3-27-67-1 • VOL. 3 • MAY 1967

3-27-67-1 • VOL. 3

AD 654773

DASA 1971-3

THERMAL RADIATION PHENOMENA

VOL. 3

TABLES OF RADIATIVE PROPERTIES OF AIR



DASA 1917-3
3-27-67-1 Vol 3
May 1967

THERMAL RADIATION PHENOMENA

Tables of Radiative Properties of Air

Edited by

Henry Aroeste and John L. Magee

Open Publication was approved by the Department of Defense on 7 April 1967

Distribution of this document is unlimited

FOREWORD

"Thermal radiation" is electromagnetic radiation emitted by matter in a state of thermal excitation. The energy density of such radiation in an enclosure at constant temperature is given by the well known Planck formula. The importance of thermal radiation in physical problems increases as the temperature is raised; at moderate temperatures (say, thousands of degrees Kelvin) its role is primarily one of transmitting energy, whereas at high temperatures (say, millions of degrees Kelvin) the energy density of the radiation field itself becomes important as well. If thermal radiation must be considered explicitly in a problem, the radiative properties of the matter must be known. In the simplest order of approximation, it can be assumed that the matter is in thermodynamic equilibrium "locally" (a condition called local thermodynamic equilibrium, or LTE), and all of the necessary radiative properties can be defined, at least in principle. Of course whenever thermal radiation must be considered, the medium which contains it inevitably has pressure and density gradients and the treatment requires the use of hydrodynamics. Hydrodynamics with explicit consideration of thermal radiation is called "radiation hydrodynamics".

In the past twenty years or so, many radiation hydrodynamic problems involving air have been studied. In this work a great deal of effort has gone into calculations of the equilibrium properties of air. Both thermodynamic and radiative properties have been calculated. It has been generally believed that the basic theory is well enough understood that such calculations yield valid results, and the limited experimental checks which are possible seem to support this hypothesis. The advantage of having sets of tables which are entirely calculated is evident: the calculated quantities are self-consistent on the basis of some set of assumptions, and they can later be improved if calculational techniques are improved, or if better assumptions can be made.

The origin of this set of books was in the desire of a number of persons interested in the radiation hydrodynamics of air to have a good source of reliable information on basic air properties. A series of books dealing with both theoretical and practical aspects was envisaged. As the series materalized, it was thought appropriate to devote the first three volumes to the equilibrium properties of air. They are:

The Equilibrium Thermodynamic Properties of Air,
by F. R. Gilmore

The Radiative Properties of Heated Air,
by B. H. Armstrong and R. W. Nicholls

Tables of Radiative Properties of Air,
by Lockheed Staff

The first volume contains a set of tables along with a detailed discussion of the basic models and techniques used for their computation. Because of the size of the related radiative tables and text, two volumes were considered necessary. The first contains the text, and the second the tables. It is hoped that these volumes will be widely useful, but because of the emphasis on very high temperatures it is clear that they will be most attractive to those concerned with nuclear weapons phenomenology, reentry vehicles, etc.

Our understanding of kinetic phenomena, long known to be important and at present in a state of rapid growth, is not as easy to assess as are equilibrium properties. Severe limitations had to be placed on choice of material. One volume is offered at this time:

Excitation and Non Equilibrium Phenomena,
by Landshoff, et al.

It provides material on the more important processes involved in the excitation of air, criteria for the validity of LTE and special radiative effects.

A discussion of radiation hydrodynamics was felt to be necessary and another volume was planned to deal with this topic:

Radiation Hydrodynamics of High Temperature Air,
by Landshoff, Hillendahl, et al.

It is not ready for publication at this time. It will review the basic theory of radiation hydrodynamics and discuss the application to fireballs in the atmosphere.

The choice of material for these last two volumes was made with an eye to the needs of the principal users of the other three volumes.

Most of the work on which these volumes are based was supported by the United States Government through various agencies of the Defense Department and the Atomic Energy Commission. The actual preparation of the volumes was largely supported by the Defense Atomic Support Agency.

We are indebted to many authors and organizations for assistance and we gratefully acknowledge their cooperation. We are particularly grateful to the RAND Corporation for permission to use works of F. R. Gilmore and H. L. Brode and to the IBM Corporation for permission to use some of the work of B. H. Armstrong. Most of the other authors are employed by the Lockheed Missiles and Space Company, in some cases as consultants.

Finally we would like to acknowledge the key role of Dr. R. E. Meyerott of LMSC in all of this effort, from the initial conception to its realization. We are particularly grateful to him for his constant advice and encouragement.

Criticism and constructive suggestions are invited from all readers of these books. We understand that much remains to be done in this field, and we hope that the efforts represented by this work will be a stimulus to its development.

The Editors

J. L. Magee

H. Aroeste

Preface

This volume presents tables of the equilibrium radiative properties of air and its constituents for a wide range of temperatures and densities. The information contained in such tables is of necessity a combination of experimental fact and theoretical computation. Related theory is discussed by B.H. Armstrong and R.W. Nicholls in a companion volume of this series.

We have attempted to provide an up-to-date compendium which will be useful for a wide variety of scientific and engineering applications. This field is developing in both experimental technique and theoretical understanding, and any tables of radiative properties must be considered tentative. Revisions will be made from time to time.

The work is divided into five parts: Part A is a summary section designed to give an overview of the field. Some of the data are presented in semi-schematic form and should not be used for quantitative work. Part B gives basic data and references used in the preparation of the subsequent parts. Finally, parts C, D and E contain the absorption coefficients in the ranges 1000°K to 24,000°K (Part C), 1 eV to 20 eV (Part D), and above 20 eV (Part E).

We would like to thank the contributors for their cooperation in assembling the data for this volume.

J.L. Magee

H. Aroeste

Contributors

B. H. Armstrong, IBM Systems Research and Development Center, Palo Alto

D. R. Churchill, Lockheed Research Laboratories, Palo Alto

B. E. Freeman, John Jay Hopkins Laboratory for Pure and Applied Science, General Dynamics, San Diego

S. A. Hagstrom, University of Indiana, Bloomington

R. K. M. Landshoff, Lockheed Research Laboratories, Palo Alto

R. W. Nicholls, York University, Toronto

O. R. Platas, Lockheed Research Laboratories, Palo Alto

Tables of Radiative Properties of Air

		Page
A.	Summary Figures	1
B.	Basic Data	14
C.	Absorption Coefficients (1000 - 24,000°K)	37
	1. Spectral Absorption Coefficients	37
	2. Mean Absorption Coefficients	422
D.	Absorption Coefficients (1 - 20 eV)	541
	1. Photoelectric and Free-Free Absorption Coefficients of Oxygen and Nitrogen	541
	2. Mean Absorption Coefficients of Air	615
E.	Mean Air Absorption Coefficients above 20 eV	620

A. Summary Figures

From the large amount of data on absorption coefficients of heated air which are presented in the tables, we have constructed a few representative graphs. These should help the reader to acquire a better understanding of the relative importance of the various parameters on which these results depend. The first set of curves (Fig. 1, 2, 3, 4) shows the absorption coefficient as a function of photon energy for two densities and temperatures. The low temperature curves (Fig. 1, 2) are characterized by a very steep increase with photon energy. Essentially, the air transmits every photon in the low energy part and absorbs every photon in the high energy part. At the higher temperatures (Fig. 3, 4) the low energy photons are absorbed along with the high energy photons. The next two curves (Fig. 5, 6) show the temperature dependence of μ for two densities and various photon energies. The photon energy is given as a parameter (in eV). These graphs show the crossing over of the various curves in the vicinity of kT = 1 eV. The large absorption at a photon energy of 8 eV and at the low temperature end is due to the Schumann-Runge continuum. The two topographic type representations of μ in the temperature photon energy plane (Fig. 7, 8) permit the viewer to visualize the overall behavior. Strongly absorbing regions are heavily shaded. The crossing short lines represent a saddle point. The parallel lines at 45° show where the energy of the blackbody spectrum lies at a given temperature. Fig. 7 is at normal air density, and Fig. 8 is at 10^{-3} normal. The variation of Planck Mean Opacity with temperature is shown in Fig. 9. All the curves show that the Planck function has a maximum at 10 eV, and the slope of the curves is very

steep, indicating the rapid change of the Planck function with temperature. The next curve (Fig. 10) shows the temperature dependence of the Rosseland Mean Opacity for five densities. The slowly changing slope of the curves around 3 to 12 eV indicates that the Rosseland function is a smoothly varying function of temperature, but at low and high temperatures the change is more abrupt.

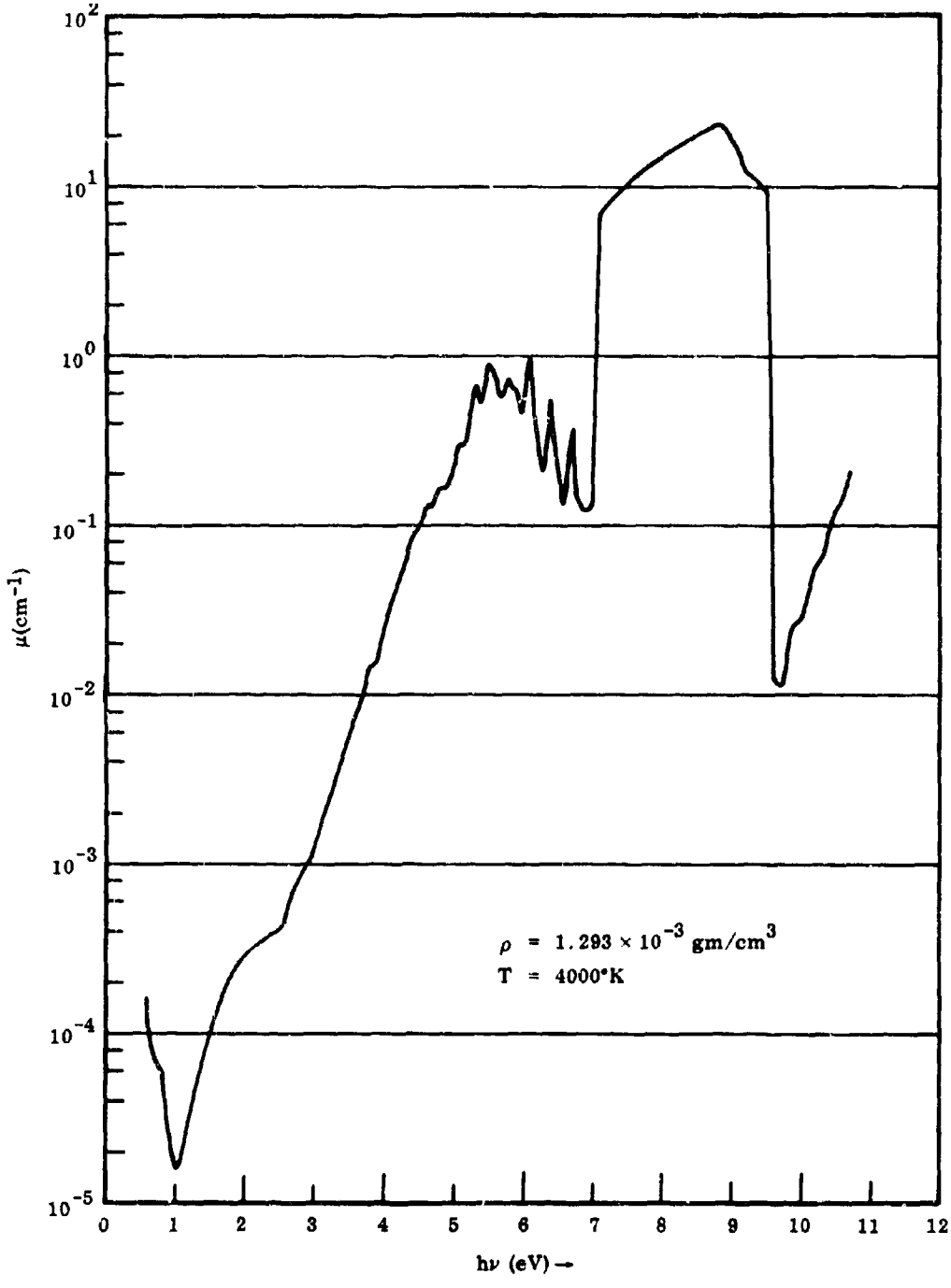


Fig. 1 Absorption Coefficient of Air as a Function of the Photon Energy: Density, 1.293×10^{-3} gm/cm^3; Temperature, 4000°K

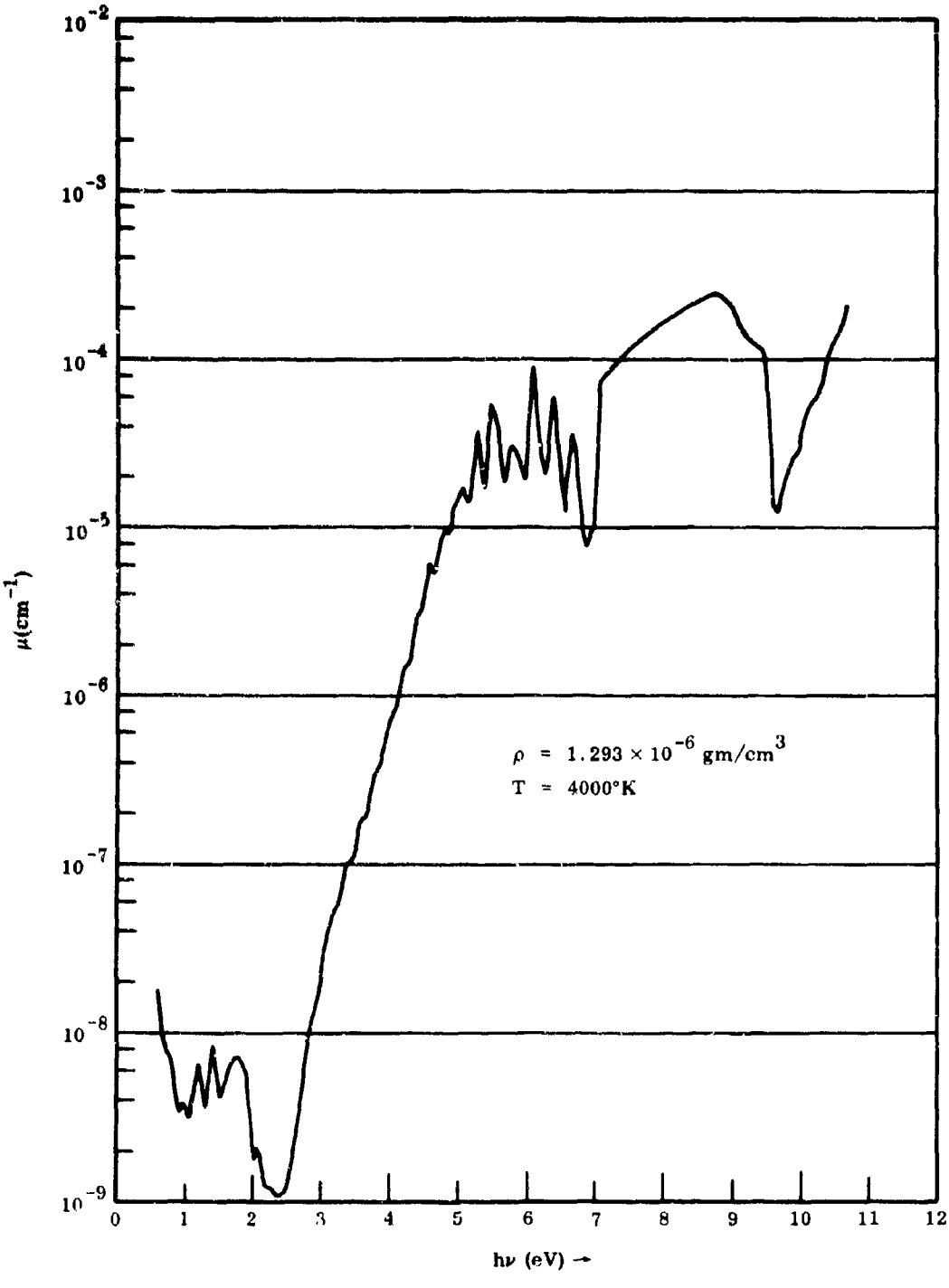


Fig. 2 Absorption Coefficient of Air as a Function of the Photon Energy: Density, 1.293×10^{-6} gm/cm^3; Temperature, 4000°K

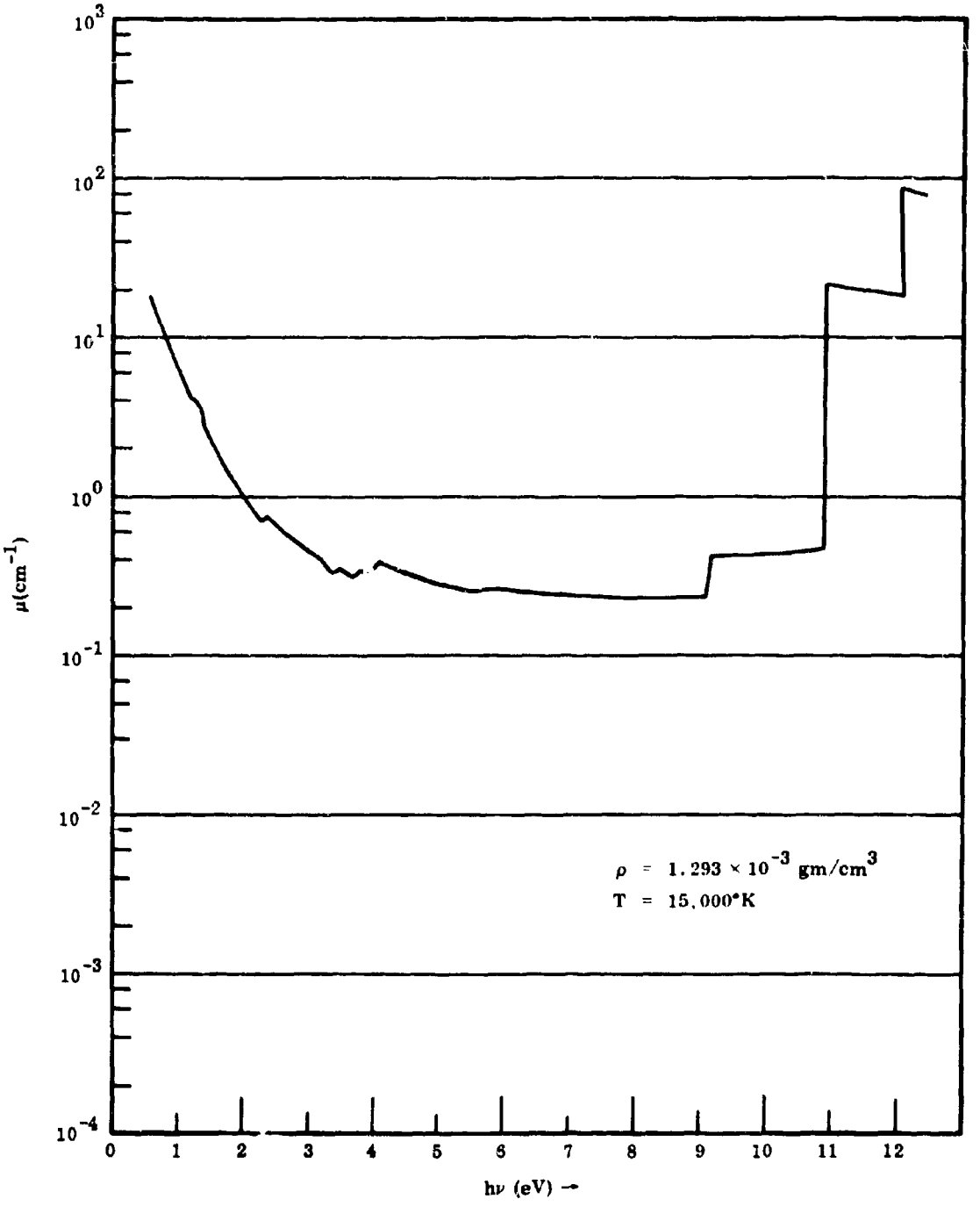


Fig. 3 Absorption Coefficient of Air as a Function of the Photon Energy: Density, 1.293×10^{-3} gm/cm^3; Temperature 15,000°K

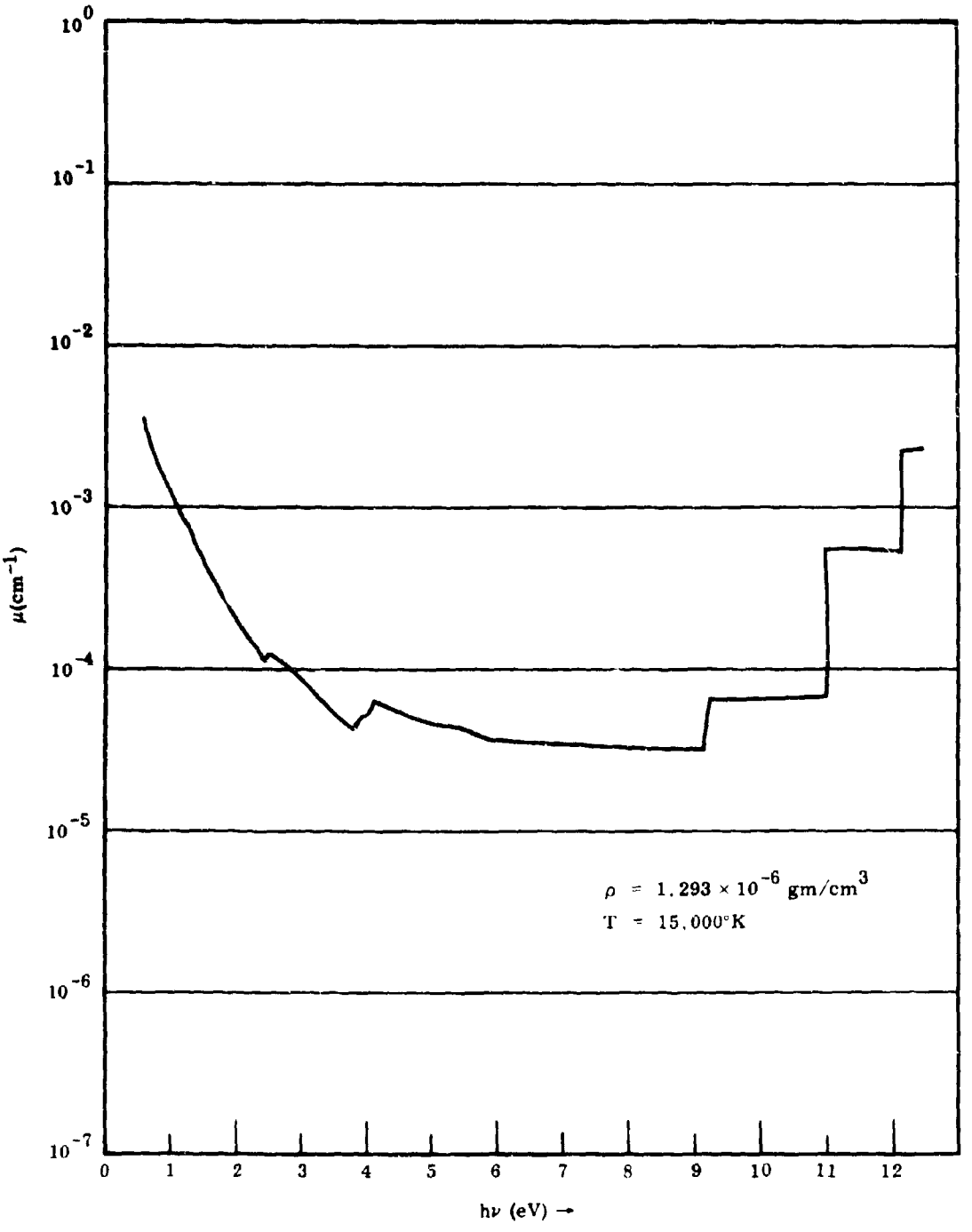


Fig. 4 Absorption Coefficient of Air as a Function of the Photon Energy: Density, 1.293×10^{-6} gm/cm^3; Temperature 15,000°K

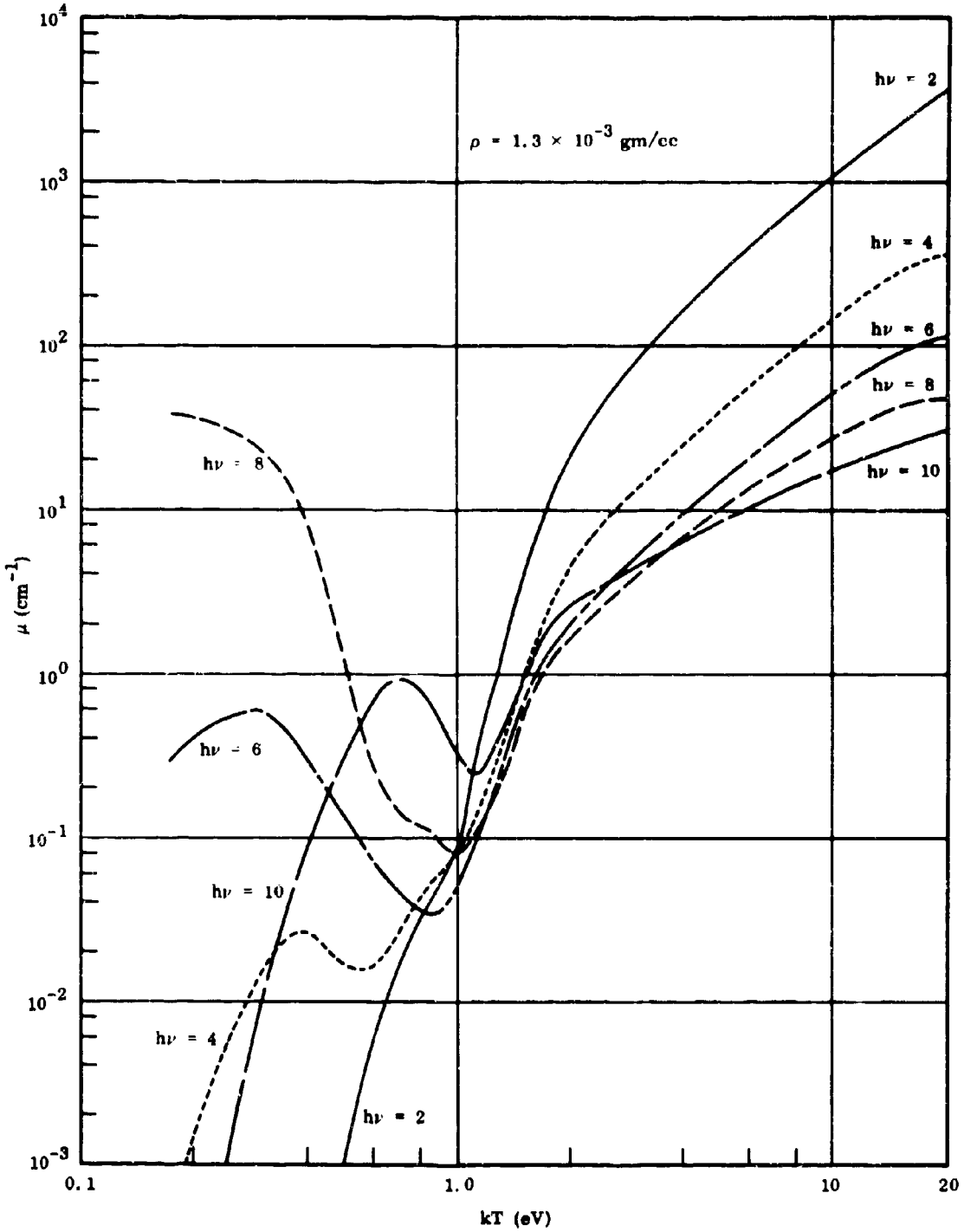


Fig. 5 Absorption Coefficient of Air at Specified Photon Energies as a Function of Temperature: Density, 1.3×10^{-3} gm/cm^3

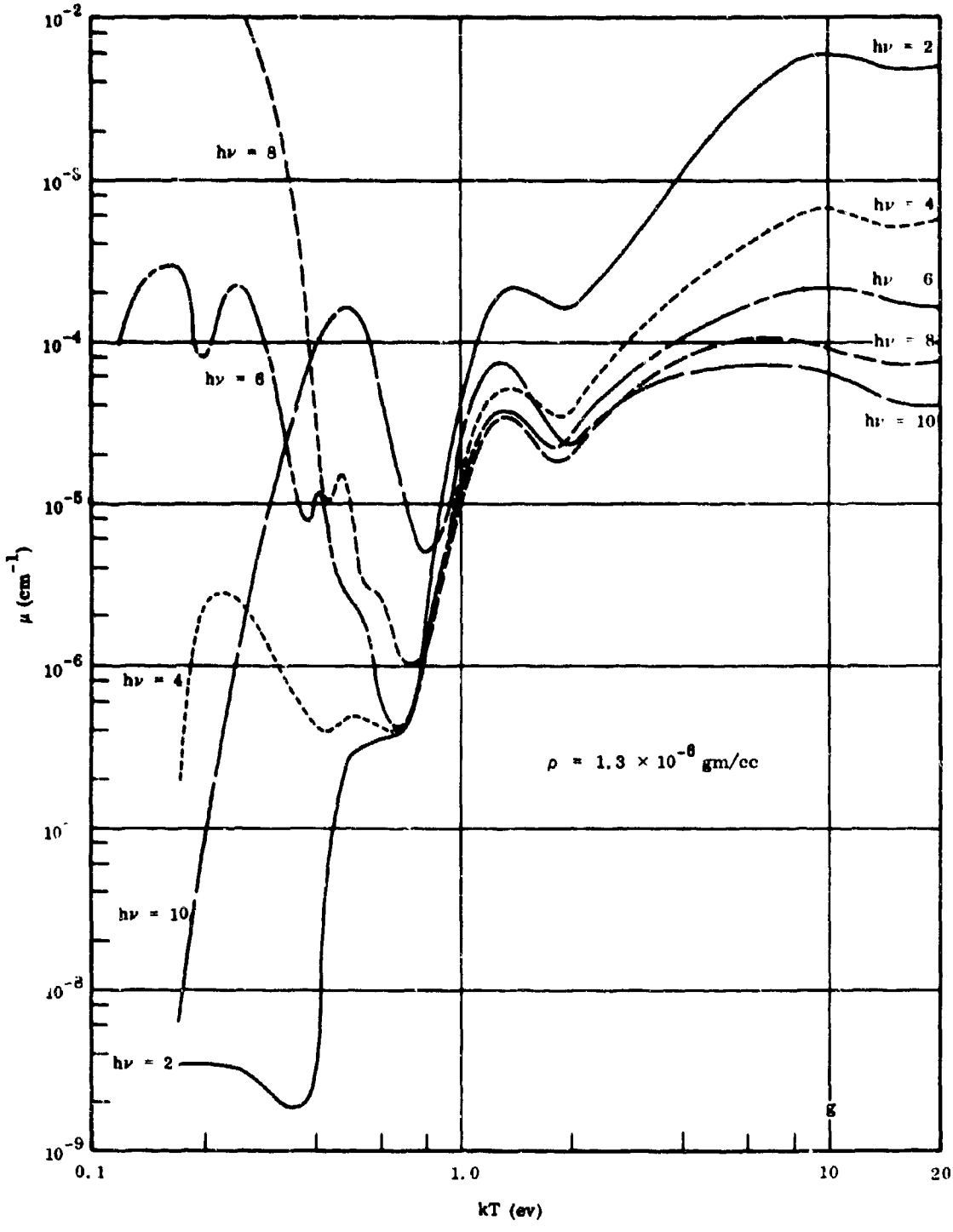


Fig. 6 Absorption Coefficient of Air at Specified Photon Energies as a Function of Temperature: Density, 1.3×10^{-6} gm/cm^3

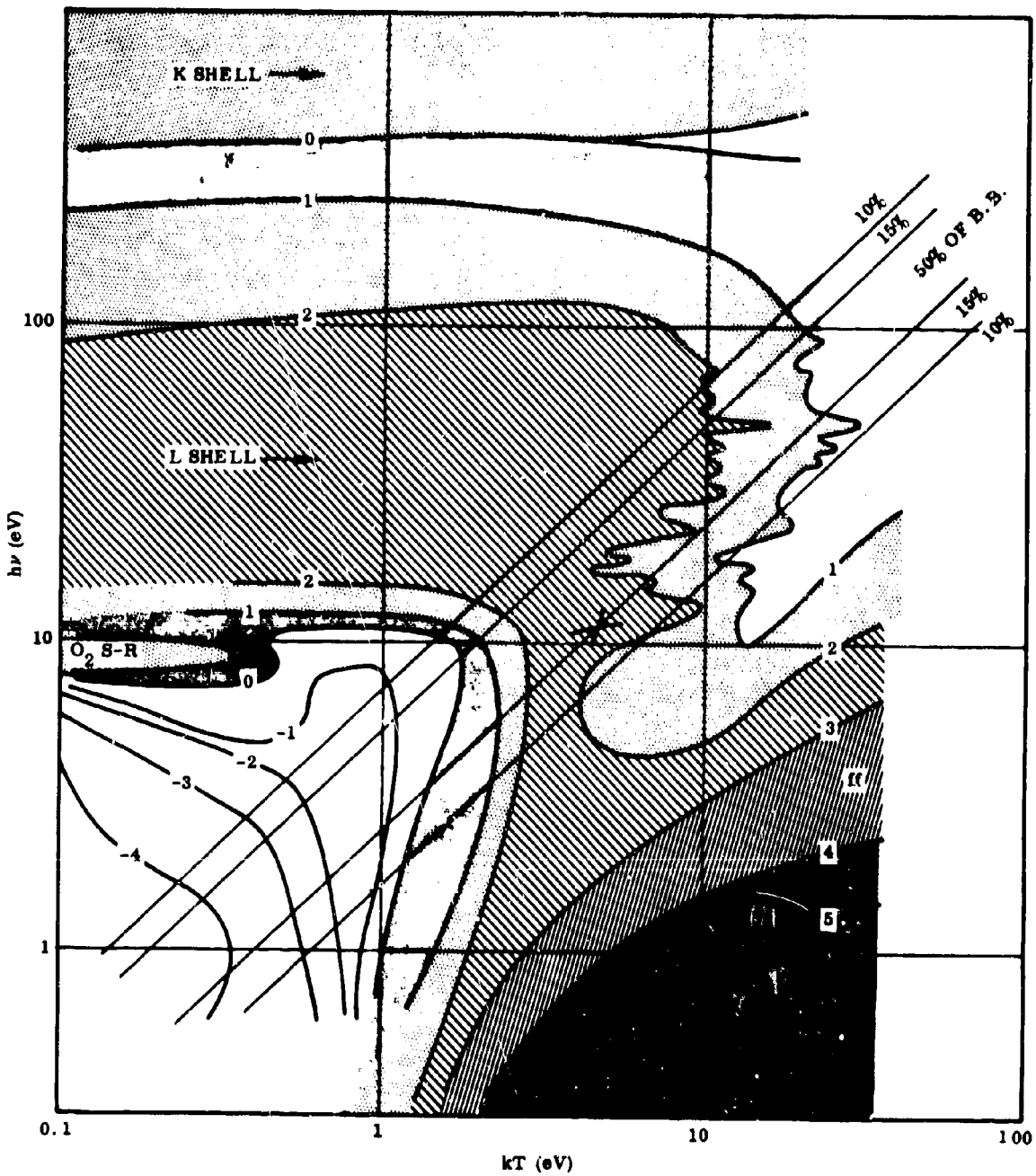


Fig. 7 Topograhic Representation of Absorption Coefficient in the Temperature-Energy Plane for Normal Density Air. A number (n) on the niveau line indicates that μ is equal to 10^n cm^{-1}.

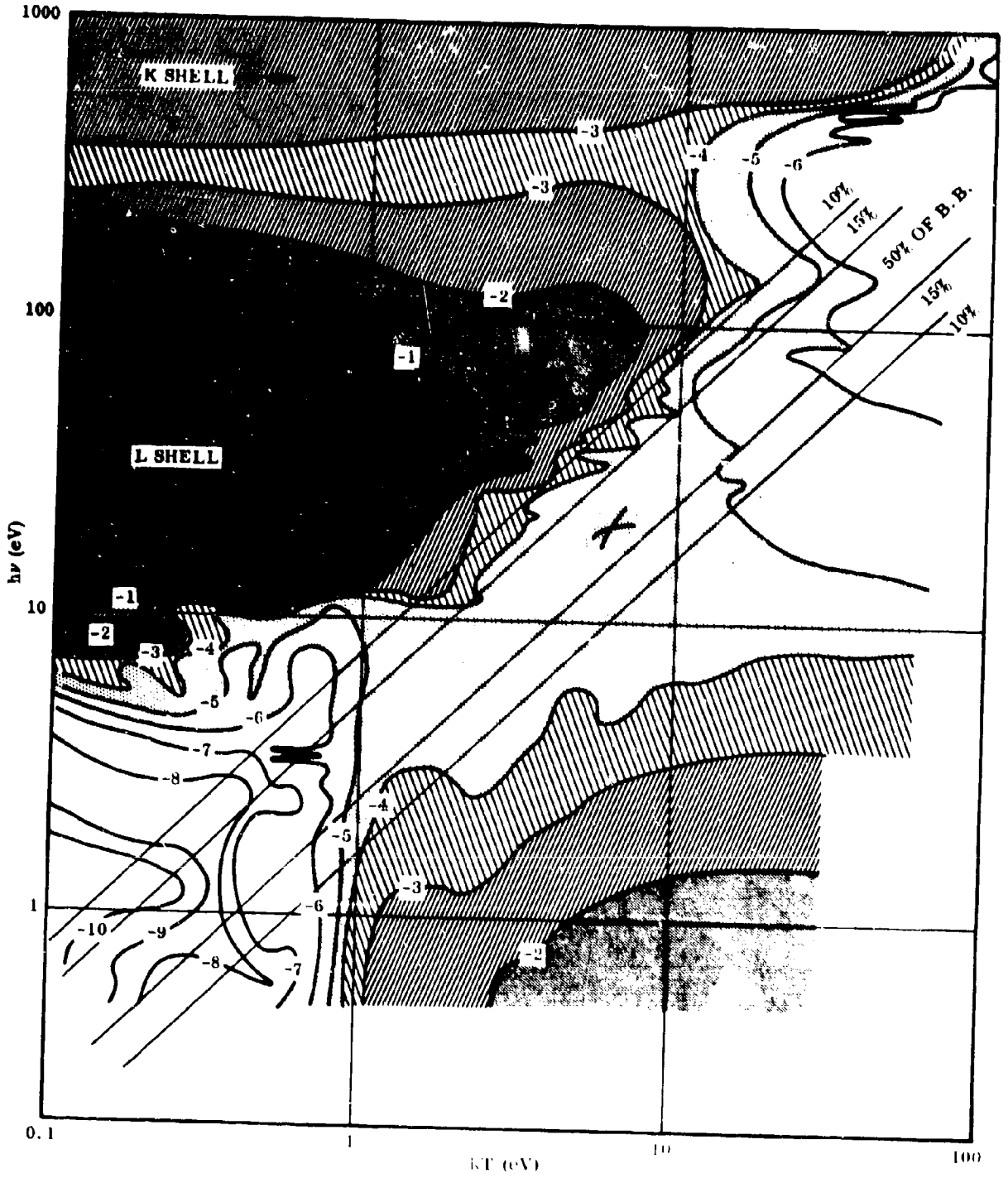


Fig. 8 Topographic Representation of Absorption Coefficient the Temperature-Energy Plane for 10^{-3} Normal Density Air. A number (n) on the niveau line indicates that μ is equal to 10^{n} cm^{-1}.

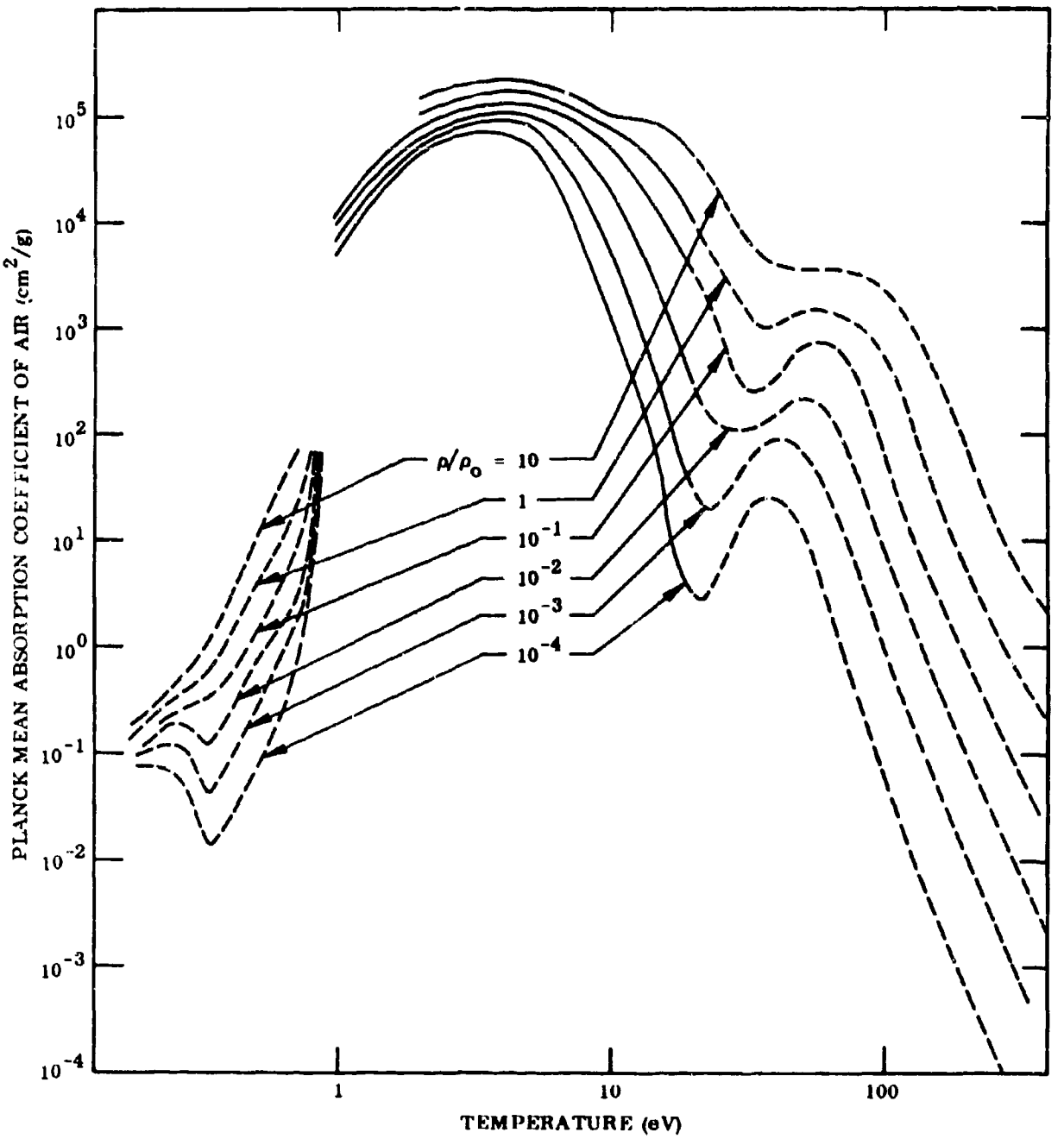


Fig. 9 Planck Mean Absorption Coefficient of Air as a Function of Temperature for Various Density Ratios. The dashed lines below 1 eV represent results obtained by Churchill (1966); the solid lines are from Armstrong, Johnston and Kelly, the dashed lines above 20 eV are from Freeman (1963). The gap at 1 eV represents a gap in our knowledge because atomic line contributions have not been included in the dashed curves.

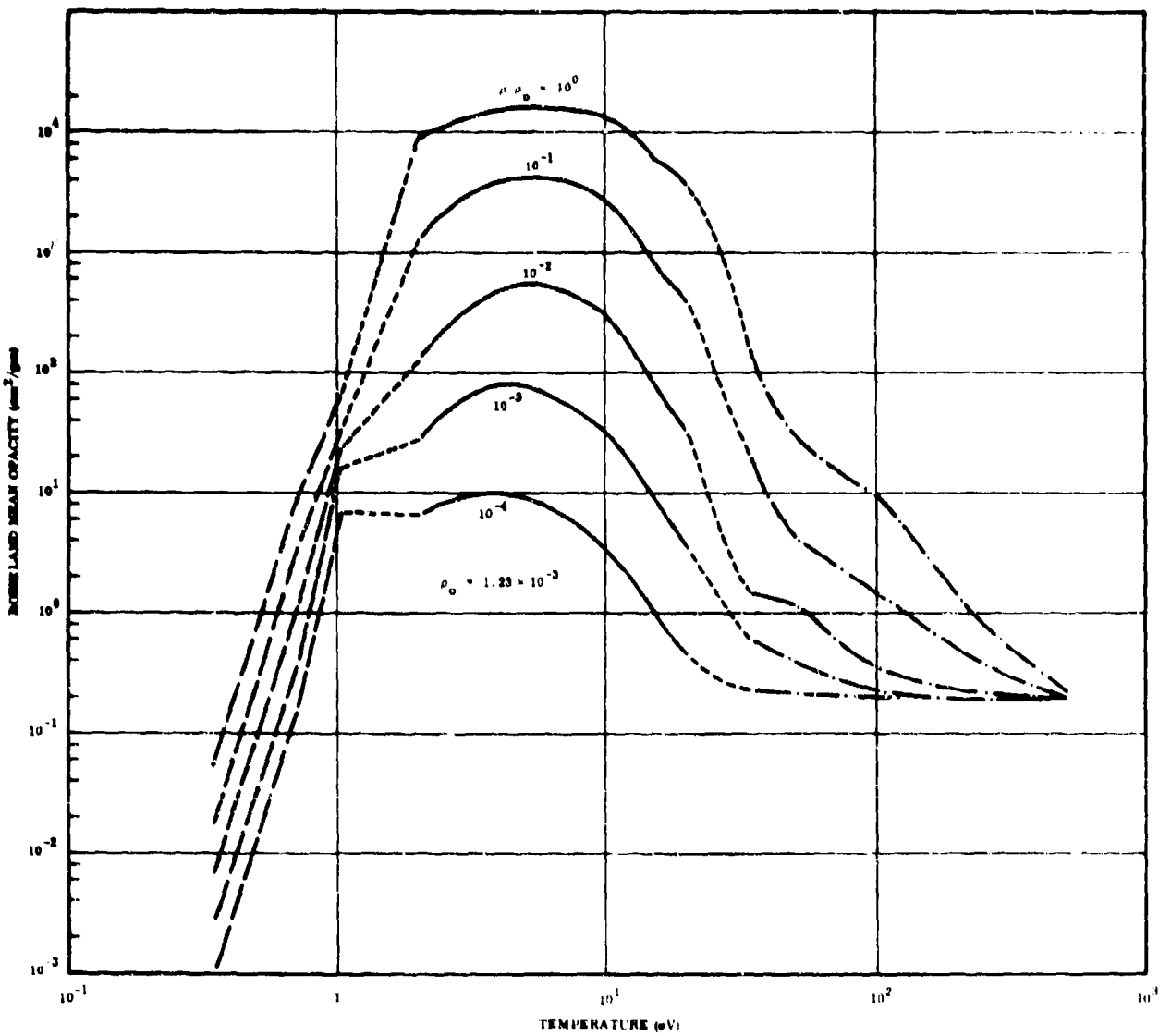


Fig. 10 Rosseland Mean Opacity of Air as a Function of Temperature for Various Density Ratios. The (—— ——) Lines Represent Values Calculated by Churchill (1966); the Solid Lines are From Armstrong, Johnston, and Kelly (1965); the (—— · ——) Lines are From Freeman (1963); and the (---) Lines are Connecting Lines Between the Various Calculations.

References

Armstrong, B. H., R. R. Johnston, and P. S. Kelly, LMSC Contract AF 29(601)-5006, Air Force Weapons Laboratory Report No. AFWL-TR-65-17, 1965.

Churchill, D. R., this report, Section II. C. of Tables of Air Properties, 1966.

Freeman, B. E., Opacity and Absorption Coefficients for Ionic Air, Air Force Special Weapons Center Contract AF29(601)-6105, GAMD-4566, 1963.

B. Basic Data

For a discussion of references to basic atomic data and the use thereof, please see Armstrong and Nicholls (1966). The following tables of basic molecular data list spectroscopic constants for those band systems of diatomic molecules which have been included in the current calculations of heated air absorption coefficients. The values listed for these constants are those which were used in the theoretical reconstruction of the corresponding band system. Most of these were taken directly from the literature and, in general, they were obtained experimentally. In those cases where no experimental values were available they were estimated with the aid of the basic equations of spectroscopy. As a single exception to the general procedure, all the constants listed for the $X^3\Sigma$ state of O_2 in Table 3 were calculated with the aid of formulas and constants given in Herzberg (1950). This state is described extremely well by the constants so obtained.

Whenever both of the electronic states involved in a transition are singlet or display only a small amount of splitting, an indication of the energy separation of the two states may be given by a single number such as ν_{oo}, which is the transition frequency or energy between vibrationless-rotationless levels of these states. However, when the splitting is relatively large, such as in the case of a $^2\pi$ state with large spin-orbit coupling, such a single number is not as meaningful although it may still give a convenient estimate of an "average" separation. Table 1 gives either ν_{oo} or ν_e (the energy separation of the potential minima of the two states) for the band systems under consideration. Succeeding tables list the vibrational term $G(v)$ as referred either to the $v = 0$ level or to the potential

minima as specified by the subscript attached to the G , viz. $G_o'(v)$ or $G_1(v)$, $G_2(v)$. Also, B_v and D_v are those constants used to generate the rotational manifold for the v^{th} vibrational level (along with the coupling constant Y_v).

The first fourteen tables contain those constants which are necessary to compute the line frequencies for all the band systems. Tables 15 through 20 give those values of the band strength and related quantities which are required to calculate the line intensities for six of the band systems. The "band strength" is given in the column labelled $p_{v',v''}$ and is given, as noted, in atomic units. The corresponding band f-numbers and Einstein A's are also tabulated. Table 21 lists the matrix elements used to compute the intensities for the one vibration-rotation band system which was included. Since no direct intensity measurements were available for the N_2 Birge-Hopfield #1 bands, the band strength was obtained from an assumed constant f-number of 0.1 and calculated Franck-Condon factors which are given in Table 22.

References

Armstrong, B. and R. Nicholls, The Radiative Properties of Heated Air, Thermal Radiation Phenomena, Lockheed, Palo Alto, 1966.

Herzberg, G., Spectra of Diatomic Molecules, Van Nostrand, Princeton, 1950.

Table 1. Molecular Band Systems Included in the Calculation of the Absorption Coefficient of Heated Air.

Molecular Species and System Name	Spectroscopic Notation	ν_{oo} (cm^{-1})	Spectral Region Spanned by Systems (cm^{-1})	No. of Lines Included
O_2 Schumann-Runge	$B^3\Sigma_u^- - X^3\Sigma_g^-$	49,357.5	56,851.51 - 20,081.01	4,611
N_2 first positive	$B^3\Pi_g - A^3\Sigma_u^-$	9,557.0	19,471.63 - 2,673.18	48,785
N_2 second positive	$C^3\Pi_u - B^3\Pi_g$	29,670.6	36,365.66 - 20,323.54	20,369
N_2 Birge-Hopfield	$b'^1\Sigma_u^+ - X^1\Sigma_g^+$	103,672.1	107,981.86 - 46,678.12	38,983
N_2^+ first negative	$B^2\Sigma_u^+ - X^2\Sigma_g^+$	25,566.0	31,731.58 - 19,121.38	3,216
NO β	$B^2\Pi - X^2\Pi$	45,868.7*	51,410.52 - 19,426.22	18,518
NO γ	$A^2\Sigma - X^2\Pi$	43,905.2†	61,615.35 - 31,534.58	31,429
NO vib.-rot.	$X^2\Pi - X^2\Pi$	--	9,131.35 - 1,036.91	25,610

* This is an effective ν_e for the NO beta bands.

† This is also an effective ν_e and may be reproduced from the tables of Herzberg (1950) by subtracting the average T_e of the lower ($^2\Pi$) state from the T_e of the upper ($^2\Sigma$) state.

Table 2. Continuous Contributors (in the amount of about 1% or more) to the Absorption Coefficient of Heated Air at Relative Density $\rho/\rho_o = 10^{-3}$

System	Spectral Region of Importance eV (cm^{-1})	Temperature Region of Importance ^oK
O_2 Schumann-Runge Continuum	~ 7.1 - 9.5 eV (57,000 - 77,000 cm^{-1})	1,000 - 10,000
NO_2	~ 1.1 - 5.1 eV (9,000 - 41,000 cm^{-1})	1,000 - 5,000
O^- photodetachment	~ 1.5 - 10.7 eV (12,100 - 86,000 cm^{-1})	3,000 - 15,000
N phctoionization	Entire Range of Calculation	T ≥ 7,000
O photoionization	Entire Range of Calculation	T ≥ 7,000
Free-free in presence of ions	<~ 0.8 eV (6,450 cm^{-1}) at 6,000^{o}K; Entire Range of Calculation at 18,000^{o}K.	T ≥ 6,000

Table 3. Spectroscopic Constants for the $X^3\Sigma_g^-$ State of O_2

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v ($10^{-6}cm^{-1}$)
0	0.0	1.438	4.913
1	1556.4	1.422	4.825
2	3089.1	1.406	4.737
3	4598.3	1.390	4.649
4	6084.4	1.375	4.561
5	7547.4	1.359	4.473
6	8987.5	1.343	4.385
7	10404.9	1.327	4.297
8	11799.7	1.311	4.209
9	13171.8	1.296	4.121
10	14521.4	1.280	4.033
11	15848.3	1.264	3.945
12	17152.7	1.248	3.857
13	18434.2	1.232	3.769
14	19693.0	1.217	3.681
15	20928.7	1.201	3.593
16	22141.2	1.185	3.505
17	23330.3	1.169	3.417
18	24495.7	1.154	3.329
19	25637.2	1.138	3.241
20	26754.4	1.122	3.153
21	27846.9	1.106	3.065
22	28914.4	1.090	2.977
23	29956.5	1.074	2.889
24	30972.6	1.059	2.801
25	31962.3	1.043	2.713
26	32925.0	1.027	2.625
27	33860.2	1.011	2.537
28	34767.3	0.9956	2.449
29	35645.7	0.9798	2.361

Ref. 1 Babcock, H.D. and L. Herzberg, Astrophys. J. 108, 167 (1948).

Table 4. Spectroscopic Constants for the $B^3\Sigma_u^-$ State of O_2

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	0.8130	4.380
1	688.0	0.7980	4.380
2	1353.1	0.7850	4.380
3	1994.6	0.7700	4.380
4	2612.2	0.7540	4.380
5	3204.0	0.7350	4.380
6	3765.2	0.7190	4.380
7	4299.2	0.7020	4.380
8	4799.6	0.6710	4.380
9	5265.0	0.6510	4.380
10	5694.2	0.6330	4.380
11	6082.4	0.5930	4.380
12	6427.0	0.5625	13.000
13	6727.9	0.5247	16.800
14	6982.9	0.4836	21.200
15	7192.9	0.4399	25.700
16	7361.9	0.3953	34.300
17	7494.8	0.3470	45.000
18	7596.9	0.2960	52.00
19	7672.6	0.2580	49.00
20	7725.2	0.2070	76.000

Ref. 1 Curry, J. and G. Herzberg, Ann. Physik 19, 800 (1934)
2 Knauss, H.P. and H.S. Ballard, Phys. Rev. 48, 796 (1935)
3 Babcock, H.D. and L. Herzberg, Astrophys. J., 108, 167 (1948)
4 Brix, P. and G. Herzberg, Can. J. Phys. 32, 110 (1954)

Table 5. Spectroscopic Constants for the $A^3\Sigma_u^-$ State of N_2

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	1.433	5.5
1	1432.5	1.421	5.5
2	2837.0	1.408	5.5
3	4213.3	1.395	5.5
4	5561.4	1.382	5.5
5	6880.9	1.369	5.5
6	8171.9	1.356	5.5
7	9434.1	1.343	5.5
8	10667.4	1.330	5.5
9	11871.7	1.317	5.5
10	13046.7	1.304	5.5
11	14192.4	1.291	5.5

Ref. 1 Naude, S.M., Proc. Roy. Soc. London, 136, 114 (1932).

Table 6. Spectroscopic Constants for the $B^3\Pi_g$ State of N_2.

v	$G_o(v)$ (cm^{-1})	Y_v	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	25.9	1.6285	5.8
1	1705.2	26.2	1.6108	6.0
2	3381.4	26.4	1.5925	6.0
3	5028.0	26.8	1.5735	6.0
4	6646.6	27.0	1.5554	6.0
5	8236.0	27.3	1.5364	6.0
6	9796.9	27.6	1.5172	6.0
7	11328.4	27.95	1.4954	6.0
8	12831.0	28.25	1.4765	6.0
9	14304.7	28.5	1.4576	6.0
10	15749.4	28.8	1.4387	6.0

Ref. 1 Budó, A., Z. Physik 96, 219 (1935).

Table 7. Spectroscopic Constants for the $C^3\Pi_u$ State of N_2.

v	$G_o(v)$ (cm^{-1})	Y_v	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	21.5	1.8154	6.0
1	1994.2	21.5	1.7932	6.0
2	3934.4	21.4	1.7682	6.0
3	5808.1	21.1	1.7407	7.5
4	7589.8	20.3	1.7012	11.0

Ref. 1 Budó, A., Z. Physik 96, 219 (1935).

Table 8. Spectroscopic Constants for the $X^1\Sigma_g^+$ State of N_2

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	00.00	1.9898	6.4
1	2329.66	1.9720	5.0
2	4630.83	1.9548	5.0
3	6903.44	1.9364	5.5
4	9147.41	1.9186	5.5
5	11362.67	1.9008	5.5
6	13549.14	1.8829	5.0
7	15706.76	1.8651	5.0
8	17835.44	1.8473	5.0
9	19935.11	1.8295	5.0
10	22005.70	1.8117	5.0
11	24047.13	1.7939	5.3
12	26059.33	1.7761	5.5
13	28042.23	1.7583	5.5
14	29995.74	1.7405	6.0
15	31919.80	1.7227	6.0
16	33814.33	1.7048	6.0
17	35679.26	1.6870	6.0
18	37514.51	1.6692	6.0
19	39320.01	1.6514	6.0
20	41095.68	1.6336	6.0
21	42841.45	1.6158	6.0
22	44557.25	1.5980	6.0
23	46242.99	1.5802	6.0
24	47898.61	1.5624	6.0
25	49524.03	1.5446	6.0
26	51119.17	1.5267	6.0
27	52683.97	1.5089	6.0

Ref. 1 Lofthus, A., The Molecular Spectrum of Nitrogen, Spectroscopic Report Number 2, Dept. of Physics, University of Oslo, Blindern, Norway, Dec., 1960.

Table 9. Spectroscopic Constants for the $b'^1\Sigma_u^+$ State of N_2

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	1.1515	11.04
1	742.0	1.146	11.37
2	1474.4	1.142	11.69
3	2196.7	1.137	12.02
4	2909.8	1.132	12.34
5	3613.2	1.128	12.67
6	4307.0	1.123	12.99

Ref. 1 Lofthus, A., The Molecular Spectrum of Nitrogen, Spectroscopic Report Number 2, Dept. of Physics, University of Oslo, Blindern, Norway, Dec., 1960.

Table 10. Spectroscopic Constants for the $X^2\Sigma_g^+$ State of N_2^+

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	1.922	6.0
1	2174.8	1.902	6.0
2	4317.0	1.879	6.0
3	6426.4	1.861	6.0
4	8502.8	1.841	6.0
5	10545.8	1.826	6.0
6	12555.0	1.808	6.0
7	14530.7	1.781	6.0
8	16470.6	1.766	6.0
9	18377.6	1.740	6.0
10	20249.7	1.724	6.0
11	22086.5	1.703	6.0
12	23887.6	1.683	6.0
13	25652.4	1.663	6.0
14	27380.5	1.641	6.0
15	29071.6	1.620	6.0
16	30725.1	1.593	6.0
17	32340.5	1.572	6.0
18	33917.3	1.552	6.0

Ref. 1 Douglas, A.E., Can. J. Phys. 30, 302-13 (1952).

Table 11. Spectroscopic Constants for the $B^2\Sigma_u^+$ State of N_2^+

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	2.073	6.0
1	2371.5	2.049	6.0
2	4690.3	2.025	6.0
3	6950.7	2.002	6.0
4	9147.1	1.968	6.0
5	11269.9	1.926	6.0
6	13310.9	1.896	6.0
7	15262.0	1.852	6.0
8	17100.2	1.810	6.0
9	18827.1	1.762	6.0
10	20423.8	1.710	6.0
11	21903.3	1.653	6.0
12	23275.1	1.595	6.0
13	24551.4	1.545	6.0
14	25747.7	1.494	6.0
15	26874.3	1.452	6.0
16	27941.4	1.404	6.0
17	28956.9	1.355	6.0

Ref. 1 Douglas, A.E., Can. J. Phys. 30, 302-13 (1952).

Table 12. Spectroscopic Constants for the $X^2\Pi$ State of NO .

v	$G_1(v)$ (cm^{-1})	$G_2(v)$ (cm^{-1})	Y_v	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	948.52	948.34	73.24	1.6957	5.0
1	2824.61	2824.08	74.02	1.6779	5.0
2	4672.74	4671.86	74.81	1.6601	5.0
3	6492.92	6491.70	75.62	1.6423	5.0
4	8285.13	8283.56	76.46	1.6245	5.0
5	10049.37	10047.44	77.30	1.6067	5.0
6	11785.63	11783.35	78.16	1.5889	5.0
7	13493.91	13491.28	79.05	1.5711	5.0
8	15174.18	15171.20	79.95	1.5533	5.0
9	16826.46	16823.13	80.88	1.5355	5.0
10	18450.73	18447.06	81.83	1.5177	5.0
11	20047.00	20042.82	82.80	1.4999	5.0
12	21615.13	21610.53	83.80	1.4821	5.0
13	23154.94	23149.82	84.81	1.4643	5.0
14	24666.29	24660.64	85.86	1.4465	5.0
15	26148.95	26142.79	86.93	1.4287	5.0
16	27602.67	27595.91	88.02	1.4109	5.0

Ref. 1 Gillette, R.H. and E.H. Eyster, Phys. Rev. 56, 1113 (1939).

Table 13. Spectroscopic Constants for the $A^2\Sigma^+$ State of NO.

v	$G_o(v)$ (cm^{-1})	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	0.0	1.9870	6.0
1	2341.4	1.9688	6.0
2	4651.4	1.9498	6.0
3	6928.2	1.9290	6.0
4	9170.7	1.9108	6.0
5	11380.4	1.8906	6.0
6	13558.8	1.8684	6.0
7	15703.1	1.8486	6.0

Ref. 1 Barrow, R.F. and E. Miescher, Proc. Phys. Soc. (London) A70, 219 (1957).

Ref. 2 Irén Deézsi, Acta Physica Acam. Sci. Hung, 9, 125-150 (1959).

Table 14. Spectroscopic Constants for the $B^2\Pi$ State of NO.

v	$G_1(v)$ (cm^{-1})	$G_2(v)$ (cm^{-1})	Y_v	B_v (cm^{-1})	D_v (10^{-6} cm^{-1})
0	516.58	517.30	28.6	1.118	6.0
1	1538.66	1540.8	29	1.105	6.0
2	2546.4	2550.0	31	1.093	6.0
3	3540.4	3545.4	32	1.081	6.0
4	4521.2	4527.7	29	1.068	6.0
5	5489.4	5497.3	36	1.056	6.0
6	6445.6	6455.1	38	1.041	6.0

Ref. 1 Barrow, R.F. and E. Miescher, Proc. Phys. Soc. (London) A70, 219 (1957).

Ref. 2 Irén Deézsi, Acta Physica Acam Sci Hung, 9, 125-150 (1959).

TABLE 15

Absolute Transition Probabilities

for Bands of the O_2 Schumann-Runge System

Band	Wavelength (Å)	$P_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
—	—	—	—	—
0,0	2030	6.66 — 9	3.31 — 10	5.38 — 1
0,7	2567	8.37 — 3	3.29 — 4	3.35 + 5
0,8	2662	2.14 — 2	8.09 — 4	7.64 + 5
0,9	2763	4.59 — 2	1.67 — 3	1.47 + 6
0,10	2871	8.38 — 2	2.94 — 3	2.39 + 6
0,11	2984	1.30 — 1	4.38 — 3	3.30 + 6
0,12	3105	1.72 — 1	5.58 — 3	3.88 + 6
0,13	3234	1.97 — 1	6.13 — 3	3.93 + 6
0,14	3372	1.95 — 1	5.81 — 3	3.42 + 6
0,15	3518	1.67 — 1	4.78 — 3	2.84 + 6
0,16	3674	1.20 — 1	3.29 — 3	1.63 + 4
0,17	3842	7.43 — 2	1.95 — 3	8.84 + 5
0,18	4022	4.0 — 2	1.0 — 3	4.14 + 5
0,19	4216	1.82 — 2	4.33 — 4	1.63 + 5
0,20	4470	7.0 — 3	1.57 — 4	5.27 + 4
1,0	1998	7.59 — 8	3.83 — 9	6.41 + 0
1,7	2522	3.73 — 2	1.49 — 3	1.56 + 6
1,8	2615	7.42 — 2	2.86 — 3	2.80 + 6
1,9	2712	1.19 — 1	4.41 — 3	4.02 + 6
1,10	2815	1.49 — 1	5.33 — 3	4.51 + 6
1,11	2924	1.42 — 1	4.87 — 3	3.82 + 6
1,12	3040	9.21 — 2	3.05 — 3	2.21 + 6
1,13	3163	3.04 — 2	9.66 — 4	6.47 + 5
1,14	3294	1.36 — 4	4.16 — 6	2.56 + 3
1,15	3433	2.28 — 2	6.60 — 4	3.80 + 5
1,16	3584	7.82 — 2	3.18 — 4	1.65 + 5
1,17	3743	1.25 — 1	3.36 — 3	1.60 + 6
1,18	3914	1.31 — 1	3.38 — 3	1.48 + 6
1,19	4096	1.03 — 1	2.54 — 3	1.01 + 6
1,20	4292	6.50 — 2	1.52 — 3	5.53 + 5
1,21	4476	3.21 — 2	7.23 — 4	2.43 + 5
2,0	1971	4.58 — 7	2.34 — 4	3.27 + 1
2,7	2481	8.18 — 2	3.32 — 3	3.61 + 6
2,8	2570	1.22 — 1	4.80 — 3	4.87 + 6
2,9	2664	1.34 — 1	5.06 — 3	4.78 + 6
2,10	2762	9.50 — 2	3.46 — 3	3.04 + 6
2,11	2868	3.14 — 2	1.1 — 3	8.98 + 6
2,12	2979	1.10 — 6	3.73 — 8	2.8 + 1
2,13	3093	3.05 — 2	9.92 — 4	6.97 + 4
2,14	3233	8.20 — 2	2.56 — 3	1.65 + 6
2,15	3358	9.05 — 2	2.71 — 3	1.61 + 6
2,16	3501	4.31 — 2	1.24 — 3	6.77 + 5
2,17	3651	2.18 — 3	6.0 — 5	3.01 + 4
2,18	3837	1.63 — 2	4.29 — 4	1.96 + 5
2,19	3988	6.87 — 2	1.74 — 3	7.3 + 5
2,20	4174	1.07 — 1	2.57 — 3	9.92 + 5
2,21	4374	1.99 — 1	4.57 — 3	1.6 + 6
3,0	1947	1.91 — 6	9.88 — 8	1.75 + 2
4,0	1924	6.18 — 6	3.24 — 7	5.87 + 2
5,0	1902	1.59 — 5	8.4 — 7	1.55 + 3
6,0	1882	3.52 — 5	1.88 — 6	3.56 + 3

TABLE 15(Cont.)

Band	Wavelength (Å)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
—	—	—	—	—
7,0	1863	6.77 — 5	3.66 — 6	7.04 + 3
8,0	1846	1.15 — 4	6.25 — 6	1.23 + 4
9,0	1830	1.76 — 4	0.97 — 6	2.00 + 4
10,0	1816	2.58 — 4	1.43 — 5	2.9 + 4
11,0	1803	3.59 — 4	2.0 — 5	4.12 + 4
12,0	1792	4.78 — 4	2.60 — 5	5.61 + 4
13,0	1872	5.59 — 4	3.16 — 5	6.65 + 4
14,0	1774	5.88 — 4	3.33 — 5	7.10 + 4
15,0	1768	5.67 — 4	3.23 — 5	6.90 + 4
16,0	1763	5.05 — 4	2.89 — 5	6.22 + 4
17,0	1759	4.34 — 4	2.48 — 5	5.38 + 4

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 16

Absolute Transition Probabilities for Bands of the N_2 First Positive System

Band	Wavelength (A)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
0,0	10,387	2.82 — 1	1.4 — 3	8.65 + 4
0,1	12,211	3.27 — 1	1.38 — 3	6.17 + 4
0,2	14.735	2.29 — 1	8.01 — 4	2.46 + 4
1,0	8851	2.62 — 1	1.521 — 3	1.29 + 5
1,1	10,200	1. 6 — 3	8.08 — 6	5.18 + 2
1,2	11,800	1.00 — 1	4.30 — 4	2.10 + 4
1,3	14,043	1.05 — 1	7.51 — 4	2.54 + 4
1,4	17,102	2.01 — 1	6.03 — 4	1.36 + 4
2,0	7694	9.57 — 2	6.407 — 4	7.21 + 4
2,1	8673	1.31 — 1	7.78 — 4	6.90 + 4
2,2	9850	8.70 — 2	4.55 — 4	3.18 + 4
2,3	11,436	1.87 — 3	8.43 — 6	4.30 + 2
2,4	13,420	8.26 — 2	3.17 — 4	1.17 + 4
2,5	16,163	1.64 — 1	5.24 — 4	1.34 + 4
3,0	6824	1.70 — 1	1.28 — 4	1.83 + 4
3,1	7569	1.38 — 1	9.41 — 4	1.09 + 5
3,2	8504	2.31 — 2	1.4 — 4	1.29 + 4
3,3	9694	1.18 — 1	6.36 — 4	4.61 + 4
3,4	11,116	2.78 — 2	1.29 — 4	6.95 + 3
3,5	12,844	9.65 — 3	3.87 — 5	1.56 + 4
3,9	15,370	8.62 — 2	2.89 — 4	8.16 + 3
4,0	6396	1.37 — 3	1.12 — 5	1.88 + 3
4,1	6741	4.37 — 2	3.34 — 4	4.90 + 4
4,2	7451	1.20 — 1	8.31 — 4	9.98 + 4
4,3	8315	5.68 — 2	3.52 — 6	3.39 + 2
4,4	9368	8.02 — 2	4.41 — 4	3.35 + 4
5,1	6098	5.90 — 3	4.99 — 5	8.95 + 3
5,2	6661	6.54 — 2	5.06 — 4	7.60 + 4
5,3	7338	8.78 — 2	5.45 — 4	6.75 + 4
5,4	8200	2.52 — 2	1.58 — 4	1.57 + 4
5,5	9147	3.01 — 2	1.69 — 4	1.35 + 4
6,1	5571	3.98 — 4	3.66 — 6	7.85 + 2
6,2	6039	1.23 — 2	1.05 — 4	1.91 + 4
6,3	6583	7.73 — 2	6.05 — 4	9.31 + 4
6,4	7229	3.36 — 2	2.39 — 4	3.05 + 4
6,5	7981	5.56 — 2	3.59 — 4	3.76 + 4
7,2	5533	1.00 — 3	9.33 — 6	2.03 + 3
7,3	5985	2.06 — 2	1.77 — 4	3.28 + 4
7,4	6505	7.65 — 2	6.06 — 4	9.54 + 4
7,5	7121	7.69 — 2	5.56 — 5	7.31 + 3
7,6	7831	6.24 — 2	4.10 — 4	4.46 + 4
8,3	5496	2.15 — 3	2.01 — 5	4.44 + 3
8,4	5931	3.06 — 2	2.66 — 4	5.04 + 4
8,5	6432	6.56 — 2	5.25 — 4	8.45 + 4
9,4	5459	3.99 — 3	3.76 — 5	8.41 + 3
9,5	5879	3.64 — 2	3.19 — 4	6.16 + 4
9,6	6360	4.01 — 2	4.00 — 4	6.58 + 4
10,5	5424	5.85 — 3	5.55 — 5	1.26 + 4
10,6	5829	3.95 — 2	3.49 — 4	6.85 + 4
10,7	6291	3.25 — 2	2.66 — 4	4.48 + 4
11,6	5390	8.89 — 3	8.50 — 5	1.95 + 4
11,7	5779	4.40 — 2	3.93 — 4	7.85 + 4
11,8	6221	1.43 — 1	1.18 — 4	1.79 + 4
12,7	5352	4.18 — 2	4.02 — 4	9.63 + 4
12,8	5730	6.81 — 2	6.12 — 5	1.24 + 4

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 17

Absolute Transition Probabilities

for Bands of the N_2 Second Positive System

Band	Wavelength (Å)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
0,0	3371.3	1.24 + 0	1.90 — 2	1.11 + 7
0,1	3576.9	9.65 — 1	1.40 — 2	7.27 + 6
0,2	3804.9	4.52 — 1	6.15 — 3	2.83 + 6
0,3	4059.4	1.82 — 1	2.31 — 3	9.33 + 5
0,4	4343.6	6.03 — 2	7.18 — 4	2.54 + 5
0,5	4667.3	1. 5 — 2	1.67 — 4	5.11 — 4
1,0	3159.3	9.35 — 1	1.53 — 2	1.02 + 7
1,1	3339	6.03 — 2	9.34 — 4	5.59 + 5
1,2	3536.7	6.03 — 1	8.82 — 3	4.70 + 6
1,3	3755.4	6.03 — 1	8.31 — 3	3.93 + 6
1,4	3998.4	3.62 — 1	4.68 — 3	1.95 + 6
1,5	4269.7	1.55 — 1	1.83 — 3	6.68 + 5
1,6	4574.3	6.03 — 2	6.82 — 4	2.17 + 5
1,7	4916.8	3.02 — 2	3.17 — 4	8.75 + 4
2,0	2976.8	2.72 — 1	4.72 — 3	3.55 + 6
2,1	3136.0	7.53 — 1	1.24 — 2	8.43 + 6
2,2	3309	9.05 — 2	1.41 — 3	8.61 + 5
2,3	3500.5	1.82 — 1	2.67 — 3	1.45 + 6
2,4	3710.5	4.82 — 1	6.73 — 3	3.26 + 6
2,5	3943.0	4.52 — 1	5.93 — 3	2.54 + 6
2,6	4200.5	2.72 — 1	3.35 — 3	1.26 + 6
2,7	4490.2	1.21 — 1	1.39 — 3	4.60 + 5
2,8	4814.7	6.03 — 2	6.48 — 4	1.86 + 5
3,0	2819.8	3.02 — 2	5.53 — 4	4.64 + 5
3,1	2962.0	4.82 — 1	8.43 — 3	6.40 + 3
3,2	3116.7	3.92 — 2	6.51 — 3	4.47 + 6
3,3	3285.3	3.02 — 1	4.75 — 3	2.93 + 6
3,5	3671.9	2.72 — 1	3.82 — 3	1.89 + 6
3,6	3894.6	4.52 — 1	6.01 — 3	2.64 + 6
3,7	4141.8	3.32 — 1	4.14 — 3	1.61 + 6
3,8	4416.7	1.82 — 1	2.12 — 3	7.24 + 5
3,9	4723.5	9.05 — 2	9.91 — 4	2.96 + 5
4,1	2814.3	9.03 — 2	1.66 — 3	1.40 + 6
4,2	2953.2	5.43 — 1	9.51 — 3	7.27 + 6
4,3	3104.0	1.21 — 1	2.01 — 3	1.39 + 6
4,4	3268.1	3.92 — 1	6.21 — 3	3.87 + 6
4,5	3446	6.03 — 2	9.05 — 4	5.08 + 5
4,6	3641.7	9.05 — 2	1.29 — 3	6.46 + 5
4,7	3857.9	3.02 — 1	4.04 — 3	1.81 + 6
4,8	4094.8	3.62 — 1	4.57 — 3	1.82 + 6
4,9	4355.0	2.42 — 1	2.87 — 2	1. 0 + 7

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 18

Absolute Transition Probabilities
for Bands of the N_2^+ First Negative System

Band	Wavelength (Å)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
—	—	—	—	—
0,0	3914.4	3.90 — 1	1.90 — 2	1.24 + 7
0,1	4278.1	1.66 — 1	6.03 — 3	2.20 + 6
0,2	4709.2	5.06 — 2	1.67 — 3	5.01 + 5
0,3	5228.3	1.45 — 2	4.29 — 4	1.05 + 5
1,0	3582.1	1.52 — 1	6.58 — 3	3.42 + 6
1,1	3884.3	1.52 — 1	6.07 — 3	2.68 + 6
1,2	4236.6	1.95 — 1	7.15 — 3	2.66 + 6
1,3	4651.8	1.88 — 1	6.27 — 3	1.93 + 6
1,4	5148.8	3.61 — 2	1.09 — 3	2.74 + 5
2,0	3308.0	2.89 — 2	1.36 — 3	8.26 + 5
2,1	3563.9	2.09 — 1	9.13 — 3	4.79 + 6
2,2	3857.9	4.34 — 2	1.75 — 3	7.82 + 5
2,3	4199.1	1.66 — 1	6.15 — 3	2.32 + 6
2,4	4599.7	1.23 — 1	4.15 — 4	1.31 + 5
3,1	3298.7	6.50 — 2	3.03 — 3	1.88 + 6
3,2	3548.9	2.24 — 1	9.80 — 3	5.19 + 6

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 19

Absolute Transition Probabilities
for Bands of the NOβ System

Band	Wavelength (A)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
—	—	—	—	—
0,4	2621	1.73 — 3	4.97 — 5	4.84 + 4
0,5	2748	4.13 — 3	1.13 — 4	1.01 + 5
0,6	2885	7.75 — 3	2.02 — 4	1.63 + 5
0,7	3035	1.17 — 2	2.90 — 4	2.11 + 5
0,8	3198	1.44 — 2	3.39 — 4	2.22 + 5
0,9	3376	1.47 — 2	3.28 — 4	1.93 + 5
0,10	3572	1.24 — 2	2.61 — 4	1.37 + 5
0,11	3789	8.82 — 3	1.75 — 4	8.17 + 4
0,12	4028	5.22 — 3	9.75 — 5	4.03 + 4
0,13	4294	2.55 — 3	4.47 — 5	2.77 + 4
1,4	2552	4.89 — 3	1.44 — 4	1.48 + 5
1,5	2672	7.67 — 3	2.13 — 4	2.0 + 5
1,6	2803	7.99 — 3	2.15 — 4	1.84 + 5
1,7	2943	4.94 — 3	1.26 — 4	9.72 + 4
1,10	3446	4.75 — 3	1.04 — 4	5.87 + 5
1,11	3647	1.08 — 2	2.23 — 4	1.13 + 5
1,12	3868	1.42 — 2	2.76 — 4	1.23 + 5
1,13	4114	1.29 — 2	2.35 — 4	9.31 + 4
2,2	2288	1.79 — 3	5.89 — 5	7.5 + 4
2,3	2382	4.28 — 3	1.35 — 4	1.59 + 5
2,4	2488	6.25 — 3	1.89 — 4	2.04 + 5
2,5	2602	5.18 — 3	1.50 — 4	1.49 + 5
2,6	2725	1.58 — 3	4.36 — 5	3.93 + 4
2,8	3003	3.37 — 3	8.44 — 5	6.27 + 4
2,9	3150	6.73 — 3	1.60 — 4	1.07 + 5
2,10	3331	4.92 — 3	1.11 — 4	6.67 + 4
2,11	3518	6.57 — 4	1.41 — 5	7.64 + 3
2,13	3950	7.67 — 3	1.47 — 4	6.31 + 4
3,0	2063	1.40 — 4	5.10 — 6	7.97 + 3
3,1	2144	1.04 — 3	3.66 — 5	5.33 + 4
3,2	2232	3.24 — 3	1.09 — 4	1.47 + 5
3,3	2327	5.34 — 3	1.73 — 4	1.96 + 5
3,4	2428	4.35 — 3	1.35 — 4	1.53 + 5
3,5	2536	9.64 — 4	2.86 — 5	2.98 + 4
3,8	2916	4.60 — 3	1.19 — 4	9.38 + 4
4,0	2021	3.27 — 4	1.22 — 5	2.00 + 4
4,1	2100	1.92 — 3	6.88 — 5	1.07 + 5
4,4	2372	1.35 — 3	4.28 — 5	5.09 + 4
5,0	1982	6.43 — 4	2.45 — 5	4.17 + 4
5,2	2139	4.71 — 3	1.66 — 4	2.43 + 5
5,3	2230	2.49 — 3	8.43 — 5	1.14 + 5
5,4	2319	2.25 — 6	7.30 — 8	9.11 + 1
5,6	2524	3.14 — 3	9.36 — 5	9.85 + 4
6,0	1945	1.09 — 3	4.24 — 5	7.5 + 4
6,1	2018	3.81 — 3	1.42 — 4	2.34 + 5
6,2	2096	3.98 — 3	1.43 — 4	2.18 + 5
6,3	2179	6.38 — 4	2.21 — 5	3.12 + 4

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 20

Absolute Transition Probabilities for Bands of the NOγ System

Band	Wavelength (Å)	$p_{v'v''}(a_o^2 e^2)$	$f_{v'v''}$	$A_{v'v''}(sec^{-1})$
—	—	—	—	—
0,0	2262	1.26 — 2	4.14 — 4	5.42 + 5
0,1	2362	2.30 — 2	7.38 — 4	8.80 + 5
0,2	2470	2.46 — 2	7.53 — 4	8.27 + 5
0,3	2586	2.13 — 2	6.20 — 4	6.21 + 5
0,4	2712	1.79 — 2	4.98 — 4	4.54 + 5
0,5	2848	1.40 — 2	3.71 — 4	3.07 + 5
0,6	2998	9.77 — 3	2.46 — 4	1.83 + 5
0,7	3171	6.28 — 3	1.51 — 4	1.01 + 5
1,0	2148	2.26 — 3	7.94 — 4	1.15 + 6
1,1	2238	7.76 — 3	2.62 — 4	3.45 + 5
1,2	2338	6.67 — 5	2.15 — 6	2.63 + 3
1,3	2439	7.12 — 3	2.20 — 4	2.48 + 5
1,4	2550	1.67 — 2	4.95 — 4	5.11 + 5
1,5	2670	2.27 — 2	6.43 — 4	6.04 + 5
1,6	2800	2.58 — 2	6.97 — 4	5.96 + 5
1,7	2041	2.42 — 2	6.23 — 4	4.82 + 5
2,0	2047	1.84 — 2	6.81 — 4	1.09 + 6
2,1	2128	0.90 — 3	3.52 — 5	5.20 + 4
2,2	2215	1.13 — 2	3.84 — 4	5.25 + 5
2,3	2309	6.08 — 3	1.98 — 4	2.49 + 5
2,4	2410	5.20 — 5	1.63 — 6	1.88 + 3
2,5	2516	3.88 — 3	1.16 — 4	1.21 + 5
2,6	2630	1.10 — 2	3.74 — 4	3.66 + 5
2,7	2754	2.37 — 2	6.51 — 4	5.75 + 5
3,0	1956	9.55 — 3	3.54 — 4	6.10 + 5
3,1	2030	1.22 — 2	4.53 — 4	7.37 + 5
3,2	2109	3.25 — 3	1.16 — 4	1.75 + 5
3,3	2193	2.66 — 3	9.14 — 5	1.27 + 5
3,4	2283	8.84 — 3	2.93 — 4	3.76 + 5
3,5	2379	4.62 — 3	1.44 — 4	1.70 + 5
3,6	2481	6.30 — 5	1.92 — 6	2.09 + 5
3,7	2580	3.04 — 3	8.83 — 5	8.91 + 5
4,0	1878	2.98 — 3	1.20 — 4	2.28 + 5
4,1	1740	1.43 — 2	5.59 — 4	9.98 + 5
4,2	2019	2.22 — 3	8.30 — 5	1.37 + 5
4,3	2096	8.28 — 3	2.99 — 4	4.56 + 5
5,0	1803	6.76 — 4	2.84 — 5	5.86 + 4
5,1	1866	7.84 — 3	3.18 — 4	6.12 + 5
5,2	1933	1.18 — 2	4.61 — 4	8.24 + 5
5,3	2003	2.27 — 4	8.57 — 6	1.43 + 4
5,4	2078	6.72 — 3	2.45 — 4	3.80 + 5
5,5	2160	3.52 — 3	1.24 — 4	1.78 + 5
6,0	1735	1.10 — 4	4.82 — 6	1.07 + 3
6,1	1795	2.55 — 3	1.08 — 4	2.25 + 5
6,2	1855	1.16 — 2	4.72 — 4	9.19 + 5

Ref. 1 Nicholls, R.W., Annales de Geophysique 20, 144 (1964).

TABLE 21

The Vibrational Matrix Elements ($M^{v''v'} \times 10^{21}$)
for V-R Transitions $X^2\Pi - X^2\Pi$ in NO

v'' \ v'	1	2	3	4	5	6	7	8
0	72.619	10.138	-1.671	-0.559	-0.157	0.0	0.0	0.0
1	0.0	104.208	17.624	-3.542	-1.148	-0.360	0.0	0.0
2	0.0	0.0	129.520	24.854	-5.924	-2.057	-0.677	0.0
3	0.0	0.0	0.0	151.888	32.134	-8.848	-3.472	-1.143
4	0.0	0.0	0.0	0.0	172.710	39.550	-12.349	-5.535
5	0.0	0.0	0.0	0.0	0.0	192.602	47.124	-16.422
6	0.0	0.0	0.0	0.0	0.0	0.0	211.870	54.827
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	230.601
v'' \ v'	9	10	11	12	13	14	15	
4	-1.753	0.0	0.0	0.0	0.0	0.0	0.0	
5	-8.311	-2.455	0.0	0.0	0.0	0.0	0.0	
6	-21.008	-11.762	-3.161	0.0	0.0	0.0	0.0	
7	62.595	-26.012	-15.764	-3.755	0.0	0.0	0.0	
8	248.760	70.363	-31.321	-20.138	-4.120	0.0	0.0	
9	0.0	266.290	78.075	-36.832	-24.684	-4.152	0.0	
10	0.0	0.0	283.116	85.702	-42.454	-29.210	-3.759	
11	0.0	0.0	0.0	299.180	93.241	-48.115	-22.540	
12	0.0	0.0	0.0	0.0	314.480	100.710	-53.753	
13	0.0	0.0	0.0	0.0	0.0	329.010	108.160	
14	0.0	0.0	0.0	0.0	0.0	0.0	342.781	

Ref. 1 Churchill, D.R., B.H. Armstrong and K.G. Mueller, Absorption Coefficients of Heated Air: A Compilation to 24,000°K, LMSC 4-77-65-1, July, 1965.

TABLE 22

Franck-Condon Factors for the N_2 ($b' {}^1\Sigma_u^+ - X {}^1\Sigma_g^+$)
Birge-Hopfield No. 1 System

v'	v''						
	0	1	2	3	4	5	6
0	2.1190-7	2.9921-6	2.1884-5	1.0971-4	4.2151-4	1.3171-3	3.4716-3
1	2.7849-6	3.4604-5	2.2112-4	9.5936-4	3.1524-3	8.3013-3	1.8101-2
2	1.8669-5	2.0290-4	1.1238-3	4.1742-3	1.1554-2	2.5089-2	4.3828-2
3	8.5095-5	8.0341-4	3.8204-3	1.1986-2	2.7389-2	4.7522-2	6.3144-2
4	2.9664-6	2.4137-3	9.7434-3	2.5373-2	4.6537-2	6.1416-2	5.6360-2
5	8.4338-4	5.8603-3	1.9804-2	4.1831-2	5.9053-2	5.4340-2	2.7371-2
6	2.0367-3	1.1957-2	3.3239-2	5.5152-2	5.5978-5	2.9782-2	3.0393-3
	7	8	9	10	11	12	13
0	7.9072-3	1.5831-2	2.8210-2	4.5158-2	6.5404-2	8.6174-2	1.0372-1
1	3.3321-2	5.2317-2	7.0244-2	8.0177-2	7.6375-2	5.8193-2	3.1969-2
2	6.2072-2	7.0591-2	6.2211-2	3.8661-2	1.2476-2	5.3382-5	9.5731-3
3	6.2689-2	4.2684-2	1.4943-2	1.4776-4	9.7782-3	3.3398-2	4.6879-2
4	3.1176-2	5.4214-3	2.1711-3	2.2324-2	4.0811-2	3.4640-2	1.1261-2
5	2.7340-3	5.3553-3	2.8169-2	3.8433-2	2.1321-2	1.3800-3	7.4268-3
6	5.8297-3	2.9014-2	3.4894-2	1.3957-2	1.7964-5	1.5049-2	3.2478-2
	14	15	16	17	18	19	20
0	1.1442-1	1.1595-1	1.0813-1	9.2899-2	7.3580-2	5.3735-2	3.6175-2
1	8.9762-3	2.1381-6	9.6578-3	3.3955-2	6.2614-2	8.4465-2	9.2570-2
2	3.3555-2	5.3490-2	5.3909-2	3.4531-2	1.0367-2	1.0483-5	1.2100-2
3	3.6128-2	1.2112-2	2.4528-6	1.2953-2	3.8361-2	5.1042-2	3.8781-2
4	1.1900-4	1.5406-2	3.7429-2	3.7755-2	1.5946-2	1.6971-4	1.1410-2
5	2.9736-2	3.4215-2	1.3956-2	9.4965-9	1.4218-2	3.5984-2	3.3118-2
6	2.2115-2	1.8886-3	7.0055-3	2.8850-2	2.9672-2	7.9907-3	1.4963-3
	21	22	23	24	25	26	27
0	2.2435-2	1.2804-2	6.7151-3	3.2302-3	1.4220-3	5.7133-4	2.0881-4
1	8.6338-2	7.0204-2	5.0455-2	3.2307-2	1.8514-2	9.5167-3	4.3901-3
2	4.0365-2	6.9563-2	8.6062-2	8.4950-2	7.0140-2	4.9651-2	3.0553-2
3	1.3774-2	5.5983-5	1.1550-2	4.1815-2	7.1932-2	8.5977-2	8.0219-2
4	3.7500-2	4.8499-2	3.2247-2	7.2453-3	1.2946-3	2.3401-2	5.8100-2
5	9.8604-3	6.3770-4	2.0551-2	4.4596-2	4.2193-2	1.6791-2	8.9475-5
6	2.2638-2	3.7228-2	2.1406-2	1.0002-3	1.0148-2	3.8019-2	4.5685-2

Ref. 1 Churchill, D.R. and S.A. Hagstrom, Infrared Absorption in Heated Air from Vibration-Rotation Bands of Nitric Oxide, LMSC 2-12-64-2, December, 1964.

C. Absorption Coefficients (1000 - 24,000°K)

1. Spectral Absorption Coefficients

The tables of absorption coefficients of heated air were produced with the aid of the SACHA digital computer programs. Relevant theory of the molecular and atomic radiative processes which contribute to absorption in heated air as well as the averaging procedure used in constructing average absorption coefficients has been thoroughly covered in the literature (see D. R. Churchill, B. H. Armstrong, R. R. Johnston, and K. G. Müller, JQSRT 6, 371 (1966) and references cited therein).

The absorption coefficients listed have been averaged over energy intervals of 0.1 eV, with these intervals centered at the corresponding listed energy. Tables are grouped according to temperature and these groups are arranged sequentially with increasing temperature. There are 24 such groups, one for each temperature from 1,000°K to 24,000°K at 1,000°K intervals. Within each temperature block are eight tables of two pages each with a table for each density; densities are taken at integral powers of ten from ten times normal atmospheric to 10^{-6} times normal. The photon-energy range covered in each table is 10.7 - 0.6 eV.

The difference in headings on the two pages of each table is a result of the large number of absorbers included in the calculation.

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R B. DS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-08	0.	0.	0.	0.	0.	0.	0.	1.08E-08
2	10.60	0.	0.	3.92E-09	0.	0.	0.	0.	0.	0.	0.	3.92E-09
3	10.50	0.	0.	9.09E-10	0.	0.	0.	0.	0.	0.	0.	9.09E-10
4	10.40	0.	0.	4.66E-10	0.	0	0.	0.	0.	0.	0.	4.66E-10
5	10.30	0.	0.	1.20E-10	0.	0.	0.	0.	0.	0.	0.	1.20E-10
6	10.20	0.	0.	4.03E-11	0.	0.	0.	0.	0.	0.	0.	4.03E-11
7	10.10	0.	0.	2.33E-11	0.	0.	0.	0.	0.	0.	0.	2.33E-11
8	10.00	0.	0.	2.91E-12	0.	0.	0.	0.	0.	0.	0.	2.91E-12
9	9.90	0.	0.	2.04E-12	0.	0.	0.	0.	0.	0.	0.	2.04E-12
10	9.80	0.	0.	7.44E-13	0.	0.	0.	0.	0.	0.	0.	7.44E-13
11	9.70	0.	0.	9.89E-14	0.	0.	0.	0.	0.	0.	0.	9.89E-14
12	9.60	0.	0.	1.13E-13	0.	0.	0.	0.	0.	0.	0.	1.13E-13
13	9.50	0.	3.72E 01	1.21E-14	0.	0.	0.	0.	0.	0.	0.	3.72E 01
14	9.40	0.	1.38E 02	6.32E-15	0.	0.	0.	0.	0.	0.	0.	1.38E 02
15	9.30	0.	2.38E 02	3.07E-15	0.	0.	0.	0.	0.	0.	0.	2.38E 02
16	9.20	0.	3.38E 02	1.67E-16	0.	0.	0.	0.	0.	0.	0.	3.38E 02
17	9.10	0.	4.64E 02	4.77E-17	0.	0.	0.	0.	0.	0.	0.	4.64E 02
18	9.00	0.	5.95E 02	3.43E-17	0.	0.	0.	0.	0.	0.	0.	5.95E 02
19	8.90	0.	7.26E 02	2.57E-17	0.	0.	0.	0.	0.	0.	0.	7.26E 02
20	8.80	0.	7.78E 02	6.95E-18	0.	0.	0.	0.	0.	0.	0.	7.78E 02
21	8.70	0.	7.69E 02	1.05E-18	0.	0.	0.	0.	0.	0.	0.	7.69E 02
22	8.60	0.	7.60E 02	1.21E-18	0.	0.	0.	0.	0.	0.	0.	7.60E 02
23	8.50	0.	7.35E 02	8.34E-20	0.	0.	0.	0.	0.	0.	0.	7.35E 02
24	8.40	0.	6.91E 02	1.06E-19	0.	0.	0.	0.	0.	0.	0.	6.91E 02
25	8.30	0.	6.40E 02	9.85E-21	0.	0.	0.	0.	0.	0.	0.	6.40E 02
26	8.20	0.	5.82E 02	6.51E-21	0.	0.	0.	0.	0.	0.	0.	5.82E 02
27	8.10	0.	5.21E 02	1.16E-21	0.	0.	0.	0.	0.	0.	0.	5.21E 02
28	8.00	0.	4.60E 02	4.83E-22	0.	0.	0.	0.	0.	0.	0.	4.60E 02
29	7.90	0.	3.94E 02	1.20E-22	0.	0.	0.	0.	0.	0.	0.	3.94E 02
30	7.80	0.	3.27E 02	4.74E-23	0.	0.	0.	0.	0.	0.	0.	3.27E 02
31	7.70	0.	2.68E 02	1.39E-23	0.	0.	0.	0.	0.	0.	0.	2.68E 02
32	7.60	0.	2.17E 02	3.41E-24	0.	3.54E-12	0.	0.	0.	0.	0.	2.17E 02
33	7.50	0.	1.66E 02	1.11E-24	0.	2.49E-07	0.	0.	0.	0.	0.	1.66E 02
34	7.40	0.	1.26E 02	2.47E-25	0.	4.83E-06	0.	0.	0.	0.	0.	1.26E 02
35	7.30	0.	8.95E 01	7.11E-26	0.	4.24E-08	0.	0.	0.	0.	0.	8.95E 01
36	7.20	0.	6.79E 01	1.74E-26	0.	4.99E-05	0.	0.	0.	0.	0.	6.79E 01
37	7.10	0.	4.74E 01	4.85E-27	0.	6.42E-06	0.	0.	0.	0.	0.	4.74E 01
38	7.00	4.06E 00	0.	1.21E-27	0.	1.58E-05	0.	0.	0.	0.	0.	4.06E 00
39	6.90	4.40E 00	0.	3.30E-28	0.	3.07E-04	0.	0.	0.	0.	0.	4.40E 00
40	6.80	2.11E 00	0.	8.40E-29	0.	6.84E-07	0.	0.	0.	0.	0.	2.11E 00
41	6.70	8.49E-01	0.	2.16E-29	0.	2.21E-04	0.	0.	0.	0.	0.	8.50E-01
42	6.60	3.68E-01	0.	5.43E-30	0.	1.04E-03	0.	0.	0.	0.	0.	3.69E-01
43	6.50	1.12E-01	0.	1.21E-30	0.	5.39E-06	0.	0.	0.	0.	0.	1.12E-01
44	6.40	1.96E-01	0.	1.69E-31	1.76E-04	1.22E-03	0.	0.	0.	0.	0.	1.97E-01
45	6.30	2.01E-01	0.	1.14E-32	2.32E-04	2.36E-03	0.	0.	0.	0.	0.	2.04E-01
46	6.20	1.74E-01	0.	2.46E-34	2.13E-04	1.71E-05	0.	0.	0.	0.	0.	1.74E-01
47	6.10	2.23E-01	0.	3.03E-36	2.02E-04	5.08E-03	0.	0.	0.	0.	0.	2.28E-01
48	6.00	1.80E-01	0.	1.51E-38	5.72E-05	1.14E-03	0.	0.	0.	0.	0.	1.81E-01
49	5.90	9.83E-02	0.	0.	4.82E-05	3.35E-05	0.	0.	0.	0.	0.	9.84E-02
50	5.80	4.05E-02	0.	0.	2.94E-05	8.79E-04	0.	0.	0.	0.	0.	4.14E-02
51	5.70	9.56E-03	0.	0.	1.22E-05	7.69E-07	0	0.	0.	0.	0.	9.57E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-03	0.	0.	0.	8.48E-07	5.83E-05	0.	0.	0.	0.	0.	0.	8.25E-03
53	5.50	5.01E-03	0.	0.	0.	4.75E-06	3.76E-03	0.	0.	0.	0.	0.	0.	8.78E-03
54	5.40	1.63E-03	0.	0.	0.	2.69E-06	1.51E-06	0.	0.	0.	0.	0.	0.	1.43E-03
55	5.30	8.17E-04	0.	0.	0.	7.51E-07	2.81E-04	0.	0.	0.	0.	0.	0.	1.08E-03
56	5.20	9.54E-05	0.	0.	0.	4.36E-07	1.77E-04	0.	0.	0.	0.	0.	0.	2.72E-04
57	5.10	8.14E-05	0.	0.	0.	1.16E-07	4.60E-06	0.	4.33E-04	0.	0.	0.	0.	5.19E-04
58	5.00	5.19E-05	0.	0.	0.	3.85E-08	2.78E-05	0.	4.50E-04	0.	0.	0.	0.	5.29E-04
59	4.90	3.92E-05	0.	0.	0.	2.38E-08	1.79E-07	0.	4.67E-04	0.	0.	0.	0.	5.06E-04
60	4.80	2.12E-05	0.	0.	0.	3.37E-08	1.[illegible]36	0.	4.90E-04	0.	0.	0.	0.	5.13E-04
61	4.70	9.60E-06	0.	0.	0.	1.53E-08	8.38E-09	0.	5.16E-04	0.	0.	0.	0.	5.26E-04
62	4.60	4.33E-06	0.	0.	0.	5.09E-09	1.24E-07	0.	5.42E-04	0.	0.	0.	0.	5.47E-04
63	4.50	1.50E-06	0.	0.	0.	2.35E-09	4.20E-10	0.	5.67E-04	0.	0.	0.	0.	5.69E-04
64	4.40	5.17E-07	0.	0.	0.	6.29E-10	6.40E-09	0.	5.94E-04	0.	0.	0.	0.	5.94E-04
65	4.30	2.04E-07	0.	0.	0.	3.13E-10	1.48E-09	0.	6.31E-04	0.	0.	0.	0.	6.31E-04
66	4.20	6.09E-08	0.	0.	0.	8.83E-11	2.34E-10	0.	6.74E-04	0.	0.	0.	0.	6.74E-04
67	4.10	3.34E-08	0.	0.	0.	3.46E-11	2.27E-10	0.	7.21E-04	0.	0.	0.	0.	7.21E-04
68	4.00	8.11E-09	0.	0.	0.	1.33E-11	5.34E-12	0.	7.79E-04	0.	0.	0.	0.	7.79E-04
69	3.90	1.82E-09	0.	0.	0.	3.07E-12	1.53E-11	0.	8.42E-04	0.	0.	0.	0.	8.42E-04
70	3.80	1.27E-09	0.	0.	0.	1.91E-12	0.	0.	9.18E-04	0.	0.	0.	0.	9.18E-04
71	3.70	2.03E-10	0.	0.	0.	2.51E-13	0.	0.	10.00E-04	0.	0.	0.	0.	10.00E-04
72	3.60	7.18E-11	0.	0.	0.	2.19E-13	0.	0.	1.10E-03	0.	0.	0.	0.	1.10E-03
73	3.50	2.87E-11	0.	0.	0.	2.06E-14	0.	0.	1.21E-03	0.	0.	0.	0.	1.21E-03
74	3.40	5.45E-12	0.	0.	0.	1.96E-14	0.	0.	1.34E-03	0.	0.	0.	0.	1.34E-03
75	3.30	1.93E-12	0.	0.	0.	1.80E-15	0.	0.	1.39E-03	0.	0.	0.	0.	1.39E-03
76	3.20	4.90E-13	0.	0.	0.	1.38E-15	0.	0.	1.42E-03	0.	0.	0.	0.	1.42E-03
77	3.10	1.12E-13	0.	0.	0.	1.60E-16	0.	0.	1.43E-03	0.	0.	0.	0.	1.43E-03
78	3.00	3.06E-14	0.	0.	0.	7.92E-17	0.	0.	1.38E-03	0.	0.	0.	0.	1.38E-03
79	2.90	6.95E-15	0.	0.	0.	8.02E-18	0.	0.	1.34E-03	0.	0.	0.	0.	1.34E-03
80	2.80	2.05E-15	0.	0.	0.	1.51E-18	0.	0.	1.24E-03	0.	0.	0.	0.	1.24E-03
81	2.70	2.50E-16	0.	0.	0.	1.56E-20	0.	0.	1.13E-03	0.	0.	0.	0.	1.13E-03
82	2.60	4.84E-18	0.	0.	0.	1.45E-22	0.	0.	1.01E-03	0.	0.	0.	0.	1.01E-03
83	2.50	4.94E-20	0.	0.	0.	1.72E-24	0.	0.	8.75E-04	0.	0.	0.	0.	8.75E-04
84	2.40	0.	0.	0.	0.	1.64E-26	0.	0.	7.56E-04	0.	0.	0.	0.	7.56E-04
85	2.30	0.	0.	0.	0.	0.	0.	0.	5.92E-04	0.	0.	0.	0.	5.92E-04
86	2.20	0.	0.	0.	0.	0.	0.	0.	4.49E-04	0.	0.	0.	0.	4.49E-04
87	2.10	0.	0.	0.	0.	0.	0.	0.	3.28E-04	0.	0.	0.	0.	3.28E-04
88	2.00	0.	0.	0.	0.	0.	0.	0.	2.17E-04	0.	0.	0.	0.	2.17E-04
89	1.90	0.	0.	0.	0.	0.	0.	0.	1.43E-04	0.	0.	0.	0.	1.43E-04
90	1.80	0.	0.	0.	0.	0.	0.	0.	8.32E-05	0.	0.	0.	0.	8.32E-05
91	1.70	0.	0.	0.	0.	0.	0.	0.	4.65E-05	0.	0.	0.	0.	4.65E-05
92	1.60	0.	0.	0.	0.	0.	0.	0.	2.44E-05	0.	0.	0.	0.	2.44E-05
93	1.50	0.	0.	0.	0.	0.	0.	0.	9.97E-06	0.	0.	0.	0.	9.97E-06
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-09	0.	0.	0.	0.	0.	1.46E-09
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-12	0.	0.	0.	0.	0.	2.21E-12
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-08	0.	0.	0.	0.	0.	1.38E-08
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-11	0.	0.	0.	0.	0.	3.24E-11
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-08	0.	0.	0.	0.	0.	9.34E-08
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-10	0.	0.	0.	0.	0.	8.06E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)		N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-09	0.	0.	0.	0.	0.	0.	0.	0.	1.08E-09
2	10.60	0.	0.	3.92E-10	0.	0.	0.	0.	0.	0.	0.	0.	3.92E-10
3	10.50	0.	0.	9.09E-11	0.	0.	0.	0.	0.	0.	0.	0.	9.09E-11
4	10.40	0.	0.	4.66E-11	0.	0.	0.	0.	0.	0.	0.	0.	4.66E-11
5	10.30	0.	0.	1.20E-11	0.	0.	0.	0.	0.	0.	0.	0.	1.70E-11
6	10.20	0.	0.	4.03E-12	0.	0.	0.	0.	0.	0.	0.	0.	4.03E-12
7	10.10	0.	0.	2.33E-12	0.	0.	0.	0.	0.	0.	0.	0.	2.33E-12
8	10.00	0.	0.	2.91E-13	0.	0.	0.	0.	0.	0.	0.	0.	2.91E-13
9	9.90	0.	0.	2.04E-13	0.	0.	0.	0.	0.	0.	0.	0.	2.04E-13
10	9.80	0.	0.	7.44E-14	0.	0.	0.	0.	0.	0.	0.	0.	7.44E-14
11	9.70	0.	0.	9.89E-15	0.	0.	0.	0.	0.	0.	0.	0.	9.89E-15
12	9.60	0.	0.	1.13E-14	0.	0.	0.	0.	0.	0.	0.	0.	1.13E-14
13	9.50	0.	3.72E 00	1.21E-15	0.	0.	0.	0.	0.	0.	0.	0.	3.72E 00
14	9.40	0.	1.38E 01	6.32E-16	0.	0.	0.	0.	0.	0.	0.	0.	1.38E 01
15	9.30	0.	2.38E 01	3.07E-16	0.	0.	0.	0.	0.	0.	0.	0.	2.38E 01
16	9.20	0.	3.38E 01	1.49E-17	0.	0.	0.	0.	0.	0.	0.	0.	3.38E 01
17	9.10	0.	4.64E 01	4.77E-17	0.	0.	0.	0.	0.	0.	0.	0.	4.64E 01
18	9.00	0.	5.95E 01	3.43E-18	0.	0.	0.	0.	0.	0.	0.	0.	5.95E 01
19	8.90	0.	7.26E 01	2.57E-18	0.	0.	0.	0.	0.	0.	0.	0.	7.26E 01
20	8.80	0.	7.78E 01	6.95E-19	0.	0.	0.	0.	0.	0.	0.	0.	7.78E 01
21	8.70	0.	7.69E 01	1.05E-19	0.	0.	0.	0.	0.	0.	0.	0.	7.69E 01
22	8.60	0.	7.60E 01	1.21E-19	0.	0.	0.	0.	0.	0.	0.	0.	7.60E 01
23	8.50	0.	7.35E 01	8.34E-21	0.	0.	0.	0.	0.	0.	0.	0.	7.35E 01
24	8.40	0.	6.91E 01	7.06E-20	0.	0.	0.	0.	0.	0.	0.	0.	6.91E 01
25	8.30	0.	6.40E 01	9.85E-22	0.	0.	0.	0.	0.	0.	0.	0.	6.40E 01
26	8.20	0.	5.82E 01	6.91E-22	0.	0.	0.	0.	0.	0.	0.	0.	5.82E 01
27	8.10	0.	5.21E 01	1.16E-22	0.	0.	0.	0.	0.	0.	0.	0.	5.21E 01
28	8.00	0.	4.68E 01	4.83E-23	0.	0.	0.	0.	0.	0.	0.	0.	4.68E 01
29	7.90	0.	3.94E 01	1.20E-23	0.	0.	0.	0.	0.	0.	0.	0.	3.94E 01
30	7.80	0.	3.27E 01	4.74E-24	0.	0.	0.	0.	0.	0.	0.	0.	3.27E 01
31	7.70	0.	2.68E 01	1.39E-24	0.	0.	0.	0.	0.	0.	0.	0.	2.68E 01
32	7.60	0.	2.17E 01	3.41E-25	0.	3.54E-13	0.	0.	0.	0.	0.	0.	2.17E 01
33	7.50	0.	1.66E 01	1.11E-25	0.	2.49E-08	0.	0.	0.	0.	0.	0.	1.66E 01
34	7.40	0.	1.26E 01	2.47E-26	0.	4.83E-07	0.	0.	0.	0.	0.	0.	1.26E 01
35	7.30	0.	8.95E 00	7.11E-27	0.	4.24E-09	0.	0.	0.	0.	0.	0.	8.95E 00
36	7.20	0.	6.79E 00	1.74E-27	0.	4.99E-06	0.	0.	0.	0.	0.	0.	6.79E 00
37	7.10	0.	4.74E 00	4.05E-28	0.	6.42E-07	0.	0.	0.	0.	0.	0.	4.74E 00
38	7.00	4.06E-01	0.	1.21E-28	0.	1.58E-06	0.	0.	0.	0.	0.	0.	4.06E-01
39	6.90	4.40E-01	0.	3.30E-29	0.	3.07E-05	0.	0.	0.	0.	0.	0.	4.40E-01
40	6.80	2.11E-01	0.	8.40E-30	0.	6.84E-08	0.	0.	0.	0.	0.	0.	2.11E-01
41	6.70	8.49E-02	0.	2.16E-30	0.	2.21E-05	0.	0.	0.	0.	0.	0.	8.50E-02
42	6.60	3.68E-02	0.	5.43E-31	0.	1.04E-04	0.	0.	0.	0.	0.	0.	3.69E-02
43	6.50	1.12E-02	0.	1.21E-31	0.	5.39E-07	0.	0.	0.	0.	0.	0.	1.12E-02
44	6.40	1.96E-02	0.	1.69E-32	1.76E-05	1.22E-04	0.	0.	0.	0.	0.	0.	1.97E-02
45	6.30	2.01E-02	0.	1.14E-33	2.32E-05	2.36E-04	0.	0.	0.	0.	0.	0.	2.04E-02
46	6.20	1.74E-02	0.	2.46E-35	2.13E-05	1.71E-06	0.	0.	0.	0.	0.	0.	1.74E-02
47	6.10	2.23E-02	0.	3.03E-37	2.02E-05	5.08E-04	0.	0.	0.	0.	0.	0.	2.28E-02
48	6.00	1.80E-02	0.	1.51E-39	5.72E-06	1.14E-04	0.	0.	0.	0.	0.	0.	1.81E-02
49	5.90	9.83E-03	0.	0.	4.82E-06	3.35E-06	0.	0.	0.	0.	0.	0.	9.84E-03
50	5.80	4.05E-03	0.	0.	2.94E-06	8.79E-05	0.	0.	0.	0.	0.	0.	4.14E-03
51	5.70	9.56E-04	0.	0.	1.22E-06	7.69E-08	0.	0.	0.	0.	0.	0.	9.57E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-04	0.	0.	0.	8.48E-08	9.83E-06	0.	0.	0.	0.	0.	0.	8.25E-04
53	5.50	5.01E-04	0.	0.	0.	4.75E-07	3.76E-04	0.	0.	0.	0.	0.	0.	8.78E-04
54	5.40	1.63E-04	0.	0.	0.	2.69E-07	1.51E-07	0.	0.	0.	0.	0.	0.	1.63E-04
55	5.30	8.17E-05	0.	0.	0.	7.51E-08	2.61E-05	0.	0.	0.	0.	0.	0.	1.08E-04
56	5.20	9.54E-06	0.	0.	0.	4.36E-08	1.77E-05	0.	0.	0.	0.	0.	0.	2.72E-05
57	5.10	8.14E-06	0.	0.	0.	1.16E-08	4.60E-07	0.	1.37E-05	0.	0.	0.	0.	2.23E-05
58	5.00	5.19E-06	0.	0.	0.	3.85E-09	2.78E-06	0.	1.42E-05	0.	0.	0.	0.	2.22E-05
59	4.90	3.92E-06	0.	0.	0.	2.38E-09	1.79E-08	0.	1.48E-05	0.	0.	0.	0.	1.87E-05
60	4.80	2.12E-06	0.	0.	0.	3.37E-09	1.88E-07	0.	1.55E-05	0.	0.	0.	0.	1.78E-05
61	4.70	9.60E-07	0.	0.	0.	1.53E-09	8.38E-10	0.	1.63E-05	0.	0.	0.	0.	1.73E-05
62	4.60	4.33E-07	0.	0.	0.	5.09E-10	1.24E-08	0.	1.72E-05	0.	0.	0.	0.	1.76E-05
63	4.50	1.50E-07	0.	0.	0.	2.35E-10	4.20E-11	0.	1.79E-05	0.	0.	0.	0.	1.81E-05
64	4.40	5.17E-08	0.	0.	0.	6.29E-11	6.40E-10	0.	1.88E-05	0.	0.	0.	0.	1.88E-05
65	4.30	2.04E-08	0.	0.	0.	3.13E-11	1.48E-10	0.	2.00E-05	0.	0.	0.	0.	2.00E-05
66	4.20	6.09E-09	0.	0.	0.	8.83E-12	2.34E-11	0.	2.13E-05	0.	0.	0.	0.	2.13E-05
67	4.10	3.34E-09	0.	0.	0.	3.46E-12	2.27E-11	0.	2.28E-05	0.	0.	0.	0.	2.28E-05
68	4.00	8.11E-10	0.	0.	0.	1.33E-12	5.36E-13	0.	2.47E-05	0.	0.	0.	0.	2.47E-05
69	3.90	1.82E-10	0.	0.	0.	3.07E-13	1.53E-12	0.	2.66E-05	0.	0.	0.	0.	2.66E-05
70	3.80	1.27E-10	0.	0.	0.	1.91E-13	0.	0.	2.90E-05	0.	0.	0.	0.	2.90E-05
71	3.70	2.03E-11	0.	0.	0.	2.51E-14	0.	0.	3.17E-05	0.	0.	0.	0.	3.17E-05
72	3.60	7.18E-12	0.	0.	0.	2.19E-14	0.	0.	3.48E-05	0.	0.	0.	0.	3.48E-05
73	3.50	2.87E-12	0.	0.	0.	2.06E-15	0.	0.	3.84E-05	0.	0.	0.	0.	3.84E-05
74	3.40	5.45E-13	0.	0.	0.	1.96E-15	0.	0.	4.24E-05	0.	0.	0.	0.	4.24E-05
75	3.30	1.93E-13	0.	0.	0.	1.80E-16	0.	0.	4.40E-05	0.	0.	0.	0.	4.40E-05
76	3.20	4.90E-14	0.	0.	0.	1.38E-16	0.	0.	4.48E-05	0.	0.	0.	0.	4.48E-05
77	3.10	1.12E-14	0.	0.	0.	1.60E-17	0.	0.	4.51E-05	0.	0.	0.	0.	4.51E-05
78	3.00	3.06E-15	0.	0.	0.	7.92E-18	0.	0.	4.37E-05	0.	0.	0.	0.	4.37E-05
79	2.90	6.95E-16	0.	0.	0.	8.02E-19	0.	0.	4.24E-05	0.	0.	0.	0.	4.24E-05
80	2.80	2.05E-16	0.	0.	0.	1.51E-19	0.	0.	3.92E-05	0.	0.	0.	0.	3.92E-05
81	2.70	2.50E-17	0.	0.	0.	1.56E-21	0.	0.	3.57E-05	0.	0.	0.	0.	3.57E-05
82	2.60	4.84E-19	0.	0.	0.	1.45E-23	0.	0.	3.21E-05	0.	0.	0.	0.	3.21E-05
83	2.50	4.94E-21	0.	0.	0.	1.72E-25	0.	0.	2.77E-05	0.	0.	0.	0.	2.77E-05
84	2.40	0.	0.	0.	0.	1.64E-27	0.	0.	2.39E-05	0.	0.	0.	0.	2.39E-05
85	2.30	0.	0.	0.	0.	0.	0.	0.	1.87E-05	0.	0.	0.	0.	1.87E-05
86	2.20	0.	0.	0.	0.	0.	0.	0.	1.42E-05	0.	0.	0.	0.	1.42E-05
87	2.10	0.	0.	0.	0.	0.	0.	0.	1.04E-05	0.	0.	0.	0.	1.04E-05
88	2.00	0.	0.	0.	0.	0.	0.	0.	6.85E-06	0.	0.	0.	0.	6.85E-06
89	1.90	0.	0.	0.	0.	0.	0.	0.	4.52E-06	0.	0.	0.	0.	4.52E-06
90	1.80	0.	0.	0.	0.	0.	0.	0.	2.63E-06	0.	0.	0.	0.	2.63E-06
91	1.70	0.	0.	0.	0.	0.	0.	0.	1.47E-06	0.	0.	0.	0.	1.47E-06
92	1.60	0.	0.	0.	0.	0.	0.	0.	7.73E-07	0.	0.	0.	0.	7.73E-07
93	1.50	0.	0.	0.	0.	0.	0.	0.	3.15E-07	0.	0.	0.	0.	3.15E-07
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-10	0.	0.	0.	0.	0.	1.46E-10
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-13	0.	0.	0.	0.	0.	2.21E-13
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-09	0.	0.	0.	0.	0.	1.38E-09
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-12	0.	0.	0.	0.	0.	3.24E-12
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-09	0.	0.	0.	0.	0.	9.34E-09
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-11	0.	0.	0.	0.	0.	8.06E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)		N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-10	0.	0.	0.	0.	0.	0.	0.	0.	1.08E-10
2	10.60	0.	0.	3.92E-11	0.	0.	0.	0.	0.	0.	0.	0.	3.92E-11
3	10.50	0.	0.	9.09E-12	0.	0.	0.	0.	0.	0.	0.	0.	9.09E-12
4	10.40	0.	0.	4.66E-12	0.	0.	0.	0.	0.	0.	0.	0.	4.66E-12
5	10.30	0.	0.	1.20E-12	0.	0.	0.	0.	0.	0.	0.	0.	1.20E-12
6	10.20	0.	0.	4.03E-13	0.	0.	0.	0.	0.	0.	0.	0.	4.03E-13
7	10.10	0.	0.	2.33E-13	0.	0.	0.	0.	0.	0.	0.	0.	2.33E-13
8	10.00	0.	0.	2.91E-14	0.	0.	0.	0.	0.	0.	0.	0.	2.91E-14
9	9.90	0.	0.	2.04E-14	0.	0.	0.	0.	0.	0.	0.	0.	2.04E-14
10	9.80	0.	0.	7.44E-15	0.	0.	0.	0.	0.	0.	0.	0.	7.44E-15
11	9.70	0.	0.	9.89E-16	0.	0.	0.	0.	0.	0.	0.	0.	9.89E-16
12	9.60	0.	0.	1.13E-15	0.	0.	0.	0.	0.	0.	0.	0.	1.13E-15
13	9.50	0.	3.72E-01	1.21E-16	0.	0.	0.	0.	0.	0.	0.	0.	3.72E-01
14	9.40	0.	1.38E 00	6.32E-17	0.	0.	0.	0.	0.	0.	0.	0.	1.38E 00
15	9.30	0.	2.38E 00	3.07E-17	0.	0.	0.	0.	0.	0.	0.	0.	2.38E 00
16	9.20	0.	3.38E 00	1.67E-18	0.	0.	0.	0.	0.	0.	0.	0.	3.38E 00
17	9.10	0.	4.64E 00	4.77E-18	0.	0.	0.	0.	0.	0.	0.	0.	4.64E 00
18	9.00	0.	5.95E 00	3.43E-19	0.	0.	0.	0.	0.	0.	0.	0.	5.95E 00
19	8.90	0.	7.26E 00	2.57E-19	0.	0.	0.	0.	0.	0.	0.	0.	7.26E 00
20	8.80	0.	7.78E 00	6.95E-20	0.	0.	0.	0.	0.	0.	0.	0.	7.78E 00
21	8.70	0.	7.69E 00	1.05E-20	0.	0.	0.	0.	0.	0.	0.	0.	7.69E 00
22	8.60	0.	7.60E 00	1.21E-20	0.	0.	0.	0.	0.	0.	0.	0.	7.60E 00
23	8.50	0.	7.35E 00	8.34E-22	0.	0.	0.	0.	0.	0.	0.	0.	7.35E 00
24	8.40	0.	6.91E 00	1.06E-21	0.	0.	0.	0.	0.	0.	0.	0.	6.91E 00
25	8.30	0.	6.40E 00	9.85E-23	0.	0.	0.	0.	0.	0.	0.	0.	6.40E 00
26	8.20	0.	5.82E 00	6.51E-23	0.	0.	0.	0.	0.	0.	0.	0.	5.82E 00
27	8.10	0.	5.21E 00	1.16E-23	0.	0.	0.	0.	0.	0.	0.	0.	5.21E 00
28	8.00	0.	4.60E 00	4.83E-24	0.	0.	0.	0.	0.	0.	0.	0.	4.60E 00
29	7.90	0.	3.94E 00	1.20E-24	0.	0.	0.	0.	0.	0.	0.	0.	3.94E 00
30	7.80	0.	3.27E 00	4.74E-25	0.	0.	0.	0.	0.	0.	0.	0.	3.27E 00
31	7.70	0.	2.68E 00	1.39E-25	0.	0.	0.	0.	0.	0.	0.	0.	2.68E 00
32	7.60	0.	2.17E 00	3.41E-26	0.	3.54E-14	0.	0.	0.	0.	0.	0.	2.17E 00
33	7.50	0.	1.66E 00	1.11E-26	0.	2.49E-09	0.	0.	0.	0.	0.	0.	1.66E 00
34	7.40	0.	1.26E 00	2.47E-27	0.	4.83E-08	0.	0.	0.	0.	0.	0.	1.26E 00
35	7.30	0.	8.95E-01	7.11E-28	0.	4.24E-10	0.	0.	0.	0.	0.	0.	8.95E-01
36	7.20	0.	6.79E-01	1.74E-28	0.	4.99E-07	0.	0.	0.	0.	0.	0.	6.79E-01
37	7.10	0.	4.74E-01	4.85E-29	0.	6.42E-08	0.	0.	0.	0.	0.	0.	4.74E-01
38	7.00	4.06E-02	0.	1.21E-29	0.	1.58E-07	0.	0.	0.	0.	0.	0.	4.06E-02
39	6.90	4.40E-02	0.	3.30E-30	0.	3.07E-06	0.	0.	0.	0.	0.	0.	4.40E-02
40	6.80	2.11E-02	0.	8.40E-31	0.	6.84E-09	0.	0.	0.	0.	0.	0.	2.11E-02
41	6.70	8.49E-03	0.	2.16E-31	0.	2.21E-06	0.	0.	0.	0.	0.	0.	8.50E-03
42	6.60	3.68E-03	0.	5.43E-32	0.	1.04E-05	0.	0.	0.	0.	0.	0.	3.69E-03
43	6.50	1.12E-03	0.	1.21E-32	0.	5.39E-08	0.	0.	0.	0.	0.	0.	1.12E-03
44	6.40	1.96E-03	0.	1.69E-33	1.76E-06	1.22E-05	0.	0.	0.	0.	0.	0.	1.97E-03
45	6.30	2.01E-03	0.	1.14E-34	2.32E-06	2.36E-05	0.	0.	0.	0.	0.	0.	2.04E-03
46	6.20	1.74E-03	0.	2.46E-36	2.13E-06	1.71E-07	0.	0.	0.	0.	0.	0.	1.74E-03
47	6.10	2.23E-03	0.	3.03E-38	2.02E-06	5.08E-05	0.	0.	0.	0.	0.	0.	2.28E-03
48	6.00	1.80E-03	0.	0.	5.72E-07	1.14E-05	0.	0.	0.	0.	0.	0.	1.81E-03
49	5.90	9.83E-04	0.	0.	4.82E-07	3.35E-07	0.	0.	0.	0.	0.	0.	9.84E-04
50	5.80	4.05E-04	0.	0.	2.94E-07	8.79E-06	0.	0.	0.	0.	0.	0.	4.14E-04
51	5.70	9.5[illegible]E-05	0.	0.	1.22E-07	7.69E-09	0.	0.	0.	0.	0.	0.	9.57E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-05	0.	0.	0.	8.48E-09	9.83E-07	0.	0.	0.	0.	0.	0.	8.25E-05
53	5.50	5.01E-05	0.	0.	0.	4.75E-08	3.76E-05	0.	0.	0.	0.	0.	0.	8.78E-05
54	5.40	1.63E-05	0.	0.	0.	2.69E-08	1.51E-08	0.	0.	0.	0.	0.	0.	1.63E-05
55	5.30	8.17E-06	0.	0.	0.	7.51E-09	2.61E-06	0.	0.	0.	0.	0.	0.	1.08E-05
56	5.20	9.54E-07	0.	0.	0.	4.36E-09	1.77E-06	0.	0.	0.	0.	0.	0.	2.72E-06
57	5.10	8.14E-07	0.	0.	0.	1.16E-09	4.60E-08	0.	4.33E-07	0.	0.	0.	0.	1.29E-06
58	5.00	5.19E-07	0.	0.	0.	3.85E-10	2.79E-07	0.	4.50E-07	0.	0.	0.	0.	1.24E-06
59	4.90	3.92E-07	0.	0.	0.	2.38E-10	1.79E-09	0.	4.67E-07	0.	0.	0.	0.	8.42E-07
60	4.80	2.12E-07	0.	0.	0.	3.37E-10	1.88E-08	0.	4.90E-07	0.	0.	0.	0.	7.22E-07
61	4.70	9.60E-08	0.	0.	0.	1.53E-10	8.35E-11	0.	5.16E-07	0.	0.	0.	0.	6.12E-07
62	4.60	4.33E-08	0.	0.	0.	5.09E-11	1.24E-09	0.	5.42E-07	0.	0.	0.	0.	5.87E-07
63	4.50	1.50E-08	0.	0.	0.	2.35E-11	4.20E-12	0.	5.67E-07	0.	0.	0.	0.	5.83E-07
64	4.40	5.17E-09	0.	0.	0.	6.29E-12	6.40E-11	0.	5.94E-07	0.	0.	0.	0.	5.99E-07
65	4.30	2.04E-09	0.	0.	0.	3.13E-12	1.48E-11	0.	6.31E-07	0.	0.	0.	0.	6.33E-07
66	4.20	6.09E-10	0.	0.	0.	8.83E-13	2.34E-12	0.	6.74E-07	0.	0.	0.	0.	6.74E-07
67	4.10	3.34E-10	0.	0.	0.	3.46E-13	2.27E-12	0.	7.21E-07	0.	0.	0.	0.	7.22E-07
68	4.00	8.11E-11	0.	0.	0.	1.33E-13	5.36E-14	0.	7.79E-07	0.	0.	0.	0.	7.79E-07
69	3.90	1.82E-11	0.	0.	0.	3.07E-14	1.53E-13	0.	8.42E-07	0.	0.	0.	0.	8.42E-07
70	3.80	1.27E-11	0.	0.	0.	1.91E-14	0.	0.	9.18E-07	0.	0.	0.	0.	9.18E-07
71	3.70	2.03E-12	0.	0.	0.	2.51E-15	0.	0.	1.00E-06	0.	0.	0.	0.	10.00E-07
72	3.60	7.18E-13	0.	0.	0.	2.19E-15	0.	0.	1.10E-06	0.	0.	0.	0.	1.10E-06
73	3.50	2.87E-13	0.	0.	0.	2.06E-16	0.	0.	1.21E-06	0.	0.	0.	0.	1.21E-06
74	3.40	5.45E-14	0.	0.	0.	1.56E-16	0.	0.	1.34E-06	0.	0.	0.	0.	1.34E-06
75	3.30	1.93E-14	0.	0.	0.	1.80E-17	0.	0.	1.39E-06	0.	0.	0.	0.	1.39E-06
76	3.20	4.90E-15	0.	0.	0.	1.38E-17	0.	0.	1.42E-06	0.	0.	0.	0.	1.42E-06
77	3.10	1.12E-15	0.	0.	0.	1.60E-18	0.	0.	1.43E-06	0.	0.	0.	0.	1.43E-06
78	3.00	3.06E-16	0.	0.	0.	7.92E-19	0.	0.	1.38E-06	0.	0.	0.	0.	1.38E-06
79	2.90	6.95E-17	0.	0.	0.	8.02E-20	0.	0.	1.34E-06	0.	0.	0.	0.	1.34E-06
80	2.80	2.05E-17	0.	0.	0.	1.51E-20	0.	0.	1.24E-06	0.	0.	0.	0.	1.24E-06
81	2.70	2.50E-18	0.	0.	0.	1.56E-22	0.	0.	1.13E-06	0.	0.	0.	0.	1.13E-06
82	2.60	4.84E-20	0.	0.	0.	1.45E-24	0.	0.	1.01E-06	0.	0.	0.	0.	1.01E-06
83	2.50	4.94E-22	0.	0.	0.	1.72E-26	0.	0.	8.75E-07	0.	0.	0.	0.	8.75E-07
84	2.40	0.	0.	0.	0.	1.64E-28	0.	0.	7.56E-07	0.	0.	0.	0.	7.56E-07
85	2.30	0.	0.	0.	0.	0.	0.	0.	5.92E-07	0.	0.	0.	0.	5.92E-07
86	2.20	0.	0.	0.	0.	0.	0.	0.	4.49E-07	0.	0.	0.	0.	4.49E-07
87	2.10	0.	0.	0.	0.	0.	0.	0.	3.28E-07	0.	0.	0.	0.	3.28E-07
88	2.00	0.	0.	0.	0.	0.	0.	0.	2.17E-07	0.	0.	0.	0.	2.17E-07
89	1.90	0.	0.	0.	0.	0.	0.	0.	1.43E-07	0.	0.	0.	0.	1.43E-07
90	1.80	0.	0.	0.	0.	0.	0.	0.	8.32E-08	0.	0.	0.	0.	8.32E-08
91	1.70	0.	0.	0.	0.	0.	0.	0.	4.65E-08	0.	0.	0.	0.	4.65E-08
92	1.60	0.	0.	0.	0.	0.	0.	0.	2.44E-08	0.	0.	0.	0.	2.44E-08
93	1.50	0.	0.	0.	0.	0.	0.	0.	9.97E-09	0.	0.	0.	0.	9.97E-09
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-11	0.	0.	0.	0.	0.	1.46E-11
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-14	0.	0.	0.	0.	0.	2.21E-14
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-10	0.	0.	0.	0.	0.	1.38E-10
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-13	0.	0.	0.	0.	0.	3.24E-13
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-10	0.	0.	0.	0.	0.	9.34E-10
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-12	0.	0.	0.	0.	0.	8.06E-12

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	1.08E-11	0.	0.	0.	0.	0.	0.	0.	1.08E-11
2	10.60	0.	0.	3.92E-12	0.	0.	0.	0.	0.	0.	0.	3.92E-12
3	10.50	0.	0.	9.09E-13	0.	0.	0.	0.	0.	0.	0.	9.09E-13
4	10.40	0.	0.	4.66E-13	0.	0.	0.	0.	0.	0.	0.	4.66E-13
5	10.30	0.	0.	1.20E-13	0.	0.	0.	0.	0.	0.	0.	1.20E-13
6	10.20	0.	0.	4.03E-14	0.	0.	0.	0.	0.	0.	0.	4.03E-14
7	10.10	0.	0.	2.33E-14	0.	0.	0.	0.	0.	0.	0.	2.33E-14
8	10.00	0.	0.	2.91E-15	0.	0.	0.	0.	0.	0.	0.	2.91E-15
9	9.90	0.	0.	2.04E-15	0.	0.	0.	0.	0.	0.	0.	2.04E-15
10	9.80	0.	0.	7.44E-16	0.	0.	0.	0.	0.	0.	0.	7.44E-16
11	9.70	0.	0.	9.89E-17	0.	0.	0.	0.	0.	0.	0.	9.89E-17
12	9.60	0.	0.	1.13E-16	0.	0.	0.	0.	0.	0.	0.	1.13E-16
13	9.50	0.	3.72E-02	1.21E-17	0.	0.	0.	0.	0.	0.	0.	3.72E-02
14	9.40	0.	1.38E-01	6.32E-18	0.	0.	0.	0.	0.	0.	0.	1.38E-01
15	9.30	0.	2.38E-01	3.07E-18	0.	0.	0.	0.	0.	0.	0.	2.38E-01
16	9.20	0.	3.38E-01	1.67E-19	0.	0.	0.	0.	0.	0.	0.	3.38E-01
17	9.10	0.	4.64E-01	4.77E-19	0.	0.	0.	0.	0.	-	0.	4.64E-01
18	9.00	0.	5.93E-01	3.43E-20	0.	0.	0.	0.	0.	0.	0.	5.93E-01
19	8.90	0.	7.26E-01	2.57E-20	0.	0.	0.	0.	0.	0.	0.	7.26E-01
20	8.80	0.	7.78E-01	6.95E-21	0.	0.	0.	0.	0.	0.	0.	7.78E-01
21	8.70	0.	7.69E-01	1.05E-21	0.	0.	0.	0.	0.	0.	0.	7.69E-01
22	8.60	0.	7.60E-01	1.21E-21	0.	0.	0.	0.	0.	0.	0.	7.60E-01
23	8.50	0.	7.35E-01	8.34E-23	0.	0.	0.	0.	0.	0.	0.	7.35E-01
24	8.40	0.	6.91E-01	1.06E-22	0.	0.	0.	0.	0.	0.	0.	6.91E-01
25	8.30	0.	6.40E-01	9.85E-24	0.	0.	0.	0.	0.	0.	0.	6.40E-01
26	8.20	0.	5.82E-01	6.51E-24	0.	0.	0.	0.	0.	0.	0.	5.82E-01
27	8.10	0.	5.21E-01	1.16E-24	0.	0.	0.	0.	0.	0.	0.	5.21E-01
28	8.00	0.	4.60E-01	4.83E-25	0.	0.	0.	0.	0.	0.	0.	4.60E-01
29	7.90	0.	3.94E-01	1.29E-25	0.	0.	0.	0.	0.	0.	0.	3.94E-01
30	7.80	0.	3.27E-01	4.74E-26	0.	0.	0.	0.	0.	0.	0.	3.27E-01
31	7.70	0.	2.68E-01	1.39E-26	0.	0.	0.	0.	0.	0.	0.	2.68E-01
32	7.60	0.	2.17E-01	3.41E-27	0.	1.54E-15	0.	0.	0.	0.	0.	2.17E-01
33	7.50	0.	1.66E-01	1.11E-27	0.	2.49E-10	0.	0.	0.	0.	0.	1.66E-01
34	7.40	0.	1.26E-01	2.47E-28	0.	4.83E-09	0.	0.	0.	0.	0.	1.26E-01
35	7.30	0.	8.95E-02	7.11E-29	0.	4.24E-11	0.	0.	0.	0.	0.	8.95E-02
36	7.20	0.	6.79E-02	1.74E-29	0.	4.99E-08	0.	0.	0.	0.	0.	6.79E-02
37	7.10	0.	4.74E-02	4.85E-30	0.	6.42E-09	0.	0.	0.	0.	0.	4.74E-02
38	7.00	4.06E-03	0.	1.21E-30	0.	1.59E-08	0.	0.	0.	0.	0.	4.06E-03
39	6.90	4.40E-03	0.	3.30E-31	0.	3.07E-07	0.	0.	0.	0.	0.	4.40E-03
40	6.80	2.11E-03	0.	8.40E-32	0.	6.84E-10	0.	0.	0.	0.	0.	2.11E-03
41	6.70	8.49E-04	0.	2.16E-32	0.	2.21E-07	0.	0.	0.	0.	0.	8.50E-04
42	6.60	3.68E-04	0.	5.43E-33	0.	1.04E-06	0.	0.	0.	0.	0.	3.69E-04
43	6.50	1.12E-04	0.	1.21E-33	0.	5.39E-09	0.	0.	0.	0.	0.	1.12E-04
44	6.40	1.96E-04	0.	1.69E-34	1.76E-07	1.22E-06	0.	0.	0.	0.	0.	1.97E-04
45	6.30	2.01E-04	0.	1.14E-35	2.32E-07	2.36E-06	0.	0.	0.	0.	0.	2.04E-04
46	6.20	1.74E-04	0.	2.46E-37	2.13E-07	1.71E-08	0.	0.	0.	0.	0.	1.74E-04
47	6.10	2.23E-04	0.	3.03E-39	2.92E-07	5.08E-06	0.	0.	0.	0.	0.	2.28E-04
48	6.00	1.80E-04	0.	0.	5.72E-08	1.14E-06	0.	0.	0.	0.	0.	1.81E-04
49	5.90	9.83E-05	0.	0.	4.82E-08	3.35E-08	0.	0.	0.	0.	0.	9.84E-05
50	5.80	4.05E-05	0.	0.	2.94E-08	8.79E-07	0.	0.	0.	0.	0.	4.14E-05
51	5.70	9.56E-06	0.	0.	1.22E-08	7.69E-10	0.	0.	0.	0.	0.	9.57E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-06	0.	0.	0.	8.48E-10	9.83E-08	0.	0.	0.	0.	0.	0.	8.25E-06
53	5.50	5.01E-06	0.	0.	0.	4.75E-09	3.76E-06	0.	0.	0.	0.	0.	0.	8.78E-06
54	5.40	1.63E-06	0.	0.	0.	2.69E-09	1.51E-09	0.	0.	0.	0.	0.	0.	1.63E-06
55	5.30	8.17E-07	0.	0.	0.	7.51E-10	2.61E-07	0.	0.	0.	0.	0.	0.	1.08E-06
56	5.20	9.54E-08	0.	0.	0.	4.36E-10	1.77E-07	0.	0.	0.	0.	0.	0.	2.72E-07
57	5.10	8.14E-08	0.	0.	0.	1.16E-10	4.60E-09	0.	1.37E-08	0.	0.	0.	0.	9.98E-08
58	5.00	5.19E-08	0.	0.	0.	3.85E-11	2.78E-08	0.	1.42E-08	0.	0.	0.	0.	9.41E-08
59	4.90	3.92E-08	0.	0.	0.	2.38E-11	1.79E-10	0.	1.48E-08	0.	0.	0.	0.	5.42E-08
60	4.80	2.12E-08	0.	0.	0.	3.37E-11	1.88E-09	0.	1.55E-08	0.	0.	0.	0.	3.87E-08
61	4.70	9.60E-09	0.	0.	0.	1.53E-11	8.38E-12	0.	1.63E-08	0.	0.	0.	0.	2.60E-08
62	4.60	4.33E-09	0.	0.	0.	5.09E-12	1.24E-10	0.	1.72E-08	0.	0.	0.	0.	2.16E-08
63	4.50	1.50E-09	0.	0.	0.	2.35E-12	4.20E-13	0.	1.79E-08	0.	0.	0.	0.	1.95E-08
64	4.40	5.17E-10	0.	0.	0.	6.29E-13	6.40E-12	0.	1.88E-08	0.	0.	0.	0.	1.93E-08
65	4.30	2.04E-10	0.	0.	0.	3.13E-13	1.48E-12	0.	2.00E-08	0.	0.	0.	0.	2.02E-08
66	4.20	6.09E-11	0.	0.	0.	8.83E-14	2.34E-13	0.	2.13E-08	0.	0.	0.	0.	2.14E-08
67	4.10	3.34E-11	0.	0.	0.	3.46E-14	2.27E-13	0.	2.28E-08	0.	0.	0.	0.	2.29E-08
68	4.00	8.11E-12	0.	0.	0.	1.33E-14	5.36E-15	0.	2.47E-08	0.	0.	0.	0.	2.47E-08
69	3.90	1.82E-12	0.	0.	0.	3.07E-15	1.53E-14	0.	2.66E-08	0.	0.	0.	0.	2.66E-08
70	3.80	1.27E-12	0.	0.	0.	1.91E-15	0.	0.	2.90E-08	0.	0.	0.	0.	2.90E-08
71	3.70	2.03E-13	0.	0.	0.	2.51E-16	0.	0.	3.17E-08	0.	0.	0.	0.	3.17E-08
72	3.60	7.18E-14	0.	0.	0.	2.19E-16	0.	0.	3.48E-08	0.	0.	0.	0.	3.48E-08
73	3.50	2.87E-14	0.	0.	0.	2.06E-17	0.	0.	3.84E-08	0.	0.	0.	0.	3.84E-08
74	3.40	5.45E-15	0.	0.	0.	1.98E-17	0.	0.	4.24E-08	0.	0.	0.	0.	4.24E-08
75	3.30	1.93E-15	0.	0.	0.	1.80E-18	0.	0.	4.40E-08	0.	0.	0.	0.	4.40E-08
76	3.20	4.90E-16	0.	0.	0.	1.38E-18	0.	0.	4.48E-08	0.	0.	0.	0.	4.49E-08
77	3.10	1.12E-16	0.	0.	0.	1.60E-19	0.	0.	4.51E-08	0.	0.	0.	0.	4.51E-08
78	3.00	3.06E-17	0.	0.	0.	7.92E-20	0.	0.	4.37E-08	0.	0.	0.	0.	4.37E-08
79	2.90	6.95E-18	0.	0.	0.	8.02E-21	0.	0.	4.24E-08	0.	0.	0.	0.	4.24E-08
80	2.80	2.05E-18	0.	0.	0.	1.51E-21	0.	0.	3.92E-08	0.	0.	0.	0.	3.92E-08
81	2.70	2.50E-19	0.	0.	0.	1.56E-23	0.	0.	3.57E-08	0.	0.	0.	0.	3.57E-08
82	2.60	4.84E-21	0.	0.	0.	1.45E-25	0.	0.	3.21E-08	0.	0.	0.	0.	3.21E-08
83	2.50	4.94E-23	0.	0.	0.	1.72E-27	0.	0.	2.77E-08	0.	0.	0.	0.	2.77E-08
84	2.40	0.	0.	0.	0.	1.64E-29	0.	0.	2.39E-08	0.	0.	0.	0.	2.39E-08
85	2.30	0.	0.	0.	0.	0.	0.	0.	1.87E-08	0.	0.	0.	0.	1.87E-08
86	2.20	0.	0.	0.	0.	0.	0.	0.	1.42E-08	0.	0.	0.	0.	1.42E-08
87	2.10	0.	0.	0.	0.	0.	0.	0.	1.04E-08	0.	0.	0.	0.	1.04E-08
88	2.00	0.	0.	0.	0.	0.	0.	0.	6.85E-09	0.	0.	0.	0.	6.85E-09
89	1.90	0.	0.	0.	0.	0.	0.	0.	4.52E-09	0.	0.	0.	0.	4.52E-09
90	1.80	0.	0.	0.	0.	0.	0.	0.	2.63E-09	0.	0.	0.	0.	2.63E-09
91	1.70	0.	0.	0.	0.	0.	0.	0.	1.47E-09	0.	0.	0.	0.	1.47E-09
92	1.60	0.	0.	0.	0.	0.	0.	0.	7.73E-10	0.	0.	0.	0.	7.73E-10
93	1.50	0.	0.	0.	0.	0.	0.	0.	3.16E-10	0.	0.	0.	0.	3.16E-10
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-12	0.	0.	0.	0.	0.	1.46E-12
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-15	0.	0.	0.	0.	0.	2.21E-15
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-11	0.	0.	0.	0.	0.	1.38E-11
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-14	0.	0.	0.	0.	0.	3.24E-14
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-11	0.	0.	0.	0.	0.	9.34E-11
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-13	0.	0.	0.	0.	0.	8.06E-13

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)		N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-12	0.	0.	0.	0.	0.	0.	0.	0.	1.08E-12
2	10.60	0.	0.	3.92E-13	0.	0.	0.	0.	0.	0.	0.	0.	3.92E-13
3	10.50	0.	0.	9.09E-14	0.	0.	0.	0.	0.	0.	0.	0.	9.09E-14
4	10.40	0.	0.	4.66E-14	0.	0.	0.	0.	0.	0.	0.	0.	4.66E-14
5	10.30	0.	0.	1.20E-14	0.	0.	0.	0.	0.	0.	0.	0.	1.20E-14
6	10.20	0.	0.	4.03E-15	0.	0.	0.	0.	0.	0.	0.	0.	4.03E-15
7	10.10	0.	0.	2.33E-15	0.	0.	0.	0.	0.	0.	0.	0.	2.33E-15
8	10.00	0.	0.	2.91E-16	0.	0.	0.	0.	0.	0.	0.	0.	2.91E-16
9	9.90	0.	0.	2.04E-16	0.	0.	0.	0.	0.	0.	0.	0.	2.04E-16
10	9.80	0.	0.	7.44E-17	0.	0.	0.	0.	0.	0.	0.	0.	7.44E-17
11	9.70	0.	0.	9.89E-18	0.	0.	0.	0.	0.	0.	0.	0.	9.89E-18
12	9.60	0.	0.	1.13E-17	0.	0.	0.	0.	0.	0.	0.	0.	1.13E-17
13	9.50	0.	3.72E-03	1.21E-18	0.	0.	0.	0.	0.	0.	0.	0.	3.72E-03
14	9.40	0.	1.38E-02	6.32E-19	0.	0.	0.	0.	0.	0.	0.	0.	1.38E-02
15	9.30	0.	2.38E-02	3.87E-19	0.	0.	0.	0.	0.	0.	0.	0.	2.38E-02
16	9.20	0.	3.38E-02	1.67E-20	0.	0.	0.	0.	0.	0.	0.	0.	3.38E-02
17	9.10	0.	4.64E-02	4.77E-20	0.	0.	0.	0.	0.	0.	0.	0.	4.64E-02
18	9.00	0.	5.95E-02	3.43E-21	0.	0.	0.	0.	0.	0.	0.	0.	5.95E-02
19	8.90	0.	7.26E-02	2.57E-21	0.	0.	0.	0.	0.	0.	0.	0.	7.26E-02
20	8.80	0.	7.78E-02	6.95E-22	0.	0.	0.	0.	0.	0.	0.	0.	7.78E-02
21	8.70	0.	7.69E-02	1.05E-22	0.	0.	0.	0.	0.	0.	0.	0.	7.69E-02
22	8.60	0.	7.60E-02	1.21E-22	0.	0.	0.	0.	0.	0.	0.	0.	7.60E-02
23	8.50	0.	7.35E-02	8.34E-24	0.	0.	0.	0.	0.	0.	0.	0.	7.35E-02
24	8.40	0.	6.91E-02	1.06E-23	0.	0.	0.	0.	0.	0.	0.	0.	6.91E-02
25	8.30	0.	6.40E-02	9.05E-25	0.	0.	0.	0.	0.	0.	0.	0.	6.40E-02
26	8.20	0.	5.82E-02	6.51E-25	0.	0.	0.	0.	0.	0.	0.	0.	5.82E-02
27	8.10	0.	5.21E-02	1.16E-25	0.	0.	0.	0.	0.	0.	0.	0.	5.21E-02
28	8.00	0.	4.60E-02	4.83E-26	0.	0.	0.	0.	0.	0.	0.	0.	4.60E-02
29	7.90	0.	3.94E-02	1.20E-26	0.	0.	0.	0.	0.	0.	0.	0.	3.94E-02
30	7.80	0.	3.27E-02	4.74E-27	0.	0.	0.	0.	0.	0.	0.	0.	3.27E-02
31	7.70	0.	2.68E-02	1.39E-27	0.	0.	0.	0.	0.	0.	0.	0.	2.68E-02
32	7.60	0.	2.17E-02	3.41E-28	0.	3.54E-16	0.	0.	0.	0.	0.	0.	2.17E-02
33	7.50	0.	1.66E-02	1.11E-28	0.	2.49E-11	0.	0.	0.	0.	0.	0.	1.66E-02
34	7.40	0.	1.26E-02	2.47E-29	0.	4.83E-10	0.	0.	0.	0.	0.	0.	1.26E-02
35	7.30	0.	8.95E-03	7.11E-30	0.	4.24E-12	0.	0.	0.	0.	0.	0.	8.95E-03
36	7.20	0.	6.79E-03	1.74E-30	0.	4.99E-09	0.	0.	0.	0.	0.	0.	6.79E-03
37	7.10	0.	4.74E-03	4.85E-31	0.	6.42E-10	0.	0.	0.	0.	0.	0.	4.74E-03
38	7.00	4.06E-04	0.	1.21E-31	0.	1.58E-09	0.	0.	0.	0.	0.	0.	4.06E-04
39	6.90	4.40E-04	0.	3.30E-32	0.	3.87E-08	0.	0.	0.	0.	0.	0.	4.40E-04
40	6.80	2.11E-04	0.	8.40E-33	0.	6.84E-11	0.	0.	0.	0.	0.	0.	2.11E-04
41	6.70	8.49E-05	0.	2.16E-33	0.	2.21E-08	0.	0.	0.	0.	0.	0.	8.50E-05
42	6.60	3.68E-05	0.	5.43E-34	0.	1.04E-07	0.	0.	0.	0.	0.	0.	3.69E-05
43	6.50	1.12E-05	0.	1.21E-34	0.	5.39E-10	0.	0.	0.	0.	0.	0.	1.12E-05
44	6.40	1.96E-05	0.	1.69E-35	1.76E-08	1.22E-07	0.	0.	0.	0.	0.	0.	1.97E-05
45	6.30	2.01E-05	0.	1.14E-36	2.32E-08	2.36E-07	0.	0.	0.	0.	0.	0.	2.04E-05
46	6.20	1.74E-05	0.	2.46E-38	2.13E-08	1.71E-09	0.	0.	0.	0.	0.	0.	1.74E-05
47	6.10	2.23E-05	0.	0.	2.02E-08	5.08E-07	0.	0.	0.	0.	0.	0.	2.28E-05
48	6.00	1.80E-05	0.	0.	5.72E-09	1.14E-07	0.	0.	0.	0.	0.	0.	1.81E-05
49	5.90	9.83E-06	0.	0.	4.82E-09	3.35E-09	0.	0.	0.	0.	0.	0.	9.84E-06
50	5.80	4.05E-06	0.	0.	2.94E-09	8.79E-08	0.	0.	0.	0.	0.	0.	4.14E-06
51	5.70	9.56E-07	0.	0.	1.22E-09	7.69E-11	0.	0.	0.	0.	0.	0.	9.57E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1800. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-07	0.	0.	0.	8.48E-11	9.83E-09	0.	0.	0.	0.	0.	0.	8.25E-07
53	5.50	5.01E-07	0.	0.	0.	4.75E-10	3.76E-07	0.	0.	0.	0.	0.	0.	8.78E-07
54	5.40	1.63E-07	0.	0.	0.	2.69E-10	1.51E-10	0.	0.	0.	0.	0.	0.	1.63E-07
55	5.30	8.17E-08	0.	0.	0.	7.51E-11	2.61E-08	0.	0.	0.	0.	0.	0.	1.08E-07
56	5.20	9.54E-09	0.	0.	0.	4.36E-11	1.77E-08	0.	0.	0.	0.	0.	0.	2.72E-08
57	5.10	8.14E-09	0.	0.	0.	1.16E-11	4.60E-10	0.	4.33E-10	0.	0.	0.	0.	9.05E-09
58	5.00	5.19E-09	0.	0.	0.	3.85E-12	2.78E-09	0.	4.50E-10	0.	0.	0.	0.	8.43E-09
59	4.90	3.92E-09	0.	0.	0.	2.38E-12	1.79E-11	0.	4.67E-10	0.	0.	0.	0.	4.41E-09
60	4.80	2.12E-09	0.	0.	0.	3.37E-12	1.88E-10	0.	4.90E-10	0.	0.	0.	0.	2.80E-09
61	4.70	9.60E-10	0.	0.	0.	1.53E-12	8.38E-13	0.	5.16E-10	0.	0.	0.	0.	1.48E-09
62	4.60	4.33E-10	0.	0.	0.	5.09E-13	1.24E-11	0.	5.42E-10	0.	0.	0.	0.	9.88E-10
63	4.50	1.50E-10	0.	0.	0.	2.35E-13	4.20E-14	0.	5.67E-10	0.	0.	0.	0.	7.18E-10
64	4.40	5.17E-11	0.	0.	0.	8.29E-14	6.40E-13	0.	5.94E-10	0.	0.	0.	0.	6.46E-10
65	4.30	2.04E-11	0.	0.	0.	3.13E-14	1.48E-13	0.	6.31E-10	0.	0.	0.	0.	6.51E-10
66	4.20	6.09E-12	0.	0.	0.	8.83E-15	2.34E-14	0.	6.74E-10	0.	0.	0.	0.	6.80E-10
67	4.10	3.34E-12	0.	0.	0.	3.46E-15	2.27E-14	0.	7.21E-10	0.	0.	0.	0.	7.25E-10
68	4.00	8.11E-13	0.	0.	0.	1.33E-15	5.36E-16	0.	7.79E-10	0.	0.	0.	0.	7.80E-10
69	3.90	1.82E-13	0.	0.	0.	3.07E-16	1.93E-15	0.	8.42E-10	0.	0.	0.	0.	8.42E-10
70	3.80	1.27E-13	0.	0.	0.	1.91E-16	0.	0.	9.18E-10	0.	0.	0.	0.	9.18E-10
71	3.70	2.03E-14	0.	0.	0.	2.51E-17	0.	0.	1.00E-09	0.	0.	0.	0.	10.00E-10
72	3.60	7.18E-15	0.	0.	0.	2.19E-17	0.	0.	1.10E-09	0.	0.	0.	0.	1.10E-09
73	3.50	2.87E-15	0.	0.	0.	2.06E-18	0.	0.	1.21E-09	0.	0.	0.	0.	1.21E-09
74	3.40	5.45E-16	0.	0.	0.	1.96E-18	0.	0.	1.34E-09	0.	0.	0.	0.	1.34E-09
75	3.30	1.93E-16	0.	0.	0.	1.80E-19	0.	0.	1.39E-09	0.	0.	0.	0.	1.39E-09
76	3.20	4.90E-17	0.	0.	0.	1.38E-19	0.	0.	1.42E-09	0.	0.	0.	0.	1.42E-09
77	3.10	1.12E-17	0.	0.	0.	1.60E-20	0.	0.	1.43E-09	0.	0.	0.	0.	1.43E-09
78	3.00	3.06E-18	0.	0.	0.	7.92E-21	0.	0.	1.38E-09	0.	0.	0.	0.	1.38E-09
79	2.90	6.95E-19	0.	0.	0.	8.02E-22	0.	0.	1.34E-09	0.	0.	0.	0.	1.34E-09
80	2.80	2.05E-19	0.	0.	0.	1.51E-22	0.	0.	1.24E-09	0.	0.	0.	0.	1.24E-09
81	2.70	2.50E-20	0.	0.	0.	1.56E-24	0.	0.	1.13E-09	0.	0.	0.	0.	1.13E-09
82	2.60	4.84E-22	0.	0.	0.	1.45E-26	0.	0.	1.01E-09	0.	0.	0.	0.	1.01E-09
83	2.50	4.94E-24	0.	0.	0.	1.72E-28	0.	0.	8.75E-10	0.	0.	0.	0.	8.75E-10
84	2.40	0.	0.	0.	0.	1.54E-30	0.	0.	7.56E-10	0.	0.	0.	0.	7.56E-10
85	2.30	0.	0.	0.	0.	0.	0.	0.	5.92E-10	0.	0.	0.	0.	5.92E-10
86	2.20	0.	0.	0.	0.	0.	0.	0.	4.49E-10	0.	0.	0.	0.	4.49E-10
87	2.10	0.	0.	0.	0.	0.	0.	0.	3.28E-10	0.	0.	0.	0.	3.28E-10
88	2.00	0.	0.	0.	0.	0.	0.	0.	2.17E-10	0.	0.	0.	0.	2.17E-10
89	1.90	0.	0.	0.	0.	0.	0.	0.	1.43E-10	0.	0.	0.	0.	1.43E-10
90	1.80	0.	0.	0.	0.	0.	0.	0.	8.32E-11	0.	0.	0.	0.	8.32E-11
91	1.70	0.	0.	0.	0.	0.	0.	0.	4.65E-11	0.	0.	0.	0.	4.65E-11
92	1.60	0.	0.	0.	0.	0.	0.	0.	2.44E-11	0.	0.	0.	0.	2.44E-11
93	1.50	0.	0.	0.	0.	0.	0.	0.	9.97E-12	0.	0.	0.	0.	9.97E-12
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-13	0.	0.	0.	0.	0.	1.46E-13
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-16	0.	0.	0.	0.	0.	2.21E-16
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-12	0.	0.	0.	0.	0.	1.38E-12
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-15	0.	0.	0.	0.	0.	3.24E-15
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-12	0.	0.	0.	0.	0.	9.34E-12
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-14	0.	0.	0.	0.	0.	8.06E-14

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-13	0.	0.	0.	0.	0.	0.	0.	1.08E-13
2	10.60	0.	0.	3.92E-14	0.	0.	0.	0.	0.	0.	0.	3.92E-14
3	10.50	0.	0.	9.99E-15	0.	0.	0.	0.	0.	0.	0.	9.99E-15
4	10.40	0.	0.	4.66E-15	0.	0.	0.	0.	0.	0.	0.	4.66E-15
5	10.30	0.	0.	1.20E-15	0.	0.	0.	0.	0.	0.	0.	1.20E-15
6	10.20	0.	0.	4.03E-16	0.	0.	0.	0.	0.	0.	0.	4.03E-16
7	10.10	0.	0.	2.33E-16	0.	0.	0.	0.	0.	0.	0.	2.33E-16
8	10.00	0.	0.	2.91E-17	0.	0.	0.	0.	0.	0.	0.	2.91E-17
9	9.90	0.	0.	2.04E-17	0.	0.	0.	0.	0.	0.	0.	2.04E-17
10	9.80	0.	0.	7.44E-18	0.	0.	0.	0.	0.	0.	0.	7.44E-18
11	9.70	0.	0.	9.89E-19	0.	0.	0.	0.	0.	0.	0.	9.89E-19
12	9.60	0.	0.	1.13E-18	0.	0.	0.	0.	0.	0.	0.	1.13E-18
13	9.50	0.	3.72E-04	1.21E-19	0.	0.	0.	0.	0.	0.	0.	3.72E-04
14	9.40	0.	1.38E-03	6.32E-20	0.	0.	0.	0.	0.	0.	0.	1.38E-03
15	9.30	0.	2.38E-03	3.07E-20	0.	0.	0.	0.	0.	0.	0.	2.38E-03
16	9.20	0.	3.38E-03	1.67E-21	0.	0.	0.	0.	0.	0.	0.	3.38E-03
17	9.10	0.	4.64E-03	4.77E-21	0.	0.	0.	0.	0.	0.	0.	4.64E-03
18	9.00	0.	5.95E-03	3.43E-22	0.	0.	0.	0.	0.	0.	0.	5.95E-03
19	8.90	0.	7.26E-03	2.57E-22	0.	0.	0.	0.	0.	0.	0.	7.26E-03
20	8.80	0.	7.78E-03	6.95E-23	0.	0.	0.	0.	0.	0.	0.	7.78E-03
21	8.70	0.	7.69E-03	1.05E-23	0.	0.	0.	0.	0.	0.	0.	7.69E-03
22	8.60	0.	7.60E-03	1.21E-23	0.	0.	0.	0.	0.	0.	0.	7.60E-03
23	8.50	0.	7.35E-03	8.34E-25	0.	0.	0.	0.	0.	0.	0.	7.35E-03
24	8.40	0.	6.91E-03	1.06E-24	0.	0.	0.	0.	0.	0.	0.	6.91E-03
25	8.30	0.	6.40E-03	9.85E-26	0.	0.	0.	0.	0.	0.	0.	6.40E-03
26	8.20	0.	5.82E-03	6.51E-26	0.	0.	0.	0.	0.	0.	0.	5.82E-03
27	8.10	0.	5.21E-03	1.18E-26	0.	0.	0.	0.	0.	0.	0.	5.21E-03
28	8.00	0.	4.60E-03	4.83E-27	0.	0.	0.	0.	0.	0.	0.	4.68E-03
29	7.90	0.	3.94E-03	1.20E-27	0.	0.	0.	0.	0.	0.	0.	3.94E-03
30	7.80	0.	3.27E-03	4.74E-28	0.	0.	0.	0.	0.	0.	0.	3.27E-03
31	7.70	0.	2.68E-03	1.39E-28	0.	0.	0.	0.	0.	0.	0.	2.68E-03
32	7.60	0.	2.17E-03	3.41E-29	0.	3.54E-17	0.	0.	0.	0.	0.	2.17E-03
33	7.50	0.	1.66E-03	1.11E-29	0.	2.49E-12	0.	0.	0.	0.	0.	1.66E-03
34	7.40	0.	1.26E-03	2.47E-30	0.	4.83E-11	0.	0.	0.	0.	0.	1.26E-03
35	7.30	0.	8.95E-04	7.11E-31	0.	4.24E-13	0.	0.	0.	0.	0.	8.95E-04
36	7.20	0.	6.79E-04	1.74E-31	0.	4.99E-10	0.	0.	0.	0.	0.	6.79E-04
37	7.10	0.	4.74E-04	4.85E-32	0.	6.42E-11	0.	0.	0.	0.	0.	4.74E-04
38	7.00	4.06E-05	0.	1.21E-32	0.	1.58E-10	0.	0.	0.	0.	0.	4.06E-05
39	6.90	4.40E-05	0.	3.30E-33	0.	3.07E-09	0.	0.	0.	0.	0.	4.40E-05
40	6.80	2.11E-05	0.	8.40E-34	0.	6.84E-12	0.	0.	0.	0.	0.	2.11E-05
41	6.70	8.49E-06	0.	2.16E-34	0.	2.21E-09	0.	0.	0.	0.	0.	8.50E-06
42	6.60	3.68E-06	0.	5.43E-35	0.	1.04E-08	0.	0.	0.	0.	0.	3.69E-06
43	6.50	1.12E-06	0.	1.21E-35	0.	5.39E-11	0.	0.	0.	0.	0.	1.12E-06
44	6.40	1.96E-06	0.	1.69E-36	1.76E-09	1.22E-08	0.	0.	0.	0.	0.	1.97E-06
45	6.30	2.01E-06	0.	1.14E-37	2.32E-09	2.36E-08	0.	0.	0.	0.	0.	2.04E-06
46	6.20	1.74E-06	0.	2.46E-39	2.13E-09	1.71E-10	0.	0.	0.	0.	0.	1.74E-06
47	6.10	2.23E-06	0.	0.	2.02E-09	5.08E-08	0.	0.	0.	0.	0.	2.28E-06
48	6.00	1.80E-06	0.	0.	5.72E-10	1.14E-08	0.	0.	0.	0.	0.	1.81E-06
49	5.90	9.83E-07	0.	0.	4.82E-10	3.35E-10	0.	0.	0.	0.	0.	9.84E-07
50	5.80	4.05E-07	0.	0.	2.94E-10	8.79E-09	0.	0.	0.	0.	0.	4.14E-07
51	5.70	9.56E-08	0.	0.	1.22E-10	7.69E-12	0.	0.	0.	0.	0.	9.57E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
52	5.60	8.15E-08	0.	0.	0.	8.48E-12	9.83E-10	0.	0.	0.	0.	0.	0.	8.25E-08
53	5.50	5.01E-08	0.	0.	0.	4.75E-11	3.76E-08	0.	0.	0.	0.	0.	0.	8.78E-08
54	5.40	1.63E-08	0.	0.	0.	2.69E-11	1.51E-11	0.	0.	0.	0.	0.	0.	1.63E-08
55	5.30	8.17E-09	0.	0.	0.	7.51E-12	2.61E-09	0.	0.	0.	0.	0.	0.	1.08E-08
56	5.20	9.54E-10	0.	0.	0.	4.36E-12	1.77E-09	0.	0.	0.	0.	0.	0.	2.72E-09
57	5.10	8.14E-10	0.	0.	0.	1.16E-12	4.60E-11	0.	1.67E-11	0.	0.	0.	0.	8.75E-10
58	5.00	5.19E-10	0.	0.	0.	3.85E-13	2.78E-10	0.	1.42E-11	0.	0.	0.	0.	8.13E-10
59	4.90	3.92E-10	0.	0.	0.	2.38E-13	1.79E-12	0.	1.48E-11	0.	0.	0.	0.	4.09E-10
60	4.80	2.12E-10	0.	0.	0.	3.37E-13	1.88E-11	0.	1.55E-11	0.	0.	0.	0.	2.47E-10
61	4.70	9.60E-11	0.	0.	0.	1.53E-13	8.30E-14	0.	1.63E-11	0.	0.	0.	0.	1.13E-10
62	4.60	4.33E-11	0.	0.	0.	5.09E-14	1.24E-12	0.	1.72E-11	0.	0.	0.	0.	6.18E-11
63	4.50	1.50E-11	0.	0.	0.	2.35E-14	4.20E-15	0.	1.79E-11	0.	0.	0.	0.	3.30E-11
64	4.40	5.17E-12	0.	0.	0.	6.29E-15	6.40E-14	0.	1.88E-11	0.	0.	0.	0.	2.40E-11
65	4.30	2.04E-12	0.	0.	0.	3.13E-15	1.48E-14	0.	2.00E-11	0.	0.	0.	0.	2.20E-11
66	4.20	6.09E-13	0.	0.	0.	8.83E-16	2.34E-15	0.	2.13E-11	0.	0.	0.	0.	2.19E-11
67	4.10	3.34E-13	0.	0.	0.	3.48E-16	2.27E-15	0.	2.26E-11	0.	0.	0.	0.	2.32E-11
68	4.00	8.11E-14	0.	0.	0.	1.33E-16	5.36E-17	0.	2.47E-11	0.	0.	0.	0.	2.47E-11
69	3.90	1.82E-14	0.	0.	0.	3.07E-17	1.53E-16	0.	2.66E-11	0.	0.	0.	0.	2.67E-11
70	3.80	1.27E-14	0.	0.	0.	1.91E-17	0.	0.	2.90E-11	0.	0.	0.	0.	2.91E-11
71	3.70	2.03E-15	0.	0.	0.	2.51E-18	0.	0.	3.17E-11	0.	0.	0.	0.	3.17E-11
72	3.60	7.18E-16	0.	0.	0.	2.19E-18	0.	0.	3.48E-11	0.	0.	0.	0.	3.48E-11
73	3.50	2.87E-16	0.	0.	0.	2.06E-19	0.	0.	3.84E-11	0.	0.	0.	0.	3.84E-11
74	3.40	5.45E-17	0.	0.	0.	1.96E-19	0.	0.	4.24E-11	0.	0.	0.	0.	4.24E-11
75	3.30	1.93E-17	0.	0.	0.	1.80E-20	0.	0.	4.40E-11	0.	0.	0.	0.	4.40E-11
76	3.20	4.90E-18	0.	0.	0.	1.38E-20	0.	0.	4.48E-11	0.	0.	0.	0.	4.49E-11
77	3.10	1.12E-18	0.	0.	0.	1.60E-21	0.	0.	4.51E-11	0.	0.	0.	0.	4.51E-11
78	3.00	3.06E-19	0.	0.	0.	7.92E-22	0.	0.	4.37E-11	0.	0.	0.	0.	4.37E-11
79	2.90	6.95E-20	0.	0.	0.	8.82E-23	0.	0.	4.24E-11	0.	0.	0.	0.	4.24E-11
80	2.80	2.05E-20	0.	0.	0.	1.51E-23	0.	0.	3.92E-11	0.	0.	0.	0.	3.92E-11
81	2.70	2.50E-21	0.	0.	0.	1.56E-25	0.	0.	3.57E-11	0.	0.	0.	0.	3.57E-11
82	2.60	4.84E-23	0.	0.	0.	1.45E-27	0.	0.	3.21E-11	0.	0.	0.	0.	3.21E-11
83	2.50	4.94E-25	0.	0.	0.	1.72E-29	0.	0.	2.77E-11	0.	0.	0.	0.	2.77E-11
84	2.40	0.	0.	0.	0.	1.64E-31	0.	0.	2.39E-11	0.	0.	0.	0.	2.39E-11
85	2.30	0.	0.	0.	0.	0.	0.	0.	1.87E-11	0.	0.	0.	0.	1.87E-11
86	2.20	0.	0.	0.	0.	0.	0.	0.	1.42E-11	0.	0.	0.	0.	1.42E-11
87	2.10	0.	0.	0.	0.	0.	0.	0.	1.04E-11	0.	0.	0.	0.	1.04E-11
88	2.00	0.	0.	0.	0.	0.	0.	0.	6.85E-12	0.	0.	0.	0.	6.85E-12
89	1.90	0.	0.	0.	0.	0.	0.	0.	4.52E-12	0.	0.	0.	0.	4.52E-12
90	1.80	0.	0.	0.	0.	0.	0.	0.	2.63E-12	0.	0.	0.	0.	2.63E-12
91	1.70	0.	0.	0.	0.	0.	0.	0.	1.47E-12	0.	0.	0.	0.	1.47E-12
92	1.60	0.	0.	0.	0.	0.	0.	0.	7.73E-13	0.	0.	0.	0.	7.73E-13
93	1.50	0.	0.	0.	0.	0.	0.	0.	3.15E-13	0.	0.	0.	0.	3.15E-13
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-14	0.	0.	0.	0.	0.	1.46E-14
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-17	0.	0.	0.	0.	0.	2.21E-17
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-13	0.	0.	0.	0.	0.	1.38E-13
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-16	0.	0.	0.	0.	0.	3.24E-16
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-13	0.	0.	0.	0.	0.	9.34E-13
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-15	0.	0.	0.	0.	0.	8.06E-15

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.233E-08 (10.3E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-14	0.	0.	0.	0.	0.	0.	0.	1.08E-14
2	10.60	0.	0.	3.92E-15	0.	0.	0.	0.	0.	0.	0.	3.92E-15
3	10.50	0.	0.	9.09E-16	0.	0.	0.	0.	0.	0.	0.	9.09E-16
4	10.40	0.	0.	4.66E-16	0.	0.	0.	0.	0.	0.	0.	4.66E-16
5	10.30	0.	0.	1.20E-16	0.	0.	0.	0.	0.	0.	0.	1.20E-16
6	10.20	0.	0.	4.03E-17	0.	0.	0.	0.	0.	0.	0.	4.03E-17
7	10.10	0.	0.	2.33E-17	0.	0.	0.	0.	0.	0.	0.	2.33E-17
8	10.00	0.	0.	2.91E-18	0.	0.	0.	0.	0.	0.	0.	2.91E-18
9	9.90	0.	0.	2.04E-18	0.	0.	0.	0.	0.	0.	0.	2.04E-18
10	9.80	0.	0.	7.44E-19	0.	0.	0.	0.	0.	0.	0.	7.44E-19
11	9.70	0.	0.	9.89E-20	0.	0.	0.	0.	0.	0.	0.	9.89E-20
12	9.60	0.	0.	1.13E-19	0.	0.	0.	0.	0.	0.	0.	1.13E-19
13	9.50	0.	3.72E-05	1.21E-20	0.	0.	0.	0.	0.	0.	0.	3.72E-05
14	9.40	0.	1.38E-04	6.32E-21	0.	0.	0.	0.	0.	0.	0.	1.38E-04
15	9.30	0.	2.38E-04	3.07E-21	0.	0.	0.	0.	0.	0.	0.	2.38E-04
16	9.20	0.	3.38E-04	1.67E-22	0.	0.	0.	0.	0.	0.	0.	3.38E-04
17	9.10	0.	4.64E-04	4.77E-22	0.	0.	0.	0.	0.	0.	0.	4.64E-04
18	9.00	0.	5.95E-04	3.43E-23	0.	0.	0.	0.	0.	0.	0.	5.95E-04
19	8.90	0.	7.26E-04	2.57E-23	0.	0.	0.	0.	0.	0.	0.	7.26E-04
20	8.80	0.	7.78E-04	6.95E-24	0.	0.	0.	0.	0.	0.	0.	7.78E-04
21	8.70	0.	7.69E-04	1.05E-24	0.	0.	0.	0.	0.	0.	0	7.69E-04
22	8.60	0.	7.60E-04	1.21E-24	0.	0.	0.	0.	0.	0.	0.	7.60E-04
23	8.50	0.	7.35E-04	8.34E-26	0.	0.	0.	0.	0.	0.	0.	7.35E-04
24	8.40	0.	6.91E-04	1.06E-25	0.	0.	0.	0.	0.	0.	0.	6.91E-04
25	8.30	0.	6.40E-04	9.85E-27	0.	0.	0.	0.	0.	0.	0.	6.40E-04
26	8.20	0.	5.82E-04	6.51E-27	0.	0.	0.	0.	0.	0.	0.	5.82E-04
27	8.10	0.	5.21E-04	1.16E-27	0.	0.	0.	0.	0.	0.	0.	5.21E-04
28	8.00	0.	4.60E-04	4.83E-28	0.	0.	0.	0.	0.	0.	0.	4.60E-04
29	7.90	0.	3.94E-04	1.28E-28	0.	0.	0.	0.	0.	0.	0.	3.94E-04
30	7.80	0.	3.27E-04	4.74E-29	0.	0.	0.	0.	0.	0.	0.	3.27E-04
31	7.70	0.	2.68E-04	1.39E-29	0.	0.	0.	0.	0.	0.	0.	2.68E-04
32	7.60	0.	2.17E-04	3.41E-30	0.	3.54E-18	0.	0.	0.	0.	0.	2.17E-04
33	7.50	0.	1.66E-04	1.11E-30	0.	2.49E-13	0.	0.	0.	0.	0.	1.66E-04
34	7.40	0.	1.26E-04	2.47E-31	0.	4.83E-12	0.	0.	0.	0.	0.	1.26E-04
35	7.30	0.	8.95E-05	7.11E-32	0.	4.24E-14	0.	0.	0.	0.	0.	8.95E-05
36	7.20	0.	6.79E-05	1.74E-32	0.	4.99E-11	0.	0.	0.	0.	0.	6.79E-05
37	7.10	0.	4.74E-05	4.85E-33	0.	6.42E-12	0.	0.	0.	0.	0.	4.74E-05
38	7.00	4.06E-06	0.	1.21E-33	0.	1.58E-11	0.	0.	0.	0.	0.	4.06E-06
39	6.90	4.40E-06	0.	3.30E-34	0.	3.07E-10	0.	0.	0.	0.	0.	4.40E-06
40	6.80	2.11E-06	0.	8.40E-35	0.	6.84E-13	0.	0.	0.	0.	0.	2.11E-06
41	6.70	8.49E-07	0.	2.16E-35	0.	2.21E-10	0.	0.	0.	0.	0.	8.50E-07
42	6.60	3.68E-07	0.	5.43E-36	0.	1.04E-09	0.	0.	0.	0.	0.	3.69E-07
43	6.50	1.12E-07	0.	1.21E-36	0.	5.39E-12	0.	0.	0.	0.	0.	1.12E-07
44	6.40	1.96E-07	0.	1.69E-37	1.76E-10	1.22E-09	0.	0.	0.	0.	0.	1.97E-07
45	6.30	2.01E-07	0.	1.14E-38	2.32E-10	2.36E-09	0.	0.	0.	0.	0.	2.04E-07
46	6.20	1.74E-07	0.	0.	2.13E-10	1.71E-11	0.	0.	0.	0.	0.	1.74E-07
47	6.10	2.23E-07	0.	0.	2.02E-10	5.08E-09	0.	0.	0.	0.	0.	2.28E-07
48	6.00	1.80E-07	0.	0.	5.72E-11	1.14E-09	0.	0.	0.	0.	0.	1.81E-07
49	5.90	9.83E-08	0.	0.	4.82E-11	3.35E-11	0.	0.	0.	0.	0.	9.84E-08
50	5.80	4.05E-08	0.	0.	2.94E-11	8.79E-10	0.	0.	0.	0.	0.	4.14E-08
51	5.70	9.56E-09	0.	0.	1.22E-11	7.69E-13	0.	0.	0.	0.	0.	9.57E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-09	0.	0.	0.	8.48E-13	9.83E-11	0.	0.	0.	0.	0.	0.	8.25E-09
53	5.50	5.01E-09	0.	0.	0.	4.75E-12	3.74E-09	0.	0.	0.	0.	0.	0.	8.78E-09
54	5.40	1.63E-09	0.	0.	0.	2.69E-12	1.51E-12	0.	0.	0.	0.	0.	0.	1.63E-09
55	5.30	8.17E-10	0.	0.	0.	7.51E-13	2.61E-10	0.	0.	0.	0.	0.	0.	1.08E-09
56	5.20	9.54E-11	0.	0.	0.	4.36E-13	1.77E-10	0.	0.	0.	0.	0.	0.	2.72E-10
57	5.10	8.14E-11	0.	0.	0.	1.16E-13	4.60E-12	0.	4.33E-13	0.	0.	0.	0.	8.66E-11
58	5.00	5.19E-11	0.	0.	0.	3.85E-14	2.78E-11	0.	4.50E-13	0.	0.	0.	0.	8.13E-11
59	4.90	3.92E-11	0.	0.	0.	2.38E-14	1.79E-13	0.	4.67E-13	0.	0.	0.	0.	3.99E-11
60	4.80	2.12E-11	0.	0.	0.	3.37E-14	1.88E-12	0.	4.90E-13	0.	0.	0.	0.	2.36E-11
61	4.70	9.60E-12	0.	0.	0.	1.53E-14	8.38E-15	0.	5.16E-13	0.	0.	0.	0.	1.01E-11
62	4.60	4.33E-12	0.	0.	0.	5.09E-15	1.24E-13	0.	5.42E-13	0.	0.	0.	0.	5.00E-12
63	4.50	1.50E-12	0.	0.	0.	2.35E-15	4.20E-16	0.	5.67E-13	0.	0.	0.	0.	2.07E-12
64	4.40	5.17E-13	0.	0.	0.	6.29E-16	6.40E-15	0.	5.94E-13	0.	0.	0.	0.	1.12E-12
65	4.30	2.04E-13	0.	0.	0.	3.13E-16	1.48E-15	0.	8.31E-13	0.	0.	0.	0.	8.36E-13
66	4.20	6.09E-14	0.	0.	0.	8.83E-17	2.34E-16	0.	6.74E-13	0.	0.	0.	0.	7.35E-13
67	4.10	3.34E-14	0.	0.	0.	3.46E-17	2.27E-16	0.	7.21E-13	0.	0.	0.	0.	7.55E-13
68	4.00	8.11E-15	0.	0.	0.	1.33E-17	5.38E-18	0.	7.79E-13	0.	0.	0.	0.	7.88E-13
69	3.90	1.82E-15	0.	0.	0.	3.07E-18	1.93E-17	0.	8.42E-13	0.	0.	0.	0.	8.44E-13
70	3.80	1.27E-15	0.	0.	0.	1.91E-18	0.	0.	9.18E-13	0.	0.	0.	0.	9.19E-13
71	3.70	2.03E-16	0.	0.	0.	2.51E-19	0.	0.	1.00E-12	0.	0.	0.	0.	10.00E-13
72	3.60	7.18E-17	0.	0.	0.	2.19E-19	0.	0.	1.10E-12	0.	0.	0.	0.	1.10E-12
73	3.50	2.87E-17	0.	0.	0.	2.06E-20	0.	0.	1.21E-12	0.	0.	0.	0.	1.21E-12
74	3.40	5.45E-18	0.	0.	0.	1.96E-20	0.	0.	1.34E-12	0.	0.	0.	0.	1.34E-12
75	3.30	1.93E-18	0.	0.	0.	1.80E-21	0.	0.	1.39E-12	0.	0.	0.	0.	1.39E-12
76	3.20	4.90E-19	0.	0.	0.	1.38E-21	0.	0.	1.42E-12	0.	0.	0.	0.	1.42E-12
77	3.10	1.12E-19	0.	0.	0.	1.60E-22	0.	0.	1.43E-12	0.	0.	0.	0.	1.43E-12
78	3.00	3.08E-20	0.	0.	0.	7.92E-23	0.	0.	1.38E-12	0.	0.	0.	0.	1.38E-12
79	2.90	6.95E-21	0.	0.	0.	8.02E-24	0.	0.	1.34E-12	0.	0.	0.	0.	1.34E-12
80	2.80	2.05E-21	0.	0.	0.	1.51E-24	0.	0.	1.24E-12	0.	0.	0.	0.	1.24E-12
81	2.70	3.50E-22	0.	0.	0.	1.56E-26	0.	0.	1.13E-12	0.	0.	0.	0.	1.13E-12
82	2.60	4.84E-24	0.	0.	0.	1.45E-28	0.	0.	1.01E-12	0.	0.	0.	0.	1.01E-12
83	2.50	4.94E-26	0.	0.	0.	1.72E-30	0.	0.	8.75E-13	0.	0.	0.	0.	8.75E-13
84	2.40	0.	0.	0.	0.	1.64E-32	0.	0.	7.56E-13	0.	0.	0.	0.	7.56E-13
85	2.30	0.	0.	0.	0.	0.	0.	0.	5.92E-13	0.	0.	0.	0.	5.92E-13
86	2.20	0.	0.	0.	0.	0.	0.	0.	4.49E-13	0.	0.	0.	0.	4.49E-13
87	2.10	0.	0.	0.	0.	0.	0.	0.	3.28E-13	0.	0.	0.	0.	3.28E-13
88	2.00	0.	0.	0.	0.	0.	0.	0.	2.17E-13	0.	0.	0.	0.	2.17E-13
89	1.90	0.	0.	0.	0.	0.	0.	0.	1.43E-13	0.	0.	0.	0.	1.43E-13
90	1.80	0.	0.	0.	0.	0.	0.	0.	8.32E-14	0.	0.	0.	0.	8.32E-14
91	1.70	0.	0.	0.	0.	0.	0.	0.	4.65E-14	0.	0.	0.	0.	4.65E-14
92	1.60	0.	0.	0.	0.	0.	0.	0.	2.44E-14	0.	0.	0.	0.	2.44E-14
93	1.50	0.	0.	0.	0.	0.	0.	0.	9.97E-15	0.	0.	0.	0.	9.97E-15
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-15	0.	0.	0.	0.	0.	1.46E-15
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-18	0.	0.	0.	0.	0.	2.21E-18
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-14	0.	0.	0.	0.	0.	1.38E-14
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-17	0.	0.	0.	0.	0.	3.24E-17
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-14	0.	0.	0.	0.	0.	9.34E-14
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-16	0.	0.	0.	0.	0.	8.06E-16

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.08E-15	0.	0.	0.	0.	0.	0.	0.	1.08E-15
2	10.60	0.	0.	3.92E-16	0.	0.	0.	0.	0.	0.	0.	3.92E-16
3	10.50	0.	0.	9.09E-17	0.	0.	0.	0.	0.	0.	0.	9.09E-17
4	10.40	0.	0.	4.66E-17	0.	0.	0.	0.	0.	0.	0.	4.66E-17
5	10.30	0.	0.	1.20E-17	0.	0.	0.	0.	0.	0.	0.	1.20E-17
6	10.20	0.	0.	4.03E-18	0.	0.	0.	0.	0.	0.	0.	4.03E-18
7	10.10	0.	0.	2.33E-18	0.	0.	0.	0.	0.	0.	0.	2.33E-18
8	10.00	0.	0.	2.91E-19	0.	0.	0.	0.	0.	0.	0.	2.91E-19
9	9.90	0.	0.	2.04E-19	0.	0.	0.	0.	0.	0.	0.	2.04E-19
10	9.80	0.	0.	7.44E-20	0.	0.	0.	0.	0.	0.	0.	7.44E-20
11	9.70	0.	0.	9.89E-21	0.	0.	0.	0.	0.	0.	0.	9.89E-21
12	9.60	0.	0.	1.13E-20	0.	0.	0.	0.	0.	0.	0.	1.13E-20
13	9.50	0.	3.72E-06	1.21E-21	0.	0.	0.	0.	0.	0.	0.	3.72E-06
14	9.40	0.	1.38E-05	8.32E-22	0.	0.	0.	0.	0.	0.	0.	1.38E-05
15	9.30	0.	2.38E-05	3.07E-22	0.	0.	0.	0.	0.	0.	0.	2.38E-05
16	9.20	0.	3.38E-05	1.67E-23	0.	0.	0.	0.	0.	0.	0.	3.38E-05
17	9.10	0.	4.64E-05	4.77E-23	0.	0.	0.	0.	0.	0.	0.	4.64E-05
18	9.00	0.	5.95E-05	3.43E-24	0.	0.	0.	0.	0.	0.	0.	5.95E-05
19	8.90	0.	7.26E-05	2.57E-24	0.	0.	0.	0.	0.	0.	0.	7.26E-05
20	8.80	0.	7.78E-05	6.95E-25	0.	0.	0.	0.	0.	0.	0.	7.78E-05
21	8.70	0.	7.69E-05	1.05E-25	0.	0.	0.	0.	0.	0.	0.	7.69E-05
22	8.60	0.	7.60E-05	1.21E-25	0.	0.	0.	0.	0.	0.	0.	7.60E-05
23	8.50	0.	7.35E-05	8.34E-27	0.	0.	0.	0.	0.	0.	0.	7.35E-05
24	8.40	0.	6.91E-05	1.06E-26	0.	0.	0.	0.	0.	0.	0.	6.91E-05
25	8.30	0.	6.40E-05	9.85E-28	0.	0.	0.	0.	0.	0.	0.	6.40E-05
26	8.20	0.	5.82E-05	6.51E-28	0.	0.	0.	0.	0.	0.	0.	5.82E-05
27	8.10	0.	5.21E-05	1.16E-28	0.	0.	0.	0.	0.	0.	0.	5.21E-05
28	8.00	0.	4.60E-05	4.83E-29	0.	0.	0.	0.	0.	0.	0.	4.60E-05
29	7.90	0.	3.94E-05	1.28E-29	0.	0.	0.	0.	0.	0.	0.	3.94E-05
30	7.80	0.	3.27E-05	4.75E-30	0.	0.	0.	0.	0.	0.	0.	3.27E-05
31	7.70	0.	2.68E-05	1.39E-30	0.	0.	0.	0.	0.	0.	0.	2.68E-05
32	7.60	0.	2.17E-05	3.41E-31	0.	3.54E-19	0.	0.	0.	0.	0.	2.17E-05
33	7.50	0.	1.66E-05	1.11E-31	0.	2.49E-14	0.	0.	0.	0.	0.	1.66E-05
34	7.40	0.	1.26E-05	2.47E-32	0.	4.83E-13	0.	0.	0.	0.	0.	1.26E-05
35	7.30	0.	8.95E-06	7.11E-33	0.	4.24E-15	0.	0.	0.	0.	0.	8.95E-06
36	7.20	0.	6.79E-06	1.74E-33	0.	4.99E-12	0.	0.	0.	0.	0.	6.79E-06
37	7.10	0.	4.74E-06	4.85E-34	0.	6.42E-13	0.	0.	0.	0.	0.	4.74E-06
38	7.00	4.06E-07	0.	1.21E-34	0.	1.58E-12	0.	0.	0.	0.	0.	4.06E-07
39	6.90	4.40E-07	0.	3.30E-35	0.	3.07E-11	0.	0.	0.	0.	0.	4.40E-07
40	6.80	2.11E-07	0.	8.40E-36	0.	6.84E-14	0.	0.	0.	0.	0.	2.11E-07
41	6.70	8.49E-08	0.	2.14E-36	0.	2.21E-11	0.	0.	0.	0.	0.	8.50E-08
42	6.60	3.68E-08	0.	5.43E-37	0.	1.04E-10	0.	0.	0.	0.	0.	3.69E-08
43	6.50	1.12E-08	0.	1.21E-37	0.	5.39E-13	0.	0.	0.	0.	0.	1.12E-08
44	6.40	1.96E-08	0.	1.69E-38	1.76E-11	1.22E-10	0.	0.	0.	0.	0.	1.97E-08
45	6.30	2.01E-08	0.	0.	2.32E-11	2.34E-10	0.	0.	0.	0.	0.	2.04E-08
46	6.20	1.74E-08	0.	0.	2.13E-11	1.71E-12	0.	0.	0.	0.	0.	1.74E-08
47	6.10	2.23E-08	0.	0.	2.02E-11	5.04E-10	0.	0.	0.	0.	0.	2.28E-08
48	6.00	1.80E-08	0.	0.	5.72E-12	1.14E-10	0.	0.	0.	0.	0.	1.81E-08
49	5.90	9.83E-09	0.	0.	4.82E-12	3.35E-12	0.	0.	0.	0.	0.	9.84E-09
50	5.80	4.05E-09	0.	0.	2.94E-12	8.79E-11	0.	0.	0.	0.	0.	4.14E-09
51	5.70	9.56E-10	0.	0.	1.22E-12	7.69E-14	0.	0.	0.	0.	0.	9.57E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-10	0.	0.	0.	8.48E-14	5.83E-12	0.	0.	0.	0.	0.	0.	8.25E-10
53	5.50	5.01E-10	0.	0.	0.	4.75E-13	3.76E-10	0.	0.	0.	0.	0.	0.	8.78E-10
54	5.40	1.63E-10	0.	0.	0.	2.69E-13	1.51E-13	0.	0.	0.	0.	0.	0.	1.63E-10
55	5.30	8.17E-11	0.	0.	0.	7.51E-14	2.61E-11	0.	0.	0.	0.	0.	0.	1.08E-10
56	5.20	9.54E-12	0.	0.	0.	4.36E-14	1.77E-11	0.	0.	0.	0.	0.	0.	2.72E-11
57	5.10	8.14E-12	0.	0.	0.	1.16E-14	4.60E-13	0.	1.37E-14	0.	0.	0.	0.	8.43E-12
58	5.00	5.19E-12	0.	0.	0.	3.85E-15	2.78E-12	0.	1.42E-14	0.	0.	0.	0.	8.00E-12
59	4.90	3.92E-12	0.	0.	0.	2.38E-15	1.79E-14	0.	1.48E-14	0.	0.	0.	0.	3.96E-12
60	4.80	2.12E-12	0.	0.	0.	3.37E-15	1.88E-13	0.	1.55E-14	0.	0.	0.	0.	2.33E-12
61	4.70	9.60E-13	0.	0.	0.	1.53E-15	8.38E-16	0.	1.63E-14	0.	0.	0.	0.	9.79E-13
62	4.60	4.33E-13	0.	0.	0.	5.09E-16	1.24E-14	0.	1.72E-14	0.	0.	0.	0.	4.43E-13
63	4.50	1.50E-13	0.	0.	0.	2.35E-16	4.20E-17	0.	1.79E-14	0.	0.	0.	0.	1.68E-13
64	4.40	5.17E-14	0.	0.	0.	8.29E-17	6.40E-16	0.	1.88E-14	0.	0.	0.	0.	7.12E-14
65	4.30	2.04E-14	0.	0.	0.	3.13E-17	1.48E-16	0.	2.00E-14	0.	0.	0.	0.	4.05E-14
66	4.20	6.09E-15	0.	0.	0.	8.83E-18	2.34E-17	0.	2.13E-14	0.	0.	0.	0.	2.74E-14
67	4.10	3.34E-15	0.	0.	0.	3.46E-18	2.27E-17	0.	2.28E-14	0.	0.	0.	0.	2.62E-14
68	4.00	8.11E-16	0.	0.	0.	1.33E-18	5.34E-19	0.	2.47E-14	0.	0.	0.	0.	2.55E-14
69	3.90	1.82E-16	0.	0.	0.	3.07E-19	1.53E-18	0.	2.66E-14	0.	0.	0.	0.	2.68E-14
70	3.80	1.27E-16	0.	0.	0.	1.91E-19	0.	0.	2.90E-14	0.	0.	0.	0.	2.92E-14
71	3.70	2.03E-17	0.	0.	0.	2.51E-20	0.	0.	3.17E-14	0.	0.	0.	0.	3.18E-14
72	3.60	7.18E-18	0.	0.	0.	2.19E-20	0.	0.	3.48E-14	0.	0.	0.	0.	3.48E-14
73	3.50	2.87E-18	0.	0.	0.	2.06E-21	0.	0.	3.84E-14	0.	0.	0.	0.	3.84E-14
74	3.40	5.45E-19	0.	0.	0.	1.96E-21	0.	0.	4.24E-14	0.	0.	0.	0.	4.24E-14
75	3.30	1.93E-19	0.	0.	0.	1.80E-22	0.	0.	4.40E-14	0.	0.	0.	0.	4.40E-14
76	3.20	4.90E-20	0.	0.	0.	1.38E-22	0.	0.	4.48E-14	0.	0.	0.	0.	4.49E-14
77	3.10	1.12E-20	0.	0.	0.	1.60E-23	0.	0.	4.51E-14	0.	0.	0.	0.	4.51E-14
78	3.00	3.06E-21	0.	0.	0.	7.92E-24	0.	0.	4.37E-14	0.	0.	0.	0.	4.37E-14
79	2.90	6.95E-22	0.	0.	0.	8.02E-25	0.	0.	4.24E-14	0.	0.	0.	0.	4.24E-14
80	2.80	2.05E-22	0.	0.	0.	1.51E-25	0.	0.	3.92E-14	0.	0.	0.	0.	3.92E-14
81	2.70	2.50E-23	0.	0.	0.	1.58E-27	0.	0.	3.57E-14	0.	0.	0.	0.	3.57E-14
82	2.60	4.84E-25	0.	0.	0.	1.45E-29	0.	0.	3.21E-14	0.	0.	0.	0.	3.21E-14
83	2.50	4.94E-27	0.	0.	0.	1.72E-31	0.	0.	2.77E-14	0.	0.	0.	0.	2.77E-14
84	2.40	0.	0.	0.	0.	1.64E-33	0.	0.	2.39E-14	0.	0.	0.	0.	2.39E-14
85	2.30	0.	0.	0.	0.	0.	0.	0.	1.87E-14	0.	0.	0.	0.	1.87E-14
86	2.20	0.	0.	0.	0.	0.	0.	0.	1.42E-14	0.	0.	0.	0.	1.42E-14
87	2.10	0.	0.	0.	0.	0.	0.	0.	1.04E-14	0.	0.	0.	0.	1.04E-14
88	2.00	0.	0.	0.	0.	0.	0.	0.	6.85E-15	0.	0.	0.	0.	6.85E-15
89	1.90	0.	0.	0.	0.	0.	0.	0.	4.52E-15	0.	0.	0.	0.	4.52E-15
90	1.80	0.	0.	0.	0.	0.	0.	0.	2.63E-15	0.	0.	0.	0.	2.63E-15
91	1.70	0.	0.	0.	0.	0.	0.	0.	1.47E-15	0.	0.	0.	0.	1.47E-15
92	1.60	0.	0.	0.	0.	0.	0.	0.	7.73E-16	0.	0.	0.	0.	7.73E-16
93	1.50	0.	0.	0.	0.	0.	0.	0.	3.15E-16	0.	0.	0.	0.	3.15E-16
94	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
95	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
96	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
97	1.10	0.	0.	0.	0.	0.	0.	1.46E-16	0.	0.	0.	0.	0.	1.46E-16
98	1.00	0.	0.	0.	0.	0.	0.	2.21E-19	0.	0.	0.	0.	0.	2.21E-19
99	0.90	0.	0.	0.	0.	0.	0.	1.38E-15	0.	0.	0.	0.	0.	1.38E-15
100	0.80	0.	0.	0.	0.	0.	0.	3.24E-18	0.	0.	0.	0.	0.	3.24E-18
101	0.70	0.	0.	0.	0.	0.	0.	9.34E-15	0.	0.	0.	0.	0.	9.34E-15
102	0.60	0.	0.	0.	0.	0.	0.	8.06E-17	0.	0.	0.	0.	0.	8.06E-17

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-03	0.	0.	0.	0.	0.	0.	0.	4.06E-03
2	10.60	0.	0.	2.13E-03	0.	0.	0.	0.	0.	0.	0.	2.13E-03
3	10.50	0.	0.	1.33E-03	0.	0.	0.	0.	0.	0.	0.	1.33E-03
4	10.40	0.	0.	8.68E-04	0.	0.	0.	0.	0.	0.	0.	8.68E-04
5	10.30	0.	0.	4.08E-04	0.	0.	0.	0.	0.	0.	0.	4.08E-04
6	10.20	0.	0.	2.70E-04	0.	0.	0.	0.	0.	0.	0.	2.70E-04
7	10.10	0.	0.	1.88E-04	0.	0.	0.	0.	0.	0.	0.	1.88E-04
8	10.00	0.	0.	6.99E-05	0.	0.	0.	0.	0.	0.	0.	6.99E-05
9	9.90	0.	0.	6.20E-05	0.	0.	0.	0.	0.	0.	0.	6.20E-05
10	9.80	0.	0.	3.44E-05	0.	0.	0.	0.	0.	0.	0.	3.44E-05
11	9.70	0.	0.	1.31E-05	0.	0.	0.	0.	0.	0.	0.	1.31E-05
12	9.60	0.	0.	1.44E-05	0.	0.	0.	0.	0.	0.	0.	1.44E-05
13	9.50	0.	3.44E 01	4.84E-06	0.	0.	0.	0.	0.	0.	0.	3.44E 01
14	9.40	0.	1.27E 02	3.14E-06	0.	0.	0.	0.	0.	0.	0.	1.27E 02
15	9.30	0.	2.20E 02	2.49E-06	0.	0.	0.	0.	0.	0.	0.	2.20E 02
16	9.20	0.	3.13E 02	6.08E-07	0.	0.	0.	0.	0.	0.	0.	3.13E 02
17	9.10	0.	4.14E 02	9.14E-07	0.	0.	0.	0.	0.	0.	0.	4.14E 02
18	9.00	0.	5.16E 02	2.89E-07	0.	0.	0.	0.	0.	0.	0.	5.16E 02
19	8.90	0.	6.18E 02	1.92E-07	0.	0.	0.	0.	0.	0.	0.	6.18E 02
20	8.80	0.	6.49E 02	1.25E-07	0.	0.	0.	0.	0.	0.	0.	6.49E 02
21	8.70	0.	6.24E 02	4.15E-08	0.	0.	0.	0.	0.	0.	0.	6.24E 02
22	8.60	0.	5.99E 02	4.70E-08	0.	0.	0.	0.	0.	0.	0.	5.99E 02
23	8.50	0.	5.71E 02	1.37E-08	0.	0.	0.	0.	0.	0.	0.	5.71E 02
24	8.40	0.	5.36E 02	1.34E-08	0.	0.	0.	0.	0.	0.	0.	5.36E 02
25	8.30	0.	4.98E 02	4.43E-09	0.	0.	0.	0.	0.	0.	0.	4.98E 02
26	8.20	0.	4.60E 02	3.48E-09	0.	0.	0.	0.	0.	0.	0.	4.60E 02
27	8.10	0.	4.23E 02	1.42E-09	0.	0.	0.	0.	0.	0.	0.	4.23E 02
28	8.00	0.	3.87E 02	9.81E-10	0.	0.	0.	0.	0.	0.	0.	3.87E 02
29	7.90	0.	3.48E 02	4.26E-10	0.	0.	0.	0.	0.	0.	0.	3.48E 02
30	7.80	0.	3.09E 02	3.03E-10	0.	0.	0.	0.	0.	0.	0.	3.09E 02
31	7.70	0.	2.72E 02	1.42E-10	0.	0.	0.	0.	0.	0.	0.	2.72E 02
32	7.60	0.	2.35E 02	7.94E-11	0.	4.91E-07	0.	0.	0.	0.	0.	2.35E 02
33	7.50	0.	1.99E 02	4.08E-11	0.	1.67E-04	0.	0.	0.	0.	0.	1.99E 02
34	7.40	0.	1.69E 02	2.10E-11	0.	7.66E-04	0.	0.	0.	0.	0.	1.69E 02
35	7.30	0.	1.41E 02	1.10E-11	0.	4.59E-04	0.	0.	0.	0.	0.	1.41E 02
36	7.20	0.	1.18E 02	5.53E-12	0.	1.66E-02	0.	0.	0.	0.	0.	1.18E 02
37	7.10	0.	9.53E 01	2.98E-12	0.	1.22E-03	0.	0.	0.	0.	0.	9.53E 01
38	7.00	1.83E 00	0.	1.49E-12	0.	3.89E-02	0.	0.	0.	0.	0.	1.87E 00
39	6.90	2.61E 00	0.	7.77E-13	0.	7.80E-02	0.	0.	0.	0.	0.	2.69E 00
40	6.80	1.62E 00	0.	3.99E-13	0.	1.42E-02	0.	0.	0.	0.	0.	1.63E 00
41	6.70	8.26E-01	0.	1.96E-13	0.	2.09E-01	0.	0.	0.	0.	0.	1.04E 00
42	6.60	3.84E-01	0.	9.62E-14	0.	1.74E-01	0.	0.	0.	0.	0.	5.58E-01
43	6.50	1.52E-01	0.	3.82E-14	0.	4.38E-02	0.	0.	0.	0.	0.	1.96E-01
44	6.40	2.78E-01	0.	9.52E-15	1.81E-02	5.38E-01	0.	0.	0.	0.	0.	8.34E-01
45	6.30	4.40E-01	0.	1.54E-15	4.33E-02	3.09E-01	0.	0.	0.	0.	0.	7.92E-01
46	6.20	8.03E-01	0.	2.00E-16	4.05E-02	6.65E-02	0.	0.	0.	0.	0.	9.10E-01
47	6.10	1.86E 00	0.	2.65E-17	7.01E-02	1.10E 00	0.	0.	0.	0.	0.	3.03E 00
48	6.00	2.83E 00	0.	2.88E-18	2.53E-02	1.37E-01	0.	0.	0.	0.	0.	2.99E 00
49	5.90	2.72E 00	0.	1.60E-19	3.37E-02	7.13E-02	0.	0.	0.	0.	0.	2.82E 00
50	5.80	2.34E 00	0.	2.98E-21	3.30E-02	2.22E-01	0.	0.	0.	0.	0.	2.59E 00
51	5.70	1.35E 00	0.	0.	2.10E-02	1.30E-02	0.	0.	0.	0.	0.	1.39E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.30E 00	0.	0.	0.	5.38E-03	1.51E-01	0.	0.	0.	0.	0.	0.	1.46E 00
53	5.50	9.98E-01	0.	0.	0.	1.28E-02	6.74E-01	0.	0.	0.	0.	0.	0.	1.48E 00
54	5.40	6.58E-01	0.	0.	0.	7.75E-03	1.88E-02	0.	0.	0.	0.	0.	0.	6.66E-01
55	5.30	4.50E-01	0.	0.	0.	6.08E-03	2.22E-01	0.	0.	0.	0.	0.	0.	6.78E-01
56	5.20	1.45E-01	0.	0.	0.	4.53E-03	7.99E-02	0.	0.	0.	0.	0.	0.	2.29E-01
57	5.10	1.18E-01	0.	0.	0.	2.70E-03	3.31E-02	0.	5.79E-03	0.	0.	0.	0.	1.59E-01
58	5.00	7.10E-02	0.	0.	0.	1.43E-03	5.70E-02	0.	5.99E-03	0.	0.	0.	0.	1.36E-01
59	4.90	6.00E-02	0.	0.	0.	1.18E-03	7.15E-03	0.	6.19E-03	0.	0.	0.	0.	7.45E-02
60	4.80	5.33E-02	0.	0.	0.	1.31E-03	1.62E-02	0.	6.35E-03	0.	0.	0.	0.	7.72E-02
61	4.70	3.88E-02	0.	0.	0.	8.36E-04	1.62E-03	0.	6.50E-03	0.	0.	0.	0.	4.78E-02
62	4.60	3.01E-02	0.	0.	0.	6.11E-04	4.34E-03	0.	6.66E-03	0.	0.	0.	0.	4.17E-02
63	4.50	1.87E-02	0.	1.17E-17	0.	3.45E-04	3.93E-04	0.	6.84E-03	0.	0.	0.	0.	2.63E-02
64	4.40	1.18E-02	0.	3.13E-16	0.	2.27E-04	9.77E-04	0.	7.01E-03	0.	0.	0.	0.	1.98E-02
65	4.30	6.77E-03	0.	4.43E-17	0.	1.40E-04	1.70E-04	0.	7.19E-03	0.	0.	0.	0.	1.43E-02
66	4.20	4.01E-03	0.	2.47E-15	0.	9.09E-05	1.78E-04	0.	7.37E-03	0.	0.	0.	0.	1.16E-02
67	4.10	2.69E-03	0.	2.34E-17	0.	5.20E-05	6.55E-05	0.	7.56E-03	0.	0.	0.	0.	1.04E-02
68	4.00	1.44E-03	0.	2.52E-15	0.	3.46E-05	1.40E-05	0.	7.83E-03	0.	0.	0.	0.	9.31E-03
69	3.90	6.57E-04	0.	3.41E-15	0.	1.53E-05	1.57E-05	0.	8.10E-03	0.	0.	0.	0.	8.78E-03
70	3.80	5.73E-04	0.	3.57E-16	0.	1.41E-05	0.	0.	8.42E-03	0.	0.	0.	0.	9.01E-03
71	3.70	2.29E-04	0.	5.79E-15	0.	4.39E-06	0.	0.	8.77E-03	0.	0.	0.	0.	9.01E-03
72	3.60	1.34E-04	0.	1.03E-16	0.	5.00E-06	0.	0.	9.15E-03	0.	0.	0.	0.	9.29E-03
73	3.50	8.00E-05	0.	1.46E-15	0.	1.30E-06	0.	0.	9.58E-03	0.	0.	0.	0.	9.67E-03
74	3.40	3.66E-05	0.	3.35E-17	0.	1.49E-06	0.	0.	10.00E-03	0.	0.	0.	0.	1.01E-02
75	3.30	2.03E-05	0.	2.33E-16	0.	4.09E-07	0.	0.	1.03E-02	0.	0.	0.	0.	1.04E-02
76	3.20	9.50E-06	0.	8.93E-18	0.	3.84E-07	0.	0.	1.06E-02	0.	0.	0.	0.	1.06E-02
77	3.10	4.96E-06	0.	3.12E-17	0.	1.40E-07	0.	0.	1.07E-02	0.	0.	0.	0.	1.07E-02
78	3.00	2.45E-06	0.	1.83E-18	0.	8.86E-08	0.	0.	1.05E-02	0.	0.	0.	0.	1.05E-02
79	2.90	1.07E-06	0.	3.22E-18	0.	2.30E-08	0.	0.	1.02E-02	0.	0.	0.	0.	1.02E-02
80	2.80	6.73E-07	0.	2.53E-19	0.	6.10E-09	0.	0.	9.73E-03	0.	0.	0.	0.	9.73E-03
81	2.70	1.68E-07	0.	2.90E-19	0.	6.10E-10	0.	0.	9.20E-03	0.	0.	0.	0.	9.20E-03
82	2.60	2.06E-08	0.	3.83E-20	0.	5.65E-11	0.	0.	8.63E-03	0.	0.	0.	0.	8.63E-03
83	2.50	7.45E-10	0.	1.74E-20	0.	4.73E-12	0.	0.	7.89E-03	0.	0.	0.	0.	7.89E-03
84	2.40	0.	2.27E-17	0.	0.	2.19E-13	0.	0.	7.22E-03	0.	0.	0.	0.	7.22E-03
85	2.30	0.	3.12E-15	0.	0.	0.	0.	0.	6.31E-03	0.	0.	0.	0.	6.31E-03
86	2.20	0.	3.41E-15	0.	0.	0.	0.	0.	5.43E-03	0.	0.	0.	0.	5.43E-03
87	2.10	0.	3.14E-14	0.	0.	0.	0.	0.	4.53E-03	0.	0.	0.	0.	4.53E-03
88	2.00	0.	3.95E-14	0.	0.	0.	0.	0.	3.43E-03	0.	0.	0.	0.	3.43E-03
89	1.90	0.	3.46E-13	0.	0.	0.	0.	0.	2.60E-03	0.	0.	0.	0.	2.60E-03
90	1.80	0.	1.46E-12	0.	0.	0.	0.	0.	1.74E-03	0.	0.	0.	0.	1.74E-03
91	1.70	0.	4.14E-13	0.	0.	0.	0.	0.	1.11E-03	0.	0.	0.	0.	1.11E-03
92	1.60	0.	9.30E-13	0.	0.	0.	0.	0.	6.85E-04	0.	0.	0.	0.	6.85E-04
93	1.50	0.	3.47E-13	0.	0.	0.	0.	0.	2.81E-04	0.	0.	0.	0.	2.81E-04
94	1.40	0.	1.86E-12	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.46E-12
95	1.30	0.	2.43E-13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-13
96	1.20	0.	1.55E-12	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-12
97	1.10	0.	1.82E-13	0.	0.	0.	0.	8.60E-07	0.	0.	0.	0.	0.	8.40E-07
98	1.00	0.	5.11E-13	0.	0.	0.	0.	1.87E-07	0.	0.	0.	0.	0.	1.47E-07
99	0.90	0.	1.15E-13	0.	0.	0.	0.	6.88E-06	0.	0.	0.	0.	0.	6.88E-06
100	0.80	0.	6.32E-14	0.	0.	0.	0.	1.99E-06	0.	0.	0.	0.	0.	1.99E-06
101	0.70	0.	1.04E-14	0.	0.	0.	0.	3.92E-05	0.	0.	0.	0.	0.	3.92E-05
102	0.60	0.	1.19E-19	0.	0.	0.	0.	1.08E-05	0.	0.	0.	0.	0.	1.08E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2800. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	4.06E-04	0.	0.	0.	0.	0.	0.	0.	4.06E-04
2	10.60	0.	0.	2.13E-04	0.	0.	0.	0.	0.	0.	0.	2.13E-04
3	10.50	0.	0.	1.33E-04	0.	0.	0.	0.	0.	0.	0.	1.33E-04
4	10.40	0.	0.	8.60E-05	0.	0.	0.	0.	0.	0.	0.	8.60E-05
5	10.30	0.	0.	4.08E-05	0.	0.	0.	0.	0.	0.	0.	4.08E-05
6	10.20	0.	0.	2.70E-05	0.	0.	0.	0.	0.	0.	0.	2.70E-05
7	10.10	0.	0.	1.80E-05	0.	0.	0.	0.	0.	0.	0.	1.80E-05
8	10.00	0.	0.	6.99E-06	0.	0.	0.	0.	0.	0.	0.	6.99E-06
9	9.90	0.	0.	6.20E-06	0.	0.	0.	0.	0.	0.	0.	6.20E-06
10	9.80	0.	0.	3.44E-06	0.	0.	0.	0.	0.	0.	0.	3.44E-06
11	9.70	0.	0.	1.31E-06	0.	0.	0.	0.	0.	0.	0.	1.31E-06
12	9.60	0.	0.	1.44E-06	0.	0.	0.	0.	0.	0.	0.	1.44E-06
13	9.50	0.	3.44E 00	4.84E-07	0.	0.	0.	0.	0.	0.	0.	3.44E 00
14	9.40	0.	1.27E 01	3.14E-07	0.	0.	0.	0.	0.	0.	0.	1.27E 01
15	9.30	0.	2.20E 01	2.49E-07	0.	0.	0.	0.	0.	0.	0.	2.20E 01
16	9.20	0.	3.13E 01	6.88E-08	0.	0.	0.	0.	0.	0.	0.	3.13E 01
17	9.10	0.	4.14E 01	9.14E-08	0.	0.	0.	0.	0.	0.	0.	4.14E 01
18	9.00	0.	5.16E 01	2.89E-08	0.	0.	0.	0.	0.	0.	0.	5.16E 01
19	8.90	0.	6.18E 01	1.92E-08	0.	0.	0.	0.	0.	0.	0.	6.18E 01
20	8.80	0.	6.49E 01	1.25E-08	0.	0.	0.	0.	0.	0.	0.	6.49E 01
21	8.70	0.	6.24E 01	4.15E-09	0.	0.	0.	0.	0.	0.	0.	6.24E 01
22	8.60	0.	5.99E 01	4.70E-09	0.	0.	0.	0.	0.	0.	0.	5.99E 01
23	8.50	0.	5.71E 01	1.37E-09	0.	0.	0.	0.	0.	0.	0.	5.71E 01
24	8.40	0.	5.36E 01	1.34E-09	0.	0.	0.	0.	0.	0.	0.	5.36E 01
25	8.30	0.	4.98E 01	4.43E-10	0.	0.	0.	0.	0.	0.	0.	4.98E 01
26	8.20	0.	4.60E 01	3.48E-10	0.	0.	0.	0.	0.	0.	0.	4.60E 01
27	8.10	0.	4.23E 01	1.42E-10	0.	0.	0.	0.	0.	0.	0.	4.23E 01
28	8.00	0.	3.87E 01	9.81E-11	0.	0.	0.	0.	0.	0.	0.	3.87E 01
29	7.90	0.	3.48E 01	4.26E-11	0.	0.	0.	0.	0.	0.	0.	3.48E 01
30	7.80	0.	3.09E 01	3.03E-11	0.	0.	0.	0.	0.	0.	0.	3.09E 01
31	7.70	0.	2.72E 01	1.42E-11	0.	0.	0.	0.	0.	0.	0.	2.72E 01
32	7.60	0.	2.35E 01	7.94E-12	0.	4.91E-08	0.	0.	0.	0.	0.	2.35E 01
33	7.50	0.	1.99E 01	4.08E-12	0.	1.67E-05	0.	0.	0.	0.	0.	1.99E 01
34	7.40	0.	1.69E 01	2.10E-12	0.	7.66E-05	0.	0.	0.	0.	0.	1.69E 01
35	7.30	0.	1.41E 01	1.18E-12	0.	4.59E-05	0.	0.	0.	0.	0.	1.41E 01
36	7.20	0.	1.18E 01	5.53E-13	0.	1.66E-03	0.	0.	0.	0.	0.	1.18E 01
37	7.10	0.	9.53E 00	2.90E-13	0.	1.22E-04	0.	0.	0.	0.	0.	9.53E 00
38	7.00	1.83E-01	0.	1.49E-13	0.	3.89E-03	0.	0.	0.	0.	0.	1.97E-01
39	6.90	2.61E-01	0.	7.77E-14	0.	7.80E-03	0.	0.	0.	0.	0.	2.69E-01
40	6.80	1.62E-01	0.	3.99E-14	0.	1.42E-03	0.	0.	0.	0.	0.	1.63E-01
41	6.70	8.26E-02	0.	1.96E-14	0.	2.89E-02	0.	0.	0.	0.	0.	1.04E-01
42	6.60	3.84E-02	0.	9.62E-15	0.	1.74E-02	0.	0.	0.	0.	0.	5.58E-02
43	6.50	1.52E-02	0.	3.82E-15	0.	4.38E-03	0.	0.	0.	0.	0.	1.96E-02
44	6.40	2.78E-02	0.	9.[illegible]-16	1.81E-03	5.38E-02	0.	0.	0.	0.	0.	8.34E-02
45	6.30	4.40E-02	0.	1.5[illegible]E-16	4.33E-03	3.09E-02	0.	0.	0.	0.	0.	7.92E-02
46	6.20	8.03E-02	0.	2.08E-17	4.05E-03	6.65E-03	0.	0.	0.	0.	0.	9.10E-02
47	6.10	1.86E-01	0.	2.65E-18	7.01E-03	1.10E-01	0.	0.	0.	0.	0.	3.03E-01
48	6.00	2.83E-01	0.	2.88E-19	2.53E-03	1.37E-02	0.	0.	0.	0.	0.	2.99E-01
49	5.90	2.72E-01	0.	1.60E-20	3.37E-03	7.13E-03	0.	0.	0.	0.	0.	2.82E-01
50	5.80	2.34E-01	0.	2.98E-22	3.30E-03	2.27E-02	0.	0.	0.	0.	0.	2.59E-01
51	5.70	1.35E-01	0.	0.	2.10E-03	1.30E-03	0.	0.	0.	0.	0.	1.39E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.30E-01	0.	0.	0.	5.38E-04	1.51E-02	0.	0.	0.	0.	0.	0.	1.46E-01
53	5.50	9.98E-02	0.	0.	0.	1.28E-03	6.74E-02	0.	0.	0.	0.	0.	0.	1.68E-01
54	5.40	6.58E-02	0.	0.	0.	7.75E-04	1.88E-03	0.	0.	0.	0.	0.	0.	6.84E-02
55	5.30	4.50E-02	0.	0.	0.	6.08E-04	2.22E-02	0.	0.	0.	0.	0.	0.	6.78E-02
56	5.20	1.45E-02	0.	0.	0.	4.53E-04	7.99E-03	0.	0.	0.	0.	0.	0.	2.29E-02
57	5.10	1.18E-02	0.	0.	0.	2.70E-04	3.31E-03	0.	1.83E-04	0.	0.	0.	0.	1.55E-02
58	5.00	7.10E-03	0.	0.	0.	1.43E-04	5.70E-03	0.	1.89E-04	0.	0.	0.	0.	1.31E-02
59	4.90	6.00E-03	0.	0.	0.	1.18E-04	7.15E-04	0.	1.96E-04	0.	0.	0.	0.	7.03E-03
60	4.80	5.33E-03	0.	0.	0.	1.31E-04	1.62E-03	0.	2.01E-04	0.	0.	0.	0.	7.28E-03
61	4.70	3.86E-03	0.	0.	0.	8.36E-05	1.62E-04	0.	2.06E-04	0.	0.	0.	0.	4.33E-03
62	4.60	3.01E-03	0.	0.	0.	6.11E-05	4.34E-04	0.	2.11E-04	0.	0.	0.	0.	3.72E-03
63	4.50	1.87E-03	0.	1.17E-18	0.	3.49E-05	3.93E-05	0.	2.16E-04	0.	0.	0.	0.	2.16E-03
64	4.40	1.10E-03	0.	3.13E-17	0.	2.27E-05	9.77E-05	0.	2.22E-04	0.	0.	0.	0.	1.50E-03
65	4.30	6.77E-04	0.	4.43E-18	0.	1.40E-05	1.70E-05	0.	2.27E-04	0.	0.	0.	0.	9.35E-04
66	4.20	4.01E-04	0.	2.47E-18	0.	9.09E-06	1.78E-05	0.	2.33E-04	0.	0.	0.	0.	6.68E-04
67	4.10	2.69E-04	0.	2.34E-18	0.	5.20E-06	6.55E-06	0.	2.39E-04	0.	0.	0.	0.	5.20E-04
68	4.00	1.44E-04	0.	2.52E-16	0.	3.46E-06	1.40E-06	0.	2.47E-04	0.	0.	0.	0.	3.96E-04
69	3.90	6.57E-05	0.	3.41E-16	0.	1.53E-06	1.57E-06	0.	2.56E-04	0.	0.	0.	0.	3.25E-04
70	3.80	5.73E-05	0.	3.57E-17	0.	1.41E-06	0.	0.	2.66E-04	0.	0.	0.	0.	3.25E-04
71	3.70	2.29E-05	0.	5.75E-16	0.	4.39E-07	0.	0.	2.77E-04	0.	0.	0.	0.	3.01E-04
72	3.60	1.34E-05	0.	1.03E-17	0.	5.00E-07	0.	0.	2.89E-04	0.	0.	0.	0.	3.03E-04
73	3.50	8.00E-06	0.	1.46E-16	0.	1.30E-07	0.	0.	3.03E-04	0.	0.	0.	0.	3.11E-04
74	3.40	3.66E-06	0.	3.35E-18	0.	1.49E-07	0.	0.	3.17E-04	0.	0.	0.	0.	3.21E-04
75	3.30	2.03E-06	0.	2.33E-17	0.	4.09E-08	0.	0.	3.27E-04	0.	0.	0.	0.	3.29E-04
76	3.20	9.50E-07	0.	8.93E-19	0.	3.84E-08	0.	0.	3.35E-04	0.	0.	0.	0.	3.36E-04
77	3.10	4.96E-07	0.	3.12E-18	0.	1.40E-08	0.	0.	3.40E-04	0.	0.	0.	0.	3.40E-04
78	3.00	2.45E-07	0.	1.83E-19	0.	8.86E-09	0.	0.	3.31E-04	0.	0.	0.	0.	3.32E-04
79	2.90	1.07E-07	0.	3.22E-19	0.	2.30E-09	0.	0.	3.23E-04	0.	0.	0.	0.	3.23E-04
80	2.80	6.73E-08	0.	2.53E-20	0.	6.10E-10	0.	0.	3.08E-04	0.	0.	0.	0.	3.08E-04
81	2.70	1.68E-08	0.	2.98E-20	0.	6.10E-11	0.	0.	2.91E-04	0.	0.	0.	0.	2.91E-04
82	2.60	2.08E-09	0.	3.83E-21	0.	5.69E-12	0.	0.	2.73E-04	0.	0.	0.	0.	2.73E-04
83	2.50	7.45E-11	0.	1.74E-21	0.	4.73E-13	0.	0.	2.50E-04	0.	0.	0.	0.	2.50E-04
84	2.40	0.	2.27E-18	0.	0.	2.19E-14	0.	0.	2.28E-04	0.	0.	0.	0.	2.28E-04
85	2.30	0.	3.12E-16	0.	0.	0.	0.	0.	1.99E-04	0.	0.	0.	0.	1.99E-04
86	2.20	0.	3.41E-16	0.	0.	0.	0.	0.	1.72E-04	0.	0.	0.	0.	1.72E-04
87	2.10	0.	3.14E-15	0.	0.	0.	0.	0.	1.43E-04	0.	0.	0.	0.	1.43E-04
88	2.00	0.	3.95E-15	0.	0.	0.	0.	0.	1.08E-04	0.	0.	0.	0.	1.08E-04
89	1.90	0.	3.46E-14	0.	0.	0.	0.	0.	8.22E-05	0.	0.	0.	0.	8.22E-05
90	1.80	0.	1.44E-13	0.	0.	0.	0.	0.	5.49E-05	0.	0.	0.	0.	5.49E-05
91	1.70	0.	4.14E-14	0.	0.	0.	0.	0.	3.51E-05	0.	0.	0.	0.	3.51E-05
92	1.60	0	9.30E-14	0.	0.	0.	0.	0.	2.16E-05	0.	0.	0.	0.	2.16E-05
93	1.52	0.	3.47E-14	0.	0.	0.	0.	0.	8.90E-06	0.	0.	0.	0.	8.90E-06
94	1.40	0.	1.84E-13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.98E-13
95	1.30	0.	2.43E-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-14
9A	1.20	0.	1.55E-13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-13
97	1.10	0.	1.82E-14	0.	0.	0.	0.	8.40E-08	0.	0.	0.	0.	0.	8.48E-08
98	1.00	0.	5.11E-14	0.	0.	0.	0.	1.87E-08	0.	0.	0.	0.	0.	1.87E-08
99	0.90	0.	1.15E-14	0.	0.	0.	0.	6.88E-07	0.	0.	0.	0.	0.	6.88E-07
100	0.80	0.	6.32E-15	0.	0.	0.	0.	1.99E-07	0.	0.	0.	0.	0.	1.99E-07
101	0.70	0.	1.04E-15	0.	0.	0.	0.	3.92E-06	0.	0.	0.	0.	0.	3.92E-06
102	0.60	0.	1.19E-20	0.	0.	0.	0.	1.08E-06	0.	0.	0.	0.	0.	1.08E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-04 (19.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-05	0.	0.	0.	0.	0.	0.	0.	4.06E-05
2	10.60	0.	0.	2.13E-05	0.	0.	0.	0.	0.	0.	0.	2.13E-05
3	10.50	0.	0.	1.33E-05	0.	0.	0.	0.	0.	0.	0.	1.33E-05
4	10.40	0.	0.	8.60E-06	0.	0.	0.	0.	0.	0.	0.	8.60E-06
5	10.30	0.	0.	4.96E-06	0.	0.	0.	0.	0.	0.	0.	4.00E-06
6	10.20	0.	0.	2.78E-06	0.	0.	0.	0.	0.	0.	0.	2.78E-06
7	10.10	0.	0.	1.88E-06	0.	0.	0.	0.	0.	0.	0.	1.88E-06
8	10.00	0.	0.	6.99E-07	0.	0.	0.	0.	0.	0.	0.	6.99E-07
9	9.90	0.	0.	6.28E-07	0.	0.	0.	0.	0.	0.	0.	6.28E-07
10	9.80	0.	0.	3.44E-07	0.	0.	0.	0.	0.	0.	0.	3.44E-07
11	9.70	0.	0.	1.31E-07	0.	0.	0.	0.	0.	0.	0.	1.31E-07
12	9.60	0.	0.	1.44E-07	0.	0.	0.	0.	0.	0.	0.	1.44E-07
13	9.50	0.	3.44E-01	4.84E-08	0.	0.	0.	0.	0.	0.	0.	3.44E-01
14	9.40	0.	1.27E 00	3.14E-08	0.	0.	0.	0.	0.	0.	0.	1.27E 00
15	9.30	0.	2.28E 00	2.49E-08	0.	0.	0.	0.	0.	0.	0.	2.28E 00
16	9.20	0.	3.13E 00	6.08E-09	0.	0.	0.	0.	0.	0.	0.	3.13E 00
17	9.10	0.	4.14E 00	9.14E-09	0.	0.	0.	0.	0.	0.	0.	4.14E 00
18	9.00	0.	5.16E 00	2.89E-09	0.	0.	0.	0.	0.	0.	0.	5.16E 00
19	8.90	0.	6.18E 00	1.92E-09	0.	0.	0.	0.	0.	0.	0.	6.18E 00
20	8.80	0.	6.49E 00	1.25E-09	0.	0.	0.	0.	0.	0.	0.	6.49E 00
21	8.70	0.	6.24E 00	4.15E-10	0.	0.	0.	0.	0.	0.	0.	6.24E 00
22	8.60	0.	5.99E 00	4.70E-10	0.	0.	0.	0.	0.	0.	0.	5.99E 00
23	8.50	0.	5.71E 00	1.37E-10	0.	0.	0.	0.	0.	0.	0.	5.71E 00
24	8.40	0.	5.36E 00	1.34E-10	0.	0.	0.	0.	0.	0.	0.	5.36E 00
25	8.30	0.	4.98E 00	4.43E-11	0.	0.	0.	0.	0.	0.	0.	4.98E 00
26	8.20	0.	4.60E 00	3.48E-11	0.	0.	0.	0.	0.	0.	0.	4.60E 00
27	8.10	0.	4.23E 00	1.42E-11	0.	0.	0.	0.	0.	0.	0.	4.23E 00
28	8.00	0.	3.87E 00	9.81E-12	0.	0.	0.	0.	0.	0.	0.	3.87E 00
29	7.90	0.	3.48E 00	4.26E-12	0.	0.	0.	0.	0.	0.	0.	3.48E 00
30	7.80	0.	3.09E 00	3.03E-12	0.	0.	0.	0.	0.	0.	0.	3.09E 00
31	7.70	0.	2.72E 00	1.42E-12	0.	0.	0.	0.	0.	0.	0.	2.72E 00
32	7.60	0.	2.35E 00	7.93E-13	0.	4.91E-09	0.	0.	0.	0.	0.	2.35E 00
33	7.50	0.	1.99E 00	4.08E-13	0.	1.67E-06	0.	0.	0.	0.	0.	1.99E 00
34	7.40	0.	1.69E 00	2.18E-13	0.	7.66E-06	0.	0.	0.	0.	0.	1.69E 00
35	7.30	0.	1.41E 00	1.18E-13	0.	4.59E-06	0.	0.	0.	0.	0.	1.41E 00
36	7.20	0.	1.18E 00	5.52E-14	0.	1.64E-04	0.	0.	0.	0.	0.	1.18E 00
37	7.10	0.	9.53E-01	2.98E-14	0.	1.22E-05	0.	0.	0.	0.	0.	9.53E-01
38	7.00	1.83E-02	0.	1.49E-14	0.	3.89E-04	0.	0.	0.	0.	0.	1.87E-02
39	6.90	2.61E-02	0.	7.77E-15	0.	7.79E-04	0.	0.	0.	0.	0.	2.59E-02
40	6.80	1.62E-02	0.	3.99E-15	0.	1.42E-04	0.	0.	0.	0.	0.	1.63E-02
41	6.70	8.26E-03	0.	1.96E-15	0.	2.09E-03	0.	0.	0.	0.	0.	1.04E-02
42	6.60	3.84E-03	0.	9.62E-16	0.	1.74E-03	0.	0.	0.	0.	0.	5.58E-03
43	6.50	1.52E-03	0.	3.82E-16	0.	4.38E-04	0.	0.	0.	0.	0.	1.96E-03
44	6.40	2.78E-03	0.	9.52E-17	1.81E-04	5.38E-03	0.	0.	0.	0.	0.	8.34E-03
45	6.30	4.40E-03	0.	1.54E-17	4.33E-04	3.09E-03	0.	0.	0.	0.	0.	7.92E-03
46	6.20	8.02E-03	0.	2.08E-18	4.05E-04	6.65E-04	0.	0.	0.	0.	0.	9.10E-03
47	6.10	1.86E-02	0.	2.65E-19	7.00E-04	1.10E-02	0.	0.	0.	0.	0.	3.03E-02
48	6.00	2.83E-02	0.	2.80E-20	2.52E-04	1.37E-03	0.	0.	0.	0.	0.	2.99E-02
49	5.90	2.72E-02	0.	1.68E-21	3.37E-04	7.13E-04	0.	0.	0.	0.	0.	2.82E-02
50	5.80	2.33E-02	0.	2.98E-23	3.30E-04	2.22E-03	0.	0.	0.	0.	0.	2.59E-02
51	5.70	1.35E-02	0.	0.	2.10E-04	1.30E-04	0.	0.	0.	0.	0.	1.39E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.30E-02	0.	0.	0.	5.38E-05	1.51E-03	0.	0.	0.	0.	0.	0.	1.46E-02
53	5.50	9.98E-03	0.	0.	0.	1.20E-04	6.73E-03	0.	0.	0.	0.	0.	0.	1.68E-02
54	5.40	6.58E-03	0.	0.	0.	7.75E-05	1.88E-04	0.	0.	0.	0.	0.	0.	6.84E-03
55	5.30	4.50E-03	0.	0.	0.	6.08E-05	2.22E-03	0.	0.	0.	0.	0.	0.	6.78E-03
56	5.20	1.45E-03	0.	0.	0.	4.53E-05	7.89E-04	0.	0.	0.	0.	0.	0.	2.29E-03
57	5.10	1.17E-03	0.	0.	0.	2.70E-05	3.31E-04	0.	5.78E-06	0.	0.	0.	0.	1.54E-03
58	5.00	7.10E-04	0.	0.	0.	1.43E-05	5.70E-04	0.	5.98E-06	0.	0.	0.	0.	1.30E-03
59	4.90	5.99E-04	0.	0.	0.	1.18E-05	7.15E-05	0.	6.19E-06	0.	0.	0.	0.	6.89E-04
60	4.80	5.33E-04	0.	0.	0.	1.31E-05	1.61E-04	0.	6.35E-06	0.	0.	0.	0.	7.14E-04
61	4.70	3.88E-04	0.	0.	0.	8.36E-06	1.62E-03	0.	6.50E-06	0.	0.	0.	0.	4.19E-04
62	4.60	3.01E-04	0.	0.	0.	6.11E-06	4.34E-05	0.	6.66E-06	0.	0.	0.	0.	3.57E-04
63	4.50	1.87E-04	0.	1.17E-19	0.	3.45E-06	3.93E-06	0.	6.83E-06	0.	0.	0.	0.	2.01E-04
64	4.40	1.16E-04	0.	3.13E-18	0.	2.27E-06	9.76E-06	0.	7.01E-06	0.	0.	0.	0.	1.35E-04
65	4.30	6.78E-05	0.	4.43E-19	0.	1.40E-06	1.70E-06	0.	7.18E-06	0.	0.	0.	0.	7.79E-05
66	4.20	4.00E-05	0.	2.47E-17	0.	9.09E-07	1.78E-06	0.	7.36E-06	0.	0.	0.	0.	5.01E-05
67	4.10	2.69E-05	0.	2.33E-19	0.	5.20E-07	8.55E-07	0.	7.56E-06	0.	0.	0.	0.	3.56E-05
68	4.00	1.44E-05	0.	2.52E-17	0.	3.46E-07	1.40E-07	0.	7.82E-06	0.	0.	0.	0.	2.27E-05
69	3.90	6.57E-06	0.	3.41E-17	0.	1.53E-07	1.57E-07	0.	8.09E-06	0.	0.	0.	0.	1.50E-05
70	3.80	5.73E-06	0.	3.97E-18	0.	1.41E-07	0.	0.	8.42E-06	0.	0.	0.	0.	1.43E-05
71	3.70	2.29E-06	0.	5.75E-17	0.	4.39E-08	0.	0.	8.77E-06	0.	0.	0.	0.	1.11E-05
72	3.60	1.34E-06	0.	1.03E-18	0.	4.99E-08	0.	0.	9.15E-06	0.	0.	0.	0.	1.05E-05
73	3.50	8.00E-07	0.	1.46E-17	0.	1.30E-08	0.	0.	9.56E-06	0.	0.	0.	0.	1.04E-05
74	3.40	3.65E-07	0.	3.35E-19	0.	1.49E-08	0.	0.	1.00E-05	0.	0.	0.	0.	1.04E-05
75	3.30	2.03E-07	0.	2.33E-18	0.	4.09E-09	0.	0.	1.03E-05	0.	0.	0.	0.	1.05E-05
76	3.20	9.50E-08	0.	8.93E-20	0.	3.83E-09	0.	0.	1.06E-05	0.	0.	0.	0.	1.07E-05
77	3.10	4.96E-08	0.	3.12E-19	0.	1.70E-09	0.	0.	1.07E-05	0.	0.	0.	0.	1.08E-05
78	3.00	2.45E-08	0.	1.83E-20	0.	8.85E-10	0.	0.	1.05E-05	0.	0.	0.	0.	1.05E-05
79	2.90	1.07E-08	0.	3.22E-20	0.	2.30E-10	0.	0.	1.02E-05	0.	0.	0.	0.	1.02E-05
80	2.80	6.73E-09	0.	2.53E-21	0.	6.09E-11	0.	0.	9.73E-06	0.	0.	0.	0.	9.73E-06
81	2.70	1.68E-09	0.	2.98E-21	0.	4.09E-12	0.	0.	9.20E-06	0.	0.	0.	0.	9.20E-06
82	2.60	2.06E-10	0.	3.83E-22	0.	5.65E-13	0.	0.	8.62E-06	0.	0.	0.	0.	8.63E-06
83	2.50	7.48E-12	0.	1.74E-22	0.	4.73E-14	0.	0.	7.89E-06	0.	0.	0.	0.	7.89E-06
84	2.40	0.	2.27E-19	0.	0.	2.19E-15	0.	0.	7.21E-06	0.	0.	0.	0.	7.21E-06
85	2.30	0.	3.12E-17	0.	0.	0.	0.	0.	6.30E-06	0.	0.	0.	0.	6.30E-06
86	2.20	0.	3.41E-17	0.	0.	0.	0.	0.	5.43E-06	0.	0.	0.	0.	5.43E-06
87	2.10	0.	3.14E-16	0.	0.	0.	0.	0.	4.52E-06	0.	0.	0.	0.	4.52E-06
88	2.00	0.	3.95E-16	0.	0.	0.	0.	0.	3.43E-06	0.	0.	0.	0.	3.43E-06
89	1.90	0.	3.46E-15	0.	0.	0.	0.	0.	2.60E-06	0.	0.	0.	0.	2.60E-06
90	1.80	0.	1.46E-14	0.	0.	0.	0.	0.	1.73E-06	0.	0.	0.	0.	1.73E-06
91	1.70	0.	4.14E-15	0.	0.	0.	0.	0.	1.11E-06	0.	0.	0.	0.	1.11E-06
92	1.60	0.	9.30E-15	0.	0.	0.	0.	0.	6.84E-07	0.	0.	0.	0.	6.84E-07
93	1.50	0.	3.47E-15	0.	0.	0.	0.	0.	2.81E-07	0.	0.	0.	0.	2.81E-07
94	1.40	0.	1.86E-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-14
95	1.30	0.	2.43E-15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-15
96	1.20	0.	1.55E-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-14
97	1.10	0.	1.82E-13	0.	0.	0.	0.	8.60E-09	0.	0.	0.	0.	0.	8.60E-09
98	1.00	0.	5.10E-15	0.	0.	0.	0.	1.87E-09	0.	0.	0.	0.	0.	1.87E-09
99	0.90	0.	1.15E-15	0.	0.	0.	0.	6.88E-08	0.	0.	0.	0.	0.	6.88E-08
100	0.80	0.	6.32E-16	0.	0.	0.	0.	1.99E-08	0.	0.	0.	0.	0.	1.99E-08
101	0.70	0.	1.04E-16	0.	0.	0.	0.	3.92E-07	0.	0.	0.	0.	0.	3.92E-07
102	0.60	0.	1.18E-21	0.	0.	0.	0.	1.08E-07	0.	0.	0.	0.	0.	1.08E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-05 (13.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-06	0.	0.	0.	0.	0.	0.	0.	4.06E-06
2	10.60	0.	0.	2.13E-06	0.	0.	0.	0.	0.	0.	0.	2.13E-06
3	10.50	0.	0.	1.33E-06	0.	0.	0.	0.	0.	0.	0.	1.33E-06
4	10.40	0.	0.	8.61E-07	0.	0.	0.	0.	0.	0.	0.	8.61E-07
5	10.30	0.	0.	4.08E-07	0.	0.	0.	0.	0.	0.	0.	4.08E-07
6	10.20	0.	0.	2.78E-07	0.	0.	0.	0.	0.	0.	0.	2.78E-07
7	10.10	0.	0.	1.88E-07	0.	0.	0.	0.	0.	0.	0.	1.88E-07
8	10.00	0.	0.	6.99E-08	0.	0.	0.	0.	0.	0.	0.	6.99E-08
9	9.90	0.	0.	6.20E-08	0.	0.	0.	0.	0.	0.	0.	6.20E-08
10	9.80	0.	0.	3.44E-08	0.	0.	0.	0.	0.	0.	0.	3.44E-08
11	9.70	0.	0.	1.31E-08	0.	0.	0.	0.	0.	0.	0.	1.31E-08
12	9.60	0.	0.	1.44E-08	0.	0.	0.	0.	0.	0.	0.	1.44E-08
13	9.50	0.	3.44E-02	4.85E-09	0.	0.	0.	0.	0.	0.	0.	3.44E-02
14	9.40	0.	1.27E-01	3.14E-09	0.	0.	0.	0.	0.	0.	0.	1.27E-01
15	9.30	0.	2.20E-01	2.49E-09	0.	0.	0.	0.	0.	0.	0.	2.20E-01
16	9.20	0.	3.13E-01	6.09E-10	0.	0.	0.	0.	0.	0.	0.	3.13E-01
17	9.10	0.	4.14E-01	9.15E-10	0.	0.	0.	0.	0.	0.	0.	4.14E-01
18	9.00	0.	5.16E-01	2.90E-10	0.	0.	0.	0.	0.	0.	0.	5.16E-01
19	8.90	0.	6.18E-01	1.92E-10	0.	0.	0.	0.	0.	0.	0.	6.18E-01
20	8.80	0.	6.49E-01	1.25E-10	0.	0.	0.	0.	0.	0.	0.	6.49E-01
21	8.70	0.	6.24E-01	4.15E-11	0.	0.	0.	0.	0.	0.	0.	6.24E-01
22	8.60	0.	5.99E-01	4.71E-11	0.	0.	0.	0.	0.	0.	0.	5.99E-01
23	8.50	0.	5.71E-01	1.37E-11	0.	0.	0.	0.	0.	0.	0.	5.71E-01
24	8.40	0.	5.36E-01	1.34E-11	0.	0.	0.	0.	0.	0.	0.	5.36E-01
25	8.30	0.	4.98E-01	4.43E-12	0.	0.	0.	0.	0.	0.	0.	4.98E-01
26	8.20	0.	4.60E-01	3.48E-12	0.	0.	0.	0.	0.	0.	0.	4.6 E-01
27	8.10	0.	4.23E-01	1.42E-12	0.	0.	0.	0.	0.	0.	0.	4.23E-01
28	8.00	0.	3.87E-01	9.82E-13	0.	0.	0.	0.	0.	0.	0.	3.87E-01
29	7.90	0.	3.48E-01	4.26E-13	0.	0.	0.	0.	0.	0.	0.	3.48E-01
30	7.80	0.	3.09E-01	3.08E-13	0.	0.	0.	0.	0.	0.	0.	3.09E-01
31	7.70	0.	2.72E-01	1.42E-13	0.	0.	0.	0.	0.	0.	0.	2.72E-01
32	7.60	0.	2.35E-01	7.94E-14	0.	4.91E-10	0.	0.	0.	0.	0.	2.35E-01
33	7.50	0.	1.99E-01	4.09E-14	0.	1 7E-07	0.	0.	0.	0.	0.	1.99E-01
34	7.40	0.	1.69E-01	2.10E-14	0.	7.66E-07	0.	0.	0.	0.	0.	1.69E-01
35	7.30	0.	1.41E-01	1.13E-14	0.	4.59E-07	0.	0.	0.	0.	0.	1.41E-01
36	7.20	0.	1.18E-01	5.53E-15	0.	1.66E-05	0.	0.	0.	0.	0.	1.18E-01
37	7.10	0.	9.53E-02	2.98E-15	0.	1.22E-06	0.	0.	0.	0.	0.	9.53E-02
38	7.00	1.83E-03	0.	1.49E-15	0.	3.89E-05	0.	0.	0.	0.	0.	1.86E-03
39	6.90	2.60E-03	0.	7.77E-16	0.	7.79E-05	0.	0.	0.	-.	0.	2.68E-03
40	6.80	1.62E-03	0.	4.00E-16	0.	1.42E-05	0.	0.	0.	0.	0.	1.63E-03
41	6.70	8.25E-04	0.	1.96E-16	0.	2.09E-04	0.	0.	0.	0.	0.	1.03E-03
42	6.60	3.83E-04	0.	9.62E-17	0.	1.74E-04	0.	0.	0.	0.	0.	5.57E-04
43	6.50	1.51E-04	0.	3.82E-17	0.	4.38E-05	0.	0.	0.	0.	0.	1.95E-04
44	6.40	2.77E-04	0.	9.53E-18	1.81E-05	5.34E-04	0.	0.	0.	0.	0.	8.93E-04
45	6.30	4.40E-04	0.	1.54E-18	4.33E-05	3.09E-04	0.	0.	0	0.	0.	7..2E-04
46	6.20	8.01E-04	0.	2.00E-19	4.05E-05	6.65E-05	0.	0.	0.	0.	0.	9.08E-04
47	6.10	1.86E-03	0.	2.66E-20	7.00E-05	1.10E-03	0	0.	0.	0.	0.	3.03E-03
48	6.00	2.82E-03	0.	2.88E-21	2.52E-05	1.37E-04	0.	0.	0.	0.	0.	2.99E-03
49	5.90	2.71E-03	0.	1.61E-22	3.37E-05	7.13E-05	0.	0.	0.	0.	0.	2.82E-03
50	5.80	2.33E-03	0.	2.98E-24	3.30E-05	2.22E-04	0.	0.	0.	0.	0.	2.59E-03
51	5.70	1.35E-03	0.	0.	2.10E-05	1.30E-05	0.	0.	0.	0.	0.	1.38E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2600. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R	O2 BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
52	5.60	1.30E-03	0.	0.	0.	0.	3.38E-06	1.51E-04	0.	0.	0.	0.	0.	0.	1.46E-03
53	5.50	9.98E-04	0.	0.	0.	0.	1.28E-05	6.73E-04	0.	0.	0.	0.	0.	0.	1.68E-03
54	5.40	6.57E-04	0.	0.	0.	0.	7.74E-06	1.88E-05	0.	0.	0.	0.	0.	0.	6.83E-04
55	5.30	4.49E-04	0.	0.	0.	0.	6.08E-06	2.22E-04	0.	0.	0.	0.	0.	0.	6.77E-04
56	5.20	1.44E-04	0.	0.	0.	0.	4.53E-06	7.99E-05	0.	0.	0.	0.	0.	0.	2.29E-04
57	5.10	1.17E-04	0.	0.	0.	0.	2.70E-06	3.31E-05	0.	1.82E-07	0.	0.	0.	0.	1.53E-04
58	5.00	7.09E-05	0.	0.	0.	0.	1.43E-06	5.70E-05	0.	1.89E-07	0.	0.	0.	0.	1.30E-04
59	4.90	5.98E-05	0.	0.	0.	0.	1.18E-06	7.15E-06	0.	1.95E-07	0.	0.	0.	0.	6.83E-05
60	4.80	5.32E-05	0.	0.	0.	0.	1.31E-06	1.61E-05	0.	2.00E-07	0.	0.	0.	0.	7.09E-05
61	4.70	3.87E-05	0.	0.	0.	0.	8.36E-07	1.62E-06	0.	2.05E-07	0.	0.	0.	0.	4.14E-05
62	4.60	3.01E-05	0.	0.	0.	0.	6.11E-07	4.33E-06	0.	2.10E-07	0.	0.	0.	0.	3.52E-05
63	4.50	1.87E-05	0.	1.17E-20	0.	0.	3.45E-07	3.93E-07	0.	2.16E-07	0.	0.	0.	0.	1.97E-05
64	4.40	1.16E-05	0.	3.13E-19	0.	0.	2.27E-07	9.76E-07	0.	2.21E-07	0.	0.	0.	0.	1.30E-05
65	4.30	6.75E-06	0.	4.47E-20	0.	0.	1.40E-07	1.70E-07	0.	2.27E-07	0.	0.	0.	0.	7.29E-06
66	4.20	4.00E-06	0.	2.47E-18	0.	0.	9.08E-08	1.78E-07	0.	2.32E-07	0.	0.	0.	0.	4.50E-06
67	4.10	2.69E-06	0.	2.34E-20	0.	0.	5.20E-08	6.55E-08	0.	2.39E-07	0.	0.	0.	0.	3.04E-06
68	4.00	1.43E-06	0.	2.53E-18	0.	0.	3.46E-08	1.40E-08	0.	2.47E-07	0.	0.	0.	0.	1.73E-06
69	3.90	6.56E-07	0.	3.41E-18	0.	0.	1.53E-08	1.57E-08	0.	2.55E-07	0.	0.	0.	0.	9.42E-07
70	3.80	3.72E-07	0.	3.58E-19	0.	0.	1.41E-08	0.	0.	2.66E-07	0.	0.	0.	0.	8.52E-07
71	3.70	2.28E-07	0.	5.76E-19	0.	0.	4.58E-09	0.	0.	2.77E-07	0.	0.	0.	0.	5.19E-07
72	3.60	1.34E-07	0.	1.03E-19	0.	0.	4.99E-09	0.	0.	2.89E-07	0.	0.	0.	0.	4.27E-07
73	3.50	7.99E-08	0.	5.46E-18	0.	0.	1.30E-09	0.	0.	3.02E-07	0.	0.	0.	0.	3.83E-07
74	3.40	3.65E-08	0.	3.36E-20	0.	0.	1.49E-09	0.	0.	3.17E-07	0.	0.	0.	0.	3.55E-07
75	3.30	2.02E-08	0.	2.33E-19	0.	0.	4.09E-10	0.	0.	3.26E-07	0.	0.	0.	0.	3.47E-07
76	3.20	9.48E-09	0.	8.93E-21	0.	0.	3.83E-10	0.	0.	3.35E-07	0.	0.	0.	0.	3.45E-07
77	3.10	4.95E-09	0.	3.12E-20	0.	0.	1.40E-10	0.	0.	3.39E-07	0.	0.	0.	0.	3.44E-07
78	3.00	2.45E-09	0.	1.83E-21	0.	0.	8.85E-11	0.	0.	3.30E-07	0.	0.	0.	0.	3.33E-07
79	2.90	1.06E-09	0.	3.22E-21	0.	0.	2.30E-11	0.	0.	3.22E-07	0.	0.	0.	0.	3.23E-07
80	2.80	6.72E-10	0.	2.53E-22	0.	0.	6.09E-12	0.	0.	3.07E-07	0.	0.	0.	0.	3.08E-07
81	2.70	1.68E-10	0.	2.98E-23	0.	0.	6.09E-13	0.	0.	2.90E-07	0.	0.	0.	0.	2.98E-07
82	2.60	2.06E-11	0.	3.83E-23	0.	0.	5.65E-14	0.	0.	2.72E-07	0.	0.	0.	0.	2.72E-07
83	2.50	7.43E-13	0.	1.74E-23	0.	0.	4.73E-15	0.	0.	2.49E-07	0.	0.	0.	0.	2.49E-07
84	2.40	0.	2.27E-20	0.	0.	0.	2.19E-16	0.	0.	2.28E-07	0.	0.	0.	0.	2.28E-07
85	2.30	0.	3.12E-18	0.	0.	0.	0.	0.	0.	1.99E-07	0.	0.	0.	0.	1.99E-07
86	2.20	0.	3.41E-18	0.	0.	0.	0.	0.	0.	1.71E-07	0.	0.	0.	0.	1.71E-07
87	2.10	0.	3.14E-17	0.	0.	0.	0.	0.	0.	1.43E-07	0.	0.	0.	0.	1.43E-07
88	2.00	0.	3.95E-17	0.	0.	0.	0.	0.	0.	1.08E-07	0.	0.	0.	0.	1.08E-07
89	1.90	0.	3.46E-16	0.	0.	0.	0.	0.	0.	8.20E-08	0.	0.	0.	0.	8.20E-08
90	1.80	0.	1.46E-15	0.	0.	0.	0.	0.	0.	5.48E-08	0.	0.	0.	0.	5.48E-08
91	1.70	0.	4.14E-16	0.	0.	0.	0.	0.	0.	3.50E-08	0.	0.	0.	0.	3.50E-08
92	1.60	0.	9.31E-16	0.	0.	0.	0.	0.	0.	2.16E-08	0.	0.	0.	0.	2.16E-08
93	1.50	0.	3.47E-16	0.	0.	0.	0.	0.	0.	8.87E-09	0.	0.	0.	0.	8.88E-09
94	1.40	0.	1.86E-15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-15
95	1.30	0.	2.43E-16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-16
96	1.20	0.	1.55E-15	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-15
97	1.10	0.	1.82E-16	0.	0.	0.	0.	0.	8.60E-10	0.	0.	0.	0.	0.	8.60E-10
98	1.00	0.	5.11E-16	0.	0.	0.	0.	0.	1.87E-10	0.	0.	0.	0.	0.	1.87E-10
99	0.90	0.	1.15E-16	0.	0.	0.	0.	0.	6.88E-09	0.	0.	0.	0.	0.	6.88E-09
100	0.80	0.	6.33E-17	0.	0.	0.	0.	0.	1.99E-09	0.	0.	0.	0.	0.	1.99E-09
101	0.70	0.	1.04E-17	0.	0.	0.	0.	0.	3.91E-08	0.	0.	0.	0.	0.	3.91E-08
102	0.60	0.	1.19E-22	0.	0.	0.	0.	0.	1.08E-08	0.	0.	0.	0.	0.	1.08E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-07	0.	0.	0.	0.	0.	0.	0.	4.06E-07
2	10.60	0.	0.	2.13E-07	0.	0.	0.	0.	0.	0.	0.	2.13E-07
3	10.50	0.	0.	1.33E-07	0.	0.	0.	0.	0.	0.	0.	1.33E-07
4	10.40	0.	0.	8.60E-08	0.	0.	0.	0.	0.	0.	0.	8.60E-08
5	10.30	0.	0.	4.08E-08	0.	0.	0.	0.	0.	0.	0.	4.08E-08
6	10.20	0.	0.	2.70E-08	0.	0.	0.	0.	0.	0.	0.	2.70E-08
7	10.10	0.	0.	1.88E-08	0.	0.	0.	0.	0.	0.	0.	1.88E-08
8	10.00	0.	0.	6.99E-09	0.	0.	0.	0.	0.	0.	0.	6.99E-09
9	9.90	0.	0.	6.20E-09	0.	0.	0.	0.	0.	0.	0.	6.20E-09
10	9.80	0.	0.	3.44E-09	0.	0.	0.	0.	0.	0.	0.	3.44E-09
11	9.70	0.	0.	1.31E-09	0.	0.	0.	0.	0.	0.	0.	1.31E-09
12	9.60	0.	0.	1.44E-09	0.	0.	0.	0.	0.	0.	0.	1.44E-09
13	9.50	0.	3.41E-03	4.84E-10	0.	0.	0.	0.	0.	0.	0.	3.41E-03
14	9.40	0.	1.26E-02	3.14E-10	0.	0.	0.	0.	0.	0.	0.	1.26E-02
15	9.30	0.	2.18E-02	2.49E-10	0.	0.	0.	0.	0.	0.	0.	2.18E-02
16	9.20	0.	3.10E-02	6.09E-11	0.	0.	0.	0.	0.	0.	0.	3.10E-02
17	9.10	0.	4.10E-02	9.15E-11	0.	0.	0.	0.	0.	0.	0.	4.10E-02
18	9.00	0.	5.11E-02	2.89E-11	0.	0.	0.	0.	0.	0.	0.	5.11E-02
19	8.90	0.	6.12E-02	1.92E-11	0.	0.	0.	0.	0.	0.	0.	6.12E-02
20	8.80	0.	6.43E-02	1.25E-11	0.	0.	0.	0.	0.	0.	0.	6.43E-02
21	8.70	0.	6.18E-02	4.15E-12	0.	0.	0.	0.	0.	0.	0.	6.18E-02
22	8.60	0.	5.93E-02	4.70E-12	0.	0.	0.	0.	0.	0.	0.	5.93E-02
23	8.50	0.	5.65E-02	1.37E-12	0.	0.	0.	0.	0.	0.	0.	5.65E-02
24	8.40	0.	5.31E-02	1.34E-12	0.	0.	0.	0.	0.	0.	0.	5.31E-02
25	8.30	0.	4.93E-02	4.43E-13	0.	0.	0.	0.	0.	0.	0.	4.93E-02
26	8.20	0.	4.56E-02	3.40E-13	0.	0.	0.	0.	0.	0.	0.	4.56E-02
27	8.10	0.	4.19E-02	1.42E-13	0.	0.	0.	0.	0.	0.	0.	4.19E-02
28	8.00	0.	3.83E-02	9.81E-14	0.	0.	0.	0.	0.	0.	0.	3.83E-02
29	7.90	0.	3.45E-02	4.26E-14	0.	0.	0.	0.	0.	0.	0.	3.45E-02
30	7.80	0.	3.04E-02	3.83E-14	0.	0.	0.	0.	0.	0.	0.	3.04E-02
31	7.70	0.	2.69E-02	1.42E-14	0.	0.	0.	0.	0.	0.	0.	2.69E-02
32	7.60	0.	2.33E-02	7.94E-15	0.	4.89E-11	0.	0.	0.	0.	0.	2.33E-02
33	7.50	0.	1.97E-02	4.09E-15	0.	1.67E-08	0.	0.	0.	0.	0.	1.97E-02
34	7.40	0.	1.67E-02	2.18E-15	0.	7.63E-08	0.	0.	0.	0.	0.	1.67E-02
35	7.30	0.	1.40E-02	1.18E-15	0.	4.57E-08	0.	0.	0.	0.	0.	1.40E-02
36	7.20	0.	1.17E-02	5.53E-16	0.	1.66E-06	0.	0.	0.	0.	0.	1.17E-02
37	7.10	0.	9.44E-03	2.98E-16	0.	1.22E-07	0.	0.	0.	0.	0.	9.44E-03
38	7.00	1.82E-04	0.	1.49E-16	0.	3.88E-06	0.	0.	0.	0.	0.	1.85E-04
39	6.90	2.59E-04	0.	7.77E-17	0.	7.77E-06	0.	0.	0.	0.	0.	2.67E-04
40	6.80	1.61E-04	0.	4.08E-17	0.	1.41E-06	0.	0.	0.	0.	0.	1.62E-04
41	6.70	8.20E-05	0.	1.96E-17	0.	2.08E-05	0.	0.	0.	0.	0.	1.03E-04
42	6.60	3.81E-05	0.	9.62E-18	0.	1.74E-05	0.	0.	0.	0.	0.	5.55E-05
43	6.50	1.51E-05	0.	3.72E-18	0.	4.36E-06	0.	0.	0.	0.	0.	1.94E-05
44	6.40	2.76E-05	0.	9.52E-19	1.81E-06	5.36E-05	0.	0.	0.	0.	0.	8.29E-05
45	6.30	4.37E-05	0.	1.54E-19	4.31E-06	3.08E-05	0.	0.	0.	0.	0.	7.88E-05
46	6.20	7.97E-05	0.	2.08E-20	4.04E-06	6.83E-06	0.	0.	0.	0.	0.	9.03E-05
47	6.10	1.85E-04	0.	2.66E-21	6.98E-06	1.10E-04	0.	0.	0.	0.	0.	3.02E-04
48	6.00	2.81E-04	0.	2.88E-22	2.52E-06	1.37E-05	0.	0.	0.	0.	0.	2.97E-04
49	5.90	2.70E-04	0.	1.60E-23	3.36E-06	7.11E-06	0.	0.	0.	0.	0.	2.80E-04
50	5.80	2.32E-04	0.	2.98E-25	3.29E-06	2.21E-05	0.	0.	0.	0.	0.	2.57E-04
51	5.70	1.34E-04	0.	0.	2.09E-06	1.30E-06	0.	0.	0.	0.	0.	1.38E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.29E-04	0.	0.	0.	5.36E-07	1.51E-05	0.	0.	0.	0.	0.	0.	1.45E-04
53	5.50	9.91E-05	0.	0.	0.	1.27E-06	6.71E-05	0.	0.	0.	0.	0.	0.	1.67E-04
54	5.40	6.53E-05	0.	0.	0.	7.72E-07	1.08E-06	0.	0.	0.	0.	0.	0.	6.79E-05
55	5.30	4.47E-05	0.	0.	0.	6.06E-07	2.21E-05	0.	0.	0.	0.	0.	0.	6.75E-05
56	5.20	1.43E-05	0.	0.	0.	4.92E-07	7.96E-06	0.	0.	0.	0.	0.	0.	2.28E-05
57	5.10	1.17E-05	0.	0.	0.	2.69E-07	3.30E-06	0.	5.74E-09	0.	0.	0.	0.	1.52E-05
58	5.00	7.05E-06	0.	0.	0.	1.42E-07	5.68E-06	0.	5.94E-09	0.	0.	0.	0.	1.29E-05
59	4.90	5.95E-06	0.	0.	0.	1.18E-07	7.12E-07	0.	6.14E-09	0.	0.	0.	0.	6.78E-06
60	4.80	5.29E-06	0.	0.	0.	1.31E-07	1.61E-06	0.	6.30E-09	0.	0.	0.	0.	7.04E-06
61	4.70	3.85E-06	0.	0.	0.	8.33E-08	1.62E-07	0.	6.45E-09	0.	0.	0.	0.	4.10E-06
62	4.60	2.99E-06	0.	0.	0.	6.09E-08	4.32E-07	0.	6.61E-09	0.	0.	0.	0.	3.49E-06
63	4.50	1.86E-06	0.	1.17E-21	0.	3.44E-08	3.92E-08	0.	6.78E-09	0.	0.	0.	0.	1.94E-06
64	4.40	1.15E-06	0.	3.13E-20	0.	2.26E-08	9.73E-08	0.	6.96E-09	0.	0.	0.	0.	1.28E-06
65	4.30	6.71E-07	0.	4.43E-21	0.	1.39E-08	1.70E-08	0.	7.13E-09	0.	0.	0.	0.	7.09E-07
66	4.20	3.98E-07	0.	2.47E-19	0.	9.06E-09	1.78E-08	0.	7.30E-09	0.	0.	0.	0.	4.32E-07
67	4.10	2.67E-07	0.	2.34E-21	0.	5.19E-09	6.83E-09	0.	7.50E-09	0.	0.	0.	0.	2.86E-07
68	4.00	1.42E-07	0.	2.53E-19	0.	3.45E-09	1.40E-09	0.	7.76E-09	0.	0.	0.	0.	1.55E-07
69	3.90	6.52E-08	0.	3.41E-19	0.	1.52E-09	1.97E-09	0.	8.03E-09	0.	0.	0.	0.	7.63E-08
70	3.80	5.69E-08	0.	3.98E-20	0.	1.41E-09	0.	0.	8.35E-09	0.	0.	0.	0.	6.64E-08
71	3.70	2.27E-08	0.	5.75E-19	0.	4.11E-10	0.	0.	8.70E-09	0.	0.	0.	0.	3.18E-08
72	3.60	1.33E-08	0.	1.03E-20	0.	4.98E-10	0.	0.	9.08E-09	0.	0.	0.	0.	2.29E-08
73	3.50	7.94E-09	0.	1.46E-19	0.	1.30E-10	0.	0.	9.50E-09	0.	0.	0.	0.	1.76E-08
74	3.40	3.63E-09	0.	3.36E-21	0.	1.48E-10	0.	0.	9.95E-09	0.	0.	0.	0.	1.37E-08
75	3.30	2.01E-09	0.	2.33E-20	0.	4.68E-11	0.	0.	1.03E-08	0.	0.	0.	0.	1.23E-08
76	3.20	9.43E-10	0.	8.93E-22	0.	3.82E-11	0.	0.	1.05E-08	0.	0.	0.	0.	1.15E-08
77	3.10	4.92E-10	0.	3.12E-21	0.	1.39E-11	0.	0.	1.06E-08	0.	0.	0.	0.	1.12E-08
78	3.00	2.43E-10	0.	1.83E-22	0.	8.82E-12	0.	0.	1.04E-08	0.	0.	0.	0.	1.06E-08
79	2.90	1.06E-10	0.	3.22E-22	0.	2.29E-12	0.	0.	1.01E-08	0.	0.	0.	0.	1.02E-08
80	2.80	6.68E-11	0.	2.53E-23	0.	6.07E-13	0.	0.	9.65E-09	0.	0.	0.	0.	9.72E-09
81	2.70	1.67E-11	0.	2.98E-23	0.	6.07E-14	0.	0.	9.13E-09	0.	0.	0.	0.	9.14E-09
82	2.60	2.04E-12	0.	3.03E-24	0.	5.63E-15	0.	0.	8.56E-09	0.	0.	0.	0.	8.56E-09
83	2.50	7.39E-14	0.	1.74E-24	0.	4.72E-16	0.	0.	7.83E-09	0.	0.	0.	0.	7.83E-09
84	2.40	0.	2.27E-21	0.	0.	2.19E-17	0.	0.	7.16E-09	0.	0.	0.	0.	7.16E-09
85	2.30	0.	3.12E-19	0.	0.	0.	0.	0.	6.26E-09	0.	0.	0.	0.	6.26E-09
86	2.20	0.	3.41E-19	0.	0.	0.	0.	0.	5.39E-09	0.	0.	0.	0.	5.39E-09
87	2.10	0.	3.14E-18	0.	0.	0.	0.	0.	4.49E-09	0.	0.	0.	0.	4.49E-09
88	2.00	0.	3.95E-18	0.	0.	0.	0.	0.	3.40E-09	0.	0.	0.	0.	3.48E-09
89	1.90	0.	3.46E-17	0.	0.	0.	0.	0.	2.58E-09	0.	0.	0.	0.	2.58E-09
90	1.80	0.	1.46E-16	0.	0.	0.	0.	0.	1.72E-09	0.	0.	0.	0.	1.72E-09
91	1.70	0.	4.14E-17	0.	0.	0.	0.	0.	1.10E-09	0.	0.	0.	0.	1.18E-09
92	1.60	0.	9.31E-17	0.	0.	0.	0.	0.	6.79E-10	0.	0.	0.	0.	6.79E-10
93	1.50	0.	3.47E-17	0.	0.	0.	0.	0.	2.79E-10	0.	0.	0.	0.	2.79E-10
94	1.40	0.	1.86E-16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-16
95	1.30	0.	2.43E-17	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-17
96	1.20	0.	1.55E-16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-16
97	1.10	0.	1.82E-17	0.	0.	0.	0.	8.57E-11	0.	0.	0.	0.	0.	8.57E-11
98	1.00	0.	5.11E-17	0.	0.	0.	0.	1.86E-11	0.	0.	0.	0.	0.	1.86E-11
99	0.90	0.	1.15E-17	0.	0.	0.	0.	4.86E-10	0.	0.	0.	0.	0.	4.86E-10
100	0.80	0.	3.32E-18	0.	0.	0.	0.	1.98E-10	0.	0.	0.	0.	0.	1.98E-10
101	0.70	0.	1.04E-18	0.	0.	0.	0.	3.90E-09	0.	0.	0.	0.	0.	3.90E-09
102	0.60	0.	1.19E-33	0.	0.	0.	0.	1.87E-09	0.	0.	0.	0.	0.	1.87E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-08	0.	0.	0.	0.	0.	0.	0.	4.06E-08
2	10.60	0.	0.	2.13E-08	0.	0.	0.	0.	0.	0.	0.	2.13E-08
3	10.50	0.	0.	1.33E-08	0.	0.	0.	0.	0.	0.	0.	1.33E-08
4	10.40	0.	0.	8.61E-09	0.	0.	0.	0.	0.	0.	0.	8.61E-09
5	10.30	0.	0.	4.08E-09	0.	0.	0.	0.	0.	0.	0.	4.08E-09
6	10.20	0.	0.	2.70E-09	0.	0.	0.	0	0.	0.	0.	2.70E-09
7	10.10	0.	0.	1.80E-09	0.	0.	0.	0.	0.	0.	0.	1.80E-09
8	10.00	0.	0.	7.00E-10	0.	0.	0.	0.	0.	0.	0.	7.00E-10
9	9.90	0.	0.	6.20E-10	0.	0.	0.	0.	0.	0.	0.	6.20E-10
10	9.80	0.	0.	3.44E-10	0.	0.	0.	0.	0.	0.	0.	3.44E-10
11	9.70	0.	0.	1.31E-10	0.	0.	0.	0.	0.	0.	0.	1.31E-10
12	9.60	0.	0.	1.44E-10	0.	0.	0.	0.	0.	0.	0.	1.44E-10
13	9.50	0.	3.37E-04	4.85E-11	0.	0.	0.	0.	0.	0.	0.	3.37E-04
14	9.40	0.	1.25E-03	3.14E-11	0.	0.	0.	0.	0.	0.	0.	1.25E-03
15	9.30	0.	2.16E-03	2.40E-11	0.	0.	0.	0.	0.	0.	0.	2.16E-03
16	9.20	0.	3.07E-03	6.89E-12	0.	0.	0.	0.	0.	0.	0.	3.07E-03
17	9.10	0.	4.06E-03	9.19E-12	0.	0.	0.	0.	0.	0.	0.	4.06E-03
18	9.00	0.	5.06E-03	2.90E-12	0.	0.	0.	0.	0.	0.	0.	5.06E-03
19	8.90	0.	6.06E-03	1.92E-12	0.	0.	0.	0.	0.	0.	0.	6.06E-03
20	8.80	0.	6.36E-03	1.29E-12	0.	0.	0.	0.	0.	0.	0.	6.36E-03
21	8.70	0.	6.12E-03	4.15E-13	0.	0.	0.	0.	0.	0.	0.	6.12E-03
22	8.60	0.	5.87E-03	4.71E-13	0.	0.	0.	0.	0.	0.	0.	5.87E-03
23	8.50	0.	5.60E-03	1.37E-13	0.	0.	0.	0.	0.	0.	0.	5.60E-03
24	8.40	0.	5.24E-03	1.34E-13	0.	0.	0.	0.	0.	0.	0.	5.24E-03
25	8.30	0.	4.88E-03	4.43E-14	0.	0.	0.	0.	0.	0.	0.	4.88E-03
26	8.20	0.	4.51E-03	3.48E-14	0.	0.	0.	0.	0.	0.	0.	4.51E-03
27	8.10	0.	4.15E-03	1.42E-14	0.	0.	0.	0.	0.	0.	0.	4.15E-03
28	8.00	0.	3.79E-03	9.82E-15	0.	0.	0.	0.	0.	0.	0.	3.79E-03
29	7.90	0.	3.41E-03	4.26E-15	0.	0.	0.	0.	0.	0.	0.	3.41E-03
30	7.80	0.	3.03E-03	3.03E-15	0.	0.	0.	0.	0.	0.	0.	3.03E-03
31	7.70	0.	2.66E-03	1.42E-15	0.	0.	0.	0.	0.	0.	0.	2.66E-03
32	7.60	0.	2.31E-03	7.94E-16	0.	4.85E-12	0.	0.	0.	0.	0.	2.31E-03
33	7.50	0.	1.95E-03	4.09E-16	0.	1.65E-09	0.	0.	0.	0.	3.	1.95E-03
34	7.40	0.	1.66E-03	2.18E-16	0.	7.57E-09	0.	0.	0.	0.	0.	1.66E-03
35	7.30	0.	1.39E-03	1.18E-16	0.	4.53E-09	0.	0.	0.	0.	0.	1.39E-03
36	7.20	0.	1.16E-03	5.53E-17	0.	1.64E-07	0.	0.	0.	0.	0.	1.16E-03
37	7.10	0.	9.35E-04	2.99E-17	0.	1.20E-08	0.	0.	0.	0.	0.	9.35E-04
38	7.00	1.78E-05	0.	1.49E-17	0.	3.85E-07	0.	0.	0.	0.	0.	1.82E-05
39	6.90	2.54E-05	0.	7.77E-18	0.	7.70E-07	0.	0.	0.	0.	0.	2.62E-05
40	6.80	1.50E-05	0.	4.08E-18	0.	1.40E-07	0.	0.	0.	0.	0.	1.59E-05
41	6.70	8.06E-06	0.	1.96E-18	0.	2.06E-06	0.	0.	0.	0.	0.	1.01E-05
42	6.60	3.74E-06	0.	9.63E-19	0.	1.72E-06	0.	0.	0.	0.	0.	5.46E-06
43	6.50	1.48E-06	0.	3.82E-19	0.	4.33E-07	0.	0.	0.	0.	0.	1.91E-06
44	6.40	2.71E-06	0.	9.53E-20	1.79E-07	5.31E-06	0.	0.	0.	0.	0.	8.20E-06
45	6.30	4.29E-56	0.	1.54E-20	4.27E-07	3.95E-06	0.	0.	0.	0.	0.	7.77E-06
46	6.20	7.82E-06	0.	2.00E-21	4.00E-07	6.57E-07	0.	0.	0.	0.	0.	8.88E-06
47	6.10	1.81E-05	0.	2.66E-22	6.92E-07	1.09E-05	0.	0.	0.	0.	0.	2.97E-05
48	6.00	2.76E-05	0.	2.88E-23	2.49E-07	1.35E-06	0.	0.	0.	0.	0.	2.92E-05
49	5.90	2.65E-05	0.	1.61E-24	3.33E-07	7.04E-07	0.	0.	0.	0.	0.	2.75E-05
50	5.80	2.28E-05	0.	2.98E-26	3.26E-07	2.19E-06	0.	0.	0.	0.	0.	2.53E-05
51	5.70	1.32E-05	0.	0.	2.08E-07	1.28E-07	0.	0.	0.	0.	0.	1.35E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.27E-05	0.	0.	0.	5.31E-08	1.49E-06	0.	0.	0.	0.	0.	0.	1.42E-05
53	5.50	9.73E-06	0.	0.	0.	1.26E-07	6.65E-06	0.	0.	0.	0.	0.	0.	1.65E-05
54	5.40	6.41E-06	0.	0.	0.	7.65E-08	1.66E-07	0.	0.	0.	0.	0.	0.	6.67E-06
55	5.30	4.39E-06	0.	0.	0.	6.01E-08	2.20E-06	0.	0.	0.	0.	0.	0.	6.65E-06
56	5.20	1.41E-06	0.	0.	0.	4.48E-08	7.89E-07	0.	0.	0.	0.	0.	0.	2.24E-06
57	5.10	1.15E-06	0.	0.	0.	2.67E-08	3.27E-07	0.	1.78E-10	0.	0.	0.	0.	1.50E-06
58	5.00	6.92E-07	0.	0.	0.	1.41E-08	5.63E-07	0.	1.84E-10	0.	0.	0.	0.	1.27E-06
59	4.90	5.84E-07	0.	0.	0.	1.17E-08	7.06E-08	0.	1.91E-10	0.	0.	0.	0.	6.67E-07
60	4.80	5.19E-07	0.	0.	0.	1.29E-08	1.80E-07	0.	1.96E-10	0.	0.	0.	0.	6.92E-07
61	4.70	3.78E-07	0.	0.	0.	8.26E-09	1.60E-08	0.	2.00E-10	0.	0.	0.	0.	4.03E-07
62	4.60	2.94E-07	0.	0.	0.	6.03E-09	4.28E-08	0.	2.05E-10	0.	0.	0.	0.	3.43E-07
63	4.50	1.03E-07	0.	1.17E-22	0.	3.41E-09	3.89E-09	0.	2.11E-10	0.	0.	0.	0.	1.98E-07
64	4.40	1.13E-07	0.	3.13E-21	0.	2.24E-09	9.65E-09	0.	2.16E-10	0.	0.	0.	0.	1.25E-07
65	4.30	6.59E-08	0.	4.43E-22	0.	1.38E-09	1.68E-09	0.	2.22E-10	0.	0.	0.	0.	6.92E-08
66	4.20	3.90E-08	0.	2.47E-20	0.	8.98E-10	1.76E-09	0.	2.27E-10	0.	0.	0.	0.	4.19E-08
67	4.10	2.62E-08	0.	2.34E-22	0.	5.14E-10	6.47E-10	0.	2.33E-10	0.	0.	0.	0.	2.76E-08
68	4.00	1.40E-08	0.	2.93E-20	0.	3.41E-10	1.38E-10	0.	2.41E-10	0.	0.	0.	0.	1.47E-08
69	3.90	6.40E-09	0.	3.41E-20	0.	1.51E-10	1.55E-10	0.	2.49E-10	0.	0.	0.	0.	6.96E-09
70	3.80	5.59E-09	0.	3.58E-21	0.	1.39E-10	0.	0.	2.59E-10	0.	0.	0.	0.	5.99E-09
71	3.70	2.23E-09	0.	9.76E-20	0.	4.33E-11	0.	0.	2.70E-10	0.	0.	0.	0.	2.54E-09
72	3.60	1.31E-09	0.	1.03E-21	0.	4.93E-11	0.	0.	2.82E-10	0.	0.	0.	0.	1.64E-09
73	3.50	7.80E-10	0.	1.46E-20	0.	1.20E-11	0.	0.	2.95E-10	0.	0.	0.	0.	1.09E-09
74	3.40	3.56E-10	0.	3.36E-22	0.	1.47E-11	0.	0.	3.09E-10	0.	0.	0.	0.	6.80E-10
75	3.30	1.98E-10	0.	2.33E-21	0.	4.04E-12	0.	0.	3.19E-10	0.	0.	0.	0.	5.20E-10
76	3.20	9.26E-11	0.	8.94E-23	0.	3.79E-12	0.	0.	3.27E-10	0.	0.	0.	0.	4.23E-10
77	3.10	4.83E-11	0.	3.12E-22	0.	1.38E-12	0.	0.	3.31E-10	0.	0.	0.	0.	3.81E-10
78	3.00	2.39E-11	0.	1.83E-23	0.	8.75E-13	0.	0.	3.23E-10	0.	0.	0.	0.	3.47E-10
79	2.90	1.04E-11	0.	3.22E-23	0.	2.27E-13	0.	0.	3.15E-10	0.	0.	0.	0.	3.25E-10
80	2.80	6.56E-12	0.	2.93E-24	0.	6.02E-14	0.	0.	3.00E-10	0.	0.	0.	0.	3.06E-10
81	2.70	1.64E-12	0.	2.90E-24	0.	6.02E-15	0.	0.	2.83E-10	0.	0.	0.	0.	2.85E-10
82	2.60	2.01E-13	0.	3.83E-25	0.	5.58E-16	0.	0.	2.66E-10	0.	0.	0.	0.	2.66E-10
83	2.50	7.28E-15	0.	1.74E-25	0.	4.68E-17	0.	0.	2.43E-10	0.	0.	0.	0.	2.43E-10
84	2.40	0.	2.27E-22	0.	0.	2.17E-18	0.	0.	2.22E-10	0.	0.	0.	0.	2.22E-10
85	2.30	0.	3.12E-20	0.	0.	0.	0.	0.	1.94E-10	0.	0.	0.	0.	1.94E-10
86	2.20	0.	3.42E-20	0.	0.	0.	0.	0.	1.67E-10	0.	0.	0.	0.	1.67E-10
87	2.10	0.	3.14E-19	0.	0.	0.	0.	0.	1.39E-10	0.	0.	0.	0.	1.39E-10
88	2.00	0.	3.95E-19	0.	0.	0.	0.	0.	1.06E-10	0.	0.	0.	0.	1.06E-10
89	1.90	0.	3.46E-18	0.	0.	0.	0.	0.	8.01E-11	0.	0.	0.	0.	8.01E-11
90	1.80	0.	1.46E-17	0.	0.	0.	0.	0.	5.35E-11	0.	0.	0.	0.	5.35E-11
91	1.70	0.	4.14E-18	0.	0.	0.	0.	0.	3.42E-11	0.	0.	0.	0.	3.42E-11
92	1.60	0.	9.31E-18	0.	0.	0.	0.	0.	2.11E-11	0.	0.	0.	0.	2.11E-11
93	1.50	0.	3.47E-18	0.	0.	0.	0.	0.	8.67E-12	0.	0.	0.	0.	8.67E-12
94	1.40	0.	1.86E-17	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-17
95	1.30	0.	2.43E-18	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-18
96	1.20	0.	1.55E-17	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-17
97	1.10	0.	1.02E-18	0.	0.	0.	0.	0.50E-12	0.	0.	0.	0.	0.	0.50E-12
98	1.00	0.	5.11E-18	0.	0.	0.	0.	1.85E-12	0.	0.	0.	0.	0.	1.85E-12
99	0.90	0.	1.15E-18	0.	0.	0.	0.	6.80E-11	0.	0.	0.	0.	0.	6.80E-11
100	0.80	0.	6.33E-19	0.	0.	0.	0.	1.97E-11	0.	0.	0.	0.	0.	1.97E-11
101	0.70	0.	1.04E-19	0.	0.	0.	0.	3.67E-10	0.	0.	0.	0.	0.	3.67E-10
102	0.60	0.	1.19E-24	0.	0.	0.	0.	1.06E-10	0.	0.	0.	0.	0.	1.06E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2600. DENSITY (GM/CC) 1.293E-00 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-09	0.	0.	0.	0.	0.	0.	0.	4.06E-09
2	10.60	0.	0.	2.13E-09	0.	0.	0.	0.	0.	0.	0.	2.13E-09
3	10.50	0.	0.	1.33E-09	0.	0.	0.	0.	0.	0.	0.	1.33E-09
4	10.40	0.	0.	8.61E-10	0.	0.	0.	0.	0.	0.	0.	8.61E-10
5	10.30	0.	0.	4.80E-10	0.	0.	0.	0.	0.	0.	0.	4.80E-10
6	10.20	0.	0.	2.78E-10	0.	0.	0.	0.	0.	0.	0.	2.78E-10
7	10.10	0.	0.	1.88E-10	0.	0.	0.	0.	0.	0.	0.	1.88E-10
8	10.00	0.	0.	6.99E-11	0.	0.	0.	0.	0.	0.	0.	6.99E-11
9	9.90	0.	0.	6.20E-11	0.	0.	0.	0.	0.	0.	0.	6.20E-11
10	9.80	0.	0.	3.44E-11	0.	0.	0.	0.	0.	0.	0.	3.44E-11
11	9.70	0.	0.	1.31E-11	0.	0.	0.	0.	0.	0.	0.	1.31E-11
12	9.60	0.	0.	1.44E-11	0.	0.	0.	0.	0.	0.	0.	1.44E-11
13	9.50	0.	3.17E-05	4.85E-12	0.	0.	0.	0.	0.	0.	0.	3.17E-05
14	9.40	0.	1.17E-04	3.14E-12	0.	0.	0.	0.	0.	0.	0.	1.17E-04
15	9.30	0.	2.03E-04	2.49E-12	0.	0.	0.	0.	0.	0.	0.	2.03E-04
16	9.20	0.	2.89E-04	6.09E-13	0.	0.	0.	0.	0.	0.	0.	2.89E-04
17	9.10	0.	3.81E-04	9.15E-13	0.	0.	0.	0.	0.	0.	0.	3.81E-04
18	9.00	0.	4.75E-04	2.90E-13	0.	0.	0.	0.	0.	0.	0.	4.75E-04
19	8.90	0.	5.69E-04	1.92E-13	0.	0.	0.	0.	0.	0.	0.	5.69E-04
20	8.80	0.	5.98E-04	1.25E-13	0.	0.	0.	0.	0.	0.	0.	5.98E-04
21	8.70	0.	5.75E-04	4.15E-14	0.	0.	0.	0.	0.	0.	0.	5.75E-04
22	8.60	0.	5.52E-04	4.70E-14	0.	0.	0.	0.	0.	0.	0.	5.52E-04
23	8.50	0.	5.26E-04	1.37E-14	0.	0.	0.	0.	0.	0.	0.	5.26E-04
24	8.40	0.	4.94E-04	1.34E-14	0.	0.	0.	0.	0.	0.	0.	4.94E-04
25	8.30	0.	4.58E-04	4.43E-15	0.	0.	0.	0.	0.	0.	0.	4.58E-04
26	8.20	0.	4.24E-04	3.48E-15	0.	0.	0.	0.	0.	0.	0.	4.24E-04
27	8.10	0.	3.90E-04	1.42E-15	0.	0.	0.	0.	0.	0.	0.	3.90E-04
28	8.00	0.	3.56E-04	9.82E-16	0.	0.	0.	0.	0.	0.	0.	3.56E-04
29	7.90	0.	3.21E-04	4.26E-16	0.	0.	0.	0.	0.	0.	0.	3.21E-04
30	7.80	0.	2.85E-04	3.83E-16	0.	0.	0.	0.	0.	0.	0.	2.85E-04
31	7.70	0.	2.50E-04	1.42E-16	0.	0.	0.	0.	0.	0.	0.	2.50E-04
32	7.60	0.	2.17E-04	7.94E-17	0.	4.71E-13	0.	0.	0.	0.	0.	2.17E-04
33	7.50	0.	1.83E-04	4.89E-17	0.	1.60E-10	0.	0.	0.	0.	0.	1.83E-04
34	7.40	0.	1.54E-04	2.18E-17	0.	7.35E-10	0.	0.	0.	0.	0.	1.54E-04
35	7.30	0.	1.30E-04	1.18E-17	0.	4.40E-10	0.	0.	0.	0.	0.	1.30E-04
36	7.20	0.	1.09E-04	5.53E-18	0.	1.60E-08	0.	0.	0.	0.	0.	1.09E-04
37	7.10	0.	8.78E-05	2.98E-18	0.	1.17E-09	0.	0.	0.	0.	0.	8.78E-05
38	7.00	1.68E-06	0.	1.49E-18	0.	3.74E-08	0.	0.	0.	0.	0.	1.72E-06
39	6.90	2.48E-06	0.	7.77E-19	0.	7.48E-08	0.	0.	0.	0.	0.	2.47E-06
40	6.80	1.49E-06	0.	4.08E-19	0.	1.36E-08	0.	0.	0.	0.	0.	1.50E-06
41	6.70	7.68E-07	0.	1.96E-19	0.	2.01E-07	0.	0.	0.	0.	0.	9.68E-07
42	6.60	3.53E-07	0.	9.62E-20	0.	1.67E-07	0.	0.	0.	0.	0.	5.20E-07
43	6.50	1.40E-07	0.	3.82E-20	0.	4.20E-08	0.	0.	0.	0.	0.	1.82E-07
44	6.40	2.55E-07	0.	9.53E-21	1.74E-08	5.16E-07	0.	0.	0.	0.	0.	7.89E-07
45	6.30	4.05E-07	0.	1.54E-21	4.15E-08	2.94E-07	0.	0.	0.	0.	0.	7.42E-07
46	6.20	7.38E-07	0.	2.08E-22	3.89E-08	6.38E-08	0.	0.	0.	0.	0.	8.41E-07
47	6.10	1.71E-06	0.	2.66E-23	6.72E-08	1.05E-06	0.	0.	0.	0.	0.	2.83E-06
48	6.00	2.68E-06	0.	2.88E-24	2.42E-08	1.32E-07	0.	0.	0.	0.	0.	2.76E-06
49	5.90	2.50E-06	0.	1.68E-25	3.24E-08	6.84E-08	0.	0.	0.	0.	0.	2.60E-06
50	5.80	2.15E-06	0.	2.98E-27	3.17E-08	2.13E-07	0.	0.	0.	0.	0.	2.39E-06
51	5.70	1.24E-06	0.	0.	2.02E-08	1.25E-08	0.	0.	0.	0.	0.	1.28E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-03 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.28E-06	0.	0.	0.	5.16E-09	1.45E-07	0.	0.	0.	0.	0.	0.	1.35E-06
53	5.50	9.18E-07	0.	0.	0.	1.23E-08	6.46E-07	0.	0.	0.	0.	0.	0.	1.58E-06
54	5.40	6.09E-07	0.	0.	0.	7.43E-09	1.81E-08	0.	0.	0.	0.	0.	0.	6.30E-07
55	5.30	4.14E-07	0.	0.	0.	9.83E-09	2.13E-07	0.	0.	0.	0.	0.	0.	6.33E-07
56	5.20	1.33E-07	0.	0.	0.	4.35E-09	7.67E-08	0.	0.	0.	0.	0.	0.	2.14E-07
57	5.10	1.88E-07	0.	0.	0.	2.59E-09	3.18E-08	0.	5.32E-12	0.	0.	0.	0.	1.42E-07
58	5.00	6.53E-08	0.	0.	0.	1.37E-09	5.47E-08	0.	5.50E-12	0.	0.	0.	0.	1.21E-07
59	4.90	5.51E-08	0.	0.	0.	1.13E-09	6.86E-09	0.	5.69E-12	0.	0.	0.	0.	6.31E-08
60	4.80	4.98E-08	0.	0.	0.	1.26E-09	1.95E-08	0.	5.84E-12	0.	0.	0.	0.	6.57E-08
61	4.70	3.56E-08	0.	0.	0.	6.02E-10	1.56E-09	0.	5.98E-12	0.	0.	0.	0.	3.48E-08
62	4.60	2.77E-08	0.	0.	0.	5.86E-10	4.16E-09	0.	6.12E-12	0.	0.	0.	0.	3.24E-08
63	4.50	1.72E-08	0.	1.17E-23	0.	3.31E-10	3.77E-10	0.	6.28E-12	0.	0.	0.	0.	1.79E-08
64	4.40	1.07E-08	0.	3.13E-22	0.	2.17E-10	9.37E-10	0.	6.45E-12	0.	0.	0.	0.	1.18E-08
65	4.30	6.22E-09	0.	4.48E-23	0.	1.34E-10	1.63E-10	0.	6.61E-12	0.	0.	0.	0.	6.53E-09
66	4.20	3.68E-09	0.	2.47E-21	0.	8.72E-11	1.71E-10	0.	6.77E-12	0.	0.	0.	0.	3.95E-09
67	4.10	2.47E-09	0.	2.34E-23	0.	4.99E-11	6.28E-11	0.	6.95E-12	0.	0.	0.	0.	2.59E-09
68	4.00	1.32E-09	0.	2.93E-21	0.	3.32E-11	1.34E-11	0.	7.19E-12	0.	0.	0.	0.	1.37E-09
69	3.90	6.04E-10	0.	3.41E-21	0.	1.47E-11	1.51E-11	0.	7.44E-12	0.	0.	0.	0.	6.41E-10
70	3.80	5.27E-10	0.	3.50E-22	0.	1.35E-11	0.	0.	7.74E-12	0.	0.	0.	0.	5.48E-10
71	3.70	2.10E-10	0.	5.79E-21	0.	4.21E-12	0.	0.	8.06E-12	0.	0.	0.	0.	2.23E-10
72	3.60	1.23E-10	0.	1.83E-22	0.	4.79E-12	0.	0.	8.41E-12	0.	0.	0.	0.	1.36E-10
73	3.50	7.36E-11	0.	1.44E-21	0.	1.29E-12	0.	0.	8.81E-12	0.	0.	0.	0.	8.36E-11
74	3.40	3.36E-11	0.	3.34E-23	0.	1.43E-12	0.	0.	9.23E-12	0.	0.	0.	0.	4.43E-11
75	3.30	1.84E-11	0.	2.33E-22	0.	3.92E-13	0.	0.	9.71E-12	0.	0.	0.	0.	2.85E-11
76	3.20	8.74E-12	0.	8.93E-24	0.	3.68E-13	0.	0.	9.75E-12	0.	0.	0.	0.	1.89E-11
77	3.10	4.56E-12	0.	3.12E-23	0.	1.34E-13	0.	0.	9.88E-12	0.	0.	0.	0.	1.46E-11
78	3.00	2.26E-12	0.	1.03E-24	0.	8.50E-14	0.	0.	9.63E-12	0.	0.	0.	0.	1.28E-11
79	2.90	9.81E-13	0.	3.22E-24	0.	2.29E-14	0.	0.	9.39E-12	0.	0.	0.	0.	1.04E-11
80	2.80	6.19E-13	0.	2.53E-25	0.	5.85E-15	0.	0.	8.95E-12	0.	0.	0.	0.	9.57E-12
81	2.70	1.55E-13	0.	2.90E-25	0.	5.85E-16	0.	0.	8.46E-12	0.	0.	0.	0.	8.62E-12
82	2.60	1.89E-14	0.	3.83E-26	0.	5.42E-17	0.	0.	7.93E-12	0.	0.	0.	0.	7.95E-12
83	2.50	6.85E-16	0.	1.74E-26	0.	4.54E-18	0.	0.	7.26E-12	0.	0.	0.	0.	7.26E-12
84	2.40	0.	2.27E-23	0.	0.	2.10E-19	0.	0.	6.64E-12	0.	0.	0.	0.	6.64E-12
85	2.30	0.	3.12E-21	0.	0.	0.	0.	0.	5.80E-12	0.	0.	0.	0.	5.80E-12
86	2.20	0.	3.41E-21	0.	0.	0.	0.	0.	4.99E-12	0.	0.	0.	0.	4.99E-12
87	2.10	0.	3.14E-20	0.	0.	0.	0.	0.	4.16E-12	0.	0.	0.	0.	4.16E-12
88	2.00	0.	3.95E-20	0.	0.	0.	0.	0.	3.15E-12	0.	0.	0.	0.	3.16E-12
89	1.90	0.	3.44E-19	0.	0.	0.	0.	0.	2.39E-12	0.	0.	0.	0.	2.39E-12
90	1.80	0.	1.46E-18	0.	0.	0.	0.	0.	1.60E-12	0.	0.	0.	0.	1.60E-12
91	1.70	0.	4.14E-19	0.	0.	0.	0.	0.	1.02E-12	0.	0.	0.	0.	1.02E-12
92	1.60	0.	9.31E-19	0.	0.	0.	0.	0.	6.29E-13	0.	0.	0.	0.	6.30E-13
93	1.50	0.	3.47E-19	0.	0.	0.	0.	0.	2.59E-13	0.	0.	0.	0.	2.59E-13
94	1.40	0.	1.86E-18	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-18
95	1.30	0.	2.43E-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-19
96	1.20	0.	1.95E-18	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.95E-18
97	1.10	0.	1.82E-19	0.	0.	0.	0.	8.25E-13	0.	0.	0.	0.	0.	8.25E-13
98	1.00	0.	5.11E-19	0.	0.	0.	0.	1.79E-13	0.	0.	0.	0.	0.	1.79E-13
99	0.90	0.	1.19E-19	0.	0.	0.	0.	6.60E-12	0.	0.	0.	0.	0.	6.60E-12
100	0.80	0.	6.32E-20	0.	0.	0.	0.	1.91E-12	0.	0.	0.	0.	0.	1.91E-12
101	0.70	0.	1.84E-20	0.	0.	0.	0.	3.76E-11	0.	0.	0.	0.	0.	3.76E-11
102	0.60	0.	1.19E-25	0.	0.	0.	0.	1.03E-11	0.	0.	0.	0.	0.	1.03E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-00 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.06E-10	0.	0.	0.	0.	0.	0.	0.	4.06E-10
2	10.60	0.	0.	2.13E-10	0.	0.	0.	0.	0.	0.	0.	2.13E-10
3	10.50	0.	0.	1.33E-10	0.	0.	0.	0.	0.	0.	0.	1.33E-10
4	10.40	0.	0.	8.61E-11	0.	0.	0.	0.	0.	0.	0.	8.61E-11
5	10.30	0.	0.	4.08E-11	0.	0.	0.	0.	0.	0.	0.	4.08E-11
6	10.20	0.	0.	2.70E-11	0.	0.	0.	0.	0.	0.	0.	2.70E-11
7	10.10	0.	0.	1.88E-11	0.	0.	0.	0.	0.	0.	0.	1.88E-11
8	10.00	0.	0.	7.80E-12	0.	0.	0.	0.	0.	0.	0.	7.80E-12
9	9.90	0.	0.	6.21E-12	0.	0.	0.	0.	0.	0.	0.	6.21E-12
10	9.80	0.	0.	3.44E-12	0.	0.	0.	0.	0.	0.	0.	3.44E-12
11	9.70	0.	0.	1.31E-12	0.	0.	0.	0.	0.	0.	0.	1.31E-12
12	9.60	0.	0.	1.44E-12	0.	0.	0.	0.	0.	0.	0.	1.44E-12
13	9.50	0.	2.64E-06	4.89E-13	0.	0.	0.	0.	0.	0.	0.	2.64E-06
14	9.40	0.	9.70E-06	3.14E-13	0.	0.	0.	0.	0.	0.	0.	9.70E-06
15	9.30	0.	1.69E-05	2.49E-13	0.	0.	0.	0.	0.	0.	0.	1.69E-05
16	9.20	0.	2.41E-05	6.89E-14	0.	0.	0.	0.	0.	0.	0.	2.41E-05
17	9.10	0.	3.10E-05	9.15E-14	0.	0.	0.	0.	0.	0.	0.	3.10E-05
18	9.00	0.	3.96E-05	2.90E-14	0.	0.	0.	0.	0.	0.	0.	3.96E-05
19	8.90	0.	4.75E-05	1.92E-14	0.	0.	0.	0.	0.	0.	0.	4.75E-05
20	8.80	0.	4.98E-05	1.25E-14	0.	0.	0.	0.	0.	0.	0.	4.98E-05
21	8.70	0.	4.79E-05	4.19E-15	0.	0.	0.	0.	0.	0.	0.	4.79E-05
22	8.60	0.	4.60E-05	4.71E-15	0.	0.	0.	0.	0.	0.	0.	4.60E-05
23	8.50	0.	4.36E-05	1.37E-15	0.	0.	0.	0.	0.	0.	0.	4.38E-05
24	8.40	0.	4.12E-05	1.34E-15	0.	0.	0.	0.	0.	0.	0.	4.12E-05
25	8.30	0.	3.82E-05	4.43E-16	0.	0.	0.	0.	0.	0.	0.	3.82E-05
26	8.20	0.	3.53E-05	3.48E-16	0.	0.	0.	0.	0.	0.	0.	3.53E-05
27	8.10	0.	3.25E-05	1.42E-16	0.	0.	0.	0.	0.	0.	0.	3.29E-05
28	8.00	0.	2.97E-05	9.82E-17	0.	0.	0.	0.	0.	0.	0.	2.97E-05
29	7.90	0.	2.67E-05	4.27E-17	0.	0.	0.	0.	0.	0.	0.	2.67E-05
30	7.80	0.	2.38E-05	3.03E-17	0.	0.	0.	0.	0.	0.	0.	2.38E-05
31	7.70	0.	2.09E-05	1.42E-17	0.	0.	0.	0.	0.	0.	0.	2.09E-05
32	7.60	0.	1.81E-05	7.94E-18	0.	4.38E-14	0.	0.	0.	0.	0.	1.81E-05
33	7.50	0.	1.53E-05	4.89E-18	0.	1.48E-11	0.	0.	0.	0.	0.	1.53E-05
34	7.40	0.	1.30E-05	2.11E-18	0.	6.71E-11	0.	0.	0.	0.	0.	1.30E-05
35	7.30	0.	1.09E-05	1.18E-18	0.	4.02E-11	0.	0.	0.	0.	0.	1.09E-05
36	7.20	0.	9.08E-06	9.53E-19	0.	1.46E-09	0.	0.	0.	0.	0.	9.08E-06
37	7.10	0.	7.32E-06	2.99E-19	0.	1.07E-10	0.	0.	0.	0.	0.	7.32E-06
38	7.00	1.40E-07	0.	1.49E-19	0.	3.41E-09	0.	0.	0.	0.	0.	1.44E-07
39	6.90	2.00E-07	0.	7.78E-20	0.	6.83E-09	0.	0.	0.	0.	0.	2.07E-07
40	6.80	1.24E-07	0.	4.88E-20	0.	1.24E-09	0.	0.	0.	0.	0.	1.25E-07
41	6.70	6.34E-08	0.	1.96E-20	0.	1.83E-08	0.	0.	0.	0.	0.	8.17E-08
42	6.60	2.94E-08	0.	9.63E-21	0.	1.53E-08	0.	0.	0.	0.	0.	4.47E-08
43	6.50	1.16E-08	0.	3.83E-21	0.	3.84E-09	0.	0.	0.	0.	0.	1.55E-08
44	6.40	2.13E-08	0.	9.53E-22	1.59E-09	4.71E-08	0.	0.	0.	0.	0.	7.08E-08
45	6.30	3.38E-08	0.	1.54E-22	3.79E-09	2.78E-08	0.	0.	0.	0.	0.	6.46E-08
46	6.20	6.15E-08	0.	2.08E-23	3.55E-09	5.83E-09	0.	0.	0.	0.	0.	7.19E-08
47	6.10	1.43E-07	0.	2.66E-24	6.14E-09	9.63E-08	0.	0.	0.	0.	0.	2.46E-07
48	6.00	2.17E-07	0.	2.88E-25	2.21E-09	1.20E-08	0.	0.	0.	0.	0.	2.31E-07
49	5.90	2.08E-07	0.	1.61E-26	2.96E-09	6.25E-09	0.	0.	0.	0.	0.	2.17E-07
50	5.80	1.79E-07	0.	2.98E-28	2.89E-09	1.95E-08	0.	0.	0.	0.	0.	2.81E-07
51	5.70	1.04E-07	0.	0.	1.84E-09	1.14E-09	0.	0.	0.	0.	0.	1.07E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	9.98E-08	0.	0.	0.	4.71E-10	1.32E-08	0.	0.	0.	0.	0.	0.	1.14E-07
53	5.50	7.65E-08	0.	0.	0.	1.12E-09	5.90E-08	0.	0.	0.	0.	0.	0.	1.37E-07
54	5.40	5.04E-08	0.	0.	0.	6.79E-10	1.65E-09	0.	0.	0.	0.	0.	0.	5.20E-08
55	5.30	3.49E-08	0.	0.	0.	5.33E-10	1.95E-08	0.	0.	0.	0.	0.	0.	5.45E-08
56	5.20	1.11E-08	0.	0.	0.	3.97E-10	7.00E-09	0.	0.	0.	0.	0.	0.	1.85E-08
57	5.10	9.01E-09	0.	0.	0.	2.37E-10	2.90E-09	0.	1.40E-13	0.	0.	0.	0.	1.22E-08
58	5.00	5.44E-09	0.	0.	0.	1.25E-10	5.00E-09	0.	1.45E-13	0.	0.	0.	0.	1.06E-08
59	4.90	4.68E-09	0.	0.	0.	1.04E-10	6.26E-10	0.	1.50E-13	0.	0.	0.	0.	5.33E-09
60	4.80	4.08E-09	0.	0.	0.	1.15E-10	1.41E-09	0.	1.54E-13	0.	0.	0.	0.	5.6.E-09
61	4.70	2.97E-09	0.	0.	0.	7.33E-11	1.42E-10	0.	1.58E-13	0.	0.	0.	0.	3.19E-09
62	4.60	2.31E-09	0.	0.	0.	5.35E-11	3.80E-10	0.	1.61E-13	0.	0.	0.	0.	2.74E-09
63	4.50	1.44E-09	0.	1.17E-24	0.	3.02E-11	3.45E-11	0.	1.66E-13	0.	0.	0.	0.	1.58E-09
64	4.40	8.91E-10	0.	3.13E-23	0.	1.99E-11	8.56E-11	0.	1.70E-13	0.	0.	0.	0.	9.06E-10
65	4.30	5.19E-10	0.	4.43E-24	0.	1.22E-11	1.49E-11	0.	1.74E-13	0.	0.	0.	0.	5.46E-10
66	4.20	3.07E-10	0.	2.47E-22	0.	7.96E-12	1.56E-11	0.	1.78E-13	0.	0.	0.	0.	3.31E-10
67	4.10	2.06E-10	0.	2.34E-24	0.	4.56E-12	5.74E-12	0.	1.83E-13	0.	0.	0.	0.	2.17E-10
68	4.00	1.10E-10	0.	2.53E-22	0.	3.03E-12	1.23E-12	0.	1.90E-13	0.	0.	0.	0.	1.15E-10
69	3.90	5.04E-11	0.	3.41E-22	0.	1.34E-12	1.38E-12	0.	1.96E-13	0.	0.	0.	0.	5.33E-11
70	3.80	4.39E-11	0.	3.98E-23	0.	1.24E-12	0.	0.	2.04E-13	0.	0.	0.	0.	4.54E-11
71	3.70	1.75E-11	0.	5.76E-22	0.	3.84E-13	0.	0.	2.13E-13	0.	0.	0.	0.	1.81E-11
72	3.60	1.03E-11	0.	1.03E-23	0.	4.38E-13	0.	0.	2.22E-13	0.	0.	0.	0.	1.09E-11
73	3.50	6.13E-12	0.	1.46E-22	0.	1.14E-13	0.	0.	2.32E-13	0.	0.	0.	0.	6.48E-12
74	3.40	2.80E-12	0.	3.36E-24	0.	1.31E-13	0.	0.	2.43E-13	0.	0.	0.	0.	3.18E-12
75	3.30	1.55E-12	0.	2.38E-23	0.	3.58E-14	0.	0.	2.51E-13	0.	0.	0.	0.	1.84E-12
76	3.20	7.28E-13	0.	8.94E-25	0.	3.36E-14	0.	0.	2.57E-13	0.	0.	0.	0.	1.02E-12
77	3.10	3.80E-13	0.	3.12E-24	0.	1.22E-14	0.	0.	2.60E-13	0.	0.	0.	0.	6.53E-13
78	3.00	1.88E-13	0.	1.83E-25	0.	7.76E-15	0.	0.	2.54E-13	0.	0.	0.	0.	4.50E-13
79	2.90	8.18E-14	0.	3.22E-25	0.	2.01E-15	0.	0.	2.47E-13	0.	0.	0.	0.	3.31E-13
80	2.80	5.16E-14	0.	2.53E-26	0.	5.34E-16	0.	0.	2.36E-13	0.	0.	0.	0.	2.90E-13
81	2.70	1.29E-14	0.	2.90E-26	0.	5.34E-17	0.	0.	2.23E-13	0.	0.	0.	0.	2.36E-13
82	2.60	1.58E-15	0.	3.83E-27	0.	4.95E-18	0.	0.	2.09E-13	0.	0.	0.	0.	2.11E-13
83	2.50	5.71E-17	0.	1.74E-27	0.	4.15E-19	0.	0.	1.91E-13	0.	0.	0.	0.	1.91E-13
84	2.40	0.	2.27E-24	0.	0.	1.92E-20	0.	0.	1.75E-13	0.	0.	0.	0.	1.75E-13
85	2.30	0.	3.12E-22	0.	0.	0.	0.	0.	1.53E-13	0.	0.	0.	0.	1.53E-13
86	2.20	0.	3.49E-22	0.	0.	0.	0.	0.	1.32E-13	0.	0.	0.	0.	1.32E-13
87	2.10	0.	3.14E-21	0.	0.	0.	0.	0.	1.10E-13	0.	0.	0.	0.	1.10E-13
88	2.00	0.	3.95E-21	0.	0.	0.	0.	0.	8.32E-14	0.	0.	0.	0.	8.32E-14
89	1.90	0.	3.46E-20	0.	0.	0.	0.	0.	6.30E-14	0.	0.	0.	0.	6.30E-14
90	1.80	0.	1.48E-19	0.	0.	0.	0.	0.	4.21E-14	0.	0.	0.	0.	4.21E-14
91	1.70	0.	4.14E-20	0.	0.	0.	0.	0.	2.69E-14	0.	0.	0.	0.	2.69E-14
92	1.60	0.	9.31E-20	0.	0.	0.	0.	0.	1.66E-14	0.	0.	0.	0.	1.66E-14
93	1.50	0.	3.47E-20	0.	0.	0.	0.	0.	6.82E-15	0.	0.	0.	0.	6.82E-15
94	1.40	0.	1.86E-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-19
95	1.30	0.	2.44E-20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.44E-20
96	1.20	0.	1.55E-19	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-19
97	1.10	0.	1.82E-20	0.	0.	0.	0.	7.54E-14	0.	0.	0.	0.	0.	7.54E-14
98	1.00	0.	5.11E-20	0.	0.	0.	0.	1.64E-14	0.	0.	0.	0.	0.	1.64E-14
99	0.90	0.	1.15E-20	0.	0.	0.	0.	6.03E-13	0.	0.	0.	0.	0.	6.03E-13
100	0.80	0.	6.33E-21	0.	0.	0.	0.	1.74E-13	0.	0.	0.	0.	0.	1.74E-13
101	0.70	0.	1.04E-21	0.	0.	0.	0.	3.43E-12	0.	0.	0.	0.	0.	3.43E-12
102	0.60	0.	1.19E-26	0.	0.	0.	0.	9.44E-13	0.	0.	0.	0.	0.	9.44E-13

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.67E-01	0.	0.	0.	1.77E-06	0.	0.	0.	2.67E-01
2	10.60	0.	0.	1.69E-01	0.	0.	0.	1.78E-06	0.	0.	0.	1.69E-01
3	10.50	0.	0.	1.32E-01	0.	0.	0.	1.78E-06	0.	0.	0.	1.32E-01
4	10.40	0.	0.	9.57E-02	0.	0.	0.	1.78E-06	0.	0.	0.	9.57E-02
5	10.30	0.	0.	5.71E-02	0.	0.	0.	1.78E-06	0.	0.	0.	5.71E-02
6	10.20	0.	0.	4.04E-02	0.	0.	0.	1.79E-06	0.	0.	0.	4.04E-02
7	10.10	0.	0.	3.48E-02	0.	0.	0.	1.79E-06	0.	0.	0.	3.48E-02
8	10.00	0.	0.	1.82E-02	0.	0.	0.	1.79E-06	0.	0.	0.	1.82E-02
9	9.90	0.	0.	1.71E-02	0.	0.	0.	1.79E-06	0.	0.	0.	1.71E-02
10	9.80	0.	0.	1.13E-02	0.	0.	0.	1.80E-06	0.	0.	0.	1.14E-02
11	9.70	0.	0.	5.99E-03	0.	0.	0.	1.80E-06	0.	0.	0.	5.99E-03
12	9.60	0.	0.	4.47E-03	0.	0.	0.	1.80E-06	0.	0.	0.	4.47E-03
13	9.50	0.	2.77E 01	3.17E-03	0.	0.	0.	1.81E-06	0.	0.	0.	2.77E 01
14	9.40	0.	1.03E 02	2.27E-03	0.	0.	0.	1.81E-06	0.	0.	0.	1.03E 02
15	9.30	0.	1.78E 02	2.84E-03	0.	0.	0.	1.82E-06	0.	0.	0.	1.78E 02
16	9.20	0.	2.52E 02	8.20E-04	0.	0.	0.	1.83E-06	0.	0.	0.	2.52E 02
17	9.10	0.	3.24E 02	9.94E-04	0.	0.	0.	1.83E-06	0.	0.	0.	3.24E 02
18	9.00	0.	3.95E 02	5.84E-04	0.	0.	0.	1.84E-06	0.	0.	0.	3.95E 02
19	8.90	0.	4.65E 02	3.50E-04	0.	0.	0.	1.85E-06	0.	0.	0.	4.65E 02
20	8.80	0.	4.84E 02	2.80E-04	0.	0.	0.	1.85E-06	0.	0.	0.	4.84E 02
21	8.70	0.	4.61E 02	1.34E-04	0.	0.	0.	1.86E-06	0.	0.	0.	4.61E 02
22	8.60	0.	4.39E 02	1.41E-04	0.	0.	0.	1.87E-06	0.	0.	0.	4.39E 02
23	8.50	0.	4.16E 02	6.54E-05	0.	0.	0.	1.87E-06	0.	0.	0.	4.16E 02
24	8.40	0.	3.93E 02	4.10E-05	0.	0.	0.	1.88E-06	0.	0.	0.	3.93E 02
25	8.30	0.	3.72E 02	2.97E-05	0.	0.	0.	1.89E-06	0.	0.	0.	3.72E 02
26	8.20	0.	3.49E 02	2.56E-05	0.	0.	0.	1.90E-06	0.	0.	0.	3.49E 02
27	8.10	0.	3.24E 02	1.37E-05	0.	0.	0.	1.91E-06	5.37E-16	0.	0.	3.24E 02
28	8.00	0.	3.00E 02	1.11E-05	0.	0.	0.	1.92E-06	5.57E-16	0.	0.	3.00E 02
29	7.90	0.	2.77E 02	6.12E-06	0.	0.	0.	1.93E-06	5.78E-16	0.	0.	2.77E 02
30	7.80	0.	2.55E 02	5.07E-06	0.	0.	0.	1.94E-06	6.01E-16	0.	0.	2.55E 02
31	7.70	0.	2.32E 02	2.94E-06	0.	0.	0.	1.95E-06	6.25E-16	0.	0.	2.32E 02
32	7.60	0.	2.09E 02	2.85E-06	0.	2.21E-05	0.	1.96E-06	6.50E-16	0.	0.	2.09E 02
33	7.50	0.	1.85E 02	1.30E-06	0.	1.26E-03	0.	1.97E-06	6.76E-16	0.	0.	1.85E 02
34	7.40	0.	1.64E 02	8.37E-07	0.	3.20E-03	0.	1.98E-06	7.04E-16	0.	0.	1.66E 02
35	7.30	0.	1.47E 02	5.50E-07	0.	8.89E-03	0.	1.99E-06	7.34E-16	0.	0.	1.47E 02
36	7.20	0.	1.28E 02	3.49E-07	0.	9.75E-02	0.	2.00E-06	7.65E-16	0.	0.	1.28E 02
37	7.10	0.	1.08E 02	2.34E-07	0.	2.35E-02	0.	2.02E-06	7.98E-16	0.	0.	1.08E 02
38	7.00	8.96E-01	0.	1.47E-07	0.	4.22E-01	0.	2.04E-06	8.32E-16	0.	0.	1.32E 00
39	6.90	1.43E 00	0.	9.48E-08	0.	4.85E-01	0.	2.05E-06	8.69E-16	0.	0.	1.83E 00
40	6.80	9.93E-01	0.	6.10E-08	0.	3.25E-01	0.	2.07E-06	9.08E-16	0.	0.	1.32E 00
41	6.70	5.70E-01	0.	3.75E-08	0.	1.70E 00	0.	2.09E-06	9.50E-16	0.	0.	2.27E 00
42	6.60	2.86E-01	0.	2.30E-08	0.	7.49E-01	0.	2.10E-06	9.93E-16	0.	0.	1.04E 00
43	6.50	1.29E-01	0.	1.16E-08	0.	7.19E-01	0.	2.12E-06	1.94E-15	0.	0.	8.48E-01
44	6.40	2.12E-01	0.	4.04E-09	5.75E-02	3.30E 00	0.	2.14E-06	1.09E-15	0.	0.	3.57E 00
45	6.30	3.84E-01	0.	1.09E-09	1.74E-01	1.17E 00	0.	2.15E-06	1.14E-15	0.	0.	1.73E 00
46	6.20	8.70E-01	0.	2.67E-10	1.79E-01	8.57E-01	0.	2.17E-06	1.20E-15	0.	0.	1.90E 00
47	6.10	2.52E 00	0.	6.18E-11	3.81E-01	5.21E 00	0.	2.19E-06	1.26E-15	0.	0.	8.11E 00
48	6.00	4.70E 00	0.	9.87E-12	1.87E-01	6.26E-01	0.	2.20E-06	1.32E-15	0.	0.	5.59E 00
49	5.90	5.64E 00	0.	6.37E-13	2.48E-01	7.27E-01	0.	2.20E-06	1.39E-15	0.	0.	6.62E 00
50	5.80	6.12E 00	0.	1.36E-14	2.80E-01	1.12E 00	0.	2.18E-06	1.46E-15	0.	0.	7.52E 00
51	5.70	4.70E 00	0.	0.	2.18E-01	2.74E-01	0.	2.04E-06	1.54E-15	0.	0.	5.25E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3800. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.98E 00	0.	0.	0.	8.80E-02	1.37E 00	0.	0.	1.89E-06	1.63E-15	0.	0.	6.43E 00
53	5.50	4.24E 00	0.	0.	0.	1.47E-01	2.88E 00	0.	0.	1.88E-06	1.72E-15	0.	0.	7.27E 00
54	5.40	3.43E 00	0.	0.	0.	9.65E-02	3.42E-01	0.	0.	1.91E-06	1.82E-15	0.	0.	3.87E 00
55	5.30	2.68E 00	0.	0.	0.	9.30E-02	1.61E 00	0.	0.	1.93E-06	1.92E-15	0.	0.	4.39E 00
56	5.20	1.21E 00	0.	0.	0.	7.99E-02	4.95E-01	0.	0.	1.94E-06	2.03E-15	0.	0.	1.78E 00
57	5.10	10.80E-01	0.	0.	0.	6.02E-02	4.88E-01	0.	1.47E-02	1.96E-06	2.16E-15	0.	0.	1.56E 00
58	5.00	6.33E-01	0.	0.	0.	3.91E-02	5.35E-01	0.	1.48E-02	1.97E-06	2.29E-15	0.	0.	1.22E 00
59	4.90	5.28E-01	0.	0.	0.	3.57E-02	1.87E-01	0.	1.48E-02	1.99E-06	2.43E-15	0.	0.	7.66E-01
60	4.80	5.21E-01	0.	0.	0.	3.70E-02	2.51E-01	0.	1.49E-02	2.00E-06	2.59E-15	0.	0.	8.23E-01
61	4.70	4.48E-01	0.	0.	0.	2.80E-02	7.20E-02	0.	1.49E-02	2.02E-06	2.76E-15	0.	0.	5.63E-01
62	4.60	4.18E-01	0.	0.	0.	2.39E-02	1.10E-01	0.	1.50E-02	2.04E-06	2.94E-15	0.	0.	5.67E-01
63	4.50	3.14E-01	0.	4.38E-11	0.	1.57E-02	2.87E-02	0.	1.51E-02	2.05E-06	3.14E-15	0.	0.	3.76E-01
64	4.40	2.39E-01	0.	4.75E-10	0.	1.26E-02	3.98E-02	0.	1.52E-02	2.07E-06	3.36E-15	0.	0.	3.06E-01
65	4.30	1.44E-01	0.	2.31E-10	0.	8.89E-03	9.86E-03	0.	1.53E-02	2.09E-06	3.60E-15	0.	0.	1.98E-01
66	4.20	1.17E-01	0.	3.96E-09	0.	7.34E-03	1.19E-02	0.	1.54E-02	2.10E-06	3.86E-15	0.	0.	1.52E-01
67	4.10	8.72E-02	0.	1.76E-10	0.	5.01E-03	3.20E-03	0.	1.54E-02	2.11E-06	4.15E-15	0.	0.	1.11E-01
68	4.00	5.85E-02	0.	4.72E-09	0.	3.83E-03	1.41E-03	0.	1.55E-02	2.12E-06	4.47E-15	0.	0.	7.93E-02
69	3.90	3.48E-02	0.	3.77E-09	5.14E-17	2.21E-03	1.09E-03	0.	1.56E-02	2.11E-06	4.82E-15	0.	0.	5.29E-02
70	3.80	3.21E-02	0.	1.23E-09	5.94E-15	2.19E-03	0.	0.	1.57E-02	2.10E-06	5.21E-15	0.	0.	5.01E-02
71	3.70	1.74E-02	0.	7.05E-09	1.34E-14	9.81E-04	0.	0.	1.58E-02	2.07E-06	5.65E-15	0.	0.	3.42E-02
72	3.60	1.28E-02	0.	5.16E-10	1.13E-15	1.12E-03	0.	0.	1.59E-02	1.94E-06	6.13E-15	0.	0.	2.91E-02
73	3.50	8.35E-03	0.	2.89E-09	3.21E-14	4.43E-04	0.	0.	1.60E-02	1.77E-06	6.67E-15	0.	0.	2.48E-02
74	3.40	5.02E-03	0.	2.46E-10	4.55E-17	5.01E-04	0.	0.	1.61E-02	1.02E-06	7.28E-15	0.	0.	2.16E-02
75	3.30	3.21E-03	0.	7.21E-10	2.69E-15	2.11E-04	0.	0.	1.61E-02	1.03E-06	7.96E-15	0.	0.	1.95E-02
76	3.20	1.89E-03	0.	9.44E-11	5.09E-14	2.01E-04	0.	0.	1.41E-02	1.03E-06	8.73E-15	0.	0.	1.82E-02
77	3.10	1.26E-03	0.	1.50E-10	9.04E-17	1.11E-04	0.	0.	1.60E-02	1.03E-06	9.61E-15	0.	0.	1.74E-02
78	3.00	7.79E-04	0.	2.83E-11	2.94E-15	7.67E-05	0.	0.	1.59E-02	1.03E-06	1.06E-14	0.	0.	1.67E-02
79	2.90	4.38E-04	0.	2.39E-11	7.07E-15	2.97E-05	0.	0.	1.57E-02	1.03E-06	1.17E-14	0.	0.	1.62E-02
80	2.80	3.32E-04	0.	4.94E-12	1.07E-16	1.00E-05	0.	0.	1.54E-02	1.03E-06	1.30E-14	0.	0.	1.57E-02
81	2.70	1.17E-04	0.	3.16E-12	1.35E-15	2.08E-06	0.	0.	1.50E-02	1.03E-06	1.45E-14	0.	0.	1.51E-02
82	2.60	2.46E-05	0.	9.56E-13	3.04E-16	3.85E-07	0.	0.	1.46E-02	1.03E-06	1.63E-14	0.	0.	1.45E-02
83	2.50	1.20E-06	0.	2.63E-13	2.12E-17	5.23E-08	0.	0.	1.40E-02	1.03E-06	1.83E-14	0.	0.	1.40E-02
84	2.40	0.	7.78E-11	0.	9.73E-17	3.56E-09	0.	0.	1.34E-02	1.03E-06	2.07E-14	0.	0.	1.34E-02
85	2.30	0.	2.43E-09	0.	0.	0.	0.	0.	1.25E-02	1.03E-06	2.35E-14	0.	0.	1.25E-02
86	2.20	0.	2.30E-09	0.	0.	0.	0.	0.	1.16E-02	1.02E-06	2.69E-14	0.	0.	1.16E-02
87	2.10	0.	1.48E-08	0.	0.	0.	0.	0.	1.05E-02	1.02E-06	3.09E-14	0.	0.	1.05E-02
88	2.00	0.	1.10E-08	0.	0.	0.	0.	0.	8.82E-03	9.86E-07	3.58E-14	0.	0.	8.82E-03
89	1.90	0.	1.01E-07	0.	0.	0.	0.	0.	7.43E-03	9.49E-07	4.17E-14	0.	0.	7.43E-03
90	1.80	0.	1.87E-07	0.	0.	0.	0.	0.	5.41E-03	9.07E-07	4.91E-14	0.	0.	5.41E-03
91	1.70	0.	1.14E-07	0.	0.	0.	0.	0.	3.75E-03	8.55E-07	5.83E-14	0.	0.	3.75E-03
92	1.60	0.	1.28E-07	0.	0.	0.	0.	0.	2.53E-03	7.23E-07	6.99E-14	0.	0.	2.53E-03
93	1.50	0.	9.68E-08	0.	0.	0.	0.	0.	1.46E-03	5.29E-07	8.49E-14	0.	0.	1.46E-03
94	1.40	0.	2.42E-07	0.	0.	0.	0.	0.	7.77E-04	0.	1.04E-13	0.	0.	7.78E-04
95	1.30	0.	7.33E-08	0.	0.	0.	0.	0.	3.10E-04	0.	1.30E-13	0.	0.	3.19E-04
96	1.20	0.	1.96E-07	0.	0.	0.	0.	0.	0.	0.	1.66E-13	0.	0.	1.96E-07
97	1.10	0.	5.50E-08	0.	0.	0.	0.	8.70E-06	0.	0.	2.15E-13	0.	0.	8.75E-06
98	1.00	0.	8.79E-08	0.	0.	0.	0.	8.46E-06	0.	0.	2.87E-13	0.	0.	8.55E-06
99	0.90	0.	3.81E-08	0.	0.	0.	0.	6.56E-05	0.	0.	3.94E-13	0.	0.	6.56E-05
100	0.80	0.	1.67E-08	0.	0.	0.	0.	1.01E-04	0.	0.	5.62E-13	0.	0.	1.01E-04
101	0.70	0.	4.43E-09	0.	0.	0.	0.	3.24E-04	0.	0.	8.42E-13	0.	0.	3.24E-04
102	0.60	0.	1.84E-12	0.	0.	0.	0.	3.42E-04	0.	0.	1.34E-12	0.	0.	3.42E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.67E-02	0.	0.	0.	2.27E-07	0.	0.	0.	2.67E-02
2	10.60	0.	0.	1.70E-02	0.	0.	0.	2.27E-07	0.	0.	0.	1.70E-02
3	10.50	0.	0.	1.32E-02	0.	0.	0.	2.28E-07	0.	0.	0.	1.32E-02
4	10.40	0.	0.	9.57E-03	0.	0.	0.	2.28E-07	0.	0.	0.	9.57E-03
5	10.30	0.	0.	5.71E-03	0.	0.	0.	2.28E-07	0.	0.	0.	5.71E-03
6	10.20	0.	0.	4.64E-03	0.	0.	0.	2.28E-07	0.	0.	0.	4.65E-03
7	10.10	0.	0.	3.48E-03	0.	0.	0.	2.29E-07	0.	0.	0.	3.48E-03
8	10.00	0.	0.	1.82E-03	0.	0.	0.	2.29E-07	0.	0.	0.	1.82E-03
9	9.90	0.	0.	1.71E-03	0.	0.	0.	2.29E-07	0.	0.	0.	1.71E-03
10	9.80	0.	0	1.14E-03	0.	0.	0.	2.30E-07	0.	0.	0.	1.14E-03
11	9.70	0.	0.	5.99E-04	0.	0.	0.	2.30E-07	0.	0.	0.	6.00E-04
12	9.60	0.	0.	6.47E-04	0.	0.	0.	2.31E-07	0.	0.	0.	6.48E-04
13	9.50	0.	2.71E 00	3.17E-04	0.	0.	0.	2.31E-07	0.	0.	0.	2 71E 00
14	9.40	0.	1.00E 01	2.27E-04	0.	0.	0.	2.32E-07	0.	0.	0.	1.00E 01
15	9.30	0.	1.73E 01	2.04E-04	0.	0.	0.	2.33E-07	0.	0.	0.	1.73E 01
16	9.20	0.	2.44E 01	8.29E-05	0.	0.	0.	2.34E-07	0.	0.	0.	2.46E 01
17	9.10	0.	3.16E 01	9.84E-05	0.	0.	0.	2.34E-07	0.	0.	0.	3.16E 01
18	9.00	0.	3.85E 01	5.04E-05	0.	0.	0.	2.35E-07	0.	0.	0.	3.85E 01
19	8.90	0.	4.54E 01	3.58E-05	0.	0.	0.	2.36E-07	0.	0.	0.	4.54E 01
20	8.80	0.	4.72E 01	2.80E-05	0.	0.	0.	2.37E-07	0.	0.	0.	4.72E 01
21	8.70	0.	4.50E 01	1.34E-05	0.	0.	0.	2.38E-07	0.	0.	0.	4.50E 01
22	8.60	0.	4.28E 01	1.41E-05	0.	0.	0.	2.39E-07	0.	0.	0.	4.28E 01
23	8.50	0.	4.06E 01	6.55E-06	0.	0.	0.	2.40E-07	0.	0.	0.	4.86E 01
24	8.40	0.	3.84E 01	6.11E-06	0.	0.	0.	2.41E-07	0.	0.	0.	3.84E 01
25	8.30	0.	3.63E 01	2.97E-06	0.	0.	0.	2.42E-07	0.	0.	0.	3.43E 01
26	8.20	0.	3.41E 01	2.56E-06	0.	0.	0.	2.43E-07	0.	0.	0.	3.41E 01
27	8.10	0.	3.17E 01	1.37E-06	0.	0.	0.	2.45E-07	5.30E-17	0.	0.	3.17E 01
28	8.00	0.	2.93E 01	1.11E-06	0.	0.	0.	2.46E-07	5.51E-17	0.	0.	2.93E 01
29	7.90	0.	2.71E 01	6.12E-07	0.	0.	0.	2.47E-07	5.72E-17	0.	0.	2.71E 01
30	7.80	0.	2.49E 01	5.07E-07	0.	0.	0.	2.48E-07	5.94E-17	0.	0.	2.49E 01
31	7.70	0.	2.26E 01	2.95E-07	0.	0.	0.	2.50E-07	6.18E-17	0.	0.	2.26E 01
32	7.60	0.	2.04E 01	2.09E-07	0.	2.19E-06	0.	2.51E-07	6.42E-17	0.	0.	2.04E 01
33	7.50	0.	1.81E 01	1.30E-07	0.	1.25E-04	0.	2.52E-07	6.69E-17	0.	0.	1.81E 01
34	7.40	0.	1.62E 01	8.38E-08	0.	3.17E-04	0.	2.54E-07	6.96E-17	0.	0.	1.62E 01
35	7.30	0.	1.44E 01	5.51E-08	0.	8.79E-04	0.	2.55E-07	7.25E-17	0.	0.	1.44E 01
36	7.20	0.	1.25E 01	3.45E-08	0.	9.63E-03	0.	2.56E-07	7.56E-17	0.	0.	1.25E 01
37	7.10	0.	1.06E 01	2.34E-08	0.	2.32E-03	0.	2.58E-07	7.89E-17	0.	0.	1.06E 01
38	7.00	8.75E-02	0.	1.47E-08	0.	4.17E-02	0.	2.61E-07	8.23E-17	0.	0.	1.29E-01
39	6.90	1.39E-01	0.	9.49E-09	0.	4.00E-02	0.	2 63E-07	8.59E-17	0.	0.	1.79E-01
40	6.80	9.69E-02	0.	6.19E-09	0.	3.21E-02	0.	2.65E-07	8.98E-17	0.	0.	1.29E-01
41	6.70	5.56E-02	0.	3.75E-09	0.	1.65E-01	0.	2.67E-07	9.39E-17	0.	0.	2.23E-01
42	6.60	2.79E-02	0.	2.30E-09	0.	7.40E-02	0.	2.69E-07	9.82E-17	0.	0.	1.02E-01
43	6.50	1.26E-02	0.	1.16E-09	0.	7.10E-02	0.	2.71E-07	1.03E-16	0.	0.	8.36E-02
44	6.40	2.07E-02	0.	4.04E-10	5.68E	3.24E-01	0.	2.73E-07	1.08E-16	0.	0.	3.53E-01
45	6.30	3.75E-02	0.	1.09E-10	1.72E-02	1.16E-01	0.	2.75E-07	1.13E-16	0.	0.	1.70E-01
46	6.20	8.49E-02	0.	2.67E-11	1.77E-02	8.46E-02	0.	2.77E-07	1.18E-16	0.	0.	1.87E-01
47	6.10	2.46E-01	0.	6.19E-12	3.76E-02	5.15E-01	0.	2.79E-07	1.24E-16	0.	0.	7.98E-01
48	6.00	.66E-01	0.	9.87E-13	1.85E-02	6.19E-02	0.	2.82E-07	1.31E-16	0.	0.	5.46E-01
49	5.90	5.51E-01	0.	6.37E-14	2.45E-02	7.18E-02	0.	2.82E-07	1.38E-16	0.	0.	6.47E-01
50	5.80	5.97E-01	0.	1.36E-15	2.77E-02	1.11E-01	0.	2.77E-07	1.45E-16	0.	0.	7.35E-01
51	5.70	4.64E-01	0.	0.	2.15E-02	2.71E-02	0.	2.51E-07	1.53E-16	0.	0.	5.13E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.08E-01	0.	0.	0.	6.69E-03	1.35E-01	0.	0.	2.42E-07	1.61E-16	0.	0.	6.30E-01
53	5.50	4.14E-01	0.	0.	0.	1.45E-02	2.85E-01	0.	0.	2.44E-07	1.70E-16	0.	0.	7.13E-01
54	5.40	3.35E-01	0.	0.	0.	9.93E-03	3.30E-02	0.	0.	2.45E-07	1.80E-16	0.	0.	3.78E-01
55	5.30	2.61E-01	0.	0.	0.	9.19E-03	1.60E-01	0.	0.	2.46E-07	1.90E-16	0.	0.	4.30E-01
56	5.20	1.18E-01	0.	0.	0.	7.89E-03	4.89E-02	0.	0.	2.48E-07	2.01E-16	0.	0.	1.75E-01
57	5.10	9.70E-02	0.	0.	0.	5.94E-03	4.83E-02	0.	4.54E-04	2.50E-07	2.13E-16	0.	0.	1.52E-01
58	5.00	6.18E-02	0.	0.	0.	3.86E-03	5.29E-02	0.	4.56E-04	2.52E-07	2.26E-16	0.	0.	1.19E-01
59	4.90	5.15E-02	0.	0.	0.	3.53E-03	1.84E-02	0.	4.57E-04	2.54E-07	2.41E-16	0.	0.	7.30E-02
60	4.80	5.09E-02	0.	0.	0.	3.66E-03	2.48E-02	0.	4.59E-04	2.56E-07	2.56E-16	0.	0.	7.98E-02
61	4.70	4.38E-02	0.	0.	0.	2.76E-03	7.11E-03	0.	4.61E-04	2.58E-07	2.72E-16	0.	0.	5.41E-02
62	4.60	4.08E-02	0.	0.	0.	2.36E-03	1.39E-02	0.	4.63E-04	2.61E-07	2.91E-16	0.	0.	5.45E-02
63	4.50	3.08E-02	0.	4.38E-12	0.	1.95E-03	2.83E-03	0.	4.66E-04	2.63E-07	3.10E-16	0.	0.	3.57E-02
64	4.40	2.33E-02	0.	4.75E-11	0.	1.25E-03	3.93E-03	0.	4.68E-04	2.65E-07	3.32E-16	0.	0.	2.90E-02
65	4.30	1.60E-02	0.	2.31E-11	0.	9.79E-04	9.74E-04	0.	4.71E-04	2.67E-07	3.56E-16	0.	0.	1.83E-02
66	4.20	1.14E-02	0.	3.96E-10	0.	7.25E-04	1.17E-03	0.	4.74E-04	2.69E-07	3.82E-16	0.	0.	1.38E-02
67	4.10	8.51E-03	0.	1.76E-11	0.	4.93E-04	3.17E-04	0.	4.77E-04	2.70E-07	4.10E-16	0.	0.	9.80E-03
68	4.00	5.71E-03	0.	4.72E-10	0.	3.79E-04	1.39E-04	0.	4.80E-04	2.71E-07	4.42E-16	0.	0.	6.70E-03
69	3.90	3.32E-03	0.	3.77E-15	1.26E-17	2.19E-04	1.07E-04	0.	4.83E-04	2.70E-07	4.77E-16	0.	0.	4.12E-03
70	3.80	3.14E-03	0.	1.23E-10	1.45E-15	2.16E-04	0.	0.	4.86E-04	2.69E-07	5.15E-16	0.	0.	3.84E-03
71	3.70	1.70E-03	0.	7.05E-10	3.28E-16	9.69E-05	0.	0.	4.89E-04	2.65E-07	5.58E-16	0.	0.	2.28E-03
72	3.60	1.17E-03	0.	5.17E-11	2.75E-16	1.11E-04	0.	0.	4.91E-04	2.48E-07	6.06E-16	0.	0.	1.77E-03
73	3.50	8.15E-04	0.	2.85E-10	7.65E-15	4.38E-05	0.	0.	4.94E-04	2.27E-07	6.60E-16	0.	0.	1.35E-03
74	3.40	4.90E-04	0.	2.46E-11	1.11E-17	4.95E-05	0.	0.	4.97E-04	1.31E-07	7.20E-16	0.	0.	1.04E-03
75	3.30	3.13E-04	0.	7.23E-11	5.59E-16	2.09E-05	0.	0.	4.97E-04	1.31E-07	7.87E-16	0.	0.	8.32E-04
76	3.20	1.89E-04	0.	9.44E-12	1.24E-14	1.99E-05	0.	0.	4.96E-04	1.31E-07	8.33E-16	0.	0.	7.01E-04
77	3.10	1.23E-04	0.	1.50E-11	2.21E-17	1.09E-05	0.	0.	4.94E-04	1.32E-07	9.49E-16	0.	0.	6.28E-04
78	3.00	7.56E-05	0.	2.63E-12	7.19E-16	7.58E-06	0.	0.	4.89E-04	1.32E-07	1.05E-15	0.	0.	5.73E-04
79	2.90	4.19E-05	0.	2.35E-12	1.73E-15	2.94E-06	0.	0.	4.85E-04	1.32E-07	1.16E-15	0.	0.	5.38E-04
80	2.80	3.24E-05	0.	4.94E-13	2.62E-17	9.90E-07	0.	0.	4.74E-04	1.32E-07	1.29E-15	0.	0.	5.08E-04
81	2.70	1.14E-05	0.	3.16E-13	3.30E-16	2.06E-07	0.	0.	4.63E-04	1.32E-07	1.44E-15	0.	0.	4.75E-04
82	2.60	2.40E-06	0.	9.56E-14	7.44E-17	3.80E-08	0.	0.	4.50E-04	1.32E-07	1.61E-15	0.	0.	4.52E-04
83	2.50	1.17E-07	0.	2.63E-14	9.19E-18	9.17E-09	0.	0.	4.32E-04	1.32E-07	1.81E-15	0.	0.	4.32E-04
84	2.40	0.	7.79E-12	0.	2.38E-17	3.52E-10	0.	0.	4.14E-04	1.32E-07	2.05E-15	0.	0.	4.15E-04
85	2.30	0.	2.43E-10	0.	0.	0.	0.	0.	3.87E-04	1.31E-07	2.32E-15	0.	0.	3.87E-04
86	2.20	0.	2.30E-10	0.	0.	0.	0.	0.	3.57E-04	1.31E-07	2.66E-15	0.	0.	3.58E-04
87	2.10	0.	1.48E-09	0.	0.	0.	0.	0.	3.23E-04	1.30E-07	3.05E-15	0.	0.	3.23E-04
88	2.00	0.	1.10E-09	0.	0.	0.	0.	0.	2.72E-04	1.26E-07	3.54E-15	0.	0.	2.72E-04
89	1.90	0.	1.01E-08	0.	0.	0.	0.	0.	2.29E-04	1.21E-07	4.12E-15	0.	0.	2.29E-04
90	1.80	0.	1.87E-08	0.	0.	0.	0.	0.	1.67E-04	1.16E-07	4.85E-15	0.	0.	1.67E-04
91	1.70	0.	1.14E-08	0.	0.	0.	0.	0.	1.16E-04	1.09E-07	5.76E-15	0.	0.	1.16E-04
92	1.60	0.	1.20E-08	0.	0.	0.	0.	0.	7.81E-05	9.25E-08	6.91E-15	0.	0.	7.82E-05
93	1.50	0.	9.68E-09	0.	0.	0.	0.	0.	4.50E-05	4.20E-08	8.39E-15	0.	0.	4.51E-05
94	1.40	0.	2.42E-08	0.	0.	0.	0.	0.	2.40E-05	0.	1.03E-14	0.	0.	2.40E-05
95	1.30	0.	7.33E-09	0.	0.	0.	0.	0.	9.55E-06	0.	1.29E-14	0.	0.	9.56E-06
96	1.20	0.	1.97E-08	0.	0.	0.	0.	0.	0.	0.	1.64E-14	0.	0.	1.97E-08
97	1.10	0.	5.58E-09	0.	0.	0.	0.	8.60E-07	0.	0.	2.13E-14	0.	0.	8.65E-07
98	1.00	0.	8.79E-09	0.	0.	0.	0.	8.38E-07	0.	0.	2.84E-14	0.	0.	8.45E-07
99	0.90	0.	3.81E-09	0.	0.	0.	0.	6.48E-06	0.	0.	3.90E-14	0.	0.	6.49E-06
100	0.80	0.	1.67E-09	0.	0.	0.	0.	9.99E-06	0.	0.	5.56E-14	0.	0.	1.00E-05
101	0.70	0.	4.43E-10	0.	0.	0.	0.	3.20E-05	0.	0.	8.32E-14	0.	0.	3.20E-05
102	0.60	0.	1.84E-13	0.	0.	0.	0.	3.38E-05	0.	0.	1.32E-13	0.	0.	3.38E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3800. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.67E-03	0.	0.	0.	2.26E-08	0.	0.	0.	2.67E-03
2	10.60	0.	0.	1.78E-03	0.	0.	0.	2.27E-08	0.	0.	0.	1.78E-03
3	10.50	0.	0.	1.33E-03	0.	0.	0.	2.27E-08	0.	0.	0.	1.33E-03
4	10.40	0.	0.	9.59E-04	0.	0.	0.	2.27E-08	0.	0.	0.	9.59E-04
5	10.30	0.	0.	5.72E-04	0.	0.	0.	2.28E-08	0.	0.	0.	5.72E-04
6	10.20	0.	0.	4.65E-04	0.	0.	0.	2.28E-08	0.	0.	0.	4.65E-04
7	10.10	0.	0.	3.49E-04	0.	0.	0.	2.28E-08	0.	0.	0.	3.49E-04
8	10.00	0.	0.	1.82E-04	0.	0.	0.	2.28E-08	0.	0.	0.	1.82E-04
9	9.90	0.	0.	1.72E-04	0.	0.	0.	2.29E-08	0.	0.	0.	1.72E-04
10	9.80	0.	0.	1.14E-04	0.	0.	0.	2.29E-08	0.	0.	0.	1.14E-04
11	9.70	0.	0.	6.88E-05	0.	0.	0.	2.30E-08	0.	0.	0.	6.88E-05
12	9.60	0.	0.	6.48E-05	0.	0.	0.	2.30E-08	0.	0.	0.	6.48E-05
13	9.50	0.	2.50E-01	3.17E-05	0.	0.	0.	2.31E-08	0.	0.	0.	2.50E-01
14	9.40	0.	9.25E-01	2.28E-05	0.	0.	0.	2.31E-08	0.	0.	0.	9.29E-01
15	9.30	0.	1.60E 00	2.09E-05	0.	0.	0.	2.32E-08	0.	0.	0.	1.60E 00
16	9.20	0.	2.20E 00	8.22E-06	0.	0.	0.	2.33E-08	0.	0.	0.	2.20E 00
17	9.10	0.	2.92E 00	9.99E-06	0.	0.	0.	2.34E-08	0.	0.	0.	2.92E 00
18	9.00	0.	3.56E 00	5.04E-06	0.	0.	0.	2.35E-08	0.	0.	0.	3.56E 00
19	8.90	0.	4.20E 00	3.51E-06	0.	0.	0.	2.36E-08	0.	0.	0.	4.20E 00
20	8.80	0.	4.36E 00	2.01E-06	0.	0.	0.	2.36E-08	0.	0.	0.	4.36E 00
21	8.70	0.	4.16E 00	1.34E-06	0.	0.	0.	2.37E-08	0.	0.	0.	4.16E 00
22	8.60	0.	3.95E 00	1.41E-06	0.	0.	0.	2.38E-08	0.	0.	0.	3.95E 00
23	8.50	0.	3.75E 00	6.59E-07	0.	0.	0.	2.39E-08	0.	0.	0.	3.75E 00
24	8.40	0.	3.54E 00	6.11E-07	0.	0.	0.	2.40E-08	0.	0.	0.	3.54E 00
25	8.30	0.	3.35E 00	2.98E-07	0.	0.	0.	2.41E-08	0.	0.	0.	3.35E 00
26	8.20	0.	3.14E 00	2.96E-07	0.	0.	0.	2.43E-08	0.	0.	0.	3.14E 00
27	8.10	0.	2.93E 00	1.37E-07	0.	0.	0.	2.44E-08	5.10E-18	0.	0.	2.93E 00
28	8.00	0.	2.71E 00	1.11E-07	0.	0.	0.	2.45E-08	5.29E-18	0.	0.	2.71E 00
29	7.90	0.	2.50E 00	6.13E-08	0.	0.	0.	2.47E-08	5.50E-18	0.	0.	2.50E 00
30	7.80	0.	2.30E 00	5.88E-08	0.	0.	0.	2.48E-08	5.71E-18	0.	0.	2.30E 00
31	7.70	0.	2.09E 00	2.95E-08	0.	0.	0.	2.49E-08	5.94E-18	0.	0.	2.09E 00
32	7.60	0.	1.88E 00	2.85E-08	0.	2.10E-07	0.	2.50E-08	6.18E-18	0.	0.	1.88E 00
33	7.50	0.	1.67E 00	1.38E-08	0.	1.20E-05	0.	2.52E-08	6.43E-18	0.	0.	1.67E 00
34	7.40	0.	1.49E 00	8.39E-09	0.	3.84E-05	0.	2.53E-08	6.69E-18	0.	0.	1.49E 00
35	7.30	0.	1.33E 00	5.51E-09	0.	8.45E-05	0.	2.54E-08	6.97E-18	0.	0.	1.33E 00
36	7.20	0.	1.19E 00	3.46E-09	0.	9.26E-04	0.	2.56E-08	7.27E-18	0.	0.	1.19E 00
37	7.10	0.	9.76E-01	2.34E-09	0.	2.22E-04	0.	2.58E-08	7.58E-18	0.	0.	9.76E-01
38	7.00	8.08E-03	0.	1.47E-09	0.	4.01E-03	0.	2.60E-08	7.91E-18	0.	0.	1.21E-02
39	6.90	1.29E-02	0.	9.50E-10	0.	3.85E-03	0.	2.62E-08	8.26E-18	0.	0.	1.67E-02
40	6.80	8.95E-03	0.	6.20E-10	0.	3.09E-03	0.	2.64E-08	8.63E-18	0.	0.	1.20E-02
41	6.70	5.14E-03	0.	3.79E-10	0.	1.61E-02	0.	2.66E-08	9.02E-18	0.	0.	2.13E-02
42	6.60	2.50E-03	0.	2.31E-10	0.	7.12E-03	0.	2.68E-08	9.44E-18	0.	0.	9.78E-03
43	6.50	1.16E-03	0.	1.16E-10	0.	6.83E-03	0.	2.70E-08	9.88E-18	0.	0.	7.99E-03
44	6.40	1.91E-03	0.	4.04E-11	5.47E-04	3.14E-02	0.	2.73E-08	1.04E-17	0.	0.	3.30E-02
45	6.30	3.46E-03	0.	1.09E-11	1.65E-03	1.11E-02	0.	2.75E-08	1.09E-17	0.	0.	1.43E-02
46	6.20	7.85E-03	0.	2.67E-12	1.70E-03	8.14E-03	0.	2.77E-08	1.14E-17	0.	0.	1.77E-02
47	6.10	2.27E-02	0.	6.19E-13	3.62E-03	4.95E-02	0.	2.79E-08	1.20E-17	0.	0.	7.58E-02
48	6.00	4.31E-02	0.	9.89E-14	1.78E-03	5.95E-03	0.	2.81E-08	1.26E-17	0.	0.	5.08E-02
49	5.90	5.09E-02	0.	6.38E-15	2.36E-03	6.91E-03	0.	2.81E-08	1.32E-17	0.	0.	6.01E-02
50	5.80	5.52E-02	0.	1.36E-16	2.67E-03	1.07E-02	0.	2.77E-08	1.39E-17	0.	0.	6.85E-02
51	5.70	4.29E-02	0.	0.	2.07E-03	2.61E-03	0.	2.60E-08	1.47E-17	0.	0.	4.76E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3800. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	H P.E.	O P.E.	TOTAL AIR
52	5.60	4.49E-02	0.	0.	0.	8.36E-04	1.30E-02	0.	0.	2.42E-08	1.55E-17	0.	0.	5.87E-02
53	5.50	3.82E-02	0.	0.	0.	1.39E-03	2.74E-02	0.	0.	2.43E-08	1.63E-17	0.	0.	6.78E-02
54	5.40	3.09E-02	0.	0.	0.	9.17E-04	3.25E-03	0.	0.	2.44E-08	1.73E-17	0.	0.	3.51E-02
55	5.30	2.41E-02	0.	0.	0.	8.84E-04	1.53E-02	0.	0.	2.46E-08	1.83E-17	0.	0.	4.03E-02
56	5.20	1.09E-02	0.	0.	0.	7.59E-04	4.70E-03	0.	0.	2.47E-08	1.93E-17	0.	0.	1.63E-02
57	5.10	9.02E-03	0.	0.	0.	5.72E-04	4.64E-03	0.	1.33E-09	2.49E-08	2.03E-17	0.	0.	1.42E-02
58	5.00	5.71E-03	0.	0.	0.	3.72E-04	5.09E-03	0.	1.33E-05	2.52E-08	2.18E-17	0.	0.	1.12E-02
59	4.90	4.76E-03	0.	0.	0.	3.39E-04	1.77E-03	0.	1.33E-05	2.54E-08	2.31E-17	0.	0.	6.89E-03
60	4.80	4.78E-03	0.	0.	0.	3.52E-04	2.38E-03	0.	1.34E-05	2.56E-08	2.46E-17	0.	0.	7.45E-03
61	4.70	4.04E-03	0.	0.	0.	2.66E-04	6.84E-04	0.	1.35E-05	2.58E-08	2.62E-17	0.	0.	5.01E-03
62	4.60	3.77E-03	0.	0.	0.	2.27E-04	1.05E-03	0.	1.35E-05	2.60E-08	2.79E-17	0.	0.	5.06E-03
63	4.50	2.85E-03	0.	4.38E-13	0.	1.49E-04	2.72E-04	0.	1.36E-05	2.62E-08	2.98E-17	0.	0.	3.29E-03
64	4.40	2.15E-03	0.	4.76E-12	0.	1.20E-04	3.78E-04	0.	1.37E-05	2.64E-08	3.19E-17	0.	0.	2.67E-03
65	4.30	1.48E-03	0.	2.32E-12	0.	8.45E-05	9.37E-05	0.	1.38E-05	2.66E-08	3.42E-17	0.	0.	1.67E-03
66	4.20	1.06E-03	0.	3.97E-11	0.	6.97E-05	1.13E-04	0.	1.38E-05	2.68E-08	3.67E-17	0.	0.	1.25E-03
67	4.10	7.87E-04	0.	1.76E-12	0.	4.76E-05	3.05E-05	0.	1.39E-05	2.69E-08	3.94E-17	0.	0.	8.79E-04
68	4.00	5.27E-04	0.	4.73E-11	0.	3.64E-05	1.34E-05	0.	1.40E-05	2.70E-08	4.25E-17	0.	0.	5.91E-04
69	3.90	3.06E-04	0.	3.77E-11	3.83E-18	2.10E-05	1.03E-05	0.	1.41E-05	2.69E-08	4.58E-17	0.	0.	3.52E-04
70	3.80	2.90E-04	0.	1.23E-11	4.43E-16	2.08E-05	0.	0.	1.42E-05	2.68E-08	4.95E-17	0.	0.	3.25E-04
71	3.70	1.97E-04	0.	7.06E-11	0.00E-17	9.32E-06	0.	0.	1.43E-05	2.64E-08	5.37E-17	0.	0.	1.81E-04
72	3.60	1.08E-04	0.	5.17E-12	6.39E-17	1.07E-05	0.	0.	1.44E-05	2.47E-08	5.83E-17	0.	0.	1.33E-04
73	3.50	7.53E-05	0.	2.89E-11	2.40E-15	4.21E-06	0.	0.	1.44E-05	2.26E-08	6.34E-17	0.	0.	9.48E-05
74	3.40	4.53E-05	0.	2.47E-12	3.40E-18	4.76E-06	0.	0.	1.45E-05	1.31E-08	6.92E-17	0.	0.	6.46E-05
75	3.30	2.98E-05	0.	7.23E-12	2.01E-16	2.01E-06	0.	0.	1.45E-05	1.31E-08	7.57E-17	0.	0.	4.59E-05
76	3.20	1.71E-05	0.	9.45E-13	3.79E-15	1.91E-06	0.	0.	1.45E-05	1.31E-08	8.30E-17	0.	0.	3.35E-05
77	3.10	1.14E-05	0.	1.50E-12	6.79E-18	1.93E-06	0.	0.	1.44E-05	1.31E-08	9.13E-17	0.	0.	2.69E-05
78	3.00	6.99E-06	0.	2.63E-13	2.19E-16	7.29E-07	0.	0.	1.43E-05	1.32E-08	1.01E-16	0.	0.	2.20E-05
79	2.90	3.87E-06	0.	2.39E-13	5.27E-16	2.83E-07	0.	0.	1.42E-05	1.32E-08	1.11E-16	0.	0.	1.83E-05
80	2.80	2.99E-06	0.	4.95E-14	8.00E-18	9.52E-08	0.	0.	1.39E-05	1.32E-08	1.24E-16	0.	0.	1.70E-05
81	2.70	1.05E-06	0.	3.17E-14	1.01E-16	1.98E-08	0.	0.	1.35E-05	1.32E-08	1.38E-16	0.	0.	1.46E-05
82	2.60	2.22E-07	0.	9.58E-15	2.27E-17	3.66E-09	0.	0.	1.31E-05	1.32E-08	1.55E-16	0.	0.	1.34E-05
83	2.50	1.08E-08	0.	2.63E-15	1.58E-18	4.97E-10	0.	0.	1.26E-05	1.32E-08	1.74E-16	0.	0.	1.28E-05
84	2.40	0.	7.80E-13	0.	7.26E-18	3.38E-11	0.	0.	1.21E-05	1.32E-08	1.97E-16	0.	0.	1.21E-05
85	2.30	0.	2.43E-11	0.	0.	0.	0.	0.	1.13E-05	1.31E-08	2.23E-16	0.	0.	1.13E-05
86	2.20	0.	2.30E-11	0.	0.	0.	0.	0.	1.04E-05	1.30E-08	2.55E-16	0.	0.	1.05E-05
87	2.10	0.	1.49E-10	0.	0.	0.	0.	0.	9.43E-06	1.30E-08	2.94E-16	0.	0.	9.45E-06
88	2.00	0.	1.16E-10	0.	0.	0.	0.	0.	7.95E-06	1.26E-08	3.40E-16	0.	0.	7.97E-06
89	1.90	0.	1.02E-09	0.	0.	0.	0.	0.	6.70E-06	1.21E-08	3.97E-16	0.	0.	6.72E-06
90	1.80	0.	1.87E-09	0.	0.	0.	0.	0.	4.88E-06	1.16E-08	4.66E-16	0.	0.	4.89E-06
91	1.70	0.	1.14E-09	0.	0.	0.	0.	0.	3.38E-06	1.09E-08	5.54E-16	0.	0.	3.40E-06
92	1.60	0.	1.29E-09	0.	0.	0.	0.	0.	2.28E-06	9.22E-09	6.64E-16	0.	0.	2.29E-06
93	1.50	0.	9.70E-10	0.	0.	0.	0.	0.	1.31E-06	4.19E-09	8.06E-16	0.	0.	1.32E-06
94	1.40	0.	2.42E-09	0.	0.	0.	0.	0.	7.01E-07	0.	9.92E-16	0.	0.	7.04E-07
95	1.30	0.	7.34E-10	0.	0.	0.	0.	0.	2.79E-07	0.	1.24E-15	0.	0.	2.80E-07
96	1.20	0.	1.97E-09	0.	0.	0.	0.	0.	0.	0.	1.58E-15	0.	0.	1.97E-09
97	1.10	0.	5.51E-10	0.	0.	0.	0.	6.27E-08	0.	0.	2.09E-15	0.	0.	8.32E-08
98	1.00	0.	8.81E-10	0.	0.	0.	0.	8.04E-08	0.	0.	2.73E-15	0.	0.	8.13E-08
99	0.90	0.	3.81E-10	0.	0.	0.	0.	6.23E-07	0.	0.	3.79E-15	0.	0.	6.24E-07
100	0.80	0.	1.67E-10	0.	0.	0.	0.	9.61E-07	0.	0.	5.34E-15	0.	0.	9.61E-07
101	0.70	0.	4.44E-11	0.	0.	0.	0.	3.08E-06	0.	0.	8.80E-15	0.	0.	3.08E-06
102	0.60	0.	1.84E-14	0.	0.	0.	0.	3.29E-06	0.	0.	1.27E-14	0.	0.	3.29E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	F 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0	2.68E-04	0.	0.	0.	1.90E-09	0.	0.	0.	2.68E-04
2	10.60	0.	0.	1.70E-04	0.	0.	0.	1.91E-09	0.	0.	0.	1.70E-04
3	10.50	0.	0.	1.33E-04	0.	0.	0.	1.91E-09	0.	0.	0.	1.33E-04
4	10.40	0.	0.	9.62E-05	0.	0.	0.	1.91E-09	0.	0.	0.	9.62E-05
5	10.30	0.	0.	5.74E-05	0.	0.	0.	1.91E-09	0.	0.	0.	5.74E-05
6	10.20	0.	0.	4.67E-05	0.	0.	0.	1.92E-09	0.	0.	0.	4.67E-05
7	10.10	0.	0.	3.98E-05	0.	0.	0.	1.92E-09	0.	0.	0.	3.98E-05
8	10.00	0.	0.	1.83E-05	0.	0.	0.	1.92E-09	0.	0.	0.	1.83E-05
9	9.90	0.	0.	1.72E-05	0.	0.	0.	1.93E-09	0.	0.	0.	1.72E-05
10	9.80	0.	0.	1.14E-05	0.	0.	0.	1.93E-09	0.	0.	0.	1.14E-05
11	9.70	0.	0.	6.02E-06	0.	0.	0.	1.93E-09	0.	0.	0.	6.02E-06
12	9.60	0.	0.	4.59E-06	0.	0.	0.	1.94E-09	0.	0.	0.	4.59E-06
13	9.50	0.	1.95E-02	3.18E-06	0.	0.	0.	1.94E-09	0.	0.	0.	1.95E-02
14	9.40	0.	7.22E-02	2.20E-06	0.	0.	0.	1.95E-09	0.	0.	0.	7.22E-02
15	9.30	0.	1.25E-01	2.05E-06	0.	0.	0.	1.95E-09	0.	0.	0.	1.25E-01
16	9.20	0.	1.70E-01	8.24E-07	0.	0.	0.	1.96E-09	0.	0.	0.	1.70E-01
17	9.10	0.	2.20E-01	9.99E-07	0.	0.	0.	1.97E-09	0.	0.	0.	2.20E-01
18	9.00	0.	2.70E-01	5.06E-07	0.	0.	0.	1.98E-09	0.	0.	0.	2.70E-01
19	8.90	0.	3.20E-01	3.93E-07	0.	0.	0.	1.98E-09	0.	0.	0.	3.20E-01
20	8.80	0.	3.41E-01	2.02E-07	0.	0.	0.	1.99E-09	0.	0.	0.	3.41E-01
21	8.70	0.	3.25E-01	1.39E-07	0.	0.	0.	2.00E-09	0.	0.	0.	3.25E-01
22	8.60	0.	3.09E-01	1.42E-07	0.	0.	0.	2.00E-09	0.	0.	0.	3.09E-01
23	8.50	0.	2.92E-01	6.58E-08	0.	0.	0.	2.01E-09	0.	0.	0.	2.92E-01
24	8.40	0.	2.77E-01	6.13E-08	0.	0.	0.	2.02E-09	0.	0.	0.	2.77E-01
25	8.30	0.	2.62E-01	2.90E-08	0.	0.	0.	2.03E-09	0.	0.	0.	2.62E-01
26	8.20	0.	2.45E-01	2.57E-08	0.	0.	0.	2.04E-09	0.	0.	0.	2.45E-01
27	8.10	0.	2.20E-01	1.30E-08	0.	0.	0.	2.05E-09	4.91E-19	0.	0.	2.20E-01
28	8.00	0.	2.11E-01	1.11E-08	0.	0.	0.	2.06E-09	4.68E-19	0.	0.	2.11E-01
29	7.90	0.	1.95E-01	4.15E-09	0.	0.	0.	2.07E-09	4.86E-19	0.	0.	1.95E-01
30	7.80	0.	1.79E-01	5.00E-09	0.	0.	0.	2.08E-09	5.05E-19	0.	0.	1.79E-01
31	7.70	0.	1.63E-01	2.96E-09	0.	0.	0.	2.10E-09	5.29E-19	0.	0.	1.63E-01
32	7.60	0.	1.47E-01	2.06E-09	0.	1.06E-08	0.	2.11E-09	5.46E-19	0.	0.	1.47E-01
33	7.50	0.	1.31E-01	1.30E-09	0.	1.06E-06	0.	2.12E-09	5.69E-19	0.	0.	1.31E-01
34	7.40	0.	1.17E-01	8.42E-10	0.	2.69E-06	0.	2.13E-09	5.92E-19	0.	0.	1.17E-01
35	7.30	0.	1.04E-01	5.53E-10	0.	7.47E-06	0.	2.14E-09	6.17E-19	0.	0.	1.04E-01
36	7.20	0.	8.99E-02	3.47E-10	0.	8.19E-05	0.	2.15E-09	6.43E-19	0.	0.	9.08E-02
37	7.10	0.	7.62E-02	2.35E-10	0.	1.97E-05	0.	2.17E-09	6.71E-19	0.	0.	7.62E-02
38	7.00	6.38E-04	0.	1.48E-10	0.	3.55E-04	0.	2.19E-09	7.00E-19	0.	0.	9.95E-04
39	6.90	1.08E-03	0.	9.53E-11	0.	3.40E-04	0.	2.20E-09	7.31E-19	0.	0.	1.34E-03
40	6.80	6.98E-04	0.	6.22E-11	0.	2.73E-04	0.	2.22E-09	7.64E-19	0.	0.	9.71E-04
41	6.70	4.81E-04	0.	3.76E-11	0.	1.43E-03	0.	2.24E-09	7.98E-19	0.	0.	1.83E-03
42	6.60	2.01E-04	0.	2.31E-11	0.	6.29E-04	0.	2.26E-09	8.35E-19	0.	0.	8.31E-04
43	6.50	9.09E-05	0.	1.16E-11	0.	6.64E-04	0.	2.28E-09	8.74E-19	0.	0.	6.95E-04
44	6.40	1.49E-04	0.	4.86E-12	4.83E-05	2.78E-03	0.	2.29E-09	9.16E-19	0.	0.	2.97E-03
45	6.30	2.78E-04	0.	1.89E-12	1.46E-04	9.83E-04	0.	2.31E-09	9.61E-19	0.	0.	1.39E-03
46	6.20	6.12E-04	0.	2.68E-13	1.50E-04	7.20E-04	0.	2.33E-09	1.01E-18	0.	0.	1.48E-03
47	6.10	1.77E-03	0.	6.21E-14	3.20E-04	4.38E-03	0.	2.35E-09	1.06E-18	0.	0.	6.47E-03
48	6.00	3.36E-03	0.	9.92E-15	1.57E-04	5.26E-04	0.	2.36E-09	1.11E-18	0.	0.	4.04E-03
49	5.90	3.97E-03	0.	6.48E-16	2.09E-04	6.11E-04	0.	2.38E-09	1.17E-18	0.	0.	4.79E-03
50	5.80	4.30E-03	0.	1.36E-17	2.36E-04	9.42E-04	0.	2.33E-09	1.23E-18	0.	0.	5.48E-03
51	5.70	3.34E-03	0.	0.	1.83E-04	2.30E-04	0.	2.19E-09	1.30E-18	0.	0.	3.76E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.50E-03	0.	0.	0.	7.39E-05	1.15E-03	0.	0.	2.03E-09	1.37E-18	0.	0.	4.72E-03
53	5.50	2.98E-03	0.	0.	0.	1.23E-04	2.42E-03	0.	0.	2.04E-09	1.44E-18	0.	0.	5.52E-03
54	5.40	2.41E-03	0.	0.	0.	8.11E-05	2.88E-04	0.	0.	2.05E-09	1.93E-18	0.	0.	2.78E-03
55	5.30	1.68E-03	0.	0.	0.	7.82E-05	1.36E-03	0.	0.	2.07E-09	1.62E-18	0.	0.	3.31E-03
56	5.20	8.48E-04	0.	0.	0.	6.71E-05	4.16E-04	0.	0.	2.08E-09	1.71E-18	0.	0.	1.33E-03
57	5.10	7.03E-04	0.	0.	0.	5.06E-05	4.11E-04	0.	3.28E-07	2.10E-09	1.81E-18	0.	0.	1.10E-03
58	5.00	4.45E-04	0.	0.	0.	3.29E-05	4.50E-04	0.	3.29E-07	2.12E-09	1.92E-18	0.	0.	9.20E-04
59	4.90	3.71E-04	0.	0.	0.	3.00E-05	1.97E-04	0.	3.30E-07	2.13E-09	2.04E-18	0.	0.	5.58E-04
60	4.80	3.66E-04	0.	0.	0.	3.11E-05	2.11E-04	0.	3.31E-07	2.15E-09	2.17E-18	0.	0.	6.08E-04
61	4.70	3.15E-04	0.	0.	0.	2.35E-05	6.05E-05	0.	3.33E-07	2.17E-09	2.32E-18	0.	0.	3.99E-04
62	4.60	2.94E-04	0.	0.	0.	2.01E-05	9.27E-05	0.	3.34E-07	2.19E-09	2.47E-18	0.	0.	4.07E-04
63	4.50	2.22E-04	0.	4.32E-14	0.	1.32E-05	2.41E-05	0.	3.36E-07	2.20E-09	2.64E-18	0.	0.	2.60E-04
64	4.40	1.68E-04	0.	4.77E-13	0.	1.06E-05	3.34E-05	0.	3.38E-07	2.22E-09	2.82E-18	0.	0.	2.12E-04
65	4.30	1.15E-04	0.	2.32E-13	0.	7.40E-06	8.28E-06	0.	3.40E-07	2.24E-09	3.03E-18	0.	0.	1.31E-04
66	4.20	8.24E-05	0.	3.98E-12	0.	6.17E-06	9.97E-06	0.	3.42E-07	2.26E-09	3.25E-18	0.	0.	9.89E-05
67	4.10	6.13E-05	0.	1.77E-13	0.	4.21E-06	2.69E-06	0.	3.44E-07	2.27E-09	3.49E-18	0.	0.	6.86E-05
68	4.00	4.11E-05	0.	4.74E-12	0.	3.92E-06	1.18E-06	0.	3.46E-07	2.28E-09	3.76E-18	0.	0.	4.50E-05
69	3.90	2.39E-05	0.	3.79E-12	1.28E-18	1.86E-06	9.12E-07	0.	3.48E-07	2.27E-09	4.05E-18	0.	0.	2.70E-05
70	3.80	2.26E-05	0.	1.23E-12	1.47E-16	1.54E-06	0.	0.	3.50E-07	2.26E-09	4.38E-18	0.	0.	2.48E-05
71	3.70	1.22E-05	0.	7.08E-12	3.33E-17	8.24E-07	0.	0.	3.53E-07	2.22E-09	4.75E-18	0.	0.	1.34E-05
72	3.60	8.44E-06	0.	5.19E-13	2.79E-17	9.42E-07	0.	0.	3.59E-07	2.08E-09	5.16E-18	0.	0.	9.74E-06
73	3.50	5.87E-06	0.	2.86E-12	7.98E-16	3.73E-07	0.	0.	3.57E-07	1.90E-09	5.61E-18	0.	0.	6.68E-06
74	3.40	3.53E-06	0.	2.47E-13	1.13E-18	4.21E-07	0.	0.	3.59E-07	1.10E-09	6.12E-18	0.	0.	4.31E-06
75	3.30	2.26E-06	0.	7.25E-13	6.69E-17	1.77E-07	0.	0.	3.59E-07	1.10E-09	6.70E-18	0.	0.	2.79E-06
76	3.20	1.33E-06	0.	9.48E-14	1.26E-15	1.69E-07	0.	0.	3.58E-07	1.10E-09	7.34E-18	0.	0.	1.86E-06
77	3.10	8.87E-07	0.	1.50E-13	2.25E-18	9.31E-08	0.	0.	3.56E-07	1.10E-09	8.07E-18	0.	0.	1.34E-06
78	3.00	5.45E-07	0.	2.64E-14	7.30E-17	6.45E-08	0.	0.	3.53E-07	1.11E-09	8.91E-18	0.	0.	9.63E-07
79	2.90	3.02E-07	0.	2.36E-14	1.75E-16	2.50E-08	0.	0.	3.50E-07	1.11E-09	9.86E-18	0.	0.	6.78E-07
80	2.80	2.33E-07	0.	4.97E-15	2.66E-18	8.42E-09	0.	0.	3.42E-07	1.11E-09	1.09E-17	0.	0.	5.85E-07
81	2.70	8.20E-08	0.	3.18E-15	3.35E-17	1.79E-09	0.	0.	3.34E-07	1.11E-09	1.22E-17	0.	0.	4.19E-07
82	2.60	1.73E-08	0.	9.40E-16	7.55E-18	3.23E-10	0.	0.	3.24E-07	1.11E-09	1.37E-17	0.	0.	3.43E-07
83	2.50	8.48E-10	0.	2.64E-16	5.20E-19	4.48E-11	0.	0.	3.11E-07	1.11E-09	1.54E-17	0.	0.	3.13E-07
84	2.40	0.	7.82E-14	0.	2.42E-18	2.99E-12	0.	0.	2.99E-07	1.11E-09	1.74E-17	0.	0.	3.00E-07
85	2.30	0.	2.44E-12	0.	0.	0.	0.	0.	2.79E-07	1.10E-09	1.96E-17	0.	0.	2.80E-07
86	2.20	0.	2.31E-12	0.	0.	0.	0.	0.	2.58E-07	1.10E-09	2.26E-17	0.	0.	2.59E-07
87	2.10	0.	1.49E-11	0.	0.	0.	0.	0.	2.33E-07	1.09E-09	2.60E-17	0.	0.	2.34E-07
88	2.00	0.	1.11E-11	0.	0.	0.	0.	0.	1.96E-07	1.06E-09	3.01E-17	0.	0.	1.97E-07
89	1.90	0.	1.02E-10	0.	0.	0.	0.	0.	1.65E-07	1.02E-09	3.51E-17	0.	0.	1.67E-07
90	1.80	0.	1.88E-10	0.	0.	0.	0.	0.	1.20E-07	9.74E-10	4.13E-17	0.	0.	1.22E-07
91	1.70	0.	1.14E-10	0.	0.	0.	0.	0.	8.35E-08	9.17E-10	4.90E-17	0.	0.	8.45E-08
92	1.60	0.	1.29E-10	0.	0.	0.	0.	0.	5.64E-08	7.76E-10	5.88E-17	0.	0.	5.73E-08
93	1.50	0.	9.73E-11	0.	0.	0.	0.	0.	3.29E-08	5.53E-10	7.13E-17	0.	0.	3.29E-08
94	1.40	0.	2.43E-10	0.	0.	0.	0.	0.	1.73E-08	0.	8.70E-17	0.	0.	1.76E-08
95	1.30	0.	7.36E-11	0.	0.	0.	0.	0.	8.09E-09	0.	1.10E-16	0.	0.	8.97E-09
96	1.20	0.	1.97E-10	0.	0.	0.	0.	0.	0.	0.	1.39E-16	0.	0.	1.97E-10
97	1.10	0.	5.53E-11	0.	0.	0.	0.	7.31E-09	0.	0.	1.81E-16	0.	0.	7.37E-09
98	1.00	0.	8.83E-11	0.	0.	0.	0.	7.11E-09	0.	0.	2.41E-16	0.	0.	7.20E-09
99	0.90	0.	3.82E-11	0.	0.	0.	0.	5.91E-08	0.	0.	3.31E-16	0.	0.	5.52E-08
100	0.80	0.	1.68E-11	0.	0.	0.	0.	8.50E-08	0.	0.	4.73E-16	0.	0.	8.50E-08
101	0.70	0.	4.45E-12	0.	0.	0.	0.	2.73E-07	0.	0.	7.08E-16	0.	0.	2.73E-07
102	0.60	0.	1.85E-15	0.	0.	0.	0.	2.87E-07	0.	0.	1.13E-15	0.	0.	2.87E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.70E-05	0.	0.	0.	1.11E-10	0.	0.	0.	2.70E-05
2	10.60	0.	0.	1.72E-05	0.	0.	0.	1.11E-10	0.	0.	0.	1.72E-05
3	10.50	0.	0.	1.34E-05	0.	0.	0.	1.11E-10	0.	0.	0.	1.34E-05
4	10.40	0.	0.	9.69E-06	0.	0.	0.	1.11E-10	0.	0.	0.	9.69E-06
5	10.30	0.	0.	5.78E-06	0.	0.	0.	1.11E-10	0.	0.	0.	5.78E-06
6	10.20	0.	0.	4.78E-06	0.	0.	0.	1.11E-10	0.	0.	0.	4.78E-06
7	10.10	0.	0.	3.52E-06	0.	0.	0.	1.12E-10	0.	0.	0.	3.52E-06
8	10.00	0.	0.	1.84E-06	0.	0.	0.	1.12E-10	0.	0.	0.	1.84E-06
9	9.90	0.	0.	1.73E-06	0.	0.	0.	1.12E-10	0.	0.	0.	1.73E-06
10	9.80	0.	0.	1.15E-06	0.	0.	0.	1.12E-10	0.	0.	0.	1.15E-06
11	9.70	0.	0.	6.87E-07	0.	0.	0.	1.12E-10	0.	0.	0.	6.87E-07
12	9.60	0.	0.	6.55E-07	0.	0.	0.	1.13E-10	0.	0.	0.	6.55E-07
13	9.50	0.	9.41E-04	3.21E-07	0.	0.	0.	1.13E-10	0.	0.	0.	9.41E-04
14	9.40	0.	3.48E-03	2.38E-07	0.	0.	0.	1.13E-10	0.	0.	0.	3.48E-03
15	9.30	0.	6.03E-03	2.07E-07	0.	0.	0.	1.14E-10	0.	0.	0.	6.03E-03
16	9.20	0.	8.57E-03	8.38E-08	0.	0.	0.	1.14E-10	0.	0.	0.	8.57E-03
17	9.10	0.	1.10E-02	1.01E-07	0.	0.	0.	1.14E-10	0.	0.	0.	1.10E-02
18	9.00	0.	1.34E-02	5.10E-08	0.	0.	0.	1.15E-10	0.	0.	0.	1.34E-02
19	8.90	0.	1.58E-02	3.54E-08	0.	0.	0.	1.15E-10	0.	0.	0.	1.58E-02
20	8.80	0.	1.64E-02	2.84E-08	0.	0.	0.	1.16E-10	0.	0.	0.	1.64E-02
21	8.70	0.	1.57E-02	1.36E-08	0.	0.	0.	1.16E-10	0.	0.	0.	1.57E-02
22	8.60	0.	1.49E-02	1.43E-08	0.	0.	0.	1.16E-10	0.	0.	0.	1.49E-02
23	8.50	0.	1.41E-02	6.63E-09	0.	0.	0.	1.17E-10	0.	0.	0.	1.41E-02
24	8.40	0.	1.33E-02	6.10E-09	0.	0.	0.	1.17E-10	0.	0.	0.	1.33E-02
25	8.30	0.	1.26E-02	3.81E-09	0.	0.	0.	1.18E-10	0.	0.	0.	1.26E-02
26	8.20	0.	1.18E-02	2.90E-09	0.	0.	0.	1.19E-10	0.	0.	0.	1.18E-02
27	8.10	0.	1.10E-02	1.30E-09	0.	0.	0.	1.19E-10	3.14E-20	0.	0.	1.10E-02
28	8.00	0.	1.02E-02	1.12E-09	0.	0.	0.	1.20E-10	3.26E-20	0.	0.	1.02E-02
29	7.90	0.	9.42E-03	6.20E-10	0.	0.	0.	1.21E-10	3.39E-20	0.	0.	9.42E-03
30	7.80	0.	8.65E-03	5.13E-10	0.	0.	0.	1.21E-10	3.52E-20	0.	0.	8.65E-03
31	7.70	0.	7.87E-03	2.90E-10	0.	0.	0.	1.22E-10	3.66E-20	0.	0.	7.87E-03
32	7.60	0.	7.08E-03	2.07E-10	0.	1.30E-09	0.	1.22E-10	3.80E-20	0.	0.	7.08E-03
33	7.50	0.	6.30E-03	1.31E-10	0.	7.39E-08	0.	1.23E-10	3.96E-20	0.	0.	6.30E-03
34	7.40	0.	5.62E-03	8.48E-11	0.	1.88E-07	0.	1.24E-10	4.12E-20	0.	0.	5.62E-03
35	7.30	0.	5.00E-03	5.57E-11	0.	5.21E-07	0.	1.24E-10	4.29E-20	0.	0.	5.00E-03
36	7.20	0.	4.34E-03	3.49E-11	0.	5.71E-06	0.	1.25E-10	4.48E-20	0.	0.	4.34E-03
37	7.10	0.	3.68E-03	2.37E-11	0.	1.37E-06	0.	1.26E-10	4.67E-20	0.	0.	3.68E-03
38	7.00	3.04E-05	0.	1.49E-11	0.	2.47E-05	0.	1.27E-10	4.87E-20	0.	0.	5.51E-05
39	6.90	4.84E-05	0.	9.60E-12	0.	2.37E-05	0.	1.28E-10	5.09E-20	0.	0.	7.20E-05
40	6.80	3.36E-05	0.	6.27E-12	0.	1.90E-05	0.	1.29E-10	5.32E-20	0.	0.	5.27E-05
41	6.70	1.93E-05	0.	3.79E-12	0.	9.94E-05	0.	1.30E-10	5.56E-20	0.	0.	1.19E-04
42	6.60	9.78E-06	0.	2.33E-12	0.	4.38E-05	0.	1.31E-10	5.81E-20	0.	0.	5.35E-05
43	6.50	4.36E-06	0.	1.17E-12	0.	4.21E-05	0.	1.32E-10	6.09E-20	0.	0.	4.64E-05
44	6.40	7.19E-06	0.	4.09E-13	3.37E-06	1.93E-04	0.	1.33E-10	6.38E-20	0.	0.	2.04E-04
45	6.30	1.38E-05	0.	1.18E-13	1.02E-05	6.85E-05	0.	1.34E-10	6.69E-20	0.	0.	9.17E-05
46	6.20	2.95E-05	0.	2.78E-14	1.05E-05	5.01E-05	0.	1.35E-10	7.02E-20	0.	0.	9.01E-05
47	6.10	8.53E-05	0.	6.26E-15	2.23E-05	3.45E-04	0.	1.36E-10	7.37E-20	0.	0.	4.12E-04
48	6.00	1.62E-04	0.	9.99E-16	1.10E-05	3.67E-05	0.	1.37E-10	7.74E-20	0.	0.	2.09E-04
49	5.90	1.91E-04	0.	6.45E-17	1.45E-05	4.25E-05	0.	1.37E-10	8.15E-20	0.	0.	2.48E-04
50	5.80	2.07E-04	0.	1.37E-18	1.64E-05	6.54E-05	0.	1.39E-10	8.58E-20	0.	0.	2.89E-04
51	5.70	1.61E-04	0.	0.	1.28E-05	1.61E-05	0.	1.27E-10	9.04E-20	0.	0.	1.90E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.69E-04	0.	0.	0.	5.15E-06	8.00E-05	0.	0.	1.18E-18	9.53E-20	0.	0.	2.54E-04
53	5.50	1.44E-04	0.	0.	0.	4.59E-06	1.69E-04	0.	0.	1.19E-18	1.01E-19	0.	0.	3.21E-04
54	5.40	1.10E-04	0.	0.	0.	5.65E-06	2.00E-05	0.	0.	1.19E-18	1.06E-19	0.	0.	1.42E-04
55	5.30	9.06E-05	0.	0.	0.	5.45E-06	9.45E-05	0.	0.	1.20E-18	1.12E-19	0.	0.	1.91E-04
56	5.20	4.09E-05	0.	0.	0.	4.68E-06	2.90E-05	0.	0.	1.21E-18	1.19E-19	0.	0.	7.45E-05
57	5.10	3.39E-05	0.	0.	0.	3.52E-06	2.86E-05	0.	5.02E-09	1.22E-18	1.26E-19	0.	0.	6.48E-05
58	5.00	2.14E-05	0.	0.	0.	2.29E-06	3.13E-05	0.	5.03E-09	1.23E-18	1.34E-19	0.	0.	5.58E-05
59	4.90	1.79E-05	0.	0.	0.	2.09E-06	1.09E-05	0.	5.04E-09	1.24E-18	1.42E-19	0.	0.	3.09E-05
60	4.80	1.77E-05	0.	0.	0.	2.17E-06	1.47E-05	0.	5.07E-09	1.25E-18	1.51E-19	0.	0.	3.46E-05
61	4.70	1.52E-05	0.	0.	0.	1.64E-06	4.21E-06	0.	5.09E-09	1.26E-18	1.61E-19	0.	0.	2.11E-05
62	4.60	1.41E-05	0.	0.	0.	1.40E-06	6.46E-06	0.	5.12E-09	1.27E-18	1.72E-19	0.	0.	2.28E-05
63	4.50	1.07E-05	0.	4.35E-15	0.	9.18E-07	1.68E-06	0.	5.14E-09	1.28E-18	1.84E-19	0.	0.	1.33E-05
64	4.40	8.09E-06	0.	4.81E-14	0.	7.39E-07	2.33E-06	0.	5.17E-09	1.29E-18	1.97E-19	0.	0.	1.12E-05
65	4.30	5.55E-06	0.	2.34E-14	0.	5.21E-07	5.77E-07	0.	5.20E-09	1.30E-18	2.11E-19	0.	0.	6.66E-06
66	4.20	3.97E-06	0.	4.81E-13	0.	4.29E-07	6.95E-07	0.	5.23E-09	1.31E-18	2.26E-19	0.	0.	5.10E-06
67	4.10	2.95E-06	0.	1.78E-14	0.	2.93E-07	1.88E-07	0.	5.27E-09	1.32E-18	2.43E-19	0.	0.	3.44E-06
68	4.00	1.98E-06	0.	4.78E-13	0.	2.24E-07	8.23E-08	0.	5.30E-09	1.32E-18	2.62E-19	0.	0.	2.29E-06
69	3.90	1.15E-06	0.	3.81E-13	4.85E-19	1.30E-07	6.36E-08	0.	5.33E-09	1.32E-18	2.82E-19	0.	0.	1.35E-06
70	3.80	1.99E-08	0.	1.24E-13	5.61E-17	1.28E-07	0.	0.	5.36E-09	1.31E-18	3.05E-19	0.	0.	1.22E-06
71	3.70	5.89E-07	0.	7.13E-13	1.27E-17	5.74E-08	0.	0.	5.40E-09	1.29E-18	3.31E-19	0.	0.	6.52E-07
72	3.60	4.07E-07	0.	5.23E-14	1.04E-17	6.56E-08	0.	0.	5.43E-09	1.21E-18	3.59E-19	0.	0.	4.78E-07
73	3.50	2.83E-07	0.	2.88E-13	3.03E-16	2.60E-08	0.	0.	5.46E-09	1.11E-18	3.91E-19	0.	0.	3.14E-07
74	3.40	1.70E-07	0.	2.49E-14	4.30E-19	2.95E-08	0.	0.	5.49E-09	6.39E-11	4.26E-19	0.	0.	2.05E-07
75	3.30	1.09E-07	0.	7.31E-14	2.55E-17	1.24E-08	0.	0.	5.49E-09	6.40E-11	4.66E-19	0.	0.	1.27E-07
76	3.20	6.41E-08	0.	9.56E-15	4.81E-16	1.10E-08	0.	0.	5.48E-09	6.41E-11	5.11E-19	0.	0.	8.15E-08
77	3.10	4.28E-08	0.	1.51E-14	8.54E-19	6.48E-09	0.	0.	5.45E-09	6.42E-11	5.62E-19	0.	0.	5.48E-08
78	3.00	2.62E-08	0.	2.66E-15	2.78E-17	4.49E-09	0.	0.	5.40E-09	6.44E-11	6.20E-19	0.	0.	3.62E-08
79	2.90	1.45E-08	0.	2.37E-15	6.68E-17	1.74E-09	0.	0.	5.35E-09	6.45E-11	6.86E-19	0.	0.	2.17E-08
80	2.80	1.12E-08	0.	5.88E-16	1.01E-18	5.86E-10	0.	0.	5.24E-09	6.46E-11	7.63E-19	0.	0.	1.71E-08
81	2.70	3.95E-09	0.	3.20E-16	1.26E-17	1.22E-10	0.	0.	5.11E-09	6.46E-11	8.50E-19	0.	0.	9.25E-09
82	2.60	8.33E-10	0.	9.68E-17	2.87E-18	2.25E-11	0.	0.	4.96E-09	6.46E-11	9.52E-19	0.	0.	5.89E-09
83	2.50	4.05E-11	0.	2.66E-17	2.01E-19	3.06E-12	0.	0.	4.77E-09	6.46E-11	1.07E-18	0.	0.	4.87E-09
84	2.40	0.	7.88E-15	0.	9.20E-19	2.08E-13	0.	0.	4.58E-09	6.46E-11	1.21E-18	0.	0.	4.64E-09
85	2.30	0.	2.46E-13	0.	0.	0.	0.	0.	4.27E-09	6.41E-11	1.38E-18	0.	0.	4.33E-09
86	2.20	0.	2.33E-13	0.	0.	0.	0.	0.	3.95E-09	6.38E-11	1.57E-18	0.	0.	4.01E-09
87	2.10	0.	1.50E-12	0.	0.	0.	0.	0.	3.56E-09	6.36E-11	1.81E-18	0.	0.	3.63E-09
88	2.00	0.	1.11E-12	0.	0.	0.	0.	0.	3.08E-09	6.15E-11	2.09E-18	0.	0.	3.07E-09
89	1.90	0.	1.03E-11	0.	0.	0.	0.	0.	2.53E-09	5.92E-11	2.44E-18	0.	0.	2.68E-09
90	1.80	0.	1.89E-11	0.	0.	0.	0.	0.	1.84E-09	5.66E-11	2.87E-18	0.	0.	1.92E-09
91	1.70	0.	1.15E-11	0.	0.	0.	0.	0.	1.28E-09	5.33E-11	3.41E-18	0.	0.	1.34E-09
92	1.60	0.	1.30E-11	0.	0.	0.	0.	0.	8.63E-10	4.91E-11	4.09E-18	0.	0.	9.21E-10
93	1.50	0.	9.80E-12	0.	0.	0.	0.	0.	4.97E-10	2.05E-11	4.97E-18	0.	0.	5.27E-10
94	1.40	0.	2.45E-11	0.	0.	0.	0.	0.	2.69E-10	0.	6.11E-18	0.	0.	2.09E-10
95	1.30	0.	7.42E-12	0.	0.	0.	0.	0.	1.05E-10	0.	7.63E-18	0.	0.	1.13E-10
96	1.20	0.	1.69E-11	0.	0.	0.	0.	0.	0.	0.	9.71E-18	0.	0.	1.99E-11
97	1.10	0.	3.57E-12	0.	0.	0.	0.	5.09E-10	0.	0.	1.26E-17	0.	0.	5.15E-10
98	1.00	0.	8.90E-12	0.	0.	0.	0.	4.95E-10	0.	0.	1.68E-17	0.	0.	5.04E-10
99	0.90	0.	3.85E-12	0.	0.	0.	0.	3.84E-09	0.	0.	2.31E-17	0.	0.	3.84E-09
100	0.80	0.	1.49E-12	0.	0.	0.	0.	5.92E-09	0.	0.	3.29E-17	0.	0.	5.92E-09
101	0.70	0.	4.48E-13	0.	0.	0.	0.	1.90E-08	0.	0.	4.93E-17	0.	0.	1.90E-08
102	0.60	0.	1.86E-16	0.	0.	0.	0.	2.00E-08	0.	0.	7.84E-17	0.	0.	2.00E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICMS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	2.73E-06	0.	0.	0.	3.36E-12	0.	0.	0.	2.73E-06
2	10.60	0.	0.	1.73E-06	0.	0.	0.	3.37E-12	0.	0.	0.	1.73E-06
3	10.50	0.	0.	1.35E-06	0.	0.	0.	3.37E-12	0.	0.	0.	1.35E-06
4	10.40	0.	0.	9.78E-07	0.	0.	0.	3.38E-12	0.	0.	0.	9.78E-07
5	10.30	0.	0.	5.84E-07	0.	0.	0.	3.38E-12	0.	0.	0.	5.84E-07
6	10.20	0.	0.	4.74E-07	0.	0.	0.	3.38E-12	0.	0.	0.	4.74E-07
7	10.10	0.	0.	3.56E-07	0.	0.	0.	3.39E-12	0.	0.	0.	3.56E-07
8	10.00	0.	0.	1.86E-07	0.	0.	0.	3.39E-12	0.	0.	0.	1.86E-07
9	9.90	0.	0.	1.75E-07	0.	0.	0.	3.40E-12	0.	0.	0.	1.75E-07
10	9.80	0.	0.	1.16E-07	0.	0.	0.	3.41E-12	0.	0.	0.	1.16E-07
11	9.70	0.	0.	6.12E-08	0.	0.	0.	3.41E-12	0.	0.	0.	6.12E-08
12	9.60	0.	0.	6.41E-08	0.	0.	0.	3.42E-12	0.	0.	0.	6.61E-08
13	9.50	0.	1.91E-05	3.20E-08	0.	0.	0.	3.42E-12	0.	0.	0.	1.92E-05
14	9.40	0.	7.09E-05	2.32E-08	0.	0.	0.	3.44E-12	0.	0.	0.	7.09E-05
15	9.30	0.	1.23E-04	2.89E-08	0.	0.	0.	3.45E-12	0.	0.	0.	1.23E-04
16	9.20	0.	1.74E-04	8.38E-09	0.	0.	0.	3.46E-12	0.	0.	0.	1.74E-04
17	9.10	0.	2.24E-04	1.82E-08	0.	0.	0.	3.47E-12	0.	0.	0.	2.24E-04
18	9.00	0.	2.73E-04	5.15E-09	0.	0.	0.	3.49E-12	0.	0.	0.	2.73E-04
19	8.90	0.	3.21E-04	3.58E-09	0.	0.	0.	3.50E-12	0.	0.	0.	3.21E-04
20	8.80	0.	3.34E-04	2.86E-09	0.	0.	0.	3.51E-12	0.	0.	0.	3.34E-04
21	8.70	0.	3.19E-04	1.37E-09	0.	0.	0.	3.52E-12	0.	0.	0.	3.19E-04
22	8.60	0.	3.03E-04	1.44E-09	0.	0.	0.	3.54E-12	0.	0.	0.	3.03E-04
23	8.50	0.	2.87E-04	6.69E-10	0.	0.	0.	3.55E-12	0.	0.	0.	2.87E-04
24	8.40	0.	2.71E-04	6.24E-10	0.	0.	0.	3.57E-12	0.	0.	0.	2.71E-04
25	8.30	0.	2.57E-04	3.03E-10	0.	0.	0.	3.59E-12	0.	0.	0.	2.57E-04
26	8.20	0.	2.41E-04	2.61E-10	0.	0.	0.	3.60E-12	0.	0.	0.	2.41E-04
27	8.10	0.	2.24E-04	1.40E-10	0.	0.	0.	3.62E-12	1.42E-21	0.	0.	2.24E-04
28	8.00	0.	2.07E-04	1.13E-10	0.	0.	0.	3.64E-12	1.48E-21	0.	0.	2.07E-04
29	7.90	0.	1.92E-04	6.26E-11	0.	0.	0.	3.66E-12	1.53E-21	0.	0.	1.92E-04
30	7.80	0.	1.76E-04	5.18E-11	0.	0.	0.	3.68E-12	1.59E-21	0.	0.	1.76E-04
31	7.70	0.	1.60E-04	3.01E-11	0.	0.	0.	3.70E-12	1.64E-21	0.	0.	1.60E-04
32	7.60	0.	1.44E-04	2.09E-11	0.	5.87E-11	0.	3.72E-12	1.72E-21	0.	0.	1.44E-04
33	7.50	0.	1.28E-04	1.38E-11	0.	3.35E-09	0.	3.74E-12	1.79E-21	0.	0.	1.28E-04
34	7.40	0.	1.14E-04	8.56E-12	0.	8.49E-09	0.	3.76E-12	1.87E-21	0.	0.	1.14E-04
35	7.30	0.	1.02E-04	5.63E-12	0.	2.36E-08	0.	3.78E-12	1.95E-21	0.	0.	1.02E-04
36	7.20	0.	8.82E-05	3.52E-12	0.	2.58E-07	0.	3.80E-12	2.03E-21	0.	0.	8.85E-05
37	7.10	0.	7.48E-05	2.39E-12	0.	8.27E-08	0.	3.83E-12	2.12E-21	0.	0.	7.49E-05
38	7.00	6.17E-07	0.	1.58E-12	0.	1.12E-06	0.	3.86E-12	2.21E-21	0.	0.	1.74E-06
39	6.90	9.82E-07	0.	9.49E-13	0.	1.07E-06	0.	3.89E-12	2.31E-21	0.	0.	2.06E-06
40	6.80	6.83E-07	0.	6.33E-13	0.	8.62E-07	0.	3.92E-12	2.41E-21	0.	0.	1.55E-06
41	6.70	3.92E-07	0.	3.83E-13	0.	4.50E-06	0.	3.95E-12	2.52E-21	0.	0.	4.90E-06
42	6.60	1.97E-07	0.	2.35E-13	0.	1.99E-06	0.	3.98E-12	2.64E-21	0.	0.	2.18E-06
43	6.50	8.86E-08	0.	1.18E-13	0.	1.91E-06	0.	4.02E-12	2.76E-21	0.	0.	1.99E-06
44	6.40	1.48E-07	0.	4.12E-14	1.52E-07	3.76E-06	0.	4.05E-12	2.89E-21	0.	0.	9.06E-06
45	6.30	2.64E-07	0.	1.11E-14	4.61E-07	3.10E-06	0.	4.08E-12	3.03E-21	0.	0.	3.83E-06
46	6.20	5.99E-07	0.	2.73E-15	4.75E-07	2.27E-06	0.	4.11E-12	3.14E-21	0.	0.	3.34E-06
47	6.10	1.73E-06	0.	6.32E-16	1.01E-06	1.38E-05	0.	4.14E-12	3.34E-21	0.	0.	1.65E-05
48	6.00	3.29E-06	0.	1.01E-16	4.96E-07	1.66E-06	0.	4.17E-12	3.51E-21	0.	0.	5.45E-06
49	5.90	3.88E-06	0.	6.51E-18	6.59E-07	1.93E-06	0.	4.17E-12	3.69E-21	0.	0.	6.47E-06
50	5.80	4.21E-06	0.	1.39E-19	7.43E-07	2.97E-06	0.	4.11E-12	3.89E-21	0.	0.	7.92E-06
51	5.70	3.27E-06	0.	0.	5.77E-07	7.27E-07	0.	3.86E-12	4.10E-21	0.	0.	4.57E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.42E-06	0.	0.	0.	2.33E-07	3.67E-06	0.	0.	3.59E-12	4.32E-21	0.	0.	7.28E-06
53	5.50	2.92E-06	0.	0.	0.	3.89E-07	7.64E-06	0.	0.	3.61E-12	4.56E-21	0.	0.	1.09E-05
54	5.40	2.36E-06	0.	0.	0.	2.56E-07	9.08E-07	0.	0.	3.63E-12	4.82E-21	0.	0.	3.52E-06
55	5.30	1.84E-06	0.	0.	0.	2.47E-07	4.28E-06	0.	0.	3.65E-12	5.10E-21	0.	0.	6.37E-06
56	5.20	8.30E-07	0.	0.	0.	2.12E-07	1.31E-06	0.	0.	3.67E-12	5.40E-21	0.	0.	2.35E-06
57	5.10	6.88E-07	0.	0.	0.	1.60E-07	1.30E-06	0.	3.24E-11	3.70E-12	5.72E-21	0.	0.	2.14E-06
58	5.00	4.36E-07	0.	0.	0.	1.04E-07	1.42E-06	0.	3.25E-11	3.74E-12	6.07E-21	0.	0.	1.96E-06
59	4.90	3.63E-07	0.	0.	0.	9.46E-08	4.95E-07	0.	3.25E-11	3.77E-12	6.45E-21	0.	0.	9.53E-07
60	4.80	3.59E-07	0.	0.	0.	9.82E-08	6.69E-07	0.	3.27E-11	3.80E-12	6.86E-21	0.	0.	1.13E-06
61	4.70	3.08E-07	0.	0.	0.	7.42E-08	1.91E-07	0.	3.29E-11	3.83E-12	7.31E-21	0.	0.	5.73E-07
62	4.60	2.87E-07	0.	0.	0.	6.33E-08	2.93E-07	0.	3.30E-11	3.86E-12	7.80E-21	0.	0.	6.43E-07
63	4.50	2.17E-07	0.	4.30E-16	0.	4.16E-08	7.60E-08	0.	3.32E-11	3.89E-12	8.33E-21	0.	0.	3.35E-07
64	4.40	1.64E-07	0.	4.86E-15	0.	3.35E-08	1.05E-07	0.	3.34E-11	3.92E-12	8.91E-21	0.	0.	3.03E-07
65	4.30	1.13E-07	0.	2.36E-15	0.	2.36E-08	2.61E-08	0.	3.36E-11	3.95E-12	9.55E-21	0.	0.	1.63E-07
66	4.20	8.07E-08	0.	4.05E-14	0.	1.95E-08	3.15E-08	0.	3.38E-11	3.98E-12	1.02E-20	0.	0.	1.32E-07
67	4.10	6.08E-08	0.	1.08E-15	0.	1.33E-08	8.50E-09	0.	3.40E-11	4.00E-12	1.18E-20	0.	0.	8.18E-08
68	4.00	4.02E-08	0.	4.02E-14	0.	1.02E-08	3.73E-09	0.	3.42E-11	4.02E-12	1.19E-20	0.	0.	5.42E-08
69	3.90	2.34E-08	0.	3.85E-14	2.38E-19	5.87E-09	2.88E-09	0.	3.44E-11	4.08E-12	1.28E-20	0.	0.	3.22E-08
70	3.80	2.21E-08	0.	1.25E-14	2.64E-17	5.81E-09	0.	0.	3.46E-11	3.98E-12	1.38E-20	0.	0.	2.80E-08
71	3.70	1.20E-08	0.	7.20E-14	6.01E-18	2.60E-09	0.	0.	3.48E-11	3.92E-12	1.50E-20	0.	0.	1.46E-08
72	3.60	8.26E-09	0.	5.28E-15	5.04E-18	2.97E-09	0.	0.	3.50E-11	3.67E-12	1.63E-20	0.	0.	1.13E-08
73	3.50	5.75E-09	0.	2.91E-14	1.44E-16	1.18E-09	0.	0.	3.52E-11	3.36E-12	1.77E-20	0.	0.	6.96E-09
74	3.40	3.45E-09	0.	2.52E-15	2.04E-19	1.33E-09	0.	0.	3.54E-11	1.94E-12	1.53E-20	0.	0.	4.82E-09
75	3.30	2.21E-09	0.	7.37E-15	1.21E-17	5.60E-10	0.	0.	3.54E-11	1.94E-12	2.11E-20	0.	0.	2.91E-09
76	3.20	1.30E-09	0.	9.64E-16	2.28E-16	5.34E-10	0.	0.	3.53E-11	1.95E-12	2.32E-20	0.	0.	1.87E-09
77	3.10	8.69E-10	0.	1.93E-15	4.05E-19	2.94E-10	0.	0.	3.52E-11	1.95E-12	2.55E-20	0.	0.	1.20E-09
78	3.00	5.33E-10	0.	2.69E-16	1.32E-17	2.03E-10	0.	0.	3.49E-11	1.95E-12	2.81E-20	0.	0.	7.73E-10
79	2.90	2.90E-10	0.	2.48E-16	3.16E-17	7.88E-11	0.	0.	3.45E-11	1.96E-12	3.11E-20	0.	0.	4.11E-10
80	2.80	2.29E-10	0.	9.89E-17	4.80E-19	2.66E-11	0.	0.	3.38E-11	1.96E-12	3.46E-20	0.	0.	2.91E-10
81	2.70	8.03E-11	0.	3.28E-17	6.05E-18	5.53E-12	0.	0.	3.30E-11	1.96E-12	3.85E-20	0.	0.	1.21E-10
82	2.60	1.69E-11	0.	9.77E-18	1.36E-18	1.02E-12	0.	0.	3.20E-11	1.96E-12	4.32E-20	0.	0.	5.19E-11
83	2.50	8.22E-13	0.	2.69E-18	9.51E-20	1.39E-13	0.	0.	3.09E-11	1.96E-12	4.84E-20	0.	0.	3.37E-11
84	2.40	0.	7.96E-16	0.	4.36E-19	9.44E-15	0.	0.	2.95E-11	1.96E-12	5.49E-20	0.	0.	3.13E-11
85	2.30	0.	2.48E-14	0.	0.	0.	0.	0.	2.75E-11	1.95E-12	6.24E-20	0.	0.	2.95E-11
86	2.20	0.	2.35E-14	0.	0.	0.	0.	0.	2.55E-11	1.94E-12	7.13E-20	0.	0.	2.74E-11
87	2.10	0.	1.52E-13	0.	0.	0.	0.	0.	2.30E-11	1.93E-12	8.20E-20	0.	0.	2.51E-11
88	2.00	0.	1.17E-13	0.	0.	0.	0.	0.	1.94E-11	1.87E-12	9.49E-20	0.	0.	2.14E-11
89	1.90	0.	1.04E-12	0.	0.	0.	0.	0.	1.63E-11	1.80E-12	1.11E-19	0.	0.	1.92E-11
90	1.80	0.	1.91E-12	0.	0.	0.	0.	0.	1.19E-11	1.72E-12	1.30E-19	0.	0.	1.55E-11
91	1.70	0.	1.18E-12	0.	0.	0.	0.	0.	8.25E-12	1.62E-12	1.54E-19	0.	0.	1.18E-11
92	1.60	0.	1.31E-12	0.	0.	0.	0.	0.	5.56E-12	1.37E-12	1.85E-19	0.	0.	8.25E-12
93	1.50	0.	9.09E-13	0.	0.	0.	0.	0.	3.21E-12	6.23E-13	2.25E-19	0.	0.	4.82E-12
94	1.40	0.	2.47E-12	0.	0.	0.	0.	0.	1.71E-12	0.	2.77E-19	0.	0.	4.18E-12
95	1.30	0.	7.40E-13	0.	0.	0.	0.	0.	6.81E-13	0.	3.46E-19	0.	0.	1.43E-12
96	1.20	0.	2.01E-12	0.	0.	0.	0.	0.	0.	0.	4.49E-19	0.	0.	2.01E-12
97	1.10	0.	5.62E-13	0.	0.	0.	0.	2.31E-11	0.	0.	5.72E-19	0.	0.	2.36E-11
98	1.00	0.	8.98E-13	0.	0.	0.	0.	2.24E-11	0.	0.	7.61E-19	0.	0.	2.33E-11
99	0.90	0.	3.89E-13	0.	0.	0.	0.	1.74E-10	0.	0.	1.04E-18	0.	0.	1.74E-10
100	0.80	0.	1.71E-13	0.	0.	0.	0.	2.68E-10	0.	0.	1.49E-18	0.	0.	2.68E-10
101	0.70	0.	4.93E-14	0.	0.	0.	0.	8.68E-10	0.	0.	2.23E-18	0.	0.	8.68E-10
102	0.60	0.	1.88E-17	0.	0.	0.	0.	9.06E-10	0.	0.	3.95E-18	0.	0.	9.06E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3800. DENSITY (GM/CC) 1.293E-03 (16.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.74E-07	0.	0.	0.	6.71E-14	0.	0.	0.	2.74E-07
2	10.60	0.	0.	1.74E-07	0.	0.	0.	6.72E-14	0.	0.	0.	1.74E-07
3	10.50	0.	0.	1.36E-07	0.	0.	0.	6.73E-14	0.	0.	0.	1.36E-07
4	10.40	0.	0.	9.83E-08	0.	0.	0.	6.74E-14	0.	0.	0.	9.83E-08
5	10.30	0.	0.	5.87E-08	0.	0.	0.	6.75E-14	0.	0.	0.	5.87E-08
6	10.20	0.	0.	4.77E-08	0.	0.	0.	6.75E-14	0.	0.	0.	4.77E-08
7	10.10	0.	0.	3.57E-08	0.	0.	0.	6.76E-14	0.	0.	0.	3.57E-08
8	10.00	0.	0.	1.87E-08	0.	0.	0.	6.77E-14	0.	0.	0.	1.87E-08
9	9.90	0.	0.	1.76E-08	0.	0.	0.	6.78E-14	0.	0.	0.	1.76E-08
10	9.80	0.	0.	1.17E-08	0.	0.	0.	6.80E-14	0.	0.	0.	1.17E-08
11	9.70	0.	0.	6.15E-09	0.	0.	0.	6.81E-14	0.	0.	0.	6.15E-09
12	9.60	0.	0.	6.64E-09	0.	0.	0.	6.82E-14	0.	0.	0.	6.64E-09
13	9.50	0.	2.23E-07	3.25E-09	0.	0.	0.	6.83E-14	0.	0.	0.	2.27E-07
14	9.40	0.	8.27E-07	2.33E-09	0.	0.	0.	6.86E-14	0.	0.	0.	8.29E-07
15	9.30	0.	1.43E-06	2.18E-09	0.	0.	0.	6.88E-14	0.	0.	0.	1.43E-06
16	9.20	0.	2.03E-06	8.42E-10	0.	0.	0.	6.91E-14	0.	0.	0.	2.03E-06
17	9.10	0.	2.61E-06	1.82E-09	0.	0.	0.	6.93E-14	0.	0.	0.	2.61E-06
18	9.00	0.	3.18E-06	5.17E-10	0.	0.	0.	6.96E-14	0.	0.	0.	3.19E-06
19	8.90	0.	3.75E-06	3.50E-10	0.	0.	0.	6.98E-14	0.	0.	0.	3.75E-06
20	8.80	0.	3.90E-06	2.88E-10	0.	0.	0.	7.01E-14	0.	0.	0.	3.90E-06
21	8.70	0.	3.71E-06	1.38E-10	0.	0.	0.	7.03E-14	0.	0.	0.	3.71E-06
22	8.60	0.	3.53E-06	1.45E-10	0.	0.	0.	7.06E-14	0.	0.	0.	3.53E-06
23	8.50	0.	3.35E-06	6.72E-11	0.	0.	0.	7.08E-14	0.	0.	0.	3.35E-06
24	8.40	0.	3.14E-06	6.27E-11	0.	0.	0.	7.12E-14	0.	0.	0.	3.14E-06
25	8.30	0.	3.00E-06	3.09E-11	0.	0.	0.	7.16E-14	0.	0.	0.	3.00E-06
26	8.20	0.	2.81E-06	2.62E-11	0.	0.	0.	7.19E-14	0.	0.	0.	2.81E-06
27	8.10	0.	2.61E-06	1.41E-11	0.	0.	0.	7.23E-14	4.87E-23	0.	0.	2.61E-06
28	8.00	0.	2.42E-06	1.14E-11	0.	0.	0.	7.27E-14	5.95E-23	0.	0.	2.42E-06
29	7.90	0.	2.23E-06	5.29E-12	0.	0.	0.	7.31E-14	5.25E-23	0.	0.	2.23E-06
30	7.80	0.	2.05E-06	5.20E-12	0.	0.	0.	7.34E-14	5.45E-23	0.	0.	2.05E-06
31	7.70	0.	1.87E-06	3.02E-12	0.	0.	0.	7.38E-14	5.67E-23	0.	0.	1.87E-06
32	7.60	0.	1.68E-06	2.10E-12	0.	2.01E-12	0.	7.42E-14	5.89E-23	0.	0.	1.68E-06
33	7.50	0.	1.49E-06	1.33E-12	0.	1.15E-10	0.	7.46E-14	6.13E-23	0.	0.	1.49E-06
34	7.40	0.	1.33E-06	8.68E-13	0.	2.91E-10	0.	7.50E-14	6.39E-23	0.	0.	1.33E-06
35	7.30	0.	1.19E-06	5.65E-13	0.	8.07E-10	0.	7.54E-14	6.65E-23	0.	0.	1.19E-06
36	7.20	0.	1.03E-06	3.54E-13	0.	3.84E-09	0.	7.58E-14	6.94E-23	0.	0.	1.04E-06
37	7.10	0.	8.72E-07	2.40E-13	0.	2.13E-09	0.	7.64E-14	7.24E-23	0.	0.	8.74E-07
38	7.00	7.19E-09	0.	1.51E-13	0.	3.83E-08	0.	7.70E-14	7.55E-23	0.	0.	4.55E-08
39	6.90	1.15E-08	0.	9.74E-14	0.	5.67E-08	0.	7.77E-14	7.89E-23	0.	0.	6.82E-08
40	6.80	7.96E-09	0.	6.36E-14	0.	2.95E-08	0.	7.83E-14	8.24E-23	0.	0.	3.75E-08
41	6.70	4.57E-09	0.	3.85E-14	0.	1.54E-07	0.	7.89E-14	8.61E-23	0.	0.	1.59E-07
42	6.60	2.30E-09	0.	2.36E-14	0.	6.88E-08	0.	7.95E-14	9.01E-23	0.	0.	7.03E-08
43	6.50	1.03E-09	0.	1.19E-14	0.	6.52E-08	0.	8.02E-14	9.43E-23	0.	0.	6.63E-08
44	6.40	1.70E-09	0.	4.14E-15	5.22E-09	3.00E-07	0.	9.08E-14	9.86E-23	0.	0.	3.06E-07
45	6.30	3.08E-09	0.	5.12E-15	2.58E-08	1.06E-07	0.	1.14E-13	1.04E-22	0.	0.	1.25E-07
46	6.20	6.98E-09	0.	2.75E-16	1.62E-08	7.77E-08	0.	1.20E-13	1.09E-22	0.	0.	1.01E-07
47	6.10	2.02E-08	0.	6.35E-17	3.46E-08	4.73E-07	0.	8.26E-14	1.14E-22	0.	0.	5.27E-07
48	6.00	3.83E-08	0.	1.01E-17	1.70E-08	5.6PE-08	0.	8.33E-14	1.20E-22	0.	0.	1.12E-07
49	5.90	4.53E-08	0.	6.54E-19	2.25E-08	6.59E-08	0.	8.33E-14	1.26E-22	0.	0.	1.34E-07
50	5.80	4.91E-08	0.	1.39E-20	2.54E-08	1.02E-07	0.	8.20E-14	1.33E-22	0.	0.	1.76E-07
51	5.70	3.81E-08	0.	0.	1.98E-08	2.49E-08	0.	7.70E-14	1.40E-22	0.	0.	8.27E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-03 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.99E-08	0.	0.	0.	7.99E-09	1.24E-07	0.	0.	7.16E-14	1.48E-22	0.	0.	1.72E-07
53	5.50	3.40E-08	0.	0.	0.	1.33E-08	2.41E-07	0.	0.	7.20E-14	1.56E-22	0.	0.	3.09E-07
54	5.40	2.75E-08	0.	0.	0.	8.76E-09	3.11E-08	0.	0.	7.24E-14	1.65E-22	0.	0.	6.73E-08
55	5.30	2.15E-08	0.	0.	0.	8.44E-09	1.46E-07	0.	0.	7.28E-14	1.74E-22	0.	0.	1.76E-07
56	5.20	9.68E-09	0.	0.	0.	7.23E-09	4.49E-08	0.	0.	7.33E-14	1.85E-22	0.	0.	6.18E-08
57	5.10	8.02E-09	0.	0.	0.	5.46E-09	4.43E-08	0.	1.20E-13	7.39E-14	1.96E-22	0.	0.	5.78E-08
58	5.00	5.08E-09	0.	0.	0.	3.59E-09	4.63E-08	0.	1.20E-13	7.46E-14	2.08E-22	0.	0.	5.72E-08
59	4.90	4.23E-09	0.	0.	0.	3.24E-09	1.69E-08	0.	1.20E-13	7.52E-14	2.21E-22	0.	0.	2.44E-08
60	4.80	4.18E-09	0.	0.	0.	3.36E-09	2.28E-08	0.	1.21E-13	7.58E-14	2.35E-22	0.	0.	3.03E-08
61	4.70	3.60E-09	0.	0.	0.	2.54E-09	4.53E-09	0.	1.21E-13	7.64E-14	2.50E-22	0.	0.	1.27E-08
62	4.60	3.35E-09	0.	0.	0.	2.17E-09	8.00E-09	0.	1.22E-13	7.70E-14	2.67E-22	0.	0.	1.55E-08
63	4.50	2.54E-09	0.	4.41E-17	0.	1.42E-09	2.60E-09	0.	1.23E-13	7.77E-14	2.85E-22	0.	0.	6.56E-09
64	4.40	1.92E-09	0.	4.88E-16	0.	1.15E-09	3.61E-09	0.	1.23E-13	7.83E-14	3.05E-22	0.	0.	6.67E-09
65	4.30	1.32E-09	0.	2.37E-16	0.	8.07E-10	8.94E-10	0.	1.24E-13	7.89E-14	3.26E-22	0.	0.	3.32E-09
66	4.20	9.40E-10	0.	4.07E-15	0.	6.66E-10	1.08E-09	0.	1.25E-13	7.95E-14	3.50E-22	0.	0.	2.68E-09
67	4.10	7.00E-10	0.	1.61E-16	0.	4.55E-10	2.91E-10	0.	1.25E-13	7.98E-14	3.76E-22	0.	0.	1.45E-09
68	4.00	4.69E-10	0.	4.89E-15	0.	3.48E-10	1.28E-10	0.	1.26E-13	8.02E-14	4.05E-22	0.	0.	9.45E-10
69	3.90	2.72E-10	0.	3.87E-15	1.25E-19	2.01E-10	9.89E-11	0.	1.27E-13	7.98E-14	4.38E-22	0.	0.	5.72E-10
70	3.80	2.58E-10	0.	1.26E-15	1.44E-17	1.99E-10	0.	0.	1.28E-13	7.95E-14	4.73E-22	0.	0.	4.57E-10
71	3.70	1.40E-10	0.	7.24E-15	3.27E-18	8.90E-11	0.	0.	1.29E-13	7.83E-14	5.12E-22	0.	0.	2.29E-10
72	3.60	9.63E-11	0.	5.38E-16	2.74E-18	1.02E-10	0.	0.	1.29E-13	7.33E-14	5.56E-22	0.	0.	1.98E-10
73	3.50	6.70E-11	0.	2.92E-15	7.81E-17	4.02E-11	0.	0.	1.30E-13	6.71E-14	6.05E-22	0.	0.	1.07E-10
74	3.40	4.03E-11	0.	2.53E-16	1.11E-19	4.55E-11	0.	0.	1.31E-13	3.87E-14	6.60E-22	0.	0.	8.59E-11
75	3.30	2.58E-11	0.	7.31E-16	4.55E-18	1.92E-11	0.	0.	1.31E-13	3.88E-14	7.22E-22	0.	0.	4.91E-11
76	3.20	1.52E-11	0.	9.69E-17	1.24E-16	1.83E-11	0.	0.	1.31E-13	3.88E-14	7.92E-22	0.	0.	3.36E-11
77	3.10	1.01E-11	0.	1.94E-16	2.20E-19	1.01E-11	0.	0.	1.30E-13	3.89E-14	8.71E-22	0.	0.	2.03E-11
78	3.00	6.22E-12	0.	2.78E-17	7.15E-18	6.96E-12	0.	0.	1.29E-13	3.90E-14	9.61E-22	0.	0.	1.33E-11
79	2.90	3.45E-12	0.	2.41E-17	1.72E-17	2.70E-12	0.	0.	1.28E-13	3.91E-14	1.06E-21	0.	0.	6.31E-12
80	2.80	2.66E-12	0.	5.07E-15	2.61E-19	9.09E-13	0.	0.	1.25E-13	3.91E-14	1.18E-21	0.	0.	3.74E-12
81	2.70	9.34E-13	0.	3.25E-18	3.26E-18	1.89E-13	0.	0.	1.22E-13	3.91E-14	1.32E-21	0.	0.	1.29E-12
82	2.60	1.97E-13	0.	9.82E-19	7.40E-18	3.49E-14	0.	0.	1.18E-13	3.91E-14	1.48E-21	0.	0.	3.90E-13
83	2.50	9.59E-15	0.	2.78E-19	5.17E-20	4.79E-15	0.	0.	1.14E-13	3.91E-14	1.66E-21	0.	0.	1.67E-13
84	2.40	0.	8.00E-17	0.	2.37E-19	3.23E-16	0.	0.	1.09E-13	3.91E-14	1.88E-21	0.	0.	1.49E-13
85	2.30	0.	2.49E-15	0.	0.	0.	0.	0.	1.02E-13	3.88E-14	2.13E-21	0.	0.	1.43E-13
86	2.20	0.	2.34E-15	0.	0.	0.	0.	0.	9.41E-14	3.87E-14	2.44E-21	0.	0.	1.35E-13
87	2.10	0.	1.52E-14	0.	0.	0.	0.	0.	8.50E-14	3.85E-14	2.80E-21	0.	0.	1.39E-13
88	2.00	0.	1.13E-14	0.	0.	0.	0.	0.	7.16E-14	3.73E-14	3.25E-21	0.	0.	1.20E-13
89	1.90	0.	1.04E-13	0.	0.	0.	0.	0.	6.04E-14	3.59E-14	3.78E-21	0.	0.	2.00E-13
90	1.80	0.	1.92E-13	0.	0.	0.	0.	0.	4.39E-14	3.43E-14	4.45E-21	0.	0.	2.70E-13
91	1.70	0.	1.17E-13	0.	0.	0.	0.	0.	3.05E-14	3.23E-14	5.28E-21	0.	0.	1.68E-13
92	1.60	0.	1.32E-13	0.	0.	0.	0.	0.	2.06E-14	2.73E-14	6.34E-21	0.	0.	1.88E-13
93	1.50	0.	9.94E-14	0.	0.	0.	0.	0.	1.18E-14	1.24E-14	7.78E-21	0.	0.	1.24E-13
94	1.40	0.	2.48E-13	0.	0.	0.	0.	0.	6.31E-13	0.	9.47E-21	0.	0.	2.55E-13
95	1.30	0.	7.52E-14	0.	0.	0.	0.	0.	2.51E-15	0.	1.18E-20	0.	0.	7.77E-14
96	1.20	0.	2.02E-13	0.	0.	0.	0.	0.	0.	0.	1.50E-20	0.	0.	2.02E-13
97	1.10	0.	5.65E-14	0.	0.	0.	0.	7.89E-13	0.	0.	1.95E-20	0.	0.	8.46E-13
98	1.00	0.	9.03E-14	0.	0.	0.	0.	7.68E-13	0.	0.	2.68E-20	0.	0.	8.58E-13
99	0.90	0.	3.91E-14	0.	0.	0.	0.	5.95E-12	0.	0.	3.57E-20	0.	0.	5.99E-12
100	0.80	0.	1.72E-14	0.	0.	0.	0.	9.10E-12	0.	0.	5.10E-20	0.	0.	9.28E-12
101	0.70	0.	4.55E-15	0.	0.	0.	0.	2.94E-11	0.	0.	7.63E-20	0.	0.	2.94E-11
102	0.60	0.	1.89E-18	0.	0.	0.	0.	3.10E-11	0.	0.	1.21E-19	0.	0.	3.10E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E...	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.74E-08	0.	0.	0.	1.22E-15	0.	0.	0.	2.74E-08
2	10.60	0.	0.	1.74E-08	0.	0.	0.	1.22E-15	0.	0.	0.	1.74E-08
3	10.50	0.	0.	1.36E-08	0.	0.	0.	1.22E-15	0.	0.	0.	1.36E-08
4	10.40	0.	0.	9.83E-09	0.	0.	0.	1.22E-15	0.	0.	0.	9.83E-09
5	10.30	0.	0.	5.87E-09	0.	0.	0.	1.22E-15	0.	0.	0.	5.87E-09
6	10.20	0.	0.	4.77E-09	0.	0.	0.	1.22E-15	0.	0.	0.	4.77E-09
7	10.10	0.	0.	3.58E-09	0.	0.	0.	1.23E-15	0.	0.	0.	3.58E-09
8	10.00	0.	0.	1.87E-09	0.	0.	0.	1.23E-15	0.	0.	0.	1.87E-09
9	9.90	0.	0.	1.76E-09	0.	0.	0.	1.23E-15	0.	0.	0.	1.76E-09
10	9.80	0.	0.	1.17E-09	0.	0.	0.	1.23E-15	0.	0.	0.	1.17E-09
11	9.70	0.	0.	6.15E-10	0.	0.	0.	1.23E-15	0.	0.	0.	6.15E-10
12	9.60	0.	0.	6.65E-10	0.	0.	0.	1.24E-15	0.	0.	0.	6.65E-10
13	9.50	0.	2.29E-09	3.25E-10	0.	0.	0.	1.24E-15	0.	0.	0.	2.62E-09
14	9.40	0.	8.49E-09	2.33E-10	0.	0.	0.	1.24E-15	0.	0.	0.	8.72E-09
15	9.30	0.	1.47E-08	2.10E-10	0.	0.	0.	1.25E-15	0.	0.	0.	1.49E-08
16	9.20	0.	2.09E-08	8.42E-11	0.	0.	0.	1.25E-15	0.	0.	0.	2.18E-08
17	9.10	0.	2.68E-08	1.02E-10	0.	0.	0.	1.26E-15	0.	0.	0.	2.69E-08
18	9.00	0.	3.26E-08	5.17E-11	0.	0.	0.	1.26E-15	0.	0.	0.	3.27E-08
19	8.90	0	3.85E-08	3.59E-11	0.	0.	0.	1.27E-15	0.	0.	0.	3.85E-08
20	8.80	0.	4.00E-08	2.88E-11	0.	0.	0.	1.27E-15	0.	0.	0.	4.08E-08
21	8.70	0.	3.81E-08	1.38E-11	0.	0.	0.	1.28E-15	0.	0.	0.	3.82E-08
22	8.60	0.	3.63E-08	1.45E-11	0.	0.	0.	1.28E-15	0.	0.	0.	3.63E-08
23	8.50	0.	3.44E-08	6.72E-12	0.	0.	0.	1.28E-15	0.	0.	0.	3.44E-08
24	8.40	0.	3.25E-08	6.27E-12	0.	0.	0.	1.29E-15	0.	0.	0.	3.25E-08
25	8.30	0.	3.08E-08	3.05E-12	0.	0.	0.	1.30E-15	0.	0.	0.	3.08E-08
26	8.20	0.	2.88E-08	2.62E-12	0.	0.	0.	1.30E-15	0.	0.	0.	2.89E-08
27	8.10	0.	2.68E-08	1.41E-12	0.	0.	0.	1.31E-15	1.56E-24	0.	0.	2.68E-08
28	8.00	0.	2.48E-08	1.14E-12	0.	0.	0.	1.32E-15	1.62E-24	0.	0.	2.48E-08
29	7.90	0.	2.29E-08	6.29E-13	0.	0.	0.	1.33E-15	1.68E-24	0.	0.	2.29E-08
30	7.80	0.	2.11E-08	5.20E-13	0.	0.	0.	1.33E-15	1.75E-24	0.	0.	2.11E-08
31	7.70	0.	1.92E-08	3.02E-13	0.	0.	0.	1.34E-15	1.82E-24	0.	0.	1.92E-08
32	7.60	0.	1.73E-08	2.10E-13	0.	6.44E-14	0.	1.35E-15	1.89E-24	0.	0.	1.73E-08
33	7.50	0.	1.53E-08	1.33E-13	0.	3.67E-12	0.	1.35E-15	1.97E-24	0.	0.	1.53E-08
34	7.40	0.	1.37E-08	8.68E-14	0.	9.32E-12	0.	1.36E-15	2.05E-24	0.	0.	1.37E-08
35	7.30	0.	1.22E-08	5.65E-14	0.	2.59E-11	0.	1.37E-15	2.13E-24	0.	0.	1.22E-08
36	7.20	0.	1.06E-08	3.54E-14	0.	2.84E-10	0.	1.37E-15	2.22E-24	0.	0.	1.08E-08
37	7.10	0.	8.95E-09	2.48E-14	0.	6.82E-11	0.	1.39E-15	2.32E-24	0.	0.	9.02E-09
38	7.00	7.38E-11	0.	1.51E-14	0.	1.23E-09	0.	1.40E-15	2.42E-24	0.	0.	1.30E-09
39	6.90	1.18E-10	0.	9.74E-15	0.	1.18E-09	0.	1.41E-15	2.53E-24	0.	0.	1.29E-09
40	6.80	8.17E-11	0.	6.36E-15	0.	9.46E-10	0.	1.42E-15	2.64E-24	0.	0.	1.03E-09
41	6.70	4.69E-11	0.	3.85E-15	0.	4.94E-09	0.	1.43E-15	2.76E-24	0.	0.	4.99E-09
42	6.60	2.36E-11	0.	2.36E-15	0.	2.18E-09	0.	1.44E-15	2.89E-24	0.	0.	2.20E-09
43	6.50	1.06E-11	0.	1.19E-15	0.	2.09E-09	0.	1.45E-15	3.02E-24	0.	0.	2.10E-09
44	6.40	1.75E-11	0.	4.15E-16	1.67E-10	9.61E-09	0.	1.46E-15	3.17E-24	0.	0.	9.79E-09
45	6.30	3.16E-11	0.	1.12E-16	5.06E-10	3.40E-09	0.	1.48E-15	3.32E-24	0.	0.	3.94E-09
46	6.20	7.16E-11	0.	2.74E-17	9.21E-10	2.49E-09	0.	1.49E-15	3.49E-24	0.	0.	3.08E-09
47	6.10	2.07E-10	0.	6.35E-18	1.11E-09	1.51E-08	0.	1.50E-15	3.66E-24	0.	0.	1.65E-08
48	6.00	3.93E-10	0.	1.01E-18	5.44E-10	1.82E-09	0.	1.51E-15	3.85E-24	0.	0.	2.76E-09
49	5.90	4.64E-10	0.	6.54E-20	7.23E-10	2.11E-09	0.	1.51E-15	4.05E-24	0.	0.	3.30E-09
50	5.80	5.04E-10	0.	1.39E-21	8.16E-10	3.26E-09	0.	1.49E-15	4.26E-24	0.	0.	4.58E-09
51	5.70	3.92E-10	0.	0.	6.34E-10	7.98E-10	0.	1.40E-15	4.49E-24	0.	0.	1.82E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.10E-10	0.	0.	0.	2.56E-10	3.98E-09	0.	0.	1.30E-15	4.74E-24	0.	0.	4.64E-09
53	5.50	3.49E-10	0.	0.	0.	4.27E-10	8.38E-09	0.	0.	1.31E-15	5.00E-24	0.	0.	9.15E-09
54	5.40	2.82E-10	0.	0.	0.	2.81E-10	9.96E-10	0.	0.	1.31E-15	5.26E-24	0.	0.	1.56E-09
55	5.30	2.20E-10	0.	0.	0.	2.71E-10	4.70E-09	0.	0.	1.32E-15	5.59E-24	0.	0.	5.19E-09
56	5.20	9.93E-11	0.	0.	0.	2.32E-10	1.44E-09	0.	0.	1.33E-15	5.92E-24	0.	0.	1.77E-09
57	5.10	8.23E-11	0.	0.	0.	1.75E-10	1.42E-09	0.	3.88E-16	1.34E-15	6.27E-24	0.	0.	1.68E-09
58	5.00	5.21E-11	0.	0.	0.	1.14E-10	1.56E-09	0.	3.89E-16	1.35E-15	6.66E-24	0.	0.	1.72E-09
59	4.90	4.35E-11	0.	0.	0.	1.04E-10	5.43E-10	0.	3.90E-16	1.36E-15	7.07E-24	0.	0.	6.90E-10
60	4.80	4.29E-11	0.	0.	0.	1.08E-10	7.30E-10	0.	3.92E-16	1.37E-15	7.52E-24	0.	0.	8.80E-10
61	4.70	3.69E-11	0.	0.	0.	8.14E-11	2.09E-10	0.	3.94E-16	1.39E-15	8.01E-24	0.	0.	3.28E-10
62	4.60	3.44E-11	0.	0.	0.	6.95E-11	3.21E-10	0.	3.96E-16	1.40E-15	8.55E-24	0.	0.	4.25E-10
63	4.50	2.60E-11	0.	4.41E-18	0.	4.56E-11	8.34E-11	0.	3.98E-16	1.41E-15	9.13E-24	0.	0.	1.53E-10
64	4.40	1.97E-11	0.	4.88E-17	0.	3.67E-11	1.16E-10	0.	4.00E-16	1.42E-15	9.77E-24	0.	0.	1.72E-10
65	4.30	1.35E-11	0.	2.37E-17	0.	2.59E-11	2.87E-11	0.	4.03E-16	1.43E-15	1.05E-23	0.	0.	6.80E-11
66	4.20	9.65E-12	0.	4.07E-16	0.	2.13E-11	3.45E-11	0.	4.05E-16	1.44E-15	1.12E-23	0.	0.	8.55E-11
67	4.10	7.10E-12	0.	1.81E-17	0.	1.46E-11	9.32E-12	0.	4.08E-16	1.45E-15	1.21E-23	0.	0.	3.11E-11
68	4.00	4.61E-12	0.	4.85E-16	0.	1.12E-11	4.09E-12	0.	4.10E-16	1.45E-15	1.30E-23	0.	0.	2.01E-11
69	3.90	2.80E-12	0.	3.87E-16	6.98E-20	6.44E-12	3.16E-12	0.	4.13E-16	1.45E-15	1.40E-23	0.	0.	1.24E-11
70	3.80	2.64E-12	0.	1.26E-16	8.07E-18	6.37E-12	0.	0.	4.15E-16	1.44E-15	1.52E-23	0.	0.	9.02E-12
71	3.70	1.43E-12	0.	7.24E-16	1.82E-18	2.89E-12	0.	0.	4.18E-16	1.42E-15	1.64E-23	0.	0.	4.29E-12
72	3.60	9.89E-13	0.	5.38E-17	1.93E-18	3.26E-12	0.	0.	4.20E-16	1.33E-15	1.78E-23	0.	0.	4.25E-12
73	3.50	6.88E-13	0.	2.92E-16	4.36E-17	1.29E-12	0.	0.	4.23E-16	1.22E-15	1.94E-23	0.	0.	1.98E-12
74	3.40	4.13E-13	0.	2.53E-17	6.18E-20	1.46E-12	0.	0.	4.25E-16	7.02E-16	2.12E-23	0.	0.	1.87E-12
75	3.30	2.64E-13	0.	7.41E-17	3.66E-18	6.14E-13	0.	0.	4.25E-16	7.03E-16	2.32E-23	0.	0.	8.80E-13
76	3.20	1.56E-13	0.	9.69E-18	6.91E-17	5.85E-13	0.	0.	4.24E-16	7.04E-16	2.54E-23	0.	0.	7.42E-13
77	3.10	1.04E-13	0.	1.54E-17	1.23E-19	3.22E-13	0.	0.	4.22E-16	7.06E-16	2.79E-23	0.	0.	4.27E-13
78	3.00	6.38E-14	0.	2.70E-18	4.00E-18	2.23E-13	0.	0.	4.18E-16	7.08E-16	3.08E-23	0.	0.	2.88E-13
79	2.90	3.54E-14	0.	2.41E-18	9.60E-18	8.65E-14	0.	0.	4.14E-16	7.09E-16	3.41E-23	0.	0.	1.23E-13
80	2.80	2.73E-14	0.	5.08E-19	1.46E-19	2.91E-14	0.	0.	4.06E-16	7.10E-16	3.79E-23	0.	0.	5.76E-14
81	2.70	9.61E-15	0.	3.25E-19	1.84E-18	8.08E-15	0.	0.	3.96E-16	7.10E-16	4.22E-23	0.	0.	1.68E-14
82	2.60	2.03E-15	0.	9.62E-20	4.13E-19	1.12E-15	0.	0.	3.84E-16	7.10E-16	4.73E-23	0.	0.	4.24E-15
83	2.50	9.84E-17	0.	2.70E-20	2.89E-20	1.52E-16	0.	0.	3.69E-16	7.10E-16	5.32E-23	0.	0.	1.33E-15
84	2.40	0.	8.00E-18	0.	1.32E-19	1.04E-17	0.	0.	3.54E-16	7.10E-16	6.02E-23	0.	0.	1.08E-15
85	2.30	0.	2.50E-16	0.	0.	0.	0.	0.	3.30E-16	7.04E-16	6.84E-23	0.	0.	1.20E-15
86	2.20	0.	2.36E-16	0.	0.	0.	0.	0.	3.05E-16	7.02E-16	7.81E-23	0.	0.	1.24E-15
87	2.10	0.	1.52E-15	0.	0.	0.	0.	0.	2.76E-16	6.99E-16	8.98E-23	0.	0.	2.50E-15
88	2.00	0.	1.13E-15	0.	0.	0.	0.	0.	2.33E-16	6.76E-16	1.04E-22	0.	0.	2.04E-15
89	1.90	0.	1.04E-14	0.	0.	0.	0.	0.	1.96E-16	6.50E-16	1.21E-22	0.	0.	1.13E-14
90	1.80	0.	1.92E-14	0.	0.	0.	0.	0.	1.43E-16	6.22E-16	1.43E-22	0.	0.	1.99E-14
91	1.70	0.	1.17E-14	0.	0.	0.	0.	0.	9.89E-17	5.86E-16	1.69E-22	0.	0.	1.24E-14
92	1.60	0.	1.32E-14	0.	0.	0.	0.	0.	6.68E-17	4.96E-16	2.03E-22	0.	0.	1.37E-14
93	1.50	0.	9.94E-15	0.	0.	0.	0.	0.	3.85E-17	2.25E-16	2.47E-22	0.	0.	1.02E-14
94	1.40	0.	2.48E-14	0.	0.	0.	0.	0.	2.05E-17	0.	3.04E-22	0.	0.	2.48E-14
95	1.30	0.	7.52E-15	0.	0.	0.	0.	0.	8.17E-18	0.	3.79E-22	0.	0.	7.53E-15
96	1.20	0.	2.02E-14	0.	0.	0.	0.	0.	0.	0.	4.82E-22	0.	0.	2.02E-14
97	1.10	0.	5.63E-15	0.	0.	0.	0.	2.53E-14	0.	0.	6.27E-22	0.	0.	3.18E-14
98	1.00	0.	9.03E-15	0.	0.	0.	0.	2.46E-14	0.	0.	8.35E-22	0.	0.	3.36E-14
99	0.90	0.	3.91E-15	0.	0.	0.	0.	1.91E-13	0.	0.	1.15E-21	0.	0.	1.95E-13
100	0.80	0.	1.72E-15	0.	0.	0.	0.	2.94E-13	0.	0.	1.64E-21	0.	0.	2.96E-13
101	0.70	0.	4.55E-16	0.	0.	0.	0.	9.43E-13	0.	0.	2.45E-21	0.	0.	9.44E-13
102	0.60	0.	1.89E-19	0.	0.	0.	0.	9.94E-13	0.	0.	3.90E-21	0.	0.	9.94E-13

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	1.98E 00	0.	0.	0.	4.61E-04	4.86E-12 0.	0.		1.98E 00
2	10.60	0.	0.	1.48E 00	0.	0.	0.	4.62E-04	5.00E-12 0.	0.		1.48E 00
3	10.50	0.	0.	1.20E 00	0.	0.	0.	4.62E-04	5.14E-12 0.	0.		1.20E 00
4	10.40	0.	0.	9.26E-01	0.	0.	0.	4.63E-04	5.29E-12 0.	0.		9.26E-01
5	10.30	0.	0.	6.21E-01	0.	0.	0.	4.63E-04	5.45E-12 0.	0.		6.21E-01
6	10.20	0.	0.	5.44E-01	0.	0.	0.	4.64E-04	5.61E-12 0.	0.		5.45E-01
7	10.10	0.	0.	4.35E-01	0.	0.	0.	4.65E-04	5.76E-12 0.	0.		4.35E-01
8	10.00	0.	0.	2.58E-01	0.	0.	0.	4.65E-04	5.96E-12 0.	0.		2.60E-01
9	9.90	0.	0.	2.59E-01	0.	0.	0.	4.66E-04	6.14E-12 0.	0.		2.59E-01
10	9.80	0.	0.	1.98E-01	0.	0.	0.	4.67E-04	6.33E-12 0.	0.		1.90E-01
11	9.70	0.	0.	1.17E-01	0.	0.	0.	4.68E-04	6.53E-12 0.	0.		1.17E-01
12	9.60	0.	0.	1.25E-01	0.	0.	0.	4.69E-04	6.74E-12 0.	0.		1.20E-01
13	9.50	0.	1.21E 02	7.35E-02	0.	0.	0.	4.70E-04	6.96E-12 0.	0.		1.21E 02
14	9.40	0.	1.36E 02	5.63E-02	0.	0.	0.	4.71E-04	7.18E-12 0.	0.		1.36E 02
15	9.30	0.	1.51E 02	5.31E-02	0.	0.	0.	4.73E-04	7.42E-12 0.	0.		1.51E 02
16	9.20	0.	1.66E 02	2.71E-02	0.	0.	0.	4.75E-04	7.66E-12 0.	0.		1.46F 02
17	9.10	0.	2.05E 02	3.08E-02	0.	0.	0.	4.76E-04	7.92E-12 0.	0.		2.05E 02
18	9.00	0.	2.48E 02	1.88E-02	0.	0.	0.	4.78E-04	8.19E-12 0.	0.		2.48E 02
19	8.90	0.	2.91E 02	1.30E-02	0.	0.	0.	4.80E-04	8.47E-12 0.	0.		2.91E 02
20	8.80	0.	3.03E 02	1.20E-02	0.	0.	0.	4.82E-04	8.76E-12 0.	0.		3.03E 02
21	8.70	0.	2.89E 02	6.94E-03	0.	0.	0.	4.83E-04	9.07E-12 0.	0.		2.89E 02
22	8.60	0.	2.75E 02	7.88E-03	0.	0.	0.	4.85E-04	9.39E-12 0.	0.		2.75E 02
23	8.50	0.	2.62E 02	4.88E-03	0.	0.	0.	4.87E-04	9.73E-12 0.	0.		2.62E 02
24	8.40	0.	2.50E 02	3.79E-03	0.	0.	0.	4.89E-04	1.01E-11 0.	0.		2.58E 02
25	8.30	0.	2.38E 02	2.21E-03	0.	0.	0.	4.92E-04	1.04E-11 0.	0.		2.38E 02
26	8.20	0.	2.26E 02	1.99E-03	0.	0.	0.	4.94E-04	1.08E-11 0.	0.		2.26E 02
27	8.10	0.	2.13E 02	1.23E-03	0.	0.	0.	4.97E-04	1.12E-11 0.	0.		2.13E 02
28	8.00	0.	2.00E 02	1.07E-03	0.	0.	0.	4.99E-04	1.17E-11 0.	0.		2.00E 02
29	7.90	0.	1.87E 02	6.74E-04	0.	0.	0.	5.02E-04	1.21E-11 0.	0.		1.87E 02
30	7.80	0.	1.75E 02	5.98E-04	0.	0.	0.	5.05E-04	1.26E-11 0.	0.		1.75E 02
31	7.70	0.	1.62E 02	3.91E-04	0.	0.	0.	5.07E-04	1.31E-11 0.	0.		1.62E 02
32	7.60	0.	1.49E 02	3.08E-04	0.	1.19E-04	0.	5.10E-04	1.36E-11 0.	0.		1.49E 02
33	7.50	0.	1.36E 02	2.13E-04	0.	2.79E-03	0.	5.12E-04	1.42E-11 0.	0.		1.36E 02
34	7.40	0.	1.23E 02	1.52E-04	0.	6.03E-03	0.	5.15E-04	1.48E-11 0.	0.		1.23E 02
35	7.30	0.	1.10E 02	1.12E-04	0.	3.16E-02	0.	5.18E-04	1.54E-11 0.	0.		1.10E 02
36	7.20	0.	9.84E 01	7.85E-05	0.	1.00E-01	0.	5.21E-04	1.60E-11 0.	0.		9.86E 01
37	7.10	0.	8.67E 01	5.94E-05	0.	1.15E-01	0.	5.25E-04	1.67E-11 0.	0.		8.68E 01
38	7.00	4.13E-01	0.	4.20E-05	0.	1.09E 00	0.	5.29E-04	1.75E-11 0.	0.		1.58E 00
39	6.90	6.98E-01	0.	3.01E-05	0.	7.89E-01	0.	5.34E-04	1.82E-11 0.	0.		1.49E 00
40	6.80	5.16E-01	0.	2.21E-05	0.	1.23E 00	0.	5.38E-04	1.90E-11 0.	0.		1.74E 00
41	6.70	3.17E-01	0.	1.49E-05	0.	3.78E 00	0.	5.42E-04	1.99E-11 0.	0.		4.18E 00
42	6.60	1.67E-01	0.	1.02E-05	0.	1.37E 00	0.	5.46E-04	2.08E-11 0.	0.		1.54E 00
43	6.50	8.07E-02	0.	5.87E-06	0.	2.28E 00	0.	5.51E-04	2.18E-11 0.	0.		2.36E 00
44	6.40	1.29E-01	0.	2.58E-06	7.58E-02	6.34E 00	0.	5.55E-04	2.29E-11 0.	0.		6.55E 00
45	6.30	2.39E-01	0.	8.84E-07	2.60E-01	1.96E 00	0.	5.59E-04	2.40E-11 0.	0.		2.46E 00
46	6.20	5.99E-01	0.	2.88E-07	2.88E-01	2.41E 00	0.	5.63E-04	2.51E-11 0.	0.		3.30E 00
47	6.10	1.94E 00	0.	8.47E-08	6.73E-01	8.82E 00	0.	5.68E-04	2.64E-11 0.	0.		1.14E 01
48	6.00	4.12E 00	0.	1.58E-08	3.99E-01	1.35E 00	0.	5.72E-04	2.78E-11 0.	0.		5.07E 00
49	5.90	5.42E 00	0.	1.07E-09	5.31E-01	1.80E 00	0.	5.72E-04	2.92E-11 0.	0.		7.76E 00
50	5.80	6.61E 00	0.	2.42E-11	6.39E-01	2.04E 00	0.	5.63E-04	3.07E-11 0.	0.		9.29E 00
51	5.70	5.95E 00	0.	0.	5.55E-01	9.86E-01	0.	5.29E-04	3.24E-11 0.	0.		7.49E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.57E 00	0.	0.	0.	2.81E-01	3.19E 00	0.	0.	4.92E-04	3.41E-11	0.	0.	1.00E 01
53	5.50	5.96E 00	0.	0.	0.	4.03E-01	4.71E 00	0.	0.	4.69E-04	3.60E-11	0.	0.	1.11E 01
54	5.40	5.30E 00	0.	0.	0.	2.83E-01	1.13E 00	0.	0.	4.97E-04	3.81E-11	0.	0.	6.72E 00
55	5.30	4.44E 00	0.	0.	0.	2.88E-01	3.39E 00	0.	0.	5.01E-04	4.03E-11	0.	0.	8.11E 00
56	5.20	2.36E 00	0.	0.	0.	2.66E-01	1.11E 00	0.	0.	5.04E-04	4.27E-11	0.	0.	3.74E 00
57	5.10	2.01E 00	0.	0.	0.	2.23E-01	1.46E 00	0.	1.53E-02	5.08E-04	4.52E-11	0.	0.	3.71E 00
58	5.00	1.33E 00	0.	0.	0.	1.62E-01	1.33E 00	0.	1.55E-02	5.12E-04	4.80E-11	0.	0.	2.84E 00
59	4.90	1.10E 00	0.	0.	0.	1.56E-01	7.44E-01	0.	1.56E-02	5.17E-04	5.10E-11	0.	0.	2.02E 00
60	4.80	1.11E 00	0.	0.	0.	1.60E-01	8.04E-01	0.	1.57E-02	5.21E-04	5.43E-11	0.	0.	2.09E 00
61	4.70	1.04E 00	0.	0.	0.	1.31E-01	3.75E-01	0.	1.58E-02	5.25E-04	5.78E-11	0.	0.	1.56E 00
62	4.60	1.06E 00	0.	0.	0.	1.19E-01	4.52E-01	0.	1.59E-02	5.29E-04	6.17E-11	0.	0.	1.65E 00
63	4.50	8.85E-01	0.	7.16E-08	0.	8.57E-02	1.87E-01	0.	1.60E-02	5.34E-04	6.59E-11	0.	0.	1.17E 00
64	4.40	7.48E-01	0.	5.10E-07	0.	7.47E-02	1.98E-01	0.	1.61E-02	5.38E-04	7.05E-11	0.	0.	1.04E 00
65	4.30	5.56E-01	0.	4.68E-07	0.	5.71E-02	6.64E-02	0.	1.63E-02	5.42E-04	7.55E-11	0.	0.	8.97E-01
66	4.20	4.33E-01	0.	4.53E-06	0.	5.21E-02	7.30E-02	0.	1.65E-02	5.46E-04	8.10E-11	0.	0.	5.75E-01
67	4.10	3.43E-01	0.	4.20E-07	0.	3.95E-02	1.79E-02	0.	1.67E-02	5.49E-04	8.71E-11	0.	0.	4.17E-01
68	4.00	2.55E-01	0.	5.79E-06	0.	3.22E-02	1.06E-02	0.	1.68E-02	5.51E-04	9.38E-11	0.	0.	3.15E-01
69	3.90	1.67E-01	0.	3.47E-06	4.42E-12	2.14E-02	6.69E-03	0.	1.70E-02	5.49E-04	1.01E-10	0.	0.	2.12E-01
70	3.80	1.64E-01	0.	2.05E-06	1.80E-10	2.17E-02	0.	0.	1.72E-02	5.46E-04	1.09E-10	0.	0.	2.04E-01
71	3.70	1.04E-01	0.	6.80E-06	3.07E-11	1.10E-02	0.	0.	1.74E-02	5.38E-04	1.18E-10	0.	0.	1.33E-01
72	3.60	7.76E-02	0.	1.03E-06	7.16E-11	1.33E-02	0.	0.	1.76E-02	5.04E-04	1.28E-10	0.	0.	1.09E-01
73	3.50	5.86E-02	0.	3.49E-06	9.26E-10	6.55E-03	0.	0.	1.79E-02	4.61E-04	1.40E-10	0.	0.	8.35E-02
74	3.40	4.02E-02	0.	5.67E-07	5.82E-12	7.29E-03	0.	0.	1.81E-02	2.66E-04	1.53E-10	0.	0.	6.50E-02
75	3.30	2.76E-02	0.	1.13E-06	1.37E-10	3.81E-03	0.	0.	1.82E-02	2.66E-04	1.67E-10	0.	0.	4.99E-02
76	3.20	1.83E-02	0.	2.88E-07	1.30E-09	3.67E-03	0.	0.	1.84E-02	2.67E-04	1.83E-10	0.	0.	4.06E-02
77	3.10	1.37E-02	0.	2.98E-07	1.01E-11	2.45E-03	0.	0.	1.84E-02	2.67E-04	2.02E-10	0.	0.	3.48E-02
78	3.00	9.39E-03	0.	3.70E-08	1.48E-10	1.81E-03	0.	0.	1.81E-02	2.68E-04	2.23E-10	0.	0.	2.96E-02
79	2.90	5.89E-03	0.	5.97E-08	2.27E-10	8.67E-04	0.	0.	1.79E-02	2.68E-04	2.47E-10	0.	0.	2.50E-02
80	2.80	5.00E-03	0.	1.89E-08	1.07E-11	3.50E-04	0.	0.	1.76E-02	2.69E-04	2.74E-10	0.	0.	2.32E-02
81	2.70	2.11E-03	0.	9.79E-09	7.16E-11	1.02E-04	0.	0.	1.73E-02	2.69E-04	3.05E-10	0.	0.	1.97E-02
82	2.60	5.74E-04	0.	4.86E-09	1.11E-11	2.54E-05	0.	0.	1.68E-02	2.69E-04	3.42E-10	0.	0.	1.77E-02
83	2.50	3.16E-05	0.	8.52E-10	1.92E-12	4.21E-06	0.	0.	1.61E-02	2.69E-04	3.85E-10	0.	0.	1.65E-02
84	2.40	0.	1.32E-07	0.	5.47E-12	3.36E-07	0.	0.	1.55E-02	2.69E-04	4.35E-10	0.	0.	1.57E-02
85	2.30	0.	2.69E-06	0.	0.	0.	0.	0.	1.49E-02	2.67E-04	4.94E-10	0.	0.	1.48E-02
86	2.20	0.	2.38E-06	0.	0.	0.	0.	0.	1.35E-02	2.66E-04	5.65E-10	0.	0.	1.37E-02
87	2.10	0.	9.30E-06	0.	0.	0.	0.	0.	1.24E-02	2.65E-04	6.50E-10	0.	0.	1.27E-02
88	2.00	0.	7.98E-06	0.	0.	0.	0.	0.	1.11E-02	2.64E-04	7.53E-10	0.	0.	1.14E-02
89	1.90	0.	4.95E-05	0.	0.	0.	0.	0.	9.92E-03	2.46E-04	8.78E-10	0.	0.	1.02E-02
90	1.80	0.	6.86E-05	0.	0.	0.	0.	0.	8.23E-03	2.36E-04	1.03E-09	0.	0.	8.52E-03
91	1.70	0.	5.31E-05	0.	0.	0.	0.	0.	6.65E-03	2.22E-04	1.23E-09	0.	0.	6.93E-03
92	1.60	0.	4.44E-05	0.	0.	0.	0.	0.	5.31E-03	1.88E-04	1.47E-09	0.	0.	5.55E-03
93	1.50	0.	4.54E-05	0.	0.	0.	0.	0.	4.02E-03	8.54E-05	1.79E-09	0.	0.	4.15E-03
94	1.40	0.	7.77E-05	0.	0.	0.	0.	0.	2.99E-03	0.	2.28E-09	0.	0.	3.07E-03
95	1.30	0.	3.53E-05	0.	0.	0.	0.	0.	1.99E-03	0.	2.79E-09	0.	0.	2.62E-03
96	1.20	0.	6.19E-05	0.	0.	0.	0.	0.	1.27E-03	0.	3.93E-09	0.	0.	1.33E-03
97	1.10	0.	2.68E-05	0.	0.	0.	0.	2.34E-05	7.62E-04	0.	4.55E-09	0.	0.	8.13E-04
98	1.00	0.	3.29E-05	0.	0.	0.	0.	4.88E-05	3.86E-04	0.	6.07E-09	0.	0.	4.61E-04
99	0.90	0.	1.92E-05	0.	0.	0.	0.	1.77E-04	1.89E-04	0.	8.39E-09	0.	0.	3.85E-04
100	0.80	0.	8.24E-06	0.	0.	0.	0.	4.77E-04	0.	0.	1.19E-08	0.	0.	4.85E-04
101	0.70	0.	2.42E-06	0.	0.	0.	0.	8.62E-04	0.	0.	1.78E-08	0.	0.	8.65E-04
102	0.60	0.	4.20E-09	0.	0.	0.	0.	1.94E-03	0.	0.	2.84E-08	0.	0.	1.94E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.00E-01	0.	0.	0.	4.95E-05	4.24E-13	0.	0.	2.00E-01
2	10.60	0.	0.	1.41E-01	0.	0.	0.	4.95E-05	4.37E-13	0.	0.	1.41E-01
3	10.50	0.	0.	1.21E-01	0.	0.	0.	4.96E-05	4.49E-13	0.	0.	1.21E-01
4	10.40	0.	0.	9.33E-02	0.	0.	0.	4.97E-05	4.62E-13	0.	0.	9.33E-02
5	10.30	0.	0.	6.26E-02	0.	0.	0.	4.97E-05	4.76E-13	0.	0.	6.26E-02
6	10.20	0.	0.	5.49E-02	0.	0.	0.	4.98E-05	4.90E-13	0.	0.	2.49E-02
7	10.10	0.	0.	4.38E-02	0.	0.	0.	4.98E-05	5.05E-13	0.	0.	4.39E-02
8	10.00	0.	0.	2.70E-02	0.	0.	0.	4.99E-05	5.21E-13	0.	0.	2.70E-02
9	9.90	0.	0.	2.61E-02	0.	0.	0.	4.80E-05	5.37E-13	0.	0.	2.61E-02
10	9.80	0.	0.	1.91E-02	0.	0.	0.	4.81E-05	5.53E-13	0.	0.	1.91E-02
11	9.70	0.	0.	1.18E-02	0.	0.	0.	4.61E-05	5.71E-13	0.	0.	1.18E-02
12	9.60	0.	0.	1.26E-02	0.	0.	0.	4.62E-05	5.89E-13	0.	0.	1.27E-02
13	9.50	0.	9.15E 00	7.41E-03	0.	0.	0.	4.63E-05	6.08E-13	0.	0.	9.16E 00
14	9.40	0.	1.03E 01	5.67E-03	0.	0.	0.	4.69E-05	6.28E-13	0.	0.	1.03E 01
15	9.30	0.	1.15E 01	5.36E-03	0.	0.	0.	4.67E-05	6.48E-13	0.	0.	1.15E 01
16	9.20	0.	1.26E 01	2.73E-03	0.	0.	0.	4.68E-05	6.70E-13	0.	0.	1.26E 01
17	9.10	0.	1.56E 01	3.03E-03	0.	0.	0.	4.70E-05	6.92E-13	0.	0.	1.56E 01
18	9.00	0.	1.68E 01	1.90E-03	0.	0.	0.	4.72E-05	7.16E-13	0.	0.	1.68E 01
19	8.90	0.	2.21E 01	1.48E-03	0.	0.	0.	4.73E-05	7.40E-13	0.	0.	2.21E 01
20	8.80	0.	2.30E 01	1.21E-03	0.	0.	0.	4.75E-05	7.66E-13	0.	0.	2.30E 01
21	8.70	0.	2.19E 01	7.08E-04	0.	0.	0.	4.77E-05	7.92E-13	0.	0.	2.19E 01
22	8.60	0.	2.09E 01	7.14E-04	0.	0.	0.	4.78E-05	8.21E-13	0.	0.	2.09E 01
23	8.50	0.	1.99E 01	4.11E-04	0.	0.	0.	4.80E-05	8.50E-13	0.	0.	1.99E 01
24	8.40	0.	1.90E 01	3.82E-04	0.	0.	0.	4.83E-05	8.81E-13	0.	0.	1.98E 01
25	8.30	0.	1.81E 01	2.23E-04	0.	0.	0.	4.85E-05	9.13E-13	0.	0.	1.81E 01
26	8.20	0.	1.71E 01	2.01E-04	0.	0.	0.	4.88E-05	9.47E-13	0.	0.	1.71E 01
27	8.10	0.	1.62E 01	1.24E-04	0.	0.	0.	4.90E-05	9.83E-13	0.	0.	1.62E 01
28	8.00	0.	1.52E 01	1.08E-04	0.	0.	0.	4.93E-05	1.02E-12	0.	0.	1.52E 01
29	7.90	0.	1.42E 01	6.79E-05	0.	0.	0.	4.95E-05	1.06E-12	0.	0.	1.42E 01
30	7.80	0.	1.33E 01	6.03E-05	0.	0	0.	4.98E-05	1.10E-12	0.	0.	1.33E 01
31	7.70	0.	1.23E 01	3.95E-05	0.	0.	0.	5.00E-05	1.14E-12	0.	0.	1.23E 01
32	7.60	0.	1.13E 01	3.03E-05	0.	1.04E-05	0.	5.03E-05	1.19E-12	0.	0.	1.13E 01
33	7.50	0.	1.03E 01	2.14E-05	0.	2.44E-04	0.	5.05E-05	1.24E-12	0.	0.	1.03E 01
34	7.40	0.	9.32E 00	1.52E-05	0.	5.27E-04	0.	5.08E-05	1.29E-12	0.	0.	9.32E 00
35	7.30	0.	8.37E 00	1.13E-05	0.	2.76E-03	0.	5.11E-05	1.34E-12	0.	0.	8.37E 00
36	7.20	0.	7.47E 00	7.91E-06	0.	1.64E-02	0.	5.14E-05	1.40E-12	0.	0.	7.49E 00
37	7.10	0.	6.58E 00	5.99E-06	0.	10.00E-03	0.	5.18E-05	1.46E-12	0.	0.	6.59E 00
38	7.00	3.13E-02	0.	4.23E-06	0.	9.52E-02	0.	5.22E-05	1.53E-12	0.	0.	1.27E-01
39	6.90	5.20E-02	0.	3.03E-06	0.	6.90E-02	0.	5.26E-05	1.59E-12	0.	0.	1.22E-01
40	6.80	3.90E-02	0.	2.23E-06	0.	1.07E-01	0.	5.31E-05	1.66E-12	0.	0.	1.46E-01
41	6.70	2.40E-02	0.	1.58E-06	0.	3.31E-01	0.	5.35E-05	1.74E-12	0.	0.	3.55E-01
42	6.60	1.27E-02	0.	1.03E-06	0.	1.20E-01	0.	5.39E-05	1.82E-12	0.	0.	1.33E-01
43	6.50	6.12E-03	0.	5.91E-07	0.	1.99E-01	0.	5.43E-05	1.91E-12	0.	0.	2.05E-01
44	6.40	9.45E-03	0.	2.52E-07	6.61E-03	5.54E-01	0.	5.47E-05	2.00E-12	0.	0.	5.71E-01
45	6.30	1.81E-02	0.	8.91E-08	2.27E-02	1.71E-01	0.	5.52E-05	2.09E-12	0.	0.	2.12E-01
46	6.20	4.54E-02	0.	2.90E-08	2.51E-02	2.11E-01	0.	5.56E-05	2.20E-12	0.	0.	2.52E-01
47	6.10	1.47E-01	0.	8.54E-09	5.88E-02	7.71E-01	0.	5.60E-05	2.31E-12	0.	0.	9.77E-01
48	6.00	3.12E-01	0.	1.40E-09	3.48E-02	1.18E-01	0.	5.64E-05	2.43E-12	0.	0.	4.65E-01
49	5.90	4.11E-01	0.	1.08E-10	4.64E-02	1.58E-01	0.	5.64E-05	2.55E-12	0.	0.	6.15E-01
50	5.80	5.01E-01	0.	2.44E-12	5.58E-02	1.79E-01	0.	5.56E-05	2.69E-12	0.	0.	7.35E-01
51	5.70	4.51E-01	0.	0.	4.85E-02	8.62E-02	0.	5.22E-05	2.83E-12	0.	0.	5.86E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.97E-01	0.	0.	0.	2.46E-02	2.79E-01	0.	0.	4.86E-05	2.98E-12	0.	0.	8.08E-01
53	5.50	4.51E-01	0.	0.	0.	3.52E-02	4.11E-01	0.	0.	4.88E-05	3.15E-12	0.	0.	8.98E-01
54	5.40	4.01E-01	0.	0.	0.	2.48E-02	9.90E-02	0.	0.	4.91E-05	3.33E-12	0.	0.	9.25E-01
55	5.30	3.36E-01	0.	0.	0.	2.52E-02	2.96E-01	0.	0.	4.94E-05	3.52E-12	0.	0.	6.57E-01
56	5.20	1.79E-01	0.	0.	0.	2.32E-02	9.71E-02	0.	0.	4.97E-05	3.73E-12	0.	0.	2.99E-01
57	5.10	1.53E-01	0.	0.	0.	1.95E-02	1.27E-01	0.	3.69E-04	5.01E-05	3.95E-12	0.	0.	3.08E-01
58	5.00	1.01E-01	0.	0.	0.	1.42E-02	1.14E-01	0.	3.72E-04	5.05E-05	4.19E-12	0.	0.	2.31E-01
59	4.90	8.34E-02	0.	0.	0.	1.37E-02	6.50E-02	0.	3.75E-04	5.10E-05	4.46E-12	0.	0.	1.63E-01
60	4.80	8.44E-02	0.	0.	0.	1.40E-02	7.03E-02	0.	3.77E-04	5.14E-05	4.74E-12	0.	0.	1.69E-01
61	4.70	7.89E-02	0.	0.	0.	1.15E-02	3.27E-02	0.	3.80E-04	5.18E-05	5.05E-12	0.	0.	1.23E-01
62	4.60	8.02E-02	0.	0.	0.	1.04E-02	3.95E-02	0.	3.83E-04	5.22E-05	5.39E-12	0.	0.	1.31E-01
63	4.50	6.70E-02	0.	7.22E-09	0.	7.49E-03	1.63E-02	0.	3.86E-04	5.26E-05	5.76E-12	0.	0.	9.13E-02
64	4.40	5.60E-02	0.	5.22E-08	0.	6.53E-03	1.73E-02	0.	3.88E-04	5.31E-05	6.16E-12	0.	0.	8.03E-02
65	4.30	4.21E-02	0.	4.64E-08	0.	4.99E-03	9.81E-03	0.	3.93E-04	5.35E-05	6.60E-12	0.	0.	5.34E-02
66	4.20	3.20E-02	0.	4.57E-07	0.	4.55E-03	6.38E-03	0.	3.98E-04	5.39E-05	7.08E-12	0.	0.	4.42E-02
67	4.10	2.60E-02	0.	4.23E-08	0.	3.49E-03	1.57E-03	0.	4.02E-04	5.41E-05	7.61E-12	0.	0.	3.14E-02
68	4.00	1.93E-02	0.	5.80E-07	0.	2.82E-03	9.24E-04	0.	4.05E-04	5.43E-05	8.20E-12	0.	0.	2.35E-02
69	3.90	1.24E-02	0.	3.58E-07	1.24E-12	1.87E-03	5.84E-04	0.	4.09E-04	5.41E-05	8.85E-12	0.	0.	1.55E-02
70	3.80	1.25E-02	0.	2.07E-07	5.07E-11	1.90E-03	0.	0.	4.14E-04	5.39E-05	9.56E-12	0.	0.	1.48E-02
71	3.70	7.85E-03	0.	6.86E-07	8.65E-12	1.03E-03	0.	0.	4.19E-04	5.31E-05	1.04E-11	0.	0.	9.35E-03
72	3.60	5.88E-03	0.	1.04E-07	2.01E-11	1.16E-03	0.	0.	4.25E-04	4.97E-05	1.12E-11	0.	0.	7.51E-03
73	3.50	4.44E-03	0.	3.52E-07	2.60E-10	5.73E-04	0.	0.	4.30E-04	4.55E-05	1.22E-11	0.	0.	5.49E-03
74	3.40	3.04E-03	0.	5.92E-08	1.64E-12	6.37E-04	0.	0.	4.36E-04	2.62E-05	1.34E-11	0.	0.	4.14E-03
75	3.30	2.09E-03	0.	1.14E-07	3.86E-11	3.33E-04	0.	0.	4.39E-04	2.63E-05	1.46E-11	0.	0.	2.89E-03
76	3.20	1.38E-03	0.	2.71E-08	3.67E-10	3.21E-04	0.	0.	4.42E-04	2.63E-05	1.60E-11	0.	0.	2.17E-03
77	3.10	1.04E-03	0.	3.08E-08	2.85E-12	2.14E-04	0.	0.	4.42E-04	2.64E-05	1.74E-11	0.	0.	1.72E-03
78	3.00	7.11E-04	0.	8.77E-09	4.17E-11	1.99E-04	0.	0.	4.37E-04	2.64E-05	1.95E-11	0.	0.	1.33E-03
79	2.90	4.46E-04	0.	6.02E-09	6.39E-11	7.57E-05	0.	0.	4.31E-04	2.65E-05	2.15E-11	0.	0.	9.88E-04
80	2.80	3.79E-04	0.	1.91E-09	3.00E-12	3.06E-05	0.	0.	4.24E-04	2.65E-05	2.39E-11	0.	0.	8.68E-04
81	2.70	1.60E-04	0.	9.87E-10	2.01E-11	8.88E-06	0.	0.	4.16E-04	2.65E-05	2.67E-11	0.	0.	6.11E-04
82	2.60	4.35E-05	0.	4.09E-10	3.13E-12	2.22E-06	0.	0.	4.05E-04	2.65E-05	2.99E-11	0.	0.	4.78E-04
83	2.50	2.39E-06	0.	8.56E-11	9.40E-13	3.68E-07	0.	0.	3.89E-04	2.65E-05	3.36E-11	0.	0.	4.18E-04
84	2.40	0.	1.33E-08	0.	1.54E-12	2.93E-08	0.	0.	3.73E-04	2.65E-05	3.80E-11	0.	0.	3.99E-04
85	2.30	0.	2.01E-07	0.	0.	0.	0.	0.	3.49E-04	2.63E-05	4.32E-11	0.	0.	3.76E-04
86	2.20	0.	2.48E-07	0.	0.	0.	0.	0.	3.24E-04	2.62E-05	4.94E-11	0.	0.	3.51E-04
87	2.10	0.	9.37E-07	0.	0.	0.	0.	0.	2.99E-04	2.61E-05	5.68E-11	0.	0.	3.26E-04
88	2.00	0.	8.04E-07	0.	0.	0.	0.	0.	2.67E-04	2.53E-05	6.58E-11	0.	0.	2.93E-04
89	1.90	0.	4.99E-06	0.	0.	0.	0.	0.	2.39E-04	2.43E-05	7.67E-11	0.	0.	2.68E-04
90	1.80	0.	6.11E-06	0.	0.	0.	0.	0.	1.98E-04	2.32E-05	9.03E-11	0.	0.	2.27E-04
91	1.70	0.	5.36E-06	0.	0.	0.	0.	0.	1.60E-04	2.19E-05	1.07E-10	0.	0.	1.87E-04
92	1.60	0.	4.47E-06	0.	0.	0.	0.	0.	1.28E-04	1.85E-05	1.29E-10	0.	0.	1.51E-04
93	1.50	0.	4.57E-06	0.	0.	0.	0.	0.	9.67E-05	8.42E-06	1.56E-10	0.	0.	1.10E-04
94	1.40	0.	7.83E-06	0.	0.	0.	0.	0.	7.20E-05	0.	1.92E-10	0.	0.	7.90E-05
95	1.30	0.	3.56E-06	0.	0.	0.	0.	0.	4.78E-05	0.	2.40E-10	0.	0.	5.14E-05
96	1.20	0.	6.24E-06	0.	0.	0.	0.	0.	3.06E-05	0.	3.84E-10	0.	0.	3.68E-05
97	1.10	0.	2.70E-06	0.	0.	0.	0.	2.84E-06	1.83E-05	0.	3.98E-10	0.	0.	2.31E-05
98	1.00	0.	3.32E-06	0.	0.	0.	0.	4.27E-06	9.13E-06	0.	5.30E-10	0.	0.	1.47E-05
99	0.90	0.	1.94E-06	0.	0.	0.	0.	1.55E-05	4.55E-06	0.	7.29E-10	0.	0.	2.20E-05
100	0.80	0.	8.30E-07	0.	0.	0.	0.	5.92E-05	0.	0.	1.04E-09	0.	0.	4.00E-05
101	0.70	0.	2.44E-07	0.	0.	0.	0.	7.54E-05	0.	0.	1.56E-09	0.	0.	7.56E-05
102	0.60	0.	6.29E-10	0.	0.	0.	0.	1.69E-04	0.	0.	2.49E-09	0.	0.	1.69E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.03E-02	0.	0.	0.	2.67E-06	2.88E-14	0.	0.	2.03E-02
2	10.60	0.	0.	1.44E-02	0.	0.	0.	2.67E-06	2.97E-14	0.	0.	1.44E-02
3	10.50	0.	0.	1.23E-02	0.	0.	0.	2.67E-06	3.05E-14	0.	0.	1.23E-02
4	10.40	0.	0.	9.49E-03	0.	0.	0.	2.68E-06	3.14E-14	0.	0.	9.49E-03
5	10.30	0.	0.	6.36E-03	0.	0.	0.	2.68E-06	3.24E-14	0.	0.	6.37E-03
6	10.20	0.	0.	5.58E-03	0.	0.	0.	2.68E-06	3.33E-14	0.	0.	5.58E-03
7	10.10	0.	0.	4.46E-03	0.	0.	0.	2.69E-06	3.43E-14	0.	0.	4.46E-03
8	10.00	0.	0.	2.74E-03	0.	0.	0.	2.69E-06	3.54E-14	0.	0.	2.75E-03
9	9.90	0.	0.	2.65E-03	0.	0.	0.	2.70E-06	3.65E-14	0.	0.	2.65E-03
10	9.80	0.	0.	1.94E-03	0.	0.	0.	2.70E-06	3.76E-14	0.	0.	1.95E-03
11	9.70	0.	0.	1.20E-03	0.	0.	0.	2.71E-06	3.88E-14	0.	0.	1.20E-03
12	9.60	0.	0.	1.20E-03	0.	0.	0.	2.71E-06	4.00E-14	0.	0.	1.29E-03
13	9.50	0.	4.17E-01	7.54E-04	0.	0.	0.	2.72E-06	4.13E-14	0.	0.	4.18E-01
14	9.40	0.	4.70E-01	5.77E-04	0.	0.	0.	2.73E-06	4.26E-14	0.	0.	4.70E-01
15	9.30	0.	5.22E-01	5.45E-04	0.	0.	0.	2.74E-06	4.40E-14	0.	0.	5.23E-01
16	9.20	0.	5.75E-01	2.78E-04	0.	0.	0.	2.75E-06	4.55E-14	0.	0.	5.75E-01
17	9.10	0.	7.09E-01	3.08E-04	0.	0.	0.	2.76E-06	4.70E-14	0.	0.	7.09E-01
18	9.00	0.	8.58E-01	1.93E-04	0.	0.	0.	2.77E-06	4.86E-14	0.	0.	8.58E-01
19	8.90	0.	1.01E 00	1.42E-04	0.	0.	0.	2.78E-06	5.03E-14	0.	0.	1.01E 00
20	8.80	0.	1.05E 00	1.23E-04	0.	0.	0.	2.79E-06	5.20E-14	0.	0.	1.05E 00
21	8.70	0.	9.99E-01	7.11E-05	0.	0.	0.	2.80E-06	5.38E-14	0.	0.	9.99E-01
22	8.60	0.	9.51E-01	7.26E-05	0.	0.	0.	2.81E-06	5.57E-14	0.	0.	9.51E-01
23	8.50	0.	9.06E-01	4.18E-05	0.	0.	0.	2.81E-06	5.77E-14	0.	0.	9.06E-01
24	8.40	0.	8.64E-01	3.88E-05	0.	0.	0.	2.83E-06	5.98E-14	0.	0.	8.64E-01
25	8.30	0.	8.24E-01	2.27E-05	0.	0.	0.	2.84E-06	6.20E-14	0.	0.	8.24E-01
26	8.20	0.	7.81E-01	2.04E-05	0.	0.	0.	2.86E-06	6.44E-14	0.	0.	7.81E-01
27	8.10	0.	7.36E-01	1.26E-05	0.	0.	0.	2.87E-06	6.68E-14	0.	0.	7.36E-01
28	8.00	0.	6.91E-01	1.10E-05	0.	0.	0.	2.89E-06	6.93E-14	0.	0.	6.91E-01
29	7.90	0.	6.48E-01	6.91E-06	0.	0.	0.	2.90E-06	7.20E-14	0.	0.	6.48E-01
30	7.80	0.	6.04E-01	6.13E-06	0.	0.	0.	2.92E-06	7.48E-14	0.	0.	6.04E-01
31	7.70	0.	5.59E-01	4.01E-06	0.	0.	0.	2.93E-06	7.78E-14	0.	0.	5.59E-01
32	7.60	0.	5.14E-01	3.08E-06	0.	7.05E-07	0.	2.95E-06	8.09E-14	0.	0.	5.14E-01
33	7.50	0.	4.69E-01	2.18E-06	0.	1.66E-05	0.	2.96E-06	8.42E-14	0.	0.	4.69E-01
34	7.40	0.	4.25E-01	1.56E-06	0.	3.58E-05	0.	2.98E-06	8.77E-14	0.	0.	4.25E-01
35	7.30	0.	3.81E-01	1.15E-06	0.	1.86E-04	0.	3.00E-06	9.14E-14	0.	0.	3.81E-01
36	7.20	0.	3.40E-01	8.05E-07	0.	1.12E-03	0.	3.01E-06	9.52E-14	0.	0.	3.41E-01
37	7.10	0.	3.00E-01	6.09E-07	0.	6.81E-04	0.	3.04E-06	9.93E-14	0.	0.	3.00E-01
38	7.00	1.42E-03	0.	4.30E-07	0.	6.47E-03	0.	3.06E-06	1.04E-13	0.	0.	7.89E-03
39	6.90	2.40E-03	0.	3.89E-07	0.	4.69E-03	0.	3.09E-06	1.08E-13	0.	0.	7.09E-03
40	6.80	1.77E-03	0.	2.27E-07	0.	7.30E-03	0.	3.11E-06	1.13E-13	0.	0.	9.07E-03
41	6.70	1.09E-03	0.	1.58E-07	0.	2.25E-02	0.	3.14E-06	1.18E-13	0.	0.	2.36E-02
42	6.60	5.75E-04	0.	1.05E-07	0.	8.15E-03	0.	3.16E-06	1.24E-13	0.	0.	8.73E-03
43	6.50	2.78E-04	0.	6.01E-08	0.	1.35E-02	0.	3.19E-06	1.30E-13	0.	0.	1.38E-02
44	6.40	4.29E-04	0.	2.57E-08	4.49E-04	3.77E-02	0.	3.21E-06	1.36E-13	0.	0.	3.86E-02
45	6.30	8.22E-04	0.	9.06E-09	1.54E-03	1.17E-02	0.	3.23E-06	1.42E-13	0.	0.	1.41E-02
46	6.20	2.06E-03	0.	2.95E-09	1.71E-03	1.43E-02	0.	3.26E-06	1.49E-13	0.	0.	1.81E-02
47	6.10	6.68E-03	0.	8.69E-10	4.00E-03	5.24E-02	0.	3.28E-06	1.57E-13	0.	0.	6.31E-02
48	6.00	1.42E-02	0.	1.62E-10	2.37E-03	7.99E-03	0.	3.31E-06	1.65E-13	0.	0.	2.46E-02
49	5.90	1.87E-02	0.	1.10E-11	3.15E-03	1.07E-02	0.	3.31E-06	1.73E-13	0.	0.	3.25E-02
50	5.80	2.27E-02	0.	2.48E-13	3.79E-03	1.21E-02	0.	3.26E-06	1.82E-13	0.	0.	3.86E-02
51	5.70	2.05E-02	0.	0.	3.29E-03	5.85E-03	0.	3.06E-06	1.92E-13	0.	0.	2.96E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.26E-02	0.	0.	0.	1.67E-03	1.89E-02	0.	0.	2.85E-06	2.03E-13	0.	0.	4.32E-02
53	5.50	2.09E-02	0.	0.	0.	2.39E-03	2.80E-02	0.	0.	2.86E-06	2.14E-13	0.	0.	5.09E-02
54	5.40	1.82E-02	0.	0.	0.	1.68E-03	6.73E-03	0.	0.	2.88E-06	2.26E-13	0.	0.	2.66E-02
55	5.30	1.53E-02	0.	0.	0.	1.71E-03	2.01E-02	0.	0.	2.90E-06	2.39E-13	0.	0.	3.71E-02
56	5.20	8.13E-03	0.	0.	0.	1.58E-03	6.60E-03	0.	0.	2.91E-06	2.5 E-13	0.	0.	1.63E-02
57	5.10	6.93E-03	0	0.	0.	1.32E-03	8.66E-03	0.	5.35E-06	2.94E-06	2.6.E-13	0.	0.	1.69E-02
58	5.00	4.56E-03	0.	0.	0.	9.63E-04	7.90E-03	0.	5.39E-06	2.96E-06	2.85E-13	0.	0.	1.34E-02
59	4.90	3.79E-03	0.	0.	0.	9.28E-04	4.42E-03	0.	5.43E-06	2.99E-06	3.03E-13	0.	0.	9.14E-03
60	4.80	3.83E-03	0.	0.	0.	9.49E-04	4.78E-03	0.	5.47E-06	3.01E-06	3.22E-13	0.	0.	9.56E-03
61	4.70	3.58E-03	0.	0.	0.	7.79E-04	2.22E-03	0.	5.51E-06	3.04E-06	3.43E-13	0.	0.	6.68E-03
62	4.60	3.64E-03	0.	0.	0.	7.07E-04	2.68E-03	0.	5.55E-06	3.06E-06	3.66E-13	0.	0.	7.04E-03
63	4.50	3.04E-03	0.	7.34E-10	0.	5.09E-04	1.11E-03	0.	5.59E-06	3.09E-06	3.91E-13	0.	0.	4.67E-03
64	4.40	2.54E-03	0.	5.31E-09	0.	4.44E-04	1.18E-03	0.	5.62E-06	3.11E-06	4.18E-13	0.	0.	4.17E-03
65	4.30	1.91E-03	0.	4.72E-09	0.	3.39E-04	1.95E-04	0.	5.69E-06	3.14E-06	4.48E-13	0.	0.	2.65E-03
66	4.20	1.49E-03	0.	4.64E-08	0.	3.09E-04	4.34E-04	0.	5.76E-06	3.16E-06	4.81E-13	0.	0.	2.24E-03
67	4.10	1.18E-03	0.	4.30E-09	0.	2.34E-04	1.06E-04	0.	5.82E-06	3.17E-06	5.17E-13	0.	0.	1.53E-03
68	4.00	8.77E-04	0.	5.90E-08	0.	1.92E-04	6.28E-05	0.	5.87E-06	3.19E-06	5.57E-13	0.	0.	1.14E-03
69	3.90	5.73E-04	0.	3.56E-08	4.60E-13	1.27E-04	3.97E-05	0.	5.92E-06	3.17E-06	6.01E-13	0.	0.	7.49E-04
70	3.80	5.65E-04	0.	2.10E-08	1.87E-11	1.29E-04	0.	0.	5.99E-06	3.16E-06	6.50E-13	0.	0.	7.03E-04
71	3.70	3.56E-04	0.	6.97E-08	3.20E-12	7.01E-05	0.	0.	6.07E-06	3.11E-06	7.04E-13	0.	0.	4.36E-04
72	3.60	2.67E-04	0.	1.09E-08	7.45E-12	7.91E-05	0.	0.	6.15E-06	2.91E-06	7.64E-13	0.	0.	3.55E-04
73	3.50	2.01E-04	0.	3.58E-08	9.63E-11	3.89E-05	0.	0.	6.23E-06	2.67E-06	8.32E-13	0.	0.	2.49E-04
74	3.40	1.38E-04	0.	6.02E-09	6.05E-13	4.33E-05	0.	0.	6.31E-06	1.54E-06	9.07E-13	0.	0.	1.89E-04
75	3.30	9.48E-05	0.	1.16E-08	1.43E-11	2.26E-05	0.	0.	6.36E-06	1.54E-06	9.93E-13	0.	0.	1.25E-04
76	3.20	6.29E-05	0.	2.75E-09	1.35E-10	2.10E-05	0.	0.	6.40E-06	1.54E-06	1.09E-12	0.	0.	9.26E-05
77	3.10	4.70E-05	0.	3.05E-09	1.05E-12	1.46E-05	0.	0.	6.41E-06	1.55E-06	1.20E-12	0.	0.	6.95E-05
78	3.00	3.23E-05	0.	3.92E-10	1.54E-11	1.08E-05	0.	0.	6.33E-06	1.55E-06	1.32E-12	0.	0.	5.09E-05
79	2.90	2.03E-05	0.	6.12E-10	2.36E-11	3.15E-06	0.	0.	6.25E-06	1.55E-06	1.46E-12	0.	0.	3.32E-05
80	2.80	1.72E-05	0.	1.94E-10	1.11E-12	2.08E-06	0.	0.	6.14E-06	1.56E-06	1.63E-12	0.	0.	2.78E-05
81	2.70	7.25E-06	0.	10.08E-11	7.44E-12	6.04E-07	0.	0.	6.02E-06	1.56E-06	1.81E-12	0.	0.	1.54E-05
82	2.60	1.97E-06	0.	4.16E-11	1.16E-12	1.51E-07	0.	0.	5.87E-06	1.56E-06	2.03E-12	0.	0.	9.55E-06
83	2.50	1.09E-07	0.	8.74E-12	2.00E-13	2.50E-08	0.	0.	5.63E-06	1.56E-06	2.28E-12	0.	0.	7.32E-06
84	2.40	0.	1.35E-09	0.	5.69E-13	1.99E-09	0.	0.	5.39E-06	1.56E-06	2.58E-12	0.	0.	4.95E-06
85	2.30	0.	2.05E-08	0.	0.	0.	0.	0.	5.05E-06	1.54E-06	2.93E-12	0.	0.	6.62E-06
86	2.20	0.	2.44E-08	0.	0.	0.	0.	0.	4.70E-06	1.54E-06	3.35E-12	0.	0.	6.26E-06
87	2.10	0.	9.53E-08	0.	0.	0.	0.	0.	4.32E-06	1.53E-06	3.86E-12	0.	0.	5.95E-06
88	2.00	0.	8.18E-08	0.	0.	0.	0.	0.	3.87E-06	1.48E-06	4.47E-12	0.	0.	5.43E-06
89	1.90	0.	5.07E-07	0.	0.	0.	0.	0.	3.46E-06	1.42E-06	5.21E-12	0.	0.	5.39E-06
90	1.80	0.	6.21E-07	0.	0.	0.	0.	0.	2.87E-06	1.36E-06	6.13E-12	0.	0.	4.85E-06
91	1.70	0.	5.45E-07	0.	0.	0.	0.	0.	2.32E-06	1.28E-06	7.28E-12	0.	0.	4.15E-06
92	1.60	0.	4.55E-07	0.	0.	0.	0.	0.	1.85E-06	1.09E-06	8.74E-12	0.	0.	3.39E-06
93	1.50	0.	4.65E-07	0.	0.	0.	0.	0.	1.40E-06	4.94E-07	1.06E-11	0.	0.	2.36E-06
94	1.40	0.	7.97E-07	0.	0.	0.	0.	0.	1.04E-06	0.	1.31E-11	0.	0.	1.84E-06
95	1.30	0.	3.62E-07	0.	0.	0.	0.	0.	6.92E-07	0.	1.63E-11	0.	0.	1.05E-06
96	1.20	0.	6.35E-07	0.	0.	0.	0.	0.	4.42E-07	0.	2.08E-11	0.	0.	1.08E-06
97	1.10	0.	2.74E-07	0.	0.	0.	0.	1.39E-07	2.66E-07	0.	2.70E-11	0.	0.	6.79E-07
98	1.00	0.	3.37E-07	0.	0.	0.	0.	2.90E-07	1.32E-07	0.	3.60E-11	0.	0.	7.60E-07
99	0.90	0.	1.97E-07	0.	0.	0.	0.	1.05E-06	6.99E-08	0.	4.96E-11	0.	0.	1.31E-06
100	0.80	0.	8.44E-08	0.	0.	0.	0.	4.02E-06	0.	0.	7.07E-11	0.	0.	4.10E-06
101	0.70	0.	2.48E-08	0.	0.	0.	0.	5.12E-06	0.	0.	1.06E-10	0.	0.	5.15E-06
102	0.60	0.	6.36E-11	0.	0.	0.	0.	1.15E-05	0.	0.	1.69E-10	0.	0.	1.15E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.07E-03	0.	0.	0.	8.92E-08	1.29E-15	0.	0.	2.07E-03
2	10.60	0.	0.	1.46E-03	0.	0.	0.	8.83E-08	1.33E-15	0.	0.	1.46E-03
3	10.50	0.	0.	1.25E-03	0.	0.	0.	8.84E-08	1.37E-15	0.	0.	1.25E-03
4	10.40	0.	0.	9.67E-04	0.	0.	0.	8.85E-08	1.41E-15	0.	0.	9.67E-04
5	10.30	0.	0.	6.49E-04	0.	0.	0.	8.86E-08	1.45E-15	0.	0.	6.49E-04
6	10.20	0.	0.	5.69E-04	0.	0.	0.	8.87E-08	1.49E-15	0.	0.	5.69E-04
7	10.10	0.	0.	4.55E-04	0.	0.	0.	8.88E-08	1.54E-15	0.	0.	4.55E-04
8	10.00	0.	0.	2.88E-04	0.	0.	0.	8.89E-08	1.58E-15	0.	0.	2.88E-04
9	9.90	0.	0.	2.78E-04	0.	0.	0.	8.11E-08	1.63E-15	0.	0.	2.78E-04
10	9.80	0.	0.	1.98E-04	0.	0.	0.	8.12E-08	1.68E-15	0.	0.	1.98E-04
11	9.70	0.	0.	1.22E-04	0.	0.	0.	8.14E-08	1.74E-15	0.	0.	1.22E-04
12	9.60	0.	0.	1.31E-04	0.	0.	0.	8.15E-08	1.79E-15	0.	0.	1.31E-04
13	9.50	0.	8.22E-03	7.69E-05	0.	0.	0.	8.17E-08	1.85E-15	0.	0.	8.29E-03
14	9.40	0.	9.25E-03	5.68E-05	0.	0.	0.	8.28E-08	1.91E-15	0.	0.	9.31E-03
15	9.30	0.	1.03E-02	5.55E-05	0.	0.	0.	8.28E-08	1.97E-15	0.	0.	1.03E-02
16	9.20	0.	1.13E-02	2.83E-05	0.	0.	0.	8.26E-08	2.04E-15	0.	0.	1.14E-02
17	9.10	0.	1.40E-02	3.14E-05	0.	0.	0.	8.29E-08	2.11E-15	0.	0.	1.40E-02
18	9.00	0.	1.69E-02	1.97E-05	0.	0.	0.	8.32E-08	2.18E-15	0.	0.	1.69E-02
19	8.90	0.	1.99E-02	1.45E-05	0.	0.	0.	8.35E-08	2.25E-15	0.	0.	1.99E-02
20	8.80	0.	2.06E-02	1.29E-05	0.	0.	0.	8.38E-08	2.33E-15	0.	0.	2.06E-02
21	8.70	0.	1.97E-02	7.25E-06	0.	0.	0.	8.41E-08	2.41E-15	0.	0.	1.97E-02
22	8.60	0.	1.87E-02	7.40E-06	0.	0.	0.	8.44E-08	2.50E-15	0.	0.	1.87E-02
23	8.50	0.	1.78E-02	4.26E-06	0.	0.	0.	8.47E-08	2.58E-15	0.	0.	1.79E-02
24	8.40	0.	1.70E-02	3.96E-06	0.	0.	0.	8.51E-08	2.68E-15	0.	0.	1.70E-02
25	8.30	0.	1.62E-02	2.31E-06	0.	0.	0.	8.55E-08	2.78E-15	0.	0.	1.62E-02
26	8.20	0.	1.54E-02	2.08E-06	0.	0.	0.	8.60E-08	2.88E-15	0.	0.	1.54E-02
27	8.10	0.	1.45E-02	1.29E-06	0.	0.	0.	8.64E-08	2.99E-15	0.	0.	1.45E-02
28	8.00	0.	1.36E-02	1.12E-06	0.	0.	0.	8.69E-08	3.10E-15	0.	0.	1.36E-02
29	7.90	0.	1.28E-02	7.84E-07	0.	0.	0.	8.73E-08	3.22E-15	0.	0.	1.28E-02
30	7.80	0.	1.19E-02	6.25E-07	0.	0.	0.	8.78E-08	3.35E-15	0.	0.	1.19E-02
31	7.70	0.	1.10E-02	4.09E-07	0.	0.	0.	8.82E-08	3.48E-15	0.	0.	1.10E-02
32	7.60	0.	1.01E-02	3.14E-07	0.	3.16E-08	0.	8.87E-08	3.62E-15	0.	0.	1.01E-02
33	7.50	0.	9.24E-03	2.22E-07	0.	7.44E-07	0.	8.91E-08	3.77E-15	0.	0.	9.24E-03
34	7.40	0.	8.37E-03	1.59E-07	0.	1.60E-06	0.	8.96E-08	3.93E-15	0.	0.	8.37E-03
35	7.30	0.	7.51E-03	1.17E-07	0.	8.41E-06	0.	9.01E-08	4.09E-15	0.	0.	7.52E-03
36	7.20	0.	6.71E-03	8.21E-08	0.	5.01E-05	0.	9.06E-08	4.26E-15	0.	0.	6.76E-03
37	7.10	0.	5.91E-03	6.21E-08	0.	3.05E-05	0.	9.13E-08	4.45E-15	0.	0.	5.94E-03
38	7.00	2.80E-05	0.	4.39E-08	0.	2.90E-04	0.	9.21E-08	4.64E-15	0.	0.	3.18E-04
39	6.90	4.73E-05	0.	3.15E-08	0.	2.10E-04	0.	9.28E-08	4.85E-15	0.	0.	2.56E-04
40	6.80	3.50E-05	0.	2.31E-08	0.	3.27E-04	0.	9.36E-08	5.06E-15	0.	0.	3.62E-04
41	6.70	2.15E-05	0.	1.56E-08	0.	1.01E-03	0.	9.43E-08	5.30E-15	0.	0.	1.03E-03
42	6.60	1.13E-05	0.	1.07E-08	0.	3.65E-04	0.	9.51E-08	5.54E-15	0.	0.	3.77E-04
43	6.50	5.48E-06	0.	6.13E-09	0.	6.86E-04	0.	9.58E-08	5.80E-15	0.	0.	6.12E-04
44	6.40	8.46E-06	0.	2.62E-09	2.01E-05	1.69E-03	0.	9.65E-08	6.08E-15	0.	0.	1.72E-03
45	6.30	1.62E-05	0.	9.24E-10	6.91E-05	5.23E-04	0.	9.73E-08	6.37E-15	0.	0.	6.08E-04
46	6.20	4.06E-05	0.	3.01E-10	7.66E-05	6.43E-04	0.	9.80E-08	6.69E-15	0.	0.	7.68E-04
47	6.10	1.32E-04	0.	8.86E-11	1.79E-04	2.35E-03	0.	9.88E-08	7.02E-15	0.	0.	2.66E-03
48	6.00	2.80E-04	0.	1.66E-11	1.06E-04	3.58E-04	0.	9.95E-08	7.38E-15	0.	0.	7.45E-04
49	5.90	3.68E-04	0.	1.12E-12	1.41E-04	4.80E-04	0.	9.95E-08	7.76E-15	0.	0.	9.90E-04
50	5.80	4.48E-04	0.	2.53E-14	1.70E-04	5.44E-04	0.	9.10E-08	8.17E-15	0.	0.	1.16E-03
51	5.70	4.04E-04	0.	0.	1.48E-04	2.63E-04	0.	9.21E-08	8.61E-15	0.	0.	8.14E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.46E-04	0.	0.	0.	7.50E-05	8.49E-04	0.	0.	8.56E-08	9.08E-15	0.	0.	1.37E-03
53	5.50	4.04E-04	0.	0.	0.	1.07E-04	1.25E-03	0.	0.	8.61E-08	9.58E-15	0.	0.	1.76E-03
54	5.40	3.59E-04	0.	0.	0.	7.55E-05	3.02E-04	0.	0.	8.65E-08	1.01E-14	0.	0.	7.36E-04
55	5.30	3.01E-04	0.	0.	0.	7.67E-05	9.02E-04	0.	0.	8.71E-08	1.07E-14	0.	0.	1.20E-03
56	5.20	1.68E-04	0.	0.	0.	7.08E-05	2.96E-04	0.	0.	8.76E-08	1.13E-14	0.	0.	5.27E-04
57	5.10	1.37E-04	0.	0.	0.	5.93E-05	3.80E-04	0.	3.37E-08	8.84E-08	1.20E-14	0.	0.	5.85E-04
58	5.00	9.03E-05	0.	0.	0.	4.32E-05	3.54E-04	0.	3.39E-08	8.91E-08	1.28E-14	0.	0.	4.88E-04
59	4.90	7.47E-05	0.	0.	0.	4.16E-05	1.98E-04	0.	3.42E-08	8.99E-08	1.36E-14	0.	0.	3.14E-04
60	4.80	7.56E-05	0.	0.	0.	4.25E-05	2.14E-04	0.	3.44E-08	9.06E-08	1.44E-14	0.	0.	3.32E-04
61	4.70	7.06E-05	0.	0.	0.	3.49E-05	9.98E-05	0.	3.47E-08	9.13E-08	1.54E-14	0.	0.	2.06E-04
62	4.60	7.18E-05	0.	0.	0.	3.17E-05	1.20E-04	0.	3.49E-08	9.21E-08	1.64E-14	0.	0.	2.24E-04
63	4.50	6.88E-05	0.	7.48E-11	0.	2.28E-05	4.98E-05	0.	3.51E-08	9.28E-08	1.75E-14	0.	0.	1.33E-04
64	4.40	5.82E-05	0.	5.41E-10	0.	1.99E-05	5.28E-05	0.	3.54E-08	9.36E-08	1.87E-14	0.	0.	1.23E-04
65	4.30	3.77E-05	0.	4.81E-10	0.	1.52E-05	1.77E-05	0.	3.58E-08	9.43E-08	2.01E-14	0.	0.	7.08E-05
66	4.20	2.94E-05	0.	4.73E-09	0.	1.39E-05	1.95E-05	0.	3.62E-08	9.51E-08	2.16E-14	0.	0.	6.29E-05
67	4.10	2.33E-05	0.	4.39E-10	0.	1.05E-05	4.77E-06	0.	3.67E-08	9.54E-08	2.32E-14	0.	0.	3.87E-05
68	4.00	1.73E-05	0.	6.01E-09	0.	8.99E-06	2.82E-06	0.	3.70E-08	9.58E-08	2.49E-14	0.	0.	2.98E-05
69	3.90	1.13E-05	0.	3.63E-09	2.19E-13	5.71E-06	1.78E-06	0.	3.73E-08	9.54E-08	2.69E-14	0.	0.	1.89E-05
70	3.80	1.12E-05	0.	2.14E-09	8.92E-12	5.78E-06	0.	0.	3.77E-08	9.51E-08	2.91E-14	0.	0.	1.71E-05
71	3.70	7.03E-06	0.	7.11E-09	1.52E-12	3.15E-06	0.	0.	3.82E-08	9.36E-08	3.15E-14	0.	0.	1.03E-05
72	3.60	5.26E-06	0.	1.08E-09	3.54E-12	3.59E-06	0.	0.	3.87E-08	8.76E-08	3.42E-14	0.	0.	8.94E-06
73	3.50	3.98E-06	0.	3.69E-09	4.58E-11	1.75E-06	0.	0.	3.92E-08	8.02E-08	3.72E-14	0.	0.	5.84E-06
74	3.40	2.73E-06	0.	6.14E-10	2.88E-13	1.94E-06	0.	0.	3.97E-08	4.63E-08	4.06E-14	0.	0.	4.75E-06
75	3.30	1.87E-06	0.	1.18E-09	6.79E-12	1.01E-06	0.	0.	4.00E-08	4.63E-08	4.44E-14	0.	0.	2.97E-06
76	3.20	1.24E-06	0.	2.80E-10	6.44E-11	9.77E-07	0.	0.	4.03E-08	4.64E-08	4.88E-14	0.	0.	2.38E-06
77	3.10	9.28E-07	0.	3.11E-10	5.01E-13	6.53E-07	0.	0.	4.03E-08	4.65E-08	5.36E-14	0.	0.	1.67E-06
78	3.00	6.37E-07	0.	9.09E-11	7.34E-12	4.83E-07	0.	0.	3.98E-08	4.66E-08	5.92E-14	0.	0.	1.21E-06
79	2.90	4.00E-07	0.	6.24E-11	1.12E-11	2.31E-07	0.	0.	3.93E-08	4.67E-08	6.55E-14	0.	0.	7.17E-07
80	2.80	3.39E-07	0.	1.98E-11	5.27E-13	9.33E-08	0.	0.	3.86E-08	4.68E-08	7.28E-14	0.	0.	5.18E-07
81	2.70	1.43E-07	0.	1.02E-11	3.54E-12	2.71E-08	0.	0.	3.79E-08	4.68E-08	8.12E-14	0.	0.	2.55E-07
82	2.60	3.89E-08	0.	4.24E-12	5.51E-13	6.75E-09	0.	0.	3.69E-08	4.68E-08	9.10E-14	0.	0.	1.29E-07
83	2.50	2.14E-09	0.	8.91E-13	9.49E-14	1.12E-09	0.	0.	3.54E-08	4.86E-08	1.02E-13	0.	0.	8.55E-08
84	2.40	0.	1.38E-10	0.	2.71E-13	8.94E-11	0.	0.	3.39E-08	4.68E-08	1.16E-13	0.	0.	8.10E-08
85	2.30	0.	2.09E-09	0.	0.	0.	0.	0.	3.18E-08	4.84E-08	1.31E-13	0.	0.	8.03E-08
86	2.20	0.	2.49E-09	0.	0.	0.	0.	0.	2.96E-08	4.62E-08	1.50E-13	0.	0.	7.83E-08
87	2.10	0.	9.72E-09	0.	0.	0.	0.	0.	2.72E-08	4.60E-08	1.73E-13	0.	0.	8.38E-08
88	2.00	0.	8.34E-09	0.	0.	0.	0.	0.	2.43E-08	4.46E-08	2.00E-13	0.	0.	7.72E-08
89	1.90	0.	5.17E-08	0.	0.	0.	0.	0.	2.17E-08	4.29E-08	2.33E-13	0.	0.	1.16E-07
90	1.80	0.	6.33E-08	0.	0.	0.	0.	0.	1.80E-08	4.10E-08	2.75E-13	0.	0.	1.22E-07
91	1.70	0.	5.55E-08	0.	0.	0.	0.	0.	1.46E-08	3.86E-08	3.26E-13	0.	0.	1.09E-07
92	1.60	0.	4.64E-08	0.	0.	0.	0.	0.	1.16E-08	3.27E-08	3.91E-13	0.	0.	9.07E-08
93	1.50	0.	4.74E-08	0.	0.	0.	0.	0.	8.81E-09	1.48E-08	4.75E-13	0.	0.	7.11E-08
94	1.40	0.	8.12E-08	0.	0.	0.	0.	0.	6.56E-09	0.	5.85E-13	0.	0.	8.78E-08
95	1.30	0.	3.69E-08	0.	0.	0.	0.	0.	4.36E-09	0.	7.31E-13	0.	0.	4.12E-08
96	1.20	0.	6.47E-08	0.	0.	0.	0.	0.	2.78E-09	0.	9.80E-13	0.	0.	6.75E-08
97	1.10	0.	2.80E-08	0.	0.	0.	0.	6.23E-09	1.67E-09	0.	1.21E-12	0.	0.	3.49E-08
98	1.00	0.	3.44E-08	0.	0.	0.	0.	1.30E-08	8.33E-10	0.	1.61E-12	0.	0.	4.82E-08
99	0.90	0.	2.01E-08	0.	0.	0.	0.	4.71E-08	4.15E-10	0.	2.22E-12	0.	0.	6.76E-08
100	0.80	0.	8.61E-09	0.	0.	0.	0.	1.80E-07	0.	0.	3.17E-12	0.	0.	1.89E-07
101	0.70	0.	2.93E-09	0.	0.	0.	0.	7.30E-07	0.	0.	4.74E-12	0.	0.	2.32E-07
102	0.60	0.	6.48E-12	0.	0.	0.	0.	9.16E-07	0.	0.	7.56E-12	0.	0.	9.16E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.08E-04	0.	0.	0.	1.62E-09	4.45E-17	0.	0.	2.08E-04
2	10.60	0.	0.	1.47E-04	0.	0.	0.	1.63E-09	4.58E-17	0.	0.	1.47E-04
3	10.50	0.	0.	1.26E-04	0.	0.	0.	1.63E-09	4.72E-17	0.	0.	1.26E-04
4	10.40	0.	0.	9.72E-05	0.	0.	0.	1.63E-09	4.85E-17	0.	0.	9.72E-05
5	10.30	0.	0.	6.52E-05	0.	0.	0.	1.63E-09	5.00E-17	0.	0.	6.52E-05
6	10.20	0.	0.	5.72E-05	0.	0.	0.	1.64E-09	5.15E-17	0.	0.	5.72E-05
7	10.10	0.	0.	4.57E-05	0.	0.	0.	1.64E-09	5.30E-17	0.	0.	4.57E-05
8	10.00	0.	0.	2.81E-05	0.	0.	0.	1.64E-09	5.44E-17	0.	0.	2.81E-05
9	9.90	0.	0.	2.72E-05	0.	0.	0.	1.64E-09	5.63E-17	0.	0.	2.72E-05
10	9.80	0.	0.	1.99E-05	0.	0.	0.	1.65E-09	5.81E-17	0.	0.	1.99E-05
11	9.70	0.	0.	1.23E-05	0.	0.	0.	1.65E-09	5.99E-17	0.	0.	1.23E-05
12	9.60	0.	0.	1.32E-05	0.	0.	0.	1.65E-09	6.18E-17	0.	0.	1.32E-05
13	9.50	0.	9.75E-05	7.72E-06	0.	0.	0.	1.65E-09	6.38E-17	0.	0.	1.05E-04
14	9.40	0.	1.10E-04	5.91E-06	0.	0.	0.	1.66E-09	6.59E-17	0.	0.	1.16E-04
15	9.30	0.	1.22E-04	5.58E-06	0.	0.	0.	1.67E-09	6.80E-17	0.	0.	1.28E-04
16	9.20	0.	1.35E-04	2.84E-06	0.	0.	0.	1.67E-09	7.03E-17	0.	0.	1.37E-04
17	9.10	0.	1.64E-04	3.15E-06	0.	0.	0.	1.68E-09	7.26E-17	0.	0.	1.69E-04
18	9.00	0.	2.01E-04	1.98E-06	0.	0.	0.	1.69E-09	7.51E-17	0.	0.	2.03E-04
19	8.90	0.	2.36E-04	1.46E-06	0.	0.	0.	1.69E-09	7.77E-17	0.	0.	2.37E-04
20	8.80	0.	2.45E-04	1.26E-06	0.	0.	0.	1.70E-09	8.03E-17	0.	0.	2.46E-04
21	8.70	0.	2.34E-04	7.29E-07	0.	0.	0.	1.70E-09	8.32E-17	0.	0.	2.34E-04
22	8.60	0.	2.23E-04	7.44E-07	0.	0.	0.	1.71E-09	8.61E-17	0.	0.	2.23E-04
23	8.50	0.	2.12E-04	4.28E-07	0.	0.	0.	1.72E-09	8.92E-17	0.	0.	2.12E-04
24	8.40	0.	2.02E-04	3.95E-07	0.	0.	0.	1.72E-09	9.24E-17	0.	0.	2.03E-04
25	8.30	0.	1.93E-04	2.32E-07	0.	0.	0.	1.73E-09	9.58E-17	0.	0.	1.93E-04
26	8.20	0.	1.83E-04	2.09E-07	0.	0.	0.	1.74E-09	9.94E-17	0.	0.	1.83E-04
27	8.10	0.	1.72E-04	1.30E-07	0.	0.	0.	1.75E-09	1.03E-16	0.	0.	1.72E-04
28	8.00	0.	1.62E-04	1.12E-07	0.	0.	0.	1.76E-09	1.07E-16	0.	0.	1.62E-04
29	7.90	0.	1.52E-04	7.08E-08	0.	0.	0.	1.77E-09	1.11E-16	0.	0.	1.52E-04
30	7.80	0.	1.41E-04	6.28E-08	0.	0.	0.	1.78E-09	1.16E-16	0.	0.	1.41E-04
31	7.70	0.	1.31E-04	4.11E-08	0.	0.	0.	1.79E-09	1.20E-16	0.	0.	1.31E-04
32	7.60	0.	1.20E-04	3.19E-08	0.	1.09E-09	0.	1.80E-09	1.25E-16	0.	0.	1.20E-04
33	7.50	0.	1.10E-04	2.23E-08	0.	2.57E-08	0.	1.81E-09	1.30E-16	0.	0.	1.10E-04
34	7.40	0.	9.94E-05	1.68E-08	0.	5.54E-08	0.	1.82E-09	1.35E-16	0.	0.	9.95E-05
35	7.30	0.	8.92E-05	1.18E-08	0.	2.90E-07	0.	1.83E-09	1.41E-16	0.	0.	8.95E-05
36	7.20	0.	7.94E-05	8.25E-09	0.	1.73E-06	0.	1.84E-09	1.47E-16	0.	0.	8.14E-05
37	7.10	0.	7.01E-05	6.24E-09	0.	1.05E-06	0.	1.85E-09	1.53E-16	0.	0.	7.12E-05
38	7.00	3.32E-07	0.	4.41E-09	0.	1.00E-05	0.	1.87E-09	1.60E-16	0.	0.	1.03E-05
39	6.90	5.61E-07	0.	3.16E-09	0.	7.25E-06	0.	1.88E-09	1.67E-16	0.	0.	7.82E-06
40	6.80	4.14E-07	0.	2.32E-09	0.	1.13E-05	0.	1.90E-09	1.75E-16	0.	0.	1.17E-05
41	6.70	2.54E-07	0.	1.57E-09	0.	3.48E-05	0.	1.91E-09	1.83E-16	0.	0.	3.58E-05
42	6.60	1.34E-07	0.	1.08E-09	0.	1.26E-05	0.	1.93E-09	1.91E-16	0.	0.	1.28E-05
43	6.50	6.49E-08	0.	6.16E-10	0.	2.09E-05	0.	1.94E-09	2.00E-16	0.	0.	2.10E-05
44	6.40	1.00E-07	0.	2.68E-10	6.95E-07	5.83E-05	0.	1.96E-09	2.10E-16	0.	0.	5.91E-05
45	6.30	1.92E-07	0.	9.28E-11	2.39E-06	1.80E-05	0.	1.97E-09	2.20E-16	0.	0.	2.00E-05
46	6.20	4.82E-07	0.	3.03E-11	2.64E-06	2.22E-05	0.	1.99E-09	2.31E-16	0.	0.	2.53E-05
47	6.10	1.56E-06	0.	8.90E-12	6.19E-06	8.11E-05	0.	2.00E-09	2.42E-16	0.	0.	8.88E-05
48	6.00	3.31E-06	0.	1.66E-12	3.66E-06	1.24E-05	0.	2.02E-09	2.55E-16	0.	0.	1.93E-05
49	5.90	4.36E-06	0.	1.13E-13	4.88E-06	1.64E-05	0.	2.02E-09	2.68E-16	0.	0.	2.59E-05
50	5.80	5.31E-06	0.	2.54E-15	5.87E-06	1.84E-05	0.	1.99E-09	2.82E-16	0.	0.	3.08E-05
51	5.70	4.78E-06	0.	0.	5.10E-06	9.04E-06	0.	1.87E-09	2.97E-16	0.	0.	1.98E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.28E-06	0.	0.	0.	2.59E-06	2.93E-05	0.	0.	1.73E-09	3.13E-16	0.	0.	3.72E-05
53	5.50	4.79E-06	0.	0.	0.	3.71E-06	4.33E-05	0.	0.	1.74E-09	3.31E-16	0.	0.	5.18E-05
54	5.40	4.26E-06	0.	0.	0.	2.60E-06	1.04E-05	0.	0.	1.75E-09	3.49E-16	0.	0.	1.73E-05
55	5.30	3.67E-06	0.	0.	0.	2.65E-06	3.11E-05	0.	0.	1.76E-09	3.69E-16	0.	0.	3.74E-05
56	5.20	1.90E-06	0.	0.	0.	2.44E-06	1.02E-05	0.	0.	1.78E-09	3.91E-16	0.	0.	1.46E-05
57	5.10	1.62E-06	0.	0.	0.	2.05E-06	1.34E-05	0.	1.26E-10	1.79E-09	4.15E-16	0.	0.	1.70E-05
58	5.00	1.07E-06	0.	0.	0.	1.49E-06	1.22E-05	0.	1.27E-10	1.81E-09	4.40E-16	0.	0.	1.48E-05
59	4.90	8.85E-07	0.	0.	0.	7.44E-06	6.84E-06	0.	1.28E-10	1.82E-09	4.68E-16	0.	0.	9.16E-06
60	4.80	8.96E-07	0.	0.	0.	1.47E-06	7.39E-06	0.	1.29E-10	1.84E-09	4.98E-16	0.	0.	9.76E-06
61	4.70	6.37E-07	0.	0.	0.	1.21E-06	3.44E-06	0.	1.30E-10	1.85E-09	5.30E-16	0.	0.	5.49E-06
62	4.60	5.51E-07	0.	0.	0.	1.09E-06	4.15E-06	0.	1.31E-10	1.87E-09	5.66E-16	0.	0.	6.10E-06
63	4.50	7.11E-07	0.	7.52E-12	0.	7.87E-07	1.72E-06	0.	1.32E-10	1.88E-09	6.04E-16	0.	0.	3.22E-06
64	4.40	5.95E-07	0.	5.44E-11	0.	6.87E-07	1.82E-06	0.	1.33E-10	1.90E-09	6.46E-16	0.	0.	3.11E-06
65	4.30	4.47E-07	0.	4.83E-11	0.	5.25E-07	6.11E-07	0.	1.34E-10	1.91E-09	6.93E-16	0.	0.	1.58E-06
66	4.20	3.68E-07	0.	4.78E-10	0.	4.79E-07	6.71E-07	0.	1.36E-10	1.93E-09	7.43E-16	0.	0.	1.50E-06
67	4.10	2.78E-07	0.	4.41E-11	0.	3.63E-07	1.65E-07	0.	1.38E-10	1.93E-09	7.99E-16	0.	0.	8.05E-07
68	4.00	2.05E-07	0.	6.04E-10	0.	2.96E-07	9.72E-08	0.	1.39E-10	1.94E-09	8.60E-16	0.	0.	6.01E-07
69	3.90	1.34E-07	0.	3.65E-10	1.15E-13	1.97E-07	6.14E-08	0.	1.40E-10	1.93E-09	9.28E-16	0.	0.	3.95E-07
70	3.80	1.32E-07	0.	2.15E-10	4.82E-12	1.99E-07	0.	0.	1.42E-10	1.93E-09	1.00E-15	0.	0.	3.34E-07
71	3.70	8.33E-08	0.	7.15E-10	8.21E-13	1.09E-07	0.	0.	1.43E-10	1.90E-09	1.09E-15	0.	0.	1.95E-07
72	3.60	6.24E-08	0.	1.08E-10	1.91E-12	1.22E-07	0.	0.	1.45E-10	1.78E-09	1.18E-15	0.	0.	1.87E-07
73	3.50	4.71E-08	0.	3.67E-10	2.47E-11	6.02E-08	0.	0.	1.47E-10	1.62E-09	1.28E-15	0.	0.	1.18E-07
74	3.40	3.23E-08	0.	6.17E-11	1.56E-13	6.70E-08	0.	0.	1.49E-10	9.38E-10	1.40E-15	0.	0.	1.00E-07
75	3.30	2.22E-08	0.	1.10E-10	3.67E-12	3.50E-08	0.	0.	1.50E-10	9.39E-10	1.53E-15	0.	0.	5.84E-08
76	3.20	1.47E-08	0.	2.82E-11	3.48E-11	3.37E-08	0.	0.	1.51E-10	9.41E-10	1.68E-15	0.	0.	4.90E-08
77	3.10	1.10E-08	0.	3.13E-11	2.71E-13	2.25E-08	0.	0.	1.51E-10	9.43E-10	1.85E-15	0.	0.	3.46E-08
78	3.00	7.55E-09	0.	9.14E-12	3.96E-12	1.67E-08	0.	0.	1.50E-10	9.45E-10	2.04E-15	0.	0.	2.53E-08
79	2.90	4.74E-09	0.	6.28E-12	6.07E-12	7.96E-09	0.	0.	1.48E-10	9.47E-10	2.26E-15	0.	0.	1.38E-08
80	2.80	4.02E-09	0.	1.99E-12	2.85E-13	3.22E-09	0.	0.	1.45E-10	9.48E-10	2.51E-15	0.	0.	8.34E-09
81	2.70	1.69E-09	0.	1.03E-12	1.91E-12	9.34E-10	0.	0.	1.42E-10	9.48E-10	2.80E-15	0.	0.	3.72E-09
82	2.60	4.61E-10	0.	4.26E-13	2.98E-13	2.33E-10	0.	0.	1.39E-10	9.45E-10	3.14E-15	0.	0.	1.78E-09
83	2.50	2.54E-11	0.	8.95E-14	5.13E-14	3.87E-11	0.	0.	1.33E-10	9.48E-10	3.53E-15	0.	0.	1.15E-09
84	2.40	0.	1.38E-11	0.	1.46E-13	3.09E-12	0.	0.	1.28E-10	9.48E-10	3.99E-15	0.	0.	1.09E-09
85	2.30	0.	2.10E-10	0.	0.	0.	0.	0.	1.19E-10	9.41E-10	4.53E-15	0.	0.	1.27E-09
86	2.20	0.	2.50E-10	0.	0.	0.	0.	0.	1.11E-10	9.37E-10	5.18E-15	0.	0.	1.30E-09
87	2.10	0.	9.77E-10	0.	0.	0.	0.	0.	1.02E-10	9.33E-10	5.96E-15	0.	0.	2.01E-09
88	2.00	0.	8.39E-10	0.	0.	0.	0.	0.	9.14E-11	9.03E-10	6.90E-15	0.	0.	1.83E-09
89	1.90	0.	5.20E-09	0.	0.	0.	0.	0.	8.17E-11	8.69E-10	8.05E-15	0.	0.	6.15E-09
90	1.80	0.	6.36E-09	0.	0.	0.	0.	0.	6.78E-11	8.31E-10	9.47E-15	0.	0.	7.26E-09
91	1.70	0.	5.58E-09	0.	0.	0.	0.	0.	5.48E-11	7.83E-10	1.13E-14	0.	0.	6.42E-09
92	1.60	0.	4.64E-09	0.	0.	0.	0.	0.	4.38E-11	6.62E-10	1.35E-14	0.	0.	5.37E-09
93	1.50	0.	4.77E-09	0.	0.	0.	0.	0.	3.31E-11	3.01E-10	1.64E-14	0.	0.	5.10E-09
94	1.40	0.	8.17E-09	0.	0.	0.	0.	0.	2.46E-11	0.	2.02E-14	0.	0.	8.19E-09
95	1.30	0.	3.71E-09	0.	0.	0.	0.	0.	1.64E-11	0.	2.52E-14	0.	0.	3.72E-09
96	1.20	0.	6.31E-09	0.	0.	0.	0.	0.	1.05E-11	0.	3.21E-14	0.	0.	6.52E-09
97	1.10	0.	2.81E-09	0.	0.	0.	0.	2.15E-10	6.28E-12	0.	4.17E-14	0.	0.	3.03E-09
98	1.00	0.	3.46E-09	0.	0.	0.	0.	4.49E-10	3.13E-12	0.	5.57E-14	0.	0.	3.91E-09
99	0.90	0.	2.02E-09	0.	0.	0.	0.	1.63E-09	1.56E-12	0.	7.65E-14	0.	0.	3.65E-09
100	0.80	0.	8.65E-10	0.	0.	0.	0.	6.22E-09	0.	0.	1.09E-13	0.	0.	7.09E-09
101	0.70	0.	2.55E-10	0.	0.	0.	0.	7.93E-09	0.	0.	1.63E-13	0.	0.	8.19E-09
102	0.60	0.	6.52E-13	0.	0.	0.	0.	1.78E-08	0.	0.	2.61E-13	0.	0.	1.78E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.05E-05	0.	0.	0.	2.97E-11	1.43E-18	0.	0.	2.05E-05
2	10.60	0.	0.	1.45E-05	0.	0.	0.	2.97E-11	1.47E-18	0.	0.	1.45E-05
3	10.50	0.	0.	1.24E-05	0.	0.	0.	2.97E-11	1.51E-18	0.	0.	1.24E-05
4	10.40	0.	0.	9.58E-06	0.	0.	0.	2.98E-11	1.56E-18	0.	0.	9.58E-06
5	10.30	0.	0.	6.43E-06	0.	0.	0.	2.98E-11	1.60E-18	0.	0.	6.43E-06
6	10.20	0.	0.	5.64E-06	0.	0.	0.	2.98E-11	1.65E-18	0.	0.	5.64E-06
7	10.10	0.	0.	4.58E-06	0.	0.	0.	2.99E-11	1.70E-18	0.	0.	4.58E-06
8	10.00	0.	0.	2.77E-06	0.	0.	0.	2.99E-11	1.75E-18	0.	0.	2.77E-06
9	9.90	0.	0.	2.68E-06	0.	0.	0.	3.00E-11	1.80E-18	0.	0.	2.68E-06
10	9.80	0.	0.	1.96E-06	0.	0.	0.	3.00E-11	1.86E-18	0.	0.	1.96E-06
11	9.70	0.	0.	1.21E-06	0.	0.	0.	3.01E-11	1.92E-18	0.	0.	1.21E-06
12	9.60	0.	0.	1.30E-06	0.	0.	0.	3.01E-11	1.98E-18	0.	0.	1.30E-06
13	9.50	0.	1.01E-06	7.61E-07	0.	0.	0.	3.02E-11	2.04E-18	0.	0.	1.77E-06
14	9.40	0.	1.14E-06	5.83E-07	0.	0.	0.	3.03E-11	2.11E-18	0.	0.	1.72E-06
15	9.30	0.	1.27E-06	5.50E-07	0.	0.	0.	3.04E-11	2.18E-18	0.	0.	1.82E-06
16	9.20	0.	1.40E-06	2.80E-07	0.	0.	0.	3.05E-11	2.25E-18	0.	0.	1.48E-06
17	9.10	0.	1.72E-06	3.11E-07	0.	0.	0.	3.06E-11	2.33E-18	0.	0.	2.03E-06
18	9.00	0.	2.09E-06	1.95E-07	0.	0.	0.	3.08E-11	2.41E-18	0.	0.	2.28E-06
19	8.90	0.	2.45E-06	1.44E-07	0.	0.	0.	3.09E-11	2.49E-18	0.	0.	2.59E-06
20	8.80	0.	2.54E-06	1.24E-07	0.	0.	0.	3.10E-11	2.58E-18	0.	0.	2.67E-06
21	8.70	0.	2.43E-06	7.18E-08	0.	0.	0.	3.11E-11	2.67E-18	0.	0.	2.50E-06
22	8.60	0.	2.31E-06	7.33E-08	0.	0.	0.	3.12E-11	2.76E-18	0.	0.	2.39E-06
23	8.50	0.	2.20E-06	4.22E-08	0.	0.	0.	3.13E-11	2.86E-18	0.	0.	2.24E-06
24	8.40	0.	2.10E-06	3.92E-08	0.	0.	0.	3.15E-11	2.96E-18	0.	0.	2.14E-06
25	8.30	0.	2.00E-06	2.29E-08	0.	0.	0.	3.16E-11	3.07E-18	0.	0.	2.03E-06
26	8.20	0.	1.90E-06	2.06E-08	0.	0.	0.	3.18E-11	3.19E-18	0.	0.	1.92E-06
27	8.10	0.	1.79E-06	1.28E-08	0.	0.	0.	3.20E-11	3.31E-18	0.	0.	1.80E-06
28	8.00	0.	1.68E-06	1.11E-08	0.	0.	0.	3.21E-11	3.43E-18	0.	0.	1.69E-06
29	7.90	0.	1.57E-06	6.98E-09	0.	0.	0.	3.23E-11	3.56E-18	0.	0.	1.58E-06
30	7.80	0.	1.47E-06	6.19E-09	0.	0.	0.	3.25E-11	3.70E-18	0.	0.	1.47E-06
31	7.70	0.	1.36E-06	4.05E-09	0.	0.	0.	3.26E-11	3.85E-18	0.	0.	1.36E-06
32	7.60	0.	1.25E-06	3.11E-09	0.	3.49E-11	0.	3.28E-11	4.01E-18	0.	0.	1.25E-06
33	7.50	0.	1.14E-06	2.20E-09	0.	8.22E-10	0.	3.29E-11	4.17E-18	0.	0.	1.14E-06
34	7.40	0.	1.03E-06	1.58E-09	0.	1.77E-09	0.	3.31E-11	4.34E-18	0.	0.	1.04E-06
35	7.30	0.	9.27E-07	1.16E-09	0.	9.29E-09	0.	3.33E-11	4.52E-18	0.	0.	9.37E-07
36	7.20	0.	8.26E-07	8.13E-10	0.	5.53E-08	0.	3.35E-11	4.72E-18	0.	0.	8.44E-07
37	7.10	0.	7.29E-07	6.15E-10	0.	3.37E-08	0.	3.38E-11	4.92E-18	0.	0.	7.63E-07
38	7.00	3.45E-09	0.	4.35E-10	0.	3.20E-07	0.	3.40E-11	5.13E-18	0.	0.	3.24E-07
39	6.90	5.82E-09	0.	3.12E-10	0.	2.32E-07	0.	3.43E-11	5.36E-18	0.	0.	2.38E-07
40	6.80	4.30E-09	0.	2.29E-10	0.	3.61E-07	0.	3.46E-11	5.60E-18	0.	0.	3.66E-07
41	6.70	2.64E-09	0.	1.54E-10	0.	1.11E-06	0.	3.49E-11	5.86E-18	0.	0.	1.12E-06
42	6.60	1.40E-09	0.	1.06E-10	0.	4.04E-07	0.	3.51E-11	6.13E-18	0.	0.	4.05E-07
43	6.50	5.74E-10	0.	6.07E-11	0.	6.70E-07	0.	3.54E-11	6.42E-18	0.	0.	6.70E-07
44	6.40	1.04E-09	0.	2.59E-11	2.22E-08	1.87E-06	0.	3.57E-11	6.72E-18	0.	0.	1.89E-06
45	6.30	2.00E-09	0.	9.15E-12	7.64E-08	5.77E-07	0.	3.60E-11	7.05E-18	0.	0.	6.56E-07
46	6.20	5.00E-09	0.	2.98E-12	8.46E-08	7.10E-07	0.	3.62E-11	7.39E-18	0.	0.	7.99E-07
47	6.10	1.62E-08	0.	8.77E-13	1.98E-07	2.59E-06	0.	3.65E-11	7.76E-18	0.	0.	2.91E-06
48	6.00	3.44E-08	0.	1.64E-13	1.17E-07	3.94E-07	0.	3.68E-11	8.16E-18	0.	0.	5.47E-07
49	5.90	4.53E-08	0.	1.11E-14	1.56E-07	5.30E-07	0.	3.68E-11	8.58E-18	0.	0.	7.32E-07
50	5.80	5.52E-08	0.	2.50E-16	1.88E-07	6.01E-07	0.	3.62E-11	9.03E-18	0.	0.	8.44E-07
51	5.70	4.97E-08	0.	0.	1.63E-07	2.90E-07	0.	3.40E-11	9.52E-18	0.	0.	5.03E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.48E-08	0.	0.	0.	8.28E-08	9.37E-07	0.	0.	3.17E-11	10.00E-18	0.	0.	1.07E-06
53	5.50	4.97E-08	0.	0.	0.	1.19E-07	1.38E-06	0.	0.	3.18E-11	1.06E-17	0.	0.	1.55E-06
54	5.40	4.42E-08	0.	0.	0.	8.33E-08	3.33E-07	0.	0.	3.20E-11	1.12E-17	0.	0.	4.60E-07
55	5.30	3.71E-08	0.	0.	0.	8.47E-08	9.96E-07	0.	0.	3.22E-11	1.18E-17	0.	0.	1.12E-06
56	5.20	1.97E-08	0.	0.	0.	7.82E-08	3.27E-07	0.	0.	3.24E-11	1.25E-17	0.	0.	4.25E-07
57	5.10	1.68E-08	0.	0.	0.	6.55E-08	4.29E-07	0.	4.13E-13	3.27E-11	1.33E-17	0.	0.	5.11E-07
58	5.00	1.11E-08	0.	0.	0.	4.77E-08	3.91E-07	0.	4.16E-13	3.29E-11	1.41E-17	0.	0.	4.50E-07
59	4.90	9.20E-09	0.	0.	0.	4.59E-08	2.19E-07	0.	4.19E-13	3.32E-11	1.50E-17	0.	0.	2.74E-07
60	4.80	9.30E-09	0.	0.	0.	4.70E-08	2.36E-07	0.	4.22E-13	3.35E-11	1.59E-17	0.	0.	2.93E-07
61	4.70	8.69E-09	0.	0.	0.	3.86E-08	1.10E-07	0.	4.25E-13	3.38E-11	1.70E-17	0.	0.	1.57E-07
62	4.60	6.84E-09	0.	0.	0.	3.50E-08	1.33E-07	0.	4.28E-13	3.40E-11	1.81E-17	0.	0.	1.77E-07
63	4.50	7.39E-09	0.	7.41E-13	0.	2.52E-08	5.50E-06	0.	4.31E-13	3.43E-11	1.94E-17	0.	0.	8.76E-08
64	4.40	6.18E-09	0.	5.36E-12	0.	2.20E-08	5.83E-08	0.	4.34E-13	3.46E-11	2.07E-17	0.	0.	8.65E-08
65	4.30	4.64E-09	0.	4.76E-12	0.	1.68E-08	1.95E-08	0.	4.39E-13	3.49E-11	2.22E-17	0.	0.	4.10E-08
66	4.20	3.62E-09	0.	4.69E-11	0.	1.53E-08	2.15E-08	0.	4.44E-13	3.51E-11	2.38E-17	0.	0.	4.05E-08
67	4.10	2.86E-09	0.	4.34E-12	0.	1.16E-08	5.27E-09	0.	4.49E-13	3.53E-11	2.56E-17	0.	0.	1.98E-08
68	4.00	2.13E-09	0.	5.96E-11	0.	9.48E-09	3.11E-09	0.	4.53E-13	3.54E-11	2.76E-17	0.	0.	1.48E-08
69	3.90	1.39E-09	0.	3.59E-11	6.50E-14	6.30E-09	1.96E-09	0.	4.57E-13	3.53E-11	2.98E-17	0.	0.	9.73E-09
70	3.80	1.37E-09	0.	2.12E-11	2.65E-12	6.38E-09	0.	0.	4.62E-13	3.51E-11	3.22E-17	0.	0.	7.81E-09
71	3.70	8.69E-10	0.	7.04E-11	4.52E-13	3.47E-09	0.	0.	4.68E-13	3.46E-11	3.48E-17	0.	0.	4.44E-09
72	3.60	6.48E-10	0.	1.07E-11	1.05E-12	3.91E-09	0.	0.	4.75E-13	3.24E-11	3.78E-17	0.	0.	4.61E-09
73	3.50	4.89E-10	0.	3.62E-11	1.36E-11	1.93E-09	0.	0.	4.81E-13	2.97E-11	4.12E-17	0.	0.	2.50E-09
74	3.40	3.36E-10	0.	6.08E-12	8.56E-14	2.14E-09	0.	0.	4.87E-13	1.71E-11	4.49E-17	0.	0.	2.50E-09
75	3.30	2.38E-10	0.	1.17E-11	2.02E-12	1.12E-09	0.	0.	4.91E-13	1.71E-11	4.91E-17	0.	0.	1.38E-09
76	3.20	1.53E-10	0.	2.78E-12	1.92E-11	1.08E-09	0.	0.	4.94E-13	1.72E-11	5.39E-17	0.	0.	1.27E-09
77	3.10	1.14E-10	0.	3.08E-12	1.49E-13	7.21E-10	0.	0.	4.94E-13	1.72E-11	5.93E-17	0.	0.	8.56E-10
78	3.00	7.84E-11	0.	9.01E-13	2.18E-12	5.34E-10	0.	0.	4.88E-13	1.72E-11	6.54E-17	0.	0.	6.33E-10
79	2.90	4.92E-11	0.	6.18E-13	3.34E-12	2.55E-10	0.	0.	4.82E-13	1.73E-11	7.25E-17	0.	0.	3.26E-10
80	2.80	4.18E-11	0.	1.96E-13	1.57E-13	1.03E-10	0.	0.	4.74E-13	1.73E-11	8.05E-17	0.	0.	1.63E-10
81	2.70	1.76E-11	0.	1.01E-13	1.05E-12	2.99E-11	0.	0.	4.64E-13	1.73E-11	8.96E-17	0.	0.	6.64E-11
82	2.60	4.79E-12	0.	4.20E-14	1.64E-13	7.46E-12	0.	0.	4.53E-13	1.73E-11	1.01E-16	0.	0.	3.02E-11
83	2.50	2.64E-13	0.	8.62E-15	2.82E-14	1.24E-12	0.	0.	4.34E-13	1.73E-11	1.13E-16	0.	0.	1.93E-11
84	2.40	0.	1.36E-12	0.	8.05E-14	9.87E-14	0.	0.	4.16E-13	1.73E-11	1.28E-16	0.	0.	1.93E-11
85	2.30	0.	2.07E-11	0.	0.	0.	0.	0.	3.90E-13	1.72E-11	1.45E-16	0.	0.	3.82E-11
86	2.20	0.	2.47E-11	0.	0.	0.	0.	0.	3.63E-13	1.71E-11	1.66E-16	0.	0.	4.21E-11
87	2.10	0.	9.62E-11	0.	0.	0.	0.	0.	3.34E-13	1.70E-11	1.91E-16	0.	0.	1.14E-10
88	2.00	0.	8.26E-11	0.	0.	0.	0.	0.	2.98E-13	1.65E-11	2.21E-16	0.	0.	9.94E-11
89	1.90	0.	5.12E-10	0.	0.	0.	0.	0.	2.67E-13	1.58E-11	2.58E-16	0.	0.	5.29E-10
90	1.80	0.	6.27E-10	0.	0.	0.	0.	0.	2.21E-13	1.52E-11	3.04E-16	0.	0.	6.43E-10
91	1.70	0.	5.50E-10	0.	0.	0.	0.	0.	1.79E-13	1.43E-11	3.61E-16	0.	0.	5.65E-10
92	1.60	0.	4.59E-10	0.	0.	0.	0.	0.	1.43E-13	1.21E-11	4.33E-16	0.	0.	4.72E-10
93	1.50	0.	4.70E-10	0.	0.	0.	0.	0.	1.08E-13	5.49E-12	5.26E-16	0.	0.	4.75E-10
94	1.40	0.	8.05E-10	0.	0.	0.	0.	0.	8.05E-14	0.	6.47E-16	0.	0.	8.05E-10
95	1.30	0.	3.65E-10	0.	0.	0.	0.	0.	5.34E-14	0.	8.08E-16	0.	0.	3.65E-10
96	1.20	0.	6.41E-10	0.	0.	0.	0.	0.	3.42E-14	0.	1.03E-15	0.	0.	6.41E-10
97	1.10	0.	2.77E-10	0.	0.	0.	0.	6.88E-12	2.05E-14	0.	1.34E-15	0.	0.	2.84E-10
98	1.00	0.	3.41E-10	0.	0.	0.	0.	1.44E-11	1.02E-14	0.	1.78E-15	0.	0.	3.55E-10
99	0.90	0.	1.99E-10	0.	0.	0.	0.	5.20E-11	5.08E-15	0.	2.45E-15	0.	0.	2.51E-10
100	0.80	0.	8.53E-11	0.	0.	0.	0.	1.99E-10	0.	0.	3.50E-15	0.	0.	2.84E-10
101	0.70	0.	2.51E-11	0.	0.	0.	0.	2.54E-10	0.	0.	5.24E-15	0.	0.	2.79E-10
102	0.60	0.	6.42E-14	0.	0.	0.	0.	5.70E-10	0.	0.	8.36E-15	0.	0.	5.70E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-03 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.94E-06	0.	0.	0.	5.25E-13	4.43E-20	0.	0.	1.94E-06
2	10.60	0.	0.	1.37E-06	0.	0.	0.	5.26E-13	4.55E-20	0.	0.	1.37E-06
3	10.50	0.	0.	1.17E-06	0.	0.	0.	5.26E-13	4.67E-20	0.	0.	1.17E-06
4	10.40	0.	0.	9.07E-07	0.	0.	0.	5.27E-13	4.79E-20	0.	0.	9.07E-07
5	10.30	0.	0.	6.08E-07	0.	0.	0.	5.28E-13	4.97E-20	0.	0.	6.08E-07
6	10.20	0.	0.	5.34E-07	0.	0.	0.	5.28E-13	5.11E-20	0.	0.	5.34E-07
7	10.10	0.	0.	4.26E-07	0.	0.	0.	5.29E-13	5.27E-20	0.	0.	4.26E-07
8	10.00	0.	0.	2.62E-07	0.	0.	0.	5.30E-13	5.43E-20	0.	0.	2.62E-07
9	9.90	0.	0.	2.54E-07	0.	0.	0.	5.31E-13	5.60E-20	0.	0.	2.54E-07
10	9.80	0.	0.	1.86E-07	0.	0.	0.	5.32E-13	5.77E-20	0.	0.	1.86E-07
11	9.70	0.	0.	1.15E-07	0.	0.	0.	5.33E-13	5.95E-20	0.	0.	1.15E-07
12	9.60	0.	0.	1.23E-07	0.	0.	0.	5.34E-13	6.14E-20	0.	0.	1.23E-07
13	9.50	0.	1.02E-08	7.21E-09	0.	0.	0.	5.35E-13	6.34E-20	0.	0.	8.23E-08
14	9.40	0.	1.15E-08	5.52E-08	0.	0.	0.	5.37E-13	6.55E-20	0.	0.	6.67E-08
15	9.30	0.	1.28E-08	5.21E-08	0.	0.	0.	5.39E-13	6.76E-20	0.	0.	6.49E-08
16	9.20	0.	1.41E-08	2.65E-08	0.	0.	0.	5.40E-13	6.98E-20	0.	0.	4.07E-08
17	9.10	0.	1.74E-08	2.94E-08	0.	0.	0.	5.42E-13	7.22E-20	0.	0.	4.68E-08
18	9.00	0.	2.11E-08	1.85E-08	0.	0.	0.	5.44E-13	7.46E-20	0.	0.	3.95E-08
19	8.90	0.	2.47E-08	1.36E-08	0.	0.	0.	5.46E-13	7.72E-20	0.	0.	3.83E-08
20	8.80	0.	2.57E-08	1.17E-08	0.	0.	0.	5.48E-13	7.98E-20	0.	0.	3.74E-08
21	8.70	0.	2.45E-08	6.80E-09	0.	0.	0.	5.50E-13	8.26E-20	0.	0.	3.13E-08
22	8.60	0.	2.34E-08	6.94E-09	0.	0.	0.	5.52E-13	8.56E-20	0.	0.	3.03E-08
23	8.50	0.	2.22E-08	4.08E-09	0.	0.	0.	5.54E-13	8.86E-20	0.	0.	2.62E-08
24	8.40	0.	2.12E-08	3.71E-09	0.	0.	0.	5.57E-13	9.18E-20	0.	0.	2.49E-08
25	8.30	0.	2.02E-08	2.17E-09	0.	0.	0.	5.60E-13	9.52E-20	0.	0.	2.24E-08
26	8.20	0.	1.92E-08	1.95E-09	0.	0.	0.	5.63E-13	9.88E-20	0.	0.	2.11E-08
27	8.10	0.	1.81E-08	1.21E-09	0.	0.	0.	5.66E-13	1.02E-19	0.	0.	1.93E-08
28	8.00	0.	1.70E-08	1.05E-09	0.	0.	0.	5.69E-13	1.06E-19	0.	0.	1.80E-08
29	7.90	0.	1.59E-08	6.61E-10	0.	0.	0.	5.72E-13	1.10E-19	0.	0.	1.66E-08
30	7.80	0.	1.48E-08	5.84E-10	0.	0.	0.	5.75E-13	1.15E-19	0.	0.	1.54E-08
31	7.70	0.	1.37E-08	3.84E-10	0.	0.	0.	5.77E-13	1.19E-19	0.	0.	1.41E-08
32	7.60	0.	1.26E-08	2.94E-10	0.	1.08E-12	0.	5.80E-13	1.24E-19	0.	0.	1.29E-08
33	7.50	0.	1.15E-08	2.08E-10	0.	2.54E-11	0.	5.83E-13	1.29E-19	0.	0.	1.18E-08
34	7.40	0.	1.04E-08	1.49E-10	0.	5.48E-11	0.	5.87E-13	1.35E-19	0.	0.	1.06E-08
35	7.30	0.	9.36E-09	1.10E-10	0.	2.87E-10	0.	5.90E-13	1.40E-19	0.	0.	9.76E-09
36	7.20	0.	8.36E-09	7.70E-11	0.	1.71E-09	0.	5.93E-13	1.46E-19	0.	0.	1.01E-08
37	7.10	0.	7.36E-09	5.82E-11	0.	1.04E-09	0.	5.98E-13	1.52E-19	0.	0.	8.46E-09
38	7.00	3.48E-11	0.	4.11E-11	0.	9.91E-09	0.	6.03E-13	1.59E-19	0.	0.	9.98E-09
39	6.90	5.89E-11	0.	2.95E-11	0.	7.18E-09	0.	6.08E-13	1.66E-19	0.	0.	7.27E-09
40	6.80	4.35E-11	0.	2.17E-11	0.	1.12E-08	0.	6.12E-13	1.74E-19	0.	0.	1.12E-08
41	6.70	2.67E-11	0.	1.46E-11	0.	3.44E-08	0.	6.17E-13	1.82E-19	0.	0.	3.45E-08
42	6.60	1.41E-11	0.	1.08E-11	0.	1.25E-08	0.	6.22E-13	1.90E-19	0.	0.	1.25E-08
43	6.50	6.81E-12	0.	5.75E-12	0.	2.07E-08	0.	6.27E-13	1.99E-19	0.	0.	2.07E-08
44	6.40	1.05E-11	0.	2.45E-12	6.88E-10	5.77E-08	0.	6.32E-13	2.08E-19	0.	0.	5.84E-08
45	6.30	2.02E-11	0.	8.66E-13	2.36E-09	1.78E-08	0.	6.37E-13	2.18E-19	0.	0.	2.02E-08
46	6.20	5.05E-11	0.	2.88E-13	2.62E-09	2.20E-08	0.	6.42E-13	2.29E-19	0.	0.	2.47E-08
47	6.10	1.04E-10	0.	8.31E-14	6.12E-09	8.02E-08	0.	6.46E-13	2.41E-19	0.	0.	8.65E-08
48	6.00	3.48E-10	0.	1.59E-14	3.63E-09	1.22E-08	0.	6.51E-13	2.53E-19	0.	0.	1.62E-08
49	5.90	4.58E-10	0.	1.05E-15	4.83E-09	1.64E-08	0.	6.51E-13	2.66E-19	0.	0.	2.17E-08
50	5.80	5.58E-10	0.	2.37E-17	5.81E-09	1.86E-08	0.	6.42E-13	2.80E-19	0.	0.	2.50E-08
51	5.70	5.02E-10	0.	0.	5.05E-09	8.97E-09	0.	6.03E-13	2.95E-19	0.	0.	1.45E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	S-P BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.54E-10	0.	0.	0.	2.56E-09	2.90E-08	0.	0.	5.60E-13	3.11E-19	0.	0.	3.22E-08
53	5.50	5.03E-10	0.	0.	0.	3.67E-09	4.28E-08	0.	0.	5.63E-13	3.28E-19	0.	0.	4.70E-08
54	5.40	4.47E-10	0.	0.	0.	2.58E-09	1.03E-08	0.	0.	5.66E-13	3.47E-19	0.	0.	1.33E-08
55	5.30	3.75E-10	0.	0.	0.	2.62E-09	3.08E-08	0.	0.	5.70E-13	3.67E-19	0.	0.	3.38E-08
56	5.20	1.99E-10	0.	0.	0.	2.42E-09	1.01E-08	0.	0.	5.74E-13	3.89E-19	0.	0.	1.27E-08
57	5.10	1.70E-10	0.	0.	0.	2.03E-09	1.33E-08	0.	1.28E-15	5.75E-13	4.12E-19	0.	0.	1.55E-08
58	5.00	1.12E-10	0.	0.	0.	1.48E-09	1.21E-08	0.	1.29E-15	5.83E-13	4.37E-19	0.	0.	1.37E-08
59	4.90	9.29E-11	0.	0.	0.	1.42E-09	6.77E-09	0.	1.30E-15	5.88E-13	4.65E-19	0.	0.	8.28E-09
60	4.80	9.40E-11	0.	0.	0.	1.45E-09	7.31E-09	0.	1.31E-15	5.93E-13	4.94E-19	0.	0.	8.86E-09
61	4.70	8.79E-11	0.	0.	0.	1.19E-09	3.41E-09	0.	1.32E-15	5.98E-13	5.27E-19	0.	0.	4.49E-09
62	4.60	8.93E-11	0.	0.	0.	1.08E-09	4.11E-09	0.	1.33E-15	6.03E-13	5.62E-19	0.	0.	5.28E-09
63	4.50	7.47E-11	0.	7.02E-14	0.	7.79E-10	1.70E-09	0.	1.34E-15	6.08E-13	6.00E-19	0.	0.	2.56E-09
64	4.40	6.24E-11	0.	5.07E-13	0.	6.80E-10	1.80E-09	0.	1.35E-15	6.12E-13	6.42E-19	0.	0.	2.55E-09
65	4.30	4.69E-11	0.	4.51E-13	0.	5.20E-10	6.04E-10	0.	1.36E-15	6.17E-13	6.88E-19	0.	0.	1.17E-09
66	4.20	3.66E-11	0.	4.44E-12	0.	4.74E-10	6.64E-10	0.	1.38E-15	6.22E-13	7.39E-19	0.	0.	1.18E-09
67	4.10	2.89E-11	0.	4.11E-13	0.	3.59E-10	1.67E-10	0.	1.40E-15	6.25E-13	7.94E-19	0.	0.	5.52E-10
68	4.00	2.15E-11	0.	5.64E-12	0.	2.93E-10	9.62E-11	0.	1.41E-15	6.27E-13	8.55E-19	0.	0.	4.17E-10
69	3.90	1.41E-11	0.	3.40E-12	3.50E-14	1.95E-10	6.08E-11	0.	1.42E-15	6.29E-13	9.22E-19	0.	0.	2.74E-10
70	3.80	1.39E-11	0.	2.01E-12	1.43E-12	1.97E-10	0.	0.	1.44E-15	6.22E-13	9.97E-19	0.	0.	2.15E-10
71	3.70	8.74E-12	0.	6.67E-12	2.43E-13	1.07E-10	0.	0.	1.46E-15	6.12E-13	1.08E-18	0.	0.	1.24E-10
72	3.60	6.54E-12	0.	1.01E-12	5.66E-13	1.21E-10	0.	0.	1.47E-15	5.74E-13	1.17E-18	0.	0.	1.30E-10
73	3.50	4.94E-12	0.	3.42E-12	7.32E-12	5.96E-11	0.	0.	1.49E-15	5.25E-13	1.26E-18	0.	0.	7.58E-11
74	3.40	3.39E-12	0.	5.76E-13	4.60E-14	6.63E-11	0.	0.	1.51E-15	3.03E-13	1.39E-18	0.	0.	7.06E-11
75	3.30	2.33E-12	0.	1.11E-12	1.09E-12	3.46E-11	0.	0.	1.52E-15	3.03E-13	1.52E-18	0.	0.	3.95E-11
76	3.20	1.54E-12	0.	2.63E-13	1.03E-11	3.34E-11	0.	0.	1.53E-15	3.04E-13	1.67E-18	0.	0.	4.58E-11
77	3.10	1.15E-12	0.	2.92E-13	8.02E-14	2.23E-11	0.	0.	1.54E-15	3.04E-13	1.84E-18	0.	0.	2.41E-11
78	3.00	7.92E-13	0.	8.53E-14	1.17E-12	1.65E-11	0.	0.	1.52E-15	3.05E-13	2.03E-18	0.	0.	1.89E-11
79	2.90	4.97E-13	0.	5.86E-14	1.80E-12	7.88E-12	0.	0.	1.50E-15	3.06E-13	2.25E-18	0.	0.	1.05E-11
80	2.80	4.22E-13	0.	1.86E-14	8.43E-14	3.19E-12	0.	0.	1.47E-15	3.06E-13	2.50E-18	0.	0.	4.02E-12
81	2.70	1.78E-13	0.	9.60E-15	5.66E-13	9.24E-13	0.	0.	1.44E-15	3.06E-13	2.78E-18	0.	0.	1.99E-12
82	2.60	4.84E-14	0.	3.98E-15	8.80E-14	2.31E-13	0.	0.	1.41E-15	3.06E-13	3.12E-18	0.	0.	6.79E-13
83	2.50	2.67E-15	0.	8.35E-16	1.52E-14	3.83E-14	0.	0.	1.35E-15	3.06E-13	3.51E-18	0.	0.	3.64E-13
84	2.40	0.	1.29E-13	0.	4.33E-14	3.05E-15	0.	0.	1.29E-15	3.06E-13	3.96E-18	0.	0.	4.83E-13
85	2.30	0.	1.96E-12	0.	0.	0.	0.	0.	1.21E-15	3.04E-13	4.50E-18	0.	0.	2.26E-12
86	2.20	0.	2.33E-12	0.	0.	0.	0.	0.	1.13E-15	3.03E-13	5.15E-18	0.	0.	2.64E-12
87	2.10	0.	9.11E-12	0.	0.	0.	0.	0.	1.04E-15	3.01E-13	5.92E-18	0.	0.	9.42E-12
88	2.00	0.	7.82E-12	0.	0.	0.	0.	0.	9.27E-16	2.92E-13	6.86E-18	0.	0.	8.11E-12
89	1.90	0.	4.85E-11	0.	0.	0.	0.	0.	8.29E-16	2.80E-13	8.00E-18	0.	0.	4.88E-11
90	1.80	0.	5.94E-11	0.	0.	0.	0.	0.	6.88E-16	2.68E-13	9.41E-18	0.	0.	5.97E-11
91	1.70	0.	5.21E-11	0.	0.	0.	0.	0.	5.56E-16	2.53E-13	1.12E-17	0.	0.	5.23E-11
92	1.60	0.	4.35E-11	0.	0.	0.	0.	0.	4.44E-16	2.14E-13	1.34E-17	0.	0.	4.37E-11
93	1.50	0.	4.45E-11	0.	0.	0.	0.	0.	3.36E-16	9.72E-14	1.63E-17	0.	0.	4.46E-11
94	1.40	0.	7.62E-11	0.	0.	0.	0.	0.	2.90E-16	0.	2.00E-17	0.	0.	7.62E-11
95	1.30	0.	3.46E-11	0.	0.	0.	0.	0.	1.66E-16	0.	2.51E-17	0.	0.	3.46E-11
96	1.20	0.	6.07E-11	0.	0.	0.	0.	0.	1.06E-16	0.	3.19E-17	0.	0.	6.07E-11
97	1.10	0.	2.62E-11	0.	0.	0.	0.	2.13E-13	6.37E-17	0.	4.15E-17	0.	0.	2.64E-11
98	1.00	0.	3.23E-11	0.	0.	0.	0.	4.44E-13	3.17E-17	0.	5.53E-17	0.	0.	3.27E-11
99	0.90	0.	1.88E-11	0.	0.	0.	0.	1.61E-12	1.58E-17	0.	7.61E-17	0.	0.	2.04E-11
100	0.80	0.	8.07E-12	0.	0.	0.	0.	6.16E-12	0.	0.	1.08E-16	0.	0.	1.42E-11
101	0.70	0.	2.38E-12	0.	0.	0.	0.	7.85E-12	0.	0.	1.62E-16	0.	0.	1.02E-11
102	0.60	0.	6.08E-15	0.	0.	0.	0.	1.76E-11	0.	0.	2.59E-16	0.	0.	1.76E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.63E-07	0.	0.	0.	9.01E-15	1.30E-21	0.	0.	1.63E-07
2	10.60	0.	0.	1.15E-07	0.	0.	0.	9.02E-15	1.34E-21	0.	0.	1.15E-07
3	10.50	0.	0.	9.83E-08	0.	0.	0.	9.03E-15	1.37E-21	0.	0.	9.83E-08
4	10.40	0.	0.	7.60E-08	0.	0.	0.	9.04E-15	1.41E-21	0.	0.	7.60E-08
5	10.30	0.	0.	5.10E-08	0.	0.	0.	9.05E-15	1.46E-21	0.	0.	5.10E-08
6	10.20	0.	0.	4.47E-08	0.	0.	0.	9.06E-15	1.50E-21	0.	0.	4.47E-08
7	10.10	0.	0.	3.57E-08	0.	0.	0.	9.08E-15	1.55E-21	0.	0.	3.57E-08
8	10.00	0.	0.	2.20E-08	0.	0.	0.	9.09E-15	1.59E-21	0.	0.	2.20E-08
9	9.90	0.	0.	2.12E-08	0.	0.	0.	9.11E-15	1.64E-21	0.	0.	2.12E-08
10	9.80	0.	0.	1.56E-08	0.	0.	0.	9.12E-15	1.69E-21	0.	0.	1.56E-08
11	9.70	0.	0.	9.60E-09	0.	0.	0.	9.14E-15	1.75E-21	0.	0.	9.60E-09
12	9.60	0.	0.	1.08E-08	0.	0.	0.	9.16E-15	1.80E-21	0.	0.	1.03E-08
13	9.50	0.	1.03E-10	6.04E-09	0.	0.	0.	9.17E-15	1.86E-21	0.	0.	6.14E-09
14	9.40	0.	1.16E-10	4.62E-09	0.	0.	0.	9.23E-15	1.92E-21	0.	0.	4.74E-09
15	9.30	0.	1.29E-10	4.36E-09	0.	0.	0.	9.24E-15	1.98E-21	0.	0.	1.49E-09
16	9.20	0.	1.42E-10	2.22E-09	0.	0.	0.	9.27E-15	2.05E-21	0.	0.	2.37E-09
17	9.10	0.	1.75E-10	2.47E-09	0.	0.	0.	9.31E-15	2.12E-21	0.	0.	2.64E-09
18	9.00	0.	2.11E-10	1.59E-09	0.	0.	0.	9.34E-15	2.19E-21	0.	0.	1.76E-09
19	8.90	0.	2.48E-10	1.14E-09	0.	0.	0.	9.37E-15	2.26E-21	0.	0.	1.39E-09
20	8.80	0.	2.58E-10	9.84E-10	0.	0.	0.	9.41E-15	2.34E-21	0.	0.	1.24E-09
21	8.70	0.	2.48E-10	5.70E-10	0.	0.	0.	9.44E-15	2.42E-21	0.	0.	8.16E-10
22	8.60	0.	2.34E-10	5.81E-10	0.	0.	0.	9.47E-15	2.51E-21	0.	0.	8.16E-10
23	8.50	0.	2.23E-10	3.35E-10	0.	0.	0.	9.51E-15	2.60E-21	0.	0.	5.58E-10
24	8.40	0.	2.13E-10	3.11E-10	0.	0.	0.	9.56E-15	2.69E-21	0.	0.	5.24E-10
25	8.30	0.	2.03E-10	1.81E-10	0.	0.	0.	9.61E-15	2.79E-21	0.	0.	3.85E-10
26	8.20	0.	1.92E-10	1.64E-10	0.	0.	0.	9.66E-15	2.90E-21	0.	0.	3.56E-10
27	8.10	0.	1.81E-10	1.01E-10	0.	0.	0.	9.71E-15	3.01E-21	0.	0.	2.83E-10
28	8.00	0.	1.70E-10	8.79E-11	0.	0.	0.	9.76E-15	3.12E-21	0.	0.	2.58E-10
29	7.90	0.	1.60E-10	5.53E-11	0.	0.	0.	9.81E-15	3.24E-21	0.	0.	2.15E-10
30	7.80	0.	1.49E-10	4.91E-11	0.	0.	0.	9.86E-15	3.37E-21	0.	0.	1.98E-10
31	7.70	0.	1.38E-10	3.21E-11	0.	0.	0.	9.91E-15	3.50E-21	0.	0.	1.78E-10
32	7.60	0.	1.27E-10	2.47E-11	0.	3.17E-14	0.	9.96E-15	3.64E-21	0.	0.	1.51E-10
33	7.50	0.	1.16E-10	1.75E-11	0.	7.37E-13	0.	10.00E-15	3.79E-21	0.	0.	1.34E-10
34	7.40	0.	1.05E-10	1.25E-11	0.	1.59E-12	0.	1.01E-14	3.65E-21	0.	0.	1.19E-10
35	7.30	0.	9.39E-11	9.22E-12	0.	8.33E-12	0.	1.01E-14	4.11E-21	0.	0.	1.12E-10
36	7.20	0.	8.39E-11	6.45E-12	0.	4.94E-11	0.	1.02E-14	4.29E-21	0.	0.	1.40E-10
37	7.10	0.	7.39E-11	4.88E-12	0.	3.02E-11	0.	1.03E-14	4.47E-21	0.	0.	1.09E-10
38	7.00	3.49E-13	0.	3.49E-12	0.	2.87E-10	0.	1.03E-14	4.67E-21	0.	0.	2.91E-10
39	6.90	5.90E-13	0.	2.47E-12	0.	2.08E-10	0.	1.04E-14	4.88E-21	0.	0.	2.11E-10
40	6.80	4.36E-13	0.	1.82E-12	0.	3.24E-10	0.	1.05E-14	5.09E-21	0.	0.	3.76E-10
41	6.70	2.68E-13	0.	1.22E-12	0.	9.98E-10	0.	1.06E-14	5.33E-21	0.	0.	9.99E-10
42	6.60	1.41E-13	0.	8.41E-13	0.	3.62E-10	0.	1.07E-14	5.57E-21	0.	0.	3.63E-10
43	6.50	6.83E-14	0.	4.82E-13	0.	6.00E-10	0.	1.08E-14	5.84E-21	0.	0.	6.01E-10
44	6.40	1.06E-13	0.	2.05E-13	1.99E-11	1.67E-09	0.	1.08E-14	6.11E-21	0.	0.	1.69E-09
45	6.30	2.02E-13	0.	7.26E-14	6.85E-11	5.17E-10	0.	1.09E-14	6.41E-21	0.	0.	5.86E-10
46	6.20	5.07E-13	0.	2.36E-14	7.59E-11	6.34E-10	0.	1.10E-14	6.73E-21	0.	0.	7.13E-10
47	6.10	1.64E-12	0.	6.96E-15	1.78E-10	2.33E-09	0.	1.11E-14	7.06E-21	0.	0.	2.50E-09
48	6.00	3.49E-12	0.	1.30E-15	1.05E-10	3.55E-10	0.	1.12E-14	7.42E-21	0.	0.	4.43E-10
49	5.90	4.59E-12	0.	3.60E-17	1.40E-10	4.75E-10	0.	1.12E-14	7.81E-21	0.	0.	6.28E-10
50	5.80	5.59E-12	0.	1.99E-18	1.68E-10	5.39E-10	0.	1.10E-14	8.22E-21	0.	0.	7.13E-10
51	5.70	5.03E-12	0.	0.	1.46E-10	2.60E-10	0.	1.13E-14	8.66E-21	0.	0.	4.11E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.58E-12	0.	0.	0.	7.42E-11	8.40E-10	0.	0.	9.61E-15	9.13E-21	0.	0.	9.21E-10
53	5.50	5.04E-12	0.	0.	0.	1.06E-10	1.24E-09	0.	0.	9.66E-15	9.64E-21	0.	0.	1.36E-09
54	5.40	4.48E-12	0.	0.	0.	7.47E-11	2.99E-10	0.	0.	9.71E-15	1.02E-20	0.	0.	3.77E-10
55	5.30	3.78E-12	0.	0.	0.	7.59E-11	8.93E-10	0.	0.	9.78E-15	1.08E-20	0.	0.	9.73E-10
56	5.20	2.88E-12	0.	0.	0.	7.01E-11	2.93E-10	0.	0.	9.84E-15	1.14E-20	0.	0.	3.65E-10
57	5.10	1.70E-12	0.	0.	0.	5.88E-11	3.84E-10	0.	3.72E-18	9.92E-15	1.21E-20	0.	0.	4.45E-10
58	5.00	1.13E-12	0.	0.	0.	4.28E-11	3.51E-10	0.	3.75E-18	10.00E-15	1.28E-20	0.	0.	3.95E-10
59	4.90	9.32E-13	0.	0.	0.	4.12E-11	1.96E-10	0.	3.78E-18	1.01E-14	1.36E-20	0.	0.	2.38E-10
60	4.80	9.43E-13	0.	0.	0.	4.21E-11	2.12E-10	0.	3.81E-18	1.02E-14	1.45E-20	0.	0.	2.55E-10
61	4.70	8.81E-13	0.	0.	0.	3.46E-11	9.88E-11	0.	3.83E-18	1.03E-14	1.55E-20	0.	0.	1.34E-10
62	4.60	8.96E-13	0.	0.	0.	3.14E-11	1.19E-10	0.	3.86E-18	1.03E-14	1.65E-20	0.	0.	1.51E-10
63	4.50	7.49E-13	0.	5.88E-15	0.	2.26E-11	4.93E-11	0.	3.89E-18	1.04E-14	1.76E-20	0.	0.	7.27E-11
64	4.40	6.26E-13	0.	4.25E-14	0.	1.97E-11	5.23E-11	0.	3.92E-18	1.05E-14	1.88E-20	0.	0.	7.27E-11
65	4.30	4.70E-13	0.	3.78E-14	0.	1.91E-11	1.75E-11	0.	3.96E-18	1.06E-14	2.02E-20	0.	0.	3.31E-11
66	4.20	3.67E-13	0.	3.72E-13	0.	1.37E-11	1.93E-11	0.	4.01E-18	1.07E-14	2.17E-20	0.	0.	3.37E-11
67	4.10	2.90E-13	0.	3.45E-14	0.	1.04E-11	4.73E-12	0.	4.06E-18	1.07E-14	2.33E-20	0.	0.	1.55E-11
68	4.00	2.16E-13	0.	4.72E-13	0.	8.50E-12	2.79E-12	0.	4.09E-18	1.08E-14	2.51E-20	0.	0.	1.20E-11
69	3.90	1.41E-13	0.	2.85E-13	1.71E-14	9.65E-12	1.76E-12	0.	4.12E-18	1.07E-14	2.71E-20	0.	0.	7.86E-12
70	3.80	1.39E-13	0.	1.68E-13	6.98E-13	9.72E-12	0.	0.	4.17E-18	1.07E-14	2.93E-20	0.	0.	6.74E-12
71	3.70	8.77E-14	0.	5.59E-13	1.19E-13	7.11E-12	0.	0.	4.23E-18	1.05E-14	3.17E-20	0.	0.	3.89E-12
72	3.60	6.56E-14	0.	8.45E-14	2.77E-13	3.51E-12	0.	0.	4.28E-18	9.84E-15	3.44E-20	0.	0.	3.95E-12
73	3.50	4.96E-14	0.	2.87E-13	3.58E-12	1.73E-12	0.	0.	4.34E-18	9.01E-15	3.75E-20	0.	0.	5.65E-12
74	3.40	3.40E-14	0.	4.82E-14	2.25E-14	1.92E-12	0.	0.	4.39E-18	5.19E-15	4.09E-20	0.	0.	2.03E-12
75	3.30	2.33E-14	0.	9.29E-14	5.31E-13	1.00E-12	0.	0.	4.43E-18	5.20E-15	4.47E-20	0.	0.	1.66E-12
76	3.20	1.59E-14	0.	2.28E-14	5.04E-12	9.67E-13	0.	0.	4.45E-18	5.21E-15	4.90E-20	0.	0.	6.05E-12
77	3.10	1.16E-14	0.	2.44E-14	3.92E-14	6.46E-13	0.	0.	4.46E-18	5.22E-15	5.39E-20	0.	0.	7.27E-13
78	3.00	7.94E-15	0.	7.14E-15	5.74E-13	4.78E-13	0.	0.	4.40E-18	5.24E-15	5.95E-20	0.	0.	1.07E-12
79	2.90	4.98E-15	0.	4.90E-15	8.79E-13	2.28E-13	0.	0.	4.35E-18	5.24E-15	6.59E-20	0.	0.	1.12E-12
80	2.80	4.23E-15	0.	1.59E-15	4.12E-14	9.24E-14	0.	0.	4.27E-18	5.25E-15	7.32E-20	0.	0.	1.45E-13
81	2.70	1.78E-15	0.	8.04E-16	2.77E-13	2.68E-14	0.	0.	4.19E-18	5.25E-15	8.17E-20	0.	0.	3.11E-13
82	2.60	4.86E-16	0.	3.33E-16	4.31E-14	6.69E-15	0.	0.	4.09E-18	5.25E-15	9.15E-20	0.	0.	5.58E-14
83	2.50	2.67E-17	0.	7.09E-17	7.42E-15	1.11E-15	0.	0.	3.92E-18	5.25E-15	1.03E-19	0.	0.	1.39E-14
84	2.40	0.	1.08E-14	0.	2.12E-14	8.85E-17	0.	0.	3.76E-18	5.25E-15	1.16E-19	0.	0.	3.73E-14
85	2.30	0.	1.64E-13	0.	0.	0.	0.	0.	3.52E-18	5.21E-15	1.32E-19	0.	0.	1.09E-13
86	2.20	0.	1.96E-13	0.	0.	0.	0.	0.	3.27E-18	5.19E-15	1.51E-19	0.	0.	2.01E-13
87	2.10	0.	7.63E-13	0.	0.	0.	0.	0.	3.01E-18	5.17E-15	1.74E-19	0.	0.	7.69E-13
88	2.00	0.	6.55E-13	0.	0.	0.	0.	0.	2.69E-18	5.00E-15	2.01E-19	0.	0.	6.60E-13
89	1.90	0.	4.04E-12	0.	0.	0.	0.	0.	2.41E-18	4.81E-15	2.35E-19	0.	0.	4.07E-12
90	1.80	0.	4.97E-12	0.	0.	0.	0.	0.	2.00E-18	4.60E-15	2.76E-19	0.	0.	4.98E-12
91	1.70	0.	4.36E-12	0.	0.	0.	0.	0.	1.61E-18	4.34E-15	3.28E-19	0.	0.	4.37E-12
92	1.60	0.	3.64E-12	0.	0.	0.	0.	0.	1.29E-18	3.67E-15	3.94E-19	0.	0.	3.65E-12
93	1.50	0.	3.72E-12	0.	0.	0.	0.	0.	9.75E-19	1.67E-15	4.78E-19	0.	0.	3.73E-12
94	1.40	0.	6.38E-12	0.	0.	0.	0.	0.	7.26E-19	0.	5.88E-19	0.	0.	6.38E-12
95	1.30	0.	2.90E-12	0.	0.	0.	0.	0.	4.82E-19	0.	7.35E-19	0.	0.	2.90E-12
96	1.20	0.	5.09E-12	0.	0.	0.	0.	0.	3.08E-19	0.	9.36E-19	0.	0.	5.09E-12
97	1.10	0.	2.20E-12	0.	0.	0.	0.	6.17E-15	1.85E-19	0.	1.22E-18	0.	0.	2.20E-12
98	1.00	0.	2.70E-12	0.	0.	0.	0.	1.29E-14	9.21E-20	0.	1.62E-18	0.	0.	2.72E-12
99	0.90	0.	1.58E-12	0.	0.	0.	0.	4.67E-14	4.59E-20	0.	2.23E-18	0.	0.	1.62E-12
100	0.80	0.	6.76E-13	0.	0.	0.	0.	1.78E-13	0.	0.	3.18E-18	0.	0.	8.55E-13
101	0.70	0.	1.99E-13	0.	0.	0.	0.	2.27E-13	0.	0.	4.77E-18	0.	0.	4.26E-13
102	0.60	0.	5.09E-16	0.	0.	0.	0.	5.11E-13	0.	0.	7.61E-18	0.	0.	5.11E-13

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.25E 00	0.	0.	0.	8.94E-03	1.62E-09	0.	0.	6.26E 00
2	10.60	0.	0.	4.71E 00	0.	0.	0.	8.96E-03	1.64E-09	0.	0.	4.72E 00
3	10.50	0.	0.	4.23E 00	0.	0.	0.	8.97E-03	1.71E-09	0.	0.	4.24E 00
4	10.40	0.	0.	3.42E 00	0.	0.	0.	8.98E-03	1.76E-09	0.	0.	3.43E 00
5	10.30	0.	0.	2.46E 00	0.	0.	0.	8.99E-03	1.81E-09	0.	0.	2.47E 00
6	10.20	0.	0.	2.25E 00	0.	0.	0.	9.00E-03	1.87E-09	0.	0.	2.26E 00
7	10.10	0.	0.	1.87E 00	0.	0.	0.	9.02E-03	1.92E-09	0.	0.	1.88E 00
8	10.00	0.	0.	1.27E 00	0.	0.	0.	9.03E-03	1.98E-09	0.	0.	1.28E 00
9	9.90	0.	0.	1.25E 00	0.	0.	0.	9.04E-03	2.04E-09	0.	0.	1.25E 00
10	9.80	0.	0.	9.72E-01	0.	0.	0.	9.06E-03	2.11E-09	0.	0.	9.81E-01
11	9.70	0.	0.	6.57E-01	0.	0.	0.	9.08E-03	2.17E-09	0.	0.	6.66E-01
12	9.60	0.	0.	7.02E-01	0.	0.	0.	9.09E-03	2.24E-09	0.	0.	7.11E-01
13	9.50	0.	5.98E 01	4.57E-01	0.	0.	0.	9.11E-03	2.32E-09	0.	0.	6.02E 01
14	9.40	0.	6.56E 01	3.66E-01	0.	0.	0.	9.14E-03	2.39E-09	0.	0.	6.60E 01
15	9.30	0.	7.14E 01	3.55E-01	0.	0.	0.	9.18E-03	2.47E-09	0.	0.	7.18E 01
16	9.20	0.	7.72E 01	2.07E-01	0.	0.	0.	9.21E-03	2.55E-09	0.	0.	7.74E 01
17	9.10	0.	9.53E 01	2.21E-01	0.	0.	0.	9.24E-03	2.64E-09	0.	0.	9.55E 01
18	9.00	0.	1.16E 02	1.55E-01	0.	0.	0.	9.28E-03	2.73E-09	0.	0.	1.16E 02
19	8.90	0.	1.36E 02	1.20E-01	0.	0.	0.	9.31E-03	2.82E-09	0.	0.	1.36E 02
20	8.80	0.	1.42E 02	1.08E-01	0.	0.	0.	9.34E-03	2.92E-09	0.	0.	1.42E 02
21	8.70	0.	1.35E 02	6.98E-02	0.	0.	0.	9.38E-03	3.02E-09	0.	0.	1.35E 02
22	8.60	0.	1.29E 02	7.03E-02	0.	0.	0.	9.41E-03	3.13E-09	0.	0.	1.29E 02
23	8.50	0.	1.23E 02	4.58E-02	0.	0.	0.	9.44E-03	3.24E-09	0.	0.	1.23E 02
24	8.40	0.	1.18E 02	4.27E-02	0.	0.	0.	9.49E-03	3.36E-09	0.	0.	1.18E 02
25	8.30	0.	1.13E 02	2.77E-02	0.	0.	0.	9.54E-03	3.48E-09	0.	0.	1.13E 02
26	8.20	0.	1.08E 02	2.57E-02	0.	0.	0.	9.59E-03	3.61E-09	0.	0.	1.08E 02
27	8.10	0.	1.03E 02	1.73E-02	0.	0.	0.	9.64E-03	3.75E-09	0.	0.	1.03E 02
28	8.00	0.	9.84E 01	1.57E-02	0.	0.	0.	9.69E-03	3.89E-09	0.	0.	9.85E 01
29	7.90	0.	9.30E 01	1.07E-02	0.	0.	0.	9.74E-03	4.04E-09	0.	0.	9.30E 01
30	7.80	0.	8.75E 01	9.88E-03	0.	0.	0.	9.79E-03	4.20E-09	0.	0.	8.75E 01
31	7.70	0.	8.20E 01	6.97E-03	0.	0.	0.	9.84E-03	4.36E-09	0.	0.	8.20E 01
32	7.60	0.	7.64E 01	5.66E-03	0.	2.43E-04	0.	9.89E-03	4.54E-09	0.	0.	7.64E 01
33	7.50	0.	7.09E 01	4.29E-03	0.	3.40E-03	0.	9.94E-03	4.72E-09	0.	0.	7.09E 01
34	7.40	0.	6.51E 01	3.26E-03	0.	8.04E-03	0.	9.99E-03	4.92E-09	0.	0.	6.51E 01
35	7.30	0.	5.93E 01	2.57E-03	0.	5.10E-02	0.	1.00E-02	5.12E-09	0.	0.	5.93E 01
36	7.20	0.	5.38E 01	1.92E-03	0.	2.15E-01	0.	1.01E-02	5.34E-09	0.	0.	5.41E 01
37	7.10	0.	4.85E 01	1.55E-03	0.	2.30E-01	0.	1.02E-02	5.57E-09	0.	0.	4.87E 01
38	7.00	1.52E-01	0.	1.17E-03	0.	1.44E 00	0.	1.03E-02	5.81E-09	0.	0.	1.68E 00
39	6.90	2.66E-01	0.	8.97E-04	0.	9.91E-01	0.	1.03E-02	6.07E-09	0.	0.	1.27E 00
40	6.80	2.04E-01	0.	7.08E-04	0.	2.04E 00	0.	1.04E-02	6.34E-09	0.	0.	2.25E 00
41	6.70	1.31E-01	0.	5.09E-04	0.	4.57E 00	0.	1.05E-02	6.63E-09	0.	0.	4.71E 00
42	6.60	7.15E-02	0.	3.79E-04	0.	1.69E 00	0.	1.06E-02	6.93E-09	0.	0.	1.77E 00
43	6.50	3.61E-02	0.	2.33E-04	0.	3.39E 00	0.	1.07E-02	7.26E-09	0.	0.	3.43E 00
44	6.40	5.36E-02	0.	1.13E-04	6.49E-02	6.98E 00	0.	1.08E-02	7.61E-09	0.	0.	7.11E 00
45	6.30	1.06E-01	0.	4.67E-05	2.41E-01	2.24E 00	0.	1.08E-02	7.98E-09	0.	0.	2.60E 00
46	6.20	2.81E-01	0.	1.78E-05	2.82E-01	3.36E 00	0.	1.09E-02	8.37E-09	0.	0.	3.94E 00
47	6.10	9.76E-01	0.	5.96E-06	6.96E-01	9.07E 00	0.	1.10E-02	8.79E-09	0.	0.	1.08E 01
48	6.00	2.22E 00	0.	1.22E-06	4.64E-01	1.79E 00	0.	1.11E-02	9.24E-09	0.	0.	4.48E 00
49	5.90	3.12E 00	0.	8.40E-08	6.25E-01	2.33E 00	0.	1.11E-02	9.72E-09	0.	0.	6.04E 00
50	5.80	4.08E 00	0.	1.96E-09	7.79E-01	2.31E 00	0.	1.09E-02	1.02E-08	0.	0.	7.18E 00
51	5.70	4.01E 00	0	0.	7.27E-01	1.59E 00	0.	1.03E-02	1.08E-08	0.	0.	6.33E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	NO 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.58E 00	0.	0.	0.	4.23E-01	3.97E 00	0.	0.	9.55E-03	1.14E-08	0.	0.	8.98E 00
53	5.50	4.33E 00	0.	0.	0.	5.63E-01	4.85E 00	0.	0.	9.60E-03	1.20E-08	0.	0.	9.76E 00
54	5.40	4.07E 00	0.	0.	0.	4.17E-01	1.74E 00	0.	0.	9.65E-03	1.27E-08	0.	0.	6.23E 00
55	5.30	3.57E 00	0.	0.	0.	4.29E-01	3.98E 00	0.	0.	9.71E-03	1.34E-08	0.	0.	7.99E 00
56	5.20	2.10E 00	0.	0.	0.	4.13E-01	1.49E 00	0.	0.	9.77E-03	1.42E-08	0.	0.	4.01E 00
57	5.10	1.83E 00	0.	0.	0.	3.67E-01	2.12E 00	0.	1.02E-02	9.86E-03	1.51E-08	0.	0.	4.33E 00
58	5.00	1.25E 00	0.	0.	0.	2.86E-01	1.80E 00	0.	1.02E-02	9.94E-03	1.60E-08	0.	0.	3.35E 00
59	4.90	1.03E 00	0.	0.	0.	2.85E-01	1.29E 00	0.	1.02E-02	1.00E-02	1.70E-08	0.	0.	2.62E 00
60	4.80	1.05E 00	0.	0.	0.	2.92E-01	1.27E 00	0.	1.02E-02	1.01E-02	1.81E-08	0.	0.	2.63E 00
61	4.70	1.03E 00	0.	0.	0.	2.52E-01	7.60E-01	0.	1.02E-02	1.02E-02	1.92E-08	0.	0.	2.06E 00
62	4.60	1.10E 00	0.	0.	0.	2.36E-01	8.17E-01	0.	1.02E-02	1.03E-02	2.05E-08	0.	0.	2.17E 00
63	4.50	9.74E-01	0.	5.85E-06	0.	1.80E-01	4.28E-01	0.	1.02E-02	1.03E-02	2.19E-08	0.	0.	1.60E 00
64	4.40	8.66E-01	0.	3.19E-05	0.	1.64E-01	3.92E-01	0.	1.02E-02	1.04E-02	2.35E-08	0.	0.	1.44E 00
65	4.30	6.89E-01	0.	4.04E-05	0.	1.32E-01	1.60E-01	0.	1.02E-02	1.05E-02	2.51E-08	0.	0.	1.00E 00
66	4.20	5.64E-01	0.	2.90E-04	0.	1.27E-01	1.60E-01	0.	1.02E-02	1.06E-02	2.70E-08	0.	0.	8.72E-01
67	4.10	4.65E-01	0.	4.11E-05	0.	1.03E-01	3.85E-02	0.	1.02E-02	1.06E-02	2.90E-08	0.	0.	6.27E-01
68	4.00	3.67E-01	0.	3.92E-04	0.	8.74E-02	2.60E-02	0.	1.02E-02	1.07E-02	3.13E-08	0.	0.	5.01E-01
69	3.90	2.57E-01	0.	1.97E-04	4.29E-09	6.33E-02	1.45E-02	0.	1.02E-02	1.06E-02	3.37E-08	0.	0.	3.56E-01
70	3.80	2.68E-01	0.	1.64E-04	9.47E-08	6.49E-02	0.	0.	1.02E-02	1.06E-02	3.65E-08	0.	0.	3.46E-01
71	3.70	1.80E-01	0.	3.91E-04	1.44E-08	3.97E-02	0.	0.	1.02E-02	1.04E-02	3.95E-08	0.	0.	2.40E-01
72	3.60	1.41E-01	0.	9.15E-05	5.89E-08	4.43E-02	0.	0.	1.02E-02	9.77E-03	4.29E-08	0.	0.	2.05E-01
73	3.50	1.12E-01	0.	2.33E-04	4.71E-07	2.48E-02	0.	0.	1.02E-02	8.94E-03	4.67E-08	0.	0.	1.56E-01
74	3.40	8.32E-02	0.	5.79E-05	7.03E-09	2.74E-02	0.	0.	1.02E-02	5.16E-03	5.09E-08	0.	0.	1.26E-01
75	3.30	5.94E-02	0.	8.85E-05	9.86E-08	1.62E-02	0.	0.	1.02E-02	5.17E-03	5.57E-08	0.	0.	9.11E-02
76	3.20	4.23E-02	0.	2.93E-05	6.09E-07	1.58E-02	0.	0.	1.02E-02	5.18E-03	6.11E-08	0.	0.	7.35E-02
77	3.10	3.38E-02	0.	2.72E-05	1.16E-08	1.17E-02	0.	0.	1.02E-02	5.19E-03	6.72E-08	0.	0.	6.18E-02
78	3.00	2.49E-02	0.	1.04E-05	1.05E-07	9.15E-03	0.	0.	1.02E-02	5.20E-03	7.42E-08	0.	0.	4.94E-02
79	2.90	1.68E-02	0.	6.49E-06	1.21E-07	4.95E-03	0.	0.	1.02E-02	5.21E-03	8.21E-08	0.	0.	3.72E-02
80	2.80	1.51E-02	0.	2.47E-06	1.14E-08	2.28E-03	0.	0.	1.02E-02	5.22E-03	9.13E-08	0.	0.	3.28E-02
81	2.70	7.13E-03	0.	1.18E-06	5.15E-08	7.93E-04	0.	0.	1.02E-02	5.22E-03	1.02E-07	0.	0.	2.33E-02
82	2.60	2.24E-03	0.	5.55E-07	6.41E-09	2.33E-04	0.	0.	1.02E-02	5.22E-03	1.14E-07	0.	0.	1.79E-02
83	2.50	1.32E-04	0.	9.87E-08	1.91E-09	4.30E-05	0.	0.	1.02E-02	5.22E-03	1.28E-07	0.	0.	1.56E-02
84	2.40	0.	1.07E-05	0.	4.04E-09	3.74E-06	0.	0.	1.02E-02	5.22E-03	1.45E-07	0.	0.	1.54E-02
85	2.30	0.	1.06E-04	0.	0.	0.	0.	0.	1.02E-02	5.18E-03	1.65E-07	0.	0.	1.55E-02
86	2.20	0.	1.52E-04	0.	0.	0.	0.	0.	1.02E-02	5.16E-03	1.89E-07	0.	0.	1.55E-02
87	2.10	0.	4.19E-04	0.	0.	0.	0.	0.	1.02E-02	5.13E-03	2.17E-07	0.	0.	1.57E-02
88	2.00	0.	4.39E-04	0.	0.	0.	0.	0.	1.02E-02	4.97E-03	2.51E-07	0.	0.	1.56E-02
89	1.90	0.	1.90E-03	0.	0.	0.	0.	0.	1.02E-02	4.78E-03	2.93E-07	0.	0.	1.69E-02
90	1.80	0.	1.89E-03	0.	0.	0.	0.	0.	1.02E-02	4.57E-03	3.45E-07	0.	0.	1.66E-02
91	1.70	0.	1.98E-03	0.	0.	0.	0.	0.	1.02E-02	4.31E-03	4.10E-07	0.	0.	1.69E-02
92	1.60	0.	1.44E-03	0.	0.	0.	0.	0.	1.02E-02	3.64E-03	4.92E-07	0.	0.	1.53E-02
93	1.50	0.	1.69E-03	0.	0.	0.	0.	0.	1.02E-02	1.66E-03	5.97E-07	0.	0.	1.35E-02
94	1.40	0.	2.37E-03	0.	0.	0.	0.	0.	1.02E-02	0.	7.36E-07	0.	0.	1.25E-02
95	1.30	0.	1.33E-03	0.	0.	0.	0.	0.	1.02E-02	0.	9.21E-07	0.	0.	1.15E-02
96	1.20	0.	1.85E-03	0.	0.	0.	0.	0.	1.02E-02	0.	1.17E-06	0.	0.	1.20E-02
97	1.10	0.	1.03E-03	0.	0.	0.	0.	3.22E-05	1.02E-02	0.	1.53E-06	0.	0.	1.12E-02
98	1.00	0.	1.11E-03	0.	0.	0.	0.	1.08E-04	1.02E-02	0.	2.03E-06	0.	0.	1.14E-02
99	0.90	0.	7.49E-04	0.	0.	0.	0.	2.53E-04	1.02E-02	0.	2.80E-06	0.	0.	1.12E-02
100	0.80	0.	3.27E-04	0.	0.	0.	0.	1.69E-03	1.02E-02	0.	4.00E-06	0.	0.	1.22E-02
101	0.70	0.	9.67E-05	0.	0.	0.	0.	1.37E-03	1.02E-02	0.	5.99E-06	0.	0.	1.16E-02
102	0.60	0.	7.43E-07	0.	0.	0.	0.	4.57E-03	1.02E-02	0.	9.56E-06	0.	0.	1.48E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.42E-01	0.	0.	0.	5.23E-04	1.02E-18	0.	0.	6.43E-01
2	10.60	0.	0.	4.84E-01	0.	0.	0.	5.24E-04	1.05E-18	0.	0.	4.85E-01
3	10.50	0.	0.	4.34E-01	0.	0.	0.	5.24E-04	1.08E-18	0.	0.	4.35E-01
4	10.40	0.	0.	3.52E-01	0.	0.	0.	5.25E-04	1.11E-18	0.	0.	3.52E-01
5	10.30	0.	0.	2.93E-01	0.	0.	0.	5.26E-04	1.14E-18	0.	0.	2.93E-01
6	10.20	0.	0.	2.31E-01	0.	0.	0.	5.26E-04	1.18E-18	0.	0.	2.32E-01
7	10.10	0.	0.	1.93E-01	0.	0.	0.	5.27E-04	1.21E-18	0.	0.	1.93E-01
8	10.00	0.	0.	1.30E-01	0.	0.	0.	5.28E-04	1.25E-18	0.	0.	1.31E-01
9	9.90	0.	0.	1.28E-01	0.	0.	0.	5.29E-04	1.29E-18	0.	0.	1.28E-01
10	9.80	0.	0.	9.98E-02	0.	0.	0.	5.30E-04	1.33E-18	0.	0.	1.00E-01
11	9.70	0.	0.	6.75E-02	0.	0.	0.	5.31E-04	1.37E-18	0.	0.	6.80E-02
12	9.60	0.	0.	7.21E-02	0.	0.	0.	5.32E-04	1.42E-18	0.	0.	7.26E-02
13	9.50	0.	2.32E 00	4.70E-02	0.	0.	0.	5.33E-04	1.46E-18	0.	0.	2.37E 00
14	9.40	0.	2.55E 00	3.76E-02	0.	0.	0.	5.35E-04	1.51E-18	0.	0.	2.59E 00
15	9.30	0.	2.78E 00	3.64E-02	0.	0.	0.	5.37E-04	1.56E-18	0.	0.	2.81E 00
16	9.20	0.	3.00E 00	2.13E-02	0.	0.	0.	5.39E-04	1.61E-18	0.	0.	3.02E 00
17	9.10	0.	3.70E 00	2.27E-02	0.	0.	0.	5.40E-04	1.66E-18	0.	0.	3.73E 00
18	9.00	0.	4.50E 00	1.60E-02	0.	0.	0.	5.42E-04	1.72E-18	0.	0.	4.51E 00
19	8.90	0.	5.29E 00	1.23E-02	0.	0.	0.	5.44E-04	1.78E-18	0.	0.	5.30E 00
20	8.80	0.	5.50E 00	1.11E-02	0.	0.	0.	5.46E-04	1.84E-18	0.	0.	5.52E 00
21	8.70	0.	5.26E 00	7.17E-03	0.	0.	0.	5.48E-04	1.91E-18	0.	0.	5.27E 00
22	8.60	0.	5.01E 00	7.23E-03	0.	0.	0.	5.50E-04	1.97E-18	0.	0.	5.02E 00
23	8.50	0.	4.79E 00	4.70E-03	0.	0.	0.	5.52E-04	2.04E-18	0.	0.	4.80E 00
24	8.40	0.	4.59E 00	4.39E-03	0.	0.	0.	5.55E-04	2.12E-18	0.	0.	4.60E 00
25	8.30	0.	4.48E 00	2.84E-03	0.	0.	0.	5.58E-04	2.20E-18	0.	0.	4.48E 00
26	8.20	0.	4.21E 00	2.64E-03	0.	0.	0.	5.61E-04	2.28E-18	0.	0.	4.21E 00
27	8.10	0.	4.02E 00	1.78E-03	0.	0.	0.	5.64E-04	2.36E-18	0.	0.	4.02E 00
28	8.00	0.	3.83E 00	1.61E-03	0.	0.	0.	5.67E-04	2.45E-18	0.	0.	3.83E 00
29	7.90	0.	3.61E 00	1.18E-03	0.	0.	0.	5.70E-04	2.55E-18	0.	0.	3.62E 00
30	7.80	0.	3.40E 00	1.01E-03	0.	0.	0.	5.72E-04	2.65E-18	0.	0.	3.40E 00
31	7.70	0.	3.19E 00	7.16E-04	0.	0.	0.	5.75E-04	2.75E-18	0.	0.	3.19E 00
32	7.60	0.	2.97E 00	5.81E-04	0.	1.54E-05	0.	5.78E-04	2.86E-18	0.	0.	2.97E 00
33	7.50	0.	2.75E 00	4.48E-04	0.	2.15E-04	0.	5.81E-04	2.98E-18	0.	0.	2.76E 00
34	7.40	0.	2.53E 00	3.35E-04	0.	5.08E-04	0.	5.84E-04	3.10E-18	0.	0.	2.53E 00
35	7.30	0.	2.30E 00	2.64E-04	0.	3.22E-03	0.	5.88E-04	3.23E-18	0.	0.	2.31E 00
36	7.20	0.	2.09E 00	1.97E-04	0.	1.36E-02	0.	5.91E-04	3.37E-18	0.	0.	2.11E 00
37	7.10	0.	1.88E 00	1.59E-04	0.	1.46E-02	0.	5.96E-04	3.51E-18	0.	0.	1.98E 00
38	7.00	5.91E-03	0.	1.21E-04	0.	9.11E-02	0.	6.01E-04	3.67E-18	0.	0.	9.77E-02
39	6.90	1.04E-02	0.	9.22E-05	0.	6.26E-02	0.	6.05E-04	3.83E-18	0.	0.	7.37E-02
40	6.80	7.95E-03	0.	7.27E-05	0.	1.29E-01	0.	6.10E-04	4.00E-18	0.	0.	1.37E-01
41	6.70	5.09E-03	0.	5.23E-05	0.	2.89E-01	0.	6.15E-04	4.18E-18	0.	0.	2.95E-01
42	6.60	2.78E-03	0.	3.85E-05	0.	1.07E-01	0.	6.20E-04	4.38E-18	0.	0.	1.10E-01
43	6.50	1.40E-03	0.	2.40E-05	0.	2.14E-01	0.	6.25E-04	4.58E-18	0.	0.	2.16E-01
44	6.40	2.09E-03	0.	1.16E-05	4.10E-03	4.41E-01	0.	6.30E-04	4.80E-18	0.	0.	4.48E-01
45	6.30	4.12E-03	0.	4.86E-06	1.52E-02	1.41E-01	0.	6.34E-04	5.03E-18	0.	0.	1.62E-01
46	6.20	1.09E-02	0.	1.83E-06	1.78E-02	2.13E-01	0.	6.39E-04	5.28E-18	0.	0.	2.42E-01
47	6.10	3.80E-02	0.	6.13E-07	4.40E-02	5.73E-01	0.	6.44E-04	5.55E-18	0.	0.	6.56E-01
48	6.00	8.62E-02	0.	1.25E-07	2.93E-02	1.13E-01	0.	6.49E-04	5.83E-18	0.	0.	2.29E-01
49	5.90	1.21E-01	0.	8.63E-09	3.95E-02	1.47E-01	0.	6.49E-04	6.13E-18	0.	0.	3.04E-01
50	5.80	1.59E-01	0.	2.01E-10	4.93E-02	1.46E-01	0.	6.39E-04	6.46E-18	0.	0.	3.55E-01
51	5.70	1.53E-01	0.	0.	4.60E-02	1.00E-01	0.	6.01E-04	6.80E-18	0.	0.	3.03E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.78E-01	0.	0.	0.	2.67E-02	2.51E-01	0.	0.	5.56E-04	7.18E-10	0.	0.	4.56E-01
53	5.50	1.69E-01	0.	0.	0.	3.56E-02	3.07E-01	0.	0.	5.61E-04	7.58E-10	0.	0.	5.12E-01
54	5.40	1.58E-01	0.	0.	0.	2.64E-02	1.10E-01	0.	0.	5.64E-04	8.01E-10	0.	0.	2.95E-01
55	5.30	1.39E-01	0.	0.	0.	2.71E-02	2.52E-01	0.	0.	5.68E-04	8.47E-10	0.	0.	4.18E-01
56	5.20	8.15E-02	0.	0.	0.	2.61E-02	9.43E-02	0.	0.	5.71E-04	8.97E-10	0.	0.	2.03E-01
57	5.10	7.11E-02	0.	0.	0.	2.32E-02	1.34E-01	0.	1.27E-04	5.76E-04	9.51E-10	0.	0.	2.29E-01
58	5.00	4.85E-02	0.	0.	0.	1.81E-02	1.14E-01	0.	1.27E-04	5.81E-04	1.01E-09	0.	0.	1.82E-01
59	4.90	4.01E-02	0.	0.	0.	1.80E-02	8.16E-02	0.	1.27E-04	5.86E-04	1.07E-09	0.	0.	1.41E-01
60	4.80	4.07E-02	0.	0.	0.	1.85E-02	8.00E-02	0.	1.27E-04	5.91E-04	1.14E-09	0.	0.	1.40E-01
61	4.70	3.99E-02	0.	0.	0.	1.59E-02	4.81E-02	0.	1.27E-04	5.96E-04	1.21E-09	0.	0.	1.05E-01
62	4.60	4.27E-02	0.	0.	0.	1.49E-02	5.16E-02	0.	1.27E-04	6.01E-04	1.30E-09	0.	0.	1.10E-01
63	4.50	3.75E-02	0.	5.80E-07	0.	1.14E-02	2.71E-02	0.	1.27E-04	6.05E-04	1.38E-09	0.	0.	7.71E-02
64	4.40	3.37E-02	0.	3.20E-06	0.	1.04E-02	2.48E-02	0.	1.27E-04	6.10E-04	1.48E-09	0.	0.	6.96E-02
65	4.30	2.66E-02	0.	4.15E-06	0.	8.36E-03	1.01E-02	0.	1.27E-04	6.15E-04	1.59E-09	0.	0.	4.68E-02
66	4.20	2.19E-02	0.	2.98E-05	0.	8.03E-03	1.01E-02	0.	1.27E-04	6.20E-04	1.70E-09	0.	0.	4.08E-02
67	4.10	1.81E-02	0.	4.22E-06	0.	6.49E-03	2.43E-03	0.	1.27E-04	6.22E-04	1.83E-09	0.	0.	2.77E-02
68	4.00	1.43E-02	0.	3.92E-05	0.	5.53E-03	1.64E-03	0.	1.27E-04	6.25E-04	1.97E-09	0.	0.	2.22E-02
69	3.90	9.99E-03	0.	2.03E-05	1.49E-09	4.00E-03	9.15E-04	0.	1.27E-04	6.22E-04	2.13E-09	0.	0.	1.57E-02
70	3.80	1.01E-02	0.	1.60E-05	3.28E-08	4.10E-03	0.	0.	1.27E-04	6.20E-04	2.30E-09	0.	0.	1.50E-02
71	3.70	6.98E-03	0.	4.02E-05	4.98E-09	2.51E-03	0.	0.	1.27E-04	6.10E-04	2.49E-09	0.	0.	1.03E-02
72	3.60	5.49E-03	0.	9.46E-06	2.04E-08	2.80E-03	0.	0.	1.27E-04	5.71E-04	2.71E-09	0.	0.	8.99E-03
73	3.50	4.37E-03	0.	2.39E-05	1.63E-07	1.57E-03	0.	0.	1.27E-04	5.23E-04	2.95E-09	0.	0.	6.61E-03
74	3.40	3.23E-03	0.	5.95E-06	2.44E-09	1.73E-03	0.	0.	1.27E-04	3.02E-04	3.21E-09	0.	0.	5.40E-03
75	3.30	2.31E-03	0.	9.09E-06	3.42E-08	1.02E-03	0.	0.	1.27E-04	3.02E-04	3.52E-09	0.	0.	3.77E-03
76	3.20	1.65E-03	0.	3.01E-06	2.11E-07	9.99E-04	0.	0.	1.27E-04	3.03E-04	3.86E-09	0.	0.	3.08E-03
77	3.10	1.32E-03	0.	2.80E-06	4.51E-09	7.43E-04	0.	0.	1.27E-04	3.03E-04	4.24E-09	0.	0.	2.49E-03
78	3.00	9.67E-04	0.	1.07E-06	3.64E-08	5.78E-04	0.	0.	1.27E-04	3.04E-04	4.68E-09	0.	0.	1.98E-03
79	2.90	6.54E-04	0.	6.63E-07	4.19E-08	3.13E-04	0.	0.	1.27E-04	3.05E-04	5.18E-09	0.	0.	1.40E-03
80	2.80	5.87E-04	0.	2.54E-07	3.94E-09	1.44E-04	0.	0.	1.27E-04	3.05E-04	5.76E-09	0.	0.	1.16E-03
81	2.70	2.76E-04	0.	1.21E-07	1.79E-08	5.01E-05	0.	0.	1.27E-04	3.05E-04	6.43E-09	0.	0.	7.58E-04
82	2.60	8.72E-05	0.	5.71E-08	2.22E-09	1.48E-05	0.	0.	1.27E-04	3.05E-04	7.20E-09	0.	0.	5.34E-04
83	2.50	5.15E-06	0.	1.01E-08	6.63E-10	2.72E-06	0.	0.	1.27E-04	3.05E-04	8.10E-09	0.	0.	4.40E-04
84	2.40	0.	1.10E-06	0.	1.40E-09	2.36E-07	0.	0.	1.27E-04	3.05E-04	9.16E-09	0.	0.	4.33E-04
85	2.30	0.	1.09E-05	0.	0.	0.	0.	0.	1.27E-04	3.03E-04	1.04E-08	0.	0.	4.40E-04
86	2.20	0.	1.56E-05	0.	0.	0.	0.	0.	1.27E-04	3.01E-04	1.19E-08	0.	0.	4.44E-04
87	2.10	0.	4.30E-05	0.	0.	0.	0.	0.	1.27E-04	3.00E-04	1.37E-08	0.	0.	4.70E-04
88	2.00	0.	4.51E-05	0.	0.	0.	0.	0.	1.27E-04	2.91E-04	1.59E-08	0.	0.	4.62E-04
89	1.90	0.	1.05E-04	0.	0.	0.	0.	0.	1.27E-04	2.79E-04	1.85E-08	0.	0.	6.02E-04
90	1.80	0.	1.94E-04	0.	0.	0.	0.	0.	1.27E-04	2.67E-04	2.18E-08	0.	0.	5.88E-04
91	1.70	0.	2.03E-04	0.	0.	0.	0.	0.	1.27E-04	2.52E-04	2.59E-08	0.	0.	5.82E-04
92	1.60	0.	1.50E-04	0.	0.	0.	0.	0.	1.27E-04	2.13E-04	3.10E-08	0.	0.	4.89E-04
93	1.50	0.	1.74E-04	0.	0.	0.	0.	0.	1.27E-04	9.69E-05	3.77E-08	0.	0.	3.98E-04
94	1.40	0.	2.43E-34	0.	0.	0.	0.	0.	1.27E-04	0.	4.64E-08	0.	0.	3.70E-04
95	1.30	0.	1.37E-04	0.	0.	0.	0.	0.	1.27E-04	0.	5.81E-08	0.	0.	2.63E-04
96	1.20	0.	1.90E-0'	0.	0.	0.	0.	0.	1.27E-04	0.	7.40E-08	0.	0.	3.17E-04
97	1.10	0.	1.05E-04	0.	0.	0.	0.	2.83E-06	1.27E-04	0.	9.63E-08	0.	0.	2.34E-04
98	1.00	0.	1.14E-04	0.	0.	0.	0.	6.83E-06	1.27E-04	0.	1.28E-07	0.	0.	2.47E-04
99	0.90	0.	7.70E-05	0.	0.	0.	0.	1.60E-05	1.27E-04	0.	1.76E-07	0.	0.	2.20E-04
100	0.80	0.	3.36E-05	0.	0.	0.	0.	1.07E-04	1.27E-04	0.	2.52E-07	0.	0.	2.67E-04
101	0.70	0.	9.94E-06	0.	0.	0.	0.	8.64E-05	1.27E-04	0.	3.78E-07	0.	0	2.23E-04
102	0.69	0.	7.63E-08	0.	0.	0.	0.	2.89E-04	1.27E-04	0.	6.04E-07	0.	0.	4.16E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.59E-02	0.	0.	0.	1.49E-05	4.33E-12	0.	0.	6.59E-02
2	10.60	0.	0.	4.94E-02	0.	0.	0.	1.49E-05	4.45E-12	0.	0.	4.94E-02
3	10.50	0.	0.	4.43E-02	0.	0.	0.	1.49E-05	4.58E-12	0.	0.	4.43E-02
4	10.40	0.	0.	3.59E-02	0.	0.	0.	1.49E-05	4.72E-12	0.	0.	3.59E-02
5	10.30	0.	0.	2.58E-02	0.	0.	0.	1.50E-05	4.86E-12	0.	0.	2.98E-02
6	10.20	0.	0.	2.36E-02	0.	0.	0.	1.50E-05	5.00E-12	0.	0.	2.36E-02
7	10.10	0.	0.	1.96E-02	0.	0.	0.	1.50E-05	5.15E-12	0.	0.	1.97E-02
8	10.00	0.	0.	1.33E-02	0.	0.	0.	1.50E-05	5.31E-12	0.	0.	1.33E-02
9	9.90	0.	0.	1.30E-02	0.	0.	0.	1.50E-05	5.47E-12	0.	0.	1.31E-02
10	9.80	0.	0.	1.02E-02	0.	0.	0.	1.51E-05	5.65E-12	0.	0.	1.02E-02
11	9.70	0.	0.	6.88E-03	0.	0.	0.	1.51E-05	5.82E-12	0.	0.	6.98E-03
12	9.60	0.	0.	7.35E-03	0.	0.	0.	1.51E-05	6.01E-12	0.	0.	7.37E-03
13	9.50	0.	4.13E-02	4.79E-03	0.	0.	0.	1.52E-05	6.20E-12	0.	0.	4.61E-02
14	9.40	0.	4.53E-02	3.84E-03	0.	0.	0.	1.52E-05	6.40E-12	0.	0.	4.91E-02
15	9.30	0.	4.93E-02	3.72E-03	0.	0.	0.	1.53E-05	6.61E-12	0.	0.	5.30E-02
16	9.20	0.	5.33E-02	2.17E-03	0.	0.	0.	1.53E-05	6.83E-12	0.	0.	5.55E-02
17	9.10	0.	6.58E-02	2.31E-03	0.	0.	0.	1.54E-05	7.06E-12	0.	0.	6.81E-02
18	9.00	0.	7.99E-02	1.63E-03	0.	0.	0.	1.54E-05	7.30E-12	0.	0.	8.15E-02
19	8.90	0.	9.40E-02	1.24E-03	0.	0.	0.	1.55E-05	7.55E-12	0.	0.	9.53E-02
20	8.80	0.	9.70E-02	1.13E-03	0.	0.	0.	1.55E-05	7.81E-12	0.	0.	9.89E-02
21	8.70	0.	9.34E-02	7.31E-04	0.	0.	0.	1.56E-05	8.09E-12	0.	0.	9.42E-02
22	8.60	0.	8.90E-02	7.37E-04	0.	0.	0.	1.56E-05	8.37E-12	0.	0.	8.98E-02
23	8.50	0.	8.51E-02	4.88E-04	0.	0.	0.	1.57E-05	8.67E-12	0.	0.	8.56E-02
24	8.40	0.	8.16E-02	4.48E-04	0.	0.	0.	1.58E-05	8.99E-12	0.	0.	8.21E-02
25	8.30	0.	7.82E-02	2.98E-04	0.	0.	0.	1.59E-05	9.32E-12	0.	0.	7.85E-02
26	8.20	0.	7.48E-02	2.69E-04	0.	0.	0.	1.60E-05	9.67E-12	0.	0.	7.51E-02
27	8.10	0.	7.14E-02	1.82E-04	0.	0.	0.	1.60E-05	1.00E-11	0.	0.	7.16E-02
28	8.00	0.	6.80E-02	1.64E-04	0.	0.	0.	1.61E-05	1.04E-11	0.	0.	6.82E-02
29	7.90	0.	6.42E-02	1.12E-04	0.	0.	0.	1.62E-05	1.08E-11	0.	0.	6.43E-02
30	7.80	0.	6.04E-02	1.04E-04	0.	0.	0.	1.63E-05	1.12E-11	0.	0.	6.05E-02
31	7.70	0.	5.66E-02	7.30E-05	0.	0.	0.	1.64E-05	1.17E-11	0.	0.	5.67E-02
32	7.60	0.	5.28E-02	5.93E-05	0.	8.54E-07	0.	1.64E-05	1.21E-11	0.	0.	5.28E-02
33	7.50	0.	4.89E-02	4.49E-05	0.	9.14E-06	0.	1.65E-05	1.26E-11	0.	0.	4.90E-02
34	7.40	0.	4.50E-02	3.42E-05	0.	2.16E-05	0.	1.66E-05	1.32E-11	0.	0.	4.50E-02
35	7.30	0.	4.09E-02	2.69E-05	0.	1.37E-04	0.	1.67E-05	1.37E-11	0.	0.	4.11E-02
36	7.20	0.	3.72E-02	2.01E-05	0.	5.77E-04	0.	1.68E-05	1.43E-11	0.	0.	3.78E-02
37	7.10	0.	3.39E-02	1.62E-05	0.	1.18E-04	0.	1.69E-05	1.49E-11	0.	0.	3.41E-02
38	7.00	1.05E-04	0.	1.23E-05	0.	3.87E-03	0.	1.71E-05	1.56E-11	0.	0.	4.08E-03
39	6.90	1.83E-04	0.	9.48E-06	0.	2.66E-03	0.	1.72E-05	1.62E-11	0.	0.	2.87E-03
40	6.80	1.41E-04	0.	7.41E-06	0.	5.47E-03	0.	1.74E-05	1.70E-11	0.	0.	5.64E-03
41	6.70	9.00E-05	0.	5.34E-06	0.	1.23E-02	0.	1.75E-05	1.77E-11	0.	0.	1.24E-02
42	6.60	4.92E-05	0.	3.93E-06	0.	4.54E-03	0.	1.76E-05	1.86E-11	0.	0.	4.61E-03
43	6.50	2.48E-05	0.	2.44E-06	0.	9.09E-03	0.	1.78E-05	1.94E-11	0.	0.	9.14E-03
44	6.40	3.69E-05	0.	1.18E-06	1.74E-04	1.87E-02	0.	1.79E-05	2.04E-11	0.	0.	1.89E-02
45	6.30	7.20E-05	0.	4.90E-07	6.47E-04	6.00E-03	0.	1.80E-05	2.14E-11	0.	0.	6.75E-03
46	6.20	1.93E-04	0.	1.86E-07	7.56E-04	9.03E-03	0.	1.82E-05	2.24E-11	0.	0.	1.08E-02
47	6.10	6.71E-04	0.	6.29E-08	1.87E-03	2.44E-02	0.	1.83E-05	2.35E-11	0.	0.	2.62E-02
48	6.00	1.92E-03	0.	1.27E-08	1.29E-03	4.80E-03	0.	1.85E-05	2.47E-11	0.	0.	7.98E-03
49	5.90	2.14E-03	0.	8.80E-10	1.68E-03	6.26E-03	0.	1.85E-05	2.60E-11	0.	0.	1.01E-02
50	5.80	2.80E-03	0.	2.09E-11	2.09E-03	8.20E-03	0.	1.82E-05	2.74E-11	0.	0.	1.11E-02
51	5.70	2.76E-03	0.	0.	1.95E-03	4.26E-03	0.	1.71E-05	2.89E-11	0.	0.	8.99E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	2.60	3.19E-03	0.	0.	0.	1.13E-03	1.07E-02	0.	0.	1.59E-05	3.04E-11	0.	0.	1.50E-02
93	5.50	2.98E-03	0.	0.	0.	1.91E-03	1.30E-02	0.	0.	1.60E-05	3.21E-11	0.	0.	1.76E-02
94	5.40	2.80E-03	0.	0.	0.	1.12E-03	4.66E-03	0.	0.	1.60E-05	3.40E-11	0.	0.	8.68E-03
95	5.30	2.49E-03	0.	0.	0.	1.15E-03	1.07E-02	0.	0.	1.62E-05	3.59E-11	0.	0.	1.44E-02
96	5.20	1.44E-03	0.	0.	0.	1.11E-03	4.00E-03	0.	0.	1.63E-05	3.80E-11	0.	0.	6.57E-03
97	5.10	1.20E-03	0.	0.	0.	9.86E-04	5.68E-03	0.	7.15E-07	1.64E-05	4.03E-11	0.	0.	7.94E-03
98	5.00	8.50E-04	0.	0.	0.	7.68E-04	4.84E-03	0.	7.15E-07	1.65E-05	4.28E-11	0.	0.	6.48E-03
99	4.90	7.00E-04	0.	0.	0.	7.66E-04	3.46E-03	0.	7.15E-07	1.67E-05	4.55E-11	0.	0.	4.96E-03
60	4.80	7.19E-04	0.	0.	0.	7.84E-04	3.40E-03	0.	7.15E-07	1.68E-05	4.84E-11	0.	0.	4.92E-03
61	4.70	7.06E-04	0.	0.	0.	8.76E-04	2.04E-03	0.	7.15E-07	1.69E-05	5.15E-11	0.	0.	3.44E-03
62	4.60	7.55E-04	0.	0.	0.	6.33E-04	2.19E-03	0.	7.15E-07	1.71E-05	5.50E-11	0.	0.	3.60E-03
63	4.50	6.70E-04	0.	5.92E-08	0.	4.84E-04	1.15E-03	0.	7.15E-07	1.72E-05	5.87E-11	0.	0.	2.32E-03
64	4.40	5.96E-04	0.	3.35E-07	0.	4.40E-04	1.05E-03	0.	7.15E-07	1.74E-05	6.28E-11	0.	0.	2.11E-03
65	4.30	4.74E-04	0.	4.23E-07	0.	3.55E-04	4.29E-04	0.	7.15E-07	1.75E-05	6.73E-11	0.	0.	1.28E-03
66	4.20	3.88E-04	0.	3.04E-06	0.	3.41E-04	4.29E-04	0.	7.15E-07	1.76E-05	7.23E-11	0.	0.	1.18E-03
67	4.10	3.19E-04	0.	4.31E-07	0.	2.78E-04	1.03E-04	0.	7.15E-07	1.77E-05	7.77E-11	0.	0.	7.17E-04
68	4.05	2.52E-04	0.	4.00E-06	0.	2.35E-04	6.97E-05	0.	7.15E-07	1.78E-05	8.37E-11	0.	0.	5.79E-04
69	3.90	1.77E-04	0.	2.07E-06	7.08E-10	1.70E-04	3.89E-05	0.	7.15E-07	1.77E-05	9.03E-11	0.	0.	4.06E-04
70	3.80	1.79E-04	0.	1.72E-06	1.56E-08	1.74E-04	0.	0.	7.15E-07	1.76E-05	9.76E-11	0.	0.	3.73E-04
71	3.70	1.23E-04	0.	4.18E-06	2.37E-09	1.07E-04	0.	0.	7.15E-07	1.74E-05	1.06E-10	0.	0.	2.52E-04
72	3.60	9.70E-05	0.	9.59E-07	9.72E-09	1.19E-04	0.	0.	7.15E-07	1.63E-05	1.15E-10	0.	0.	2.34E-04
73	3.50	7.72E-05	0.	2.44E-06	7.78E-08	6.67E-05	0.	0.	7.15E-07	1.49E-05	1.25E-10	0.	0.	1.62E-04
74	3.40	5.72E-05	0.	6.07E-07	1.15E-09	7.36E-05	0.	0.	7.15E-07	8.58E-06	1.36E-10	0.	0.	1.41E-04
75	3.30	4.09E-05	0.	9.27E-07	1.63E-08	4.35E-05	0.	0.	7.15E-07	8.60E-06	1.49E-10	0.	0.	9.46E-05
76	3.20	2.91E-05	0.	3.07E-07	1.91E-07	4.24E-05	0.	0.	7.15E-07	8.61E-06	1.64E-10	0.	0.	8.13E-05
77	3.10	2.33E-05	0.	2.85E-07	1.91E-09	3.15E-05	0.	0.	7.15E-07	8.63E-06	1.80E-10	0.	0.	6.44E-05
78	3.00	1.71E-05	0.	1.09E-07	1.73E-08	2.46E-05	0.	0.	7.15E-07	8.65E-06	1.99E-10	0.	0.	5.12E-05
79	2.90	1.16E-05	0.	6.76E-08	1.99E-08	1.33E-05	0.	0.	7.15E-07	8.67E-06	2.20E-10	0.	0.	3.43E-05
80	2.80	1.04E-05	0.	2.59E-08	1.87E-09	6.11E-06	0.	0.	7.15E-07	8.68E-06	2.44E-10	0.	0.	2.59E-05
81	2.70	4.88E-06	0.	1.23E-08	8.50E-09	2.13E-06	0.	0.	7.15E-07	8.68E-06	2.73E-10	0.	0.	1.64E-05
82	2.60	1.54E-06	0.	9.82E-09	1.06E-09	6.26E-07	0.	0.	7.15E-07	8.68E-06	3.05E-10	0.	0.	1.16E-05
83	2.50	9.10E-08	0.	1.03E-09	3.16E-10	1.15E-07	0.	0.	7.15E-07	8.68E-06	3.44E-10	0.	0.	9.61E-06
84	2.40	0.	1.12E-07	0.	6.67E-10	0.00E-09	0.	0.	7.15E-07	8.68E-06	3.89E-10	0.	0.	9.52E-06
85	2.30	0.	1.11E-06	0.	0.	0.	0.	0.	7.15E-07	8.61E-06	4.42E-10	0.	0.	1.04E-05
86	2.20	0.	1.59E-06	0.	0.	0.	0.	0.	7.15E-07	8.58E-06	5.09E-10	0.	0.	1.09E-05
87	2.10	0.	4.39E-06	0.	0.	0.	0.	0.	7.15E-07	8.54E-06	5.81E-10	0.	0.	1.36E-05
88	2.00	0.	4.60E-06	0.	0.	0.	0.	0.	7.15E-07	8.27E-06	6.73E-10	0.	0.	1.36E-05
89	1.90	0.	1.99E-05	0.	0.	0.	0.	0.	7.15E-07	7.95E-06	7.85E-10	0.	0.	2.96E-05
90	1.80	0.	1.98E-05	0.	0.	0.	0.	0.	7.15E-07	7.61E-06	9.24E-10	0.	0.	2.81E-05
91	1.70	0.	2.07E-05	0.	0.	0.	0.	0.	7.15E-07	7.17E-06	1.10E-09	0.	0.	2.96E-05
92	1.60	0.	1.53E-05	0.	0.	0.	0.	0.	7.15E-07	6.06E-06	1.32E-09	0.	0.	2.20E-05
93	1.50	0.	1.77E-05	0.	0.	0.	0.	0.	7.15E-07	2.76E-06	1.60E-09	0.	0.	2.12E-05
94	1.40	0.	2.48E-05	0.	0.	0.	0.	0.	7.15E-07	0.	1.97E-09	0.	0.	2.69E-05
95	1.30	0.	1.39E-05	0.	0.	0.	0.	0.	7.15E-07	0.	2.46E-09	0.	0.	1.48E-05
96	1.20	0.	1.94E-05	0.	0.	0.	0.	0.	7.15E-07	0.	3.14E-09	0.	0.	2.01E-05
97	1.10	0.	1.07E-05	0.	0.	0.	0.	8.64E-08	7.15E-07	0.	4.08E-09	0.	0.	1.15E-05
98	1.00	0.	1.18E-05	0.	0.	0.	0.	2.90E-07	7.15E-07	0.	5.49E-09	0.	0.	1.26E-05
99	0.90	0.	7.89E-06	0.	0.	0.	0.	6.79E-07	7.15E-07	0.	7.49E-09	0.	0.	9.25E-06
100	0.80	0.	3.43E-06	0.	0.	0.	0.	4.54E-06	7.15E-07	0.	1.07E-08	0.	0.	8.69E-06
101	0.70	0.	1.01E-06	0.	0.	0.	0.	3.67E-06	7.15E-07	0.	1.60E-08	0.	0.	5.41E-06
102	0.60	0.	7.78E-09	0.	0.	0.	0.	1.23E-05	7.15E-07	0.	2.56E-08	0.	0.	1.30E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.45E-03	0.	0	0.	2.98E-07	1.47E-13	0.	0.	6.45E-03
	10.60	0.	0.	4.86E-03	0.	0.	0.	2.99E-07	1.51E-13	0.	0.	4.86E-03
3	10.50	0.	0.	4.36E-03	0.	0.	0.	2.99E-07	1.56E-13	0.	0.	4.36E-03
4	10.40	0.	0.	3.53E-03	0.	0.	0.	2.99E-07	1.60E-13	0.	0.	3.53E-03
5	10.30	0.	0.	2.54E-03	0.	0.	0.	3.00E-07	1.65E-13	0.	0.	2.54E-03
6	10.20	0.	0.	2.32E-03	0.	0.	0.	3.00E-07	1.70E-13	0.	0.	2.32E-03
7	10.10	0.	0.	1.93E-03	0.	0.	0.	3.01E-07	1.75E-13	0.	0.	1.93E-03
8	10.00	0.	0.	1.31E-03	0.	0.	0.	3.01E-07	1.81E-13	0.	0.	1.31E-03
9	9.90	0.	0.	1.28E-03	0.	0.	0.	3.02E-07	1.86E-13	0.	0.	1.28E-03
10	9.80	0.	0.	10.00E-04	0.	0.	0.	3.02E-07	1.92E-13	0.	0.	10.00E-04
11	9.70	0.	0.	6.77E-04	0.	0.	0.	3.03E-07	1.98E-13	0.	0.	6.77E-04
12	9.60	0.	0.	7.24E-04	0.	0.	0.	3.03E-07	2.04E-13	0.	0.	7.24E-04
13	9.50	0.	4.83E-04	4.72E-04	0.	0.	0.	3.04E-07	2.11E-13	0.	0.	9.55E-04
14	9.40	0.	5.30E-04	3.78E-04	0.	0.	0.	3.05E-07	2.18E-13	0.	0.	9.08E-04
15	9.30	0.	5.77E-04	3.66E-04	0.	0.	0.	3.06E-07	2.25E-13	0.	0.	9.43E-04
16	9.20	0.	6.24E-04	2.14E-04	0.	0.	0.	3.07E-07	2.32E-13	0.	0.	8.38E-04
17	9.10	0.	7.70E-04	2.27E-04	0.	0.	0.	3.08E-07	2.40E-13	0.	0.	9.98E-04
18	9.00	0.	9.35E-04	1.68E-04	0.	0.	0.	3.09E-07	2.48E-13	0.	0.	1.10E-03
19	8.90	0.	1.10E-03	1.24E-04	0.	0.	0.	3.10E-07	2.57E-13	0.	0.	1.22E-03
20	8.80	0.	1.14E-03	1.11E-04	0.	0.	0.	3.12E-07	2.66E-13	0.	0.	1.26E-03
21	8.70	0.	1.09E-03	7.20E-05	0.	0.	0.	3.13E-07	2.75E-13	0.	0.	1.17E-03
22	8.60	0.	1.04E-03	7.20E-05	0.	0.	0.	3.14E-07	2.85E-13	0.	0.	1.12E-03
23	8.50	0.	9.96E-04	4.72E-05	0.	0.	0.	3.15E-07	2.95E-13	0.	0.	1.04E-03
24	8.40	0.	9.55E-04	4.41E-05	0.	0.	0.	3.17E-07	3.06E-13	0.	0.	10.00E-04
25	8.30	0.	9.15E-04	2.89E-05	0.	0.	0.	3.18E-07	3.17E-13	0.	0.	9.44E-04
26	8.20	0.	8.75E-04	2.68E-05	0.	0.	0.	3.20E-07	3.29E-13	0.	0.	9.02E-04
27	8.10	0.	8.35E-04	1.79E-05	0.	0.	0.	3.22E-07	3.41E-13	0.	0.	8.54E-04
28	8.00	0.	7.96E-04	1.62E-05	0.	0.	0.	3.23E-07	3.54E-13	0.	0.	8.12E-04
29	7.90	0.	7.51E-04	1.10E-05	0.	0.	0.	3.25E-07	3.68E-13	0.	0.	7.63E-04
30	7.80	0.	7.07E-04	1.32E-05	0.	0.	0.	3.26E-07	3.82E-13	0.	0.	7.18E-04
31	7.70	0.	6.63E-04	7.19E-06	0.	0.	0.	3.28E-07	3.97E-13	0.	0.	6.70E-04
32	7.60	0.	6.18E-04	5.93E-06	0	2.22E-08	0.	3.30E-07	4.13E-13	0.	0.	6.24E-04
33	7.50	0.	5.73E-04	4.42E-06	0.	3.10E-07	0.	3.31E-07	4.30E-13	0.	0.	6.78E-04
34	7.40	0.	5.26E-04	3.36E-06	0.	7.33E-07	0.	3.33E-07	4.48E-13	0.	0.	5.31E-04
35	7.30	0.	4.79E-04	2.65E-06	0.	4.65E-06	0.	3.35E-07	4.66E-13	0.	0.	4.87E-04
36	7.20	0.	4.35E-04	1.98E-06	0.	1.96E-05	0.	3.37E-07	4.86E-13	0.	0.	4.57E-04
37	7.10	0.	3.92E-04	1.60E-06	0.	2.10E-05	0.	3.40E-07	5.07E-13	0.	0.	4.14E-04
38	7.00	1.22E-06	0.	1.21E-06	0.	1.31E-04	0.	3.43E-07	5.29E-13	0.	0.	1.34E-04
39	6.90	2.14E-06	0.	9.25E-07	0.	9.83E-05	0.	3.45E-07	5.52E-13	0.	0.	9.37E-05
40	6.80	1.64E-06	0.	7.30E-07	0.	1.86E-04	0.	3.48E-07	5.77E-13	0.	0.	1.88E-04
41	6.70	1.05E-06	0.	5.25E-07	0.	4.16E-04	0.	3.51E-07	6.03E-13	0.	0.	4.18E-04
42	6.60	5.75E-07	0.	3.86E-07	0.	1.54E-04	0.	3.54E-07	6.31E-13	0.	0.	1.55E-04
43	6.50	2.90E-07	0.	2.40E-07	0.	3.08E-04	0.	3.56E-07	6.61E-13	0.	0.	3.09E-04
44	6.40	4.31E-07	0.	1.16E-07	5.91E-06	6.36E-04	0.	3.59E-07	6.93E-13	0.	0.	6.42E-04
45	6.30	8.52E-07	0.	4.82E-08	2.19E-05	2.04E-04	0.	3.62E-07	7.26E-13	0.	0.	2.27E-04
46	6.20	2.26E-06	0.	1.83E-08	2.57E-05	3.07E-04	0.	3.65E-07	7.62E-13	0.	0.	3.35E-04
47	6.10	7.89E-06	0.	6.15E-09	6.34E-05	8.26E-04	0.	3.67E-07	8.00E-13	0.	0.	8.98E-04
48	6.00	1.70E-05	0.	1.25E-09	4.23E-05	1.63E-04	0.	3.70E-07	8.41E-13	0.	0.	2.23E-04
49	5.90	2.51E-05	0.	8.66E-11	5.69E-05	2.12E-04	0.	3.70E-07	8.85E-13	0.	0.	2.95E-04
50	5.80	3.28E-05	0.	2.02E-12	7.10E-05	2.10E-04	0.	3.65E-07	9.31E-13	0.	0.	3.15E-04
51	5.70	3.22E-05	0.	0.	6.62E-05	1.45E-04	0.	3.43E-07	9.82E-13	0.	0.	2.43E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.69E-05	0.	0.	0.	3.85E-05	3.61E-04	0.	0.	3.18E-07	1.03E-12	0.	0.	4.37E-04
53	5.50	3.48E-05	0.	0.	0.	5.13E-05	4.42E-04	0.	0.	3.20E-07	1.09E-12	0.	0.	5.29E-04
54	5.40	3.27E-05	0.	0.	0.	3.80E-05	1.58E-04	0.	0.	3.22E-07	1.15E-12	0.	0.	2.29E-04
55	5.30	2.87E-05	0.	0.	0.	3.91E-05	3.63E-04	0.	0.	3.24E-07	1.22E-12	0.	0.	4.31E-04
56	5.20	1.69E-05	0.	0.	0.	3.76E-05	1.36E-04	0.	0.	3.26E-07	1.29E-12	0.	0.	1.91E-04
57	5.10	1.47E-05	0.	0.	0.	3.34E-05	1.93E-04	0.	2.62E-09	3.29E-07	1.37E-12	0.	0.	2.41E-04
58	5.00	1.00E-05	0.	0.	0.	2.61E-05	1.64E-04	0.	2.62E-09	3.31E-07	1.45E-12	0.	0.	2.01E-04
59	4.90	8.28E-06	0.	0.	0.	2.60E-05	1.18E-04	0.	2.62E-09	3.34E-07	1.55E-12	0.	0.	1.52E-04
60	4.80	8.41E-06	0.	0.	0.	2.66E-05	1.15E-04	0.	2.62E-09	3.37E-07	1.64E-12	0.	0.	1.50E-04
61	4.70	8.26E-06	0.	0.	0.	2.29E-05	6.93E-05	0.	2.62E-09	3.40E-07	1.75E-12	0.	0.	1.00E-04
62	4.60	8.83E-06	0.	0.	0.	2.15E-05	7.44E-05	0.	2.62E-09	3.43E-07	1.87E-12	0.	0.	1.05E-04
63	4.50	7.83E-06	0.	5.82E-09	0.	1.64E-05	3.90E-05	0.	2.62E-09	3.45E-07	2.00E-12	0.	0.	4.36E-05
64	4.40	6.97E-06	0.	3.29E-08	0.	1.49E-05	3.57E-05	0.	2.62E-09	3.48E-07	2.14E-12	0.	0.	5.80E-05
65	4.30	5.54E-06	0.	4.17E-08	0.	1.20E-05	1.45E-05	0.	2.62E-09	3.51E-07	2.29E-12	0.	0.	3.25E-05
66	4.20	4.54E-06	0	2.99E-07	0.	1.16E-05	1.44E-05	0.	2.62E-09	3.54E-07	2.46E-12	0.	0.	3.13E-05
67	4.10	3.74E-06	0.	4.24E-08	0.	9.36E-06	3.51E-06	0.	2.62E-09	3.55E-07	2.64E-12	0.	0.	1.70E-05
68	4.00	2.95E-06	0.	3.93E-07	0.	7.96E-06	2.37E-06	0.	2.62E-09	3.56E-07	2.85E-12	0.	0.	1.40E-05
69	3.90	2.07E-06	0.	2.84E-07	3.76E-10	5.76E-06	1.32E-06	0.	2.62E-09	3.55E-07	3.07E-12	0.	0.	9.71E-06
70	3.80	2.19E-06	0.	1.69E-07	8.30E-09	5.91E-06	0.	0.	2.62E-09	3.54E-07	3.32E-12	0.	0.	8.54E-06
71	3.70	1.44E-06	0.	4.04E-07	1.26E-09	3.62E-06	0.	0.	2.62E-09	3.48E-07	3.60E-12	0.	0.	5.82E-06
72	3.60	1.13E-06	0.	9.43E-09	5.16E-09	4.04E-06	0.	0.	2.62E-09	3.26E-07	3.91E-12	0.	0.	5.40E-06
73	3.50	9.03E-07	0.	2.40E-07	4.13E-08	2.26E-06	0.	0.	2.62E-09	2.98E-07	4.25E-12	0.	0.	3.75E-06
74	3.40	6.69E-07	0.	5.97E-08	6.17E-10	2.50E-06	0.	0.	2.62E-09	1.72E-07	4.64E-12	0.	0.	3.40E-06
75	3.30	4.78E-07	0.	9.12E-08	8.64E-09	1.48E-06	0.	0.	2.62E-09	1.72E-07	5.07E-12	0.	0.	2.23E-06
76	3.20	3.40E-07	0.	3.02E-08	5.34E-08	1.44E-06	0.	0.	2.62E-09	1.73E-07	5.56E-12	0.	0.	2.04E-06
77	3.10	2.72E-07	0.	2.81E-08	1.01E-09	1.07E-06	0.	0.	2.62E-09	1.73E-07	6.12E-12	0.	0.	1.55E-06
78	3.00	2.00E-07	0.	1.07E-08	9.19E-09	8.33E-07	0.	0.	2.62E-09	1.73E-07	6.75E-12	0.	0.	1.23E-06
79	2.90	1.35E-07	0.	6.66E-09	1.06E-08	4.51E-07	0.	0.	2.62E-09	1.74E-07	7.48E-12	0.	0.	7.40E-07
80	2.80	1.21E-07	0.	2.55E-09	9.95E-10	2.07E-07	0.	0.	2.62E-09	1.74E-07	8.31E-12	0.	0.	5.09E-07
81	2.70	5.71E-08	0.	1.21E-09	4.51E-09	7.22E-08	0.	0.	2.62E-09	1.74E-07	9.27E-12	0.	0.	3.12E-07
82	2.60	1.80E-08	0.	5.73E-10	5.62E-10	2.13E-08	0.	0.	2.62E-09	1.74E-07	1.04E-11	0.	0.	2.17E-07
83	2.50	1.06E-09	0.	1.02E-10	1.68E-10	3.92E-09	0.	0.	2.62E-09	1.74E-07	1.17E-11	0.	0.	1.82E-07
84	2.40	0.	1.18E-08	0.	3.54E-10	3.41E-10	0.	0.	2.62E-09	1.74E-07	1.32E-11	0.	0.	1.88E-07
85	2.30	0.	1.09E-07	0.	0.	0.	0.	0.	2.62E-09	1.73E-07	1.50E-11	0.	0.	2.84E-07
86	2.20	0.	1.57E-07	0.	0.	0.	0.	0.	2.62E-09	1.72E-07	1.72E-11	0.	0.	3.31E-07
87	2.10	0.	4.32E-07	0.	0.	0.	0.	0.	2.62E-09	1.71E-07	1.97E-11	0.	0.	6.06E-07
88	2.00	0.	4.52E-07	0.	0.	0.	0.	0.	2.62E-09	1.66E-07	2.29E-11	0.	0.	6.21E-07
89	1.90	0.	1.96E-06	0.	0.	0.	0.	0.	2.62E-09	1.49E-07	2.67E-11	0.	0.	2.12E-06
90	1.80	0.	1.95E-06	0.	0.	0.	0.	0.	2.62E-09	1.52E-07	3.14E-11	0.	0.	2.10E-06
91	1.70	0.	2.04E-06	0.	0.	0.	0.	0.	2.62E-09	1.44E-07	3.73E-11	0.	0.	2.19E-06
92	1.60	0.	1.50E-06	0.	0.	0.	0.	0.	2.62E-09	1.22E-07	4.48E-11	0.	0.	1.63E-06
93	1.50	0.	1.75E-06	0.	0.	0.	0.	0.	2.62E-09	5.52E-08	5.44E-11	0.	0.	1.80E-06
94	1.40	0.	2.44E-06	0.	0.	0.	0.	0.	2.62E-09	0.	6.70E-11	0.	0.	2.44E-06
95	1.30	0.	1.37E-06	0.	0.	0.	0.	0.	2.62E-09	0.	8.38E-11	0.	0.	1.37E-06
96	1.20	0.	1.91E-06	0.	0.	0.	0.	0.	2.62E-09	0.	1.07E-10	0.	0.	1.91E-06
97	1.10	0.	1.06E-06	0.	0.	0.	0.	2.93E-09	2.62E-09	0.	1.39E-10	0.	0.	1.06E-06
98	1.00	0.	1.14E-06	0.	0.	0.	0.	9.84E-09	2.62E-09	0.	1.85E-10	0.	0.	1.15E-06
99	0.90	0.	7.73E-07	0.	0.	0.	0.	2.30E-08	2.62E-09	0.	2.55E-10	0.	0.	7.98E-07
100	0.80	0.	3.37E-07	0.	0.	0.	0.	1.54E-07	2.62E-09	0.	3.64E-10	0.	0.	4.94E-07
101	0.70	0.	9.97E-08	0.	0.	0.	0.	1.24E-07	2.62E-09	0.	5.46E-10	0.	0.	2.27E-07
102	0.60	0.	7.66E-10	0.	0.	0.	0.	4.16E-07	2.62E-09	0.	8.71E-10	0.	0.	4.21E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.		O2 S-R BANDS	O2 S-R CONT.	N2 H-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.		5.89E-04	0.	0.	0.	5.39E-09	4.60E-15	0.	0.	5.89E-04
2	10.60	0.	0.		4.45E-04	0.	0.	0.	5.39E-09	4.73E-15	0.	0.	4.45E-04
3	10.50	0.	0.		3.99E-04	0.	0.	0.	5.40E-09	4.87E-15	0.	0.	3.99E-04
4	10.40	0.	0.		3.23E-04	0.	0.	0.	5.41E-09	5.01E-15	0.	0.	3.23E-04
5	10.30	0.	0.		2.32E-04	0.	0.	0.	5.42E-09	5.16E-15	0.	0.	2.32E-04
6	10.20	0.	0.		2.12E-04	0.	0.	0.	5.42E-09	5.32E-15	0.	0.	2.12E-04
7	10.10	0.	0.		1.77E-04	0.	0.	0.	5.43E-09	5.48E-15	0.	0.	1.77E-04
8	10.00	0.	0.		1.20E-04	0.	0.	0.	5.44E-09	5.64E-15	0.	0.	1.20E-04
9	9.90	0.	0.		1.17E-04	0.	0.	0.	5.45E-09	5.82E-15	0.	0.	1.17E-04
10	9.80	0.	0.		9.16E-05	0.	0.	0.	5.46E-09	6.00E-15	0.	0.	9.16E-05
11	9.70	0.	0.		6.19E-05	0.	0.	0.	5.47E-09	6.19E-15	0.	0.	6.19E-05
12	9.60	0.	0.		6.62E-05	0.	0.	0.	5.48E-09	6.38E-15	0.	0.	6.62E-05
13	9.50	0.	5.03E-06		4.31E-05	0.	0.	0.	5.49E-09	6.59E-15	0.	0.	4.82E-05
14	9.40	0.	3.52E-06		3.49E-05	0.	0.	0.	5.51E-09	6.80E-15	0.	0.	4.01E-05
15	9.30	0.	4.01E-06		3.34E-05	0.	0.	0.	5.53E-09	7.03E-15	0.	0.	3.94E-05
16	9.20	0.	6.58E-06		1.95E-05	0.	0.	0.	5.55E-09	7.26E-15	0.	0.	2.60E-05
17	9.10	0.	8.02E-06		2.08E-05	0.	0.	0.	5.57E-09	7.50E-15	0.	0.	2.88E-05
18	9.00	0.	9.74E-06		1.46E-05	0.	0.	0.	5.59E-09	7.76E-15	0.	0.	2.44E-05
19	8.90	0.	1.15E-05		1.13E-05	0.	0.	0.	5.61E-09	8.02E-15	0.	0.	2.28E-05
20	8.80	0.	1.19E-05		1.01E-05	0.	0.	0.	5.63E-09	8.30E-15	0.	0.	2.21E-05
21	8.70	0.	1.14E-05		6.58E-06	0.	0.	0.	5.65E-09	8.59E-15	0.	0.	1.80E-05
22	8.60	0.	1.09E-05		6.63E-06	0.	0.	0.	5.67E-09	8.90E-15	0.	0.	1.75E-05
23	8.50	0.	1.04E-05		4.32E-06	0.	0.	0.	5.69E-09	9.22E-15	0.	0.	1.47E-05
24	8.40	0.	9.95E-06		4.03E-06	0.	0.	0.	5.72E-09	9.55E-15	0.	0.	1.48E-05
25	8.30	0.	9.53E-06		2.61E-06	0.	0.	0.	5.75E-09	9.90E-15	0.	0.	1.21E-05
26	8.20	0.	9.11E-06		2.42E-06	0.	0.	0.	5.78E-09	1.03E-14	0.	0.	1.15E-05
27	8.10	0.	8.70E-06		1.60E-06	0.	0.	0.	5.81E-09	1.07E-14	0.	0.	1.03E-05
28	8.00	0.	8.27E-06		1.48E-06	0.	0.	0.	5.84E-09	1.11E-14	0.	0.	9.77E-06
29	7.90	0.	7.82E-06		1.01E-06	0.	0.	0.	5.87E-09	1.15E-14	0.	0.	8.84E-06
30	7.80	0.	7.36E-06		9.39E-07	0.	0.	0.	5.90E-09	1.19E-14	0.	0.	8.30E-06
31	7.70	0.	6.90E-06		6.92E-07	0.	0.	0.	5.93E-09	1.24E-14	0.	0.	7.56E-06
32	7.60	0.	6.43E-06		5.32E-07	0.	6.05E-10	0.	5.96E-09	1.29E-14	0.	0.	6.97E-06
33	7.50	0.	5.96E-06		4.04E-07	0.	9.57E-09	0.	5.99E-09	1.34E-14	0.	0.	6.38E-06
34	7.40	0.	5.48E-06		3.07E-07	0.	2.26E-08	0.	6.02E-09	1.40E-14	0.	0.	5.81E-06
35	7.30	0.	4.99E-06		2.43E-07	0.	1.43E-07	0.	6.05E-09	1.46E-14	0.	0.	5.38E-06
36	7.20	0.	4.53E-06		1.61E-07	0.	8.04E-07	0.	6.09E-09	1.52E-14	0.	0.	5.32E-06
37	7.10	0.	4.08E-06		1.46E-07	0.	8.48E-07	0.	6.14E-09	1.58E-14	0.	0.	4.88E-06
38	7.00	1.27E-08	0.		1.11E-07	0.	4.05E-06	0.	6.19E-09	1.65E-14	0.	0.	4.18E-06
39	6.90	2.23E-08	0.		8.46E-08	0.	2.79E-06	0.	6.24E-09	1.73E-14	0.	0.	2.90E-06
40	6.80	1.72E-08	0.		6.67E-08	0.	5.73E-06	0.	6.29E-09	1.80E-14	0.	0.	5.82E-06
41	6.70	1.10E-08	0.		4.40E-08	0.	1.28E-05	0.	6.34E-09	1.89E-14	0.	0.	1.29E-05
42	6.60	6.00E-09	0.		3.53E-08	0.	4.75E-06	0.	6.39E-09	1.97E-14	0.	0.	4.84E-06
43	6.50	3.03E-09	0.		2.20E-08	0.	9.52E-06	0.	6.44E-09	2.07E-14	0.	0.	9.55E-06
44	6.40	4.49E-09	0.		1.06E-08	1.82E-07	1.96E-05	0.	6.49E-09	2.16E-14	0.	0.	1.98E-05
45	6.30	8.88E-09	0.		4.41E-09	6.77E-07	6.29E-06	0.	6.54E-09	2.27E-14	0.	0.	6.99E-06
46	6.20	2.36E-08	0.		1.68E-09	7.02E-07	9.44E-06	0.	6.59E-09	2.38E-14	0.	0.	1.03E-05
47	6.10	8.18E-08	0.		5.62E-10	1.90E-06	2.55E-05	0.	6.64E-09	2.50E-14	0.	0.	2.76E-05
48	6.00	1.86E-07	0.		1.15E-10	1.30E-06	5.03E-06	0.	6.69E-09	2.63E-14	0.	0.	6.53E-06
49	5.90	2.61E-07	0.		7.92E-12	1.76E-06	6.55E-06	0.	6.69E-09	2.76E-14	0.	0.	8.58E-06
50	5.80	3.42E-07	0.		1.84E-13	2.19E-06	6.49E-06	0.	6.59E-09	2.91E-14	0.	0.	9.03E-06
51	5.70	3.36E-07	0.		0.	2.04E-06	4.46E-06	0.	6.19E-09	3.07E-14	0.	0.	6.85E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.40	3.84E-07	0.	0.	0.	1.19E-06	1.12E-05	0.	0.	5.75E-09	3.24E-14	0.	0.	1.28E-05
53	5.50	3.63E-07	0.	0.	0.	1.58E-06	1.37E-05	0.	0.	5.78E-09	3.42E-14	0.	0.	1.56E-05
54	5.40	3.41E-07	0.	0.	0.	1.17E-06	4.88E-06	0.	0.	5.81E-09	3.61E-14	0.	0.	6.40E-06
55	5.30	2.99E-07	0.	0.	0.	1.21E-06	1.12E-05	0.	0.	5.85E-09	3.82E-14	0.	0.	1.27E-05
56	5.20	1.76E-07	0.	0.	0.	1.16E-06	4.19E-06	0.	0.	5.89E-09	4.04E-14	0.	0.	5.54E-06
57	5.10	1.53E-07	0.	0.	0.	1.03E-06	5.95E-06	0.	8.28E-12	5.94E-09	4.28E-14	0.	0.	7.14E-06
58	5.00	1.05E-07	0.	0.	0.	8.04E-07	5.07E-06	0.	8.28E-12	5.99E-09	4.55E-14	0.	0.	5.98E-06
59	4.90	8.64E-08	0.	0.	0.	8.02E-07	3.63E-06	0.	8.28E-12	6.04E-09	4.83E-14	0.	0.	4.53E-06
60	4.80	8.77E-08	0.	0.	0.	6.21E-07	3.56E-06	0.	8.28E-12	6.09E-09	5.14E-14	0.	0.	4.47E-06
61	4.70	8.60E-08	0	0.	0.	7.08E-07	2.14E-06	0.	8.28E-12	6.14E-09	5.48E-14	0.	0.	2.93E-06
62	4.60	9.20E-08	0.	0.	0.	6.63E-07	2.30E-06	0.	8.28E-12	6.19E-09	5.84E-14	0.	0.	3.06E-06
63	4.50	8.16E-08	0.	5.33E-10	0.	5.07E-07	1.20E-06	0.	8.28E-12	6.24E-09	6.24E-14	0.	0.	1.90E-06
64	4.40	7.26E-08	0.	3.01E-09	0.	4.61E-07	1.10E-06	0.	8.28E-12	6.29E-09	6.68E-14	0.	0.	1.65E-06
65	4.30	5.78E-08	0.	3.81E-09	0.	3.72E-07	4.49E-07	0.	8.28E-12	6.34E-09	7.15E-14	0.	0.	8.89E-07
66	4.20	4.73E-08	0.	2.73E-08	0.	3.57E-07	4.50E-07	0.	8.28E-12	6.39E-09	7.68E-14	0.	0.	8.88E-07
67	4.10	3.89E-08	0.	3.88E-09	0.	2.89E-07	1.09E-07	0.	8.28E-12	6.41E-09	8.26E-14	0.	0.	4.46E-07
68	4.00	3.07E-08	0.	3.60E-08	0.	2.46E-07	7.30E-08	0.	8.28E-12	6.44E-09	8.89E-14	0.	0.	3.92E-07
69	3.90	2.15E-08	0.	1.86E-08	1.94E-10	1.78E-07	4.07E-08	0.	8.28E-12	6.41E-09	9.60E-14	0.	0.	2.65E-07
70	3.80	2.18E-08	0.	1.55E-08	4.29E-09	1.82E-07	0.	0.	8.28E-12	6.79E-09	1.04E-13	0.	0.	2.30E-07
71	3.70	1.50E-08	0.	3.69E-08	6.51E-10	1.13E-07	0.	0.	8.28E-12	6.29E-09	1.12E-13	0.	0.	1.71E-07
72	3.60	1.18E-08	0.	8.63E-09	2.67E-09	1.25E-07	0.	0.	8.28E-12	5.49E-09	1.22E-13	0.	0.	1.54E-07
73	3.50	9.41E-09	0.	2.20E-08	2.14E-08	6.99E-08	0.	0.	8.28E-12	5.39E-09	1.33E-13	0.	0.	1.28E-07
74	3.40	6.97E-09	0.	5.46E-09	3.19E-10	7.71E-08	0.	0.	8.28E-12	3.11E-09	1.45E-13	0.	0.	9.30E-08
75	3.30	4.98E-09	0.	8.34E-09	4.47E-09	4.56E-08	0.	0.	8.28E-12	3.11E-09	1.58E-13	0.	0.	6.65E-08
76	3.20	3.55E-09	0.	2.76E-09	2.76E-08	4.44E-08	0.	0.	8.28E-12	3.12E-09	1.74E-13	0.	0.	8.15E-08
77	3.10	2.84E-09	0.	2.57E-09	5.24E-10	3.30E-08	0.	0.	8.28E-12	3.13E-09	1.91E-13	0.	0.	4.21E-08
78	3.00	2.08E-09	0.	9.83E-10	4.75E-09	2.57E-08	0.	0.	8.28E-12	3.13E-09	2.11E-13	0.	0.	3.67E-08
79	2.90	1.41E-09	0.	6.09E-10	5.47E-09	1.39E-08	0.	0.	8.28E-12	3.14E-09	2.34E-13	0.	0.	2.46E-08
80	2.80	1.20E-09	0.	2.33E-10	5.15E-10	6.40E-09	0.	0.	8.28E-12	3.14E-09	2.60E-13	0.	0.	1.16E-08
81	2.70	5.95E-10	0.	1.11E-10	2.33E-09	2.23E-09	0.	0.	8.28E-12	3.14E-09	2.90E-13	0.	0.	8.42E-09
82	2.60	1.88E-10	0.	5.24E-11	2.91E-10	6.56E-10	0.	0.	8.28E-12	3.14E-09	3.25E-13	0.	0.	4.34E-09
83	2.50	1.11E-11	0.	9.31E-12	8.67E-11	1.21E-10	0.	0.	8.28E-12	3.14E-09	3.65E-13	0.	0.	3.38E-09
84	2.40	0.	1.01E-09	0.	1.83E-10	1.05E-11	0.	0.	8.28E-12	3.14E-09	4.13E-13	0.	0.	4.35E-09
85	2.30	0.	9.98E-09	0.	0.	0.	0.	0.	8.28E-12	3.12E-09	4.69E-13	0.	0.	1.31E-08
86	2.20	0.	1.43E-08	0.	0.	0.	0.	0.	8.28E-12	3.11E-09	5.36E-13	0.	0.	1.74E-08
87	2.10	0.	3.95E-08	0.	0.	0.	0.	0.	8.28E-12	3.09E-09	6.17E-13	0.	0.	4.28E-08
88	2.00	0.	4.14E-08	0.	0.	0.	0.	0.	8.28E-12	2.99E-09	7.15E-13	0.	0.	4.44E-08
89	1.90	0.	1.79E-07	0.	0.	0.	0.	0.	8.28E-12	2.88E-09	8.34E-13	0.	0.	1.82E-07
90	1.80	0.	1.78E-07	0.	0.	0.	0.	0.	8.28E-12	2.75E-09	9.82E-13	0.	0.	1.81E-07
91	1.70	0.	1.87E-07	0.	0.	0.	0.	0.	8.28E-12	2.59E-09	1.17E-12	0.	0.	1.89E-07
92	1.60	0.	1.37E-07	0.	0.	0.	0.	0.	8.28E-12	2.19E-09	1.40E-12	0.	0.	1.39E-07
93	1.50	0.	1.60E-07	0.	0.	0.	0.	0.	8.28E-12	9.98E-10	1.70E-12	0.	0.	1.61E-07
94	1.40	0.	2.23E-07	0.	0.	0.	0.	0.	8.28E-12	0.	2.09E-12	0.	0.	2.23E-07
95	1.30	0.	1.25E-07	0.	0.	0.	0.	0.	8.28E-12	0.	2.62E-12	0.	0.	1.25E-07
96	1.20	0.	1.75E-07	0.	0.	0.	0.	0.	8.28E-12	0.	3.34E-12	0.	0.	1.75E-07
97	1.10	0.	9.66E-08	0.	0.	0.	0.	9.05E-11	8.28E-12	0.	4.34E-12	0.	0.	9.67E-08
98	1.00	0.	1.04E-07	0.	0.	0.	0.	3.04E-10	8.28E-12	0.	5.79E-12	0.	0.	1.05E-07
99	0.90	0.	7.06E-08	0.	0.	0.	0.	7.11E-10	8.28E-12	0.	7.95E-12	0.	0.	7.14E-08
100	0.80	0.	3.09E-08	0.	0.	0.	0.	4.75E-09	8.28E-12	0.	1.14E-11	0.	0.	3.56E-08
101	0.70	0.	9.12E-09	0.	0.	0.	0.	3.84E-09	8.28E-12	0.	1.70E-11	0.	0.	1.30E-08
102	0.60	0.	7.01E-11	0.	0.	0.	0.	1.29E-08	8.28E-12	0.	2.72E-11	0.	0.	1.30E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.48E-05	0.	0.	0.	9.25E-11	1.34E-16	0.	0.	4.48E-05
2	10.60	0.	0.	3.32E-05	0.	0.	0.	9.27E-11	1.38E-16	0.	0.	3.32E-05
3	10.50	0.	0.	2.98E-05	0.	0.	0.	9.28E-11	1.42E-16	0.	0.	2.98E-05
4	10.40	0.	0.	2.41E-05	0.	0.	0.	9.29E-11	1.46E-16	0.	0.	2.41E-05
5	10.30	0.	0.	1.73E-05	0.	0.	0.	9.30E-11	1.50E-16	0.	0.	1.73E-05
6	10.20	0.	0.	1.59E-05	0.	0.	0.	9.32E-11	1.55E-16	0.	0.	1.59E-05
7	10.10	0.	0.	1.32E-05	0.	0.	0.	9.33E-11	1.60E-16	0.	0.	1.32E-05
8	10.00	0.	0.	8.93E-06	0.	0.	0.	9.34E-11	1.64E-16	0.	0.	8.93E-06
9	9.90	0.	0.	8.76E-06	0.	0.	0.	9.36E-11	1.70E-16	0.	0.	8.76E-06
10	9.80	0.	0.	6.84E-06	0.	0.	0.	9.37E-11	1.75E-16	0.	0.	6.84E-06
11	9.70	0.	0.	4.62E-06	0.	0.	0.	9.39E-11	1.80E-16	0.	0.	4.62E-06
12	9.60	0.	0.	4.94E-06	0.	0.	0.	9.41E-11	1.86E-16	0.	0.	4.94E-06
13	9.50	0.	5.09E-08	3.22E-06	0.	0.	0.	9.43E-11	1.92E-16	0.	0.	3.27E-06
14	9.40	0.	5.59E-08	2.58E-06	0.	0.	0.	9.46E-11	1.98E-16	0.	0.	2.63E-06
15	9.30	0.	6.08E-08	2.50E-06	0.	0.	0.	9.49E-11	2.05E-16	0.	0.	2.56E-06
16	9.20	0.	6.58E-08	1.46E-06	0.	0.	0.	9.53E-11	2.12E-16	0.	0.	1.52E-06
17	9.10	0.	8.12E-08	1.55E-06	0.	0.	0.	9.56E-11	2.19E-16	0.	0.	1.63E-06
18	9.00	0.	9.86E-08	1.09E-06	0.	0.	0.	9.60E-11	2.26E-16	0.	0.	1.19E-06
19	8.90	0.	1.16E-07	8.44E-07	0.	0.	0.	9.63E-11	2.34E-16	0.	0.	9.68E-07
20	8.80	0.	1.21E-07	7.58E-07	0.	0.	0.	9.67E-11	2.42E-16	0.	0.	8.78E-07
21	8.70	0.	1.15E-07	4.91E-07	0.	0.	0.	9.70E-11	2.50E-16	0.	0.	6.06E-07
22	8.60	0.	1.10E-07	4.95E-07	0.	0.	0.	9.73E-11	2.59E-16	0.	0.	6.05E-07
23	8.50	0.	1.05E-07	3.22E-07	0.	0.	0.	9.77E-11	2.69E-16	0.	0.	4.27E-07
24	8.40	0.	1.01E-07	3.01E-07	0.	0.	0.	9.82E-11	2.78E-16	0.	0.	4.02E-07
25	8.30	0.	9.64E-08	1.95E-07	0.	0.	0.	9.87E-11	2.89E-16	0.	0.	2.91E-07
26	8.20	0.	9.22E-08	1.81E-07	0.	0.	0.	9.92E-11	2.99E-16	0.	0.	2.73E-07
27	8.10	0.	8.80E-08	1.22E-07	0.	0.	0.	9.97E-11	3.11E-16	0.	0.	2.10E-07
28	8.00	0.	8.38E-08	1.10E-07	0.	0.	0.	10.00E-11	3.22E-16	0.	0.	1.94E-07
29	7.90	0.	7.92E-08	7.53E-08	0.	0.	0.	1.01E-10	3.35E-16	0.	0.	1.55E-07
30	7.80	0.	7.45E-08	6.99E-08	0.	0.	0.	1.01E-10	3.48E-16	0.	0.	1.44E-07
31	7.70	0.	6.98E-08	4.91E-08	0.	0.	0.	1.02E-10	3.62E-16	0.	0.	1.19E-07
32	7.60	0.	6.51E-08	3.98E-08	0.	1.88E-11	0.	1.02E-10	3.76E-16	0.	0.	1.05E-07
33	7.50	0.	6.03E-08	3.02E-08	0.	2.63E-10	0.	1.03E-10	3.92E-16	0.	0.	9.09E-08
34	7.40	0.	5.54E-08	2.38E-08	0.	6.22E-10	0.	1.03E-10	4.08E-16	0.	0.	7.91E-08
35	7.30	0.	5.05E-08	1.81E-08	0.	3.94E-09	0.	1.04E-10	4.25E-16	0.	0.	7.26E-08
36	7.20	0.	4.59E-08	1.35E-08	0.	1.66E-08	0.	1.05E-10	4.43E-16	0.	0.	7.61E-08
37	7.10	0.	4.13E-08	1.09E-08	0.	1.78E-08	0.	1.05E-10	4.62E-16	0.	0.	7.01E-08
38	7.00	1.29E-10	0.	8.26E-09	0.	1.11E-07	0.	1.06E-10	4.82E-16	0.	0.	1.20E-07
39	6.90	2.26E-10	0.	6.32E-09	0.	7.66E-08	0.	1.07E-10	5.03E-16	0.	0.	8.32E-08
40	6.80	1.73E-10	0.	4.98E-09	0.	1.58E-07	0.	1.08E-10	5.26E-16	0.	0.	1.63E-07
41	6.70	1.11E-10	0.	3.59E-09	0.	3.53E-07	0.	1.09E-10	5.50E-16	0.	0.	3.57E-07
42	6.60	6.07E-11	0.	2.64E-09	0.	1.31E-07	0.	1.10E-10	5.75E-16	0.	0.	1.33E-07
43	6.50	3.06E-11	0.	1.84E-09	0.	2.62E-07	0.	1.11E-10	6.02E-16	0.	0.	2.63E-07
44	6.40	4.55E-11	0.	7.94E-10	5.02E-09	5.40E-07	0.	1.11E-10	6.31E-16	0.	0.	5.46E-07
45	6.30	8.99E-11	0.	3.29E-10	1.86E-08	1.73E-07	0.	1.12E-10	6.61E-16	0.	0.	1.92E-07
46	6.20	2.39E-10	0.	1.25E-10	2.18E-08	2.60E-07	0.	1.13E-10	6.94E-16	0.	0.	2.82E-07
47	6.10	8.28E-10	0.	4.20E-11	5.38E-08	7.01E-07	0.	1.14E-10	7.29E-16	0.	0.	7.56E-07
48	6.00	1.88E-09	0.	8.56E-12	3.59E-08	1.38E-07	0.	1.15E-10	7.66E-16	0.	0.	1.76E-07
49	5.90	2.65E-09	0.	5.91E-13	4.83E-08	1.80E-07	0.	1.15E-10	8.06E-16	0.	0.	2.32E-07
50	5.80	3.46E-09	0.	1.38E-14	6.03E-08	1.78E-07	0.	1.13E-10	8.48E-16	0.	0.	2.42E-07
51	5.70	3.40E-09	0.	0.	5.62E-08	1.23E-07	0.	1.06E-10	8.94E-16	0.	0.	1.82E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.69E-09	0.	0.	0.	3.27E-08	3.07E-07	0.	0.	9.88E-11	9.43E-16	0.	0.	3.43E-07
53	5.50	3.68E-09	0.	0.	0.	4.35E-08	3.75E-07	0.	0.	9.93E-11	9.95E-16	0.	0.	4.23E-07
54	5.40	3.46E-09	0.	0.	0.	3.22E-08	1.34E-07	0.	0.	9.98E-11	1.05E-15	0.	0.	1.69E-07
55	5.30	3.03E-09	0.	0.	0.	3.32E-08	3.0?E-07	0.	0.	10.00E-11	1.11E-15	0.	0.	3.44E-07
56	5.20	1.78E-09	0.	0.	0.	3.19E-08	1.15E-07	0.	0.	1.01E-10	1.18E-15	0.	0.	1.49E-07
57	5.10	1.55E-09	0.	0.	0.	2.84E-08	1.64E-07	0.	2.29E-14	1.02E-10	1.25E-15	0.	0.	1.94E-07
58	5.00	1.06E-09	0.	0.	0.	2.21E-08	1.39E-07	0.	2.29E-14	1.03E-10	1.32E-15	0.	0.	1.63E-07
59	4.90	8.74E-10	0.	0.	0.	2.21E-08	9.97E-08	0.	2.29E-14	1.04E-10	1.41E-15	0.	0.	1.22E-07
60	4.80	8.88E-10	0.	0.	0.	2.26E-08	9.7?E-08	0.	2.29E-14	1.05E-10	1.50E-15	0.	0.	1.21E-07
61	4.70	8.71E-10	0.	0.	0.	1.95E-08	5.8?E-08	0.	2.29E-14	1.05E-10	1.60E-15	0.	0.	7.92E-08
62	4.60	9.31E-10	0.	0.	0.	1.82E-08	6.31E-08	0.	2.29E-14	1.06E-10	1.70E-15	0.	0.	8.24E-08
63	4.50	8.26E-10	0.	3.98E-11	0.	1.39E-08	3.31E-08	0.	2.29E-14	1.07E-10	1.82E-15	0.	0.	4.40E-08
64	4.40	7.35E-10	0.	2.25E-10	0.	1.27E-08	3.03E-08	0.	2.29E-14	1.08E-10	1.95E-15	0.	0.	4.41E-08
65	4.30	5.85E-10	0.	2.64E-10	0.	1.03E-08	1.23E-08	0.	2.29E-14	1.09E-10	2.08E 15	0.	0.	2.35E-08
66	4.20	4.79E-10	0.	2.04E-09	0.	9.81E-09	1.24E-08	0.	2.29E-14	1.10E-10	2.24E-15	0.	0.	2.48E-08
67	4.10	3.94E-10	0.	2.89E-10	0.	7.94E-09	2.9?E-09	0.	2.29E-14	1.10E-10	2.41E-15	0.	0.	1.17E-08
68	4.00	3.11E-10	0.	2.69E-09	0.	6.76E-09	2.01E-09	0.	2.29E-14	1.11E-10	2.59E-15	0.	0.	1.19E-08
69	3.90	2.16E-10	0.	1.39E-09	8.50E-11	4.89E-09	1.12E-09	0.	2.29E-14	1.10E-10	2.80E-15	0.	0.	7.81E-09
70	3.80	2.21E-10	0.	1.16E-09	1.88E-09	5.01E-09	0.	0.	2.29E-14	1.10E-10	3.02E-15	0.	0.	8.38E-09
71	3.70	1.52E-10	0.	2.79E-09	2.95E-10	3.07E-09	0.	0.	2.29E-14	1.08E-10	3.28E-15	0.	0.	6.37E-09
72	3.60	1.20E-10	0.	6.44E-10	1.17E-09	3.42E-09	0.	0.	2.29E-14	1.01E-10	3.56E-15	0.	0.	5.46E-09
73	3.50	9.53E-11	0.	1.64E-09	9.34E-09	1.92E-09	0.	0.	2.29E-14	9.25E-11	3.87E-15	0.	0.	1.21E-08
74	3.40	7.06E-11	0.	4.08E-10	1.35E-10	2.12E-09	0.	0.	2.29E-14	5.34E-11	4.22E-15	0.	0.	2.79E-09
75	3.30	5.04E-11	0.	6.23E-10	1.95E-09	1.25E-09	0.	0.	2.29E-14	5.35E-11	4.62E-15	0.	0.	3.93E-09
76	3.20	3.59E-11	0.	2.06E-10	1.21E-08	1.22E-09	0.	0.	2.29E-14	5.36E-11	5.07E-15	0.	0.	1.36E-08
77	3.10	2.87E-11	0.	1.92E-10	2.29E-10	9.08E-10	0.	0.	2.29E-14	5.37E-11	5.57E-15	0.	0.	1.41E-09
78	3.00	2.11E-11	0.	7.34E-11	2.08E-09	7.07E-10	0.	0.	2.29E-14	5.38E-11	6.15E-15	0.	0.	2.93E-09
79	2.90	1.43E-11	0.	4.54E-11	2.39E-09	3.83E-10	0.	0.	2.29E-14	5.39E-11	6.81E-15	0.	0.	2.89E-09
80	2.80	1.28E-11	0.	1.74E-11	2.25E-10	1.76E-10	0.	0.	2.29E-14	5.40E-11	7.57E-15	0.	0.	4.85E-10
81	2.70	6.03E-12	0.	8.29E-12	1.02E-09	6.13E-11	0.	0.	2.29E-14	5.40E-11	8.44E-15	0.	0.	1.15E-09
82	2.60	1.90E-12	0.	3.91E-12	1.27E-10	1.80E-11	0.	0.	2.29E-14	5.40E-11	9.46E-15	0.	0.	2.05E-10
83	2.50	1.12E-13	0.	6.95E-13	3.79E-11	3.32E-12	0.	0.	2.29E-14	5.40E-11	1.06E-14	0.	0.	9.61E-11
84	2.40	0.	7.52E-11	0.	8.01E-11	2.89E-13	0.	0.	2.29E-14	5.40E-11	1.20E-14	0.	0.	2.10E-10
85	2.30	0.	7.45E-10	0.	0.	0.	0.	0.	2.29E-14	5.36E-11	1.37E-14	0.	0.	7.98E-10
86	2.20	0.	1.07E-09	0.	0.	0.	0.	0.	2.29E-14	5.33E-11	1.56E-14	0.	0.	1.12E-09
87	2.10	0.	2.95E-09	0.	0.	0.	0.	0.	2.29E-14	5.31E-11	1.80E-14	0.	0.	3.00E-09
88	2.00	0.	3.09E-09	0.	0.	0.	0.	0.	2.29E-14	5.14E-11	2.08E-14	0.	0.	3.14E-09
89	1.90	0.	1.34E-08	0.	0.	0.	0.	0.	2.29E-14	4.95E-11	2.43E-14	0.	0.	1.34E-08
90	1.80	0.	1.33E-08	0.	0.	0.	0.	0.	2.29E-14	4.73E-11	2.86E-14	0.	0.	1.33E-08
91	1.70	0.	1.39E-08	0.	0.	0.	0.	0.	2.29E-14	4.46E-11	3.40E-14	0.	0.	1.40E-08
92	1.60	0.	1.02E-08	0.	0.	0.	0.	0.	2.29E-14	3.77E-11	4.08E-14	0.	0.	1.03E-08
93	1.50	0.	1.19E-08	0.	0.	0.	0.	0.	2.29E-14	1.71E-11	4.95E-14	0.	0.	1.19E-08
94	1.40	0.	1.67E-08	0.	0.	0.	0.	0.	2.29E-14	0.	6.10E-14	0.	0.	1.67E-08
95	1.30	0.	9.36E-09	0.	0.	0.	0.	0.	2.29E-14	0.	7.63E-14	0.	0.	9.36E-09
96	1.20	0.	1.30E-08	0.	0.	0.	0.	0.	2.29E-14	0.	9.73E-14	0.	0.	1.30E-08
97	1.10	0.	7.21E-09	0.	0.	0.	0.	2.49E-12	2.29E-14	0.	1.26E-13	0.	0.	7.22E-09
98	1.00	0.	7.78E-09	0.	0.	0.	0.	8.35E-12	2.29E-14	0.	1.69E-13	0.	0.	7.79E-09
99	0.90	0.	5.27E-09	0.	0.	0.	0.	1.95E-11	2.29E-14	0.	2.32E-13	0.	0.	5.29E-09
100	0.80	0.	2.30E-09	0.	0.	0.	0.	1.31E-10	2.29E-14	0.	3.31E-13	0.	0.	2.43E-09
101	0.70	0.	6.81E-10	0.	0.	0.	0.	1.06E-10	2.29E-14	0.	4.97E-13	0.	0.	7.87E-10
102	0.60	0.	5.23E-12	0.	0.	0.	0.	3.53E-10	2.29E-14	0.	7.93E-13	0.	0.	3.59E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	1.87E-06	0.	0.	0.	1.60E-12	3.99E-18	0.	0.	1.87E-06
2	10.60	0.	0.	1.41E-06	0.	0.	0.	1.60E-12	4.10E-18	0.	0.	1.41E-06
3	10.50	0.	0.	1.27E-06	0.	0.	0.	1.60E-12	4.22E-18	0.	0.	1.27E-06
4	10.40	0.	0.	1.63E-06	0.	0.	0.	1.60E-12	4.34E-18	0.	0.	1.63E-06
5	10.30	0.	0.	7.38E-07	0.	0.	0.	1.61E-12	4.47E-18	0.	0.	7.38E-07
6	10.20	0.	0.	6.75E-07	0.	0.	0.	1.61E-12	4.61E-18	0.	0.	6.75E-07
7	10.10	0.	0.	5.62E-07	0.	0.	0.	1.61E-12	4.74E-18	0.	0.	5.62E-07
8	10.00	0.	0.	3.81E-07	0.	0.	0.	1.61E-12	4.89E-18	0.	0.	3.81E-07
9	9.90	0.	0.	3.73E-07	0.	0.	0.	1.62E-12	5.04E-18	0.	0.	3.73E-07
10	9.80	0.	0.	2.91E-07	0.	0.	0.	1.62E-12	5.20E-18	0.	0.	2.91E-07
11	9.70	0.	0.	1.97E-07	0.	0.	0.	1.62E-12	5.36E-18	0.	0.	1.97E-07
12	9.60	0.	0.	2.10E-07	0.	0.	0.	1.63E-12	5.53E-18	0.	0.	2.10E-07
13	9.50	0.	5.12E-10	1.37E-07	0.	0.	0.	1.63E-12	5.71E-18	0.	0.	1.38E-07
14	9.40	0.	5.62E-10	1.10E-07	0.	0.	0.	1.63E-12	5.89E-18	0.	0.	1.10E-07
15	9.30	0.	6.12E-10	1.06E-07	0.	0.	0.	1.64E-12	6.09E-18	0.	0.	1.07E-07
16	9.20	0.	6.62E-10	6.21E-08	0.	0.	0.	1.69E-12	6.29E-18	0.	0.	6.28E-08
17	9.10	0.	8.17E-10	6.61E-08	0.	0.	0.	1.65E-12	6.50E-18	0.	0.	6.69E-08
18	9.00	0.	9.91E-10	4.65E-08	0.	0.	0.	1.66E-12	6.72E-18	0.	0.	4.75E-08
19	8.90	0.	1.17E-09	3.68E-08	0.	0.	0.	1.66E-12	6.95E-18	0.	0.	3.71E-08
20	8.80	0.	1.21E-09	3.23E-08	0.	0.	0.	1.67E-12	7.19E-18	0.	0.	3.35E-08
21	8.70	0.	1.16E-09	2.09E-08	0.	0.	0.	1.68E-12	7.44E-18	0.	0.	2.21E-08
22	8.60	0.	1.10E-09	2.11E-08	0.	0.	0.	1.68E-12	7.71E-1	0.	0.	2.22E-08
23	8.50	0.	1.06E-09	1.37E-08	0.	0.	0.	1.69E-12	7.99E-18	0.	0.	1.48E-08
24	8.40	0.	1.01E-09	1.28E-08	0.	0.	0.	1.70E-12	8.28E-18	0.	0.	1.38E-08
25	8.30	0.	9.70E-10	8.38E-09	0.	0.	0.	1.71E-12	8.58E-18	0.	0.	9.27E-09
26	8.20	0.	9.28E-10	7.71E-09	0.	0.	0.	1.71E-12	8.90E-18	0.	0.	8.64E-09
27	8.10	0.	8.86E-10	5.20E-09	0.	0.	0.	1.72E-12	9.24E-18	0.	0.	6.08E-09
28	8.00	0.	8.43E-10	4.70E-09	0.	0.	0.	1.73E-12	9.59E-18	0.	0.	5.54E-09
29	7.90	0.	7.97E-10	3.21E-09	0.	0.	0.	1.74E-12	9.96E-18	0.	0.	4.00E-09
30	7.80	0.	7.50E-10	2.96E-09	0.	0.	0.	1.75E-12	1.03E-17	0.	0.	3.71E-09
31	7.70	0.	7.02E-10	2.09E-09	0.	0.	0.	1.76E-12	1.08E-17	0.	0.	2.79E-09
32	7.60	0.	6.55E-10	1.70E-09	0.	3.89E-13	0.	1.77E-12	1.12E-17	0.	0.	2.35E-09
33	7.50	0.	6.07E-10	1.28E-09	0.	5.44E-12	0.	1.78E-12	1.16E-17	0.	0.	1.90E-09
34	7.40	0.	5.58E-10	9.78E-10	0.	1.29E-11	0.	1.79E-12	1.21E-17	0.	0.	1.55E-09
35	7.30	0.	5.08E-10	7.71E-10	0.	8.16E-11	0.	1.80E-12	1.26E-17	0.	0.	1.36E-09
36	7.20	0.	4.61E-10	5.76E-10	0.	3.43E-10	0.	1.81E-12	1.32E-17	0.	0.	1.38E-09
37	7.10	0.	4.15E-10	4.65E-10	0.	3.68E-10	0.	1.82E-12	1.37E-17	0.	0.	1.29E-09
38	7.00	1.29E-12	0.	3.52E-10	0.	2.30E-09	0.	1.84E-12	1.43E-17	0.	0.	2.66E-09
39	6.90	2.27E-12	0.	2.69E-10	0.	1.58E-09	0.	1.85E-12	1.50E-17	0.	0.	1.86E-09
40	6.80	1.74E-12	0.	2.12E-10	0.	3.26E-09	0.	1.87E-12	1.56E-17	0.	0.	3.47E-09
41	6.70	1.12E-12	0.	1.53E-10	0.	7.31E-09	0.	1.88E-12	1.63E-17	0.	0.	7.46E-09
42	6.60	6.09E-13	0.	1.12E-10	0.	2.70E-09	0.	1.89E-12	1.71E-17	0.	0.	2.82E-09
43	6.50	3.08E-13	0.	6.99E-11	0.	5.41E-09	0.	1.91E-12	1.79E-17	0.	0.	5.49E-09
44	6.40	4.57E-13	0.	3.38E-11	1.04E-10	1.12E-08	0.	1.92E-12	1.87E-17	0.	0.	1.13E-08
45	6.30	9.02E-13	0.	1.40E-11	3.85E-10	3.50E-09	0.	1.94E-12	1.97E-17	0.	0.	3.98E-09
46	6.20	2.39E-12	0.	5.33E-12	4.50E-10	5.38E-09	0.	1.95E-12	2.06E-17	0.	0.	5.84E-09
47	6.10	8.32E-12	0.	1.79E-12	1.11E-09	1.45E-08	0.	1.97E-12	2.17E-17	0.	0.	1.56E-08
48	6.00	1.89E-11	0.	3.65E-13	7.42E-10	2.86E-09	0.	1.98E-12	2.28E-17	0.	0.	3.62E-09
49	5.90	2.66E-11	0.	2.92E-14	10.00E-10	3.73E-09	0.	1.98E-12	2.39E-17	0.	0.	4.76E-09
50	5.80	3.47E-11	0.	5.86E-16	1.25E-09	3.69E-09	0.	1.95E-12	2.52E-17	0.	0.	4.97E-09
51	5.70	3.41E-11	0.	0.	1.16E-09	2.54E-09	0.	1.84E-12	2.66E-17	0.	0.	3.73E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.91E-11	0.	0.	0.	6.76E-10	6.35E-09	0.	0.	1.71E-12	2.80E-17	0.	0.	7.06E-09
53	5.50	3.69E-11	0.	0.	0.	9.01E-10	7.76E-09	0.	0.	1.72E-12	2.96E-17	0.	0.	8.71E-09
54	5.40	3.47E-11	0.	0.	0.	6.67E-10	2.78E-09	0.	0.	1.72E-12	3.13E-17	0.	0.	3.47E-09
55	5.30	3.04E-11	0.	0.	0.	6.87E-10	6.37E-09	0.	0.	1.74E-12	3.31E-17	0.	0.	7.08E-09
56	5.20	1.79E-11	0.	0.	0.	6.61E-10	2.38E-09	0.	0.	1.75E-12	3.50E-17	0.	0.	3.07E-09
57	5.10	1.56E-11	0.	0.	0.	5.87E-10	3.38E-09	0.	4.74E-17	1.76E-12	3.71E-17	0.	0.	3.99E-09
58	5.00	1.06E-11	0.	0.	0.	4.57E-10	2.88E-09	0.	4.74E-17	1.78E-12	3.94E-17	0.	0.	3.35E-09
59	4.90	8.78E-12	0.	0.	0.	4.58E-10	2.06E-09	0.	4.74E-17	1.79E-12	4.19E-17	0.	0.	2.53E-09
60	4.80	8.91E-12	0.	0.	0.	4.67E-10	2.02E-09	0.	4.74E-17	1.81E-12	4.45E-17	0.	0.	2.50E-09
61	4.70	8.74E-12	0.	0.	0.	4.03E-10	1.22E-09	0.	4.74E-17	1.82E-12	4.74E-17	0.	0.	1.63E-09
62	4.60	9.35E-12	0.	0.	0.	3.77E-10	1.31E-09	0.	4.74E-17	1.84E-12	5.06E-17	0.	0.	1.69E-09
63	4.50	8.29E-12	0.	1.69E-12	0.	2.88E-10	6.84E-10	0.	4.74E-17	1.85E-12	5.41E-17	0.	0.	9.85E-10
64	4.40	7.36E-12	0.	9.57E-12	0.	2.62E-10	6.28E-10	0.	4.74E-17	1.87E-12	5.78E-17	0.	0.	9.09E-10
65	4.30	5.87E-12	0.	1.21E-11	0.	2.11E-10	2.55E-10	0.	4.74E-17	1.88E-12	6.20E-17	0.	0.	4.87E-10
66	4.20	4.80E-12	0.	8.69E-11	0.	2.03E-10	2.56E-10	0.	4.74E-17	1.89E-12	6.65E-17	0.	0.	5.52E-10
67	4.10	3.96E-12	0.	1.23E-11	0.	1.64E-10	6.15E-11	0.	4.74E-17	1.90E-12	7.15E-17	0.	0.	2.44E-10
68	4.00	3.12E-12	0.	1.14E-10	0.	1.40E-10	4.15E-11	0.	4.74E-17	1.91E-12	7.70E-17	0.	0.	3.01E-10
69	3.90	2.19E-12	0.	5.92E-11	2.10E-11	1.01E-10	2.31E-11	0.	4.74E-17	1.90E-12	8.31E-17	0.	0.	2.09E-10
70	3.80	2.22E-12	0.	4.93E-11	4.64E-10	1.04E-10	0.	0.	4.74E-17	1.89E-12	8.99E-17	0.	0.	6.21E-10
71	3.70	1.53E-12	0.	1.17E-10	7.04E-11	6.76E-11	0.	0.	4.74E-17	1.87E-12	9.74E-17	0.	0.	2.55E-10
72	3.60	1.20E-12	0.	2.74E-11	2.88E-10	7.08E-11	0.	0.	4.74E-17	1.75E-12	1.06E-16	0.	0.	3.90E-10
73	3.50	9.56E-13	0.	6.98E-11	2.31E-09	3.97E-11	0.	0.	4.74E-17	1.60E-12	1.15E-16	0.	0.	2.42E-09
74	3.40	7.09E-13	0.	1.74E-11	3.44E-11	4.39E-11	0.	0.	4.74E-17	9.22E-13	1.26E-16	0.	0.	9.73E-11
75	3.30	5.06E-13	0.	2.65E-11	4.83E-10	2.59E-11	0.	0.	4.74E-17	9.24E-13	1.37E-16	0.	0.	5.37E-10
76	3.20	3.50E-13	0.	8.79E-12	2.98E-09	2.53E-11	0.	0.	4.74E-17	9.25E-13	1.51E-16	0.	0.	3.02E-09
77	3.10	2.88E-13	0.	8.16E-12	5.68E-11	1.88E-11	0.	0.	4.74E-17	9.28E-13	1.66E-16	0.	0.	8.48E-11
78	3.00	2.12E-13	0.	3.13E-12	5.14E-10	1.46E-11	0.	0.	4.74E-17	9.30E-13	1.83E-16	0.	0.	5.32E-10
79	2.90	1.43E-13	0.	1.94E-12	5.91E-10	7.92E-12	0.	0.	4.74E-17	9.31E-13	2.02E-16	0.	0.	6.02E-10
80	2.80	1.19E-13	0.	7.41E-13	5.56E-11	3.64E-12	0.	0.	4.74E-17	9.33E-13	2.25E-16	0.	0.	6.10E-11
81	2.70	6.05E-14	0.	3.53E-13	2.52E-10	1.27E-12	0.	0.	4.74E-17	9.33E-13	2.51E-16	0.	0.	2.55E-10
82	2.60	1.91E-14	0.	1.66E-13	3.14E-11	3.73E-13	0.	0.	4.74E-17	9.33E-13	2.81E-16	0.	0.	3.29E-11
83	2.50	1.13E-15	0.	2.96E-14	9.37E-12	6.88E-14	0.	0.	4.74E-17	9.33E-13	3.16E-16	0.	0.	1.04E-11
84	2.40	0.	3.20E-12	0.	1.98E-11	5.98E-15	0.	0.	4.74E-17	9.33E-13	3.58E-16	0.	0.	2.39E-11
85	2.30	0.	3.17E-11	0.	0.	0.	0.	0.	4.74E-17	9.25E-13	4.07E-16	0.	0.	3.26E-11
86	2.20	0.	4.55E-11	0.	0.	0.	0.	0.	4.74E-17	9.22E-13	4.65E-16	0.	0.	4.65E-11
87	2.10	0.	1.25E-10	0.	0.	0.	0.	0.	4.74E-17	9.18E-13	5.35E-16	0.	0.	1.26E-10
88	2.00	0.	1.32E-10	0.	0.	0.	0.	0.	4.74E-17	8.88E-13	6.19E-16	0.	0.	1.32E-10
89	1.90	0.	5.70E-10	0.	0.	0.	0.	0.	4.74E-17	8.54E-13	7.23E-16	0.	0.	5.71E-10
90	1.80	0.	5.66E-10	0.	0.	0.	0.	0.	4.74E-17	8.17E-13	8.51E-16	0.	0.	5.67E-10
91	1.70	0.	5.94E-10	0.	0.	0.	0.	0.	4.74E-17	7.70E-13	1.01E-15	0.	0.	5.94E-10
92	1.60	0.	4.36E-10	0.	0.	0.	0.	0.	4.74E-17	6.51E-13	1.21E-15	0.	0.	4.37E-10
93	1.50	0.	5.08E-10	0.	0.	0.	0.	0.	4.74E-17	2.96E-13	1.47E-15	0.	0.	5.08E-10
94	1.40	0.	7.09E-10	0.	0.	0.	0.	0.	4.74E-17	0.	1.81E-15	0.	0.	7.09E-10
95	1.30	0.	3.99E-10	0.	0.	0.	0.	0.	4.74E-17	0.	2.27E-15	0.	0.	3.99E-10
96	1.20	0.	5.55E-10	0.	0.	0.	0.	0.	4.74E-17	0.	2.89E-15	0.	0.	5.55E-10
97	1.10	0.	3.07E-10	0.	0.	0.	0.	5.14E-14	4.74E-17	0.	3.76E-15	0.	0.	3.07E-10
98	1.00	0.	3.31E-10	0.	0.	0.	0.	1.73E-13	4.74E-17	0.	5.01E-15	0.	0.	3.32E-10
99	0.90	0.	2.25E-10	0.	0.	0.	0.	4.04E-13	4.74E-17	0.	6.89E-15	0.	0.	2.25E-10
100	0.80	0.	9.81E-11	0.	0.	0.	0.	2.70E-12	4.74E-17	0.	9.85E-15	0.	0.	1.01E-10
101	0.70	0.	2.90E-11	0.	0.	0.	0.	2.18E-12	4.74E-17	0.	1.48E-14	0.	0.	3.12E-11
102	0.60	0.	2.23E-13	0.	0.	0.	0.	7.31E-12	4.74E-17	0.	2.36E-14	0.	0.	7.56E-12

ABSORPT.ON COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.25E-08	0.	0.	0.	3.60E-14	2.02E-19	0.	0.	3.25E-08
2	10.60	0.	0.	2.45E-08	0.	0.	0.	3.61E-14	2.08E-19	0.	0.	2.45E-08
3	10.50	0.	0.	2.20E-08	0.	0.	0.	3.61E-14	2.14E-19	0.	0.	2.20E-08
4	10.40	0.	0.	1.78E-08	0.	0.	0.	3.62E-14	2.20E-19	0.	0.	1.78E-08
5	10.30	0.	0.	1.28E-08	0.	0.	0.	3.62E-14	2.27E-19	0.	0.	1.28E-08
6	10.20	0.	0.	1.17E-08	0.	0.	0.	3.62E-14	2.33E-19	0.	0.	1.17E-08
7	10.10	0.	0.	9.73E-09	0.	0.	0.	3.63E-14	2.40E-19	0.	0.	9.73E-09
8	10.00	0.	0.	6.59E-09	0.	0.	0.	3.64E-14	2.48E-19	0.	0.	6.59E-09
9	9.90	0.	0.	6.46E-09	0.	0.	0.	3.64E-14	2.55E-19	0.	0.	6.46E-09
10	9.80	0.	0.	5.05E-09	0.	0.	0.	3.65E-14	2.63E-19	0.	0.	5.05E-09
11	9.70	0.	0.	3.41E-09	0.	0.	0.	3.65E-14	2.72E-19	0.	0.	3.41E-09
12	9.60	0.	0.	3.64E-09	0.	0.	0.	3.66E-14	2.80E-19	0.	0.	3.64E-09
13	9.50	0.	5.12E-12	2.38E-09	0.	0.	0.	3.67E-14	2.89E-19	0.	0.	2.38E-09
14	9.40	0.	5.62E-12	1.90E-09	0.	0.	0.	3.68E-14	2.99E-19	0.	0.	1.91E-09
15	9.30	0.	6.12E-12	1.84E-09	0.	0.	0.	3.70E-14	3.09E-19	0.	0.	1.85E-09
16	9.20	0.	6.62E-12	1.08E-09	0.	0.	0.	3.71E-14	3.19E-19	0.	0.	1.08E-09
17	9.10	0.	8.17E-12	1.14E-09	0.	0.	0.	3.72E-14	3.29E-19	0.	0.	1.15E-09
18	9.00	0.	9.91E-12	8.06E-10	0.	0.	0.	3.73E-14	3.41E-19	0.	0.	8.16E-10
19	8.90	0.	1.17E-11	6.23E-10	0.	0.	0.	3.75E-14	3.52E-19	0.	0.	6.35E-10
20	8.80	0.	1.21E-11	5.59E-10	0.	0.	0.	3.76E-14	3.65E-19	0.	0.	5.71E-10
21	8.70	0.	1.16E-11	3.62E-10	0.	0.	0.	3.77E-14	3.77E-19	0.	0.	3.78E-10
22	8.60	0.	1.10E-11	3.65E-10	0.	0.	0.	3.79E-14	3.91E-19	0.	0.	3.76E-10
23	8.50	0.	1.04E-11	2.38E-10	0.	0.	0.	3.80E-14	4.05E-19	0.	0.	2.48E-10
24	8.40	0.	1.01E-11	2.22E-10	0.	0.	0.	3.82E-14	4.19E-19	0.	0.	2.32E-10
25	8.30	0.	9.70E-12	1.44E-10	0.	0.	0.	3.84E-14	4.35E-19	0.	0.	1.53E-10
26	8.20	0.	9.28E-12	1.33E-10	0.	0.	0.	3.86E-14	4.51E-19	0.	0.	1.43E-10
27	8.10	0.	8.86E-12	9.00E-11	0.	0.	0.	3.88E-14	4.68E-19	0.	0.	9.89E-11
28	8.00	0.	8.43E-12	8.14E-11	0.	0.	0.	3.90E-14	4.86E-19	0.	0.	8.98E-11
29	7.90	0.	7.97E-12	5.55E-11	0.	0.	0.	3.92E-14	5.05E-19	0.	0.	6.35E-11
30	7.80	0.	7.50E-12	5.13E-11	0.	0.	0.	3.94E-14	5.24E-19	0.	0.	5.88E-11
31	7.70	0.	7.02E-12	3.62E-11	0.	0.	0.	3.96E-14	5.45E-19	0.	0.	4.32E-11
32	7.60	0.	6.55E-12	2.94E-11	0.	5.13E-15	0.	3.98E-14	5.67E-19	0.	0.	3.60E-11
33	7.50	0.	6.07E-12	2.22E-11	0.	7.17E-14	0.	4.00E-14	5.90E-19	0.	0.	2.84E-11
34	7.40	0.	5.58E-12	1.68E-11	0.	1.69E-13	0.	4.02E-14	6.14E-19	0.	0.	2.27E-11
35	7.30	0.	5.08E-12	1.34E-11	0.	1.07E-12	0.	4.05E-14	6.40E-19	0.	0.	1.95E-11
36	7.20	0.	4.61E-12	9.98E-12	0.	4.52E-12	0.	4.07E-14	6.67E-19	0.	0.	1.92E-11
37	7.10	0.	4.15E-12	8.05E-12	0.	4.85E-12	0.	4.10E-14	6.96E-19	0.	0.	1.71E-11
38	7.00	1.30E-14	0.	6.10E-12	0.	3.03E-11	0.	4.13E-14	7.26E-19	0.	0.	3.65E-11
39	6.90	2.27E-14	0.	4.66E-12	0.	2.09E-11	0.	4.17E-14	7.58E-19	0.	0.	2.56E-11
40	6.80	1.74E-14	0.	3.37E-12	0.	4.29E-11	0.	4.20E-14	7.92E-19	0.	0.	4.66E-11
41	6.70	1.12E-14	0.	2.64E-12	0.	9.62E-11	0.	4.23E-14	8.28E-19	0.	0.	9.89E-11
42	6.60	6.10E-15	0.	1.95E-12	0.	3.56E-11	0.	4.27E-14	8.66E-19	0.	0.	3.76E-11
43	6.50	3.08E-15	0.	1.21E-12	0.	7.13E-11	0.	4.30E-14	9.07E-19	0.	0.	7.25E-11
44	6.40	4.57E-15	0.	5.86E-13	1.37E-12	1.47E-10	0.	4.33E-14	9.50E-19	0.	0.	1.49E-10
45	6.30	9.03E-15	0.	2.43E-13	5.07E-12	4.71E-11	0.	4.37E-14	9.97E-19	0.	0.	5.24E-11
46	6.20	2.40E-14	0.	9.23E-14	5.93E-12	7.08E-11	0.	4.40E-14	1.05E-18	0.	0.	7.69E-11
47	6.10	8.32E-14	0.	3.10E-14	1.46E-11	1.91E-10	0.	4.44E-14	1.10E-18	0.	0.	2.06E-10
48	6.00	1.89E-13	0.	6.32E-15	9.77E-12	3.76E-11	0.	4.47E-14	1.15E-18	0.	0.	4.77E-11
49	5.90	2.66E-13	0.	4.36E-16	1.32E-11	4.90E-11	0.	4.47E-14	1.21E-18	0.	0.	6.26E-11
50	5.80	3.48E-13	0.	1.02E-17	1.64E-11	4.86E-11	0.	4.40E-14	1.28E-18	0.	0.	6.53E-11
51	5.70	3.42E-13	0.	0.	1.53E-11	3.34E-11	0.	4.13E-14	1.35E-18	0.	0.	4.91E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO ?	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.91E-13	0.	0.	0.	8.90E-12	8.35E-11	0.	0.	3.85E-14	1.42E-18	0.	0.	9.29E-11
53	5.50	3.69E-13	0.	0.	0.	1.19E-11	1.02E-10	0.	0.	3.86E-14	1.50E-18	0.	0.	1.14E-10
54	5.40	3.47E-13	0.	0.	0.	8.78E-12	3.65E-11	0.	0.	3.88E-14	1.58E-18	0.	0.	4.57E-11
55	5.30	3.04E-13	0.	0.	0.	9.04E-12	8.38E-11	0.	0.	3.91E-14	1.68E-18	0.	0.	9.32E-11
56	5.20	1.79E-13	0.	0.	0.	8.70E-12	3.14E-11	0.	0.	3.94E-14	1.77E-18	0.	0.	4.03E-11
57	5.10	1.56E-13	0.	0.	0.	7.73E-12	4.45E-11	0.	6.25E-20	3.97E-14	1.88E-18	0.	0.	5.25E-11
58	5.00	1.06E-13	0.	0.	0.	6.02E-12	3.79E-11	0.	6.25E-20	4.00E-14	2.00E-18	0.	0.	4.41E-11
59	4.90	8.78E-14	0.	0.	0.	6.01E-12	2.72E-11	0.	6.25E-20	4.03E-14	2.12E-18	0.	0.	3.33E-11
60	4.80	8.92E-14	0.	0.	0.	6.15E-12	2.64E-11	0.	6.25E-20	4.07E-14	2.26E-18	0.	0.	3.29E-11
61	4.70	8.75E-14	0.	0.	0.	5.30E-12	1.60E-11	0.	6.25E-20	4.10E-14	2.40E-18	0.	0.	2.14E-11
62	4.60	9.36E-14	0.	0.	0.	4.97E-12	1.72E-11	0.	6.25E-20	4.13E-14	2.56E-18	0.	0.	2.23E-11
63	4.50	8.30E-14	0.	2.93E-14	0.	3.80E-12	9.01E-12	0.	6.25E-20	4.17E-14	2.74E-18	0.	0.	1.30E-11
64	4.40	7.39E-14	0.	1.66E-13	0.	3.45E-12	8.26E-12	0.	6.25E-20	4.20E-14	2.93E-18	0.	0.	1.20E-11
65	4.30	5.88E-14	0.	2.10E-13	0.	2.78E-12	3.36E-12	0.	6.25E-20	4.23E-14	3.14E-18	0.	0.	6.46E-12
66	4.20	4.81E-14	0.	1.51E-12	0.	2.67E-12	3.37E-12	0.	6.25E-20	4.27E-14	3.37E-18	0.	0.	7.64E-12
67	4.10	3.96E-14	0.	2.13E-13	0.	2.16E-12	8.10E-13	0.	6.25E-20	4.28E-14	3.63E-18	0.	0.	3.27E-12
68	4.00	3.13E-14	0.	1.98E-12	0.	1.84E-12	5.47E-13	0.	6.25E-20	4.30E-14	3.90E-18	0.	0.	4.44E-12
69	3.90	2.19E-14	0.	1.03E-12	1.62E-12	1.33E-12	3.05E-13	0.	6.25E-20	4.28E-14	4.21E-18	0.	0.	4.34E-12
70	3.80	2.22E-14	0.	8.53E-13	3.57E-11	1.37E-12	0.	0.	6.25E-20	4.27E-14	4.55E-18	0.	0.	3.80E-11
71	3.70	1.53E-14	0.	2.03E-12	5.41E-12	8.37E-13	0.	0.	6.25E-20	4.20E-14	4.94E-18	0.	0.	8.34E-12
72	3.60	1.20E-14	0.	4.75E-13	2.22E-11	9.33E-13	0.	0.	6.25E-20	3.94E-14	5.36E-18	0	0.	2.36E-11
73	3.50	9.57E-15	0.	1.21E-12	1.78E-10	5.23E-13	0.	0.	6.25E-20	3.60E-14	5.83E-18	0.	0.	1.79E-10
74	3.40	7.09E-15	0.	3.01E-13	2.65E-12	5.77E-13	0.	0.	6.25E-20	2.08E-14	6.36E-18	0.	0.	3.56E-12
75	3.30	5.07E-15	0.	4.59E-13	3.71E-11	3.41E-13	0.	0.	6.25E-20	2.08E-14	6.96E-18	0.	0.	3.90E-11
76	3.20	3.61E-15	0.	1.52E-13	2.29E-10	3.33E-13	0.	0.	6.25E-20	2.08E-14	7.64E-18	0.	0.	2.30E-10
77	3.10	2.89E-15	0.	1.41E-13	4.35E-12	2.47E-13	0.	0.	6.25E-20	2.09E-14	8.40E-18	0.	0.	4.77E-12
78	3.00	2.12E-15	0.	5.41E-14	3.95E-11	1.93E-13	0.	0.	6.25E-20	2.09E-14	9.27E-18	0.	0.	3.98E-11
79	2.90	1.43E-15	0.	3.35E-14	4.53E-11	1.04E-13	0.	0.	6.23E-20	2.10E-14	1.03E-17	0.	0.	4.56E-11
80	2.80	1.29E-15	0.	1.26E-14	4.28E-12	4.79E-14	0.	0.	6.25E-20	2.10E-14	1.14E-17	0.	0.	4.36E-12
81	2.70	6.06E-16	0.	6.12E-15	1.94E-11	1.67E-14	0.	0.	6.25E-20	2.10E-14	1.27E-17	0.	0.	1.94E-11
82	2.60	1.91E-16	0.	2.88E-15	2.41E-12	4.91E-15	0.	0.	6.25E-20	2.10E-14	1.43E-17	0.	0.	2.44E-12
83	2.50	1.13E-17	0.	5.13E-16	7.21E-13	9.05E-16	0.	0.	6.25E-20	2.10E-14	1.60E-17	0.	0.	7.43E-13
84	2.40	0.	5.55E-14	0.	1.52E-12	7.87E-17	0.	0.	6.25E-20	2.10E-14	1.81E-17	0.	0.	1.80E-12
85	2.30	0.	5.49E-13	0.	0.	0.	0.	0.	6.25E-20	2.08E-14	2.06E-17	0.	0.	5.70E-13
86	2.20	0.	7.89E-13	0.	0.	0.	0.	0.	6.25E-20	2.08E-14	2.36E-17	0.	0.	8.09E-13
87	2.10	0.	2.17E-12	0.	0.	0.	0.	0.	6.25E-20	2.07E-14	2.71E-17	0.	0.	2.19E-12
88	2.00	0.	2.28E-12	0.	0.	0.	0.	0.	6.25E-20	2.00E-14	3.14E-17	0.	0.	2.30E-12
89	1.90	0.	9.87E-12	0.	0.	0.	0.	0.	6.25E-20	1.92E-14	3.66E-17	0.	0.	9.89E-12
90	1.80	0.	9.81E-12	0.	0.	0.	0.	0.	6.25E-20	1.84E-14	4.31E-17	0.	0.	9.82E-12
91	1.70	0.	1.03E-11	0.	0.	0.	0.	0.	6.25E-20	1.73E-14	5.12E-17	0.	0.	1.03E-11
92	1.60	0.	7.58E-12	0.	0.	0.	0.	0.	6.25E-20	1.47E-14	6.15E-17	0.	0.	7.57E-12
93	1.50	0.	8.79E-12	0.	0.	0.	0.	0.	6.25E-20	6.67E-15	7.47E-17	0.	0.	8.80E-12
94	1.40	0.	1.23E-11	0.	0.	0.	0.	0.	6.25E-20	0.	9.19E-17	0.	0.	1.23E-11
95	1.30	0.	6.90E-12	0.	0.	0.	0.	0.	6.25E-20	0.	1.15E-16	0.	0.	6.90E-12
96	1.20	0.	9.62E-12	0.	0.	0.	0.	0.	6.25E-20	0.	1.46E-16	0.	0.	9.62E-12
97	1.10	0.	5.32E-12	0.	0.	0.	0.	6.77E-16	6.25E-20	0.	1.91E-16	0.	0.	5.32E-12
98	1.00	0.	5.74E-12	0.	0.	0.	0.	2.27E-15	6.25E-20	0.	2.54E-16	0.	0.	5.74E-12
99	0.90	0.	3.89E-12	0.	0.	0.	0.	5.32E-15	6.25E-20	0.	3.49E-16	0.	0.	3.90E-12
100	0.80	0.	1.70E-12	0.	0.	0.	0.	3.56E-14	6.25E-20	0.	4.99E-16	0.	0.	1.74E-12
101	0.70	0.	5.02E-13	0.	0.	0.	0.	2.88E-14	6.25E-20	0.	7.49E-16	0.	0.	5.32E-13
102	0.60	0.	3.84E-15	0.	0.	0.	0.	9.62E-14	6.25E-20	0.	1.19E-15	0.	0.	1.01E-13

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.30E 01	0.	0.	0.	4.49E-02	6.38E-08	1.31E-07	2.92E-06	1.30E 01
2	10.60	0.	0.	1.02E 01	0.	0.	0.	4.50E-02	6.57E-08	1.01E-07	2.92E-06	1.03E 01
3	10.50	0.	0.	9.45E 00	0.	0.	0.	4.51E-02	6.76E-08	1.02E-07	2.93E-06	9.58E 00
4	10.40	0.	0.	7.91E 00	0.	0.	0.	4.51E-02	6.95E-08	1.02E-07	2.94E-06	7.96E 00
5	10.30	0.	0.	5.95E 00	0.	0.	0.	4.52E-02	7.16E-08	1.02E-07	2.94E-06	6.00E 00
6	10.20	0.	0.	5.60E 00	0.	0.	0.	4.52E-02	7.36E-08	1.32E-07	2.95E-06	5.65E 00
7	10.10	0.	0.	4.80E 00	0.	0.	0.	4.53E-02	7.60E-08	1.03E-07	2.95E-06	4.84E 00
8	10.00	0.	0.	3.46E 00	0.	0.	0.	4.54E-02	7.83E-08	1.03E-07	2.96E-06	3.50E 00
9	9.90	0.	0.	3.43E 00	0.	0.	0.	4.54E-02	8.07E-08	1.03E-07	2.97E-06	3.47E 00
10	9.80	0.	0.	2.79E 00	0.	0.	0.	4.55E-02	8.32E-08	1.03E-07	2.97E-06	2.84E 00
11	9.70	0.	0.	2.03E 00	0.	0.	0.	4.56E-02	8.58E-08	1.04E-07	2.98E-06	2.05E 00
12	9.60	0.	0.	2.14E 00	0.	0.	0.	4.57E-02	8.86E-08	1.04E-07	2.98E-06	2.18E 00
13	9.50	0.	2.20E 01	1.49E 00	0.	0.	0.	4.58E-02	9.14E-08	1.04E-07	2.99E-06	2.35E 01
14	9.40	0.	2.42E 01	1.24E 00	0.	0.	0.	4.59E-02	9.44E-08	1.04E-07	2.99E-06	2.54E 01
15	9.30	0.	2.63E 01	1.21E 00	0.	0.	0.	4.61E-02	9.74E-08	1.05E-07	3.00E-06	2.76E 01
16	9.20	0.	2.85E 01	7.74E-01	0.	0.	0.	4.63E-02	1.01E-07	2.74E-08	3.01E-06	2.94E 01
17	9.10	0.	3.50E 01	8.07E-01	0.	0.	0.	4.64E-02	1.04E-07	2.72E-08	3.01E-06	3.59E 01
18	9.00	0.	4.23E 01	6.18E-01	0.	0.	0.	4.66E-02	1.08E-07	2.71E-08	3.02E-06	4.29E 01
19	8.90	0.	4.95E 01	4.89E-01	0.	0.	0.	4.68E-02	1.11E-07	2.70E-08	3.02E-06	5.01E 01
20	8.80	0.	5.15E 01	4.48E-01	0.	0.	0.	4.69E-02	1.15E-07	2.69E-08	3.03E-06	5.20E 01
21	8.70	0.	4.92E 01	3.13E-01	0.	0.	0.	4.71E-02	1.19E-07	2.67E-08	3.04E-06	4.96E 01
22	8.60	0.	4.70E 01	3.14E-01	0.	0.	0.	4.73E-02	1.23E-07	2.66E-08	3.04E-06	4.74E 01
23	8.50	0.	4.53E 01	2.21E-01	0.	0.	0.	4.74E-02	1.28E-07	2.65E-08	3.05E-06	4.55E 01
24	8.40	0.	4.37E 01	2.08E-01	0.	0.	0.	4.77E-02	1.32E-07	2.64E-08	3.05E-06	4.40E 01
25	8.30	0.	4.18E 01	1.44E-01	0.	0.	0.	4.79E-02	1.37E-07	2.62E-08	3.07E-06	4.20E 01
26	8.20	0.	4.00E 01	1.36E-01	0.	0.	0.	4.82E-02	1.42E-07	2.61E-08	3.12E-06	4.02E 01
27	8.10	0.	3.84E 01	9.74E-02	0.	0.	0.	4.84E-02	1.48E-07	2.59E-08	3.16E-06	3.86E 01
28	8.00	0.	3.68E 01	9.04E-02	0.	0.	0.	4.87E-02	1.53E-07	2.57E-08	3.20E-06	3.69E 01
29	7.90	0.	3.49E 01	6.51E-02	0.	0.	0.	4.89E-02	1.59E-07	2.55E-08	3.24E-06	3.51E 01
30	7.80	0.	3.31E 01	6.18E-02	0.	0.	0.	4.92E-02	1.65E-07	2.53E-08	3.29E-06	3.32E 01
31	7.70	0.	3.12E 01	4.58E-02	0.	0.	0.	4.94E-02	1.72E-07	2. -08	3.33E-06	3.13E 01
32	7.60	0.	2.93E 01	3.86E-02	0.	2.94E-04	0.	4.97E-02	1.79E-07	2.50E-08	3.37E-06	2.94E 01
33	7.50	0.	2.74E 01	3.06E-02	0.	2.93E-03	0.	4.99E-02	1.86E-07	2.48E-08	3.42E-06	2.74E 01
34	7.40	0.	2.54E 01	2.42E-02	0.	8.26E-03	0.	5.02E-02	1.94E-07	2.46E-08	3.46E-06	2.55E 01
35	7.30	0.	2.35E 01	2.00E-02	0.	5.28E-02	0.	5.05E-02	2.02E-07	2.45E-08	3.50E-06	2.37E 01
36	7.20	0.	2.18E 01	1.56E-02	0.	1.82E-01	0.	5.08E-02	2.10E-07	2.43E-08	3.54E-06	2.20E 01
37	7.10	0.	2.01E 01	1.31E-02	0.	2.77E-01	0.	5.12E-02	2.20E-07	2.41E-08	3.59E-06	2.04E 01
38	7.00	4.53E-02	0.	1.04E-02	0.	1.31E 00	0.	5.16E-02	2.29E-07	2.39E-08	3.63E-06	1.41E 00
39	6.90	8.13E-02	0.	8.30E-03	0.	9.44E-01	0.	5.20E-02	2.39E-07	2.38E-08	3.67E-06	1.03E 00
40	6.80	6.41E-02	0.	6.86E-03	0.	2.14E 00	0.	5.24E-02	2.50E-07	2.36E-08	3.72E-06	2.26E 00
41	6.70	4.22E-02	0.	5.17E-03	0.	3.89E 00	0.	5.28E-02	2.61E-07	2.34E-08	3.76E-06	3.99E 00
42	6.60	2.36E-02	0.	3.98E-03	0.	1.5PE 00	0.	5.33E-02	2.74E-07	2.33E-08	3.81E-06	1.66E 00
43	6.50	1.23E-02	0.	2.62E-03	0.	3.30E 00	0.	5.37E-02	2.86E-07	2.32E-08	3.85E-06	3.37E 00
44	6.40	1.78E-02	0.	1.38E-03	4.53E-02	5.5PE 00	0.	5.41E-02	3.00E-07	2.31E-08	3.89E-06	5.69E 00
45	6.30	3.58E-02	0.	6.73E-04	1.70E-01	1.97E 00	0.	5.45E-02	3.15E-07	2.29E-08	3.95E-06	2.22E 00
46	6.20	9.85E-02	0.	2.65E-04	2.06E-01	3.14E 00	0.	5.49E-02	3.30E-07	2.28E-08	4.04E-06	3.52E 00
47	6.10	3.58E-01	0.	9.67E-05	5.28E-01	6.9PE 00	0.	5.53E-02	3.47E-07	2.29E-08	4.12E-06	7.92E 00
48	6.00	8.52E-01	0.	2.08E-05	3.82E-01	1.69E 00	0.	5.58E-02	3.64E-07	2.30E-08	4.21E-06	2.98E 00
49	5.90	1.25E 00	0.	1.46E-06	5.21E-01	2.0PE 00	0.	5.58E-02	3.83E-07	2.30E-08	4.30E-06	3.91E 00
50	5.80	1.72E 00	0.	3.46E-08	6.66E-01	1.9PE 00	0.	5.49E-02	4.03E-07	2.31E-08	4.38E-06	4.40E 00
51	5.70	1.79E 00	0.	0.	1.53E-01	1.64E 00	0.	5.16E-02	4.25E-07	2.31E-08	4.47E-06	4.13E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.255E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.10E 00	0.	0.	0.	4.15E-01	3.46E 00	0.	0.	4.80E-02	4.48E-07	2.32E-08	4.55E-06	6.03E 00
53	5.50	2.04E 00	0.	0.	0.	5.33E-01	3.81E 00	0.	0.	4.82E-02	4.73E-07	2.32E-08	4.64E-06	6.43E 00
54	5.40	1.99E 00	0.	0.	0.	4.11E-01	1.74E 00	0.	0.	4.85E-02	5.00E-07	2.33E-08	4.73E-06	4.18E 00
55	5.30	1.80E 00	0.	0.	0.	4.24E-01	3.37E 00	0.	0.	4.88E-02	5.29E-07	2.34E-08	4.82E-06	5.64E 00
56	5.20	1.13E 00	0.	0.	0.	4.19E-01	1.43E 00	0.	0.	4.91E-02	5.60E-07	2.36E-08	4.95E-06	3.03E 00
57	5.10	1.00E 00	0.	0.	0.	3.85E-01	2.06E 00	0.	4.44E-03	4.95E-02	5.94E-07	2.41E-08	5.08E-06	3.50E 00
58	5.00	7.00E-01	0.	0.	0.	3.14E-01	1.72E 00	0.	4.44E-03	4.99E-02	6.30E-07	2.47E-08	5.21E-06	2.79E 00
59	4.90	5.70E-01	0.	0.	0.	3.21E-01	1.42E 00	0.	4.44E-03	5.03E-02	6.70E-07	2.53E-08	5.33E-06	2.37E 00
60	4.80	5.86E-01	0.	0.	0.	3.30E-01	1.33E 00	0.	4.44E-03	5.08E-02	7.13E-07	2.58E-08	5.46E-06	2.31E 00
61	4.70	5.94E-01	0.	0.	0.	2.94E-01	9.24E-01	0.	4.44E-03	5.12E-02	7.60E-07	2.63E-08	5.60E-06	1.87E 00
62	4.60	6.56E-01	0.	0.	0.	2.81E-01	9.32E-01	0.	4.44E-03	5.16E-02	8.10E-07	2.69E-08	5.73E-06	1.93E 00
63	4.50	6.05E-01	0.	9.87E-05	0.	2.24E-01	5.57E-01	0.	4.44E-03	5.20E-02	8.66E-07	2.76E-08	5.86E-06	1.44E 00
64	4.40	5.62E-01	0.	4.77E-04	0.	2.09E-01	4.68E-01	0.	4.44E-03	5.24E-02	9.26E-07	2.83E-08	6.00E-06	1.30E 00
65	4.30	4.64E-01	0.	7.59E-04	0.	1.75E-01	2.16E-01	0.	4.44E-03	5.28E-02	9.93E-07	2.89E-08	6.13E-06	9.13E-01
66	4.20	3.92E-01	0.	4.45E-03	0.	1.73E-01	2.01E-01	0.	4.44E-03	5.33E-02	1.06E-06	2.98E-08	6.27E-06	8.28E-01
67	4.10	3.33E-01	0.	8.31E-04	0.	1.46E-01	4.87E-02	0.	4.44E-03	5.35E-02	1.14E-06	3.03E-08	2.46E-07	5.86E-01
68	4.00	2.73E-01	0.	5.99E-03	0.	1.28E-01	3.51E-02	0.	4.44E-03	5.37E-02	1.23E-06	1.63E-08	2.53E-07	5.90E-01
69	3.90	2.00E-01	0.	2.85E-03	4.46E-07	9.82E-02	1.79E-02	0.	4.44E-03	5.35E-02	1.33E-06	1.65E-08	2.61E-07	3.77E-01
70	3.80	2.06E-01	0.	2.93E-03	6.60E-06	1.01E-01	0.	0.	4.44E-03	5.33E-02	1.44E-06	1.34E-08	2.69E-07	3.68E-01
71	3.70	1.51E-01	0.	5.61E-03	1.01E-04	6.73E-02	0.	0.	4.44E-03	5.24E-02	1.56E-06	1.35E-08	3.13E-07	2.91E-01
72	3.60	1.23E-01	0.	1.74E-03	5.54E-06	7.44E-02	0.	0.	4.44E-03	4.91E-02	1.69E-06	9.00E-09	3.65E-07	2.52E-01
73	3.50	1.01E-01	0.	3.70E-03	3.21E-05	4.54E-02	0.	0.	4.44E-03	4.49E-02	1.84E-06	1.04E-08	4.18E-07	2.00E-01
74	3.40	7.88E-02	0.	1.18E-03	8.40E-07	5.00E-02	0.	0.	4.44E-03	2.59E-02	2.01E-06	1.18E-08	4.73E-07	1.60E-01
75	3.30	5.79E-02	0.	1.57E-03	8.46E-06	3.20E-02	0.	0.	4.44E-03	2.60E-02	2.20E-06	1.33E-08	5.29E-07	1.22E-01
76	3.20	4.32E-02	0.	6.40E-04	3.90E-05	3.15E-02	0.	0.	4.44E-03	2.60E-02	2.41E-06	1.47E-08	5.85E-07	1.06E-01
77	3.10	3.61E-02	0.	5.41E-04	1.34E-06	2.50E-02	0.	0.	4.44E-03	2.61E-02	2.65E-06	1.62E-08	6.42E-07	9.22E-02
78	3.00	2.78E-02	0.	2.42E-04	8.86E-06	2.03E-02	0.	0.	4.44E-03	2.61E-02	2.93E-06	1.77E-08	6.98E-07	7.98E-02
79	2.90	1.98E-02	0.	1.44E-04	8.40E-06	1.19E-02	0.	0.	4.44E-03	2.62E-02	3.24E-06	1.92E-08	7.54E-07	6.25E-02
80	2.80	1.84E-02	0.	6.07E-05	1.26E-04	6.00E-03	0.	0.	4.44E-03	2.62E-02	3.61E-06	2.07E-08	8.12E-07	5.51E-02
81	2.70	1.30E-02	0.	2.81E-05	4.32E-06	2.34E-03	0.	0.	4.44E-03	2.62E-02	4.02E-06	2.23E-08	8.72E-07	4.23E-02
82	2.60	3.23E-03	0.	1.40E-05	4.75E-07	7.65E-04	0.	0.	4.44E-03	2.62E-02	4.51E-06	2.39E-08	9.27E-07	3.47E-02
83	2.50	1.99E-04	0.	2.22E-06	6.02E-07	1.51E-04	0.	0.	4.44E-03	2.62E-02	5.07E-06	2.62E-08	1.62E-07	3.10E-02
84	2.40	0.	1.92E-04	0.	3.47E-07	1.38E-05	0.	0.	4.44E-03	2.62E-02	5.74E-06	8.95E-09	2.00E-07	3.09E-02
85	2.30	0.	1.44E-03	0.	0.	0.	0.	0.	4.44E-03	2.60E-02	6.52E-06	1.09E-08	2.38E-07	3.19E-02
86	2.20	0.	2.36E-03	0.	0.	0.	0.	0.	4.44E-03	2.59E-02	7.46E-06	1.28E-08	2.86E-07	3.27E-02
87	2.10	0.	5.12E-03	0.	0.	0.	0.	0.	4.44E-03	2.58E-02	8.58E-06	1.49E-08	3.34E-07	3.54E-02
88	2.00	0.	6.28E-03	0.	0.	0.	0.	0.	4.44E-03	2.50E-02	9.93E-06	1.70E-08	3.82E-07	3.57E-02
89	1.90	0.	2.08E-02	0.	0.	0.	0.	0.	4.44E-03	2.40E-02	1.16E-05	1.91E-08	4.30E-07	4.92E-02
90	1.80	0.	1.86E-02	0.	0.	0.	0.	0.	4.44E-03	2.30E-02	1.36E-05	2.20E-08	4.99E-07	4.60E-02
91	1.70	0.	2.12E-02	0.	0.	0.	0.	0.	4.44E-03	2.16E-02	1.62E-05	2.55E-08	5.83E-07	4.73E-02
92	1.60	0.	1.49E-02	0.	0.	0.	0.	0.	4.44E-03	1.83E-02	1.95E-05	2.90E-08	6.67E-07	3.79E-02
93	1.50	0.	1.82E-02	0.	0.	0.	0.	0.	4.44E-03	8.32E-03	2.37E-05	3.43E-08	7.06E-07	3.09E-02
94	1.40	0.	2.25E-02	0.	0.	0.	0.	0.	4.44E-03	0.	2.92E-05	3.56E-08	8.33E-07	2.70E-02
95	1.30	0.	1.43E-02	0.	0.	0.	0.	0.	4.44E-03	0.	3.65E-05	2.35E-08	5.70E-07	1.88E-02
96	1.20	0.	1.74E-02	0.	0.	0.	0.	0.	4.44E-03	0.	4.65E-05	3.04E-08	7.36E-07	2.19E-02
97	1.10	0.	1.12E-02	0.	0.	0.	0.	3.00E-05	4.44E-03	0.	6.04E-05	3.76E-08	9.01E-07	1.57E-02
98	1.00	0.	1.13E-02	0.	0.	0.	0.	1.39E-04	4.44E-03	0.	8.07E-05	4.19E-08	9.17E-07	1.53E-02
99	0.90	0.	8.29E-03	0.	0.	0.	0.	2.50E-04	4.44E-03	0.	1.11E-04	4.88E-08	1.07E-06	1.31E-02
100	0.80	0.	3.70E-03	0.	0.	0.	0.	2.40E-03	4.44E-03	0.	1.59E-04	5.58E-08	1.23E-06	1.07E-02
101	0.70	0.	1.07E-03	0.	0.	0.	0.	1.61E-03	4.44E-03	0.	2.38E-04	6.24E-08	1.38E-06	7.35E-03
102	0.60	0.	1.71E-05	0.	0.	0.	0.	6.38E-03	4.44E-03	0.	3.81E-04	4.98E-08	1.09E-06	1.12E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.32E 00	0.	0.	0.	1.61E-03	2.98E-09	3.22E-08	4.26E-07	1.33E 00
2	10.60	0.	0.	1.04E 00	0.	0.	0.	1.61E-03	3.07E-09	3.23E-08	4.27E-07	1.05E 00
3	10.50	0.	0.	8.44E-01	0.	0.	0.	1.61E-03	3.15E-09	3.25E-08	4.28E-07	8.66E-01
4	10.40	0.	0.	6.87E-01	0.	0.	0.	1.61E-03	3.25E-09	3.26E-08	4.29E-07	6.89E-01
5	10.30	0.	0.	5.67E-01	0.	0.	0.	1.62E-03	3.34E-09	3.27E-08	4.30E-07	5.69E-01
6	10.20	0.	0.	4.71E-01	0.	0.	0.	1.62E-03	3.44E-09	3.27E-08	4.31E-07	4.73E-01
7	10.10	0.	0.	3.89E-01	0.	0.	0.	1.62E-03	3.55E-09	3.28E-08	4.32E-07	3.91E-01
8	10.00	0.	0.	3.53E-01	0.	0.	0.	1.62E-03	3.66E-09	3.29E-08	4.33E-07	3.54E-01
9	9.90	0.	0.	3.49E-01	0.	0.	0.	1.63E-03	3.77E-09	3.30E-08	4.33E-07	3.51E-01
10	9.80	0.	0.	2.85E-01	0.	0.	0.	1.63E-03	3.89E-09	3.30E-08	4.34E-07	2.86E-01
11	9.70	0.	0.	2.04E-01	0.	0.	0.	1.63E-03	4.01E-09	3.31E-08	4.35E-07	2.06E-01
12	9.60	0.	0.	2.18E-01	0.	0.	0.	1.63E-03	4.13E-09	3.32E-08	4.36E-07	2.20E-01
13	9.50	0.	4.72E-01	1.52E-01	0.	0.	0.	1.64E-03	4.27E-09	3.33E-08	4.37E-07	5.25E-01
14	9.40	0.	5.19E-01	1.26E-01	0.	0.	0.	1.64E-03	4.40E-09	3.33E-08	4.38E-07	5.47E-01
15	9.30	0.	5.66E-01	1.24E-01	0.	0.	0.	1.65E-03	4.55E-09	3.79E-08	4.39E-07	6.92E-01
16	9.20	0.	6.13E-01	7.89E-02	0.	0.	0.	1.66E-03	4.70E-09	3.75E-08	4.40E-07	6.94E-01
17	9.10	0.	7.52E-01	8.23E-02	0.	0.	0.	1.66E-03	4.86E-09	3.71E-08	4.40E-07	8.36E-01
18	9.00	0.	9.02E-01	6.22E-02	0.	0.	0.	1.67E-03	5.02E-09	3.67E-08	4.41E-07	9.72E-01
19	8.90	0.	1.06E 00	4.98E-02	0.	0.	0.	1.67E-03	5.18E-09	3.63E-08	4.42E-07	1.12E 00
20	8.80	0.	1.11E 00	4.57E-02	0.	0.	0.	1.68E-03	5.37E-09	3.59E-08	4.43E-07	1.15E 00
21	8.70	0.	1.06E 00	3.19E-02	0.	0.	0.	1.69E-03	5.56E-09	3.55E-08	4.44E-07	1.09E 00
22	8.60	0.	1.01E 00	3.21E-02	0.	0.	0.	1.69E-03	5.74E-09	3.51E-08	4.45E-07	1.04E 00
23	8.50	0.	9.72E-01	2.29E-02	0.	0.	0.	1.70E-03	5.96E-09	3.47E-08	4.46E-07	9.97E-01
24	8.40	0.	9.40E-01	2.12E-02	0.	0.	0.	1.71E-03	6.18E-09	3.42E-08	4.47E-07	9.63E-01
25	8.30	0.	8.98E-01	1.47E-02	0.	0.	0.	1.71E-03	6.41E-09	3.38E-08	4.49E-07	9.14E-01
26	8.20	0.	8.69E-01	1.39E-02	0.	0.	0.	1.72E-03	6.64E-09	3.34E-08	4.55E-07	8.76E-01
27	8.10	0.	8.26E-01	9.94E-03	0.	0.	0.	1.73E-03	6.89E-09	3.27E-08	4.62E-07	8.37E-01
28	8.00	0.	7.91E-01	9.21E-03	0.	0.	0.	1.74E-03	7.16E-09	3.21E-08	4.68E-07	8.02E-01
29	7.90	0.	7.51E-01	6.66E-03	0.	0.	0.	1.75E-03	7.45E-09	3.15E-08	4.74E-07	7.59E-01
30	7.80	0.	7.11E-01	6.30E-03	0.	0.	0.	1.76E-03	7.72E-09	3.09E-08	4.81E-07	7.19E-01
31	7.70	0.	6.70E-01	4.68E-03	0.	0.	0.	1.77E-03	8.03E-09	3.04E-08	4.87E-07	6.78E-01
32	7.60	0.	6.29E-01	3.94E-03	0.	1.37E-05	0.	1.78E-03	8.35E-09	2.98E-08	4.93E-07	6.35E-01
33	7.50	0.	5.88E-01	3.12E-03	0.	1.37E-04	0.	1.79E-03	8.69E-09	2.93E-08	4.99E-07	5.93E-01
34	7.40	0.	5.47E-01	2.47E-03	0.	3.85E-04	0.	1.80E-03	9.05E-09	2.87E-08	5.06E-07	5.51E-01
35	7.30	0.	5.06E-01	2.04E-03	0.	2.46E-03	0.	1.81E-03	9.43E-09	2.82E-08	5.12E-07	5.12E-01
36	7.20	0.	4.66E-01	1.59E-03	0.	8.48E-03	0.	1.82E-03	9.83E-09	2.76E-08	5.18E-07	4.80E-01
37	7.10	0.	4.31E-01	1.34E-03	0.	1.29E-02	0.	1.83E-03	1.02E-08	2.71E-08	5.25E-07	4.47E-01
38	7.00	9.67E-04	0.	1.06E-03	0.	6.10E-02	0.	1.85E-03	1.07E-08	2.65E-08	5.31E-07	6.48E-02
39	6.90	1.74E-03	0.	8.47E-04	0.	4.41E-02	0.	1.86E-03	1.12E-08	2.59E-08	5.37E-07	4.85E-02
40	6.80	1.37E-03	0.	7.00E-04	0.	9.98E-02	0.	1.88E-03	1.17E-08	2.54E-08	5.43E-07	1.04E-01
41	6.70	9.02E-04	0.	5.27E-04	0.	1.81E-01	0.	1.89E-03	1.22E-08	2.48E-08	5.50E-07	1.85E-01
42	6.60	5.05E-04	0.	4.05E-04	0.	7.39E-02	0.	1.91E-03	1.28E-08	2.44E-08	5.56E-07	7.67E-02
43	6.50	2.63E-04	0.	2.67E-04	0.	1.54E-01	0.	1.92E-03	1.34E-08	2.40E-08	5.63E-07	1.56E-01
44	6.40	3.80E-04	0.	1.41E-04	2.02E-03	2.60E-01	0.	1.94E-03	1.40E-08	2.37E-08	5.69E-07	2.65E-01
45	6.30	7.64E-04	0.	6.46E-05	7.92E-03	9.18E-02	0.	1.95E-03	1.47E-08	2.33E-08	5.78E-07	1.03E-01
46	6.20	2.10E-03	0.	2.70E-05	9.63E-03	1.47E-01	0.	1.97E-03	1.54E-08	2.30E-08	5.90E-07	1.61E-01
47	6.10	7.65E-03	0.	9.86E-06	2.46E-02	3.26E-01	0.	1.98E-03	1.62E-08	2.31E-08	6.03E-07	3.60E-01
48	6.00	1.82E-02	0.	2.12E-06	1.78E-02	7.89E-02	0.	1.99E-03	1.70E-08	2.34E-08	6.15E-07	1.17E-01
49	5.90	2.67E-02	0.	1.48E-07	2.43E-02	9.72E-02	0.	1.99E-03	1.79E-08	2.36E-08	6.28E-07	1.51E-01
50	5.80	3.67E-02	0.	3.52E-09	3.11E-02	9.14E-02	0.	1.97E-03	1.88E-08	2.38E-08	6.40E-07	1.61E-01
51	5.70	3.85E-02	0.	0.	3.04E-02	7.64E-02	0.	1.85E-03	1.98E-08	2.39E-08	6.53E-07	1.47E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.49E-02	0.	0.	0.	1.94E-02	1.69E-01	0.	0.	1.72E-03	2.09E-08	7.40E-09	6.66E-07	2.28E-01
53	5.50	4.36E-02	0.	0.	0.	2.49E-02	1.70E-01	0.	0.	1.73E-03	2.21E-08	7.43E-09	6.76E-07	2.49E-01
54	5.40	4.25E-02	0.	0.	0.	1.98E-02	8.10E-02	0.	0.	1.73E-03	2.33E-08	7.45E-09	6.91E-07	1.45E-01
55	5.30	3.84E-02	0.	0.	0.	1.98E-02	1.57E-01	0.	0.	1.75E-03	2.47E-08	7.48E-09	7.05E-07	2.17E-01
56	5.20	2.41E-02	0.	0.	0.	1.96E-02	6.70E-02	0.	0.	1.76E-03	2.62E-08	7.53E-09	7.24E-07	1.12E-01
57	5.10	2.14E-02	0.	0.	0.	1.80E-02	9.80E-02	0.	3.03E-05	1.77E-03	2.77E-08	7.70E-09	7.43E-07	1.37E-01
58	5.00	1.49E-02	0.	0.	0.	1.48E-02	8.02E-02	0.	3.03E-05	1.79E-03	2.94E-08	7.89E-09	7.61E-07	1.12E-01
59	4.90	1.24E-02	0.	0.	0.	1.50E-02	6.60E-02	0.	3.03E-05	1.80E-03	3.13E-08	8.08E-09	7.80E-07	9.51E-02
60	4.80	1.25E-02	0.	0.	0.	1.54E-02	6.21E-02	0.	3.03E-05	1.82E-03	3.33E-08	8.25E-09	7.99E-07	9.18E-02
61	4.70	1.27E-02	0.	0.	0.	1.37E-02	4.31E-02	0.	3.03E-05	1.83E-03	3.55E-08	8.41E-09	8.18E-07	7.14E-02
62	4.60	1.40E-02	0.	0.	0.	1.31E-02	4.35E-02	0.	3.03E-05	1.85E-03	3.78E-08	8.61E-09	8.38E-07	7.25E-02
63	4.50	1.29E-02	0.	1.01E-05	0.	1.05E-02	2.60E-02	0.	3.03E-05	1.86E-03	4.04E-08	8.82E-09	8.57E-07	5.13E-02
64	4.40	1.20E-02	0.	4.86E-05	0.	9.73E-03	2.19E-02	0.	3.03E-05	1.88E-03	4.32E-08	9.03E-09	8.77E-07	4.55E-02
65	4.30	9.92E-03	0.	7.74E-05	0.	8.15E-03	1.01E-02	0.	3.03E-05	1.89E-03	4.63E-08	9.25E-09	8.97E-07	3.02E-02
66	4.20	8.38E-03	0.	4.54E-04	0.	8.07E-03	9.37E-03	0.	3.03E-05	1.91E-03	4.97E-08	9.46E-09	9.13E-07	2.82E-02
67	4.10	7.10E-03	0.	8.47E-05	0.	6.83E-03	2.27E-03	0.	3.03E-05	1.91E-03	5.35E-08	9.68E-09	3.59E-08	1.82E-02
68	4.00	5.82E-03	0.	6.11E-04	0.	5.98E-03	1.64E-03	0.	3.03E-05	1.92E-03	5.76E-08	5.19E-09	3.70E-08	1.69E-02
69	3.90	4.27E-03	0.	2.91E-04	1.86E-07	4.58E-03	8.37E-04	0.	3.03E-05	1.91E-03	6.21E-08	4.22E-09	3.81E-08	1.19E-02
70	3.80	4.40E-03	0.	2.99E-04	2.75E-06	4.74E-03	0.	0.	3.03E-05	1.91E-03	6.72E-08	4.27E-09	3.93E-08	1.14E-02
71	3.70	3.23E-03	0.	5.72E-04	4.22E-07	3.14E-03	0.	0.	3.03E-05	1.88E-03	7.28E-08	2.56E-09	4.58E-08	8.64E-03
72	3.60	2.62E-03	0.	1.78E-04	2.31E-06	3.47E-03	0.	0.	3.03E-05	1.76E-03	7.90E-08	2.88E-09	5.33E-08	8.06E-03
73	3.50	2.16E-03	0.	3.77E-04	1.34E-05	2.12E-03	0.	0.	3.03E-05	1.61E-03	8.60E-08	3.31E-09	6.11E-08	6.31E-03
74	3.40	1.68E-03	0.	1.21E-04	3.50E-07	2.33E-03	0.	0.	3.03E-05	9.28E-04	9.38E-08	3.78E-09	6.92E-08	5.10E-03
75	3.30	1.24E-03	0.	1.60E-04	3.52E-06	1.49E-03	0.	0.	3.03E-05	9.29E-04	1.03E-07	4.24E-09	7.73E-08	3.85E-03
76	3.20	9.22E-04	0.	6.52E-05	1.82E-05	1.47E-03	0.	0.	3.03E-05	9.31E-04	1.13E-07	4.71E-09	8.55E-08	3.44E-03
77	3.10	7.71E-04	0.	5.52E-05	5.59E-07	1.17E-03	0.	0.	3.03E-05	9.33E-04	1.24E-07	5.18E-09	9.38E-08	2.96E-03
78	3.00	5.93E-04	0.	2.47E-05	3.69E-06	9.45E-04	0.	0.	3.03E-05	9.35E-04	1.37E-07	5.65E-09	1.02E-07	2.53E-03
79	2.90	4.22E-04	0.	1.47E-05	3.50E-05	5.56E-04	0.	0.	3.03E-05	9.37E-04	1.51E-07	6.13E-09	1.10E-07	1.96E-03
80	2.80	3.92E-04	0.	6.19E-06	5.26E-07	2.80E-04	0.	0.	3.03E-05	9.38E-04	1.68E-07	6.62E-09	1.19E-07	1.65E-03
81	2.70	1.99E-04	0.	2.86E-06	1.82E-06	1.09E-04	0.	0.	3.03E-05	9.38E-04	1.88E-07	7.12E-09	1.27E-07	1.28E-03
82	2.60	6.91E-05	0.	1.42E-06	1.98E-07	3.57E-05	0.	0.	3.03E-05	9.38E-04	2.10E-07	7.65E-09	2.07E-08	1.07E-03
83	2.50	4.28E-06	0.	2.26E-07	8.44E-08	7.02E-06	0.	0.	3.03E-05	9.38E-04	2.37E-07	2.27E-09	2.37E-08	9.80E-04
84	2.40	0.	1.96E-05	0.	1.45E-07	6.44E-07	0.	0.	3.03E-05	9.38E-04	2.69E-07	2.86E-09	2.92E-08	9.89E-04
85	2.30	0.	1.47E-04	0.	0.	0.	0.	0.	3.03E-05	9.31E-04	3.04E-07	3.47E-09	3.49E-08	1.11E-03
86	2.20	0.	2.41E-04	0.	0.	0.	0.	0.	3.03E-05	9.27E-04	3.48E-07	4.10E-09	4.18E-08	1.20E-03
87	2.10	0.	5.23E-04	0.	0.	0.	0.	0.	3.03E-05	9.23E-04	4.00E-07	4.76E-09	4.88E-08	1.48E-03
88	2.00	0.	6.41E-04	0.	0.	0.	0.	0.	3.03E-05	8.93E-04	4.64E-07	5.43E-09	5.58E-08	1.57E-03
89	1.90	0.	2.12E-03	0.	0.	0.	0.	0.	3.03E-05	8.59E-04	5.41E-07	6.11E-09	6.28E-08	3.01E-03
90	1.80	0.	1.89E-03	0.	0.	0.	0.	0.	3.03E-05	8.22E-04	6.37E-07	7.04E-09	7.30E-08	2.74E-03
91	1.70	0.	2.16E-03	0.	0.	0.	0.	0.	3.03E-05	7.74E-04	7.57E-07	8.15E-09	8.53E-08	2.97E-03
92	1.60	0.	1.51E-03	0.	0.	0.	0.	0.	3.03E-05	6.55E-04	9.09E-07	9.26E-09	8.80E-08	2.20E-03
93	1.50	0.	1.85E-03	0.	0.	0.	0.	0.	3.03E-05	2.98E-04	1.11E-06	9.66E-09	1.03E-07	2.18E-03
94	1.40	0.	2.30E-03	0.	0.	0.	0.	0.	3.03E-05	0.	1.36E-06	5.35E-09	1.21E-07	2.33E-03
95	1.30	0.	1.44E-03	0.	0.	0.	0.	0.	3.03E-05	0.	1.70E-06	7.50E-09	8.34E-08	1.49E-03
96	1.20	0.	1.77E-03	0.	0.	0.	0.	0.	3.03E-05	0.	2.17E-06	9.72E-09	1.08E-07	1.81E-03
97	1.10	0.	1.14E-03	0.	0.	0.	0.	1.40E-06	3.03E-05	0.	2.82E-06	1.20E-08	1.11E-07	1.18E-03
98	1.00	0.	1.15E-03	0.	0.	0.	0.	6.51E-06	3.03E-05	0.	3.77E-06	1.34E-08	1.34E-07	1.19E-03
99	0.90	0.	8.45E-04	0.	0.	0.	0.	1.17E-05	3.03E-05	0.	5.19E-06	1.56E-08	1.57E-07	8.62E-04
100	0.80	0.	3.77E-04	0.	0.	0.	0.	1.12E-04	3.03E-05	0.	7.42E-06	1.77E-08	1.79E-07	5.27E-04
101	0.70	0.	1.09E-04	0.	0.	0.	0.	7.49E-05	3.03E-05	0.	1.11E-05	1.42E-08	1.32E-07	2.25E-04
102	0.60	0.	1.79E-06	0.	0.	0.	0.	2.98E-04	3.03E-05	0.	1.78E-05	1.59E-08	1.49E-07	3.48E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.27E-01	0.	0.	0.	3.49E-05	1.85E-10	9.97E-09	4.82E-08	1.27E-01
2	10.60	0.	0.	1.08E-01	0.	0.	0.	3.49E-05	1.88E-10	1.01E-08	4.83E-08	1.08E-01
3	10.50	0.	0.	9.27E-02	0.	0.	0.	3.50E-05	1.91E-10	1.01E-08	4.84E-08	9.27E-02
4	10.40	0.	0.	7.76E-02	0.	0.	0.	3.50E-05	1.95E-10	1.01E-08	4.85E-08	7.76E-02
5	10.30	0.	0.	5.84E-02	0.	0.	0.	3.51E-05	1.18E-10	1.01E-08	4.86E-08	5.84E-02
6	10.20	0.	0.	5.49E-02	0.	0.	0.	3.51E-05	1.22E-10	1.02E-08	4.87E-08	5.50E-02
7	10.10	0.	0.	4.71E-02	0.	0.	0.	3.52E-05	1.25E-10	1.02E-08	4.88E-08	4.71E-02
8	10.00	0.	0.	3.39E-02	0.	0.	0.	3.52E-05	1.29E-10	1.02E-08	4.89E-08	3.39E-02
9	9.90	0.	0.	3.36E-02	0.	0.	0.	3.53E-05	1.33E-10	1.02E-08	4.90E-08	3.36E-02
10	9.80	0.	0.	2.74E-02	0.	0.	0.	3.54E-05	1.37E-10	1.02E-08	4.91E-08	2.74E-02
11	9.70	0.	0.	1.96E-02	0.	0.	0.	3.54E-05	1.42E-10	1.03E-08	4.92E-08	1.97E-02
12	9.60	0.	0.	2.10E-02	0.	0.	0.	3.55E-05	1.46E-10	1.03E-08	4.93E-08	2.10E-02
13	9.50	0.	6.02E-03	1.46E-02	0.	0.	0.	3.55E-05	1.51E-10	1.03E-08	4.94E-08	2.07E-02
14	9.40	0.	6.63E-03	1.21E-02	0.	0.	0.	3.57E-05	1.56E-10	1.03E-08	4.95E-08	1.88E-02
15	9.30	0.	7.23E-03	1.19E-02	0.	0.	0.	3.58E-05	1.61E-10	2.72E-09	4.96E-08	1.92E-02
16	9.20	0.	7.83E-03	7.59E-03	0.	0.	0.	3.59E-05	1.66E-10	2.71E-09	4.97E-08	1.55E-02
17	9.10	0.	9.60E-03	7.92E-03	0.	0.	0.	3.61E-05	1.72E-10	2.70E-09	4.98E-08	1.76E-02
18	9.00	0.	1.16E-02	5.98E-03	0.	0.	0.	3.62E-05	1.77E-10	2.69E-09	4.99E-08	1.76E-02
19	8.90	0.	1.36E-02	4.79E-03	0.	0.	0.	3.63E-05	1.84E-10	2.67E-09	5.00E-08	1.84E-02
20	8.80	0.	1.41E-02	4.48E-03	0.	0.	0.	3.64E-05	1.90E-10	2.66E-09	5.01E-08	1.86E-02
21	8.70	0.	1.35E-02	3.07E-03	0.	0.	0.	3.66E-05	1.97E-10	2.65E-09	5.02E-08	1.66E-02
22	8.60	0.	1.29E-02	3.08E-03	0.	0.	0.	3.67E-05	2.04E-10	2.64E-09	5.03E-08	1.60E-02
23	8.50	0.	1.24E-02	2.17E-03	0.	0.	0.	3.68E-05	2.11E-10	2.63E-09	5.04E-08	1.46E-02
24	8.40	0.	1.20E-02	2.04E-03	0.	0.	0.	3.70E-05	2.18E-10	2.61E-09	5.05E-08	1.41E-02
25	8.30	0.	1.15E-02	1.41E-03	0.	0.	0.	3.72E-05	2.26E-10	2.60E-09	5.07E-08	1.29E-02
26	8.20	0.	1.10E-02	1.34E-03	0.	0.	0.	3.74E-05	2.35E-10	2.59E-09	5.14E-08	1.24E-02
27	8.10	0.	1.05E-02	9.55E-04	0.	0.	0.	3.76E-05	2.44E-10	2.57E-09	5.22E-08	1.15E-02
28	8.00	0.	1.01E-02	8.86E-04	0.	0.	0.	3.78E-05	2.53E-10	2.55E-09	5.29E-08	1.10E-02
29	7.90	0.	9.59E-03	6.39E-04	0.	0.	0.	3.80E-05	2.63E-10	2.53E-09	5.36E-08	1.03E-02
30	7.80	0.	9.07E-03	6.06E-04	0.	0.	0.	3.82E-05	2.73E-10	2.51E-09	5.43E-08	9.72E-03
31	7.70	0.	8.55E-03	4.58E-04	0.	0.	0.	3.84E-05	2.84E-10	2.49E-09	5.50E-08	9.04E-03
32	7.60	0.	8.03E-03	3.79E-04	0.	4.81E-07	0.	3.86E-05	2.95E-10	2.47E-09	5.57E-08	8.45E-03
33	7.50	0.	7.51E-03	3.03E-04	0.	4.79E-06	0.	3.88E-05	3.07E-10	2.46E-09	5.64E-08	7.85E-03
34	7.40	0.	6.98E-03	2.38E-04	0.	1.35E-05	0.	3.90E-05	3.20E-10	2.44E-09	5.71E-08	7.27E-03
35	7.30	0.	6.46E-03	1.96E-04	0.	8.64E-05	0.	3.92E-05	3.33E-10	2.42E-09	5.78E-08	6.78E-03
36	7.20	0.	5.98E-03	1.53E-04	0.	2.97E-04	0.	3.94E-05	3.47E-10	2.41E-09	5.85E-08	6.47E-03
37	7.10	0.	5.51E-03	1.29E-04	0.	4.53E-04	0.	3.97E-05	3.62E-10	2.39E-09	5.93E-08	6.13E-03
38	7.00	1.23E-05	0.	1.02E-04	0.	2.14E-03	0.	4.01E-05	3.78E-10	2.37E-09	6.00E-08	2.29E-03
39	6.90	2.22E-05	0.	8.14E-05	0.	1.54E-03	0.	4.04E-05	3.95E-10	2.35E-09	6.07E-08	1.69E-03
40	6.80	1.75E-05	0.	6.73E-05	0.	3.50E-03	0.	4.07E-05	4.13E-10	2.34E-09	6.14E-08	3.62E-03
41	6.70	1.15E-05	0.	5.07E-05	0.	6.38E-03	0.	4.10E-05	4.32E-10	2.32E-09	6.21E-08	6.46E-03
42	6.60	6.44E-06	0.	3.90E-05	0.	2.59E-03	0.	4.14E-05	4.52E-10	2.31E-09	6.29E-08	2.68E-03
43	6.50	3.35E-06	0.	2.57E-05	0.	5.39E-03	0.	4.17E-05	4.73E-10	2.30E-09	6.36E-08	5.46E-03
44	6.40	4.85E-06	0.	1.35E-05	7.08E-05	9.12E-03	0.	4.20E-05	4.95E-10	2.28E-09	6.43E-08	9.25E-03
45	6.30	9.75E-06	0.	6.21E-06	2.77E-04	3.22E-03	0.	4.23E-05	5.19E-10	2.27E-09	6.53E-08	3.55E-03
46	6.20	2.69E-05	0.	2.60E-06	3.76E-04	5.16E-33	0.	4.27E-05	5.45E-10	2.26E-09	6.67E-08	5.58E-03
47	6.10	9.77E-05	0.	9.48E-07	8.63E-04	1.14E-02	0.	4.30E-05	5.72E-10	2.27E-09	6.81E-08	1.24E-02
48	6.00	2.32E-04	0.	2.04E-07	6.25E-04	2.77E-03	0.	4.33E-05	6.01E-10	2.27E-09	6.95E-08	3.66E-03
49	5.90	3.42E-04	0.	1.43E-08	8.52E-04	3.41E-03	0.	4.33E-05	6.33E-10	2.28E-09	7.09E-08	4.64E-03
50	5.80	4.68E-04	0.	3.39E-10	1.09E-03	3.20E-03	0.	4.27E-05	6.66E-10	2.29E-09	7.24E-08	4.81E-03
51	5.70	4.38E-04	0.	0.	1.07E-03	2.68E-03	0.	4.01E-05	7.02E-10	2.29E-09	7.38E-08	4.27E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.73E-04	0.	0.	0.	6.79E-04	5.66E-03	0.	0.	3.73E-05	7.40E-10	2.70E-09	7.52E-08	6.95E-03
53	5.50	5.57E-04	0.	0.	0.	8.71E-04	6.24E-03	0.	0.	3.75E-05	7.61E-10	2.30E-09	7.66E-08	7.70E-03
54	5.40	5.43E-04	0.	0.	0.	6.72E-04	2.84E-03	0.	0.	3.76E-05	8.26E-10	2.31E-09	7.91E-08	4.09E-03
55	5.30	4.90E-04	0.	0.	0.	6.94E-04	5.50E-03	0.	0.	3.79E-05	8.73E-10	2.32E-09	7.97E-08	6.73E-03
56	5.20	3.07E-04	0.	0.	0.	6.86E-04	2.35E-03	0.	0.	3.81E-05	9.25E-10	2.33E-09	8.18E-08	3.38E-03
57	5.10	2.73E-04	0.	0.	0.	6.30E-04	3.36E-03	0.	1.20E-07	3.85E-05	9.80E-10	2.39E-09	8.39E-08	4.30E-03
58	5.00	1.91E-04	0.	0.	0.	5.13E-04	2.81E-03	0.	1.20E-07	3.88E-05	1.04E-09	2.45E-09	8.60E-08	3.56E-03
59	4.90	1.58E-04	0.	0.	0.	5.25E-04	2.31E-03	0.	1.20E-07	3.91E-05	1.11E-09	2.51E-09	8.81E-08	3.03E-03
60	4.80	1.60E-04	0.	0.	0.	5.40E-04	2.18E-03	0.	1.20E-07	3.94E-05	1.18E-09	2.56E-09	9.02E-08	2.92E-03
61	4.70	1.62E-04	0.	0.	0.	4.81E-04	1.51E-03	0.	1.20E-07	3.97E-05	1.25E-09	2.61E-09	9.24E-08	2.19E-03
62	4.60	1.79E-04	0.	0.	0.	4.60E-04	1.52E-03	0.	1.20E-07	4.01E-05	1.34E-09	2.67E-09	9.46E-08	2.20E-03
63	4.50	1.65E-04	0.	9.68E-07	0.	3.66E-04	9.10E-04	0.	1.20E-07	4.04E-05	1.43E-09	2.73E-09	9.69E-08	1.40E-03
64	4.40	1.53E-04	0.	4.68E-06	0.	3.42E-04	7.66E-04	0.	1.20E-07	4.07E-05	1.53E-09	2.80E-09	9.91E-08	1.31E-03
65	4.30	1.27E-04	0.	7.44E-06	0.	2.86E-04	3.53E-04	0.	1.20E-07	4.10E-05	1.64E-09	2.87E-09	1.01E-07	8.15E-04
66	4.20	1.07E-04	0.	4.37E-05	0.	2.83E-04	3.20E-04	0.	1.20E-07	4.14E-05	1.76E-09	2.93E-09	3.93E-09	8.04E-04
67	4.10	9.07E-05	0.	8.15E-06	0.	2.39E-04	7.96E-05	0.	1.20E-07	4.15E-05	1.89E-09	1.59E-09	4.06E-09	4.59E-04
68	4.00	7.44E-05	0.	5.88E-05	0.	2.09E-04	5.73E-05	0.	1.20E-07	4.17E-05	2.04E-09	1.61E-09	4.18E-09	4.42E-04
69	3.90	5.46E-05	0.	2.80E-05	9.31E-08	1.61E-04	2.93E-05	0.	1.20E-07	4.15E-05	2.20E-09	1.31E-09	4.31E-09	3.14E-04
70	3.80	5.63E-05	0.	2.87E-05	1.37E-06	1.66E-04	0.	0.	1.20E-07	4.14E-05	2.37E-09	1.32E-09	4.44E-09	2.94E-04
71	3.70	4.12E-05	0.	5.50E-05	2.11E-07	1.10E-04	0.	0.	1.20E-07	4.07E-05	2.57E-09	7.95E-10	5.17E-09	2.47E-04
72	3.60	3.34E-05	0.	1.71E-05	1.15E-06	1.22E-04	0.	0.	1.20E-07	3.81E-05	2.79E-09	8.92E-10	6.02E-09	2.12E-04
73	3.50	2.76E-05	0.	3.62E-05	6.69E-06	7.43E-05	0.	0.	1.20E-07	3.49E-05	3.04E-09	1.03E-09	6.93E-09	1.80E-04
74	3.40	2.15E-05	0.	1.16E-05	1.75E-07	8.18E-05	0.	0.	1.20E-07	2.01E-05	3.32E-09	1.17E-09	7.81E-09	1.35E-04
75	3.30	1.58E-05	0.	1.54E-05	1.76E-06	5.23E-05	0.	0.	1.20E-07	2.02E-05	3.63E-09	1.32E-09	8.73E-09	1.06E-04
76	3.20	1.18E-05	0.	6.27E-06	8.12E-06	5.15E-05	0.	0.	1.20E-07	2.02E-05	3.98E-09	1.46E-09	9.66E-09	9.81E-05
77	3.10	9.84E-06	0.	5.31E-06	2.80E-07	4.09E-05	0.	0.	1.20E-07	2.02E-05	4.38E-09	1.61E-09	1.06E-08	7.67E-05
78	3.00	7.57E-06	0.	2.38E-06	1.85E-06	3.31E-05	0.	0.	1.20E-07	2.03E-05	4.84E-09	1.75E-09	1.15E-08	6.54E-05
79	2.90	5.39E-06	0.	1.41E-06	1.75E-06	1.95E-05	0.	0.	1.20E-07	2.03E-05	5.36E-09	1.90E-09	1.25E-08	4.85E-05
80	2.80	5.01E-06	0.	5.95E-07	2.63E-07	9.82E-06	0.	0.	1.20E-07	2.04E-05	5.95E-09	2.05E-09	1.34E-08	3.62E-05
81	2.70	2.54E-06	0.	2.79E-07	9.12E-07	3.83E-06	0.	0.	1.20E-07	2.04E-05	6.64E-09	2.21E-09	1.43E-08	2.81E-05
82	2.60	8.62E-07	0.	1.37E-07	9.91E-08	1.25E-06	0.	0.	1.20E-07	2.04E-05	7.44E-09	2.37E-09	2.34E-09	2.29E-05
83	2.50	5.44E-08	0.	2.17E-08	4.22E-08	2.46E-07	0.	0.	1.20E-07	2.04E-05	8.37E-09	7.04E-10	2.67E-09	2.09E-05
84	2.40	0.	1.89E-06	0.	7.24E-08	2.26E-08	0.	0.	1.20E-07	2.04E-05	9.47E-09	8.87E-10	3.30E-09	2.25E-05
85	2.30	0.	1.41E-05	0.	0.	0.	0.	0.	1.20E-07	2.02E-05	1.08E-08	1.08E-09	3.94E-09	3.44E-05
86	2.20	0.	2.31E-05	0.	0.	0.	0.	0.	1.20E-07	2.01E-05	1.23E-08	1.27E-09	4.73E-09	4.34E-05
87	2.10	0.	5.03E-05	0.	0.	0.	0.	0.	1.20E-07	2.00E-05	1.42E-08	1.48E-09	5.52E-09	7.04E-05
88	2.00	0.	6.16E-05	0.	0.	0.	0.	0.	1.20E-07	1.94E-05	1.64E-08	1.68E-09	6.31E-09	8.12E-05
89	1.90	0.	2.04E-04	0.	0.	0.	0.	0.	1.20E-07	1.86E-05	1.91E-08	1.82E-09	7.10E-09	2.23E-04
90	1.80	0.	1.02E-04	0.	0.	0.	0.	0.	1.20E-07	1.78E-05	2.25E-08	2.18E-09	8.25E-09	2.00E-04
91	1.70	0.	2.09E-04	0.	0.	0.	0.	0.	1.20E-07	1.68E-05	2.66E-08	2.53E-09	9.63E-09	2.25E-04
92	1.60	0.	1.45E-04	0.	0.	0.	0.	0.	1.20E-07	1.42E-05	3.22E-08	2.87E-09	9.94E-09	1.60E-04
93	1.50	0.	1.78E-04	0.	0.	0.	0.	0.	1.20E-07	8.46E-06	3.91E-08	2.99E-09	1.17E-08	1.85E-04
94	1.40	0.	2.21E-04	0.	0.	0.	0.	0.	1.20E-07	0.	4.82E-08	1.66E-09	6.96E-09	2.21E-04
95	1.30	0.	1.40E-04	0.	0.	0.	0.	0.	1.20E-07	0.	6.03E-08	2.31E-09	9.42E-09	1.48E-04
96	1.20	0.	1.70E-04	0.	0.	0.	0.	0.	1.20E-07	0.	7.67E-08	5.02E-0010.00E-09		1.71E-04
97	1.10	0.	1.10E-04	0.	0.	0.	0.	4.90E-08	1.20E-07	0.	9.98E-08	3.46E-09	1.26E-08	1.18E-04
98	1.00	0.	1.11E-04	0.	0.	0.	0.	2.28E-07	1.20E-07	0.	1.33E-07	4.15E-09	1.51E-08	1.11E-04
99	0.90	0.	8.13E-05	0.	0.	0.	0.	4.09E-07	1.20E-07	0.	1.83E-07	4.84E-09	1.77E-08	8.20E-05
100	0.80	0.	3.63E-05	0.	0.	0.	0.	3.92E-06	1.20E-07	0.	2.62E-07	5.50E-09	2.02E-08	4.06E-05
101	0.70	0.	1.09E-05	0.	0.	0.	0.	2.62E-06	1.20E-07	0.	3.93E-07	4.40E-09	1.49E-08	1.36E-05
102	0.60	0.	1.68E-07	0.	0.	0.	0.	1.04E-05	1.20E-07	0.	6.28E-07	4.94E-09	1.68E-08	1.14E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.06E-02	0.	0.	0.	6.44E-07	3.33E-12	2.87E-09	4.99E-09	1.86E-02
2	10.60	0.	0.	8.34E-03	0.	0.	0.	6.44E-07	3.42E-12	2.89E-09	5.00E-09	8.34E-03
3	10.50	0.	0.	7.70E-03	0.	0.	0.	6.45E-07	3.52E-12	2.90E-09	5.01E-09	7.70E-03
4	10.40	0.	0.	6.45E-03	0.	0.	0.	6.46E-07	3.63E-12	2.91E-09	5.02E-09	6.45E-03
5	10.30	0.	0.	4.85E-03	0.	0.	0.	6.47E-07	3.73E-12	2.92E-09	5.03E-09	4.85E-03
6	10.20	0.	0.	4.56E-03	0.	0.	0.	6.48E-07	3.85E-12	2.93E-09	5.04E-09	4.56E-03
7	10.10	0.	0.	3.91E-03	0.	0.	0.	6.49E-07	3.96E-12	2.93E-09	5.05E-09	3.91E-03
8	10.00	0.	0.	2.82E-03	0.	0.	0.	6.49E-07	4.08E-12	2.94E-09	5.06E-09	2.82E-03
9	9.90	0.	0.	2.79E-03	0.	0.	0.	6.51E-07	4.21E-12	2.95E-09	5.07E-09	2.79E-03
10	9.80	0.	0.	2.27E-03	0.	0.	0.	6.52E-07	4.34E-12	2.95E-09	5.08E-09	2.27E-03
11	9.70	0.	0.	1.63E-03	0.	0.	0.	6.53E-07	4.48E-12	2.96E-09	5.09E-09	1.63E-03
12	9.60	0.	0.	1.74E-03	0.	0.	0.	6.54E-07	4.62E-12	2.97E-09	5.10E-09	1.74E-03
13	9.50	0.	6.47E-05	1.21E-03	0.	0.	0.	6.55E-07	4.77E-12	2.97E-09	5.11E-09	1.28E-03
14	9.40	0.	7.17E-05	1.01E-03	0.	0.	0.	6.56E-07	4.92E-12	7.89E-10	5.12E-09	1.08E-03
15	9.30	0.	7.76E-05	9.88E-04	0.	0.	0.	6.68E-07	5.08E-12	7.85E-10	5.13E-09	1.07E-03
16	9.20	0.	8.41E-05	6.31E-04	0.	0.	0.	6.63E-07	5.25E-12	7.82E-10	5.14E-09	7.15E-04
17	9.10	0.	1.03E-04	6.58E-04	0.	0.	0.	6.65E-07	5.42E-12	7.78E-10	5.15E-09	7.61E-04
18	9.00	0.	1.25E-04	4.97E-04	0.	0.	0.	6.67E-07	5.61E-12	7.74E-10	5.16E-09	6.22E-04
19	8.90	0.	1.46E-04	3.98E-04	0.	0.	0.	6.70E-07	5.80E-12	7.71E-10	5.17E-09	5.45E-04
20	8.80	0.	1.52E-04	3.65E-04	0.	0.	0.	6.72E-07	6.00E-12	7.67E-10	5.18E-09	5.18E-04
21	8.70	0.	1.45E-04	2.55E-04	0.	0.	0.	6.75E-07	6.21E-12	7.64E-10	5.19E-09	4.01E-04
22	8.60	0.	1.39E-04	2.56E-04	0.	0.	0.	6.77E-07	6.43E-12	7.60E-10	5.20E-09	3.95E-04
23	8.50	0.	1.33E-04	1.80E-04	0.	0.	0.	6.79E-07	6.66E-12	7.56E-10	5.21E-09	3.14E-04
24	8.40	0.	1.29E-04	1.69E-04	0.	0.	0.	6.83E-07	6.90E-12	7.53E-10	5.22E-09	2.99E-04
25	8.30	0.	1.23E-04	1.17E-04	0.	0.	0.	6.86E-07	7.15E-12	7.49E-10	5.25E-09	2.41E-04
26	8.20	0.	1.18E-04	1.11E-04	0.	0.	0.	6.90E-07	7.42E-12	7.45E-10	5.33E-09	2.38E-04
27	8.10	0.	1.13E-04	7.94E-05	0.	0.	0.	6.94E-07	7.70E-12	7.39E-10	5.40E-09	1.93E-04
28	8.00	0.	1.08E-04	7.36E-05	0.	0.	0.	6.97E-07	7.99E-12	7.34E-10	5.47E-09	1.83E-04
29	7.90	0.	1.03E-04	5.31E-05	0.	0.	0.	7.01E-07	8.30E-12	7.28E-10	5.55E-09	1.57E-04
30	7.80	0.	9.74E-05	5.03E-05	0.	0.	0.	7.04E-07	8.62E-12	7.23E-10	5.62E-09	1.48E-04
31	7.70	0.	9.19E-05	3.74E-05	0.	0.	0.	7.08E-07	8.97E-12	7.18E-10	5.70E-09	1.30E-04
32	7.60	0.	8.62E-05	3.15E-05	0.	1.44E-08	0.	7.11E-07	9.33E-12	7.13E-10	5.77E-09	1.18E-04
33	7.50	0.	8.06E-05	2.58E-05	0.	1.43E-07	0.	7.15E-07	9.71E-12	7.08E-10	5.84E-09	1.06E-04
34	7.40	0.	7.50E-05	1.97E-05	0.	4.03E-07	0.	7.19E-07	1.01E-11	7.03E-10	5.92E-09	9.59E-05
35	7.30	0.	6.94E-05	1.63E-05	0.	2.58E-06	0.	7.23E-07	1.05E-11	6.98E-10	5.99E-09	8.90E-05
36	7.20	0.	6.42E-05	1.27E-05	0.	8.87E-06	0.	7.27E-07	1.10E-11	6.93E-10	6.06E-09	8.65E-05
37	7.10	0.	5.91E-05	1.07E-05	0.	1.35E-05	0.	7.32E-07	1.14E-11	6.88E-10	6.14E-09	8.41E-05
38	7.00	1.32E-07	0.	8.48E-06	0.	6.38E-05	0.	7.39E-07	1.19E-11	6.84E-10	6.21E-09	7.31E-05
39	6.90	2.38E-07	0.	6.77E-06	0.	4.61E-05	0.	7.45E-07	1.25E-11	6.79E-10	6.28E-09	5.38E-05
40	6.80	1.87E-07	0.	5.59E-06	0.	1.04E-04	0.	7.51E-07	1.30E-11	6.74E-10	6.36E-09	1.11E-04
41	6.70	1.24E-07	0.	4.21E-06	0.	1.90E-04	0.	7.57E-07	1.36E-11	6.69E-10	6.43E-09	1.95E-04
42	6.60	6.91E-08	0.	3.24E-06	0.	7.73E-05	0.	7.63E-07	1.43E-11	6.65E-10	6.51E-09	8.14E-05
43	6.50	3.68E-08	0.	2.13E-06	0.	1.61E-04	0.	7.69E-07	1.49E-11	6.61E-10	6.58E-09	1.64E-04
44	6.40	5.20E-08	0.	1.12E-06	2.11E-06	2.72E-04	0.	7.75E-07	1.56E-11	6.58E-10	6.66E-09	2.76E-04
45	6.30	1.05E-07	0.	5.16E-07	8.28E-06	9.60E-05	0.	7.81E-07	1.64E-11	6.55E-10	6.76E-09	1.06E-04
46	6.20	2.80E-07	0.	2.16E-07	1.01E-05	1.54E-04	0.	7.87E-07	1.72E-11	6.52E-10	6.91E-09	1.65E-04
47	6.10	1.05E-06	0.	7.68E-08	2.58E-05	3.41E-04	0.	7.92E-07	1.81E-11	6.54E-10	7.05E-09	3.48E-04
48	6.00	2.49E-06	0.	1.70E-08	1.86E-05	8.24E-05	0.	7.98E-07	1.90E-11	6.55E-10	7.20E-09	1.04E-04
49	5.90	3.66E-06	0.	1.19E-09	2.54E-05	1.02E-04	0.	7.98E-07	2.00E-11	6.58E-10	7.35E-09	1.32E-04
50	5.80	5.02E-06	0.	2.82E-11	3.25E-05	9.54E-05	0.	7.87E-07	2.10E-11	6.59E-10	7.49E-09	1.34E-04
51	5.70	5.23E-06	0.	0.	3.18E-05	7.99E-05	0.	7.39E-07	2.22E-11	6.60E-10	7.64E-09	1.17E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.14E-06	0.	0.	0.	2.03E-05	1.69E-04	0.	0.	6.87E-07	2.34E-11	6.62E-10	7.79E-09	1.96E-04
53	5.50	5.98E-06	0.	0.	0.	2.60E-05	1.84E-04	0.	0.	6.91E-07	2.47E-11	6.63E-10	7.93E-09	2.19E-04
54	5.40	5.82E-06	0.	0.	0.	2.01E-05	8.47E-05	0.	0.	6.94E-07	2.61E-11	6.66E-10	8.08E-09	1.11E-04
55	5.30	5.26E-06	0.	0.	0.	2.07E-05	1.64E-04	0.	0.	6.99E-07	2.76E-11	6.68E-10	8.25E-09	1.91E-04
56	5.20	3.30E-06	0.	0.	0.	2.05E-05	7.00E-05	0.	0.	7.03E-07	2.92E-11	6.73E-10	8.47E-09	9.45E-05
57	5.10	2.93E-06	0.	0.	0.	1.88E-05	10.00E-05	0.	3.70E-10	7.09E-07	3.10E-11	6.88E-10	8.69E-09	1.23E-04
58	5.00	2.09E-06	0.	0.	0.	1.53E-05	8.39E-05	0.	3.70E-10	7.15E-07	3.29E-11	7.05E-10	8.91E-09	1.02E-04
59	4.90	1.69E-06	0.	0.	0.	1.57E-05	6.91E-05	0.	3.70E-10	7.21E-07	3.49E-11	7.22E-10	9.12E-09	8.72E-05
60	4.80	1.71E-06	0.	0.	0.	1.61E-05	6.49E-05	0.	3.70E-10	7.27E-07	3.72E-11	7.37E-10	9.34E-09	8.35E-05
61	4.70	1.74E-06	0.	0.	0.	1.44E-05	4.51E-05	0.	3.70E-10	7.33E-07	3.96E-11	7.52E-10	9.57E-09	6.19E-05
62	4.60	1.92E-06	0.	0.	0.	1.37E-05	4.59E-05	0.	3.70E-10	7.39E-07	4.22E-11	7.69E-10	9.80E-09	6.19E-05
63	4.50	1.77E-06	0.	8.04E-08	0.	1.09E-05	2.72E-05	0.	3.70E-10	7.45E-07	4.51E-11	7.88E-10	10.00E-09	4.07E-05
64	4.40	1.64E-06	0.	3.88E-07	0.	1.02E-05	2.29E-05	0.	3.70E-10	7.51E-07	4.83E-11	8.07E-10	1.03E-08	3.58E-05
65	4.30	1.36E-06	0.	6.18E-07	0.	8.54E-06	1.05E-05	0.	3.70E-10	7.57E-07	5.17E-11	8.26E-10	1.04E-08	2.18E-05
66	4.20	1.15E-06	0.	3.63E-06	0.	8.44E-06	9.80E-06	0.	3.70E-10	7.63E-07	5.55E-11	8.45E-10	4.07E-10	2.38E-05
67	4.10	9.72E-07	0.	6.77E-07	0.	7.14E-06	2.38E-06	0.	3.70E-10	7.66E-07	5.97E-11	4.57E-10	4.20E-10	1.19E-05
68	4.00	7.97E-07	0.	4.83E-06	0.	6.25E-06	1.71E-06	0.	3.70E-10	7.69E-07	6.43E-11	3.73E-10	4.33E-10	1.44E-05
69	3.90	5.85E-07	0.	2.53E-06	4.34E-08	4.79E-06	8.75E-07	0.	3.70E-10	7.86E-07	6.94E-11	3.77E-10	4.46E-10	9.39E-06
70	3.80	6.03E-07	0.	2.39E-06	6.41E-07	4.99E-06	0.	0.	3.70E-10	7.63E-07	7.50E-11	2.21E-10	4.59E-10	9.35E-06
71	3.70	4.42E-07	0.	4.57E-06	9.86E-08	3.28E-06	0.	0.	3.70E-10	7.91E-07	8.13E-11	2.29E-10	5.35E-10	9.15E-06
72	3.60	3.59E-07	0.	1.42E-06	5.39E-07	3.63E-06	0.	0.	3.70E-10	7.93E-07	9.83E-11	2.57E-10	6.24E-10	6.65E-06
73	3.50	2.96E-07	0.	3.01E-06	3.12E-06	2.22E-06	0.	0.	3.70E-10	6.44E-07	9.60E-11	2.96E-10	7.14E-10	9.29E-06
74	3.40	2.31E-07	0.	9.63E-07	8.17E-08	2.44E-06	0.	0.	3.70E-10	3.71E-07	1.05E-10	3.38E-10	8.09E-10	4.09E-06
75	3.30	1.69E-07	0.	1.28E-06	8.23E-07	1.90E-06	0.	0.	3.70E-10	3.72E-07	1.15E-10	3.79E-10	9.04E-10	4.21E-06
76	3.20	1.26E-07	0.	5.21E-07	3.79E-06	1.54E-06	0.	0.	3.70E-10	3.72E-07	1.26E-10	4.21E-10	1.00E-09	6.35E-06
77	3.10	1.06E-07	0.	4.41E-07	1.31E-07	1.22E-06	0.	0.	3.70E-10	3.73E-07	1.38E-10	4.63E-10	1.10E-09	2.27E-06
78	3.00	8.12E-08	0.	1.97E-07	8.62E-07	9.89E-07	0.	0.	3.70E-10	3.74E-07	1.53E-10	5.05E-10	1.19E-09	2.51E-06
79	2.90	5.78E-08	0.	1.18E-07	8.16E-07	5.82E-07	0.	0.	3.70E-10	3.75E-07	1.69E-10	5.48E-10	1.29E-09	1.95E-06
80	2.80	5.37E-08	0.	4.95E-08	1.23E-07	2.93E-07	0.	0.	3.70E-10	3.75E-07	1.84E-10	5.91E-10	1.38E-09	8.97E-07
81	2.70	2.72E-08	0.	2.29E-08	4.25E-07	1.14E-07	0.	0.	3.70E-10	3.75E-07	2.10E-10	6.36E-10	2.25E-10	9.67E-07
82	2.60	9.46E-09	0.	1.14E-08	4.62E-08	3.73E-08	0.	0.	3.70E-10	3.75E-07	2.35E-10	1.70E-10	2.42E-10	4.81E-07
83	2.50	5.83E-10	0.	1.81E-09	1.97E-08	7.35E-09	0.	0.	3.70E-10	3.75E-07	2.84E-10	2.03E-10	2.77E-10	4.04E-07
84	2.40	0.	1.57E-07	0.	3.38E-08	6.73E-10	0.	0.	3.70E-10	3.75E-07	2.99E-10	2.56E-10	3.41E-10	5.68E-07
85	2.30	0.	1.17E-06	0.	0.	0.	0.	0.	3.70E-10	3.72E-07	3.48E-10	3.10E-10	4.08E-10	1.55E-06
86	2.20	0.	1.92E-06	0.	0.	0.	0.	0.	3.70E-10	3.71E-07	3.89E-10	3.66E-10	4.90E-10	2.30E-06
87	2.10	0.	4.17E-06	0.	0.	0.	0.	0.	3.70E-10	3.69E-07	4.47E-10	4.25E-10	5.71E-10	4.55E-06
88	2.00	0.	5.12E-06	0.	0.	0.	0.	0.	3.70E-10	3.67E-07	5.18E-10	4.86E-10	6.53E-10	5.48E-06
89	1.90	0.	1.69E-05	0.	0.	0.	0.	0.	3.70E-10	3.44E-07	6.05E-10	5.46E-10	7.35E-10	1.73E-05
90	1.80	0.	1.51E-05	0.	0.	0.	0.	0.	3.70E-10	3.29E-07	7.12E-10	6.30E-10	8.54E-10	1.54E-05
91	1.70	0.	1.73E-05	0.	0.	0.	0.	0.	3.70E-10	3.10E-07	8.46E-10	7.20E-10	9.98E-10	1.76E-05
92	1.60	0.	1.21E-05	0.	0.	0.	0.	0.	3.70E-10	2.62E-07	1.02E-09	7.17E-10	1.03E-09	1.23E-05
93	1.50	0.	1.40E-05	0.	0.	0.	0.	0.	3.70E-10	1.19E-07	1.23E-09	8.63E-10	1.20E-09	1.49E-05
94	1.40	0.	1.84E-05	0.	0.	0.	0.	0.	3.70E-10	0.	1.52E-09	4.79E-10	7.21E-10	1.84E-05
95	1.30	0.	1.14E-05	0.	0.	0.	0.	0.	3.70E-10	0.	1.90E-09	6.84E-10	9.76E-10	1.16E-05
96	1.20	0.	1.42E-05	0.	0.	0.	0.	0.	3.70E-10	0.	2.42E-09	8.69E-10	1.04E-09	1.42E-05
97	1.10	0.	9.14E-06	0.	0.	0.	0.	1.46E-09	3.70E-10	0.	3.15E-09	9.97E-10	1.30E-09	9.14E-06
98	1.00	0.	9.19E-06	0.	0.	0.	0.	6.80E-09	3.70E-10	0.	4.21E-09	1.20E-09	1.57E-09	9.21E-06
99	0.90	0.	6.75E-06	0.	0.	0.	0.	1.22E-08	3.70E-10	0.	5.79E-09	1.39E-09	1.83E-09	6.77E-06
100	0.80	0.	3.31E-06	0.	0.	0.	0.	1.17E-07	3.70E-10	0.	8.28E-09	1.31E-09	1.34E-09	3.14E-06
101	0.70	0.	8.70E-07	0.	0.	0.	0.	7.83E-08	3.70E-10	0.	1.24E-08	1.27E-09	1.54E-09	9.64E-07
102	0.60	0.	1.39E-08	0.	0.	0.	0.	3.11E-07	3.70E-10	0.	1.98E-08	1.42E-09	1.74E-09	3.49E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-04 (10.9E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 U-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.89E-04	0.	0.	0.	1.18E-08	1.09E-13	6.78E-10	9.04E-10	5.89E-04
2	10.60	0.	0.	4.64E-04	0.	0.	0.	1.18E-08	1.12E-13	6.82E-10	9.09E-10	4.64E-04
3	10.50	0.	0.	4.29E-04	0.	0.	0.	1.18E-08	1.15E-13	6.85E-10	9.06E-10	4.29E-04
4	10.40	0.	0.	3.59E-04	0.	0.	0.	1.18E-08	1.19E-13	6.87E-10	9.07E-10	3.59E-04
5	10.30	0.	0.	2.78E-04	0.	0.	0.	1.18E-08	1.22E-13	6.89E-10	9.08E-10	2.78E-04
6	10.20	0.	0.	2.54E-04	0.	0.	0.	1.19E-08	1.26E-13	6.90E-10	9.09E-10	2.54E-04
7	10.10	0.	0.	2.18E-04	0.	0.	0.	1.19E-08	1.30E-13	6.92E-10	9.10E-10	2.18E-04
8	10.00	0.	0.	1.57E-04	0.	0.	0.	1.19E-08	1.34E-13	6.94E-10	9.11E-10	1.57E-04
9	9.90	0.	0.	1.55E-04	0.	0.	0.	1.19E-08	1.39E-13	6.95E-10	9.12E-10	1.55E-04
10	9.80	0.	0.	1.27E-04	0.	0.	0.	1.19E-08	1.42E-13	6.97E-10	9.13E-10	1.27E-04
11	9.70	0.	0.	9.08E-05	0.	0.	0.	1.19E-08	1.47E-13	6.98E-10	9.14E-10	9.08E-05
12	9.60	0.	0.	9.69E-05	0.	0.	0.	1.20E-08	1.51E-13	7.00E-10	9.16E-10	9.69E-05
13	9.50	0.	6.60E-07	6.76E-05	0.	0.	0.	1.20E-08	1.56E-13	7.01E-10	9.17E-10	6.83E-05
14	9.40	0.	7.26E-07	5.68E-05	0.	0.	0.	1.23E-08	1.61E-13	1.86E-10	9.18E-10	5.68E-05
15	9.30	0.	7.92E-07	5.58E-05	0.	0.	0.	1.21E-08	1.66E-13	1.85E-10	9.19E-10	5.58E-05
16	9.20	0.	8.58E-07	3.51E-05	0.	0.	0.	1.21E-08	1.72E-13	1.84E-10	9.20E-10	3.68E-05
17	9.10	0.	1.05E-06	3.66E-05	0.	0.	0.	1.22E-08	1.78E-13	1.84E-10	9.21E-10	3.77E-05
18	9.00	0.	1.27E-06	2.74E-05	0.	0.	0.	1.22E-08	1.84E-13	1.83E-10	9.22E-10	2.69E-05
19	8.90	0.	1.49E-06	2.22E-05	0.	0.	0.	1.23E-08	1.90E-13	1.82E-10	9.23E-10	2.37E-05
20	8.80	0.	1.55E-06	2.83E-05	0.	0.	0.	1.23E-08	1.97E-13	1.81E-10	9.24E-10	2.19E-05
21	8.70	0.	1.48E-06	1.42E-05	0.	0.	0.	1.23E-08	2.03E-13	1.80E-10	9.25E-10	1.57E-05
22	8.60	0.	1.41E-06	1.43E-05	0.	0.	0.	1.24E-08	2.11E-13	1.79E-10	9.26E-10	1.57E-05
23	8.50	0.	1.34E-06	1.08E-05	0.	0.	0.	1.24E-08	2.18E-13	1.78E-10	9.27E-10	1.14E-05
24	8.40	0.	1.32E-06	9.43E-06	0.	0.	0.	1.25E-08	2.26E-13	1.78E-10	9.28E-10	1.08E-05
25	8.30	0.	1.26E-06	6.93E-06	0.	0.	0.	1.26E-08	2.34E-13	1.77E-10	9.31E-10	7.88E-06
26	8.20	0.	1.20E-06	6.18E-06	0.	0.	0.	1.26E-08	2.43E-13	1.76E-10	9.38E-10	7.39E-06
27	8.10	0.	1.15E-06	4.42E-06	0.	0.	0.	1.27E-08	2.52E-13	1.74E-10	9.46E-10	5.59E-06
28	8.00	0.	1.11E-06	4.10E-06	0.	0.	0.	1.28E-08	2.62E-13	1.73E-10	9.53E-10	5.22E-06
29	7.90	0.	1.05E-06	2.95E-06	0.	0.	0.	1.28E-08	2.72E-13	1.72E-10	9.61E-10	4.02E-06
30	7.80	0.	9.94E-07	2.88E-06	0.	0.	0.	1.29E-08	2.83E-13	1.71E-10	9.68E-10	3.81E-06
31	7.70	0.	9.37E-07	2.08E-06	0.	0.	0.	1.29E-08	2.94E-13	1.69E-10	9.75E-10	3.03E-06
32	7.60	0.	8.80E-07	1.75E-06	0.	3.42E-10	0.	1.30E-08	3.06E-13	1.68E-10	9.83E-10	2.64E-06
33	7.50	0.	8.22E-07	1.39E-06	0.	3.40E-09	0.	2.31E-08	3.18E-13	1.67E-10	9.90E-10	2.23E-06
34	7.40	0.	7.65E-07	1.18E-06	0.	9.61E-09	0.	1.32E-08	3.31E-13	1.66E-10	9.98E-10	1.89E-06
35	7.30	0.	7.08E-07	9.86E-07	0.	6.14E-08	0.	1.32E-08	3.45E-13	1.65E-10	6.85E-10	1.69E-06
36	7.20	0.	6.55E-07	7.00E-07	0.	2.11E-07	0.	1.33E-08	3.60E-13	1.64E-10	6.13E-10	1.59E-06
37	7.10	0.	6.03E-07	5.96E-07	0.	3.22E-07	0.	1.34E-08	3.75E-13	1.62E-10	6.20E-10	1.53E-06
38	7.00	1.35E-09	0.	4.72E-07	0.	1.52E-06	0.	1.35E-08	3.92E-13	1.61E-10	6.27E-10	2.01E-06
39	6.90	2.43E-09	0.	3.46E-07	0.	1.10E-06	0.	1.36E-08	4.09E-13	1.60E-10	6.35E-10	1.49E-06
40	6.80	1.91E-09	0.	3.11E-07	0.	2.49E-06	0.	1.37E-08	4.27E-13	1.59E-10	6.42E-10	2.82E-06
41	6.70	1.26E-09	0.	2.34E-07	0.	4.52E-06	0.	1.38E-08	4.47E-13	1.58E-10	6.50E-10	4.77E-06
42	6.60	7.05E-10	0.	1.80E-07	0.	1.84E-06	0.	1.40E-08	4.68E-13	1.57E-10	6.58E-10	2.04E-06
43	6.50	3.67E-10	0.	1.19E-07	0.	3.84E-06	0.	1.41E-08	4.90E-13	1.56E-10	6.65E-10	3.97E-06
44	6.40	5.31E-10	0.	9.25E-08	5.04E-08	6.49E-06	0.	1.42E-08	5.13E-13	1.55E-10	6.73E-10	6.62E-06
45	6.30	1.07E-09	0.	2.87E-08	1.97E-07	2.29E-06	0.	1.43E-08	5.38E-13	1.55E-10	6.83E-10	2.53E-06
46	6.20	2.94E-09	0.	1.28E-08	2.40E-07	3.67E-06	0.	1.44E-08	5.64E-13	1.54E-10	6.98E-10	3.94E-06
47	6.10	1.07E-08	0.	4.39E-09	6.14E-07	8.12E-06	0.	1.45E-08	5.92E-13	1.54E-10	7.13E-10	8.76E-06
48	6.00	2.54E-08	0.	9.44E-10	4.44E-07	1.97E-06	0.	1.46E-08	6.23E-13	1.55E-10	7.27E-10	2.46E-06
49	5.90	3.74E-08	0.	6.68E-11	6.06E-07	2.42E-06	0.	1.46E-08	6.55E-13	1.55E-10	7.42E-10	3.09E-06
50	5.80	5.12E-08	0.	1.57E-12	7.75E-07	2.28E-06	0.	1.44E-08	6.89E-13	1.56E-10	7.57E-10	3.12E-06
51	5.70	5.34E-08	0.	0.	7.59E-07	1.90E-06	0.	1.35E-08	7.26E-13	1.56E-10	7.72E-10	2.73E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.50	6.27E-08	0.	0.	0.	4.83E-07	4.03E-06	0.	0.	1.26E-08	7.66E-13	1.56E-10	7.87E-10	4.58E-06
53	5.50	6.10E-08	0.	0.	0.	6.20E-07	4.44E-06	0.	0.	1.26E-08	8.09E-13	1.57E-10	8.02E-10	5.13E-06
54	5.40	5.94E-08	0.	0.	0.	4.78E-07	2.02E-06	0.	0.	1.27E-08	8.55E-13	1.57E-10	8.17E-10	2.57E-06
55	5.30	5.36E-08	0.	0.	0.	4.94E-07	3.92E-06	0.	0.	1.28E-08	9.04E-13	1.58E-10	8.34E-10	4.47E-06
56	5.20	3.36E-08	0.	0.	0.	4.88E-07	1.67E-06	0.	0.	1.29E-08	9.57E-13	1.59E-10	8.56E-10	2.20E-06
57	5.10	2.99E-08	0.	0.	0.	4.48E-07	2.39E-06	0.	8.92E-13	1.30E-08	1.01E-12	1.62E-10	8.78E-10	2.89E-06
58	5.00	2.09E-08	0.	0.	0.	3.65E-07	2.00E-06	0.	8.92E-13	1.31E-08	1.08E-12	1.66E-10	9.00E-10	2.48E-06
59	4.90	1.73E-08	0.	0.	0.	3.73E-07	1.65E-06	0.	8.92E-13	1.32E-08	1.14E-12	1.75E-10	9.22E-10	2.65E-06
60	4.80	1.79E-08	0.	0.	0.	3.84E-07	1.55E-06	0.	8.92E-13	1.33E-08	1.22E-12	1.74E-10	9.44E-10	1.96E-06
61	4.70	1.77E-08	0.	0.	0.	3.42E-07	1.07E-06	0.	8.92E-13	1.34E-08	1.30E-12	1.77E-10	9.67E-10	1.45E-06
62	4.60	1.96E-08	0.	0.	0.	3.27E-07	1.08E-06	0.	8.92E-13	1.35E-08	1.38E-12	1.81E-10	9.90E-10	1.45E-06
63	4.50	1.81E-08	0.	4.48E-09	0.	2.61E-07	6.47E-07	0.	8.92E-13	1.36E-08	1.48E-12	1.86E-10	1.01E-09	9.45E-07
64	4.40	1.68E-08	0.	2.16E-08	0.	2.43E-07	5.45E-07	0.	8.92E-13	1.37E-08	1.58E-12	1.90E-10	1.04E-09	8.41E-07
65	4.30	1.39E-08	0.	3.44E-08	0.	2.04E-07	2.51E-07	0.	8.92E-13	1.38E-08	1.70E-12	1.95E-10	1.06E-09	5.18E-07
66	4.20	1.17E-08	0.	2.02E-07	0.	2.01E-07	2.34E-07	0.	8.92E-13	1.40E-08	1.82E-12	1.99E-10	8.12E-11	6.63E-07
67	4.10	9.92E-09	0.	3.77E-08	0.	1.70E-07	5.64E-08	0.	8.92E-13	1.40E-08	1.96E-12	1.88E-10	4.25E-11	2.99E-07
68	4.00	8.14E-09	0.	2.72E-07	0.	1.49E-07	4.04E-08	0.	8.92E-13	1.41E-08	2.11E-12	8.79E-11	9.38E-11	4.84E-07
69	3.90	5.97E-09	0.	1.29E-07	1.33E-08	1.14E-07	2.09E-08	0.	8.92E-13	1.40E-08	2.27E-12	8.98E-11	4.51E-11	2.98E-07
70	3.80	6.16E-09	0.	1.33E-07	1.97E-07	1.18E-07	0	0.	8.92E-13	1.42E-08	2.46E-12	5.22E-11	4.64E-11	4.68E-07
71	3.70	4.51E-09	0.	2.54E-07	3.03E-08	7.83E-08	0.	0.	8.92E-13	1.37E-08	2.66E-12	5.41E-11	5.41E-11	3.81E-07
72	3.60	3.64E-09	0.	3.91E-08	1.66E-07	8.66E-08	0.	0.	8.92E-13	1.29E-08	2.89E-12	6.07E-11	6.30E-11	3.48E-07
73	3.50	3.02E-09	0.	1.60E-07	9.59E-07	5.28E-08	0.	0.	8.92E-13	1.18E-08	3.15E-12	6.98E-11	7.22E-11	1.19E-06
74	3.40	2.35E-09	0.	5.36E-08	2.51E-08	5.82E-08	0.	0.	8.92E-13	6.79E-09	3.43E-12	7.96E-11	8.17E-11	1.46E-07
75	3.30	1.73E-09	0.	7.13E-08	2.53E-07	3.72E-08	0.	0.	8.92E-13	6.80E-09	3.76E-12	8.94E-11	9.13E-11	3.70E-07
76	3.20	1.29E-09	0.	2.90E-08	1.14E-06	3.67E-08	0.	0.	8.92E-13	6.81E-09	4.12E-12	9.93E-11	1.01E-10	1.24E-06
77	3.10	1.08E-09	0.	2.45E-08	4.01E-08	2.91E-08	0.	0.	8.92E-13	6.83E-09	4.54E-12	1.09E-10	1.11E-10	1.12E-07
78	3.00	8.28E-10	0.	1.18E-08	2.65E-07	2.36E-08	0.	0.	8.92E-13	6.85E-09	5.01E-12	1.19E-10	1.21E-10	3.97E-07
79	2.90	5.90E-10	0.	6.54E-09	2.51E-07	1.39E-08	0.	0.	8.92E-13	6.86E-09	5.54E-12	1.29E-10	1.30E-10	2.79E-07
80	2.80	5.48E-10	0.	2.78E-09	3.77E-08	6.98E-09	0.	0.	8.92E-13	6.87E-09	6.14E-12	1.39E-10	1.40E-10	5.52E-08
81	2.70	2.78E-10	0.	1.27E-09	1.31E-07	2.73E-09	0.	0.	8.92E-13	6.87E-09	6.88E-12	1.50E-10	2.27E-11	1.42E-07
82	2.60	9.65E-11	0.	6.33E-10	1.42E-08	8.89E-10	0.	0.	8.92E-13	6.87E-09	7.70E-12	4.01E-11	2.45E-11	2.29E-08
83	2.50	5.95E-12	0.	10.00E-11	6.05E-09	1.75E-10	0.	0.	8.92E-13	6.87E-09	8.67E-12	4.79E-11	2.80E-11	1.33E-08
84	2.40	0.	8.72E-09	0.	1.04E-08	1.61E-11	0.	0.	8.92E-13	6.87E-09	9.80E-12	5.03E-11	3.45E-11	2.41E-08
85	2.30	0.	6.52E-08	0.	0.	0.	0.	0.	8.92E-13	6.91E-09	1.11E-11	7.32E-11	4.12E-11	7.22E-08
86	2.20	0.	1.07E-07	0.	0.	0.	0.	0.	8.92E-13	6.79E-09	1.27E-11	8.64E-11	4.85E-11	1.14E-07
87	2.10	0.	2.32E-07	0.	0.	0.	0.	0.	8.92E-13	6.76E-09	1.47E-11	10.90E-11	5.77E-11	2.39E-07
88	2.00	0.	2.85E-07	0.	0.	0.	0.	0.	8.92E-13	6.54E-09	1.72E-11	1.15E-10	6.88E-11	2.92E-07
89	1.90	0.	9.42E-07	0.	0.	0.	0.	0.	8.92E-13	6.29E-09	1.98E-11	1.29E-10	7.43E-11	9.48E-07
90	1.80	0.	8.41E-07	0.	0.	0.	0.	0.	8.92E-13	6.02E-09	2.33E-11	1.49E-10	8.63E-11	8.47E-07
91	1.70	0.	9.61E-07	0.	0.	0.	0.	0.	8.92E-13	5.67E-09	2.77E-11	1.72E-10	8.98E-11	9.61E-07
92	1.60	0.	6.72E-07	0.	0.	0.	0.	0.	8.92E-13	4.80E-09	3.33E-11	1.69E-10	1.04E-10	6.77E-07
93	1.50	0.	8.23E-07	0.	0.	0.	0.	0.	8.92E-13	2.18E-09	4.05E-11	8.59E-11	5.63E-11	8.25E-07
94	1.40	0.	1.02E-06	0.	0.	0.	0.	0.	8.92E-13	0.	4.99E-11	1.13E-10	7.29E-11	1.02E-06
95	1.30	0.	6.48E-07	0.	0.	0.	0.	0.	8.92E-13	0.	6.24E-11	1.57E-10	9.86E-11	6.48E-07
96	1.20	0.	7.88E-07	0.	0.	0.	0.	0.	8.92E-13	0.	7.94E-11	2.05E-10	1.05E-10	7.89E-07
97	1.10	0.	5.09E-07	0.	0.	0.	0.	3.48E-11	8.92E-13	0.	1.03E-10	2.35E-10	1.32E-10	5.09E-07
98	1.00	0.	5.11E-07	0.	0.	0.	0.	1.62E-10	8.92E-13	0.	1.34E-10	2.82E-10	1.58E-10	5.12E-07
99	0.90	0.	3.78E-07	0.	0.	0.	0.	2.91E-10	8.92E-13	0.	1.90E-10	3.27E-10	1.85E-10	3.77E-07
100	0.80	0.	1.68E-07	0.	0.	0.	0.	2.70E-09	8.92E-13	0.	2.71E-10	2.62E-10	1.36E-10	1.71E-07
101	0.70	0.	4.84E-08	0.	0.	0.	0.	1.87E-09	8.92E-13	0.	4.07E-10	2.99E-10	1.56E-10	5.12E-08
102	0.60	0.	7.76E-10	0.	0.	0.	0.	7.42E-09	8.92E-13	0.	6.90E-10	3.36E-10	1.76E-10	9.16E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.41E-05	0.	0	0.	2.72E-10	5.79E-15	1.05E-10	5.05E-11	1.11E-05
2	10.60	0.	0.	1.11E-05	0.	0.	0.	2.72E-10	5.96E-15	1.35E-10	5.06E-11	1.11E-05
3	10.50	0.	0.	1.03E-05	0.	0.	0.	2.73E-10	6.13E-15	1.06E-10	5.07E-11	1.03E-05
4	10.40	0.	0.	8.58E-06	0.	0.	0.	2.73E-10	6.31E-15	1.06E-10	5.08E-11	8.58E-06
5	10.30	0.	0.	6.46E-06	0.	0.	0.	2.73E-10	6.50E-15	1.07E-10	5.10E-11	6.46E-06
6	10.20	0.	0.	6.08E-06	0.	0.	0.	2.74E-10	6.69E-15	1.07E-10	5.11E-11	6.08E-06
7	10.10	0.	0.	5.20E-06	0.	0.	0.	2.74E-10	6.90E-15	1.07E-10	5.12E-11	5.20E-06
8	10.00	0.	0.	3.75E-06	0.	0.	0.	2.75E-10	7.11E-15	1.07E-10	5.13E-11	3.75E-06
9	9.90	0.	0.	3.72E-06	0.	0.	0.	2.75E-10	7.32E-15	1.07E-10	5.14E-11	3.72E-06
10	9.80	0.	0.	3.03E-06	0.	0.	0.	2.76E-10	7.55E-15	1.08E-10	5.15E-11	3.03E-06
11	9.70	0.	0.	2.17E-06	0.	0.	0.	2.76E-10	7.79E-15	1.08E-10	5.16E-11	2.17E-06
12	9.60	0.	0.	2.32E-06	0.	0.	0.	2.77E-10	8.04E-15	1.08E-10	5.17E-11	2.32E-06
13	9.50	0.	8.64E-09	1.62E-06	0.	0.	0.	2.77E-10	8.29E-15	1.08E-10	5.18E-11	1.62E-06
14	9.40	0.	7.30E-09	1.34E-06	0.	0.	0.	2.78E-10	8.56E-15	2.88E-11	5.19E-11	1.35E-06
15	9.30	0.	7.97E-09	1.32E-06	0.	0.	0.	2.79E-10	8.84E-15	2.87E-11	5.20E-11	1.32E-06
16	9.20	0.	8.63E-09	8.39E-07	0.	0.	0.	2.80E-10	9.14E-15	2.85E-11	5.21E-11	8.48E-07
17	9.10	0.	1.06E-08	8.75E-07	0.	0.	0.	2.81E-10	9.44E-15	2.84E-11	5.22E-11	8.86E-07
18	9.00	0.	1.28E-08	6.61E-07	0.	0.	0.	2.82E-10	9.76E-15	2.83E-11	5.23E-11	6.74E-07
19	8.90	0.	1.50E-08	5.38E-07	0.	0.	0.	2.83E-10	1.01E-14	2.81E-11	5.24E-11	5.45E-07
20	8.80	0.	1.56E-08	4.86E-07	0.	0.	0.	2.84E-10	1.04E-14	2.80E-11	5.25E-11	5.02E-07
21	8.70	0.	1.49E-08	3.39E-07	0.	0.	0.	2.85E-10	1.08E-14	2.79E-11	5.26E-11	3.55E-07
22	8.60	0.	1.42E-08	3.41E-07	0.	0.	0.	2.86E-10	1.12E-14	2.77E-11	5.27E-11	3.56E-07
23	8.50	0.	1.37E-08	2.40E-07	0.	0.	0.	2.87E-10	1.16E-14	2.76E-11	5.28E-11	2.54E-07
24	8.40	0.	1.32E-08	2.25E-07	0.	0.	0.	2.89E-10	1.20E-14	2.75E-11	5.29E-11	2.39E-07
25	8.30	0.	1.26E-08	1.56E-07	0.	0.	0.	2.90E-10	1.25E-14	2.73E-11	5.32E-11	1.63E-07
26	8.20	0.	1.21E-08	1.48E-07	0.	0.	0.	2.92E-10	1.29E-14	2.72E-11	5.48E-11	1.68E-07
27	8.10	0.	1.16E-08	1.06E-07	0.	0.	0.	2.93E-10	1.34E-14	2.70E-11	5.47E-11	1.16E-07
28	8.00	0.	1.11E-08	9.80E-08	0.	0.	0.	2.95E-10	1.39E-14	2.68E-11	5.55E-11	1.18E-07
29	7.90	0.	1.06E-08	7.06E-08	0.	0.	0.	2.96E-10	1.45E-14	2.66E-11	5.62E-11	8.16E-08
30	7.80	0.	10.00E-09	6.70E-08	0.	0.	0.	2.98E-10	1.50E-14	2.64E-11	5.69E-11	7.74E-08
31	7.70	0.	9.43E-09	4.97E-08	0.	0.	0.	2.99E-10	1.56E-14	2.62E-11	5.77E-11	5.95E-08
32	7.60	0.	8.85E-09	4.19E-08	0.	5.30E-12	0.	3.01E-10	1.62E-14	2.60E-11	5.84E-11	5.11E-08
33	7.50	0.	8.27E-09	3.32E-08	0.	5.28E-11	0.	3.02E-10	1.69E-14	2.59E-11	5.92E-11	4.19E-08
34	7.40	0.	7.69E-09	2.63E-08	0.	1.49E-10	0.	3.04E-10	1.76E-14	2.57E-11	5.99E-11	3.45E-08
35	7.30	0.	7.12E-09	2.17E-08	0.	9.52E-10	0.	3.06E-10	1.83E-14	2.55E-11	6.07E-11	3.01E-08
36	7.20	0.	6.59E-09	1.69E-08	0.	3.27E-09	0.	3.07E-10	1.91E-14	2.53E-11	6.14E-11	2.72E-08
37	7.10	0.	6.07E-09	1.42E-08	0.	4.99E-09	0.	3.10E-10	1.99E-14	2.51E-11	6.22E-11	2.77E-08
38	7.00	1.36E-11	0.	1.13E-08	0.	2.36E-08	0.	3.12E-10	2.08E-14	2.49E-11	6.29E-11	3.53E-08
39	6.90	2.44E-11	0.	9.01E-09	0.	1.70E-08	0.	3.15E-10	2.17E-14	2.48E-11	6.36E-11	2.45E-08
40	6.80	1.92E-11	0.	7.44E-09	0.	3.84E-08	0.	3.17E-10	2.27E-14	2.46E-11	6.44E-11	4.44E-08
41	6.70	1.27E-11	0.	5.68E-09	0.	7.01E-08	0.	3.20E-10	2.37E-14	2.44E-11	6.52E-11	7.61E-08
42	6.60	7.09E-12	0.	4.31E-09	0.	2.86E-08	0.	3.22E-10	2.48E-14	2.43E-11	6.59E-11	3.33E-08
43	6.50	3.69E-12	0.	2.84E-09	0.	5.95E-08	0.	3.25E-10	2.60E-14	2.41E-11	6.67E-11	6.27E-08
44	6.40	5.33E-12	0.	1.58E-09	7.81E-10	1.01E-07	0.	3.27E-10	2.72E-14	2.40E-11	6.75E-11	1.03E-07
45	6.30	1.07E-11	0.	6.87E-10	3.06E-09	3.55E-08	0.	3.30E-10	2.86E-14	2.39E-11	6.85E-11	3.96E-08
46	6.20	2.96E-11	0.	2.88E-10	3.72E-09	5.69E-08	0.	3.33E-10	3.00E-14	2.38E-11	6.99E-11	6.14E-08
47	6.10	1.07E-10	0.	1.05E-10	9.52E-09	1.26E-07	0.	3.35E-10	3.15E-14	2.39E-11	7.14E-11	1.38E-07
48	6.00	2.55E-10	0.	2.26E-11	6.89E-09	3.05E-08	0.	3.38E-10	3.31E-14	2.39E-11	7.29E-11	3.41E-08
49	5.90	3.76E-10	0.	1.58E-12	9.39E-09	3.76E-08	0.	3.38E-10	3.48E-14	2.40E-11	7.44E-11	4.78E-08
50	5.80	5.15E-10	0.	3.75E-14	1.20E-08	3.53E-08	0.	3.33E-10	3.66E-14	2.41E-11	7.59E-11	4.83E-08
51	5.70	5.37E-10	0.	0.	1.18E-08	2.95E-08	0.	3.12E-10	3.86E-14	2.41E-11	7.74E-11	4.22E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.30E-10	0.	0.	0.	7.48E-09	6.24E-08	0.	0.	2.90E-10	4.07E-14	2.41E-11	7.89E-11	7.79E-08
53	5.50	6.13E-10	0.	0.	0.	9.60E-09	6.87E-08	0.	0.	2.92E-10	4.29E-14	2.42E-11	8.04E-11	7.94E-08
54	5.40	5.97E-10	0.	0.	0.	7.41E-09	3.13E-08	0.	0.	2.93E-10	4.54E-14	2.43E-11	8.19E-11	3.97E-08
55	5.30	5.39E-10	0.	0.	0.	7.65E-09	6.07E-08	0.	0.	2.93E-10	4.80E-14	2.44E-11	8.36E-11	6.92E-08
56	5.20	3.38E-10	0.	0.	0.	7.56E-09	2.59E-08	0.	0.	2.97E-10	5.08E-14	2.45E-11	8.58E-11	3.41E-08
57	5.10	3.00E-10	0.	0.	0.	6.95E-09	3.71E-08	0.	1.39E-15	3.00E-10	5.39E-14	2.51E-11	8.80E-11	4.48E-08
58	5.00	2.10E-10	0.	0.	0.	5.66E-09	3.10E-08	0.	1.39E-15	3.02E-10	5.72E-14	2.57E-11	9.02E-11	3.73E-08
59	4.90	1.74E-10	0.	0.	0.	5.78E-09	2.55E-08	0.	1.39E-15	3.05E-10	6.08E-14	2.64E-11	9.24E-11	3.19E-08
60	4.80	1.78E-10	0.	0.	0.	5.95E-09	2.40E-08	0.	1.39E-15	3.07E-10	6.47E-14	2.69E-11	9.46E-11	3.05E-08
61	4.70	1.78E-10	0.	0.	0.	5.30E-09	1.67E-08	0.	1.39E-15	3.10E-10	6.89E-14	2.74E-11	9.69E-11	2.26E-08
62	4.60	1.97E-10	0.	0.	0.	5.07E-09	1.62E-08	0.	1.39E-15	3.12E-10	7.35E-14	2.81E-11	9.93E-11	2.25E-08
63	4.50	1.82E-10	0.	1.07E-10	0.	4.04E-09	1.00E-09	0.	1.39E-15	3.15E-10	7.86E-14	2.88E-11	1.02E-10	1.48E-08
64	4.40	1.68E-10	0.	5.17E-10	0.	3.77E-09	8.44E-09	0.	1.39E-15	3.17E-10	8.41E-14	2.95E-11	1.01E-10	1.73E-08
65	4.30	1.39E-10	0.	8.23E-10	0.	3.15E-09	3.89E-09	0.	1.39E-15	3.20E-10	9.01E-14	3.02E-11	4.00E-12	8.16E-09
66	4.20	1.18E-10	0.	4.83E-09	0.	3.12E-09	3.62E-09	0.	1.39E-15	3.22E-10	9.67E-14	3.09E-11	4.13E-12	1.20E-08
67	4.10	9.98E-11	0.	9.01E-10	0.	2.64E-09	8.77E-10	0.	1.39E-15	3.24E-10	1.04E-13	1.67E-11	4.26E-12	4.86E-09
68	4.00	8.18E-11	0.	6.90E-09	0.	2.31E-09	6.32E-10	0.	1.39E-15	3.25E-10	1.12E-13	1.36E-11	4.39E-12	9.86E-09
69	3.90	6.00E-11	0.	3.18E-09	1.38E-09	1.77E-09	3.23E-10	0.	1.39E-15	3.24E-10	1.21E-13	1.38E-11	4.52E-12	6.98E-09
70	3.80	6.19E-11	0.	3.18E-09	2.05E-08	1.83E-09	0.	0.	1.39E-15	3.22E-10	1.31E-13	8.07E-12	4.65E-12	2.59E-08
71	3.70	4.53E-11	0.	6.09E-09	3.15E-09	1.21E-09	0.	0.	1.39E-15	3.17E-10	1.41E-13	8.16E-12	5.42E-12	1.08E-08
72	3.60	3.68E-11	0.	1.89E-09	1.72E-08	1.34E-09	0.	0.	1.39E-15	2.97E-10	1.54E-13	9.38E-12	6.32E-12	2.18E-08
73	3.50	3.03E-11	0.	4.01E-09	9.95E-08	8.19E-10	0.	0.	1.39E-15	2.72E-10	1.67E-13	1.08E-11	7.23E-12	1.05E-07
74	3.40	2.36E-11	0.	1.28E-09	2.60E-09	9.02E-10	0.	0.	1.39E-15	1.57E-10	1.82E-13	1.23E-11	8.19E-12	4.99E-09
75	3.30	1.74E-11	0.	1.71E-09	2.63E-08	5.77E-10	0.	0.	1.39E-15	1.57E-10	1.99E-13	1.38E-11	9.16E-12	2.47E-08
76	3.20	1.30E-11	0.	6.94E-10	1.21E-07	5.68E-10	0.	0.	1.39E-15	1.57E-10	2.19E-13	1.54E-11	1.01E-11	1.22E-07
77	3.10	1.08E-11	0.	5.87E-10	4.16E-09	4.51E-10	0.	0.	1.39E-15	1.58E-10	2.41E-13	1.69E-11	1.11E-11	5.40E-09
78	3.00	8.33E-12	0.	2.63E-10	2.75E-08	3.65E-10	0.	0.	1.39E-15	1.58E-10	2.66E-13	1.84E-11	1.21E-11	2.43E-08
79	2.90	5.93E-12	0.	1.56E-10	2.60E-08	2.15E-10	0.	0.	1.39E-15	1.58E-10	2.94E-13	2.00E-11	1.31E-11	2.46E-08
80	2.80	5.51E-12	0.	6.58E-11	3.92E-09	1.08E-10	0.	0.	1.39E-15	1.59E-10	3.27E-13	2.16E-11	1.40E-11	4.29E-09
81	2.70	2.79E-12	0.	3.04E-11	1.36E-08	4.23E-11	0.	0.	1.39E-15	1.59E-10	3.65E-13	2.12E-11	2.28E-12	1.38E-08
82	2.60	9.70E-13	0.	1.52E-11	1.47E-09	1.38E-11	0.	0.	1.39E-15	1.59E-10	4.09E-13	6.20E-12	2.45E-12	1.47E-09
83	2.50	5.98E-14	0.	2.40E-12	6.28E-10	2.71E-12	0.	0.	1.39E-15	1.59E-10	4.60E-13	7.41E-12	2.81E-12	8.13E-10
84	2.40	0.	2.09E-10	0.	1.08E-09	2.49E-13	0.	0.	1.39E-15	1.59E-10	5.21E-13	9.33E-12	3.46E-12	1.46E-09
85	2.30	0.	1.54E-09	0.	0.	0.	0.	0.	1.39E-15	1.57E-10	5.92E-13	1.13E-11	4.13E-12	1.73E-09
86	2.20	0.	2.56E-09	0.	0.	0.	0.	0.	1.39E-15	1.57E-10	6.77E-13	1.34E-11	4.96E-12	2.74E-09
87	2.10	0.	5.54E-09	0.	0.	0.	0.	0.	1.39E-15	1.56E-10	7.78E-13	1.55E-11	5.79E-12	5.74E-09
88	2.00	0.	6.82E-09	0.	0.	0.	0.	0.	1.39E-15	1.51E-10	9.02E-13	1.77E-11	6.61E-12	6.99E-09
89	1.90	0.	2.25E-08	0.	0.	0.	0.	0.	1.39E-15	1.45E-10	1.05E-12	1.99E-11	7.45E-12	2.27E-08
90	1.80	0.	2.01E-08	0.	0.	0.	0.	0.	1.39E-15	1.39E-10	1.24E-12	2.30E-11	8.65E-12	2.13E-08
91	1.70	0.	2.30E-08	0.	0.	0.	0.	0.	1.39E-15	1.31E-10	1.47E-12	2.46E-11	9.00E-12	2.32E-08
92	1.60	0.	1.61E-08	0.	0.	0.	0.	0.	1.39E-15	1.11E-10	1.77E-12	2.62E-11	1.04E-11	1.42E-08
93	1.50	0.	1.97E-08	0.	0.	0.	0.	0.	1.39E-15	5.04E-11	2.15E-12	1.33E-11	5.64E-12	1.98E-03
94	1.40	0.	2.45E-08	0.	0.	0.	0.	0.	1.39E-15	0.	2.65E-12	1.72E-11	7.30E-12	2.45E-08
95	1.30	0.	1.55E-08	0.	0.	0.	0.	0.	1.39E-15	0.	3.31E-12	2.42E-11	9.88E-12	1.55E-08
96	1.20	0.	1.89E-08	0.	0.	0.	0.	0.	1.39E-15	0.	4.22E-12	2.91E-11	1.85E-11	1.89E-08
97	1.10	0.	1.22E-08	0.	0.	0.	0.	5.40E-13	1.39E-15	0.	5.49E-12	3.44E-11	1.32E-11	1.22E-08
98	1.00	0.	1.22E-08	0.	0.	0.	0.	2.51E-12	1.39E-15	0.	7.32E-12	4.37E-11	1.59E-11	1.23E-08
99	0.90	0.	8.99E-09	0.	0.	0.	0.	4.51E-12	1.39E-15	0	1.01E-11	5.06E-11	1.85E-11	9.47E-09
100	0.80	0.	4.01E-09	0.	0.	0.	0.	4.32E-11	1.39E-15	0.	1.44E-11	4.85E-11	1.36E-11	4.12E-09
101	0.70	0.	1.16E-09	0.	0.	0.	0.	2.89E-11	1.39E-15	0.	2.16E-11	4.62E-11	1.56E-11	1.27E-09
102	0.61	0.	1.84E-11	0.	0.	0.	0.	1.15E-10	1.39E-15	0.	3.43E-11	5.20E-11	1.76E-11	2.18E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.69E-07	0.	0.	0.	8.02E-12	5.05E-16	1.15E-11	5.05E-12	1.60E-07
2	10.60	0.	0.	1.33E-07	0.	0.	0.	8.04E-12	5.20E-16	1.16E-11	5.06E-12	1.33E-07
3	10.50	0.	0.	1.23E-07	0.	0.	0.	8.05E-12	5.35E-16	1.16E-11	5.07E-12	1.23E-07
4	10.40	0.	0.	1.03E-07	0.	0.	0.	8.06E-12	5.50E-16	1.16E-11	5.08E-12	1.03E-07
5	10.30	0.	0.	7.76E-08	0.	0.	0.	8.07E-12	5.67E-16	1.17E-11	5.09E-12	7.76E-08
6	10.20	0.	0.	7.30E-08	0.	0.	0.	8.08E-12	5.84E-16	1.17E-11	5.10E-12	7.30E-08
7	10.10	0.	0.	6.25E-08	0.	0.	0.	8.09E-12	6.01E-16	1.17E-11	5.11E-12	6.26E-08
8	10.00	0.	0.	4.51E-08	0.	0.	0.	8.10E-12	6.20E-16	1.18E-11	5.12E-12	4.51E-08
9	9.90	0.	0.	4.46E-08	0.	0.	0.	8.11E-12	6.39E-16	1.18E-11	5.13E-12	4.47E-08
10	9.80	0.	0.	3.84E-08	0.	0.	0.	8.13E-12	6.59E-16	1.18E-11	5.14E-12	3.84E-08
11	9.70	0.	0.	2.61E-08	0.	0.	0.	8.14E-12	6.79E-16	1.18E-11	5.15E-12	2.61E-08
12	9.60	0.	0.	2.79E-08	0.	0.	0.	8.16E-12	7.01E-16	1.19E-11	5.16E-12	2.79E-08
13	9.50	0.	6.63E-11	1.94E-08	0.	0.	0.	8.17E-12	7.23E-16	1.19E-11	5.17E-12	1.95E-08
14	9.40	0.	7.29E-11	1.61E-08	0.	0.	0.	8.20E-12	7.47E-16	3.16E-12	5.18E-12	1.62E-08
15	9.30	0.	7.95E-11	1.58E-08	0.	0.	0.	8.23E-12	7.71E-16	3.14E-12	5.19E-12	1.59E-08
16	9.20	0.	8.62E-11	1.01E-08	0.	0.	0.	8.26E-12	7.97E-16	3.13E-12	5.20E-12	1.02E-08
17	9.10	0.	1.04E-10	1.05E-08	0.	0.	0.	8.29E-12	8.23E-16	3.11E-12	5.21E-12	1.06E-08
18	9.00	0.	1.24E-10	7.95E-09	0.	0.	0.	8.32E-12	8.51E-16	3.10E-12	5.22E-12	8.09E-09
19	8.90	0.	1.49E-10	6.37E-09	0.	0.	0.	8.35E-12	8.80E-16	3.08E-12	5.23E-12	6.54E-09
20	8.80	0.	1.55E-10	5.84E-09	0.	0.	0.	8.38E-12	9.11E-16	3.07E-12	5.24E-12	6.02E-09
21	8.70	0.	1.49E-10	4.08E-09	0.	0.	0.	8.41E-12	9.42E-16	3.05E-12	5.26E-12	4.24E-09
22	8.60	0.	1.42E-10	4.10E-09	0.	0.	0.	8.44E-12	9.76E-16	3.04E-12	5.27E-12	4.26E-09
23	8.50	0.	1.37E-10	2.88E-09	0.	0.	0.	8.47E-12	1.01E-15	3.03E-12	5.28E-12	3.03E-09
24	8.40	0.	1.32E-10	2.71E-09	0.	0.	0.	8.51E-12	1.05E-15	3.01E-12	5.29E-12	2.86E-09
25	8.30	0.	1.26E-10	1.88E-09	0.	0.	0.	8.56E-12	1.09E-15	3.00E-12	5.32E-12	2.02E-09
26	8.20	0.	1.21E-10	1.78E-09	0.	0.	0.	8.60E-12	1.13E-15	2.98E-12	5.39E-12	1.91E-09
27	8.10	0.	1.16E-10	1.27E-09	0.	0.	0.	8.65E-12	1.17E-15	2.96E-12	5.47E-12	1.40E-09
28	8.00	0.	1.11E-10	1.18E-09	0.	0.	0.	8.69E-12	1.21E-15	2.94E-12	5.54E-12	1.31E-09
29	7.90	0.	1.05E-10	8.49E-10	0.	0.	0.	8.74E-12	1.26E-15	2.91E-12	5.61E-12	9.71E-10
30	7.80	0.	9.9AE-11	8.05E-10	0.	0.	0.	8.78E-12	1.31E-15	2.89E-12	5.69E-12	9.22E-10
31	7.70	0.	9.41E-11	5.97E-10	0.	0.	0.	8.83E-12	1.36E-15	2.87E-12	5.76E-12	7.09E-10
32	7.60	0.	8.83E-11	5.03E-10	0.	5.81E-14	0.	8.87E-12	1.42E-15	2.85E-12	5.84E-12	6.09E-10
33	7.50	0.	8.25E-11	3.99E-10	0.	5.78E-13	0.	8.92E-12	1.47E-15	2.83E-12	5.91E-12	5.08E-10
34	7.40	0.	7.68E-11	3.16E-10	0.	1.63E-12	0.	8.97E-12	1.53E-15	2.81E-12	5.99E-12	4.12E-10
35	7.30	0.	7.11E-11	2.60E-10	0.	1.04E-11	0.	9.02E-12	1.60E-15	2.79E-12	6.06E-12	3.60E-10
36	7.20	0.	6.58E-11	2.03E-10	0.	3.59E-11	0.	9.06E-12	1.67E-15	2.77E-12	6.13E-12	3.23E-10
37	7.10	0.	6.05E-11	1.71E-10	0.	5.47E-11	0.	9.14E-12	1.74E-15	2.75E-12	6.21E-12	3.05E-10
38	7.00	1.36E-13	0.	1.36E-10	0.	2.58E-10	0.	9.21E-12	1.81E-15	2.73E-12	6.28E-12	4.12E-10
39	6.90	2.43E-13	0.	1.08E-10	0.	1.87E-10	0.	9.29E-12	1.89E-15	2.71E-12	6.36E-12	3.13E-10
40	6.80	1.92E-13	0.	8.94E-11	0.	4.22E-10	0.	9.36E-12	1.98E-15	2.69E-12	6.43E-12	5.30E-10
41	6.70	1.26E-13	0.	6.73E-11	0.	7.68E-10	0.	9.44E-12	2.07E-15	2.67E-12	6.51E-12	8.54E-10
42	6.60	7.07E-14	0.	5.18E-11	0.	3.13E-10	0.	9.51E-12	2.16E-15	2.66E-12	6.59E-12	3.91E-10
43	6.50	3.68E-14	0.	3.41E-11	0.	6.51E-10	0.	9.58E-12	2.27E-15	2.65E-12	6.66E-12	7.04E-10
44	6.40	5.32E-14	0.	1.80E-11	8.55E-12	1.10E-09	0.	9.66E-12	2.38E-15	2.63E-12	6.74E-12	1.15E-09
45	6.30	1.07E-13	0.	8.25E-12	3.35E-11	3.88E-10	0.	9.73E-12	2.49E-15	2.62E-12	6.84E-12	4.49E-10
46	6.20	2.95E-13	0.	3.46E-12	4.08E-11	6.24E-10	0.	9.81E-12	2.61E-15	2.61E-12	6.99E-12	6.87E-10
47	6.10	1.07E-12	0.	1.26E-12	1.04E-10	1.38E-09	0.	9.88E-12	2.74E-15	2.61E-12	7.14E-12	1.50E-09
48	6.00	2.55E-12	0.	2.71E-13	7.54E-11	3.34E-10	0.	9.96E-12	2.88E-15	2.62E-12	7.28E-12	4.33E-10
49	5.90	3.75E-12	0.	1.90E-14	1.03E-10	4.12E-10	0.	9.96E-12	3.03E-15	2.63E-12	7.43E-12	5.39E-10
50	5.80	5.14E-12	0.	4.50E-16	1.32E-10	3.87E-10	0.	9.81E-12	3.19E-15	2.64E-12	7.58E-12	5.44E-10
51	5.70	5.36E-12	0.	0.	1.29E-10	3.23E-10	0.	9.21E-12	3.36E-15	2.64E-12	7.73E-12	4.77E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	O P.E.	O P.F.	TOTAL AIR
52	5.60	6.29E-12	0.	0.	0.	8.20E-11	6.84E-10	0.	0.	8.57E-12	3.55E-15	2.65E-12	7.88E-12	7.91E-10
53	5.50	6.12E-12	0.	0.	0.	1.05E-10	7.53E-10	0.	0.	8.61E-12	3.74E-15	2.65E-12	8.03E-12	8.84E-10
54	5.40	5.98E-12	0.	0.	0.	8.12E-11	3.43E-10	0.	0.	8.66E-12	3.96E-15	2.66E-12	8.18E-12	4.49E-10
55	5.30	5.38E-12	0.	0.	0.	8.38E-11	6.65E-10	0.	0.	8.71E-12	4.19E-15	2.67E-12	8.35E-12	7.73E-10
56	5.20	3.37E-12	0.	0.	0.	8.28E-11	2.83E-10	0.	0.	8.77E-12	4.43E-15	2.69E-12	8.57E-12	3.69E-10
57	5.10	3.00E-12	0.	0.	0.	7.61E-11	4.06E-10	0.	1.52E-18	8.84E-12	4.70E-15	2.75E-12	8.79E-12	5.06E-10
58	5.00	2.09E-12	0.	0.	0.	6.70E-11	3.40E-10	0.	1.52E-18	8.92E-12	4.99E-15	2.82E-12	9.01E-12	4.25E-10
59	4.90	1.73E-12	0.	0.	0	6.33E-11	2.79E-10	0.	1.52E-18	8.99E-12	5.30E-15	2.89E-12	9.23E-12	3.46E-10
60	4.80	1.76E-12	0.	0.	0.	6.52E-11	2.63E-10	0.	1.52E-18	9.06E-12	5.64E-15	2.95E-12	9.45E-12	3.51E-10
61	4.70	1.78E-12	0.	0.	0.	5.81E-11	1.82E-10	0.	1.52E-18	9.14E-12	6.01E-15	3.01E-12	9.68E-12	2.64E-10
62	4.60	1.96E-12	0.	0.	0.	5.56E-11	1.84E-10	0.	1.52E-18	9.21E-12	6.41E-15	3.08E-12	9.92E-12	2.64E-10
63	4.50	1.81E-12	0.	1.29E-12	0.	4.42E-11	1.10E-10	0.	1.52E-18	9.29E-12	6.85E-15	3.15E-12	1.01E-11	1.80E-10
64	4.40	1.68E-12	0.	6.21E-12	0.	4.13E-11	9.25E-11	0.	1.52E-18	9.36E-12	7.33E-15	3.23E-12	1.04E-11	1.65E-10
65	4.30	1.39E-12	0.	9.89E-12	0.	3.46E-11	4.27E-11	0.	1.52E-18	9.44E-12	7.85E-15	3.31E-12	3.99E-13	1.02E-10
66	4.20	1.17E-12	0.	5.80E-11	0.	3.42E-11	3.97E-11	0.	1.52E-18	9.51E-12	8.43E-15	3.38E-12	4.12E-13	1.46E-10
67	4.10	9.90E-13	0	1.08E-11	0.	2.89E-11	9.61E-12	0.	1.52E-18	9.55E-12	9.06E-15	1.83E-12	4.25E-13	6.22E-11
68	4.00	8.16E-13	0.	7.81E-11	0.	2.53E-11	6.92E-12	0.	1.52E-18	9.58E-12	9.76E-15	1.49E-12	4.38E-13	1.23E-10
69	3.90	5.99E-13	0.	3.72E-11	5.64E-11	1.94E-11	3.54E-12	0.	1.52E-18	9.55E-12	1.05E-14	1.51E-12	4.52E-13	1.29E-10
70	3.80	6.18E-13	0.	3.82E-11	8.33E-10	2.00E-11	0.	0.	1.52E-18	9.51E-12	1.14E-14	8.85E-13	4.65E-13	9.02E-10
71	3.70	4.52E-13	0.	7.32E-11	1.28E-10	1.33E-11	0.	0.	1.52E-18	9.36E-12	1.23E-14	9.17E-13	5.42E-13	2.26E-10
72	3.60	7.67E-13	0.	2.27E-11	6.99E-10	1.47E-11	0.	0.	1.52E-18	8.77E-12	1.34E-14	1.03E-12	6.31E-13	7.48E-10
73	3.50	3.03E-13	0.	4.82E-11	4.05E-09	8.97E-12	0.	0.	1.52E-18	8.02E-12	1.46E-14	1.18E-12	7.23E-13	4.12E-09
74	3.40	2.36E-13	0.	1.54E-11	1.06E-10	9.88E-12	0.	0.	1.52E-18	4.63E-12	1.59E-14	1.35E-12	8.19E-13	1.38E-10
75	3.30	1.73E-13	0.	2.05E-11	1.07E-09	6.32E-12	0.	0.	1.52E-18	4.64E-12	1.74E-14	1.52E-12	9.15E-13	1.10E-09
76	3.20	1.29E-13	0.	8.34E-12	4.92E-09	6.23E-12	0.	0.	1.52E-18	4.64E-12	1.91E-14	1.68E-12	1.01E-12	4.94E-09
77	3.10	1.08E-13	0.	7.05E-12	1.69E-10	4.94E-12	0.	0.	1.52E-18	4.65E-12	2.10E-14	1.85E-12	1.11E-12	1.89E-10
78	3.00	8.31E-14	0.	3.16E-12	1.12E-09	4.00E-12	0.	0.	1.52E-18	4.67E-12	2.32E-14	2.02E-12	1.21E-12	1.13E-09
79	2.90	5.91E-14	0.	1.88E-12	1.06E-09	2.35E-12	0.	0.	1.52E-18	4.67E-12	2.57E-14	2.19E-12	1.31E-12	1.07E-09
80	2.80	5.50E-14	0.	7.91E-13	1.59E-10	1.19E-12	0.	0.	1.52E-18	4.68E-12	2.85E-14	2.37E-12	1.40E-12	1.70E-10
81	2.70	2.79E-14	0.	3.66E-13	5.92E-10	4.63E-13	0.	0.	1.52E-18	4.68E-12	3.18E-14	2.54E-12	2.28E-13	5.61E-10
82	2.60	9.68E-15	0.	1.82E-13	8.00E-11	1.51E-13	0.	0.	1.52E-18	4.68E-12	3.57E-14	6.80E-13	2.45E-13	6.60E-11
83	2.50	5.97E-16	0.	0.	2.89E-14	2.56E-11	2.97E-14	0.	1.52E-18	4.68E-12	4.01E-14	8.12E-13	2.80E-13	3.15E-11
84	2.40	0.	2.51E-12	0.	4.38E-11	2.73E-15	0.	0.	1.52E-18	4.68E-12	4.54E-14	1.02E-12	3.45E-13	5.24E-11
85	2.30	0.	1.07E-11	0.	0.	0.	0.	0.	1.52E-18	4.64E-12	5.16E-14	1.24E-12	4.13E-13	2.51E-11
86	2.20	0.	3.08E-11	0.	0.	0.	0.	0.	1.52E-18	4.63E-12	5.90E-14	1.46E-12	4.95E-13	3.74E-11
87	2.10	0.	6.68E-11	0.	0.	0.	0.	0.	1.52E-18	4.61E-12	6.79E-14	1.70E-12	5.78E-13	7.37E-11
88	2.00	0.	9.19E-11	0.	0.	0.	0.	0.	1.52E-18	4.46E-12	7.86E-14	1.94E-12	6.61E-13	8.90E-11
89	1.90	0.	2.71E-10	0.	0.	0.	0.	0.	1.52E-18	4.29E-12	9.17E-14	2.18E-12	7.44E-13	2.78E-10
90	1.80	0.	2.42E-10	0.	0.	0.	0.	0.	1.52E-18	4.10E-12	1.08E-13	2.52E-12	8.64E-13	2.49E-10
91	1.70	0.	2.76E-10	0.	0.	0.	0.	0.	1.52E-18	3.86E-12	1.28E-13	2.92E-12	8.99E-13	2.84E-10
92	1.60	0.	1.93E-10	0.	0.	0.	0.	0.	1.52E-18	3.27E-12	1.54E-13	2.87E-12	1.04E-12	2.01E-10
93	1.50	0.	2.37E-10	0.	0.	0.	0.	0.	1.52E-18	1.49E-12	1.87E-13	1.46E-12	5.64E-13	2.40E-10
94	1.40	0.	2.94E-10	0.	0.	0.	0.	0.	1.52E-18	0.	2.31E-13	1.89E-12	7.30E-13	2.97E-10
95	1.30	0.	1.86E-10	0.	0.	0.	0.	0.	1.52E-18	0.	2.89E-13	2.66E-12	9.87E-13	1.90E-10
96	1.20	0.	2.27E-10	0.	0.	0.	0.	0.	1.52E-18	0.	3.66E-13	3.19E-12	1.05E-12	2.31E-10
97	1.10	0.	1.46E-10	0.	0.	0.	0.	5.92E-15	1.52E-18	0.	4.78E-13	3.99E-12	1.32E-12	1.52E-10
98	1.00	0.	1.47E-10	0.	0.	0.	0.	2.75E-14	1.52E-18	0.	6.39E-13	4.79E-12	1.59E-12	1.54E-10
99	0.90	0.	1.08E-10	0.	0.	0.	0.	4.94E-14	1.52E-18	0.	8.79E-13	5.54E-12	1.85E-12	1.16E-10
100	0.80	0.	4.82E-11	0.	0.	0.	0.	4.73E-13	1.52E-18	0.	1.26E-12	4.44E-12	1.36E-12	5.57E-11
101	0.70	0.	1.39E-11	0.	0.	0.	0.	3.17E-13	1.52E-18	0.	1.89E-12	5.07E-12	1.56E-12	2.28E-11
102	0.60	0.	2.23E-13	0.	0.	0.	0.	1.26E-12	1.52E-18	0.	3.01E-12	5.70E-12	1.76E-12	1.20E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.71E-09	0.	0.	0.	2.49E-13	4.91E-17	1.14E-12	9.82E-13	1.71E-09
2	10.60	0.	0.	1.35E-09	0.	0.	0.	2.49E-13	5.05E-17	1.16E-12	9.83E-13	1.35E-09
3	10.50	0.	0.	1.25E-09	0.	0.	0.	2.50E-13	5.20E-17	1.17E-12	9.84E-13	1.25E-09
4	10.40	0.	0.	1.04E-09	0.	0.	0.	2.50E-13	5.35E-17	1.17E-12	9.85E-13	1.05E-09
5	10.30	0.	0.	7.85E-10	0.	0.	0.	2.50E-13	5.51E-17	1.17E-12	9.86E-13	7.87E-10
6	10.20	0.	0.	7.39E-10	0.	0.	0.	2.51E-13	5.68E-17	1.18E-12	9.87E-13	7.41E-10
7	10.10	0.	0.	6.33E-10	0.	0.	0.	2.51E-13	5.85E-17	1.18E-12	9.88E-13	6.35E-10
8	10.00	0.	0.	4.56E-10	0.	0.	0.	2.51E-13	6.03E-17	1.18E-12	9.89E-13	4.58E-10
9	9.90	0.	0.	4.52E-10	0.	0.	0.	2.52E-13	6.21E-17	1.19E-12	9.10E-13	4.54E-10
10	9.80	0.	0.	3.68E-10	0.	0.	0.	2.52E-13	6.41E-17	1.19E-12	9.11E-13	3.70E-10
11	9.70	0.	0.	2.64E-10	0.	0.	0.	2.53E-13	6.61E-17	1.19E-12	9.12E-13	2.66E-10
12	9.60	0.	0.	2.82E-10	0.	0.	0.	2.53E-13	6.82E-17	1.19E-12	9.13E-13	2.84E-10
13	9.50	0.	6.55E-13	1.97E-10	0.	0.	0.	2.53E-13	7.04E-17	1.20E-12	9.14E-13	1.99E-10
14	9.40	0.	7.20E-13	1.63E-10	0.	0.	0.	2.54E-13	7.26E-17	3.18E-13	9.15E-13	1.65E-10
15	9.30	0.	7.86E-13	1.60E-10	0.	0.	0.	2.55E-13	7.50E-17	3.16E-13	9.16E-13	1.62E-10
16	9.20	0.	8.51E-13	1.02E-10	0.	0.	0.	2.56E-13	7.75E-17	3.15E-13	9.17E-13	1.04E-10
17	9.10	0.	1.04E-12	1.06E-10	0.	0.	0.	2.57E-13	8.01E-17	3.13E-13	9.18E-13	1.09E-10
18	9.00	0.	1.24E-12	8.04E-11	0.	0.	0.	2.59E-13	8.28E-17	3.12E-13	9.19E-13	8.28E-11
19	8.90	0.	1.44E-12	6.45E-11	0.	0.	0.	2.59E-13	8.56E-17	3.10E-13	9.20E-13	6.70E-11
20	8.80	0.	1.53E-12	5.91E-11	0.	0.	0.	2.60E-13	8.86E-17	3.09E-13	9.22E-13	6.18E-11
21	8.70	0.	1.47E-12	4.13E-11	0.	0.	0.	2.61E-13	9.17E-17	3.07E-13	9.23E-13	4.34E-11
22	8.60	0.	1.40E-12	4.15E-11	0.	0.	0.	2.62E-13	9.49E-17	3.06E-13	9.24E-13	4.40E-11
23	8.50	0.	1.35E-12	2.91E-11	0.	0.	0.	2.63E-13	9.83E-17	3.04E-13	9.25E-13	3.16E-11
24	8.40	0.	1.30E-12	2.74E-11	0.	0.	0.	2.64E-13	1.02E-16	3.03E-13	9.26E-13	2.98E-11
25	8.30	0.	1.25E-12	1.98E-11	0.	0.	0.	2.65E-13	1.06E-16	3.02E-13	9.29E-13	2.13E-11
26	8.20	0.	1.19E-12	1.88E-11	0.	0.	0.	2.67E-13	1.10E-16	3.50E-13	9.36E-13	2.03E-11
27	8.10	0.	1.15E-12	1.20E-11	0.	0.	0.	2.68E-13	1.14E-16	2.98E-13	9.43E-13	1.51E-11
28	8.00	0.	1.10E-12	1.19E-11	0.	0.	0.	2.70E-13	1.18E-16	2.95E-13	9.51E-13	1.41E-11
29	7.90	0.	1.04E-12	8.59E-12	0.	0.	0.	2.71E-13	1.23E-16	2.93E-13	9.58E-13	1.08E-11
30	7.80	0.	9.86E-13	8.15E-12	0.	0.	0.	2.72E-13	1.27E-16	2.91E-13	9.66E-13	1.03E-11
31	7.70	0.	9.30E-13	6.05E-12	0.	0.	0.	2.74E-13	1.32E-16	2.89E-13	9.73E-13	8.11E-12
32	7.60	0.	8.73E-13	5.09E-12	0.	5.81E-16	0.	2.75E-13	1.38E-16	2.87E-13	9.80E-13	7.11E-12
33	7.50	0.	8.16E-13	4.04E-12	0.	5.78E-15	0.	2.77E-13	1.43E-16	2.85E-13	9.88E-13	6.01E-12
34	7.40	0.	7.59E-13	3.20E-12	0.	1.43E-14	0.	2.78E-13	1.49E-16	2.83E-13	9.95E-13	5.13E-12
35	7.30	0.	7.02E-13	2.64E-12	0.	1.04E-13	0.	2.80E-13	1.55E-16	2.81E-13	6.03E-13	4.61E-12
36	7.20	0.	6.50E-13	2.06E-12	0.	3.59E-13	0.	2.81E-13	1.62E-16	2.79E-13	6.10E-13	4.24E-12
37	7.10	0.	5.98E-13	1.73E-12	0.	5.47E-13	0.	2.83E-13	1.69E-16	2.77E-13	6.17E-13	4.06E-12
38	7.00	1.34E-15	0.	1.37E-12	0.	2.58E-12	0.	2.86E-13	1.76E-16	2.75E-13	6.25E-13	5.14E-12
39	6.90	2.41E-15	0.	1.10E-12	0.	1.87E-12	0.	2.88E-13	1.84E-16	2.73E-13	6.32E-13	4.16E-12
40	6.80	1.90E-15	0.	9.05E-13	0.	4.23E-12	0.	2.90E-13	1.92E-16	2.71E-13	6.40E-13	6.33E-12
41	6.70	1.25E-15	0.	6.81E-13	0.	7.68E-12	0.	2.93E-13	2.01E-16	2.69E-13	6.47E-13	9.58E-12
42	6.60	6.99E-16	0.	5.24E-13	0.	3.13E-12	0.	2.95E-13	2.11E-16	2.68E-13	6.55E-13	4.87E-12
43	6.50	3.64E-16	0.	3.45E-13	0.	6.52E-12	0.	2.97E-13	2.21E-16	2.66E-13	6.62E-13	8.09E-12
44	6.40	5.26E-16	0.	1.82E-13	8.56E-14	1.10E-11	0.	3.00E-13	2.31E-16	2.65E-13	6.70E-13	1.25E-11
45	6.30	1.06E-15	0.	8.35E-14	3.35E-13	3.89E-12	0.	3.02E-13	2.42E-16	2.64E-13	6.80E-13	5.55E-12
46	6.20	2.92E-15	0.	3.50E-14	4.08E-13	6.24E-12	0.	3.04E-13	2.54E-16	2.62E-13	6.95E-13	7.94E-12
47	6.10	1.06E-14	0.	1.28E-14	1.04E-12	1.38E-11	0.	3.06E-13	2.67E-16	2.63E-13	7.10E-13	1.61E-11
48	6.00	2.52E-14	0.	2.79E-15	7.55E-13	3.34E-12	0.	3.09E-13	2.80E-16	2.64E-13	7.24E-13	5.43E-12
49	5.90	3.71E-14	0.	1.92E-16	1.03E-12	4.12E-12	0.	3.09E-13	2.95E-16	2.65E-13	7.39E-13	6.50E-12
50	5.80	5.08E-14	0.	4.96E-18	1.32E-12	3.87E-12	0.	3.04E-13	3.11E-16	2.65E-13	7.54E-13	6.58E-12
51	5.70	5.30E-14	0.	0.	1.29E-12	3.23E-12	0.	2.86E-13	3.27E-16	2.66E-13	7.69E-13	5.89E-12

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.22E-14	0.	0.	0.	8.20E-13	6.84E-12	0.	0.	2.66E-13	3.45E-16	2.66E-13	7.83E-13	9.04E-12
53	5.50	6.05E-14	0.	0.	0.	1.05E-12	7.53E-12	0.	0.	2.67E-13	3.64E-16	2.67E-13	7.98E-13	9.98E-12
54	5.40	5.89E-14	0.	0.	0.	8.12E-13	3.43E-12	0.	0.	2.68E-13	3.85E-16	2.68E-13	8.13E-13	5.65E-12
55	5.30	5.32E-14	0.	0.	0.	8.38E-13	6.65E-12	0.	0.	2.70E-13	4.07E-16	2.69E-13	8.30E-13	8.91E-12
56	5.20	3.33E-14	0.	0.	0.	8.28E-13	2.84E-12	0.	0.	2.72E-13	4.31E-16	2.71E-13	8.52E-13	5.09E-12
57	5.10	2.96E-14	0.	0.	0.	7.62E-13	4.07E-12	0.	1.51E-21	2.74E-13	4.57E-16	2.77E-13	8.74E-13	6.28E-12
58	5.00	2.07E-14	0.	0.	0.	6.20E-13	3.40E-12	0.	1.51E-21	2.77E-13	4.85E-16	2.84E-13	8.96E-13	5.50E-12
59	4.90	1.71E-14	0.	0.	0.	6.34E-13	2.80E-12	0.	1.51E-21	2.79E-13	5.16E-16	2.91E-13	9.13E-13	4.94E-12
60	4.80	1.73E-14	0.	0.	0.	6.52E-13	2.63E-12	0.	1.51E-21	2.81E-13	5.49E-16	2.97E-13	9.40E-13	4.81E-12
61	4.70	1.76E-14	0.	0.	0.	5.81E-13	1.82E-12	0.	1.51E-21	2.83E-13	5.85E-16	3.02E-13	9.63E-13	3.97E-12
62	4.60	1.94E-14	0.	0.	0.	5.56E-13	1.84E-12	0.	1.51E-21	2.86E-13	6.24E-16	3.09E-13	9.86E-13	4.00E-12
63	4.50	1.79E-14	0.	1.30E-14	0.	4.43E-13	1.10E-12	0.	1.51E-21	2.88E-13	6.66E-16	3.17E-13	1.01E-12	3.19E-12
64	4.40	1.66E-14	0.	6.29E-14	0.	4.13E-13	9.25E-13	0.	1.51E-21	2.90E-13	7.13E-16	3.25E-13	1.03E-12	3.07E-12
65	4.30	1.37E-14	0.	10.08E-14	0.	3.46E-13	4.27E-13	0.	1.51E-21	2.93E-13	7.64E-16	3.32E-13	3.97E-14	1.55E-12
66	4.20	1.16E-14	0.	5.87E-13	0.	3.42E-13	3.97E-13	0.	1.51E-21	2.95E-13	8.20E-16	1.81E-13	4.10E-14	1.86E-12
67	4.10	9.84E-15	0.	1.10E-13	0.	2.89E-13	9.61E-14	0.	1.51E-21	2.96E-13	8.82E-16	1.84E-13	4.23E-14	1.03E-12
68	4.00	8.07E-15	0.	7.90E-13	0.	2.53E-13	6.93E-14	0.	1.51E-21	2.97E-13	9.50E-16	1.50E-13	4.36E-14	1.61E-12
69	3.90	5.92E-15	0.	3.77E-13	1.83E-12	1.94E-13	3.94E-14	0.	1.51E-21	2.96E-13	1.02E-15	1.52E-13	4.49E-14	2.93E-12
70	3.80	6.10E-15	0.	3.87E-13	2.70E-11	2.01E-13	0.	0.	1.51E-21	2.95E-13	1.11E-15	8.90E-14	4.62E-14	2.80E-11
71	3.70	4.47E-15	0.	7.40E-13	4.1..-12	1.33E-13	0.	0.	1.51E-21	2.90E-13	1.20E-15	9.22E-14	5.39E-14	5.47E-12
72	3.60	3.63E-15	0.	2.30E-13	2.27E-11	1.47E-13	0.	0.	1.51E-21	2.72E-13	1.30E-15	1.03E-13	6.28E-14	2.35E-11
73	3.50	2.99E-15	0.	4.87E-13	1.31E-10	8.98E-14	0.	0.	1.51E-21	2.49E-13	1.42E-15	1.19E-13	7.19E-14	1.32E-10
74	3.40	2.33E-15	0.	1.96E-13	3.44E-12	9.89E-14	0.	0.	1.51E-21	1.44E-13	1.55E-15	1.36E-13	8.14E-14	4.06E-12
75	3.30	1.71E-15	0.	2.07E-13	3.47E-11	6.32E-14	0.	0.	1.51E-21	1.44E-13	1.69E-15	1.53E-13	9.10E-14	3.53E-11
76	3.20	1.28E-15	0.	8.44E-14	1.60E-10	6.23E-14	0.	0.	1.51E-21	1.44E-13	1.86E-15	1.69E-13	1.01E-13	1.68E-10
77	3.10	1.07E-15	0.	7.14E-14	5.50E-12	4.94E-14	0.	0.	1.51E-21	1.44E-13	2.04E-15	1.86E-13	1.10E-13	4.06E-12
78	3.00	8.21E-16	0.	3.19E-14	3.63E-11	4.00E-14	0.	0.	1.51E-21	1.45E-13	2.26E-15	2.03E-13	1.20E-13	3.68E-11
79	2.90	5.85E-16	0.	1.90E-14	3.44E-11	2.35E-14	0.	0.	1.51E-21	1.45E-13	2.50E-15	2.20E-13	1.30E-13	3.49E-11
80	2.80	5.43E-16	0.	8.01E-15	5.17E-12	1.19E-14	0.	0.	1.51E-21	1.45E-13	2.78E-15	2.38E-13	1.39E-13	5.72E-12
81	2.70	2.75E-16	0.	3.70E-15	1.79E-11	4.63E-15	0.	0.	1.51E-21	1.45E-13	3.10E-15	2.56E-13	2.27E-14	1.83E-11
82	2.60	9.57E-17	0.	1.84E-15	1.95E-12	1.51E-15	0.	0.	1.51E-21	1.45E-13	3.47E-15	6.84E-14	2.44E-14	2.19E-12
83	2.50	5.90E-18	0.	2.92E-16	8.30E-13	2.97E-16	0.	0.	1.51E-21	1.45E-13	3.91E-15	8.17E-14	2.79E-14	1.09E-12
84	2.40	0.	2.54E-14	0.	1.42E-12	2.73E-17	0.	0.	1.51E-21	1.45E-13	4.42E-15	1.03E-13	3.43E-14	1.73E-12
85	2.30	0.	1.90E-13	0.	0.	0.	0.	0.	1.51E-21	1.44E-13	5.02E-15	1.25E-13	4.10E-14	5.05E-13
86	2.20	0.	3.11E-13	0.	0.	0.	0.	0.	1.51E-21	1.43E-13	5.74E-15	1.47E-13	4.93E-14	6.57E-13
87	2.10	0.	6.76E-13	0.	0.	0.	0.	0.	1.51E-21	1.43E-13	6.60E-15	1.71E-13	5.75E-14	1.05E-12
88	2.00	0.	8.29E-13	0.	0.	0.	0.	0.	1.51E-21	1.38E-13	7.65E-15	1.95E-13	6.57E-14	1.24E-12
89	1.90	0.	2.74E-12	0.	0.	0.	0.	0.	1.51E-21	1.33E-13	8.93E-15	2.20E-13	7.40E-14	3.18E-12
90	1.80	0.	2.45E-12	0.	0.	0.	0.	0.	1.51E-21	1.27E-13	1.05E-14	2.53E-13	8.59E-14	2.92E-12
91	1.70	0.	2.80E-12	0.	0.	0.	0.	0.	1.51E-21	1.20E-13	1.25E-14	2.93E-13	8.94E-14	3.31E-12
92	1.60	0.	1.96E-12	0.	0.	0.	0.	0.	1.51E-21	1.01E-13	1.50E-14	2.88E-13	1.04E-13	2.46E-12
93	1.50	0.	2.39E-12	0.	0.	0.	0.	0.	1.51E-21	4.61E-14	1.82E-14	1.46E-13	5.60E-14	2.46E-12
94	1.40	0.	2.97E-12	0.	0.	0.	0.	0.	1.51E-21	0.	2.25E-14	1.98E-13	7.26E-14	3.26E-12
95	1.30	0.	1.88E-12	0.	0.	0.	0.	0.	1.51E-21	0.	2.81E-14	2.67E-13	9.82E-14	2.28E-12
96	1.20	0.	2.29E-12	0.	0.	0.	0.	0.	1.51E-21	0.	3.58E-14	3.21E-13	1.04E-13	2.75E-12
97	1.10	0.	1.48E-12	0.	0.	0.	0.	5.92E-17	1.51E-21	0.	4.65E-14	4.01E-13	1.31E-13	2.06E-12
98	1.00	0.	1.49E-12	0.	0.	0.	0.	2.75E-16	1.51E-21	0.	6.21E-14	4.82E-13	1.58E-13	2.19E-12
99	0.90	0.	1.09E-12	0.	0.	0.	0.	4.94E-16	1.51E-21	0.	8.56E-14	5.98E-13	1.84E-13	1.92E-12
100	0.80	0.	4.89E-13	0.	0.	0.	0.	4.74E-15	1.51E-21	0.	1.22E-13	4.47E-13	1.35E-13	1.20E-12
101	0.70	0.	1.41E-13	0.	0.	0.	0.	3.17E-15	1.51E-21	0.	1.83E-13	5.10E-13	1.55E-13	9.93E-13
102	0.60	0.	2.24E-15	0.	0.	0.	0.	1.26E-14	1.51E-21	0.	2.93E-13	5.73E-13	1.75E-13	1.06E-12

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.09E 01	0.	0.	0.	1.16E-01	8.24E-07	4.68E-01	5.08E-05	2.14E 01
2	10.60	0.	0.	1.70E 01	0.	0.	0.	1.16E-01	8.48E-07	7.71E-06	5.09E-05	1.71E 01
3	10.50	0.	0.	1.68E 01	0.	0.	0.	1.16E-01	8.72E-07	7.75E-06	5.09E-05	1.61E 01
4	10.40	0.	0.	1.37E 01	0.	0.	0.	1.16E-01	8.98E-07	7.78E-06	5.10E-05	1.38E 01
5	10.30	0.	0.	1.07E 01	0.	0.	0.	1.16E-01	9.24E-07	7.80E-06	5.11E-05	1.08E 01
6	10.20	0.	0.	1.02E 01	0.	0.	0.	1.16E-01	9.52E-07	7.82E-06	5.11E-05	1.04E 01
7	10.10	0.	0.	8.95E 00	0.	0.	0.	1.16E-01	9.81E-07	7.84E-06	5.12E-05	9.07E 00
8	10.00	0.	0.	6.74E 00	0.	0.	0.	1.17E-01	1.01E-06	7.85E-06	5.13E-05	6.84E 00
9	9.90	0.	0.	6.72E 00	0.	0.	0.	1.17E-01	1.04E-06	7.87E-06	5.14E-05	6.84E 00
10	9.80	0.	0.	5.65E 00	0.	0.	0.	1.17E-01	1.07E-06	7.89E-06	5.14E-05	5.77E 00
11	9.70	0.	0.	4.23E 00	0.	0.	0.	1.17E-01	1.11E-06	7.91E-06	5.15E-05	4.34E 00
12	9.60	0.	0.	4.52E 00	0.	0.	0.	1.17E-01	1.14E-06	7.93E-06	5.16E-05	4.63E 00
13	9.50	0.	7.32E 00	3.30E 00	0.	0.	0.	1.18E-01	1.18E-06	7.95E-06	5.16E-05	1.07E 01
14	9.40	0.	8.22E 00	2.81E 00	0.	0.	0.	1.18E-01	1.22E-06	7.97E-06	5.17E-05	1.11E 01
15	9.30	0.	9.12E 00	2.78E 00	0.	0.	0.	1.19E-01	1.26E-06	7.99E-06	5.18E-05	1.20E 01
16	9.20	0.	1.00E 01	1.89E 00	0.	0.	0.	1.19E-01	1.30E-06	8.01E-06	5.18E-05	1.20E 01
17	9.10	0.	1.22E 01	1.95E 00	0.	0.	0.	1.19E-01	1.34E-06	2.05E-06	5.19E-05	1.42E 01
18	9.00	0.	1.46E 01	1.54E 00	0.	0.	0.	1.20E-01	1.39E-06	2.04E-06	5.20E-05	1.62E 01
19	8.90	0.	1.70E 01	1.27E 00	0.	0.	0.	1.20E-01	1.43E-06	2.03E-06	5.20E-05	1.83E 01
20	8.80	0.	1.74E 01	1.18E 00	0.	0.	0.	1.21E-01	1.48E-06	2.02E-06	5.21E-05	1.89E 01
21	8.70	0.	1.69E 01	8.69E-01	0.	0.	0.	1.21E-01	1.54E-06	2.02E-06	5.22E-05	1.79E 01
22	8.60	0.	1.63E 01	8.74E-01	0.	0.	0.	1.22E-01	1.59E-06	2.01E-06	5.22E-05	1.72E 01
23	8.50	0.	1.57E 01	6.47E-01	0.	0.	0.	1.22E-01	1.65E-06	2.00E-06	5.23E-05	1.65E 01
24	8.40	0.	1.53E 01	6.14E-01	0.	0.	0.	1.23E-01	1.71E-06	1.99E-06	5.24E-05	1.60E 01
25	8.30	0.	1.47E 01	4.45E-01	0.	0.	0.	1.23E-01	1.77E-06	1.98E-06	5.26E-05	1.53E 01
26	8.20	0.	1.47E 01	4.27E-01	0.	0.	0.	1.24E-01	1.84E-06	1.98E-06	5.33E-05	1.47E 01
27	8.10	0.	1.37E 01	3.18E-01	0.	0.	0.	1.25E-01	1.91E-06	1.96E-06	5.40E-05	1.41E 01
28	8.00	0.	1.32E 01	3.01E-01	0.	0.	0.	1.25E-01	1.98E-06	1.95E-06	5.46E-05	1.36E 01
29	7.90	0.	1.26E 01	2.25E-01	0.	0.	0.	1.26E-01	2.06E-06	1.94E-06	5.53E-05	1.29E 01
30	7.80	0.	1.20E 01	2.18E-01	0.	0.	0.	1.26E-01	2.14E-06	1.93E-06	5.60E-05	1.23E 01
31	7.70	0.	1.13E 01	1.68E-01	0.	0.	0.	1.27E-01	2.22E-06	1.92E-06	5.66E-05	1.16E 01
32	7.60	0.	1.04E 01	1.45E-01	0.	2.72E-04	0.	1.28E-01	2.31E-06	1.91E-06	5.73E-05	1.09E 01
33	7.50	0.	9.90E 00	1.19E-01	0.	2.14E-03	0.	1.28E-01	2.40E-06	1.90E-06	5.80E-05	1.01E 01
34	7.40	0.	9.32E 00	9.67E-02	0.	7.22E-03	0.	1.29E-01	2.50E-06	1.89E-06	5.86E-05	9.55E 00
35	7.30	0.	8.80E 00	8.22E-02	0.	4.40E-02	0.	1.30E-01	2.61E-06	1.88E-06	5.93E-05	9.05E 00
36	7.20	0.	8.16E 00	6.63E-02	0.	1.34E-01	0.	1.31E-01	2.72E-06	1.87E-06	6.00E-05	8.49E 00
37	7.10	0.	7.52E 00	5.79E-02	0.	2.56E-01	0.	1.32E-01	2.83E-06	1.86E-06	6.06E-05	7.94E 00
38	7.00	1.34E-02	0.	4.70E-02	0.	9.91E-01	0.	1.33E-01	2.96E-06	1.85E-06	6.13E-05	1.18E 00
39	6.90	2.44E-02	0.	3.87E-02	0.	7.79E-01	0.	1.34E-01	3.09E-06	1.84E-06	6.20E-05	9.76E-01
40	6.80	1.96E-02	0.	3.31E-02	0.	1.79E 00	0.	1.35E-01	3.23E-06	1.83E-06	6.26E-05	1.98E 00
41	6.70	1.32E-02	0.	2.57E-02	0.	2.82E 00	0.	1.36E-01	3.37E-06	1.82E-06	6.33E-05	2.99E 00
42	6.60	7.52E-03	0.	2.04E-02	0.	1.28E 00	0.	1.37E-01	3.53E-06	1.82E-06	6.41E-05	1.45E 00
43	6.50	4.00E-03	0.	1.40E-02	0.	2.62E 00	0.	1.38E-01	3.70E-06	1.81E-06	6.48E-05	2.78E 00
44	6.40	5.68E-03	0.	7.85E-03	2.61E-02	3.84E 00	0.	1.39E-01	3.87E-06	1.81E-06	6.55E-05	4.83E 00
45	6.30	1.16E-02	0.	3.87E-03	1.06E-01	1.51E 00	0.	1.40E-01	4.06E-06	1.80E-06	6.64E-05	1.78E 00
46	6.20	3.27E-02	0.	1.73E-03	1.33E-01	2.45E 00	0.	1.41E-01	4.26E-06	1.80E-06	6.78E-05	2.76E 00
47	6.10	1.23E-01	0.	6.68E-04	3.49E-01	4.72E 00	0.	1.42E-01	4.47E-06	1.81E-06	6.91E-05	5.34E 00
48	6.00	3.02E-01	0.	1.49E-04	2.68E-01	1.34E 00	0.	1.43E-01	4.70E-06	1.82E-06	7.05E-05	2.05E 00
49	5.90	4.56E+01	0.	1.05E-05	3.70E-01	1.57E 00	0.	1.43E-01	4.95E-06	1.83E-06	7.19E-05	2.54E 00
50	5.80	6.50E+01	0.	2.53E-07	4.81E-01	1.45E 00	0.	1.41E-01	5.21E-06	1.83E-06	7.33E-05	2.73E 00
51	5.70	7.06E+01	0.	0.	4.89E-01	1.36E 00	0.	1.33E-01	5.49E-06	1.84E-06	7.46E-05	2.69E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.45E-01	0.	0.	0.	3.32E-01	2.56E 00	0.	0.	1.23E-01	5.79E-06	1.85E-06	7.60E-05	3.86E 00
53	5.50	8.40E-01	0.	0.	0.	4.17E-01	2.65E 00	0.	0.	1.24E-01	6.11E-06	1.86E-06	7.74E-05	4.03E 00
54	5.40	8.35E-01	0.	0.	0.	3.32E-01	1.41E 00	0.	0.	1.25E-01	6.46E-06	1.88E-06	7.88E-05	2.71E 00
55	5.30	7.74E-01	0.	0.	0.	3.43E-01	2.45E 00	0.	0.	1.25E-01	6.83E-06	1.89E-06	8.04E-05	3.69E 00
56	5.20	5.08E-01	0.	0.	0.	3.45E-01	1.16E 00	0.	0.	1.26E-01	7.24E-06	1.91E-06	8.25E-05	2.15E 00
57	5.10	4.58E-01	0.	0.	0.	3.25E-01	1.65E 00	0.	1.81E-03	1.27E-01	7.67E-06	1.95E-06	8.45E-05	2.57E 00
58	5.00	3.26E-01	0.	0.	0.	2.72E-01	1.38E 00	0.	1.81E-03	1.28E-01	8.14E-06	2.00E-06	8.66E-05	2.11E 00
59	4.90	2.70E-01	0.	0.	0.	2.83E-01	1.24E 00	0.	1.81E-03	1.29E-01	8.65E-06	2.09E-06	8.87E-05	1.92E 00
60	4.80	2.73E-01	0.	0.	0.	2.93E-01	1.14E 00	0.	1.81E-03	1.31E-01	9.20E-06	2.10E-06	9.08E-05	1.64E 00
61	4.70	2.83E-01	0.	0.	0.	2.68E-01	8.67E-01	0.	1.81E-03	1.32E-01	9.81E-06	2.14E-06	9.30E-05	1.55E 00
62	4.60	3.19E-01	0.	0.	0.	2.60E-01	8.44E-01	0.	1.81E-03	1.33E-01	1.05E-05	2.19E-06	9.52E-05	1.54E 00
63	4.50	3.03E-01	0.	7.28E-04	0.	2.13E-01	5.45E-01	0.	1.81E-03	1.34E-01	1.12E-05	2.26E-06	9.75E-05	1.28E 00
64	4.40	2.90E-01	0.	3.12E-03	0.	2.02E-01	4.34E-01	0.	1.81E-03	1.35E-01	1.20E-05	2.32E-06	9.97E-05	1.07E 00
65	4.30	2.47E-01	0.	5.03E-03	0.	1.74E-01	2.17E-01	0.	1.81E-03	1.36E-01	1.28E-05	2.38E-06	1.02E-04	7.82E-01
66	4.20	2.13E-01	0.	2.96E-02	0.	1.75E-01	1.91E-01	0.	1.81E-03	1.37E-01	1.37E-05	2.44E-06	1.04E-04	7.48E-01
67	4.10	1.84E-01	0.	6.73E-03	0.	1.53E-01	4.70E-02	0.	1.81E-03	1.37E-01	1.48E-05	2.51E-06	1.06E-04	5.31E-01
68	4.00	1.55E-01	0.	4.07E-02	0.	1.37E-01	3.50E-02	0.	1.81E-03	1.38E-01	1.59E-05	2.57E-06	7.85E-06	5.07E-01
69	3.90	1.18E-01	0.	1.84E-02	1.35E-05	1.09E-01	1.88E-02	0.	1.81E-03	1.37E-01	1.72E-05	1.64E-06	7.25E-06	4.82E-01
70	3.80	1.23E-01	0.	2.18E-02	1.50E-04	1.14E-01	0.	0.	1.81E-03	1.37E-01	1.86E-05	1.67E-06	7.47E-06	3.97E-01
71	3.70	9.39E-02	0.	3.59E-02	2.52E-04	7.97E-02	0.	0.	1.81E-03	1.35E-01	2.01E-05	1.31E-06	8.59E-06	3.46E-01
72	3.60	7.88E-02	0.	1.36E-02	1.56E-04	6.76E-02	0.	0.	1.81E-03	1.26E-01	2.19E-05	1.41E-06	9.90E-06	3.07E-01
73	3.50	6.68E-02	0.	2.54E-02	7.17E-04	5.68E-02	0.	0.	1.81E-03	1.16E-01	2.38E-05	1.17E-06	1.13E-05	2.66E-01
74	3.40	5.34E-02	0.	9.66E-03	2.78E-05	6.25E-02	0.	0.	1.81E-03	6.67E-02	2.60E-05	1.33E-06	1.27E-05	1.94E-01
75	3.30	3.99E-02	0.	1.18E-02	2.24E-04	4.22E-02	0.	0.	1.81E-03	6.68E-02	2.84E-05	1.49E-06	1.41E-05	1.63E-01
76	3.20	3.08E-02	0.	5.48E-03	8.30E-04	4.20E-02	0.	0.	1.81E-03	6.69E-02	3.12E-05	1.65E-06	1.56E-05	1.48E-01
77	3.10	2.66E-02	0.	4.41E-03	4.38E-05	3.48E-02	0.	0.	1.81E-03	6.70E-02	3.43E-05	1.81E-06	1.71E-05	1.35E-01
78	3.00	2.11E-02	0.	2.17E-03	2.31E-04	2.90E-02	0.	0.	1.81E-03	6.72E-02	3.79E-05	1.97E-06	1.86E-05	1.22E-01
79	2.90	1.56E-02	0.	1.20E-03	1.90E-04	1.81E-02	0.	0.	1.81E-03	6.73E-02	4.19E-05	2.14E-06	2.01E-05	1.04E-01
80	2.80	1.48E-02	0.	5.67E-04	4.00E-05	9.76E-03	0.	0.	1.81E-03	6.74E-02	4.66E-05	2.31E-06	2.16E-05	9.45E-02
81	2.70	7.93E-03	0.	2.59E-04	1.14E-04	4.12E-03	0.	0.	1.81E-03	6.74E-02	5.20E-05	2.49E-06	2.32E-05	8.17E-02
82	2.60	2.95E-03	0.	1.32E-04	1.14E-05	1.44E-03	0.	0.	1.81E-03	6.74E-02	5.83E-05	2.69E-06	2.48E-05	7.39E-02
83	2.50	1.87E-04	0.	1.93E-05	6.18E-06	2.97E-04	0.	0.	1.81E-03	6.74E-02	6.56E-05	2.96E-06	9.84E-06	6.98E-02
84	2.40	0.	1.44E-03	0.	9.08E-06	2.82E-05	0.	0.	1.81E-03	6.74E-02	7.42E-05	3.33E-06	7.19E-06	7.08E-02
85	2.30	0.	8.83E-03	0.	0.	0.	0.	0.	1.81E-03	6.69E-02	8.43E-05	1.55E-06	8.68E-06	7.76E-02
86	2.20	0.	1.60E-02	0.	0.	0.	0.	0.	1.81E-03	6.66E-02	9.64E-05	1.83E-06	1.43E-05	8.45E-02
87	2.10	0.	2.93E-02	0.	0.	0.	0.	0.	1.81E-03	6.63E-02	1.11E-04	2.13E-06	1.71E-05	9.76E-02
88	2.00	0.	4.03E-02	0.	0.	0.	0.	0.	1.81E-03	6.42E-02	1.29E-04	2.43E-06	1.38E-05	1.06E-01
89	1.90	0.	1.09E-01	0.	0.	0.	0.	0.	1.81E-03	6.18E-02	1.50E-04	2.73E-06	1.56E-05	1.73E-01
90	1.80	0.	9.22E-02	0.	0.	0.	0.	0.	1.81E-03	5.91E-02	1.77E-04	3.10E-06	1.83E-05	1.53E-01
91	1.70	0.	1.10E-01	0.	0.	0.	0.	0.	1.81E-03	5.56E-02	2.10E-04	3.71E-06	2.16E-05	1.67E-01
92	1.60	0.	7.55E-02	0.	0.	0.	0.	0.	1.81E-03	4.71E-02	2.52E-04	4.24E-06	2.48E-05	1.29E-01
93	1.50	0.	9.39E-02	0.	0.	0.	0.	0.	1.81E-03	2.14E-02	3.97E-04	5.18E-06	2.91E-05	1.17E-01
94	1.40	0.	1.09E-01	0.	0.	0.	0.	0.	1.81E-03	0.	3.78E-04	6.82E-06	3.22E-05	1.11E-01
95	1.30	0.	7.38E-02	0.	0.	0.	0.	0.	1.81E-03	0.	4.73E-04	6.05E-06	4.08E-05	7.62E-02
96	1.20	0.	6.27E-02	0.	0.	0.	0.	0.	1.81E-03	0.	6.03E-04	5.38E-06	3.28E-05	8.52E-02
97	1.10	0.	5.91E-02	0.	0.	0.	0.	2.31E-05	1.81E-03	0.	7.89E-04	6.62E-06	3.95E-05	6.17E-02
98	1.00	0.	5.72E-02	0.	0.	0.	0.	1.37E-04	1.81E-03	0.	1.09E-03	7.92E-06	4.15E-05	6.02E-02
99	0.90	0.	4.39E-02	0.	0.	0.	0.	2.07E-04	1.81E-03	0.	1.44E-03	8.75E-06	4.86E-05	4.74E-02
100	0.80	0.	1.99E-02	0.	0.	0.	0.	2.93E-03	1.81E-03	0.	2.86E-03	1.08E-05	5.57E-05	2.64E-02
101	0.70	0.	5.60E-03	0.	0.	0.	0.	1.48E-03	1.81E-03	0.	3.10E-03	1.12E-05	6.26E-05	1.22E-02
102	0.60	0.	1.52E-04	0.	0.	0.	0.	6.73E-03	1.81E-03	0.	4.96E-03	1.24E-05	6.97E-05	1.37E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-03 (19.0E-P$_1$ NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	C- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.08E 00	0.	0.	0.	3.14E-03	3.26E-08	2.38E-06	6.87E-06	2.01E 00
2	10.60	0.	0.	1.63E 00	0.	0.	0.	3.15E-03	3.34E-08	2.39E-06	6.38E-06	1.63E 00
3	10.50	0.	0.	1.54E 00	0.	0.	0.	3.15E-03	3.46E-08	2.40E-06	6.38E-06	1.54E 00
4	10.40	0.	0.	1.32E 00	0.	0.	0.	3.16E-03	3.56E-08	2.41E-06	6.39E-06	1.32E 00
5	10.30	0.	0.	1.03E 00	0.	0.	0.	3.16E-03	3.66E-08	2.42E-06	6.40E-06	1.03E 00
6	10.20	0.	0.	9.84E-01	0.	0.	0.	3.17E-03	3.77E-08	2.42E-06	6.41E-06	9.97E-01
7	10.10	0.	0.	8.60E-01	0.	0.	0.	3.17E-03	3.88E-08	2.43E-06	6.42E-06	8.63E-01
8	10.00	0.	0.	6.48E-01	0.	0.	0.	3.17E-03	4.00E-08	2.44E-06	6.43E-06	6.51E-01
9	9.90	0.	0.	6.46E-01	0.	0.	0.	3.18E-03	4.13E-08	2.44E-06	6.44E-06	6.49E-01
10	9.80	0.	0.	5.43E-01	0.	0.	0.	3.19E-03	4.25E-08	2.45E-06	6.44E-06	5.46E-01
11	9.70	0.	0.	4.06E-01	0.	0.	0.	3.19E-03	4.39E-08	2.45E-06	6.45E-06	4.09E-01
12	9.60	0.	0.	4.34E-01	0.	0.	0.	3.20E-03	4.53E-08	2.46E-06	6.46E-06	4.37E-01
13	9.50	0.	1.17E-01	3.17E-01	0.	0.	0.	3.20E-03	4.67E-08	2.47E-06	6.47E-06	4.30E-01
14	9.40	0.	1.32E-01	2.70E-01	0.	0.	0.	3.21E-03	4.82E-08	2.47E-06	6.48E-06	4.04E-01
15	9.30	0.	1.44E-01	2.67E-01	0.	0.	0.	3.23E-03	4.98E-08	2.48E-06	6.49E-06	4.17E-01
16	9.20	0.	1.66E-01	1.81E-01	0.	0.	0.	3.24E-03	5.14E-08	6.38E-07	6.49E-06	3.45E-01
17	9.10	0.	1.95E-01	1.87E-01	0.	0.	0.	3.25E-03	5.32E-08	6.35E-07	6.50E-06	3.85E-01
18	9.00	0.	2.33E-01	1.48E-01	0.	0.	0.	3.26E-03	5.50E-08	6.33E-07	6.51E-06	3.84E-01
19	8.90	0.	2.71E-01	1.22E-01	0.	0.	0.	3.27E-03	5.68E-08	6.30E-07	6.52E-06	3.97E-01
20	8.80	0.	2.87E-01	1.14E-01	0.	0.	0.	3.28E-03	5.88E-08	6.28E-07	6.53E-06	3.99E-01
21	8.70	0.	2.71E-01	8.35E-02	0.	0.	0.	3.30E-03	6.09E-08	6.25E-07	6.54E-06	3.58E-01
22	8.60	0.	2.60E-01	8.39E-02	0.	0.	0.	3.31E-03	6.30E-08	6.23E-07	6.55E-06	3.47E-01
23	8.50	0.	2.52E-01	6.22E-02	0.	0.	0.	3.32E-03	6.53E-08	6.20E-07	6.55E-06	3.17E-01
24	8.40	0.	2.45E-01	5.98E-02	0.	0.	0.	3.34E-03	6.77E-08	6.18E-07	6.56E-06	3.17E-01
25	8.30	0.	2.35E-01	4.28E-02	0.	0.	0.	3.35E-03	7.02E-08	6.15E-07	6.60E-06	2.82E-01
26	8.20	0.	2.2.E-01	4.11E-02	0.	0.	0.	3.37E-03	7.28E-08	6.13E-07	6.68E-06	2.71E-01
27	8.10	0.	2.19E-01	3.06E-02	0.	0.	0.	3.39E-03	7.55E-08	6.89E-07	6.76E-06	2.53E-01
28	8.00	0.	2.11E-01	2.89E-02	0.	0.	0.	3.41E-03	7.84E-08	6.85E-07	6.85E-06	2.43E-01
29	7.90	0.	2.01E-01	2.17E-02	0.	0.	0.	3.42E-03	8.14E-08	6.82E-07	6.93E-06	2.26E-01
30	7.80	0.	1.92E-01	2.09E-02	0.	0.	0.	3.44E-03	8.46E-08	5.98E-07	7.01E-06	2.18E-01
31	7.70	0.	1.81E-01	1.61E-02	0.	0.	0.	3.46E-03	8.80E-08	5.95E-07	7.10E-06	2.01E-01
32	7.60	0.	1.70E-01	1.39E-02	0.	1.06E-05	0.	3.48E-03	9.15E-08	5.92E-07	7.18E-06	1.87E-01
33	7.50	0.	1.58E-01	1.14E-02	0.	8.30E-05	0.	3.49E-03	9.52E-08	5.89E-07	7.27E-06	1.73E-01
34	7.40	0.	1.49E-01	9.30E-03	0.	2.81E-04	0.	3.51E-03	9.92E-08	5.86E-07	7.35E-06	1.62E-01
35	7.30	0.	1.41E-01	7.90E-03	0.	1.71E-03	0.	3.53E-03	1.03E-07	5.83E-07	7.43E-06	1.54E-01
36	7.20	0.	1.31E-01	6.37E-03	0.	5.22E-03	0.	3.55E-03	1.08E-07	5.80E-07	7.52E-06	1.46E-01
37	7.10	0.	1.20E-01	5.52E-03	0.	9.96E-03	0.	3.58E-03	1.12E-07	5.77E-07	7.60E-06	1.39E-01
38	7.00	2.10E-04	0.	4.52E-03	0.	3.85E-02	0.	3.61E-03	1.17E-07	5.74E-07	7.68E-06	4.49E-02
39	6.90	3.84E-04	0.	3.72E-03	0.	3.03E-02	0.	3.64E-03	1.22E-07	5.71E-07	7.77E-06	3.88E-02
40	6.80	3.08E-04	0.	3.18E-03	0.	6.96E-02	0.	3.67E-03	1.28E-07	5.68E-07	7.85E-06	7.68E-02
41	6.70	2.08E-04	0.	2.47E-03	0.	1.09E-01	0.	3.70E-03	1.34E-07	5.65E-07	7.94E-06	1.16E-01
42	6.60	1.18E-04	0.	1.96E-03	0.	4.98E-02	0.	3.73E-03	1.40E-07	5.63E-07	8.03E-06	5.56E-02
43	6.50	6.29E-05	0.	1.35E-03	0.	1.02E-01	0.	3.76E-03	1.46E-07	5.62E-07	8.12E-06	1.07E-01
44	6.40	8.93E-05	0.	7.54E-04	1.01E-03	1.50E-01	0.	3.79E-03	1.53E-07	5.60E-07	8.20E-06	1.55E-01
45	6.30	1.82E-04	0.	3.72E-04	4.13E-03	5.88E-02	0.	3.81E-03	1.61E-07	5.59E-07	8.32E-06	6.74E-02
46	6.20	5.14E-04	0.	1.66E-04	5.18E-03	9.53E-02	0.	3.84E-03	1.69E-07	5.58E-07	8.49E-06	1.06E-01
47	6.10	1.93E-03	0.	6.42E-05	1.36E-02	1.84E-01	0.	3.87E-03	1.77E-07	5.60E-07	8.66E-06	2.03E-01
48	6.00	4.74E-03	0.	1.44E-05	1.04E-02	5.21E-02	0.	3.90E-03	1.86E-07	5.63E-07	8.84E-06	7.12E-02
49	5.90	7.20E-03	0.	1.01E-06	1.44E-02	6.10E-02	0.	3.90E-03	1.96E-07	5.66E-07	9.01E-06	8.45E-02
50	5.80	1.02E-02	0.	2.43E-08	1.87E-02	5.65E-02	0.	3.84E-03	2.06E-07	5.69E-07	9.18E-06	8.93E-02
51	5.70	1.11E-02	0.	0.	1.90E-02	5.27E-02	0.	3.61E-03	2.17E-07	5.71E-07	9.35E-06	8.65E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R	O2 BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	C- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
52	5.60	1.33E-02	0.	0.	0.	1.29E-02	9.95E-02	0.	0.	3.36E-03	2.29E-07	5.74E-07	9.53E-06	1.29E-01
53	5.50	1.32E-02	0.	0.	0.	1.62E-02	1.03E-01	0.	0.	3.37E-03	2.42E-07	5.77E-07	9.70E-06	1.36E-01
54	5.40	1.32E-02	0.	0.	0.	1.29E-02	5.48E-02	0.	0.	3.39E-03	2.56E-07	5.82E-07	9.88E-06	8.44E-02
55	5.30	1.22E-02	0.	0.	0.	1.33E-02	9.51E-02	0.	0.	3.41E-03	2.71E-07	5.86E-07	1.01E-05	1.24E-01
56	5.20	7.99E-03	0.	0.	0.	1.34E-02	4.52E-02	0.	0.	3.44E-03	2.87E-07	5.92E-07	1.03E-05	7.61E-02
57	5.10	7.20E-03	0.	0.	0.	1.26E-02	6.42E-02	0.	8.02E-06	3.46E-03	3.04E-07	6.06E-07	1.06E-05	8.75E-02
58	5.00	5.13E-03	0.	0.	0.	1.06E-02	9.38E-02	0.	8.02E-06	3.49E-03	3.23E-07	6.21E-07	1.09E-05	7.30E-02
59	4.90	4.25E-03	0.	0.	0.	1.10E-02	4.81E-02	0.	8.02E-06	3.52E-03	3.43E-07	6.36E-07	1.11E-05	6.69E-02
60	4.80	4.29E-03	0.	0.	0.	1.14E-02	4.45E-02	0.	8.02E-06	3.55E-03	3.65E-07	6.50E-07	1.14E-05	6.37E-02
61	4.70	4.44E-03	0.	0.	0.	1.04E-02	3.37E-02	0.	8.02E-06	3.58E-03	3.88E-07	6.64E-07	1.17E-05	5.21E-02
62	4.60	5.02E-03	0.	0.	0.	1.01E-02	3.24E-02	0.	8.02E-06	3.61E-03	4.14E-07	6.80E-07	1.19E-05	5.15E-02
63	4.50	4.76E-03	0.	6.92E-05	0.	8.28E-03	2.12E-02	0.	8.02E-06	3.64E-03	4.43E-07	6.99E-07	1.22E-05	3.79E-02
64	4.40	4.55E-03	0.	3.00E-04	0.	7.85E-03	1.69E-02	0.	8.02E-06	3.67E-03	4.74E-07	7.19E-07	1.25E-05	3.33E-02
65	4.30	3.88E-03	0.	5.40E-04	0.	6.76E-03	8.45E-03	0.	8.02E-06	3.70E-03	5.07E-07	7.38E-07	1.28E-05	2.34E-02
66	4.20	3.39E-03	0.	2.86E-03	0.	6.81E-03	7.42E-03	0.	8.02E-06	3.73E-03	5.45E-07	7.57E-07	1.31E-05	2.42E-02
67	4.10	2.90E-03	0.	6.46E-04	0.	5.95E-03	1.83E-03	0.	8.02E-06	3.74E-03	5.86E-07	7.77E-07	8.58E-07	1.51E-02
68	4.00	2.44E-03	0.	3.91E-03	0.	5.31E-03	1.36E-03	0.	8.02E-06	3.76E-03	6.31E-07	4.98E-07	8.84E-07	1.48E-02
69	3.90	1.85E-03	0.	1.78E-03	5.96E-06	4.24E-03	6.53E-04	0.	8.02E-06	3.74E-03	6.81E-07	5.08E-07	9.09E-07	1.23E-02
70	3.80	1.93E-03	0.	2.09E-03	6.64E-05	4.42E-03	0.	0.	8.02E-06	3.73E-03	7.36E-07	3.99E-07	9.36E-07	1.22E-02
71	3.70	1.48E-03	0.	3.45E-03	1.12E-05	3.16E-03	0.	0.	8.02E-06	3.67E-03	7.98E-07	4.06E-07	1.08E-06	1.17E-02
72	3.60	1.23E-03	0.	1.31E-03	6.92E-05	3.40E-03	0.	0.	8.02E-06	3.44E-03	8.66E-07	3.16E-07	1.24E-06	9.45E-03
73	3.50	1.04E-03	0.	2.44E-03	3.17E-04	2.21E-03	0.	0.	8.02E-06	3.14E-03	9.43E-07	3.61E-07	1.41E-06	9.16E-03
74	3.40	8.39E-04	0.	9.28E-04	1.23E-05	2.43E-03	0.	0.	8.02E-06	1.81E-03	1.03E-06	4.11E-07	1.59E-06	6.03E-03
75	3.30	6.27E-04	0.	1.13E-03	9.90E-05	1.64E-03	0.	0.	8.02E-06	1.82E-03	1.13E-06	4.61E-07	1.77E-06	5.33E-03
76	3.20	4.85E-04	0.	5.27E-04	3.07E-04	1.63E-03	0.	0.	8.02E-06	1.82E-03	1.23E-06	5.10E-07	1.96E-06	4.84E-03
77	3.10	4.17E-04	0.	4.24E-04	1.94E-05	1.35E-03	0.	0.	8.02E-06	1.82E-03	1.36E-06	5.61E-07	2.14E-06	4.05E-03
78	3.00	3.32E-04	0.	2.09E-04	1.82E-04	1.13E-03	0.	0.	8.02E-06	1.83E-03	1.50E-06	6.12E-07	2.33E-06	3.61E-03
79	2.90	2.49E-04	0.	1.23E-04	8.42E-05	7.03E-04	0.	0.	8.02E-06	1.83E-03	1.66E-06	6.82E-07	2.51E-06	3.08E-03
80	2.80	2.33E-04	0.	9.49E-05	1.77E-05	3.79E-04	0.	0.	8.02E-06	1.83E-03	1.85E-06	7.16E-07	2.71E-06	2.93E-03
81	2.70	1.25E-04	0.	2.49E-05	5.04E-05	1.60E-04	0.	0.	8.02E-06	1.83E-03	2.06E-06	7.71E-07	2.91E-06	2.71E-03
82	2.60	4.64E-05	0.	1.27E-05	9.05E-06	5.50E-05	0.	0.	8.02E-06	1.83E-03	2.31E-06	8.30E-07	3.07E-06	1.97E-03
83	2.50	2.95E-06	0.	1.09E-06	2.74E-06	1.19E-05	0.	0.	8.02E-06	1.83E-03	2.60E-06	9.17E-07	7.31E-07	1.87E-03
84	2.40	0.	1.30E-04	0.	4.02E-06	1.10E-06	0.	0.	8.02E-06	1.83E-03	2.94E-06	3.96E-07	9.01E-07	1.99E-03
85	2.30	0.	8.49E-04	0.	0.	0.	0.	0.	8.02E-06	1.82E-03	3.34E-06	4.80E-07	1.08E-06	2.48E-03
86	2.20	0.	1.54E-03	0.	0.	0.	0.	0.	8.02E-06	1.81E-03	3.82E-06	5.67E-07	1.30E-06	3.36E-03
87	2.10	0.	2.82E-03	0.	0.	0.	0.	0.	8.02E-06	1.81E-03	4.40E-06	6.68E-07	1.52E-06	4.64E-03
88	2.00	0.	3.88E-03	0.	0.	0.	0.	0.	8.02E-06	1.75E-03	5.09E-06	7.93E-07	1.74E-06	5.64E-03
89	1.90	0.	1.85E-02	0.	0.	0.	0.	0.	8.02E-06	1.68E-03	5.95E-06	8.48E-07	1.96E-06	1.22E-02
90	1.80	0.	8.06E-03	0.	0.	0.	0.	0.	8.02E-06	1.61E-03	7.01E-06	9.85E-07	2.24E-06	1.05E-02
91	1.70	0.	1.05E-02	0.	0.	0.	0.	0.	8.02E-06	1.51E-03	8.33E-06	1.15E-06	2.70E-06	1.21E-02
92	1.60	0.	7.24E-03	0.	0.	0.	0.	0.	8.02E-06	1.28E-03	1.00E-05	1.31E-06	3.11E-06	8.96E-03
93	1.50	0.	9.83E-03	0.	0.	0.	0.	0.	8.02E-06	5.02E-04	1.22E-05	1.50E-06	3.37E-06	9.63E-03
94	1.40	0.	1.84E-02	0.	0.	0.	0.	0.	8.02E-06	0.	1.50E-05	1.69E-06	4.03E-06	1.05E-02
95	1.30	0.	7.10E-03	0.	0.	0.	0.	0.	8.02E-06	0.	1.87E-05	1.27E-06	3.67E-06	7.13E-03
96	1.20	0.	7.95E-03	0.	0.	0.	0.	0.	8.02E-06	0.	2.30E-05	1.65E-06	4.91E-06	7.99E-03
97	1.10	0.	5.68E-03	0.	0.	0.	0.	8.97E-07	8.02E-06	0.	3.11E-05	2.05E-06	4.38E-06	5.72E-03
98	1.00	0.	5.49E-03	0.	0.	0.	0.	5.31E-06	8.02E-06	0.	4.15E-05	2.32E-06	5.20E-06	5.54E-03
99	0.90	0.	4.22E-03	0.	0.	0.	0.	3.05E-06	8.02E-06	0.	5.72E-05	2.71E-06	6.09E-06	4.30E-03
100	0.80	0.	1.92E-03	0.	0.	0.	0.	9.81E-05	8.02E-06	0.	8.18E-05	3.11E-06	6.98E-06	2.12E-03
101	0.70	0.	5.38E-04	0.	0.	0.	0.	6.23E-05	8.02E-06	0.	1.23E-04	3.47E-06	7.85E-06	7.43E-04
102	0.60	0.	1.46E-05	0.	0.	0.	0.	2.61E-04	8.02E-06	0.	1.96E-04	2.06E-06	6.01E-06	4.98E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E...	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.61E-01	0.	0.	0.	6.29E-05	1.11E-09	6.73E-07	6.83E-07	1.51E-01
2	10.60	0.	0.	1.31E-01	0.	0.	0.	6.30E-05	1.14E-09	6.77E-07	6.84E-07	1.31E-01
3	10.50	0.	0.	1.23E-01	0.	0.	0.	6.30E-05	1.17E-09	6.80E-07	6.85E-07	1.23E-01
4	10.40	0.	0.	1.06E-01	0.	0.	0.	6.31E-05	1.21E-09	6.83E-07	6.86E-07	1.06E-01
5	10.30	0.	0.	8.23E-02	0.	0.	0.	6.32E-05	1.24E-09	6.84E-07	6.87E-07	8.23E-02
6	10.20	0.	0.	7.89E-02	0.	0.	0.	6.33E-05	1.28E-09	6.84E-07	6.88E-07	7.89E-02
7	10.10	0.	0.	6.98E-02	0.	0.	0.	6.34E-05	1.32E-09	6.84E-07	6.89E-07	6.98E-02
8	10.00	0.	0.	5.19E-02	0.	0.	0.	6.35E-05	1.36E-09	6.89E-07	6.89E-07	5.20E-02
9	9.90	0.	0.	5.18E-02	0.	0.	0.	6.34E-05	1.40E-09	6.91E-07	6.90E-07	5.19E-02
10	9.80	0.	0.	4.35E-02	0.	0.	0.	6.37E-05	1.44E-09	6.93E-07	6.91E-07	4.34E-02
11	9.70	0.	0.	3.26E-02	0.	0.	0.	6.38E-05	1.48E-09	6.94E-07	6.92E-07	3.26E-02
12	9.60	0.	0.	3.48E-02	0.	0.	0.	6.39E-05	1.54E-09	6.96E-07	6.93E-07	3.49E-02
13	9.50	0.	1.34E-03	2.54E-02	0.	0.	0.	6.40E-05	1.59E-09	6.98E-07	6.94E-07	2.68E-02
14	9.40	0.	1.51E-03	2.16E-02	0.	0.	0.	6.43E-05	1.64E-09	7.00E-07	6.95E-07	2.32E-02
15	9.30	0.	1.67E-03	2.14E-02	0.	0.	0.	6.45E-05	1.69E-09	1.81E-07	6.96E-07	2.32E-02
16	9.20	0.	1.84E-03	1.45E-02	0.	0.	0.	6.47E-05	1.75E-09	1.81E-07	6.97E-07	1.64E-02
17	9.10	0.	2.24E-03	1.58E-02	0.	0.	0.	6.50E-05	1.81E-09	1.88E-07	6.98E-07	1.73E-02
18	9.00	0.	2.68E-03	1.19E-02	0.	0.	0.	6.52E-05	1.87E-09	1.79E-07	6.99E-07	1.46E-02
19	8.90	0.	3.11E-03	9.79E-03	0.	0.	0.	6.54E-05	1.93E-09	1.78E-07	6.99E-07	1.30E-02
20	8.80	0.	3.24E-03	9.12E-03	0.	0.	0.	6.57E-05	2.00E-09	1.78E-07	7.00E-07	1.24E-02
21	8.70	0.	3.11E-03	6.69E-03	0.	0.	0.	6.59E-05	2.07E-09	1.77E-07	7.01E-07	9.87E-03
22	8.60	0.	2.99E-03	6.73E-03	0.	0.	0.	6.61E-05	2.14E-09	1.76E-07	7.02E-07	9.78E-03
23	8.50	0.	2.89E-03	4.98E-03	0.	0.	0.	6.64E-05	2.22E-09	1.76E-07	7.03E-07	7.94E-03
24	8.40	0.	2.81E-03	4.73E-03	0.	0.	0.	6.67E-05	2.30E-09	1.75E-07	7.04E-07	7.68E-03
25	8.30	0.	2.70E-03	3.43E-03	0.	0.	0.	6.71E-05	2.38E-09	1.74E-07	7.07E-07	6.20E-03
26	8.20	0.	2.61E-03	3.29E-03	0.	0.	0.	6.74E-05	2.47E-09	1.73E-07	7.16E-07	5.97E-03
27	8.10	0.	2.51E-03	2.49E-03	0.	0.	0.	6.78E-05	2.56E-09	1.72E-07	7.25E-07	5.83E-03
28	8.00	0.	2.42E-03	2.32E-03	0.	0.	0.	6.81E-05	2.66E-09	1.71E-07	7.34E-07	4.81E-03
29	7.90	0.	2.31E-03	1.74E-03	0.	0.	0.	6.85E-05	2.77E-09	1.70E-07	7.43E-07	4.12E-03
30	7.80	0.	2.20E-03	1.68E-03	0.	0.	0.	6.88E-05	2.87E-09	1.69E-07	7.52E-07	3.95E-03
31	7.70	0.	2.08E-03	1.20E-03	0.	0.	0.	6.92E-05	2.99E-09	1.69E-07	7.61E-07	3.44E-03
32	7.60	0.	1.99E-03	1.12E-03	0.	3.21E-07	0.	6.95E-05	3.11E-09	1.68E-07	7.70E-07	3.14E-03
33	7.50	0.	1.82E-03	9.16E-04	0.	2.52E-06	0.	6.99E-05	3.23E-09	1.67E-07	7.79E-07	2.81E-03
34	7.40	0.	1.71E-03	7.45E-04	0.	8.52E-06	0.	7.03E-05	3.37E-09	1.66E-07	7.88E-07	2.54E-03
35	7.30	0.	1.62E-03	6.34E-04	0.	5.19E-05	0.	7.06E-05	3.51E-09	1.65E-07	7.97E-07	2.37E-03
36	7.20	0.	1.50E-03	5.11E-04	0.	1.59E-04	0.	7.10E-05	3.66E-09	1.64E-07	8.06E-07	2.24E-03
37	7.10	0.	1.38E-03	4.43E-04	0.	3.03E-04	0.	7.14E-05	3.81E-09	1.63E-07	8.15E-07	2.70E-03
38	7.00	2.42E-06	0.	3.62E-04	0.	1.17E-03	0.	7.22E-05	3.98E-09	1.62E-07	8.24E-07	1.61E-03
39	6.90	4.42E-06	0.	2.98E-04	0.	9.19E-04	0.	7.28E-05	4.16E-09	1.62E-07	8.33E-07	1.38E-03
40	6.80	3.55E-06	0.	2.55E-04	0.	2.11E-03	0.	7.34E-05	4.34E-09	1.61E-07	8.42E-07	2.49E-03
41	6.70	2.39E-06	0.	1.98E-04	0.	3.32E-03	0.	7.39E-05	4.54E-09	1.60E-07	8.52E-07	3.68E-03
42	6.60	1.36E-06	0.	1.57E-04	0.	1.51E-03	0.	7.45E-05	4.75E-09	1.59E-07	8.61E-07	1.75E-03
43	6.50	7.23E-07	0.	1.08E-04	0.	3.09E-03	0.	7.51E-05	4.97E-09	1.59E-07	8.71E-07	3.28E-03
44	6.40	1.03E-06	0.	6.05E-05	3.08E-05	4.55E-03	0.	7.57E-05	5.21E-09	1.59E-07	8.80E-07	4.72E-03
45	6.30	2.09E-06	0.	2.98E-05	1.25E-04	1.79E-03	0.	7.63E-05	5.46E-09	1.58E-07	8.92E-07	2.02E-03
46	6.20	5.91E-06	0.	1.33E-05	1.57E-04	2.89E-03	0.	7.69E-05	5.73E-09	1.58E-07	9.11E-07	3.15E-03
47	6.10	2.22E-05	0.	5.15E-06	4.12E-04	5.57E-03	0.	7.74E-05	6.02E-09	1.59E-07	9.29E-07	6.09E-03
48	6.00	5.45E-05	0.	1.15E-06	3.17E-04	1.58E-03	0.	7.80E-05	6.33E-09	1.59E-07	9.48E-07	2.03E-03
49	5.90	8.28E-05	0.	8.10E-08	4.37E-04	1.85E-03	0.	7.86E-05	6.66E-09	1.60E-07	9.66E-07	2.45E-03
50	5.80	1.17E-04	0.	1.95E-09	5.68E-04	1.72E-03	0.	7.69E-05	7.01E-09	1.61E-07	9.85E-07	2.40E-03
51	5.75	1.28E-04	0.	0.	5.77E-04	1.60E-03	0.	7.22E-05	7.39E-09	1.62E-07	1.88E-06	2.38E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.53E-04	0.	0.	0.	3.92E-04	3.02E-03	0.	0.	6.71E-05	7.79E-09	1.62E-07	1.02E-06	3.63E-03
53	5.50	1.52E-04	0.	0.	0.	4.92E-04	3.13E-03	0.	0.	6.75E-05	8.22E-09	1.63E-07	1.04E-06	3.84E-03
54	5.40	1.52E-04	0.	0.	0.	3.92E-04	1.67E-03	0.	0.	6.78E-05	8.69E-09	1.65E-07	1.06E-06	2.28E-03
55	5.30	1.48E-04	0.	0.	0.	4.05E-04	2.09E-03	0.	0.	6.83E-05	9.19E-09	1.66E-07	1.08E-06	3.50E-03
56	5.20	9.19E-05	0.	0.	0.	4.07E-04	1.37E-03	0.	0.	6.87E-05	9.74E-09	1.67E-07	1.11E-06	1.94E-03
57	5.10	8.28E-05	0.	0.	0.	3.83E-04	1.95E-03	0.	2.87E-08	6.93E-05	1.03E-08	1.71E-07	1.14E-06	2.48E-03
58	5.00	5.98E-05	0.	0.	0.	3.21E-04	1.63E-03	0.	2.87E-08	6.99E-05	1.10E-08	1.76E-07	1.18E-06	2.09E-03
59	4.90	4.88E-05	0.	0.	0.	3.34E-04	1.46E-03	0.	2.87E-08	7.04E-05	1.16E-08	1.80E-07	1.19E-06	1.91E-03
60	4.80	4.93E-05	0.	0.	0.	3.46E-04	1.35E-03	0.	2.87E-08	7.10E-05	1.24E-08	1.84E-07	1.22E-06	1.82E-03
61	4.70	5.11E-05	0.	0.	0.	3.16E-04	1.02E-03	0.	2.87E-08	7.16E-05	1.32E-08	1.88E-07	1.25E-06	1.46E-03
62	4.60	5.77E-05	0.	0.	0.	3.07E-04	9.96E-04	0.	2.87E-08	7.22E-05	1.41E-08	1.93E-07	1.28E-06	1.43E-03
63	4.50	5.48E-05	0.	5.55E-06	0.	2.52E-04	6.43E-04	0.	2.87E-08	7.28E-05	1.50E-08	1.98E-07	1.31E-06	1.03E-03
64	4.40	5.24E-05	0.	2.40E-05	0.	2.39E-04	5.12E-04	0.	2.87E-08	7.34E-05	1.61E-08	2.03E-07	1.34E-06	9.02E-04
65	4.30	4.46E-05	0.	4.49E-05	0.	2.05E-04	2.56E-04	0.	2.87E-08	7.39E-05	1.72E-08	2.09E-07	1.37E-06	6.27E-04
66	4.20	3.85E-05	0.	2.29E-04	0.	2.07E-04	2.25E-04	0.	2.87E-08	7.45E-05	1.85E-08	2.14E-07	8.93E-08	7.75E-04
67	4.10	3.33E-05	0.	5.18E-05	0.	1.81E-04	5.54E-05	0.	2.87E-08	7.48E-05	1.99E-08	2.20E-07	9.21E-08	3.97E-04
68	4.00	2.81E-05	0.	3.13E-04	0.	1.61E-04	4.13E-05	0.	2.87E-08	7.51E-05	2.14E-08	1.41E-07	9.48E-08	6.19E-04
69	3.90	2.13E-05	0.	1.43E-04	2.58E-06	1.29E-04	1.98E-05	0.	2.87E-08	7.48E-05	2.31E-08	1.11E-07	9.75E-08	3.91E-04
70	3.80	2.22E-05	0.	1.48E-04	2.85E-05	1.34E-04	0.	0.	2.87E-08	7.49E-05	2.50E-08	1.13E-07	10.00E-08	4.28E-04
71	3.70	1.70E-05	0.	2.77E-04	4.80E-06	9.40E-05	0.	0.	2.87E-08	7.34E-05	2.71E-08	8.02E-08	1.15E-07	4.46E-04
72	3.60	1.41E-05	0.	1.05E-04	2.97E-05	1.03E-04	0.	0.	2.87E-08	6.87E-05	2.94E-08	8.94E-08	1.33E-07	3.21E-04
73	3.50	1.19E-05	0.	1.96E-04	1.36E-04	6.70E-05	0.	0.	2.87E-08	6.29E-05	3.20E-08	1.02E-07	1.51E-07	4.74E-04
74	3.40	9.65E-06	0.	7.44E-05	5.28E-06	7.38E-05	0.	0.	2.87E-08	3.63E-05	3.50E-08	1.16E-07	1.71E-07	2.08E-04
75	3.30	7.22E-06	0.	9.09E-05	4.25E-05	4.97E-05	0.	0.	2.87E-08	3.63E-05	3.82E-08	1.30E-07	1.90E-07	2.27E-04
76	3.20	5.57E-06	0.	4.22E-05	1.58E-04	4.95E-05	0.	0.	2.87E-08	3.64E-05	4.19E-08	1.45E-07	2.10E-07	2.92E-04
77	3.10	4.86E-06	0.	3.48E-05	8.33E-06	4.11E-05	0.	0.	2.87E-08	5.65E-05	4.62E-08	1.59E-07	2.30E-07	1.25E-04
78	3.00	3.82E-06	0.	1.67E-05	4.39E-05	3.43E-05	0.	0.	2.87E-08	3.66E-05	5.10E-08	1.73E-07	2.50E-07	1.36E-04
79	2.90	2.32E-06	0.	9.86E-06	3.62E-05	2.14E-05	0.	0.	2.87E-08	3.66E-05	5.64E-08	1.88E-07	2.70E-07	1.47E-04
80	2.80	2.68E-06	0.	4.37E-06	7.61E-06	1.15E-05	0.	0.	2.87E-08	3.67E-05	6.27E-08	2.03E-07	2.90E-07	6.34E-05
81	2.70	1.43E-06	0.	2.80E-06	2.16E-05	4.86E-06	0.	0.	2.87E-08	3.67E-05	7.00E-08	2.18E-07	3.08E-07	6.72E-05
82	2.60	5.33E-07	0.	1.82E-06	2.17E-06	1.70E-06	0.	0.	2.87E-08	3.67E-05	7.85E-08	2.35E-07	6.84E-08	4.25E-05
83	2.50	3.39E-08	0.	1.48E-07	1.18E-06	3.50E-07	0.	0.	2.87E-08	3.67E-05	8.83E-08	8.94E-08	7.84E-08	3.87E-05
84	2.40	0.	1.11E-05	0.	1.73E-06	3.33E-08	0.	0.	2.87E-08	3.67E-05	9.98E-08	1.12E-07	8.66E-08	4.99E-05
85	2.30	0.	6.80E-05	0.	0.	0.	0.	0.	2.87E-08	3.64E-05	1.13E-07	1.36E-07	1.16E-07	1.05E-04
86	2.20	0.	1.23E-04	0.	0.	0.	0.	0.	2.87E-08	3.62E-05	1.30E-07	1.61E-07	1.39E-07	1.68E-04
87	2.10	0.	2.24E-04	0.	0.	0.	0.	0.	2.87E-08	3.61E-05	1.49E-07	1.87E-07	1.63E-07	2.62E-04
88	2.00	0.	3.11E-04	0.	0.	0.	0.	0.	2.87E-08	3.49E-05	1.73E-07	2.13E-07	1.86E-07	3.40E-04
89	1.90	0.	4.39E-04	0.	0.	0.	0.	0.	2.87E-08	3.36E-05	2.02E-07	2.48E-07	2.10E-07	8.73E-04
90	1.80	0.	7.10E-04	0.	0.	0.	0.	0.	2.87E-08	3.21E-05	2.38E-07	2.79E-07	2.46E-07	7.43E-04
91	1.70	0.	8.44E-04	0.	0.	0.	0.	0.	2.87E-08	3.03E-05	2.83E-07	3.25E-07	2.90E-07	8.75E-04
92	1.60	0.	5.82E-04	0.	0.	0.	0.	0.	2.87E-08	2.56E-05	3.46E-07	3.72E-07	3.85E-07	6.08E-04
93	1.50	0.	7.24E-04	0.	0.	0.	0.	0.	2.87E-08	1.16E-05	4.13E-07	4.08E-07	3.62E-07	7.36E-04
94	1.40	0.	8.37E-04	0.	0.	0.	0.	0.	2.87E-08	0.	5.09E-07	2.52E-07	2.38E-07	8.38E-04
95	1.30	0.	5.69E-04	0.	0.	0.	0.	0.	2.87E-08	0.	6.36E-07	3.54E-07	3.29E-07	5.79E-04
96	1.20	0.	6.37E-04	0.	0.	0.	0.	0.	2.87E-08	0.	8.11E-07	4.67E-07	4.30E-07	6.39E-04
97	1.10	0.	4.55E-04	0.	0.	0.	0.	2.72E-08	2.87E-08	0.	1.06E-06	5.46E-07	4.61E-07	4.57E-04
98	1.00	0.	4.40E-04	0.	0.	0.	0.	1.61E-07	2.87E-08	0.	1.41E-06	6.97E-07	5.57E-07	4.43E-04
99	0.90	0.	3.30E-04	0.	0.	0.	0.	2.44E-07	2.87E-08	0.	1.94E-06	7.68E-07	6.53E-07	3.42E-04
100	0.80	0.	1.94E-04	0.	0.	0.	0.	2.98E-08	2.87E-08	0.	2.78E-06	8.71E-07	7.40E-07	1.61E-04
101	0.70	0.	4.31E-05	0.	0.	0.	0.	1.89E-06	2.87E-08	0.	4.17E-06	7.28E-07	5.71E-07	5.65E-05
102	0.60	0.	1.17E-06	0.	0.	0.	0.	7.94E-06	2.87E-08	0.	6.87E-06	8.09E-07	6.45E-07	1.73E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. Density (GM/CC) 1.293E-09 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	7.97E-03	0.	0.	0.	1.29E-06	4.45E-11	1.50E-07	6.97E-08	7.97E-03
2	10.60	0.	0.	6.48E-03	0.	0.	0.	1.29E-06	4.50E-11	1.51E-07	6.98E-08	6.48E-03
3	10.50	0.	0.	6.11E-03	0.	0.	0.	1.29E-06	4.71E-11	1.51E-07	6.99E-08	6.11E-03
4	10.40	0.	0.	5.24E-03	0.	0.	0.	1.29E-06	4.85E-11	1.52E-07	7.00E-08	5.25E-03
5	10.30	0.	0.	4.08E-03	0.	0.	0.	1.29E-06	4.99E-11	1.52E-07	7.01E-08	4.08E-03
6	10.20	0.	0.	3.91E-03	0.	0.	0.	1.30E-06	5.14E-11	1.53E-07	7.01E-08	3.91E-03
7	10.10	0.	0.	3.42E-03	0.	0.	0.	1.30E-06	5.29E-11	1.53E-07	7.02E-08	3.42E-03
8	10.00	0.	0.	2.57E-03	0.	0.	0.	1.30E-06	5.45E-11	1.54E-07	7.03E-08	2.90E-03
9	9.90	0.	0.	2.57E-03	0.	0.	0.	1.30E-06	5.62E-11	1.54E-07	7.04E-08	2.57E-03
10	9.80	0.	0.	2.16E-03	0.	0.	0.	1.30E-06	5.80E-11	1.54E-07	7.05E-08	2.16E-03
11	9.70	0.	0.	1.61E-03	0.	0.	0.	1.31E-06	5.98E-11	1.55E-07	7.06E-08	1.62E-03
12	9.60	0.	0.	1.72E-03	0.	0.	0.	1.31E-06	6.17E-11	1.55E-07	7.07E-08	1.73E-03
13	9.50	0.	1.41E-05	1.26E-03	0.	0.	0.	1.31E-06	6.37E-11	1.55E-07	7.08E-08	1.28E-03
14	9.40	0.	1.58E-05	1.07E-03	0.	0.	0.	1.32E-06	6.57E-11	1.56E-07	7.09E-08	1.09E-03
15	9.30	0.	1.76E-05	1.06E-03	0.	0.	0.	1.32E-06	6.79E-11	4.04E-08	7.10E-08	1.08E-03
16	9.20	0.	1.93E-05	7.21E-04	0.	0.	0.	1.33E-06	7.01E-11	4.02E-08	7.11E-08	7.41E-04
17	9.10	0.	2.34E-05	7.44E-04	0.	0.	0.	1.33E-06	7.25E-11	4.00E-08	7.12E-08	7.69E-04
18	9.00	0.	2.80E-05	5.89E-04	0.	0.	0.	1.33E-06	7.49E-11	3.99E-08	7.13E-08	6.19E-04
19	8.90	0.	3.27E-05	4.85E-04	0.	0.	0.	1.34E-06	7.75E-11	3.97E-08	7.14E-08	5.28E-04
20	8.80	0.	3.39E-05	4.52E-04	0.	0.	0.	1.34E-06	8.02E-11	3.96E-08	7.14E-08	4.88E-04
21	8.70	0.	3.26E-05	3.32E-04	0.	0.	0.	1.35E-06	8.30E-11	3.94E-08	7.15E-08	3.66E-04
22	8.60	0.	3.13E-05	3.34E-04	0.	0.	0.	1.35E-06	8.59E-11	3.92E-08	7.16E-08	3.66E-04
23	8.50	0.	3.03E-05	2.47E-04	0.	0.	0.	1.36E-06	8.90E-11	3.91E-08	7.17E-08	2.79E-04
24	8.40	0.	2.94E-05	2.34E-04	0.	0.	0.	1.37E-06	9.22E-11	3.89E-08	7.18E-08	2.65E-04
25	8.30	0.	2.83E-05	1.70E-04	0.	0.	0.	1.37E-06	9.54E-11	3.88E-08	7.22E-08	2.00E-04
26	8.20	0.	2.73E-05	1.63E-04	0.	0.	0.	1.38E-06	9.92E-11	3.86E-08	7.31E-08	1.92E-04
27	8.10	0.	2.63E-05	1.22E-04	0.	0.	0.	1.39E-06	1.03E-10	3.84E-08	7.40E-08	1.49E-04
28	8.00	0.	2.54E-05	1.15E-04	0.	0.	0.	1.39E-06	1.07E-10	3.81E-08	7.49E-08	1.42E-04
29	7.90	0.	2.42E-05	8.61E-05	0.	0.	0.	1.40E-06	1.11E-10	3.79E-08	7.58E-08	1.12E-04
30	7.80	0.	2.31E-05	8.32E-05	0.	0.	0.	1.41E-06	1.15E-10	3.77E-08	7.68E-08	1.08E-04
31	7.70	0.	2.18E-05	6.41E-05	0.	0.	0.	1.42E-06	1.20E-10	3.75E-08	7.77E-08	8.74E-05
32	7.60	0.	2.04E-05	5.54E-05	0.	7.31E-09	0.	1.42E-06	1.25E-10	3.73E-08	7.86E-08	7.74E-05
33	7.50	0.	1.91E-05	4.54E-05	0.	5.73E-08	0.	1.43E-06	1.30E-10	3.71E-08	7.95E-08	6.61E-05
34	7.40	0.	1.79E-05	3.70E-05	0.	1.94E-07	0.	1.44E-06	1.35E-10	3.69E-08	8.04E-08	5.66E-05
35	7.30	0.	1.69E-05	3.14E-05	0.	1.18E-06	0.	1.45E-06	1.41E-10	3.67E-08	8.13E-08	5.11E-05
36	7.20	0.	1.57E-05	2.53E-05	0.	3.60E-06	0.	1.45E-06	1.47E-10	3.66E-08	8.23E-08	4.62E-05
37	7.10	0.	1.45E-05	2.20E-05	0.	6.88E-06	0.	1.47E-06	1.53E-10	3.64E-08	8.32E-08	4.49E-05
38	7.00	2.52E-08	0.	1.88E-05	0.	2.66E-05	0.	1.48E-06	1.60E-10	3.62E-08	8.41E-08	4.62E-05
39	6.90	4.60E-08	0.	1.48E-05	0.	2.09E-05	0.	1.49E-06	1.67E-10	3.60E-08	8.50E-08	3.73E-05
40	6.80	3.69E-08	0.	1.26E-05	0.	4.81E-05	0.	1.50E-06	1.74E-10	3.58E-08	8.59E-08	6.24E-05
41	6.70	2.49E-08	0.	9.62E-06	0.	7.56E-05	0.	1.51E-06	1.82E-10	3.56E-08	8.69E-08	8.71E-05
42	6.60	1.42E-08	0.	7.81E-06	0.	3.44E-05	0.	1.53E-06	1.91E-10	3.55E-08	8.78E-08	4.39E-05
43	6.50	7.53E-09	0.	5.36E-06	0.	7.03E-05	0.	1.54E-06	2.00E-10	3.54E-08	8.88E-08	7.73E-05
44	6.40	1.07E-08	0.	3.00E-06	7.00E-07	1.04E-04	0.	1.55E-06	2.09E-10	3.53E-08	8.98E-08	1.09E-04
45	6.30	2.18E-08	0.	1.48E-06	2.85E-06	4.06E-05	0.	1.56E-06	2.19E-10	3.52E-08	9.10E-08	4.66E-05
46	6.20	6.15E-08	0.	6.61E-07	3.58E-06	6.58E-05	0.	1.57E-06	2.30E-10	3.52E-08	9.29E-08	7.19E-05
47	6.10	2.31E-07	0.	2.55E-07	9.37E-06	1.27E-04	0.	1.59E-06	2.42E-10	3.53E-08	9.48E-08	1.38E-04
48	6.00	5.68E-07	0.	5.71E-08	7.20E-06	3.60E-05	0.	1.60E-06	2.54E-10	3.55E-08	9.67E-08	4.56E-05
49	5.90	8.63E-07	0.	4.02E-09	4.92E-06	4.21E-05	0.	1.60E-06	2.67E-10	3.57E-08	9.86E-08	5.47E-05
50	5.80	1.22E-06	0.	9.67E-11	1.29E-05	3.90E-05	0.	1.57E-06	2.81E-10	3.59E-08	10.00E-08	5.49E-05
51	5.70	1.33E-06	0.	0.	1.31E-05	3.64E-05	0.	1.48E-06	2.96E-10	3.60E-08	1.02E-07	5.29E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.59E-06	0.	0.	0.	8.90E-06	6.87E-05	0.	0.	1.37E-06	3.13E-10	3.62E-08	1.04E-07	8.27E-05
53	5.50	1.50E-06	0.	0.	0.	1.12E-05	7.12E-05	0.	0.	1.38E-06	3.30E-10	3.64E-08	1.06E-07	8.55E-05
54	5.40	1.58E-06	0.	0.	0.	8.92E-06	3.79E-05	0.	0.	1.39E-06	3.49E-10	3.67E-08	1.08E-07	4.99E-05
55	5.30	1.46E-06	0.	0.	0.	9.20E-06	6.57E-05	0.	0.	1.40E-06	3.69E-10	3.69E-08	1.10E-07	7.79E-05
56	5.20	9.57E-07	0.	0.	0.	9.26E-06	3.12E-05	0.	0.	1.41E-06	3.91E-10	3.73E-08	1.13E-07	4.31E-05
57	5.10	8.63E-07	0.	0.	0.	8.71E-06	4.43E-05	0.	6.66E-11	1.42E-06	4.14E-10	3.82E-08	1.16E-07	5.55E-05
58	5.00	6.14E-07	0.	0.	0.	7.30E-06	3.71E-05	0.	6.66E-11	1.43E-06	4.40E-10	3.91E-08	1.19E-07	4.66E-05
59	4.90	5.09E-07	0.	0.	0.	7.60E-06	3.37E-05	0.	6.66E-11	1.44E-06	4.67E-10	4.01E-08	1.22E-07	4.30E-05
60	4.80	5.14E-07	0.	0.	0.	7.87E-06	3.07E-05	0.	6.66E-11	1.45E-06	4.97E-10	4.10E-08	1.24E-07	4.07E-05
61	4.70	5.32E-07	0.	0.	0.	7.18E-06	2.32E-05	0.	6.66E-11	1.47E-06	5.29E-10	4.18E-08	1.28E-07	3.26E-05
62	4.60	6.01E-07	0.	0.	0.	6.97E-06	2.24E-05	0.	6.66E-11	1.48E-06	5.65E-10	4.29E-08	1.31E-07	3.19E-05
63	4.50	5.71E-07	0.	2.79E-07	0.	5.72E-06	1.46E-05	0.	6.66E-11	1.49E-06	6.03E-10	4.41E-08	1.34E-07	2.28E-05
64	4.40	5.46E-07	0.	1.19E-06	0.	5.42E-06	1.16E-05	0.	6.66E-11	1.50E-06	6.45E-10	4.53E-08	1.37E-07	2.05E-05
65	4.30	4.64E-07	0.	2.23E-06	0.	4.67E-06	5.83E-06	0.	6.66E-11	1.51E-06	6.92E-10	4.65E-08	1.40E-07	1.49E-05
66	4.20	4.01E-07	0.	1.14E-05	0.	4.70E-06	5.12E-06	0.	6.66E-11	1.53E-06	7.42E-10	4.77E-08	9.11E-09	2.32E-05
67	4.10	3.47E-07	0.	2.57E-06	0.	4.11E-06	1.26E-06	0.	6.66E-11	1.53E-06	7.98E-10	3.07E-08	9.39E-09	9.96E-06
68	4.00	2.92E-07	0.	1.59E-05	0.	3.67E-06	9.38E-07	0.	6.66E-11	1.54E-06	8.59E-10	3.13E-08	9.67E-09	2.28E-05
69	3.90	2.21E-07	0.	7.09E-06	6.33E-07	2.93E-06	4.51E-07	0.	6.66E-11	1.53E-06	9.27E-10	2.47E-08	9.95E-09	1.29E-05
70	3.80	2.31E-07	0.	8.32E-06	7.06E-06	3.05E-06	0.	0.	6.66E-11	1.53E-06	1.00E-09	2.51E-08	1.02E-08	2.62E-05
71	3.70	1.77E-07	0.	1.37E-05	1.19E-06	2.14E-06	0.	0.	6.66E-11	1.50E-06	1.09E-09	1.79E-08	1.18E-08	1.87E-05
72	3.60	1.47E-07	0.	5.19E-06	7.35E-06	2.35E-06	0.	0.	6.66E-11	1.41E-06	1.18E-09	1.99E-08	1.36E-08	1.45E-05
73	3.50	1.24E-07	0.	9.72E-06	3.37E-05	1.52E-06	0.	0.	6.66E-11	1.29E-06	1.28E-09	2.28E-08	1.54E-08	4.44E-05
74	3.40	1.00E-07	0.	3.69E-06	1.31E-06	1.68E-06	0.	0.	6.66E-11	7.43E-07	1.40E-09	2.59E-08	1.74E-08	7.56E-06
75	3.30	7.51E-08	0.	4.91E-06	1.05E-05	1.13E-06	0.	0.	6.66E-11	7.44E-07	1.53E-09	2.90E-08	1.94E-08	1.70E-05
76	3.20	5.80E-08	0.	2.09E-06	3.90E-05	1.13E-06	0.	0.	6.66E-11	7.45E-07	1.68E-09	3.22E-08	2.14E-08	4.31E-05
77	3.10	5.00E-08	0.	1.69E-06	2.06E-06	9.34E-07	0.	0.	6.66E-11	7.47E-07	1.85E-09	3.54E-08	2.35E-08	5.54E-06
78	3.00	3.97E-08	0.	8.38E-07	1.08E-05	7.79E-07	0.	0.	6.66E-11	7.49E-07	2.04E-09	3.85E-08	2.55E-08	1.33E-05
79	2.90	2.93E-08	0.	4.89E-07	8.99E-06	4.86E-07	0.	0.	6.66E-11	7.50E-07	2.26E-09	4.17E-08	2.75E-08	1.18E-05
80	2.80	2.79E-08	0.	2.17E-07	1.88E-06	2.62E-07	0.	0.	6.66E-11	7.51E-07	2.52E-09	4.51E-08	2.96E-08	3.22E-06
81	2.70	1.49E-08	0.	9.98E-08	5.35E-06	1.11E-07	0.	0.	6.66E-11	7.51E-07	2.81E-09	4.86E-08	6.47E-09	6.39E-06
82	2.60	5.56E-09	0.	5.04E-08	5.37E-07	3.87E-08	0.	0.	6.66E-11	7.51E-07	3.15E-09	5.23E-08	6.98E-09	1.45E-06
83	2.50	3.53E-10	0.	7.35E-09	2.91E-07	7.96E-09	0.	0.	6.66E-11	7.51E-07	3.54E-09	1.99E-08	8.00E-09	1.09E-06
84	2.40	0.	5.49E-07	0.	4.27E-07	7.57E-10	0.	0.	6.66E-11	7.51E-07	4.01E-09	2.50E-08	9.86E-09	1.07E-06
85	2.30	0.	3.37E-06	0.	0.	0.	0.	0.	6.66E-11	7.45E-07	4.55E-09	3.03E-08	1.14E-08	4.17E-06
86	2.20	0.	6.11E-06	0.	0.	0.	0.	0.	6.66E-11	7.42E-07	5.21E-09	3.58E-08	1.42E-08	6.81E-06
87	2.10	0.	1.12E-05	0.	0.	0.	0.	0.	6.66E-11	7.39E-07	5.99E-09	4.16E-08	1.66E-08	1.20E-05
88	2.00	0.	1.54E-05	0.	0.	0.	0.	0.	6.66E-11	7.15E-07	6.94E-09	4.75E-08	1.90E-08	1.62E-05
89	1.90	0.	4.16E-05	0.	0.	0.	0.	0.	6.66E-11	6.88E-07	8.11E-09	5.34E-08	2.14E-08	4.24E-05
90	1.80	0.	3.52E-05	0.	0.	0.	0.	0.	6.66E-11	6.58E-07	9.59E-09	6.21E-08	2.51E-08	3.60E-05
91	1.70	0.	4.19E-05	0.	0.	0.	0.	0.	6.66E-11	6.20E-07	1.13E-08	7.24E-08	2.96E-08	4.28E-05
92	1.60	0.	2.88E-05	0.	0.	0.	0.	0.	6.66E-11	5.25E-07	1.36E-08	8.28E-08	3.11E-08	2.95E-05
93	1.50	0.	3.59E-05	0.	0.	0.	0.	0.	6.66E-11	2.38E-07	1.66E-08	8.91E-08	3.67E-08	3.63E-05
94	1.40	0.	4.15E-05	0.	0.	0.	0.	0.	6.66E-11	0.	2.04E-08	5.81E-08	2.43E-08	4.15E-05
95	1.30	0.	2.82E-05	0.	0.	0.	0.	0.	6.66E-11	0.	2.55E-08	7.87E-08	3.35E-08	2.43E-05
96	1.20	0.	3.16E-05	0.	0.	0.	0.	0.	6.66E-11	0.	3.25E-08	1.04E-07	3.73E-08	3.18E-05
97	1.10	0.	2.26E-05	0.	0.	0.	0.	6.19E-10	6.66E-11	0.	4.24E-08	1.22E-07	4.71E-08	2.20E-05
98	1.00	0.	2.10E-05	0.	0.	0.	0.	3.66E-09	6.66E-11	0.	5.66E-08	1.46E-07	5.68E-08	2.21E-05
99	0.90	0.	1.60E-05	0.	0.	0.	0.	5.56E-09	6.66E-11	0.	7.79E-08	1.69E-07	6.63E-08	1.71E-05
100	0.80	0.	7.62E-06	0.	0.	0.	0.	6.77E-08	6.66E-11	0.	1.11E-07	1.94E-07	7.61E-08	8.07E-06
101	0.70	0.	2.14E-06	0.	0.	0.	0.	4.30E-08	6.66E-11	0.	1.67E-07	1.60E-07	5.83E-08	2.57E-06
102	0.60	0.	5.80E-08	0.	0.	0.	0.	1.80E-07	6.66E-11	0.	2.68E-07	1.80E-07	6.58E-08	7.52E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.02E-04	0.	0.	0.	3.45E-08	3.16E-12	2.14E-08	7.08E-09	1.42E-04
2	10.60	0.	0.	1.32E-04	0.	0.	0.	3.45E-08	3.25E-12	2.15E-08	7.01E-09	1.32E-04
3	10.50	0.	0.	1.24E-04	0.	0.	0.	3.46E-08	3.35E-12	2.16E-08	7.02E-09	1.24E-04
4	10.40	0.	0.	1.07E-04	0.	0.	0.	3.46E-08	3.44E-12	2.17E-08	7.03E-09	1.07E-04
5	10.30	0.	0.	8.29E-05	0.	0.	0.	3.47E-08	3.55E-12	2.17E-08	7.04E-09	8.30E-05
6	10.20	0.	0.	7.95E-05	0.	0.	0.	3.47E-08	3.65E-12	2.18E-08	7.05E-09	7.96E-05
7	10.10	0.	0.	6.95E-05	0.	0.	0.	3.48E-08	3.76E-12	2.18E-08	7.06E-09	6.96E-05
8	10.00	0.	0.	5.24E-05	0.	0.	0.	3.48E-08	3.88E-12	2.19E-08	7.07E-09	5.24E-05
9	9.90	0.	0.	5.22E-05	0.	0.	0.	3.49E-08	3.99E-12	2.20E-08	7.08E-09	5.23E-05
10	9.80	0.	0.	4.39E-05	0.	0.	0.	3.49E-08	4.12E-12	2.20E-08	7.09E-09	4.40E-05
11	9.70	0.	0.	3.28E-05	0.	0.	0.	3.50E-08	4.25E-12	2.21E-08	7.09E-09	3.29E-05
12	9.60	0.	0.	3.51E-05	0.	0.	0.	3.51E-08	4.38E-12	2.21E-08	7.10E-09	3.51E-05
13	9.50	0.	1.42E-07	2.58E-05	0.	0.	0.	3.51E-08	4.32E-12	2.22E-08	7.11E-09	2.58E-05
14	9.40	0.	1.60E-07	2.18E-05	0.	0.	0.	3.52E-08	4.67E-12	5.78E-09	7.12E-09	2.28E-05
15	9.30	0.	1.77E-07	2.16E-05	0.	0.	0.	3.54E-08	4.82E-12	5.76E-09	7.13E-09	2.18E-05
16	9.20	0.	1.94E-07	1.47E-05	0.	0.	0.	3.55E-08	4.98E-12	5.74E-09	7.14E-09	1.49E-05
17	9.10	0.	2.36E-07	1.51E-05	0.	0.	0.	3.56E-08	5.15E-12	5.71E-09	7.15E-09	1.54E-05
18	9.00	0.	2.83E-07	1.20E-05	0.	0.	0.	3.58E-08	5.32E-12	5.69E-09	7.16E-09	1.23E-05
19	8.90	0.	3.29E-07	9.87E-06	0.	0.	0.	3.59E-08	5.50E-12	5.67E-09	7.17E-09	1.03E-05
20	8.80	0.	3.42E-07	9.20E-06	0.	0.	0.	3.60E-08	5.70E-12	5.64E-09	7.18E-09	9.59E-06
21	8.70	0.	3.29E-07	6.75E-06	0.	0.	0.	3.61E-08	5.90E-12	5.62E-09	7.19E-09	7.13E-06
22	8.60	0.	3.15E-07	6.79E-06	0.	0.	0.	3.63E-08	6.10E-12	5.60E-09	7.20E-09	7.15E-06
23	8.50	0.	3.05E-07	5.03E-06	0.	0.	0.	3.64E-08	6.32E-12	5.58E-09	7.21E-09	5.38E-06
24	8.40	0.	2.97E-07	4.77E-06	0.	0.	0.	3.66E-08	6.55E-12	5.55E-09	7.22E-09	5.11E-06
25	8.30	0.	2.88E-07	3.46E-06	0.	0.	0.	3.68E-08	6.79E-12	5.53E-09	7.25E-09	3.79E-06
26	8.20	0.	2.75E-07	3.32E-06	0.	0.	0.	3.70E-08	7.05E-12	5.51E-09	7.34E-09	3.64E-06
27	8.10	0.	2.68E-07	2.47E-06	0.	0.	0.	3.72E-08	7.31E-12	5.47E-09	7.44E-09	2.79E-06
28	8.00	0.	2.58E-07	2.34E-06	0.	0.	0.	3.74E-08	7.59E-12	5.44E-09	7.53E-09	2.64E-06
29	7.90	0.	2.44E-07	1.75E-06	0.	0.	0.	3.75E-08	7.89E-12	5.41E-09	7.62E-09	2.05E-06
30	7.80	0.	2.32E-07	1.69E-06	0.	0.	0.	3.77E-08	8.19E-12	5.38E-09	7.71E-09	1.98E-06
31	7.70	0.	2.20E-07	1.30E-06	0.	0.	0.	3.79E-08	8.52E-12	5.35E-09	7.80E-09	1.57E-06
32	7.60	0.	2.08E-07	1.13E-06	0.	1.05E-10	0.	3.81E-08	8.86E-12	5.32E-09	7.90E-09	1.38E-06
33	7.50	0.	1.92E-07	9.24E-07	0.	8.20E-10	0.	3.83E-08	9.22E-12	5.30E-09	7.99E-09	1.17E-06
34	7.40	0.	1.81E-07	7.51E-07	0.	2.78E-09	0.	3.85E-08	9.60E-12	5.27E-09	8.08E-09	9.97E-07
35	7.30	0.	1.71E-07	6.39E-07	0.	1.69E-08	0.	3.87E-08	1.00E-11	5.24E-09	8.17E-09	8.79E-07
36	7.20	0.	1.58E-07	5.15E-07	0.	5.16E-08	0.	3.89E-08	1.04E-11	5.21E-09	8.26E-09	7.78E-07
37	7.10	0.	1.44E-07	4.47E-07	0.	9.85E-08	0.	3.93E-08	1.09E-11	5.19E-09	8.36E-09	7.44E-07
38	7.00	2.54E-10	0.	3.65E-07	0.	3.81E-07	0.	3.96E-08	1.13E-11	5.16E-09	8.45E-09	8.00E-07
39	6.90	4.64E-10	0.	3.01E-07	0.	2.99E-07	0.	3.99E-08	1.18E-11	5.13E-09	8.54E-09	6.54E-07
40	6.80	3.73E-10	0.	2.57E-07	0.	6.89E-07	0.	4.02E-08	1.24E-11	5.10E-09	8.63E-09	10.00E-07
41	6.70	2.51E-10	0.	2.00E-07	0.	1.08E-06	0.	4.05E-08	1.29E-11	5.08E-09	8.73E-09	1.34E-06
42	6.60	1.43E-10	0.	1.59E-07	0.	4.93E-07	0.	4.09E-08	1.35E-11	5.06E-09	8.83E-09	7.06E-07
43	6.50	7.60E-11	0.	1.09E-07	0.	1.01E-06	0.	4.12E-08	1.42E-11	5.05E-09	8.92E-09	1.17E-06
44	6.40	1.08E-10	0.	6.18E-08	10.00E-09	1.48E-06	0.	4.15E-08	1.49E-11	5.04E-09	9.02E-09	1.61E-06
45	6.30	2.20E-10	0.	3.01E-08	4.08E-08	5.82E-07	0.	4.18E-08	1.56E-11	5.03E-09	9.15E-09	7.09E-07
46	6.20	6.21E-10	0.	1.34E-08	5.12E-08	9.43E-07	0.	4.21E-08	1.63E-11	5.02E-09	9.34E-09	1.06E-06
47	6.10	2.33E-09	0.	5.19E-09	1.34E-07	1.82E-06	0.	4.25E-08	1.72E-11	5.04E-09	9.53E-09	2.01E-06
48	6.00	5.73E-09	0.	1.16E-09	3.03E-07	5.15E-07	0.	4.28E-08	1.80E-11	5.06E-09	9.71E-09	6.83E-07
49	5.90	8.71E-09	0.	8.17E-11	1.42E-07	6.03E-07	0.	4.28E-08	1.90E-11	5.09E-09	9.90E-09	8.12E-07
50	5.80	1.23E-08	0.	1.97E-12	1.85E-07	5.59E-07	0.	4.21E-08	2.00E-11	5.11E-09	1.01E-08	8.13E-07
51	5.70	1.34E-08	0.	0.	1.88E-07	5.22E-07	0.	3.96E-08	2.11E-11	5.13E-09	1.03E-08	7.78E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.61E-08	0.	0.	0.	1.27E-07	9.84E-07	0.	0.	3.66E-08	2.22E-11	5.16E-09	1.05E-08	1.18E-06
53	5.50	1.60E-08	0.	0.	0.	1.69E-07	1.07E-06	0.	0.	3.70E-08	2.34E-11	5.19E-09	1.07E-08	1.25E-06
54	5.40	1.59E-08	0.	0.	0.	1.20E-07	5.42E-07	0.	0.	3.72E-08	2.48E-11	5.23E-09	1.09E-08	7.39E-07
55	5.30	1.47E-08	0.	0.	0.	1.32E-07	9.40E-07	0.	0.	3.74E-08	2.62E-11	5.27E-09	1.11E-08	1.14E-06
56	5.20	9.66E-09	0.	0.	0.	1.33E-07	4.47E-07	0.	0.	3.77E-08	2.78E-11	5.32E-09	1.14E-08	6.44E-07
57	5.10	8.71E-09	0.	0.	0.	1.25E-07	6.35E-07	0.	9.58E-14	3.80E-08	2.94E-11	5.44E-09	1.16E-08	8.24E-07
58	5.00	6.20E-09	0.	0.	0.	1.09E-07	5.32E-07	0.	9.58E-14	3.83E-08	3.12E-11	5.58E-09	1.19E-08	6.99E-07
59	4.90	5.13E-09	0.	0.	0.	1.09E-07	4.76E-07	0.	9.58E-14	3.86E-08	3.32E-11	5.72E-09	1.22E-08	6.47E-07
60	4.80	5.19E-09	0.	0.	0.	1.13E-07	4.40E-07	0.	9.58E-14	3.89E-08	3.53E-11	5.84E-09	1.25E-08	6.15E-07
61	4.70	5.37E-09	0.	0.	0.	1.03E-07	3.33E-07	0.	9.58E-14	3.93E-08	3.76E-11	5.97E-09	1.28E-08	4.99E-07
62	4.60	6.07E-09	0.	0.	0.	9.98E-08	3.24E-07	0.	9.58E-14	3.96E-08	4.01E-11	6.12E-09	1.31E-08	4.89E-07
63	4.50	5.76E-09	0.	5.59E-09	0.	8.19E-08	2.09E-07	0.	9.58E-14	3.99E-08	4.29E-11	6.29E-09	1.34E-08	3.62E-07
64	4.40	5.51E-09	0.	2.42E-08	0.	7.77E-08	1.67E-07	0.	9.58E-14	4.02E-08	4.59E-11	6.46E-09	1.37E-08	3.35E-07
65	4.30	4.69E-09	0.	4.53E-08	0.	6.69E-08	8.35E-08	0.	9.58E-14	4.05E-08	4.91E-11	6.63E-09	1.39E-08	2.62E-07
66	4.20	4.05E-09	0.	2.31E-07	0.	6.73E-08	7.34E-08	0.	9.58E-14	4.09E-08	5.27E-11	6.81E-09	9.16E-10	4.25E-07
67	4.10	3.50E-09	0.	5.23E-08	0.	5.89E-08	1.81E-08	0.	9.58E-14	4.10E-08	5.67E-11	4.37E-09	9.44E-10	1.79E-07
68	4.00	2.95E-09	0.	3.16E-07	0.	5.26E-08	1.34E-08	0.	9.58E-14	4.12E-08	6.11E-11	3.45E-09	9.72E-10	4.30E-07
69	3.90	2.24E-09	0.	1.44E-07	4.83E-08	4.20E-08	6.46E-09	0.	9.58E-14	4.10E-08	6.59E-11	3.52E-09	10.00E-10	2.89E-07
70	3.80	2.34E-09	0.	1.69E-07	5.33E-07	4.37E-08	0.	0.	9.58E-14	4.09E-08	7.13E-11	2.46E-09	1.03E-09	7.98E-07
71	3.70	1.78E-09	0.	2.79E-07	9.05E-08	3.06E-08	0.	0.	9.58E-14	4.02E-08	7.73E-11	2.55E-09	1.10E-09	4.46E-07
72	3.60	1.48E-09	0.	1.06E-07	5.61E-07	3.37E-08	0.	0.	9.58E-14	3.77E-08	8.39E-11	2.84E-09	1.36E-09	7.43E-07
73	3.50	1.26E-09	0.	1.98E-07	2.57E-06	2.18E-08	0.	0.	9.58E-14	3.45E-08	9.13E-11	3.25E-09	1.55E-09	2.93E-06
74	3.40	1.01E-09	0.	7.58E-08	9.96E-08	2.40E-08	0.	0.	9.58E-14	1.99E-08	9.97E-11	3.69E-09	1.75E-09	2.25E-07
75	3.30	7.59E-10	0.	9.16E-08	8.02E-07	1.62E-08	0.	0.	9.58E-14	1.99E-08	1.09E-10	4.14E-09	1.95E-09	9.37E-07
76	3.20	5.86E-10	0.	4.26E-08	2.98E-06	1.61E-08	0.	0.	9.58E-14	1.99E-08	1.20E-10	4.59E-09	2.15E-09	3.06E-06
77	3.10	5.05E-10	0.	3.43E-08	1.57E-07	1.34E-08	0.	0.	9.58E-14	2.00E-08	1.32E-10	5.04E-09	2.36E-09	2.03E-07
78	3.00	4.01E-10	0.	1.69E-08	8.27E-07	1.12E-08	0.	0.	9.58E-14	2.00E-08	1.45E-10	5.50E-09	2.54E-09	8.44E-07
79	2.90	2.96E-10	0.	9.94E-09	6.83E-07	6.96E-09	0.	0.	9.58E-14	2.01E-08	1.61E-10	5.96E-09	2.76E-09	7.29E-07
80	2.80	2.82E-10	0.	4.48E-09	1.44E-07	3.75E-09	0.	0.	9.58E-14	2.01E-08	1.79E-10	6.44E-09	2.94E-09	1.82E-07
81	2.70	1.51E-10	0.	2.01E-09	4.38E-07	1.58E-09	0.	0.	9.58E-14	2.01E-08	2.00E-10	6.93E-09	6.50E-10	4.40E-07
82	2.60	5.61E-11	0.	1.02E-09	4.10E-09	5.54E-10	0.	0.	9.58E-14	2.01E-08	2.24E-10	2.38E-09	7.01E-10	6.60E-08
83	2.50	3.56E-12	0.	1.50E-10	2.22E-08	1.14E-10	0.	0.	9.58E-14	2.01E-08	2.52E-10	2.44E-09	8.84E-10	4.64E-08
84	2.40	0.	1.12E-38	0.	3.26E-08	1.08E-11	0.	0.	9.58E-14	2.01E-08	2.85E-10	3.56E-09	9.91E-10	6.87E-08
85	2.30	0.	6.66E-08	0.	0.	0.	0.	0.	9.58E-14	1.99E-08	3.24E-10	4.32E-09	1.19E-09	9.44E-08
86	2.20	0.	1.24E-07	0.	0.	0.	0.	0.	9.58E-14	1.99E-08	3.70E-10	5.10E-09	1.43E-09	1.51E-07
87	2.10	0.	2.28E-07	0.	0.	0.	0.	0.	9.58E-14	1.98E-08	4.26E-10	5.94E-09	1.67E-09	2.56E-07
88	2.00	0.	3.13E-07	0.	0.	0.	0.	0.	9.58E-14	1.92E-08	4.93E-10	6.77E-09	1.91E-09	3.42E-07
89	1.90	0.	8.46E-07	0.	0.	0.	0.	0.	9.58E-14	1.84E-08	5.76E-10	7.62E-09	2.15E-09	8.75E-07
90	1.80	0.	7.16E-07	0.	0.	0.	0.	0.	9.58E-14	1.76E-08	6.78E-10	8.85E-09	2.52E-09	7.46E-07
91	1.70	0.	8.51E-07	0.	0.	0.	0.	0.	9.58E-14	1.66E-08	8.06E-10	1.03E-08	2.97E-09	8.82E-07
92	1.60	0.	5.87E-07	0.	0.	0.	0.	0.	9.58E-14	1.40E-08	9.69E-10	1.04E-08	3.13E-09	6.15E-07
93	1.50	0.	7.30E-07	0.	0.	0.	0.	0.	9.58E-14	6.30E-09	1.18E-09	1.27E-08	3.69E-09	7.54E-07
94	1.40	0.	8.44E-07	0.	0.	0.	0.	0.	9.58E-14	0.	1.43E-09	8.00E-09	2.44E-09	8.56E-07
95	1.30	0.	5.74E-07	0.	0.	0.	0.	0.	9.58E-14	0.	1.81E-09	1.12E-08	3.37E-09	5.90E-07
96	1.20	0.	6.43E-07	0.	0.	0.	0.	0.	9.58E-14	0.	2.31E-09	1.48E-08	3.74E-09	6.64E-07
97	1.10	0.	4.59E-07	0.	0.	0.	0.	8.87E-12	9.58E-14	0.	3.01E-09	1.73E-08	4.73E-09	4.84E-07
98	1.00	0.	4.44E-07	0.	0.	0.	0.	5.25E-11	9.58E-14	0.	4.02E-09	2.09E-08	5.71E-09	4.75E-07
99	0.90	0.	3.41E-07	0.	0.	0.	0.	7.96E-11	9.58E-14	0.	5.54E-09	2.41E-08	6.67E-09	3.78E-07
100	0.80	0.	1.55E-07	0.	0.	0.	0.	9.70E-10	9.58E-14	0.	7.92E-09	2.08E-08	5.10E-09	1.89E-07
101	0.70	0.	4.35E-08	0.	0.	0.	0.	8.16E-10	9.58E-14	0.	1.19E-08	2.29E-08	5.85E-09	8.47E-08
102	0.60	0.	1.18E-09	0.	0.	0.	0.	2.59E-09	9.58E-14	0.	1.90E-08	2.97E-08	6.61E-09	5.51E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.83E-06	0.	0.	0.	1.86E-09	2.99E-13	2.27E-09	6.90E-10	1.84E-06
2	10.60	0.	0.	1.49E-06	0.	0.	0.	1.86E-09	3.08E-13	2.29E-09	6.99E-10	1.49E-06
3	10.50	0.	0.	1.40E-06	0.	0.	0.	1.86E-09	3.17E-13	2.36E-09	7.80E-10	1.41E-06
4	10.40	0.	0.	1.21E-06	0.	0.	0.	1.86E-09	3.26E-13	2.31E-09	7.81E-10	1.21E-06
5	10.30	0.	0.	9.37E-07	0.	0.	0.	1.86E-09	3.36E-13	2.31E-09	7.82E-10	9.41E-07
6	10.20	0.	0.	8.99E-07	0.	0.	0.	1.86E-09	3.46E-13	2.32E-09	7.83E-10	9.03E-07
7	10.10	0.	0.	7.86E-07	0.	0.	0.	1.87E-09	3.56E-13	2.32E-09	7.84E-10	7.90E-07
8	10.00	0.	0.	5.92E-07	0.	0.	0.	1.87E-09	3.67E-13	2.33E-09	7.85E-10	5.96E-07
9	9.90	0.	0.	5.91E-07	0.	0.	0.	1.87E-09	3.78E-13	2.33E-09	7.86E-10	5.95E-07
10	9.80	0.	0.	4.97E-07	0.	0.	0.	1.87E-09	3.89E-13	2.34E-09	7.87E-10	5.01E-07
11	9.70	0.	0.	3.71E-07	0.	0.	0.	1.87E-09	4.02E-13	2.35E-09	7.88E-10	3.75E-07
12	9.60	0.	0.	3.97E-07	0.	0.	0.	1.88E-09	4.15E-13	2.35E-09	7.89E-10	4.01E-07
13	9.50	0.	1.42E-09	2.90E-07	0.	0.	0.	1.88E-09	4.28E-13	2.36E-09	7.89E-10	2.96E-07
14	9.40	0.	1.60E-09	2.47E-07	0.	0.	0.	1.88E-09	4.42E-13	6.15E-10	7.10E-10	2.51E-07
15	9.30	0.	1.77E-09	2.45E-07	0.	0.	0.	1.89E-09	4.57E-13	6.12E-10	7.11E-10	2.49E-07
16	9.20	0.	1.94E-09	1.66E-07	0.	0.	0.	1.89E-09	4.72E-13	6.10E-10	7.12E-10	1.70E-07
17	9.10	0.	2.36E-09	1.71E-07	0.	0.	0.	1.89E-09	4.88E-13	6.07E-10	7.13E-10	1.76E-07
18	9.00	0.	2.83E-09	1.35E-07	0.	0.	0.	1.10E-09	5.04E-13	6.05E-10	7.14E-10	1.41E-07
19	8.90	0.	3.29E-09	1.12E-07	0.	0.	0.	1.10E-09	5.21E-13	6.02E-10	7.15E-10	1.17E-07
20	8.80	0.	3.42E-09	1.04E-07	0.	0.	0.	1.10E-09	5.39E-13	6.00E-10	7.16E-10	1.10E-07
21	8.70	0.	3.29E-09	7.63E-08	0.	0.	0.	1.11E-09	5.58E-13	5.98E-10	7.17E-10	8.21E-08
22	8.60	0.	3.15E-09	7.67E-08	0.	0.	0.	1.11E-09	5.78E-13	5.95E-10	7.18E-10	8.23E-08
23	8.50	0.	3.05E-09	5.68E-08	0.	0.	0.	1.12E-09	5.99E-13	5.93E-10	7.19E-10	6.23E-08
24	8.40	0.	2.97E-09	5.39E-08	0.	0.	0.	1.12E-09	6.21E-13	5.90E-10	7.20E-10	5.93E-08
25	8.30	0.	2.86E-09	3.91E-08	0.	0.	0.	1.13E-09	6.44E-13	5.88E-10	7.23E-10	4.44E-08
26	8.20	0.	2.78E-09	3.75E-08	0.	0.	0.	1.13E-09	6.67E-13	5.86E-10	7.33E-10	4.27E-08
27	8.10	0.	2.64E-09	2.80E-08	0.	0.	0.	1.14E-09	6.93E-13	5.82E-10	7.42E-10	3.31E-08
28	8.00	0.	2.56E-09	2.64E-08	0.	0.	0.	1.15E-09	7.19E-13	5.78E-10	7.51E-10	3.15E-08
29	7.90	0.	2.44E-09	1.98E-08	0.	0.	0.	1.15E-09	7.47E-13	5.75E-10	7.60E-10	2.47E-08
30	7.80	0.	2.32E-09	1.91E-08	0.	0.	0.	1.16E-09	7.76E-13	5.72E-10	7.69E-10	2.40E-08
31	7.70	0.	2.20E-09	1.47E-08	0.	0.	0.	1.16E-09	8.07E-13	5.69E-10	7.78E-10	1.94E-08
32	7.60	0.	2.04E-09	1.27E-08	0.	1.11E-12	0.	1.17E-09	8.39E-13	5.66E-10	7.88E-10	1.73E-08
33	7.50	0.	1.92E-09	1.04E-08	0	8.70E-12	0.	1.18E-09	8.73E-13	5.63E-10	7.97E-10	1.49E-08
34	7.40	0.	1.81E-09	8.50E-09	0.	2.94E-11	0.	1.18E-09	9.09E-13	5.60E-10	8.06E-10	1.29E-08
35	7.30	0.	1.71E-09	7.23E-09	0.	1.79E-10	0.	1.19E-09	9.47E-13	5.57E-10	8.15E-10	1.17E-08
36	7.20	0.	1.58E-09	5.83E-09	0.	5.47E-10	0.	1.19E-09	9.88E-13	5.54E-10	8.24E-10	1.05E-08
37	7.10	0.	1.46E-09	5.05E-09	0.	1.04E-09	0.	1.20E-09	1.03E-12	5.51E-10	8.34E-10	1.01E-08
38	7.00	2.53E-12	0.	4.13E-09	0.	4.04E-09	0.	1.21E-09	1.07E-12	5.48E-10	8.43E-10	1.08E-08
39	6.90	4.62E-12	0.	3.40E-09	0.	3.18E-09	0.	1.22E-09	1.12E-12	5.46E-10	8.52E-10	9.28E-09
40	6.80	3.71E-12	0.	2.90E-09	0.	7.30E-09	0.	1.23E-09	1.17E-12	5.43E-10	8.61E-10	1.29E-08
41	6.70	2.50E-12	0.	2.26E-09	0.	1.15E-08	0.	1.24E-09	1.23E-12	5.40E-10	8.71E-10	1.64E-08
42	6.60	1.42E-12	0.	1.80E-09	0.	5.22E-09	0.	1.25E-09	1.28E-12	5.38E-10	8.80E-10	9.70E-09
43	6.50	7.58E-13	0.	1.28E-09	0.	1.07E-08	0.	1.26E-09	1.34E-12	5.37E-10	8.90E-10	1.46E-08
44	6.40	1.07E-12	0.	6.90E-10	1.06E-10	1.57E-08	0.	1.27E-09	1.41E-12	5.36E-10	9.00E-10	1.92E-08
45	6.30	2.18E-12	0.	3.40E-10	4.33E-10	6.17E-09	0.	1.28E-09	1.48E-12	5.34E-10	9.12E-10	9.68E-09
46	6.20	6.18E-12	0.	1.52E-10	5.43E-10	10.00E-09	0.	1.29E-09	1.55E-12	5.34E-10	9.31E-10	1.35E-08
47	6.10	2.32E-11	0.	5.87E-11	1.42E-09	1.93E-08	0.	1.30E-09	1.63E-12	5.36E-10	9.50E-10	2.35E-08
48	6.00	5.70E-11	0.	1.31E-11	1.09E-09	5.47E-09	0.	1.31E-09	1.71E-12	5.38E-10	9.69E-10	9.45E-09
49	5.90	6.66E-11	0.	9.24E-13	1.51E-09	6.39E-09	0.	1.31E-09	1.80E-12	5.41E-10	9.88E-10	1.08E-08
50	5.80	1.23E-10	0.	2.22E-14	1.96E-09	5.93E-09	0.	1.29E-09	1.89E-12	5.44E-10	1.01E-09	1.08E-08
51	5.70	1.33E-10	0.	0.	1.99E-09	5.53E-09	0.	1.21E-09	1.99E-12	5.46E-10	1.03E-09	1.04E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.68E-10	0.	0	0.	1.35E-09	1.04E-08	0.	0.	1.13E-09	2.10E-12	5.48E-10	1.04E-09	1.47E-08
53	5.50	1.59E-10	0.	0.	0.	1.70E-09	1.08E-08	0.	0.	1.14E-09	2.22E-12	5.52E-10	1.06E-09	1.55E-08
54	5.40	1.59E-10	0.	0.	0.	1.35E-09	9.75E-09	0.	0.	1.14E-09	2.35E-12	5.56E-10	1.08E-09	1.08E-08
55	5.30	1.46E-10	0.	0.	0.	1.40E-09	9.97E-09	0.	0.	1.15E-09	2.48E-12	5.60E-10	1.11E-09	1.43E-08
56	5.20	9.68E-11	0.	0.	0.	1.41E-09	4.75E-09	0.	0.	1.16E-09	2.63E-12	5.65E-10	1.13E-09	9.11E-09
57	5.10	8.66E-11	0.	0.	0.	1.32E-09	6.73E-09	0.	1.01E-16	1.17E-09	2.79E-12	5.79E-10	1.16E-09	1.11E-08
58	5.00	6.16E-11	0.	0.	0.	1.11E-09	5.64E-09	0.	1.01E-16	1.18E-09	2.96E-12	5.93E-10	1.19E-09	9.77E-09
59	4.90	5.11E-11	0.	0.	0.	1.15E-09	5.05E-09	0.	1.01E-16	1.19E-09	3.14E-12	6.08E-10	1.22E-09	9.27E-09
60	4.80	5.16E-11	0.	0.	0.	1.20E-09	4.66E-09	0.	1.01E-16	1.19E-09	3.34E-12	6.21E-10	1.25E-09	8.98E-09
61	4.70	5.34E-11	0.	0.	0.	1.09E-09	3.53E-09	0.	1.01E-16	1.20E-09	3.56E-12	6.34E-10	1.28E-09	7.79E-09
62	4.60	6.03E-11	0.	0.	0.	1.06E-09	3.44E-09	0.	1.01E-16	1.21E-09	3.80E-12	6.50E-10	1.31E-09	7.74E-09
63	4.50	5.73E-11	0.	6.32E-11	0.	8.69E-10	2.22E-09	0.	1.01E-16	1.22E-09	4.06E-12	6.69E-10	1.34E-09	6.45E-09
64	4.40	5.48E-11	0.	2.74E-10	0.	8.24E-10	1.77E-09	0.	1.01E-16	1.23E-09	4.34E-12	6.87E-10	1.37E-09	6.22E-09
65	4.30	4.66E-11	0.	9.12E-10	0.	7.09E-10	8.86E-10	0.	1.01E-16	1.24E-09	4.65E-12	7.05E-10	1.39E-09	5.50E-09
66	4.20	4.03E-11	0.	2.61E-09	0.	7.14E-10	7.78E-10	0.	1.01E-16	1.25E-09	5.00E-12	7.24E-10	9.13E-11	6.22E-09
67	4.10	3.43E-11	0.	5.91E-10	0.	6.24E-10	1.91E-10	0.	1.01E-16	1.26E-09	5.37E-12	4.65E-10	9.41E-11	3.26E-09
68	4.00	2.93E-11	0.	1.97E-09	0.	5.37E-10	1.43E-10	0.	1.01E-16	1.26E-09	5.78E-12	3.67E-10	9.69E-11	6.05E-09
69	3.90	2.22E-11	0.	1.63E-09	1.77E-09	4.45E-10	6.85E-11	0.	1.01E-16	1.26E-09	6.24E-12	3.74E-10	9.97E-11	5.68E-09
70	3.80	2.32E-11	0.	1.91E-09	1.88E-09	4.63E-10	0.	0.	1.01E-16	1.25E-09	6.75E-12	2.61E-10	1.03E-10	2.36E-09
71	3.70	1.77E-11	0.	3.15E-09	3.32E-09	3.25E-10	0.	0.	1.01E-16	1.23E-09	7.32E-12	2.71E-10	1.18E-10	8.49E-09
72	3.60	1.47E-11	0.	1.19E-09	2.04E-09	3.57E-10	0.	0.	1.01E-16	1.16E-09	7.95E-12	3.02E-10	1.36E-10	2.38E-09
73	3.50	1.25E-11	0.	2.23E-09	9.45E-09	2.31E-10	0.	0.	1.01E-16	1.06E-09	8.65E-12	3.45E-10	1.55E-10	9.86E-09
74	3.40	1.01E-11	0.	8.48E-10	3.66E-09	2.55E-10	0.	0.	1.01E-16	6.10E-10	9.44E-12	3.93E-10	1.75E-10	5.96E-09
75	3.30	7.54E-12	0.	1.04E-09	2.95E-09	1.72E-10	0.	0.	1.01E-16	6.11E-10	1.03E-11	4.48E-10	1.94E-10	3.19E-09
76	3.20	5.83E-12	0.	4.81E-10	1.09E-07	1.71E-10	0.	0.	1.01E-16	6.12E-10	1.13E-11	4.88E-10	2.15E-10	1.11E-07
77	3.10	5.02E-12	0.	3.88E-10	5.78E-09	1.42E-10	0.	0.	1.01E-16	6.14E-10	1.25E-11	5.36E-10	2.35E-10	7.71E-09
78	3.00	3.99E-12	0.	1.91E-10	3.04E-08	1.18E-10	0.	0.	1.01E-16	6.15E-10	1.38E-11	5.95E-10	2.55E-10	3.22E-08
79	2.90	2.94E-12	0.	1.12E-10	2.51E-08	7.38E-11	0.	0.	1.01E-16	6.16E-10	1.52E-11	6.33E-10	2.76E-10	2.48E-08
80	2.80	2.81E-12	0.	4.98E-11	5.27E-09	3.98E-11	0.	0.	1.01E-16	6.17E-10	1.69E-11	6.84E-10	2.93E-10	6.98E-09
81	2.70	1.50E-12	0.	2.20E-11	1.50E-08	1.60E-11	0.	0.	1.01E-16	6.17E-10	1.69E-11	7.37E-10	4.48E-11	1.65E-08
82	2.60	5.58E-13	0.	1.16E-11	1.51E-09	5.88E-12	0.	0.	1.01E-16	6.17E-10	2.12E-11	2.53E-10	6.99E-11	2.48E-09
83	2.50	3.54E-14	0.	1.69E-12	8.15E-10	1.21E-12	0.	0.	1.01E-16	6.17E-10	2.36E-11	3.02E-10	8.01E-11	1.84E-09
84	2.40	0.	1.26E-10	0.	1.20E-09	1.15E-13	0.	0.	1.01E-16	6.17E-10	2.75E-11	3.79E-10	9.83E-11	2.44E-09
85	2.30	0.	7.74E-10	0.	0.	0.	0.	0.	1.01E-16	6.12E-10	3.06E-11	4.59E-10	1.18E-10	2.08E-09
86	2.20	0.	1.40E-09	0.	0.	0.	0.	0.	1.01E-16	6.10E-10	3.50E-11	5.42E-10	1.42E-10	2.73E-09
87	2.10	0.	2.58E-09	0.	0.	0.	0.	0.	1.01E-16	6.07E-10	4.03E-11	6.31E-10	1.66E-10	4.02E-09
88	2.00	0.	3.54E-09	0.	0.	0.	0.	0.	1.01E-16	5.00E-10	4.67E-11	7.28E-10	1.90E-10	5.09E-09
89	1.90	0.	9.57E-09	0.	0.	0.	0.	0.	1.01E-16	5.69E-10	5.46E-11	8.19E-10	2.15E-10	1.12E-08
90	1.80	0.	8.10E-09	0.	0.	0.	0.	0.	1.01E-16	3.41E-10	6.43E-11	9.41E-10	2.51E-10	9.98E-09
91	1.70	0.	9.63E-09	0.	0.	0.	0.	0.	1.01E-16	5.09E-10	7.34E-11	1.10E-09	2.88E-10	1.16E-08
92	1.60	0.	6.63E-09	0.	0.	0.	0.	0.	1.01E-16	4.31E-10	9.18E-11	1.10E-09	3.12E-10	8.57E-09
93	1.50	0.	8.25E-09	0.	0.	0.	0.	0.	1.21E-16	1.96E-10	1.11E-10	6.44E-10	3.68E-10	9.57E-09
94	1.40	0.	9.54E-09	0.	0.	0.	0.	0.	1.01E-16	0.	1.37E-10	8.58E-10	2.44E-10	1.08E-08
95	1.30	0.	6.49E-09	0.	0.	0.	0.	0.	1.01E-16	0.	1.72E-10	1.19E-09	3.36E-10	8.19E-09
96	1.20	0.	7.27E-09	0.	0.	0.	0.	0.	1.01E-16	0.	2.19E-10	1.50E-09	3.73E-10	9.44E-09
97	1.10	0.	5.19E-09	0.	0.	0.	0.	9.41E-14	1.01E-16	0.	2.89E-10	1.84E-09	4.72E-10	7.79E-09
98	1.00	0.	5.02E-09	0.	0.	0.	0.	5.96E-13	1.01E-16	0.	3.81E-10	2.22E-09	5.78E-10	8.19E-09
99	0.90	0.	3.84E-09	0.	0.	0.	0.	8.44E-13	1.01E-16	0.	5.24E-10	2.57E-09	6.65E-10	7.62E-09
100	0.80	0.	1.75E-09	0.	0.	0.	0.	1.03E-11	1.01E-16	0.	7.50E-10	2.13E-09	5.08E-10	5.15E-09
101	0.70	0.	4.42E-10	0.	0.	0.	0.	6.94E-12	1.01E-16	0.	1.13E-09	2.43E-09	5.84E-10	4.64E-09
102	0.60	0.	1.33E-11	0.	0.	0.	0.	2.74E-11	1.01E-16	0.	1.88E-09	2.73E-09	6.59E-10	5.23E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-03 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.81E-08	0.	0.	0.	3.27E-11	2.93E-14	2.26E-16	6.90E-11	1.84E-08
2	10.60	0.	0.	1.47E-08	0.	0.	0.	3.27E-11	3.02E-14	2.27E-10	6.90E-11	1.51E-08
3	10.50	0.	0.	1.39E-08	0.	0.	0.	3.28E-11	3.19E-14	2.28E-10	6.91E-11	1.42E-08
4	10.40	0.	0.	1.19E-08	0.	0.	0.	3.28E-11	3.19E-14	2.29E-10	6.92E-11	1.22E-08
5	10.30	0.	0.	9.26E-09	0.	0.	0.	3.29E-11	3.29E-14	2.30E-10	6.93E-11	9.59E-09
6	10.20	0.	0.	8.89E-09	0.	0.	0.	3.29E-11	3.39E-14	2.30E-10	6.94E-11	9.22E-09
7	10.10	0.	0.	7.77E-09	0.	0.	0.	3.30E-11	3.49E-14	2.31E-10	6.95E-11	8.10E-09
8	10.00	0.	0.	5.85E-09	0.	0.	0.	3.30E-11	3.59E-14	2.31E-10	6.96E-11	6.18E-09
9	9.90	0.	0.	5.84E-09	0.	0.	0.	3.31E-11	3.71E-14	2.32E-10	6.97E-11	6.17E-09
10	9.80	0.	0.	4.91E-09	0.	0.	0.	3.31E-11	3.82E-14	2.33E-10	6.98E-11	5.24E-09
11	9.70	0.	0.	3.67E-09	0.	0.	0.	3.32E-11	3.94E-14	2.33E-10	6.99E-11	4.01E-09
12	9.60	0.	0.	3.92E-09	0.	0.	0.	3.32E-11	4.06E-14	2.34E-10	7.00E-11	4.26E-09
13	9.50	0.	1.38E-11	2.86E-09	0.	0.	0.	3.33E-11	4.20E-14	2.34E-10	7.01E-11	3.22E-09
14	9.40	0.	1.55E-11	2.44E-09	0.	0.	0.	3.34E-11	4.33E-14	5.11E-11	7.01E-11	2.62E-09
15	9.30	0.	1.72E-11	2.42E-09	0.	0.	0.	3.35E-11	4.47E-14	6.09E-11	7.02E-11	2.60E-09
16	9.20	0.	1.88E-11	1.64E-09	0.	0.	0.	3.27E-11	4.62E-14	6.36E-11	7.03E-11	1.82E-09
17	9.10	0.	2.29E-11	1.69E-09	0.	0.	0.	3.35E-11	4.78E-14	6.84E-11	7.04E-11	1.88E-09
18	9.00	0.	2.74E-11	1.34E-09	0.	0.	0.	3.39E-11	4.94E-14	6.81E-11	7.05E-11	1.53E-09
19	8.90	0.	3.19E-11	1.10E-09	0.	0.	0.	3.40E-11	5.11E-14	5.99E-11	7.06E-11	1.30E-09
20	8.80	0.	3.32E-11	1.03E-09	0.	0.	0.	3.41E-11	5.28E-14	5.96E-11	7.07E-11	1.23E-09
21	8.70	0.	3.19E-11	7.54E-10	0.	0.	0.	3.43E-11	5.47E-14	5.94E-11	7.08E-11	9.51E-10
22	8.60	0.	3.06E-11	7.58E-10	0.	0.	0.	3.44E-11	5.66E-14	5.92E-11	7.09E-11	9.53E-10
23	8.50	0.	2.96E-11	5.62E-10	0.	0.	0.	3.45E-11	5.87E-14	5.09E-11	7.10E-11	7.56E-10
24	8.40	0.	2.86E-11	5.33E-10	0.	0.	0.	3.47E-11	6.08E-14	5.87E-11	7.11E-11	7.26E-10
25	8.30	0.	2.77E-11	3.86E-10	0.	0.	0.	3.49E-11	6.30E-14	5.85E-11	7.14E-11	5.79E-10
26	8.20	0.	2.67E-11	3.71E-10	0.	0.	0.	3.51E-11	6.54E-14	5.82E-11	7.23E-11	5.63E-10
27	8.10	0.	2.57E-11	2.76E-10	0.	0.	0.	3.52E-11	6.78E-14	5.78E-11	7.32E-11	4.69E-10
28	8.00	0.	2.48E-11	2.61E-10	0.	0.	0.	3.54E-11	7.04E-14	5.75E-11	7.41E-11	4.53E-10
29	7.90	0.	2.37E-11	1.96E-10	0.	0.	0.	3.56E-11	7.31E-14	5.72E-11	7.50E-11	3.87E-10
30	7.80	0.	2.25E-11	1.89E-10	0.	0.	0.	3.58E-11	7.60E-14	5.69E-11	7.60E-11	3.80E-10
31	7.70	0.	2.13E-11	1.46E-10	0.	0.	0.	3.60E-11	7.88E-14	5.66E-11	7.69E-11	3.36E-10
32	7.60	0.	2.00E-11	1.26E-10	0.	1.09E-14	0.	3.61E-11	8.22E-14	5.63E-11	7.78E-11	3.16E-10
33	7.50	0.	1.86E-11	1.03E-10	0.	8.54E-14	0.	3.63E-11	8.55E-14	5.60E-11	7.87E-11	2.93E-10
34	7.40	0.	1.75E-11	8.40E-11	0.	2.89E-13	0.	3.65E-11	8.91E-14	5.57E-11	7.96E-11	2.74E-10
35	7.30	0.	1.66E-11	7.14E-11	0.	1.76E-12	0.	3.67E-11	9.28E-14	5.54E-11	8.05E-11	2.62E-10
36	7.20	0.	1.54E-11	5.76E-11	0.	5.37E-12	0.	3.69E-11	9.67E-14	5.51E-11	8.14E-11	2.52E-10
37	7.10	0.	1.41E-11	4.99E-11	0.	1.03E-11	0.	3.72E-11	1.01E-13	5.48E-11	8.23E-11	2.49E-10
38	7.00	2.46E-14	0.	4.08E-11	0.	3.96E-11	0.	3.75E-11	1.05E-13	5.45E-11	8.32E-11	2.76E-10
39	6.90	4.50E-14	0.	3.36E-11	0.	3.12E-11	0.	3.78E-11	1.10E-13	5.42E-11	8.41E-11	2.41E-10
40	6.80	3.62E-14	0.	2.87E-11	0.	7.17E-11	0.	3.81E-11	1.15E-13	5.39E-11	8.50E-11	2.70E-10
41	6.70	2.43E-14	0.	2.23E-11	0.	1.13E-10	0.	3.84E-11	1.20E-13	5.36E-11	8.60E-11	3.13E-10
42	6.60	1.39E-14	0.	1.77E-11	0.	5.13E-11	0.	3.87E-11	1.26E-13	5.35E-11	8.69E-11	2.48E-10
43	6.50	7.37E-15	0.	1.22E-11	0.	1.05E-10	0.	3.90E-11	1.31E-13	5.34E-11	8.79E-11	2.97E-10
44	6.40	1.05E-14	0.	6.81E-12	1.04E-12	1.54E-10	0.	3.94E-11	1.38E-13	5.32E-11	8.88E-11	3.44E-10
45	6.30	2.13E-14	0.	3.36E-12	4.25E-12	6.05E-11	0.	3.97E-11	1.44E-13	5.31E-11	9.81E-11	2.51E-10
46	6.20	6.02E-14	0.	1.50E-12	5.33E-12	9.81E-11	0.	4.00E-11	1.52E-13	5.30E-11	9.19E-11	2.98E-10
47	6.10	2.26E-13	0.	5.80E-13	1.40E-11	1.09E-10	0.	4.03E-11	1.59E-13	5.32E-11	9.38E-11	3.91E-10
48	6.00	5.56E-13	0.	1.30E-13	1.07E-11	5.36E-11	0.	4.06E-11	1.67E-13	5.35E-11	9.57E-11	2.55E-10
49	5.90	8.44E-13	0.	9.13E-15	1.48E-11	6.27E-11	0.	4.06E-11	1.76E-13	5.38E-11	9.75E-11	2.71E-10
50	5.80	1.20E-12	0.	2.20E-16	1.92E-11	5.82E-11	0.	4.80E-11	1.85E-13	5.40E-11	9.94E-11	2.72E-10
51	5.70	1.30E-12	0.	0.	1.96E-11	5.43E-11	0.	3.75E-11	1.95E-13	5.43E-11	1.01E-10	2.68E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.56E-12	0.	0.	0.	1.33E-11	1.02E-10	0.	0.	3.49E-11	2.06E-13	5.45E-11	1.63E-10	3.10E-10
53	5.50	1.55E-12	0.	0.	0.	1.47E-11	1.06E-10	0.	0.	3.51E-11	2.17E-13	5.48E-11	1.05E-10	3.20E-10
54	5.40	1.55E-12	0.	0.	0.	1.33E-11	5.64E-11	0.	0.	3.53E-11	2.30E-13	5.53E-11	1.07E-10	2.69E-10
55	5.30	1.43E-12	0.	0.	0.	1.37E-11	9.78E-11	0.	0.	3.55E-11	2.43E-13	5.57E-11	1.09E-10	3.13E-10
56	5.20	9.37E-13	0.	0.	0.	1.39E-11	4.64E-11	0.	0.	3.57E-11	2.57E-13	5.62E-11	1.12E-10	2.65E-10
57	5.10	8.44E-13	0.	0.	0.	1.30E-11	6.61E-11	0.	9.82E-20	3.60E-11	2.73E-13	5.75E-11	1.15E-10	2.89E-10
58	5.00	6.01E-13	0.	0.	0.	1.09E-11	5.53E-11	0.	9.82E-20	3.63E-11	2.90E-13	5.90E-11	1.18E-10	2.79E-10
59	4.90	4.98E-13	0.	0.	0.	1.13E-11	4.09E-11	0.	9.82E-20	3.66E-11	3.08E-13	6.04E-11	1.20E-10	2.79E-10
60	4.80	5.03E-13	0.	0.	0.	1.17E-11	4.57E-11	0.	9.82E-20	3.69E-11	3.25E-13	6.18E-11	1.23E-10	2.88E-10
61	4.70	5.21E-13	0.	0.	0.	1.07E-11	3.47E-11	0.	9.82E-20	3.72E-11	3.49E-13	6.38E-11	1.26E-10	2.73E-10
62	4.60	5.88E-13	0.	0.	0.	1.04E-11	3.32E-11	0.	9.82E-20	3.75E-11	3.77E-13	6.46E-11	1.29E-10	2.77E-10
63	4.50	5.59E-13	0.	4.25E-13	0.	8.52E-12	2.10E-11	0.	9.82E-20	3.78E-11	3.98E-13	6.65E-11	1.32E-10	2.68E-10
64	4.40	5.34E-13	0.	2.71E-12	0.	8.00E-12	1.73E-11	0.	9.82E-20	3.81E-11	4.25E-13	6.83E-11	1.35E-10	2.71E-10
65	4.30	4.54E-13	0.	5.06E-12	0.	6.96E-12	8.69E-12	0.	9.82E-20	3.84E-11	4.56E-13	7.01E-11	8.74E-12	1.39E-10
66	4.20	3.93E-13	0.	2.98E-11	0.	7.01E-12	7.63E-12	0.	9.82E-20	3.87E-11	4.89E-13	7.20E-11	9.02E-12	1.61E-10
67	4.10	3.48E-13	0.	5.84E-12	0.	6.12E-12	1.88E-12	0.	9.82E-20	3.89E-11	5.26E-13	4.62E-11	9.29E-12	1.09E-10
68	4.00	2.86E-13	0.	3.93E-11	0.	5.47E-12	1.40E-12	0.	9.82E-20	3.90E-11	5.66E-13	3.64E-11	9.57E-12	1.20E-10
69	3.90	2.17E-13	0.	1.61E-11	5.60E-11	4.37E-12	6.72E-13	0.	9.82E-20	3.89E-11	6.11E-13	3.72E-11	9.84E-12	1.64E-10
70	3.80	2.26E-13	0.	1.89E-11	6.25E-10	4.94E-12	0.	0.	9.82E-20	3.87E-11	6.61E-13	2.59E-11	1.01E-11	7.24E-10
71	3.70	1.73E-13	0.	3.12E-11	1.09E-10	3.19E-12	0.	0.	9.82E-20	3.81E-11	7.17E-13	2.69E-11	1.17E-11	2.17E-10
72	3.60	1.44E-13	0.	1.18E-11	6.50E-10	3.50E-12	0.	0.	9.82E-20	3.97E-11	7.78E-13	3.00E-11	1.34E-11	7.46E-10
73	3.50	1.22E-13	0.	2.21E-11	2.99E-09	2.27E-12	0.	0.	9.82E-20	3.27E-11	8.47E-13	3.43E-11	1.53E-11	3.99E-09
74	3.40	9.83E-14	0.	8.38E-12	1.16E-10	2.50E-12	0.	0.	9.82E-20	1.09E-11	9.24E-13	3.90E-11	1.72E-11	2.03E-10
75	3.30	7.36E-14	0.	1.02E-11	9.31E-10	1.69E-12	0.	0.	9.82E-20	1.89E-11	1.01E-12	4.38E-11	1.92E-11	1.03E-09
76	3.20	5.68E-14	0.	4.76E-12	3.46E-09	1.68E-12	0.	0.	9.82E-20	1.89E-11	1.11E-12	4.85E-11	2.12E-11	3.59E-09
77	3.10	4.89E-14	0.	3.83E-12	1.82E-10	1.39E-12	0.	0.	9.82E-20	1.90E-11	1.22E-12	5.33E-11	2.32E-11	2.84E-10
78	3.00	3.89E-14	0.	1.89E-12	9.60E-10	1.16E-12	0.	0.	9.82E-20	1.90E-11	1.35E-12	5.81E-11	2.52E-11	1.07E-09
79	2.90	2.87E-14	0.	1.11E-12	7.52E-10	7.24E-13	0.	0.	9.82E-20	1.90E-11	1.49E-12	6.29E-11	2.72E-11	9.05E-10
80	2.80	2.74E-14	0.	4.92E-13	1.66E-10	3.90E-13	0.	0.	9.82E-20	1.91E-11	1.66E-12	6.80E-11	2.90E-11	2.85E-10
81	2.70	1.46E-14	0.	2.29E-13	4.74E-10	1.69E-13	0.	0.	9.82E-20	1.91E-11	1.85E-12	7.32E-11	6.48E-12	5.75E-10
82	2.60	5.44E-15	0.	1.14E-13	4.75E-11	5.77E-14	0.	0.	9.82E-20	1.91E-11	2.07E-12	2.51E-11	6.90E-12	1.01E-10
83	2.50	3.45E-16	0.	1.67E-14	2.57E-11	1.10E-14	0.	0.	9.82E-20	1.91E-11	2.33E-12	3.08E-11	7.91E-12	8.50E-11
84	2.40	0.	1.25E-12	0.	3.78E-11	1.13E-15	0.	0.	9.82E-20	1.91E-11	2.64E-12	3.77E-11	9.75E-12	1.08E-10
85	2.30	0.	7.67E-12	0.	0.	0.	0.	0.	9.82E-20	1.89E-11	3.00E-12	4.57E-11	1.17E-11	8.69E-11
86	2.20	0.	1.39E-11	0.	0.	0.	0.	0.	9.82E-20	1.88E-11	3.43E-12	5.39E-11	1.40E-11	1.04E-10
87	2.10	0.	2.54E-11	0.	0.	0.	0.	0.	9.82E-20	1.88E-11	3.95E-12	6.27E-11	1.64E-11	1.27E-10
88	2.00	0.	3.50E-11	0.	0.	0.	0.	0.	9.82E-20	1.82E-11	4.57E-12	7.18E-11	1.88E-11	1.48E-10
89	1.90	0.	9.46E-11	0.	0.	0.	0.	0.	9.82E-20	1.79E-11	5.34E-12	8.06E-11	2.12E-11	2.19E-10
90	1.80	0.	8.09E-11	0.	0.	0.	0.	0.	9.82E-20	1.67E-11	6.29E-12	9.36E-11	2.48E-11	2.21E-10
91	1.70	0.	9.51E-11	0.	0.	0.	0.	0.	9.82E-20	1.97E-11	7.48E-12	1.09E-10	2.64E-11	2.54E-10
92	1.60	0.	6.55E-11	0.	0.	0.	0.	0.	9.82E-20	1.33E-11	8.99E-12	1.18E-10	3.08E-11	2.20E-10
93	1.50	0.	8.15E-11	0.	0.	0.	0.	0.	9.82E-20	6.95E-12	1.09E-11	6.48E-11	1.84E-11	1.81E-10
94	1.40	0.	9.43E-11	0.	0.	0.	0.	0.	9.82E-20	0.	1.34E-11	8.30E-11	2.41E-11	2.15E-10
95	1.30	0.	6.41E-11	0.	0.	0.	0.	0.	9.82E-20	0.	1.68E-11	1.19E-10	3.32E-11	2.33E-10
96	1.20	0.	7.10E-11	0.	0.	0.	0.	0.	9.82E-20	0.	2.14E-11	1.97E-10	3.69E-11	2.87E-10
97	1.10	0.	5.13E-11	0.	0.	0.	0.	9.23E-16	9.82E-20	0.	2.79E-11	1.03E-10	4.66E-11	3.09E-10
98	1.00	0.	4.96E-11	0.	0.	0.	0.	5.46E-15	9.82E-20	0.	3.73E-11	2.21E-10	5.82E-11	3.64E-10
99	0.90	0.	3.81E-11	0.	0.	0.	0.	8.28E-15	9.82E-20	0.	5.13E-11	2.95E-10	6.56E-11	4.18E-10
100	0.80	0.	1.73E-11	0.	0.	0.	0.	1.01E-13	9.82E-20	0.	7.35E-11	2.12E-10	5.82E-11	3.53E-10
101	0.70	0.	3.86E-12	0.	0.	0.	0.	6.41E-14	9.82E-20	0.	1.10E-10	2.42E-10	9.76E-11	4.14E-10
102	0.60	0.	1.32E-13	0.	0.	0.	0.	2.49E-13	9.82E-20	0.	1.74E-10	2.72E-10	6.51E-11	5.14E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-04 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.67E-10	0.	0.	0.	9.78E-13	2.00E-15	2.17E-11	6.62E-12	1.96E-10
2	10.60	0.	0.	1.39E-10	0.	0.	0.	9.71E-13	2.85E-15	2.18E-11	6.62E-12	1.69E-10
3	10.50	0.	0.	1.28E-10	0.	0.	0.	9.72E-13	2.97E-15	2.19E-11	6.63E-12	1.57E-10
4	10.40	0.	0.	1.10E-10	0.	0.	0.	9.74E-13	3.09E-15	2.20E-11	6.64E-12	1.39E-10
5	10.30	0.	0.	8.52E-11	0.	0.	0.	9.75E-13	3.14E-15	2.20E-11	6.65E-12	1.15E-10
6	10.20	0.	0.	8.18E-11	0.	0.	0.	9.76E-13	3.24E-15	2.21E-11	6.66E-12	1.12E-10
7	10.10	0.	0.	7.15E-11	0.	0.	0.	9.78E-13	3.34E-15	2.21E-11	6.67E-12	1.01E-10
8	10.00	0.	0.	5.38E-11	0.	0.	0.	9.79E-13	3.44E-15	2.22E-11	6.68E-12	8.37E-11
9	9.90	0.	0.	5.37E-11	0.	0.	0.	9.81E-13	3.54E-15	2.23E-11	6.69E-12	8.36E-11
10	9.80	0.	0.	4.51E-11	0.	0.	0.	9.83E-13	3.69E-15	2.23E-11	6.70E-12	7.51E-11
11	9.70	0.	0.	3.38E-11	0.	0.	0.	9.84E-13	3.77E-15	2.24E-11	6.70E-12	6.38E-11
12	9.60	0.	0.	3.61E-11	0.	0.	0.	9.86E-13	3.89E-15	2.24E-11	6.71E-12	6.62E-11
13	9.50	0.	1.27E-13	2.64E-11	0.	0.	0.	9.88E-13	4.01E-15	2.25E-11	6.72E-12	5.67E-11
14	9.40	0.	1.42E-13	2.24E-11	0.	0.	0.	9.91E-13	4.14E-15	5.64E-12	6.73E-12	3.42E-11
15	9.30	0.	1.58E-13	2.22E-11	0.	0.	0.	9.95E-13	4.26E-15	5.84E-12	6.74E-12	3.60E-11
16	9.20	0.	1.74E-13	1.51E-11	0.	0.	0.	9.99E-13	4.42E-15	5.81E-12	6.75E-12	2.80E-11
17	9.10	0.	2.11E-13	1.56E-11	0.	0.	0.	1.00E-12	4.57E-15	5.79E-12	6.77E-12	2.93E-11
18	9.00	0.	2.52E-13	1.23E-11	0.	0.	0.	1.01E-12	4.72E-15	5.77E-12	6.77E-12	2.61E-11
19	8.90	0.	2.94E-13	1.02E-11	0.	0.	0.	1.01E-12	4.88E-15	5.74E-12	6.77E-12	2.40E-11
20	8.80	0.	3.05E-13	9.46E-12	0.	0.	0.	1.01E-12	5.05E-15	5.72E-12	6.78E-12	2.33E-11
21	8.70	0.	2.94E-13	6.94E-12	0.	0.	0.	1.02E-12	5.23E-15	5.70E-12	6.79E-12	2.07E-11
22	8.60	0.	2.82E-13	6.98E-12	0.	0.	0.	1.02E-12	5.41E-15	5.68E-12	6.80E-12	2.08E-11
23	8.50	0.	2.73E-13	5.17E-12	0.	0.	0.	1.02E-12	5.61E-15	5.65E-12	6.81E-12	1.89E-11
24	8.40	0.	2.65E-13	4.90E-12	0.	0.	0.	1.03E-12	5.81E-15	5.63E-12	6.82E-12	1.87E-11
25	8.30	0.	2.55E-13	3.56E-12	0.	0.	0.	1.03E-12	6.03E-15	5.61E-12	6.85E-12	1.73E-11
26	8.20	0.	2.46E-13	3.41E-12	0.	0.	0.	1.04E-12	6.25E-15	5.58E-12	6.94E-12	1.72E-11
27	8.10	0.	2.37E-13	2.54E-12	0.	0.	0.	1.04E-12	6.48E-15	5.55E-12	7.03E-12	1.64E-11
28	8.00	0.	2.28E-13	2.40E-12	0.	0.	0.	1.05E-12	6.73E-15	5.51E-12	7.11E-12	1.63E-11
29	7.90	0.	2.19E-13	1.80E-12	0.	0.	0.	1.06E-12	6.99E-15	5.48E-12	7.20E-12	1.58E-11
30	7.80	0.	2.09E-13	1.74E-12	0.	0.	0.	1.06E-12	7.27E-15	5.45E-12	7.29E-12	1.58E-11
31	7.70	0.	1.96E-13	1.34E-12	0.	0.	0.	1.07E-12	7.55E-15	5.43E-12	7.37E-12	1.54E-11
32	7.60	0.	1.84E-13	1.16E-12	0.	10.00E-17	0.	1.07E-12	7.86E-15	5.40E-12	7.46E-12	1.53E-11
33	7.50	0.	1.72E-13	9.58E-13	0.	7.86E-16	0.	1.08E-12	8.18E-15	5.37E-12	7.55E-12	1.51E-11
34	7.40	0.	1.62E-13	7.73E-13	0.	2.64E-15	0.	1.08E-12	8.51E-15	5.34E-12	7.64E-12	1.50E-11
35	7.30	0.	1.53E-13	6.57E-13	0.	1.62E-14	0.	1.09E-12	8.87E-15	5.31E-12	7.72E-12	1.50E-11
36	7.20	0.	1.41E-13	5.30E-13	0.	4.95E-14	0.	1.10E-12	9.25E-15	5.29E-12	7.81E-12	1.49E-11
37	7.10	0.	1.30E-13	4.99E-13	0.	9.44E-14	0.	1.10E-12	9.64E-15	5.26E-12	7.90E-12	1.50E-11
38	7.00	2.27E-16	0.	3.76E-13	0.	3.65E-13	0.	1.11E-12	1.01E-14	5.23E-12	7.98E-12	1.51E-11
39	6.90	4.14E-16	0.	3.09E-13	0.	2.87E-13	0.	1.12E-12	1.05E-14	5.20E-12	8.07E-12	1.50E-11
40	6.80	3.33E-16	0.	2.64E-13	0.	6.60E-13	0.	1.13E-12	1.10E-14	5.17E-12	8.16E-12	1.54E-11
41	6.70	2.24E-16	0.	2.09E-13	0.	1.04E-12	0.	1.14E-12	1.15E-14	5.15E-12	8.25E-12	1.58E-11
42	6.60	1.28E-16	0.	1.63E-13	0.	4.72E-13	0.	1.15E-12	1.20E-14	5.13E-12	8.34E-12	1.53E-11
43	6.50	6.79E-17	0.	1.12E-13	0.	9.65E-13	0.	1.16E-12	1.26E-14	5.12E-12	8.43E-12	1.58E-11
44	6.40	9.64E-17	0.	6.27E-14	9.61E-15	1.42E-12	0.	1.17E-12	1.32E-14	5.11E-12	8.52E-12	1.63E-11
45	6.30	1.98E-16	0.	3.09E-14	3.91E-14	5.57E-13	0.	1.18E-12	1.38E-14	5.10E-12	8.64E-12	1.56E-11
46	6.20	5.55E-16	0.	1.38E-14	4.91E-14	9.03E-13	0.	1.19E-12	1.45E-14	5.09E-12	8.82E-12	1.61E-11
47	6.10	2.08E-15	0.	5.34E-15	1.29E-13	1.74E-12	0.	1.19E-12	1.52E-14	5.11E-12	9.00E-12	1.72E-11
48	6.00	5.12E-15	0.	1.19E-15	9.88E-14	4.94E-13	0.	1.20E-12	1.60E-14	5.13E-12	9.18E-12	1.61E-11
49	5.90	7.77E-15	0.	8.40E-17	1.36E-13	5.78E-13	0.	1.20E-12	1.68E-14	5.16E-12	9.36E-12	1.65E-11
50	5.80	1.10E-14	0.	2.02E-18	1.77E-13	5.36E-13	0.	1.19E-12	1.77E-14	5.18E-12	9.54E-12	1.66E-11
51	5.70	1.20E-14	0.	0.	1.80E-13	5.00E-13	0.	1.11E-12	1.87E-14	5.20E-12	9.72E-12	1.67E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-09 (15.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.43E-14	0.	0.	0.	1.29E-13	9.43E-13	0.	0.	1.04E-12	1.97E-14	5.23E-12	9.96E-12	1.72E-11
53	5.50	1.43E-14	0.	0.	0.	1.54E-13	9.77E-13	0.	0.	1.04E-12	2.09E-14	5.20E-12	1.01E-11	1.75E-11
54	5.40	1.42E-14	0.	0.	0.	1.22E-13	9.20E-13	0.	0.	1.05E-12	2.20E-14	5.36E-12	1.03E-11	1.73E-11
55	5.30	1.31E-14	0.	0.	0.	1.26E-13	9.81E-13	0.	0.	1.05E-12	2.32E-14	5.34E-12	1.05E-11	1.79E-11
56	5.20	8.62E-15	0.	0.	0.	1.27E-13	4.29E-13	0.	0.	1.05E-12	2.46E-14	5.39E-12	1.07E-11	1.78E-11
57	5.10	7.77E-15	0.	0.	0.	1.19E-13	6.08E-13	0.	3.67E-23	1.07E-12	2.61E-14	5.52E-12	1.10E-11	1.84E-11
58	5.00	5.53E-15	0.	0.	0.	10.05E-14	5.10E-13	0.	8.67E-23	1.08E-12	2.77E-14	5.66E-12	1.13E-11	1.87E-11
59	4.90	4.58E-15	0.	0.	0.	1.04E-13	4.54E-13	0.	8.67E-23	1.09E-12	2.94E-14	5.79E-12	1.15E-11	1.93E-11
60	4.80	4.63E-15	0.	0.	0.	1.08E-13	4.21E-13	0.	8.67E-23	1.10E-12	3.13E-14	5.92E-12	1.18E-11	1.94E-11
61	4.70	4.79E-15	0.	0.	0.	9.89E-14	3.19E-13	0.	8.67E-23	1.10E-12	3.34E-14	6.05E-12	1.21E-11	1.97E-11
62	4.60	5.42E-15	0.	0.	0.	9.57E-14	2.11E-13	0.	8.67E-23	1.11E-12	3.56E-14	6.20E-12	1.24E-11	2.02E-11
63	4.50	5.14E-15	0.	5.79E-15	0.	7.85E-14	2.01E-13	0.	8.67E-23	1.12E-12	3.83E-14	6.30E-12	1.27E-11	2.05E-11
64	4.40	4.92E-15	0.	2.40E-14	0.	7.44E-14	1.60E-13	0.	8.67E-23	1.13E-12	4.07E-14	6.55E-12	1.30E-11	2.10E-11
65	4.30	4.18E-15	0.	4.66E-14	0.	6.41E-14	8.00E-14	0.	8.67E-23	1.14E-12	4.36E-14	6.73E-12	8.38E-13	8.94E-12
66	4.20	3.61E-15	0.	2.38E-13	0.	6.45E-14	7.03E-14	0.	8.67E-23	1.15E-12	4.68E-14	6.90E-12	5.65E-13	9.34E-12
67	4.10	3.13E-15	0.	5.37E-14	0.	5.64E-14	1.73E-14	0.	8.67E-23	1.15E-12	5.03E-14	4.43E-12	8.91E-13	6.46E-12
68	4.00	2.63E-15	0.	3.29E-13	0.	5.04E-14	1.29E-14	0.	8.67E-23	1.16E-12	5.42E-14	3.58E-12	9.10E-13	6.92E-12
69	3.90	2.00E-15	0.	1.48E-13	1.67E-12	4.02E-14	6.19E-15	0.	8.67E-23	1.15E-12	5.84E-14	3.57E-12	9.44E-13	7.59E-12
70	3.80	2.09E-15	0.	1.74E-13	1.86E-11	4.10E-14	0.	0.	8.67E-23	1.15E-12	6.32E-14	2.49E-12	9.72E-13	2.35E-11
71	3.70	1.59E-15	0.	2.87E-13	3.12E-12	2.93E-14	0.	0.	8.67E-23	1.13E-12	6.85E-14	2.58E-12	1.12E-12	8.34E-12
72	3.60	1.32E-15	0.	1.09E-13	1.94E-11	3.23E-14	0.	0.	8.67E-23	1.06E-12	7.44E-14	2.88E-12	1.29E-12	2.48E-11
73	3.50	1.12E-15	0.	2.03E-13	8.89E-11	2.09E-14	0.	0.	8.67E-23	9.78E-13	8.10E-14	3.29E-12	1.47E-12	9.49E-11
74	3.40	9.05E-16	0.	7.71E-14	3.44E-12	2.30E-14	0.	0.	8.67E-23	5.59E-13	8.84E-14	3.75E-12	1.65E-12	9.59E-12
75	3.30	6.77E-16	0.	9.42E-14	2.77E-11	1.55E-14	0.	0.	8.67E-23	5.68E-13	9.67E-14	4.28E-12	1.84E-12	3.45E-11
76	3.20	5.23E-16	0.	4.38E-14	1.03E-10	1.54E-14	0.	0.	8.67E-23	5.01E-13	1.06E-13	4.65E-12	2.03E-12	1.10E-10
77	3.10	4.51E-16	0.	3.53E-14	5.43E-12	1.20E-14	0.	0.	8.67E-23	5.63E-13	1.17E-13	5.11E-12	2.23E-12	1.35E-11
78	3.00	3.58E-16	0.	1.74E-14	2.86E-11	1.07E-14	0.	0.	8.67E-23	5.64E-13	1.29E-13	5.58E-12	2.42E-12	3.73E-11
79	2.90	2.64E-16	0.	1.02E-14	2.36E-11	6.67E-15	0.	0.	8.67E-23	5.65E-13	1.43E-13	6.04E-12	2.61E-12	3.38E-11
80	2.80	2.52E-16	0.	4.53E-15	4.96E-12	3.59E-15	0.	0.	8.67E-23	5.66E-13	1.59E-13	6.52E-12	2.70E-12	1.50E-11
81	2.70	1.35E-16	0.	2.07E-15	1.41E-11	1.52E-15	0.	0.	8.67E-23	5.66E-13	1.77E-13	7.03E-12	8.14E-13	2.25E-11
82	2.60	5.01E-17	0.	1.09E-15	1.41E-12	5.31E-16	0.	0.	8.67E-23	5.66E-13	1.98E-13	2.41E-12	6.62E-13	5.29E-12
83	2.50	3.18E-18	0.	1.54E-16	7.66E-13	1.09E-16	0.	0.	8.67E-23	5.66E-13	2.23E-13	2.88E-12	7.59E-13	5.19E-12
84	2.40	0.	1.15E-14	0.	1.12E-12	1.04E-17	0.	0.	8.67E-23	5.66E-13	2.52E-13	3.41E-12	9.36E-13	6.50E-12
85	2.30	0.	7.06E-14	0.	0.	0.	0.	0.	8.67E-23	5.61E-13	2.87E-13	4.30E-12	1.12E-12	6.42E-12
86	2.20	0.	1.24E-13	0.	0.	0.	0.	0.	8.67E-23	5.59E-13	3.28E-13	5.27E-12	1.35E-12	7.53E-12
87	2.10	0.	2.34E-13	0.	0.	0.	0.	0.	8.67E-23	5.57E-13	3.77E-13	6.62E-12	1.58E-12	8.76E-12
88	2.00	0.	3.22E-13	0.	0.	0.	0.	0.	8.67E-23	5.39E-13	4.37E-13	6.87E-12	1.80E-12	9.97E-12
89	1.90	0.	8.70E-13	0.	0.	0.	0.	0.	8.67E-23	5.18E-13	5.11E-13	7.73E-12	2.93E-12	1.17E-11
90	1.80	0.	7.36E-13	0.	0.	0.	0.	0.	8.67E-23	4.36E-13	6.02E-13	8.98E-12	2.38E-12	1.32E-11
91	1.70	0.	8.75E-13	0.	0.	0.	0.	0.	8.67E-23	4.67E-13	7.15E-13	1.05E-11	2.53E-12	1.51E-11
92	1.60	0.	6.03E-13	0.	0.	0.	0.	0.	8.67E-23	3.95E-13	8.39E-13	1.85E-11	2.95E-12	1.53E-11
93	1.50	0.	7.50E-13	0.	0.	0.	0.	0.	8.67E-23	1.88E-13	1.04E-12	9.14E-12	1.76E-12	9.87E-12
94	1.40	0.	8.68E-13	0.	0.	0.	0.	0.	8.67E-23	0.	1.29E-12	7.97E-12	2.31E-12	1.24E-11
95	1.30	0.	5.90E-13	0.	0.	0.	0.	0.	8.67E-23	0.	1.61E-12	1.14E-11	3.14E-12	1.68E-11
96	1.20	0.	6.61E-13	0.	0.	0.	0.	0.	8.67E-23	0.	2.05E-12	1.48E-11	3.94E-12	2.02E-11
97	1.10	0.	4.72E-13	0.	0.	0.	0.	8.58E-18	8.67E-23	0.	2.67E-12	1.76E-11	3.47E-12	2.52E-11
98	1.00	0.	4.57E-13	0.	0.	0.	0.	5.83E-17	8.67E-23	0.	3.57E-12	2.17E-11	5.43E-12	3.04E-11
99	0.90	0.	3.51E-13	0.	0.	0.	0.	7.63E-17	8.67E-23	0.	4.91E-12	2.45E-11	7.39E-12	3.68E-11
100	0.80	0.	1.59E-13	0.	0.	0.	0.	9.38E-16	8.67E-23	0.	7.03E-12	2.03E-11	4.81E-12	3.23E-11
101	0.70	0.	4.47E-14	0.	0.	0.	0.	5.91E-16	8.67E-23	0.	1.05E-11	2.32E-11	5.53E-12	3.93E-11
102	0.60	0.	1.21E-15	0.	0.	0.	0.	2.48E-15	8.67E-23	0.	1.69E-11	2.61E-11	6.25E-12	4.92E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.2935E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	B- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL ABS
1	10.70	0.	0.	2.77E 01	0.	0.	0.	2.04E-01	5.22E-06	2.52E 00	4.19E-04	3.04E 01
2	10.60	0.	0.	2.38E 01	0.	0.	0.	2.04E-01	5.30E-06	1.95E-04	4.19E-04	2.38E 01
3	10.50	0.	0.	2.21E 01	0.	0.	0.	2.04E-01	5.53E-06	1.94E-04	4.20E-04	2.21E 01
4	10.40	0.	0.	1.93E 01	0.	0.	0.	2.04E-01	5.70E-06	1.97E-04	4.20E-04	1.93E 01
5	10.30	0.	0.	1.54E 01	0.	0.	0.	2.07E-01	5.84E-06	1.97E-04	4.20E-04	1.54E 01
6	10.20	0.	0.	1.50E 01	0.	0.	0.	2.07E-01	6.04E-06	1.98E-04	4.21E-04	1.50E 01
7	10.10	0.	0.	1.33E 01	0.	0.	0.	2.07E-01	6.22E-06	1.98E-04	4.20E-04	1.33E 01
8	10.00	0.	0.	1.03E 01	0.	0.	0.	2.07E-01	6.41E-06	1.99E-04	4.21E-04	1.03E 01
9	9.90	0.	0.	1.04E 01	0.	0.	0.	2.08E-01	6.61E-06	1.99E-04	4.21E-04	1.04E 01
10	9.80	0.	0.	8.92E 00	0.	0.	0.	2.08E-01	6.82E-06	2.00E-04	4.21E-04	9.13E 00
11	9.70	0.	0.	6.88E 00	0.	0.	0.	2.09E-01	7.03E-06	2.00E-04	4.21E-04	7.09E 00
12	9.60	0.	0.	7.36E 00	0.	0.	0.	2.09E-01	7.25E-06	2.01E-04	4.22E-04	7.57E 00
13	9.50	0.	2.83E 00	5.57E 00	0.	0.	0.	2.09E-01	7.49E-06	2.01E-04	4.22E-04	8.40E 00
14	9.40	0.	3.29E 00	4.83E 00	0.	0.	0.	2.10E-01	7.73E-06	2.02E-04	4.22E-04	8.32E 00
15	9.30	0.	3.73E 00	4.83E 00	0.	0.	0.	2.11E-01	7.98E-06	2.02E-04	4.22E-04	8.77E 00
16	9.20	0.	4.19E 00	3.42E 00	0.	0.	0.	2.12E-01	8.25E-06	2.03E-04	4.23E-04	7.81E 00
17	9.10	0.	5.05E 00	3.51E 00	0.	0.	0.	2.12E-01	8.52E-06	5.23E-05	4.23E-04	8.77E 00
18	9.00	0.	6.00E 00	2.87E 00	0.	0.	0.	2.13E-01	8.81E-06	5.22E-05	4.23E-04	9.08E 00
19	8.90	0.	6.95E 00	2.42E 00	0.	0.	0.	2.14E-01	9.11E-06	5.20E-05	4.23E-04	9.99E 00
20	8.80	0.	7.23E 00	2.28E 00	0.	0.	0.	2.15E-01	9.43E-06	5.18E-05	4.24E-04	9.72E 00
21	8.70	0.	6.97E 00	1.74E 00	0.	0.	0.	2.15E-01	9.76E-06	5.16E-05	4.24E-04	8.92E 00
22	8.60	0.	6.71E 00	1.75E 00	0.	0.	0.	2.16E-01	1.01E-05	5.15E-05	4.24E-04	8.68E 00
23	8.50	0.	6.51E 00	1.39E 00	0.	0.	0.	2.17E-01	1.05E-05	5.13E-05	4.24E-04	8.07E 00
24	8.40	0.	6.36E 00	1.20E 00	0.	0.	0.	2.18E-01	1.08E-05	5.12E-05	4.25E-04	7.84E 00
25	8.30	0.	6.21E 00	9.65E-01	0.	0.	0.	2.19E-01	1.12E-05	5.10E-05	4.24E-04	7.39E 00
26	8.20	0.	6.02E 00	9.36E-01	0.	0.	0.	2.20E-01	1.17E-05	5.08E-05	4.31E-04	7.17E 00
27	8.10	0.	5.81E 00	7.19E-01	0.	0.	0.	2.22E-01	1.21E-05	5.05E-05	4.36E-04	6.75E 00
28	8.00	0.	5.60E 00	6.89E-01	0.	0.	0.	2.23E-01	1.26E-05	5.03E-05	4.41E-04	6.51E 00
29	7.90	0.	5.36E 00	5.31E-01	0.	0.	0.	2.24E-01	1.30E-05	5.01E-05	4.46E-04	6.11E 00
30	7.80	0.	5.11E 00	5.21E-01	0.	0.	0.	2.25E-01	1.36E-05	4.99E-05	4.50E-04	5.86E 00
31	7.70	0.	4.87E 00	4.12E-01	0.	0.	0.	2.26E-01	1.41E-05	4.98E-05	4.55E-04	5.61E 00
32	7.60	0.	4.63E 00	3.63E-01	0.	2.31E-04	0.	2.27E-01	1.47E-05	4.96E-05	4.60E-04	5.22E 00
33	7.50	0.	4.39E 00	3.06E-01	0.	1.52E-03	0.	2.28E-01	1.53E-05	4.94E-05	4.65E-04	4.92E 00
34	7.40	0.	4.14E 00	2.54E-01	0.	6.04E-03	0.	2.30E-01	1.59E-05	4.93E-05	4.70E-04	4.63E 00
35	7.30	0.	3.89E 00	2.21E-01	0.	3.46E-02	0.	2.31E-01	1.65E-05	4.91E-05	4.74E-04	4.38E 00
36	7.20	0.	3.64E 00	1.82E-01	0.	9.86E-02	0.	2.32E-01	1.72E-05	4.89E-05	4.79E-04	4.15E 00
37	7.10	0.	3.38E 00	1.62E-01	0.	2.18E-01	0.	2.34E-01	1.80E-05	4.87E-05	4.84E-04	4.00E 00
38	7.00	4.59E-03	0.	1.35E-01	0.	7.28E-01	0.	2.36E-01	1.88E-05	4.86E-05	4.89E-04	1.11E 00
39	6.90	8.50E-03	0.	1.14E-01	0.	6.26E-01	0.	2.38E-01	1.96E-05	4.84E-05	4.94E-04	9.87E-01
40	6.80	6.93E-03	0.	9.98E-02	0.	1.41E 00	0.	2.40E-01	2.05E-05	4.82E-05	4.98E-04	1.76E 00
41	6.70	4.74E-03	0.	7.95E-02	0.	2.00E 00	0.	2.42E-01	2.14E-05	4.81E-05	5.03E-04	2.33E 00
42	6.60	2.74E-03	0.	6.48E-02	0.	1.01E 00	0.	2.44E-01	2.24E-05	4.80E-05	5.09E-04	1.32E 00
43	6.50	1.48E-03	0.	4.59E-02	0.	1.98E 00	0.	2.46E-01	2.35E-05	4.80E-05	5.14E-04	2.20E 00
44	6.40	2.07E-03	0.	2.69E-02	1.60E-02	2.64E 00	0.	2.47E-01	2.46E-05	4.80E-05	5.19E-04	2.94E 00
45	6.30	4.25E-03	0.	1.39E-02	6.72E-02	1.15E 00	0.	2.49E-01	2.58E-05	4.81E-05	5.26E-04	1.48E 00
46	6.20	1.23E-02	0.	6.54E-03	8.63E-02	1.83E 00	0.	2.51E-01	2.71E-05	4.81E-05	5.36E-04	2.19E 00
47	6.10	4.72E-02	0.	2.63E-03	2.30E-01	3.20E 00	0.	2.53E-01	2.84E-05	4.83E-05	5.46E-04	3.74E 00
48	6.00	1.19E-01	0.	6.05E-04	1.85E-01	1.02E 00	0.	2.55E-01	2.99E-05	4.87E-05	5.57E-04	1.58E 00
49	5.90	1.85E-01	0.	4.28E-05	2.58E-01	1.15E 00	0.	2.55E-01	3.14E-05	4.90E-05	5.67E-04	1.84E 00
50	5.80	2.69E-01	0.	1.04E-06	3.40E-01	1.07E 00	0.	2.51E-01	3.31E-05	4.94E-05	5.77E-04	1.93E 00
51	5.70	3.02E-01	0.	0.	3.55E-01	1.06E 00	0.	2.36E-01	3.49E-05	4.96E-05	5.87E-04	1.96E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.64E-01	0.	0.	0.	2.53E-01	1.85E 00	0.	0.	2.19E-01	3.68E-05	5.68E-05	5.98E-04	2.69E 00
53	5.50	3.70E-01	0.	0.	0.	3.14E-01	1.85E 00	0.	0.	2.21E-01	3.68E-05	5.95E-05	6.08E-04	2.75E 00
54	5.40	3.77E-01	0.	0.	0.	2.57E-01	1.89E 00	0.	0.	2.22E-01	4.18E-05	5.18E-05	6.19E-04	1.95E 00
55	5.30	3.54E-01	0.	0.	0.	2.65E-01	1.75E 00	0.	0.	2.23E-01	4.34E-05	5.16E-05	6.31E-04	2.49E 00
56	5.20	2.48E-01	0.	0.	0.	2.70E-01	9.12E-01	0.	0.	2.25E-01	4.59E-05	5.22E-05	6.47E-04	1.65E 00
57	5.10	2.19E-01	0.	0.	0.	2.58E-01	1.27E 00	0.	7.45E-04	2.26E-01	4.87E-05	5.35E-05	6.63E-04	1.98E 00
58	5.00	1.58E-01	0.	0.	0.	2.21E-01	1.08E 00	0.	7.45E-04	2.28E-01	5.17E-05	5.49E-05	6.78E-04	1.49E 00
59	4.90	1.51E-01	0.	0.	0.	2.33E-01	1.02E 00	0.	7.45E-04	2.30E-01	5.49E-05	5.63E-05	6.94E-04	1.62E 00
60	4.80	1.32E-01	0.	0.	0.	2.43E-01	9.36E-01	0.	7.45E-04	2.32E-01	5.84E-05	5.76E-05	7.10E-04	1.55E 00
61	4.70	1.39E-01	0.	0.	0.	2.25E-01	7.49E-01	0.	7.45E-04	2.34E-01	6.22E-05	5.89E-05	7.27E-04	1.35E 00
62	4.60	1.40E-01	0.	0.	0.	2.21E-01	7.14E-01	0.	7.45E-04	2.36E-01	6.64E-05	6.06E-05	7.45E-04	1.33E 00
63	4.50	1.55E-01	0.	2.99E-03	0.	1.86E-01	4.84E-01	0.	7.45E-04	2.38E-01	7.09E-05	6.25E-05	7.63E-04	1.07E 00
64	4.40	1.52E-01	0.	1.10E-02	0.	1.70E-01	3.71E-01	0.	7.45E-04	2.40E-01	7.59E-05	6.44E-05	7.80E-04	9.54E-01
65	4.30	1.32E-01	0.	2.49E-02	0.	1.57E-01	1.97E-01	0.	7.45E-04	2.42E-01	8.14E-05	6.63E-05	7.98E-04	7.54E-01
66	4.20	1.16E-01	0.	1.19E-01	0.	1.60E-01	1.69E-01	0.	7.45E-04	2.44E-01	8.74E-05	6.83E-05	8.16E-04	8.81E-01
67	4.10	1.02E-01	0.	2.99E-02	0.	1.43E-01	4.14E-02	0.	7.45E-04	2.45E-01	9.39E-05	7.02E-05	8.33E-04	5.62E-01
68	4.00	8.74E-02	0.	1.59E-01	0.	1.30E-01	3.13E-02	0.	7.45E-04	2.46E-01	1.01E-04	7.22E-05	8.17E-05	6.94E-01
69	3.90	6.79E-02	0.	7.89E-02	1.64E-04	1.07E-01	1.44E-02	0.	7.45E-04	2.45E-01	1.09E-04	5.21E-05	8.40E-05	5.96E-01
70	3.80	7.16E-02	0.	9.10E-02	1.48E-03	1.12E-01	0.	0.	7.45E-04	2.44E-01	1.18E-04	5.33E-05	8.65E-05	5.20E-01
71	3.70	5.65E-02	0.	1.35E-01	2.80E-04	8.17E-02	0.	0.	7.45E-04	2.40E-01	1.28E-04	4.12E-05	9.86E-05	5.14E-01
72	3.60	4.77E-02	0.	5.88E-02	1.81E-03	8.94E-02	0.	0.	7.45E-04	2.25E-01	1.39E-04	4.44E-05	1.13E-04	4.23E-01
73	3.50	4.12E-02	0.	1.01E-01	6.97E-03	6.05E-02	0.	0.	7.45E-04	2.06E-01	1.51E-04	3.99E-05	1.27E-04	4.16E-01
74	3.40	3.42E-02	0.	4.32E-02	3.61E-04	6.67E-02	0.	0.	7.45E-04	1.19E-01	1.64E-04	4.53E-05	1.43E-04	2.64E-01
75	3.39	2.60E-02	0.	5.80E-02	2.47E-03	4.60E-02	0.	0.	7.45E-04	1.19E-01	1.61E-04	5.86E-05	1.59E-04	2.45E-01
76	3.20	2.80E-02	0.	2.54E-02	7.78E-03	4.69E-02	0.	0.	7.45E-04	1.19E-01	1.98E-04	5.68E-05	1.75E-04	2.21E-01
77	3.10	1.81E-02	0.	1.99E-02	5.65E-04	4.02E-02	0.	0.	7.45E-04	1.19E-01	2.18E-04	6.15E-05	1.91E-04	1.99E-01
78	3.00	1.48E-02	0.	1.04E-02	2.51E-03	3.43E-02	0.	0.	7.45E-04	1.20E-01	2.41E-04	6.78E-05	2.08E-04	1.83E-01
79	2.90	1.12E-02	0.	6.15E-03	1.87E-03	2.23E-02	0.	0.	7.45E-04	1.20E-01	2.67E-04	7.29E-05	2.24E-04	1.63E-01
80	2.80	1.09E-02	0.	2.81E-03	5.05E-04	1.27E-02	0.	0.	7.45E-04	1.20E-01	2.96E-04	7.84E-05	2.41E-04	1.40E-01
81	2.70	6.84E-03	0.	1.20E-03	1.24E-03	5.67E-03	0.	0.	7.45E-04	1.20E-01	3.31E-04	8.46E-05	2.59E-04	1.38E-01
82	2.60	2.36E-03	0.	6.56E-04	1.19E-04	2.09E-03	0.	0.	7.45E-04	1.20E-01	3.71E-04	9.12E-05	2.78E-04	1.27E-01
83	2.50	1.53E-04	0.	9.88E-05	7.57E-05	4.44E-04	0.	0.	7.45E-04	1.20E-01	4.27E-04	1.01E-04	8.11E-05	1.22E-01
84	2.40	0.	6.83E-03	0.	9.87E-05	4.33E-05	0.	0.	7.45E-04	1.20E-01	4.72E-04	1.15E-04	9.97E-05	1.28E-01
85	2.30	0.	3.20E-02	0.	0.	0.	0.	0.	7.45E-04	1.19E-01	5.36E-04	6.26E-05	1.19E-04	1.52E-01
86	2.20	0.	6.24E-02	0.	0.	0.	0.	0.	7.45E-04	1.18E-01	6.14E-04	7.39E-05	1.44E-04	1.93E-01
87	2.10	0.	1.01E-01	0.	0.	0.	0.	0.	7.45E-04	1.18E-01	7.07E-04	8.88E-05	1.68E-04	2.71E-01
88	2.00	0.	1.51E-01	0.	0.	0.	0.	0.	7.45E-04	1.14E-01	8.19E-04	9.81E-05	1.93E-04	2.67E-01
89	1.90	0.	3.50E-01	0.	0.	0.	0.	0.	7.45E-04	1.10E-01	9.57E-04	1.11E-04	2.18E-04	4.62E-01
90	1.80	0.	2.89E-01	0.	0.	0.	0.	0.	7.45E-04	1.05E-01	1.13E-03	1.29E-04	2.57E-04	3.94E-01
91	1.70	0.	3.49E-01	0.	0.	0.	0.	0.	7.45E-04	9.98E-02	1.34E-03	1.52E-04	3.05E-04	4.50E-01
92	1.60	0.	2.48E-01	0.	0.	0.	0.	0.	7.45E-04	8.38E-02	1.61E-03	1.74E-04	3.53E-04	3.27E-01
93	1.50	0.	2.99E-01	0.	0.	0.	0.	0.	7.45E-04	3.81E-02	1.95E-03	2.13E-04	4.18E-04	3.41E-01
94	1.40	0.	3.31E-01	0.	0.	0.	0.	0.	7.45E-04	0.	2.41E-03	2.94E-04	4.71E-04	3.34E-01
95	1.30	0.	2.35E-01	0.	0.	0.	0.	0.	7.45E-04	0.	3.02E-03	2.98E-04	5.95E-04	2.39E-01
96	1.20	0.	2.50E-01	0.	0.	0.	0.	0.	7.45E-04	0.	3.85E-03	2.54E-04	5.88E-04	2.55E-01
97	1.10	0.	1.91E-01	0.	0.	0.	0.	1.71E-05	7.45E-04	0.	5.01E-03	3.13E-04	6.31E-04	1.98E-01
98	1.00	0.	1.81E-01	0.	0.	0.	0.	1.72E-04	7.45E-04	0.	6.69E-03	3.79E-04	6.76E-04	1.89E-01
99	0.90	0.	1.43E-01	0.	0.	0.	0.	1.66E-04	7.45E-04	0.	9.22E-03	4.15E-04	7.04E-04	1.54E-01
100	0.80	0.	6.56E-02	0.	0.	0.	0.	2.38E-03	7.45E-04	0.	1.32E-02	4.79E-04	9.12E-04	8.33E-02
101	0.70	0.	1.79E-02	0.	0.	0.	0.	1.53E-03	7.45E-04	0.	1.98E-02	5.34E-04	1.02E-03	4.15E-02
102	0.60	0.	7.21E-04	0.	0.	0.	0.	6.40E-03	7.45E-04	0.	3.19E-02	5.94E-04	1.14E-03	4.15E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	2.32E 00	0.	0.	0.	5.00E-03	2.01E-07	5.61E-05	4.90E-05	2.32E 00
2	10.60	0.	0.	1.93E 00	0.	0.	0.	5.00E-03	2.07E-07	5.64E-05	4.90E-05	1.93E 00
3	10.50	0.	0.	1.65E 00	0.	0.	0.	5.01E-03	2.13E-07	5.67E-05	4.90E-05	1.65E 00
4	10.40	0.	0.	1.42E 00	0.	0.	0.	5.02E-03	2.19E-07	5.69E-05	4.91E-05	1.43E 00
5	10.30	0.	0.	1.29E 00	0.	0.	0.	5.02E-03	2.25E-07	5.70E-05	4.91E-05	1.29E 00
6	10.20	0.	0.	1.25E 00	0.	0.	0.	5.03E-03	2.32E-07	5.72E-05	4.91E-05	1.26E 00
7	10.10	0.	0.	1.11E 00	0.	0.	0.	5.04E-03	2.39E-07	5.73E-05	4.91E-05	1.12E 00
8	10.00	0.	0.	9.65E-01	0.	0.	0.	5.04E-03	2.46E-07	5.74E-05	4.92E-05	9.78E-01
9	9.90	0.	0.	8.68E-01	0.	0.	0.	5.05E-03	2.54E-07	5.76E-05	4.92E-05	8.78E-01
10	9.80	0.	0.	7.47E-01	0.	0.	0.	5.06E-03	2.62E-07	5.77E-05	4.92E-05	7.52E-01
11	9.70	0.	0.	5.76E-01	0.	0.	0.	5.07E-03	2.70E-07	5.79E-05	4.92E-05	5.81E-01
12	9.60	0.	0.	6.16E-01	0.	0.	0.	5.08E-03	2.79E-07	5.80E-05	4.93E-05	6.21E-01
13	9.50	0.	3.85E-02	4.66E-01	0.	0.	0.	5.09E-03	2.88E-07	5.82E-05	4.93E-05	5.10E-01
14	9.40	0.	4.46E-02	4.04E-01	0.	0.	0.	5.11E-03	2.97E-07	5.83E-05	4.93E-05	4.94E-01
15	9.30	0.	5.09E-02	4.04E-01	0.	0.	0.	5.13E-03	3.07E-07	5.85E-05	4.94E-05	4.48E-01
16	9.20	0.	5.69E-02	2.88E-01	0.	0.	0.	5.14E-03	3.17E-07	1.52E-05	4.94E-05	3.48E-01
17	9.10	0.	6.88E-02	2.94E-01	0.	0.	0.	5.16E-03	3.27E-07	1.51E-05	4.94E-05	3.60E-01
18	9.00	0.	8.17E-02	2.40E-01	0.	0.	0.	5.18E-03	3.38E-07	1.51E-05	4.94E-05	3.27E-01
19	8.90	0.	9.47E-02	2.08E-01	0.	0.	0.	5.20E-03	3.50E-07	1.50E-05	4.95E-05	3.02E-01
20	8.80	0.	9.84E-02	1.91E-01	0.	0.	0.	5.22E-03	3.62E-07	1.50E-05	4.95E-05	2.95E-01
21	8.70	0.	9.49E-02	1.49E-01	0.	0.	0.	5.24E-03	3.75E-07	1.49E-05	4.95E-05	2.46E-01
22	8.60	0.	9.14E-02	1.46E-01	0.	0.	0.	5.26E-03	3.88E-07	1.49E-05	4.96E-05	2.43E-01
23	8.50	0.	8.84E-02	1.13E-01	0.	0.	0.	5.27E-03	4.02E-07	1.48E-05	4.96E-05	2.07E-01
24	8.40	0.	8.66E-02	1.08E-01	0.	0.	0.	5.30E-03	4.17E-07	1.48E-05	4.96E-05	2.00E-01
25	8.30	0.	8.49E-02	8.08E-02	0.	0.	0.	5.33E-03	4.32E-07	1.47E-05	4.98E-05	1.71E-01
26	8.20	0.	8.19E-02	7.83E-02	0.	0.	0.	5.36E-03	4.48E-07	1.47E-05	5.04E-05	1.66E-01
27	8.10	0.	7.91E-02	6.02E-02	0.	0.	0.	5.39E-03	4.65E-07	1.46E-05	5.09E-05	1.45E-01
28	8.00	0.	7.62E-02	5.71E-02	0.	0.	0.	5.41E-03	4.83E-07	1.46E-05	5.15E-05	1.39E-01
29	7.90	0.	7.29E-02	4.45E-02	0.	0.	0.	5.44E-03	5.01E-07	1.45E-05	5.21E-05	1.23E-01
30	7.80	0.	6.96E-02	4.36E-02	0.	0.	0.	5.47E-03	5.21E-07	1.44E-05	5.26E-05	1.19E-01
31	7.70	0.	6.63E-02	3.45E-02	0.	0.	0.	5.50E-03	5.41E-07	1.44E-05	5.32E-05	1.06E-01
32	7.60	0.	6.30E-02	3.04E-02	0.	7.82E-04	0.	5.52E-03	5.63E-07	1.43E-05	5.37E-05	9.98E-02
33	7.50	0.	5.97E-02	2.58E-02	0.	9.14E-04	0.	5.55E-03	5.86E-07	1.43E-05	5.43E-05	9.09E-02
34	7.40	0.	5.63E-02	2.12E-02	0.	2.04E-04	0.	5.58E-03	6.10E-07	1.42E-05	5.49E-05	8.34E-02
35	7.30	0.	5.30E-02	1.85E-02	0.	1.17E-03	0.	5.61E-03	6.36E-07	1.42E-05	5.54E-05	7.83E-02
36	7.20	0.	4.96E-02	1.58E-02	0.	3.33E-03	0.	5.64E-03	6.63E-07	1.41E-05	5.60E-05	7.38E-02
37	7.10	0.	4.60E-02	1.33E-02	0.	7.39E-03	0.	5.69E-03	6.91E-07	1.41E-05	5.66E-05	7.27E-02
38	7.00	6.27E-05	0.	1.13E-02	0.	2.46E-02	0.	5.74E-03	7.21E-07	1.40E-05	5.71E-05	4.18E-02
39	6.90	1.16E-04	0.	9.54E-03	0.	2.11E-02	0.	5.78E-03	7.53E-07	1.40E-05	5.77E-05	3.67E-02
40	6.80	9.46E-05	0.	8.39E-03	0.	4.78E-02	0.	5.83E-03	7.87E-07	1.40E-05	5.82E-05	6.22E-02
41	6.70	6.47E-05	0.	6.66E-03	0.	6.76E-02	0.	5.88E-03	8.23E-07	1.39E-05	5.88E-05	8.83E-02
42	6.60	3.74E-05	0.	5.41E-03	0.	3.41E-02	0.	5.92E-03	8.61E-07	1.39E-05	5.94E-05	4.56E-02
43	6.50	2.02E-05	0.	3.84E-03	0.	6.71E-02	0.	5.97E-03	9.02E-07	1.39E-05	6.00E-05	7.78E-02
44	6.40	2.63E-05	0.	2.25E-03	5.42E-04	8.94E-02	0.	6.01E-03	9.45E-07	1.39E-05	6.07E-05	9.83E-02
45	6.30	5.81E-05	0.	1.17E-03	2.27E-03	3.87E-02	0.	6.06E-03	9.91E-07	1.39E-05	6.14E-05	4.84E-02
46	6.20	1.67E-04	0.	5.47E-04	2.92E-03	6.20E-02	0.	6.11E-03	1.04E-06	1.39E-05	6.26E-05	7.19E-02
47	6.10	6.44E-04	0.	2.20E-04	7.78E-03	1.08E-01	0.	6.15E-03	1.09E-06	1.40E-05	6.38E-05	1.23E-01
48	6.00	1.62E-03	0.	5.07E-05	6.25E-03	3.46E-02	0.	6.20E-03	1.15E-06	1.41E-05	6.50E-05	4.48E-02
49	5.90	2.52E-03	0.	3.58E-06	8.71E-03	3.88E-02	0.	6.20E-03	1.21E-06	1.42E-05	6.62E-05	5.63E-02
50	5.80	3.67E-03	0.	8.71E-08	1.15E-02	3.61E-02	0.	6.11E-03	1.27E-06	1.43E-05	6.74E-05	5.75E-02
51	5.70	4.12E-03	0.	0.	1.20E-02	3.60E-02	0.	5.74E-03	1.34E-06	1.44E-05	6.86E-05	5.79E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.08E-03	0.	0.	0.	8.54E-03	6.26E-02	0.	0.	5.33E-03	1.41E-06	1.45E-05	6.99E-05	8.15E-02
53	5.50	5.06E-03	0.	0.	0.	1.06E-02	6.24E-02	0.	0.	5.36E-03	1.49E-06	1.46E-05	7.11E-05	8.36E-02
54	5.40	5.15E-03	0.	0.	0.	8.68E-03	3.70E-02	0.	0.	5.39E-03	1.58E-06	1.48E-05	7.23E-05	5.62E-02
55	5.30	4.83E-03	0.	0.	0.	8.95E-03	5.92E-02	0.	0.	5.42E-03	1.67E-06	1.49E-05	7.38E-05	7.85E-02
56	5.20	3.28E-03	0.	0.	0.	9.13E-03	3.08E-02	0.	0.	5.46E-03	1.76E-06	1.51E-05	7.56E-05	4.88E-02
57	5.10	2.99E-03	0.	0.	0.	8.71E-03	4.31E-02	0.	2.94E-06	5.51E-03	1.87E-06	1.55E-05	7.74E-05	6.04E-02
58	5.00	2.16E-03	0.	0.	0.	7.46E-03	3.65E-02	0.	2.94E-06	5.55E-03	1.98E-06	1.59E-05	7.93E-05	5.18E-02
59	4.90	1.79E-03	0.	0.	0.	7.87E-03	3.45E-02	0.	2.94E-06	5.60E-03	2.11E-06	1.63E-05	8.11E-05	4.98E-02
60	4.80	1.81E-03	0.	0.	0.	8.20E-03	3.14E-02	0.	2.94E-06	5.64E-03	2.24E-06	1.67E-05	8.29E-05	4.74E-02
61	4.70	1.90E-03	0.	0.	0.	7.62E-03	2.53E-02	0.	2.94E-06	5.69E-03	2.39E-06	1.70E-05	8.50E-05	4.07E-02
62	4.60	2.18E-03	0.	0.	0.	7.48E-03	2.41E-02	0.	2.94E-06	5.74E-03	2.55E-06	1.75E-05	8.70E-05	3.96E-02
63	4.50	2.12E-03	0.	2.47E-04	0.	6.28E-03	1.63E-02	0.	2.94E-06	5.78E-03	2.72E-06	1.81E-05	8.91E-05	3.49E-02
64	4.40	2.07E-03	0.	9.88E-04	0.	6.03E-03	1.25E-02	0.	2.94E-06	5.83E-03	2.92E-06	1.86E-05	9.12E-05	2.70E-02
65	4.30	1.80E-03	0.	2.08E-03	0.	5.30E-03	6.64E-03	0.	2.94E-06	5.88E-03	3.13E-06	1.92E-05	9.33E-05	2.18E-02
66	4.20	1.58E-03	0.	9.60E-03	0.	5.40E-03	5.59E-03	0.	2.94E-06	5.92E-03	3.36E-06	1.97E-05	9.53E-05	2.42E-02
67	4.10	1.39E-03	0.	2.56E-03	0.	4.84E-03	1.40E-03	0.	2.94E-06	5.95E-03	3.61E-06	2.03E-05	9.57E-05	1.62E-02
68	4.00	1.19E-03	0.	1.33E-02	0.	4.39E-03	1.06E-03	0.	2.94E-06	5.97E-03	3.89E-06	2.09E-05	9.55E-06	2.59E-02
69	3.90	9.26E-04	0.	5.94E-03	6.58E-05	3.61E-03	4.86E-04	0.	2.94E-06	5.95E-03	4.19E-06	1.56E-05	9.82E-06	1.70E-02
70	3.80	9.78E-04	0.	7.61E-03	5.96E-04	3.78E-03	0.	0.	2.94E-06	5.92E-03	4.54E-06	1.14E-05	1.01E-05	1.49E-02
71	3.70	7.71E-04	0.	2.13E-02	1.13E-04	2.76E-03	0.	0.	2.94E-06	5.83E-03	4.92E-06	1.19E-05	1.15E-05	2.08E-02
72	3.60	6.51E-04	0.	4.92E-03	7.30E-04	3.02E-03	0.	0.	2.94E-06	5.46E-03	5.34E-06	1.02E-05	1.32E-05	1.48E-02
73	3.50	5.63E-04	0.	8.44E-03	2.81E-03	2.05E-03	0.	0.	2.94E-06	5.00E-03	5.81E-06	1.15E-05	1.49E-05	1.89E-02
74	3.40	4.67E-04	0.	3.62E-03	1.45E-04	2.26E-03	0.	0.	2.94E-06	2.88E-03	6.34E-06	1.31E-05	1.67E-05	9.41E-03
75	3.30	3.54E-04	0.	4.18E-03	9.93E-04	1.58E-03	0.	0.	2.94E-06	2.89E-03	6.94E-06	1.46E-05	1.85E-05	1.08E-02
76	3.20	2.81E-04	0.	2.13E-03	3.13E-03	1.59E-03	0.	0.	2.94E-06	2.89E-03	7.62E-06	1.62E-05	2.05E-05	1.01E-02
77	3.10	2.47E-04	0.	1.47E-03	2.27E-04	1.36E-03	0.	0.	2.94E-06	2.90E-03	8.38E-06	1.78E-05	2.24E-05	6.45E-03
78	3.00	2.02E-04	0.	8.79E-04	1.01E-03	1.16E-03	0.	0.	2.94E-06	2.91E-03	9.25E-06	1.94E-05	2.43E-05	6.21E-03
79	2.90	1.53E-04	0.	5.15E-04	7.54E-04	7.55E-04	0.	0.	2.94E-06	2.91E-03	1.02E-05	2.10E-05	2.62E-05	5.15E-03
80	2.80	1.48E-04	0.	2.35E-04	2.03E-04	4.29E-04	0.	0.	2.94E-06	2.91E-03	1.14E-05	2.27E-05	2.82E-05	4.00E-03
81	2.70	8.25E-05	0.	1.6 E-04	4.97E-04	1.92E-04	0.	0.	2.94E-06	2.91E-03	1.27E-05	2.45E-05	3.03E-05	3.86E-03
82	2.60	3.23E-05	0.	5.49E-05	4.77E-05	7.06E-05	0.	0.	2.94E-06	2.91E-03	1.42E-05	2.64E-05	3.18E-05	3.20E-03
83	2.50	2.09E-06	0.	7.93E-06	3.04E-05	1.50E-05	0.	0.	2.94E-06	2.91E-03	1.60E-05	2.93E-05	3.45E-06	3.83E-03
84	2.40	0.	5.05E-04	0.	3.97E-05	1.46E-06	0.	0.	2.94E-06	2.91E-03	1.81E-05	1.49E-05	1.19E-05	3.51E-03
85	2.30	0.	2.38E-03	0.	0.	0.	0.	0.	2.94E-06	2.89E-03	2.06E-05	1.81E-05	1.43E-05	5.43E-03
86	2.20	0.	5.23E-03	0.	0.	0.	0.	0.	2.94E-06	2.88E-03	2.36E-05	2.14E-05	1.68E-05	8.17E-03
87	2.10	0.	8.44E-03	0.	0.	0.	0.	0.	2.94E-06	2.87E-03	2.71E-05	2.49E-05	1.97E-05	1.14E-02
88	2.00	0.	1.27E-02	0.	0.	0.	0.	0.	2.94E-06	2.78E-03	3.15E-05	2.84E-05	2.25E-05	1.55E-02
89	1.90	0.	2.93E-02	0.	0.	0.	0.	0.	2.94E-06	2.67E-03	3.67E-05	3.20E-05	2.54E-05	3.21E-02
90	1.80	0.	2.42E-02	0.	0.	0.	0.	0.	2.94E-06	2.55E-03	4.33E-05	3.74E-05	3.00E-05	2.68E-02
91	1.70	0.	2.92E-02	0.	0.	0.	0.	0.	2.94E-06	2.41E-03	5.14E-05	4.39E-05	3.56E-05	3.17E-02
92	1.60	0.	2.01E-02	0.	0.	0.	0.	0.	2.94E-06	2.04E-03	6.13E-05	5.04E-05	4.13E-05	2.73E-02
93	1.50	0.	2.51E-02	0.	0.	0.	0.	0.	2.94E-06	9.25E-04	7.31E-05	6.16E-05	4.89E-05	2.42E-02
94	1.40	0.	2.77E-02	0.	0.	0.	0.	0.	2.94E-06	0.	9.25E-05	6.72E-05	5.59E-05	2.79E-02
95	1.30	0.	1.94E-02	0.	0.	0.	0.	0.	2.94E-06	0.	1.16E-04	8.62E-05	6.90E-05	1.99E-02
96	1.20	0.	2.09E-02	0.	0.	0.	0.	0.	2.94E-06	0.	1.48E-04	7.34E-05	5.94E-05	2.12E-02
97	1.10	0.	1.60E-02	0.	0.	0.	0.	5.79E-07	2.94E-06	0.	1.92E-04	9.84E-05	7.38E-05	1.64E-02
98	1.00	0.	1.51E-02	0.	0.	0.	0.	4.11E-06	2.94E-06	0.	2.57E-04	1.88E-04	7.91E-05	1.56E-02
99	0.90	0.	1.19E-02	0.	0.	0.	0.	5.61E-06	2.94E-06	0.	3.54E-04	1.21E-04	9.28E-05	1.25E-02
100	0.80	0.	5.49E-03	0.	0.	0.	0.	8.06E-05	2.94E-06	0.	5.07E-04	1.39E-04	1.87E-04	6.33E-03
101	0.70	0.	1.50E-03	0.	0.	0.	0.	5.16E-05	2.94E-06	0.	7.61E-04	1.54E-04	1.20E-04	2.59E-03
102	0.60	0.	5.64E-05	0.	0.	0.	0.	2.16E-04	2.94E-06	0.	1.22E-03	1.38E-04	9.41E-05	1.73E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.2[illegible]E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	C 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	1.25E-01	0.	0.	0.	1.[illegible]E-04	8.95E-09	1.30E-05	5.15E-06	1.25E-01
2	10.60	0.	0.	1.04E-01	0.	0.	0.	1.12E-04	9.21E-09	1.31E-05	5.14E-06	1.04E-01
3	10.50	0.	0.	9.96E-02	0.	0.	0.	1.12E-04	9.48E-09	1.32E-05	5.14E-06	9.97E-02
4	10.40	0.	0.	8.71E-02	0.	0.	0.	1.12E-04	9.79E-09	1.32E-05	5.14E-06	8.73E-02
5	10.30	0.	0.	6.94E-02	0.	0.	0.	1.12E-04	10.00E-09	1.32E-05	5.15E-06	6.95E-02
6	10.20	0.	0.	6.76E-02	0.	0.	0.	1.12E-04	1.03E-08	1.33E-05	5.15E-06	6.77E-02
7	10.10	0.	0.	6.00E-02	0.	0.	0.	1.12E-04	1.06E-08	1.33E-05	5.15E-06	6.01E-02
8	10.00	0.	0.	4.69E-02	0.	0.	0.	1.12E-04	1.10E-08	1.33E-05	5.16E-06	4.69E-02
9	9.90	0.	0.	4.68E-02	0.	0.	0.	1.13E-04	1.13E-08	1.34E-05	5.16E-06	4.70E-02
10	9.80	0.	0.	4.03E-02	0.	0.	0.	1.13E-04	1.17E-08	1.34E-05	5.16E-06	4.04E-02
11	9.70	0.	0.	3.11E-02	0.	0.	0.	1.13E-04	1.20E-08	1.34E-05	5.16E-06	3.12E-02
12	9.60	0.	0.	3.32E-02	0.	0.	0.	1.13E-04	1.24E-08	1.35E-05	5.17E-06	3.34E-02
13	9.50	0.	4.23E-04	2.51E-02	0.	0.	0.	1.13E-04	1.28E-08	1.35E-05	5.17E-06	2.57E-02
14	9.40	0.	4.91E-04	2.18E-02	0.	0.	0.	1.14E-04	1.32E-08	1.35E-05	5.17E-06	2.24E-02
15	9.30	0.	5.58E-04	2.18E-02	0.	0.	0.	1.14E-04	1.37E-08	1.36E-05	5.18E-06	2.25E-02
16	9.20	0.	6.24E-04	1.54E-02	0.	0.	0.	1.15E-04	1.41E-08	3.53E-06	5.18E-06	1.62E-02
17	9.10	0.	7.56E-04	1.58E-02	0.	0.	0.	1.15E-04	1.46E-08	3.52E-06	5.18E-06	1.67E-02
18	9.00	0.	8.98E-04	1.30E-02	0.	0.	0.	1.16E-04	1.51E-08	3.50E-06	5.18E-06	1.40E-02
19	8.90	0.	1.04E-03	1.09E-02	0.	0.	0.	1.16E-04	1.56E-08	3.49E-06	5.19E-06	1.21E-02
20	8.80	0.	1.08E-03	1.03E-02	0.	0.	0.	1.16E-04	1.61E-08	3.48E-06	5.19E-06	1.15E-02
21	8.70	0.	1.04E-03	7.84E-03	0.	0.	0.	1.17E-04	1.67E-08	3.47E-06	5.19E-06	9.01E-03
22	8.60	0.	10.00E-04	7.98E-03	0.	0.	0	1.17E-04	1.73E-08	3.46E-06	5.20E-06	9.03E-03
23	8.50	0.	9.74E-04	6.07E-03	0.	0.	0.	1.18E-04	1.79E-08	3.45E-06	5.20E-06	7.17E-03
24	8.40	0.	9.51E-04	5.40E-03	0.	0.	0.	1.18E-04	1.86E-08	3.44E-06	5.20E-06	6.48E-03
25	8.30	0.	9.29E-04	4.36E-03	0.	0.	0.	1.19E-04	1.92E-08	3.43E-06	5.22E-06	5.41E-03
26	8.20	0.	9.01E-04	4.23E-03	0.	0.	0.	1.19E-04	2.00E-08	3.41E-06	5.28E-06	5.25E-03
27	8.10	0.	8.69E-04	3.25E-03	0.	0.	0.	1.20E-04	2.07E-08	3.40E-06	5.34E-06	4.25E-03
28	8.00	0.	8.38E-04	3.11E-03	0.	0.	0.	1.21E-04	2.15E-08	3.38E-06	5.40E-06	4.08E-03
29	7.90	0.	8.02E-04	2.48E-03	0.	0.	0.	1.21E-04	2.23E-08	3.37E-06	5.46E-06	3.33E-03
30	7.80	0.	7.65E-04	2.35E-03	0.	0.	0.	1.22E-04	2.32E-08	3.36E-06	5.52E-06	3.25E-03
31	7.70	0.	7.29E-04	1.86E-03	0.	0.	0.	1.23E-04	2.41E-08	3.34E-06	5.58E-06	2.72E-03
32	7.60	0.	6.92E-04	1.64E-03	0.	1.91E-07	0.	1.23E-04	2.51E-08	3.33E-06	5.64E-06	2.47E-03
33	7.50	0.	6.56E-04	1.38E-03	0.	1.25E-06	0.	1.24E-04	2.61E-08	3.32E-06	5.70E-06	2.17E-03
34	7.40	0.	6.19E-04	1.15E-03	0.	4.98E-06	0.	1.24E-04	2.72E-08	3.31E-06	5.75E-06	1.90E-03
35	7.30	0.	5.83E-04	9.97E-04	0.	2.85E-05	0.	1.25E-04	2.83E-08	3.30E-06	5.81E-06	1.74E-03
36	7.20	0.	5.44E-04	8.23E-04	0.	8.12E-05	0.	1.26E-04	2.95E-08	3.29E-06	5.87E-06	1.58E-03
37	7.10	0.	5.04E-04	7.29E-04	0.	1.80E-04	0.	1.27E-04	3.08E-08	3.27E-06	5.93E-06	1.55E-03
38	7.00	6.89E-07	0.	6.11E-04	0.	6.00E-04	0.	1.28E-04	3.21E-08	3.26E-06	5.99E-06	1.35E-03
39	6.90	1.28E-06	0.	5.15E-04	0.	5.15E-04	0	1.29E-04	3.36E-08	3.25E-06	6.05E-06	1.17E-03
40	6.80	1.04E-06	0.	4.51E-04	0.	1.16E-03	0.	1.30E-04	3.51E-08	3.24E-06	6.11E-06	1.76E-03
41	6.70	7.12E-07	0.	3.59E-04	0.	1.65E-03	0.	1.31E-04	3.67E-08	3.23E-06	6.17E-06	2.15E-03
42	6.60	4.11E-07	0.	2.93E-04	0.	8.31E-04	0.	1.32E-04	3.84E-08	3.23E-06	6.23E-06	1.27E-03
43	6.50	2.22E-07	0.	2.07E-04	0.	1.63E-03	0.	1.33E-04	4.02E-08	3.23E-06	6.30E-06	1.98E-03
44	6.40	3.11E-07	0.	1.21E-04	1.32E-05	2.18E-03	0.	1.34E-04	4.21E-08	3.23E-06	6.36E-06	2.46E-03
45	6.30	6.39E-07	0.	6.29E-05	5.53E-05	9.41E-04	0.	1.35E-04	4.41E-08	3.23E-06	6.44E-06	1.21E-03
46	6.20	1.84E-06	0.	2.95E-05	7.11E-05	1.51E-03	0.	1.36E-04	4.63E-08	3.23E-06	6.57E-06	1.76E-03
47	6.10	7.08E-06	0.	1.19E-05	1.90E-04	2.63E-03	0.	1.37E-04	4.87E-08	3.25E-06	6.70E-06	2.99E-03
48	6.00	1.78E-05	0.	2.73E-06	1.52E-04	8.43E-04	0.	1.38E-04	5.11E-08	3.27E-06	6.82E-06	1.17E-03
49	5.90	2.78E-05	0.	1.93E-07	2.12E-04	9.46E-04	0.	1.38E-04	5.38E-08	3.29E-06	6.95E-06	1.34E-03
50	5.80	4.04E-05	0.	4.76E-09	2.00E-04	8.80E-04	0.	1.36E-04	5.66E-08	3.32E-06	7.07E-06	1.35E-03
51	5.70	4.53E-05	0.	0.	2.43E-04	8.77E-04	0.	1.28E-04	5.97E-08	3.33E-06	7.20E-06	1.36E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.50E-05	0.	0.	0.	2.08E-04	1.52E-03	0.	0.	1.19E-04	6.29E-08	3.36E-06	7.33E-06	1.92E-03
53	5.50	5.56E-05	0.	0.	0.	2.58E-04	1.92E-03	0.	0.	1.20E-04	6.64E-08	3.39E-06	7.45E-06	1.97E-03
54	5.40	5.66E-05	0.	0.	0.	2.11E-04	9.00E-04	0.	0.	1.20E-04	7.02E-08	3.43E-06	7.58E-06	1.38E-03
55	5.30	5.31E-05	0.	0.	0.	2.18E-04	1.44E-03	0.	0.	1.21E-04	7.43E-08	3.47E-06	7.73E-06	1.84E-03
56	5.20	3.61E-05	0.	0.	0.	2.22E-04	7.51E-04	0.	0.	1.22E-04	7.86E-08	3.51E-06	7.93E-06	1.15E-03
57	5.10	3.29E-05	0.	0.	0.	2.12E-04	1.05E-03	0.	7.52E-09	1.23E-04	8.34E-08	3.59E-06	8.12E-06	1.43E-03
58	5.00	2.38E-05	0.	0.	0.	1.82E-04	8.89E-04	0.	7.52E-09	1.24E-04	8.85E-08	3.68E-06	8.31E-06	1.23E-03
59	4.90	1.97E-05	0.	0.	0.	1.92E-04	8.40E-04	0.	7.52E-09	1.25E-04	9.40E-08	3.78E-06	8.50E-06	1.19E-03
60	4.80	1.99E-05	0.	0.	0.	2.00E-04	7.71E-04	0.	7.52E-09	1.26E-04	10.00E-08	3.87E-06	8.70E-06	1.12E-03
61	4.70	2.09E-05	0.	0.	0.	1.86E-04	6.17E-04	0.	7.52E-09	1.27E-04	1.07E-07	3.96E-06	8.91E-06	9.64E-04
62	4.60	2.40E-05	0.	0.	0.	1.82E-04	5.88E-04	0.	7.52E-09	1.28E-04	1.14E-07	4.07E-06	9.13E-06	9.36E-04
63	4.50	2.33E-05	0.	1.33E-05	0.	1.53E-04	3.98E-04	0.	7.52E-09	1.29E-04	1.21E-07	4.20E-06	9.35E-06	7.30E-04
64	4.40	2.28E-05	0.	5.38E-05	0.	1.47E-04	3.04E-04	0.	7.52E-09	1.30E-04	1.30E-07	4.32E-06	9.56E-06	6.73E-04
65	4.30	1.98E-05	0.	1.12E-04	0.	1.29E-04	1.62E-04	0.	7.52E-09	1.31E-04	1.39E-07	4.45E-06	9.78E-06	5.69E-04
66	4.20	1.74E-05	0.	5.18E-04	0.	1.32E-04	1.36E-04	0.	7.52E-09	1.32E-04	1.50E-07	4.59E-06	9.99E-06	9.50E-04
67	4.10	1.53E-05	0.	1.39E-04	0.	1.18E-04	3.41E-05	0.	7.52E-09	1.33E-04	1.61E-07	4.72E-06	9.73E-07	4.40E-04
68	4.00	1.31E-05	0.	7.16E-04	0.	1.07E-04	2.98E-05	0.	7.52E-09	1.33E-04	1.73E-07	3.40E-06	1.00E-06	9.99E-04
69	3.90	1.02E-05	0.	3.20E-04	1.67E-05	8.79E-05	1.18E-05	0.	7.52E-09	1.33E-04	1.67E-07	2.64E-06	1.03E-06	5.83E-04
70	3.80	1.08E-05	0.	4.11E-04	1.51E-04	9.20E-05	0.	0.	7.52E-09	1.32E-04	2.02E-07	2.70E-06	1.06E-06	8.01E-04
71	3.70	8.48E-06	0.	6.07E-04	2.86E-05	6.73E-05	0.	0.	7.52E-09	1.30E-04	2.19E-07	2.77E-06	1.21E-06	8.44E-04
72	3.60	7.16E-06	0.	2.69E-04	1.85E-04	7.37E-05	0.	0.	7.52E-09	1.22E-04	2.38E-07	2.36E-06	1.38E-06	6.57E-04
73	3.50	6.19E-06	0.	4.55E-04	7.12E-04	4.98E-05	0.	0.	7.52E-09	1.11E-04	2.59E-07	2.68E-06	1.56E-06	1.34E-03
74	3.40	5.14E-06	0.	1.95E-04	3.68E-05	5.50E-05	0.	0.	7.52E-09	6.43E-09	2.83E-07	3.84E-06	1.75E-06	3.62E-04
75	3.30	3.90E-06	0.	2.26E-04	2.52E-04	3.95E-05	0.	0.	7.52E-09	6.44E-09	3.09E-07	3.40E-06	1.94E-06	5.98E-04
76	3.20	3.02E-06	0.	1.15E-04	7.94E-04	3.57E-05	0.	0.	7.52E-09	6.45E-09	3.39E-07	3.76E-06	2.14E-06	1.02E-03
77	3.10	2.72E-06	0.	9.08E-05	5.77E-05	3.31E-05	0.	0.	7.52E-09	6.46E-09	3.74E-07	4.13E-06	2.34E-06	2.55E-04
78	3.00	2.22E-06	0.	4.72E-05	2.56E-04	2.83E-05	0.	0.	7.52E-09	6.48E-09	4.12E-07	4.50E-06	2.54E-06	4.06E-04
79	2.90	1.68E-06	0.	2.78E-05	1.91E-04	1.94E-05	0.	0.	7.52E-09	6.49E-09	4.57E-07	4.87E-06	2.74E-06	3.12E-04
80	2.80	1.63E-06	0.	1.27E-05	5.16E-05	1.04E-05	0.	0.	7.52E-09	6.50E-09	5.08E-07	5.27E-06	2.95E-06	1.50E-04
81	2.70	9.07E-07	0.	5.78E-06	1.26E-04	4.67E-06	0.	0.	7.52E-09	6.50E-09	5.66E-07	5.68E-06	3.17E-06	2.12E-04
82	2.60	3.55E-07	0.	2.94E-06	1.21E-05	1.72E-06	0.	0.	7.52E-09	6.50E-09	6.34E-07	6.12E-06	8.63E-07	8.98E-05
83	2.50	2.30E-08	0.	4.08E-07	7.73E-06	3.65E-07	0.	0.	7.52E-09	6.50E-09	7.14E-07	2.77E-06	9.91E-07	7.80E-05
84	2.40	0.	2.72E-05	0.	1.01E-05	3.56E-08	0.	0.	7.52E-09	6.50E-09	8.08E-07	3.47E-06	1.22E-06	1.98E-04
85	2.30	0.	1.45E-04	0.	0.	0.	0.	0.	7.52E-09	6.45E-09	9.18E-07	4.20E-06	1.46E-06	2.16E-04
86	2.20	0.	2.82E-04	0.	0.	0.	0.	0.	7.52E-09	6.42E-09	1.05E-06	4.96E-06	1.76E-06	3.54E-04
87	2.10	0.	4.96E-04	0.	0.	0.	0.	0.	7.52E-09	6.40E-09	1.21E-06	5.78E-06	2.06E-06	5.29E-04
88	2.00	0.	6.83E-04	0.	0.	0.	0.	0.	7.52E-09	6.19E-09	1.40E-06	6.59E-06	2.36E-06	7.56E-04
89	1.90	0.	1.58E-03	0.	0.	0.	0.	0.	7.52E-09	5.96E-09	1.64E-06	7.43E-06	2.67E-06	1.65E-03
90	1.80	0.	1.38E-03	0.	0.	0.	0.	0.	7.52E-09	5.70E-09	1.93E-06	8.68E-06	3.14E-06	1.37E-03
91	1.70	0.	1.98E-03	0.	0.	0.	0.	0.	7.52E-09	9.37E-09	2.29E-06	1.02E-05	3.74E-06	1.45E-03
92	1.60	0.	1.89E-03	0.	0.	0.	0.	0.	7.52E-09	4.54E-09	2.75E-06	1.17E-05	4.53E-06	1.15E-03
93	1.50	0.	1.35E-03	0.	0.	0.	0.	0.	7.52E-09	2.66E-09	3.35E-06	1.29E-05	4.78E-06	1.39E-03
94	1.40	0.	1.49E-03	0.	0.	0.	0.	0.	7.52E-09	0.	4.12E-06	1.56E-05	5.72E-06	1.52E-03
95	1.30	0.	1.86E-03	0.	0.	0.	0.	0.	7.52E-09	0.	5.16E-06	1.28E-05	4.71E-06	1.08E-03
96	1.20	0.	1.13E-03	0.	0.	0.	0.	0.	7.52E-09	0.	6.59E-06	1.68E-05	6.22E-06	1.16E-03
97	1.10	0.	8.63E-04	0.	0.	0.	0.	1.41E-08	7.52E-09	0.	8.58E-06	2.18E-05	8.84E-06	8.99E-04
98	1.00	0.	8.18E-04	0.	0.	0.	0.	10.00E-08	7.52E-09	0.	1.14E-05	2.48E-05	8.29E-06	8.68E-04
99	0.90	0.	6.44E-04	0.	0.	0.	0.	1.37E-07	7.52E-09	0.	1.50E-05	2.81E-05	9.73E-06	6.98E-04
100	0.80	0.	2.96E-04	0.	0.	0.	0.	1.96E-06	7.52E-09	0.	2.26E-05	3.16E-05	1.11E-05	3.64E-04
101	0.70	0.	8.09E-05	0.	0.	0.	0.	1.26E-06	7.52E-09	0.	3.39E-05	3.87E-05	8.74E-06	1.95E-04
102	0.60	0.	3.26E-06	0.	0.	0.	0.	5.27E-06	7.52E-09	0.	5.46E-05	3.83E-05	9.87E-06	1.03E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-R NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.82E-03	0.	0.	0.	3.12E-06	6.84E-10	1.96E-06	5.20E-07	2.03E-03
2	10.60	0.	0.	2.35E-03	0.	0.	0.	3.12E-06	7.03E-10	1.97E-06	5.20E-07	2.35E-03
3	10.50	0.	0.	2.25E-03	0.	0.	0.	3.13E-06	7.24E-10	1.98E-06	5.20E-07	2.25E-03
4	10.40	0.	0.	1.97E-03	0.	0.	0.	3.13E-06	7.45E-10	1.98E-06	5.20E-07	1.97E-03
5	10.30	0.	0.	1.57E-03	0.	0.	0.	3.13E-06	7.67E-10	1.99E-06	5.21E-07	1.57E-03
6	10.20	0.	0.	1.53E-03	0.	0.	0.	3.14E-06	7.90E-10	1.99E-06	5.21E-07	1.53E-03
7	10.10	0.	0.	1.35E-03	0.	0.	0.	3.14E-06	8.14E-10	2.00E-06	5.21E-07	1.36E-03
8	10.00	0.	0.	1.05E-03	0.	0.	0.	3.15E-06	8.38E-10	2.00E-06	5.22E-07	1.06E-03
9	9.90	0.	0.	1.06E-03	0.	0.	0.	3.15E-06	8.64E-10	2.01E-06	5.22E-07	1.06E-03
10	9.80	0.	0.	8.10E-04	0.	0.	0.	3.16E-06	8.91E-10	2.01E-06	5.22E-07	8.15E-04
11	9.70	0.	0.	7.02E-04	0.	0.	0.	3.16E-06	9.19E-10	2.02E-06	5.23E-07	7.07E-04
12	9.60	0.	0.	7.50E-04	0.	0.	0.	3.17E-06	9.48E-10	2.02E-06	5.23E-07	7.56E-04
13	9.50	0.	4.34E-06	5.67E-04	0.	0.	0.	3.18E-06	9.79E-10	2.03E-06	5.23E-07	5.78E-04
14	9.40	0.	5.03E-06	4.93E-04	0.	0.	0.	3.19E-06	1.01E-09	2.04E-06	5.23E-07	5.03E-04
15	9.30	0.	5.72E-06	4.92E-04	0.	0.	0.	3.20E-06	1.04E-09	5.32E-07	5.24E-07	5.02E-04
16	9.20	0.	6.42E-06	3.48E-04	0.	0.	0.	3.21E-06	1.08E-09	5.30E-07	5.24E-07	3.59E-04
17	9.10	0.	7.75E-06	3.58E-04	0.	0.	0.	3.22E-06	1.11E-09	5.28E-07	5.24E-07	3.78E-04
18	9.00	0.	9.21E-06	2.92E-04	0.	0.	0.	3.23E-06	1.15E-09	5.26E-07	5.25E-07	3.04E-04
19	8.90	0.	1.07E-05	2.47E-04	0.	0.	0.	3.24E-06	1.19E-09	5.25E-07	5.25E-07	2.62E-04
20	8.80	0.	1.11E-05	2.32E-04	0.	0.	0.	3.26E-06	1.23E-09	5.23E-07	5.25E-07	2.48E-04
21	8.70	0.	1.07E-05	1.77E-04	0.	0.	0.	3.27E-06	1.28E-09	5.21E-07	5.26E-07	1.92E-04
22	8.60	0.	1.03E-05	1.78E-04	0.	0.	0.	3.28E-06	1.32E-09	5.19E-07	5.26E-07	1.93E-04
23	8.50	0.	9.99E-06	1.37E-04	0.	0.	0.	3.29E-06	1.37E-09	5.18E-07	5.26E-07	1.51E-04
24	8.40	0.	9.75E-06	1.31E-04	0.	0.	0.	3.31E-06	1.42E-09	5.16E-07	5.27E-07	1.45E-04
25	8.30	0.	9.52E-06	9.84E-05	0.	0.	0.	3.33E-06	1.47E-09	5.15E-07	5.29E-07	1.12E-04
26	8.20	0.	9.24E-06	9.54E-05	0.	0.	0.	3.34E-06	1.52E-09	5.13E-07	5.35E-07	1.09E-04
27	8.10	0.	8.91E-06	7.33E-05	0.	0.	0.	3.36E-06	1.58E-09	5.10E-07	5.41E-07	8.67E-05
28	8.00	0.	8.59E-06	7.02E-05	0.	0.	0.	3.38E-06	1.64E-09	5.08E-07	5.46E-07	8.32E-05
29	7.90	0.	8.22E-06	5.42E-05	0.	0.	0.	3.39E-06	1.71E-09	5.06E-07	5.52E-07	6.48E-05
30	7.80	0.	7.85E-06	5.31E-05	0.	0.	0.	3.41E-06	1.77E-09	5.04E-07	5.58E-07	6.55E-05
31	7.70	0.	7.47E-06	4.20E-05	0.	0.	0.	3.43E-06	1.84E-09	5.02E-07	5.64E-07	5.48E-05
32	7.60	0.	7.10E-06	3.70E-05	0.	2.90E-09	0.	3.45E-06	1.92E-09	5.01E-07	5.70E-07	4.87E-05
33	7.50	0.	6.72E-06	3.11E-05	0.	1.91E-08	0.	3.46E-06	1.99E-09	4.99E-07	5.76E-07	4.24E-05
34	7.40	0.	6.35E-06	2.59E-05	0.	7.57E-08	0.	3.48E-06	2.08E-09	4.97E-07	5.82E-07	3.69E-05
35	7.30	0.	5.97E-06	2.25E-05	0.	4.33E-07	0.	3.50E-06	2.16E-09	4.95E-07	5.86E-07	3.35E-05
36	7.20	0.	5.58E-06	1.86E-05	0.	1.23E-06	0.	3.52E-06	2.25E-09	4.94E-07	5.94E-07	3.00E-05
37	7.10	0.	5.19E-06	1.65E-05	0.	2.73E-06	0.	3.55E-06	2.35E-09	4.92E-07	6.00E-07	2.90E-05
38	7.00	7.05E-09	0.	1.38E-05	0.	9.17E-06	0.	3.58E-06	2.45E-09	4.90E-07	6.06E-07	2.76E-05
39	6.90	1.31E-08	0.	1.16E-05	0.	7.83E-06	0.	3.61E-06	2.56E-09	4.88E-07	6.12E-07	2.42E-05
40	6.80	1.07E-08	0.	1.02E-05	0.	1.77E-05	0.	3.64E-06	2.68E-09	4.87E-07	6.18E-07	3.26E-05
41	6.70	7.29E-09	0.	9.11E-06	0.	2.50E-05	0.	3.67E-06	2.80E-09	4.85E-07	6.24E-07	3.79E-05
42	6.60	4.21E-09	0.	6.61E-06	0.	1.26E-05	0.	3.70E-06	2.93E-09	4.85E-07	6.31E-07	2.41E-05
43	6.50	2.27E-09	0.	4.68E-06	0.	2.49E-05	0.	3.72E-06	3.07E-09	4.85E-07	6.37E-07	3.44E-05
44	6.40	3.19E-09	0.	2.74E-06	2.91E-07	3.31E-05	0.	3.75E-06	3.22E-09	4.85E-07	6.44E-07	4.09E-05
45	6.30	6.54E-09	0.	1.42E-06	8.41E-07	1.44E-05	0.	3.78E-06	3.37E-09	4.85E-07	6.52E-07	2.15E-05
46	6.20	1.88E-08	0.	8.66E-07	1.08E-06	2.30E-05	0.	3.81E-06	3.54E-09	4.85E-07	6.65E-07	2.97E-05
47	6.10	7.25E-08	0.	2.69E-07	2.88E-06	4.00E-05	0.	3.84E-06	3.72E-09	4.85E-07	6.77E-07	4.63E-05
48	6.00	1.83E-07	0.	6.17E-08	2.32E-06	1.28E-05	0.	3.87E-06	3.91E-09	4.91E-07	6.90E-07	2.04E-05
49	5.90	2.84E-07	0.	4.36E-09	3.23E-06	1.44E-05	0.	3.87E-06	4.11E-09	4.95E-07	7.03E-07	2.30E-05
50	5.80	4.13E-07	0.	1.06E-10	4.26E-06	1.34E-05	0.	3.81E-06	4.33E-09	4.98E-07	7.16E-07	2.31E-05
51	5.70	4.64E-07	0.	0.	4.45E-06	1.33E-05	0.	3.58E-06	4.56E-09	5.01E-07	7.28E-07	2.31E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-W BANDS	N2 1ST POS.	O2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO V10-ROT	NO 2	C- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.43E-07	0.	0.	0.	3.15E-06	2.32E-05	0.	0.	3.33E-06	4.81E-09	5.85E-07	7.41E-07	3.15E-05
53	5.50	5.69E-07	0.	0.	0.	3.93E-06	2.31E-05	0.	0.	3.35E-06	5.07E-09	5.89E-07	7.54E-07	3.23E-05
54	5.40	5.89E-07	0	0.	0.	3.21E-06	1.37E-05	0.	0.	3.36E-06	5.36E-09	5.15E-07	7.67E-07	2.22E-05
55	5.30	5.44E-07	0.	0.	0.	3.31E-06	2.19E-05	0.	0.	3.38E-06	5.67E-09	5.21E-07	7.83E-07	3.04E-05
56	5.20	3.69E-07	0.	0.	0.	3.38E-06	1.14E-05	0.	0.	3.41E-06	6.01E-09	5.27E-07	8.02E-07	1.99E-05
57	5.10	3.37E-07	0.	0.	0.	3.23E-06	1.60E-05	0.	1.16E-11	3.44E-06	6.37E-09	5.40E-07	8.22E-07	2.43E-05
58	5.00	2.43E-07	0.	0.	0.	2.76E-06	1.35E-05	0.	1.16E-11	3.46E-06	6.76E-09	5.54E-07	8.41E-07	2.14E-05
59	4.90	2.02E-07	0.	0.	0.	2.92E-06	1.28E-05	0.	1.16E-11	3.49E-06	7.18E-09	5.68E-07	8.60E-07	2.08E-05
60	4.80	2.03E-07	0.	0.	0.	3.04E-06	1.17E-05	0.	1.16E-11	3.52E-06	7.64E-09	5.81E-07	8.80E-07	1.99E-05
61	4.70	2.14E-07	0.	0.	0.	2.82E-06	9.38E-06	0.	1.16E-11	3.55E-06	8.14E-09	5.95E-07	9.02E-07	1.75E-05
62	4.60	2.46E-07	0.	0.	0.	2.77E-06	8.94E-06	0.	1.16E-11	3.58E-06	8.68E-09	6.11E-07	9.24E-07	1.71E-05
63	4.50	2.36E-07	0.	3.01E-07	0.	2.32E-06	6.0?E-06	0.	1.16E-11	3.61E-06	9.27E-09	6.35E-07	9.46E-07	1.41E-05
64	4.40	2.33E-07	0.	1.30E-06	0.	2.23E-06	4.65E-06	0.	1.16E-11	3.64E-06	9.92E-09	6.49E-07	9.68E-07	1.36E-05
65	4.30	2.03E-07	0.	2.54E-06	0.	1.96E-06	2.47E-06	0.	1.16E-11	3.67E-06	1.06E-08	6.69E-07	9.89E-07	1.25E-05
66	4.20	1.78E-07	0.	1.17E-05	0.	2.00E-06	2.?7E-06	0.	1.16E-11	3.70E-06	1.14E-08	6.89E-07	9.55E-08	2.04E-05
67	4.10	1.56E-07	0.	3.04E-06	0.	1.79E-06	5.19E-07	0.	1.16E-11	3.71E-06	1.23E-08	4.99E-07	9.84E-08	9.83E-06
68	4.00	1.34E-07	0.	1.62E-05	0.	1.62E-06	3.92E-07	0.	1.16E-11	3.72E-06	1.32E-08	5.11E-07	1.01E-07	2.27E-05
69	3.90	1.04E-07	0.	7.28E-06	1.36E-06	1.34E-06	1.80E-07	0.	1.16E-11	3.71E-06	1.43E-08	3.96E-07	1.04E-07	1.44E-05
70	3.80	1.10E-07	0.	9.27E-06	1.23E-05	1.40E-06	0.	0.	1.16E-11	3.70E-06	1.54E-08	4.86E-07	1.07E-07	2.74E-05
71	3.70	8.68E-08	0.	1.37E-05	2.34E-06	1.02E-06	0.	0.	1.16E-11	3.64E-06	1.67E-08	3.28E-07	1.22E-07	2.13E-05
72	3.60	7.33E-08	0.	5.99E-06	1.51E-05	1.12E-06	0.	0.	1.16E-11	3.41E-06	1.82E-08	3.54E-07	1.40E-07	2.62E-05
73	3.50	6.74E-08	0.	1.03E-05	5.81E-05	7.58E-07	0.	0.	1.16E-11	3.12E-06	1.98E-08	4.03E-07	1.58E-07	7.29E-05
74	3.40	5.26E-08	0.	4.41E-06	3.00E-06	8.35E-07	0.	0.	1.16E-11	1.80E-06	2.15E-08	4.57E-07	1.77E-07	1.88E-05
75	3.30	3.99E-08	0.	9.10E-06	2.06E-05	5.85E-07	0.	0.	1.16E-11	1.80E-06	2.36E-08	5.11E-07	1.97E-07	2.86E-05
76	3.20	3.16E-08	0.	2.59E-06	5.48E-05	9.88E-07	0.	0.	1.16E-11	1.80E-06	2.59E-08	5.65E-07	2.17E-07	7.87E-05
77	3.10	2.78E-08	0.	2.03E-06	4.71E-06	5.03E-07	0.	0.	1.16E-11	1.81E-06	2.85E-08	6.21E-07	2.37E-07	9.97E-06
78	3.00	2.27E-08	0.	1.07E-06	2.09E-05	4.30E-07	0.	0.	1.16E-11	1.81E-06	3.15E-08	6.76E-07	2.57E-07	2.52E-05
79	2.90	1.72E-08	0.	6.27E-07	1.54E-05	2.80E-07	0.	0.	1.16E-11	1.82E-06	3.49E-08	7.32E-07	2.78E-07	1.94E-05
80	2.80	1.67E-08	0.	2.66E-07	4.91E-06	1.39E-07	0.	0.	1.16E-11	1.82E-06	3.88E-08	7.92E-07	2.99E-07	7.62E-06
81	2.70	9.28E-09	0.	1.31E-07	1.03E-05	7.10E-08	0.	0.	1.16E-11	1.82E-06	4.33E-08	8.53E-07	3.15E-07	1.35E-05
82	2.60	3.63E-09	0.	6.69E-08	9.89E-07	3.61E-08	0.	0.	1.16E-11	1.82E-06	4.89E-08	9.28E-07	3.73E-08	3.96E-06
83	2.50	2.36E-10	0	9.17E-09	6.31E-07	5.55E-09	0.	0.	1.16E-11	1.82E-06	5.45E-08	4.16E-07	10.80E-08	3.84E-06
84	2.40	0.	6.15E-07	0.	8.23E-07	5.42E-10	0.	0.	1.16E-11	1.22E-06	6.17E-08	5.21E-07	1.24E-07	3.96E-06
85	2.30	0.	3.26E-06	0.	0.	0.	0.	0.	1.16E-11	1.80E-06	7.01E-08	6.32E-07	1.48E-07	5.92E-06
86	2.20	0.	6.36E-06	0.	0.	0.	0.	0.	1.16E-11	1.80E-06	8.02E-08	7.46E-07	1.78E-07	9.17E-06
87	2.10	0.	1.03E-05	0.	0.	0.	0.	0.	1.16E-11	1.79E-06	9.24E-08	8.68E-07	2.09E-07	1.33E-05
88	2.00	0.	1.54E-05	0.	0.	0.	0.	0.	1.16E-11	1.73E-06	1.07E-07	9.91E-07	2.39E-07	1.85E-05
89	1.90	0.	3.57E-05	0.	0.	0.	0.	0.	1.16E-11	1.67E-06	1.25E-07	1.12E-06	2.72E-07	3.89E-05
90	1.80	0.	2.94E-05	0.	0.	0.	0.	0.	1.16E-11	1.59E-06	1.47E-07	1.30E-06	3.18E-07	3.28E-05
91	1.70	0.	3.56E-05	0.	0.	0.	0.	0.	1.16E-11	1.50E-06	1.75E-07	1.53E-06	3.78E-07	3.92E-05
92	1.60	0.	2.45E-05	0.	0.	0.	0.	0.	1.16E-11	1.27E-06	2.10E-07	1.76E-06	4.44E-07	2.82E-05
93	1.50	0.	3.05E-05	0.	0.	0.	0.	0.	1.16E-11	5.77E-07	2.56E-07	1.94E-06	4.83E-07	3.38E-05
94	1.40	0.	3.31E-05	0.	0.	0.	0.	0.	1.16E-11	0.	3.15E-07	1.34E-06	3.41E-07	3.57E-05
95	1.30	0.	2.39E-05	0.	0.	0.	0.	0.	1.16E-11	0.	3.94E-07	1.90E-06	4.77E-07	2.67E-05
96	1.20	0.	2.54E-05	0.	0.	0.	0.	0.	1.16E-11	0.	5.03E-07	2.53E-06	6.30E-07	2.91E-05
97	1.10	0.	1.95E-05	0.	0.	0.	0.	2.14E-10	1.16E-11	0.	6.55E-07	2.59E-06	6.92E-07	2.38E-05
98	1.00	0.	1.84E-05	0.	0.	0.	0.	1.52E-09	1.16E-11	0.	8.75E-07	3.60E-06	8.39E-07	2.38E-05
99	0.90	0.	1.45E-05	0.	0.	0.	0.	2.08E-09	1.16E-11	0.	1.21E-06	4.22E-06	9.85E-07	2.18E-05
100	0.80	0.	6.69E-06	0	0.	0.	0.	2.98E-08	1.16E-11	0.	1.72E-06	4.77E-06	1.12E-06	1.43E-05
101	0.70	0.	1.83E-06	0.	0.	0.	0.	1.91E-08	1.16E-11	0.	2.59E-06	4.85E-06	8.84E-07	9.36E-06
102	0.60	0.	7.35E-08	0.	0.	0.	0.	8.01E-08	1.16E-11	0.	4.17E-06	4.55E-06	9.99E-07	9.87E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8900. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.29E-05	0.	0.	0.	9.69E-08	6.98E-11	2.11E-07	5.18E-08	3.32E-05
2	10.60	0.	0.	2.73E-05	0.	0.	0.	9.64E-08	6.77E-11	2.12E-07	5.18E-08	2.77E-05
3	10.50	0.	0.	2.62E-05	0.	0.	0.	9.67E-08	6.97E-11	2.13E-07	5.19E-08	2.69E-05
4	10.40	0.	0.	2.25E-05	0.	0.	0.	9.69E-08	7.17E-11	2.14E-07	5.19E-08	2.33E-05
5	10.30	0.	0.	1.82E-05	0.	0.	0.	9.70E-08	7.38E-11	2.15E-07	5.19E-08	1.88E-05
6	10.20	0.	0.	1.70E-05	0.	0.	0.	9.71E-08	7.60E-11	2.15E-07	5.20E-08	1.81E-05
7	10.10	0.	0.	1.58E-05	0.	0.	0.	9.73E-08	7.83E-11	2.16E-07	5.20E-08	1.61E-05
8	10.00	0.	0.	1.28E-05	0.	0.	0.	9.74E-08	8.07E-11	2.16E-07	5.20E-08	1.26E-05
9	9.90	0.	0.	1.23E-05	0.	0.	0.	9.76E-08	8.32E-11	2.17E-07	5.20E-08	1.27E-05
10	9.80	0.	0.	1.06E-05	0.	0.	0.	9.77E-08	8.58E-11	2.17E-07	5.21E-08	1.10E-05
11	9.70	0.	0.	8.17E-06	0.	0.	0.	9.79E-08	8.85E-11	2.18E-07	5.21E-08	8.54E-06
12	9.60	0.	0.	8.73E-06	0.	0.	0.	9.81E-08	9.13E-11	2.19E-07	5.21E-08	9.18E-06
13	9.50	0.	4.31E-08	6.61E-06	0.	0.	0.	9.83E-08	9.42E-11	2.19E-07	5.22E-08	7.02E-06
14	9.40	0.	5.00E-08	5.74E-06	0.	0.	0.	9.86E-08	9.73E-11	2.20E-07	5.22E-08	6.16E-06
15	9.30	0.	5.69E-08	5.73E-06	0.	0.	0.	9.90E-08	1.00E-11	5.74E-08	5.22E-08	5.99E-06
16	9.20	0.	6.38E-08	4.06E-06	0.	0.	0.	9.93E-08	1.04E-10	5.72E-08	5.22E-08	4.33E-06
17	9.10	0.	7.71E-08	4.16E-06	0.	0.	0.	9.97E-08	1.07E-10	5.70E-08	5.23E-08	4.45E-06
18	9.00	0.	9.15E-08	3.41E-06	0.	0.	0.	10.00E-08	1.11E-10	5.68E-08	5.23E-08	3.71E-06
19	8.90	0.	1.06E-07	2.87E-06	0.	0.	0.	10.00E-08	1.15E-10	5.66E-08	5.23E-08	3.19E-06
20	8.80	0.	1.10E-07	2.71E-06	0.	0.	0.	1.01E-07	1.19E-10	5.64E-08	5.24E-08	3.03E-06
21	8.70	0.	1.06E-07	2.06E-06	0.	0.	0.	1.01E-07	1.23E-10	5.63E-08	5.24E-08	2.38E-06
22	8.60	0.	1.02E-07	2.08E-06	0.	0.	0.	1.01E-07	1.27E-10	5.61E-08	5.24E-08	2.39E-06
23	8.50	0.	9.93E-08	1.60E-06	0.	0.	0.	1.02E-07	1.32E-10	5.59E-08	5.25E-08	1.91E-06
24	8.40	0.	9.69E-08	1.53E-06	0.	0.	0.	1.02E-07	1.37E-10	5.57E-08	5.25E-08	1.83E-06
25	8.30	0.	9.47E-08	1.13E-06	0.	0.	0.	1.03E-07	1.42E-10	5.55E-08	5.27E-08	1.45E-06
26	8.20	0.	9.18E-08	1.11E-06	0.	0.	0.	1.03E-07	1.47E-10	5.54E-08	5.33E-08	1.41E-06
27	8.10	0.	8.86E-08	8.54E-07	0.	0.	0.	1.04E-07	1.52E-10	5.50E-08	5.39E-08	1.10E-06
28	8.00	0.	8.54E-08	8.17E-07	0.	0.	0.	1.04E-07	1.58E-10	5.48E-08	5.45E-08	1.12E-06
29	7.90	0.	8.17E-08	6.31E-07	0.	0.	0.	1.05E-07	1.64E-10	5.46E-08	5.51E-08	9.27E-07
30	7.80	0.	7.80E-08	6.19E-07	0.	0.	0.	1.06E-07	1.71E-10	5.44E-08	5.57E-08	9.12E-07
31	7.70	0.	7.43E-08	4.89E-07	0.	0.	0.	1.06E-07	1.77E-10	5.42E-08	5.63E-08	7.80E-07
32	7.60	0.	7.05E-08	4.31E-07	0.	3.12E-11	0.	1.07E-07	1.85E-10	5.40E-08	5.69E-08	7.20E-07
33	7.50	0.	6.68E-08	3.63E-07	0.	2.05E-10	0.	1.07E-07	1.92E-10	5.38E-08	5.75E-08	6.48E-07
34	7.40	0.	6.31E-08	3.01E-07	0.	8.14E-10	0.	1.08E-07	2.00E-10	5.37E-08	5.80E-08	5.85E-07
35	7.30	0.	5.94E-08	2.62E-07	0.	4.66E-09	0.	1.08E-07	2.08E-10	5.35E-08	5.86E-08	5.47E-07
36	7.20	0.	5.55E-08	2.16E-07	0.	1.33E-08	0.	1.09E-07	2.17E-10	5.33E-08	5.92E-08	5.07E-07
37	7.10	0.	5.16E-08	1.92E-07	0.	2.94E-08	0.	1.10E-07	2.26E-10	5.31E-08	5.98E-08	4.96E-07
38	7.00	7.01E-11	0.	1.61E-07	0.	9.81E-08	0.	1.11E-07	2.36E-10	5.29E-08	6.04E-08	4.83E-07
39	6.90	1.30E-10	0.	1.35E-07	0.	3.42E-08	0.	1.12E-07	2.47E-10	5.27E-08	6.10E-08	4.45E-07
40	6.80	1.06E-10	0.	1.18E-07	0.	1.90E-07	0.	1.13E-07	2.58E-10	5.25E-08	6.16E-08	5.36E-07
41	6.70	7.24E-11	0.	9.44E-08	0.	2.69E-07	0.	1.13E-07	2.70E-10	5.23E-08	6.22E-08	5.92E-07
42	6.60	4.18E-11	0.	7.70E-08	0.	1.36E-07	0.	1.14E-07	2.82E-10	5.23E-08	6.29E-08	4.43E-07
43	6.50	2.26E-11	0.	5.45E-08	0.	2.67E-07	0.	1.15E-07	2.95E-10	5.23E-08	6.35E-08	5.53E-07
44	6.40	3.17E-11	0.	3.19E-08	2.16E-09	3.56E-07	0.	1.16E-07	3.10E-10	5.23E-08	6.42E-08	6.23E-07
45	6.30	6.50E-11	0.	1.65E-08	9.05E-09	1.54E-07	0.	1.17E-07	3.25E-10	5.23E-08	6.50E-08	4.19E-07
46	6.20	1.87E-10	0.	7.76E-09	1.16E-08	2.47E-07	0.	1.18E-07	3.41E-10	5.24E-08	6.63E-08	5.03E-07
47	6.10	7.21E-10	0.	3.13E-09	3.10E-08	4.31E-07	0.	1.19E-07	3.58E-10	5.27E-08	6.75E-08	7.05E-07
48	6.00	1.82E-09	0.	7.19E-10	2.49E-08	1.38E-07	0.	1.20E-07	3.76E-10	5.30E-08	6.88E-08	4.07E-07
49	5.90	2.83E-09	0.	5.08E-11	3.47E-08	1.55E-07	0.	1.20E-07	3.96E-10	5.34E-08	7.01E-08	4.36E-07
50	5.80	4.11E-09	0.	1.23E-12	4.58E-08	1.44E-07	0.	1.18E-07	4.16E-10	5.38E-08	7.14E-08	4.37E-07
51	5.70	4.61E-09	0.	0.	4.79E-08	1.43E-07	0.	1.11E-07	4.39E-10	5.41E-08	7.26E-08	4.34E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.60E-09	0.	0.	0.	3.40E-08	2.49E-07	0.	0.	1.03E-07	4.63E-10	5.45E-08	7.39E-08	5.21E-07
53	5.50	5.66E-09	0.	0.	0.	4.23E-08	2.49E-07	0.	0.	1.04E-07	4.89E-10	5.50E-08	7.52E-08	5.31E-07
54	5.40	5.78E-09	0.	0.	0.	3.46E-08	1.47E-07	0.	0.	1.04E-07	5.16E-10	5.56E-08	7.65E-08	4.24E-07
55	5.30	5.48E-09	0.	0.	0.	3.56E-08	2.36E-07	0.	0.	1.05E-07	5.46E-10	5.62E-08	7.80E-08	5.16E-07
56	5.20	3.67E-09	0.	0.	0.	3.64E-08	1.23E-07	0.	0.	1.05E-07	5.78E-10	5.69E-08	8.00E-08	4.06E-07
57	5.10	3.35E-09	0.	0.	0.	3.47E-08	1.72E-07	0.	1.24E-14	1.06E-07	6.13E-10	5.83E-08	8.19E-08	4.56E-07
58	5.00	2.42E-09	0.	0.	0.	2.97E-08	1.45E-07	0.	1.24E-14	1.07E-07	6.31E-10	5.97E-08	8.39E-08	4.29E-07
59	4.90	2.01E-09	0.	0.	0.	3.14E-08	1.37E-07	0.	1.24E-14	1.08E-07	6.91E-10	6.13E-08	8.58E-08	4.26E-07
60	4.80	2.02E-09	0.	0.	0.	3.27E-08	1.26E-07	0.	1.24E-14	1.09E-07	7.36E-10	6.27E-08	8.78E-08	4.21E-07
61	4.70	2.13E-09	0.	0.	0.	3.04E-08	1.01E-07	0.	1.24E-14	1.10E-07	7.84E-10	6.42E-08	8.99E-08	3.90E-07
62	4.60	2.44E-09	0.	0.	0.	2.98E-08	9.61E-08	0.	1.24E-14	1.11E-07	8.36E-10	6.60E-08	9.21E-08	3.90E-07
63	4.50	2.37E-09	0.	3.91E-09	0.	2.50E-08	6.51E-08	0.	1.24E-14	1.12E-07	8.93E-10	6.80E-08	9.43E-08	3.71E-07
64	4.40	2.32E-09	0.	1.40E-08	0.	2.40E-08	5.00E-08	0.	1.24E-14	1.13E-07	9.56E-10	7.01E-08	9.65E-08	3.70E-07
65	4.30	2.01E-09	0.	2.95E-08	0.	2.11E-08	2.65E-08	0.	1.24E-14	1.13E-07	1.02E-09	7.22E-08	9.86E-08	3.45E-07
66	4.20	1.77E-09	0.	1.36E-07	0.	2.15E-08	2.23E-08	0.	1.24E-14	1.14E-07	1.10E-09	7.43E-08	9.53E-09	3.81E-07
67	4.10	1.54E-09	0.	3.54E-08	0.	1.93E-08	5.58E-09	0.	1.24E-14	1.15E-07	1.18E-09	5.38E-08	9.81E-09	2.41E-07
68	4.00	1.34E-09	0.	1.86E-07	0.	1.75E-08	4.22E-09	0.	1.24E-14	1.15E-07	1.27E-09	5.51E-08	1.01E-08	3.93E-07
69	3.90	1.04E-09	0.	8.42E-08	5.11E-09	1.44E-08	1.93E-09	0.	1.24E-14	1.15E-07	1.37E-09	4.27E-08	1.04E-08	3.22E-07
70	3.80	1.09E-09	0.	1.08E-07	4.63E-07	1.50E-08	0.	0.	1.24E-14	1.14E-07	1.49E-09	4.38E-08	1.07E-08	7.57E-07
71	3.70	8.63E-10	0.	1.60E-07	8.76E-08	1.10E-08	0.	0.	1.24E-14	1.13E-07	1.61E-09	3.45E-08	1.22E-08	4.20E-07
72	3.60	7.29E-10	0.	6.98E-08	5.67E-07	1.20E-08	0.	0.	1.24E-14	1.05E-07	1.75E-09	3.82E-08	1.39E-08	8.00E-07
73	3.50	6.30E-10	0.	1.20E-07	2.18E-06	8.15E-09	0.	0.	1.24E-14	9.65E-08	1.90E-09	4.35E-08	1.57E-08	2.47E-06
74	3.40	5.23E-10	0.	5.13E-08	1.13E-07	8.99E-09	0.	0.	1.24E-14	9.57E-08	2.08E-09	4.93E-08	1.77E-08	2.98E-07
75	3.30	3.97E-10	0.	5.98E-08	7.71E-07	6.30E-09	0.	0.	1.24E-14	5.57E-08	2.27E-09	5.91E-08	1.96E-08	9.78E-07
76	3.20	3.14E-10	0.	3.02E-08	2.43E-06	6.32E-09	0.	0.	1.24E-14	5.50E-08	2.50E-09	6.10E-08	2.16E-08	2.61E-06
77	3.10	2.77E-10	0.	2.37E-08	1.77E-07	5.41E-09	0.	0.	1.24E-14	5.60E-08	2.75E-09	6.70E-08	2.36E-08	3.55E-07
78	3.00	2.26E-10	0.	1.24E-08	7.85E-07	4.62E-09	0.	0.	1.24E-14	5.61E-08	3.03E-09	7.30E-08	2.57E-08	9.60E-07
79	2.90	1.71E-10	0.	7.30E-09	5.86E-07	3.01E-09	0.	0.	1.24E-14	5.62E-08	3.36E-09	7.90E-08	2.77E-08	7.62E-07
80	2.80	1.66E-10	0.	3.33E-09	1.58E-07	1.71E-09	0.	0.	1.24E-14	5.63E-08	3.73E-09	8.54E-08	2.98E-08	3.30E-07
81	2.70	9.23E-11	0.	1.52E-09	3.86E-07	7.64E-10	0.	0.	1.24E-14	5.63E-08	4.16E-09	9.21E-08	8.87E-09	5.49E-07
82	2.60	3.61E-11	0.	7.79E-10	3.71E-08	2.81E-10	0.	0.	1.24E-14	5.63E-08	4.67E-09	9.93E-08	8.71E-09	2.02E-07
83	2.50	2.34E-12	0.	1.07E-10	2.36E-08	5.97E-11	0.	0.	1.24E-14	5.63E-08	5.29E-09	4.49E-08	10.00E-09	1.48E-07
84	2.40	0.	7.16E-09	0.	3.09E-08	5.83E-12	0.	0.	1.24E-14	5.63E-08	5.94E-09	5.62E-08	1.23E-08	1.69E-07
85	2.30	0.	3.80E-08	0.	0.	0.	0.	0.	1.24E-14	5.58E-08	6.75E-09	6.82E-08	1.48E-08	1.84E-07
86	2.20	0.	7.41E-08	0.	0.	0.	0.	0.	1.24E-14	5.56E-08	7.73E-09	8.05E-08	1.78E-08	2.36E-07
87	2.10	0.	1.20E-07	0.	0.	0.	0.	0.	1.24E-14	5.54E-08	8.90E-09	9.37E-08	2.08E-08	2.99E-07
88	2.00	0.	1.80E-07	0.	0.	0.	0.	0.	1.24E-14	5.36E-08	1.03E-08	1.07E-07	2.38E-08	3.74E-07
89	1.90	0.	4.16E-07	0.	0.	0.	0.	0.	1.24E-14	5.16E-08	1.20E-08	1.21E-07	2.69E-08	6.27E-07
90	1.80	0.	3.43E-07	0.	0.	0.	0.	0.	1.24E-14	4.93E-08	1.42E-08	1.41E-07	3.17E-08	5.79E-07
91	1.70	0.	4.14E-07	0.	0.	0.	0.	0.	1.24E-14	4.65E-08	1.69E-08	1.65E-07	3.77E-08	6.80E-07
92	1.60	0.	2.85E-07	0.	0.	0.	0.	0.	1.24E-14	3.93E-08	2.02E-08	1.90E-07	4.63E-08	5.75E-07
93	1.50	0.	3.55E-07	0.	0.	0.	0.	0.	1.24E-14	1.79E-08	2.46E-08	2.16E-07	4.82E-08	6.95E-07
94	1.40	0.	3.92E-07	0.	0.	0.	0.	0.	1.24E-14	0.	3.03E-08	1.45E-07	3.49E-08	6.81E-07
95	1.30	0.	2.79E-07	0.	0.	0.	0.	0.	1.24E-14	0.	3.88E-08	2.09E-07	4.76E-08	5.69E-07
96	1.20	0.	2.96E-07	0.	0.	0.	0.	0.	1.24E-14	0.	4.84E-08	2.73E-07	5.45E-08	6.72E-07
97	1.10	0.	2.27E-07	0.	0.	0.	0.	2.31E-12	1.24E-14	0.	6.31E-08	3.22E-07	6.90E-08	6.81E-07
98	1.00	0.	2.15E-07	0.	0.	0.	0.	1.64E-11	1.24E-14	0.	8.42E-08	3.89E-07	8.36E-08	7.72E-07
99	0.90	0.	1.69E-07	0.	0.	0.	0.	2.24E-11	1.24E-14	0.	1.16E-07	4.49E-07	9.74E-08	8.32E-07
100	0.80	0.	7.79E-08	0.	0.	0.	0.	3.21E-16	1.24E-14	0.	1.66E-07	5.15E-07	1.12E-07	8.71E-07
101	0.70	0.	2.13E-08	0.	0.	0.	0.	2.06E-10	1.24E-14	0.	2.49E-07	4.37E-07	8.81E-08	7.96E-07
102	0.60	0.	8.54E-10	0.	0.	0.	0.	8.42E-10	1.24E-14	0.	4.01E-07	4.91E-07	9.96E-08	9.94E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-07 (10.0E-09 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONZ)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.21E-07	0.	0.	0.	2.98E-09	6.42E-12	2.09E-08	5.09E-09	3.50E-07
2	10.60	0.	0.	2.67E-07	0.	0.	0.	2.97E-09	6.41E-12	2.10E-08	5.10E-09	2.96E-07
3	10.50	0.	0.	2.96E-07	0.	0.	0.	2.97E-09	6.40E-12	2.11E-08	5.10E-09	2.85E-07
4	10.40	0.	0.	2.24E-07	0.	0.	0.	2.97E-09	7.40E-12	2.12E-08	5.10E-09	2.53E-07
5	10.30	0.	0.	1.78E-07	0.	0.	0.	2.96E-09	7.20E-12	2.12E-08	5.11E-09	2.08E-07
6	10.20	0.	0.	1.74E-07	0.	0.	0.	2.96E-09	7.42E-12	2.13E-08	5.11E-09	2.03E-07
7	10.10	0.	0.	1.54E-07	0.	0.	0.	2.99E-09	7.64E-12	2.13E-08	5.11E-09	1.84E-07
8	10.00	0.	0.	1.20E-07	0.	0.	0.	2.99E-09	7.87E-12	2.14E-08	5.11E-09	1.49E-07
9	9.90	0.	0.	1.20E-07	0.	0.	0.	3.00E-09	8.12E-12	2.14E-08	5.12E-09	1.50E-07
10	9.80	0.	0.	1.08E-07	0.	0.	0.	3.00E-09	8.37E-12	2.15E-08	5.12E-09	1.33E-07
11	9.70	0.	0.	7.98E-08	0.	0.	0.	3.01E-09	8.63E-12	2.15E-08	5.12E-09	1.09E-07
12	9.60	0.	0.	8.53E-08	0.	0.	0.	3.01E-09	8.91E-12	2.16E-08	5.13E-09	1.15E-07
13	9.50	0.	4.18E-10	6.45E-08	0.	0.	0.	3.02E-09	9.19E-12	2.17E-08	5.13E-09	9.48E-08
14	9.40	0.	4.85E-10	5.40E-08	0.	0.	0.	3.03E-09	9.49E-12	2.17E-08	5.13E-09	8.64E-08
15	9.30	0.	5.51E-10	5.59E-08	0.	0.	0.	3.04E-09	9.80E-12	5.67E-09	5.13E-09	7.84E-08
16	9.20	0.	6.14E-10	3.96E-08	0.	0.	0.	3.05E-09	1.01E-11	5.65E-09	5.14E-09	5.41E-08
17	9.10	0.	7.47E-10	4.07E-08	0.	0.	0.	3.06E-09	1.05E-11	5.63E-09	5.14E-09	5.53E-08
18	9.00	0.	8.87E-10	3.32E-08	0.	0.	0.	3.07E-09	1.08E-11	5.61E-09	5.14E-09	4.80E-08
19	8.90	0.	1.03E-09	2.81E-08	0.	0.	0.	3.08E-09	1.12E-11	5.60E-09	5.15E-09	4.29E-08
20	8.80	0.	1.07E-09	2.64E-08	0.	0.	0.	3.09E-09	1.16E-11	5.58E-09	5.15E-09	4.13E-08
21	8.70	0.	1.03E-09	2.91E-08	0.	0.	0.	3.11E-09	1.20E-11	5.56E-09	5.15E-09	3.58E-08
22	8.60	0.	9.92E-10	2.03E-08	0.	0.	0.	3.12E-09	1.24E-11	5.54E-09	5.16E-09	3.51E-08
23	8.50	0.	9.62E-10	1.58E-08	0.	0.	0.	3.13E-09	1.29E-11	5.52E-09	5.16E-09	3.04E-08
24	8.40	0.	9.39E-10	1.49E-08	0.	0.	0.	3.14E-09	1.33E-11	5.51E-09	5.16E-09	2.97E-08
25	8.30	0.	9.17E-10	1.12E-08	0.	0.	0.	3.16E-09	1.38E-11	5.49E-09	5.18E-09	2.60E-08
26	8.20	0.	8.89E-10	1.09E-08	0.	0.	0.	3.18E-09	1.43E-11	5.47E-09	5.24E-09	2.56E-08
27	8.10	0.	8.58E-10	6.34E-09	0.	0.	0.	3.19E-09	1.49E-11	5.44E-09	5.30E-09	2.31E-08
28	8.00	0.	8.28E-10	7.98E-09	0.	0.	0.	3.21E-09	1.54E-11	5.42E-09	5.36E-09	2.28E-08
29	7.90	0.	7.92E-10	6.16E-09	0.	0.	0.	3.23E-09	1.60E-11	5.39E-09	5.42E-09	2.10E-08
30	7.80	0.	7.56E-10	6.04E-09	0.	0.	0.	3.24E-09	1.66E-11	5.38E-09	5.47E-09	2.09E-08
31	7.70	0.	7.20E-10	4.78E-09	0.	0.	0.	3.26E-09	1.73E-11	5.36E-09	5.53E-09	1.97E-08
32	7.60	0.	6.84E-10	4.21E-09	0.	3.03E-13	0.	3.28E-09	1.80E-11	5.34E-09	5.59E-09	1.91E-08
33	7.50	0.	6.49E-10	3.54E-09	0.	1.99E-12	0.	3.29E-09	1.87E-11	5.32E-09	5.65E-09	1.85E-08
34	7.40	0.	6.11E-10	2.94E-09	0.	7.91E-12	0.	3.31E-09	1.95E-11	5.30E-09	5.71E-09	1.79E-08
35	7.30	0.	5.75E-10	2.56E-09	0.	4.53E-11	0.	3.33E-09	2.03E-11	5.28E-09	5.77E-09	1.76E-08
36	7.20	0.	5.38E-10	2.11E-09	0.	1.29E-10	0.	3.35E-09	2.12E-11	5.26E-09	5.82E-09	1.72E-08
37	7.10	0.	5.00E-10	1.87E-09	0.	2.86E-10	0.	3.37E-09	2.21E-11	5.25E-09	5.88E-09	1.72E-08
38	7.00	6.78E-13	0.	1.57E-09	0.	9.54E-10	0.	3.40E-09	2.31E-11	5.23E-09	5.94E-09	1.71E-08
39	6.90	1.26E-12	0.	1.32E-09	0.	8.19E-10	0.	3.43E-09	2.41E-11	5.21E-09	6.00E-09	1.68E-08
40	6.80	1.02E-12	0.	1.16E-09	0.	1.85E-09	0.	3.46E-09	2.52E-11	5.19E-09	6.06E-09	1.77E-08
41	6.70	7.01E-13	0.	9.22E-10	0.	2.62E-09	0.	3.48E-09	2.63E-11	5.17E-09	6.12E-09	1.83E-08
42	6.60	4.04E-13	0.	7.52E-10	0.	1.32E-09	0.	3.51E-09	2.75E-11	5.17E-09	6.18E-09	1.78E-08
43	6.50	2.19E-13	0.	5.32E-10	0.	2.60E-09	0.	3.54E-09	2.88E-11	5.17E-09	6.25E-09	1.91E-08
44	6.40	3.06E-13	0.	3.11E-10	2.10E-11	3.46E-09	0.	3.57E-09	3.02E-11	5.17E-09	6.31E-09	1.89E-08
45	6.30	6.29E-13	0.	1.62E-10	8.79E-11	1.50E-09	0.	3.59E-09	3.17E-11	5.17E-09	6.39E-09	1.69E-08
46	6.20	1.81E-12	0.	7.98E-11	1.13E-10	2.40E-09	0.	3.62E-09	3.32E-11	5.18E-09	6.52E-09	1.79E-08
47	6.10	6.97E-12	0.	3.05E-11	3.01E-10	4.19E-09	0.	3.65E-09	3.49E-11	5.20E-09	6.64E-09	2.00E-08
48	6.00	1.76E-11	0.	7.02E-12	2.42E-10	1.34E-09	0.	3.68E-09	3.67E-11	5.24E-09	6.77E-09	1.73E-08
49	5.90	2.73E-11	0.	4.96E-13	3.37E-10	1.50E-09	0.	3.68E-09	3.86E-11	5.28E-09	6.89E-09	1.77E-08
50	5.80	3.97E-11	0.	1.21E-14	4.45E-10	1.40E-09	0.	3.62E-09	4.06E-11	5.31E-09	7.02E-09	1.78E-08
51	5.70	4.46E-11	0.	0.	4.65E-10	1.39E-09	0.	3.48E-09	4.28E-11	5.34E-09	7.14E-09	1.78E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.42E-11	0.	0.	0.	3.31E-10	2.42E-09	0.	0.	3.16E-09	4.51E-11	5.18E-09	7.27E-09	1.07E-08
53	5.50	5.47E-11	0.	0.	0.	4.11E-10	2.42E-09	0.	0.	3.10E-09	4.77E-11	5.43E-09	7.39E-09	1.90E-08
54	5.40	5.57E-11	0.	0.	0.	3.36E-10	1.43E-09	0.	0.	3.20E-09	5.04E-11	5.49E-09	7.52E-09	1.81E-08
55	5.30	5.23E-11	0.	0.	0.	3.47E-10	2.29E-09	0.	0.	3.22E-09	5.33E-11	5.55E-09	7.67E-09	1.92E-08
56	5.20	3.55E-11	0.	0.	0.	3.53E-10	1.19E-09	0.	0.	3.24E-09	5.64E-11	5.62E-09	7.86E-09	1.83E-08
57	5.10	3.24E-11	0.	0.	0.	3.37E-10	1.67E-09	0.	1.19E-17	3.27E-09	5.98E-11	5.76E-09	8.05E-09	1.91E-08
58	5.00	2.34E-11	0.	0.	0.	2.89E-10	1.41E-09	0.	1.19E-17	3.29E-09	6.35E-11	5.98E-09	8.24E-09	1.92E-08
59	4.90	1.94E-11	0.	0.	0.	3.05E-10	1.33E-09	0.	1.19E-17	3.32E-09	6.74E-11	6.06E-09	8.44E-09	1.95E-08
60	4.80	1.95E-11	0.	0.	0.	3.18E-10	1.23E-09	0.	1.19E-17	3.35E-09	7.17E-11	6.20E-09	8.63E-09	1.98E-08
61	4.70	2.06E-11	0.	0.	0.	2.95E-10	9.81E-10	0.	1.19E-17	3.37E-09	7.64E-11	6.34E-09	8.84E-09	1.99E-08
62	4.60	2.36E-11	0.	0.	0.	2.90E-10	9.39E-10	0.	1.19E-17	3.40E-09	8.15E-11	6.52E-09	9.06E-09	2.03E-08
63	4.50	2.29E-11	0.	3.43E-11	0.	2.43E-10	6.33E-10	0.	1.19E-17	3.43E-09	8.71E-11	6.72E-09	9.27E-09	2.04E-08
64	4.40	2.24E-11	0.	1.37E-10	0.	2.33E-10	4.86E-10	0.	1.19E-17	3.46E-09	9.32E-11	6.93E-09	9.49E-09	2.08E-08
65	4.30	1.95E-11	0.	2.88E-10	0.	2.05E-10	2.58E-10	0.	1.19E-17	3.48E-09	9.99E-11	7.14E-09	9.70E-09	2.12E-08
66	4.20	1.71E-11	0.	1.33E-09	0.	2.09E-10	2.17E-10	0.	1.19E-17	3.51E-09	1.07E-10	7.35E-09	9.37E-10	1.37E-08
67	4.10	1.58E-11	0.	3.46E-10	0.	1.87E-10	5.42E-11	0.	1.19E-17	3.53E-09	1.15E-10	5.31E-09	9.65E-10	1.05E-08
68	4.00	1.29E-11	0.	1.84E-09	0.	1.70E-10	4.10E-11	0.	1.19E-17	3.54E-09	1.24E-10	4.12E-09	9.93E-10	1.08E-08
69	3.90	1.00E-11	0.	8.22E-10	1.60E-09	1.40E-10	1.08E-11	0.	1.19E-17	3.53E-09	1.34E-10	4.22E-09	1.02E-09	1.15E-08
70	3.80	1.06E-11	0.	1.05E-09	1.45E-08	1.46E-10	0.	0.	1.19E-17	3.51E-09	1.45E-10	3.28E-09	1.05E-09	2.37E-08
71	3.70	8.35E-12	0.	1.56E-09	2.74E-09	1.07E-10	0.	0.	1.19E-17	3.46E-09	1.57E-10	3.41E-09	1.20E-09	1.26E-08
72	3.60	7.05E-12	0.	6.82E-10	1.77E-08	1.17E-10	0.	0.	1.19E-17	3.24E-09	1.71E-10	3.78E-09	1.37E-09	2.71E-08
73	3.50	6.09E-12	0.	1.17E-09	6.82E-08	7.92E-11	0.	0.	1.19E-17	2.96E-09	1.86E-10	4.30E-09	1.55E-09	7.85E-08
74	3.40	5.06E-12	0.	5.01E-10	3.53E-09	8.74E-11	0.	0.	1.19E-17	1.71E-09	2.03E-10	4.87E-09	1.74E-09	1.26E-08
75	3.30	3.84E-12	0.	5.88E-10	2.41E-08	6.12E-11	0.	0.	1.19E-17	1.71E-09	2.22E-10	5.45E-09	1.93E-09	3.41E-08
76	3.20	3.04E-12	0.	2.95E-10	7.61E-08	6.15E-11	0.	0.	1.19E-17	1.71E-09	2.43E-10	6.03E-09	2.13E-09	8.66E-08
77	3.10	2.68E-12	0.	2.31E-10	5.53E-09	5.26E-11	0.	0.	1.19E-17	1.72E-09	2.68E-10	6.62E-09	2.33E-09	1.67E-08
78	3.00	2.18E-12	0.	1.21E-10	2.46E-08	4.49E-11	0.	0.	1.19E-17	1.72E-09	2.96E-10	7.21E-09	2.52E-09	3.65E-08
79	2.90	1.65E-12	0.	7.13E-11	1.83E-08	2.93E-11	0.	0.	1.19E-17	1.73E-09	3.28E-10	7.80E-09	2.72E-09	3.10E-08
80	2.80	1.51E-12	0.	3.26E-11	4.94E-09	1.66E-11	0.	0.	1.19E-17	1.73E-09	3.64E-10	8.44E-09	2.87E-09	1.84E-08
81	2.70	8.03E-13	0.	1.49E-11	1.21E-08	7.42E-12	0.	0.	1.19E-17	1.73E-09	4.06E-10	9.10E-09	7.91E-10	2.41E-08
82	2.60	3.49E-13	0.	7.61E-12	1.16E-09	2.73E-12	0.	0.	1.19E-17	1.73E-09	4.55E-10	3.72E-09	6.56E-10	7.93E-09
83	2.50	2.27E-14	0.	1.84E-12	7.40E-10	5.81E-13	0.	0.	1.19E-17	1.73E-09	5.12E-10	4.44E-09	9.83E-10	8.41E-09
84	2.40	0.	6.99E-11	0.	9.65E-10	5.66E-14	0.	0.	1.19E-17	1.73E-09	5.79E-10	5.55E-09	1.21E-09	1.01E-08
85	2.30	0.	3.71E-10	0.	0.	0.	0.	0.	1.19E-17	1.71E-09	6.59E-10	6.73E-09	1.45E-09	1.09E-08
86	2.20	0.	7.24E-10	0.	0.	0.	0.	0.	1.19E-17	1.71E-09	7.54E-10	7.95E-09	1.75E-09	1.29E-08
87	2.10	0.	1.17E-09	0.	0.	0.	0.	0.	1.19E-17	1.70E-09	8.68E-10	9.26E-09	2.05E-09	1.50E-08
88	2.00	0.	1.76E-09	0.	0.	0.	0.	0.	1.19E-17	1.69E-09	1.01E-09	1.06E-08	2.34E-09	1.73E-08
89	1.90	0.	4.06E-09	0.	0.	0.	0.	0.	1.19E-17	1.98E-09	1.17E-09	1.19E-08	2.65E-09	2.14E-08
90	1.80	0.	3.35E-09	0.	0.	0.	0.	0.	1.19E-17	1.51E-09	1.38E-09	1.39E-08	3.12E-09	2.33E-08
91	1.70	0.	4.05E-09	0.	0.	0.	0.	0.	1.19E-17	1.43E-09	1.64E-09	1.63E-08	3.71E-09	2.72E-08
92	1.60	0.	2.79E-09	0.	0.	0.	0.	0.	1.19E-17	1.21E-09	1.97E-09	1.67E-08	3.96E-09	2.66E-08
93	1.50	0.	3.47E-09	0.	0.	0.	0.	0.	1.19E-17	5.49E-10	2.40E-09	2.07E-08	4.69E-09	3.18E-08
94	1.40	0.	3.83E-09	0.	0.	0.	0.	0.	1.19E-17	0.	2.94E-09	1.43E-08	3.34E-09	2.44E-08
95	1.30	0.	2.72E-09	0.	0.	0.	0.	0.	1.19E-17	0.	3.70E-09	2.02E-08	4.68E-09	3.13E-08
96	1.20	0.	2.89E-09	0.	0.	0.	0.	0.	1.19E-17	0.	4.72E-09	2.69E-08	5.36E-09	3.99E-08
97	1.10	0.	2.22E-09	0.	0.	0.	0.	2.24E-14	1.19E-17	0.	6.15E-09	3.19E-08	6.79E-09	4.78E-08
98	1.00	0.	2.18E-09	0.	0.	0.	0.	1.59E-13	1.19E-17	0.	8.22E-09	3.84E-08	8.22E-09	5.78E-08
99	0.90	0.	1.65E-09	0.	0.	0.	0.	2.17E-13	1.19E-17	0.	1.13E-08	4.44E-08	9.58E-09	6.69E-08
100	0.80	0.	7.61E-10	0.	0.	0.	0.	3.12E-12	1.19E-17	0.	1.02E-08	4.33E-08	7.54E-09	6.78E-08
101	0.70	0.	2.88E-10	0.	0.	0.	0.	2.00E-12	1.19E-17	0.	2.43E-08	4.31E-08	8.47E-09	7.63E-08
102	0.60	0.	8.36E-12	0.	0.	0.	0.	8.38E-12	1.19E-17	0.	3.92E-08	4.89E-08	9.79E-09	9.75E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8888. DENSITY (GM/CC) 1.293E-00 (10.0E-26 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.81E-09	0.	0.	0.	8.57E-11	6.01E-13	1.95E-09	4.82E-10	5.33E-09
2	10.60	0.	0.	2.34E-09	0.	0.	0.	8.58E-11	6.10E-13	1.96E-09	4.82E-10	4.87E-09
3	10.50	0.	0.	2.24E-09	0.	0.	0.	8.60E-11	6.36E-13	1.97E-09	4.83E-10	4.78E-09
4	10.40	0.	0.	1.96E-09	0.	0.	0.	8.81E-11	6.94E-13	1.98E-09	4.83E-10	4.51E-09
5	10.30	0	0.	1.56E-09	0.	0.	0.	8.62E-11	6.74E-13	1.99E-09	4.83E-10	4.12E-09
6	10.20	0.	0.	1.52E-09	0.	0.	0.	8.63E-11	6.94E-13	1.99E-09	4.84E-10	4.08E-09
7	10.10	0.	0.	1.39E-09	0.	0.	0.	8.64E-11	7.[illegible]	2.00E-09	4.84E-10	3.92E-09
8	10.00	0.	0.	1.05E-09	0.	0.	0.	8.65E-11	7.[illegible]	2.00E-09	4.84E-10	3.62E-09
9	9.90	0.	0.	1.05E-09	0.	0.	0.	8.67E-11	7.[illegible]	2.01E-09	4.84E-10	3.63E-09
10	9.80	0.	0.	9.06E-10	0.	0.	0.	8.68E-11	7.83E-13	2.01E-09	4.85E-10	3.49E-09
11	9.70	0.	0.	6.99E-10	0.	0.	0.	8.70E-11	8.08E-13	2.02E-09	4.85E-10	3.29E-09
12	9.60	0.	0.	7.47E-10	0.	0.	0.	8.72E-11	8.33E-13	2.02E-09	4.85E-10	3.34E-09
13	9.50	0.	3.75E-12	5.65E-10	0.	0.	0.	8.73E-11	8.60E-13	2.03E-09	4.85E-10	3.17E-09
14	9.40	0.	4.35E-12	4.91E-10	0.	0.	0.	8.76E-11	8.88E-13	2.03E-09	4.86E-10	3.10E-09
15	9.30	0.	4.95E-12	4.90E-10	0.	0.	0.	8.80E-11	9.17E-13	2.04E-09	4.86E-10	3.10E-09
16	9.20	0.	5.55E-12	3.47E-10	0.	0.	0.	8.83E-11	9.47E-13	2.04E-09	4.87E-10	2.96E-09
17	9.10	0.	6.70E-12	3.56E-10	0.	0.	0.	8.86E-11	9.79E-13	2.05E-09	4.87E-10	2.97E-09
18	9.00	0.	7.97E-12	2.91E-10	0.	0.	0.	8.89E-11	1.01E-12	2.06E-09	4.87E-10	2.90E-09
19	8.90	0.	9.23E-12	2.46E-10	0.	0.	0.	8.92E-11	1.05E-12	2.06E-09	4.87E-10	2.86E-09
20	8.80	0.	9.59E-12	2.31E-10	0.	0.	0.	8.95E-11	1.08E-12	2.07E-09	4.87E-10	2.84E-09
21	8.70	0.	9.25E-12	1.76E-10	0.	0.	0.	8.99E-11	1.12E-12	2.08E-09	4.88E-10	2.78E-09
22	8.60	0.	8.91E-12	1.78E-10	0.	0.	0.	9.02E-11	1.15E-12	2.09E-09	4.88E-10	2.78E-09
23	8.50	0.	8.64E-12	1.37E-10	0.	0.	0.	9.05E-11	1.20E-12	2.10E-09	4.88E-10	2.74E-09
24	8.40	0.	8.44E-12	1.31E-10	0.	0.	0.	9.10E-11	1.25E-12	2.11E-09	4.89E-10	2.74E-09
25	8.30	0.	8.24E-12	9.88E-11	0.	0.	0.	9.14E-11	1.29E-12	2.14E-09	4.91E-10	2.70E-09
26	8.20	0.	7.99E-12	9.50E-11	0.	0.	0.	9.19E-11	1.34E-12	2.12E-09	4.96E-10	2.68E-09
27	8.10	0.	7.71E-12	7.30E-11	0.	0.	0.	9.24E-11	1.39E-12	5.89E-10	5.82E-10	1.19E-09
28	8.00	0.	7.43E-12	6.98E-11	0.	0.	0.	9.29E-11	1.44E-12	5.87E-10	5.87E-10	1.19E-09
29	7.90	0.	7.11E-12	5.30E-11	0.	0.	0.	9.34E-11	1.50E-12	5.85E-10	5.13E-10	1.17E-09
30	7.80	0.	6.79E-12	5.29E-11	0.	0.	0.	9.38E-11	1.56E-12	5.83E-10	5.18E-10	1.18E-09
31	7.70	0.	6.46E-12	4.13E-11	0.	0.	0.	9.43E-11	1.62E-12	5.81E-10	5.24E-10	1.17E-09
32	7.60	0.	6.14E-12	3.69E-11	0.	2.68E-13	0.	9.48E-11	1.68E-12	5.80E-10	5.29E-10	1.17E-09
33	7.50	0.	5.81E-12	3.10E-11	0.	1.76E-14	0.	9.53E-11	1.75E-12	4.98E-10	5.35E-10	1.17E-09
34	7.40	0.	5.49E-12	2.58E-11	0.	7.00E-14	0.	9.58E-11	1.82E-12	4.96E-10	5.40E-10	1.17E-09
35	7.30	0.	5.16E-12	2.24E-11	0.	4.01E-13	0.	9.63E-11	1.90E-12	4.95E-10	5.46E-10	1.17E-09
36	7.20	0.	4.83E-12	1.85E-11	0.	1.14E-12	0.	9.68E-11	1.98E-12	4.93E-10	5.51E-10	1.17E-09
37	7.10	0.	4.49E-12	1.64E-11	0.	2.53E-12	0.	9.76E-11	2.07E-12	4.91E-10	5.57E-10	1.17E-09
38	7.00	4.07E-15	0.	1.37E-11	0.	8.44E-12	0.	9.84E-11	2.16E-12	4.89E-10	5.62E-10	1.17E-09
39	6.90	1.12E-14	0.	1.16E-11	0.	7.25E-12	0.	9.92E-11	2.25E-12	4.88E-10	5.68E-10	1.18E-09
40	6.80	9.17E-15	0.	1.01E-11	0.	1.64E-11	0.	10.00E-11	2.35E-12	4.86E-10	5.73E-10	1.19E-09
41	6.70	6.27E-15	0.	8.07E-12	0.	2.32E-11	0.	1.01E-10	2.46E-12	4.84E-10	5.77E-10	1.20E-09
42	6.60	3.62E-15	0.	6.58E-12	0.	1.17E-11	0.	1.02E-10	2.57E-12	4.84E-10	5.85E-10	1.19E-09
43	6.50	1.96E-15	0.	4.66E-12	0.	2.30E-11	0.	1.02E-10	2.70E-12	4.84E-10	5.91E-10	1.21E-09
44	6.40	2.74E-15	0.	2.73E-12	1.86E-13	3.04E-11	0.	1.03E-10	2.82E-12	4.84E-10	5.97E-10	1.22E-09
45	6.30	5.63E-15	0.	1.42E-12	7.78E-13	1.33E-11	0.	1.04E-10	2.96E-12	4.84E-10	6.05E-10	1.21E-09
46	6.20	1.62E-14	0.	6.64E-13	1.00E-12	2.13E-11	0.	1.05E-10	3.11E-12	4.85E-10	6.17E-10	1.23E-09
47	6.10	6.24E-14	0.	2.67E-13	2.67E-12	3.31E-11	0.	1.06E-10	3.26E-12	4.87E-10	6.29E-10	1.26E-09
48	6.00	1.57E-13	0.	6.19E-14	2.14E-12	1.19E-11	0.	1.06E-10	3.43E-12	4.90E-10	6.40E-10	1.25E-09
49	5.90	2.45E-13	0.	4.35E-15	2.99E-12	1.33E-11	0.	1.06E-10	3.61E-12	4.94E-10	6.52E-10	1.27E-09
50	5.80	3.56E-13	0.	1.06E-16	3.94E-12	1.24E-11	0.	1.05E-10	3.80E-12	4.97E-10	6.64E-10	1.29E-09
51	5.70	3.99E-13	0.	0.	4.12E-12	1.23E-11	0.	9.84E-11	4.00E-12	5.00E-10	6.76E-10	1.30E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-08 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.85E-13	0.	0.	0.	2.93E-12	2.15E-11	0.	0.	9.15E-11	6.22E-12	5.04E-18	6.88E-18	1.31E-09
53	5.50	4.90E-13	0.	0.	0.	3.64E-12	2.24E-11	0.	0.	9.20E-11	4.46E-12	5.08E-18	7.00E-18	1.33E-09
54	5.40	4.99E-13	0.	0.	0.	2.98E-12	1.27E-11	0.	0.	9.25E-11	4.71E-12	5.14E-18	7.12E-18	1.34E-09
55	5.30	4.68E-13	0.	0.	0.	3.07E-12	2.35E-11	0.	0.	9.31E-11	4.98E-12	5.20E-18	7.26E-18	1.37E-09
56	5.20	3.18E-13	0.	0.	0.	3.13E-12	1.84E-11	0.	0.	9.37E-11	5.29E-12	5.26E-18	7.44E-18	1.38E-09
57	5.10	2.90E-13	0.	0.	0.	2.99E-12	1.91E-11	0.	9.94E-21	9.45E-11	5.59E-12	5.39E-18	7.52E-18	1.42E-09
58	5.00	2.09E-13	0.	0.	0.	2.56E-12	1.25E-11	0.	9.94E-21	9.53E-11	5.94E-12	5.53E-18	7.88E-18	1.45E-09
59	4.90	1.74E-13	0.	0.	0.	2.70E-12	1.38E-11	0.	9.94E-21	9.61E-11	6.31E-12	5.67E-18	7.98E-18	1.48E-09
60	4.80	1.75E-13	0.	0.	0.	2.81E-12	1.09E-11	0.	9.94E-21	9.68E-11	6.71E-12	5.80E-18	8.17E-18	1.51E-09
61	4.70	1.84E-13	0.	0.	0.	2.61E-12	8.68E-12	0.	9.94E-21	9.76E-11	7.15E-12	5.94E-18	8.37E-18	1.55E-09
62	4.60	2.11E-13	0.	0.	0.	2.56E-12	8.27E-12	0.	9.94E-21	9.84E-11	7.63E-12	6.10E-18	8.57E-18	1.58E-09
63	4.50	2.05E-13	0.	3.80E-13	0.	2.15E-12	5.60E-12	0.	9.94E-21	9.92E-11	8.15E-12	6.27E-18	8.78E-18	1.62E-09
64	4.40	2.00E-13	0.	1.28E-12	0.	2.87E-12	4.36E-12	0.	9.94E-21	10.00E-11	8.72E-12	6.45E-18	8.99E-18	1.66E-09
65	4.30	1.74E-13	0.	2.53E-12	0.	1.82E-12	2.28E-12	0.	9.94E-21	1.01E-10	9.35E-12	6.68E-18	9.82E-18	1.69E-09
66	4.20	1.53E-13	0.	1.16E-11	0.	1.85E-12	1.92E-12	0.	9.94E-21	1.02E-10	1.00E-11	6.88E-18	8.86E-18	9.84E-10
67	4.10	1.35E-13	0.	3.03E-12	0.	1.68E-12	4.80E-13	0.	9.94E-21	1.02E-10	1.08E-11	4.97E-18	9.13E-18	9.46E-10
68	4.00	1.16E-13	0.	1.61E-11	0.	1.50E-12	3.63E-13	0.	9.94E-21	1.02E-10	1.16E-11	3.86E-18	9.40E-18	9.42E-10
69	3.90	8.98E-14	0.	7.28E-12	4.58E-11	1.24E-12	1.61E-13	0.	9.94E-21	1.02E-10	1.25E-11	3.95E-18	9.67E-18	9.69E-10
70	3.80	9.47E-14	0.	9.24E-12	4.15E-10	1.29E-12	0.	0.	9.94E-21	1.02E-10	1.36E-11	3.69E-18	9.95E-18	9.99E-10
71	3.70	7.47E-14	0.	1.37E-11	7.85E-11	9.46E-13	0.	0.	9.94E-21	10.00E-11	1.47E-11	3.51E-18	1.13E-10	6.42E-10
72	3.60	6.31E-14	0.	9.97E-12	5.08E-10	1.04E-12	0.	0.	9.94E-21	9.97E-11	1.60E-11	3.54E-18	1.29E-10	1.11E-09
73	3.50	5.45E-14	0.	1.02E-11	1.95E-09	7.01E-13	0.	0.	9.94E-21	9.57E-11	1.74E-11	3.82E-18	1.46E-10	7.62E-09
74	3.40	4.52E-14	0.	4.39E-12	1.01E-10	7.73E-13	0.	0.	9.94E-21	4.95E-11	1.90E-11	4.56E-18	1.64E-10	7.95E-10
75	3.30	3.43E-14	0.	9.07E-12	6.91E-10	5.42E-13	0.	0.	9.94E-21	4.95E-11	2.08E-11	5.10E-18	1.83E-10	2.48E-09
76	3.20	2.72E-14	0.	2.58E-12	2.18E-09	5.44E-13	0.	0.	9.94E-21	4.96E-11	2.26E-11	5.64E-18	2.01E-10	3.82E-09
77	3.10	2.48E-14	0.	2.02E-12	1.58E-10	4.66E-13	0.	0.	9.94E-21	4.97E-11	2.51E-11	6.20E-18	2.20E-10	1.75E-09
78	3.00	1.95E-14	0.	1.88E-12	7.03E-10	3.98E-13	0.	0.	9.94E-21	4.99E-11	2.77E-11	6.75E-18	2.39E-10	1.18E-09
79	2.90	1.48E-14	0.	6.29E-13	5.25E-10	2.59E-13	0.	0.	9.94E-21	4.99E-11	3.06E-11	7.31E-18	2.58E-10	1.59E-09
80	2.80	1.44E-14	0.	2.89E-13	1.41E-10	1.47E-13	0.	0.	9.94E-21	5.00E-11	3.41E-11	7.98E-18	2.71E-10	1.72E-09
81	2.70	7.99E-15	0.	1.38E-13	3.46E-10	6.57E-14	0.	0.	9.94E-21	5.00E-11	3.80E-11	8.52E-18	2.43E-11	1.50E-09
82	2.60	3.13E-15	0.	6.66E-14	3.32E-11	2.42E-14	0.	0.	9.94E-21	5.00E-11	4.26E-11	3.49E-18	8.18E-11	5.54E-10
83	2.50	2.03E-16	0.	9.13E-15	2.12E-11	5.14E-15	0.	0.	9.94E-21	5.00E-11	4.79E-11	4.18E-18	9.38E-11	5.28E-10
84	2.40	0.	6.12E-13	0.	2.76E-11	5.01E-16	0.	0.	9.94E-21	5.00E-11	5.42E-11	5.20E-18	1.15E-10	7.67E-10
85	2.30	0.	3.25E-12	0.	0.	0.	0.	0.	9.94E-21	4.98E-11	6.16E-11	6.38E-18	1.37E-10	8.82E-10
86	2.20	0.	6.34E-12	0.	0.	0.	0.	0.	9.94E-21	4.94E-11	7.05E-11	7.44E-18	1.65E-10	1.54E-09
87	2.10	0.	1.03E-11	0.	0.	0.	0.	0.	9.94E-21	4.92E-11	8.12E-11	8.67E-18	1.94E-10	1.20E-09
88	2.00	0.	1.54E-11	0.	0.	0.	0.	0.	9.94E-21	4.76E-11	9.41E-11	9.89E-18	2.24E-10	1.37E-09
89	1.90	0.	3.54E-11	0.	0.	0.	0.	0.	9.94E-21	4.58E-11	1.10E-10	1.11E-09	2.54E-10	1.56E-09
90	1.80	0.	2.93E-11	0.	0.	0.	0.	0.	9.94E-21	4.38E-11	1.29E-10	1.30E-09	2.95E-10	1.80E-09
91	1.70	0.	3.54E-11	0.	0.	0.	0.	0.	9.94E-21	4.13E-11	1.54E-10	1.53E-09	3.20E-10	2.08E-09
92	1.60	0.	2.44E-11	0.	0.	0.	0.	0.	9.94E-21	3.45E-11	1.85E-10	1.56E-09	3.74E-10	2.40E-09
93	1.50	0.	3.04E-11	0.	0.	0.	0.	0.	9.94E-21	1.50E-11	2.25E-10	1.81E-09	4.44E-10	1.72E-09
94	1.40	0.	3.36E-11	0.	0.	0.	0.	0.	9.94E-21	0.	2.77E-10	1.34E-09	3.16E-10	1.94E-09
95	1.30	0.	2.38E-11	0.	0.	0.	0.	0.	9.94E-21	0.	3.46E-10	1.89E-09	4.42E-10	2.71E-09
96	1.20	0.	2.53E-11	0.	0.	0.	0.	0.	9.94E-21	0.	4.42E-10	2.52E-09	5.87E-10	3.58E-09
97	1.10	0.	1.94E-11	0.	0.	0.	0.	1.98E-16	9.94E-21	0.	5.76E-10	2.90E-09	6.42E-10	4.26E-09
98	1.00	0.	1.84E-11	0.	0.	0.	0.	1.41E-15	9.94E-21	0.	7.69E-10	3.60E-09	7.78E-10	5.16E-09
99	0.90	0.	1.45E-11	0.	0.	0.	0.	1.92E-15	9.94E-21	0.	1.06E-09	4.15E-09	9.06E-10	6.13E-09
100	0.80	0.	6.64E-12	0.	0.	0.	0.	2.76E-14	9.94E-21	0.	1.51E-09	3.53E-09	7.14E-10	5.77E-09
101	0.70	0.	1.82E-12	0.	0.	0.	0.	1.77E-14	9.94E-21	0.	2.28E-09	4.04E-09	8.20E-10	7.14E-09
102	0.60	0.	7.32E-14	0.	0.	0.	0.	7.41E-14	9.94E-21	0.	3.46E-09	4.54E-09	9.26E-10	9.13E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8500. DENSITY (GM/CC) 1.232E-04 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.85E-11	0.	0.	0.	2.05E-12	4.09E-14	1.58E-10	4.03E-11	2.19E-10
2	10.60	0.	0.	1.94E-11	0.	0.	0.	2.05E-12	5.03E-14	1.59E-10	4.04E-11	2.17E-10
3	10.50	0.	0.	1.47E-11	0.	0.	0.	2.05E-12	5.18E-14	1.60E-10	4.04E-11	2.17E-10
4	10.40	0.	0.	1.29E-11	0.	0.	0.	2.06E-12	5.33E-14	1.60E-10	4.04E-11	2.16E-10
5	10.30	0.	0.	1.02E-11	0.	0.	0.	2.06E-12	5.49E-14	1.61E-10	4.04E-11	2.14E-10
6	10.20	0.	0.	9.98E-12	0.	0.	0.	2.06E-12	5.65E-14	1.61E-10	4.05E-11	2.14E-10
7	10.10	0.	0.	8.86E-12	0.	0.	0.	2.06E-12	5.82E-14	1.62E-10	4.05E-11	2.13E-10
8	10.00	0.	0.	6.89E-12	0.	0.	0.	2.07E-12	6.00E-14	1.62E-10	4.05E-11	2.12E-10
9	9.90	0.	0.	6.91E-12	0.	0.	0.	2.07E-12	6.18E-14	1.63E-10	4.05E-11	2.12E-10
10	9.80	0.	0.	5.55E-12	0.	0.	0.	2.07E-12	6.36E-14	1.63E-10	4.06E-11	2.12E-10
11	9.70	0.	0.	4.59E-12	0.	0.	0.	2.08E-12	6.53E-14	1.63E-10	4.06E-11	2.11E-10
12	9.60	0.	0.	4.91E-12	0.	0.	0.	2.08E-12	6.70E-14	1.64E-10	4.06E-11	2.11E-10
13	9.50	0.	2.66E-14	3.71E-12	0.	0.	0.	2.09E-12	7.08E-14	1.64E-10	4.06E-11	2.11E-10
14	9.40	0.	3.08E-14	3.22E-12	0.	0.	0.	2.09E-12	7.23E-14	4.32E-11	4.06E-11	8.92E-11
15	9.30	0.	3.51E-14	3.22E-12	0.	0.	0.	2.10E-12	7.47E-14	4.30E-11	4.07E-11	8.91E-11
16	9.20	0.	3.93E-14	2.28E-12	0.	0.	0.	2.11E-12	7.71E-14	4.29E-11	4.07E-11	8.81E-11
17	9.10	0.	4.75E-14	2.34E-12	0.	0.	0.	2.12E-12	7.97E-14	4.27E-11	4.07E-11	8.80E-11
18	9.00	0.	5.64E-14	1.91E-12	0.	0.	0.	2.13E-12	8.24E-14	4.26E-11	4.07E-11	8.75E-11
19	8.90	0.	6.54E-14	1.61E-12	0.	0.	0.	2.13E-12	8.53E-14	4.24E-11	4.08E-11	8.71E-11
20	8.80	0.	6.79E-14	1.52E-12	0.	0.	0.	2.14E-12	8.82E-14	4.23E-11	4.08E-11	8.69E-11
21	8.70	0.	6.55E-14	1.16E-12	0.	0.	0.	2.15E-12	9.13E-14	4.22E-11	4.08E-11	8.64E-11
22	8.60	0.	6.31E-14	1.17E-12	0.	0.	0.	2.15E-12	9.45E-14	4.20E-11	4.08E-11	8.63E-11
23	8.50	0.	6.12E-14	8.97E-13	0.	0.	0.	2.16E-12	9.79E-14	4.19E-11	4.09E-11	8.60E-11
24	8.40	0.	5.98E-14	8.57E-13	0.	0.	0.	2.17E-12	1.01E-13	4.18E-11	4.09E-11	8.58E-11
25	8.30	0.	5.84E-14	6.43E-13	0.	0.	0.	2.18E-12	1.05E-13	4.16E-11	4.11E-11	8.57E-11
26	8.20	0.	5.68E-14	6.24E-13	0.	0.	0.	2.20E-12	1.09E-13	4.15E-11	4.15E-11	8.60E-11
27	8.10	0.	5.46E-14	4.88E-13	0.	0.	0.	2.21E-12	1.13E-13	4.13E-11	4.20E-11	8.61E-11
28	8.00	0.	5.26E-14	4.59E-13	0.	0.	0.	2.22E-12	1.17E-13	4.11E-11	4.24E-11	8.64E-11
29	7.90	0.	5.04E-14	3.54E-13	0.	0.	0.	2.23E-12	1.22E-13	4.09E-11	4.29E-11	8.66E-11
30	7.80	0.	4.81E-14	3.47E-13	0.	0.	0.	2.24E-12	1.27E-13	4.08E-11	4.34E-11	8.69E-11
31	7.70	0.	4.58E-14	2.75E-13	0.	0.	0.	2.25E-12	1.32E-13	4.06E-11	4.38E-11	8.72E-11
32	7.60	0.	4.33E-14	2.42E-13	0.	1.82E-17	0.	2.26E-12	1.37E-13	4.05E-11	4.43E-11	8.75E-11
33	7.50	0.	4.13E-14	2.04E-13	0.	1.20E-16	0.	2.28E-12	1.43E-13	4.03E-11	4.48E-11	8.78E-11
34	7.40	0.	3.89E-14	1.69E-13	0.	4.75E-16	0.	2.29E-12	1.49E-13	4.02E-11	4.52E-11	8.81E-11
35	7.30	0.	3.66E-14	1.47E-13	0.	2.72E-15	0.	2.30E-12	1.55E-13	4.01E-11	4.57E-11	8.84E-11
36	7.20	0.	3.42E-14	1.22E-13	0.	7.75E-15	0.	2.31E-12	1.61E-13	3.99E-11	4.61E-11	8.87E-11
37	7.10	0.	3.18E-14	1.08E-13	0.	1.72E-14	0.	2.33E-12	1.68E-13	3.98E-11	4.66E-11	8.90E-11
38	7.00	4.25E-17	0.	9.03E-14	0.	5.73E-14	0.	2.35E-12	1.76E-13	3.96E-11	4.71E-11	8.94E-11
39	6.90	7.88E-17	0.	7.66E-14	0.	1.92E-14	0.	2.37E-12	1.83E-13	3.95E-11	4.75E-11	8.97E-11
40	6.80	6.42E-17	0.	6.65E-14	0.	1.11E-13	0.	2.39E-12	1.92E-13	3.94E-11	4.80E-11	9.01E-11
41	6.70	4.39E-17	0.	5.38E-14	0.	1.57E-13	0.	2.41E-12	2.00E-13	3.92E-11	4.85E-11	9.05E-11
42	6.60	2.54E-17	0.	4.32E-14	0.	7.97E-14	0.	2.43E-12	2.10E-13	3.92E-11	4.90E-11	9.09E-11
43	6.50	1.37E-17	0.	3.56E-14	0.	1.54E-13	0.	2.45E-12	2.20E-13	3.92E-11	4.95E-11	9.15E-11
44	6.40	1.92E-17	0.	3.79E-14	1.26E-15	2.09E-13	0.	2.47E-12	2.30E-13	3.92E-11	5.00E-11	9.21E-11
45	6.30	3.94E-17	0.	9.29E-15	5.28E-15	9.01E-14	0.	2.48E-12	2.41E-13	3.92E-11	5.06E-11	9.27E-11
46	6.20	1.14E-16	0.	4.36E-15	6.78E-15	1.44E-13	0.	2.50E-12	2.53E-13	3.93E-11	5.16E-11	9.38E-11
47	6.10	4.37E-16	0.	1.78E-15	1.81E-14	2.52E-13	0.	2.52E-12	2.66E-13	3.95E-11	5.26E-11	9.51E-11
48	6.00	1.10E-15	0.	4.04E-16	1.45E-14	8.05E-14	0.	2.54E-12	2.79E-13	3.97E-11	5.36E-11	9.62E-11
49	5.90	1.71E-15	0.	2.85E-17	2.03E-14	9.04E-14	0.	2.54E-12	2.94E-13	4.00E-11	5.46E-11	9.76E-11
50	5.80	2.49E-15	0.	5.94E-19	2.67E-14	8.40E-14	0.	2.50E-12	3.09E-13	4.03E-11	5.56E-11	9.88E-11
51	5.70	2.80E-15	0.	0.	2.79E-14	8.37E-14	0.	2.35E-12	3.26E-13	4.05E-11	5.66E-11	9.99E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.43E-15	0.	0.	0.	1.99E-14	1.46E-13	0.	0.	2.19E-12	3.44E-13	4.08E-11	5.76E-11	1.01E-10
53	5.50	3.43E-15	0.	0.	.	2.47E-14	1.45E-13	0.	0.	2.20E-12	3.83E-13	4.12E-11	5.86E-11	1.02E-10
54	5.40	3.49E-15	0.	0.	0.	2.02E-14	8.60E-14	0.	0.	2.21E-12	3.84E-13	4.16E-11	5.96E-11	1.04E-10
55	5.30	3.28E-15	0.	0.	0.	2.08E-14	1.38E-13	0.	0.	2.22E-12	4.06E-13	4.21E-11	6.08E-11	1.06E-10
56	5.20	2.23E-15	0.	0.	0.	2.12E-14	7.17E-14	0.	0.	2.24E-12	4.30E-13	4.26E-11	6.23E-11	1.08E-10
57	5.10	2.83E-15	0.	0.	0.	2.03E-14	10.00E-14	0.	5.64E-24	2.26E-12	4.56E-13	4.37E-11	6.38E-11	1.10E-10
58	5.00	1.47E-15	0.	0.	0.	1.74E-14	8.49E-14	0.	5.64E-24	2.28E-12	4.83E-13	4.48E-11	6.53E-11	1.13E-10
59	4.90	1.22E-15	0.	0.	0.	1.83E-14	8.02E-14	0.	5.64E-24	2.29E-12	5.14E-13	4.59E-11	6.68E-11	1.16E-10
60	4.80	1.23E-15	0.	0.	0.	1.91E-14	7.36E-14	0.	5.64E-24	2.31E-12	5.47E-13	4.70E-11	6.84E-11	1.19E-10
61	4.70	1.29E-15	0.	0.	0.	1.77E-14	5.89E-14	0.	5.64E-24	2.33E-12	5.82E-13	4.81E-11	7.00E-11	1.21E-10
62	4.60	1.48E-15	0.	0.	0.	1.74E-14	5.61E-14	0.	5.64E-24	2.35E-12	6.21E-13	4.94E-11	7.17E-11	1.24E-10
63	4.50	1.44E-15	0.	1.95E-15	0.	1.46E-14	3.80E-14	0.	5.64E-24	2.37E-12	6.63E-13	5.10E-11	7.34E-11	1.28E-10
64	4.40	1.48E-15	0.	7.87E-15	0.	1.40E-14	2.92E-14	0.	5.64E-24	2.39E-12	7.10E-13	5.25E-11	7.51E-11	1.31E-10
65	4.30	1.22E-15	0.	1.66E-14	0.	1.23E-14	1.55E-14	0.	5.64E-24	2.41E-12	7.61E-13	5.41E-11	7.19E-12	6.45E-11
66	4.20	1.07E-15	0.	7.65E-14	0.	1.26E-14	1.30E-14	0.	5.64E-24	2.43E-12	8.17E-13	5.57E-11	7.42E-12	6.65E-11
67	4.10	9.43E-16	0.	1.99E-14	0.	1.12E-14	3.26E-15	0.	5.64E-24	2.44E-12	8.77E-13	4.02E-11	7.64E-12	5.12E-11
68	4.00	6.10E-16	0.	8.08E-13	0.	1.02E-14	2.46E-15	0.	5.64E-24	2.45E-12	9.47E-13	3.12E-11	7.87E-12	4.26E-11
69	3.90	6.25E-16	0.	1.73E-14	1.05E-12	8.39E-15	1.13E-15	0.	5.64E-24	2.44E-12	1.02E-12	3.20E-11	8.09E-12	4.47E-11
70	3.80	6.64E-16	0.	6.07E-14	9.54E-12	8.79E-15	0.	0.	5.64E-24	2.43E-12	1.10E-12	2.49E-11	8.33E-12	4.63E-11
71	3.70	5.23E-16	0.	8.97E-14	1.81E-12	6.42E-15	0.	0.	5.64E-24	2.39E-12	1.20E-12	2.58E-11	9.49E-12	4.08E-11
72	3.60	4.42E-16	0.	3.92E-14	1.17E-11	7.63E-15	0.	0.	5.64E-24	2.24E-12	1.30E-12	2.86E-11	1.08E-11	5.47E-11
73	3.50	3.82E-16	0.	6.72E-14	4.47E-11	4.78E-15	0.	0.	5.64E-24	2.05E-12	1.41E-12	3.26E-11	1.22E-11	9.33E-11
74	3.40	3.17E-16	0.	2.68E-14	2.32E-12	5.25E-15	0.	0.	5.64E-24	1.18E-12	1.54E-12	3.69E-11	1.38E-11	5.68E-11
75	3.30	2.41E-16	0.	3.38E-14	1.59E-11	3.68E-15	0.	0.	5.64E-24	1.18E-12	1.69E-12	4.13E-11	1.53E-11	7.54E-11
76	3.20	1.91E-16	0.	1.60E-14	5.61E-11	3.89E-15	0.	0.	5.64E-24	1.19E-12	1.85E-12	4.57E-11	1.68E-11	1.16E-10
77	3.10	1.68E-16	0.	1.33E-14	3.64E-12	3.16E-15	0.	0.	5.64E-24	1.19E-12	2.04E-12	5.02E-11	1.84E-11	7.53E-11
78	3.00	1.37E-16	0.	6.97E-15	1.62E-11	2.70E-15	0.	0.	5.64E-24	1.19E-12	2.25E-12	5.47E-11	2.00E-11	9.43E-11
79	2.90	1.04E-16	0.	4.18E-15	1.21E-11	1.78E-15	0.	0.	5.64E-24	1.19E-12	2.50E-12	5.92E-11	2.16E-11	9.65E-11
80	2.80	1.01E-16	0.	1.87E-15	3.25E-12	9.98E-16	0.	0.	5.64E-24	1.19E-12	2.77E-12	6.40E-11	2.27E-11	9.39E-11
81	2.70	5.60E-17	0.	8.54E-16	7.96E-13	4.46E-16	0.	0.	5.64E-24	1.19E-12	3.09E-12	6.90E-11	2.27E-12	8.75E-11
82	2.60	2.19E-17	0.	4.37E-16	7.64E-13	1.66E-16	0.	0.	5.64E-24	1.19E-12	3.47E-12	2.82E-11	6.78E-12	4.03E-11
83	2.50	1.42E-18	0.	8.06E-17	4.87E-13	3.49E-17	0.	0.	5.64E-24	1.19E-12	3.90E-12	3.37E-11	7.79E-12	4.78E-11
84	2.40	0.	4.02E-15	0.	6.36E-13	3.40E-18	0.	0.	5.64E-24	1.19E-12	4.41E-12	4.21E-11	9.60E-12	5.80E-11
85	2.30	0.	2.13E-14	0.	0.	0.	0.	0.	5.64E-24	1.19E-12	5.02E-12	5.11E-11	1.15E-11	6.88E-11
86	2.20	0.	4.16E-14	0.	0.	0.	0.	0.	5.64E-24	1.18E-12	5.74E-12	6.03E-11	1.39E-11	8.11E-11
87	2.10	0.	6.74E-14	0.	0.	0.	0.	0.	5.64E-24	1.18E-12	6.61E-12	7.02E-11	1.62E-11	9.43E-11
88	2.00	0.	1.01E-13	0.	0.	0.	0.	0.	5.64E-24	1.14E-12	7.66E-12	8.01E-11	1.86E-11	1.08E-10
89	1.90	0.	2.34E-13	0.	0.	0.	0.	0.	5.64E-24	1.09E-12	8.95E-12	9.03E-11	2.10E-11	1.22E-10
90	1.80	0.	1.93E-13	0.	0.	0.	0.	0.	5.64E-24	1.05E-12	1.05E-11	1.05E-10	2.47E-11	1.42E-10
91	1.70	0.	2.33E-13	0.	0.	0.	0.	0.	5.64E-24	9.86E-13	1.25E-11	1.24E-10	2.68E-11	1.64E-10
92	1.60	0.	1.66E-13	0.	0.	0.	0.	0.	5.64E-24	8.35E-13	1.50E-11	1.26E-10	3.13E-11	1.74E-10
93	1.50	0.	2.00E-13	0.	0.	0.	0.	0.	5.64E-24	3.79E-13	1.83E-11	8.18E-11	2.01E-11	1.21E-10
94	1.40	0.	2.20E-13	0.	0.	0.	0.	0.	5.64E-24	0.	2.25E-11	1.06E-10	2.65E-11	1.55E-10
95	1.30	0.	1.56E-13	0.	0.	0.	0.	0.	5.64E-24	0.	2.82E-11	1.53E-10	3.70E-11	2.19E-10
96	1.20	0.	1.66E-13	0.	0.	0.	0.	0.	5.64E-24	0.	3.40E-11	2.04E-10	4.24E-11	2.63E-10
97	1.10	0.	1.27E-13	0.	0.	0.	0.	1.35E-18	5.64E-24	0.	4.69E-11	2.42E-10	5.38E-11	3.42E-10
98	1.00	0.	1.21E-13	0.	0.	0.	0.	9.96E-18	5.64E-24	0.	6.26E-11	2.92E-10	6.51E-11	4.19E-10
99	0.90	0.	9.52E-14	0.	0.	0.	0.	1.31E-17	5.64E-24	0.	8.63E-11	3.37E-10	7.99E-11	4.99E-10
100	0.80	0.	4.37E-14	0.	0.	0.	0.	1.87E-16	5.64E-24	0.	1.23E-10	2.86E-10	9.97E-11	4.70E-10
101	0.70	0.	1.19E-14	0.	0.	0.	0.	1.20E-16	5.64E-24	0.	1.85E-10	3.27E-10	6.86E-11	5.81E-10
102	0.60	0.	4.81E-16	0.	0.	0.	0.	5.03E-16	5.64E-24	0.	2.98E-10	3.68E-10	7.75E-11	7.44E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.13E 01	0.	0.	0.	3.14E-01	2.31E-05	9.12E 00	2.18E-03	4.87E 01
2	10.60	0.	0.	2.65E 01	0.	0.	0.	3.15E-01	2.38E-05	2.32E-03	2.18E-03	2.69E 01
3	10.50	0.	0.	2.57E 01	0.	0.	0.	3.15E-01	2.45E-05	2.33E-03	2.18E-03	2.60E 01
4	10.40	0.	0.	2.28E 01	0.	0.	0.	3.16E-01	2.52E-05	2.34E-03	2.18E-03	2.32E 01
5	10.30	0.	0.	1.85E 01	0.	0.	0.	3.16E-01	2.60E-05	2.35E-03	2.18E-03	1.88E 01
6	10.20	0.	0.	1.83E 01	0.	0.	0.	3.16E-01	2.67E-05	2.35E-03	2.18E-03	1.86E 01
7	10.10	0.	0.	1.64E 01	0.	0.	0.	3.17E-01	2.75E-05	2.36E-03	2.18E-03	1.67E 01
8	10.00	0.	0.	1.31E 01	0.	0.	0.	3.17E-01	2.84E-05	2.36E-03	2.18E-03	1.34E 01
9	9.90	0.	0.	1.32E 01	0.	0.	0.	3.18E-01	2.93E-05	2.37E-03	2.18E-03	1.35E 01
10	9.80	0.	0.	1.15E 01	0.	0.	0.	3.18E-01	3.02E-05	2.38E-03	2.18E-03	1.19E 01
11	9.70	0.	0.	9.12E 00	0.	0.	0.	3.19E-01	3.11E-05	2.38E-03	2.18E-03	9.44E 00
12	9.60	0.	0.	8.76E 00	0.	0.	0.	3.29E-01	3.21E-05	2.39E-03	2.18E-03	1.01E 02
13	9.50	0.	1.18E 00	7.56E 00	0.	0.	0.	3.20E-01	3.31E-05	2.40E-03	2.18E-03	9.08E 00
14	9.40	0.	1.45E 00	6.69E 00	0.	0.	0.	3.21E-01	3.42E-05	2.40E-03	2.18E-03	8.47E 00
15	9.30	0.	1.72E 00	6.72E 00	0.	0.	0.	3.22E-01	3.53E-05	2.41E-03	2.18E-03	8.76E 00
16	9.20	0.	1.99E 00	4.92E 00	0.	0.	0.	3.24E-01	3.65E-05	2.42E-03	2.17E-03	7.24E 00
17	9.10	0.	2.36E 00	5.04E 00	0.	0.	0.	3.25E-01	3.77E-05	6.41E-04	2.17E-03	7.75E 00
18	9.00	0.	2.80E 00	4.22E 00	0.	0.	0.	3.26E-01	3.90E-05	6.39E-04	2.17E-03	7.34E 00
19	8.90	0.	3.21E 00	3.62E 00	0.	0.	0.	3.27E-01	4.03E-05	6.37E-04	2.17E-03	7.16E 00
20	8.80	0.	3.38E 00	3.44E 00	0.	0.	0.	3.28E-01	4.17E-05	6.35E-04	2.17E-03	7.16E 00
21	8.70	0.	3.21E 00	2.79E 00	0.	0.	0.	3.29E-01	4.32E-05	6.34E-04	2.17E-03	6.24E 00
22	8.60	0.	3.09E 00	2.72E 00	0.	0.	0.	3.31E-01	4.47E-05	6.32E-04	2.17E-03	6.15E 00
23	8.50	0.	3.01E 00	2.16E 00	0.	0.	0.	3.32E-01	4.63E-05	6.31E-04	2.17E-03	5.50E 00
24	8.40	0.	2.96E 00	2.07E 00	0.	0.	0.	3.33E-01	4.80E-05	6.29E-04	2.17E-03	5.37E 00
25	8.30	0.	2.92E 00	1.60E 00	0.	0.	0.	3.35E-01	4.97E-05	6.28E-04	2.18E-03	4.85E 00
26	8.20	0.	2.84E 00	1.56E 00	0.	0.	0.	3.37E-01	5.16E-05	6.26E-04	2.20E-03	4.74E 00
27	8.10	0.	2.75E 00	1.23E 00	0.	0.	0.	3.39E-01	5.35E-05	6.23E-04	2.22E-03	4.32E 00
28	8.00	0.	2.66E 00	1.19E 00	0.	0.	0.	3.41E-01	5.56E-05	6.22E-04	2.24E-03	4.19E 00
29	7.90	0.	2.57E 00	9.30E-01	0.	0.	0.	3.42E-01	5.77E-05	6.20E-04	2.27E-03	3.85E 00
30	7.80	0.	2.47E 00	9.31E-01	0.	0.	0.	3.44E-01	6.00E-05	6.19E-04	2.29E-03	3.75E 00
31	7.70	0.	2.36E 00	7.52E-01	0.	0.	0.	3.45E-01	6.24E-05	6.18E-04	2.31E-03	3.47E 00
32	7.60	0.	2.25E 00	6.74E-01	0.	1.87E-04	0.	3.47E-01	6.49E-05	6.17E-04	2.33E-03	3.27E 00
33	7.50	0.	2.14E 00	5.78E-01	0.	1.08E-03	0.	3.49E-01	6.75E-05	6.15E-04	2.35E-03	3.07E 00
34	7.40	0.	2.03E 00	4.88E-01	0.	4.90E-03	0.	3.51E-01	7.03E-05	6.14E-04	2.37E-03	2.88E 00
35	7.30	0.	1.92E 00	4.32E-01	0.	2.64E-02	0.	3.53E-01	7.32E-05	6.13E-04	2.39E-03	2.74E 00
36	7.20	0.	1.80E 00	3.63E-01	0.	7.24E-02	0.	3.55E-01	7.63E-05	6.12E-04	2.42E-03	2.60E 00
37	7.10	0.	1.68E 00	3.27E-01	0.	1.77E-01	0.	3.58E-01	7.96E-05	6.11E-04	2.44E-03	2.55E 00
38	7.00	1.84E-03	0.	2.79E-01	0.	5.29E-01	0.	3.61E-01	8.31E-05	6.10E-04	2.46E-03	1.17E 00
39	6.90	3.49E-03	0.	2.39E-01	0.	4.93E-01	0.	3.64E-01	8.68E-05	6.08E-04	2.48E-03	1.10E 00
40	6.80	2.87E-03	0.	2.14E-01	0.	1.08E 00	0.	3.67E-01	9.07E-05	6.07E-04	2.50E-03	1.67E 00
41	6.70	1.99E-03	0.	1.74E-01	0.	1.41E 00	0.	3.70E-01	9.48E-05	6.06E-04	2.52E-03	1.98E 00
42	6.60	1.16E-03	0.	1.44E-01	0.	7.79E-01	0.	3.72E-01	9.92E-05	6.07E-04	2.55E-03	1.30E 00
43	6.50	8.37E-04	0.	1.09E-01	0.	1.47E 00	0.	3.75E-01	1.04E-04	6.08E-04	2.57E-03	1.95E 00
44	6.40	8.83E-04	0.	6.34E-02	10.00E-03	1.82E 00	0.	3.78E-01	1.09E-04	6.09E-04	2.60E-03	2.27E 00
45	6.30	1.82E-03	0.	3.42E-02	4.31E-02	8.59E-01	0.	3.81E-01	1.14E-04	6.11E-04	2.63E-03	1.32E 00
46	6.20	5.33E-03	0.	1.66E-02	5.65E-02	1.35E 00	0.	3.84E-01	1.20E-04	6.12E-04	2.66E-03	1.82E 00
47	6.10	2.09E-02	0.	6.92E-03	1.53E-01	2.18E 00	0.	3.87E-01	1.26E-04	6.16E-04	2.72E-03	2.75E 00
48	6.00	5.37E-02	0.	1.62E-03	1.27E-01	7.66E-01	0.	3.90E-01	1.32E-04	6.22E-04	2.77E-03	1.34E 00
49	5.90	8.51E-02	0.	1.19E-04	1.79E-01	8.33E-01	0.	3.90E-01	1.39E-04	6.27E-04	2.82E-03	1.50E 00
50	5.80	1.26E-01	0.	2.82E-06	2.38E-01	7.82E-01	0.	3.84E-01	1.46E-04	6.32E-04	2.87E-03	1.54E 00
51	5.70	1.45E-01	0.	0.	2.55E-01	8.12E-01	0.	3.42E-01	1.54E-04	6.37E-04	2.91E-03	1.58E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.78E-01	0.	0.	0.	1.88E-01	1.33E 00	0.	0.	3.36E-01	1.63E-04	6.43E-04	2.96E-03	2.03E 00
53	5.50	1.53E-01	0.	0.	0.	2.32E-01	1.29E 00	0.	0.	3.37E-01	1.72E-04	6.51E-04	3.01E-03	2.05E 00
54	5.40	1.89E-01	0.	0.	0.	1.94E-01	8.26E-01	0.	0.	3.38E-01	1.81E-04	6.60E-04	3.06E-03	1.55E 00
55	5.30	1.79E-01	0.	0.	0.	1.99E-01	1.25E 00	0.	0.	3.41E-01	1.92E-04	6.69E-04	3.12E-03	1.98E 00
56	5.20	1.25E-01	0.	0.	0.	2.06E-01	7.00E-01	0.	0.	3.43E-01	2.03E-04	6.79E-04	3.20E-03	1.38E 00
57	5.10	1.15E-01	0.	0.	0.	1.96E-01	9.64E-01	0.	0.	3.46E-01	2.15E-04	6.96E-04	3.27E-03	1.63E 00
58	5.00	8.41E-02	0.	0.	0.	1.73E-01	8.27E-01	0.	0.	3.49E-01	2.29E-04	7.15E-04	3.35E-03	1.44E 00
59	4.90	7.00E-02	0.	0.	0.	1.84E-01	8.11E-01	0.	0.	3.52E-01	2.43E-04	7.34E-04	3.42E-03	1.42E 00
60	4.80	7.02E-02	0.	0.	0.	1.93E-01	7.44E-01	0.	0.	3.55E-01	2.59E-04	7.53E-04	3.50E-03	1.36E 00
61	4.70	7.48E-02	0.	0.	0.	1.82E-01	6.18E-01	0.	0.	3.58E-01	2.76E-04	7.71E-04	3.58E-03	1.24E 00
62	4.60	8.70E-02	0.	0.	0.	1.80E-01	5.80E-01	0.	0.	3.61E-01	2.94E-04	7.94E-04	3.67E-03	1.21E 00
63	4.50	8.58E-02	0.	8.01E-03	0.	1.54E-01	4.04E-01	0.	0.	3.64E-01	3.14E-04	8.22E-04	3.76E-03	1.02E 00
64	4.40	8.54E-02	0.	3.01E-02	0.	1.42E-01	3.63E-01	0.	0.	3.67E-01	3.36E-04	8.49E-04	3.85E-03	9.40E-01
65	4.30	7.53E-02	0.	6.95E-02	0.	1.33E-01	1.68E-01	0.	0.	3.70E-01	3.60E-04	8.77E-04	3.94E-03	8.21E-01
66	4.20	6.72E-02	0.	2.97E-01	0.	1.37E-01	1.36E-01	0.	0.	3.72E-01	3.87E-04	9.08E-04	4.03E-03	1.01E 00
67	4.10	5.99E-02	0.	8.61E-02	0.	1.25E-01	3.46E-02	0.	0.	3.74E-01	4.16E-04	9.34E-04	4.11E-03	6.85E-01
68	4.00	5.22E-02	0.	4.14E-01	0.	1.15E-01	2.64E-02	0.	0.	3.75E-01	4.48E-04	9.63E-04	5.47E-04	9.85E-01
69	3.90	4.13E-02	0.	1.84E-01	1.03E-03	9.66E-02	1.17E-02	0.	0.	3.74E-01	4.84E-04	7.56E-04	5.83E-04	7.10E-01
70	3.80	4.39E-02	0.	2.51E-01	7.99E-03	1.02E-01	0.	0.	0.	3.72E-01	5.23E-04	7.74E-04	5.80E-04	7.78E-01
71	3.70	3.59E-02	0.	3.42E-01	1.71E-03	7.66E-02	0.	0.	0.	3.67E-01	5.67E-04	5.96E-04	6.55E-04	8.24E-01
72	3.60	3.94E-02	0.	1.66E-01	1.11E-02	8.37E-02	0.	0.	0.	3.43E-01	6.16E-04	6.44E-04	7.42E-04	6.37E-01
73	3.50	2.67E-02	0.	2.68E-01	3.71E-02	5.85E-02	0.	0.	0.	3.14E-01	6.70E-04	6.10E-04	8.34E-04	7.06E-01
74	3.40	2.26E-02	0.	1.26E-01	2.39E-03	6.46E-02	0.	0.	0.	1.81E-01	7.32E-04	6.89E-04	9.35E-04	3.99E-01
75	3.30	1.73E-02	0.	1.40E-01	1.45E-02	4.66E-02	0.	0.	0.	1.82E-01	8.01E-04	7.69E-04	1.04E-03	4.03E-01
76	3.20	1.40E-02	0.	7.59E-02	4.02E-02	4.72E-02	0.	0.	0.	1.82E-01	8.78E-04	8.50E-04	1.14E-03	3.62E-01
77	3.10	1.28E-02	0.	5.87E-02	3.74E-03	4.13E-02	0.	0.	0.	1.82E-01	9.67E-04	9.32E-04	1.24E-03	3.02E-01
78	3.00	1.04E-02	0.	3.21E-02	1.46E-02	3.80E-02	0.	0.	0.	1.83E-01	1.07E-03	1.01E-03	1.35E-03	2.79E-01
79	2.90	8.08E-03	0.	1.90E-02	1.01E-02	2.42E-02	0.	0.	0.	1.83E-01	1.18E-03	1.10E-03	1.49E-03	2.48E-01
80	2.80	7.95E-03	0.	8.95E-03	3.29E-03	1.43E-02	0.	0.	0.	1.83E-01	1.31E-03	1.19E-03	1.56E-03	2.22E-01
81	2.70	4.56E-03	0.	4.94E-03	7.15E-03	6.68E-03	0.	0.	0.	1.83E-01	1.47E-03	1.28E-03	1.68E-03	2.10E-01
82	2.60	1.85E-03	0.	2.06E-03	6.72E-04	2.56E-03	0.	0.	0.	1.83E-01	1.64E-03	1.38E-03	1.81E-03	1.95E-01
83	2.50	1.22E-04	0.	2.78E-04	4.81E-04	5.57E-04	0.	0.	0.	1.83E-01	1.85E-03	1.55E-03	6.19E-04	1.89E-01
84	2.40	0.	1.67E-03	0.	5.71E-04	5.53E-05	0.	0.	0.	1.83E-01	2.09E-03	1.77E-03	7.59E-04	2.05E-01
85	2.30	0.	7.90E-02	0.	0.	0.	0.	0.	0.	1.82E-01	2.38E-03	1.07E-03	9.10E-04	2.65E-01
86	2.20	0.	1.63E-01	0.	0.	0.	0.	0.	0.	1.81E-01	2.72E-03	1.27E-03	1.10E-03	3.98E-01
87	2.10	0.	2.41E-01	0.	0.	0.	0.	0.	0.	1.80E-01	3.14E-03	1.48E-03	1.28E-03	4.27E-01
88	2.00	0.	3.84E-01	0.	0.	0.	0.	0.	0.	1.75E-01	3.63E-03	1.69E-03	1.47E-03	5.69E-01
89	1.90	0.	7.88E-01	0.	0.	0.	0.	0.	0.	1.68E-01	4.24E-03	1.90E-03	1.66E-03	9.64E-01
90	1.80	0.	6.43E-01	0.	0.	0.	0.	0.	0.	1.61E-01	5.00E-03	2.23E-03	1.97E-03	8.13E-01
91	1.70	0.	7.79E-01	0.	0.	0.	0.	0.	0.	1.91E-01	5.94E-03	2.64E-03	2.36E-03	9.42E-01
92	1.60	0.	5.41E-01	0.	0.	0.	0.	0.	0.	1.28E-01	7.14E-03	3.04E-03	2.74E-03	6.82E-01
93	1.50	0.	6.69E-01	0.	0.	0.	0.	0.	0.	5.82E-02	9.68E-03	3.76E-03	3.27E-03	7.43E-01
94	1.40	0.	7.17E-01	0.	0.	0.	0.	0.	0.	0.	1.07E-02	4.52E-03	3.74E-03	7.35E-01
95	1.30	0.	5.27E-01	0.	0.	0.	0.	0.	0.	0.	1.34E-02	5.43E-03	4.79E-03	5.48E-01
96	1.20	0.	5.57E-01	0.	0.	0.	0.	0.	0.	0.	1.71E-02	4.80E-03	4.28E-03	5.63E-01
97	1.10	0.	4.33E-01	0.	0.	0.	0.	1.25E-05	0.	0.	2.23E-02	6.04E-03	5.34E-03	4.66E-01
98	1.00	0.	4.04E-01	0.	0.	0.	0.	1.02E-04	0.	0.	2.98E-02	7.26E-03	5.81E-03	4.47E-01
99	0.90	0.	3.24E-01	0.	0.	0.	0.	1.31E-04	0.	0.	4.10E-02	8.16E-03	6.83E-03	3.80E-01
100	0.80	0.	1.58E-01	0.	0.	0.	0.	2.10E-03	0.	0.	5.87E-02	9.36E-03	7.85E-03	2.28E-01
101	0.70	0.	4.00E-02	0.	0.	0.	0.	1.39E-03	0.	0.	8.87E-02	1.04E-02	8.77E-03	1.48E-01
102	0.60	0.	2.19E-03	0.	0.	0.	0.	5.70E-03	0.	0.	1.42E-01	1.16E-02	9.78E-03	1.71E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 900. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.04E 00	0.	0.	0.	7.89E-03	1.68E-06	2.33E 00	2.45E-04	4.37E 00
2	10.60	0.	0.	1.73E 00	0.	0.	0.	7.90E-03	1.89E-06	9.92E-04	2.45E-04	1.74E 00
3	10.50	0.	0.	1.67E 00	0.	0.	0.	7.91E-03	1.12E-06	5.95E-04	2.45E-04	1.68E 00
4	10.40	0.	0.	1.49E 00	0.	0.	0.	7.92E-03	1.15E-06	5.97E-04	2.45E-04	1.50E 00
5	10.30	0.	0.	1.21E 00	0.	0.	0.	7.93E-03	1.19E-06	5.99E-04	2.45E-04	1.22E 00
6	10.20	0.	0.	1.19E 00	0.	0.	0.	7.94E-03	1.22E-06	6.00E-04	2.45E-04	1.20E 00
7	10.10	0.	0.	1.07E 00	0.	0.	0.	7.95E-03	1.26E-06	6.02E-04	2.45E-04	1.08E 00
8	10.00	0.	0.	8.52E-01	0.	0.	0.	7.96E-03	1.30E-06	6.03E-04	2.45E-04	8.61E-01
9	9.90	0.	0.	8.38E-01	0.	0.	0.	7.98E-03	1.34E-06	6.05E-04	2.45E-04	8.47E-01
10	9.80	0.	0.	7.52E-01	0.	0.	0.	7.99E-03	1.38E-06	6.06E-04	2.45E-04	7.61E-01
11	9.70	0.	0.	5.94E-01	0.	0.	0.	8.01E-03	1.42E-06	6.08E-04	2.45E-04	6.03E-01
12	9.60	0.	0.	5.36E-01	0.	0.	0.	8.02E-03	1.47E-06	6.09E-04	2.45E-04	5.45E-01
13	9.50	0.	1.49E-02	4.94E-01	0.	0.	0.	8.04E-03	1.52E-06	6.11E-04	2.45E-04	5.18E-01
14	9.40	0.	1.83E-02	4.36E-01	0.	0.	0.	8.07E-03	1.57E-06	6.13E-04	2.45E-04	4.63E-01
15	9.30	0.	2.17E-02	4.38E-01	0.	0.	0.	8.10E-03	1.62E-06	6.14E-04	2.45E-04	4.68E-01
16	9.20	0.	2.52E-02	3.20E-01	0.	0.	0.	8.13E-03	1.67E-06	6.16E-04	2.45E-04	3.55E-01
17	9.10	0.	3.01E-02	3.28E-01	0.	0.	0.	8.15E-03	1.73E-06	1.63E-04	2.45E-04	3.67E-01
18	9.00	0.	3.53E-02	2.75E-01	0.	0.	0.	8.18E-03	1.78E-06	1.63E-04	2.45E-04	3.19E-01
19	8.90	0.	4.06E-02	2.36E-01	0.	0.	0.	8.21E-03	1.85E-06	1.63E-04	2.45E-04	2.85E-01
20	8.80	0.	4.20E-02	2.24E-01	0.	0.	0.	8.24E-03	1.91E-06	1.62E-04	2.45E-04	2.75E-01
21	8.70	0.	4.05E-02	1.76E-01	0.	0.	0.	8.27E-03	1.98E-06	1.62E-04	2.45E-04	2.25E-01
22	8.60	0.	3.91E-02	1.77E-01	0.	0.	0.	8.30E-03	2.05E-06	1.61E-04	2.45E-04	2.25E-01
23	8.50	0.	3.80E-02	1.40E-01	0.	0.	0.	8.33E-03	2.12E-06	1.61E-04	2.44E-04	1.87E-01
24	8.40	0.	3.74E-02	1.33E-01	0.	0.	0.	8.37E-03	2.20E-06	1.60E-04	2.44E-04	1.81E-01
25	8.30	0.	3.68E-02	1.04E-01	0.	0.	0.	8.42E-03	2.28E-06	1.60E-04	2.45E-04	1.50E-01
26	8.20	0.	3.59E-02	1.02E-01	0.	0.	0.	8.46E-03	2.36E-06	1.60E-04	2.48E-04	1.47E-01
27	8.10	0.	3.48E-02	8.01E-02	0.	0.	0.	8.51E-03	2.45E-06	1.59E-04	2.50E-04	1.24E-01
28	8.00	0.	3.36E-02	7.75E-02	0.	0.	0.	8.55E-03	2.54E-06	1.59E-04	2.52E-04	1.20E-01
29	7.90	0.	3.24E-02	6.12E-02	0.	0.	0.	8.59E-03	2.64E-06	1.58E-04	2.55E-04	1.03E-01
30	7.80	0.	3.12E-02	6.07E-02	0.	0.	0.	8.64E-03	2.75E-06	1.58E-04	2.57E-04	1.01E-01
31	7.70	0.	2.99E-02	4.90E-02	0.	0.	0.	8.68E-03	2.85E-06	1.58E-04	2.60E-04	8.80E-02
32	7.60	0.	2.84E-02	4.39E-02	0.	5.38E-06	0.	8.72E-03	2.97E-06	1.57E-04	2.62E-04	8.15E-02
33	7.50	0.	2.70E-02	3.76E-02	0.	3.09E-05	0.	8.77E-03	3.09E-06	1.57E-04	2.65E-04	7.38E-02
34	7.40	0.	2.56E-02	3.18E-02	0.	1.41E-04	0.	8.82E-03	3.22E-06	1.57E-04	2.67E-04	6.68E-02
35	7.30	0.	2.43E-02	2.81E-02	0.	7.57E-04	0.	8.87E-03	3.35E-06	1.56E-04	2.69E-04	6.25E-02
36	7.20	0.	2.28E-02	2.36E-02	0.	2.08E-03	0.	8.91E-03	3.49E-06	1.56E-04	2.72E-04	5.78E-02
37	7.10	0.	2.12E-02	2.13E-02	0.	5.08E-03	0.	8.99E-03	3.64E-06	1.56E-04	2.74E-04	5.78E-02
38	7.00	2.36E-05	0.	1.82E-02	0.	1.52E-02	0.	9.06E-03	3.80E-06	1.56E-04	2.77E-04	4.29E-02
39	6.90	4.41E-05	0.	1.56E-02	0.	1.41E-02	0.	9.13E-03	3.97E-06	1.55E-04	2.79E-04	3.94E-02
40	6.80	3.64E-05	0.	1.39E-02	0.	3.10E-02	0.	9.21E-03	4.15E-06	1.55E-04	2.81E-04	5.46E-02
41	6.70	2.52E-05	0.	1.13E-02	0.	4.05E-02	0.	9.28E-03	4.34E-06	1.55E-04	2.84E-04	6.16E-02
42	6.60	1.47E-05	0.	9.48E-03	0.	2.24E-02	0.	9.35E-03	4.54E-06	1.55E-04	2.87E-04	4.16E-02
43	6.50	8.06E-06	0.	6.81E-03	0.	4.22E-02	0.	9.43E-03	4.76E-06	1.55E-04	2.89E-04	5.89E-02
44	6.40	1.12E-05	0.	4.13E-03	2.89E-04	5.21E-02	0.	9.50E-03	4.98E-06	1.55E-04	2.92E-04	6.65E-02
45	6.30	2.31E-05	0.	2.23E-03	1.24E-03	2.47E-02	0.	9.57E-03	5.22E-06	1.56E-04	2.96E-04	3.82E-02
46	6.20	6.74E-05	0.	1.08E-03	1.62E-03	3.87E-02	0.	9.65E-03	5.48E-06	1.56E-04	3.01E-04	5.17E-02
47	6.10	2.64E-04	0.	4.51E-04	4.39E-03	6.27E-02	0.	9.72E-03	5.76E-06	1.57E-04	3.06E-04	7.80E-02
48	6.00	6.79E-04	0.	1.06E-04	3.65E-03	2.20E-02	0.	9.79E-03	6.05E-06	1.59E-04	3.12E-04	3.67E-02
49	5.90	1.08E-03	0.	7.51E-06	5.13E-03	2.39E-02	0.	9.79E-03	6.36E-06	1.60E-04	3.17E-04	4.04E-02
50	5.80	1.60E-03	0.	1.94E-07	6.84E-03	2.25E-02	0.	9.65E-03	6.70E-06	1.61E-04	3.22E-04	4.10E-02
51	5.70	1.84E-03	0.	0.	7.31E-03	2.33E-02	0.	9.06E-03	7.06E-06	1.63E-04	3.28E-04	4.20E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
32	5.60	2.26E-03	0.	0.	0.	5.40E-03	3.81E-02	0.	0.	8.43E-03	7.44E-06	1.64E-04	3.33E-04	5.47E-02
53	5.50	2.31E-03	0.	0.	0.	6.65E-03	3.71E-02	0.	0.	8.47E-03	7.86E-06	1.66E-04	3.39E-04	5.51E-02
54	5.40	2.39E-03	0.	0.	0.	5.96E-03	2.37E-02	0.	0.	8.51E-03	8.30E-06	1.68E-04	3.45E-04	4.87E-02
55	5.30	2.27E-03	0.	0.	0.	5.73E-03	3.99E-02	0.	0.	8.57E-03	8.78E-06	1.71E-04	3.51E-04	5.30E-02
56	5.20	1.58E-03	0.	0.	0.	5.90E-03	2.01E-02	0.	0.	8.62E-03	9.30E-06	1.73E-04	3.60E-04	3.68E-02
57	5.10	1.46E-03	0.	0.	0.	5.70E-03	2.77E-02	0.	0.	8.70E-03	9.86E-06	1.78E-04	3.68E-04	4.41E-02
58	5.00	1.06E-03	0.	0.	0.	4.96E-03	2.38E-02	0.	0.	8.77E-03	1.05E-05	1.82E-04	3.76E-04	3.91E-02
59	4.90	8.86E-04	0.	0.	0.	5.29E-03	2.33E-02	0.	0.	8.84E-03	1.11E-05	1.87E-04	3.85E-04	3.89E-02
60	4.80	8.89E-04	0.	0.	0.	5.53E-03	2.14E-02	0.	0.	8.91E-03	1.18E-05	1.92E-04	3.94E-04	3.73E-02
61	4.70	9.47E-04	0.	0.	0.	5.22E-03	1.77E-02	0.	0.	8.99E-03	1.26E-05	1.97E-04	4.03E-04	3.35E-02
62	4.60	1.10E-03	0.	0.	0.	5.17E-03	1.67E-02	0.	0.	9.06E-03	1.35E-05	2.03E-04	4.13E-04	3.26E-02
63	4.50	1.09E-03	0.	5.22E-04	0.	4.41E-03	1.17E-02	0.	0.	9.13E-03	1.44E-05	2.10E-04	4.23E-04	2.75E-02
64	4.40	1.08E-03	0.	1.96E-03	0.	4.28E-03	8.71E-03	0.	0.	9.21E-03	1.54E-05	2.17E-04	4.33E-04	2.50E-02
65	4.30	9.56E-04	0.	4.53E-03	0.	3.82E-03	4.82E-03	0.	0.	9.28E-03	1.65E-05	2.24E-04	4.43E-04	2.41E-02
66	4.20	8.50E-04	0.	1.93E-02	0.	3.93E-03	3.91E-03	0.	0.	9.35E-03	1.77E-05	2.31E-04	4.53E-04	3.81E-02
67	4.10	7.57E-04	0.	5.61E-03	0.	3.58E-03	9.94E-04	0.	0.	9.39E-03	1.90E-05	2.38E-04	4.62E-04	2.11E-02
68	4.00	6.60E-04	0.	2.78E-02	0.	3.28E-03	7.58E-04	0.	0.	9.43E-03	2.05E-05	2.46E-04	6.15E-05	4.14E-02
69	3.90	5.22E-04	0.	1.20E-02	3.01E-04	2.77E-03	3.35E-04	0.	0.	9.39E-03	2.21E-05	1.93E-04	6.33E-05	2.56E-02
70	3.80	5.55E-04	0.	1.63E-02	2.33E-03	2.92E-03	0.	0.	0.	9.35E-03	2.39E-05	1.98E-04	6.52E-05	3.18E-02
71	3.70	4.49E-04	0.	2.23E-02	4.98E-04	2.20E-03	0.	0.	0.	9.21E-03	2.59E-05	1.52E-04	7.37E-05	3.49E-02
72	3.60	3.84E-04	0.	1.08E-02	3.23E-03	2.40E-03	0.	0.	0.	8.62E-03	2.82E-05	1.64E-04	8.35E-05	2.57E-02
73	3.50	3.37E-04	0.	1.74E-02	1.08E-02	1.68E-03	0.	0.	0.	7.89E-03	3.07E-05	1.56E-04	9.39E-05	3.85E-02
74	3.40	2.86E-04	0.	8.19E-03	6.98E-04	1.86E-03	0.	0.	0.	4.55E-03	3.35E-05	1.76E-04	1.05E-04	1.59E-02
75	3.30	2.19E-04	0.	9.12E-03	4.23E-03	1.34E-03	0.	0.	0.	4.56E-03	3.66E-05	1.96E-04	1.16E-04	1.98E-02
76	3.20	1.77E-04	0.	4.95E-03	1.17E-02	1.33E-03	0.	0.	0.	4.57E-03	4.02E-05	2.17E-04	1.28E-04	2.32E-02
77	3.10	1.59E-04	0.	3.83E-03	1.09E-03	1.19E-03	0.	0.	0.	4.58E-03	4.42E-05	2.38E-04	1.40E-04	1.13E-02
78	3.00	1.32E-04	0.	2.09E-03	4.26E-03	1.03E-03	0.	0.	0.	4.59E-03	4.88E-05	2.59E-04	1.52E-04	1.26E-02
79	2.90	1.02E-04	0.	1.24E-03	2.95E-03	6.95E-04	0.	0.	0.	4.60E-03	5.41E-05	2.80E-04	1.63E-04	1.01E-02
80	2.80	1.01E-04	0.	5.75E-04	9.40E-04	4.11E-04	0.	0.	0.	4.60E-03	6.01E-05	3.03E-04	1.76E-04	7.19E-03
81	2.70	5.77E-05	0.	2.63E-04	2.08E-03	1.72E-04	0.	0.	0.	4.60E-03	6.71E-05	3.27E-04	1.89E-04	7.78E-03
82	2.60	2.35E-05	0.	1.33E-04	1.96E-04	7.34E-05	0.	0.	0.	4.60E-03	7.52E-05	3.53E-04	2.03E-04	5.66E-03
83	2.50	1.55E-06	0.	1.76E-05	1.40E-04	1.60E-05	0.	0.	0.	4.60E-03	8.47E-05	3.95E-04	6.97E-05	5.33E-03
84	2.40	0.	1.09E-03	0.	1.60E-04	1.59E-06	0.	0.	0.	4.60E-03	9.58E-05	4.53E-04	8.54E-05	6.49E-03
85	2.30	0.	5.15E-03	0.	0.	0.	0.	0.	0.	4.57E-03	1.09E-04	2.74E-04	1.02E-04	1.02E-02
86	2.20	0.	1.04E-02	0.	0.	0.	0.	0.	0.	4.55E-03	1.23E-04	3.24E-04	1.23E-04	1.56E-02
87	2.10	0.	1.57E-02	0.	0.	0.	0.	0.	0.	4.53E-03	1.44E-04	3.77E-04	1.44E-04	2.09E-02
88	2.00	0.	2.50E-02	0.	0.	0.	0.	0.	0.	4.38E-03	1.68E-04	4.31E-04	1.66E-04	3.02E-02
89	1.90	0.	5.13E-02	0.	0.	0.	0.	0.	0.	4.21E-03	1.94E-04	4.86E-04	1.87E-04	5.64E-02
90	1.80	0.	4.19E-02	0.	0.	0.	0.	0.	0.	4.03E-03	2.29E-04	5.79E-04	2.22E-04	4.69E-02
91	1.70	0.	5.08E-02	0.	0.	0.	0.	0.	0.	3.80E-03	2.72E-04	6.73E-04	2.65E-04	5.58E-02
92	1.60	0.	3.57E-02	0.	0.	0.	0.	0.	0.	3.21E-03	3.27E-04	7.76E-04	3.68E-04	3.98E-02
93	1.50	0.	4.36E-02	0.	0.	0.	0.	0.	0.	1.44E-03	3.97E-04	9.58E-04	3.68E-04	4.68E-02
94	1.40	0.	4.67E-02	0.	0.	0.	0.	0.	0.	0.	4.90E-04	1.15E-03	4.20E-04	4.87E-02
95	1.30	0.	3.40E-02	0.	0.	0.	0.	0.	0.	0.	6.14E-04	1.39E-03	5.38E-04	3.68E-02
96	1.20	0.	3.50E-02	0.	0.	0.	0.	0.	0.	0.	7.83E-04	1.25E-03	4.82E-04	3.75E-02
97	1.10	0.	2.67E-02	0.	0.	0.	0.	3.58E-07	0.	0.	1.02E-03	1.54E-03	4.01E-04	3.13E-02
98	1.00	0.	2.63E-02	0.	0.	0.	0.	2.04E-06	0.	0.	1.36E-03	1.85E-03	6.53E-04	3.02E-02
99	0.90	0.	2.11E-02	0.	0.	0.	0.	5.79E-06	0.	0.	1.88E-03	2.68E-03	7.68E-04	2.58E-02
100	0.80	0.	9.79E-03	0.	0.	0.	0.	6.04E-05	0.	0.	2.69E-03	2.39E-03	8.83E-04	1.58E-02
101	0.70	0.	2.61E-03	0.	0.	0.	0.	4.02E-05	0.	0.	4.06E-03	2.65E-03	9.85E-04	1.03E-02
102	0.60	0.	1.43E-04	0.	0.	0.	0.	1.64E-04	0.	0.	6.51E-03	2.95E-03	1.10E-03	1.69E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.17E-02	0.	0.	0.	2.21E-04	7.70E-08	1.02E-04	2.54E-05	6.20E-02
2	10.60	0.	0.	5.23E-02	0.	0.	0.	2.21E-04	7.92E-08	1.03E-04	2.54E-05	5.26E-02
3	10.50	0.	0.	5.06E-02	0.	0.	0.	2.22E-04	8.15E-08	1.03E-04	2.54E-05	5.09E-02
4	10.40	0.	0.	4.50E-02	0.	0.	0.	2.22E-04	8.39E-08	1.04E-04	2.53E-05	4.53E-02
5	10.30	0.	0.	3.65E-02	0.	0.	0.	2.22E-04	8.64E-08	1.04E-04	2.53E-05	3.68E-02
6	10.20	0.	0.	3.59E-02	0.	0.	0.	2.22E-04	8.89E-08	1.04E-04	2.53E-05	3.62E-02
7	10.10	0.	0.	3.23E-02	0.	0.	0.	2.23E-04	9.16E-08	1.05E-04	2.53E-05	3.27E-02
8	10.00	0.	0.	2.58E-02	0.	0.	0.	2.23E-04	9.44E-08	1.05E-04	2.53E-05	2.61E-02
9	9.90	0.	0.	2.60E-02	0.	0.	0.	2.23E-04	9.73E-08	1.05E-04	2.53E-05	2.63E-02
10	9.80	0.	0.	2.27E-02	0.	0.	0.	2.24E-04	10.00E-08	1.05E-04	2.53E-05	2.31E-02
11	9.70	0.	0.	1.80E-02	0.	0.	0.	2.24E-04	1.03E-07	1.06E-04	2.53E-05	1.83E-02
12	9.60	0.	0.	1.92E-02	0.	0.	0.	2.25E-04	1.07E-07	1.06E-04	2.53E-05	1.94E-02
13	9.50	0.	1.59E-04	1.49E-02	0.	0.	0.	2.25E-04	1.10E-07	1.06E-04	2.53E-05	1.54E-02
14	9.40	0.	1.94E-04	1.32E-02	0.	0.	0.	2.26E-04	1.14E-07	1.07E-04	2.53E-05	1.37E-02
15	9.30	0.	2.33E-04	1.32E-02	0.	0.	0.	2.27E-04	1.17E-07	1.07E-04	2.53E-05	1.38E-02
16	9.20	0.	2.70E-04	9.69E-03	0.	0.	0.	2.28E-04	1.21E-07	2.85E-05	2.53E-05	1.02E-02
17	9.10	0.	3.22E-04	9.91E-03	0.	0.	0.	2.28E-04	1.25E-07	2.84E-05	2.53E-05	1.05E-02
18	9.00	0.	3.78E-04	8.31E-03	0.	0.	0.	2.29E-04	1.30E-07	2.83E-05	2.53E-05	8.97E-03
19	8.90	0.	4.34E-04	7.14E-03	0.	0.	0.	2.30E-04	1.34E-07	2.83E-05	2.53E-05	7.84E-03
20	8.80	0.	4.50E-04	6.78E-03	0.	0.	0.	2.31E-04	1.39E-07	2.82E-05	2.53E-05	7.52E-03
21	8.70	0.	4.34E-04	5.31E-03	0.	0.	0.	2.32E-04	1.44E-07	2.81E-05	2.53E-05	6.03E-03
22	8.60	0.	4.18E-04	5.37E-03	0.	0.	0.	2.32E-04	1.49E-07	2.80E-05	2.53E-05	6.07E-03
23	8.50	0.	4.07E-04	4.25E-03	0.	0.	0.	2.33E-04	1.54E-07	2.80E-05	2.53E-05	4.96E-03
24	8.40	0.	4.01E-04	4.08E-03	0.	0.	0.	2.34E-04	1.60E-07	2.79E-05	2.53E-05	4.77E-03
25	8.30	0.	3.95E-04	3.15E-03	0.	0.	0.	2.36E-04	1.65E-07	2.79E-05	2.53E-05	3.83E-03
26	8.20	0.	3.84E-04	3.08E-03	0.	0.	0.	2.37E-04	1.72E-07	2.78E-05	2.56E-05	3.75E-03
27	8.10	0.	3.72E-04	2.42E-03	0.	0.	0.	2.38E-04	1.78E-07	2.77E-05	2.58E-05	3.09E-03
28	8.00	0.	3.60E-04	2.34E-03	0.	0.	0.	2.39E-04	1.85E-07	2.76E-05	2.61E-05	3.00E-03
29	7.90	0.	3.47E-04	1.85E-03	0.	0.	0.	2.41E-04	1.92E-07	2.75E-05	2.63E-05	2.49E-03
30	7.80	0.	3.34E-04	1.53E-03	0.	0.	0.	2.42E-04	2.00E-07	2.75E-05	2.66E-05	2.46E-03
31	7.70	0.	3.20E-04	1.48E-03	0.	0.	0.	2.43E-04	2.07E-07	2.74E-05	2.68E-05	2.18E-03
32	7.60	0.	3.05E-04	1.33E-03	0.	9.66E-08	0.	2.44E-04	2.16E-07	2.74E-05	2.71E-05	1.93E-03
33	7.50	0.	2.89E-04	1.14E-03	0.	5.55E-07	0.	2.46E-04	2.25E-07	2.73E-05	2.73E-05	1.73E-03
34	7.40	0.	2.74E-04	9.60E-04	0.	2.53E-06	0.	2.47E-04	2.34E-07	2.73E-05	2.76E-05	1.54E-03
35	7.30	0.	2.66E-04	8.50E-04	0.	1.36E-05	0.	2.48E-04	2.44E-07	2.72E-05	2.78E-05	1.43E-03
36	7.20	0.	2.44E-04	7.15E-04	0.	3.77E-05	0.	2.50E-04	2.54E-07	2.72E-05	2.81E-05	1.30E-03
37	7.10	0.	2.27E-04	6.44E-04	0.	9.13E-05	0.	2.52E-04	2.65E-07	2.71E-05	2.83E-05	1.27E-03
38	7.00	2.52E-07	0.	5.50E-04	0.	2.73E-04	0.	2.54E-04	2.76E-07	2.70E-05	2.86E-05	1.13E-03
39	6.90	4.71E-07	0.	4.71E-04	0.	2.54E-04	0.	2.56E-04	2.89E-07	2.70E-05	2.88E-05	1.04E-03
40	6.80	3.88E-07	0.	4.21E-04	0.	5.58E-04	0.	2.58E-04	3.02E-07	2.69E-05	2.91E-05	1.29E-03
41	6.70	2.69E-07	0.	3.42E-04	0.	7.29E-04	0.	2.60E-04	3.15E-07	2.69E-05	2.94E-05	1.39E-03
42	6.60	1.57E-07	0.	2.84E-04	0.	4.02E-04	0.	2.62E-04	3.30E-07	2.69E-05	2.96E-05	10.80E-04
43	6.50	8.60E-08	0.	2.06E-04	0.	7.58E-04	0.	2.64E-04	3.46E-07	2.70E-05	2.99E-05	1.29E-03
44	6.40	1.19E-07	0.	1.25E-04	5.18E-06	9.37E-04	0.	2.66E-04	3.62E-07	2.70E-05	3.02E-05	1.39E-03
45	6.30	2.46E-07	0.	6.74E-05	2.22E-05	4.43E-04	0.	2.68E-04	3.80E-07	2.71E-05	3.06E-05	8.59E-04
46	6.20	7.20E-07	0.	3.28E-05	2.91E-05	6.96E-04	0.	2.70E-04	3.98E-07	2.72E-05	3.11E-05	1.09E-03
47	6.10	2.82E-06	0.	1.36E-05	7.88E-05	1.13E-03	0.	2.72E-04	4.18E-07	2.74E-05	3.17E-05	1.55E-03
48	6.00	7.25E-06	0.	3.20E-06	6.56E-05	3.95E-04	0.	2.74E-04	4.40E-07	2.76E-05	3.22E-05	8.05E-04
49	5.90	1.15E-05	0.	2.27E-07	9.21E-05	4.30E-04	0.	2.74E-04	4.62E-07	2.78E-05	3.28E-05	8.68E-04
50	5.80	1.71E-05	0.	5.56E-09	1.23E-04	4.03E-04	0.	2.70E-04	4.87E-07	2.81E-05	3.33E-05	8.75E-04
51	5.70	1.96E-05	0.	0.	1.31E-04	4.19E-04	0.	2.54E-04	5.13E-07	2.83E-05	3.39E-05	8.87E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.41E-05	0.	0.	0.	9.70E-05	6.85E-04	0.	0.	2.36E-04	5.41E-07	2.85E-05	3.45E-05	1.10E-03
53	5.50	2.47E-05	0.	0.	0.	1.20E-04	6.67E-04	0.	0.	2.37E-04	5.71E-07	2.89E-05	3.50E-05	1.11E-03
54	5.40	2.55E-05	0.	0.	0.	9.99E-05	4.26E-04	0.	0.	2.38E-04	6.03E-07	2.93E-05	3.56E-05	8.56E-04
55	5.30	2.42E-05	0.	0.	0.	1.03E-04	6.45E-04	0.	0.	2.40E-04	6.38E-07	2.97E-05	3.63E-05	1.07E-03
56	5.20	1.69E-05	0.	0.	0.	1.06E-04	3.61E-04	0.	0.	2.41E-04	6.76E-07	3.01E-05	3.72E-05	7.94E-04
57	5.10	1.56E-05	0.	0.	0.	1.02E-04	4.97E-04	0.	0.	2.43E-04	7.16E-07	3.09E-05	3.80E-05	9.29E-04
58	5.00	1.14E-05	0.	0.	0.	8.90E-05	4.27E-04	0.	0.	2.46E-04	7.61E-07	3.17E-05	3.89E-05	8.44E-04
59	4.90	9.46E-06	0.	0.	0.	9.50E-05	4.19E-04	0.	0.	2.48E-04	8.08E-07	3.26E-05	3.98E-05	8.43E-04
60	4.80	9.49E-06	0.	0.	0.	9.94E-05	3.84E-04	0.	0.	2.50E-04	8.61E-07	3.34E-05	4.07E-05	8.17E-04
61	4.70	1.01E-05	0.	0.	0.	9.37E-05	3.19E-04	0.	0.	2.52E-04	9.17E-07	3.42E-05	4.17E-05	7.51E-04
62	4.60	1.18E-05	0.	0.	0.	9.28E-05	2.99E-04	0.	0.	2.54E-04	9.78E-07	3.53E-05	4.27E-05	7.37E-04
63	4.50	1.16E-05	0.	1.58E-05	0.	7.93E-05	2.69E-04	0.	0.	2.56E-04	1.04E-06	3.65E-05	4.37E-05	6.53E-04
64	4.40	1.15E-05	0.	5.94E-05	0.	7.66E-05	1.54E-04	0.	0.	2.58E-04	1.12E-06	3.77E-05	4.48E-05	6.46E-04
65	4.30	1.02E-05	0.	1.37E-04	0.	6.86E-05	8.65E-05	0.	0.	2.60E-04	1.20E-06	3.89E-05	4.58E-05	6.48E-04
66	4.20	9.08E-06	0.	5.85E-04	0.	7.06E-05	7.02E-05	0.	0.	2.62E-04	1.29E-06	4.02E-05	4.67E-05	1.08E-03
67	4.10	8.09E-06	0.	1.78E-04	0.	6.44E-05	1.79E-05	0.	0.	2.63E-04	1.38E-06	4.15E-05	6.18E-06	5.72E-04
68	4.00	7.05E-06	0.	8.16E-04	0.	5.91E-05	1.34E-05	0.	0.	2.64E-04	1.49E-06	4.27E-05	6.36E-06	1.21E-03
69	3.90	5.58E-06	0.	3.62E-04	3.37E-05	4.98E-05	6.02E-06	0.	0.	2.63E-04	1.61E-06	3.34E-05	6.54E-06	7.62E-04
70	3.80	5.93E-06	0.	4.93E-04	2.60E-04	5.24E-05	0.	0.	0.	2.62E-04	1.74E-06	2.57E-05	6.74E-06	1.11E-03
71	3.70	4.79E-06	0.	6.74E-04	5.57E-05	3.95E-05	0.	0.	0.	2.58E-04	1.89E-06	2.65E-05	7.62E-06	1.07E-03
72	3.60	4.10E-06	0.	3.28E-04	3.61E-04	4.32E-05	0.	0.	0.	2.41E-04	2.05E-06	2.39E-05	8.63E-06	1.01E-03
73	3.50	3.60E-06	0.	9.27E-04	1.21E-03	3.32E-05	0.	0.	0.	2.21E-04	2.23E-06	2.71E-05	9.70E-06	2.03E-03
74	3.40	3.05E-06	0.	2.48E-04	7.80E-05	3.33E-05	0.	0.	0.	1.27E-04	2.43E-06	3.06E-05	1.09E-05	5.33E-04
75	3.30	2.34E-06	0.	2.76E-04	4.72E-04	2.41E-05	0.	0.	0.	1.20E-04	2.66E-06	3.41E-05	1.20E-05	9.51E-04
76	3.20	1.89E-06	0.	1.50E-04	1.31E-03	2.43E-05	0.	0.	0.	1.20E-04	2.92E-06	3.77E-05	1.33E-05	1.67E-03
77	3.10	1.70E-06	0.	1.16E-04	1.22E-04	2.13E-05	0.	0.	0.	1.20E-04	3.22E-06	4.14E-05	1.45E-05	4.48E-04
78	3.00	1.41E-06	0.	6.32E-05	4.75E-04	1.86E-05	0.	0.	0.	1.20E-04	3.55E-06	4.58E-05	1.57E-05	7.91E-04
79	2.90	1.09E-06	0.	3.74E-05	3.29E-04	1.25E-05	0.	0.	0.	1.29E-04	3.93E-06	4.87E-05	1.69E-05	5.78E-04
80	2.80	1.08E-06	0.	1.74E-05	1.07E-04	7.39E-06	0.	0.	0.	1.29E-04	4.37E-06	5.27E-05	1.82E-05	3.37E-04
81	2.70	6.16E-07	0.	7.95E-06	2.33E-04	3.45E-06	0.	0.	0.	1.29E-04	4.88E-06	5.69E-05	1.96E-05	4.55E-04
82	2.60	2.51E-07	0.	4.07E-06	2.19E-05	1.32E-06	0.	0.	0.	1.29E-04	5.46E-06	6.14E-05	2.03E-05	2.44E-04
83	2.50	1.65E-08	0.	5.31E-07	1.57E-05	2.87E-07	0.	0.	0.	1.29E-04	6.15E-06	6.87E-05	7.17E-06	2.27E-04
84	2.40	0.	3.28E-05	0.	1.86E-05	2.85E-08	0.	0.	0.	1.29E-04	6.96E-06	3.93E-05	8.83E-06	2.35E-04
85	2.30	0.	1.56E-04	0.	0.	0.	0.	0.	0.	1.26E-04	7.92E-06	4.77E-05	1.06E-05	3.50E-04
86	2.20	0.	3.22E-04	0.	0.	0.	0.	0.	0.	1.27E-04	9.06E-06	5.63E-05	1.28E-05	5.28E-04
87	2.10	0.	4.79E-04	0.	0.	0.	0.	0.	0.	1.27E-04	1.04E-05	6.56E-05	1.49E-05	6.92E-04
88	2.00	0.	7.57E-04	0.	0.	0.	0.	0.	0.	1.23E-04	1.21E-05	7.49E-05	1.71E-05	9.84E-04
89	1.90	0.	1.55E-03	0.	0.	0.	0.	0.	0.	1.18E-04	1.41E-05	8.45E-05	1.94E-05	1.79E-03
90	1.80	0.	1.27E-03	0.	0.	0.	0.	0.	0.	1.13E-04	1.66E-05	9.92E-05	2.29E-05	1.52E-03
91	1.70	0.	1.53E-03	0.	0.	0.	0.	0.	0.	1.06E-04	1.98E-05	1.17E-04	2.74E-05	1.81E-03
92	1.60	0.	1.07E-03	0.	0.	0.	0.	0.	0.	9.00E-05	2.37E-05	1.35E-04	3.19E-05	1.35E-03
93	1.50	0.	1.32E-03	0.	0.	0.	0.	0.	0.	4.09E-05	2.89E-05	1.67E-04	3.57E-05	1.49E-03
94	1.40	0.	1.41E-03	0.	0.	0.	0.	0.	0.	0.	3.56E-05	1.85E-04	4.34E-05	1.68E-03
95	1.30	0.	1.03E-03	0.	0.	0.	0.	0.	0.	0.	4.46E-05	1.63E-04	3.74E-05	1.27E-03
96	1.20	0.	1.04E-03	0.	0.	0.	0.	0.	0.	0.	5.69E-05	2.14E-04	4.94E-05	1.38E-03
97	1.10	0.	8.52E-04	0.	0.	0.	0.	6.44E-09	0.	0.	7.41E-05	2.68E-04	6.21E-05	1.26E-03
98	1.00	0.	7.96E-04	0.	0.	0.	0.	5.28E-08	0.	0.	9.91E-05	3.09E-04	6.76E-05	1.27E-03
99	0.90	0.	5.38E-04	0.	0.	0.	0.	6.74E-08	0.	0.	1.36E-04	3.62E-04	7.94E-05	1.22E-03
100	0.80	0.	2.94E-04	0.	0.	0.	0.	1.08E-06	0.	0.	1.95E-04	4.15E-04	9.12E-05	9.99E-04
101	0.70	0.	7.84E-05	0.	0.	0.	0.	7.18E-07	0.	0.	2.95E-04	4.61E-04	1.02E-04	9.37E-04
102	0.60	0.	4.32E-06	0.	0.	0.	0.	2.94E-06	0.	0.	4.73E-04	3.97E-04	8.18E-05	9.59E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	8.16E-04	0.	0.	0.	6.86E-06	7.39E-09	1.18E-05	2.54E-06	8.37E-04
2	10.60	0.	0.	6.92E-04	0.	0.	0.	6.87E-06	7.40E-09	1.18E-05	2.54E-06	7.13E-04
3	10.50	0.	0.	6.70E-04	0.	0.	0.	6.88E-06	7.82E-09	1.19E-05	2.54E-06	6.91E-04
4	10.40	0.	0.	5.95E-04	0.	0.	0.	6.89E-06	8.05E-09	1.20E-05	2.54E-06	6.17E-04
5	10.30	0.	0.	4.83E-04	0.	0.	0.	6.90E-06	8.29E-09	1.20E-05	2.54E-06	5.04E-04
6	10.20	0.	0.	4.76E-04	0.	0.	0.	6.91E-06	8.54E-09	1.20E-05	2.54E-06	4.97E-04
7	10.10	0.	0.	4.28E-04	0.	0.	0.	6.91E-06	8.80E-09	1.20E-05	2.54E-06	4.49E-04
8	10.00	0.	0.	3.41E-04	0.	0.	0.	6.92E-06	9.07E-09	1.21E-05	2.54E-06	3.63E-04
9	9.90	0.	0.	3.44E-04	0.	0.	0.	6.94E-06	9.34E-09	1.21E-05	2.54E-06	3.65E-04
10	9.80	0.	0.	3.01E-04	0.	0.	0.	6.95E-06	9.64E-09	1.21E-05	2.54E-06	3.23E-04
11	9.70	0.	0.	2.38E-04	0.	0.	0.	6.96E-06	9.94E-09	1.22E-05	2.54E-06	2.59E-04
12	9.60	0.	0.	2.55E-04	0.	0.	0.	6.97E-06	1.02E-08	1.22E-05	2.54E-06	2.76E-04
13	9.50	0.	1.60E-06	1.98E-04	0.	0.	0.	6.99E-06	1.06E-08	1.22E-05	2.53E-06	2.21E-04
14	9.40	0.	1.97E-06	1.74E-04	0.	0.	0.	7.01E-06	1.09E-08	1.23E-05	2.53E-06	1.98E-04
15	9.30	0.	2.34E-06	1.75E-04	0.	0.	0.	7.04E-06	1.13E-08	1.23E-05	2.53E-06	1.99E-04
16	9.20	0.	2.71E-06	1.28E-04	0.	0.	0.	7.06E-06	1.16E-08	3.20E-06	2.53E-06	1.44E-04
17	9.10	0.	3.24E-06	1.31E-04	0.	0.	0.	7.09E-06	1.20E-08	3.27E-06	2.53E-06	1.48E-04
18	9.00	0.	3.80E-06	1.10E-04	0.	0.	0.	7.11E-06	1.24E-08	3.26E-06	2.53E-06	1.27E-04
19	8.90	0.	4.36E-06	9.45E-05	0.	0.	0.	7.14E-06	1.29E-08	3.25E-06	2.53E-06	1.12E-04
20	8.80	0.	4.52E-06	8.98E-05	0.	0.	0.	7.17E-06	1.33E-08	3.24E-06	2.53E-06	1.07E-04
21	8.70	0.	4.36E-06	7.03E-05	0.	0.	0.	7.19E-06	1.38E-08	3.23E-06	2.53E-06	8.77E-05
22	8.60	0.	4.20E-06	7.10E-05	0.	0.	0.	7.22E-06	1.43E-08	3.23E-06	2.53E-06	8.82E-05
23	8.50	0.	4.09E-06	5.62E-05	0.	0.	0.	7.24E-06	1.48E-08	3.22E-06	2.53E-06	7.38E-05
24	8.40	0.	4.03E-06	5.41E-05	0.	0.	0.	7.26E-06	1.53E-08	3.21E-06	2.53E-06	7.11E-05
25	8.30	0.	3.96E-06	4.17E-05	0.	0.	0.	7.32E-06	1.59E-08	3.20E-06	2.54E-06	5.87E-05
26	8.20	0.	3.86E-06	4.07E-05	0.	0.	0.	7.36E-06	1.65E-08	3.20E-06	2.56E-06	5.77E-05
27	8.10	0.	3.74E-06	3.21E-05	0.	0.	0.	7.39E-06	1.71E-08	3.18E-06	2.59E-06	4.90E-05
28	8.00	0.	3.62E-06	3.18E-05	0.	0.	0.	7.43E-06	1.77E-08	3.17E-06	2.61E-06	4.79E-05
29	7.90	0.	3.49E-06	2.45E-05	0.	0.	0.	7.47E-06	1.84E-08	3.17E-06	2.64E-06	4.13E-05
30	7.80	0.	3.36E-06	2.43E-05	0.	0.	0.	7.51E-06	1.92E-08	3.16E-06	2.66E-06	4.10E-05
31	7.70	0.	3.21E-06	1.96E-05	0.	0.	0.	7.55E-06	1.99E-08	3.15E-06	2.69E-06	3.62E-05
32	7.60	0.	3.06E-06	1.75E-05	0.	1.11E-09	0.	7.58E-06	2.07E-08	3.15E-06	2.71E-06	3.41E-05
33	7.50	0.	2.90E-06	1.51E-05	0.	5.40E-09	0.	7.62E-06	2.16E-08	3.14E-06	2.74E-06	3.15E-05
34	7.40	0.	2.73E-06	1.27E-05	0.	2.91E-08	0.	7.67E-06	2.24E-08	3.14E-06	2.76E-06	2.91E-05
35	7.30	0.	2.61E-06	1.13E-05	0.	1.57E-07	0.	7.71E-06	2.34E-08	3.13E-06	2.79E-06	2.77E-05
36	7.20	0.	2.45E-06	9.47E-06	0.	4.31E-07	0.	7.75E-06	2.44E-08	3.12E-06	2.81E-06	2.61E-05
37	7.10	0.	2.28E-06	8.53E-06	0.	1.05E-06	0.	7.81E-06	2.54E-08	3.12E-06	2.84E-06	2.57E-05
38	7.00	2.53E-09	0.	7.29E-06	0.	3.15E-06	0.	7.88E-06	2.65E-08	3.11E-06	2.86E-06	2.43E-05
39	6.90	4.74E-09	0.	6.24E-06	0.	2.97E-06	0.	7.94E-06	2.77E-08	3.11E-06	2.89E-06	2.31E-05
40	6.80	3.98E-09	0.	5.57E-06	0.	6.43E-06	0.	8.00E-06	2.90E-08	3.10E-06	2.91E-06	2.61E-05
41	6.70	2.70E-09	0.	4.53E-06	0.	8.40E-06	0.	8.07E-06	3.03E-08	3.09E-06	2.94E-06	2.71E-05
42	6.60	1.56E-09	0.	3.76E-06	0.	4.63E-06	0.	8.13E-06	3.17E-08	3.10E-06	2.97E-06	2.26E-05
43	6.50	8.64E-10	0.	2.73E-06	0.	8.75E-06	0.	8.19E-06	3.32E-08	3.10E-06	3.00E-06	2.50E-05
44	6.40	1.28E-09	0.	1.65E-06	5.98E-08	1.08E-05	0.	8.26E-06	3.48E-08	3.11E-06	3.02E-06	2.69E-05
45	6.30	2.47E-09	0.	8.92E-07	2.57E-07	5.11E-06	0.	8.32E-06	3.64E-08	3.12E-06	3.06E-06	2.08E-05
46	6.20	7.23E-09	0.	4.34E-07	3.36E-07	8.03E-06	0.	8.39E-06	3.82E-08	3.13E-06	3.12E-06	2.35E-05
47	6.10	2.84E-08	0.	1.80E-07	9.09E-07	1.30E-05	0.	8.45E-06	4.02E-08	3.15E-06	3.17E-06	2.89E-05
48	6.00	7.29E-08	0.	4.24E-08	7.57E-07	6.56E-06	0.	8.51E-06	4.22E-08	3.17E-06	3.23E-06	2.04E-05
49	5.90	1.16E-07	0.	3.00E-09	1.06E-06	4.96E-06	0.	8.51E-06	4.44E-08	3.20E-06	3.28E-06	2.12E-05
50	5.80	1.71E-07	0.	7.36E-11	1.42E-06	4.65E-06	0.	8.39E-06	4.67E-08	3.23E-06	3.34E-06	2.13E-05
51	5.70	1.97E-07	0.	0.	1.52E-06	4.83E-06	0.	7.88E-06	4.92E-08	3.25E-06	3.40E-06	2.11E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.42E-07	0.	0.	0.	1.12E-06	7.90E-06	0.	0.	7.32E-06	5.19E-05	3.28E-06	3.45E-06	2.33E-05
53	5.50	2.48E-07	0.	0.	0.	1.38E-06	7.69E-06	0.	0.	7.36E-06	5.48E-05	3.32E-06	3.51E-06	2.35E-05
54	5.40	2.56E-07	0.	0.	0.	1.15E-06	4.92E-06	0.	0.	7.40E-06	5.79E-05	3.37E-06	3.57E-06	2.00E-05
55	5.30	2.43E-07	0.	0.	0.	1.19E-06	7.44E-06	0.	0.	7.45E-06	6.13E-05	3.42E-06	3.64E-06	2.34E-05
56	5.20	1.70E-07	0.	0.	0.	1.22E-06	4.17E-06	0.	0.	7.50E-06	6.49E-05	3.47E-06	3.72E-06	2.03E-05
57	5.10	1.56E-07	0.	0.	0.	1.18E-06	5.74E-06	0.	0.	7.56E-06	6.88E-05	3.55E-06	3.81E-06	2.21E-05
58	5.00	1.14E-07	0.	0.	0.	1.03E-06	4.92E-06	0.	0.	7.62E-06	7.30E-05	3.65E-06	3.90E-06	2.13E-05
59	4.90	9.50E-08	0.	0.	0.	1.10E-06	4.83E-06	0.	0.	7.69E-06	7.76E-05	3.75E-06	3.99E-06	2.16E-05
60	4.80	9.53E-08	0.	0.	0.	1.15E-06	4.43E-06	0.	0.	7.75E-06	8.26E-05	3.84E-06	4.07E-06	2.14E-05
61	4.70	1.02E-07	0.	0.	0.	1.08E-06	3.68E-06	0.	0.	7.81E-06	8.80E-05	3.94E-06	4.17E-06	2.09E-05
62	4.60	1.18E-07	0.	0.	0.	1.07E-06	3.45E-06	0.	0.	7.88E-06	9.39E-05	4.06E-06	4.28E-06	2.09E-05
63	4.50	1.16E-07	0.	2.09E-07	0.	9.15E-07	2.42E-06	0.	0.	7.94E-06	10.00E-05	4.19E-06	4.38E-06	2.03E-05
64	4.40	1.16E-07	0.	7.86E-07	0.	8.80E-07	1.81E-06	0.	0.	8.00E-06	1.07E-07	4.33E-06	4.48E-06	2.05E-05
65	4.30	1.03E-07	0.	1.81E-06	0.	7.92E-07	9.98E-07	0.	0.	8.07E-06	1.15E-07	4.49E-06	4.59E-06	2.10E-05
66	4.20	9.12E-08	0.	7.74E-06	0.	8.14E-07	8.10E-07	0.	0.	8.13E-06	1.23E-07	4.63E-06	4.55E-06	2.49E-05
67	4.10	8.13E-08	0.	2.24E-06	0.	7.43E-07	2.06E-07	0.	0.	8.16E-06	1.33E-07	4.77E-06	6.19E-07	1.73E-05
68	4.00	7.00E-08	0.	1.08E-05	0.	6.82E-07	1.57E-07	0.	0.	8.19E-06	1.43E-07	3.73E-06	6.37E-07	2.44E-05
69	3.90	5.60E-08	0.	4.79E-06	1.44E-06	5.75E-07	6.94E-08	0.	0.	8.16E-06	1.54E-07	2.88E-06	6.55E-07	1.88E-05
70	3.80	5.96E-08	0.	6.58E-06	1.11E-05	6.04E-07	0.	0.	0.	8.13E-06	1.67E-07	2.96E-06	6.75E-07	3.02E-05
71	3.70	4.81E-08	0.	8.92E-06	2.38E-06	4.56E-07	0.	0.	0.	8.00E-06	1.81E-07	2.49E-06	7.63E-07	2.32E-05
72	3.60	4.12E-08	0.	4.34E-06	1.54E-05	4.98E-07	0.	0.	0.	7.50E-06	1.97E-07	2.75E-06	8.65E-07	3.16E-05
73	3.50	3.62E-08	0.	6.98E-06	9.16E-05	3.40E-07	0.	0.	0.	6.86E-06	2.14E-07	3.11E-06	9.72E-07	7.02E-05
74	3.40	3.07E-08	0.	3.28E-06	3.33E-06	3.85E-07	0.	0.	0.	3.96E-06	2.34E-07	3.52E-06	1.09E-06	1.58E-05
75	3.30	2.35E-08	0.	3.65E-06	2.02E-05	2.77E-07	0.	0.	0.	3.94E-06	2.56E-07	3.93E-06	1.21E-06	3.35E-05
76	3.20	1.90E-08	0.	1.98E-06	5.60E-05	2.81E-07	0.	0.	0.	3.97E-06	2.81E-07	4.34E-06	1.33E-06	6.82E-05
77	3.10	1.70E-08	0.	1.58E-06	5.21E-05	2.46E-07	0.	0.	0.	3.98E-06	3.09E-07	4.76E-06	1.45E-06	1.75E-05
78	3.00	1.42E-08	0.	8.37E-07	2.03E-05	2.14E-07	0.	0.	0.	3.99E-06	3.41E-07	5.18E-06	1.57E-06	3.24E-05
79	2.90	1.10E-08	0.	4.99E-07	1.41E-05	1.44E-07	0.	0.	0.	4.00E-06	3.77E-07	5.60E-06	1.69E-06	2.64E-05
80	2.80	1.08E-08	0.	2.38E-07	4.58E-06	8.52E-08	0.	0.	0.	4.00E-06	4.19E-07	6.07E-06	1.82E-06	1.72E-05
81	2.70	6.19E-09	0.	1.05E-07	9.94E-06	3.98E-08	0.	0.	0.	4.00E-06	4.68E-07	6.55E-06	1.90E-06	2.38E-05
82	2.60	2.52E-09	0.	5.38E-08	9.35E-07	1.52E-08	0.	0.	0.	4.00E-06	5.25E-07	7.07E-06	6.24E-07	1.32E-05
83	2.50	1.66E-10	0.	7.03E-09	6.69E-07	3.31E-09	0.	0.	0.	4.00E-06	5.91E-07	3.63E-06	7.18E-07	9.62E-06
84	2.40	0.	1.34E-07	0.	7.94E-07	3.29E-10	0.	0.	0.	4.00E-06	6.69E-07	4.53E-06	8.84E-07	1.13E-05
85	2.30	0.	2.04E-06	0.	0.	0.	0.	0.	0.	3.97E-06	7.60E-07	5.49E-06	1.06E-06	1.33E-05
86	2.20	0.	4.26E-06	0.	0.	0.	0.	0.	0.	3.95E-06	8.70E-07	6.48E-06	1.26E-06	1.58E-05
87	2.10	0.	8.28E-06	0.	0.	0.	0.	0.	0.	3.94E-06	1.00E-06	7.55E-06	1.50E-06	2.03E-05
88	2.00	0.	1.00E-05	0.	0.	0.	0.	0.	0.	3.81E-06	1.16E-06	8.62E-06	1.71E-06	2.53E-05
89	1.90	0.	2.05E-05	0.	0.	0.	0.	0.	0.	3.67E-06	1.36E-06	9.73E-06	1.94E-06	3.72E-05
90	1.80	0.	1.66E-05	0.	0.	0.	0.	0.	0.	3.51E-06	1.60E-06	1.14E-05	2.30E-06	3.56E-05
91	1.70	0.	2.03E-05	0.	0.	0.	0.	0.	0.	3.38E-06	1.90E-06	1.35E-05	2.75E-06	4.17E-05
92	1.60	0.	1.41E-05	0.	0.	0.	0.	0.	0.	2.79E-06	2.28E-06	1.55E-05	3.19E-06	3.79E-05
93	1.50	0.	1.74E-05	0.	0.	0.	0.	0.	0.	1.27E-06	2.77E-06	1.75E-05	3.57E-06	4.25E-05
94	1.40	0.	1.87E-05	0.	0.	0.	0.	0.	0.	0.	3.42E-06	2.13E-05	4.29E-06	4.77E-05
95	1.30	0.	1.34E-05	0.	0.	0.	0.	0.	0.	0.	4.28E-06	1.87E-05	3.75E-06	4.84E-05
96	1.20	0.	1.40E-05	0.	0.	0.	0.	0.	0.	0.	5.46E-06	2.46E-05	4.99E-06	4.91E-05
97	1.10	0.	1.13E-05	0.	0.	0.	0.	7.43E-11	0.	0.	7.11E-06	3.08E-05	5.58E-06	5.48E-05
98	1.00	0.	1.05E-05	0.	0.	0.	0.	6.10E-10	0.	0.	9.91E-06	3.55E-05	6.77E-06	6.23E-05
99	0.90	0.	8.45E-06	0.	0.	0.	0.	7.78E-10	0.	0.	1.31E-05	4.16E-05	7.96E-06	7.11E-05
100	0.80	0.	3.92E-06	0.	0.	0.	0.	1.25E-08	0.	0.	1.87E-05	4.78E-05	9.03E-06	7.87E-05
101	0.70	0.	1.04E-06	0.	0.	0.	0.	8.28E-09	0.	0.	2.83E-05	4.59E-05	7.25E-06	8.25E-05
102	0.60	0.	5.71E-08	0.	0.	0.	0.	3.39E-08	0.	0.	4.54E-05	4.56E-05	8.20E-06	9.93E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	8.08E-06	0.	0.	0.	2.11E-07	7.28E-10	1.17E-06	2.50E-07	9.72E-06
2	10.60	0.	0.	6.85E-06	0.	0.	0.	2.11E-07	7.41E-10	1.18E-06	2.50E-07	8.49E-06
3	10.50	0.	0.	6.63E-06	0.	0.	0.	2.11E-07	7.62E-10	1.18E-06	2.50E-07	8.28E-06
4	10.40	0.	0.	5.89E-06	0.	0.	0.	2.12E-07	7.85E-10	1.19E-06	2.50E-07	7.55E-06
5	10.30	0.	0.	4.78E-06	0.	0.	0.	2.12E-07	8.08E-10	1.19E-06	2.50E-07	6.44E-06
6	10.20	0.	0.	4.71E-06	0.	0.	0.	2.12E-07	8.32E-10	1.20E-06	2.50E-07	6.37E-06
7	10.10	0.	0.	4.23E-06	0.	0.	0.	2.13E-07	8.57E-10	1.20E-06	2.50E-07	5.90E-06
8	10.00	0.	0.	3.38E-06	0.	0.	0.	2.13E-07	8.83E-10	1.20E-06	2.50E-07	5.04E-06
9	9.90	0.	0.	3.40E-06	0.	0.	0.	2.13E-07	9.11E-10	1.20E-06	2.50E-07	5.07E-06
10	9.80	0.	0.	2.96E-06	0.	0.	0.	2.14E-07	9.39E-10	1.21E-06	2.50E-07	4.65E-06
11	9.70	0.	0.	2.35E-06	0.	0.	0.	2.14E-07	9.68E-10	1.21E-06	2.50E-07	4.03E-06
12	9.60	0.	0.	2.52E-06	0.	0.	0.	2.14E-07	9.99E-10	1.21E-06	2.50E-07	4.20E-06
13	9.50	0.	1.55E-08	1.96E-06	0.	0.	0.	2.15E-07	1.03E-09	1.22E-06	2.49E-07	3.66E-06
14	9.40	0.	1.91E-08	1.73E-06	0.	0.	0.	2.16E-07	1.06E-09	1.22E-06	2.49E-07	3.43E-06
15	9.30	0.	2.27E-08	1.73E-06	0.	0.	0.	2.16E-07	1.10E-09	3.27E-07	2.49E-07	2.55E-06
16	9.20	0.	2.62E-08	1.27E-06	0.	0.	0.	2.17E-07	1.14E-09	3.26E-07	2.49E-07	2.09E-06
17	9.10	0.	3.14E-08	1.38E-06	0.	0.	0.	2.18E-07	1.17E-09	3.25E-07	2.49E-07	2.13E-06
18	9.00	0.	3.68E-08	1.09E-06	0.	0.	0.	2.19E-07	1.21E-09	3.25E-07	2.49E-07	1.92E-06
19	8.90	0.	4.23E-08	9.36E-07	0.	0.	0.	2.19E-07	1.25E-09	3.24E-07	2.49E-07	1.77E-06
20	8.80	0.	4.38E-08	8.89E-07	0.	0.	0.	2.20E-07	1.30E-09	3.23E-07	2.49E-07	1.73E-06
21	8.70	0.	4.23E-08	6.97E-07	0.	0.	0.	2.21E-07	1.34E-09	3.22E-07	2.49E-07	1.53E-06
22	8.60	0.	4.07E-08	7.04E-07	0.	0.	0.	2.22E-07	1.39E-09	3.21E-07	2.49E-07	1.54E-06
23	8.50	0.	3.96E-08	5.57E-07	0.	0.	0.	2.23E-07	1.44E-09	3.20E-07	2.49E-07	1.39E-06
24	8.40	0.	3.90E-08	5.35E-07	0.	0.	0.	2.24E-07	1.49E-09	3.20E-07	2.49E-07	1.37E-06
25	8.30	0.	3.84E-08	4.12E-07	0.	0.	0.	2.25E-07	1.55E-09	3.19E-07	2.50E-07	1.25E-06
26	8.20	0.	3.74E-08	4.03E-07	0.	0.	0.	2.26E-07	1.61E-09	3.18E-07	2.52E-07	1.24E-06
27	8.10	0.	3.62E-08	3.18E-07	0.	0.	0.	2.27E-07	1.67E-09	3.17E-07	2.55E-07	1.15E-06
28	8.00	0.	3.51E-08	3.07E-07	0.	0.	0.	2.28E-07	1.73E-09	3.16E-07	2.57E-07	1.15E-06
29	7.90	0.	3.38E-08	2.42E-07	0.	0.	0.	2.30E-07	1.80E-09	3.15E-07	2.58E-07	1.08E-06
30	7.80	0.	3.25E-08	2.41E-07	0.	0.	0.	2.31E-07	1.87E-09	3.14E-07	2.62E-07	1.08E-06
31	7.70	0.	3.12E-08	1.94E-07	0.	0.	0.	2.32E-07	1.94E-09	3.14E-07	2.65E-07	1.04E-06
32	7.60	0.	2.97E-08	1.74E-07	0.	1.09E-11	0.	2.33E-07	2.02E-09	3.13E-07	2.67E-07	1.02E-06
33	7.50	0.	2.81E-08	1.49E-07	0.	6.27E-11	0.	2.34E-07	2.10E-09	3.13E-07	2.70E-07	9.96E-07
34	7.40	0.	2.67E-08	1.26E-07	0.	2.85E-10	0.	2.36E-07	2.19E-09	3.12E-07	2.72E-07	9.75E-07
35	7.30	0.	2.53E-08	1.11E-07	0.	1.54E-09	0.	2.37E-07	2.28E-09	3.11E-07	2.74E-07	9.63E-07
36	7.20	0.	2.37E-08	9.37E-08	0.	4.22E-09	0.	2.38E-07	2.38E-09	3.11E-07	2.77E-07	9.58E-07
37	7.10	0.	2.21E-08	8.45E-08	0.	1.03E-08	0.	2.40E-07	2.48E-09	3.10E-07	2.79E-07	9.49E-07
38	7.00	2.45E-11	0.	7.22E-08	0.	3.08E-08	0.	2.42E-07	2.59E-09	3.10E-07	2.82E-07	9.39E-07
39	6.90	4.59E-11	0.	6.18E-08	0.	2.87E-08	0.	2.44E-07	2.70E-09	3.09E-07	2.84E-07	9.31E-07
40	6.80	3.78E-11	0.	5.52E-08	0.	6.30E-08	0.	2.46E-07	2.82E-09	3.09E-07	2.87E-07	9.62E-07
41	6.70	2.62E-11	0.	4.48E-08	0.	8.23E-08	0.	2.48E-07	2.95E-09	3.08E-07	2.89E-07	9.75E-07
42	6.60	1.53E-11	0.	3.72E-08	0.	4.54E-08	0.	2.50E-07	3.09E-09	3.08E-07	2.92E-07	9.36E-07
43	6.50	8.37E-12	0.	2.70E-08	0.	8.57E-08	0.	2.52E-07	3.23E-09	3.09E-07	2.95E-07	9.72E-07
44	6.40	1.16E-11	0.	1.64E-08	5.86E-10	1.06E-07	0.	2.54E-07	3.39E-09	3.10E-07	2.98E-07	9.87E-07
45	6.30	2.40E-11	0.	8.84E-09	2.51E-09	9.01E-08	0.	2.56E-07	3.55E-09	3.10E-07	3.01E-07	9.32E-07
46	6.20	7.00E-11	0.	4.29E-09	3.29E-09	7.86E-08	0.	2.58E-07	3.73E-09	3.11E-07	3.07E-07	9.66E-07
47	6.10	2.75E-10	0.	1.79E-09	8.90E-09	1.27E-07	0.	2.60E-07	3.91E-09	3.13E-07	3.12E-07	1.03E-06
48	6.00	7.06E-10	0.	4.19E-10	7.41E-09	4.44E-08	0.	2.62E-07	4.11E-09	3.16E-07	3.18E-07	9.53E-07
49	5.90	1.12E-09	0.	2.98E-11	1.04E-08	4.85E-08	0.	2.62E-07	4.33E-09	3.19E-07	3.25E-07	9.68E-07
50	5.80	1.66E-09	0.	7.29E-13	1.39E-08	4.56E-08	0.	2.59E-07	4.55E-09	3.21E-07	3.29E-07	9.74E-07
51	5.70	1.91E-09	0.	0.	1.48E-08	4.73E-08	0.	2.42E-07	4.80E-09	3.24E-07	3.34E-07	9.69E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.35E-09	0.	0.	0.	1.10E-08	7.74E-08	0.	0.	2.25E-07	5.06E-09	3.27E-07	3.40E-07	9.87E-07
53	5.50	2.40E-09	0.	0.	0.	1.35E-08	7.54E-08	0.	0.	2.26E-07	5.34E-09	3.31E-07	3.45E-07	9.98E-07
54	5.40	2.48E-09	0.	0.	0.	1.13E-08	4.81E-08	0.	0.	2.27E-07	5.64E-09	3.35E-07	3.51E-07	9.81E-07
55	5.30	2.36E-09	0.	0.	0.	1.16E-08	7.29E-08	0.	0.	2.29E-07	5.97E-09	3.40E-07	3.58E-07	1.02E-06
56	5.20	1.64E-09	0.	0.	0.	1.20E-08	4.08E-08	0.	0.	2.30E-07	6.32E-09	3.45E-07	3.67E-07	1.08E-06
57	5.10	1.51E-09	0.	0.	0.	1.16E-08	5.62E-08	0.	0.	2.32E-07	6.70E-09	3.54E-07	3.75E-07	1.04E-06
58	5.00	1.11E-09	0.	0.	0.	1.01E-08	4.82E-08	0.	0.	2.34E-07	7.11E-09	3.63E-07	3.84E-07	1.05E-06
59	4.90	9.28E-10	0.	0.	0.	1.07E-08	4.73E-08	0.	0.	2.33E-07	7.56E-09	3.73E-07	3.92E-07	1.07E-06
60	4.80	9.24E-10	0.	0.	0.	1.12E-08	4.33E-08	0.	0.	2.38E-07	8.05E-09	3.82E-07	4.01E-07	1.08E-06
61	4.70	9.84E-10	0.	0.	0.	1.06E-08	3.60E-08	0.	0.	2.43E-07	8.58E-09	3.92E-07	4.11E-07	1.10E-06
62	4.60	1.14E-09	0.	0.	0.	1.05E-08	3.38E-08	0.	0.	2.42E-07	9.15E-09	4.04E-07	4.21E-07	1.12E-06
63	4.50	1.13E-09	0.	2.67E-09	0.	9.96E-09	2.36E-08	0.	0.	2.44E-07	9.78E-09	4.17E-07	4.31E-07	1.14E-06
64	4.40	1.12E-09	0.	7.78E-09	0.	8.68E-09	1.77E-08	0.	0.	2.46E-07	1.05E-08	4.31E-07	4.41E-07	1.16E-06
65	4.30	9.93E-10	0.	1.88E-08	0.	7.76E-09	9.77E-09	0.	0.	2.48E-07	1.12E-08	4.46E-07	4.51E-07	1.19E-06
66	4.20	8.83E-10	0.	7.87E-08	0.	7.97E-09	7.93E-09	0.	0.	2.50E-07	1.20E-08	4.60E-07	5.91E-08	8.75E-07
67	4.10	7.87E-10	0.	2.22E-08	0.	7.27E-09	2.82E-09	0.	0.	2.91E-07	1.29E-08	3.62E-07	3.69E-08	7.19E-07
68	4.00	6.86E-10	0.	1.97E-07	0.	6.68E-09	1.54E-09	0.	0.	2.92E-07	1.39E-08	3.71E-07	6.27E-08	8.15E-07
69	3.90	5.48E-10	0.	4.79E-08	4.56E-08	5.63E-09	6.88E-10	0.	0.	2.91E-07	1.50E-08	2.84E-07	6.45E-08	7.17E-07
70	3.80	5.79E-10	0.	6.47E-08	3.52E-07	5.92E-09	0.	0.	0.	2.58E-07	1.63E-08	2.93E-07	6.65E-08	1.05E-06
71	3.70	4.66E-10	0.	8.88E-08	7.54E-06	4.47E-09	0.	0.	0.	2.46E-07	1.76E-08	2.48E-07	7.51E-08	7.55E-07
72	3.60	3.99E-10	0.	4.29E-08	4.89E-07	4.88E-09	0.	0.	0.	2.58E-07	1.92E-08	2.74E-07	8.51E-08	1.15E-06
73	3.50	3.51E-10	0.	6.91E-08	1.64E-06	3.41E-09	0.	0.	0.	2.11E-07	2.09E-08	3.10E-07	9.57E-08	2.35E-06
74	3.40	2.97E-10	0.	3.25E-08	1.06E-07	3.77E-09	0.	0.	0.	1.22E-07	2.28E-08	3.70E-07	1.07E-07	7.44E-07
75	3.30	2.28E-10	0.	3.42E-08	6.48E-07	2.72E-09	0.	0.	0.	1.22E-07	2.49E-08	3.91E-07	1.19E-07	1.34E-06
76	3.20	1.84E-10	0.	1.96E-08	1.77E-06	2.75E-09	0.	0.	0.	1.22E-07	2.73E-08	4.32E-07	1.31E-07	2.51E-06
77	3.10	1.65E-10	0.	1.92E-08	1.69E-07	2.41E-09	0.	0.	0.	1.22E-07	3.01E-08	3.74E-07	1.43E-07	9.51E-07
78	3.00	1.37E-10	0.	8.29E-09	6.44E-07	2.18E-09	0.	0.	0.	1.23E-07	3.32E-08	5.15E-07	1.55E-07	1.48E-06
79	2.90	1.08E-10	0.	4.91E-08	4.46E-07	1.41E-09	0.	0.	0.	1.23E-07	3.69E-08	5.54E-07	1.67E-07	1.34E-06
80	2.80	1.05E-10	0.	2.28E-09	1.45E-07	8.34E-10	0.	0.	0.	1.23E-07	4.09E-08	6.84E-07	1.79E-07	1.19E-06
81	2.70	5.99E-11	0.	1.04E-09	3.15E-07	3.89E-10	0.	0.	0.	1.23E-07	4.96E-08	8.52E-07	1.07E-07	1.32E-06
82	2.60	2.44E-11	0.	5.33E-10	2.96E-08	1.49E-10	0.	0.	0.	1.23E-07	5.21E-08	7.03E-07	6.14E-08	9.69E-07
83	2.50	1.61E-12	0.	6.96E-11	2.17E-08	3.24E-11	0.	0.	0.	1.23E-07	5.76E-08	3.61E-07	7.87E-08	6.34E-07
84	2.40	0.	6.38E-09	0.	2.52E-08	3.28E-12	0.	0.	0.	1.23E-07	6.51E-08	4.51E-07	8.78E-08	7.55E-07
85	2.30	0.	2.04E-08	0.	0.	0.	0.	0.	0.	1.22E-07	7.41E-08	5.46E-07	1.64E-07	8.67E-07
86	2.20	0.	4.22E-08	0.	0.	0.	0.	0.	0.	1.22E-07	8.48E-08	6.45E-07	1.26E-07	1.02E-06
87	2.10	0.	6.22E-08	0.	0.	0.	0.	0.	0.	1.21E-07	9.76E-08	7.51E-07	1.47E-07	1.18E-06
88	2.00	0.	9.92E-08	0.	0.	0.	0.	0.	0.	1.17E-07	1.13E-07	8.57E-07	1.69E-07	1.36E-06
89	1.90	0.	2.83E-07	0.	0.	0.	0.	0.	0.	1.13E-07	1.32E-07	9.68E-07	1.91E-07	1.61E-06
90	1.80	0.	1.46E-07	0.	0.	0.	0.	0.	0.	1.08E-07	1.56E-07	1.14E-06	2.24E-07	1.79E-06
91	1.70	0.	2.01E-07	0.	0.	0.	0.	0.	0.	1.01E-07	1.85E-07	1.34E-06	2.79E-07	2.10E-06
92	1.60	0.	1.49E-07	0.	0.	0.	0.	0.	0.	8.50E-08	2.22E-07	1.54E-06	2.92E-07	2.20E-06
93	1.50	0.	1.73E-07	0.	0.	0.	0.	0.	0.	3.98E-08	2.78E-07	1.74E-06	3.52E-07	2.57E-06
94	1.40	0.	1.85E-07	0.	0.	0.	0.	0.	0.	0.	3.33E-07	1.20E-06	2.61E-07	2.84E-06
95	1.30	0.	1.35E-07	0.	0.	0.	0.	0.	0.	0.	4.17E-07	1.83E-06	3.59E-07	2.75E-06
96	1.20	0.	1.39E-07	0.	0.	0.	0.	0.	0.	0.	5.32E-07	2.45E-06	4.91E-07	3.61E-06
97	1.10	0.	1.12E-07	0.	0.	0.	0.	7.27E-13	0.	0.	6.93E-07	2.92E-06	5.49E-07	4.20E-06
98	1.00	0.	1.84E-07	0.	0.	0.	0.	5.97E-12	0.	0.	9.27E-07	3.53E-06	6.66E-07	5.23E-06
99	0.90	0.	8.37E-08	0.	0.	0.	0.	7.61E-12	0.	0.	1.20E-06	4.14E-06	7.82E-07	6.29E-06
100	0.80	0.	3.88E-08	0.	0.	0.	0.	1.23E-10	0.	0.	1.83E-06	4.67E-06	8.89E-07	7.43E-06
101	0.70	0.	1.83E-06	0.	0.	0.	0.	8.11E-11	0.	0.	2.76E-06	4.84E-06	7.14E-07	7.52E-06
102	0.60	0.	5.64E-10	0.	0.	0.	0.	3.32E-10	0.	0.	4.42E-06	4.84E-06	8.87E-07	9.77E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.99E-08	0.	0.	0.	6.09E-09	6.70E-11	1.09E-07	2.37E-08	2.09E-07
2	10.60	0.	0.	5.92E-08	0.	0.	0.	6.10E-09	6.80E-11	1.10E-07	2.37E-08	1.99E-07
3	10.50	0.	0.	5.73E-08	0.	0.	0.	6.11E-09	7.09E-11	1.10E-07	2.37E-08	1.97E-07
4	10.40	0.	0.	5.10E-08	0.	0.	0.	6.11E-09	7.30E-11	1.11E-07	2.37E-08	1.91E-07
5	10.30	0.	0.	4.14E-08	0.	0.	0.	6.12E-09	7.51E-11	1.11E-07	2.37E-08	1.82E-07
6	10.20	0.	0.	4.07E-08	0.	0.	0.	6.13E-09	7.74E-11	1.11E-07	2.37E-08	1.81E-07
7	10.10	0.	0.	3.66E-08	0.	0.	0.	6.14E-09	7.97E-11	1.11E-07	2.37E-08	1.78E-07
8	10.00	0.	0.	2.92E-08	0.	0.	0.	6.15E-09	8.22E-11	1.12E-07	2.37E-08	1.71E-07
9	9.90	0.	0.	2.94E-08	0.	0.	0.	6.16E-09	8.47E-11	1.12E-07	2.36E-08	1.71E-07
10	9.80	0.	0.	2.58E-08	0.	0.	0.	6.17E-09	8.73E-11	1.12E-07	2.36E-08	1.68E-07
11	9.70	0.	0.	2.84E-08	0.	0.	0.	6.18E-09	9.01E-11	1.13E-07	2.36E-08	1.63E-07
12	9.60	0.	0.	2.18E-08	0.	0.	0.	6.19E-09	9.29E-11	1.13E-07	2.36E-08	1.65E-07
13	9.50	0.	1.39E-10	1.49E-08	0.	0.	0.	6.20E-09	9.59E-11	1.13E-07	2.36E-08	1.60E-07
14	9.40	0.	1.71E-10	1.49E-08	0.	0.	0.	6.23E-09	9.90E-11	1.13E-07	2.36E-08	1.59E-07
15	9.30	0.	2.03E-10	1.58E-08	0.	0.	0.	6.25E-09	1.02E-10	3.04E-08	2.36E-08	7.56E-08
16	9.20	0.	2.35E-10	1.18E-08	0.	0.	0.	6.27E-09	1.06E-10	3.03E-08	2.36E-08	7.16E-08
17	9.10	0.	2.81E-10	1.12E-08	0.	0.	0.	6.29E-09	1.09E-10	3.03E-08	2.36E-08	7.18E-08
18	9.00	0.	3.30E-10	9.42E-09	0.	0.	0.	6.32E-09	1.13E-10	3.02E-08	2.36E-08	7.08E-08
19	8.90	0.	3.79E-10	8.99E-09	0.	0.	0.	6.34E-09	1.17E-10	3.01E-08	2.36E-08	6.96E-08
20	8.80	0.	3.92E-10	7.69E-09	0.	0.	0.	6.36E-09	1.21E-10	3.03E-08	2.36E-08	6.82E-08
21	8.70	0.	3.78E-10	6.82E-09	0.	0.	0.	6.38E-09	1.25E-10	2.99E-08	2.36E-08	6.64E-08
22	8.60	0.	3.65E-10	6.08E-09	0.	0.	0.	6.41E-09	1.29E-10	2.99E-08	2.36E-08	6.64E-08
23	8.50	0.	3.55E-10	4.81E-09	0.	0.	0.	6.43E-09	1.34E-10	2.98E-08	2.36E-08	6.51E-08
24	8.40	0.	3.50E-10	4.63E-09	0.	0.	0.	6.46E-09	1.39E-10	2.97E-08	2.36E-08	6.49E-08
25	8.30	0.	3.44E-10	3.57E-09	0.	0.	0.	6.50E-09	1.44E-10	2.96E-08	2.37E-08	6.39E-08
26	8.20	0.	3.35E-10	3.49E-09	0.	0.	0.	6.53E-09	1.49E-10	2.96E-08	2.39E-08	6.48E-08
27	8.10	0.	3.25E-10	2.75E-09	0.	0.	0.	6.56E-09	1.55E-10	2.94E-08	2.41E-08	6.34E-08
28	8.00	0.	3.14E-10	2.66E-09	0.	0.	0.	6.60E-09	1.61E-10	2.94E-08	2.44E-08	6.35E-08
29	7.90	0.	3.03E-10	2.18E-09	0.	0.	0.	6.63E-09	1.67E-10	2.93E-08	2.46E-08	6.31E-08
30	7.80	0.	2.91E-10	2.08E-09	0.	0.	0.	6.66E-09	1.74E-10	2.92E-08	2.48E-08	6.33E-08
31	7.70	0.	2.79E-10	1.68E-09	0.	0.	0.	6.70E-09	1.80E-10	2.92E-08	2.51E-08	6.31E-08
32	7.60	0.	2.66E-10	1.58E-09	0.	9.61E-14	0.	6.73E-09	1.88E-10	2.91E-08	2.53E-08	6.31E-08
33	7.50	0.	2.52E-10	1.29E-09	0.	5.52E-13	0.	6.77E-09	1.95E-10	2.91E-08	2.55E-08	6.31E-08
34	7.40	0.	2.39E-10	1.09E-09	0.	2.51E-12	0.	6.80E-09	2.03E-10	2.90E-08	2.58E-08	6.31E-08
35	7.30	0.	2.27E-10	9.64E-10	0.	1.35E-11	0.	6.84E-09	2.12E-10	2.90E-08	2.60E-08	6.32E-08
36	7.20	0.	2.13E-10	8.11E-10	0.	3.71E-11	0.	6.88E-09	2.21E-10	2.89E-08	2.62E-08	6.33E-08
37	7.10	0.	1.98E-10	7.38E-10	0.	9.89E-11	0.	6.94E-09	2.30E-10	2.89E-08	2.65E-08	6.35E-08
38	7.00	2.20E-13	0.	6.24E-10	0.	2.71E-10	0.	6.99E-09	2.41E-10	2.88E-08	2.67E-08	6.36E-08
39	6.90	4.34E-13	0.	5.34E-10	0.	2.53E-10	0.	7.05E-09	2.51E-10	2.87E-08	2.69E-08	6.38E-08
40	6.80	3.39E-13	0.	4.77E-10	0.	5.55E-10	0.	7.10E-09	2.63E-10	2.87E-08	2.72E-08	6.42E-08
41	6.70	2.35E-13	0.	3.83E-10	0.	7.25E-10	0.	7.16E-09	2.74E-10	2.86E-08	2.74E-08	6.46E-08
42	6.60	1.37E-13	0.	3.22E-10	0.	3.99E-10	0.	7.22E-09	2.87E-10	2.87E-08	2.77E-08	6.46E-08
43	6.50	7.51E-14	0.	2.34E-10	0.	7.54E-10	0.	7.27E-09	3.01E-10	2.87E-08	2.79E-08	6.52E-08
44	6.40	1.04E-13	0.	1.42E-10	9.16E-12	9.31E-10	0.	7.33E-09	3.15E-10	2.88E-08	2.82E-08	6.57E-08
45	6.30	2.15E-13	0.	7.64E-11	2.21E-11	4.41E-10	0.	7.39E-09	3.30E-10	2.89E-08	2.85E-08	6.56E-08
46	6.20	6.28E-13	0.	3.16E-11	2.90E-11	6.92E-10	0.	7.44E-09	3.47E-10	2.89E-08	2.90E-08	6.65E-08
47	6.10	2.46E-12	0.	1.55E-11	7.84E-11	1.12E-09	0.	7.50E-09	3.64E-10	2.91E-08	2.96E-08	6.78E-08
48	6.00	6.33E-12	0.	3.63E-12	6.52E-11	3.93E-10	0.	7.56E-09	3.83E-10	2.94E-08	3.01E-08	6.79E-08
49	5.90	1.00E-11	0.	2.57E-13	9.16E-11	4.27E-10	0.	7.56E-09	4.02E-10	2.96E-08	3.06E-08	6.87E-08
50	5.80	1.49E-11	0.	6.30E-15	1.22E-10	4.01E-10	0.	7.44E-09	4.24E-10	2.99E-08	3.11E-08	6.94E-08
51	5.70	1.71E-11	0.	0.	1.31E-10	4.16E-10	0.	6.99E-09	4.46E-10	3.01E-08	3.16E-08	6.97E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.18E-11	0.	0.	0.	9.64E-11	6.81E-10	0.	0.	6.50E-09	4.71E-10	3.04E-08	3.22E-08	7.03E-08
53	5.50	2.15E-11	0.	0.	0.	1.19E-10	6.83E-10	0.	0.	6.94E-09	4.97E-10	3.07E-08	3.27E-08	7.13E-08
54	5.40	2.23E-11	0.	0.	0.	9.94E-11	4.24E-10	0.	0.	6.57E-09	5.25E-10	3.12E-08	3.33E-08	7.28E-08
55	5.30	2.11E-11	0.	0.	0.	1.02E-10	6.42E-10	0.	0.	6.61E-09	5.55E-10	3.16E-08	3.39E-08	7.34E-08
56	5.20	1.47E-11	0.	0.	0.	1.05E-10	3.59E-10	0.	0.	6.65E-09	5.86E-10	3.21E-08	3.47E-08	7.45E-08
57	5.10	1.36E-11	0.	0.	0.	1.02E-10	4.94E-10	0.	0.	6.71E-09	6.23E-10	3.29E-08	3.55E-08	7.63E-08
58	5.00	9.92E-12	0.	0.	0.	8.86E-11	4.24E-10	0.	0.	6.77E-09	6.62E-10	3.38E-08	3.63E-08	7.80E-08
59	4.90	8.25E-12	0.	0.	0.	9.44E-11	4.16E-10	0.	0.	6.82E-09	7.03E-10	3.47E-08	3.72E-08	7.99E-08
60	4.80	9.28E-12	0.	0.	0.	9.89E-11	3.82E-10	0.	0.	6.88E-09	7.49E-10	3.56E-08	3.80E-08	8.16E-08
61	4.70	8.83E-12	0.	0.	0.	9.32E-11	3.17E-10	0.	0.	6.94E-09	7.98E-10	3.66E-08	3.89E-08	8.35E-08
62	4.60	1.03E-11	0.	0.	0.	9.23E-11	2.98E-10	0.	0.	6.99E-09	8.51E-10	3.75E-08	3.99E-08	8.56E-08
63	4.50	1.01E-11	0.	1.79E-11	0.	7.88E-11	2.88E-10	0.	0.	7.05E-09	9.10E-10	3.88E-08	4.08E-08	8.79E-08
64	4.40	1.01E-11	0.	6.78E-11	0.	7.64E-11	1.56E-10	0.	0.	7.10E-09	9.73E-10	4.01E-08	4.18E-08	9.03E-08
65	4.30	8.91E-12	0.	1.35E-10	0.	6.83E-11	8.68E-11	0.	0.	7.16E-09	1.04E-09	4.14E-08	4.27E-08	9.26E-08
66	4.20	7.92E-12	0.	6.63E-10	0.	7.02E-11	6.99E-11	0.	0.	7.22E-09	1.12E-09	4.28E-08	5.68E-09	5.75E-08
67	4.10	7.06E-12	0.	1.92E-10	0.	6.40E-11	1.78E-11	0.	0.	7.25E-09	1.20E-09	3.36E-08	5.77E-09	4.81E-08
68	4.00	6.15E-12	0.	9.25E-10	0.	5.88E-11	1.35E-11	0.	0.	7.27E-09	1.30E-09	3.45E-08	5.94E-09	5.00E-08
69	3.90	4.87E-12	0.	4.10E-10	1.29E-09	4.95E-11	5.98E-12	0.	0.	7.25E-09	1.40E-09	2.66E-08	6.11E-09	4.31E-08
70	3.80	5.17E-12	0.	5.59E-10	9.99E-09	5.21E-11	0.		0.	7.22E-09	1.51E-09	2.74E-08	6.30E-09	5.30E-08
71	3.70	4.18E-12	0.	7.64E-10	2.14E-09	3.93E-11	0.	0.	0.	7.10E-09	1.64E-09	2.31E-08	7.11E-09	4.19E-08
72	3.60	3.58E-12	0.	3.71E-10	1.39E-08	4.29E-11	0.	0.	0.	6.65E-09	1.78E-09	2.54E-08	8.86E-09	5.62E-08
73	3.50	3.14E-12	0.	5.98E-10	4.64E-08	3.08E-11	0.	0.	0.	6.69E-09	1.94E-09	2.88E-08	9.86E-09	9.30E-08
74	3.40	2.66E-12	0.	2.81E-10	2.99E-09	3.52E-11	0.	0.	0.	3.51E-09	2.12E-09	3.26E-08	1.81E-08	5.17E-08
75	3.30	2.04E-12	0.	3.13E-10	1.81E-08	2.39E-11	0.	0.	0.	3.52E-09	2.32E-09	3.64E-08	1.12E-06	7.19E-08
76	3.20	1.65E-12	0.	1.78E-10	5.03E-08	2.42E-11	0.	0.	0.	3.52E-09	2.54E-09	4.92E-08	1.24E-08	1.09E-07
77	3.10	1.48E-12	0.	1.31E-10	4.68E-09	2.12E-11	0.	0.	0.	3.53E-09	2.90E-09	4.48E-08	1.35E-08	6.87E-08
78	3.00	1.23E-12	0.	7.17E-11	1.83E-08	1.89E-11	0.	0.	0.	3.54E-09	3.39E-09	4.79E-08	1.46E-08	8.75E-08
79	2.90	9.52E-13	0.	4.24E-11	1.26E-08	1.24E-11	0.	0.	0.	3.55E-09	3.42E-09	5.19E-08	1.58E-08	8.73E-08
80	2.80	9.38E-13	0.	1.97E-11	4.12E-09	7.35E-12	0.	0.	0.	3.55E-09	3.80E-09	5.61E-08	1.70E-08	8.46E-08
81	2.70	5.38E-13	0.	9.91E-12	8.94E-09	3.43E-12	0.	0.	0.	3.55E-09	4.24E-09	6.06E-08	5.48E-09	8.27E-08
82	2.60	2.19E-13	0.	4.61E-12	8.40E-10	1.31E-12	0.	0.	0.	3.55E-09	4.75E-09	6.54E-08	5.02E-09	8.04E-08
83	2.50	1.44E-14	0.	6.02E-13	6.02E-10	2.86E-13	0.	0.	0.	3.55E-09	5.35E-09	3.36E-08	6.69E-09	4.90E-08
84	2.40	0.	3.72E-11	0.	7.14E-10	2.84E-14	0.	0.	0.	3.55E-09	6.06E-09	4.19E-08	8.24E-09	6.35E-08
85	2.30	0.	1.76E-10	0.	0.	0.	0.	0.	0.	3.52E-09	6.89E-09	5.08E-08	9.08E-09	7.13E-08
86	2.20	0.	3.65E-10	0.	0.	0.	0.	0.	0.	3.51E-09	7.88E-09	6.08E-08	1.19E-08	8.37E-08
87	2.10	0.	5.38E-10	0.	0.	0.	0.	0.	0.	3.50E-09	9.05E-09	6.99E-08	1.39E-08	9.69E-08
88	2.00	0.	8.58E-10	0.	0.	0.	0.	0.	0.	3.38E-09	1.05E-08	7.27E-08	1.40E-08	1.18E-07
89	1.90	0.	1.78E-09	0.	0.	0.	0.	0.	0.	3.25E-09	1.23E-08	9.80E-08	1.81E-08	1.25E-07
90	1.80	0.	1.43E-09	0.	0.	0.	0.	0.	0.	3.11E-09	1.45E-08	1.06E-07	2.14E-08	1.46E-07
91	1.70	0.	1.74E-09	0.	0.	0.	0.	0.	0.	2.93E-09	1.72E-08	1.25E-07	2.56E-08	1.72E-07
92	1.60	0.	1.21E-09	0.	0.	0.	0.	0.	0.	2.40E-09	2.07E-08	1.44E-07	2.76E-08	1.96E-07
93	1.50	0.	1.49E-09	0.	0.	0.	0.	0.	0.	1.11E-09	2.51E-08	1.62E-07	3.33E-08	2.23E-07
94	1.40	0.	1.60E-09	0.	0.	0.	0.	0.	0.	0.	3.10E-08	1.19E-07	2.47E-08	1.72E-07
95	1.30	0.	1.17E-09	0.	0.	0.	0.	0.	0.	0.	3.88E-08	1.78E-07	3.50E-08	2.45E-07
96	1.20	0.	1.20E-09	0.	0.	0.	0.	0.	0.	0.	4.95E-08	2.28E-07	4.09E-08	3.19E-07
97	1.10	0.	9.66E-10	0.	0.	0.	0.	6.48E-15	0.	0.	6.45E-08	2.72E-07	5.20E-08	3.69E-07
98	1.00	0.	9.02E-10	0.	0.	0.	0.	5.25E-14	0.	0.	8.62E-08	3.29E-07	6.31E-08	4.79E-07
99	0.90	0.	7.24E-10	0.	0.	0.	0.	6.70E-14	0.	0.	1.19E-07	3.78E-07	7.32E-08	5.71E-07
100	0.80	0.	3.36E-10	0.	0.	0.	0.	1.88E-12	0.	0.	1.78E-07	4.35E-07	8.42E-08	6.89E-07
101	0.70	0.	8.93E-11	0.	0.	0.	0.	7.14E-13	0.	0.	2.57E-07	3.75E-07	6.76E-08	7.08E-07
102	0.60	0.	4.89E-12	0.	0.	0.	0.	2.93E-12	0.	0.	4.11E-07	4.22E-07	7.64E-08	9.18E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.38E-10	0.	0.	0.	1.44E-10	5.35E-12	8.64E-09	1.90E-09	1.12E-08
2	10.60	0.	0.	3.72E-10	0.	0.	0	1.44E-10	5.51E-12	8.68E-09	1.90E-09	1.12E-08
3	10.50	0.	0.	3.66E-10	0.	0.	0.	1.44E-10	5.67E-12	8.73E-09	1.90E-09	1.12E-08
4	10.40	0.	0.	3.20E-10	0.	0.	0.	1.45E-10	5.83E-12	8.76E-09	1.91E-09	1.12E-08
5	10.30	0.	0.	2.90E-10	0.	0.	0.	1.45E-10	6.81E-12	8.78E-09	1.90E-09	1.12E-08
6	10.20	0.	0.	2.56E-10	0.	0.	0.	1.45E-10	6.19E-12	8.80E-09	1.90E-09	1.12E-08
7	10.10	0.	0.	2.30E-10	0.	0.	0.	1.45E-10	6.37E-12	8.83E-09	1.90E-09	1.12E-08
8	10.00	0.	0.	1.83E-10	0.	0.	0.	1.45E-10	6.57E-12	8.85E-09	1.90E-09	1.12E-08
9	9.90	0.	0.	1.89E-10	0.	0.	0.	1.46E-10	6.77E-12	8.87E-09	1.90E-09	1.12E-08
10	9.80	0.	0.	1.62E-10	0.	0.	0.	1.46E-10	6.98E-12	8.89E-09	1.90E-09	1.12E-08
11	9.70	0.	0.	1.20E-10	0.	0.	0.	1.46E-10	7.23E-12	8.92E-09	1.90E-09	1.12E-08
12	9.60	0.	0.	1.37E-10	0.	0.	0.	1.46E-10	7.43E-12	8.94E-09	1.90E-09	1.12E-08
13	9.50	0.	9.73E-13	1.06E-10	0.	0.	0.	1.47E-10	7.67E-12	8.96E-09	1.90E-09	1.12E-08
14	9.40	0.	1.20E-12	9.37E-11	0.	0.	0.	1.47E-10	7.91E-12	8.99E-09	1.90E-09	1.12E-08
15	9.30	0.	1.42E-12	9.41E-11	0.	0.	0.	1.48E-10	8.17E-12	2.41E-09	1.90E-09	4.64E-09
16	9.20	0.	1.65E-12	6.89E-11	0.	0.	0.	1.48E-10	8.44E-12	2.40E-09	1.90E-09	4.61E-09
17	9.10	0.	1.97E-12	7.06E-11	0.	0.	0.	1.49E-10	8.73E-12	2.40E-09	1.90E-09	4.60E-09
18	9.00	0.	2.31E-12	5.91E-11	0.	0.	0.	1.49E-10	9.02E-12	2.39E-09	1.90E-09	4.59E-09
19	8.90	0.	2.65E-12	5.08E-11	0.	0.	0.	1.50E-10	9.33E-12	2.38E-09	1.97E-09	4.57E-09
20	8.80	0.	2.75E-12	4.82E-11	0.	0.	0.	1.50E-10	9.65E-12	2.38E-09	1.97E-09	4.56E-09
21	8.70	0.	2.65E-12	3.78E-11	0.	0.	0.	1.51E-10	9.99E-12	2.37E-09	1.97E-09	4.55E-09
22	8.60	0.	2.55E-12	3.82E-11	0.	0.	0.	1.52E-10	1.03E-11	2.36E-09	1.97E-09	4.54E-09
23	8.50	0.	2.49E-12	3.02E-11	0.	0.	0.	1.52E-10	1.07E-11	2.36E-09	1.97E-09	4.53E-09
24	8.40	0.	2.45E-12	2.90E-11	0.	0.	0.	1.53E-10	1.11E-11	2.35E-09	1.97E-09	4.52E-09
25	8.30	0.	2.41E-12	2.24E-11	0.	0.	0.	1.54E-10	1.15E-11	2.35E-09	1.98E-09	4.52E-09
26	8.20	0.	2.35E-12	2.19E-11	0.	0.	0.	1.54E-10	1.19E-11	2.34E-09	2.00E-09	4.53E-09
27	8.10	0.	2.27E-12	1.72E-11	0.	0.	0.	1.55E-10	1.24E-11	2.33E-09	2.02E-09	4.54E-09
28	8.00	0.	2.20E-12	1.67E-11	0.	0.	0.	1.56E-10	1.29E-11	2.33E-09	2.04E-09	4.55E-09
29	7.90	0.	2.12E-12	1.31E-11	0.	0.	0.	1.57E-10	1.34E-11	2.32E-09	2.06E-09	4.56E-09
30	7.80	0.	2.04E-12	1.30E-11	0.	0.	0.	1.58E-10	1.39E-11	2.32E-09	2.08E-09	4.58E-09
31	7.70	0.	1.95E-12	1.05E-11	0.	0.	0.	1.58E-10	1.44E-11	2.31E-09	2.10E-09	4.59E-09
32	7.60	0.	1.86E-12	9.43E-12	0.	6.37E-16	0.	1.59E-10	1.50E-11	2.31E-09	2.12E-09	4.61E-09
33	7.50	0.	1.77E-12	8.09E-12	0.	3.66E-15	0.	1.60E-10	1.56E-11	2.30E-09	2.14E-09	4.62E-09
34	7.40	0.	1.68E-12	6.83E-12	0.	1.67E-14	0.	1.61E-10	1.63E-11	2.30E-09	2.16E-09	4.64E-09
35	7.30	0.	1.59E-12	6.05E-12	0.	8.97E-14	0.	1.62E-10	1.69E-11	2.29E-09	2.17E-09	4.66E-09
36	7.20	0.	1.49E-12	5.09E-12	0.	2.46E-13	0.	1.63E-10	1.77E-11	2.29E-09	2.19E-09	4.67E-09
37	7.10	0.	1.39E-12	4.58E-12	0.	6.02E-13	0.	1.64E-10	1.84E-11	2.29E-09	2.21E-09	4.69E-09
38	7.00	1.54E-15	0.	3.91E-12	0.	1.80E-12	0.	1.65E-10	1.92E-11	2.28E-09	2.23E-09	4.70E-09
39	6.90	2.58E-15	0	3.35E-12	0.	1.68E-12	0.	1.67E-10	2.01E-11	2.28E-09	2.25E-09	4.72E-09
40	6.80	2.37E-15	0.	2.99E-12	0.	3.68E-12	0.	1.68E-10	2.10E-11	2.27E-09	2.27E-09	4.74E-09
41	6.70	1.64E-15	0.	2.43E-12	0.	4.80E-12	0.	1.69E-10	2.19E-11	2.27E-09	2.29E-09	4.76E-09
42	6.60	9.59E-16	0	2.02E-12	0.	2.65E-12	0.	1.71E-10	2.30E-11	2.27E-09	2.32E-09	4.78E-09
43	6.50	5.25E-16	0.	1.46E-12	0.	5.00E-12	0.	1.72E-10	2.40E-11	2.28E-09	2.34E-09	4.81E-09
44	6.40	7.28E-16	0.	8.88E-13	3.42E-14	6.17E-12	0.	1.73E-10	2.52E-11	2.28E-09	2.36E-09	4.84E-09
45	6.30	1.50E-15	0.	4.79E-13	1.47E-13	2.99E-12	0.	1.75E-10	2.64E-11	2.29E-09	2.39E-09	4.88E-09
46	6.20	4.39E-15	0.	2.33E-13	1.92E-13	4.59E-12	0.	1.76E-10	2.77E-11	2.29E-09	2.43E-09	4.93E-09
47	6.10	1.72E-14	0.	9.09E-14	5.20E-13	7.42E-12	0.	1.77E-10	2.91E-11	2.31E-09	2.47E-09	5.00E-09
48	6.00	4.43E-14	0.	2.28E-14	4.32E-13	2.61E-12	0.	1.79E-10	3.06E-11	2.33E-09	2.52E-09	5.06E-09
49	5.90	7.02E-14	0.	1.61E-15	6.07E-13	7.83E-12	0.	1.79E-10	3.22E-11	2.35E-09	2.56E-09	5.12E-09
50	5.80	1.04E-13	0.	3.98E-17	8.10E-13	2.66E-12	0.	1.76E-10	3.39E-11	2.37E-09	2.60E-09	5.18E-09
51	5.70	1.20E-13	0.	0.	8.66E-13	2.76E-12	0.	1.69E-10	3.57E-11	2.38E-09	2.65E-09	5.24E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	H P.E.	O P.E.	TOTAL AIR
52	5.60	1.47E-13	0.	0.	0.	6.39E-13	4.51E-12	0.	0.	1.54E-10	3.73E-11	2.41E-09	2.89E-09	5.29E-09
53	5.50	1.51E-13	0.	0.	0.	7.68E-13	4.40E-12	0.	0.	1.55E-10	3.97E-11	2.43E-09	2.74E-09	5.17E-09
54	5.40	1.56E-13	0.	0.	0.	6.59E-13	2.81E-12	0.	0.	1.55E-10	4.20E-11	2.47E-09	2.78E-09	5.25E-09
55	5.30	1.48E-13	0.	0.	0.	6.78E-13	4.25E-12	0.	0.	1.56E-10	4.44E-11	2.50E-09	2.84E-09	5.35E-09
56	5.20	1.03E-13	0.	0.	0.	6.99E-13	2.38E-12	0.	0.	1.57E-10	4.70E-11	2.54E-09	2.90E-09	5.45E-09
57	5.10	9.50E-14	0.	0.	0.	6.75E-13	3.28E-12	0.	0.	1.59E-10	4.98E-11	2.60E-09	2.97E-09	5.59E-09
58	5.00	6.94E-14	0.	0.	0.	5.87E-13	2.81E-12	0.	0.	1.60E-10	5.29E-11	2.67E-09	3.04E-09	5.93E-09
59	4.90	5.78E-14	0.	0.	0.	6.26E-13	2.76E-12	0.	0.	1.61E-10	5.62E-11	2.75E-09	3.11E-09	6.07E-09
60	4.80	5.80E-14	0.	0.	0.	6.55E-13	2.53E-12	0.	0.	1.63E-10	5.99E-11	2.82E-09	3.18E-09	6.22E-09
61	4.70	6.18E-14	0.	0.	0.	6.18E-13	2.10E-12	0.	0.	1.64E-10	6.38E-11	2.89E-09	3.26E-09	6.37E-09
62	4.60	7.18E-14	0.	0.	0.	6.12E-13	1.97E-12	0.	0.	1.65E-10	6.81E-11	2.97E-09	3.34E-09	6.54E-09
63	4.50	7.08E-14	0.	1.12E-13	0.	5.23E-13	1.38E-12	0.	0.	1.67E-10	7.27E-11	3.07E-09	3.42E-09	6.73E-09
64	4.40	7.05E-14	0.	4.22E-13	0.	5.06E-13	1.03E-12	0.	0.	1.68E-10	7.78E-11	3.18E-09	3.50E-09	6.92E-09
65	4.30	6.23E-14	0.	9.74E-13	0.	4.53E-13	5.70E-13	0.	0.	1.69E-10	8.34E-11	3.28E-09	3.47E-09	7.01E-09
66	4.20	5.54E-14	0.	4.16E-12	0.	4.65E-13	4.63E-13	0.	0.	1.71E-10	8.95E-11	3.39E-09	4.68E-10	4.12E-09
67	4.10	4.94E-14	0.	1.21E-12	0.	4.24E-13	1.13E-13	0.	0.	1.71E-10	9.62E-11	2.66E-09	4.83E-10	3.41E-09
68	4.00	4.30E-14	0.	5.80E-12	0.	3.90E-13	8.98E-14	0.	0.	1.72E-10	1.04E-10	2.05E-09	4.97E-10	2.83E-09
69	3.90	3.40E-14	0.	2.57E-12	2.87E-11	3.28E-13	3.97E-14	0.	0.	1.73E-10	1.12E-10	2.11E-09	5.11E-10	2.93E-09
70	3.80	3.62E-14	0.	3.51E-12	2.22E-10	3.45E-13	0.	0.	0.	1.73E-10	1.21E-10	1.76E-09	5.27E-10	2.80E-09
71	3.70	2.93E-14	0.	4.79E-12	4.74E-11	2.61E-13	0.	0.	0.	1.68E-10	1.31E-10	1.83E-09	5.95E-10	2.77E-09
72	3.60	2.51E-14	0	2.33E-12	3.09E-10	2.85E-13	0.	0.	0.	1.57E-10	1.42E-10	2.02E-09	6.74E-10	3.30E-09
73	3.50	2.20E-14	0.	3.79E-12	1.03E-09	1.99E-13	0.	0.	0.	1.44E-10	1.55E-10	2.20E-09	7.58E-10	4.37E-09
74	3.40	1.86E-14	0.	1.76E-12	6.64E-11	2.20E-13	0.	0.	0.	9.31E-11	1.69E-10	2.58E-09	8.49E-10	3.75E-09
75	3.30	1.43E-14	0.	1.96E-12	4.02E-10	1.59E-13	0.	0.	0.	9.32E-11	1.85E-10	2.88E-09	9.40E-10	4.49E-09
76	3.20	1.15E-14	0.	1.08E-12	1.12E-09	1.60E-13	0.	0.	0.	8.34E-11	2.03E-10	3.18E-09	1.03E-09	5.62E-09
77	3.10	1.04E-14	0.	8.23E-13	1.04E-10	1.40E-13	0.	0.	0.	8.36E-11	2.24E-10	3.49E-09	1.13E-09	5.03E-09
78	3.00	8.60E-15	0.	4.58E-13	4.05E-10	1.22E-13	0.	0.	0.	8.38E-11	2.47E-10	3.80E-09	1.22E-09	5.76E-09
79	2.90	6.66E-15	0.	2.66E-13	2.80E-10	8.24E-14	0.	0.	0.	8.39E-11	2.73E-10	4.11E-09	1.32E-09	6.07E-09
80	2.80	6.57E-15	0.	1.24E-13	9.14E-11	4.87E-14	0.	0.	0.	8.40E-11	3.04E-10	4.45E-09	1.37E-09	6.30E-09
81	2.70	3.76E-15	0.	5.67E-14	1.98E-10	2.27E-14	0.	0.	0.	8.40E-11	3.39E-10	4.80E-09	4.49E-10	5.87E-09
82	2.60	1.53E-15	0.	2.89E-14	1.76E-11	8.69E-15	0.	0.	0.	8.40E-11	3.80E-10	2.23E-09	4.87E-10	3.20E-09
83	2.50	1.01E-16	0.	3.78E-15	1.34E-11	1.88E-15	0.	0.	0.	8.40E-11	4.28E-10	2.66E-09	5.60E-10	3.75E-09
84	2.40	0.	2.33E-13	0.	1.59E-11	1.18E-16	0.	0.	0.	8.40E-11	4.84E-10	3.32E-09	6.90E-10	4.59E-09
85	2.30	0.	1.11E-12	0.	0.	0.	0.	0.	0.	8.34E-11	5.51E-10	4.02E-09	8.26E-10	5.45E-09
86	2.20	0.	2.29E-12	0.	0.	0.	0.	0.	0.	8.30E-11	6.30E-10	4.75E-09	9.96E-10	6.46E-09
87	2.10	0.	3.37E-12	0.	0.	0.	0.	0.	0.	8.27E-11	7.26E-10	5.53E-09	1.17E-09	7.51E-09
88	2.00	0.	5.34E-12	0.	0.	0.	0.	0.	0.	8.00E-11	8.31E-10	6.31E-09	1.34E-09	8.58E-09
89	1.90	0.	1.10E-11	0.	0.	0.	0.	0.	0.	7.70E-11	9.82E-10	7.13E-09	1.51E-09	9.71E-09
90	1.80	0.	9.00E-12	0.	0.	0.	0.	0.	0.	7.36E-11	1.16E-09	8.36E-09	1.79E-09	1.14E-08
91	1.70	0.	1.09E-11	0.	0.	0.	0.	0.	0.	6.94E-11	1.37E-09	9.87E-09	2.14E-09	1.35E-08
92	1.60	0.	7.57E-12	0.	0.	0.	0.	0.	0.	5.87E-11	1.65E-09	1.02E-08	2.31E-09	1.42E-08
93	1.50	0.	9.37E-12	0.	0.	0.	0.	0.	0.	2.67E-11	2.01E-09	1.29E-08	2.74E-09	1.76E-08
94	1.40	0.	1.00E-11	0.	0.	0.	0.	0.	0.	0.	2.48E-09	9.46E-09	2.07E-09	1.48E-08
95	1.30	0.	7.32E-12	0.	0.	0.	0.	0.	0.	0.	3.13E-09	1.35E-08	2.93E-09	1.95E-08
96	1.20	0.	7.52E-12	0.	0.	0.	0.	0.	0.	0.	3.93E-09	1.88E-08	3.42E-09	2.59E-08
97	1.10	0.	6.08E-12	0.	0.	0.	0.	4.24E-17	0.	0.	5.15E-09	2.19E-08	4.35E-09	3.18E-08
98	1.00	0.	5.64E-12	0.	0.	0.	0.	3.48E-16	0.	0.	6.89E-09	2.60E-08	5.20E-09	3.42E-08
99	0.90	0.	4.54E-12	0.	0.	0.	0.	4.44E-16	0.	0.	9.49E-09	3.80E-08	6.12E-09	4.56E-08
100	0.80	0.	2.10E-12	0.	0.	0.	0.	7.15E-15	0.	0.	1.36E-08	2.96E-08	4.92E-09	4.81E-08
101	0.70	0.	5.60E-13	0.	0.	0.	0.	4.73E-15	0.	0.	2.05E-08	2.97E-08	5.66E-09	5.59E-08
102	0.60	0.	3.07E-14	0.	0.	0.	0.	1.94E-14	0.	0.	3.29E-08	3.19E-08	6.39E-09	7.27E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9680. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-R NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.F.	O P.F.	TOTAL AIR
1	10.70	0.	0.	1.11E-12	0.	0.	0.	1.83E-12	2.74E-13	4.34E-10	1.11E-10	5.40E-10
2	10.60	0.	0.	9.37E-13	0.	0.	0.	1.84E-12	2.82E-13	4.36E-10	1.11E-10	5.41E-10
3	10.50	0.	0.	9.07E-13	0.	0.	0.	1.84E-12	2.91E-13	4.38E-10	1.11E-10	5.43E-10
4	10.40	0.	0.	8.07E-13	0.	0.	0.	1.84E-12	2.99E-13	4.40E-10	1.11E-10	5.44E-10
5	10.30	0.	0.	6.98E-13	0.	0.	0.	1.84E-12	3.08E-13	4.41E-10	1.11E-10	5.45E-10
6	10.20	0.	0.	6.45E-13	0.	0.	0.	1.85E-12	3.17E-13	4.42E-10	1.11E-10	5.46E-10
7	10.10	0.	0.	5.79E-13	0.	0.	0.	1.85E-12	3.27E-13	4.43E-10	1.11E-10	5.47E-10
8	10.00	0.	0.	5.32E-13	0.	0.	0.	1.85E-12	3.37E-13	4.44E-10	1.11E-10	5.48E-10
9	9.90	0.	0.	4.66E-13	0.	0.	0.	1.86E-12	3.47E-13	4.46E-10	1.11E-10	5.48E-10
10	9.80	0.	0.	4.04E-13	0.	0.	0.	1.86E-12	3.58E-13	4.47E-10	1.11E-10	5.49E-10
11	9.70	0.	0.	3.22E-13	0.	0.	0.	1.86E-12	3.69E-13	4.48E-10	1.11E-10	5.50E-10
12	9.60	0.	0.	2.49E-13	0.	0.	0.	1.87E-12	3.81E-13	4.49E-10	1.11E-10	5.50E-10
13	9.50	0.	8.91E-14	2.68E-13	0.	0.	0.	1.87E-12	3.93E-13	4.50E-10	1.11E-10	5.64E-10
14	9.40	0.	3.78E-15	2.36E-13	0.	0.	0.	1.88E-12	4.06E-13	1.21E-10	1.11E-10	2.35E-10
15	9.30	0.	4.44E-15	2.37E-13	0.	0.	0.	1.88E-12	4.19E-13	1.21E-10	1.11E-10	2.35E-10
16	9.20	0.	5.20E-15	1.74E-13	0.	0.	0.	1.89E-12	4.33E-13	1.21E-10	1.11E-10	2.34E-10
17	9.10	0.	6.23E-15	1.76E-13	0.	0.	0.	1.90E-12	4.47E-13	1.20E-10	1.11E-10	2.34E-10
18	9.00	0.	7.36E-15	1.44E-13	0.	0.	0.	1.90E-12	4.62E-13	1.20E-10	1.11E-10	2.34E-10
19	8.90	0.	8.74E-15	1.06E-13	0.	0.	0.	1.91E-12	4.78E-13	1.20E-10	1.11E-10	2.33E-10
20	8.80	0.	8.58E-15	1.22E-13	0.	0.	0.	1.92E-12	4.95E-13	1.19E-10	1.11E-10	2.33E-10
21	8.70	0.	8.39E-15	9.53E-14	0.	0.	0.	1.92E-12	5.12E-13	1.19E-10	1.11E-10	2.33E-10
22	8.60	0.	8.07E-15	9.63E-14	0.	0.	0.	1.93E-12	5.30E-13	1.19E-10	1.11E-10	2.32E-10
23	8.50	0.	7.83E-15	7.62E-14	0.	0.	0.	1.94E-12	5.49E-13	1.19E-10	1.11E-10	2.32E-10
24	8.40	0.	7.71E-15	7.83E-14	0.	0.	0.	1.95E-12	5.69E-13	1.18E-10	1.11E-10	2.32E-10
25	8.30	0.	7.49E-15	5.64E-14	0.	0.	0.	1.96E-12	5.90E-13	1.18E-10	1.11E-10	2.32E-10
26	8.20	0.	7.42E-15	5.52E-14	0.	0.	0.	1.97E-12	6.12E-13	1.18E-10	1.13E-10	2.33E-10
27	8.10	0.	7.18E-15	4.39E-14	0.	0.	0.	1.98E-12	6.35E-13	1.17E-10	1.14E-10	2.33E-10
28	8.00	0.	6.95E-15	4.20E-14	0.	0.	0.	1.99E-12	6.59E-13	1.17E-10	1.15E-10	2.34E-10
29	7.90	0.	6.78E-15	3.32E-14	0.	0.	0.	2.00E-12	6.85E-13	1.17E-10	1.16E-10	2.35E-10
30	7.80	0.	6.45E-15	3.20E-14	0.	0.	0.	2.01E-12	7.11E-13	1.16E-10	1.17E-10	2.36E-10
31	7.70	0.	6.17E-15	2.66E-14	0.	0.	0.	2.02E-12	7.40E-13	1.16E-10	1.18E-10	2.37E-10
32	7.60	0.	5.88E-15	2.38E-14	0.	1.60E-18	0.	2.03E-12	7.69E-13	1.16E-10	1.19E-10	2.38E-10
33	7.50	0.	5.58E-15	2.04E-14	0.	1.03E-17	0.	2.04E-12	8.01E-13	1.16E-10	1.20E-10	2.39E-10
34	7.40	0.	5.30E-15	1.72E-14	0.	4.70E-17	0.	2.05E-12	8.34E-13	1.15E-10	1.21E-10	2.40E-10
35	7.30	0.	5.02E-15	1.53E-14	0.	2.53E-16	0.	2.06E-12	8.69E-13	1.15E-10	1.22E-10	2.41E-10
36	7.20	0.	4.71E-15	1.28E-14	0.	6.95E-16	0.	2.07E-12	9.05E-13	1.15E-10	1.23E-10	2.41E-10
37	7.10	0.	4.39E-15	1.16E-14	0.	1.70E-15	0.	2.09E-12	9.44E-13	1.15E-10	1.25E-10	2.42E-10
38	7.00	4.67E-18	0.	9.87E-15	0.	5.09E-15	0.	2.11E-12	9.86E-13	1.15E-10	1.26E-10	2.43E-10
39	6.90	9.11E-18	0.	8.46E-15	0.	4.73E-15	0.	2.12E-12	1.03E-12	1.14E-10	1.27E-10	2.44E-10
40	6.80	7.51E-18	0.	7.55E-15	0.	1.04E-14	0.	2.14E-12	1.08E-12	1.14E-10	1.28E-10	2.45E-10
41	6.70	5.20E-18	0.	6.13E-15	0.	1.36E-14	0.	2.16E-12	1.13E-12	1.14E-10	1.29E-10	2.46E-10
42	6.60	3.04E-18	0.	5.10E-15	0.	7.48E-15	0.	2.17E-12	1.18E-12	1.14E-10	1.30E-10	2.48E-10
43	6.50	1.66E-18	0.	3.70E-15	0.	1.41E-14	0.	2.19E-12	1.23E-12	1.14E-10	1.31E-10	2.49E-10
44	6.40	2.31E-18	0.	2.24E-15	9.65E-17	1.74E-14	0.	2.21E-12	1.29E-12	1.15E-10	1.33E-10	2.51E-10
45	6.30	4.76E-18	0.	1.21E-15	4.14E-16	8.25E-15	0.	2.23E-12	1.35E-12	1.15E-10	1.34E-10	2.53E-10
46	6.20	1.39E-17	0.	5.88E-16	5.42E-16	1.30E-14	0.	2.24E-12	1.42E-12	1.15E-10	1.37E-10	2.56E-10
47	6.10	5.46E-17	0.	2.45E-16	1.47E-15	2.10E-14	0.	2.26E-12	1.49E-12	1.16E-10	1.39E-10	2.59E-10
48	6.00	1.40E-16	0.	5.74E-17	1.22E-15	7.36E-15	0.	2.28E-12	1.57E-12	1.17E-10	1.42E-10	2.62E-10
49	5.90	2.22E-16	0.	4.07E-18	1.72E-15	8.00E-15	0.	2.28E-12	1.65E-12	1.18E-10	1.44E-10	2.66E-10
50	5.80	3.30E-16	0.	9.97E-20	2.29E-15	7.51E-15	0.	2.24E-12	1.74E-12	1.19E-10	1.47E-10	2.69E-10
51	5.70	3.79E-16	0.	0.	2.45E-15	7.80E-15	0.	2.11E-12	1.83E-12	1.20E-10	1.49E-10	2.73E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
52	5.60	4.66E-16	0.	0.	0.	1.81E-15	1.28E-14	0.	0.	1.96E-12	1.93E-12	1.21E-10	1.51E-10	2.76E-10
53	5.50	4.77E-16	0.	0.	0.	2.23E-15	1.24E-14	0.	0.	1.87E-12	2.04E-12	1.22E-10	1.54E-10	2.80E-10
54	5.40	4.93E-16	0.	0.	0.	1.86E-15	7.94E-15	0.	0.	1.98E-12	2.15E-12	1.24E-10	1.57E-10	2.85E-10
55	5.30	4.68E-16	0.	0.	0.	1.92E-15	1.20E-14	0.	0.	1.99E-12	2.28E-12	1.26E-10	1.60E-10	2.90E-10
56	5.20	3.27E-16	0.	0.	0.	1.98E-15	6.73E-15	0.	0.	2.00E-12	2.41E-12	1.28E-10	1.63E-10	2.96E-10
57	5.10	3.01E-16	0.	0.	0.	1.91E-15	9.26E-15	0.	0.	2.02E-12	2.55E-12	1.31E-10	1.67E-10	3.03E-10
58	5.00	3.20E-16	0.	0.	0.	1.66E-15	7.95E-15	0.	0.	2.04E-12	2.71E-12	1.34E-10	1.71E-10	3.10E-10
59	4.90	1.83E-16	0.	0.	0.	1.77E-15	7.79E-15	0.	0.	2.06E-12	2.88E-12	1.38E-10	1.75E-10	3.18E-10
60	4.80	1.83E-16	0.	0.	0.	1.85E-15	7.14E-15	0.	0.	2.07E-12	3.07E-12	1.41E-10	1.79E-10	3.25E-10
61	4.70	1.96E-16	0.	0.	0.	1.75E-15	5.93E-15	0.	0.	2.09E-12	3.27E-12	1.45E-10	1.83E-10	3.34E-10
62	4.60	2.27E-16	0.	0.	0.	1.73E-15	5.57E-15	0.	0.	2.11E-12	3.49E-12	1.49E-10	1.88E-10	3.43E-10
63	4.50	2.24E-16	0.	2.83E-16	0.	1.48E-15	3.90E-15	0.	0.	2.12E-12	3.73E-12	1.54E-10	1.92E-10	3.52E-10
64	4.40	2.23E-16	0.	1.06E-15	0.	1.43E-15	2.91E-15	0.	0.	2.14E-12	3.99E-12	1.60E-10	1.96E-10	3.62E-10
65	4.30	1.97E-16	0.	2.46E-15	0.	1.28E-15	1.61E-15	0.	0.	2.16E-12	4.27E-12	1.65E-10	2.56E-11	1.97E-10
66	4.20	1.76E-16	0.	1.05E-14	0.	1.31E-15	1.31E-15	0.	0.	2.17E-12	4.59E-12	1.30E-10	2.64E-11	1.63E-10
67	4.10	1.56E-16	0.	3.04E-15	0.	1.20E-15	3.33E-16	0.	0.	2.18E-12	4.93E-12	1.33E-10	2.72E-11	1.67E-10
68	4.00	1.36E-16	0.	1.46E-14	0.	1.18E-15	2.54E-16	0.	0.	2.19E-12	5.31E-12	1.03E-10	2.80E-11	1.30E-10
69	3.90	1.08E-16	0.	6.49E-15	3.20E-13	9.28E-16	1.12E-16	0.	0.	2.18E-12	5.74E-12	1.06E-10	2.88E-11	1.43E-10
70	3.80	1.15E-16	0.	8.85E-15	2.47E-12	9.79E-16	0.	0.	0.	2.17E-12	6.20E-12	8.82E-11	2.96E-11	1.29E-10
71	3.70	9.27E-17	0.	1.21E-14	5.78E-13	7.58E-16	0.	0.	0.	2.14E-12	6.72E-12	9.27E-11	3.35E-11	1.35E-10
72	3.60	7.94E-17	0.	5.88E-15	3.43E-12	8.34E-16	0.	0.	0.	2.08E-12	7.30E-12	1.01E-10	3.79E-11	1.52E-10
73	3.50	6.97E-17	0.	9.46E-15	1.15E-11	5.62E-16	0.	0.	0.	1.83E-12	7.95E-12	1.15E-10	4.26E-11	1.79E-10
74	3.40	5.90E-17	0.	4.44E-15	7.40E-13	6.21E-16	0.	0.	0.	1.06E-12	8.68E-12	1.30E-10	4.73E-11	1.88E-10
75	3.30	4.53E-17	0.	4.95E-15	4.48E-12	4.48E-16	0.	0.	0.	1.06E-12	9.50E-12	1.45E-10	5.29E-11	2.13E-10
76	3.20	3.66E-17	0.	2.68E-15	1.24E-11	4.53E-16	0.	0.	0.	1.06E-12	1.04E-11	1.68E-10	5.82E-11	2.42E-10
77	3.10	3.28E-17	0.	2.08E-15	1.16E-12	3.97E-16	0.	0.	0.	1.06E-12	1.15E-11	1.75E-10	6.36E-11	2.53E-10
78	3.00	2.72E-17	0.	1.13E-15	4.51E-12	3.45E-16	0.	0.	0.	1.07E-12	1.26E-11	1.91E-10	6.89E-11	2.78E-10
79	2.90	2.11E-17	0.	6.71E-16	3.12E-12	2.33E-16	0.	0.	0.	1.67E-12	1.40E-11	2.06E-10	7.43E-11	2.99E-10
80	2.80	2.08E-17	0.	3.12E-16	1.07E-12	1.36E-16	0.	0.	0.	1.07E-12	1.56E-11	2.23E-10	7.73E-11	3.18E-10
81	2.70	1.19E-17	0.	1.43E-16	2.21E-12	6.42E-17	0.	0.	0.	1.07E-12	1.74E-11	2.41E-10	2.53E-11	2.87E-10
82	2.60	4.89E-18	0.	7.30E-17	2.08E-13	2.45E-17	0.	0.	0.	1.07E-12	1.95E-11	1.12E-10	2.74E-11	1.68E-10
83	2.50	3.20E-19	0.	9.52E-18	1.49E-13	5.35E-19	0.	0.	0.	1.07E-12	2.19E-11	1.34E-10	3.15E-11	1.88E-10
84	2.40	0.	5.89E-16	0.	1.77E-13	5.32E-19	0.	0.	0.	1.07E-12	2.48E-11	1.67E-10	3.88E-11	2.32E-10
85	2.30	0.	2.79E-15	0.	0.	0.	0.	0.	0.	1.06E-12	2.82E-11	2.82E-10	4.65E-11	2.78E-10
86	2.20	0.	5.70E-15	0.	0.	0.	0.	0.	0.	1.06E-12	3.23E-11	2.39E-10	5.61E-11	3.28E-10
87	2.10	0.	8.51E-15	0.	0.	0.	0.	0.	0.	1.05E-12	3.72E-11	2.78E-10	6.56E-11	3.82E-10
88	2.00	0.	1.36E-14	0.	0.	0.	0.	0.	0.	1.02E-12	4.31E-11	3.17E-10	7.52E-11	4.37E-10
89	1.90	0.	2.78E-14	0.	0.	0.	0.	0.	0.	9.81E-13	5.03E-11	3.58E-10	8.58E-11	4.95E-10
90	1.80	0.	2.27E-14	0.	0.	0.	0.	0.	0.	9.38E-13	5.93E-11	4.28E-10	1.01E-10	5.81E-10
91	1.70	0.	2.75E-14	0.	0.	0.	0.	0.	0.	8.84E-13	7.05E-11	4.96E-10	1.11E-10	6.78E-10
92	1.60	0.	1.91E-14	0.	0.	0.	0.	0.	0.	7.48E-13	8.47E-11	5.13E-10	1.30E-10	7.28E-10
93	1.50	0.	2.36E-14	0.	0.	0.	0.	0.	0.	3.40E-13	1.03E-10	3.58E-10	8.78E-11	5.49E-10
94	1.40	0.	2.53E-14	0.	0.	0.	0.	0.	0.	0.	1.27E-10	4.42E-10	1.16E-10	7.06E-10
95	1.30	0.	1.85E-14	0.	0.	0.	0.	0.	0.	0.	1.59E-10	6.76E-10	1.48E-10	9.75E-10
96	1.20	0.	1.90E-14	0.	0.	0.	0.	0.	0.	0.	2.03E-10	8.56E-10	1.93E-10	1.25E-09
97	1.10	0.	1.53E-14	0.	0.	0.	0.	1.20E-19	0.	0.	2.64E-10	1.08E-09	2.45E-10	1.59E-09
98	1.00	0.	1.43E-14	0.	0.	0.	0.	9.84E-19	0.	0.	3.53E-10	1.31E-09	2.97E-10	1.96E-09
99	0.90	0.	1.15E-14	0.	0.	0.	0.	1.26E-18	0.	0.	4.84E-10	1.51E-09	3.44E-10	2.34E-09
100	0.80	0.	5.31E-15	0.	0.	0.	0.	2.02E-17	0.	0.	6.96E-10	1.31E-09	2.77E-10	2.28E-09
101	0.70	0.	1.41E-15	0.	0.	0.	0.	1.34E-17	0.	0.	1.05E-09	1.49E-09	3.18E-10	2.86E-09
102	0.60	0.	7.74E-17	0.	0.	0.	0.	5.48E-17	0.	0.	1.69E-09	1.68E-09	3.60E-10	3.73E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10500. DENSITY (GM/CC) 1.203E-02 1.0E 01 NORMAL

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.89E 01	0.	0.	0.	4.39E-01	8.04E-05	2.41E 01	8.27E-03	5.41E 01
2	10.60	0.	0.	2.62E 01	0.	0.	0.	4.68E-01	8.93E-05	1.46E-02	8.27E-03	2.47E 01
3	10.50	0.	0.	2.56E 01	0.	0.	0.	4.68E-01	9.19E-05	1.61E-02	8.26E-03	2.41E 01
4	10.40	0.	0.	2.31E 01	0.	0.	0.	4.61E-01	9.44E-05	1.62E-02	8.25E-03	2.35E 01
5	10.30	0.	0.	1.98E 01	0.	0.	0.	4.61E-01	9.73E-05	1.62E-02	8.23E-03	1.95E 01
6	10.20	0.	0.	1.89E 01	0.	0.	0.	4.62E-01	10.00E-05	1.63E-02	8.24E-03	1.84E 01
7	10.10	0.	0.	1.71E 01	0.	0.	0.	4.63E-01	1.03E-04	1.63E-02	8.23E-03	1.76E 01
8	10.00	0.	0.	1.30E 01	0.	0.	0.	4.63E-01	1.06E-04	1.64E-02	8.22E-03	1.44E 01
9	9.90	0.	0.	1.41E 01	0.	0.	0.	4.64E-01	1.10E-04	1.64E-02	8.22E-03	1.44E 01
10	9.80	0.	0.	1.25E 01	0.	0.	0.	4.65E-01	1.13E-04	1.64E-02	8.21E-03	1.30E 01
11	9.70	0.	0.	1.01E 01	0.	0.	0.	4.66E-01	1.17E-04	1.65E-02	8.20E-03	1.06E 01
12	9.60	0.	0.	1.08E 01	0.	0.	0.	4.67E-01	1.20E-04	1.65E-02	8.20E-03	1.13E 01
13	9.50	0.	5.36E-01	8.56E 00	0.	0.	0.	4.68E-01	1.24E-04	1.66E-02	8.19E-03	9.59E 00
14	9.40	0.	7.23E-01	7.66E 00	0.	0.	0.	4.69E-01	1.28E-04	1.66E-02	8.18E-03	8.68E 00
15	9.30	0.	9.03E-01	7.73E 00	0.	0.	0.	4.71E-01	1.32E-04	1.67E-02	8.17E-03	9.13E 00
16	9.20	0.	1.10E 00	5.81E 00	0.	0.	0.	4.73E-01	1.37E-04	1.67E-02	8.17E-03	7.49E 00
17	9.10	0.	1.31E 00	5.94E 00	0.	0.	0.	4.74E-01	1.41E-04	4.59E-03	8.16E-03	7.73E 00
18	9.00	0.	1.52E 00	5.07E 00	0.	0.	0.	4.76E-01	1.46E-04	4.58E-03	8.15E-03	7.00E 00
19	8.90	0.	1.73E 00	4.42E 00	0.	0.	0.	4.78E-01	1.51E-04	4.57E-03	8.15E-03	6.44E 00
20	8.80	0.	1.79E 00	4.23E 00	0.	0.	0.	4.79E-01	1.56E-04	4.56E-03	8.14E-03	6.51E 00
21	8.70	0.	1.72E 00	3.39E 00	0.	0.	0.	4.81E-01	1.62E-04	4.56E-03	8.13E-03	5.60E 00
22	8.60	0.	1.66E 00	3.43E 00	0.	0.	0.	4.83E-01	1.68E-04	4.55E-03	8.13E-03	5.58E 00
23	8.50	0.	1.62E 00	2.77E 00	0.	0.	0.	4.85E-01	1.74E-04	4.54E-03	8.12E-03	4.89E 00
24	8.40	0.	1.60E 00	2.66E 00	0.	0.	0.	4.87E-01	1.80E-04	4.53E-03	8.12E-03	4.79E 00
25	8.30	0.	1.59E 00	2.11E 00	0.	0.	0.	4.90E-01	1.87E-04	4.53E-03	8.14E-03	4.20E 00
26	8.20	0.	1.56E 00	2.08E 00	0.	0.	0.	4.92E-01	1.94E-04	4.52E-03	8.20E-03	4.14E 00
27	8.10	0.	1.51E 00	1.67E 00	0.	0.	0.	4.95E-01	2.01E-04	4.50E-03	8.27E-03	3.69E 00
28	8.00	0.	1.46E 00	1.63E 00	0.	0.	0.	4.97E-01	2.08E-04	4.50E-03	8.34E-03	3.66E 00
29	7.90	0.	1.42E 00	1.31E 00	0.	0.	0.	5.00E-01	2.17E-04	4.49E-03	8.41E-03	3.24E 00
30	7.80	0.	1.38E 00	1.31E 00	0.	0.	0.	5.02E-01	2.25E-04	4.49E-03	8.48E-03	3.28E 00
31	7.70	0.	1.33E 00	1.07E 00	0.	0.	0.	5.05E-01	2.34E-04	4.49E-03	8.55E-03	2.92E 00
32	7.60	0.	1.27E 00	9.74E-01	0.	1.44E-04	0.	5.07E-01	2.43E-04	4.49E-03	8.62E-03	2.76E 00
33	7.50	0.	1.20E 00	8.48E-01	0.	7.44E-04	0.	5.10E-01	2.53E-04	4.48E-03	8.69E-03	2.57E 00
34	7.40	0.	1.14E 00	7.25E-01	0.	3.81E-03	0.	5.13E-01	2.64E-04	4.48E-03	8.76E-03	2.40E 00
35	7.30	0.	1.09E 00	6.51E-01	0.	1.94E-02	0.	5.16E-01	2.75E-04	4.48E-03	8.83E-03	2.29E 00
36	7.20	0.	1.03E 00	5.56E-01	0.	5.22E-02	0.	5.19E-01	2.86E-04	4.48E-03	8.89E-03	2.17E 00
37	7.10	0.	9.66E-01	5.08E-01	0.	1.37E-01	0.	5.23E-01	2.99E-04	4.47E-03	8.96E-03	2.15E 00
38	7.00	8.41E-04	0.	4.40E-01	0.	3.75E-01	0.	5.27E-01	3.12E-04	4.47E-03	9.03E-03	1.36E 00
39	6.90	1.59E-03	0.	3.82E-01	0.	3.75E-01	0.	5.31E-01	3.26E-04	4.47E-03	9.10E-03	1.38E 00
40	6.80	1.32E-03	0.	3.47E-01	0.	7.96E-01	0.	5.36E-01	3.40E-04	4.47E-03	9.17E-03	1.69E 00
41	6.70	9.24E-04	0.	2.86E-01	0.	9.79E-01	0.	5.40E-01	3.56E-04	4.46E-03	9.25E-03	1.82E 00
42	6.60	5.44E-04	0.	2.41E-01	0.	5.82E-01	0.	5.44E-01	3.72E-04	4.48E-03	9.33E-03	1.38E 00
43	6.50	3.81E-04	0.	1.78E-01	0.	1.06E 00	0.	5.48E-01	3.90E-04	4.49E-03	9.41E-03	1.80E 00
44	6.40	4.14E-04	0.	1.11E-01	6.31E-03	1.23E 00	0.	5.53E-01	4.08E-04	4.51E-03	9.48E-03	1.91E 00
45	6.30	8.59E-04	0.	6.19E-02	2.76E-02	6.28E-01	0.	5.57E-01	4.28E-04	4.53E-03	9.59E-03	1.29E 00
46	6.20	2.54E-03	0.	3.09E-02	3.67E-02	9.36E-01	0.	5.61E-01	4.49E-04	4.55E-03	9.75E-03	1.61E 00
47	6.10	1.01E-02	0.	1.32E-02	1.00E-01	1.48E 00	0.	5.65E-01	4.71E-04	4.58E-03	9.91E-03	2.18E 00
48	6.00	2.64E-02	0.	3.15E-03	8.59E-02	5.57E-01	0.	5.70E-01	4.95E-04	4.63E-03	1.01E-02	1.26E 00
49	5.90	4.25E-02	0.	2.24E-04	1.22E-01	5.99E-01	0.	5.78E-01	5.21E-04	4.67E-03	1.02E-02	1.34E 00
50	5.80	6.41E-02	0.	9.52E-06	1.64E-01	5.61E-01	0.	5.61E-01	5.49E-04	4.72E-03	1.04E-02	1.36E 00
51	5.70	7.51E-02	0.	0.	1.78E-01	5.97E-01	0.	5.27E-01	5.78E-04	4.76E-03	1.06E-02	1.48E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	9.32E-02	0.	0.	0.	1.35E-01	9.33E-01	0.	0.	4.98E-01	6.10E-04	4.81E-03	1.07E-02	1.66E 00
53	5.50	9.65E-02	0.	0.	0.	1.66E-01	8.94E-01	0.	0.	4.93E-01	6.44E-04	4.88E-03	1.09E-02	1.67E 00
54	5.40	1.01E-01	0.	0.	0.	1.42E-01	6.85E-01	0.	0.	4.95E-01	6.81E-04	4.96E-03	1.11E-02	1.36E 00
55	5.30	9.69E-02	0.	0.	0.	1.46E-01	8.77E-01	0.	0.	4.98E-01	7.20E-04	5.04E-03	1.13E-02	1.64E 00
56	5.20	6.89E-02	0.	0.	0.	1.51E-01	5.21E-01	0.	0.	5.02E-01	7.63E-04	5.13E-03	1.15E-02	1.26E 00
57	5.10	6.40E-02	0.	0.	0.	1.47E-01	7.88E-01	0.	0.	5.06E-01	8.09E-04	5.26E-03	1.12E-02	1.44E 00
58	5.00	4.72E-02	0.	0.	0.	1.30E-01	6.16E-01	0.	0.	5.10E-01	8.59E-04	5.41E-03	1.21E-02	1.32E 00
59	4.90	3.93E-02	0.	0.	0.	1.39E-01	6.20E-01	0.	0.	5.14E-01	9.12E-04	5.56E-03	1.23E-02	1.33E 00
60	4.80	3.93E-02	0.	0.	0.	1.47E-01	5.70E-01	0.	0.	5.19E-01	9.71E-04	5.71E-03	1.26E-02	1.29E 00
61	4.70	4.23E-02	0.	0.	0.	1.40E-01	4.85E-01	0.	0.	5.23E-01	1.03E-03	5.86E-03	1.29E-02	1.21E 00
62	4.60	4.97E-02	0.	0.	0.	1.48E-01	4.51E-01	0.	0.	5.27E-01	1.10E-03	6.05E-03	1.32E-02	1.19E 00
63	4.50	4.97E-02	0.	1.57E-02	0.	1.21E-01	3.23E-01	0.	0.	5.31E-01	1.18E-03	6.28E-03	1.35E-02	1.06E 00
64	4.40	5.02E-02	0.	5.82E-02	0.	1.18E-01	2.36E-01	0.	0.	5.36E-01	1.26E-03	6.50E-03	1.39E-02	1.02E 00
65	4.30	4.50E-02	0.	1.39E-01	0.	1.07E-01	1.35E-01	0.	0.	5.40E-01	1.35E-03	6.74E-03	1.42E-02	9.88E-01
66	4.20	4.04E-02	0.	5.68E-01	0.	1.11E-01	1.06E-01	0.	0.	5.44E-01	1.45E-03	6.98E-03	1.45E-02	1.38E 00
67	4.10	3.64E-02	0.	1.77E-01	0.	1.02E-01	2.74E-02	0.	0.	5.46E-01	1.56E-03	7.21E-03	1.48E-02	9.13E-01
68	4.00	3.21E-02	0.	7.87E-01	0.	9.49E-02	2.10E-02	0.	0.	5.48E-01	1.68E-03	7.45E-03	2.51E-03	1.49E 00
69	3.90	2.58E-02	0.	3.49E-01	3.78E-03	8.15E-02	9.80E-03	0.	0.	5.46E-01	1.82E-03	6.19E-03	2.59E-03	1.03E 00
70	3.80	2.76E-02	0.	4.97E-01	2.58E-02	8.60E-02	0.	0.	0.	5.44E-01	1.96E-03	6.35E-03	2.67E-03	1.19E 00
71	3.70	2.27E-02	0.	6.38E-01	6.19E-03	6.66E-02	0.	0.	0.	5.38E-01	2.13E-03	4.98E-03	3.80E-03	1.28E 00
72	3.60	1.97E-02	0.	3.37E-01	3.95E-02	7.26E-02	0.	0.	0.	5.82E-01	2.31E-03	5.31E-03	3.37E-03	9.81E-01
73	3.50	1.75E-02	0.	9.17E-01	1.18E-01	5.21E-02	0.	0.	0.	4.59E-01	2.52E-03	5.19E-03	3.78E-03	1.18E 00
74	3.40	1.50E-02	0.	2.68E-01	9.09E-03	5.76E-02	0.	0.	0.	2.65E-01	2.75E-03	5.86E-03	4.22E-03	6.28E-01
75	3.30	1.16E-02	0.	2.83E-01	5.81E-02	4.25E-02	0.	0.	0.	2.69E-01	3.01E-03	6.53E-03	4.66E-03	6.66E-01
76	3.20	9.56E-03	0.	1.61E-01	1.25E-01	4.33E-02	0.	0.	0.	2.66E-01	3.30E-03	7.28E-03	5.12E-03	6.28E-01
77	3.10	8.69E-03	0.	1.23E-01	1.42E-02	3.86E-02	0.	0.	0.	2.66E-01	3.63E-03	7.89E-03	5.59E-03	4.68E-01
78	3.00	7.33E-03	0.	6.95E-02	4.99E-02	3.41E-02	0.	0.	0.	2.67E-01	4.01E-03	8.58E-03	6.05E-03	4.46E-01
79	2.90	5.78E-03	0.	4.14E-02	3.26E-02	2.36E-02	0.	0.	0.	2.67E-01	4.44E-03	9.28E-03	6.52E-03	3.91E-01
80	2.80	5.76E-03	0.	1.95E-02	1.23E-02	1.44E-02	0.	0.	0.	2.68E-01	4.94E-03	10.00E-03	7.02E-03	3.42E-01
81	2.70	3.38E-03	0.	8.93E-03	2.43E-02	6.95E-03	0.	0.	0.	2.68E-01	5.51E-03	1.09E-02	7.56E-03	3.35E-01
82	2.60	1.42E-03	0.	4.55E-03	2.27E-03	2.74E-03	0.	0.	0.	2.68E-01	6.18E-03	1.17E-02	8.12E-03	3.05E-01
83	2.50	9.48E-05	0.	5.71E-04	1.77E-03	6.09E-04	0.	0.	0.	2.68E-01	6.96E-03	1.32E-02	9.15E-03	2.94E-01
84	2.40	0.	3.31E-02	0.	1.94E-03	4.19E-05	0.	0.	0.	2.68E-01	7.87E-03	1.52E-02	3.85E-03	3.38E-01
85	2.30	0.	1.44E-01	0.	0.	0.	0.	0.	0.	2.66E-01	8.95E-03	10.00E-03	4.41E-03	4.33E-01
86	2.20	0.	3.11E-01	0.	0.	0.	0.	0.	0.	2.65E-01	1.62E-02	1.18E-02	5.56E-03	6.04E-01
87	2.10	0.	4.27E-01	0.	0.	0.	0.	0.	0.	2.63E-01	1.10E-02	1.38E-02	6.51E-03	7.22E-01
88	2.00	0.	7.14E-01	0.	0.	0.	0.	0.	0.	2.55E-01	1.37E-02	1.57E-02	7.47E-03	1.01E 00
89	1.90	0.	1.33E 00	0.	0.	0.	0.	0.	0.	2.49E-01	1.66E-02	1.78E-02	8.46E-03	1.62E 00
90	1.80	0.	1.08E 00	0.	0.	0.	0.	0.	0.	2.39E-01	1.88E-02	2.05E-02	1.01E-02	1.37E 00
91	1.70	0.	1.31E 00	0.	0.	0.	0.	0.	0.	2.21E-01	2.23E-02	2.48E-02	1.21E-02	1.59E 00
92	1.60	0.	9.16E-01	0.	0.	0.	0.	0.	0.	1.87E-01	2.69E-02	2.86E-02	1.41E-02	1.17E 00
93	1.50	0.	1.12E 00	0.	0.	0.	0.	0.	0.	8.90E-02	3.27E-02	3.57E-02	1.69E-02	1.29E 00
94	1.40	0.	1.18E 00	0.	0.	0.	0.	0.	0.	0.	4.03E-02	4.33E-02	1.96E-02	1.20E 00
95	1.30	0.	8.74E-01	0.	0.	0.	0.	0.	0.	0.	5.05E-02	5.30E-02	2.53E-02	1.00E 00
96	1.20	0.	8.78E-01	0.	0.	0.	0.	0.	0.	0.	6.44E-02	4.98E-02	2.34E-02	1.02E 00
97	1.10	0.	7.35E-01	0.	0.	0.	0.	6.85E-06	0.	0.	3.40E-02	6.15E-02	2.93E-02	9.89E-01
98	1.00	0.	6.81E-01	0.	0.	0.	0.	8.17E-05	0.	0.	1.12E-01	7.41E-02	3.22E-02	8.99E-01
99	0.90	0.	5.51E-01	0.	0.	0.	0.	9.98E-05	0.	0.	1.54E-01	8.35E-02	3.79E-02	8.27E-01
100	0.80	0.	2.57E-01	0.	0.	0.	0.	1.74E-03	0.	0.	2.22E-01	9.59E-02	4.36E-02	6.21E-01
101	0.70	0.	8.70E-02	0.	0.	0.	0.	1.23E-03	0.	0.	3.36E-01	1.06E-01	4.84E-02	5.58E-01
102	0.60	0.	4.69E-03	0.	0.	0.	0.	4.78E-03	0.	0.	5.36E-01	1.18E-01	5.40E-02	7.18E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-H CONT.	N2 B-H NO. 1	NO BETA	AO GAMMA	NO 2	B-F PHOTO-DET	FREE-FREE (log6)	H P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.3.E 00	0.	0.	0.	1.31E-02	5.96E-06	9.11E 00	0.07E-04	4.40E 00
2	10.60	0.	0.	1.18E 00	0.	0.	0.	1.31E-02	5.72E-06	3.40E-03	9.04E-04	1.20E 00
3	10.50	0.	0.	1.15E 00	0.	0.	0.	1.32E-02	5.89E-06	3.42E-03	9.05E-04	1.17E 00
4	10.40	0.	0.	1.04E 00	0.	0.	0.	1.32E-02	6.04E-06	3.43E-03	9.04E-04	1.06E 00
5	10.30	0.	0.	8.55E-01	0.	0.	0.	1.32E-02	6.24E-06	3.44E-03	9.04E-04	8.72E-01
6	10.20	0.	0.	8.58E-01	0.	0.	0.	1.32E-02	6.47E-06	3.45E-03	9.03E-04	8.67E-01
7	10.10	0.	0.	7.71E-01	0.	0.	0.	1.32E-02	6.62E-06	3.46E-03	9.02E-04	7.80E-01
8	10.00	0.	0.	6.27E-01	0.	0.	0.	1.33E-02	6.82E-06	3.47E-03	9.01E-04	6.45E-01
9	9.90	0.	0.	6.34E-01	0.	0.	0.	1.33E-02	7.03E-06	3.48E-03	9.01E-04	6.52E-01
10	9.80	0.	0.	5.64E-01	0.	0.	0.	1.33E-02	7.25E-06	3.49E-03	9.00E-04	5.82E-01
11	9.70	0.	0.	4.54E-01	0.	0.	0.	1.33E-02	7.47E-06	3.49E-03	8.99E-04	4.71E-01
12	9.60	0.	0.	4.87E-01	0.	0.	0.	1.33E-02	7.71E-06	3.50E-03	8.98E-04	5.04E-01
13	9.50	0.	8.58E-03	3.86E-01	0.	0.	0.	1.34E-02	7.96E-06	3.51E-03	8.97E-04	4.10E-01
14	9.40	0.	8.67E-03	3.49E-01	0.	0.	0.	1.34E-02	8.22E-06	3.52E-03	8.96E-04	3.72E-01
15	9.30	0.	1.12E-02	3.48E-01	0.	0.	0.	1.35E-02	8.48E-06	3.53E-03	8.94E-04	3.77E-01
16	9.20	0.	1.35E-02	2.62E-01	0.	0.	0.	1.35E-02	8.77E-06	3.54E-03	8.95E-04	2.93E-01
17	9.10	0.	1.60E-02	2.67E-01	0.	0.	0.	1.36E-02	9.06E-06	9.75E-04	8.94E-04	2.99E-01
18	9.00	0.	1.86E-02	2.28E-01	0.	0.	0.	1.36E-02	9.37E-06	9.72E-04	8.94E-04	2.62E-01
19	8.90	0.	2.13E-02	1.99E-01	0.	0.	0.	1.37E-02	9.69E-06	9.70E-04	8.93E-04	2.36E-01
20	8.80	0.	2.20E-02	1.90E-01	0.	0.	0.	1.37E-02	1.00E-05	9.68E-04	8.92E-04	2.20E-01
21	8.70	0.	2.12E-02	1.92E-01	0.	0.	0.	1.38E-02	1.04E-05	9.66E-04	8.91E-04	1.89E-01
22	8.60	0.	2.04E-02	1.94E-01	0.	0.	0.	1.38E-02	1.07E-05	9.64E-04	8.91E-04	1.90E-01
23	8.50	0.	1.99E-02	1.25E-01	0.	0.	0.	1.39E-02	1.11E-05	9.63E-04	8.90E-04	1.40E-01
24	8.40	0.	1.97E-02	1.21E-01	0.	0.	0.	1.39E-02	1.15E-05	9.61E-04	8.90E-04	1.56E-01
25	8.30	0.	1.95E-02	9.58E-02	0.	0.	0.	1.40E-02	1.19E-05	9.60E-04	8.92E-04	1.30E-01
26	8.20	0.	1.91E-02	9.35E-02	0.	0.	0.	1.41E-02	1.24E-05	9.58E-04	8.99E-04	1.29E-01
27	8.10	0.	1.85E-02	7.51E-02	0.	0.	0.	1.42E-02	1.29E-05	9.55E-04	9.67E-04	1.18E-01
28	8.30	0.	1.80E-02	7.32E-02	0.	0.	0.	1.42E-02	1.34E-05	9.54E-04	9.14E-04	1.07E-01
29	7.90	0.	1.75E-02	5.88E-02	0.	0.	0.	1.43E-02	1.39E-05	9.53E-04	9.22E-04	9.25E-02
30	7.80	0.	1.70E-02	5.89E-02	0.	0.	0.	1.44E-02	1.44E-05	9.52E-04	9.29E-04	9.21E-02
31	7.70	0.	1.63E-02	4.84E-02	0.	0.	0.	1.44E-02	1.50E-05	9.52E-04	9.37E-04	8.10E-02
32	7.60	0.	1.55E-02	4.38E-02	0.	3.36E-06	0.	1.45E-02	1.56E-05	9.51E-04	9.44E-04	7.58E-02
33	7.50	0.	1.48E-02	3.82E-02	0.	1.73E-05	0.	1.46E-02	1.62E-05	9.51E-04	9.52E-04	6.95E-02
34	7.40	0.	1.41E-02	3.26E-02	0.	8.85E-05	0.	1.47E-02	1.69E-05	9.50E-04	9.60E-04	6.34E-02
35	7.30	0.	1.34E-02	2.93E-02	0.	4.51E-04	0.	1.48E-02	1.76E-05	9.50E-04	9.67E-04	5.98E-02
36	7.20	0.	1.26E-02	2.58E-02	0.	1.21E-03	0.	1.48E-02	1.83E-05	9.49E-04	9.75E-04	5.56E-02
37	7.10	0.	1.19E-02	2.28E-02	0.	3.18E-03	0.	1.50E-02	1.91E-05	9.49E-04	9.82E-04	5.48E-02
38	7.00	1.01E-05	0.	1.98E-02	0.	8.71E-03	0.	1.51E-02	2.00E-05	9.48E-04	9.90E-04	4.56E-02
39	6.90	1.91E-05	0.	1.72E-02	0.	8.72E-03	0.	1.52E-02	2.09E-05	9.48E-04	9.97E-04	4.31E-02
40	6.80	1.59E-05	0.	1.56E-02	0.	1.85E-02	0.	1.53E-02	2.18E-05	9.47E-04	10.00E-04	5.14E-02
41	6.70	1.11E-05	0.	1.29E-02	0.	2.28E-02	0.	1.54E-02	2.28E-05	9.47E-04	1.01E-03	5.31E-02
42	6.60	6.53E-06	0.	1.09E-02	0.	1.35E-02	0.	1.56E-02	2.38E-05	9.49E-04	1.02E-03	4.20E-02
43	6.50	3.62E-06	0.	8.03E-03	0.	2.46E-02	0.	1.57E-02	2.50E-05	9.53E-04	1.03E-03	5.03E-02
44	6.40	4.46E-06	0.	5.08E-03	1.47E-04	2.86E-02	0.	1.58E-02	2.61E-05	9.57E-04	1.04E-03	5.16E-02
45	6.30	1.03E-05	0.	2.70E-03	6.41E-04	1.46E-02	0.	1.59E-02	2.74E-05	9.61E-04	1.05E-03	3.63E-02
46	6.20	3.05E-05	0.	1.39E-03	8.53E-04	2.25E-02	0.	1.60E-02	2.88E-05	9.65E-04	1.07E-03	4.28E-02
47	6.10	1.22E-04	0.	5.94E-04	2.33E-03	2.43E-02	0.	1.62E-02	3.02E-05	9.72E-04	1.09E-03	5.56E-02
48	6.00	3.17E-04	0.	1.42E-04	2.00E-03	1.29E-02	0.	1.63E-02	3.17E-05	9.81E-04	1.10E-03	3.38E-02
49	5.90	5.10E-04	0.	1.01E-05	2.83E-03	1.37E-02	0.	1.63E-02	3.34E-05	9.91E-04	1.12E-03	3.55E-02
50	5.80	7.79E-04	0.	2.48E-07	3.81E-03	1.35E-02	0.	1.60E-02	3.51E-05	10.00E-04	1.14E-03	3.59E-02
51	5.70	9.63E-04	0.	0.	4.14E-03	1.39E-02	0.	1.51E-02	3.70E-05	1.01E-03	1.16E-03	3.62E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.12E-03	0.	0.	0.	3.15E-03	2.17E-02	0.	0.	1.40E-02	3.91E-05	1.02E-03	1.10E-03	4.22E-02
53	5.50	1.16E-03	0.	0.	0.	3.87E-03	2.08E-02	0.	0.	1.41E-02	4.12E-05	1.03E-03	1.19E-03	4.22E-02
54	5.40	1.21E-03	0.	0.	0.	3.29E-03	1.41E-02	0.	0.	1.42E-02	4.36E-05	1.05E-03	1.21E-03	3.58E-02
55	5.30	1.16E-03	0.	0.	0.	3.39E-03	2.04E-02	0.	0.	1.43E-02	4.61E-05	1.07E-03	1.24E-03	4.16E-02
56	5.20	8.28E-04	0.	0.	0.	3.52E-03	1.21E-02	0.	0.	1.43E-02	4.89E-05	1.09E-03	1.26E-03	3.32E-02
57	5.10	7.69E-04	0.	0.	0.	3.42E-03	1.65E-02	0.	0.	1.45E-02	5.18E-05	1.12E-03	1.29E-03	3.76E-02
58	5.00	5.67E-04	0.	0.	0.	3.01E-03	1.43E-02	0.	0.	1.44E-02	5.50E-05	1.15E-03	1.32E-03	3.50E-02
59	4.90	4.73E-04	0.	0.	0.	3.24E-03	1.44E-02	0.	0.	1.47E-02	5.84E-05	1.18E-03	1.35E-03	3.55E-02
60	4.80	4.73E-04	0.	0.	0.	3.41E-03	1.32E-02	0.	0.	1.48E-02	6.22E-05	1.21E-03	1.38E-03	3.46E-02
61	4.70	5.09E-04	0.	0.	0.	3.25E-03	1.13E-02	0.	0.	1.90E-02	6.63E-05	1.24E-03	1.41E-03	3.27E-02
62	4.60	5.98E-04	0.	0.	0.	3.24E-03	1.05E-02	0.	0.	1.91E-02	7.07E-05	1.28E-03	1.45E-03	3.22E-02
63	4.50	5.97E-04	0.	7.05E-04	0.	2.81E-03	7.50E-03	0.	0.	1.52E-02	7.55E-05	1.33E-03	1.48E-03	2.97E-02
64	4.40	6.03E-04	0.	9.58E-03	0.	2.74E-03	5.50E-03	0.	0.	1.53E-02	8.08E-05	1.38E-03	1.52E-03	2.97E-02
65	4.30	5.40E-04	0.	6.28E-03	0.	2.48E-03	3.13E-03	0.	0.	1.54E-02	8.67E-05	1.43E-03	1.56E-03	3.09E-02
66	4.20	4.85E-04	0.	2.52E-02	0.	2.57E-03	2.47E-03	0.	0.	1.56E-02	9.30E-05	1.48E-03	1.59E-03	4.99E-02
67	4.10	4.37E-04	0.	7.96E-03	0.	2.38E-03	6.38E-04	0.	0.	1.56E-02	10.00E-05	1.53E-03	1.62E-03	3.03E-02
68	4.00	3.85E-04	0.	3.54E-02	0.	2.21E-03	4.88E-04	0.	0.	1.97E-02	1.08E-04	1.58E-03	2.75E-04	5.62E-02
69	3.90	3.09E-04	0.	1.57E-02	6.51E-04	1.89E-03	2.09E-04	0.	0.	1.96E-02	1.16E-04	1.31E-03	2.83E-04	3.61E-02
70	3.80	3.31E-04	0.	2.24E-02	4.44E-03	2.00E-03	0.	0.	0.	1.56E-02	1.26E-04	1.35E-03	2.92E-04	4.65E-02
71	3.70	2.73E-04	0.	2.87E-02	1.07E-03	1.55E-03	0.	0.	0.	1.53E-02	1.36E-04	1.04E-03	3.20E-04	4.84E-02
72	3.60	2.36E-04	0.	1.52E-02	6.80E-03	1.69E-03	0.	0.	0.	1.43E-02	1.48E-04	1.13E-03	3.79E-04	3.99E-02
73	3.50	2.10E-04	0.	2.53E-02	2.04E-02	1.21E-03	0.	0.	0.	1.31E-02	1.61E-04	1.10E-03	4.14E-04	5.99E-02
74	3.40	1.81E-04	0.	1.17E-02	1.57E-03	1.34E-03	0.	0.	0.	7.58E-03	1.76E-04	1.24E-03	4.62E-04	2.43E-02
75	3.30	1.48E-04	0.	1.27E-02	8.63E-03	9.88E-04	0.	0.	0.	7.59E-03	1.92E-04	1.30E-03	5.11E-04	3.32E-02
76	3.20	1.15E-04	0.	7.23E-03	2.16E-02	1.01E-03	0.	0.	0.	7.60E-03	2.11E-04	1.53E-03	5.62E-04	3.99E-02
77	3.10	1.04E-04	0.	5.56E-03	2.45E-03	8.97E-04	0.	0.	0.	7.62E-03	2.32E-04	1.67E-03	6.12E-04	1.91E-02
78	3.00	8.81E-05	0.	3.13E-03	8.60E-03	7.93E-04	0.	0.	0.	7.64E-03	2.57E-04	1.82E-03	6.63E-04	2.30E-02
79	2.90	6.94E-05	0.	1.87E-03	5.63E-03	5.48E-04	0.	0.	0.	7.65E-03	2.84E-04	1.97E-03	7.14E-04	1.87E-02
80	2.80	6.92E-05	0.	8.77E-04	2.13E-03	3.35E-04	0.	0.	0.	7.66E-03	3.16E-04	2.13E-03	7.69E-04	1.43E-02
81	2.70	4.06E-05	0.	4.02E-04	4.19E-03	1.62E-04	0.	0.	0.	7.66E-03	3.53E-04	2.30E-03	8.29E-04	1.59E-02
82	2.60	1.70E-05	0.	2.05E-04	3.91E-04	6.38E-05	0.	0.	0.	7.66E-03	3.96E-04	2.49E-03	8.99E-04	1.21E-02
83	2.50	1.14E-06	0.	2.57E-05	3.04E-04	1.42E-05	0.	0.	0.	7.66E-03	4.46E-04	2.80E-03	3.45E-04	1.16E-02
84	2.40	0.	1.49E-03	0.	3.35E-04	1.43E-06	0.	0.	0.	7.66E-03	5.04E-04	3.22E-03	4.22E-04	1.36E-02
85	2.30	0.	8.47E-03	0.	0.	0.	0.	0.	0.	7.68E-03	5.74E-04	2.12E-03	5.86E-04	1.73E-02
86	2.20	0.	1.40E-02	0.	0.	0.	0.	0.	0.	7.57E-03	6.56E-04	2.50E-03	6.10E-04	2.54E-02
87	2.10	0.	1.92E-02	0.	0.	0.	0.	0.	0.	7.54E-03	7.55E-04	2.92E-03	7.14E-04	3.11E-02
88	2.00	0.	3.22E-02	0.	0.	0.	0.	0.	0.	7.38E-03	8.75E-04	3.33E-03	8.10E-04	4.45E-02
89	1.90	0.	5.94E-02	0.	0.	0.	0.	0.	0.	7.02E-03	1.02E-03	3.77E-03	9.27E-04	7.25E-02
90	1.80	0.	4.67E-02	0.	0.	0.	0.	0.	0.	6.71E-03	1.20E-03	4.43E-03	1.10E-03	6.21E-02
91	1.70	0.	5.89E-02	0.	0.	0.	0.	0.	0.	6.32E-03	1.42E-03	5.25E-03	1.33E-03	7.32E-02
92	1.60	0.	4.12E-02	0.	0.	0.	0.	0.	0.	5.35E-03	1.72E-03	6.47E-03	1.55E-03	5.99E-02
93	1.50	0.	5.04E-02	0.	0.	0.	0.	0.	0.	2.43E-03	2.09E-03	7.97E-03	1.86E-03	6.45E-02
94	1.40	0.	5.30E-02	0.	0.	0.	0.	0.	0.	0.	2.50E-03	9.17E-03	2.14E-03	6.69E-02
95	1.30	0.	3.93E-02	0.	0.	0.	0.	0.	0.	0.	3.23E-03	1.12E-02	2.77E-03	5.66E-02
96	1.20	0.	3.95E-02	0.	0.	0.	0.	0.	0.	0.	4.13E-03	1.66E-02	2.57E-03	5.68E-02
97	1.10	0.	3.31E-02	0.	0.	0.	0.	2.06E-07	0.	0.	5.38E-03	1.30E-02	3.21E-03	5.47E-02
98	1.00	0.	3.04E-02	0.	0.	0.	0.	1.98E-06	0.	0.	7.19E-03	1.57E-02	3.53E-03	5.71E-02
99	0.90	0.	2.48E-02	0.	0.	0.	0.	2.32E-06	0.	0.	9.98E-03	1.77E-02	4.15E-03	5.66E-02
100	0.80	0.	1.14E-02	0.	0.	0.	0.	4.85E-05	0.	0.	1.42E-02	2.03E-02	4.78E-03	5.10E-02
101	0.70	0.	3.01E-03	0.	0.	0.	0.	2.79E-05	0.	0.	2.15E-02	2.25E-02	5.31E-03	5.24E-02
102	0.60	0.	2.11E-04	0.	0.	0.	0.	1.11E-04	0.	0.	3.43E-02	2.51E-02	5.92E-03	6.57E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-R NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.45E-02	0.	0.	0.	4.09E-04	5.10E-07	6.63E-01	9.24E-05	7.00E-01
2	10.60	0.	0.	2.11E-02	0.	0.	0.	4.10E-04	5.31E-07	4.55E-04	9.24E-05	2.20E-02
3	10.50	0.	0.	2.06E-02	0.	0.	0.	4.10E-04	5.44E-07	4.57E-04	9.23E-05	2.15E-02
4	10.40	0.	0.	1.85E-02	0.	0.	0.	4.11E-04	5.62E-07	4.59E-04	9.22E-05	1.95E-02
5	10.30	0.	0.	1.92E-02	0.	0.	0.	4.11E-04	5.79E-07	4.60E-04	9.21E-05	1.67E-02
6	10.20	0.	0.	1.52E-02	0.	0.	0.	4.12E-04	5.96E-07	4.61E-04	9.20E-05	1.61E-02
7	10.10	0.	0.	1.38E-02	0.	0.	0.	4.12E-04	6.14E-07	4.62E-04	9.20E-05	1.47E-02
8	10.00	0.	0.	1.12E-02	0.	0.	0.	4.13E-04	6.33E-07	4.63E-04	9.19E-05	1.22E-02
9	9.90	0.	0.	1.13E-02	0.	0.	0.	4.14E-04	6.52E-07	4.64E-04	9.18E-05	1.23E-02
10	9.80	0.	0.	1.01E-02	0.	0.	0.	4.15E-04	6.72E-07	4.66E-04	9.17E-05	1.10E-02
11	9.70	0.	0.	8.18E-03	0.	0.	0.	4.15E-04	6.93E-07	4.67E-04	9.16E-05	9.67E-03
12	9.60	0.	0.	8.68E-03	0.	0.	0.	4.16E-04	7.15E-07	4.68E-04	9.16E-05	9.66E-03
13	9.50	0.	6.79E-05	6.88E-03	0.	0.	0.	4.17E-04	7.38E-07	4.69E-04	9.15E-05	7.92E-03
14	9.40	0.	9.14E-05	6.15E-03	0.	0.	0.	4.18E-04	7.62E-07	4.71E-04	9.14E-05	7.23E-03
15	9.30	0.	1.15E-04	6.20E-03	0.	0.	0.	4.20E-04	7.87E-07	4.72E-04	9.13E-05	7.30E-03
16	9.20	0.	1.39E-04	4.67E-03	0.	0.	0.	4.21E-04	8.13E-07	4.73E-04	9.12E-05	5.79E-03
17	9.10	0.	1.65E-04	4.77E-03	0.	0.	0.	4.23E-04	8.41E-07	1.36E-04	9.12E-05	5.58E-03
18	9.00	0.	1.92E-04	4.07E-03	0.	0.	0.	4.24E-04	8.69E-07	1.38E-04	9.11E-05	4.91E-03
19	8.90	0.	2.20E-04	3.55E-03	0.	0.	0.	4.26E-04	8.99E-07	1.38E-04	9.10E-05	4.42E-03
20	8.80	0.	2.27E-04	3.40E-03	0.	0.	0.	4.27E-04	9.30E-07	1.29E-04	9.10E-05	4.27E-03
21	8.70	0.	2.18E-04	2.72E-03	0.	0.	0.	4.29E-04	9.62E-07	1.29E-04	9.09E-05	3.59E-03
22	8.60	0.	2.10E-04	2.75E-03	0.	0.	0.	4.30E-04	9.97E-07	1.29E-04	9.08E-05	3.62E-03
23	8.50	0.	2.05E-04	2.23E-03	0.	0.	0.	4.32E-04	1.03E-06	1.29E-04	9.07E-05	3.09E-03
24	8.40	0.	2.03E-04	2.16E-03	0.	0.	0.	4.34E-04	1.07E-06	1.28E-04	9.07E-05	3.01E-03
25	8.30	0.	2.01E-04	1.69E-03	0.	0.	0.	4.37E-04	1.11E-06	1.28E-04	9.09E-05	2.55E-03
26	8.20	0	1.97E-04	1.67E-03	0.	0.	0.	4.39E-04	1.15E-06	1.28E-04	9.17E-05	2.53E-03
27	8.10	0.	1.91E-04	1.34E-03	0.	0.	0.	4.41E-04	1.19E-06	1.28E-04	9.24E-05	2.19E-03
28	8.00	0.	1.86E-04	1.31E-03	0.	0.	0.	4.43E-04	1.24E-06	1.27E-04	9.32E-05	2.16E-03
29	7.90	0.	1.80E-04	1.05E-03	0.	0.	0.	4.46E-04	1.29E-06	1.27E-04	9.40E-05	1.90E-03
30	7.80	0.	1.75E-04	1.05E-03	0.	0.	0.	4.48E-04	1.34E-06	1.27E-04	9.47E-05	1.90E-03
31	7.70	0.	1.68E-04	8.63E-04	0.	0.	0.	4.50E-04	1.39E-06	1.27E-04	9.55E-05	1.71E-03
32	7.60	0.	1.60E-04	7.82E-04	0.	4.57E-08	0.	4.52E-04	1.45E-06	1.27E-04	9.63E-05	1.62E-03
33	7.50	0.	1.52E-04	6.81E-04	0.	2.36E-07	0.	4.55E-04	1.51E-06	1.27E-04	9.71E-05	1.51E-03
34	7.40	0.	1.45E-04	5.83E-04	0.	1.20E-06	0.	4.57E-04	1.57E-06	1.27E-04	9.78E-05	1.41E-03
35	7.30	0.	1.38E-04	5.28E-04	0.	6.15E-06	0.	4.60E-04	1.63E-06	1.27E-04	9.86E-05	1.35E-03
36	7.20	0.	1.30E-04	4.46E-04	0.	1.65E-05	0.	4.62E-04	1.70E-06	1.27E-04	9.94E-05	1.28E-03
37	7.10	0.	1.22E-04	4.08E-04	0.	4.33E-05	0.	4.66E-04	1.78E-06	1.27E-04	10.00E-05	1.27E-03
38	7.00	1.05E-07	0.	3.53E-04	0.	1.19E-04	0.	4.70E-04	1.85E-06	1.27E-04	1.01E-04	1.17E-03
39	6.90	1.98E-07	0.	3.07E-04	0.	1.19E-04	0.	4.74E-04	1.93E-06	1.27E-04	1.02E-04	1.13E-03
40	6.80	1.65E-07	0.	2.78E-04	0.	2.52E-04	0.	4.77E-04	2.02E-06	1.27E-04	1.02E-04	1.24E-03
41	6.70	1.19E-07	0.	2.38E-04	0.	3.10E-04	0.	4.81E-04	2.11E-06	1.26E-04	1.03E-04	1.25E-03
42	6.60	6.79E-08	0.	1.94E-04	0.	1.84E-04	0.	4.85E-04	2.21E-06	1.27E-04	1.04E-04	1.10E-03
43	6.50	3.76E-08	0.	1.43E-04	0.	3.34E-04	0.	4.89E-04	2.32E-06	1.27E-04	1.05E-04	1.20E-03
44	6.40	5.17E-08	0.	8.93E-05	2.00E-06	3.89E-04	0.	4.93E-04	2.43E-06	1.28E-04	1.06E-04	1.21E-03
45	6.30	1.07E-07	0.	4.97E-05	8.73E-06	1.99E-04	0.	4.98E-04	2.54E-06	1.28E-04	1.07E-04	9.92E-04
46	6.20	3.17E-07	0.	2.48E-05	1.16E-05	3.06E-04	0.	5.00E-04	2.67E-06	1.29E-04	1.69E-04	1.08E-03
47	6.10	1.26E-06	0.	1.06E-05	3.12E-05	4.67E-04	0.	5.04E-04	2.80E-06	1.30E-04	1.11E-04	1.26E-03
48	6.00	3.29E-06	0.	2.53E-06	2.72E-05	1.76E-04	0.	5.06E-04	2.94E-06	1.31E-04	1.13E-04	9.63E-04
49	5.90	5.30E-06	0.	1.80E-07	3.65E-05	1.82E-04	0.	5.08E-04	3.10E-06	1.32E-04	1.14E-04	9.88E-04
50	5.80	7.99E-06	0.	4.48E-09	5.19E-05	1.78E-04	0.	5.00E-04	3.26E-06	1.34E-04	1.16E-04	9.91E-04
51	5.70	9.38E-06	0.	0.	5.64E-05	1.89E-04	0.	4.70E-04	3.44E-06	1.35E-04	1.18E-04	9.81E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ION'S)	N P.E.	O P.E.	TOTAL UV
92	5.60	1.16E-05	0.	0.	0.	4.29E-05	2.95E-04	0.	0.	4.37E-04	3.62E-06	1.36E-04	1.20E-04	1.04E-03
93	5.50	1.20E-05	0.	0.	0.	5.26E-05	2.83E-04	0.	0.	4.39E-04	3.83E-06	1.38E-04	1.22E-04	1.05E-03
94	5.40	1.26E-05	0.	0.	0.	4.48E-05	1.91E-04	0.	0.	4.41E-04	4.05E-06	1.41E-04	1.24E-04	9.59E-04
95	5.30	1.21E-05	0.	0.	0.	4.61E-05	2.76E-04	0.	0.	4.44E-04	4.28E-06	1.43E-04	1.26E-04	1.05E-03
96	5.20	8.60E-06	0.	0.	0.	4.79E-05	1.65E-04	0.	0.	4.47E-04	4.53E-06	1.45E-04	1.29E-04	9.48E-04
97	5.10	7.99E-06	0.	0.	0.	4.66E-05	2.24E-04	0.	0.	4.51E-04	4.81E-06	1.49E-04	1.32E-04	1.02E-03
98	5.00	5.89E-06	0.	0.	0.	4.10E-05	1.95E-04	0.	0.	4.55E-04	5.10E-06	1.53E-04	1.35E-04	9.98E-04
99	4.90	4.91E-06	0.	0.	0.	4.41E-05	1.96E-04	0.	0.	4.59E-04	5.42E-06	1.57E-04	1.38E-04	1.00E-03
100	4.80	4.91E-06	0.	0.	0.	4.64E-05	1.80E-04	0.	0.	4.62E-04	5.77E-06	1.62E-04	1.41E-04	1.00E-03
101	4.70	5.29E-06	0.	0.	0.	4.43E-05	1.54E-04	0.	0.	4.66E-04	6.15E-06	1.66E-04	1.44E-04	9.85E-04
102	4.60	6.21E-06	0.	0.	0.	4.42E-05	1.43E-04	0.	0.	4.70E-04	6.56E-06	1.71E-04	1.48E-04	9.89E-04
103	4.50	6.20E-06	0.	1.26E-05	0.	3.82E-05	1.02E-04	0.	0.	4.74E-04	7.01E-06	1.78E-04	1.51E-04	9.69E-04
104	4.40	5.26E-06	0.	4.52E-05	0.	3.73E-05	7.49E-05	0.	0.	4.77E-04	7.50E-06	1.84E-04	1.55E-04	9.88E-04
105	4.30	5.61E-06	0.	1.12E-04	0.	3.38E-05	4.27E-05	0.	0.	4.81E-04	8.04E-06	1.91E-04	1.59E-04	1.03E-03
106	4.20	5.04E-06	0.	4.50E-04	0.	3.50E-05	3.36E-05	0.	0.	4.85E-04	8.63E-06	1.98E-04	1.62E-04	1.38E-03
107	4.10	4.54E-06	0.	1.42E-04	0.	3.24E-05	8.69E-06	0.	0.	4.87E-04	9.28E-06	2.04E-04	1.65E-04	1.05E-03
108	4.00	4.08E-06	0.	6.32E-04	0.	3.00E-05	6.65E-06	0.	0.	4.89E-04	1.00E-05	2.11E-04	2.01E-05	1.41E-03
109	3.90	3.21E-06	0.	2.80E-04	3.80E-05	2.58E-05	2.85E-06	0.	0.	4.87E-04	1.08E-05	1.76E-04	2.09E-05	1.05E-03
110	3.80	3.44E-06	0.	3.99E-04	2.59E-04	2.72E-05	0.	0.	0.	4.85E-04	1.17E-05	1.80E-04	2.98E-05	1.40E-03
111	3.70	2.83E-06	0.	5.12E-04	6.23E-05	2.11E-05	0.	0.	0.	4.77E-04	1.27E-05	1.39E-04	3.35E-05	1.24E-03
112	3.60	2.45E-06	0.	2.71E-04	3.97E-04	2.30E-05	0.	0.	0.	4.47E-04	1.37E-05	1.59E-04	3.77E-05	1.34E-03
113	3.50	2.18E-06	0.	4.16E-04	1.19E-03	1.65E-05	0.	0.	0.	4.09E-04	1.50E-05	1.47E-04	4.22E-05	2.24E-03
114	3.40	1.88E-06	0.	2.09E-04	9.14E-05	1.82E-05	0.	0.	0.	2.36E-04	1.63E-05	1.66E-04	4.71E-05	7.66E-04
115	3.30	1.45E-06	0.	2.27E-04	5.04E-04	1.35E-05	0.	0.	0.	2.36E-04	1.79E-05	1.85E-04	5.21E-05	1.24E-03
116	3.20	1.19E-06	0.	1.29E-04	1.26E-03	1.37E-05	0.	0.	0.	2.37E-04	1.96E-05	2.04E-04	5.72E-05	1.92E-03
117	3.10	1.08E-06	0.	9.91E-05	1.43E-04	1.22E-05	0.	0.	0.	2.37E-04	2.16E-05	2.23E-04	6.24E-05	8.88E-04
118	3.00	9.15E-07	0.	5.59E-05	5.02E-04	1.08E-05	0.	0.	0.	2.38E-04	2.38E-05	2.43E-04	6.76E-05	1.14E-03
119	2.90	7.21E-07	0.	3.33E-05	3.28E-04	7.47E-06	0.	0.	0.	2.38E-04	2.64E-05	2.63E-04	7.28E-05	9.78E-04
120	2.80	7.19E-07	0.	1.56E-05	1.24E-04	4.56E-06	0.	0.	0.	2.39E-04	2.93E-05	2.85E-04	7.84E-05	7.76E-04
121	2.70	4.22E-07	0.	7.17E-06	2.45E-04	2.28E-06	0.	0.	0.	2.39E-04	3.27E-05	3.08E-04	8.45E-05	9.18E-04
122	2.60	1.77E-07	0.	3.65E-06	2.28E-05	8.68E-07	0.	0.	0.	2.39E-04	3.67E-05	3.32E-04	9.07E-05	7.26E-04
123	2.50	1.18E-08	0.	4.58E-07	1.78E-05	1.93E-07	0.	0.	0.	2.39E-04	4.13E-05	3.74E-04	3.52E-05	7.07E-04
124	2.40	0.	2.66E-05	0.	1.99E-05	1.95E-08	0.	0.	0.	2.39E-04	4.38E-05	4.30E-04	4.30E-05	8.05E-04
125	2.30	0.	1.15E-04	0.	0.	0.	0.	0.	0.	2.37E-04	5.32E-05	2.83E-04	5.15E-05	7.48E-04
126	2.20	0.	2.50E-04	0.	0.	0.	0.	0.	0.	2.36E-04	6.89E-05	3.35E-04	6.22E-05	9.44E-04
127	2.10	0.	3.43E-04	0.	0.	0.	0.	0.	0.	2.35E-04	7.41E-05	3.98E-04	7.28E-05	1.11E-03
128	2.00	0.	5.74E-04	0.	0.	0.	0.	0.	0.	2.27E-04	8.12E-05	4.43E-04	8.34E-05	1.41E-03
129	1.90	0.	1.07E-03	0.	0.	0.	0.	0.	0.	2.19E-04	9.49E-05	5.83E-04	9.46E-05	1.98E-03
130	1.80	0.	8.68E-04	0.	0.	0.	0.	0.	0.	2.09E-04	1.12E-04	5.92E-04	1.13E-04	1.89E-03
131	1.70	0.	1.05E-03	0.	0.	0.	0.	0.	0.	1.97E-04	1.33E-04	7.02E-04	1.35E-04	2.22E-03
132	1.60	0.	7.36E-04	0.	0.	0.	0.	0.	0.	1.67E-04	1.60E-04	8.12E-04	1.58E-04	2.03E-03
133	1.50	0.	9.82E-04	0.	0.	0.	0.	0.	0.	1.98E-05	1.94E-04	1.01E-03	1.09E-04	2.37E-03
134	1.40	0.	9.44E-04	0.	0.	0.	0.	0.	0.	0.	2.40E-04	1.23E-03	2.19E-04	2.63E-03
135	1.30	0.	7.02E-04	0.	0.	0.	0.	0.	0.	0.	3.00E-04	1.50E-03	2.83E-04	2.79E-03
136	1.20	0.	7.05E-04	0.	0.	0.	0.	0.	0.	0.	3.83E-04	1.41E-03	2.62E-04	2.78E-03
137	1.10	0.	5.90E-04	0.	0.	0.	0.	2.88E-09	0.	0.	4.99E-04	1.74E-03	3.27E-04	3.16E-03
138	1.00	0.	5.47E-04	0.	0.	0.	0.	2.59E-08	0.	0.	6.67E-04	2.18E-03	3.60E-04	3.67E-03
139	0.90	0.	4.43E-04	0.	0.	0.	0.	3.16E-08	0.	0.	9.16E-04	2.37E-03	4.23E-04	4.15E-03
140	0.80	0.	2.07E-04	0.	0.	0.	0.	5.52E-07	0.	0.	1.32E-03	2.72E-03	4.87E-04	4.73E-03
141	0.70	0.	5.38E-05	0.	0.	0.	0.	3.80E-07	0.	0.	1.99E-03	3.01E-03	5.41E-04	5.68E-03
142	0.60	0.	3.77E-06	0.	0.	0.	0.	1.51E-06	0.	0.	3.12E-03	3.35E-03	6.04E-04	7.15E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.59E-04	0.	0.	0.	1.27E-05	5.05E-08	4.69E-05	9.15E-06	3.27E-04
2	10.60	0.	0.	2.23E-04	0.	0.	0.	1.27E-05	5.19E-08	4.67E-05	9.14E-06	2.91E-04
3	10.50	0.	0.	2.17E-04	0.	0.	0.	1.27E-05	5.34E-08	4.70E-05	9.13E-06	2.84E-04
4	10.40	0.	0.	1.96E-04	0.	0.	0.	1.27E-05	5.50E-08	4.72E-05	9.13E-06	2.65E-04
5	10.30	0.	0.	1.61E-04	0.	0.	0.	1.27E-05	5.66E-08	4.73E-05	9.12E-06	2.30E-04
6	10.20	0.	0.	1.60E-04	0.	0.	0.	1.28E-05	5.83E-08	4.74E-05	9.11E-06	2.30E-04
7	10.10	0.	0.	1.45E-04	0.	0.	0.	1.28E-05	6.00E-08	4.75E-05	9.10E-06	2.15E-04
8	10.00	0.	0.	1.18E-04	0.	0.	0.	1.28E-05	6.19E-08	4.76E-05	9.10E-06	1.88E-04
9	9.90	0.	0.	1.20E-04	0.	0.	0.	1.28E-05	6.38E-08	4.78E-05	9.09E-06	1.89E-04
10	9.80	0.	0.	1.06E-04	0.	0.	0.	1.28E-05	6.58E-08	4.79E-05	9.08E-06	1.76E-04
11	9.70	0.	0.	8.56E-05	0.	0.	0.	1.29E-05	6.78E-08	4.80E-05	9.07E-06	1.56E-04
12	9.60	0.	0.	9.18E-05	0.	0.	0.	1.29E-05	7.00E-08	4.81E-05	9.06E-06	1.62E-04
13	9.50	0.	6.68E-07	7.27E-05	0.	0.	0.	1.29E-05	7.22E-08	4.83E-05	9.05E-06	1.44E-04
14	9.40	0.	9.01E-07	6.51E-05	0.	0.	0.	1.30E-05	7.45E-08	4.84E-05	9.05E-06	1.36E-04
15	9.30	0.	1.13E-06	6.56E-05	0.	0.	0.	1.30E-05	7.70E-08	4.85E-05	9.04E-06	1.37E-04
16	9.20	0.	1.37E-06	4.93E-05	0.	0.	0.	1.30E-05	7.95E-08	1.34E-05	9.03E-06	8.63E-05
17	9.10	0.	1.63E-06	5.05E-05	0.	0.	0.	1.31E-05	8.22E-08	1.34E-05	9.02E-06	8.77E-05
18	9.00	0.	1.89E-06	4.31E-05	0.	0.	0.	1.31E-05	8.50E-08	1.34E-05	9.02E-06	8.06E-05
19	8.90	0.	2.16E-06	3.75E-05	0.	0.	0.	1.32E-05	8.79E-08	1.33E-05	9.01E-06	7.53E-05
20	8.80	0.	2.23E-06	3.59E-05	0.	0.	0.	1.32E-05	9.09E-08	1.33E-05	9.00E-06	7.38E-05
21	8.70	0.	2.15E-06	2.88E-05	0.	0.	0.	1.33E-05	9.41E-08	1.33E-05	9.00E-06	6.66E-05
22	8.60	0.	2.07E-06	2.91E-05	0.	0.	0.	1.33E-05	9.75E-08	1.32E-05	8.99E-06	6.69E-05
23	8.50	0.	2.02E-06	2.36E-05	0.	0.	0.	1.34E-05	1.01E-07	1.32E-05	8.98E-06	6.13E-05
24	8.40	0.	2.00E-06	2.28E-05	0.	0.	0.	1.34E-05	1.05E-07	1.32E-05	8.96E-06	6.05E-05
25	8.30	0.	1.98E-06	1.79E-05	0.	0.	0.	1.35E-05	1.08E-07	1.32E-05	9.00E-06	5.57E-05
26	8.20	0.	1.94E-06	1.76E-05	0.	0.	0.	1.36E-05	1.12E-07	1.32E-05	9.07E-06	5.55E-05
27	8.10	0.	1.88E-06	1.42E-05	0.	0.	0.	1.37E-05	1.17E-07	1.31E-05	9.15E-06	5.21E-05
28	8.00	0.	1.83E-06	1.38E-05	0.	0.	0.	1.37E-05	1.21E-07	1.31E-05	9.23E-06	5.18E-05
29	7.90	0.	1.77E-06	1.11E-05	0.	0.	0.	1.38E-05	1.26E-07	1.31E-05	9.30E-06	4.93E-05
30	7.80	0.	1.72E-06	1.11E-05	0.	0.	0.	1.39E-05	1.31E-07	1.31E-05	9.38E-06	4.93E-05
31	7.70	0.	1.66E-06	9.13E-06	0.	0.	0.	1.39E-05	1.35E-07	1.31E-05	9.45E-06	4.74E-05
32	7.60	0.	1.58E-06	8.27E-06	0.	4.66E-10	0.	1.40E-05	1.41E-07	1.31E-05	9.53E-06	4.66E-05
33	7.50	0.	1.50E-06	7.20E-06	0.	2.41E-09	0.	1.41E-05	1.47E-07	1.31E-05	9.61E-06	4.56E-05
34	7.40	0.	1.43E-06	6.18E-06	0.	1.23E-08	0.	1.42E-05	1.53E-07	1.31E-05	9.68E-06	4.47E-05
35	7.30	0.	1.36E-06	5.53E-06	0.	6.26E-08	0.	1.42E-05	1.60E-07	1.30E-05	9.76E-06	4.42E-05
36	7.20	0.	1.28E-06	4.72E-06	0.	1.68E-07	0.	1.43E-05	1.66E-07	1.30E-05	9.84E-06	4.35E-05
37	7.10	0.	1.21E-06	4.31E-06	0.	4.41E-07	0.	1.44E-05	1.74E-07	1.30E-05	9.91E-06	4.25E-05
38	7.00	1.03E-09	0.	3.74E-06	0.	1.21E-06	0.	1.45E-05	1.81E-07	1.30E-05	9.99E-06	4.27E-05
39	6.90	1.94E-09	0.	3.28E-06	0.	1.21E-06	0.	1.47E-05	1.89E-07	1.30E-05	1.01E-05	4.24E-05
40	6.80	1.62E-09	0.	2.94E-06	0.	2.57E-06	0.	1.48E-05	1.98E-07	1.30E-05	1.01E-05	4.37E-05
41	6.70	1.13E-09	0.	2.43E-06	0.	3.16E-06	0.	1.49E-05	2.07E-07	1.30E-05	1.02E-05	4.39E-05
42	6.60	6.66E-10	0.	2.05E-06	0.	1.88E-06	0.	1.50E-05	2.16E-07	1.30E-05	1.03E-05	4.25E-05
43	6.50	3.69E-10	0.	1.52E-06	0.	3.41E-06	0.	1.51E-05	2.26E-07	1.31E-05	1.04E-05	4.38E-05
44	6.40	5.07E-10	0.	9.44E-07	2.03E-08	3.97E-06	0.	1.53E-05	2.37E-07	1.31E-05	1.05E-05	4.41E-05
45	6.30	1.05E-09	0.	5.26E-07	8.89E-08	2.02E-06	0.	1.54E-05	2.49E-07	1.32E-05	1.06E-05	4.21E-05
46	6.20	3.11E-09	0.	2.63E-07	1.18E-07	3.11E-06	0.	1.55E-05	2.61E-07	1.33E-05	1.08E-05	4.33E-05
47	6.10	1.24E-08	0.	1.12E-07	3.24E-07	4.76E-06	0.	1.56E-05	2.74E-07	1.33E-05	1.10E-05	4.54E-05
48	6.00	3.23E-08	0.	2.68E-08	2.77E-07	1.79E-06	0.	1.57E-05	2.88E-07	1.35E-05	1.11E-05	4.27E-05
49	5.90	5.20E-08	0.	1.90E-09	3.92E-07	1.90E-06	0.	1.57E-05	3.03E-07	1.36E-05	1.13E-05	4.34E-05
50	5.80	7.84E-08	0.	4.69E-11	5.28E-07	1.81E-06	0.	1.55E-05	3.19E-07	1.37E-05	1.15E-05	4.35E-05
51	5.70	9.20E-08	0.	0.	5.75E-07	1.93E-06	0.	1.45E-05	3.36E-07	1.39E-05	1.17E-05	4.30E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.233E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DE	FREE-FREE (IONS)	N P.E	O P.E.	TOTAL AIR
92	5.60	1.14E-07	0.	0.	0.	4.37E-07	3.01E-06	0.	0.	1.35E-05	3.54E-07	1.48E-05	1.19E-05	4.33E-05
93	5.50	1.18E-07	0.	0.	0.	5.36E-07	2.88E-06	0.	0.	1.36E-05	3.74E-07	1.42E-05	1.21E-05	4.38E-05
94	5.40	1.23E-07	0.	0.	0.	4.57E-07	1.95E-06	0.	0.	1.37E-05	3.96E-07	1.45E-05	1.22E-05	4.33E-05
95	5.30	1.18E-07	0.	0.	0.	4.70E-07	2.83E-06	0.	0.	1.38E-05	4.19E-07	1.47E-05	1.25E-05	4.47E-05
96	5.20	8.43E-08	0.	0.	0.	4.88E-07	1.66E-06	0.	0.	1.38E-05	4.43E-07	1.49E-05	1.28E-05	4.43E-05
97	5.10	7.83E-08	0.	0.	0.	4.75E-07	2.28E-06	0.	0.	1.40E-05	4.70E-07	1.53E-05	1.31E-05	4.57E-05
98	5.00	5.77E-08	0.	0.	0.	4.18E-07	1.99E-06	0.	0.	1.41E-05	4.99E-07	1.58E-05	1.33E-05	4.61E-05
99	4.90	4.82E-08	0.	0.	0.	4.50E-07	2.00E-06	0.	0.	1.42E-05	5.30E-07	1.62E-05	1.36E-05	4.70E-05
60	4.80	4.62E-08	0.	0.	0.	4.73E-07	1.84E-06	0.	0.	1.43E-05	5.64E-07	1.66E-05	1.39E-05	4.78E-05
61	4.70	5.19E-08	0.	0.	0.	4.51E-07	1.54E-06	0.	0.	1.44E-05	6.01E-07	1.71E-05	1.43E-05	4.85E-05
62	4.60	6.09E-08	0.	0.	0.	4.50E-07	1.44E-06	0.	0.	1.45E-05	6.41E-07	1.76E-05	1.46E-05	4.94E-05
63	4.50	6.08E-08	0.	1.33E-07	0.	3.90E-07	1.04E-06	0.	0.	1.47E-05	6.85E-07	1.83E-05	1.50E-05	5.02E-05
64	4.40	6.14E-08	0.	4.77E-07	0.	3.80E-07	7.62E-07	0.	0.	1.48E-05	7.34E-07	1.89E-05	1.53E-05	5.15E-05
65	4.30	5.51E-08	0.	1.18E-06	0.	3.45E-07	4.35E-07	0.	0.	1.49E-05	7.86E-07	1.96E-05	1.57E-05	5.30E-05
66	4.20	4.93E-08	0.	4.76E-06	0.	3.56E-07	3.43E-07	0.	0.	1.50E-05	8.44E-07	2.03E-05	1.60E-05	5.77E-05
67	4.10	4.45E-08	0.	1.50E-06	0.	3.30E-07	8.85E-08	0.	0.	1.51E-05	9.08E-07	2.10E-05	2.70E-06	4.17E-05
68	4.00	3.93E-08	0.	6.68E-06	0.	3.06E-07	6.77E-08	0.	0.	1.51E-05	9.78E-07	1.75E-05	2.78E-06	4.35E-05
69	3.90	3.15E-08	0.	2.97E-06	1.29E-06	2.63E-07	2.90E-08	0.	0.	1.51E-05	1.06E-06	1.79E-05	2.86E-06	4.15E-05
70	3.80	3.37E-08	0.	4.22E-06	8.77E-06	2.77E-07	0.	0.	0.	1.50E-05	1.14E-06	1.38E-05	2.95E-06	4.63E-05
71	3.70	2.78E-08	0.	5.42E-06	2.11E-06	2.15E-07	0.	0.	0.	1.48E-05	1.24E-06	1.43E-05	3.31E-06	4.14E-05
72	3.60	2.41E-08	0.	2.86E-06	1.34E-05	2.34E-07	0.	0.	0.	1.38E-05	1.34E-06	1.34E-05	3.73E-06	4.09E-05
73	3.50	2.14E-08	0.	4.40E-06	4.03E-05	1.68E-07	0	0.	0.	1.27E-05	1.46E-06	1.51E-05	4.18E-06	7.83E-05
74	3.40	1.84E-08	0.	2.21E-06	3.09E-06	1.86E-07	0.	0.	0.	7.31E-06	1.68E-06	1.71E-05	4.66E-06	3.61E-05
75	3.30	1.43E-08	0.	2.40E-06	1.70E-05	1.37E-07	0.	0.	0.	7.32E-06	1.75E-06	1.98E-05	5.16E-06	5.28E-05
76	3.20	1.17E-08	0.	1.36E-06	4.26E-05	1.40E-07	0.	0.	0.	7.34E-06	1.92E-06	2.10E-05	5.67E-06	8.01E-05
77	3.10	1.06E-08	0.	1.05E-06	4.83E-06	1.24E-07	0.	0.	0.	7.35E-06	2.11E-06	1.38E-05	6.18E-06	4.48E-05
78	3.00	8.98E-09	0.	5.91E-07	1.70E-05	1.10E-07	0.	0.	0.	7.37E-06	2.33E-06	2.50E-05	6.69E-06	5.91E-05
79	2.90	7.07E-09	0.	3.52E-07	1.11E-05	7.61E-08	0.	0.	0.	7.38E-06	2.58E-06	2.70E-05	7.21E-06	5.57E-05
80	2.80	7.05E-09	0.	1.65E-07	4.20E-06	4.65E-08	0.	0.	0.	7.39E-06	2.87E-06	2.93E-05	7.76E-06	5.17E-05
81	2.70	4.14E-09	0.	7.58E-08	8.28E-06	2.24E-08	0.	0.	0.	7.39E-06	3.20E-06	3.16E-05	8.36E-06	5.98E-05
82	2.60	1.74E-09	0.	3.86E-08	7.73E-07	8.84E-09	0.	0.	0.	7.39E-06	3.59E-06	3.42E-05	8.57E-06	5.46E-05
83	2.50	1.14E-10	0.	4.85E-09	6.01E-07	1.56E-09	0.	0.	0.	7.39E-06	4.04E-06	3.84E-05	3.46E-06	5.39E-05
84	2.40	0.	2.81E-07	0.	6.61E-07	1.98E-10	0.	0.	0.	7.39E-06	4.58E-06	3.40E-05	4.26E-06	4.12E-05
85	2.30	0.	1.22E-06	0.	0.	0.	0.	0.	0.	7.34E-06	5.20E-06	2.91E-05	5.10E-06	4.80E-05
86	2.20	0.	2.64E-06	0.	0.	0.	0.	0.	0.	7.31E-06	5.95E-06	3.44E-05	6.15E-06	5.45E-05
87	2.10	0.	3.62E-06	0.	0.	0.	0.	0.	0.	7.28E-06	6.85E-06	4.01E-05	7.21E-06	6.50E-05
88	2.00	0.	6.07E-06	0.	0.	0.	0.	0.	0.	7.04E-06	7.94E-06	4.58E-05	8.26E-06	7.51E-05
89	1.90	0.	1.13E-05	0.	0.	0.	0.	0.	0.	6.77E-06	9.20E-06	5.17E-05	9.36E-06	8.84E-05
90	1.80	0.	9.18E-06	0.	0.	0.	0.	0.	0.	6.48E-06	1.09E-05	6.09E-05	1.11E-05	9.96E-05
91	1.70	0.	1.11E-05	0.	0.	0.	0.	0.	0.	6.18E-06	1.38E-05	7.22E-05	1.34E-05	1.16E-04
92	1.60	0.	7.78E-06	0.	0.	0.	0.	0.	0.	5.16E-06	1.56E-05	8.35E-05	1.56E-05	1.28E-04
93	1.50	0.	9.54E-06	0.	0.	0.	0.	0.	0.	2.35E-06	1.90E-05	1.04E-04	1.77E-05	1.53E-04
94	1.40	0.	1.00E-05	0.	0.	0.	0.	0.	0.	0.	2.34E-05	1.17E-04	2.16E-05	1.72E-04
95	1.30	0.	7.42E-06	0.	0.	0.	0.	0.	0.	0.	2.93E-05	1.08E-04	1.94E-05	1.65E-04
96	1.20	0.	7.41E-06	0.	0.	0.	0.	0.	0.	0.	3.74E-05	1.43E-04	2.59E-05	2.13E-04
97	1.10	0.	6.24E-06	0.	0.	0.	0.	2.85E-11	0.	0.	4.88E-05	1.79E-04	2.93E-05	2.64E-04
98	1.00	0.	5.78E-06	0.	0.	0.	0.	2.63E-10	0.	0.	6.52E-05	2.07E-04	3.56E-05	3.14E-04
99	0.90	0.	4.68E-06	0.	0.	0.	0.	3.22E-10	0.	0.	8.98E-05	2.43E-04	4.19E-05	3.88E-04
100	0.80	0.	2.18E-06	0.	0.	0.	0.	5.62E-09	0.	0.	1.29E-04	2.79E-04	4.81E-05	4.59E-04
101	0.70	0.	5.69E-07	0.	0.	0.	0.	3.88E-09	0.	0.	1.95E-04	3.09E-04	5.35E-05	5.59E-04
102	0.60	0.	3.93E-08	0.	0.	0.	0.	1.54E-08	0.	0.	3.11E-04	2.70E-04	4.36E-05	6.25E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.38E-06	0.	0.	0.	3.72E-07	4.74E-09	4.38E-06	8.77E-07	7.93E-06
2	10.60	0.	0.	1.98E-06	0.	0.	0.	3.73E-07	4.88E-09	4.41E-06	8.76E-07	7.84E-06
3	10.50	0.	0.	1.93E-06	0.	0.	0.	3.73E-07	5.02E-09	4.42E-06	8.76E-07	7.81E-06
4	10.40	0.	0.	1.74E-06	0.	0.	0.	3.74E-07	5.17E-09	4.44E-06	8.75E-07	7.44E-06
5	10.30	0.	0.	1.48E-06	0.	0.	0.	3.74E-07	5.32E-09	4.46E-06	8.74E-07	7.14E-06
6	10.20	0.	0.	1.42E-06	0.	0.	0.	3.75E-07	5.48E-09	4.47E-06	8.73E-07	7.14E-06
7	10.10	0.	0.	1.20E-06	0.	0.	0.	3.75E-07	5.64E-09	4.48E-06	8.73E-07	7.02E-06
8	10.00	0.	0.	1.05E-06	0.	0.	0.	3.73E-07	5.81E-09	4.49E-06	8.72E-07	6.79E-06
9	9.90	0.	0.	1.06E-06	0.	0.	0.	3.76E-07	5.99E-09	4.50E-06	8.71E-07	6.82E-06
10	9.80	0.	0.	9.44E-07	0.	0.	0.	3.77E-07	6.18E-09	4.51E-06	8.70E-07	6.71E-06
11	9.70	0.	0.	7.68E-07	0.	0.	0.	3.78E-07	6.37E-09	4.52E-06	8.70E-07	6.54E-06
12	9.60	0.	0.	8.15E-07	0.	0.	0.	3.78E-07	6.57E-09	4.54E-06	8.69E-07	6.60E-06
13	9.50	0.	6.10E-09	6.46E-07	0.	0.	0.	3.79E-07	6.78E-09	4.55E-06	8.68E-07	6.45E-06
14	9.40	0.	8.23E-09	5.78E-07	0.	0.	0.	3.81E-07	7.00E-09	4.56E-06	8.67E-07	6.40E-06
15	9.30	0.	1.04E-08	5.82E-07	0.	0.	0.	3.82E-07	7.23E-09	1.27E-06	8.66E-07	3.12E-06
16	9.20	0.	1.25E-08	4.38E-07	0.	0.	0.	3.83E-07	7.47E-09	1.26E-06	8.66E-07	2.97E-06
17	9.10	0.	1.49E-08	4.48E-07	0.	0.	0.	3.85E-07	7.72E-09	1.26E-06	8.65E-07	2.98E-06
18	9.00	0.	1.73E-08	3.82E-07	0.	0.	0.	3.86E-07	7.98E-09	1.26E-06	8.64E-07	2.92E-06
19	8.90	0.	1.97E-08	3.38E-07	0.	0.	0.	3.87E-07	8.26E-09	1.26E-06	8.64E-07	2.87E-06
20	8.80	0.	2.04E-08	3.19E-07	0.	0.	0.	3.89E-07	8.54E-09	1.25E-06	8.63E-07	2.85E-06
21	8.70	0.	1.96E-08	2.55E-07	0.	0.	0.	3.90E-07	8.84E-09	1.25E-06	8.62E-07	2.79E-06
22	8.60	0.	1.89E-08	2.59E-07	0.	0.	0.	3.92E-07	9.16E-09	1.25E-06	8.62E-07	2.79E-06
23	8.50	0.	1.84E-08	2.09E-07	0.	0.	0.	3.93E-07	9.48E-09	1.25E-06	8.61E-07	2.74E-06
24	8.40	0.	1.83E-08	2.02E-07	0.	0.	0.	3.95E-07	9.83E-09	1.24E-06	8.60E-07	2.73E-06
25	8.30	0.	1.81E-08	1.59E-07	0.	0.	0.	3.97E-07	1.02E-08	1.24E-06	8.62E-07	2.69E-06
26	8.20	0.	1.77E-08	1.57E-07	0.	0.	0.	3.99E-07	1.06E-08	1.24E-06	8.70E-07	2.69E-06
27	8.10	0.	1.72E-08	1.26E-07	0.	0.	0.	4.01E-07	1.10E-08	1.24E-06	8.77E-07	2.67E-06
28	8.00	0.	1.67E-08	1.23E-07	0.	0.	0.	4.03E-07	1.14E-08	1.23E-06	8.84E-07	2.67E-06
29	7.90	0.	1.62E-08	9.85E-08	0.	0.	0.	4.05E-07	1.18E-08	1.23E-06	8.92E-07	2.66E-06
30	7.80	0.	1.57E-08	9.86E-08	0.	0.	0.	4.07E-07	1.23E-08	1.23E-06	8.99E-07	2.67E-06
31	7.70	0.	1.51E-08	8.10E-08	0.	0.	0.	4.10E-07	1.28E-08	1.23E-06	9.06E-07	2.66E-06
32	7.60	0.	1.44E-08	7.34E-08	0.	4.20E-12	0.	4.12E-07	1.33E-08	1.23E-06	9.14E-07	2.66E-06
33	7.50	0.	1.37E-08	6.40E-08	0.	2.17E-11	0.	4.14E-07	1.38E-08	1.23E-06	9.21E-07	2.66E-06
34	7.40	0.	1.30E-08	5.47E-08	0.	1.11E-10	0.	4.16E-07	1.44E-08	1.23E-06	9.28E-07	2.66E-06
35	7.30	0.	1.24E-08	4.91E-08	0.	5.65E-10	0.	4.18E-07	1.50E-08	1.23E-06	9.35E-07	2.66E-06
36	7.20	0.	1.17E-08	4.19E-08	0.	1.52E-09	0.	4.21E-07	1.56E-08	1.23E-06	9.43E-07	2.66E-06
37	7.10	0.	1.10E-08	3.83E-08	0.	3.98E-09	0.	4.24E-07	1.63E-08	1.23E-06	9.50E-07	2.67E-06
38	7.00	9.44E-12	0.	3.32E-08	0.	1.09E-08	0.	4.27E-07	1.70E-08	1.23E-06	9.57E-07	2.67E-06
39	6.90	1.78E-11	0.	2.88E-08	0.	1.09E-08	0.	4.31E-07	1.78E-08	1.23E-06	9.65E-07	2.68E-06
40	6.80	1.48E-11	0.	2.61E-08	0.	2.32E-08	0.	4.34E-07	1.86E-08	1.23E-06	9.72E-07	2.70E-06
41	6.70	1.04E-11	0.	2.16E-08	0.	2.85E-08	0.	4.38E-07	1.94E-08	1.23E-06	9.80E-07	2.71E-06
42	6.60	6.11E-12	0.	1.82E-08	0.	1.69E-08	0.	4.41E-07	2.03E-08	1.23E-06	9.89E-07	2.71E-06
43	6.50	3.38E-12	0.	1.34E-08	0.	3.07E-08	0.	4.45E-07	2.13E-08	1.23E-06	9.97E-07	2.74E-06
44	6.40	4.65E-12	0.	8.38E-09	1.84E-10	3.58E-08	0.	4.48E-07	2.23E-08	1.24E-06	1.01E-06	2.76E-06
45	6.30	9.64E-12	0.	4.67E-09	8.03E-10	1.83E-08	0.	4.52E-07	2.34E-08	1.24E-06	1.02E-06	2.76E-06
46	6.20	2.85E-11	0.	2.33E-09	1.07E-09	2.81E-08	0.	4.55E-07	2.45E-08	1.25E-06	1.03E-06	2.79E-06
47	6.10	1.14E-10	0.	9.95E-10	2.92E-09	4.29E-08	0.	4.58E-07	2.57E-08	1.26E-06	1.05E-06	2.84E-06
48	6.00	2.96E-10	0.	2.38E-10	2.50E-09	1.62E-08	0.	4.62E-07	2.71E-08	1.27E-06	1.07E-06	2.85E-06
49	5.90	4.77E-10	0.	1.64E-11	3.54E-09	1.72E-08	0.	4.62E-07	2.85E-08	1.28E-06	1.09E-06	2.88E-06
50	5.80	7.20E-10	0.	4.16E-13	4.77E-09	1.63E-08	0.	4.55E-07	3.00E-08	1.30E-06	1.10E-06	2.90E-06
51	5.70	8.44E-10	0.	0.	5.19E-09	1.74E-08	0.	4.27E-07	3.16E-08	1.31E-06	1.12E-06	2.91E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.05E-09	0.	0.	0.	3.94E-09	2.71E-08	0.	0.	3.97E-07	3.33E-08	1.32E-06	1.14E-06	2.92E-06
53	5.50	1.08E-09	0.	0.	0.	4.84E-09	2.60E-08	0.	0.	4.00E-07	3.52E-08	1.34E-06	1.16E-06	2.96E-06
54	5.40	1.13E-09	0.	0.	0.	4.12E-09	1.76E-08	0.	0.	4.02E-07	3.72E-08	1.36E-06	1.17E-06	3.00E-06
55	5.30	1.09E-09	0.	0.	0.	4.24E-09	2.55E-08	0.	0.	4.04E-07	3.93E-08	1.38E-06	1.20E-06	3.05E-06
56	5.20	7.74E-10	0.	0.	0.	4.40E-09	1.52E-08	0.	0.	4.07E-07	4.17E-08	1.41E-06	1.22E-06	3.10E-06
57	5.10	7.19E-10	0.	0.	0.	4.28E-09	2.06E-08	0.	0.	4.10E-07	4.42E-08	1.44E-06	1.25E-06	3.18E-06
58	5.00	5.30E-10	0.	0.	0.	3.77E-09	1.79E-08	0.	0.	4.14E-07	4.69E-08	1.48E-06	1.28E-06	3.25E-06
59	4.90	4.42E-10	0.	0.	0.	4.06E-09	1.80E-08	0.	0.	4.17E-07	4.98E-08	1.53E-06	1.31E-06	3.32E-06
60	4.80	4.42E-10	0.	0.	0.	4.27E-09	1.66E-08	0.	0.	4.21E-07	5.30E-08	1.57E-06	1.33E-06	3.40E-06
61	4.70	4.76E-10	0.	0.	0.	4.07E-09	1.41E-08	0.	0.	4.24E-07	5.65E-08	1.61E-06	1.37E-06	3.48E-06
62	4.60	5.59E-10	0.	0.	0.	4.06E-09	1.31E-08	0.	0.	4.27E-07	6.03E-08	1.66E-06	1.40E-06	3.57E-06
63	4.50	5.58E-10	0.	1.18E-09	0.	3.52E-09	9.39E-09	0.	0.	4.31E-07	6.44E-08	1.72E-06	1.44E-06	3.67E-06
64	4.40	5.63E-10	0.	4.24E-09	0.	3.43E-09	6.88E-09	0.	0.	4.34E-07	6.89E-08	1.79E-06	1.47E-06	3.77E-06
65	4.30	5.05E-10	0.	1.05E-08	0.	3.11E-09	3.92E-09	0.	0.	4.38E-07	7.39E-08	1.85E-06	1.50E-06	3.88E-06
66	4.20	4.54E-10	0.	4.22E-08	0.	3.22E-09	3.09E-09	0.	0.	4.41E-07	7.93E-08	1.92E-06	1.47E-06	3.96E-06
67	4.10	4.09E-10	0.	1.38E-08	0.	2.98E-09	7.99E-10	0.	0.	4.43E-07	8.53E-08	1.98E-06	2.59E-07	2.79E-06
68	4.00	3.60E-10	0.	5.93E-08	0.	2.76E-09	6.11E-10	0.	0.	4.45E-07	9.19E-08	1.64E-06	2.66E-07	2.52E-06
69	3.90	2.89E-10	0.	2.63E-08	3.72E-08	2.37E-09	2.62E-10	0.	0.	4.43E-07	9.92E-08	1.26E-06	2.74E-07	2.15E-06
70	3.80	3.09E-10	0.	3.74E-08	2.54E-07	2.50E-09	0.	0.	0.	4.41E-07	1.07E-07	1.30E-06	2.83E-07	2.43E-06
71	3.70	2.55E-10	0.	4.81E-08	6.10E-08	1.94E-09	0.	0.	0.	4.34E-07	1.16E-07	1.15E-06	3.18E-07	2.13E-06
72	3.60	2.21E-10	0.	2.54E-08	3.89E-07	2.11E-09	0.	0.	0.	4.07E-07	1.26E-07	1.26E-06	3.58E-07	2.57E-06
73	3.50	1.96E-10	0.	3.90E-08	1.17E-06	1.51E-09	0.	0.	0.	3.72E-07	1.37E-07	1.43E-06	4.00E-07	3.54E-06
74	3.40	1.69E-10	0.	1.96E-08	8.95E-08	1.68E-09	0.	0.	0.	2.15E-07	1.50E-07	1.41E-06	4.47E-07	2.53E-06
75	3.30	1.31E-10	0.	2.13E-08	4.93E-07	1.24E-09	0.	0.	0.	2.15E-07	1.64E-07	1.79E-06	4.94E-07	3.18E-06
76	3.20	1.07E-10	0.	1.21E-08	1.23E-06	1.26E-09	0.	0.	0.	2.15E-07	1.80E-07	1.98E-06	5.43E-07	4.16E-06
77	3.10	9.76E-11	0.	9.31E-09	1.40E-07	1.12E-09	0.	0.	0.	2.16E-07	1.98E-07	2.17E-06	5.92E-07	3.32E-06
78	3.00	8.24E-11	0.	5.24E-09	4.91E-07	9.93E-10	0.	0.	0.	2.16E-07	2.19E-07	2.35E-06	6.41E-07	3.93E-06
79	2.90	6.49E-11	0.	3.12E-09	3.21E-07	6.86E-10	0.	0.	0.	2.17E-07	2.42E-07	2.55E-06	6.91E-07	4.02E-06
80	2.80	6.47E-11	0.	1.47E-09	1.22E-07	4.19E-10	0.	0.	0.	2.17E-07	2.69E-07	2.76E-06	7.44E-07	4.11E-06
81	2.70	3.80E-11	0.	6.73E-10	2.40E-07	2.02E-10	0.	0.	0.	2.17E-07	3.01E-07	2.98E-06	7.65E-07	4.58E-06
82	2.60	1.59E-11	0.	3.43E-10	2.24E-05	7.98E-11	0.	0.	0.	2.17E-07	3.37E-07	3.22E-06	2.88E-07	4.09E-06
83	2.50	1.07E-12	0.	4.30E-11	1.74E-04	1.77E-11	0.	0.	0.	2.17E-07	3.80E-07	1.82E-06	3.31E-07	2.77E-06
84	2.40	0.	2.58E-09	0.	1.91E-08	1.79E-12	0.	0.	0.	2.17E-07	4.30E-07	2.26E-06	4.08E-07	3.34E-06
85	2.30	0.	1.04E-08	0.	0.	0.	0.	0.	0.	2.15E-07	4.89E-07	2.74E-06	4.89E-07	3.95E-06
86	2.20	0.	2.35E-08	0.	0.	0.	0.	0.	0.	2.15E-07	5.59E-07	3.24E-06	5.90E-07	4.63E-06
87	2.10	0.	3.22E-08	0.	0.	0.	0.	0.	0.	2.14E-07	6.44E-07	3.78E-06	6.91E-07	5.36E-06
88	2.00	0.	5.39E-08	0.	0.	0.	0.	0.	0.	2.07E-07	7.46E-07	4.31E-06	7.91E-07	6.11E-06
89	1.90	0.	10.06E-08	0.	0.	0.	0.	0.	0.	1.99E-07	8.71E-07	4.87E-06	8.97E-07	6.94E-06
90	1.80	0.	8.15E-08	0.	0.	0.	0.	0.	0.	1.90E-07	1.03E-06	5.74E-06	1.07E-06	8.11E-06
91	1.70	0.	9.84E-08	0.	0.	0.	0.	0.	0.	1.79E-07	1.22E-06	6.80E-06	1.28E-06	9.58E-06
92	1.60	0.	6.90E-08	0.	0.	0.	0.	0.	0.	1.52E-07	1.47E-06	7.86E-06	1.40E-06	1.09E-05
93	1.50	0.	8.47E-08	0.	0.	0.	0.	0.	0.	6.89E-08	1.79E-06	9.01E-06	1.69E-06	1.26E-05
94	1.40	0.	8.84E-08	0.	0.	0.	0.	0.	0.	0.	2.20E-06	7.00E-06	2.03E-06	1.13E-05
95	1.30	0.	6.59E-08	0.	0.	0.	0.	0.	0.	0.	2.76E-06	1.02E-05	1.86E-06	1.49E-05
96	1.20	0.	6.62E-08	0.	0.	0.	0.	0.	0.	0.	3.52E-06	1.34E-05	2.48E-06	1.95E-05
97	1.10	0.	5.54E-08	0.	0.	0.	0.	2.58E-13	0.	0.	4.59E-06	1.69E-05	2.81E-06	2.43E-05
98	1.00	0.	5.13E-08	0.	0.	0.	0.	2.38E-12	0.	0.	6.13E-06	1.95E-05	3.41E-06	2.91E-05
99	0.90	0.	4.16E-08	0.	0.	0.	0.	2.90E-12	0.	0.	8.44E-06	2.29E-05	4.02E-06	3.54E-05
100	0.80	0.	1.94E-08	0.	0.	0.	0.	5.07E-11	0.	0.	1.21E-05	2.58E-05	4.53E-06	4.25E-05
101	0.70	0.	5.05E-09	0.	0.	0.	0.	3.50E-11	0.	0.	1.83E-05	2.26E-05	3.70E-06	4.48E-05
102	0.60	0.	3.54E-10	0.	0.	0.	0.	1.39E-10	0.	0.	2.93E-05	2.54E-05	4.18E-06	5.89E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.58E-08	0.	0.	0.	9.27E-09	3.91E-10	3.58E-07	7.66E-08	4.59E-07
2	10.60	0.	0.	1.32E-08	0.	0.	0.	9.28E-09	4.02E-10	3.60E-07	7.59E-08	4.59E-07
3	10.50	0.	0.	1.29E-08	0.	0.	0.	9.29E-09	4.13E-10	3.62E-07	7.59E-08	4.60E-07
4	10.40	0.	0.	1.16E-08	0.	0.	0.	9.30E-09	4.26E-10	3.63E-07	7.58E-08	4.60E-07
5	10.30	0.	0.	9.56E-09	0.	0.	0.	9.31E-09	4.38E-10	3.64E-07	7.58E-08	4.59E-07
6	10.20	0.	0.	9.50E-09	0.	0.	0.	9.33E-09	4.51E-10	3.65E-07	7.57E-08	4.60E-07
7	10.10	0.	0.	8.62E-09	0.	0.	0.	9.34E-09	4.65E-10	3.66E-07	7.56E-08	4.60E-07
8	10.00	0.	0.	7.02E-09	0.	0.	0.	9.35E-09	4.79E-10	3.67E-07	7.54E-08	4.59E-07
9	9.90	0.	0.	7.09E-09	0.	0.	0.	9.37E-09	4.94E-10	3.68E-07	7.55E-08	4.60E-07
10	9.80	0.	0.	6.31E-09	0.	0.	0.	9.39E-09	5.09E-10	3.69E-07	7.54E-08	4.60E-07
11	9.70	0.	0.	5.07E-09	0.	0.	0.	9.40E-09	5.25E-10	3.69E-07	7.54E-08	4.60E-07
12	9.60	0.	0.	5.44E-09	0.	0.	0.	9.42E-09	5.42E-10	3.70E-07	7.53E-08	4.61E-07
13	9.50	0.	4.61E-11	4.31E-09	0.	0.	0.	9.44E-09	5.59E-10	3.71E-07	7.52E-08	4.61E-07
14	9.40	0.	6.22E-11	3.86E-09	0.	0.	0.	9.47E-09	5.77E-10	3.72E-07	7.52E-08	4.62E-07
15	9.30	0.	7.83E-11	3.89E-09	0.	0.	0.	9.51E-09	5.96E-10	1.04E-07	7.51E-08	1.93E-07
16	9.20	0.	9.44E-11	2.92E-09	0.	0.	0.	9.54E-09	6.16E-10	1.03E-07	7.50E-08	1.91E-07
17	9.10	0.	1.12E-10	2.99E-09	0.	0.	0.	9.57E-09	6.36E-10	1.03E-07	7.50E-08	1.91E-07
18	9.00	0.	1.31E-10	2.55E-09	0.	0.	0.	9.61E-09	6.58E-10	1.03E-07	7.49E-08	1.91E-07
19	8.90	0.	1.49E-10	2.22E-09	0.	0.	0.	9.64E-09	6.80E-10	1.03E-07	7.49E-08	1.90E-07
20	8.80	0.	1.54E-10	2.13E-09	0.	0.	0.	9.68E-09	7.04E-10	1.02E-07	7.48E-08	1.90E-07
21	8.70	0.	1.48E-10	1.70E-09	0.	0.	0.	9.71E-09	7.29E-10	1.02E-07	7.47E-08	1.89E-07
22	8.60	0.	1.43E-10	1.73E-09	0.	0.	0.	9.75E-09	7.54E-10	1.02E-07	7.47E-08	1.89E-07
23	8.50	0.	1.39E-10	1.48E-09	0.	0.	0.	9.78E-09	7.81E-10	1.02E-07	7.46E-08	1.89E-07
24	8.40	0.	1.38E-10	1.35E-09	0.	0.	0.	9.83E-09	8.10E-10	1.02E-07	7.46E-08	1.88E-07
25	8.30	0.	1.37E-10	1.06E-09	0.	0.	0.	9.88E-09	8.40E-10	1.02E-07	7.47E-08	1.88E-07
26	8.20	0.	1.34E-10	1.05E-09	0.	0.	0.	9.94E-09	8.71E-10	1.01E-07	7.54E-08	1.89E-07
27	8.10	0.	1.30E-10	8.40E-10	0.	0.	0.	9.99E-09	9.04E-10	1.01E-07	7.60E-08	1.89E-07
28	8.00	0.	1.26E-10	8.19E-10	0.	0.	0.	10.00E-09	9.38E-10	1.01E-07	7.66E-08	1.89E-07
29	7.90	0.	1.23E-10	6.58E-10	0.	0.	0.	1.01E-08	9.74E-10	1.01E-07	7.73E-08	1.90E-07
30	7.80	0.	1.19E-10	6.58E-10	0.	0.	0.	1.01E-08	1.01E-09	1.01E-07	7.79E-08	1.91E-07
31	7.70	0.	1.14E-10	5.41E-10	0.	0.	0.	1.02E-08	1.05E-09	1.01E-07	7.85E-08	1.91E-07
32	7.60	0.	1.09E-10	4.90E-10	0.	2.98E-14	0.	1.02E-08	1.09E-09	1.01E-07	7.92E-08	1.92E-07
33	7.50	0.	1.04E-10	4.27E-10	0.	1.54E-13	0.	1.03E-08	1.14E-09	1.01E-07	7.98E-08	1.92E-07
34	7.40	0.	9.84E-11	3.65E-10	0.	7.84E-13	0.	1.03E-08	1.19E-09	1.00E-08	8.04E-08	1.93E-07
35	7.30	0.	9.39E-11	3.28E-10	0.	4.00E-12	0.	1.04E-08	1.24E-09	1.00E-08	8.11E-08	1.94E-07
36	7.20	0.	8.86E-11	2.88E-10	0.	1.08E-11	0.	1.05E-08	1.29E-09	1.00E-08	8.17E-08	1.94E-07
37	7.10	0.	8.33E-11	2.56E-10	0.	2.82E-11	0.	1.05E-08	1.34E-09	1.00E-08	8.23E-08	1.95E-07
38	7.00	7.11E-14	0.	2.22E-10	0.	7.72E-11	0.	1.06E-08	1.40E-09	1.00E-08	8.30E-08	1.96E-07
39	6.90	1.34E-13	0.	1.92E-10	0.	7.74E-11	0.	1.07E-08	1.46E-09	1.00E-08	8.36E-08	1.96E-07
40	6.80	1.12E-13	0.	1.75E-10	0.	1.64E-10	0.	1.08E-08	1.53E-09	1.00E-08	8.43E-08	1.97E-07
41	6.70	7.81E-14	0.	1.44E-10	0.	2.02E-10	0.	1.09E-08	1.60E-09	1.00E-08	8.50E-08	1.98E-07
42	6.60	4.60E-14	0.	1.21E-10	0.	1.20E-10	0.	1.10E-08	1.67E-09	1.00E-08	8.57E-08	1.99E-07
43	6.50	2.54E-14	0.	8.98E-11	0.	2.18E-10	0.	1.11E-08	1.75E-09	1.01E-07	8.64E-08	2.00E-07
44	6.40	3.50E-14	0.	5.59E-11	1.30E-12	2.54E-10	0.	1.11E-08	1.84E-09	1.01E-07	8.71E-08	2.02E-07
45	6.30	7.26E-14	0.	3.12E-11	5.69E-12	1.29E-10	0.	1.12E-08	1.93E-09	1.02E-07	8.81E-08	2.03E-07
46	6.20	2.15E-13	0.	1.56E-11	7.57E-12	1.99E-10	0.	1.13E-08	2.02E-09	1.02E-07	9.04E-08	2.05E-07
47	6.10	8.55E-13	0.	6.65E-12	2.07E-11	3.04E-10	0.	1.14E-08	2.12E-09	1.03E-07	9.11E-08	2.08E-07
48	6.00	2.23E-12	0.	1.59E-12	1.77E-11	1.15E-10	0.	1.15E-08	2.23E-09	1.04E-07	9.24E-08	2.10E-07
49	5.90	3.59E-12	0.	1.13E-13	2.51E-11	1.22E-10	0.	1.15E-08	2.34E-09	1.05E-07	9.41E-08	2.13E-07
50	5.80	5.41E-12	0.	2.78E-15	3.38E-11	1.14E-10	0.	1.13E-08	2.47E-09	1.06E-07	9.54E-08	2.15E-07
51	5.70	6.35E-12	0.	0.	3.68E-11	1.23E-10	0.	1.06E-08	2.60E-09	1.07E-07	9.71E-08	2.17E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.87E-12	0.	0.	0.	2.79E-11	1.92E-10	0.	0.	9.89E-09	2.74E-09	1.08E-07	9.86E-08	2.19E-07
53	5.50	8.15E-12	0.	0.	0.	3.43E-11	1.84E-10	0.	0.	9.94E-09	2.90E-09	1.09E-07	9.95E-08	2.23E-07
54	5.40	8.52E-12	0.	0.	0.	2.92E-11	1.25E-10	0.	0.	10.00E-09	3.06E-09	1.11E-07	1.02E-07	2.28E-07
55	5.30	8.18E-12	0.	0.	0.	3.00E-11	1.81E-10	0.	0.	1.01E-08	3.24E-09	1.13E-07	1.04E-07	2.30E-07
56	5.20	5.82E-12	0.	0.	0.	3.12E-11	1.07E-10	0.	0.	1.01E-08	3.43E-09	1.15E-07	1.06E-07	2.35E-07
57	5.10	5.41E-12	0.	0.	0.	3.34E-11	1.46E-10	0.	0.	1.02E-08	3.64E-09	1.18E-07	1.08E-07	2.40E-07
58	5.00	3.99E-12	0.	0.	0.	2.67E-11	1.27E-10	0.	0.	1.03E-08	3.86E-09	1.21E-07	1.11E-07	2.46E-07
59	4.90	3.32E-12	0.	0.	0.	2.87E-11	1.28E-10	0.	0.	1.04E-08	4.10E-09	1.25E-07	1.13E-07	2.53E-07
60	4.80	3.33E-12	0.	0.	0.	3.02E-11	1.17E-10	0.	0.	1.05E-08	4.37E-09	1.28E-07	1.16E-07	2.59E-07
61	4.70	3.58E-12	0.	0.	0.	2.88E-11	10.00E-11	0.	0.	1.05E-08	4.65E-09	1.31E-07	1.19E-07	2.65E-07
62	4.60	4.20E-12	0.	0.	0.	2.88E-11	9.31E-11	0.	0.	1.06E-08	4.97E-09	1.36E-07	1.21E-07	2.73E-07
63	4.50	4.20E-12	0.	7.89E-12	0.	2.49E-11	6.65E-11	0.	0.	1.07E-08	5.31E-09	1.41E-07	1.24E-07	2.81E-07
64	4.40	4.24E-12	0.	2.83E-11	0.	2.43E-11	4.87E-11	0.	0.	1.08E-08	5.68E-09	1.46E-07	1.27E-07	2.90E-07
65	4.30	3.80E-12	0.	7.02E-11	0.	2.20E-11	2.78E-11	0.	0.	1.09E-08	6.09E-09	1.51E-07	1.30E-07	2.98E-07
66	4.20	3.41E-12	0.	2.82E-10	0.	2.28E-11	2.19E-11	0.	0.	1.10E-08	6.53E-09	1.56E-07	2.18E-08	1.96E-07
67	4.10	3.07E-12	0.	8.91E-11	0.	2.11E-11	5.66E-12	0.	0.	1.10E-08	7.03E-09	1.30E-07	2.24E-08	1.71E-07
68	4.00	2.71E-12	0.	3.96E-10	0.	1.96E-11	4.73E-12	0.	0.	1.11E-08	7.57E-09	1.34E-07	2.31E-08	1.76E-07
69	3.90	2.18E-12	0.	1.76E-10	8.65E-10	1.68E-11	1.84E-12	0.	0.	1.10E-08	8.17E-09	1.63E-07	2.38E-08	1.47E-07
70	3.80	2.33E-12	0.	2.50E-10	5.90E-09	1.77E-11	0.	0.	0.	1.10E-08	8.84E-09	1.07E-07	2.45E-08	1.57E-07
71	3.70	1.92E-12	0.	3.21E-10	1.42E-09	1.37E-11	0.	0.	0.	1.08E-08	9.58E-09	9.39E-08	2.75E-08	1.44E-07
72	3.60	1.66E-12	0.	1.78E-10	9.04E-09	1.50E-11	0.	0.	0.	1.01E-08	1.04E-08	1.53E-07	3.10E-08	1.64E-07
73	3.50	1.48E-12	0.	2.61E-10	2.71E-08	1.07E-11	0.	0.	0.	9.27E-09	1.13E-08	1.16E-07	3.47E-08	1.99E-07
74	3.40	1.27E-12	0.	1.31E-10	2.08E-09	1.19E-11	0.	0.	0.	5.34E-09	1.24E-08	1.31E-07	3.88E-08	1.90E-07
75	3.30	9.84E-13	0.	1.42E-10	1.15E-08	8.76E-12	0.	0.	0.	5.35E-09	1.35E-08	1.46E-07	4.28E-08	2.20E-07
76	3.20	8.08E-13	0.	8.09E-11	2.67E-08	6.93E-12	0.	0.	0.	5.36E-09	1.48E-08	1.61E-07	4.71E-08	2.58E-07
77	3.10	7.35E-13	0.	6.21E-11	3.25E-09	7.95E-12	0.	0.	0.	5.37E-09	1.63E-08	1.77E-07	5.13E-08	2.53E-07
78	3.00	6.20E-13	0.	3.50E-11	1.14E-08	7.04E-12	0.	0.	0.	5.39E-09	1.80E-08	1.92E-07	5.56E-08	2.83E-07
79	2.90	4.88E-13	0.	2.09E-11	7.47E-09	4.86E-12	0.	0.	0.	5.40E-09	2.00E-08	2.08E-07	5.99E-08	3.01E-07
80	2.80	4.87E-13	0.	9.81E-12	2.83E-09	2.97E-12	0.	0.	0.	5.40E-09	2.22E-08	2.25E-07	6.45E-08	3.20E-07
81	2.70	2.86E-13	0.	4.49E-12	5.57E-09	1.43E-12	0.	0.	0.	5.40E-09	2.48E-08	2.43E-07	6.63E-08	3.46E-07
82	2.60	1.20E-13	0.	2.29E-12	5.20E-10	5.65E-13	0.	0.	0.	5.40E-09	2.78E-08	2.63E-07	2.49E-08	3.22E-07
83	2.50	8.02E-15	0.	2.87E-13	4.04E-10	1.26E-13	0.	0.	0.	5.40E-09	3.13E-08	1.49E-07	2.87E-08	2.14E-07
84	2.40	0.	1.67E-11	0.	4.45E-10	1.27E-14	0.	0.	0.	5.40E-09	3.54E-08	1.85E-07	3.54E-08	2.62E-07
85	2.30	0.	7.23E-11	0.	0.	0.	0.	0.	0.	5.36E-09	4.03E-08	2.24E-07	4.24E-08	3.12E-07
86	2.20	0.	1.57E-10	0.	0.	0.	0.	0.	0.	5.34E-09	4.61E-08	2.65E-07	5.11E-08	3.68E-07
87	2.10	0.	2.15E-10	0.	0.	0.	0.	0.	0.	5.32E-09	5.30E-08	3.08E-07	5.99E-08	4.27E-07
88	2.00	0.	3.60E-10	0.	0.	0.	0.	0.	0.	5.15E-09	6.15E-08	3.52E-07	6.86E-08	4.88E-07
89	1.90	0.	6.69E-10	0.	0.	0.	0.	0.	0.	4.95E-09	7.18E-08	3.98E-07	7.77E-08	5.53E-07
90	1.80	0.	5.44E-10	0.	0.	0.	0.	0.	0.	4.74E-09	8.46E-08	4.69E-07	9.25E-08	6.51E-07
91	1.70	0.	6.58E-10	0.	0.	0.	0.	0.	0.	4.46E-09	1.01E-07	5.56E-07	1.11E-07	7.72E-07
92	1.60	0.	4.61E-10	0.	0.	0.	0.	0.	0.	3.77E-09	1.21E-07	6.42E-07	1.21E-07	8.89E-07
93	1.50	0.	5.65E-10	0.	0.	0.	0.	0.	0.	1.72E-09	1.47E-07	7.36E-07	1.47E-07	1.03E-06
94	1.40	0.	5.93E-10	0.	0.	0.	0.	0.	0.	0.	1.81E-07	5.71E-07	1.13E-07	8.46E-07
95	1.30	0.	4.40E-10	0.	0.	0.	0.	0.	0.	0.	2.27E-07	9.15E-07	1.61E-07	1.20E-06
96	1.20	0.	4.42E-10	0.	0.	0.	0.	0.	0.	0.	2.90E-07	1.10E-06	1.91E-07	1.58E-06
97	1.10	0.	3.70E-10	0.	0.	0.	0.	1.03E-15	0.	0.	3.78E-07	1.32E-06	2.44E-07	1.94E-06
98	1.00	0.	3.43E-10	0.	0.	0.	0.	1.68E-14	0.	0.	5.05E-07	1.60E-06	2.96E-07	2.40E-06
99	0.90	0.	2.72E-10	0.	0.	0.	0.	2.06E-14	0.	0.	6.95E-07	1.87E-06	3.48E-07	2.92E-06
100	0.80	0.	1.29E-10	0.	0.	0.	0.	3.59E-13	0.	0.	1.00E-06	2.11E-06	3.93E-07	3.50E-06
101	0.70	0.	3.37E-11	0.	0.	0.	0.	2.48E-13	0.	0.	1.51E-06	1.85E-06	3.21E-07	3.68E-06
102	0.60	0.	2.34E-12	0.	0.	0.	0.	9.85E-13	0.	0.	2.41E-06	2.08E-06	3.62E-07	4.85E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.97E-11	0.	0.	0.	1.37E-10	2.18E-11	1.95E-08	4.75E-09	2.45E-08
2	10.60	0.	0.	3.93E-11	0.	0.	0.	1.37E-10	2.25E-11	1.97E-08	4.74E-09	2.46E-08
3	10.50	0.	0.	3.84E-11	0.	0.	0.	1.37E-10	2.31E-11	1.98E-08	4.74E-09	2.47E-08
4	10.40	0.	0.	3.46E-11	0.	0.	0.	1.37E-10	2.36E-11	1.98E-08	4.74E-09	2.48E-08
5	10.30	0.	0.	2.85E-11	0.	0.	0.	1.37E-10	2.45E-11	1.99E-08	4.73E-09	2.48E-08
6	10.20	0.	0.	2.83E-11	0.	0.	0.	1.38E-10	2.52E-11	1.99E-08	4.73E-09	2.48E-08
7	10.10	0.	0.	2.57E-11	0.	0.	0.	1.38E-10	2.60E-11	2.00E-08	4.72E-09	2.49E-08
8	10.00	0.	0.	2.09E-11	0.	0.	0.	1.38E-10	2.68E-11	2.00E-08	4.72E-09	2.49E-08
9	9.90	0.	0.	2.12E-11	0.	0.	0.	1.38E-10	2.76E-11	2.01E-08	4.71E-09	2.50E-08
10	9.80	0.	0.	1.88E-11	0.	0.	0.	1.38E-10	2.84E-11	2.01E-08	4.71E-09	2.50E-08
11	9.70	0.	0.	1.51E-11	0.	0.	0.	1.39E-10	2.93E-11	2.02E-08	4.71E-09	2.51E-08
12	9.60	0.	0.	1.62E-11	0.	0.	0.	1.39E-10	3.03E-11	2.02E-08	4.70E-09	2.51E-08
13	9.50	0.	1.79E-13	1.29E-11	0.	0.	0.	1.39E-10	3.12E-11	2.03E-08	4.70E-09	2.52E-08
14	9.40	0.	2.41E-13	1.15E-11	0.	0.	0.	1.40E-10	3.22E-11	2.03E-08	4.69E-09	2.52E-08
15	9.30	0.	3.03E-13	1.14E-11	0.	0.	0.	1.40E-10	3.33E-11	5.65E-09	4.69E-09	1.05E-08
16	9.20	0.	3.66E-13	8.72E-12	0.	0.	0.	1.41E-10	3.44E-11	5.64E-09	4.69E-09	1.05E-08
17	9.10	0.	4.36E-13	8.92E-12	0.	0.	0.	1.41E-10	3.56E-11	5.63E-09	4.68E-09	1.05E-08
18	9.00	0.	5.07E-13	7.61E-12	0.	0.	0.	1.42E-10	3.68E-11	5.62E-09	4.68E-09	1.05E-08
19	8.90	0.	5.78E-13	6.63E-12	0.	0.	0.	1.42E-10	3.80E-11	5.60E-09	4.67E-09	1.05E-08
20	8.80	0.	5.97E-13	6.34E-12	0.	0.	0.	1.43E-10	3.93E-11	5.59E-09	4.67E-09	1.05E-08
21	8.70	0.	5.79E-13	5.08E-12	0.	0.	0.	1.43E-10	4.07E-11	5.58E-09	4.67E-09	1.04E-08
22	8.60	0.	5.53E-13	5.15E-12	0.	0.	0.	1.44E-10	4.22E-11	5.57E-09	4.66E-09	1.04E-08
23	8.50	0.	5.40E-13	4.16E-12	0.	0.	0.	1.44E-10	4.37E-11	5.56E-09	4.66E-09	1.04E-08
24	8.40	0.	5.35E-13	4.03E-12	0.	0.	0.	1.45E-10	4.53E-11	5.55E-09	4.66E-09	1.04E-08
25	8.30	0.	5.30E-13	3.17E-12	0.	0.	0.	1.46E-10	4.69E-11	5.54E-09	4.67E-09	1.04E-08
26	8.20	0.	5.19E-13	3.12E-12	0.	0.	0.	1.47E-10	4.87E-11	5.53E-09	4.71E-09	1.04E-08
27	8.10	0.	5.04E-13	2.50E-12	0.	0.	0.	1.47E-10	5.05E-11	5.52E-09	4.75E-09	1.05E-08
28	8.00	0.	4.89E-13	2.44E-12	0.	0.	0.	1.48E-10	5.24E-11	5.51E-09	4.79E-09	1.05E-08
29	7.90	0.	4.75E-13	1.98E-12	0.	0.	0.	1.49E-10	5.45E-11	5.50E-09	4.83E-09	1.05E-08
30	7.80	0.	4.61E-13	1.96E-12	0.	0.	0.	1.50E-10	5.66E-11	5.50E-09	4.87E-09	1.06E-08
31	7.70	0.	4.43E-13	1.61E-12	0.	0.	0.	1.50E-10	5.88E-11	5.50E-09	4.91E-09	1.06E-08
32	7.60	0.	4.22E-13	1.46E-12	0.	1.01E-16	0.	1.51E-10	6.12E-11	5.49E-09	4.94E-09	1.07E-08
33	7.50	0.	4.01E-13	1.27E-12	0.	5.24E-16	0.	1.52E-10	6.37E-11	5.49E-09	4.98E-09	1.07E-08
34	7.40	0.	3.82E-13	1.09E-12	0.	2.67E-15	0.	1.53E-10	6.63E-11	5.49E-09	5.02E-09	1.07E-08
35	7.30	0.	3.64E-13	9.78E-13	0.	1.36E-14	0.	1.54E-10	6.91E-11	5.49E-09	5.06E-09	1.08E-08
36	7.20	0.	3.43E-13	8.34E-13	0.	3.67E-14	0.	1.54E-10	7.20E-11	5.48E-09	5.10E-09	1.08E-08
37	7.10	0.	3.22E-13	7.62E-13	0.	9.62E-14	0.	1.56E-10	7.51E-11	5.48E-09	5.14E-09	1.09E-08
38	7.00	2.77E-16	0.	6.60E-13	0.	2.63E-13	0.	1.57E-10	7.84E-11	5.48E-09	5.18E-09	1.09E-08
39	6.90	5.23E-16	0.	5.74E-13	0.	2.64E-13	0.	1.58E-10	8.19E-11	5.47E-09	5.22E-09	1.09E-08
40	6.80	4.35E-16	0.	5.20E-13	0.	5.60E-13	0.	1.60E-10	8.55E-11	5.47E-09	5.26E-09	1.10E-08
41	6.70	3.04E-16	0.	4.29E-13	0.	6.89E-13	0.	1.61E-10	8.94E-11	5.47E-09	5.31E-09	1.10E-08
42	6.60	1.79E-16	0.	3.62E-13	0.	4.09E-13	0.	1.62E-10	9.36E-11	5.48E-09	5.35E-09	1.11E-08
43	6.50	9.92E-17	0.	2.68E-13	0.	7.43E-13	0.	1.63E-10	9.80E-11	5.50E-09	5.40E-09	1.12E-08
44	6.40	1.38E-16	0.	1.67E-13	4.44E-15	8.65E-13	0.	1.65E-10	1.03E-10	5.53E-09	5.44E-09	1.12E-08
45	6.30	2.83E-16	0.	9.29E-14	1.94E-14	4.41E-13	0.	1.66E-10	1.08E-10	5.55E-09	5.50E-09	1.13E-08
46	6.20	8.36E-16	0.	4.64E-14	2.58E-14	6.79E-13	0.	1.67E-10	1.13E-10	5.57E-09	5.60E-09	1.14E-08
47	6.10	3.33E-15	0.	1.98E-14	7.06E-14	1.04E-12	0.	1.68E-10	1.19E-10	5.61E-09	5.69E-09	1.16E-08
48	6.00	8.69E-15	0.	4.73E-15	6.04E-14	3.91E-13	0.	1.70E-10	1.25E-10	5.67E-09	5.78E-09	1.17E-08
49	5.90	1.40E-14	0.	3.36E-16	8.55E-14	4.15E-13	0.	1.70E-10	1.31E-10	5.72E-09	5.87E-09	1.19E-08
50	5.80	2.11E-14	0.	8.28E-18	1.15E-13	3.94E-13	0.	1.47E-10	1.38E-10	5.78E-09	5.97E-09	1.21E-08
51	5.70	2.47E-14	0.	0.	1.25E-13	4.20E-13	0.	1.57E-10	1.45E-10	5.83E-09	6.06E-09	1.22E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.07E-14	0.	0.	0.	9.52E-14	6.55E-13	0.	0.	1.46E-10	1.53E-10	5.89E-09	6.16E-09	1.24E-08
53	5.50	3.18E-14	0.	0.	0.	1.17E-13	6.29E-13	0.	0.	1.47E-10	1.62E-10	5.98E-09	6.25E-09	1.25E-08
54	5.40	3.32E-14	0.	0.	0.	9.95E-14	4.25E-13	0.	0.	1.47E-10	1.71E-10	6.08E-09	6.36E-09	1.28E-08
55	5.30	3.19E-14	0.	0.	0.	1.02E-13	6.17E-13	0.	0.	1.48E-10	1.81E-10	6.18E-09	6.47E-09	1.30E-08
56	5.20	2.27E-14	0.	0.	0.	1.06E-13	3.64E-13	0.	0.	1.49E-10	1.92E-10	6.28E-09	6.62E-09	1.32E-08
57	5.10	2.11E-14	0.	0.	0.	1.03E-13	4.97E-13	0.	0.	1.51E-10	2.03E-10	6.45E-09	6.77E-09	1.36E-08
58	5.00	1.55E-14	0.	0.	0.	9.11E-14	4.33E-13	0.	0.	1.52E-10	2.16E-10	6.62E-09	6.92E-09	1.39E-08
59	4.90	1.30E-14	0.	0.	0.	9.80E-14	4.36E-13	0.	0.	1.53E-10	2.29E-10	6.81E-09	7.07E-09	1.43E-08
60	4.80	1.30E-14	0.	0.	0.	1.03E-13	4.00E-13	0.	0.	1.54E-10	2.44E-10	7.00E-09	7.23E-09	1.46E-08
61	4.70	1.39E-14	0.	0.	0.	9.83E-14	3.41E-13	0.	0.	1.56E-10	2.60E-10	7.18E-09	7.40E-09	1.50E-08
62	4.60	1.64E-14	0.	0.	0.	9.81E-14	3.17E-13	0.	0.	1.57E-10	2.77E-10	7.41E-09	7.59E-09	1.54E-08
63	4.50	1.64E-14	0.	2.35E-14	0.	8.50E-14	2.27E-13	0.	0.	1.58E-10	2.96E-10	7.69E-09	7.77E-09	1.59E-08
64	4.40	1.65E-14	0.	8.44E-14	0.	8.29E-14	1.66E-13	0.	0.	1.60E-10	3.17E-10	7.96E-09	7.95E-09	1.64E-08
65	4.30	1.48E-14	0.	2.09E-13	0.	7.51E-14	9.47E-14	0.	0.	1.61E-10	3.40E-10	8.25E-09	8.12E-09	1.69E-08
66	4.20	1.33E-14	0.	8.41E-13	0.	7.77E-14	7.47E-14	0.	0.	1.62E-10	3.65E-10	8.55E-09	8.30E-09	1.74E-08
67	4.10	1.20E-14	0.	2.65E-13	0.	7.19E-14	1.93E-14	0.	0.	1.63E-10	3.93E-10	7.88E-09	1.40E-09	9.03E-09
68	4.00	1.06E-14	0.	1.18E-12	0.	6.67E-14	1.48E-14	0.	0.	1.63E-10	4.23E-10	5.45E-09	1.44E-09	7.48E-09
69	3.90	8.48E-15	0.	5.24E-13	1.09E-11	5.73E-14	6.33E-15	0.	0.	1.63E-10	4.57E-10	5.64E-09	1.48E-09	7.75E-09
70	3.80	9.07E-15	0.	7.45E-13	7.65E-11	6.05E-14	0.	0.	0.	1.62E-10	4.94E-10	5.82E-09	1.53E-09	8.00E-09
71	3.70	7.48E-15	0.	9.57E-13	1.79E-11	4.68E-14	0.	0.	0.	1.60E-10	5.35E-10	5.13E-09	1.72E-09	7.56E-09
72	3.60	6.48E-15	0.	5.06E-13	1.14E-10	5.10E-14	0.	0.	0.	1.49E-10	5.81E-10	5.64E-09	1.94E-09	8.42E-09
73	3.50	5.76E-15	0.	7.77E-13	3.42E-10	3.66E-14	0.	0.	0.	1.37E-10	6.33E-10	6.36E-09	2.17E-09	9.64E-09
74	3.40	4.98E-15	0.	3.91E-13	2.63E-11	4.05E-14	0.	0.	0.	7.69E-11	6.91E-10	7.17E-09	2.42E-09	1.07E-08
75	3.30	3.84E-15	0.	4.24E-13	1.45E-10	2.99E-14	0.	0.	0.	7.90E-11	7.56E-10	7.99E-09	2.67E-09	1.18E-08
76	3.20	3.15E-15	0.	2.41E-13	3.62E-10	3.04E-14	0.	0.	0.	7.91E-11	8.29E-10	8.82E-09	2.94E-09	1.30E-08
77	3.10	2.86E-15	0.	1.85E-13	4.10E-11	2.71E-14	0.	0.	0.	7.93E-11	9.13E-10	9.66E-09	3.21E-09	1.42E-08
78	3.00	2.42E-15	0.	1.84E-13	1.44E-10	2.40E-14	0.	0.	0.	7.95E-11	1.01E-09	1.05E-08	3.47E-09	1.52E-08
79	2.90	1.98E-15	0.	6.22E-14	9.43E-11	1.66E-14	0.	0.	0.	7.96E-11	1.12E-09	1.14E-08	3.74E-09	1.64E-08
80	2.80	1.90E-15	0.	2.92E-14	3.56E-11	1.01E-14	0.	0.	0.	7.98E-11	1.24E-09	1.23E-08	4.03E-09	1.77E-08
81	2.70	1.11E-15	0.	1.34E-14	7.03E-11	4.89E-15	0.	0.	0.	7.98E-11	1.39E-09	1.33E-08	1.44E-09	1.63E-08
82	2.60	4.67E-16	0.	6.83E-15	6.56E-12	1.93E-15	0.	0.	0.	7.98E-11	1.55E-09	6.83E-09	1.56E-09	10.98E-09
83	2.50	3.12E-17	0.	8.57E-16	5.10E-12	4.28E-16	0.	0.	0.	7.98E-11	1.75E-09	8.12E-09	1.79E-09	1.17E-08
84	2.40	0.	4.97E-14	0.	5.61E-12	4.32E-17	0.	0.	0.	7.98E-11	1.98E-09	1.81E-08	2.21E-09	1.44E-08
85	2.30	0.	2.14E-13	0.	0.	0.	0.	0.	0.	7.91E-11	2.25E-09	1.22E-08	2.65E-09	1.72E-08
86	2.20	0.	4.67E-13	0.	0.	0.	0.	0.	0.	7.88E-11	2.58E-09	1.45E-08	3.19E-09	2.03E-08
87	2.10	0.	6.41E-13	0.	0.	0.	0.	0.	0.	7.85E-11	2.96E-09	1.68E-08	3.74E-09	2.36E-08
88	2.00	0.	1.07E-12	0.	0.	0.	0.	0.	0.	7.68E-11	3.44E-09	1.92E-08	4.28E-09	2.70E-08
89	1.90	0.	1.99E-12	0.	0.	0.	0.	0.	0.	7.31E-11	4.01E-09	2.17E-08	4.86E-09	3.07E-08
90	1.80	0.	1.62E-12	0.	0.	0.	0.	0.	0.	6.99E-11	4.73E-09	2.56E-08	5.78E-09	3.42E-08
91	1.70	0.	1.94E-12	0.	0.	0.	0.	0.	0.	6.58E-11	5.62E-09	3.03E-08	6.94E-09	4.30E-08
92	1.60	0.	1.37E-12	0.	0.	0.	0.	0.	0.	5.57E-11	6.76E-09	3.17E-08	7.56E-09	4.61E-08
93	1.50	0.	1.69E-12	0.	0.	0.	0.	0.	0.	2.53E-11	8.22E-09	4.82E-08	8.96E-09	5.74E-08
94	1.40	0.	1.77E-12	0.	0.	0.	0.	0.	0.	0.	1.01E-08	3.12E-08	7.86E-09	4.84E-08
95	1.30	0.	1.31E-12	0.	0.	0.	0.	0.	0.	0.	1.27E-08	4.45E-08	1.01E-08	6.73E-08
96	1.20	0.	1.32E-12	0.	0.	0.	0.	0.	0.	0.	1.42E-08	5.99E-08	1.20E-08	8.81E-08
97	1.10	0.	1.10E-12	0.	0.	0.	0.	6.22E-18	0.	0.	2.11E-08	7.20E-08	1.52E-08	1.08E-07
98	1.00	0.	1.82E-12	0.	0.	0.	0.	5.74E-17	0.	0.	2.82E-08	8.72E-08	1.85E-08	1.34E-07
99	0.90	0.	8.27E-13	0.	0.	0.	0.	7.02E-17	0.	0.	3.88E-08	10.80E-08	2.13E-08	1.68E-07
100	0.80	0.	3.88E-13	0.	0.	0.	0.	1.22E-15	0.	0.	5.59E-08	9.96E-08	2.45E-08	1.88E-07
101	0.70	0.	1.01E-13	0.	0.	0.	0.	8.45E-16	0.	0.	8.44E-08	1.01E-07	2.00E-08	2.05E-07
102	0.60	0.	7.84E-15	0.	0.	0.	0.	3.36E-15	0.	0.	1.35E-07	1.13E-07	2.26E-08	2.71E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (10mS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.58E-14	0.	0.	0.	5.85E-13	5.33E-13	4.64E-18	1.30E-18	5.99E-18
2	10.60	0.	0.	2.22E-14	0.	0.	0.	5.89E-13	5.49E-13	4.67E-18	1.30E-18	5.98E-18
3	10.50	0.	0.	2.17E-14	0.	0.	0.	5.86E-13	5.65E-13	4.69E-18	1.30E-18	6.00E-18
4	10.40	0.	0.	1.95E-14	0.	0.	0.	5.87E-13	5.81E-13	4.71E-18	1.29E-18	6.02E-18
5	10.30	0.	0.	1.61E-14	0.	0.	0.	5.88E-13	5.98E-13	4.72E-18	1.29E-18	6.03E-18
6	10.20	0.	0.	1.60E-14	0.	0.	0.	5.88E-13	6.16E-13	4.73E-18	1.29E-18	6.04E-18
7	10.10	0.	0.	1.49E-14	0.	0.	0.	5.89E-13	6.35E-13	4.75E-18	1.29E-18	6.05E-18
8	10.00	0.	0.	1.18E-14	0.	0.	0.	5.90E-13	6.54E-13	4.76E-18	1.29E-18	6.06E-18
9	9.90	0.	0.	1.19E-14	0.	0.	0.	5.91E-13	6.74E-13	4.77E-18	1.29E-18	6.07E-18
10	9.80	0.	0.	1.06E-14	0.	0.	0.	5.92E-13	6.95E-13	4.78E-18	1.29E-18	6.08E-18
11	9.70	0.	0.	8.53E-15	0.	0.	0.	5.93E-13	7.17E-13	4.79E-18	1.29E-18	6.09E-18
12	9.60	0.	0.	9.15E-15	0.	0.	0.	5.94E-13	7.39E-13	4.81E-18	1.29E-18	6.11E-18
13	9.50	0.	1.33E-16	7.29E-15	0.	0.	0.	5.95E-13	7.63E-13	4.82E-18	1.28E-18	6.12E-18
14	9.40	0.	1.80E-16	6.48E-15	0.	0.	0.	5.96E-13	7.88E-13	1.35E-18	1.28E-18	2.64E-18
15	9.30	0.	2.26E-16	6.54E-15	0.	0.	0.	6.00E-13	8.14E-13	1.34E-18	1.28E-18	2.64E-18
16	9.20	0.	2.72E-16	4.92E-15	0.	0.	0.	6.02E-13	8.41E-13	1.34E-18	1.28E-18	2.64E-18
17	9.10	0.	3.24E-16	5.03E-15	0.	0.	0.	6.04E-13	8.69E-13	1.34E-18	1.28E-18	2.63E-18
18	9.00	0.	3.77E-16	4.29E-15	0.	0.	0.	6.06E-13	8.98E-13	1.33E-18	1.28E-18	2.63E-18
19	8.90	0.	4.30E-16	3.74E-15	0.	0.	0.	6.08E-13	9.29E-13	1.33E-18	1.28E-18	2.62E-18
20	8.80	0.	4.45E-16	3.58E-15	0.	0.	0.	6.11E-13	9.61E-13	1.33E-18	1.28E-18	2.62E-18
21	8.70	0.	4.28E-16	2.87E-15	0.	0.	0.	6.13E-13	9.95E-13	1.33E-18	1.28E-18	2.62E-18
22	8.60	0.	4.12E-16	2.98E-15	0.	0.	0.	6.15E-13	1.03E-12	1.32E-18	1.28E-18	2.61E-18
23	8.50	0.	4.02E-16	2.39E-15	0.	0.	0.	6.17E-13	1.07E-12	1.32E-18	1.27E-18	2.61E-18
24	8.40	0.	3.99E-16	2.27E-15	0.	0.	0.	6.20E-13	1.11E-12	1.32E-18	1.27E-18	2.61E-18
25	8.30	0.	3.95E-16	1.79E-15	0.	0.	0.	6.23E-13	1.15E-12	1.32E-18	1.28E-18	2.61E-18
26	8.20	0.	3.86E-16	1.76E-15	0.	0.	0.	6.27E-13	1.19E-12	1.31E-18	1.29E-18	2.62E-18
27	8.10	0.	3.75E-16	1.41E-15	0.	0.	0.	6.30E-13	1.23E-12	1.31E-18	1.30E-18	2.63E-18
28	8.00	0.	3.64E-16	1.38E-15	0.	0.	0.	6.33E-13	1.28E-12	1.31E-18	1.31E-18	2.64E-18
29	7.90	0.	3.54E-16	1.11E-15	0.	0.	0.	6.36E-13	1.33E-12	1.31E-18	1.32E-18	2.65E-18
30	7.80	0.	3.43E-16	1.11E-15	0.	0.	0.	6.40E-13	1.38E-12	1.31E-18	1.33E-18	2.66E-18
31	7.70	0.	3.30E-16	9.18E-16	0.	0.	0.	6.43E-13	1.44E-12	1.31E-18	1.34E-18	2.67E-18
32	7.60	0.	3.14E-16	8.24E-16	0.	6.59E-20	0.	6.46E-13	1.49E-12	1.30E-18	1.35E-18	2.68E-18
33	7.50	0.	2.99E-16	7.18E-16	0.	3.40E-19	0.	6.49E-13	1.56E-12	1.30E-18	1.36E-18	2.69E-18
34	7.40	0.	2.84E-16	6.14E-16	0.	1.74E-18	0.	6.53E-13	1.62E-12	1.30E-18	1.37E-18	2.70E-18
35	7.30	0.	2.71E-16	5.51E-16	0.	8.86E-18	0.	6.57E-13	1.69E-12	1.30E-18	1.38E-18	2.71E-18
36	7.20	0.	2.54E-16	4.78E-16	0.	2.38E-17	0.	6.60E-13	1.76E-12	1.30E-18	1.40E-18	2.72E-18
37	7.10	0.	2.40E-16	4.30E-16	0.	6.24E-17	0.	6.66E-13	1.83E-12	1.30E-18	1.41E-18	2.73E-18
38	7.00	2.07E-19	0.	3.72E-16	0.	1.71E-16	0.	6.71E-13	1.91E-12	1.30E-18	1.42E-18	2.74E-18
39	6.90	3.91E-19	0.	3.24E-16	0.	1.71E-16	0.	6.77E-13	2.00E-12	1.30E-18	1.43E-18	2.75E-18
40	6.80	3.25E-19	0.	2.93E-16	0.	3.64E-16	0.	6.82E-13	2.09E-12	1.30E-18	1.44E-18	2.77E-18
41	6.70	2.28E-19	0.	2.42E-16	0.	4.47E-16	0.	6.87E-13	2.18E-12	1.30E-18	1.45E-18	2.78E-18
42	6.60	1.34E-19	0.	2.04E-16	0.	2.66E-16	0.	6.93E-13	2.29E-12	1.30E-18	1.46E-18	2.80E-18
43	6.50	7.42E-20	0.	1.91E-16	0.	4.82E-16	0.	6.98E-13	2.39E-12	1.31E-18	1.48E-18	2.81E-18
44	6.40	1.02E-19	0.	9.48E-17	2.88E-18	5.62E-16	0.	7.04E-13	2.51E-12	1.31E-18	1.49E-18	2.83E-18
45	6.30	2.11E-19	0.	5.24E-17	1.26E-17	2.87E-16	0.	7.09E-13	2.63E-12	1.32E-18	1.50E-18	2.86E-18
46	6.20	6.25E-19	0.	2.62E-17	1.67E-17	4.41E-16	0.	7.14E-13	2.76E-12	1.32E-18	1.53E-18	2.89E-18
47	6.10	2.49E-18	0.	1.12E-17	4.58E-17	6.73E-16	0.	7.20E-13	2.90E-12	1.33E-18	1.56E-18	2.92E-18
48	6.00	6.50E-18	0.	2.67E-18	3.92E-17	2.54E-16	0.	7.25E-13	3.04E-12	1.35E-18	1.58E-18	2.96E-18
49	5.90	1.05E-17	0.	1.90E-19	5.55E-17	2.69E-16	0.	7.25E-13	3.20E-12	1.36E-18	1.61E-18	3.01E-18
50	5.80	1.58E-17	0.	4.67E-21	7.48E-17	2.54E-16	0.	7.14E-13	3.37E-12	1.37E-18	1.63E-18	3.05E-18
51	5.70	1.85E-17	0.	0.	8.14E-17	2.77E-16	0.	6.71E-13	3.55E-12	1.38E-18	1.64E-18	3.08E-18

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.30E-17	0.	0.	0.	6.18E-17	4.2[illegible]E-16	0.	0.	6.24E-13	3.75E-12	1.40E-10	1.68E-10	3.13E-10
53	5.50	2.38E-17	0.	0.	0.	7.59E-17	4.0[illegible]E-16	0.	0.	6.27E-13	3.95E-12	1.42E-10	1.71E-10	3.18E-10
54	5.40	2.48E-17	0.	0.	0.	6.46E-17	2.7[illegible]E-16	0.	0.	6.31E-13	4.16E-12	1.44E-10	1.74E-10	3.23E-10
55	5.30	2.30E-17	0.	0.	0.	6.65E-17	4.00E-16	0.	0.	6.35E-13	4.42E-12	1.47E-10	1.77E-10	3.29E-10
56	5.20	1.70E-17	0.	0.	0.	6.91E-17	2.38E-16	0.	0.	6.39E-13	4.69E-12	1.49E-10	1.81E-10	3.36E-10
57	5.10	1.58E-17	0.	0.	0.	6.72E-17	3.23E-16	0.	0.	6.44E-13	4.97E-12	1.53E-10	1.85E-10	3.44E-10
58	5.00	1.16E-17	0.	0.	0.	5.92E-17	2.81E-16	0.	0.	6.49E-13	5.27E-12	1.57E-10	1.89E-10	3.52E-10
59	4.90	9.69E-18	0.	0.	0.	6.36E-17	2.83E-16	0.	0.	6.55E-13	5.60E-12	1.62E-10	1.93E-10	3.61E-10
60	4.80	9.69E-18	0.	0.	0.	6.69E-17	2.60E-16	0.	0.	6.60E-13	5.96E-12	1.66E-10	1.98E-10	3.70E-10
61	4.70	1.04E-17	0.	0.	0.	6.38E-17	2.21E-16	0.	0.	6.66E-13	6.35E-12	1.71E-10	2.02E-10	3.80E-10
62	4.60	1.23E-17	0.	0.	0.	6.37E-17	2.06E-16	0.	0.	6.71E-13	6.78E-12	1.76E-10	2.07E-10	3.91E-10
63	4.50	1.22E-17	0.	1.33E-17	0.	5.52E-17	1.47E-16	0.	0.	6.77E-13	7.24E-12	1.83E-10	2.12E-10	4.03E-10
64	4.40	1.24E-17	0.	4.76E-17	0.	5.39E-17	1.08E-16	0.	0.	6.82E-13	7.75E-12	1.89E-10	2.17E-10	4.14E-10
65	4.30	1.11E-17	0.	1.18E-16	0.	4.88E-17	8.15E-17	0.	0.	6.87E-13	8.31E-12	1.96E-10	2.13E-10	4.10E-10
66	4.20	9.95E-18	0.	4.74E-16	0.	5.04E-17	4.85E-17	0.	0.	6.93E-13	8.92E-12	2.03E-10	3.72E-11	2.50E-10
67	4.10	8.96E-18	0.	1.50E-16	0.	4.67E-17	1.25E-17	0.	0.	6.95E-13	9.68E-12	1.68E-10	3.83E-11	2.17E-10
68	4.00	7.90E-18	0.	6.66E-16	0.	4.33E-17	9.59E-18	0.	0.	6.98E-13	1.03E-11	1.38E-10	3.94E-11	1.80E-10
69	3.90	6.34E-18	0.	2.95E-16	3.94E-14	3.72E-17	4.11E-18	0.	0.	6.95E-13	1.12E-11	1.34E-10	4.05E-11	1.86E-10
70	3.80	6.79E-18	0.	4.20E-16	2.69E-13	3.93E-17	0.	0.	0.	6.93E-13	1.21E-11	1.17E-10	4.15E-11	1.72E-10
71	3.70	5.59E-18	0.	9.40E-16	6.46E-14	3.84E-17	0.	0.	0.	6.82E-13	1.31E-11	1.22E-10	4.70E-11	1.83E-10
72	3.60	4.84E-18	0.	2.05E-16	4.12E-13	3.31E-17	0.	0.	0.	6.39E-13	1.42E-11	1.34E-10	5.29E-11	2.02E-10
73	3.50	4.31E-18	0.	4.30E-16	1.23E-12	2.38E-17	0.	0.	0.	5.85E-13	1.55E-11	1.51E-10	5.93E-11	2.20E-10
74	3.40	3.71E-18	0.	2.20E-16	9.40E-14	2.63E-17	0.	0.	0.	3.37E-13	1.69E-11	1.70E-10	6.62E-11	2.54E-10
75	3.30	2.87E-18	0.	2.39E-16	5.22E-13	1.94E-17	0.	0.	0.	3.38E-13	1.85E-11	1.90E-10	7.32E-11	2.82E-10
76	3.20	2.35E-18	0.	1.36E-16	1.31E-12	1.98E-17	0.	0.	0.	3.38E-13	2.03E-11	2.09E-10	8.04E-11	3.12E-10
77	3.10	2.14E-18	0.	1.84E-16	1.48E-13	1.76E-17	0.	0.	0.	3.39E-13	2.23E-11	2.29E-10	8.77E-11	3.40E-10
78	3.00	1.81E-18	0.	5.80E-17	5.20E-13	1.56E-17	0.	0.	0.	3.40E-13	2.46E-11	2.49E-10	9.49E-11	3.70E-10
79	2.90	1.42E-18	0.	3.51E-17	3.40E-13	1.08E-17	0.	0.	0.	3.40E-13	2.73E-11	2.70E-10	1.02E-10	4.00E-10
80	2.80	1.42E-18	0.	1.65E-17	1.29E-13	6.50E-18	0.	0.	0.	3.41E-13	3.03E-11	2.92E-10	1.05E-10	4.28E-10
81	2.70	8.33E-19	0.	7.55E-18	2.54E-13	3.17E-18	0.	0.	0.	3.41E-13	3.38E-11	3.16E-10	3.93E-11	3.89E-10
82	2.60	3.49E-19	0.	3.85E-18	2.37E-14	1.25E-18	0.	0.	0.	3.41E-13	3.79E-11	1.62E-10	4.24E-11	2.43E-10
83	2.50	2.34E-20	0.	4.83E-19	1.84E-14	2.78E-19	0.	0.	0.	3.41E-13	4.27E-11	1.93E-10	4.91E-11	2.85E-10
84	2.40	0.	2.88E-17	0.	2.83E-14	2.81E-20	0.	0.	0.	3.41E-13	4.84E-11	2.48E-10	6.84E-11	3.49E-10
85	2.30	0.	1.22E-16	0.	0.	0.	0.	0.	0.	3.38E-13	5.50E-11	2.91E-10	7.24E-11	4.19E-10
86	2.20	0.	2.64E-16	0.	0.	0.	0.	0.	0.	3.37E-13	6.29E-11	3.44E-10	8.73E-11	4.94E-10
87	2.10	0.	3.61E-16	0.	0.	0.	0.	0.	0.	3.36E-13	7.24E-11	4.08E-10	1.02E-10	5.75E-10
88	2.00	0.	6.69E-16	0.	0.	0.	0.	0.	0.	3.25E-13	8.48E-11	4.57E-10	1.17E-10	6.50E-10
89	1.90	0.	1.12E-15	0.	0.	0.	0.	0.	0.	3.12E-13	9.80E-11	5.16E-10	1.33E-10	7.40E-10
90	1.80	0.	9.15E-16	0.	0.	0.	0.	0.	0.	2.99E-13	1.16E-10	6.08E-10	1.58E-10	8.82E-10
91	1.70	0.	1.11E-15	0.	0.	0.	0.	0.	0.	2.81E-13	1.37E-10	7.21E-10	1.76E-10	1.03E-09
92	1.60	0.	7.75E-16	0.	0.	0.	0.	0.	0.	2.30E-13	1.65E-10	7.53E-10	2.07E-10	1.13E-09
93	1.50	0.	9.51E-16	0.	0.	0.	0.	0.	0.	1.88E-13	2.01E-10	5.98E-10	2.45E-10	1.09E-09
94	1.40	0.	9.97E-16	0.	0.	0.	0.	0.	0.	0.	2.48E-10	7.41E-10	1.93E-10	1.18E-09
95	1.30	0.	7.40E-16	0.	0.	0.	0.	0.	0.	0.	3.18E-10	1.06E-09	2.75E-10	1.64E-09
96	1.20	0.	7.43E-16	0.	0.	0.	0.	0.	0.	0.	3.96E-10	1.42E-09	3.27E-10	2.15E-09
97	1.10	0.	6.22E-16	0.	0.	0.	0.	4.84E-21	0.	0.	5.16E-10	1.71E-09	4.16E-10	2.44E-09
98	1.00	0.	5.74E-16	0.	0.	0.	0.	3.73E-20	0.	0.	6.89E-10	2.07E-09	5.85E-10	3.27E-09
99	0.90	0.	4.67E-16	0.	0.	0.	0.	4.56E-20	0.	0.	9.49E-10	2.38E-09	5.83E-10	3.91E-09
100	0.80	0.	2.14E-16	0.	0.	0.	0.	7.95E-19	0.	0.	1.37E-09	2.10E-09	4.76E-10	3.94E-09
101	0.70	0.	5.67E-17	0.	0.	0.	0.	5.49E-18	0.	0.	2.06E-09	2.40E-09	5.48E-10	5.01E-09
102	0.60	0.	3.97E-18	0.	0.	0.	0.	2.18E-18	0.	0.	3.29E-09	2.69E-09	6.19E-10	6.61E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.59E 01	0.	0.	0.	6.74E-01	3.10E-04	5.08E 01	2.50E-02	7.65E 01
2	10.60	0.	0.	2.24E 01	0.	0.	0.	6.74E-01	3.18E-04	7.32E-02	2.50E-02	2.32E 01
3	10.50	0.	0.	2.21E 01	0.	0.	0.	6.75E-01	3.28E-04	7.36E-02	2.50E-02	2.20E 01
4	10.40	0.	0.	2.01E 01	0.	0.	0.	6.76E-01	3.37E-04	7.39E-02	2.49E-02	2.09E 01
5	10.30	0.	0.	1.67E 01	0.	0.	0.	6.77E-01	3.47E-04	7.41E-02	2.49E-02	1.75E 01
6	10.20	0.	0.	1.68E 01	0.	0.	0.	6.78E-01	3.58E-04	7.43E-02	2.49E-02	1.76E 01
7	10.10	0.	0.	1.93E 01	0.	0.	0.	6.79E-01	3.68E-04	7.44E-02	2.48E-02	1.61E 01
8	10.00	0.	0.	1.27E 01	0.	0.	0.	6.80E-01	3.80E-04	7.46E-02	2.48E-02	1.35E 01
9	9.90	0.	0.	1.29E 01	0.	0.	0.	6.81E-01	3.91E-04	7.48E-02	2.47E-02	1.36E 01
10	9.80	0.	0.	1.16E 01	0.	0.	0.	6.82E-01	4.03E-04	7.50E-02	2.47E-02	1.24E 01
11	9.70	0.	0.	9.46E 00	0.	0.	0.	6.84E-01	4.16E-04	7.52E-02	2.47E-02	1.02E 01
12	9.60	0.	0.	1.02E 01	0.	0.	0.	6.85E-01	4.29E-04	7.54E-02	2.46E-02	1.09E 01
13	9.50	0.	0.	8.18E 00	0.	0.	0.	6.86E-01	4.43E-04	7.56E-02	2.46E-02	8.96E 00
14	9.40	0.	0.	7.40E 00	0.	0.	0.	6.89E-01	4.57E-04	7.58E-02	2.46E-02	8.19E 00
15	9.30	0.	0.	7.49E 00	0.	0.	0.	6.91E-01	4.72E-04	7.60E-02	2.45E-02	8.28E 00
16	9.20	0.	0.	5.75E 00	0.	0.	0.	6.94E-01	4.88E-04	7.62E-02	2.45E-02	6.55E 00
17	9.10	0.	0.	5.48E 00	0.	0.	0.	6.96E-01	5.04E-04	2.18E-02	2.45E-02	6.62E 00
18	9.00	0.	0.	5.09E 00	0.	0.	0.	6.99E-01	5.21E-04	2.18E-02	2.44E-02	5.84E 00
19	8.90	0.	0.	4.40E 00	0.	0.	0.	7.01E-01	5.39E-04	2.17E-02	2.44E-02	5.24E 00
20	8.80	0.	0.	4.32E 00	0.	0.	0.	7.04E-01	5.58E-04	2.17E-02	2.44E-02	5.07E 00
21	8.70	0.	0.	3.52E 00	0.	0.	0.	7.06E-01	5.78E-04	2.17E-02	2.43E-02	4.27E 00
22	8.60	0.	0.	3.50E 00	0.	0.	0.	7.09E-01	5.98E-04	2.16E-02	2.43E-02	4.33E 00
23	8.50	0.	0.	2.95E 00	0.	0.	0.	7.11E-01	6.20E-04	2.16E-02	2.43E-02	3.78E 00
24	8.40	0.	0.	2.86E 00	0.	0.	0.	7.15E-01	6.42E-04	2.16E-02	2.42E-02	3.63E 00
25	8.30	0.	0.	2.29E 00	0.	0.	0.	7.19E-01	6.66E-04	2.16E-02	2.43E-02	3.05E 00
26	8.20	0.	0.	2.27E 00	0.	0.	0.	7.22E-01	6.91E-04	2.16E-02	2.44E-02	3.04E 00
27	8.10	0.	0.	1.85E 00	0.	0.	0.	7.26E-01	7.17E-04	2.15E-02	2.46E-02	2.62E 00
28	8.00	0.	0.	1.81E 00	0.	0.	0.	7.30E-01	7.44E-04	2.15E-02	2.48E-02	2.59E 00
29	7.90	0.	0.	1.48E 00	0.	0.	0.	7.33E-01	7.73E-04	2.15E-02	2.50E-02	2.26E 00
30	7.80	0.	0.	1.49E 00	0.	0.	0.	7.37E-01	8.03E-04	2.15E-02	2.51E-02	2.28E 00
31	7.70	0.	0.	1.24E 00	0.	0.	0.	7.41E-01	8.34E-04	2.15E-02	2.53E-02	2.03E 00
32	7.60	0.	0.	1.14E 00	0.	1.08E-04	0.	7.45E-01	8.68E-04	2.16E-02	2.55E-02	1.93E 00
33	7.50	0.	0.	1.08E 00	0.	5.11E-04	0.	7.48E-01	9.05E-04	2.16E-02	2.57E-02	1.88E 00
34	7.40	0.	0.	8.67E-01	0.	2.87E-03	0.	7.53E-01	9.40E-04	2.16E-02	2.58E-02	1.67E 00
35	7.30	0.	0.	7.88E-01	0.	1.40E-02	0.	7.57E-01	9.80E-04	2.16E-02	2.60E-02	1.61E 00
36	7.20	0.	0.	6.81E-01	0.	3.72E-02	0.	7.61E-01	1.02E-03	2.16E-02	2.62E-02	1.53E 00
37	7.10	0.	0.	6.28E-01	0.	1.02E-01	0.	7.67E-01	1.06E-03	2.16E-02	2.64E-02	1.55E 00
38	7.00	4.41E-04	0.	5.51E-01	0.	2.69E-01	0.	7.73E-01	1.11E-03	2.17E-02	2.66E-02	1.44E 00
39	6.90	8.38E-04	0.	4.85E-01	0.	2.79E 01	0.	7.80E-01	1.16E-03	2.17E-02	2.67E-02	1.59E 00
40	6.80	7.02E-04	0.	4.45E-01	0.	5.74E-01	0.	7.86E-01	1.21E-03	2.17E-02	2.69E-02	1.85E 00
41	6.70	4.95E-04	0.	3.72E-01	0.	6.72E-01	0.	7.92E-01	1.27E-03	2.17E-02	2.71E-02	1.89E 00
42	6.60	2.94E-04	0.	3.18E-01	0.	4.24E-01	0.	7.98E-01	1.33E-03	2.18E-02	2.73E-02	1.59E 00
43	6.50	1.64E-04	0.	2.39E-01	0.	7.45E-01	0.	8.05E-01	1.39E-03	2.19E-02	2.75E-02	1.84E 00
44	6.40	2.24E-04	0.	1.52E-01	3.98E-03	8.29E-01	0.	8.11E-01	1.45E-03	2.20E-02	2.77E-02	1.85E 00
45	6.30	4.66E-04	0.	8.68E-02	1.77E-02	4.51E-01	0.	8.17E-01	1.53E-03	2.21E-02	2.80E-02	1.42E 00
46	6.20	1.39E-03	0.	4.43E-02	2.38E-02	6.80E-01	0.	8.23E-01	1.60E-03	2.23E-02	2.85E-02	1.62E 00
47	6.10	5.61E-03	0.	1.93E-02	6.58E-02	9.93E-01	0.	8.30E-01	1.68E-03	2.25E-02	2.89E-02	1.97E 00
48	6.00	1.48E-02	0.	4.67E-03	5.76E-02	3.97E-01	0.	8.36E-01	1.77E-03	2.27E-02	2.93E-02	1.76E 00
49	5.90	2.42E-02	0.	3.33E-04	8.22E-02	4.12E-01	0.	8.36E-01	1.86E-03	2.29E-02	2.99E-02	1.41E 00
50	5.80	3.69E-02	0.	9.24E-06	1.11E-01	3.97E-01	0.	8.23E-01	1.96E-03	2.32E-02	3.02E-02	1.43E 00
51	5.70	4.40E-02	0.	0.	1.23E-01	4.30E-01	0.	7.73E-01	2.06E-03	2.34E-02	3.07E-02	1.42E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.50E-02	0.	0.	0.	9.58E-02	6.47E-01	0.	0.	7.19E-01	2.18E-03	2.37E-02	3.11E-02	1.58E 00
53	5.50	5.75E-02	0.	0.	0.	1.17E-01	6.15E-01	0.	0.	7.23E-01	2.30E-03	2.41E-02	3.16E-02	1.57E 00
54	5.40	6.08E-02	0.	0.	0.	1.01E-01	4.34E-01	0.	0.	7.27E-01	2.43E-03	2.45E-02	3.21E-02	1.38E 00
55	5.30	5.87E-02	0.	0.	0.	1.04E-01	6.09E-01	0.	0.	7.31E-01	2.57E-03	2.50E-02	3.26E-02	1.56E 00
56	5.20	4.25E-02	0.	0.	0.	1.09E-01	3.80E-01	0.	0.	7.36E-01	2.72E-03	2.55E-02	3.34E-02	1.33E 00
57	5.10	3.98E-02	0.	0.	0.	1.07E-01	5.10E-01	0.	0.	7.42E-01	2.89E-03	2.62E-02	3.41E-02	1.46E 00
58	5.00	2.95E-02	0.	0.	0.	9.48E-02	4.50E-01	0.	0.	7.48E-01	3.06E-03	2.69E-02	3.48E-02	1.30E 00
59	4.90	2.47E-02	0.	0.	0.	1.03E-01	4.62E-01	0.	0.	7.55E-01	3.26E-03	2.77E-02	3.56E-02	1.41E 00
60	4.80	2.46E-02	0.	0.	0.	1.09E-01	4.25E-01	0.	0.	7.61E-01	3.46E-03	2.85E-02	3.63E-02	1.39E 00
61	4.70	2.67E-02	0.	0.	0.	1.05E-01	3.69E-01	0.	0.	7.67E-01	3.69E-03	2.93E-02	3.72E-02	1.34E 00
62	4.60	3.16E-02	0.	0.	0.	1.05E-01	3.41E-01	0.	0.	7.73E-01	3.94E-03	3.03E-02	3.81E-02	1.32E 00
63	4.50	3.19E-02	0.	2.34E-02	0.	9.19E-02	2.47E-01	0.	0.	7.80E-01	4.21E-03	3.15E-02	3.91E-02	1.25E 00
64	4.40	3.26E-02	0.	8.09E-02	0.	9.03E-02	1.79E-01	0.	0.	7.86E-01	4.51E-03	3.27E-02	4.00E-02	1.25E 00
65	4.30	2.96E-02	0.	2.18E-01	0.	8.26E-02	1.84E-01	0.	0.	7.92E-01	4.83E-03	3.40E-02	4.10E-02	1.30E 00
66	4.20	2.68E-02	0.	8.14E-01	0.	8.59E-02	8.82E-02	0.	0.	7.98E-01	5.19E-03	3.52E-02	4.19E-02	1.69E 00
67	4.10	2.43E-02	0.	2.75E-01	0.	8.04E-02	2.10E-02	0.	0.	8.01E-01	5.58E-03	3.65E-02	4.27E-02	1.29E 00
68	4.00	2.17E-02	0.	1.15E 00	0.	7.52E-02	1.61E-02	0.	0.	8.05E-01	6.01E-03	3.78E-02	8.81E-03	2.12E 00
69	3.90	1.76E-02	0.	5.12E-01	8.72E-03	6.96E-02	6.73E-03	0.	0.	8.01E-01	6.48E-03	3.20E-02	9.06E-03	1.44E 00
70	3.80	1.89E-02	0.	7.51E-01	5.34E-02	6.95E-02	0.	0.	0.	7.98E-01	7.01E-03	3.36E-02	9.37E-03	1.74E 00
71	3.70	1.59E-02	0.	9.20E-01	1.43E-02	5.49E-02	0.	0.	0.	7.86E-01	7.60E-03	2.61E-02	1.05E-02	1.5[illegible] 00
72	3.60	1.38E-02	0.	5.18E-01	8.94E-02	5.97E-02	0.	0.	0.	7.36E-01	8.25E-03	2.82E-02	1.17E-02	1.47E 00
73	3.50	1.24E-02	0.	7.68E-01	2.45E-01	4.38E-02	0.	0.	0.	6.74E-01	8.99E-03	2.83E-02	1.31E-02	1.79E 00
74	3.40	1.09E-02	0.	4.08E-01	2.16E-02	4.86E-02	0.	0.	0.	3.89E-01	9.81E-03	3.18E-02	1.46E-02	9.33E-01
75	3.30	8.48E-03	0.	4.35E-01	1.10E-01	3.65E-02	0.	0.	0.	3.89E-01	1.07E-02	3.54E-02	1.61E-02	1.04E 00
76	3.20	7.03E-03	0.	2.54E-01	2.54E-01	3.73E-02	0.	0.	0.	3.90E-01	1.18E-02	3.90E-02	1.76E-02	1.01E 00
77	3.10	6.47E-03	0.	1.96E-01	3.38E-02	3.37E-02	0.	0.	0.	3.91E-01	1.30E-02	4.27E-02	1.92E-02	7.36E-01
78	3.00	5.53E-03	0.	1.13E-01	1.09E-01	3.02E-02	0.	0.	0.	3.92E-01	1.43E-02	4.64E-02	2.08E-02	7.31E-01
79	2.90	4.42E-03	0.	6.79E-02	8.84E-02	2.14E-02	0.	0.	0.	3.92E-01	1.59E-02	5.02E-02	2.24E-02	6.43E-01
80	2.80	4.44E-03	0.	3.22E-02	2.91E-02	1.34E-02	0.	0.	0.	3.93E-01	1.76E-02	5.44E-02	2.41E-02	5.68E-01
81	2.70	2.68E-03	0.	1.48E-02	5.30E-02	6.65E-03	0.	0.	0.	3.93E-01	1.97E-02	5.88E-02	2.60E-02	5.75E-01
82	2.60	1.14E-03	0.	7.49E-03	4.95E-03	2.68E-03	0.	0.	0.	3.93E-01	2.21E-02	6.36E-02	2.79E-02	5.23E-01
83	2.50	7.74E-05	0.	9.18E-04	4.09E-03	6.05E-04	0.	0.	0.	3.93E-01	2.49E-02	7.17E-02	1.28E-02	5.07E-01
84	2.40	0.	5.01E-02	0.	4.22E-03	6.19E-05	0.	0.	0.	3.93E-01	2.81E-02	8.29E-02	1.45E-02	5.73E-01
85	2.30	0.	2.83E-01	0.	0.	0.	0.	0.	0.	3.90E-01	3.28E-02	5.81E-02	1.74E-02	7.88E-01
86	2.20	0.	4.56E-01	0.	0.	0.	0.	0.	0.	3.88E-01	3.66E-02	6.86E-02	2.10E-02	9.71E-01
87	2.10	0.	5.90E-01	0.	0.	0.	0.	0.	0.	3.87E-01	4.21E-02	7.94E-02	2.46E-02	1.12E 00
88	2.00	0.	1.03E 00	0.	0.	0.	0.	0.	0.	3.74E-01	4.88E-02	9.12E-02	2.82E-02	1.57E 00
89	1.90	0.	1.76E 00	0.	0.	0.	0.	0.	0.	3.63E-01	5.71E-02	1.03E-01	3.20E-02	2.31E 00
90	1.80	0.	1.44E 00	0.	0.	0.	0.	0.	0.	3.44E-01	6.72E-02	1.72E-01	3.63E-02	2.01E 00
91	1.70	0.	1.73E 00	0.	0.	0.	0.	0.	0.	3.24E-01	8.80E-02	1.45E-01	4.61E-02	2.32E 00
92	1.60	0.	1.22E 00	0.	0.	0.	0.	0.	0.	2.74E-01	9.62E-02	1.68E-01	5.39E-02	1.81E 00
93	1.50	0.	1.49E 00	0.	0.	0.	0.	0.	0.	1.25E-01	1.17E-01	2.11E-01	6.50E-02	2.00E 00
94	1.40	0.	1.53E 00	0.	0.	0.	0.	0.	0.	0.	1.44E-01	2.57E-01	7.57E-02	2.41E 00
95	1.30	0.	1.15E 00	0.	0.	0.	0.	0.	0.	0.	1.81E-01	3.21E-01	9.88E-02	1.75E 00
96	1.20	0.	1.14E 00	0.	0.	0.	0.	0.	0.	0.	2.31E-01	3.42E-01	9.37E-02	1.77E 00
97	1.10	0.	9.88E-01	0.	0.	0.	0.	6.18E-06	0.	0.	3.81E-01	3.85E-01	1.19E-01	1.78E 00
98	1.00	0.	9.04E-01	0.	0.	0.	0.	6.28E-05	0.	0.	4.82E-01	4.64E-01	1.30E-01	1.98E 00
99	0.90	0.	7.37E-01	0.	0.	0.	0.	7.47E-03	0.	0.	5.56E-01	5.24E-01	1.53E-01	1.97E 00
100	0.80	0.	3.45E-01	0.	0.	0.	0.	1.38E-03	0.	0.	8.82E-01	6.64E-01	1.76E-01	1.93E 00
101	0.70	0.	8.81E-02	0.	0.	0.	0.	9.96E-04	0.	0.	1.28E 00	6.67E-01	1.95E-01	2.15E 00
102	0.60	0.	7.55E-03	0.	0.	0.	0.	3.84E-04	0.	0.	1.92E 00	7.44E-01	2.18E-01	2.89E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	7.61E-01	0.	0.	0.	2.13E-02	2.56E-05	6.60E 00	2.69E-03	9.38E 00
2	10.60	0.	0.	6.63E-01	0.	0.	0.	2.13E-02	2.64E-05	1.26E-02	2.69E-03	6.99E-01
3	10.50	0.	0.	6.52E-01	0.	0.	0.	2.14E-02	2.71E-05	1.26E-02	2.68E-03	6.88E-01
4	10.40	0.	0.	5.93E-01	0.	0.	0.	2.14E-02	2.79E-05	1.27E-02	2.68E-03	6.28E-01
5	10.30	0.	0.	4.94E-01	0.	0.	0.	2.14E-02	2.88E-05	1.27E-02	2.67E-03	5.31E-01
6	10.20	0.	0.	4.96E-01	0.	0.	0.	2.15E-02	2.96E-05	1.28E-02	2.67E-03	5.32E-01
7	10.10	0.	0.	4.53E-01	0.	0.	0.	2.15E-02	3.05E-05	1.28E-02	2.67E-03	4.90E-01
8	10.00	0.	0.	3.75E-01	0.	0.	0.	2.15E-02	3.14E-05	1.28E-02	2.66E-03	4.12E-01
9	9.90	0.	0.	3.80E-01	0.	0.	0.	2.16E-02	3.24E-05	1.29E-02	2.66E-03	4.17E-01
10	9.80	0.	0.	3.42E-01	0.	0.	0.	2.16E-02	3.34E-05	1.29E-02	2.65E-03	3.79E-01
11	9.70	0.	0.	2.79E-01	0.	0.	0.	2.16E-02	3.45E-05	1.29E-02	2.65E-03	3.16E-01
12	9.60	0.	0.	3.00E-01	0.	0.	0.	2.17E-02	3.56E-05	1.30E-02	2.65E-03	3.37E-01
13	9.50	0.	0.	2.41E-01	0.	0.	0.	2.17E-02	3.67E-05	1.30E-02	2.64E-03	2.79E-01
14	9.40	0.	0.	2.19E-01	0.	0.	0.	2.18E-02	3.79E-05	1.30E-02	2.64E-03	2.56E-01
15	9.30	0.	0.	2.21E-01	0.	0.	0.	2.19E-02	3.91E-05	1.31E-02	2.63E-03	2.59E-01
16	9.20	0.	0.	1.70E-01	0.	0.	0.	2.20E-02	4.04E-05	1.31E-02	2.63E-03	2.08E-01
17	9.10	0.	0.	1.74E-01	0.	0.	0.	2.20E-02	4.18E-05	3.75E-03	2.63E-03	2.02E-01
18	9.00	0.	0.	1.50E-01	0.	0.	0.	2.21E-02	4.32E-05	3.74E-03	2.62E-03	1.79E-01
19	8.90	0.	0.	1.33E-01	0.	0.	0.	2.22E-02	4.47E-05	3.73E-03	2.62E-03	1.61E-01
20	8.80	0.	0.	1.28E-01	0.	0.	0.	2.23E-02	4.62E-05	3.73E-03	2.62E-03	1.56E-01
21	8.70	0.	0.	1.04E-01	0.	0.	0.	2.23E-02	4.78E-05	3.72E-03	2.61E-03	1.33E-01
22	8.60	0.	0.	1.06E-01	0.	0.	0.	2.24E-02	4.95E-05	3.72E-03	2.61E-03	1.34E-01
23	8.50	0.	0.	8.70E-02	0.	0.	0.	2.25E-02	5.13E-05	3.71E-03	2.61E-03	1.16E-01
24	8.40	0.	0.	8.46E-02	0.	0.	0.	2.26E-02	5.32E-05	3.71E-03	2.60E-03	1.14E-01
25	8.30	0.	0.	6.76E-02	0.	0.	0.	2.27E-02	5.51E-05	3.71E-03	2.61E-03	9.67E-02
26	8.20	0.	0.	6.69E-02	0.	0.	0.	2.29E-02	5.72E-05	3.71E-03	2.62E-03	9.62E-02
27	8.10	0.	0.	5.46E-02	0.	0.	0.	2.30E-02	5.94E-05	3.70E-03	2.64E-03	8.48E-02
28	8.00	0.	0.	5.36E-02	0.	0.	0.	2.31E-02	6.16E-05	3.70E-03	2.66E-03	8.31E-02
29	7.90	0.	0.	4.37E-02	0.	0.	0.	2.32E-02	6.40E-05	3.70E-03	2.68E-03	7.33E-02
30	7.80	0.	0.	4.41E-02	0.	0.	0.	2.33E-02	6.65E-05	3.70E-03	2.70E-03	7.39E-02
31	7.70	0.	0.	3.67E-02	0.	0.	0.	2.35E-02	6.91E-05	3.70E-03	2.72E-03	6.67E-02
32	7.60	0.	0.	3.36E-02	0.	1.99E-06	0.	2.36E-02	7.19E-05	3.71E-03	2.74E-03	6.37E-02
33	7.50	0.	0.	2.96E-02	0.	9.43E-06	0.	2.37E-02	7.48E-05	3.71E-03	2.76E-03	5.99E-02
34	7.40	0.	0.	2.56E-02	0.	5.30E-05	0.	2.38E-02	7.79E-05	3.71E-03	2.78E-03	5.61E-02
35	7.30	0.	0.	2.33E-02	0.	2.5PE-04	0.	2.40E-02	8.12E-05	3.71E-03	2.80E-03	5.41E-02
36	7.20	0.	0.	2.01E-02	0.	6.87E-04	0.	2.41E-02	8.46E-05	3.72E-03	2.81E-03	5.15E-02
37	7.10	0.	0.	1.86E-02	0.	1.89E-03	0.	2.43E-02	8.82E-05	3.72E-03	2.83E-03	5.14E-02
38	7.00	5.08E-06	0.	1.63E-02	0.	4.83E-03	0.	2.45E-02	9.21E-05	3.72E-03	2.85E-03	5.23E-02
39	6.90	9.66E-06	0.	1.43E-02	0.	5.15E-03	0.	2.47E-02	9.61E-05	3.72E-03	2.87E-03	5.08E-02
40	6.80	8.10E-06	0.	1.31E-02	0.	1.06E-02	0.	2.49E-02	10.00E-05	3.73E-03	2.89E-03	5.53E-02
41	6.70	5.71E-06	0.	1.18E-02	0.	1.24E-02	0.	2.51E-02	1.05E-04	3.73E-03	2.91E-03	5.52E-02
42	6.60	3.39E-06	0.	9.38E-03	0.	7.86E-03	0.	2.53E-02	1.10E-04	3.74E-03	2.93E-03	4.83E-02
43	6.50	1.89E-06	0.	7.09E-03	0.	1.38E-02	0.	2.55E-02	1.15E-04	3.76E-03	2.96E-03	5.31E-02
44	6.40	2.58E-06	0.	4.49E-03	7.35E-05	1.53E-02	0.	2.57E-02	1.20E-04	3.78E-03	2.98E-03	5.24E-02
45	6.30	5.38E-06	0.	2.56E-03	3.26E-04	8.32E-03	0.	2.59E-02	1.26E-04	3.80E-03	3.01E-03	4.48E-02
46	6.20	1.61E-05	0.	1.31E-03	4.40E-04	1.25E-02	0.	2.61E-02	1.33E-04	3.83E-03	3.06E-03	4.74E-02
47	6.10	6.47E-05	0.	5.71E-04	1.21E-03	1.83E-02	0.	2.63E-02	1.39E-04	3.86E-03	3.10E-03	5.36E-02
48	6.00	1.71E-04	0.	1.38E-04	1.06E-03	7.32E-03	0.	2.65E-02	1.46E-04	3.90E-03	3.15E-03	4.24E-02
49	5.90	2.79E-04	0.	9.83E-06	1.52E-03	7.61E-03	0.	2.65E-02	1.54E-04	3.94E-03	3.20E-03	4.32E-02
50	5.80	4.26E-04	0.	2.43E-07	2.06E-03	7.33E-03	0.	2.61E-02	1.62E-04	3.99E-03	3.25E-03	4.32E-02
51	5.70	5.08E-04	0.	0.	2.27E-03	7.94E-03	0.	2.45E-02	1.71E-04	4.03E-03	3.29E-03	4.27E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	D- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.35E-04	0.	0.	0.	1.77E-03	1.19E-02	0.	0.	2.28E-02	1.80E-04	4.07E-03	3.34E-03	4.47E-02
53	5.50	6.63E-04	0.	0.	0.	2.16E-03	1.13E-02	0.	0.	2.29E-02	1.90E-04	4.14E-03	3.39E-03	4.48E-02
54	5.40	6.99E-04	0.	0.	0.	1.87E-03	8.00E-03	0.	0.	2.30E-02	2.01E-04	4.22E-03	3.44E-03	4.14E-02
55	5.30	6.77E-04	0.	0.	0.	1.92E-03	1.12E-02	0.	0.	2.31E-02	2.13E-04	4.30E-03	3.51E-03	4.50E-02
56	5.20	4.90E-04	0.	0.	0.	2.01E-03	7.01E-03	0.	0.	2.33E-02	2.25E-04	4.38E-03	3.58E-03	4.10E-02
57	5.10	4.59E-04	0.	0.	0.	1.97E-03	9.41E-03	0.	0.	2.35E-02	2.39E-04	4.49E-03	3.66E-03	4.38E-02
58	5.00	3.41E-04	0.	0.	0.	1.75E-03	8.30E-03	0.	0.	2.37E-02	2.54E-04	4.62E-03	3.74E-03	4.27E-02
59	4.90	2.85E-04	0.	0.	0.	1.90E-03	8.52E-03	0.	0.	2.39E-02	2.70E-04	4.76E-03	3.82E-03	4.35E-02
60	4.80	2.84E-04	0.	0.	0.	2.00E-03	7.85E-03	0.	0.	2.41E-02	2.87E-04	4.89E-03	3.90E-03	4.33E-02
61	4.70	3.08E-04	0.	0.	0.	1.93E-03	6.81E-03	0.	0.	2.43E-02	3.06E-04	5.03E-03	4.00E-03	4.26E-02
62	4.60	3.65E-04	0.	0.	0.	1.94E-03	6.29E-03	0.	0.	2.45E-02	3.26E-04	5.20E-03	4.10E-03	4.27E-02
63	4.50	3.68E-04	0.	6.91E-04	0.	1.70E-03	4.56E-03	0.	0.	2.47E-02	3.49E-04	5.41E-03	4.20E-03	4.20E-02
64	4.40	3.76E-04	0.	2.39E-03	0.	1.67E-03	3.30E-03	0.	0.	2.49E-02	3.73E-04	5.62E-03	4.30E-03	4.29E-02
65	4.30	3.41E-04	0.	6.28E-03	0.	1.92E-03	1.92E-03	0.	0.	2.51E-02	4.00E-04	5.83E-03	4.40E-03	4.50E-02
66	4.20	3.09E-04	0.	2.40E-02	0.	1.58E-03	1.40E-03	0.	0.	2.53E-02	4.30E-04	6.06E-03	4.50E-03	6.37E-02
67	4.10	2.81E-04	0.	8.13E-03	0.	1.48E-03	3.88E-04	0.	0.	2.54E-02	4.62E-04	6.28E-03	4.58E-03	4.70E-02
68	4.00	2.50E-04	0.	3.39E-02	0.	1.39E-03	2.97E-04	0.	0.	2.55E-02	4.98E-04	6.50E-03	9.46E-04	6.93E-02
69	3.90	2.03E-04	0.	1.51E-02	8.74E-04	1.21E-03	1.24E-04	0.	0.	2.54E-02	5.37E-04	5.64E-03	9.74E-04	5.00E-02
70	3.80	2.18E-04	0.	2.22E-02	5.39E-03	1.28E-03	0.	0.	0.	2.53E-02	5.81E-04	5.77E-03	1.01E-03	6.17E-02
71	3.70	1.83E-04	0.	2.72E-02	1.44E-03	1.01E-03	0.	0.	0.	2.49E-02	6.29E-04	4.49E-03	1.12E-03	6.09E-02
72	3.60	1.60E-04	0.	1.53E-02	8.96E-03	1.10E-03	0.	0.	0.	2.33E-02	6.84E-04	4.85E-03	1.26E-03	5.56E-02
73	3.50	1.43E-04	0.	2.27E-02	2.45E-02	8.07E-04	0.	0.	0.	2.13E-02	7.44E-04	4.86E-03	1.40E-03	7.65E-02
74	3.40	1.25E-04	0.	1.20E-02	2.17E-03	8.96E-04	0.	0.	0.	1.23E-02	8.12E-04	5.47E-03	1.56E-03	3.54E-02
75	3.30	9.76E-05	0.	1.20E-02	1.11E-02	6.73E-04	0.	0.	0.	1.23E-02	8.89E-04	6.08E-03	1.73E-03	4.57E-02
76	3.20	8.11E-05	0.	7.57E-03	2.55E-02	6.89E-04	0.	0.	0.	1.23E-02	9.75E-04	6.70E-03	1.89E-03	5.57E-02
77	3.10	7.44E-05	0.	5.80E-03	3.39E-03	6.22E-04	0.	0.	0.	1.24E-02	1.07E-03	7.34E-03	2.06E-03	3.27E-02
78	3.00	6.38E-05	0.	3.34E-03	1.09E-02	5.58E-04	0.	0.	0.	1.24E-02	1.19E-03	7.97E-03	2.23E-03	3.87E-02
79	2.90	5.09E-05	0.	2.08E-03	6.85E-03	3.94E-04	0.	0.	0.	1.24E-02	1.31E-03	8.62E-03	2.40E-03	3.41E-02
80	2.80	5.12E-05	0.	9.58E-04	2.92E-03	2.47E-04	0.	0.	0.	1.24E-02	1.46E-03	9.34E-03	2.59E-03	3.00E-02
81	2.70	3.07E-05	0.	4.37E-04	5.31E-03	1.23E-04	0.	0.	0.	1.24E-02	1.63E-03	1.01E-02	2.79E-03	3.29E-02
82	2.60	1.32E-05	0.	2.21E-04	4.97E-04	4.95E-05	0.	0.	0.	1.24E-02	1.83E-03	1.09E-02	3.00E-03	2.98E-02
83	2.50	8.92E-07	0.	2.69E-05	4.10E-04	1.12E-05	0.	0.	0.	1.24E-02	2.06E-03	1.23E-02	1.28E-03	2.66E-02
84	2.40	0.	1.48E-03	0.	4.23E-04	1.14E-06	0.	0.	0.	1.24E-02	2.33E-03	1.43E-02	1.56E-03	3.25E-02
85	2.30	0.	5.98E-03	0.	0.	0.	0.	0.	0.	1.23E-02	2.65E-03	9.98E-03	1.87E-03	3.28E-02
86	2.20	0.	1.35E-02	0.	0.	0.	0.	0.	0.	1.23E-02	3.03E-03	1.18E-02	2.26E-03	4.28E-02
87	2.10	0.	1.74E-02	0.	0.	0.	0.	0.	0.	1.22E-02	3.49E-03	1.37E-02	2.64E-03	4.95E-02
88	2.00	0.	3.03E-02	0.	0.	0.	0.	0.	0.	1.18E-02	4.05E-03	1.57E-02	3.03E-03	6.49E-02
89	1.90	0.	5.20E-02	0.	0.	0.	0.	0.	0.	1.14E-02	4.73E-03	1.78E-02	3.44E-03	8.93E-02
90	1.80	0.	4.24E-02	0.	0.	0.	0.	0.	0.	1.09E-02	5.57E-03	2.10E-02	4.11E-03	8.39E-02
91	1.70	0.	5.10E-02	0.	0.	0.	0.	0.	0.	1.03E-02	6.63E-03	2.49E-02	4.95E-03	9.78E-02
92	1.60	0.	3.61E-02	0.	0.	0.	0.	0.	0.	8.69E-03	7.97E-03	2.89E-02	5.79E-03	8.74E-02
93	1.50	0.	4.38E-02	0.	0.	0.	0.	0.	0.	3.95E-03	9.70E-03	3.63E-02	6.98E-03	1.01E-01
94	1.40	0.	4.52E-02	0.	0.	0.	0.	0.	0.	0.	1.19E-02	4.42E-02	8.14E-03	1.18E-01
95	1.30	0.	3.40E-02	0.	0.	0.	0.	0.	0.	0.	1.50E-02	5.51E-02	1.06E-02	1.15E-01
96	1.20	0.	3.38E-02	0.	0.	0.	0.	0.	0.	0.	1.91E-02	5.36E-02	1.01E-02	1.16E-01
97	1.10	0.	2.89E-02	0.	0.	0.	0.	1.14E-07	0.	0.	2.49E-02	6.61E-02	1.26E-02	1.33E-01
98	1.00	0.	2.67E-02	0.	0.	0.	0.	1.16E-06	0.	0.	3.33E-02	7.98E-02	1.40E-02	1.54E-01
99	0.90	0.	2.18E-02	0.	0.	0.	0.	1.38E-06	0.	0.	4.61E-02	9.83E-02	1.65E-02	1.75E-01
100	0.80	0.	1.02E-02	0.	0.	0.	0.	2.55E-05	0.	0.	6.64E-02	1.84E-01	1.98E-02	1.99E-01
101	0.70	0.	2.60E-03	0.	0.	0.	0.	1.84E-05	0.	0.	9.96E-02	1.15E-01	2.89E-02	2.38E-01
102	0.60	0.	2.23E-04	0.	0.	0.	0.	7.08E-05	0.	0.	1.59E-01	1.28E-01	2.34E-02	3.18E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.80E-03	0.	0.	0.	6.72E-04	2.90E-06	.75E-01	2.70E-04	9.86E-01
2	10.60	0.	0.	8.53E-03	0.	0.	0.	6.73E-04	2.57E-06	.43E-01	2.70E-04	1.09E-02
3	10.50	0.	0.	8.39E-03	0.	0.	0.	6.74E-04	2.69E-06	.43E-01	2.70E-04	1.08E-02
4	10.40	0.	0.	7.68E-03	0.	0.	0.	6.74E-04	2.73E-06	.44E-01	2.69E-04	10.99E-03
5	10.30	0.	0.	6.36E-03	0.	0.	0.	6.75E-04	2.81E-06	1.44E-03	2.69E-04	8.75E-03
6	10.20	0.	0.	6.38E-03	0.	0.	0.	6.76E-04	2.89E-06	1.45E-03	2.69E-04	8.77E-03
7	10.10	0.	0.	9.03E-03	0.	0.	0.	6.77E-04	2.98E-06	1.45E-03	2.68E-04	8.23E-03
8	10.00	0.	0.	4.82E-03	0.	0.	0.	6.78E-04	3.07E-06	1.45E-03	2.68E-04	7.22E-03
9	9.90	0.	0.	4.89E-03	0.	0.	0.	6.79E-04	3.16E-06	1.46E-03	2.67E-04	7.30E-03
10	9.80	0.	0.	4.48E-03	0.	0.	0.	6.80E-04	3.26E-06	1.46E-03	2.67E-04	6.91E-03
11	9.70	0.	0.	3.59E-03	0.	0.	0.	6.82E-04	3.36E-06	1.47E-03	2.67E-04	6.81E-03
12	9.60	0.	0.	3.86E-03	0.	0.	0.	6.83E-04	3.47E-06	1.47E-03	2.66E-04	6.28E-03
13	9.50	0.	0.	3.11E-03	0.	0.	0	6.84E-04	3.58E-06	1.47E-03	2.66E-04	5.54E-03
14	9.40	0.	0.	2.81E-03	0.	0.	0.	6.87E-04	3.70E-06	1.48E-03	2.65E-04	5.29E-03
15	9.30	0.	0.	2.85E-03	0.	0.	0.	6.89E-04	3.82E-06	1.48E-03	2.65E-04	5.29E-03
16	9.20	0.	0.	2.19E-03	0.	0.	0.	6.92E-04	3.94E-06	1.49E-03	2.65E-04	4.63E-03
17	9.10	0.	0.	2.23E-03	0.	0.	0.	6.94E-04	4.08E-06	.25E-04	2.64E-04	3.62E-03
18	9.00	0.	0.	1.93E-03	0.	0.	0.	6.97E-04	4.21E-06	.24E-04	2.64E-04	3.32E-03
19	8.90	0.	0.	1.71E-03	0.	0.	0.	6.99E-04	4.36E-06	.23E-04	2.64E-04	3.10E-03
20	8.80	0.	0.	1.44E-03	0.	0.	0.	7.02E-04	4.51E-06	.23E-04	2.63E-04	3.03E-03
21	8.70	0.	0.	1.34E-03	0.	0.	0.	7.04E-04	4.67E-06	4.22E-04	2.63E-04	2.73E-03
22	8.60	0.	0.	1.36E-03	0.	0.	0.	7.07E-04	4.83E-06	4.22E-04	2.62E-04	2.76E-03
23	8.50	0.	0.	1.12E-03	0.	0.	0.	7.09E-04	5.01E-06	4.21E-04	2.62E-04	2.52E-03
24	8.40	0.	0.	1.09E-03	0.	0.	0.	7.13E-04	5.19E-06	4.21E-04	2.62E-04	2.49E-03
25	8.30	0.	0.	8.70E-04	0.	0.	0.	7.17E-04	5.38E-06	4.21E-04	2.62E-04	2.28E-03
26	8.20	0.	0.	8.61E-04	0.	0.	0.	7.20E-04	5.58E-06	4.20E-04	2.64E-04	2.27E-03
27	8.10	0.	0.	7.02E-04	0.	0.	0.	7.24E-04	5.79E-06	4.19E-04	2.66E-04	2.12E-03
28	8.00	0.	0.	6.90E-04	0.	0.	0.	7.28E-04	6.01E-06	4.19E-04	2.68E-04	2.11E-03
29	7.90	0.	0.	5.62E-04	0.	0.	0.	7.32E-04	6.24E-06	4.19E-04	2.70E-04	1.99E-03
30	7.80	0.	0.	5.67E-04	0.	0.	0.	7.35E-04	6.49E-06	4.20E-04	2.72E-04	2.08E-03
31	7.70	0.	0.	4.72E-04	0.	0.	0.	7.39E-04	6.74E-06	4.20E-04	2.74E-04	1.91E-03
32	7.60	0.	0.	4.32E-04	0.	2.27E-08	0.	7.43E-04	7.01E-06	4.20E-04	2.76E-04	1.88E-03
33	7.50	0.	0.	3.82E-04	0.	1.08E-07	0.	7.46E-04	7.30E-06	4.21E-04	2.77E-04	1.83E-03
34	7.40	0.	0.	3.30E-04	0.	6.05E-07	0.	7.51E-04	7.60E-06	4.21E-04	2.79E-04	1.79E-03
35	7.30	0.	0.	2.99E-04	0.	2.94E-06	0.	7.55E-04	7.92E-06	4.21E-04	2.81E-04	1.77E-03
36	7.20	0.	0.	2.59E-04	0.	7.84E-06	0.	7.59E-04	8.25E-06	4.22E-04	2.83E-04	1.74E-03
37	7.10	0.	0.	2.39E-04	0.	2.16E-05	0.	7.65E-04	8.61E-06	4.22E-04	2.85E-04	1.74E-03
38	7.00	5.14E-08	0.	2.09E-04	0.	5.51E-05	0.	7.71E-04	8.98E-06	4.22E-04	2.87E-04	1.75E-03
39	6.90	9.78E-08	0.	1.84E-04	0.	5.88E-05	0.	7.78E-04	9.36E-06	4.22E-04	2.89E-04	1.74E-03
40	6.80	3.20E-08	0.	1.69E-04	0.	1.21E-04	0.	7.84E-04	9.80E-06	4.23E-04	2.91E-04	1.83E-03
41	6.70	5.78E-08	0.	1.41E-04	0.	1.42E-04	0.	7.90E-04	1.02E-05	4.23E-04	2.93E-04	1.88E-03
42	6.60	3.43E-08	0.	1.21E-04	0.	8.98E-05	0.	7.96E-04	1.07E-05	4.25E-04	2.95E-04	1.76E-03
43	6.50	1.91E-08	0.	9.07E-05	0.	1.57E-04	0.	8.02E-04	1.12E-05	4.27E-04	2.97E-04	1.79E-03
44	6.40	2.62E-08	0.	5.78E-05	8.39E-07	1.75E-04	0.	8.09E-04	1.18E-05	4.29E-04	3.00E-04	1.70E-03
45	6.30	5.44E-08	0.	3.30E-05	3.72E-06	9.50E-05	0.	8.15E-04	1.23E-05	4.32E-04	3.03E-04	1.69E-03
46	6.20	1.62E-07	0.	1.68E-05	5.02E-06	1.43E-04	0.	8.21E-04	1.29E-05	4.34E-04	3.68E-04	1.74E-03
47	6.10	6.55E-07	0.	7.34E-06	1.39E-05	2.09E-04	0.	8.27E-04	1.36E-05	4.38E-04	3.12E-04	1.82E-03
48	6.00	1.73E-06	0.	1.78E-06	1.21E-05	8.36E-05	0.	8.34E-04	1.43E-05	4.42E-04	3.17E-04	1.78E-03
49	5.90	2.82E-06	0.	1.27E-07	1.73E-05	8.68E-05	0.	8.34E-04	1.50E-05	4.47E-04	3.22E-04	1.72E-03
50	5.80	4.31E-06	0.	3.13E-09	2.35E-05	8.37E-05	0.	8.21E-04	1.58E-05	4.52E-04	3.27E-04	1.72E-03
51	5.70	5.14E-06	0.	0.	2.59E-05	9.06E-05	0.	7.71E-04	1.67E-05	4.57E-04	3.31E-04	1.70E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.42E-06	0.	0.	0.	2.02E-05	1.36E-04	0.	0.	7.17E-04	1.76E-05	4.62E-04	3.36E-04	1.70E-03
53	5.50	6.71E-06	0.	0.	0.	2.47E-05	1.29E-04	0.	0.	7.21E-04	1.86E-05	4.69E-04	3.41E-04	1.71E-03
54	5.40	7.08E-06	0.	0.	0.	2.14E-05	9.13E-05	0.	0.	7.25E-04	1.96E-05	4.78E-04	3.47E-04	1.69E-03
55	5.30	6.85E-06	0.	0.	0.	2.19E-05	1.28E-04	0.	0.	7.29E-04	2.08E-05	4.87E-04	3.53E-04	1.75E-03
56	5.20	4.96E-06	0.	0.	0.	2.30E-05	8.00E-05	0.	0.	7.34E-04	2.20E-05	4.97E-04	3.61E-04	1.72E-03
57	5.10	4.64E-06	0.	0.	0.	2.25E-05	1.07E-04	0.	0.	7.40E-04	2.33E-05	5.10E-04	3.68E-04	1.77E-03
58	5.00	3.45E-06	0.	0.	0.	2.00E-05	9.48E-05	0.	0.	7.46E-04	2.48E-05	5.24E-04	3.76E-04	1.79E-03
59	4.90	2.88E-06	0.	0.	0.	2.16E-05	9.73E-05	0.	0.	7.53E-04	2.63E-05	5.39E-04	3.84E-04	1.82E-03
60	4.80	2.87E-06	0.	0.	0.	2.29E-05	8.96E-05	0.	0.	7.59E-04	2.80E-05	5.55E-04	3.92E-04	1.85E-03
61	4.70	3.12E-06	0.	0.	0.	2.20E-05	7.77E-05	0.	0.	7.65E-04	2.98E-05	5.71E-04	4.02E-04	1.87E-03
62	4.60	3.69E-06	0.	0.	0.	2.21E-05	7.18E-05	0.	0.	7.71E-04	3.18E-05	5.90E-04	4.12E-04	1.90E-03
63	4.50	3.73E-06	0.	8.98E-06	0.	1.94E-05	5.21E-05	0.	0.	7.78E-04	3.40E-05	6.13E-04	4.22E-04	1.93E-03
64	4.40	3.01E-06	0.	3.07E-05	0.	1.90E-05	3.76E-05	0.	0.	7.84E-04	3.64E-05	6.37E-04	4.32E-04	1.98E-03
65	4.30	3.45E-06	0.	8.08E-05	0.	1.74E-05	2.19E-05	0.	0.	7.90E-04	3.90E-05	6.62E-04	4.43E-04	2.06E-03
66	4.20	3.13E-06	0.	3.09E-04	0.	1.81E-05	1.69E-05	0.	0.	7.96E-04	4.19E-05	6.87E-04	4.53E-04	2.33E-03
67	4.10	2.84E-06	0.	1.05E-04	0.	1.69E-05	4.42E-06	0.	0.	7.99E-04	4.51E-05	7.12E-04	4.61E-04	2.15E-03
68	4.00	2.53E-06	0.	4.37E-04	0.	1.58E-05	3.39E-06	0.	0.	8.02E-04	4.86E-05	7.37E-04	9.52E-05	2.14E-03
69	3.90	2.05E-06	0.	1.94E-04	3.59E-05	1.38E-05	1.42E-06	0.	0.	7.99E-04	5.24E-05	6.39E-04	9.80E-05	1.84E-03
70	3.80	2.21E-06	0.	2.85E-04	2.22E-04	1.44E-05	0.	0.	0.	7.96E-04	5.67E-05	6.55E-04	1.01E-04	2.13E-03
71	3.70	1.85E-06	0.	3.50E-04	5.91E-05	1.16E-05	0.	0.	0.	7.84E-04	6.14E-05	5.09E-04	1.13E-04	1.89E-03
72	3.60	1.62E-06	0.	1.97E-04	3.68E-04	1.26E-05	0.	0.	0.	7.34E-04	6.67E-05	5.51E-04	1.27E-04	2.06E-03
73	3.50	1.45E-06	0.	2.92E-04	1.01E-03	9.22E-06	0.	0.	0.	6.72E-04	7.26E-05	5.52E-04	1.41E-04	2.75E-03
74	3.40	1.27E-06	0.	1.55E-04	8.91E-05	1.02E-05	0.	0.	0.	3.87E-04	7.93E-05	6.21E-04	1.57E-04	1.58E-03
75	3.30	9.88E-07	0.	1.65E-04	4.55E-04	7.68E-06	0.	0.	0.	3.88E-04	8.67E-05	6.98E-04	1.74E-04	1.97E-03
76	3.20	8.21E-07	0.	9.74E-05	1.05E-03	7.86E-06	0.	0.	0.	3.89E-04	9.52E-05	7.61E-04	1.91E-04	2.59E-03
77	3.10	7.55E-07	0.	7.46E-05	1.39E-04	7.10E-06	0.	0.	0.	3.90E-04	1.05E-04	8.33E-04	2.08E-04	1.76E-03
78	3.00	6.45E-07	0.	4.38E-05	4.50E-04	6.37E-06	0.	0.	0.	3.91E-04	1.16E-04	9.04E-04	2.25E-04	2.14E-03
79	2.90	5.16E-07	0.	2.58E-05	2.82E-04	4.50E-06	0.	0.	0.	3.91E-04	1.28E-04	9.78E-04	2.42E-04	2.05E-03
80	2.80	5.19E-07	0.	1.22E-05	1.20E-04	2.82E-06	0.	0.	0.	3.92E-04	1.43E-04	1.06E-03	2.61E-04	1.99E-03
81	2.70	3.11E-07	0.	9.62E-06	2.18E-04	1.40E-06	0.	0.	0.	3.92E-04	1.59E-04	1.15E-03	2.81E-04	2.20E-03
82	2.60	1.34E-07	0.	2.09E-06	2.04E-05	5.65E-07	0.	0.	0.	3.92E-04	1.78E-04	1.24E-03	3.02E-04	2.14E-03
83	2.50	9.03E-09	0.	3.44E-07	1.68E-05	1.27E-07	0.	0.	0.	3.92E-04	2.01E-04	1.40E-03	1.29E-04	2.14E-03
84	2.40	0.	1.90E-05	0.	1.74E-05	1.30E-08	0.	0.	0.	3.92E-04	2.27E-04	1.62E-03	1.57E-04	2.43E-03
85	2.30	0.	7.70E-05	0.	0.	0.	0.	0.	0.	3.89E-04	2.59E-04	1.13E-03	1.88E-04	2.04E-03
86	2.20	0.	1.73E-04	0.	0.	0.	0.	0.	0.	3.87E-04	2.96E-04	1.34E-03	2.27E-04	2.42E-03
87	2.10	0.	2.24E-04	0.	0.	0.	0.	0.	0.	3.86E-04	3.41E-04	1.56E-03	2.66E-04	2.77E-03
88	2.00	0.	3.90E-04	0.	0.	0.	0.	0.	0.	3.73E-04	3.95E-04	1.78E-03	3.05E-04	3.24E-03
89	1.90	0.	6.69E-04	0.	0.	0.	0.	0.	0.	3.59E-04	4.61E-04	2.01E-03	3.46E-04	3.85E-03
90	1.80	0.	5.45E-04	0.	0.	0.	0.	0.	0.	3.43E-04	5.43E-04	2.38E-03	4.14E-04	4.23E-03
91	1.70	0.	6.56E-04	0.	0.	0.	0.	0.	0.	3.23E-04	6.47E-04	2.83E-03	4.98E-04	4.95E-03
92	1.60	0.	4.64E-04	0.	0.	0.	0.	0.	0.	2.74E-04	7.78E-04	3.28E-03	5.83E-04	5.38E-03
93	1.50	0.	5.64E-04	0.	0.	0.	0.	0.	0.	1.24E-04	9.46E-04	4.12E-03	7.02E-04	6.45E-03
94	1.40	0.	5.82E-04	0.	0.	0.	0.	0.	0.	0.	1.17E-03	5.02E-03	8.18E-04	7.50E-03
95	1.30	0.	4.37E-04	0.	0.	0.	0.	0.	0.	0.	1.46E-03	6.25E-03	1.07E-03	9.22E-03
96	1.20	0.	4.37E-04	0.	0.	0.	0.	0.	0.	0.	1.87E-03	8.08E-03	1.81E-03	9.39E-03
97	1.10	0.	3.72E-04	0.	0.	0.	0.	1.30E-09	0.	0.	2.43E-03	7.50E-03	1.27E-03	1.16E-02
98	1.00	0.	3.44E-04	0.	0.	0.	0.	1.32E-08	0.	0.	3.24E-03	9.05E-03	1.41E-03	1.40E-02
99	0.90	0.	2.80E-04	0.	0.	0.	0.	1.57E-08	0.	0.	4.50E-03	1.32E-02	1.66E-03	1.67E-02
100	0.80	0.	1.31E-04	0.	0.	0.	0.	2.91E-07	0.	0.	6.48E-03	1.18E-02	1.91E-03	2.03E-02
101	0.70	0.	3.35E-05	0.	0.	0.	0.	2.10E-07	0.	0.	9.72E-03	1.38E-02	2.18E-03	2.48E-02
102	0.60	0.	2.87E-06	0.	0.	0.	0.	8.88E-07	0.	0.	1.55E-02	1.45E-02	2.35E-03	3.24E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.203E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.24E-05	0.	0.	0.	2.02E-05	2.39E-07	1.38E-04	2.63E-05	2.77E-04
2	10.60	0.	0.	8.64E-05	0.	0.	0.	2.02E-05	2.44E-07	1.39E-04	2.63E-05	2.44E-04
3	10.50	0.	0.	7.91E-05	0.	0.	0.	2.03E-05	2.53E-07	1.39E-04	2.62E-05	2.42E-04
4	10.40	0.	0.	7.28E-05	0.	0.	0.	2.03E-05	2.61E-07	1.40E-04	2.62E-05	2.59E-04
5	10.30	0.	0.	6.80E-05	0.	0.	0.	2.03E-05	2.68E-07	1.40E-04	2.62E-05	2.47E-04
6	10.20	0.	0.	6.01E-05	0.	0.	0.	2.03E-05	2.76E-07	1.41E-04	2.61E-05	2.47E-04
7	10.10	0.	0.	5.50E-05	0.	0.	0.	2.04E-05	2.85E-07	1.41E-04	2.61E-05	2.43E-04
8	10.00	0.	0.	4.59E-05	0.	0.	0.	2.04E-05	2.93E-07	1.41E-04	2.61E-05	2.33E-04
9	9.90	0.	0.	4.61E-05	0.	0.	0.	2.04E-05	3.02E-07	1.42E-04	2.60E-05	2.34E-04
10	9.80	0.	0.	4.19E-05	0.	0.	0.	2.05E-05	3.12E-07	1.42E-04	2.60E-05	2.30E-04
11	9.70	0.	0.	3.39E-05	0.	0.	0.	2.05E-05	3.22E-07	1.42E-04	2.59E-05	2.23E-04
12	9.60	0.	0.	3.64E-05	0.	0.	0.	2.05E-05	3.32E-07	1.43E-04	2.59E-05	2.26E-04
13	9.50	0.	0.	2.93E-05	0.	0.	0.	2.06E-05	3.42E-07	1.43E-04	2.59E-05	2.19E-04
14	9.40	0.	0.	2.69E-05	0.	0.	0.	2.07E-05	3.53E-07	1.43E-04	2.58E-05	2.17E-04
15	9.30	0.	0.	2.66E-05	0.	0.	0.	2.07E-05	3.65E-07	1.44E-04	2.58E-05	2.18E-04
16	9.20	0.	0.	2.04E-05	0.	0.	0.	2.08E-05	3.77E-07	4.13E-05	2.57E-05	1.09E-04
17	9.10	0.	0.	2.11E-05	0.	0.	0.	2.09E-05	3.90E-07	4.13E-05	2.57E-05	1.09E-04
18	9.00	0.	0.	1.82E-05	0.	0.	0.	2.10E-05	4.03E-07	4.12E-05	2.57E-05	1.06E-04
19	8.90	0.	0.	1.61E-05	0.	0.	0.	2.10E-05	4.17E-07	4.11E-05	2.56E-05	1.04E-04
20	8.80	0.	0.	1.99E-05	0.	0.	0.	2.11E-05	4.31E-07	4.11E-05	2.56E-05	1.04E-04
21	8.70	0.	0.	1.26E-05	0.	0.	0.	2.12E-05	4.46E-07	4.10E-05	2.56E-05	1.01E-04
22	8.60	0.	0.	1.20E-05	0.	0.	0.	2.13E-05	4.62E-07	4.09E-05	2.55E-05	1.01E-04
23	8.50	0.	0.	1.06E-05	0.	0.	0.	2.13E-05	4.79E-07	4.09E-05	2.55E-05	9.88E-05
24	8.40	0.	0.	1.03E-05	0.	0.	0.	2.14E-05	4.96E-07	4.09E-05	2.55E-05	9.84E-05
25	8.30	0.	0.	0.28E-06	0.	0.	0.	2.16E-05	5.14E-07	4.09E-05	2.55E-05	9.66E-05
26	8.20	0.	0.	8.12E-06	0.	0.	0.	2.17E-05	5.34E-07	4.08E-05	2.57E-05	9.69E-05
27	8.10	0.	0.	6.62E-06	0.	0.	0.	2.18E-05	5.54E-07	4.07E-05	2.59E-05	9.56E-05
28	8.00	0.	0.	6.98E-06	0.	0.	0.	2.19E-05	5.75E-07	4.07E-05	2.61E-05	9.58E-05
29	7.90	0.	0.	5.38E-06	0.	0.	0.	2.20E-05	5.97E-07	4.07E-05	2.62E-05	9.49E-05
30	7.80	0.	0.	5.39E-06	0.	0.	0.	2.21E-05	6.20E-07	4.08E-05	2.64E-05	9.53E-05
31	7.70	0.	0.	4.48E-06	0.	0.	0.	2.22E-05	6.45E-07	4.08E-05	2.64E-05	9.47E-05
32	7.60	0.	0.	4.08E-06	0.	2.15E-10	0.	2.23E-05	6.71E-07	4.08E-05	2.68E-25	9.47E-05
33	7.50	0.	0.	3.40E-06	0.	1.82E-09	0.	2.25E-05	6.98E-07	4.08E-05	2.70E-05	9.48E-05
34	7.40	0.	0.	3.11E-06	0.	5.71E-09	0.	2.26E-05	7.27E-07	4.09E-05	2.72E-05	9.45E-05
35	7.30	0.	0.	2.82E-06	0.	2.78E-08	0.	2.27E-05	7.57E-07	4.09E-05	2.74E-05	9.48E-05
36	7.20	0.	0.	2.44E-06	0.	7.41E-08	0.	2.28E-05	7.89E-07	4.09E-05	2.75E-05	9.48E-05
37	7.10	0.	0.	2.29E-06	0.	2.04E-07	0.	2.30E-05	8.23E-07	4.10E-05	2.77E-05	9.50E-05
38	7.00	4.87E-10	0.	1.98E-06	0.	5.21E-07	0.	2.32E-05	8.59E-07	4.10E-05	2.79E-05	9.55E-05
39	6.90	9.29E-10	0.	1.74E-06	0.	5.56E-07	0.	2.34E-05	8.97E-07	4.10E-05	2.81E-05	9.57E-05
40	6.80	7.75E-10	0.	1.39E-06	0.	1.14E-06	0.	2.36E-05	9.37E-07	4.11E-05	2.83E-05	9.66E-05
41	6.70	5.47E-10	0.	1.33E-06	0.	1.34E-06	0.	2.38E-05	9.80E-07	4.11E-05	2.85E-05	9.70E-05
42	6.60	3.24E-10	0.	1.14E-06	0.	9.48E-07	0.	2.40E-05	1.02E-06	4.12E-05	2.87E-05	9.69E-05
43	6.50	1.81E-10	0.	8.55E-07	0.	1.48E-06	0.	2.41E-05	1.07E-06	4.15E-05	2.89E-05	9.80E-05
44	6.40	2.47E-10	0.	5.45E-07	7.92E-09	1.65E-06	0.	2.43E-05	1.12E-06	4.17E-05	2.92E-05	9.85E-05
45	6.30	5.15E-10	0.	3.11E-07	3.52E-08	8.98E-07	0.	2.45E-05	1.18E-06	4.19E-05	2.95E-05	9.83E-05
46	6.20	1.54E-09	0.	1.59E-07	4.74E-08	1.35E-06	0.	2.47E-05	1.24E-06	4.21E-05	2.99E-05	9.94E-05
47	6.10	6.20E-09	0.	6.92E-08	1.31E-07	1.98E-06	0.	2.49E-05	1.30E-06	4.25E-05	3.04E-05	1.01E-04
48	6.00	1.64E-08	0.	1.67E-08	1.19E-07	7.89E-07	0.	2.51E-05	1.37E-06	4.30E-05	3.08E-05	1.01E-04
49	5.90	2.67E-08	0.	1.19E-09	1.63E-07	8.20E-07	0.	2.51E-05	1.44E-06	4.34E-05	3.13E-05	1.02E-04
50	5.80	4.88E-08	0.	2.95E-11	2.22E-07	7.91E-07	0.	2.47E-05	1.51E-06	4.39E-05	3.18E-05	1.03E-04
51	5.70	4.86E-08	0.	0.	2.45E-07	8.56E-07	0.	2.32E-05	1.59E-06	4.43E-05	3.22E-05	1.02E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.06E-08	0.	0.	0.	1.81E-07	1.29E-06	0.	0.	2.16E-05	1.68E-06	4.49E-05	3.27E-05	1.02E-04
53	5.50	6.35E-08	0.	0.	0.	2.33E-07	1.22E-06	0.	0.	2.17E-05	1.78E-06	4.56E-05	3.32E-05	1.04E-04
54	5.40	6.70E-08	0.	0.	0.	2.02E-07	8.63E-07	0.	0.	2.18E-05	1.88E-06	4.64E-05	3.37E-05	1.05E-04
55	5.30	6.48E-08	0.	0.	0.	2.07E-07	1.21E-06	0.	0.	2.19E-05	1.99E-06	4.73E-05	3.43E-05	1.07E-04
56	5.20	4.70E-08	0.	0.	0.	2.17E-07	7.56E-07	0.	0.	2.21E-05	2.10E-06	4.82E-05	3.51E-05	1.08E-04
57	5.10	4.39E-08	0.	0.	0.	2.12E-07	1.02E-06	0.	0.	2.23E-05	2.23E-06	4.95E-05	3.58E-05	1.11E-04
58	5.00	3.26E-08	0.	0.	0.	1.89E-07	8.95E-07	0.	0.	2.25E-05	2.37E-06	5.09E-05	3.66E-05	1.13E-04
59	4.90	2.73E-08	0.	0.	0.	2.04E-07	9.19E-07	0.	0.	2.26E-05	2.52E-06	5.24E-05	3.74E-05	1.16E-04
60	4.80	2.72E-08	0.	0.	0.	2.16E-07	8.46E-07	0.	0.	2.28E-05	2.68E-06	5.39E-05	3.82E-05	1.19E-04
61	4.70	2.99E-08	0.	0.	0.	2.08E-07	7.34E-07	0.	0.	2.30E-05	2.85E-06	5.54E-05	3.91E-05	1.21E-04
62	4.60	3.49E-08	0.	0.	0.	2.09E-07	6.78E-07	0.	0.	2.32E-05	3.04E-06	5.73E-05	4.01E-05	1.25E-04
63	4.50	3.53E-08	0.	8.30E-08	0.	1.83E-07	4.92E-07	0.	0.	2.34E-05	3.25E-06	5.96E-05	4.11E-05	1.28E-04
64	4.40	3.60E-08	0.	2.90E-07	0.	1.80E-07	3.55E-07	0.	0.	2.36E-05	3.48E-06	6.19E-05	4.21E-05	1.32E-04
65	4.30	3.27E-08	0.	7.62E-07	0.	1.64E-07	2.07E-07	0.	0.	2.38E-05	3.73E-06	6.43E-05	4.31E-05	1.36E-04
66	4.20	2.96E-08	0.	2.92E-06	0.	1.71E-07	1.60E-07	0.	0.	2.40E-05	4.01E-06	6.67E-05	4.39E-05	1.42E-04
67	4.10	2.69E-08	0.	9.86E-07	0.	1.60E-07	8.18E-08	0.	0.	2.40E-05	4.31E-06	6.91E-05	4.24E-05	1.41E-04
68	4.00	2.39E-08	0.	4.12E-06	0.	1.50E-07	3.20E-08	0.	0.	2.41E-05	4.64E-06	7.18E-05	9.26E-06	1.14E-04
69	3.90	1.94E-08	0.	1.83E-06	1.09E-06	1.30E-07	1.34E-08	0.	0.	2.40E-05	5.01E-06	6.18E-05	9.53E-06	1.03E-04
70	3.80	2.09E-08	0.	2.69E-06	6.75E-06	1.38E-07	0.	0.	0.	2.40E-05	5.42E-06	4.78E-05	9.85E-06	9.66E-05
71	3.70	1.79E-08	0.	3.38E-06	1.80E-06	1.09E-07	0.	0.	0.	2.36E-05	5.87E-06	4.94E-05	1.10E-05	9.51E-05
72	3.60	1.53E-08	0.	1.86E-06	1.12E-05	1.19E-07	0.	0.	0.	2.21E-05	6.38E-06	4.77E-05	1.23E-05	1.02E-04
73	3.50	1.37E-08	0.	2.75E-06	3.07E-05	8.71E-08	0.	0.	0.	2.02E-05	6.94E-06	5.36E-05	1.37E-05	1.20E-04
74	3.40	1.20E-08	0.	1.46E-06	2.71E-06	9.66E-08	0.	0.	0.	1.17E-05	7.58E-06	6.03E-05	1.53E-05	9.91E-05
75	3.30	9.34E-09	0.	1.58E-06	1.39E-05	7.25E-08	0.	0.	0.	1.17E-05	8.29E-06	6.70E-05	1.69E-05	1.19E-04
76	3.20	7.77E-09	0.	9.18E-07	3.19E-05	7.43E-08	0.	0.	0.	1.17E-05	9.10E-06	7.39E-05	1.85E-05	1.46E-04
77	3.10	7.14E-09	0.	7.03E-07	4.24E-06	6.71E-08	0.	0.	0.	1.17E-05	1.00E-05	8.08E-05	2.02E-05	1.20E-04
78	3.00	6.11E-09	0.	4.05E-07	1.37E-05	6.02E-08	0.	0.	0.	1.18E-05	1.11E-05	8.78E-05	2.18E-05	1.47E-04
79	2.90	4.88E-09	0.	2.43E-07	8.58E-06	4.25E-08	0.	0.	0.	1.18E-05	1.23E-05	9.50E-05	2.35E-05	1.51E-04
80	2.80	4.91E-09	0.	1.15E-07	3.69E-06	2.67E-08	0.	0.	0.	1.18E-05	1.36E-05	1.03E-04	2.54E-05	1.57E-04
81	2.70	2.94E-09	0.	9.39E-08	6.69E-06	1.32E-08	0.	0.	0.	1.18E-05	1.52E-05	1.11E-04	2.73E-05	1.72E-04
82	2.60	1.26E-09	0.	2.68E-08	6.22E-07	5.34E-09	0.	0.	0.	1.18E-05	1.71E-05	1.20E-04	2.76E-05	1.78E-04
83	2.50	8.54E-11	0.	3.26E-09	5.13E-07	1.26E-09	0.	0.	0.	1.18E-05	1.92E-05	1.36E-04	1.24E-05	1.80E-04
84	2.40	0.	1.80E-07	0.	5.30E-07	1.23E-10	0.	0.	0.	1.18E-05	2.17E-05	9.87E-05	1.53E-05	1.46E-04
85	2.30	0.	7.28E-07	0.	0.	0.	0.	0.	0.	1.17E-05	2.47E-05	1.18E-04	1.83E-05	1.65E-04
86	2.20	0.	1.63E-06	0.	0.	0.	0.	0.	0.	1.16E-05	2.83E-05	1.38E-04	2.21E-05	1.94E-04
87	2.10	0.	2.11E-06	0.	0.	0.	0.	0.	0.	1.16E-05	3.26E-05	1.91E-04	2.99E-05	2.23E-04
88	2.00	0.	3.67E-06	0.	0.	0.	0.	0.	0.	1.12E-05	3.77E-05	1.73E-04	2.96E-05	2.55E-04
89	1.90	0.	6.31E-06	0.	0.	0.	0.	0.	0.	1.08E-05	4.41E-05	1.96E-04	3.37E-05	2.90E-04
90	1.80	0.	5.14E-06	0.	0.	0.	0.	0.	0.	1.03E-05	5.28E-05	2.31E-04	4.02E-05	3.39E-04
91	1.70	0.	6.19E-06	0.	0.	0.	0.	0.	0.	9.73E-06	6.18E-05	2.75E-04	4.99E-05	4.01E-04
92	1.60	0.	4.38E-06	0.	0.	0.	0.	0.	0.	8.24E-06	7.44E-05	3.18E-04	5.67E-05	4.62E-04
93	1.50	0.	5.32E-06	0.	0.	0.	0.	0.	0.	3.74E-06	9.09E-05	4.88E-04	6.83E-05	5.68E-04
94	1.40	0.	5.49E-06	0.	0.	0.	0.	0.	0.	0.	1.11E-04	4.95E-04	7.96E-05	6.52E-04
95	1.30	0.	4.12E-06	0.	0.	0.	0.	0.	0.	0.	1.40E-04	6.07E-04	1.02E-04	8.52E-04
96	1.20	0.	4.87E-06	0.	0.	0.	0.	0.	0.	0.	1.78E-04	5.90E-04	9.85E-05	8.71E-04
97	1.10	0.	3.51E-06	0.	0.	0.	0.	1.23E-11	0.	0.	2.32E-04	7.20E-04	1.24E-04	1.09E-03
98	1.00	0.	3.24E-06	0.	0.	0.	0.	1.25E-10	0.	0.	3.10E-04	8.79E-04	1.37E-04	1.33E-03
99	0.90	0.	2.64E-06	0.	0.	0.	0.	2.49E-10	0.	0.	4.38E-04	9.95E-04	1.61E-04	1.59E-03
100	0.80	0.	1.24E-06	0.	0.	0.	0.	2.75E-09	0.	0.	6.19E-04	1.14E-03	1.85E-04	1.95E-03
101	0.70	0.	3.16E-07	0.	0.	0.	0.	1.98E-09	0.	0.	9.29E-04	1.26E-03	2.05E-04	2.40E-03
102	0.60	0.	2.70E-08	0.	0.	0.	0.	7.63E-09	0.	0.	1.48E-03	1.11E-03	1.69E-04	2.77E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.193E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	AO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.91E-07	0.	0.	0.	5.41E-07	2.60E-08	1.19E-05	2.39E-06	1.94E-05
2	10.60	0.	0.	6.81E-07	0.	0.	0.	5.42E-07	2.14E-08	1.20E-05	2.39E-06	1.95E-05
3	10.50	0.	0.	5.91E-07	0.	0.	0.	5.43E-07	2.20E-08	1.20E-05	2.38E-06	1.94E-05
4	10.40	0.	0.	5.30E-07	0.	0.	0.	5.44E-07	2.27E-08	1.21E-05	2.38E-06	1.94E-05
5	10.30	0.	0.	4.49E-07	0.	0.	0.	5.44E-07	2.33E-08	1.21E-05	2.38E-06	1.95E-05
6	10.20	0.	0.	4.50E-07	0.	0.	0.	5.45E-07	2.40E-08	1.22E-05	2.37E-06	1.95E-05
7	10.10	0.	0.	4.11E-07	0.	0.	0.	5.44E-07	2.46E-08	1.22E-05	2.37E-06	1.95E-05
8	10.00	0.	0.	3.40E-07	0.	0.	0.	5.44E-07	2.53E-08	1.22E-05	2.36E-06	1.95E-05
9	9.90	0.	0.	3.45E-07	0.	0.	0.	5.47E-07	2.63E-08	1.22E-05	2.36E-06	1.95E-05
10	9.80	0.	0.	3.10E-07	0.	0.	0.	5.48E-07	2.71E-08	1.23E-05	2.36E-06	1.95E-05
11	9.70	0.	0.	2.53E-07	0.	0.	0.	5.49E-07	2.80E-08	1.23E-05	2.35E-06	1.95E-05
12	9.60	0.	0.	2.72E-07	0.	0.	0.	5.50E-07	2.88E-08	1.23E-05	2.35E-06	1.95E-05
13	9.50	0.	0.	2.19E-07	0.	0.	0.	5.51E-07	2.98E-08	1.24E-05	2.35E-06	1.95E-05
14	9.40	0.	0.	1.90E-07	0.	0.	0.	5.53E-07	3.07E-08	1.24E-05	2.34E-06	1.95E-05
15	9.30	0.	0.	2.01E-07	0.	0.	0.	5.55E-07	3.17E-08	1.24E-05	2.34E-06	1.96E-05
16	9.20	0.	0.	1.94E-07	0.	0.	0.	5.57E-07	3.28E-08	3.57E-06	2.34E-06	6.66E-06
17	9.10	0.	0.	1.98E-07	0.	0.	0.	5.59E-07	3.39E-08	3.57E-06	2.33E-06	6.65E-06
18	9.00	0.	0.	1.36E-07	0.	0.	0.	5.61E-07	3.50E-08	3.56E-06	2.33E-06	6.63E-06
19	8.90	0.	0.	1.20E-07	0.	0.	0.	5.63E-07	3.62E-08	3.56E-06	2.33E-06	6.60E-06
20	8.80	0.	0.	1.16E-07	0.	0.	0.	5.65E-07	3.75E-08	3.55E-06	2.32E-06	6.59E-06
21	8.70	0.	0.	9.44E-08	0.	0.	0.	5.67E-07	3.88E-08	3.55E-06	2.32E-06	6.57E-06
22	8.60	0.	0.	9.59E-08	0.	0.	0.	5.69E-07	4.02E-08	3.54E-06	2.32E-06	6.56E-06
23	8.50	0.	0.	7.09E-08	0.	0.	0.	5.71E-07	4.16E-08	3.54E-06	2.31E-06	6.55E-06
24	8.40	0.	0.	7.67E-08	0.	0.	0.	5.74E-07	4.31E-08	3.54E-06	2.31E-06	6.54E-06
25	8.30	0.	0.	6.16E-08	0.	0.	0.	5.77E-07	4.47E-08	3.53E-06	2.32E-06	6.53E-06
26	8.20	0.	0.	6.07E-08	0.	0.	0.	5.80E-07	4.64E-08	3.53E-06	2.33E-06	6.55E-06
27	8.10	0.	0.	4.99E-08	0.	0.	0.	5.83E-07	4.82E-08	3.52E-06	2.35E-06	6.55E-06
28	8.00	0.	0.	4.86E-08	0.	0.	0.	5.84E-07	5.00E-08	3.52E-06	2.37E-06	6.57E-06
29	7.90	0.	0.	3.96E-08	0.	0.	0.	5.39E-07	5.19E-08	3.52E-06	2.38E-06	6.59E-06
30	7.80	0.	0.	4.00E-08	0.	0.	0.	5.93E-07	5.39E-08	3.53E-06	2.40E-06	6.61E-06
31	7.70	0.	0.	3.33E-08	0.	0.	0.	5.96E-07	5.61E-08	3.53E-06	2.42E-06	6.63E-06
32	7.60	0.	0.	3.05E-08	0.	1.69E-12	0.	5.99E-07	5.83E-08	3.53E-06	2.43E-06	6.65E-06
33	7.50	0.	0.	2.69E-08	0.	7.99E-12	0.	6.02E-07	6.07E-08	3.53E-06	2.45E-06	6.67E-06
34	7.40	0.	0.	2.32E-08	0.	4.49E-11	0.	6.05E-07	6.32E-08	3.54E-06	2.47E-06	6.69E-06
35	7.30	0.	0.	2.11E-08	0.	2.18E-10	0.	6.08E-07	6.58E-08	3.54E-06	2.48E-06	6.72E-06
36	7.20	0.	0.	1.82E-08	0.	5.82E-10	0.	6.12E-07	6.86E-08	3.54E-06	2.50E-06	6.74E-06
37	7.10	0.	0.	1.60E-08	0.	1.60E-09	0.	6.17E-07	7.16E-08	3.54E-06	2.52E-06	6.77E-06
38	7.00	4.02E-12	0.	1.48E-08	0.	4.09E-09	0.	6.22E-07	7.47E-08	3.55E-06	2.53E-06	6.79E-06
39	6.90	7.64E-12	0.	1.36E-08	0.	4.36E-09	0.	6.27E-07	7.80E-08	3.55E-06	2.55E-06	6.82E-06
40	6.80	6.40E-12	0.	1.19E-08	0.	8.96E-09	0.	6.32E-07	8.15E-08	3.55E-06	2.57E-06	6.85E-06
41	6.70	4.52E-12	0.	9.96E-09	0.	1.05E-08	0.	6.37E-07	8.52E-08	3.55E-06	2.59E-06	6.88E-06
42	6.60	2.68E-12	0.	8.51E-09	0.	6.64E-09	0.	6.42E-07	8.91E-08	3.57E-06	2.61E-06	6.92E-06
43	6.50	1.49E-12	0.	6.39E-09	0.	1.16E-08	0.	6.47E-07	9.33E-08	3.59E-06	2.63E-06	6.97E-06
44	6.40	2.04E-12	0.	4.87E-09	6.22E-11	1.29E-08	0.	6.52E-07	9.78E-08	3.61E-06	2.65E-06	7.02E-06
45	6.30	4.25E-12	0.	2.32E-09	2.76E-10	7.05E-09	0.	6.57E-07	1.02E-07	3.62E-06	2.67E-06	7.07E-06
46	6.20	1.27E-11	0.	1.19E-09	3.72E-10	1.06E-08	0.	6.62E-07	1.08E-07	3.65E-06	2.72E-06	7.14E-06
47	6.10	5.12E-11	0.	5.18E-10	1.03E-09	1.55E-08	0.	6.67E-07	1.13E-07	3.68E-06	2.76E-06	7.23E-06
48	6.00	1.39E-10	0.	1.25E-10	9.00E-10	6.20E-09	0.	6.72E-07	1.19E-07	3.71E-06	2.80E-06	7.31E-06
49	5.90	2.20E-10	0.	8.92E-12	1.28E-09	8.44E-09	0.	6.72E-07	1.25E-07	3.76E-06	2.84E-06	7.40E-06
50	5.80	3.37E-10	0.	2.21E-13	1.74E-09	6.21E-09	0.	6.62E-07	1.32E-07	3.80E-06	2.88E-06	7.48E-06
51	5.70	4.01E-10	0.	0.	1.92E-09	6.72E-09	0.	6.22E-07	1.39E-07	3.84E-06	2.93E-06	7.53E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-RAT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.02E-10	0.	0.	0.	1.58E-09	1.01E-08	0.	0.	5.78E-07	1.46E-07	3.08E-06	2.97E-06	7.59E-06
53	5.50	5.24E-10	0.	0.	0.	1.83E-09	9.60E-09	0.	0.	5.81E-07	1.54E-07	3.24E-06	3.81E-06	7.78E-06
54	5.40	5.53E-10	0.	0.	0.	1.58E-09	6.78E-09	0.	0.	5.84E-07	1.63E-07	4.02E-06	3.66E-06	7.83E-06
55	5.30	5.35E-10	0.	0.	0.	1.63E-09	9.51E-09	0.	0.	5.88E-07	1.73E-07	4.09E-06	3.11E-06	7.98E-06
56	5.20	3.87E-10	0.	0.	0.	1.70E-09	5.94E-09	0.	0.	5.92E-07	1.83E-07	4.17E-06	3.17E-06	8.14E-06
57	5.10	3.68E-10	0.	0.	0.	1.67E-09	7.97E-09	0.	0.	5.97E-07	1.94E-07	4.28E-06	3.25E-06	8.34E-06
58	5.00	2.69E-10	0.	0.	0.	1.48E-09	7.03E-09	0.	0.	6.02E-07	2.06E-07	4.40E-06	3.32E-06	8.54E-06
59	4.90	2.25E-10	0.	0.	0.	1.61E-09	7.22E-09	0.	0.	6.07E-07	2.19E-07	4.53E-06	3.39E-06	8.78E-06
60	4.80	2.24E-10	0.	0.	0.	1.70E-09	6.65E-09	0.	0.	6.12E-07	2.33E-07	4.66E-06	3.47E-06	8.98E-06
61	4.70	2.43E-10	0.	0.	0.	1.63E-09	5.76E-09	0.	0.	6.17E-07	2.48E-07	4.79E-06	3.55E-06	9.22E-06
62	4.60	2.88E-10	0.	0.	0.	1.64E-09	5.33E-09	0.	0.	6.22E-07	2.65E-07	4.96E-06	3.64E-06	9.49E-06
63	4.50	2.91E-10	0.	6.27E-10	0.	1.44E-09	3.86E-09	0.	0.	6.27E-07	2.83E-07	5.15E-06	3.73E-06	9.80E-06
64	4.40	2.97E-10	0.	2.17E-09	0.	1.41E-09	2.79E-09	0.	0.	6.32E-07	3.03E-07	5.35E-06	3.82E-06	1.01E-05
65	4.30	2.69E-10	0.	5.09E-09	0.	1.29E-09	1.63E-09	0.	0.	6.37E-07	3.25E-07	5.56E-06	3.91E-06	1.04E-05
66	4.20	2.44E-10	0.	2.18E-08	0.	1.34E-09	1.25E-09	0.	0.	6.42E-07	3.49E-07	5.77E-06	3.98E-06	1.08E-05
67	4.10	2.22E-10	0.	7.37E-09	0.	1.26E-09	3.28E-10	0.	0.	6.44E-07	3.75E-07	5.98E-06	8.16E-07	7.82E-06
68	4.00	1.97E-10	0.	3.08E-08	0.	1.17E-09	2.51E-10	0.	0.	6.47E-07	4.04E-07	5.19E-06	8.41E-07	7.11E-06
69	3.90	1.60E-10	0.	1.37E-08	2.78E-08	1.02E-09	1.05E-10	0.	0.	6.44E-07	4.36E-07	5.32E-06	8.65E-07	7.31E-06
70	3.80	1.73E-10	0.	2.01E-08	1.71E-07	1.09E-09	0.	0.	0.	6.42E-07	4.71E-07	4.13E-06	8.94E-07	6.33E-06
71	3.70	1.45E-10	0.	2.46E-08	4.57E-08	8.98E-10	0.	0.	0.	5.72E-07	5.11E-07	4.27E-06	9.99E-07	6.49E-06
72	3.60	1.26E-10	0.	1.39E-08	2.84E-07	9.33E-10	0.	0.	0.	5.92E-07	5.55E-07	4.12E-06	1.12E-06	6.49E-06
73	3.50	1.13E-10	0.	2.06E-08	7.79E-07	6.84E-10	0.	0.	0.	5.41E-07	6.04E-07	4.63E-06	1.25E-06	7.82E-06
74	3.40	9.89E-11	0.	1.09E-08	6.69E-08	7.58E-10	0.	0.	0.	3.12E-07	6.59E-07	5.21E-06	1.39E-06	7.65E-06
75	3.30	7.71E-11	0.	1.17E-08	3.52E-07	5.70E-10	0.	0.	0.	3.13E-07	7.21E-07	5.80E-06	1.53E-06	8.73E-06
76	3.20	6.41E-11	0.	6.86E-09	8.09E-07	5.83E-10	0.	0.	0.	3.13E-07	7.91E-07	6.39E-06	1.68E-06	9.99E-06
77	3.10	5.98E-11	0.	5.26E-09	1.08E-07	5.27E-10	0.	0.	0.	3.14E-07	8.71E-07	6.99E-06	1.83E-06	1.01E-05
78	3.00	5.04E-11	0.	3.03E-09	3.47E-07	4.72E-10	0.	0.	0.	3.15E-07	9.62E-07	7.68E-06	1.98E-06	1.12E-05
79	2.90	4.62E-11	0.	1.82E-09	2.18E-07	3.34E-10	0.	0.	0.	3.15E-07	1.07E-06	8.21E-06	2.14E-06	1.19E-05
80	2.80	4.05E-11	0.	8.42E-10	9.26E-08	2.89E-10	0.	0.	0.	3.16E-07	1.19E-06	8.90E-06	2.30E-06	1.28E-05
81	2.70	2.43E-11	0.	3.96E-10	1.69E-07	1.84E-10	0.	0.	0.	3.16E-07	1.32E-06	9.63E-06	2.48E-06	1.39E-05
82	2.60	1.84E-11	0.	2.81E-10	1.58E-08	4.19E-11	0.	0.	0.	3.16E-07	1.48E-06	1.04E-05	9.78E-07	1.32E-05
83	2.50	7.05E-13	0.	2.44E-11	1.30E-08	9.49E-12	0.	0.	0.	3.16E-07	1.67E-06	1.17E-05	1.13E-06	1.49E-05
84	2.40	0.	1.34E-09	0.	1.34E-08	9.66E-13	0.	0.	0.	3.16E-07	1.89E-06	7.84E-06	1.39E-06	1.14E-05
85	2.30	0.	5.43E-09	0.	0.	0.	0.	0.	0.	3.13E-07	2.15E-06	9.51E-06	1.66E-06	1.36E-05
86	2.20	0.	1.27E-08	0.	0.	0.	0.	0.	0.	3.12E-07	2.46E-06	1.12E-05	2.01E-06	1.60E-05
87	2.10	0.	1.50E-08	0.	0.	0.	0.	0.	0.	3.11E-07	2.83E-06	1.31E-05	2.35E-06	1.86E-05
88	2.00	0.	2.75E-08	0.	0.	0.	0.	0.	0.	3.01E-07	3.28E-06	1.49E-05	2.69E-06	2.12E-05
89	1.90	0.	4.72E-08	0.	0.	0.	0.	0.	0.	2.89E-07	3.83E-06	1.69E-05	3.06E-06	2.41E-05
90	1.80	0.	3.85E-08	0.	0.	0.	0.	0.	0.	2.77E-07	4.52E-06	2.08E-05	3.65E-06	2.85E-05
91	1.70	0.	4.63E-08	0.	0.	0.	0.	0.	0.	2.61E-07	5.38E-06	2.37E-05	4.40E-06	3.38E-05
92	1.60	0.	3.27E-08	0.	0.	0.	0.	0.	0.	2.21E-07	6.47E-06	2.75E-05	5.15E-06	3.94E-05
93	1.50	0.	3.98E-08	0.	0.	0.	0.	0.	0.	10.00E-08	7.87E-06	3.46E-05	5.88E-06	4.84E-05
94	1.40	0.	4.18E-08	0.	0.	0.	0.	0.	0.	0.	9.70E-06	3.94E-05	7.84E-06	5.61E-05
95	1.30	0.	3.00E-08	0.	0.	0.	0.	0.	0.	0.	1.22E-05	3.80E-05	6.67E-06	5.60E-05
96	1.20	0.	3.05E-08	0.	0.	0.	0.	0.	0.	0.	1.55E-05	5.00E-05	8.94E-06	7.45E-05
97	1.10	0.	2.63E-08	0.	0.	0.	0.	9.66E-14	0.	0.	2.02E-05	6.38E-05	1.82E-05	9.34E-05
98	1.00	0.	2.42E-08	0.	0.	0.	0.	9.81E-13	0.	0.	2.70E-05	7.32E-05	1.24E-05	1.13E-04
99	0.98	0.	1.97E-08	0.	0.	0.	0.	1.17E-12	0.	0.	3.74E-05	8.68E-05	1.46E-05	1.38E-04
100	0.96	0.	9.24E-09	0.	0.	0.	0.	2.16E-11	0.	0.	5.39E-05	9.65E-05	1.64E-05	1.67E-04
101	0.70	0.	2.36E-09	0.	0.	0.	0.	1.56E-11	0.	0.	8.88E-05	1.09E-04	1.86E-05	2.08E-04
102	0.60	0.	2.02E-10	0.	0.	0.	0.	5.99E-11	0.	0.	1.29E-04	9.64E-05	1.53E-05	2.41E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.82E-09	0.	0.	0.	10.00E-09	1.35E-09	7.61E-07	1.73E-07	9.49E-07
2	10.60	0.	0.	2.45E-09	0.	0.	0.	10.00E-09	1.39E-09	7.69E-07	1.73E-07	9.52E-07
3	10.50	0.	0.	2.41E-09	0.	0.	0.	10.00E-09	1.43E-09	7.69E-07	1.73E-07	9.54E-07
4	10.40	0.	0.	2.19E-09	0.	0.	0.	10.00E-09	1.48E-09	7.72E-07	1.72E-07	9.54E-07
5	10.30	0.	0.	1.83E-09	0.	0.	0.	1.01E-08	1.52E-09	7.74E-07	1.72E-07	9.54E-07
6	10.20	0.	0.	1.83E-09	0.	0.	0.	1.01E-08	1.56E-09	7.76E-07	1.72E-07	9.61E-07
7	10.10	0.	0.	1.68E-09	0.	0.	0.	1.01E-08	1.61E-09	7.78E-07	1.72E-07	9.63E-07
8	10.00	0.	0.	1.39E-09	0.	0.	0.	1.01E-08	1.66E-09	7.80E-07	1.71E-07	9.64E-07
9	9.90	0.	0.	1.41E-09	0.	0.	0.	1.01E-08	1.71E-09	7.82E-07	1.71E-07	9.64E-07
10	9.80	0.	0.	1.26E-09	0.	0.	0.	1.01E-08	1.77E-09	7.84E-07	1.71E-07	9.64E-07
11	9.70	0.	0.	1.03E-09	0.	0.	0.	1.02E-08	1.82E-09	7.86E-07	1.71E-07	9.69E-07
12	9.60	0.	0.	1.11E-09	0.	0.	0.	1.02E-08	1.88E-09	7.88E-07	1.70E-07	9.71E-07
13	9.50	0.	0.	8.93E-10	0.	0.	0.	1.02E-08	1.94E-09	7.90E-07	1.70E-07	9.73E-07
14	9.40	0.	0.	8.88E-10	0.	0.	0.	1.02E-08	2.00E-09	7.92E-07	1.70E-07	9.75E-07
15	9.30	0.	0.	8.10E-10	0.	0.	0.	1.03E-08	2.07E-09	2.29E-07	1.69E-07	4.11E-07
16	9.20	0.	0.	6.20E-10	0.	0.	0.	1.03E-08	2.14E-09	2.28E-07	1.69E-07	4.11E-07
17	9.10	0.	0.	6.42E-10	0.	0.	0.	1.03E-08	2.21E-09	2.28E-07	1.69E-07	4.10E-07
18	9.00	0.	0.	5.56E-10	0.	0.	0.	1.04E-08	2.28E-09	2.27E-07	1.69E-07	4.09E-07
19	8.90	0.	0.	4.98E-10	0.	0.	0.	1.04E-08	2.36E-09	2.27E-07	1.69E-07	4.09E-07
20	8.80	0.	0.	4.72E-10	0.	0.	0.	1.04E-08	2.44E-09	2.27E-07	1.68E-07	4.08E-07
21	8.70	0.	0.	3.89E-10	0.	0.	0.	1.05E-08	2.53E-09	2.26E-07	1.68E-07	4.08E-07
22	8.60	0.	0.	3.91E-10	0.	0.	0.	1.05E-08	2.62E-09	2.26E-07	1.68E-07	4.08E-07
23	8.50	0.	0.	3.22E-10	0.	0.	0.	1.06E-08	2.71E-09	2.26E-07	1.68E-07	4.07E-07
24	8.40	0.	0.	3.18E-10	0.	0.	0.	1.06E-08	2.81E-09	2.26E-07	1.67E-07	4.07E-07
25	8.30	0.	0.	2.90E-10	0.	0.	0.	1.07E-08	2.91E-09	2.26E-07	1.68E-07	4.07E-07
26	8.20	0.	0.	2.48E-10	0.	0.	0.	1.07E-08	3.02E-09	2.25E-07	1.69E-07	4.08E-07
27	8.10	0.	0.	2.82E-10	0.	0.	0.	1.08E-08	3.14E-09	2.25E-07	1.70E-07	4.09E-07
28	8.00	0.	0.	1.98E-10	0.	0.	0.	1.08E-08	3.26E-09	2.25E-07	1.71E-07	4.10E-07
29	7.90	0.	0.	1.62E-10	0.	0.	0.	1.09E-08	3.38E-09	2.25E-07	1.73E-07	4.12E-07
30	7.80	0.	0.	1.63E-10	0.	0.	0.	1.09E-08	3.51E-09	2.25E-07	1.74E-07	4.13E-07
31	7.70	0.	0.	1.36E-10	0.	0.	0.	1.10E-08	3.65E-09	2.25E-07	1.75E-07	4.15E-07
32	7.60	0.	0.	1.24E-10	0.	7.79E-15	0.	1.11E-08	3.80E-09	2.25E-07	1.76E-07	4.17E-07
33	7.50	0.	0.	1.10E-10	0.	3.69E-14	0.	1.11E-08	3.95E-09	2.26E-07	1.77E-07	4.18E-07
34	7.40	0.	0.	9.47E-11	0.	2.07E-13	0.	1.12E-08	4.12E-09	2.26E-07	1.79E-07	4.20E-07
35	7.30	0.	0.	8.60E-11	0.	1.01E-12	0.	1.12E-08	4.29E-09	2.26E-07	1.80E-07	4.21E-07
36	7.20	0.	0.	7.43E-11	0.	2.69E-12	0.	1.13E-08	4.47E-09	2.26E-07	1.81E-07	4.23E-07
37	7.10	0.	0.	6.86E-11	0.	7.39E-12	0.	1.14E-08	4.66E-09	2.26E-07	1.82E-07	4.25E-07
38	7.00	2.10E-14	0.	6.02E-11	0.	1.69E-11	0.	1.15E-08	4.87E-09	2.26E-07	1.84E-07	4.26E-07
39	6.90	4.88E-14	0.	5.29E-11	0.	2.02E-11	0.	1.16E-08	5.08E-09	2.27E-07	1.85E-07	4.28E-07
40	6.80	3.35E-14	0.	4.86E-11	0.	4.14E-11	0.	1.17E-08	5.31E-09	2.27E-07	1.86E-07	4.30E-07
41	6.70	2.37E-14	0.	4.06E-11	0.	4.85E-11	0.	1.18E-08	5.55E-09	2.27E-07	1.87E-07	4.32E-07
42	6.60	1.48E-14	0.	3.47E-11	0.	3.08E-11	0.	1.19E-08	5.81E-09	2.28E-07	1.89E-07	4.34E-07
43	6.50	7.83E-15	0.	2.61E-11	0.	5.30E-11	0.	1.19E-08	6.08E-09	2.29E-07	1.90E-07	4.37E-07
44	6.40	1.07E-14	0.	1.66E-11	2.88E-13	5.98E-11	0.	1.20E-08	6.37E-09	2.30E-07	1.92E-07	4.40E-07
45	6.30	2.22E-14	0.	9.47E-12	1.28E-12	3.26E-11	0.	1.21E-08	6.68E-09	2.31E-07	1.94E-07	4.44E-07
46	6.20	6.84E-14	0.	4.84E-12	1.72E-12	4.91E-11	0.	1.22E-08	7.01E-09	2.33E-07	1.97E-07	4.49E-07
47	6.10	2.68E-13	0.	2.11E-12	4.75E-12	7.17E-11	0.	1.23E-08	7.36E-09	2.35E-07	2.00E-07	4.54E-07
48	6.00	7.88E-13	0.	5.10E-13	4.16E-12	2.86E-11	0.	1.24E-08	7.74E-09	2.37E-07	2.03E-07	4.60E-07
49	5.90	1.15E-12	0.	3.64E-14	5.93E-12	2.98E-11	0.	1.24E-08	8.14E-09	2.40E-07	2.06E-07	4.66E-07
50	5.80	1.76E-12	0.	9.09E-16	8.05E-12	2.87E-11	0.	1.22E-08	8.57E-09	2.42E-07	2.09E-07	4.72E-07
51	5.70	2.10E-12	0.	0.	8.89E-12	3.11E-11	0.	1.15E-08	9.04E-09	2.45E-07	2.12E-07	4.77E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (10W5)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.63E-12	0.	0.	0.	6.92E-12	4.67E-11	0.	0.	1.07E-08	9.53E-09	2.48E-07	2.15E-07	4.83E-07
53	5.50	2.74E-12	0.	0.	0.	8.47E-12	4.44E-11	0.	0.	1.07E-08	1.01E-08	2.52E-07	2.18E-07	4.91E-07
54	5.40	2.89E-12	0.	0.	0.	7.32E-12	3.15E-11	0.	0.	1.08E-08	1.06E-08	2.56E-07	2.22E-07	5.00E-07
55	5.30	2.80E-12	0.	0.	0.	7.52E-12	4.40E-11	0.	0.	1.09E-08	1.12E-08	2.61E-07	2.26E-07	5.09E-07
56	5.20	2.03E-12	0.	0.	0.	7.87E-12	2.74E-11	0.	0.	1.09E-08	1.19E-08	2.66E-07	2.31E-07	5.20E-07
57	5.10	1.98E-12	0.	0.	0.	7.71E-12	3.68E-11	0.	0.	1.10E-08	1.26E-08	2.73E-07	2.36E-07	5.33E-07
58	5.00	1.41E-12	0.	0.	0.	6.85E-12	3.25E-11	0.	0.	1.11E-08	1.34E-08	2.81E-07	2.41E-07	5.48E-07
59	4.90	1.18E-12	0.	0.	0.	7.42E-12	3.33E-11	0.	0.	1.12E-08	1.42E-08	2.89E-07	2.46E-07	5.61E-07
60	4.80	1.18E-12	0.	0.	0.	7.83E-12	3.07E-11	0.	0.	1.13E-08	1.52E-08	2.98E-07	2.51E-07	5.75E-07
61	4.70	1.28E-12	0.	0.	0.	7.54E-12	2.64E-11	0.	0.	1.14E-08	1.62E-08	3.06E-07	2.57E-07	5.91E-07
62	4.60	1.51E-12	0.	0.	0.	7.57E-12	2.46E-11	0.	0.	1.15E-08	1.72E-08	3.16E-07	2.64E-07	6.09E-07
63	4.50	1.52E-12	0.	2.56E-12	0.	6.63E-12	1.79E-11	0.	0.	1.16E-08	1.84E-08	3.29E-07	2.70E-07	6.29E-07
64	4.40	1.56E-12	0.	8.83E-12	0.	6.51E-12	1.29E-11	0.	0.	1.17E-08	1.97E-08	3.42E-07	2.77E-07	6.53E-07
65	4.30	1.41E-12	0.	2.32E-11	0.	5.96E-12	7.52E-12	0.	0.	1.18E-08	2.11E-08	3.55E-07	2.82E-07	6.78E-07
66	4.20	1.28E-12	0.	6.89E-11	0.	6.20E-12	5.79E-12	0.	0.	1.19E-08	2.27E-08	3.68E-07	5.73E-08	4.69E-07
67	4.10	1.16E-12	0.	3.81E-11	0.	5.81E-12	1.52E-12	0.	0.	1.19E-08	2.44E-08	3.82E-07	5.91E-08	4.77E-07
68	4.00	1.03E-12	0.	1.26E-10	0.	5.43E-12	1.14E-12	0.	0.	1.19E-08	2.63E-08	3.98E-07	6.09E-08	4.27E-07
69	3.90	8.40E-13	0.	5.59E-11	4.43E-10	4.73E-12	4.84E-13	0.	0.	1.19E-08	2.84E-08	2.55E-07	6.27E-08	3.58E-07
70	3.80	9.04E-13	0.	8.20E-11	2.73E-09	5.82E-12	0.	0.	0.	1.19E-08	3.07E-08	2.64E-07	6.48E-08	3.74E-07
71	3.70	7.57E-13	0.	10.80E-11	7.29E-10	3.96E-12	0.	0.	0.	1.17E-08	3.33E-08	2.48E-07	7.23E-08	3.58E-07
72	3.60	6.61E-13	0.	5.66E-11	4.54E-09	4.31E-12	0.	0.	0.	1.09E-08	3.61E-08	2.63E-07	8.10E-08	3.96E-07
73	3.50	5.94E-13	0.	8.39E-11	1.24E-08	3.16E-12	0.	0.	0.	10.00E-09	3.93E-08	2.96E-07	9.03E-08	4.46E-07
74	3.40	5.18E-13	0.	4.45E-11	1.10E-09	3.50E-12	0.	0.	0.	9.77E-09	4.29E-08	3.33E-07	1.01E-07	4.83E-07
75	3.30	4.04E-13	0.	4.75E-11	5.61E-09	2.63E-12	0.	0.	0.	9.78E-09	4.70E-08	3.70E-07	1.11E-07	5.40E-07
76	3.20	3.36E-13	0.	2.88E-11	1.29E-08	2.78E-12	0.	0.	0.	9.79E-09	5.15E-08	4.08E-07	1.22E-07	6.00E-07
77	3.10	3.09E-13	0.	2.14E-11	1.72E-09	2.44E-12	0.	0.	0.	9.80E-09	5.67E-08	4.46E-07	1.33E-07	6.43E-07
78	3.00	2.64E-13	0.	1.23E-11	5.55E-09	2.18E-12	0.	0.	0.	9.82E-09	6.27E-08	4.85E-07	1.44E-07	7.03E-07
79	2.90	2.11E-13	0.	7.41E-12	3.47E-09	1.54E-12	0.	0.	0.	9.83E-09	6.95E-08	5.24E-07	1.55E-07	7.58E-07
80	2.80	2.12E-13	0.	3.51E-12	1.48E-09	9.67E-13	0.	0.	0.	9.84E-09	7.72E-08	5.68E-07	1.67E-07	8.19E-07
81	2.70	1.27E-13	0.	1.61E-12	2.69E-09	4.88E-13	0.	0.	0.	9.84E-09	8.62E-08	6.15E-07	1.69E-07	8.78E-07
82	2.60	5.47E-14	0.	8.18E-13	2.52E-10	1.94E-13	0.	0.	0.	9.84E-09	9.67E-08	6.64E-07	7.09E-08	8.38E-07
83	2.50	3.69E-15	0.	9.93E-14	2.08E-10	4.37E-14	0.	0.	0.	9.84E-09	1.09E-07	4.83E-07	8.17E-08	6.00E-07
84	2.40	0.	5.47E-12	0.	2.19E-10	4.46E-15	0.	0.	0.	9.84E-09	1.23E-07	5.01E-07	1.01E-07	7.30E-07
85	2.30	0.	2.21E-11	0.	0.	0.	0.	0.	0.	9.79E-09	1.40E-07	6.97E-07	1.21E-07	8.73E-07
86	2.20	0.	4.98E-11	0.	0.	0.	0.	0.	0.	9.77E-09	1.60E-07	7.17E-07	1.45E-07	1.03E-06
87	2.10	0.	6.44E-11	0.	0.	0.	0.	0.	0.	9.74E-09	1.84E-07	8.35E-07	1.70E-07	1.20E-06
88	2.00	0.	1.12E-10	0.	0.	0.	0.	0.	0.	9.56E-09	2.14E-07	9.54E-07	1.95E-07	1.37E-06
89	1.90	0.	1.92E-10	0.	0.	0.	0.	0.	0.	9.35E-09	2.50E-07	1.08E-06	2.21E-07	1.54E-06
90	1.80	0.	1.57E-10	0.	0.	0.	0.	0.	0.	9.11E-09	2.94E-07	1.28E-06	2.65E-07	1.84E-06
91	1.70	0.	1.80E-10	0.	0.	0.	0.	0.	0.	4.82E-09	3.50E-07	1.52E-06	3.19E-07	2.19E-06
92	1.60	0.	1.33E-10	0.	0.	0.	0.	0.	0.	4.88E-09	4.21E-07	1.76E-06	3.58E-07	2.53E-06
93	1.50	0.	1.62E-10	0.	0.	0.	0.	0.	0.	1.85E-09	5.12E-07	2.04E-06	4.26E-07	2.90E-06
94	1.40	0.	1.67E-10	0.	0.	0.	0.	0.	0.	0.	6.32E-07	1.65E-06	3.37E-07	2.62E-06
95	1.30	0.	1.24E-10	0.	0.	0.	0.	0.	0.	0.	7.92E-07	2.36E-06	4.83E-07	3.64E-06
96	1.20	0.	1.24E-10	0.	0.	0.	0.	0.	0.	0.	1.01E-06	3.19E-06	6.48E-07	4.85E-06
97	1.10	0.	1.87E-10	0.	0.	0.	0.	4.46E-16	0.	0.	1.32E-06	3.86E-06	7.41E-07	5.92E-06
98	1.00	0.	9.87E-11	0.	0.	0.	0.	4.54E-15	0.	0.	1.76E-06	4.68E-06	9.01E-07	7.33E-06
99	0.90	0.	8.84E-11	0.	0.	0.	0.	9.39E-15	0.	0.	2.44E-06	5.49E-06	1.06E-06	8.99E-06
100	0.80	0.	3.77E-11	0.	0.	0.	0.	9.99E-14	0.	0.	3.51E-06	6.16E-06	1.19E-06	1.09E-05
101	0.70	0.	9.62E-12	0.	0.	0.	0.	7.19E-14	0.	0.	5.26E-06	5.47E-06	9.83E-07	1.17E-05
102	0.60	0.	8.24E-13	0.	0.	0.	0.	2.77E-13	0.	0.	8.48E-06	6.15E-06	1.11E-06	1.57E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-03 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.70E-12	0.	0.	0.	6.62E-11	4.33E-11	2.36E-08	6.40E-09	3.01E-08
2	10.60	0.	0.	2.35E-12	0.	0.	0.	6.63E-11	4.44E-11	2.37E-08	6.39E-09	3.02E-08
3	10.50	0.	0.	2.31E-12	0.	0.	0.	6.64E-11	4.99E-11	2.38E-08	6.38E-09	3.03E-08
4	10.40	0.	0.	2.10E-12	0.	0.	0.	6.65E-11	4.72E-11	2.39E-08	6.38E-09	3.04E-08
5	10.30	0.	0.	1.75E-12	0.	0.	0.	6.66E-11	4.86E-11	2.40E-08	6.37E-09	3.04E-08
6	10.20	0.	0.	1.74E-12	0.	0.	0.	6.67E-11	5.01E-11	2.40E-08	6.36E-09	3.05E-08
7	10.10	0.	0.	1.61E-12	0.	0.	0.	6.67E-11	5.16E-11	2.41E-08	6.35E-09	3.06E-08
8	10.00	0.	0.	1.33E-12	0.	0.	0.	6.68E-11	5.31E-11	2.41E-08	6.34E-09	3.06E-08
9	9.90	0.	0.	1.35E-12	0.	0.	0.	6.70E-11	5.48E-11	2.42E-08	6.33E-09	3.07E-08
10	9.80	0.	0.	1.21E-12	0.	0.	0.	6.71E-11	5.65E-11	2.43E-08	6.32E-09	3.07E-08
11	9.70	0.	0.	9.98E-13	0.	0.	0.	6.72E-11	5.83E-11	2.43E-08	6.31E-09	3.08E-08
12	9.60	0.	0.	1.08E-12	0.	0.	0.	6.73E-11	6.01E-11	2.44E-08	6.30E-09	3.08E-08
13	9.50	0.	0.	8.56E-13	0.	0.	0.	6.74E-11	6.20E-11	2.45E-08	6.29E-09	3.09E-08
14	9.40	0.	0.	7.75E-13	0.	0.	0.	6.77E-11	6.40E-11	2.45E-08	6.28E-09	3.09E-08
15	9.30	0.	0.	7.84E-13	0.	0.	0.	6.79E-11	6.61E-11	7.88E-09	6.27E-09	1.35E-08
16	9.20	0.	0.	6.02E-13	0.	0.	0.	6.82E-11	6.83E-11	7.87E-09	6.26E-09	1.35E-08
17	9.10	0.	0.	6.16E-13	0.	0.	0.	6.84E-11	7.06E-11	7.85E-09	6.25E-09	1.34E-08
18	9.00	0.	0.	5.33E-13	0.	0.	0.	6.87E-11	7.30E-11	7.84E-09	6.25E-09	1.34E-08
19	8.90	0.	0.	4.78E-13	0.	0.	0.	6.89E-11	7.55E-11	7.83E-09	6.24E-09	1.34E-08
20	8.80	0.	0.	4.52E-13	0.	0.	0.	6.92E-11	7.81E-11	7.82E-09	6.23E-09	1.34E-08
21	8.70	0.	0.	3.69E-13	0.	0.	0.	6.94E-11	8.09E-11	7.81E-09	6.22E-09	1.34E-08
22	8.60	0.	0.	3.75E-13	0.	0.	0.	6.96E-11	8.38E-11	7.80E-09	6.21E-09	1.34E-08
23	8.50	0.	0.	3.08E-13	0.	0.	0.	6.99E-11	8.68E-11	6.99E-09	6.20E-09	1.34E-08
24	8.40	0.	0.	3.08E-13	0.	0.	0.	7.03E-11	8.99E-11	6.99E-09	6.20E-09	1.33E-08
25	8.30	0.	0.	2.48E-13	0.	0.	0.	7.06E-11	9.32E-11	6.98E-09	6.21E-09	1.34E-08
26	8.20	0.	0.	2.37E-13	0.	0.	0.	7.10E-11	9.67E-11	6.98E-09	6.25E-09	1.34E-08
27	8.10	0.	0.	1.94E-13	0.	0.	0.	7.14E-11	1.00E-10	6.96E-09	6.30E-09	1.34E-08
28	8.00	0.	0.	1.90E-13	0.	0.	0.	7.17E-11	1.04E-10	6.96E-09	6.34E-09	1.35E-08
29	7.90	0.	0.	1.55E-13	0.	0.	0.	7.21E-11	1.08E-10	6.96E-09	6.39E-09	1.35E-08
30	7.80	0.	0.	1.56E-13	0.	0.	0.	7.25E-11	1.12E-10	6.97E-09	6.43E-09	1.36E-08
31	7.70	0.	0.	1.30E-13	0.	0.	0.	7.28E-11	1.17E-10	6.97E-09	6.48E-09	1.36E-08
32	7.60	0.	0.	1.19E-13	0.	8.93E-18	0.	7.32E-11	1.21E-10	6.98E-09	6.52E-09	1.37E-08
33	7.50	0.	0.	1.05E-13	0.	4.23E-17	0.	7.36E-11	1.26E-10	6.98E-09	6.57E-09	1.37E-08
34	7.40	0.	0.	9.08E-14	0.	2.38E-16	0.	7.40E-11	1.32E-10	6.99E-09	6.61E-09	1.38E-08
35	7.30	0.	0.	8.25E-14	0.	1.16E-15	0.	7.44E-11	1.37E-10	6.99E-09	6.66E-09	1.39E-08
36	7.20	0.	0.	7.12E-14	0.	3.08E-15	0.	7.48E-11	1.43E-10	7.00E-09	6.70E-09	1.39E-08
37	7.10	0.	0.	6.58E-14	0.	8.48E-15	0.	7.54E-11	1.49E-10	7.00E-09	6.75E-09	1.40E-08
38	7.00	2.88E-17	0.	5.77E-14	0.	2.17E-14	0.	7.60E-11	1.56E-10	7.01E-09	6.79E-09	1.40E-08
39	6.90	5.48E-17	0.	5.07E-14	0.	2.31E-14	0.	7.66E-11	1.62E-10	7.01E-09	6.84E-09	1.41E-08
40	6.80	4.59E-17	0.	4.66E-14	0.	4.75E-14	0.	7.73E-11	1.70E-10	7.02E-09	6.88E-09	1.41E-08
41	6.70	3.24E-17	0.	3.89E-14	0.	5.56E-14	0.	7.79E-11	1.77E-10	7.02E-09	6.93E-09	1.42E-08
42	6.60	1.92E-17	0.	3.33E-14	0.	3.53E-14	0.	7.85E-11	1.84E-10	7.05E-09	6.99E-09	1.43E-08
43	6.50	1.07E-17	0.	2.58E-14	0.	6.17E-14	0.	7.91E-11	1.94E-10	7.09E-09	7.04E-09	1.44E-08
44	6.40	1.47E-17	0.	1.59E-14	3.38E-16	6.86E-14	0.	7.97E-11	2.04E-10	7.13E-09	7.10E-09	1.45E-08
45	6.30	3.95E-17	0.	9.08E-15	1.46E-15	3.73E-14	0.	8.03E-11	2.14E-10	7.16E-09	7.17E-09	1.46E-08
46	6.20	9.10E-17	0.	4.64E-15	1.97E-15	5.63E-14	0.	8.09E-11	2.24E-10	7.21E-09	7.28E-09	1.48E-08
47	6.10	3.67E-16	0.	2.02E-15	5.44E-15	8.22E-14	0.	8.15E-11	2.35E-10	7.27E-09	7.39E-09	1.50E-08
48	6.00	9.70E-16	0.	4.89E-16	4.77E-15	3.28E-14	0.	8.22E-11	2.47E-10	7.34E-09	7.50E-09	1.52E-08
49	5.90	1.58E-15	0.	3.40E-17	6.88E-15	3.41E-14	0.	8.22E-11	2.60E-10	7.43E-09	7.62E-09	1.54E-08
50	5.80	2.42E-15	0.	8.68E-19	9.22E-15	3.29E-14	0.	8.09E-11	2.74E-10	7.50E-09	7.73E-09	1.56E-08
51	5.70	2.88E-15	0.	0.	1.02E-14	3.56E-14	0.	7.66E-11	2.89E-10	7.58E-09	7.84E-09	1.58E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.68E-15	0.	0.	0.	7.93E-15	5.34E-14	0.	0.	7.87E-11	3.85E-10	7.67E-09	7.96E-09	1.68E-08
53	5.50	3.76E-15	0.	0.	0.	9.71E-15	5.09E-14	0.	0.	7.11E-11	3.22E-10	7.79E-09	8.08E-09	1.63E-08
54	5.40	3.97E-15	0.	0.	0.	8.39E-15	3.59E-14	0.	0.	7.14E-11	3.40E-10	7.94E-09	8.20E-09	1.66E-08
55	5.30	3.84E-15	0.	0.	0.	8.62E-15	5.04E-14	0.	0.	7.19E-11	3.60E-10	8.09E-09	8.35E-09	1.69E-08
56	5.20	2.78E-15	0.	0.	0.	9.03E-15	3.15E-14	0.	0.	7.23E-11	3.81E-10	8.25E-09	8.54E-09	1.72E-08
57	5.10	2.60E-15	0.	0.	0.	8.83E-15	4.22E-14	0.	0.	7.30E-11	4.04E-10	8.46E-09	8.72E-09	1.77E-08
58	5.00	1.93E-15	0.	0.	0.	7.85E-15	3.72E-14	0.	0.	7.36E-11	4.29E-10	8.70E-09	8.91E-09	1.81E-08
59	4.90	1.61E-15	0.	0.	0.	8.50E-15	3.82E-14	0.	0.	7.42E-11	4.56E-10	8.96E-09	9.10E-09	1.86E-08
60	4.80	1.61E-15	0.	0.	0.	8.98E-15	3.52E-14	0.	0.	7.48E-11	4.85E-10	9.21E-09	9.29E-09	1.91E-08
61	4.70	1.75E-15	0.	0.	0.	8.65E-15	3.05E-14	0.	0.	7.54E-11	5.17E-10	9.48E-09	9.52E-09	1.96E-08
62	4.60	2.07E-15	0.	0.	0.	8.68E-15	2.82E-14	0.	0.	7.60E-11	5.52E-10	9.80E-09	9.76E-09	2.02E-08
63	4.50	2.09E-15	0.	2.49E-15	0.	7.61E-15	2.85E-14	0.	0.	7.66E-11	5.90E-10	1.02E-08	9.99E-09	2.08E-08
64	4.40	2.13E-15	0.	8.46E-15	0.	7.47E-15	1.48E-14	0.	0.	7.73E-11	6.31E-10	1.06E-08	1.02E-08	2.15E-08
65	4.30	1.93E-15	0.	2.23E-14	0.	6.84E-15	8.62E-15	0.	0.	7.79E-11	6.76E-10	1.10E-08	1.04E-08	2.22E-08
66	4.20	1.75E-15	0.	8.52E-14	0.	7.10E-15	6.64E-15	0.	0.	7.85E-11	7.26E-10	1.14E-08	2.12E-09	1.43E-08
67	4.10	1.59E-15	0.	2.88E-14	0.	6.66E-15	1.74E-15	0.	0.	7.88E-11	7.81E-10	9.87E-09	2.19E-09	1.29E-08
68	4.00	1.42E-15	0.	1.20E-13	0.	6.22E-15	1.33E-15	0.	0.	7.91E-11	8.41E-10	7.61E-09	2.25E-09	1.08E-08
69	3.90	1.15E-15	0.	5.36E-14	2.38E-12	5.43E-15	5.57E-16	0.	0.	7.88E-11	9.08E-10	7.86E-09	2.32E-09	1.12E-08
70	3.80	1.24E-15	0.	7.86E-14	1.47E-11	5.79E-15	0.	0.	0.	7.85E-11	9.82E-10	8.17E-09	2.40E-09	1.16E-08
71	3.70	1.04E-15	0.	9.63E-14	3.91E-12	4.54E-15	0.	0.	0.	7.73E-11	1.06E-09	7.43E-09	2.68E-09	1.13E-08
72	3.60	9.06E-16	0.	5.43E-14	2.43E-11	4.94E-15	0.	0.	0.	7.23E-11	1.16E-09	8.15E-09	3.80E-09	1.24E-08
73	3.50	8.14E-16	0.	8.04E-14	6.67E-11	3.62E-15	0.	0.	0.	6.62E-11	1.26E-09	9.16E-09	3.34E-09	1.39E-08
74	3.40	7.18E-16	0.	4.27E-14	5.89E-12	4.02E-15	0.	0.	0.	3.82E-11	1.37E-09	1.03E-08	3.73E-09	1.54E-08
75	3.30	5.54E-16	0.	4.59E-14	3.01E-11	3.02E-15	0.	0.	0.	3.63E-11	1.50E-09	1.15E-08	4.11E-09	1.71E-08
76	3.20	4.60E-16	0.	2.60E-14	6.92E-11	3.09E-15	0.	0.	0.	3.83E-11	1.65E-09	1.26E-08	4.51E-09	1.89E-08
77	3.10	4.23E-16	0.	2.05E-14	9.22E-12	2.79E-15	0.	0.	0.	3.84E-11	1.81E-09	1.38E-08	4.91E-09	2.06E-08
78	3.00	3.62E-16	0.	1.10E-14	2.97E-11	2.58E-15	0.	0.	0.	3.85E-11	2.00E-09	1.50E-08	5.32E-09	2.24E-08
79	2.90	2.89E-16	0.	7.11E-15	1.86E-11	1.77E-15	0.	0.	0.	3.86E-11	2.22E-09	1.62E-08	5.72E-09	2.42E-08
80	2.80	2.91E-16	0.	3.37E-15	7.93E-12	1.11E-15	0.	0.	0.	3.86E-11	2.47E-09	1.76E-08	6.17E-09	2.63E-08
81	2.70	1.74E-16	0.	1.59E-15	1.44E-11	9.58E-16	0.	0.	0.	3.86E-11	2.75E-09	1.90E-08	2.41E-09	2.42E-08
82	2.60	7.49E-17	0.	7.84E-16	1.35E-12	2.22E-16	0.	0.	0.	3.86E-11	3.09E-09	2.06E-08	2.62E-09	2.63E-08
83	2.50	5.06E-18	0.	9.52E-17	1.11E-12	5.01E-17	0.	0.	0.	3.86E-11	3.48E-09	1.25E-08	3.82E-09	1.99E-08
84	2.40	0.	5.25E-15	0.	1.15E-12	5.12E-18	0.	0.	0.	3.86E-11	3.94E-09	1.55E-08	3.72E-09	2.32E-08
85	2.30	0.	2.12E-14	0.	0.	0.	0.	0.	0.	3.83E-11	4.46E-09	1.88E-08	4.46E-09	2.78E-08
86	2.20	0.	4.78E-14	0.	0.	0.	0.	0.	0.	3.82E-11	5.13E-09	2.22E-08	5.36E-09	3.27E-08
87	2.10	0.	6.18E-14	0.	0.	0.	0.	0.	0.	3.88E-11	5.90E-09	2.59E-08	6.29E-09	3.81E-08
88	2.00	0.	1.07E-13	0.	0.	0.	0.	0.	0.	3.88E-11	6.84E-09	2.95E-08	7.21E-09	4.36E-08
89	1.90	0.	1.84E-13	0.	0.	0.	0.	0.	0.	3.94E-11	7.99E-09	3.34E-08	8.19E-09	4.96E-08
90	1.80	0.	1.58E-13	0.	0.	0.	0.	0.	0.	3.38E-11	9.41E-09	3.95E-08	7.79E-09	5.87E-08
91	1.70	0.	1.81E-13	0.	0.	0.	0.	0.	0.	3.19E-11	1.12E-08	4.69E-08	9.15E-09	7.08E-08
92	1.60	0.	1.28E-13	0.	0.	0.	0.	0.	0.	2.70E-11	1.35E-08	5.44E-08	1.30E-08	8.89E-08
93	1.50	0.	1.55E-13	0.	0.	0.	0.	0.	0.	1.23E-11	1.64E-08	6.31E-08	1.53E-08	9.48E-08
94	1.40	0.	1.90E-13	0.	0.	0.	0.	0.	0.	0.	2.02E-08	5.11E-08	1.25E-08	8.38E-08
95	1.30	0.	1.26E-13	0.	0.	0.	0.	0.	0.	0.	2.53E-08	7.31E-08	1.79E-08	1.16E-07
96	1.20	0.	1.19E-13	0.	0.	0.	0.	0.	0.	0.	3.23E-08	9.88E-08	2.15E-08	1.53E-07
97	1.10	0.	1.03E-13	0.	0.	0.	0.	5.12E-19	0.	0.	4.21E-08	1.19E-07	2.74E-08	1.89E-07
98	1.00	0.	9.46E-14	0.	0.	0.	0.	5.20E-18	0.	0.	5.62E-08	1.45E-07	3.33E-08	2.34E-07
99	0.90	0.	7.71E-14	0.	0.	0.	0.	6.18E-18	0.	0.	7.79E-08	1.66E-07	3.82E-08	2.82E-07
100	0.80	0.	3.61E-14	0.	0.	0.	0.	1.14E-16	0.	0.	1.12E-07	1.91E-07	4.40E-08	3.47E-07
101	0.70	0.	9.28E-15	0.	0.	0.	0.	8.24E-17	0.	0.	1.68E-07	1.69E-07	3.64E-08	3.74E-07
102	0.60	0.	7.98E-16	0.	0.	0.	0.	3.18E-16	0.	0.	2.69E-07	1.91E-07	4.11E-08	5.08E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	5.10E-16	0.	0.	0.	1.16E-13	6.86E-13	3.24E-10	9.53E-11	4.20E-10
2	10.60	0.	0.	4.4 E-16	0.	0.	0.	1.17E-13	6.23E-13	3.26E-10	9.51E-11	4.22E-10
3	10.50	0.	0.	4.37E-16	0.	0.	0.	1.17E-13	6.41E-13	3.28E-10	9.50E-11	4.23E-10
4	10.40	0.	0.	3.98E-16	0.	0.	0.	1.17E-13	6.60E-13	3.29E-10	9.49E-11	4.24E-10
5	10.30	0.	0.	3.31E-16	0.	0.	0.	1.17E-13	6.80E-13	3.30E-10	9.47E-11	4.25E-10
6	10.20	0.	0.	3.32E-16	0.	0.	0.	1.17E-13	7.00E-13	3.32E-10	9.46E-11	4.26E-10
7	10.10	0.	0.	3.04E-16	0.	0.	0.	1.17E-13	7.21E-13	3.31E-10	9.44E-11	4.27E-10
8	10.00	0.	0.	2.51E-16	0.	0.	0.	1.17E-13	7.43E-13	3.32E-10	9.43E-11	4.27E-10
9	9.90	0.	0.	2.55E-16	0.	0.	0.	1.18E-13	7.66E-13	3.33E-10	9.42E-11	4.28E-10
10	9.80	0.	0.	2.29E-16	0.	0.	0.	1.18E-13	7.90E-13	3.34E-10	9.40E-11	4.29E-10
11	9.70	0.	0.	1.87E-16	0.	0.	0.	1.18E-13	8.14E-13	3.35E-10	9.39E-11	4.29E-10
12	9.60	0.	0.	2.01E-16	0.	0.	0.	1.18E-13	8.40E-13	3.36E-10	9.37E-11	4.30E-10
13	9.50	0.	0.	1.62E-16	0.	0.	0.	1.19E-13	8.67E-13	3.35E-10	9.36E-11	4.31E-10
14	9.40	0.	0.	1.47E-16	0.	0.	0.	1.19E-13	8.95E-13	9.76E-11	9.35E-11	1.92E-10
15	9.30	0.	0.	1.48E-16	0.	0.	0.	1.19E-13	9.25E-13	9.74E-11	9.33E-11	1.92E-10
16	9.20	0.	0.	1.14E-16	0.	0.	0.	1.20E-13	9.55E-13	9.72E-11	9.32E-11	1.91E-10
17	9.10	0.	0.	1.16E-16	0.	0.	0.	1.20E-13	9.87E-13	9.71E-11	9.31E-11	1.91E-10
18	9.00	0.	0.	1.01E-16	0.	0.	0.	1.21E-13	1.02E-12	9.69E-11	9.29E-11	1.91E-10
19	8.90	0.	0.	8.89E-17	0.	0.	0.	1.21E-13	1.06E-12	9.67E-11	9.28E-11	1.91E-10
20	8.80	0.	0.	8.5 E-17	0.	0.	0.	1.22E-13	1.09E-12	9.66E-11	9.27E-11	1.90E-10
21	8.70	0.	0.	6.97E-17	0.	0.	0.	1.22E-13	1.13E-12	9.65E-11	9.25E-11	1.90E-10
22	8.60	0.	0.	7.08E-17	0.	0.	0.	1.22E-13	1.17E-12	9.63E-11	9.24E-11	1.90E-10
23	8.50	0.	0.	5.83E-17	0.	0.	0.	1.23E-13	1.21E-12	9.62E-11	9.23E-11	1.90E-10
24	8.40	0.	0.	5.47E-17	0.	0.	0.	1.24E-13	1.26E-12	9.61E-11	9.22E-11	1.90E-10
25	8.30	0.	0.	4.53E-17	0.	0.	0.	1.24E-13	1.30E-12	9.61E-11	9.23E-11	1.90E-10
26	8.20	0.	0.	4.49E-17	0.	0.	0.	1.25E-13	1.35E-12	9.60E-11	9.36E-11	1.90E-10
27	8.10	0.	0.	3.66E-17	0.	0.	0.	1.25E-13	1.40E-12	9.58E-11	9.37E-11	1.91E-10
28	8.00	0.	0.	3.59E-17	0.	0.	0.	1.26E-13	1.46E-12	9.57E-11	9.43E-11	1.92E-10
29	7.90	0.	0.	2.93E-17	0.	0.	0.	1.27E-13	1.51E-12	9.58E-11	9.50E-11	1.92E-10
30	7.80	0.	0.	2.95E-17	0.	0.	0.	1.27E-13	1.57E-12	9.58E-11	9.57E-11	1.93E-10
31	7.70	0.	0.	2.46E-17	0.	0.	0.	1.28E-13	1.63E-12	9.59E-11	9.63E-11	1.94E-10
32	7.60	0.	0.	2.25E-17	0.	1.83E-21	0.	1.29E-13	1.70E-12	9.60E-11	9.70E-11	1.95E-10
33	7.50	0.	0.	1.99E-17	0.	8.66E-21	0.	1.29E-13	1.77E-12	9.60E-11	9.77E-11	1.96E-10
34	7.40	0.	0.	1.72E-17	0.	4.86E-20	0.	1.30E-13	1.84E-12	9.61E-11	9.84E-11	1.96E-10
35	7.30	0.	0.	1.58E-17	0.	2.37E-19	0.	1.31E-13	1.92E-12	9.62E-11	9.90E-11	1.97E-10
36	7.20	0.	0.	1.35E-17	0.	6.30E-19	0.	1.31E-13	2.00E-12	9.63E-11	9.97E-11	1.98E-10
37	7.10	0.	0.	1.24E-17	0.	1.73E-18	0.	1.33E-13	2.08E-12	9.63E-11	10.00E-11	1.99E-10
38	7.00	6.38E-21	0.	1.09E-17	0.	4.43E-18	0.	1.34E-13	2.16E-12	9.64E-11	1.01E-10	2.00E-10
39	6.90	1.21E-20	0.	9.59E-18	0.	4.73E-18	0.	1.35E-13	2.27E-12	9.65E-11	1.02E-10	2.01E-10
40	6.80	1.02E-20	0.	8.81E-18	0.	9.71E-18	0.	1.36E-13	2.37E-12	9.65E-11	1.02E-10	2.01E-10
41	6.70	7.17E-21	0.	7.36E-18	0.	1.14E-17	0.	1.37E-13	2.48E-12	9.66E-11	1.03E-10	2.02E-10
42	6.60	4.25E-21	0.	6.29E-18	.	7.22E-18	0.	1.38E-13	2.60E-12	9.70E-11	1.04E-10	2.04E-10
43	6.50	2.37E-21	0.	4.72E-18	0.	1.26E-17	0.	1.39E-13	2.72E-12	9.75E-11	1.05E-10	2.05E-10
44	6.40	3.24E-21	0.	3.01E-18	6.74E-20	1.40E-17	0.	1.40E-13	2.85E-12	9.80E-11	1.06E-10	2.07E-10
45	6.30	6.75E-21	0.	1.72E-18	2.99E-19	7.64E-18	0.	1.41E-13	2.99E-12	9.86E-11	1.07E-10	2.08E-10
46	6.20	2.01E-20	0.	8.78E-19	4.03E-19	1.15E-17	0.	1.42E-13	3.13E-12	9.91E-11	1.08E-10	2.11E-10
47	6.10	8.13E-20	0.	3.83E-19	1.11E-18	1.68E-17	0.	1.43E-13	3.29E-12	9.99E-11	1.10E-10	2.13E-10
48	6.00	2.15E-19	0.	9.25E-20	9.76E-19	6.72E-18	0.	1.44E-13	3.46E-12	1.01E-10	1.12E-10	2.16E-10
49	5.90	3.50E-19	0.	4.59E-21	1.39E-18	6.98E-18	0.	1.44E-13	3.64E-12	1.02E-10	1.13E-10	2.19E-10
50	5.80	5.39E-19	0.	1.63E-22	1.89E-18	6.73E-18	0.	1.42E-13	3.83E-12	1.03E-10	1.15E-10	2.22E-10
51	5.70	6.37E-19	0.	0.	2.08E-18	7.29E-18	0.	1.34E-13	4.04E-12	1.04E-10	1.17E-10	2.25E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	O2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.97E-19	0.	0.	0.	1.62E-18	1.10E-17	0.	0.	1.24E-13	4.26E-12	1.86E-10	1.10E-10	2.28E-10
53	5.50	8.32E-19	0.	0.	0.	1.99E-18	1.04E-17	0.	0.	1.25E-13	4.50E-12	1.07E-10	1.20E-10	2.32E-10
54	5.40	8.78E-19	0.	0.	0.	1.72E-18	7.34E-18	0.	0.	1.26E-13	4.75E-12	1.09E-10	1.22E-10	2.36E-10
55	5.30	8.50E-19	0.	0.	0.	1.76E-18	1.03E-17	0.	0.	1.26E-13	5.03E-12	1.11E-10	1.24E-10	2.41E-10
56	5.20	6.16E-19	0.	0.	0.	1.85E-18	6.44E-18	0.	0.	1.27E-13	5.33E-12	1.13E-10	1.27E-10	2.46E-10
57	5.10	5.76E-19	0.	0.	0.	1.81E-18	8.64E-18	0.	0.	1.28E-13	5.65E-12	1.16E-10	1.30E-10	2.52E-10
58	5.00	4.28E-19	0.	0.	0.	1.61E-18	7.62E-18	0.	0.	1.29E-13	6.00E-12	1.20E-10	1.33E-10	2.58E-10
59	4.90	3.97E-19	0.	0.	0.	1.74E-18	7.82E-18	0.	0.	1.30E-13	6.37E-12	1.23E-10	1.35E-10	2.65E-10
60	4.80	3.57E-19	0.	0.	0.	1.84E-18	7.20E-18	0.	0.	1.31E-13	6.78E-12	1.27E-10	1.38E-10	2.72E-10
61	4.70	3.87E-19	0.	0.	0.	1.77E-18	6.29E-18	0.	0.	1.33E-13	7.23E-12	1.30E-10	1.42E-10	2.79E-10
62	4.60	4.58E-19	0.	0.	0.	1.78E-18	9.77E-18	0.	0.	1.34E-13	7.71E-12	1.35E-10	1.45E-10	2.86E-10
63	4.50	4.62E-19	0.	4.64E-19	0.	1.56E-18	4.19E-18	0.	0.	1.35E-13	8.24E-12	1.40E-10	1.49E-10	2.97E-10
64	4.40	4.72E-19	0.	1.60E-18	0.	1.53E-18	3.02E-18	0.	0.	1.36E-13	8.82E-12	1.45E-10	1.51E-10	3.06E-10
65	4.30	4.28E-19	0.	4.21E-18	0.	1.48E-18	1.76E-18	0.	0.	1.37E-13	9.46E-12	1.51E-10	1.47E-10	3.07E-10
66	4.20	3.88E-19	0.	1.61E-17	0.	1.45E-18	1.36E-18	0.	0.	1.38E-13	1.01E-11	1.57E-10	3.16E-11	1.99E-10
67	4.10	3.92E-19	0.	5.49E-18	0.	1.36E-18	3.56E-19	0.	0.	1.38E-13	1.09E-11	1.35E-10	3.25E-11	1.79E-10
68	4.00	3.14E-19	0.	2.28E-17	0.	1.27E-18	2.72E-19	0.	0.	1.39E-13	1.18E-11	1.05E-10	3.35E-11	1.58E-10
69	3.90	2.95E-19	0.	1.01E-17	3.80E-15	1.11E-18	1.14E-19	0.	0.	1.38E-13	1.27E-11	1.08E-10	3.45E-11	1.56E-10
70	3.80	2.74E-19	0.	1.49E-17	2.35E-14	1.13E-18	0.	0.	0.	1.38E-13	1.37E-11	9.69E-11	3.57E-11	1.48E-10
71	3.70	2.30E-19	0.	1.82E-17	6.29E-15	9.30E-19	0.	0.	0.	1.36E-13	1.49E-11	1.02E-10	3.98E-11	1.57E-10
72	3.60	2.00E-19	0.	1.03E-17	3.90E-14	1.01E-18	0.	0.	0.	1.27E-13	1.62E-11	1.12E-10	4.46E-11	1.73E-10
73	3.50	1.80E-19	0.	1.92E-17	1.07E-13	7.41E-19	0.	0.	0.	1.16E-13	1.76E-11	1.26E-10	4.97E-11	1.93E-10
74	3.40	1.57E-19	0.	8.07E-18	9.43E-15	8.22E-19	0.	0.	0.	6.72E-14	1.92E-11	1.42E-10	5.54E-11	2.16E-10
75	3.30	1.22E-19	0.	8.61E-18	4.81E-14	6.17E-19	0.	0.	0.	6.73E-14	2.10E-11	1.58E-10	6.11E-11	2.40E-10
76	3.20	1.02E-19	0.	5.07E-18	1.11E-13	6.32E-19	0.	0.	0.	6.74E-14	2.30E-11	1.74E-10	6.71E-11	2.64E-10
77	3.10	9.37E-20	0.	3.89E-18	1.47E-14	5.71E-19	0.	0.	0.	6.75E-14	2.54E-11	1.90E-10	7.31E-11	2.89E-10
78	3.00	8.00E-20	0.	2.24E-18	4.76E-14	5.12E-19	0.	0.	0.	6.77E-14	2.80E-11	2.06E-10	7.91E-11	3.14E-10
79	2.90	6.39E-20	0.	1.34E-18	2.98E-14	3.61E-19	0.	0.	0.	6.78E-14	3.11E-11	2.23E-10	8.52E-11	3.40E-10
80	2.80	6.43E-20	0.	8.37E-19	1.27E-14	2.27E-19	0.	0.	0.	6.79E-14	3.45E-11	2.42E-10	8.63E-11	3.63E-10
81	2.70	3.85E-20	0.	2.93E-19	2.31E-14	1.12E-19	0.	0.	0.	6.79E-14	3.86E-11	2.61E-10	3.99E-11	3.36E-10
82	2.60	1.66E-20	0.	1.48E-19	2.16E-15	4.54E-20	0.	0.	0.	6.79E-14	4.32E-11	1.45E-10	3.90E-11	2.27E-10
83	2.50	1.12E-21	0.	1.88E-20	1.78E-15	1.02E-20	0.	0.	0.	6.79E-14	4.87E-11	1.72E-10	4.50E-11	2.66E-10
84	2.40	0.	9.93E-19	0.	1.84E-15	1.05E-21	0.	0.	0.	6.79E-14	5.51E-11	2.13E-10	5.53E-11	3.24E-10
85	2.30	0.	4.01E-18	0.	0.	0.	0.	0.	0.	6.74E-14	6.26E-11	2.58E-10	6.64E-11	3.88E-10
86	2.20	0.	9.03E-18	0.	0.	0.	0.	0.	0.	6.71E-14	7.17E-11	3.85E-10	8.08E-11	4.57E-10
87	2.10	0.	1.17E-17	0.	0.	0.	0.	0.	0.	6.68E-14	8.25E-11	3.96E-10	9.37E-11	5.32E-10
88	2.00	0.	2.03E-17	0.	0.	0.	0.	0.	0.	6.47E-14	9.56E-11	4.86E-10	1.07E-10	6.09E-10
89	1.90	0.	3.49E-17	0.	0.	0.	0.	0.	0.	6.22E-14	1.12E-10	4.68E-10	1.22E-10	6.94E-10
90	1.80	0.	2.84E-17	0.	0.	0.	0.	0.	0.	5.95E-14	1.32E-10	5.43E-10	1.46E-10	8.21E-10
91	1.70	0.	3.42E-17	0.	0.	0.	0.	0.	0.	5.61E-14	1.57E-10	6.44E-10	1.63E-10	9.66E-10
92	1.60	0.	2.42E-17	0.	0.	0.	0.	0.	0.	4.74E-14	1.88E-10	6.81E-10	1.93E-10	1.06E-09
93	1.50	0.	2.94E-17	0.	0.	0.	0.	0.	0.	2.16E-14	2.29E-10	5.29E-10	2.27E-10	9.86E-10
94	1.40	0.	3.83E-17	0.	0.	0.	0.	0.	0.	0.	2.82E-10	7.03E-10	1.86E-10	1.17E-09
95	1.30	0.	2.28E-17	0.	0.	0.	0.	0.	0.	0.	3.54E-10	1.01E-09	2.64E-10	1.63E-09
96	1.20	0.	2.25E-17	0.	0.	0.	0.	0.	0.	0.	4.52E-10	1.36E-09	3.29E-10	2.13E-09
97	1.10	0.	1.94E-17	0.	0.	0.	0.	1.05E-22	0.	0.	5.80E-10	1.64E-09	4.08E-10	2.64E-09
98	1.00	0.	1.79E-17	0.	0.	0.	0.	1.06E-21	0.	0.	7.06E-10	1.99E-09	4.96E-10	3.27E-09
99	0.90	0.	1.46E-17	0.	0.	0.	0.	1.27E-21	0.	0.	1.09E-09	2.28E-09	5.68E-10	3.94E-09
100	0.80	0.	6.83E-18	0.	0.	0.	0.	2.34E-20	0.	0.	1.97E-09	2.04E-09	4.71E-10	4.88E-09
101	0.70	0.	1.74E-18	0.	0.	0.	0.	1.49E-20	0.	0.	2.35E-09	2.33E-09	5.41E-10	5.22E-09
102	0.60	0.	1.49E-19	0.	0.	0.	0.	6.50E-20	0.	0.	3.75E-09	2.62E-09	6.12E-10	6.99E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	N3 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.92E 01	0.	0.	0.	9.81E-01	1.03E-03	0.99E 01	6.30E-02	1.00E 02
2	10.60	0.	0.	1.69E 01	0.	0.	0.	9.82E-01	1.04E-03	2.42E-01	6.37E-02	1.02E 01
3	10.50	0.	0.	1.67E 01	0.	0.	0.	9.84E-01	1.09E-03	2.44E-01	6.36E-02	1.00E 01
4	10.40	0.	0.	1.54E 01	0.	0.	0.	9.85E-01	1.12E-03	2.44E-01	6.35E-02	1.67E 01
5	10.30	0.	0.	1.29E 01	0.	0.	0.	9.86E-01	1.15E-03	2.45E-01	6.33E-02	1.48E 01
6	10.20	0.	0.	1.30E 01	0.	0.	0.	9.87E-01	1.19E-03	2.46E-01	6.32E-02	1.43E 01
7	10.10	0.	0.	1.20E 01	0.	0.	0.	9.89E-01	1.22E-03	2.46E-01	6.31E-02	1.93E 01
8	10.00	0.	0.	1.01E 01	0.	0.	0.	9.90E-01	1.26E-03	2.47E-01	6.30E-02	1.14E 01
9	9.90	0.	0.	1.02E 01	0.	0.	0.	9.92E-01	1.30E-03	2.47E-01	6.28E-02	1.15E 01
10	9.80	0.	0.	9.29E 00	0.	0.	0.	9.94E-01	1.34E-03	2.48E-01	6.27E-02	1.06E 01
11	9.70	0.	0.	7.69E 00	0.	0.	0.	9.95E-01	1.38E-03	2.49E-01	6.26E-02	9.00E 00
12	9.60	0.	0.	8.27E 00	0.	0.	0.	9.97E-01	1.43E-03	2.49E-01	6.24E-02	9.59E 00
13	9.50	0.	0.	6.75E 00	0.	0.	0.	9.99E-01	1.47E-03	2.50E-01	6.23E-02	8.06E 00
14	9.40	0.	0.	6.17E 00	0.	0.	0.	1.00E 00	1.52E-03	2.51E-01	6.27E-02	7.49E 00
15	9.30	0.	0.	6.26E 00	0.	0.	0.	1.01E 00	1.57E-03	2.52E-01	6.21E-02	7.58E 00
16	9.20	0.	0.	4.89E 00	0.	0.	0.	1.01E 00	1.62E-03	2.52E-01	6.19E-02	6.22E 00
17	9.10	0.	0.	5.08E 00	0.	0.	0.	1.01E 00	1.68E-03	7.51E-02	6.18E-02	6.16E 00
18	9.00	0.	0.	4.38E 00	0.	0.	0.	1.02E 00	1.73E-03	7.50E-02	6.17E-02	5.54E 00
19	8.90	0.	0.	3.91E 00	0.	0.	0.	1.02E 00	1.79E-03	7.49E-02	6.16E-02	5.07E 00
20	8.80	0.	0.	3.78E 00	0.	0.	0.	1.02E 00	1.86E-03	7.48E-02	6.15E-02	4.94E 00
21	8.70	0.	0.	3.12E 00	0.	0.	0.	1.03E 00	1.92E-03	7.48E-02	6.14E-02	4.29E 00
22	8.60	0.	0.	3.10E 00	0.	0.	0.	1.03E 00	1.99E-03	7.47E-02	6.12E-02	4.35E 00
23	8.50	0.	0.	2.66E 00	0.	0.	0.	1.03E 00	2.06E-03	7.47E-02	6.11E-02	3.83E 00
24	8.40	0.	0.	2.59E 00	0.	0.	0.	1.04E 00	2.13E-03	7.47E-02	6.10E-02	3.77E 00
25	8.30	0.	0.	2.10E 00	0.	0.	0.	1.05E 00	2.21E-03	7.47E-02	6.11E-02	3.29E 00
26	8.20	0.	0.	2.09E 00	0.	0.	0.	1.05E 00	2.29E-03	7.47E-02	6.15E-02	3.28E 00
27	8.10	0.	0.	1.73E 00	0.	0.	0.	1.06E 00	2.38E-03	7.46E-02	6.18E-02	2.92E 00
28	8.00	0.	0.	1.71E 00	0.	0.	0.	1.06E 00	2.47E-03	7.46E-02	6.22E-02	2.91E 00
29	7.90	0.	0.	1.41E 00	0.	0.	0.	1.07E 00	2.57E-03	7.48E-02	6.26E-02	2.62E 00
30	7.80	0.	0.	1.43E 00	0.	0.	0.	1.07E 00	2.67E-03	7.49E-02	6.30E-02	2.64E 00
31	7.70	0.	0.	1.20E 00	0.	0.	0.	1.08E 00	2.77E-03	7.50E-02	6.33E-02	2.42E 00
32	7.60	0.	0.	1.11E 00	0.	7.76E-05	0.	1.08E 00	2.88E-03	7.51E-02	6.37E-02	2.34E 00
33	7.50	0.	0.	9.91E-01	0.	3.43E-04	0.	1.09E 00	3.00E-03	7.53E-02	6.41E-02	2.22E 00
34	7.40	0.	0.	8.64E-01	0.	2.09E-03	0.	1.10E 00	3.13E-03	7.54E-02	6.45E-02	2.10E 00
35	7.30	0.	0.	7.92E-01	0.	9.75E-03	0.	1.10E 00	3.26E-03	7.55E-02	6.49E-02	2.05E 00
36	7.20	0.	0.	6.91E-01	0.	2.59E-02	0.	1.11E 00	3.39E-03	7.57E-02	6.52E-02	1.97E 00
37	7.10	0.	0.	6.44E-01	0.	7.38E-02	0.	1.12E 00	3.54E-03	7.58E-02	6.56E-02	1.98E 00
38	7.00	2.52E-04	0.	5.71E-01	0.	1.78E-01	0.	1.13E 00	3.69E-03	7.59E-02	6.61E-02	2.02E 00
39	6.90	4.83E-04	0.	5.06E-01	0.	2.01E-01	0.	1.13E 00	3.86E-03	7.61E-02	6.64E-02	1.99E 00
40	6.80	4.07E-04	0.	4.70E-01	0.	4.00E-01	0.	1.14E 00	4.03E-03	7.62E-02	6.67E-02	2.16E 00
41	6.70	2.89E-04	0.	3.97E-01	0.	4.51E-01	0.	1.15E 00	4.21E-03	7.63E-02	6.72E-02	2.15E 00
42	6.60	1.72E-04	0.	3.43E-01	0.	3.02E-01	0.	1.16E 00	4.41E-03	7.67E-02	6.77E-02	1.96E 00
43	6.50	9.78E-05	0.	2.61E-01	0.	5.11E-01	0.	1.17E 00	4.62E-03	7.72E-02	6.81E-02	2.09E 00
44	6.40	1.32E-04	0.	1.69E-01	2.49E-03	5.48E-01	0.	1.18E 00	4.84E-03	7.77E-02	6.86E-02	2.05E 00
45	6.30	2.75E-04	0.	9.86E-02	1.12E-02	3.15E-01	0.	1.19E 00	5.08E-03	7.82E-02	6.92E-02	1.77E 00
46	6.20	8.28E-04	0.	5.13E-02	1.52E-02	4.66E-01	0.	1.20E 00	5.33E-03	7.87E-02	7.02E-02	1.89E 00
47	6.10	3.37E-03	0.	2.27E-02	4.24E-02	6.57E-01	0.	1.21E 00	5.60E-03	7.95E-02	7.12E-02	2.09E 00
48	6.00	9.01E-03	0.	5.56E-03	3.79E-02	2.75E-01	0.	1.22E 00	5.88E-03	8.04E-02	7.22E-02	1.70E 00
49	5.90	1.48E-02	0.	3.97E-04	5.43E-02	2.81E-01	0.	1.22E 00	6.19E-03	8.13E-02	7.32E-02	1.72E 00
50	5.80	2.29E-02	0.	9.86E-06	7.42E-02	2.74E-01	0.	1.20E 00	6.51E-03	8.23E-02	7.43E-02	1.73E 00
51	5.70	2.77E-02	0.	0.	8.30E-02	3.00E-01	0.	1.13E 00	6.86E-03	8.32E-02	7.53E-02	1.78E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.48E-02	0.	0.	0.	6.59E-02	4.39E-01	0.	0.	1.05E 00	7.24E-03	8.43E-02	7.63E-02	1.75E 00
53	5.50	3.67E-02	0.	0.	0.	8.05E-02	4.14E-01	0.	0.	1.05E 00	7.64E-03	8.57E-02	7.74E-02	1.76E 00
54	5.40	3.90E-02	0.	0.	0.	7.05E-02	3.02E-01	0.	0.	1.06E 00	8.08E-03	8.75E-02	7.86E-02	1.64E 00
55	5.30	3.80E-02	0.	0.	0.	7.24E-02	4.13E-01	0.	0.	1.06E 00	8.55E-03	8.93E-02	7.99E-02	1.77E 00
56	5.20	2.79E-02	0.	0.	0.	7.62E-02	2.69E-01	0.	0.	1.07E 00	9.06E-03	9.11E-02	8.16E-02	1.63E 00
57	5.10	2.63E-02	0.	0.	0.	7.50E-02	3.57E-01	0.	0.	1.08E 00	9.60E-03	9.36E-02	8.33E-02	1.73E 00
58	5.00	1.96E-02	0.	0.	0.	6.71E-02	3.19E-01	0.	0.	1.09E 00	1.02E-02	9.63E-02	8.51E-02	1.69E 00
59	4.90	1.64E-02	0.	0.	0.	7.31E-02	3.32E-01	0.	0.	1.10E 00	1.08E-02	9.92E-02	8.66E-02	1.72E 00
60	4.80	1.64E-02	0.	0.	0.	7.79E-02	3.07E-01	0.	0.	1.11E 00	1.15E-02	1.02E-01	8.86E-02	1.71E 00
61	4.70	1.79E-02	0.	0.	0.	7.52E-02	2.70E-01	0.	0.	1.12E 00	1.23E-02	1.05E-01	9.08E-02	1.69E 00
62	4.60	2.13E-02	0.	0.	0.	7.59E-02	2.48E-01	0.	0.	1.13E 00	1.31E-02	1.09E-01	9.31E-02	1.69E 00
63	4.50	2.17E-02	0.	2.88E-02	0.	6.72E-02	1.82E-01	0.	0.	1.13E 00	1.40E-02	1.14E-01	9.54E-02	1.66E 00
64	4.40	2.24E-02	0.	9.38E-02	0.	6.63E-02	1.38E-01	0.	0.	1.14E 00	1.50E-02	1.18E-01	9.77E-02	1.69E 00
65	4.30	2.05E-02	0.	2.59E-01	0.	6.12E-02	7.72E-02	0.	0.	1.15E 00	1.61E-02	1.23E-01	1.00E-01	1.61E 00
66	4.20	1.87E-02	0.	9.52E-01	0.	6.38E-02	5.87E-02	0.	0.	1.16E 00	1.73E-02	1.28E-01	1.03E-01	2.50E 00
67	4.10	1.71E-02	0.	3.41E-01	0.	6.04E-02	1.54E-02	0.	0.	1.17E 00	1.86E-02	1.33E-01	1.04E-01	1.86E 00
68	4.00	1.53E-02	0.	1.35E 00	0.	5.69E-02	1.18E-02	0.	0.	1.17E 00	2.00E-02	1.38E-01	2.53E-02	2.79E 00
69	3.90	1.26E-02	0.	6.05E-01	1.42E-02	5.02E-02	4.84E-03	0.	0.	1.17E 00	2.16E-02	1.23E-01	2.60E-02	2.02E 00
70	3.80	1.36E-02	0.	9.09E-01	8.04E-02	5.34E-02	0.	0.	0.	1.16E 00	2.33E-02	1.26E-01	2.69E-02	2.40E 00
71	3.70	1.15E-02	0.	1.07E 00	2.35E-02	4.29E-02	0.	0.	0.	1.14E 00	2.53E-02	9.80E-02	2.99E-02	2.45E 00
72	3.60	1.01E-02	0.	6.37E-01	1.43E-01	4.66E-02	0.	0.	0.	1.07E 00	2.75E-02	1.07E-01	3.34E-02	2.08E 00
73	3.50	9.20E-03	0.	9.17E-01	3.62E-01	3.47E-02	0.	0.	0.	9.81E-01	2.99E-02	1.09E-01	3.71E-02	2.48E 00
74	3.40	8.12E-03	0.	5.08E-01	3.60E-02	3.86E-02	0.	0	0.	5.66E-01	3.26E-02	1.22E-01	4.13E-02	1.35E 00
75	3.30	6.36E-03	0.	5.35E-01	1.73E-01	2.94E-02	0.	0.	0.	5.67E-01	3.57E-02	1.36E-01	4.55E-02	1.53E 00
76	3.20	5.35E-03	0.	3.24E-01	3.70E-01	3.03E-02	0.	0.	0.	5.68E-01	3.92E-02	1.49E-01	4.99E-02	1.54E 00
77	3.10	4.96E-03	0.	2.48E-01	5.63E-02	2.77E-02	0.	0.	0.	5.69E-01	4.32E-02	1.63E-01	5.43E-02	1.17E 00
78	3.00	4.29E-03	0.	1.45E-01	1.69E-01	2.51E-02	0.	0.	0.	5.70E-01	4.77E-02	1.77E-01	5.86E-02	1.20E 00
79	2.90	3.46E-03	0.	8.79E-02	1.03E-01	1.88E-02	0.	0.	0.	5.71E-01	5.29E-02	1.92E-01	6.31E-02	1.09E 00
80	2.80	3.51E-03	0.	4.19E-02	4.81E-02	1.16E-02	0.	0.	0.	5.72E-01	5.88E-02	2.08E-01	6.81E-02	1.01E 00
81	2.70	2.14E-03	0.	1.93E-02	8.19E-02	5.87E-03	0.	0.	0.	5.72E-01	6.56E-02	2.25E-01	7.35E-02	1.05E 00
82	2.60	9.40E-04	0.	9.73E-03	7.71E-03	2.42E-03	0.	0.	0.	5.72E-01	7.36E-02	2.44E-01	7.98E-02	9.89E-01
83	2.50	6.41E-05	0.	1.15E-03	6.65E-03	5.52E-04	0.	0.	0.	5.72E-01	8.28E-02	2.76E-01	3.65E-02	9.76E-01
84	2.40	0.	6.08E-02	0.	6.51E-03	5.70E-05	0.	0.	0.	5.72E-01	9.37E-02	3.20E-01	4.43E-02	1.10E 00
85	2.30	0.	2.31E-01	0.	0.	0.	0.	0.	0.	5.68E-01	1.07E-01	2.35E-01	5.38E-02	1.19E 00
86	2.20	0.	5.38E-01	0.	0.	0.	0.	0.	0.	5.69E-01	1.22E-01	2.78E-01	6.39E-02	1.57E 00
87	2.10	0.	6.64E-01	0.	0.	0.	0.	0.	0.	5.63E-01	1.40E-01	3.23E-01	7.48E-02	1.77E 00
88	2.00	0.	1.19E 00	0.	0.	0.	0.	0.	0.	5.45E-01	1.63E-01	3.69E-01	8.57E-02	2.33E 00
89	1.90	0.	1.91E 00	0.	0.	0.	0.	0.	0.	5.24E-01	1.90E-01	4.19E-01	9.76E-02	3.14E 00
90	1.80	0.	1.56E 00	0.	0.	0.	0.	0.	0.	5.01E-01	2.24E-01	4.96E-01	1.17E-01	2.90E 00
91	1.70	0.	1.87E 00	0.	0.	0.	0.	0.	0.	4.72E-01	2.67E-01	5.91E-01	1.41E-01	3.34E 00
92	1.60	0.	1.33E 00	0.	0.	0.	0.	0.	0.	4.08E-01	3.21E-01	6.86E-01	1.66E-01	2.91E 00
93	1.50	0.	1.61E 00	0.	0.	0.	0.	0.	0.	1.82E-01	3.98E-01	8.67E-01	2.08E-01	3.25E 00
94	1.40	0.	1.64E 00	0.	0.	0.	0.	0.	0.	0.	4.82E-01	1.06E 00	2.35E-01	3.42E 00
95	1.30	0.	1.24E 00	0.	0.	0.	0.	0.	0.	0.	6.04E-01	1.34E 00	3.08E-01	3.49E 00
96	1.20	0.	1.21E 00	0.	0.	0.	0.	0.	0.	0.	7.78E-01	1.34E 00	2.97E-01	3.62E 00
97	1.10	0.	1.07E 00	0.	0.	0.	0.	4.20E-06	0.	0.	1.08E 00	1.65E 00	3.73E-01	4.18E 00
98	1.00	0.	9.84E-01	0.	0.	0.	0.	4.63E-05	0.	0.	1.35E 00	2.88E 00	4.14E-01	4.74E 00
99	0.90	0.	8.05E-01	0.	0.	0.	0.	9.42E-05	0.	0.	1.87E 00	2.27E 00	4.90E-01	5.43E 00
100	0.80	0.	3.78E-01	0.	0.	0.	0.	1.05E-03	0.	0.	2.60E 00	2.61E 00	9.64E-01	6.23E 00
101	0.70	0.	9.50E-02	0.	0.	0.	0.	7.86E-04	0.	0.	4.01E 00	2.87E 00	6.10E-01	7.60E 00
102	0.60	0.	9.61E-03	0.	0.	0.	0.	2.94E-03	0.	0.	6.43E 00	3.21E 00	6.90E-01	1.03E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY N/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.09E-01	0.	0.	0.	3.21E-02	9.96E-05	1.28E-01	6.73E-03	1.24E-01
2	10.60	0.	0.	3.42E-01	0.	0.	0.	3.21E-02	9.83E-05	3.49E-02	6.71E-03	4.14E-01
3	10.50	0.	0.	3.39E-01	0.	0.	0.	3.22E-02	1.01E-04	3.47E-02	6.70E-03	4.12E-01
4	10.40	0.	0.	3.11E-01	0.	0.	0.	3.22E-02	1.04E-04	3.48E-02	6.69E-03	3.89E-01
5	10.30	0.	0.	2.42E-01	0.	0.	0.	3.23E-02	1.07E-04	3.49E-02	6.67E-03	3.34E-01
6	10.20	0.	0.	2.44E-01	0.	0.	0.	3.23E-02	1.10E-04	3.50E-02	6.66E-03	3.38E-01
7	10.10	0.	0.	2.43E-01	0.	0.	0.	3.23E-02	1.14E-04	3.50E-02	6.64E-03	3.17E-01
8	10.00	0.	0.	2.84E-01	0.	0.	0.	3.24E-02	1.17E-04	3.51E-02	6.64E-03	2.70E-01
9	9.90	0.	0.	2.07E-01	0.	0.	0.	3.24E-02	1.21E-04	3.52E-02	6.62E-03	2.83E-01
10	9.80	0.	0.	1.88E-01	0.		0.	3.25E-02	1.25E-04	3.53E-02	6.61E-03	2.63E-01
11	9.70	0.	0.	1.56E-01	0.	0.	0.	3.26E-02	1.29E-04	3.54E-02	6.59E-03	2.36E-01
12	9.60	0.	0.	1.67E-01	0.	0.	0.	3.26E-02	1.33E-04	3.55E-02	6.58E-03	2.42E-01
13	9.50	0.	0.	1.37E-01	0.	0.	0.	3.27E-02	1.37E-04	3.56E-02	6.57E-03	2.12E-01
14	9.40	0.	0.	1.29E-01	0.	0.	0.	3.28E-02	1.41E-04	3.57E-02	6.55E-03	2.08E-01
15	9.30	0.	0.	1.27E-01	0.	0.	0.	3.29E-02	1.46E-04	3.58E-02	6.54E-03	2.02E-01
16	9.20	0.	0.	9.98E-02	0.	0.	0.	3.30E-02	1.51E-04	3.59E-02	6.53E-03	1.75E-01
17	9.10	0.	0.	1.01E-01	0.	0.	0.	3.32E-02	1.56E-04	1.07E-02	6.52E-03	1.52E-01
18	9.00	0.	0.	8.87E-02	0.	0.	0.	3.33E-02	1.61E-04	1.07E-02	6.50E-03	1.39E-01
19	8.90	0.	0.	7.91E-02	0.	0.	0.	3.34E-02	1.67E-04	1.07E-02	6.49E-03	1.30E-01
20	8.80	0.	0.	7.64E-02	0.	0.	0.	3.35E-02	1.72E-04	1.06E-02	6.48E-03	1.27E-01
21	8.70	0.	0.	6.32E-02	0.	0.	0.	3.36E-02	1.78E-04	1.06E-02	6.47E-03	1.14E-01
22	8.60	0.	0.	6.44E-02	0.	0.	0.	3.38E-02	1.85E-04	1.06E-02	6.45E-03	1.15E-01
23	8.50	0.	0.	5.38E-02	0.	0.	0.	3.39E-02	1.91E-04	1.06E-02	6.44E-03	1.05E-01
24	8.40	0.	0.	5.25E-02	0.	0.	0.	3.40E-02	1.98E-04	1.06E-02	6.43E-03	1.04E-01
25	8.30	0.	0.	4.26E-02	0.	0.	0.	3.42E-02	2.06E-04	1.06E-02	6.44E-03	9.41E-02
26	8.20	0.	0.	4.23E-02	0.	0.	0.	3.44E-02	2.13E-04	1.06E-02	6.48E-03	9.41E-02
27	8.10	0.	0.	3.50E-02	0.	0.	0.	3.46E-02	2.21E-04	1.06E-02	6.52E-03	8.69E-02
28	8.00	0.	0.	3.45E-02	0.	0.	0.	3.48E-02	2.30E-04	1.06E-02	6.56E-03	8.67E-02
29	7.90	0.	0.	2.85E-02	0.	0.	0.	3.49E-02	2.38E-04	1.06E-02	6.60E-03	8.09E-02
30	7.80	0.	0.	2.89E-02	0.	0.	0.	3.51E-02	2.48E-04	1.07E-02	6.64E-03	8.14E-02
31	7.70	0.	0.	2.44E-02	0.	0.	0.	3.53E-02	2.58E-04	1.07E-02	6.68E-03	7.73E-02
32	7.60	0.	0.	2.25E-02	0.	1.16E-06	0.	3.55E-02	2.68E-04	1.07E-02	6.72E-03	7.56E-02
33	7.50	0.	0.	2.01E-02	0.	5.13E-06	0.	3.57E-02	2.79E-04	1.07E-02	6.76E-03	7.35E-02
34	7.40	0.	0.	1.75E-02	0.	3.13E-05	0.	3.59E-02	2.90E-04	1.07E-02	6.80E-03	7.12E-02
35	7.30	0.	0.	1.60E-02	0.	1.46E-04	0.	3.60E-02	3.02E-04	1.08E-02	6.83E-03	7.01E-02
36	7.20	0.	0.	1.40E-02	0.	3.88E-04	0.	3.62E-02	3.15E-04	1.08E-02	6.87E-03	6.86E-02
37	7.10	0.	0.	1.30E-02	0.	1.11E-03	0.	3.65E-02	3.29E-04	1.08E-02	6.91E-03	6.87E-02
38	7.00	2.80E-06	0.	1.15E-02	0.	2.68E-03	0.	3.68E-02	3.43E-04	1.08E-02	6.95E-03	6.92E-02
39	6.90	5.36E-06	0.	1.02E-02	0.	3.01E-03	0.	3.71E-02	3.58E-04	1.08E-02	6.99E-03	6.86E-02
40	6.80	4.52E-06	0.	9.51E-03	0.	6.00E-03	0.	3.74E-02	3.74E-04	1.08E-02	7.03E-03	7.12E-02
41	6.70	3.21E-06	0.	8.03E-03	0.	6.77E-03	0.	3.77E-02	3.91E-04	1.09E-02	7.08E-03	7.39E-02
42	6.60	1.91E-06	0.	6.93E-03	0.	4.53E-03	0.	3.80E-02	4.10E-04	1.09E-02	7.13E-03	6.88E-02
43	6.50	1.08E-06	0.	5.20E-03	0.	7.66E-03	0.	3.83E-02	4.29E-04	1.10E-02	7.18E-03	6.99E-02
44	6.40	1.46E-06	0.	3.42E-03	3.73E-05	8.21E-03	0.	3.86E-02	4.50E-04	1.11E-02	7.23E-03	6.98E-02
45	6.30	3.05E-06	0.	1.99E-03	1.60E-04	4.73E-03	0.	3.89E-02	4.72E-04	1.11E-02	7.30E-03	6.47E-02
46	6.20	9.19E-06	0.	1.04E-03	2.29E-04	6.99E-03	0.	3.92E-02	4.95E-04	1.12E-02	7.40E-03	6.66E-02
47	6.10	3.74E-05	0.	4.60E-04	6.36E-04	9.84E-03	0.	3.95E-02	5.20E-04	1.13E-02	7.51E-03	6.98E-02
48	6.00	10.88E-05	0.	1.13E-04	5.68E-04	4.12E-03	0.	3.98E-02	5.46E-04	1.14E-02	7.61E-03	6.43E-02
49	5.90	1.65E-04	0.	8.83E-06	6.14E-04	4.22E-03	0.	3.98E-02	5.75E-04	1.16E-02	7.72E-03	6.49E-02
50	5.80	2.54E-04	0.	2.88E-07	1.11E-03	4.11E-03	0.	3.92E-02	6.05E-04	1.17E-02	7.83E-03	6.49E-02
51	5.70	3.07E-04	0.	0.	1.24E-03	4.90E-03	0.	3.40E-02	6.38E-04	1.18E-02	7.93E-03	6.33E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-03 (10.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.87E-04	0.	0.	0.	9.88E-04	6.58E-03	0.	0.	3.43E-02	6.73E-04	1.28E-02	8.04E-03	6.29E-02
53	5.50	4.07E-04	0.	0.	0.	1.21E-03	6.20E-03	0.	0.	3.44E-02	7.10E-04	1.22E-02	8.16E-03	6.33E-02
54	5.40	4.33E-04	0.	0.	0.	1.06E-03	4.53E-03	0.	0.	3.44E-02	7.50E-04	1.24E-02	8.28E-03	6.21E-02
55	5.30	4.22E-04	0.	0.	0.	1.09E-03	4.20E-03	0.	0.	3.48E-02	7.94E-04	1.27E-02	8.42E-03	6.44E-02
56	5.20	3.10E-04	0.	0.	0.	1.14E-03	4.03E-03	0.	0.	3.51E-02	8.41E-04	1.30E-02	8.60E-03	6.29E-02
57	5.10	2.91E-04	0.	0.	0.	1.12E-03	5.36E-03	0.	0.	3.94E-02	8.92E-04	1.33E-02	8.78E-03	6.51E-02
58	5.00	2.10E-04	0.	0.	0.	1.01E-03	4.70E-03	0.	0.	3.57E-02	9.47E-04	1.37E-02	8.96E-03	6.53E-02
59	4.90	1.82E-04	0.	0.	0.	1.10E-03	4.98E-03	0.	0.	3.50E-02	1.01E-03	1.41E-02	9.15E-03	6.65E-02
60	4.80	1.82E-04	0.	0.	0.	1.16E-03	4.60E-03	0.	0.	3.62E-02	1.07E-03	1.45E-02	9.34E-03	6.71E-02
61	4.70	1.98E-04	0.	0.	0.	1.13E-03	4.05E-03	0.	0.	3.65E-02	1.14E-03	1.50E-02	9.57E-03	6.76E-02
62	4.60	2.36E-04	0.	0.	0.	1.14E-03	3.72E-03	0.	0.	3.68E-02	1.22E-03	1.55E-02	9.81E-03	6.85E-02
63	4.50	2.41E-04	0.	5.67E-04	0.	1.01E-03	2.73E-03	0.	0.	3.71E-02	1.30E-03	1.62E-02	1.01E-02	6.92E-02
64	4.40	2.40E-04	0.	1.98E-03	0.	9.93E-04	1.95E-03	0.	0.	3.74E-02	1.39E-03	1.68E-02	1.03E-02	7.18E-02
65	4.30	2.27E-04	0.	5.24E-03	0.	9.18E-04	1.16E-03	0.	0.	3.77E-02	1.49E-03	1.75E-02	1.06E-02	7.48E-02
66	4.20	2.07E-04	0.	1.93E-02	0.	9.57E-04	8.73E-04	0.	0.	3.80E-02	1.60E-03	1.82E-02	1.08E-02	9.80E-02
67	4.10	1.90E-04	0.	6.90E-03	0.	9.05E-04	2.31E-04	0.	0.	3.82E-02	1.72E-03	1.89E-02	1.10E-02	7.88E-02
68	4.00	1.70E-04	0.	2.74E-02	0.	8.53E-04	1.77E-04	0.	0.	3.33E-02	1.86E-03	1.96E-02	2.66E-03	9.18E-02
69	3.90	1.40E-04	0.	1.22E-02	9.22E-04	7.93E-04	7.25E-05	0.	0.	3.02E-02	2.00E-03	1.75E-02	2.74E-03	7.46E-02
70	3.80	1.51E-04	0.	1.84E-02	5.24E-03	8.00E-04	0.	0.	0.	3.80E-02	2.17E-03	1.79E-02	2.84E-03	8.56E-02
71	3.70	1.28E-04	0.	2.17E-02	1.53E-03	6.43E-04	0.	0.	0.	3.74E-02	2.35E-03	1.41E-02	3.16E-03	8.19E-02
72	3.60	1.13E-04	0.	1.29E-02	9.30E-03	6.99E-04	0.	0.	0.	3.91E-02	2.55E-03	1.52E-02	3.52E-03	7.94E-02
73	3.50	1.02E-04	0.	1.86E-02	2.36E-02	5.21E-04	0.	0.	0.	3.21E-02	2.78E-03	1.55E-02	3.91E-03	9.71E-02
74	3.40	9.01E-05	0.	1.03E-02	2.34E-03	5.79E-04	0.	0.	0.	1.85E-02	3.03E-03	1.74E-02	4.35E-03	5.66E-02
75	3.30	7.06E-05	0.	1.08E-02	1.13E-02	4.41E-04	0.	0.	0.	1.85E-02	3.32E-03	1.93E-02	4.79E-03	6.86E-02
76	3.20	5.93E-05	0.	6.56E-03	2.41E-02	4.94E-04	0.	0.	0.	1.86E-02	3.64E-03	2.13E-02	5.26E-03	7.99E-02
77	3.10	5.51E-05	0.	5.02E-03	3.67E-03	4.15E-04	0.	0.	0.	1.86E-02	4.01E-03	2.33E-02	5.72E-03	6.68E-02
78	3.00	4.76E-05	0.	2.94E-03	1.10E-02	3.76E-04	0.	0.	0.	1.87E-02	4.43E-03	2.52E-02	6.18E-03	6.89E-02
79	2.90	3.85E-05	0.	1.78E-03	6.69E-03	2.70E-04	0.	0.	0.	1.87E-02	4.91E-03	2.73E-02	6.66E-03	6.63E-02
80	2.80	3.90E-05	0.	8.47E-04	3.13E-03	1.73E-04	0.	0.	0.	1.87E-02	5.46E-03	2.96E-02	7.18E-03	6.51E-02
81	2.70	2.38E-05	0.	3.91E-04	9.34E-03	8.80E-05	0.	0.	0.	1.87E-02	6.10E-03	3.20E-02	7.74E-03	7.84E-02
82	2.60	1.04E-05	0.	1.97E-04	5.03E-04	3.62E-05	0.	0.	0.	1.87E-02	6.83E-03	3.47E-02	8.33E-03	6.93E-02
83	2.50	7.11E-07	0.	2.33E-05	4.34E-04	8.28E-06	0.	0.	0.	1.87E-02	7.69E-03	3.92E-02	3.05E-03	6.99E-02
84	2.40	0.	1.23E-03	0.	4.24E-04	8.54E-07	0.	0.	0.	1.87E-02	8.71E-03	4.55E-02	4.64E-03	7.92E-02
85	2.30	0.	4.68E-03	0.	0.	0.	0.	0.	0.	1.88E-02	9.98E-03	3.34E-02	5.59E-03	7.22E-02
86	2.20	0.	1.09E-02	0.	0.	0.	0.	0.	0.	1.89E-02	1.13E-02	3.95E-02	6.73E-03	8.78E-02
87	2.10	0.	1.34E-02	0.	0.	0.	0.	0.	0.	1.84E-02	1.30E-02	4.68E-02	7.88E-03	9.88E-02
88	2.00	0.	2.41E-02	0.	0.	0.	0.	0.	0.	1.78E-02	1.51E-02	5.29E-02	9.83E-03	1.19E-01
89	1.90	0.	3.87E-02	0.	0.	0.	0.	0.	0.	1.71E-02	1.77E-02	5.96E-02	1.03E-02	1.43E-01
90	1.80	0.	3.16E-02	0.	0.	0.	0.	0.	0.	1.64E-02	2.08E-02	7.04E-02	1.23E-02	1.52E-01
91	1.70	0.	3.78E-02	0.	0.	0.	0.	0.	0.	1.54E-02	2.48E-02	8.41E-02	1.49E-02	1.77E-01
92	1.60	0.	2.78E-02	0.	0.	0.	0.	0.	0.	1.31E-02	2.98E-02	9.76E-02	1.75E-02	1.85E-01
93	1.50	0.	3.25E-02	0.	0.	0.	0.	0.	0.	9.94E-03	3.63E-02	1.23E-01	2.11E-02	2.19E-01
94	1.40	0.	3.32E-02	0.	0.	0.	0.	0.	0.	0.	4.49E-02	1.51E-01	2.49E-02	2.54E-01
95	1.30	0.	2.51E-02	0.	0.	0.	0.	0.	0.	0.	5.61E-02	1.91E-01	3.25E-02	3.95E-01
96	1.20	0.	2.44E-02	0.	0.	0.	0.	0.	0.	0.	7.16E-02	1.91E-01	3.13E-02	3.18E-01
97	1.10	0.	2.17E-02	0.	0.	0.	0.	6.30E-08	0.	0.	9.32E-02	2.35E-01	3.93E-02	3.90E-01
98	1.00	0.	1.99E-02	0.	0.	0.	0.	6.95E-07	0.	0.	1.29E-01	2.84E-01	4.39E-02	4.73E-01
99	0.90	0.	1.63E-02	0.	0.	0.	0.	8.13E-07	0.	0.	1.73E-01	3.23E-01	5.17E-02	5.44E-01
100	0.80	0.	7.69E-03	0.	0.	0.	0.	1.57E-05	0.	0.	2.49E-01	3.71E-01	5.94E-02	6.87E-01
101	0.70	0.	1.92E-03	0.	0.	0.	0.	1.18E-05	0.	0.	3.73E-01	4.89E-01	6.51E-02	8.48E-01
102	0.60	0.	1.95E-04	0.	0.	0.	0.	4.40E-05	0.	0.	5.97E-01	4.56E-01	7.20E-02	1.13E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.70	0.	0.	4.19E-03	0.	0.	0.	9.93E-04	9.28E-04	1.26E 00	6.67E-04	1.27E 00
2	10.60	0.	0.	3.[illegible]E-03	0.	0.	0.	9.95E-04	9.59E-04	3.50E-03	6.66E-04	8.93E-03
3	10.50	0.	0.	3.64E-03	0.	0.	0.	9.94E-04	9.82E-04	3.40E-03	6.65E-04	8.91E-03
4	10.40	0.	0.	3.35E-03	0.	0.	0.	9.97E-04	1.01E-05	3.61E-03	6.63E-04	8.63E-03
5	10.30	0.	0.	2.82E-03	0.	0.	0.	9.99E-04	1.04E-05	3.62E-03	6.62E-04	8.11E-03
6	10.20	0.	0.	2.84E-03	0.	0.	0.	1.00E-03	1.07E-05	3.63E-03	6.61E-04	8.14E-03
7	10.10	0.	0.	2.62E-03	0.	0.	0.	1.00E-03	1.10E-05	3.63E-03	6.59E-04	7.92E-03
8	10.00	0.	0.	2.19E-03	0.	0.	0.	1.00E-03	1.14E-05	3.64E-03	6.59E-04	7.51E-03
9	9.90	0.	0.	2.23E-03	0.	0.	0.	1.00E-03	1.17E-05	3.65E-03	6.57E-04	7.54E-03
10	9.80	0.	0.	2.02E-03	0.	0.	0.	1.01E-03	1.21E-05	3.66E-03	6.55E-04	7.36E-03
11	9.70	0.	0.	1.68E-03	0.	0.	0.	1.01E-03	1.25E-05	3.67E-03	6.54E-04	7.02E-03
12	9.60	0.	0.	1.68E-03	0.	0.	0.	1.01E-03	1.29E-05	3.68E-03	6.53E-04	7.10E-03
13	9.50	0.	0.	1.47E-03	0.	0.	0.	1.01E-03	1.33E-05	3.69E-03	6.51E-04	6.84E-03
14	9.40	0.	0.	1.34E-03	0.	0.	0.	1.01E-03	1.37E-05	3.70E-03	6.50E-04	6.72E-03
15	9.30	0.	0.	1.36E-03	0.	0.	0.	1.02E-03	1.42E-05	3.71E-03	6.49E-04	6.76E-03
16	9.20	0.	0.	1.07E-03	0.	0.	0.	1.02E-03	1.46E-05	3.72E-03	6.48E-04	6.47E-03
17	9.10	0.	0.	1.00E-03	0.	0.	0.	1.03E-03	1.51E-05	1.11E-03	6.46E-04	3.89E-03
18	9.00	0.	0.	9.54E-04	0.	0.	0.	1.03E-03	1.56E-05	1.11E-03	6.45E-04	3.75E-03
19	8.90	0.	0.	8.91E-04	0.	0.	0.	1.03E-03	1.62E-05	1.11E-03	6.44E-04	3.65E-03
20	8.80	0.	0.	8.23E-04	0.	0.	0.	1.04E-03	1.67E-05	1.10E-03	6.43E-04	3.62E-03
21	8.70	0.	0.	6.80E-04	0.	0.	0.	1.04E-03	1.73E-05	1.10E-03	6.41E-04	3.48E-03
22	8.60	0.	0.	6.93E-04	0.	0.	0.	1.04E-03	1.79E-05	1.10E-03	6.40E-04	3.50E-03
23	8.50	0.	0.	5.79E-04	0.	0.	0.	1.05E-03	1.86E-05	1.10E-03	6.39E-04	3.39E-03
24	8.40	0.	0.	5.65E-04	0.	0.	0.	1.05E-03	1.92E-05	1.10E-03	6.38E-04	3.38E-03
25	8.30	0.	0.	4.58E-04	0.	0.	0.	1.06E-03	1.99E-05	1.10E-03	6.39E-04	3.28E-03
26	8.20	0.	0.	4.56E-04	0.	0.	0.	1.06E-03	2.07E-05	1.10E-03	6.42E-04	3.29E-03
27	8.10	0.	0.	3.76E-04	0.	0.	0.	1.07E-03	2.15E-05	1.10E-03	6.46E-04	3.22E-03
28	8.00	0.	0.	3.72E-04	0.	0.	0.	1.08E-03	2.23E-05	1.10E-03	6.50E-04	3.22E-03
29	7.90	0.	0.	3.07E-04	0.	0.	0.	1.08E-03	2.31E-05	1.10E-03	6.54E-04	3.17E-03
30	7.80	0.	0.	3.11E-04	0.	0.	0.	1.09E-03	2.40E-05	1.11E-03	6.58E-04	3.19E-03
31	7.70	0.	0.	2.62E-04	0.	0.	0.	1.09E-03	2.50E-05	1.11E-03	6.62E-04	3.15E-03
32	7.60	0.	0.	2.42E-04	0.	1.20E-08	0.	1.10E-03	2.60E-05	1.11E-03	6.66E-04	3.14E-03
33	7.50	0.	0.	2.16E-04	0.	5.28E-08	0.	1.10E-03	2.71E-05	1.11E-03	6.70E-04	3.13E-03
34	7.40	0.	0.	1.88E-04	0.	3.22E-07	0.	1.11E-03	2.82E-05	1.11E-03	6.74E-04	3.11E-03
35	7.30	0.	0.	1.73E-04	0.	1.50E-06	0.	1.12E-03	2.93E-05	1.12E-03	6.78E-04	3.11E-03
36	7.20	0.	0.	1.51E-04	0.	4.00E-06	0.	1.12E-03	3.06E-05	1.12E-03	6.82E-04	3.11E-03
37	7.10	0.	0.	1.40E-04	0.	1.14E-05	0.	1.13E-03	3.19E-05	1.12E-03	6.86E-04	3.12E-03
38	7.00	2.76E-08	0.	1.24E-04	0.	2.75E-05	0.	1.14E-03	3.33E-05	1.12E-03	6.90E-04	3.14E-03
39	6.90	5.27E-08	0.	1.10E-04	0.	3.10E-05	0.	1.15E-03	3.48E-05	1.12E-03	6.94E-04	3.14E-03
40	6.80	4.45E-08	0.	1.02E-04	0.	6.17E-05	0.	1.16E-03	3.63E-05	1.13E-03	6.98E-04	3.18E-03
41	6.70	3.16E-08	0.	8.64E-05	0.	6.96E-05	0.	1.17E-03	3.80E-05	1.13E-03	7.02E-04	3.19E-03
42	6.60	1.88E-08	0.	7.46E-05	0.	4.68E-05	0.	1.18E-03	3.98E-05	1.13E-03	7.07E-04	3.18E-03
43	6.50	1.06E-08	0.	5.68E-05	0.	7.89E-05	0.	1.19E-03	4.16E-05	1.14E-03	7.12E-04	3.22E-03
44	6.40	1.44E-08	0.	3.69E-05	3.84E-07	8.45E-05	0.	1.20E-03	4.36E-05	1.15E-03	7.17E-04	3.23E-03
45	6.30	3.01E-08	0.	2.15E-05	1.73E-06	4.86E-05	0.	1.20E-03	4.58E-05	1.15E-03	7.24E-04	3.20E-03
46	6.20	9.04E-08	0.	1.12E-05	2.39E-06	7.20E-05	0.	1.21E-03	4.80E-05	1.16E-03	7.34E-04	3.24E-03
47	6.10	3.68E-07	0.	4.96E-06	6.54E-06	1.01E-04	0.	1.22E-03	5.04E-05	1.17E-03	7.45E-04	3.38E-03
48	6.00	9.84E-07	0.	1.21E-06	5.85E-06	4.24E-05	0.	1.23E-03	5.30E-05	1.19E-03	7.55E-04	3.28E-03
49	5.90	1.62E-06	0.	8.69E-08	8.38E-06	4.34E-05	0.	1.23E-03	5.58E-05	1.20E-03	7.66E-04	3.31E-03
50	5.80	2.50E-06	0.	2.15E-09	1.14E-05	4.23E-05	0.	1.21E-03	5.87E-05	1.21E-03	7.76E-04	3.32E-03
51	5.70	3.02E-06	0.	0.	1.28E-05	4.64E-05	0.	1.14E-03	6.19E-05	1.23E-03	7.87E-04	3.28E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-04 (10.0E-02 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.81E-06	0.	0.	0.	1.02E-05	6.77E-05	0.	0.	1.06E-03	6.53E-05	1.24E-03	7.98E-04	3.25E-03
53	5.50	4.01E-06	0.	0.	0.	1.24E-05	6.38E-05	0.	0.	1.07E-03	6.89E-05	1.27E-03	8.09E-04	3.29E-03
54	5.40	4.26E-06	0.	0.	0.	1.09E-05	4.66E-05	0.	0.	1.07E-03	7.28E-05	1.29E-03	8.21E-04	3.31E-03
55	5.30	4.15E-06	0.	0.	0.	1.12E-05	6.38E-05	0.	0.	1.08E-03	7.71E-05	1.32E-03	8.35E-04	3.38E-03
56	5.20	3.85E-06	0.	0.	0.	1.18E-05	4.15E-05	0.	0.	1.08E-03	8.16E-05	1.35E-03	8.53E-04	3.42E-03
57	5.10	2.87E-06	0.	0.	0.	1.16E-05	5.51E-05	0.	0.	1.09E-03	8.66E-05	1.38E-03	8.71E-04	3.50E-03
58	5.00	2.14E-06	0.	0.	0.	1.03E-05	4.92E-05	0.	0.	1.10E-03	9.19E-05	1.42E-03	8.89E-04	3.57E-03
59	4.90	1.80E-06	0.	0.	0.	1.13E-05	5.13E-05	0.	0.	1.11E-03	9.77E-05	1.46E-03	9.07E-04	3.65E-03
60	4.80	1.79E-06	0.	0.	0.	1.20E-05	4.74E-05	0.	0.	1.12E-03	1.04E-04	1.51E-03	9.26E-04	3.72E-03
61	4.70	1.95E-06	0.	0.	0.	1.16E-05	4.16E-05	0.	0.	1.13E-03	1.11E-04	1.55E-03	9.48E-04	3.80E-03
62	4.60	2.33E-06	0.	0.	0.	1.17E-05	3.83E-05	0.	0.	1.14E-03	1.18E-04	1.61E-03	9.73E-04	3.89E-03
63	4.50	2.37E-06	0.	6.11E-06	0.	1.04E-05	2.81E-05	0.	0.	1.15E-03	1.26E-04	1.68E-03	9.97E-04	4.00E-03
64	4.40	2.44E-06	0.	2.04E-05	0.	1.02E-05	2.00E-05	0.	0.	1.16E-03	1.35E-04	1.74E-03	1.02E-03	4.11E-03
65	4.30	2.24E-06	0.	5.64E-05	0.	9.45E-06	1.19E-05	0.	0.	1.17E-03	1.45E-04	1.82E-03	1.05E-03	4.25E-03
66	4.20	2.04E-06	0.	2.08E-04	0.	9.85E-06	8.99E-06	0.	0.	1.18E-03	1.56E-04	1.89E-03	1.07E-03	4.52E-03
67	4.10	1.87E-06	0.	7.43E-05	0.	9.32E-06	2.38E-06	0.	0.	1.18E-03	1.67E-04	1.96E-03	1.09E-03	4.49E-03
68	4.00	1.67E-06	0.	2.94E-04	0.	8.77E-06	1.82E-06	0.	0.	1.19E-03	1.80E-04	2.03E-03	2.64E-04	3.97E-03
69	3.90	1.37E-06	0.	1.32E-04	3.19E-05	7.75E-06	7.46E-07	0.	0.	1.18E-03	1.94E-04	1.82E-03	2.72E-04	3.64E-03
70	3.80	1.48E-06	0.	1.98E-04	1.81E-04	8.24E-06	0.	0.	0.	1.18E-03	2.10E-04	1.86E-03	2.92E-04	3.92E-03
71	3.70	1.26E-06	0.	2.34E-04	5.29E-05	6.62E-06	0.	0.	0.	1.16E-03	2.28E-04	1.46E-03	3.13E-04	3.45E-03
72	3.60	1.11E-06	0.	1.39E-04	3.21E-04	7.19E-06	0.	0.	0.	1.08E-03	2.48E-04	1.58E-03	3.49E-04	3.73E-03
73	3.50	1.00E-06	0.	2.08E-04	8.14E-04	5.36E-06	0.	0.	0.	9.93E-04	2.70E-04	1.61E-03	3.88E-04	4.20E-03
74	3.40	8.86E-07	0.	1.11E-04	8.08E-05	5.96E-06	0.	0.	0.	5.73E-04	2.94E-04	1.88E-03	4.32E-04	3.30E-03
75	3.30	6.95E-07	0.	1.17E-04	3.88E-04	4.54E-06	0.	0.	0.	5.74E-04	3.22E-04	2.88E-03	4.75E-04	3.89E-03
76	3.20	5.84E-07	0.	7.06E-05	8.32E-04	4.67E-06	0.	0.	0.	5.75E-04	3.54E-04	2.21E-03	5.21E-04	4.56E-03
77	3.10	5.42E-07	0.	5.41E-05	1.27E-04	4.27E-06	0.	0.	0.	5.76E-04	3.89E-04	2.41E-03	5.67E-04	4.13E-03
78	3.00	4.68E-07	0.	3.17E-05	3.81E-04	3.87E-06	0.	0.	0.	5.78E-04	4.28E-04	2.62E-03	6.13E-04	4.66E-03
79	2.90	3.78E-07	0.	1.92E-05	2.31E-04	2.78E-06	0.	0.	0.	5.79E-04	4.77E-04	2.83E-03	6.60E-04	4.80E-03
80	2.80	3.84E-07	0.	9.12E-06	1.08E-04	1.79E-06	0.	0.	0.	5.79E-04	5.30E-04	3.07E-03	7.12E-04	5.01E-03
81	2.70	2.34E-07	0.	4.21E-06	1.84E-04	9.85E-07	0.	0.	0.	5.79E-04	5.92E-04	3.32E-03	7.68E-04	5.45E-03
82	2.60	1.03E-07	0.	2.12E-06	1.73E-05	3.73E-07	0.	0.	0.	5.79E-04	6.63E-04	3.60E-03	8.26E-04	5.69E-03
83	2.50	7.00E-09	0.	2.50E-07	1.50E-05	8.52E-08	0.	0.	0.	5.79E-04	7.47E-04	4.07E-03	3.82E-04	5.73E-03
84	2.40	0.	1.32E-05	0.	1.46E-05	8.79E-09	0.	0.	0.	5.79E-04	8.45E-04	4.72E-03	4.63E-04	6.03E-03
85	2.30	0.	5.04E-05	0.	0.	0.	0.	0.	0.	5.75E-04	9.61E-04	3.47E-03	5.55E-04	5.61E-03
86	2.20	0.	1.17E-04	0.	0.	0.	0.	0.	0.	5.73E-04	1.10E-03	4.10E-03	6.68E-04	6.56E-03
87	2.10	0.	1.45E-04	0.	0.	0.	0.	0.	0.	5.70E-04	1.27E-03	4.77E-03	7.82E-04	7.53E-03
88	2.00	0.	2.59E-04	0.	0.	0.	0.	0.	0.	5.52E-04	1.47E-03	5.45E-03	8.95E-04	8.62E-03
89	1.90	0.	4.14E-04	0.	0.	0.	0.	0.	0.	5.31E-04	1.72E-03	6.18E-03	1.02E-03	9.86E-03
90	1.80	0.	3.41E-04	0.	0.	0.	0.	0.	0.	5.08E-04	2.02E-03	7.32E-03	1.22E-03	1.14E-02
91	1.70	0.	4.07E-04	0.	0.	0.	0.	0.	0.	4.78E-04	2.41E-03	8.72E-03	1.48E-03	1.35E-02
92	1.60	0.	2.91E-04	0.	0.	0.	0.	0.	0.	4.05E-04	2.89E-03	1.01E-02	1.73E-03	1.54E-02
93	1.50	0.	3.50E-04	0.	0.	0.	0.	0.	0.	1.04E-04	3.52E-03	1.20E-02	2.89E-03	1.89E-02
94	1.40	0.	3.57E-04	0.	0.	0.	0.	0.	0.	0.	4.34E-03	1.57E-02	2.46E-03	2.78E-02
95	1.30	0.	2.70E-04	0.	0.	0.	0.	0.	0.	0.	5.45E-03	1.98E-02	3.22E-03	2.87E-02
96	1.20	0.	2.64E-04	0.	0.	0.	0.	0.	0.	0.	6.94E-03	1.98E-02	3.11E-03	3.81E-02
97	1.10	0.	2.33E-04	0.	0.	0.	0.	6.48E-10	0.	0.	9.84E-03	2.44E-02	3.98E-03	3.76E-02
98	1.00	0.	2.14E-04	0.	0.	0.	0.	7.15E-09	0.	0.	1.21E-02	2.95E-02	4.35E-03	4.62E-02
99	0.90	0.	1.75E-04	0.	0.	0.	0.	8.36E-09	0.	0.	1.48E-02	3.35E-02	5.13E-03	5.56E-02
100	0.80	0.	8.23E-05	0.	0.	0.	0.	1.62E-07	0.	0.	2.41E-02	3.85E-02	5.90E-03	6.86E-02
101	0.70	0.	2.07E-05	0.	0.	0.	0.	1.21E-07	0.	0.	3.62E-02	4.24E-02	6.46E-03	8.50E-02
102	0.60	0.	2.09E-06	0.	0.	0.	0.	4.53E-07	0.	0.	5.79E-02	4.73E-02	7.22E-03	1.12E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.53E-05	0.	0.	0.	2.84E-05	8.50E-07	1.16E-01	5.38E-05	1.16E-01
2	10.60	0.	0.	3.18E-05	0.	0.	0.	2.84E-05	8.74E-07	3.28E-04	6.29E-05	4.52E-04
3	10.50	0.	0.	3.07E-05	0.	0.	0.	2.85E-05	9.00E-07	3.30E-04	6.28E-05	4.53E-04
4	10.40	0.	0.	2.82E-05	0.	0.	0.	2.85E-05	9.26E-07	3.31E-04	6.27E-05	4.52E-04
5	10.30	0.	0.	2.37E-05	0.	0.	0.	2.86E-05	9.53E-07	3.32E-04	6.25E-05	4.48E-04
6	10.20	0.	0.	2.30E-05	0.	0.	0.	2.86E-05	9.82E-07	3.33E-04	6.24E-05	4.49E-04
7	10.10	0.	0.	2.20E-05	0.	0.	0.	2.86E-05	1.01E-06	3.34E-04	6.23E-05	4.48E-04
8	10.00	0.	0.	1.85E-05	0.	0.	0.	2.87E-05	1.04E-06	3.34E-04	6.22E-05	4.45E-04
9	9.90	0.	0.	1.88E-05	0.	0.	0.	2.87E-05	1.07E-06	3.35E-04	6.21E-05	4.46E-04
10	9.80	0.	0.	1.70E-05	0.	0.	0.	2.88E-05	1.11E-06	3.36E-04	6.19E-05	4.45E-04
11	9.70	0.	0.	1.41E-05	0.	0.	0.	2.88E-05	1.14E-06	3.37E-04	6.18E-05	4.43E-04
12	9.60	0.	0.	1.52E-05	0.	0.	0.	2.89E-05	1.18E-06	3.38E-04	6.17E-05	4.45E-04
13	9.50	0.	0.	1.24E-05	0.	0.	0.	2.89E-05	1.22E-06	3.39E-04	6.15E-05	4.43E-04
14	9.40	0.	0.	1.18E-05	0.	0.	0.	2.90E-05	1.26E-06	3.40E-04	6.14E-05	4.43E-04
15	9.30	0.	0.	1.19E-05	0.	0.	0.	2.91E-05	1.30E-06	3.41E-04	6.13E-05	4.44E-04
16	9.20	0.	0.	8.97E-06	0.	0.	0.	2.93E-05	1.34E-06	3.42E-04	6.12E-05	4.43E-04
17	9.10	0.	0.	9.18E-06	0.	0.	0.	2.94E-05	1.38E-06	1.82E-04	6.11E-05	2.03E-04
18	9.00	0.	0.	8.88E-06	0.	0.	0.	2.95E-05	1.43E-06	1.82E-04	6.09E-05	2.01E-04
19	8.90	0.	0.	7.16E-06	0.	0.	0.	2.96E-05	1.48E-06	1.81E-04	6.08E-05	2.01E-04
20	8.80	0.	0.	6.93E-06	0.	0.	0.	2.97E-05	1.53E-06	1.81E-04	6.07E-05	2.00E-04
21	8.70	0.	0.	5.73E-06	0.	0.	0.	2.98E-05	1.59E-06	1.81E-04	6.06E-05	1.99E-04
22	8.60	0.	0.	5.88E-06	0.	0.	0.	2.99E-05	1.64E-06	1.81E-04	6.05E-05	1.99E-04
23	8.50	0.	0.	4.87E-06	0.	0.	0.	3.00E-05	1.70E-06	1.81E-04	6.04E-05	1.98E-04
24	8.40	0.	0.	4.76E-06	0.	0.	0.	3.01E-05	1.76E-06	1.81E-04	6.03E-05	1.98E-04
25	8.30	0.	0.	3.86E-06	0.	0.	0.	3.03E-05	1.83E-06	1.81E-04	6.03E-05	1.97E-04
26	8.20	0.	0.	3.84E-06	0.	0.	0.	3.05E-05	1.89E-06	1.81E-04	6.07E-05	1.98E-04
27	8.10	0.	0.	3.17E-06	0.	0.	0.	3.06E-05	1.97E-06	1.81E-04	6.11E-05	1.98E-04
28	8.00	0.	0.	3.13E-06	0.	0.	0.	3.08E-05	2.04E-06	1.81E-04	6.14E-05	1.99E-04
29	7.90	0.	0.	2.58E-06	0.	0.	0.	3.09E-05	2.12E-06	1.81E-04	6.18E-05	1.99E-04
30	7.80	0.	0.	2.62E-06	0.	0.	0.	3.11E-05	2.20E-06	1.81E-04	6.22E-05	2.00E-04
31	7.70	0.	0.	2.21E-06	0.	0.	0.	3.13E-05	2.29E-06	1.82E-04	6.26E-05	2.00E-04
32	7.60	0.	0.	2.04E-06	0.	1.04E-10	0.	3.14E-05	2.38E-06	1.82E-04	6.29E-05	2.01E-04
33	7.50	0.	0.	1.82E-06	0.	4.58E-10	0.	3.16E-05	2.48E-06	1.82E-04	6.33E-05	2.01E-04
34	7.40	0.	0.	1.58E-06	0.	2.79E-09	0.	3.17E-05	2.58E-06	1.82E-04	6.37E-05	2.02E-04
35	7.30	0.	0.	1.45E-06	0.	1.38E-08	0.	3.19E-05	2.69E-06	1.82E-04	6.40E-05	2.02E-04
36	7.20	0.	0.	1.27E-06	0.	3.47E-08	0.	3.21E-05	2.80E-06	1.83E-04	6.44E-05	2.03E-04
37	7.10	0.	0.	1.18E-06	0.	9.88E-08	0.	3.24E-05	2.92E-06	1.83E-04	6.48E-05	2.04E-04
38	7.00	2.46E-10	0.	1.05E-06	0.	2.35E-07	0.	3.26E-05	3.05E-06	1.83E-04	6.52E-05	2.05E-04
39	6.90	4.71E-10	0.	9.29E-07	0.	2.69E-07	0.	3.29E-05	3.18E-06	1.83E-04	6.55E-05	2.06E-04
40	6.80	3.97E-10	0.	8.62E-07	0.	5.35E-07	0.	3.31E-05	3.33E-06	1.83E-04	6.59E-05	2.07E-04
41	6.70	2.82E-10	0.	7.27E-07	0.	6.04E-07	0.	3.34E-05	3.48E-06	1.83E-04	6.64E-05	2.08E-04
42	6.60	1.68E-10	0.	6.28E-07	0.	4.04E-07	0.	3.37E-05	3.64E-06	1.84E-04	6.68E-05	2.09E-04
43	6.50	9.46E-11	0.	4.78E-07	0.	6.84E-07	0.	3.39E-05	3.81E-06	1.85E-04	6.73E-05	2.11E-04
44	6.40	1.29E-10	0.	3.10E-07	3.33E-09	7.33E-07	0.	3.42E-05	4.00E-06	1.85E-04	6.77E-05	2.12E-04
45	6.30	2.68E-10	0.	1.81E-07	1.50E-08	4.22E-07	0.	3.45E-05	4.19E-06	1.86E-04	6.84E-05	2.14E-04
46	6.20	8.07E-10	0.	9.41E-08	2.04E-08	6.24E-07	0.	3.47E-05	4.40E-06	1.87E-04	6.94E-05	2.16E-04
47	6.10	3.29E-09	0.	4.17E-08	5.67E-08	8.78E-07	0.	3.50E-05	4.62E-06	1.88E-04	7.04E-05	2.19E-04
48	6.00	8.78E-09	0.	1.02E-08	5.07E-08	3.68E-07	0.	3.53E-05	4.86E-06	1.89E-04	7.13E-05	2.21E-04
49	5.90	1.45E-08	0.	7.28E-10	7.27E-08	3.76E-07	0.	3.53E-05	5.11E-06	1.10E-04	7.23E-05	2.23E-04
50	5.80	2.23E-08	0.	1.81E-11	9.92E-08	3.67E-07	0.	3.47E-05	5.38E-06	1.11E-04	7.33E-05	2.25E-04
51	5.70	2.70E-08	0.	0.	1.11E-07	4.02E-07	0.	3.26E-05	5.67E-06	1.13E-04	7.43E-05	2.26E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.48E-08	0.	0.	0.	8.81E-08	5.87E-07	0.	0.	3.83E-05	5.98E-06	1.14E-04	7.53E-05	2.27E-04
53	5.50	3.58E-08	0.	0.	0.	1.08E-07	5.54E-07	0.	0.	3.85E-05	6.31E-06	1.16E-04	7.64E-05	2.30E-04
54	5.40	3.80E-08	0.	0.	0.	9.43E-08	4.84E-07	0.	0.	3.86E-05	6.67E-06	1.19E-04	7.76E-05	2.34E-04
55	5.30	3.71E-08	0.	0.	0.	9.69E-08	5.53E-07	0.	0.	3.88E-05	7.06E-06	1.21E-04	7.89E-05	2.38E-04
56	5.20	2.72E-08	0.	0.	0.	1.02E-07	3.60E-07	0.	0.	3.10E-05	7.48E-06	1.23E-04	8.06E-05	2.43E-04
57	5.10	2.56E-08	0.	0.	0.	10.00E-08	4.78E-07	0.	0.	3.13E-05	7.93E-06	1.27E-04	8.23E-05	2.49E-04
58	5.00	1.91E-08	0.	0.	0.	8.97E-08	4.27E-07	0.	0.	3.16E-05	8.42E-06	1.30E-04	8.40E-05	2.55E-04
59	4.90	1.60E-08	0.	0.	0.	9.78E-08	4.45E-07	0.	0.	3.18E-05	8.95E-06	1.34E-04	8.57E-05	2.61E-04
60	4.80	1.60E-08	0.	0.	0.	1.04E-07	4.11E-07	0.	0.	3.21E-05	9.52E-06	1.38E-04	8.75E-05	2.68E-04
61	4.70	1.74E-08	0.	0.	0.	1.01E-07	3.61E-07	0.	0.	3.24E-05	1.01E-05	1.43E-04	8.97E-05	2.75E-04
62	4.60	2.08E-08	0.	0.	0.	1.02E-07	3.32E-07	0.	0.	3.26E-05	1.08E-05	1.48E-04	9.19E-05	2.84E-04
63	4.50	2.11E-08	0.	5.14E-08	0.	8.99E-08	2.44E-07	0.	0.	3.29E-05	1.16E-05	1.54E-04	9.42E-05	2.93E-04
64	4.40	2.18E-08	0.	1.72E-07	0.	8.87E-08	1.74E-07	0.	0.	3.31E-05	1.24E-05	1.60E-04	9.65E-05	3.03E-04
65	4.30	2.00E-08	0.	4.75E-07	0.	8.19E-08	1.03E-07	0.	0.	3.34E-05	1.33E-05	1.67E-04	9.89E-05	3.13E-04
66	4.20	1.82E-08	0.	1.75E-06	0.	8.54E-08	7.79E-08	0.	0.	3.37E-05	1.42E-05	1.73E-04	1.01E-04	3.24E-04
67	4.10	1.67E-08	0.	6.25E-07	0.	8.08E-08	2.07E-08	0.	0.	3.38E-05	1.53E-05	1.80E-04	1.03E-04	3.33E-04
68	4.00	1.49E-08	0.	2.48E-06	0.	7.61E-08	1.58E-08	0.	0.	3.39E-05	1.65E-05	1.87E-04	2.49E-05	2.65E-04
69	3.90	1.23E-08	0.	1.11E-06	8.85E-07	6.72E-08	6.47E-09	0.	0.	3.38E-05	1.78E-05	1.67E-04	2.57E-05	2.46E-04
70	3.80	1.33E-08	0.	1.67E-06	5.03E-06	7.14E-08	0.	0.	0.	3.37E-05	1.93E-05	1.71E-04	2.66E-05	2.57E-04
71	3.70	1.12E-08	0.	1.97E-06	1.47E-05	5.74E-08	0.	0.	0.	3.31E-05	2.09E-05	1.34E-04	2.96E-05	2.21E-04
72	3.60	9.90E-09	0.	1.17E-06	8.93E-06	6.24E-08	0.	0.	0.	3.10E-05	2.27E-05	1.45E-04	3.30E-05	2.42E-04
73	3.50	8.97E-09	0.	1.68E-06	2.26E-05	4.65E-08	0.	0.	0.	2.84E-05	2.47E-05	1.47E-04	3.67E-05	2.62E-04
74	3.40	7.91E-09	0.	9.32E-07	2.25E-06	5.17E-08	0.	0.	0.	1.64E-05	2.70E-05	1.66E-04	4.08E-05	2.53E-04
75	3.30	6.21E-09	0.	9.82E-07	1.08E-05	3.94E-08	0.	0.	0.	1.64E-05	2.95E-05	1.84E-04	4.49E-05	2.97E-04
76	3.20	5.21E-09	0.	5.94E-07	2.32E-05	4.05E-08	0.	0.	0.	1.64E-05	3.24E-05	2.02E-04	4.92E-05	3.24E-04
77	3.10	4.84E-09	0.	4.55E-07	3.52E-06	3.70E-08	0.	0.	0.	1.65E-05	3.57E-05	2.21E-04	5.36E-05	3.51E-04
78	3.00	4.18E-09	0.	2.67E-07	1.06E-05	3.36E-08	0.	0.	0.	1.65E-05	3.94E-05	2.48E-04	5.79E-05	3.65E-04
79	2.90	3.38E-09	0.	1.61E-07	6.42E-06	2.41E-08	0.	0.	0.	1.65E-05	4.36E-05	2.60E-04	6.24E-05	3.89E-04
80	2.80	3.43E-09	0.	7.68E-08	3.00E-06	1.55E-08	0.	0.	0.	1.66E-05	4.85E-05	2.82E-04	6.73E-05	4.17E-04
81	2.70	2.09E-09	0.	3.54E-08	5.12E-06	7.85E-09	0.	0.	0.	1.66E-05	5.42E-05	3.05E-04	7.26E-05	4.54E-04
82	2.60	9.17E-10	0.	1.78E-08	4.82E-07	3.24E-09	0.	0.	0.	1.66E-05	6.07E-05	3.30E-04	7.80E-05	4.86E-04
83	2.50	6.25E-11	0.	2.11E-09	4.16E-07	7.39E-10	0.	0.	0.	1.66E-05	6.84E-05	3.73E-04	3.61E-05	4.95E-04
84	2.40	0.	1.11E-07	0.	4.07E-07	7.62E-11	0.	0.	0.	1.66E-05	7.74E-05	4.33E-04	4.37E-05	5.71E-04
85	2.30	0.	4.24E-07	0.	0.	0.	0.	0.	0.	1.64E-05	8.80E-05	3.10E-04	5.24E-05	4.75E-04
86	2.20	0.	9.87E-07	0.	0.	0.	0.	0.	0.	1.64E-05	1.01E-04	3.76E-04	6.31E-05	5.57E-04
87	2.10	0.	1.22E-06	0.	0.	0.	0.	0.	0.	1.63E-05	1.16E-04	4.38E-04	7.38E-05	6.45E-04
88	2.00	0.	2.10E-06	0.	0.	0.	0.	0.	0.	1.90E-05	1.34E-04	5.00E-04	8.46E-05	7.37E-04
89	1.90	0.	3.50E-06	0.	0.	0.	0.	0.	0.	1.52E-05	1.57E-04	5.67E-04	9.64E-05	8.39E-04
90	1.80	0.	2.87E-06	0.	0.	0.	0.	0.	0.	1.45E-05	1.85E-04	6.72E-04	1.15E-04	9.98E-04
91	1.70	0.	3.43E-06	0.	0.	0.	0.	0.	0.	1.37E-05	2.20E-04	8.01E-04	1.40E-04	1.18E-03
92	1.60	0.	2.45E-06	0.	0.	0.	0.	0.	0.	1.16E-05	2.65E-04	9.20E-04	1.64E-04	1.37E-03
93	1.50	0.	2.95E-06	9.	0.	0.	0.	0.	0.	9.26E-06	3.22E-04	1.17E-03	1.98E-04	1.70E-03
94	1.40	0.	3.01E-06	0.	0.	0.	0.	0.	0.	0.	3.98E-04	1.44E-03	2.32E-04	2.07E-03
95	1.30	0.	2.27E-06	0.	0.	0.	0.	0.	0.	0.	4.99E-04	1.82E-03	3.04E-04	2.62E-03
96	1.20	0.	2.22E-06	0.	0.	0.	0.	0.	0.	0.	6.36E-04	1.82E-03	2.94E-04	2.75E-03
97	1.10	0.	1.96E-06	0.	0.	0.	0.	5.62E-12	0.	0.	8.28E-04	2.24E-03	3.69E-04	3.24E-03
98	1.00	0.	1.81E-06	0.	0.	0.	0.	8.20E-11	0.	0.	1.11E-03	2.71E-03	4.11E-04	4.23E-03
99	0.90	0.	1.48E-06	0.	0.	0.	0.	7.25E-11	0.	0.	1.54E-03	3.07E-03	4.84E-04	5.18E-03
100	0.80	0.	6.93E-07	0.	0.	0.	0.	1.48E-09	0.	0.	2.21E-03	3.53E-03	5.57E-04	6.30E-03
101	0.70	0.	1.74E-07	0.	0.	0.	0.	1.05E-09	0.	0.	3.31E-03	3.89E-03	6.18E-04	7.91E-03
102	0.60	0.	1.74E-08	0.	0.	0.	0.	3.93E-09	0.	0.	5.31E-03	4.34E-03	6.82E-04	1.03E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.98E-07	0.	0.	0.	6.46E-07	6.49E-08	2.49E-05	5.20E-06	3.08E-05
2	10.60	0.	0.	1.74E-07	0.	0.	0.	6.47E-07	6.64E-08	2.46E-05	5.19E-06	3.07E-05
3	10.50	0.	0.	1.72E-07	0.	0.	0.	6.47E-07	6.83E-08	2.47E-05	5.18E-06	3.08E-05
4	10.40	0.	0.	1.58E-07	0.	0.	0.	6.46E-07	7.03E-08	2.48E-05	5.17E-06	3.09E-05
5	10.30	0.	0.	1.33E-07	0.	0.	0.	6.49E-07	7.24E-08	2.49E-05	5.16E-06	3.09E-05
6	10.20	0.	0.	1.34E-07	0.	0.	0.	6.50E-07	7.45E-08	2.49E-05	5.15E-06	3.09E-05
7	10.10	0.	0.	1.24E-07	0.	0.	0.	6.51E-07	7.68E-08	2.50E-05	5.14E-06	3.10E-05
8	10.00	0.	0.	1.04E-07	0.	0.	0.	6.52E-07	7.91E-08	2.51E-05	5.13E-06	3.10E-05
9	9.90	0.	0.	1.05E-07	0.	0.	0.	6.53E-07	8.16E-08	2.51E-05	5.12E-06	3.11E-05
10	9.80	0.	0.	9.57E-08	0.	0.	0.	6.54E-07	8.41E-08	2.52E-05	5.11E-06	3.11E-05
11	9.70	0.	0.	7.92E-08	0.	0.	0.	6.55E-07	8.68E-08	2.52E-05	5.10E-06	3.12E-05
12	9.60	0.	0.	8.51E-08	0.	0.	0.	6.57E-07	8.95E-08	2.23E-05	5.09E-06	3.12E-05
13	9.50	0.	0.	6.95E-08	0.	0.	0.	6.58E-07	9.24E-08	2.54E-05	5.07E-06	3.13E-05
14	9.40	0.	0.	6.35E-08	0.	0.	0.	6.60E-07	9.54E-08	2.55E-05	5.06E-06	3.13E-05
15	9.30	0.	0.	6.44E-08	0.	0.	0.	6.62E-07	9.85E-08	2.55E-05	5.05E-06	3.14E-05
16	9.20	0.	0.	5.08E-08	0.	0.	0.	6.65E-07	1.02E-07	7.63E-06	5.05E-06	1.35E-05
17	9.10	0.	0.	5.15E-08	0.	0.	0.	6.67E-07	1.05E-07	7.62E-06	5.04E-06	1.35E-05
18	9.00	0.	0.	4.51E-08	0.	0.	0.	6.70E-07	1.09E-07	7.61E-06	5.03E-06	1.35E-05
19	8.90	0.	0.	4.02E-08	0.	0.	0.	6.72E-07	1.12E-07	7.60E-06	5.02E-06	1.34E-05
20	8.80	0.	0.	3.89E-08	0.	0.	0.	6.74E-07	1.16E-07	7.60E-06	5.01E-06	1.34E-05
21	8.70	0.	0.	3.21E-08	0.	0.	0.	6.77E-07	1.20E-07	7.59E-06	5.00E-06	1.34E-05
22	8.60	0.	0.	3.27E-08	0.	0.	0.	6.79E-07	1.25E-07	7.58E-06	4.99E-06	1.34E-05
23	8.50	0.	0.	2.73E-08	0.	0.	0.	6.82E-07	1.29E-07	7.58E-06	4.98E-06	1.34E-05
24	8.40	0.	0.	2.67E-08	0.	0.	0.	6.85E-07	1.34E-07	7.58E-06	4.97E-06	1.34E-05
25	8.30	0.	0.	2.16E-08	0.	0.	0.	6.89E-07	1.39E-07	7.58E-06	4.97E-06	1.34E-05
26	8.20	0.	0.	2.19E-08	0.	0.	0.	6.92E-07	1.44E-07	7.58E-06	5.01E-06	1.34E-05
27	8.10	0.	0.	1.78E-08	0.	0.	0.	6.96E-07	1.49E-07	7.57E-06	5.04E-06	1.35E-05
28	8.00	0.	0.	1.76E-08	0.	0.	0.	7.00E-07	1.55E-07	7.58E-06	5.07E-06	1.35E-05
29	7.90	0.	0.	1.45E-08	0.	0.	0.	7.03E-07	1.61E-07	7.59E-06	5.10E-06	1.36E-05
30	7.80	0.	0.	1.47E-08	0.	0.	0.	7.07E-07	1.67E-07	7.60E-06	5.13E-06	1.36E-05
31	7.70	0.	0.	1.24E-08	0.	0.	0.	7.10E-07	1.74E-07	7.61E-06	5.16E-06	1.37E-05
32	7.60	0.	0.	1.14E-08	0.	6.41E-13	0.	7.14E-07	1.81E-07	7.63E-06	5.19E-06	1.37E-05
33	7.50	0.	0.	1.02E-08	0.	2.83E-12	0.	7.17E-07	1.88E-07	7.64E-06	5.22E-06	1.38E-05
34	7.40	0.	0.	8.69E-09	0.	1.73E-11	0.	7.21E-07	1.96E-07	7.65E-06	5.25E-06	1.38E-05
35	7.30	0.	0.	8.15E-09	0.	8.06E-11	0.	7.25E-07	2.04E-07	7.67E-06	5.28E-06	1.39E-05
36	7.20	0.	0.	7.11E-09	0.	2.14E-10	0.	7.29E-07	2.13E-07	7.68E-06	5.31E-06	1.39E-05
37	7.10	0.	0.	6.68E-09	0.	6.10E-10	0.	7.35E-07	2.22E-07	7.69E-06	5.34E-06	1.40E-05
38	7.00	1.67E-12	0.	5.87E-09	0.	1.49E-09	0.	7.41E-07	2.32E-07	7.71E-06	5.37E-06	1.41E-05
39	6.90	3.20E-12	0.	5.21E-09	0.	1.66E-09	0.	7.47E-07	2.42E-07	7.72E-06	5.40E-06	1.41E-05
40	6.80	2.70E-12	0.	4.84E-09	0.	3.31E-09	0.	7.53E-07	2.53E-07	7.74E-06	5.44E-06	1.42E-05
41	6.70	1.92E-12	0.	4.08E-09	0.	3.73E-09	0.	7.59E-07	2.64E-07	7.75E-06	5.47E-06	1.43E-05
42	6.60	1.14E-12	0.	3.53E-09	0.	2.50E-09	0.	7.65E-07	2.76E-07	7.79E-06	5.51E-06	1.43E-05
43	6.50	6.44E-13	0.	2.68E-09	0.	4.23E-09	0.	7.71E-07	2.90E-07	7.84E-06	5.55E-06	1.45E-05
44	6.40	8.75E-13	0.	1.74E-09	2.06E-11	4.53E-09	0.	7.77E-07	3.03E-07	7.89E-06	5.59E-06	1.46E-05
45	6.30	1.83E-12	0.	1.01E-09	9.24E-11	2.61E-09	0.	7.83E-07	3.18E-07	7.94E-06	5.64E-06	1.47E-05
46	6.20	5.49E-12	0.	5.28E-10	1.26E-10	3.86E-09	0.	7.89E-07	3.34E-07	7.99E-06	5.72E-06	1.48E-05
47	6.10	2.24E-11	0.	2.34E-10	3.50E-10	5.43E-09	0.	7.95E-07	3.51E-07	8.06E-06	5.88E-06	1.49E-05
48	6.00	5.97E-11	0.	5.73E-11	3.13E-10	2.27E-09	0.	8.01E-07	3.69E-07	8.16E-06	5.88E-06	1.52E-05
49	5.90	9.84E-11	0.	4.08E-12	4.49E-10	2.32E-09	0.	8.01E-07	3.88E-07	8.26E-06	5.96E-06	1.54E-05
50	5.80	1.52E-10	0.	1.02E-13	6.13E-10	2.27E-09	0.	7.89E-07	4.08E-07	8.35E-06	6.05E-06	1.54E-05
51	5.70	1.84E-10	0.	0.	6.86E-10	2.44E-09	0.	7.41E-07	4.30E-07	8.44E-06	6.13E-06	1.57E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.31E-10	0.	0.	0.	5.44E-10	3.63E-09	0.	0.	8.89E-07	4.54E-07	8.55E-06	6.21E-06	1.59E-05
53	5.50	2.43E-10	0.	0.	0.	6.65E-10	3.42E-09	0.	0.	6.93E-07	4.79E-07	8.78E-06	6.30E-06	1.62E-05
54	5.40	2.58E-10	0.	0.	0.	5.83E-10	2.50E-09	0.	0.	6.97E-07	5.07E-07	8.85E-06	6.43E-06	1.65E-05
55	5.30	2.52E-10	0.	0.	0.	5.98E-10	3.42E-09	0.	0.	7.01E-07	5.36E-07	9.06E-06	6.51E-06	1.68E-05
56	5.20	1.85E-10	0.	0.	0.	6.30E-10	2.22E-09	0.	0.	7.06E-07	5.68E-07	9.25E-06	6.65E-06	1.72E-05
57	5.10	1.74E-10	0.	0.	0.	6.20E-10	2.95E-09	0.	0.	7.12E-07	6.02E-07	9.50E-06	6.79E-06	1.76E-05
58	5.00	1.30E-10	0.	0.	0.	5.54E-10	2.64E-09	0.	0.	7.17E-07	6.39E-07	9.78E-06	6.93E-06	1.81E-05
59	4.90	1.09E-10	0.	0.	0.	6.04E-10	2.75E-09	0.	0.	7.23E-07	6.79E-07	1.01E-05	7.07E-06	1.85E-05
60	4.80	1.09E-10	0.	0.	0.	6.41E-10	2.54E-09	0.	0.	7.29E-07	7.23E-07	1.04E-05	7.22E-06	1.90E-05
61	4.70	1.19E-10	0.	0.	0.	6.22E-10	2.23E-09	0.	0.	7.35E-07	7.71E-07	1.07E-05	7.40E-06	1.96E-05
62	4.60	1.41E-10	0.	0.	0.	6.27E-10	2.15E-09	0.	0.	7.41E-07	8.22E-07	1.11E-05	7.58E-06	2.02E-05
63	4.50	1.44E-10	0.	2.89E-10	0.	5.55E-10	1.30E-09	0.	0.	7.47E-07	8.79E-07	1.15E-05	7.77E-06	2.09E-05
64	4.40	1.48E-10	0.	9.66E-10	0.	5.48E-10	1.07E-09	0.	0.	7.53E-07	9.40E-07	1.20E-05	7.96E-06	2.16E-05
65	4.30	1.36E-10	0.	2.66E-09	0.	5.06E-10	6.38E-10	0.	0.	7.59E-07	1.01E-06	1.25E-05	8.15E-06	2.24E-05
66	4.20	1.24E-10	0.	9.80E-09	0.	5.20E-10	4.81E-10	0.	0.	7.65E-07	1.08E-06	1.30E-05	8.29E-06	2.31E-05
67	4.10	1.13E-10	0.	3.51E-09	0.	4.99E-10	1.28E-10	0.	0.	7.68E-07	1.16E-06	1.35E-05	2.00E-06	1.74E-05
68	4.00	1.02E-10	0.	1.39E-08	0.	4.70E-10	9.76E-11	0.	0.	7.71E-07	1.25E-06	1.21E-05	2.06E-06	1.62E-05
69	3.90	8.35E-11	0.	6.23E-09	1.80E-08	4.15E-10	4.00E-11	0.	0.	7.68E-07	1.35E-06	1.24E-05	2.12E-06	1.66E-05
70	3.80	9.01E-11	0.	9.36E-09	1.02E-07	4.41E-10	0.	0.	0.	7.65E-07	1.46E-06	9.60E-06	2.19E-06	1.42E-05
71	3.70	7.65E-11	0.	1.14E-08	3.00E-08	3.55E-10	0.	0.	0.	7.53E-07	1.58E-06	1.00E-05	2.44E-06	1.49E-05
72	3.60	6.73E-11	0.	6.55E-09	1.82E-07	3.85E-10	0.	0.	0.	7.08E-07	1.72E-06	9.87E-06	2.72E-06	1.52E-05
73	3.50	6.10E-11	0.	9.44E-09	4.61E-07	2.87E-10	0.	0.	0.	6.46E-07	1.87E-06	1.10E-05	3.02E-06	1.71E-05
74	3.40	5.38E-11	0.	5.23E-09	4.38E-08	3.19E-10	0.	0.	0.	3.72E-07	2.05E-06	1.24E-05	3.36E-06	1.82E-05
75	3.30	4.22E-11	0.	5.51E-09	2.20E-07	2.43E-10	0.	0.	0.	3.73E-07	2.24E-06	1.38E-05	3.70E-06	2.03E-05
76	3.20	3.55E-11	0.	3.34E-09	4.72E-07	2.50E-10	0.	0.	0.	3.74E-07	2.46E-06	1.52E-05	4.06E-06	2.25E-05
77	3.10	3.29E-11	0.	2.56E-09	7.17E-09	2.29E-10	0.	0.	0.	3.75E-07	2.71E-06	1.46E-05	4.42E-06	2.42E-05
78	3.00	2.84E-11	0.	1.50E-09	2.14E-07	2.07E-10	0.	0.	0.	3.79E-07	2.99E-06	1.80E-05	4.78E-06	2.64E-05
79	2.90	2.30E-11	0.	9.05E-10	1.31E-07	1.49E-10	0.	0.	0.	3.76E-07	3.31E-06	1.95E-05	5.14E-06	2.84E-05
80	2.80	2.33E-11	0.	4.31E-10	6.12E-08	9.56E-11	0.	0.	0.	3.77E-07	3.69E-06	2.11E-05	5.55E-06	3.08E-05
81	2.70	1.42E-11	0.	1.99E-10	1.04E-07	4.85E-11	0.	0.	0.	3.77E-07	4.11E-06	2.29E-05	5.98E-06	3.34E-05
82	2.60	6.23E-12	0.	10.00E-11	9.83E-09	2.00E-11	0.	0.	0.	3.77E-07	4.61E-06	2.47E-05	5.96E-06	3.57E-05
83	2.50	4.25E-13	0.	1.18E-11	8.48E-09	4.56E-12	0.	0.	0.	3.77E-07	5.19E-06	2.79E-05	2.93E-06	3.64E-05
84	2.40	0.	6.25E-10	0.	8.29E-09	4.71E-13	0.	0.	0.	3.77E-07	5.88E-06	1.97E-05	3.60E-06	2.95E-05
85	2.30	0.	2.38E-09	0.	0.	0.	0.	0.	0.	3.74E-07	6.68E-06	2.38E-05	4.32E-06	3.52E-05
86	2.20	0.	5.54E-09	0.	0.	0.	0.	0.	0.	3.72E-07	7.65E-06	2.82E-05	5.21E-06	4.14E-05
87	2.10	0.	6.83E-09	0.	0.	0.	0.	0.	0.	3.71E-07	8.80E-06	3.28E-05	6.89E-06	4.91E-05
88	2.00	0.	1.22E-08	0.	0.	0.	0.	0.	0.	3.59E-07	1.02E-05	3.79E-05	6.93E-06	5.50E-05
89	1.90	0.	1.97E-08	0.	0.	0.	0.	0.	0.	3.49E-07	1.19E-05	4.25E-05	7.95E-06	6.27E-05
90	1.80	0.	1.61E-08	0.	0.	0.	0.	0.	0.	3.30E-07	1.41E-05	5.03E-05	9.53E-06	7.43E-05
91	1.70	0.	1.92E-08	0.	0.	0.	0.	0.	0.	3.11E-07	1.67E-05	6.00E-05	1.15E-05	8.85E-05
92	1.60	0.	1.37E-08	0.	0.	0.	0.	0.	0.	2.63E-07	2.01E-05	6.96E-05	1.35E-05	1.03E-04
93	1.50	0.	1.65E-08	0.	0.	0.	0.	0.	0.	1.20E-07	2.45E-05	8.88E-05	1.55E-05	1.20E-04
94	1.40	0.	1.69E-08	0.	0.	0.	0.	0.	0.	0.	3.02E-05	1.01E-04	1.91E-05	1.51E-04
95	1.30	0.	1.22E-08	0.	0.	0.	0.	0.	0.	0.	3.79E-05	1.01E-04	1.80E-05	1.57E-04
96	1.20	0.	1.25E-08	0.	0.	0.	0.	0.	0.	0.	4.83E-05	1.33E-04	2.42E-05	2.09E-04
97	1.10	0.	1.10E-08	0.	0.	0.	0.	3.47E-14	0.	0.	6.29E-05	1.68E-04	3.04E-05	2.61E-04
98	1.00	0.	1.01E-08	0.	0.	0.	0.	3.83E-13	0.	0.	8.44E-05	1.96E-04	3.39E-05	3.14E-04
99	0.90	0.	8.29E-09	0.	0.	0.	0.	4.48E-13	0.	0.	1.17E-04	2.38E-04	3.99E-05	3.87E-04
100	0.80	0.	3.89E-09	0.	0.	0.	0.	8.67E-12	0.	0.	1.68E-04	2.65E-04	4.58E-05	4.78E-04
101	0.70	0.	9.78E-10	0.	0.	0.	0.	6.50E-12	0.	0.	2.51E-04	2.91E-04	5.03E-05	5.93E-04
102	0.60	0.	9.90E-11	0.	0.	0.	0.	2.43E-11	0.	0.	4.03E-04	2.68E-04	4.19E-05	7.05E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICRM)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.79E-10	0.	0.	0.	7.23E-09	2.91E-09	1.07E-06	2.74E-07	1.36E-06
2	10.60	0.	0.	3.33E-10	0.	0.	0.	7.24E-09	3.00E-09	1.08E-06	2.73E-07	1.36E-06
3	10.50	0.	0.	3.30E-10	0.	0.	0.	7.25E-09	3.08E-09	1.08E-06	2.73E-07	1.37E-06
4	10.40	0.	0.	3.03E-10	0.	0.	0.	7.26E-09	3.17E-09	1.09E-06	2.72E-07	1.37E-06
5	10.30	0.	0.	2.59E-10	0.	0.	0.	7.27E-09	3.27E-09	1.09E-06	2.72E-07	1.37E-06
6	10.20	0.	0.	2.57E-10	0.	0.	0.	7.28E-09	3.37E-09	1.09E-06	2.71E-07	1.37E-06
7	10.10	0.	0.	2.37E-10	0.	0.	0.	7.29E-09	3.47E-09	1.09E-06	2.71E-07	1.38E-06
8	10.00	0.	0.	1.98E-10	0.	0.	0.	7.30E-09	3.57E-09	1.10E-06	2.70E-07	1.38E-06
9	9.90	0.	0.	2.02E-10	0.	0.	0.	7.31E-09	3.68E-09	1.10E-06	2.70E-07	1.38E-06
10	9.80	0.	0.	1.83E-10	0.	0.	0.	7.32E-09	3.80E-09	1.10E-06	2.69E-07	1.38E-06
11	9.70	0.	0.	1.52E-10	0.	0.	0.	7.34E-09	3.92E-09	1.10E-06	2.69E-07	1.38E-06
12	9.60	0.	0.	1.63E-10	0.	0.	0.	7.35E-09	4.04E-09	1.11E-06	2.68E-07	1.39E-06
13	9.50	0.	0.	1.33E-10	0.	0.	0.	7.36E-09	4.17E-09	1.11E-06	2.67E-07	1.39E-06
14	9.40	0.	0.	1.22E-10	0.	0.	0.	7.39E-09	4.31E-09	1.11E-06	2.67E-07	1.39E-06
15	9.30	0.	0.	1.23E-10	0.	0.	0.	7.42E-09	4.45E-09	3.34E-07	2.66E-07	6.13E-07
16	9.20	0.	0.	9.84E-11	0.	0.	0.	7.44E-09	4.59E-09	3.34E-07	2.66E-07	6.12E-07
17	9.10	0.	0.	9.86E-11	0.	0.	0.	7.47E-09	4.75E-09	3.34E-07	2.65E-07	6.11E-07
18	9.00	0.	0.	8.64E-11	0.	0.	0.	7.50E-09	4.91E-09	3.33E-07	2.65E-07	6.10E-07
19	8.90	0.	0.	7.78E-11	0.	0.	0.	7.52E-09	5.08E-09	3.33E-07	2.64E-07	6.10E-07
20	8.80	0.	0.	7.44E-11	0.	0.	0.	7.55E-09	5.25E-09	3.32E-07	2.64E-07	6.09E-07
21	8.70	0.	0.	6.16E-11	0.	0.	0.	7.58E-09	5.44E-09	3.32E-07	2.63E-07	6.08E-07
22	8.60	0.	0.	6.27E-11	0.	0.	0.	7.60E-09	5.63E-09	3.32E-07	2.63E-07	6.08E-07
23	8.50	0.	0.	5.24E-11	0.	0.	0.	7.63E-09	5.83E-09	3.32E-07	2.62E-07	6.08E-07
24	8.40	0.	0.	5.12E-11	0.	0.	0.	7.67E-09	6.04E-09	3.32E-07	2.62E-07	6.07E-07
25	8.30	0.	0.	4.15E-11	0.	0.	0.	7.71E-09	6.27E-09	3.32E-07	2.62E-07	6.08E-07
26	8.20	0.	0.	4.12E-11	0.	0.	0.	7.79E-09	6.50E-09	3.32E-07	2.64E-07	6.10E-07
27	8.10	0.	0.	3.41E-11	0.	0.	0.	7.79E-09	6.74E-09	3.31E-07	2.65E-07	6.11E-07
28	8.00	0.	0.	3.36E-11	0.	0.	0.	7.83E-09	7.00E-09	3.32E-07	2.67E-07	6.13E-07
29	7.90	0.	0.	2.77E-11	0.	0.	0.	7.87E-09	7.27E-09	3.32E-07	2.69E-07	6.16E-07
30	7.80	0.	0.	2.82E-11	0.	0.	0.	7.91E-09	7.55E-09	3.33E-07	2.70E-07	6.18E-07
31	7.70	0.	0.	2.37E-11	0.	0.	0.	7.95E-09	7.85E-09	3.33E-07	2.72E-07	6.21E-07
32	7.60	0.	0.	2.39E-11	0.	1.48E-15	0.	7.99E-09	8.17E-09	3.34E-07	2.73E-07	6.23E-07
33	7.50	0.	0.	1.95E-11	0.	6.52E-15	0.	8.03E-09	8.50E-09	3.34E-07	2.75E-07	6.26E-07
34	7.40	0.	0.	1.70E-11	0.	3.98E-14	0.	8.08E-09	8.85E-09	3.35E-07	2.77E-07	6.29E-07
35	7.30	0.	0.	1.56E-11	0.	1.86E-13	0.	8.12E-09	9.22E-09	3.36E-07	2.78E-07	6.31E-07
36	7.20	0.	0.	1.36E-11	0.	4.93E-13	0.	8.17E-09	9.61E-09	3.36E-07	2.80E-07	6.34E-07
37	7.10	0.	0.	1.27E-11	0.	1.41E-12	0.	8.23E-09	10.00E-09	3.37E-07	2.82E-07	6.37E-07
38	7.00	4.65E-15	0.	1.12E-11	0.	3.40E-12	0.	8.30E-09	1.05E-08	3.37E-07	2.83E-07	6.39E-07
39	6.90	3.89E-15	0.	9.98E-12	0.	3.83E-12	0.	8.37E-09	1.09E-08	3.38E-07	2.85E-07	6.42E-07
40	6.80	7.49E-15	0.	9.26E-12	0.	7.62E-12	0.	8.43E-09	1.14E-08	3.38E-07	2.86E-07	6.45E-07
41	6.70	5.32E-15	0.	7.82E-12	0.	8.60E-12	0.	8.50E-09	1.19E-08	3.39E-07	2.88E-07	6.48E-07
42	6.60	3.18E-15	0.	6.76E-12	0.	5.76E-12	0.	8.57E-09	1.25E-08	3.41E-07	2.90E-07	6.52E-07
43	6.50	1.79E-15	0.	5.14E-12	0.	9.74E-12	0.	8.63E-09	1.31E-08	3.43E-07	2.92E-07	6.57E-07
44	6.40	2.43E-15	0.	3.34E-12	4.74E-14	1.04E-11	0.	8.70E-09	1.37E-08	3.45E-07	2.94E-07	6.62E-07
45	6.30	5.07E-15	0.	1.94E-12	2.13E-13	6.00E-12	0.	8.77E-09	1.44E-08	3.47E-07	2.97E-07	6.68E-07
46	6.20	1.52E-14	0.	1.01E-12	2.90E-13	8.89E-12	0.	8.83E-09	1.51E-08	3.50E-07	3.01E-07	6.75E-07
47	6.10	6.21E-14	0.	4.48E-13	8.08E-13	1.25E-11	0.	8.90E-09	1.58E-08	3.93E-07	3.06E-07	6.83E-07
48	6.00	1.66E-13	0.	1.10E-13	7.22E-13	5.24E-12	0.	8.97E-09	1.66E-08	3.57E-07	3.10E-07	6.93E-07
49	5.90	2.73E-13	0.	9.82E-15	1.03E-12	5.36E-12	0.	8.47E-09	1.75E-08	3.61E-07	3.14E-07	7.02E-07
50	5.80	4.22E-13	0.	1.94E-14	1.41E-12	5.23E-12	0.	8.83E-09	1.84E-08	3.65E-07	3.19E-07	7.11E-07
51	5.70	5.10E-13	0.	0.	1.38E-12	5.72E-12	0.	8.30E-09	1.94E-08	3.69E-07	3.23E-07	7.20E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.41E-13	0.	0.	0.	1.25E-12	8.36E-12	0.	0.	7.72E-09	2.05E-08	3.74E-07	3.27E-07	7.38E-07
53	5.50	6.75E-13	0.	0.	0.	1.53E-12	7.86E-12	0.	0.	7.76E-09	2.16E-08	3.81E-07	3.32E-07	7.42E-07
54	5.40	7.17E-13	0.	0.	0.	1.34E-12	5.75E-12	0.	0.	7.80E-09	2.29E-08	3.88E-07	3.37E-07	7.56E-07
55	5.30	7.00E-13	0.	0.	0.	1.38E-12	7.87E-12	0.	0.	7.85E-09	2.42E-08	3.96E-07	3.43E-07	7.71E-07
56	5.20	5.14E-13	0.	0.	0.	1.45E-12	5.12E-12	0.	0.	7.90E-09	2.56E-08	4.05E-07	3.50E-07	7.88E-07
57	5.10	4.83E-13	0.	0.	0.	1.43E-12	6.81E-12	0.	0.	7.96E-09	2.72E-08	4.16E-07	3.58E-07	8.08E-07
58	5.00	3.61E-13	0.	0.	0.	1.28E-12	6.08E-12	0.	0.	8.03E-09	2.89E-08	4.28E-07	3.65E-07	8.30E-07
59	4.90	3.03E-13	0.	0.	0.	1.39E-12	6.33E-12	0.	0.	8.10E-09	3.07E-08	4.41E-07	3.72E-07	8.52E-07
60	4.80	3.01E-13	0.	0.	0.	1.48E-12	5.85E-12	0.	0.	8.17E-09	3.26E-08	4.54E-07	3.80E-07	8.75E-07
61	4.70	3.29E-13	0.	0.	0.	1.43E-12	5.14E-12	0.	0.	8.23E-09	3.48E-08	4.67E-07	3.90E-07	9.00E-07
62	4.60	3.92E-13	0.	0.	0.	1.45E-12	4.73E-12	0.	0.	8.30E-09	3.71E-08	4.84E-07	4.00E-07	9.29E-07
63	4.50	3.99E-13	0.	5.53E-13	0.	1.28E-12	3.47E-12	0.	0.	8.37E-09	3.97E-08	5.04E-07	4.09E-07	9.62E-07
64	4.40	4.12E-13	0.	1.85E-12	0.	1.26E-12	2.47E-12	0.	0.	8.43E-09	4.25E-08	5.24E-07	4.19E-07	9.95E-07
65	4.30	3.77E-13	0.	5.10E-12	0.	1.17E-12	1.47E-12	0.	0.	8.50E-09	4.55E-08	5.46E-07	4.26E-07	1.03E-06
66	4.20	3.44E-13	0.	1.88E-11	0.	1.22E-12	1.11E-12	0.	0.	8.57E-09	4.88E-08	5.68E-07	4.07E-07	1.03E-06
67	4.10	3.14E-13	0.	6.72E-12	0.	1.15E-12	2.94E-13	0.	0.	8.60E-09	5.25E-08	5.90E-07	1.85E-07	7.50E-07
68	4.00	2.82E-13	0.	2.66E-11	0.	1.08E-12	2.25E-13	0.	0.	8.63E-09	5.66E-08	5.21E-07	1.88E-07	6.95E-07
69	3.90	2.32E-13	0.	1.19E-11	1.62E-10	9.57E-13	9.2.E-14	0.	0.	8.60E-09	6.11E-08	4.08E-07	1.12E-07	5.89E-07
70	3.80	2.50E-13	0.	1.79E-11	9.23E-10	1.02E-12	0.	0.	0.	8.57E-09	6.60E-08	4.23E-07	1.16E-07	6.15E-07
71	3.70	2.12E-13	0.	2.11E-11	2.70E-10	8.17E-13	0.	0.	0.	8.43E-09	7.16E-08	3.95E-07	1.26E-07	6.03E-07
72	3.60	1.87E-13	0.	1.26E-11	1.64E-09	8.86E-13	0.	0.	0.	7.90E-09	7.78E-08	4.32E-07	1.43E-07	6.62E-07
73	3.50	1.69E-13	0.	1.81E-11	4.16E-09	6.62E-13	0.	0.	0.	7.23E-09	8.47E-08	4.83E-07	1.59E-07	7.39E-07
74	3.40	1.49E-13	0.	1.08E-11	4.13E-10	7.36E-13	0.	0.	0.	4.17E-09	9.24E-08	5.43E-07	1.77E-07	8.17E-07
75	3.30	1.17E-13	0.	1.06E-11	1.98E-09	5.60E-13	0.	0.	0.	4.18E-09	1.01E-07	6.03E-07	1.95E-07	9.05E-07
76	3.20	9.84E-14	0.	6.39E-12	4.25E-09	5.77E-13	0.	0.	0.	4.19E-09	1.11E-07	6.64E-07	2.14E-07	9.97E-07
77	3.10	9.14E-14	0.	4.89E-12	6.46E-10	5.27E-13	0.	0.	0.	4.19E-09	1.22E-07	7.26E-07	2.33E-07	1.09E-06
78	3.00	7.89E-14	0.	2.87E-12	1.94E-09	4.78E-13	0.	0.	0.	4.20E-09	1.35E-07	7.88E-07	2.52E-07	1.18E-06
79	2.90	6.38E-14	0.	1.73E-12	1.18E-09	3.43E-13	0.	0.	0.	4.21E-09	1.50E-07	8.52E-07	2.71E-07	1.28E-06
80	2.80	6.47E-14	0.	8.26E-13	5.51E-10	2.20E-13	0.	0.	0.	4.22E-09	1.66E-07	9.24E-07	2.92E-07	1.39E-06
81	2.70	3.94E-14	0.	3.81E-13	9.40E-10	1.12E-13	0.	0.	0.	4.22E-09	1.86E-07	1.00E-06	2.92E-07	1.48E-06
82	2.60	1.73E-14	0	1.92E-13	8.85E-11	4.61E-14	0.	0.	0.	4.22E-09	2.08E-07	1.08E-06	1.34E-07	1.43E-06
83	2.50	1.18E-15	0.	2.27E-14	7.64E-11	1.05E-14	0.	0.	0.	4.22E-09	2.34E-07	6.95E-07	1.55E-07	1.09E-06
84	2.40	0.	1.20E-12	0.	7.47E-11	1.09E-15	0.	0.	0.	4.22E-09	2.65E-07	8.60E-07	1.90E-07	1.32E-06
85	2.30	0.	4.58E-12	0.	0.	0.	0.	0.	0.	4.18E-09	3.02E-07	1.04E-06	2.28E-07	1.58E-06
86	2.20	0.	1.06E-11	0.	0.	0.	0.	0.	0.	4.17E-09	3.45E-07	1.23E-06	2.74E-07	1.86E-06
87	2.10	0.	1.31E-11	0.	0.	0.	0.	0.	0.	4.15E-09	3.98E-07	1.44E-06	3.21E-07	2.16E-06
88	2.00	0.	2.34E-11	0.	0.	0.	0.	0.	0.	4.02E-09	4.61E-07	1.64E-06	3.68E-07	2.47E-06
89	1.90	0.	3.77E-11	0.	0.	0.	0.	0.	0.	3.86E-09	5.39E-07	1.86E-06	4.19E-07	2.82E-06
90	1.80	0.	3.09E-11	0.	0.	0.	0.	0.	0.	3.49E-09	6.35E-07	2.20E-06	5.02E-07	3.34E-06
91	1.70	0.	3.68E-11	0.	0.	0.	0.	0.	0.	3.40E-09	7.56E-07	2.62E-06	6.06E-07	3.99E-06
92	1.60	0.	2.63E-11	0.	0.	0.	0.	0.	0.	2.94E-09	9.09E-07	3.05E-06	6.70E-07	4.63E-06
93	1.50	0.	3.17E-11	0.	0.	0.	0.	0.	0.	1.34E-09	1.10E-06	3.58E-06	6.17E-07	5.58E-06
94	1.40	0.	3.23E-11	0.	0.	0.	0.	0.	0.	0.	1.36E-06	2.99E-06	6.65E-07	5.02E-06
95	1.30	0.	2.45E-11	0.	0.	0.	0.	0.	0.	0.	1.71E-06	4.42E-06	9.49E-07	7.08E-06
96	1.20	0.	2.39E-11	0.	0.	0.	0.	0.	0.	0.	2.18E-06	5.82E-06	1.28E-06	9.28E-06
97	1.10	0.	2.11E-11	0.	0.	0.	0.	8.01E-17	0.	0.	2.84E-06	7.34E-06	1.47E-06	1.17E-05
98	1.00	0.	1.94E-11	0.	0.	0.	0.	8.83E-16	0.	0.	3.81E-06	8.57E-06	1.79E-06	1.42E-05
99	0.90	0.	1.59E-11	0.	0.	0.	0.	1.63E-15	0.	0.	5.29E-06	1.01E-05	2.18E-06	1.75E-05
100	0.80	0.	7.45E-12	0.	0.	0.	0.	2.00E-14	0.	0.	7.57E-06	1.13E-05	2.34E-06	2.12E-05
101	0.70	0.	1.87E-12	0.	0.	0.	0.	1.50E-14	0.	0.	1.14E-05	1.01E-05	1.95E-06	2.34E-05
102	0.60	0.	1.90E-13	0.	0.	0.	0.	5.60E-14	0.	0.	1.82E-05	1.14E-05	2.21E-06	3.18E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.24E-13	0.	0.	0.	2.05E-11	5.42E-11	1.94E-08	5.70E-09	2.52E-08
2	10.60	0.	0.	1.09E-13	0.	0.	0.	2.05E-11	5.50E-11	1.95E-08	5.69E-09	2.53E-08
3	10.50	0.	0.	1.08E-13	0.	0.	0.	2.06E-11	5.74E-11	1.96E-08	5.68E-09	2.54E-08
4	10.40	0.	0.	9.93E-14	0.	0.	0.	2.06E-11	5.91E-11	1.97E-08	5.67E-09	2.54E-08
5	10.30	0.	0.	8.36E-14	0.	0.	0.	2.06E-11	6.08E-11	1.97E-08	5.66E-09	2.54E-08
6	10.20	0.	0.	8.44E-14	0.	0.	0.	2.07E-11	6.26E-11	1.98E-08	5.65E-09	2.55E-08
7	10.10	0.	0.	7.76E-14	0.	0.	0.	2.07E-11	6.45E-11	1.98E-08	5.64E-09	2.55E-08
8	10.00	0.	0.	6.91E-14	0.	0.	0.	2.07E-11	6.65E-11	1.99E-08	5.62E-09	2.56E-08
9	9.90	0.	0.	6.62E-14	0.	0.	0.	2.07E-11	6.85E-11	1.99E-08	5.61E-09	2.56E-08
10	9.80	0.	0.	6.01E-14	0.	0.	0.	2.08E-11	7.07E-11	2.00E-08	5.60E-09	2.57E-08
11	9.70	0.	0.	4.97E-14	0.	0.	0.	2.08E-11	7.29E-11	2.00E-08	5.59E-09	2.57E-08
12	9.60	0.	0.	5.34E-14	0.	0.	0.	2.09E-11	7.52E-11	2.01E-08	5.58E-09	2.57E-08
13	9.50	0.	0.	4.36E-14	0.	0.	0.	2.09E-11	7.76E-11	2.01E-08	5.57E-09	2.58E-08
14	9.40	0.	0.	3.99E-14	0.	0.	0.	2.10E-11	8.01E-11	2.02E-08	5.56E-09	2.58E-08
15	9.30	0.	0.	4.05E-14	0.	0.	0.	2.11E-11	8.28E-11	6.06E-09	5.54E-09	1.17E-08
16	9.20	0.	0.	3.16E-14	0.	0.	0.	2.11E-11	8.55E-11	6.05E-09	5.53E-09	1.17E-08
17	9.10	0.	0.	3.23E-14	0.	0.	0.	2.12E-11	8.84E-11	6.04E-09	5.52E-09	1.17E-08
18	9.00	0.	0.	2.83E-14	0.	0.	0.	2.13E-11	9.14E-11	6.03E-09	5.51E-09	1.17E-08
19	8.90	0.	0.	2.53E-14	0.	0.	0.	2.14E-11	9.45E-11	6.03E-09	5.50E-09	1.16E-08
20	8.80	0.	0.	2.44E-14	0.	0.	0.	2.14E-11	9.78E-11	6.02E-09	5.49E-09	1.16E-08
21	8.70	0.	0.	2.02E-14	0.	0.	0.	2.15E-11	1.01E-10	6.02E-09	5.48E-09	1.16E-08
22	8.60	0.	0.	2.06E-14	0.	0.	0.	2.16E-11	1.05E-10	6.01E-09	5.47E-09	1.16E-08
23	8.50	0.	0.	1.72E-14	0.	0	0.	2.17E-11	1.08E-10	6.01E-09	5.46E-09	1.16E-08
24	8.40	0.	0.	1.68E-14	0.	0.	0.	2.18E-11	1.12E-10	6.01E-09	5.45E-09	1.16E-08
25	8.30	0.	0.	1.36E-14	0.	0.	0.	2.19E-11	1.17E-10	6.01E-09	5.46E-09	1.16E-08
26	8.20	0.	0.	1.35E-14	0.	0.	0.	2.20E-11	1.21E-10	6.01E-09	5.49E-09	1.16E-08
27	8.10	0.	0.	1.12E-14	0.	0.	0.	2.21E-11	1.25E-10	6.00E-09	5.52E-09	1.17E-08
28	8.00	0.	0.	1.10E-14	0.	0.	0.	2.22E-11	1.30E-10	6.00E-09	5.56E-09	1.17E-08
29	7.90	0.	0.	9.10E-15	0.	0.	0.	2.23E-11	1.35E-10	6.01E-09	5.59E-09	1.18E-08
30	7.80	0.	0.	9.23E-15	0.	0.	0.	2.25E-11	1.41E-10	6.02E-09	5.62E-09	1.18E-08
31	7.70	0.	0.	7.78E-15	0.	0.	0.	2.26E-11	1.46E-10	6.03E-09	5.66E-09	1.19E-08
32	7.60	0.	0.	7.13E-15	0.	5.57E-19	0.	2.27E-11	1.52E-10	6.04E-09	5.69E-09	1.19E-08
33	7.50	0.	0.	6.41E-15	0.	2.46E-18	0.	2.28E-11	1.58E-10	6.05E-09	5.73E-09	1.20E-08
34	7.40	0.	0.	5.56E-15	0.	1.50E-17	0.	2.29E-11	1.65E-10	6.07E-09	5.76E-09	1.20E-08
35	7.30	0.	0.	5.12E-15	0.	7.00E-17	0.	2.31E-11	1.71E-10	6.08E-09	5.79E-09	1.21E-08
36	7.20	0.	0.	4.47E-15	0.	1.84E-16	0.	2.32E-11	1.79E-10	6.09E-09	5.83E-09	1.21E-08
37	7.10	0.	0.	4.16E-15	0.	5.30E-16	0.	2.34E-11	1.86E-10	6.10E-09	5.86E-09	1.22E-08
38	7.00	2.01E-18	0.	3.69E-15	0.	1.28E-15	0.	2.36E-11	1.95E-10	6.11E-09	5.89E-09	1.22E-08
39	6.90	3.85E-18	0.	3.27E-15	0.	1.44E-15	0.	2.37E-11	2.03E-10	6.12E-09	5.93E-09	1.23E-08
40	6.80	3.25E-18	0.	3.04E-15	0.	2.87E-15	0.	2.39E-11	2.12E-10	6.13E-09	5.96E-09	1.23E-08
41	6.70	2.31E-18	0.	2.56E-15	0.	3.24E-15	0.	2.41E-11	2.22E-10	6.14E-09	6.00E-09	1.24E-08
42	6.60	1.39E-18	0.	2.22E-15	0.	2.17E-15	0.	2.43E-11	2.32E-10	6.17E-09	6.04E-09	1.25E-08
43	6.50	7.74E-19	0.	1.69E-15	0.	3.67E-15	0.	2.45E-11	2.43E-10	6.21E-09	6.09E-09	1.26E-08
44	6.40	1.05E-18	0.	1.09E-15	1.79E-17	3.92E-15	0.	2.47E-11	2.55E-10	6.25E-09	6.13E-09	1.27E-08
45	6.30	2.20E-18	0.	6.37E-16	5.03E-17	2.26E-15	0.	2.49E-11	2.67E-10	6.29E-09	6.18E-09	1.28E-08
46	6.20	6.68E-18	0.	3.32E-16	1.09E-16	3.35E-15	0.	2.51E-11	2.81E-10	6.33E-09	6.27E-09	1.29E-08
47	6.10	2.69E-17	0.	1.47E-16	3.04E-16	4.71E-15	0.	2.53E-11	2.95E-10	6.39E-09	6.36E-09	1.31E-08
48	6.00	7.19E-17	0.	3.60E-17	2.72E-16	1.97E-15	0.	2.55E-11	3.10E-10	6.44E-09	6.45E-09	1.33E-08
49	5.90	1.18E-16	0.	2.57E-18	3.90E-16	2.02E-15	0.	2.55E-11	3.26E-10	6.54E-09	6.54E-09	1.34E-08
50	5.80	1.83E-16	0.	6.38E-20	5.33E-16	1.97E-15	0.	2.51E-11	3.43E-10	6.62E-09	6.63E-09	1.36E-08
51	5.70	2.21E-16	0.	0.	5.96E-16	2.16E-15	0.	2.36E-11	3.62E-10	6.69E-09	6.72E-09	1.38E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-08 (10.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.78E-16	0.	0.	0.	4.73E-16	3.15E-15	0.	0.	2.19E-11	3.01E-10	6.78E-09	6.82E-09	1.48E-08
53	5.50	2.93E-16	0.	0.	0.	5.78E-16	2.97E-15	0.	0.	2.20E-11	4.03E-10	6.89E-09	6.91E-09	1.42E-08
54	5.40	3.11E-16	0.	0.	0.	5.06E-16	2.17E-15	0.	0.	2.21E-11	4.26E-10	7.03E-09	7.02E-09	1.45E-08
55	5.30	3.03E-16	0.	0.	0.	5.20E-16	2.97E-15	0.	0.	2.23E-11	4.50E-10	7.18E-09	7.14E-09	1.48E-08
56	5.20	2.23E-16	0.	0.	0.	5.48E-16	1.93E-15	0.	0.	2.24E-11	4.77E-10	7.33E-09	7.29E-09	1.51E-08
57	5.10	2.10E-16	0.	0.	0.	5.38E-16	2.57E-15	0.	0.	2.26E-11	5.06E-10	7.53E-09	7.44E-09	1.55E-08
58	5.00	1.57E-16	0.	0.	0.	4.82E-16	2.29E-15	0.	0.	2.28E-11	5.37E-10	7.75E-09	7.60E-09	1.59E-08
59	4.90	1.31E-16	0.	0.	0.	5.25E-16	2.39E-15	0.	0.	2.30E-11	5.71E-10	7.98E-09	7.75E-09	1.63E-08
60	4.80	1.31E-16	0.	0.	0.	5.57E-16	2.21E-15	0.	0.	2.32E-11	6.08E-10	8.22E-09	7.92E-09	1.68E-08
61	4.70	1.43E-16	0.	0.	0.	5.40E-16	1.94E-15	0.	0.	2.34E-11	6.48E-10	8.46E-09	8.11E-09	1.72E-08
62	4.60	1.76E-16	0.	0.	0.	5.45E-16	1.78E-15	0.	0.	2.36E-11	6.91E-10	8.76E-09	8.32E-09	1.78E-08
63	4.50	1.73E-16	0.	1.81E-16	0.	4.82E-16	1.31E-15	0.	0.	2.37E-11	7.38E-10	9.13E-09	8.52E-09	1.84E-08
64	4.40	1.79E-16	0.	6.07E-16	0.	4.76E-16	9.33E-16	0.	0.	2.39E-11	7.90E-10	9.50E-09	8.73E-09	1.90E-08
65	4.30	1.63E-16	0.	1.67E-15	0.	4.40E-16	5.54E-16	0.	0.	2.41E-11	8.47E-10	9.89E-09	8.88E-09	1.96E-08
66	4.20	1.49E-16	0.	6.16E-15	0.	4.58E-16	4.18E-16	0.	0.	2.43E-11	9.09E-10	1.03E-08	2.12E-09	1.33E-08
67	4.10	1.36E-16	0.	2.28E-15	0.	4.34E-16	1.11E-16	0.	0.	2.44E-11	9.70E-10	9.20E-09	2.19E-09	1.24E-08
68	4.00	1.22E-16	0.	8.74E-15	0.	4.08E-16	8.48E-17	0.	0.	2.45E-11	1.05E-09	9.44E-09	2.26E-09	1.28E-08
69	3.90	1.00E-16	0.	3.91E-15	3.50E-13	3.61E-16	3.47E-17	0.	0.	2.44E-11	1.14E-09	7.39E-09	2.32E-09	1.09E-08
70	3.80	1.08E-16	0.	5.88E-15	2.22E-12	3.83E-16	0.	0.	0.	2.43E-11	1.23E-09	7.67E-09	2.41E-09	1.13E-08
71	3.70	9.21E-17	0.	6.93E-15	6.49E-13	3.08E-16	0.	0.	0.	2.39E-11	1.33E-09	7.15E-09	2.67E-09	1.12E-08
72	3.60	8.10E-17	0.	4.12E-15	3.94E-12	3.35E-16	0.	0.	0.	2.24E-11	1.45E-09	7.82E-09	2.98E-09	1.23E-08
73	3.50	7.34E-17	0.	5.93E-15	9.99E-12	2.49E-16	0.	0.	0.	2.05E-11	1.58E-09	8.76E-09	3.32E-09	1.37E-08
74	3.40	6.48E-17	0.	3.28E-15	9.93E-13	2.77E-16	0.	0.	0.	1.18E-11	1.72E-09	9.83E-09	3.69E-09	1.53E-08
75	3.30	5.08E-17	0.	3.44E-15	4.76E-12	2.11E-16	0.	0.	0.	1.19E-11	1.88E-09	1.09E-08	4.06E-09	1.69E-08
76	3.20	4.27E-17	0.	2.18E-15	1.02E-11	2.18E-16	0.	0.	0.	1.19E-11	2.07E-09	1.20E-08	4.45E-09	1.86E-08
77	3.10	3.96E-17	0.	1.68E-15	1.55E-12	1.99E-16	0.	0.	0.	1.19E-11	2.28E-09	1.31E-08	4.85E-09	2.03E-08
78	3.00	3.42E-17	0.	9.40E-16	4.67E-12	1.88E-16	0.	0.	0.	1.19E-11	2.51E-09	1.43E-08	5.24E-09	2.20E-08
79	2.90	2.76E-17	0.	5.68E-16	2.83E-12	1.29E-16	0.	0.	0.	1.19E-11	2.78E-09	1.54E-08	5.64E-09	2.39E-08
80	2.80	2.80E-17	0.	2.71E-16	1.33E-12	8.31E-17	0.	0.	0.	1.20E-11	3.10E-09	1.67E-08	6.06E-09	2.59E-08
81	2.70	1.71E-17	0.	1.25E-16	2.26E-12	4.21E-17	0.	0.	0.	1.20E-11	3.46E-09	1.81E-08	2.56E-09	2.41E-08
82	2.60	7.50E-18	0.	6.29E-17	2.13E-13	1.74E-17	0.	0.	0.	1.20E-11	3.88E-09	1.96E-08	2.79E-09	2.62E-08
83	2.50	5.11E-19	0.	7.43E-18	1.84E-13	3.96E-18	0.	0.	0.	1.20E-11	4.36E-09	1.26E-08	3.22E-09	2.02E-08
84	2.40	0.	3.93E-16	0.	1.80E-13	4.09E-19	0.	0.	0.	1.20E-11	4.94E-09	1.36E-08	3.95E-09	2.45E-08
85	2.30	0.	1.50E-15	0.	0.	0.	0.	0.	0.	1.19E-11	5.62E-09	1.69E-08	4.74E-09	2.93E-08
86	2.20	0.	3.48E-15	0.	0.	0.	0.	0.	0.	1.18E-11	6.43E-09	2.73E-08	5.71E-09	3.45E-08
87	2.10	0.	4.29E-15	0.	0.	0.	0.	0.	0.	1.18E-11	7.40E-09	2.60E-08	6.88E-09	4.01E-08
88	2.00	0.	7.68E-15	0.	0.	0.	0.	0.	0.	1.14E-11	8.58E-09	2.97E-08	7.65E-09	4.59E-08
89	1.90	0.	1.24E-14	0.	0.	0.	0.	0.	0.	1.10E-11	10.00E-09	3.37E-08	8.72E-09	5.24E-08
90	1.80	0.	1.01E-14	0.	0.	0.	0.	0.	0.	1.05E-11	1.18E-08	3.99E-08	1.04E-08	6.22E-08
91	1.70	0.	1.21E-14	0.	0.	0.	0.	0.	0.	9.80E-12	1.41E-08	4.75E-08	1.26E-08	7.42E-08
92	1.60	0.	8.63E-15	0.	0.	0.	0.	0.	0.	8.36E-12	1.69E-08	5.52E-08	1.40E-08	8.68E-08
93	1.50	0.	1.04E-14	0.	0.	0.	0.	0.	0.	3.80E-12	2.06E-08	6.48E-08	1.64E-08	1.02E-07
94	1.40	0.	1.06E-14	0.	0.	0.	0.	0.	0.	0.	2.54E-08	5.42E-08	1.38E-08	9.34E-08
95	1.30	0.	8.02E-15	0.	0.	0.	0.	0.	0.	0.	3.18E-08	7.77E-08	1.98E-08	1.29E-07
96	1.20	0.	7.84E-15	0.	0.	0.	0.	0.	0.	0.	4.06E-08	1.05E-07	2.68E-08	1.78E-07
97	1.10	0.	6.92E-15	0.	0.	0.	0.	3.02E-20	0.	0.	5.28E-08	1.28E-07	3.06E-08	2.11E-07
98	1.00	0.	6.36E-15	0.	0.	0.	0.	3.33E-19	0.	0.	7.10E-08	1.55E-07	3.72E-08	2.63E-07
99	0.90	0.	5.20E-15	0.	0.	0.	0.	3.89E-18	0.	0.	9.84E-08	1.77E-07	4.23E-08	3.18E-07
100	0.80	0.	2.44E-15	0.	0.	0.	0.	7.53E-18	0.	0.	1.41E-07	2.04E-07	4.87E-08	3.94E-07
101	0.70	0.	6.14E-16	0.	0.	0.	0.	5.64E-18	0.	0.	2.11E-07	1.83E-07	4.37E-08	4.35E-07
102	0.60	0.	6.21E-17	0.	0.	0.	0.	2.11E-17	0.	0.	3.39E-07	2.06E-07	4.60E-08	5.91E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.52E-17	0.	0.	0.	2.47E-14	6.84E-13	2.15E-10	6.98E-11	2.81E-10
2	10.60	0.	0.	1.34E-17	0.	0.	0.	2.47E-14	6.21E-13	2.16E-10	6.49E-11	2.82E-10
3	10.50	0.	0.	1.32E-17	0.	0.	0.	2.48E-14	6.39E-13	2.17E-10	6.48E-11	2.82E-10
4	10.40	0.	0.	1.22E-17	0.	0.	0.	2.48E-14	6.98E-13	2.18E-10	6.46E-11	2.83E-10
5	10.30	0.	0.	1.02E-17	0.	0.	0.	2.48E-14	6.77E-13	2.18E-10	6.45E-11	2.84E-10
6	10.20	0.	0.	1.03E-17	0.	0.	0.	2.49E-14	6.90E-13	2.19E-10	6.44E-11	2.84E-10
7	10.10	0.	0.	9.58E-18	0.	0.	0.	2.49E-14	7.19E-13	2.19E-10	6.42E-11	2.84E-10
8	10.00	0.	0.	7.96E-18	0.	0.	0.	2.49E-14	7.41E-13	2.20E-10	6.41E-11	2.85E-10
9	9.90	0.	0.	8.09E-18	0.	0.	0.	2.50E-14	7.63E-13	2.21E-10	6.40E-11	2.85E-10
10	9.80	0.	0.	7.39E-18	0.	0.	0.	2.50E-14	7.87E-13	2.21E-10	6.39E-11	2.86E-10
11	9.70	0.	0.	6.08E-18	0.	0.	0.	2.51E-14	8.12E-13	2.22E-10	6.37E-11	2.86E-10
12	9.60	0.	0.	6.54E-18	0.	0.	0.	2.51E-14	8.38E-13	2.22E-10	6.36E-11	2.87E-10
13	9.50	0.	0.	5.34E-18	0.	0.	0.	2.51E-14	8.64E-13	2.23E-10	6.35E-11	2.87E-10
14	9.40	0.	0.	4.88E-18	0.	0.	0.	2.52E-14	8.93E-13	6.74E-11	6.33E-11	1.32E-10
15	9.30	0.	0.	4.95E-18	0.	0.	0.	2.53E-14	9.22E-13	6.73E-11	6.32E-11	1.31E-10
16	9.20	0.	0.	3.87E-18	0.	0.	0.	2.54E-14	9.52E-13	6.72E-11	6.31E-11	1.31E-10
17	9.10	0.	0.	3.96E-18	0.	0.	0.	2.55E-14	9.84E-13	6.72E-11	6.30E-11	1.31E-10
18	9.00	0.	0.	3.47E-18	0.	0.	0.	2.56E-14	1.02E-12	6.71E-11	6.28E-11	1.31E-10
19	8.90	0.	0.	3.09E-18	0.	0.	0.	2.57E-14	1.05E-12	6.70E-11	6.27E-11	1.31E-10
20	8.80	0.	0.	2.99E-18	0.	0.	0.	2.58E-14	1.09E-12	6.69E-11	6.26E-11	1.31E-10
21	8.70	0.	0.	2.47E-18	0.	0.	0.	2.59E-14	1.13E-12	6.69E-11	6.25E-11	1.31E-10
22	8.60	0.	0.	2.52E-18	0.	0.	0.	2.60E-14	1.17E-12	6.68E-11	6.24E-11	1.30E-10
23	8.50	0.	0.	2.10E-18	0.	0.	0.	2.61E-14	1.21E-12	6.65E-11	6.23E-11	1.30E-10
24	8.40	0.	0.	2.05E-18	0.	0.	0.	2.62E-14	1.25E-12	6.65E-11	6.21E-11	1.30E-10
25	8.30	0.	0.	1.66E-18	0.	0.	0.	2.63E-14	1.30E-12	6.65E-11	6.22E-11	1.30E-10
26	8.20	0.	0.	1.65E-18	0.	0.	0.	2.65E-14	1.35E-12	6.65E-11	6.26E-11	1.30E-10
27	8.10	0.	0.	1.37E-18	0.	0.	0.	2.66E-14	1.40E-12	6.65E-11	6.30E-11	1.31E-10
28	8.00	0.	0.	1.35E-18	0.	0.	0.	2.68E-14	1.45E-12	6.65E-11	6.34E-11	1.31E-10
29	7.90	0.	0.	1.11E-18	0.	0.	0.	2.69E-14	1.51E-12	6.66E-11	6.37E-11	1.32E-10
30	7.80	0.	0.	1.13E-18	0.	0.	0.	2.70E-14	1.57E-12	6.67E-11	6.41E-11	1.32E-10
31	7.70	0.	0.	9.52E-19	0.	0.	0.	2.72E-14	1.63E-12	6.69E-11	6.45E-11	1.33E-10
32	7.60	0.	0.	8.79E-19	0.	7.02E-23	0.	2.73E-14	1.69E-12	6.70E-11	6.49E-11	1.34E-10
33	7.50	0.	0.	7.84E-19	0.	3.10E-22	0.	2.74E-14	1.76E-12	6.71E-11	6.53E-11	1.34E-10
34	7.40	0.	0.	6.83E-19	0.	1.89E-21	0.	2.76E-14	1.83E-12	6.72E-11	6.57E-11	1.35E-10
35	7.30	0.	0.	6.27E-19	0.	8.83E-21	0.	2.77E-14	1.91E-12	6.73E-11	6.60E-11	1.35E-10
36	7.20	0.	0.	5.47E-19	0.	2.35E-20	0.	2.79E-14	1.99E-12	6.75E-11	6.64E-11	1.36E-10
37	7.10	0.	0.	5.09E-19	0.	6.69E-20	0.	2.81E-14	2.08E-12	6.76E-11	6.68E-11	1.37E-10
38	7.00	2.62E-22	0.	4.51E-19	0.	1.62E-19	0.	2.84E-14	2.17E-12	6.77E-11	6.72E-11	1.37E-10
39	6.90	5.00E-22	0.	4.08E-19	0.	1.02E-19	0.	2.86E-14	2.26E-12	6.79E-11	6.76E-11	1.38E-10
40	6.80	4.22E-22	0.	3.72E-19	0.	3.62E-19	0.	2.88E-14	2.36E-12	6.80E-11	6.80E-11	1.38E-10
41	6.70	3.00E-22	0.	3.14E-19	0.	4.09E-19	0.	2.90E-14	2.47E-12	6.81E-11	6.84E-11	1.39E-10
42	6.60	1.79E-22	0.	2.71E-19	0.	2.74E-19	0.	2.93E-14	2.59E-12	6.85E-11	6.89E-11	1.40E-10
43	6.50	1.01E-22	0.	2.06E-19	0.	4.63E-19	0.	2.95E-14	2.71E-12	6.89E-11	6.94E-11	1.41E-10
44	6.40	1.37E-22	0.	1.34E-19	2.25E-21	4.96E-19	0.	2.97E-14	2.84E-12	6.94E-11	6.98E-11	1.42E-10
45	6.30	2.85E-22	0.	7.80E-20	1.01E-20	2.85E-19	0.	3.00E-14	2.98E-12	6.98E-11	7.05E-11	1.43E-10
46	6.20	8.58E-22	0.	4.06E-20	1.38E-20	4.22E-19	0.	3.02E-14	3.13E-12	7.03E-11	7.15E-11	1.45E-10
47	6.10	3.50E-21	0.	1.80E-20	3.84E-20	9.94E-19	0.	3.04E-14	3.28E-12	7.07E-11	7.25E-11	1.47E-10
48	6.00	9.33E-21	0.	4.40E-21	3.43E-20	2.49E-19	0.	3.06E-14	3.45E-12	7.15E-11	7.36E-11	1.49E-10
49	5.90	1.54E-20	0.	3.14E-22	4.92E-20	2.55E-19	0.	3.08E-14	3.63E-12	7.24E-11	7.46E-11	1.51E-10
50	5.80	2.38E-20	0.	7.88E-24	6.71E-20	2.48E-19	0.	3.02E-14	3.82E-12	7.32E-11	7.56E-11	1.53E-10
51	5.70	2.87E-20	0.	0.	7.51E-20	2.72E-19	0.	2.84E-14	4.03E-12	7.40E-11	7.66E-11	1.55E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.293E-09 (10.0E-07 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ION3)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.61E-20	0.	0.	0.	5.96E-20	3.97E-19	0.	0.	2.64E-14	4.25E-12	7.50E-11	7.77E-11	1.57E-10
53	5.50	3.80E-20	0.	0.	0.	7.29E-20	3.75E-19	0.	0.	2.65E-14	4.48E-12	7.63E-11	7.88E-11	1.60E-10
54	5.40	4.04E-20	0.	0.	0.	6.38E-20	2.73E-19	0.	0.	2.66E-14	4.74E-12	7.79E-11	8.00E-11	1.63E-10
55	5.30	3.94E-20	0.	0.	0.	6.55E-20	3.74E-19	0.	0.	2.68E-14	5.02E-12	7.94E-11	8.14E-11	1.66E-10
56	5.20	2.89E-20	0.	0.	0.	6.90E-20	2.43E-19	0.	0.	2.70E-14	5.31E-12	8.11E-11	8.31E-11	1.70E-10
57	5.10	2.72E-20	0.	0.	0.	6.79E-20	3.24E-19	0.	0.	2.72E-14	5.63E-12	8.33E-11	8.49E-11	1.74E-10
58	5.00	2.04E-20	0.	0.	0.	6.07E-20	2.89E-19	0.	0.	2.74E-14	5.98E-12	8.57E-11	8.66E-11	1.78E-10
59	4.90	1.70E-20	0.	0.	0.	6.62E-20	3.01E-19	0.	0.	2.77E-14	6.36E-12	8.83E-11	8.84E-11	1.83E-10
60	4.80	1.70E-20	0.	0.	0.	7.02E-20	2.78E-19	0.	0.	2.79E-14	6.77E-12	9.10E-11	9.02E-11	1.88E-10
61	4.70	1.85E-20	0.	0.	0.	6.81E-20	2.44E-19	0.	0.	2.81E-14	7.21E-12	9.37E-11	9.25E-11	1.93E-10
62	4.60	2.21E-20	0.	0.	0.	6.87E-20	2.25E-19	0.	0.	2.84E-14	7.70E-12	9.70E-11	9.48E-11	2.00E-10
63	4.50	2.25E-20	0.	2.22E-20	0.	6.08E-20	1.69E-19	0.	0.	2.86E-14	8.22E-12	1.01E-10	9.71E-11	2.06E-10
64	4.40	2.32E-20	0.	7.42E-20	0.	6.00E-20	1.18E-19	0.	0.	2.88E-14	8.80E-12	1.05E-10	9.86E-11	2.13E-10
65	4.30	2.12E-20	0.	2.05E-19	0.	5.54E-20	6.99E-20	0.	0.	2.90E-14	9.43E-12	1.09E-10	9.42E-11	2.13E-10
66	4.20	1.94E-20	0.	7.93E-19	0.	5.78E-20	9.27E-20	0.	0.	2.93E-14	1.01E-11	1.14E-10	2.42E-11	1.48E-10
67	4.10	1.77E-20	0.	2.79E-19	0.	5.47E-20	1.40E-20	0.	0.	2.94E-14	1.09E-11	1.01E-10	2.50E-11	1.37E-10
68	4.00	1.59E-20	0.	1.07E-18	0.	5.15E-20	1.07E-20	0.	0.	2.99E-14	1.17E-11	7.87E-11	2.57E-11	1.16E-10
69	3.90	1.30E-20	0.	4.79E-19	4.53E-16	4.55E-20	4.38E-21	0.	0.	2.94E-14	1.27E-11	6.18E-11	2.65E-11	1.21E-10
70	3.80	1.41E-20	0.	7.19E-19	2.57E-15	4.83E-20	0.	0.	0.	2.93E-14	1.37E-11	7.58E-11	2.74E-11	1.17E-10
71	3.70	1.20E-20	0.	8.48E-19	7.53E-16	3.89E-20	0.	0.	0.	2.88E-14	1.48E-11	7.91E-11	3.05E-11	1.25E-10
72	3.60	1.05E-20	0.	5.04E-19	4.97E-15	4.22E-20	0.	0.	0.	2.78E-14	1.61E-11	8.66E-11	3.40E-11	1.37E-10
73	3.50	9.53E-21	0.	7.26E-19	1.16E-14	3.15E-20	0.	0.	0.	2.47E-14	1.75E-11	9.69E-11	3.78E-11	1.52E-10
74	3.40	8.41E-21	0.	4.02E-19	1.15E-15	3.50E-20	0.	0.	0.	1.42E-14	1.92E-11	1.09E-10	4.21E-11	1.70E-10
75	3.30	6.60E-21	0.	4.24E-19	5.52E-15	2.66E-20	0.	0.	0.	1.43E-14	2.10E-11	1.21E-10	4.63E-11	1.88E-10
76	3.20	5.54E-21	0.	2.56E-19	1.19E-14	2.74E-20	0.	0.	0.	1.43E-14	2.30E-11	1.33E-10	5.08E-11	2.07E-10
77	3.10	5.15E-21	0.	1.94E-19	1.80E-15	2.51E-20	0.	0.	0.	1.43E-14	2.53E-11	1.45E-10	5.53E-11	2.26E-10
78	3.00	4.44E-21	0.	1.15E-19	5.42E-15	2.27E-20	0.	0.	0.	1.44E-14	2.80E-11	1.58E-10	5.97E-11	2.46E-10
79	2.90	3.59E-21	0.	6.96E-20	3.28E-15	1.63E-20	0.	0.	0.	1.44E-14	3.10E-11	1.71E-10	6.43E-11	2.68E-10
80	2.80	3.64E-21	0.	3.31E-20	1.54E-15	1.09E-20	0.	0.	0.	1.44E-14	3.45E-11	1.85E-10	6.42E-11	2.84E-10
81	2.70	2.22E-21	0.	1.93E-20	2.62E-15	5.31E-21	0.	0.	0.	1.44E-14	3.85E-11	2.00E-10	2.92E-11	2.60E-10
82	2.60	9.74E-22	0.	7.69E-21	2.47E-16	2.19E-21	0.	0.	0.	1.44E-14	4.32E-11	1.17E-10	3.10E-11	1.92E-10
83	2.50	6.64E-23	0.	9.09E-22	2.13E-16	5.00E-22	0.	0.	0.	1.44E-14	4.86E-11	1.39E-10	3.67E-11	2.25E-10
84	2.40	0.	4.81E-20	0.	2.08E-16	5.16E-23	0.	0.	0.	1.44E-14	5.50E-11	1.72E-10	4.51E-11	2.72E-10
85	2.30	0.	1.83E-19	0.	0.	0.	0.	0.	0.	1.43E-14	6.26E-11	2.09E-10	5.48E-11	3.26E-10
86	2.20	0.	4.26E-19	0.	0.	0.	0.	0.	0.	1.42E-14	7.16E-11	2.47E-10	6.51E-11	3.84E-10
87	2.10	0.	5.25E-19	0.	0.	0.	0.	0.	0.	1.42E-14	8.24E-11	2.88E-10	7.61E-11	4.46E-10
88	2.00	0.	9.40E-19	0.	0.	0.	0.	0.	0.	1.37E-14	9.55E-11	3.20E-10	8.72E-11	5.11E-10
89	1.90	0.	1.51E-18	0.	0.	0.	0.	0.	0.	1.32E-14	1.12E-10	3.73E-10	9.94E-11	5.84E-10
90	1.80	0.	1.24E-18	0.	0.	0.	0.	0.	0.	1.26E-14	1.32E-10	4.41E-10	1.19E-10	6.92E-10
91	1.70	0.	1.48E-18	0.	0.	0.	0.	0.	0.	1.19E-14	1.57E-10	5.26E-10	1.35E-10	8.17E-10
92	1.60	0.	1.06E-18	0.	0.	0.	0.	0.	0.	1.01E-14	1.88E-10	5.98E-10	1.59E-10	9.06E-10
93	1.50	0.	1.27E-18	0.	0.	0.	0.	0.	0.	4.57E-15	2.29E-10	4.52E-10	1.87E-10	8.67E-10
94	1.40	0.	1.30E-18	0.	0.	0.	0.	0.	0.	0.	2.83E-10	6.88E-10	1.57E-10	1.04E-09
95	1.30	0.	9.81E-19	0.	0.	0.	0.	0.	0.	0.	3.55E-10	8.68E-10	2.25E-10	1.44E-09
96	1.20	0.	9.60E-19	0.	0.	0.	0.	0.	0.	0.	4.92E-10	1.17E-09	2.74E-10	1.89E-09
97	1.10	0.	8.47E-19	0.	0.	0.	0.	3.81E-24	0.	0.	5.88E-10	1.42E-09	3.49E-10	2.35E-09
98	1.00	0.	7.79E-19	0.	0.	0.	0.	4.20E-23	0.	0.	7.90E-10	1.72E-09	4.24E-10	2.93E-09
99	0.90	0.	6.37E-19	0.	0.	0.	0.	4.91E-23	0.	0.	1.10E-09	1.96E-09	4.82E-10	3.54E-09
100	0.80	0.	2.99E-19	0.	0.	0.	0.	9.49E-22	0.	0.	1.57E-09	1.77E-09	4.33E-10	3.75E-09
101	0.70	0.	7.51E-20	0.	0.	0.	0.	7.12E-22	0.	0.	2.35E-09	2.03E-09	4.64E-10	4.84E-09
102	0.60	0.	7.68E-21	0.	0.	0.	0.	2.66E-21	0.	0.	3.77E-09	2.20E-09	5.24E-10	6.57E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.2938-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 B-H BANDS	O2 B-H CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	1.38E 01	0.	0.	0.	1.38E 00	3.89E-03	1.26E 02	1.43E-01	1.40E 02
2	10.66	0.	0.	1.16E 01	0.	0.	0.	1.38E 00	3.13E-03	6.27E-01	1.43E-01	1.37E 01
3	10.58	0.	0.	1.15E 01	0.	0.	0.	1.38E 00	3.22E-03	6.31E-01	1.41E-01	1.37E 01
4	10.49	0.	0.	1.04E 01	0.	0.	0.	1.38E 00	3.32E-03	6.33E-01	1.41E-01	1.28E 01
5	10.38	0.	0.	9.04E 00	0.	0.	0.	1.38E 00	3.42E-03	6.34E-01	1.41E-01	1.13E 01
6	10.28	0.	0.	9.17E 00	0.	0.	0.	1.38E 00	3.52E-03	6.34E-01	1.40E-01	1.13E 01
7	10.18	0.	0.	9.40E 00	0.	0.	0.	1.38E 00	3.63E-03	6.37E-01	1.40E-01	1.06E 01
8	10.08	0.	0.	7.19E 00	0.	0.	0.	1.39E 00	3.74E-03	6.36E-01	1.40E-01	9.50E 00
9	9.98	0.	0.	7.33E 00	0.	0.	0.	1.39E 00	3.85E-03	6.40E-01	1.39E-01	9.50E 00
10	9.88	0.	0.	6.71E 00	0.	0.	0.	1.39E 00	3.97E-03	6.42E-01	1.39E-01	8.89E 00
11	9.78	0.	0.	5.61E 00	0.	0.	0.	1.40E 00	4.10E-03	6.44E-01	1.39E-01	7.79E 00
12	9.68	0.	0.	6.04E 00	0.	0.	0.	1.40E 00	4.23E-03	6.45E-01	1.38E-01	8.22E 00
13	9.58	0.	0.	4.99E 00	0.	0.	0.	1.40E 00	4.36E-03	6.47E-01	1.38E-01	7.18E 00
14	9.48	0.	0.	4.99E 00	0.	0.	0.	1.41E 00	4.50E-03	6.49E-01	1.37E-01	6.79E 00
15	9.38	0.	0.	4.67E 00	0.	0.	0.	1.41E 00	4.65E-03	6.51E-01	1.37E-01	6.48E 00
16	9.28	0.	0.	3.71E 00	0.	0.	0.	1.42E 00	4.80E-03	6.53E-01	1.37E-01	5.92E 00
17	9.18	0.	0.	3.76E 00	0.	0.	0.	1.42E 00	4.96E-03	2.03E-01	1.36E-01	5.56E 00
18	9.08	0.	0.	3.35E 00	0.	0.	0.	1.43E 00	5.13E-03	2.02E-01	1.36E-01	5.12E 00
19	8.98	0.	0.	3.08E 00	0.	0.	0.	1.43E 00	5.31E-03	2.02E-01	1.36E-01	4.79E 00
20	8.88	0.	0.	2.93E 00	0.	0.	0.	1.44E 00	5.49E-03	2.01E-01	1.35E-01	4.71E 00
21	8.78	0.	0.	2.49E 00	0.	0.	0.	1.44E 00	5.68E-03	2.01E-01	1.35E-01	4.23E 00
22	8.68	0.	0.	2.88E 00	0.	0.	0.	1.45E 00	5.88E-03	2.01E-01	1.35E-01	4.29E 00
23	8.58	0.	0.	2.11E 00	0.	0.	0.	1.45E 00	6.09E-03	2.01E-01	1.35E-01	3.91E 00
24	8.48	0.	0.	2.07E 00	0.	0.	0.	1.46E 00	6.32E-03	2.01E-01	1.34E-01	3.87E 00
25	8.38	0.	0.	1.78E 00	0.	0.	0.	1.47E 00	6.55E-03	2.02E-01	1.34E-01	3.51E 00
26	8.28	0.	0.	1.79E 00	0.	0.	0.	1.47E 00	6.79E-03	2.02E-01	1.35E-01	3.52E 00
27	8.18	0.	0.	1.48E 00	0.	0.	0.	1.48E 00	7.04E-03	2.02E-01	1.34E-01	3.24E 00
28	8.08	0.	0.	1.41E 00	0.	0.	0.	1.49E 00	7.31E-03	2.02E-01	1.34E-01	3.24E 00
29	7.98	0.	0.	1.17E 00	0.	0.	0.	1.50E 00	7.59E-03	2.03E-01	1.37E-01	3.02E 00
30	7.88	0.	0.	1.28E 00	0.	0.	0.	1.50E 00	7.89E-03	2.03E-01	1.36E-01	3.05E 00
31	7.78	0.	0.	1.02E 00	0.	0.	0.	1.51E 00	8.20E-03	2.04E-01	1.39E-01	2.80E 00
32	7.68	0.	0.	9.44E-01	0.	5.48E-05	0.	1.52E 00	8.51E-03	2.04E-01	1.39E-01	2.62E 00
33	7.58	0.	0.	8.92E-01	0.	2.36E-04	0.	1.53E 00	8.80E-03	2.05E-01	1.40E-01	2.73E 00
34	7.48	0.	0.	7.48E-01	0.	1.47E-03	0.	1.54E 00	9.24E-03	2.05E-01	1.41E-01	2.64E 00
35	7.38	0.	0.	6.91E-01	0.	6.64E-03	0.	1.54E 00	9.63E-03	2.04E-01	1.41E-01	2.60E 00
36	7.28	0.	0.	6.88E-01	0.	1.77E-02	0.	1.55E 00	1.00E-02	2.06E-01	1.42E-01	2.54E 00
37	7.18	0.	0.	5.71E-01	0.	5.17E-02	0.	1.57E 00	1.05E-02	2.07E-01	1.43E-01	2.59E 00
38	7.08	1.55E-04	0.	5.10E-01	0.	1.19E-01	0.	1.58E 00	1.09E-02	2.08E-01	1.43E-01	2.57E 00
39	6.98	2.98E-04	0.	4.56E-01	0.	1.41E-01	0.	1.59E 00	1.14E-02	2.08E-01	1.44E-01	2.55E 00
40	6.88	2.92E-04	0.	4.27E-01	0.	2.73E-01	0.	1.60E 00	1.19E-02	2.09E-01	1.45E-01	2.67E 00
41	6.78	1.88E-04	0.	3.64E-01	0.	2.98E-01	0.	1.62E 00	1.25E-02	2.09E-01	1.46E-01	2.65E 00
42	6.68	1.08E-04	0.	3.17E-01	0.	2.09E-01	0.	1.63E 00	1.31E-02	2.11E-01	1.47E-01	2.53E 00
43	6.58	6.12E-05	0.	2.44E-01	0.	3.43E-01	0.	1.64E 00	1.37E-02	2.12E-01	1.47E-01	2.60E 00
44	6.48	3.41E-05	0.	1.61E-01	1.54E-03	3.57E-01	0.	1.66E 00	1.43E-02	2.14E-01	1.48E-01	2.55E 00
45	6.38	1.93E-05	0.	9.54E-02	7.01E-03	2.15E-01	0.	1.67E 00	1.50E-02	2.15E-01	1.50E-01	2.37E 00
46	6.28	8.91E-06	0.	5.04E-02	9.69E-03	3.14E-01	0.	1.68E 00	1.98E-02	2.17E-01	1.52E-01	2.44E 00
47	6.18	3.88E-06	0.	2.27E-02	2.70E-02	4.20E-01	0.	1.69E 00	1.64E-02	2.19E-01	1.54E-01	2.56E 00
48	6.08	1.55E-06	0.	9.68E-03	2.45E-02	1.00E-01	0.	1.71E 00	1.74E-02	2.22E-01	1.56E-01	2.32E 00
49	5.98	3.79E-07	0.	4.88E-04	3.93E-02	1.08E-01	0.	1.71E 00	1.83E-02	2.24E-01	1.58E-01	2.33E 00
50	5.88	4.76E-08	0.	9.97E-06	4.85E-02	1.86E-01	0.	1.68E 00	1.93E-02	2.27E-01	1.60E-01	2.32E 00
51	5.78	3.50E-09	0.	0.	5.49E-02	2.05E-01	0.	1.58E 00	2.03E-02	2.30E-01	1.62E-01	2.25E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O+ PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.40	1.56E-18	0.	0.	0.	4.43E-02	2.92E-01	0.	0.	1.47E 00	2.14E-02	2.33E-01	1.64E-01	2.22E 00
93	5.50	0.	0.	0.	0.	5.41E-02	2.74E-01	0.	0.	1.48E 00	2.24E-02	2.37E-01	1.64E-01	2.23E 00
94	5.45	0.	0.	0.	0.	4.79E-02	2.86E-01	0.	0.	1.48E 00	2.19E-02	2.43E-01	1.68E-01	2.17E 00
95	5.30	0.	0.	0.	0.	4.92E-02	2.76E-01	0.	0.	1.49E 00	2.43E-02	2.48E-01	1.71E-01	2.20E 00
96	5.20	0.	0.	0.	0.	5.21E-02	1.86E-01	0.	0.	1.50E 00	2.48E-02	2.53E-01	1.75E-01	2.20E 00
97	5.10	0.	0.	0.	0.	5.14E-02	2.49E-01	0.	0.	1.52E 00	2.84E-02	2.60E-01	1.78E-01	2.26E 00
98	5.00	2.81E-03	0.	0.	0.	4.62E-02	2.21E-01	0.	0.	1.53E 00	3.87E-02	2.68E-01	1.82E-01	2.28E 00
99	4.90	4.73E-03	0.	0.	0.	5.07E-02	2.33E-01	0.	0.	1.54E 00	3.21E-02	2.76E-01	1.85E-01	2.32E 00
60	4.80	8.98E-03	0.	0.	0.	5.39E-02	2.16E-01	0.	0.	1.55E 00	3.42E-02	2.85E-01	1.88E-01	2.34E 00
61	4.70	1.12E-02	0.	0.	0.	9.27E-02	1.92E-01	0.	0.	1.57E 00	3.64E-02	2.94E-01	1.94E-01	2.35E 00
62	4.60	1.60E-02	0.	0.	0.	5.34E-02	1.76E-01	0.	0.	1.58E 00	3.88E-02	3.05E-01	1.99E-01	2.37E 00
63	4.50	1.54E-02	0.	2.54E-02	0.	4.76E-02	1.38E-01	0.	0.	1.59E 00	4.15E-02	3.18E-01	2.04E-01	2.38E 00
64	4.40	1.68E-02	0.	9.29E-02	0.	4.72E-02	9.18E-02	0.	0.	1.60E 00	4.44E-02	3.31E-01	2.09E-01	2.44E 00
65	4.30	1.67E-02	0.	2.64E-01	0.	4.39E-02	5.93E-02	0.	0.	1.62E 00	4.76E-02	3.46E-01	2.14E-01	2.60E 00
66	4.20	1.39E-02	0.	5.49E-01	0.	4.59E-02	4.18E-02	0.	0.	1.63E 00	5.11E-02	3.68E-01	2.19E-01	3.31E 00
67	4.10	1.24E-02	0.	3.95E-01	0.	4.38E-02	1.18E-02	0.	0.	1.64E 00	5.49E-02	3.79E-01	2.23E-01	2.71E 00
68	4.05	1.12E-02	0.	1.35E 00	0.	4.19E-02	8.39E-03	0.	0.	1.64E 00	5.92E-02	3.89E-01	6.19E-02	3.56E 00
69	3.98	9.31E-03	0.	6.87E-01	1.88E-02	3.70E-02	3.38E-03	0.	0.	1.64E 00	6.36E-02	3.54E-01	6.34E-02	2.80E 00
70	3.88	1.81E-02	0.	9.28E-01	9.57E-02	3.95E-02	0.	0.	0.	1.63E 00	6.91E-02	3.65E-01	6.81E-02	3.20E 00
71	3.78	8.46E-03	0.	1.86E 00	3.04E-02	3.22E-02	0.	0.	0.	1.68E 00	7.44E-02	2.88E-01	7.32E-02	3.17E 00
72	3.68	7.67E-03	0.	6.58E-01	1.88E-01	3.49E-02	0.	0.	0.	1.58E 00	8.14E-02	3.12E-01	8.14E-02	2.84E 00
73	3.58	7.89E-03	0.	9.27E-01	4.28E-01	2.64E-02	0.	0.	0.	1.38E 00	8.87E-02	3.21E-01	9.02E-02	3.26E 00
74	3.48	6.24E-03	0.	5.32E-01	4.68E-02	2.94E-02	0.	0.	0.	7.93E-01	9.68E-02	3.60E-01	1.08E-01	1.90E 00
75	3.38	4.91E-03	0.	9.99E-01	3.13E-01	2.27E-02	0.	0.	0.	7.99E-01	1.06E-01	3.99E-01	1.18E-01	2.21E 00
76	3.28	4.17E-03	0.	3.43E-01	4.32E-01	2.35E-02	0.	0.	0.	7.96E-01	1.16E-01	4.38E-01	1.21E-01	2.27E 00
77	3.18	3.98E-03	0.	2.63E-01	7.34E-02	2.16E-02	0.	0.	0.	7.90E-01	1.20E-01	4.79E-01	1.31E-01	1.90E 00
78	3.08	3.48E-03	0.	1.94E-01	2.08E-01	1.98E-02	0.	0.	0.	8.09E-01	1.41E-01	5.28E-01	1.42E-01	1.49E 00
79	2.98	2.77E-03	0.	9.52E-02	1.23E-01	1.44E-02	0.	0.	0.	8.81E-01	1.97E-01	9.62E-01	1.93E-01	1.91E 00
80	2.88	2.83E-03	0.	4.99E-02	6.22E-02	9.44E-03	0.	0.	0.	8.02E-01	1.70E-01	6.18E-01	1.69E-01	1.87E 00
81	2.78	1.75E-03	0.	2.19E-02	1.88E-01	4.88E-03	0.	0.	0.	8.02E-01	1.99E-01	6.66E-01	1.78E-01	1.96E 00
82	2.68	7.82E-04	0.	1.09E-02	9.54E-03	2.04E-03	0.	0.	0.	8.02E-01	2.18E-01	7.15E-01	1.91E-01	1.95E 00
83	2.58	9.37E-05	0.	1.22E-03	8.91E-03	4.72E-04	0.	0.	0.	8.02E-01	2.46E-01	8.10E-01	9.43E-02	1.94E 00
84	2.48	0.	6.21E-02	0.	7.95E-03	4.01E-03	0.	0.	0.	8.03E-01	2.79E-01	9.41E-01	1.14E-01	2.21E 00
85	2.38	0.	2.29E-01	0.	0.	0.	0.	0.	0.	7.90E-01	3.16E-01	7.19E-01	1.44E-01	2.19E 00
86	2.28	0.	5.17E-01	0.	0.	0.	0.	0.	0.	7.93E-01	3.62E-01	8.50E-01	1.64E-01	2.71E 00
87	2.18	0.	6.30E-01	0.	0.	0.	0.	0.	0.	7.94E-01	4.17E-01	9.89E-01	1.92E-01	3.03E 00
88	2.30	0.	1.17E 00	0.	0.	0.	0.	0.	0.	7.64E-01	4.83E-01	1.13E 00	2.20E-01	3.77E 00
89	1.98	0.	1.70E 00	0.	0.	0.	0.	0.	0.	7.35E-01	5.65E-01	1.28E 00	2.51E-01	4.61E 00
90	1.88	0.	1.44E 00	0.	0.	0.	0.	0.	0.	7.03E-01	6.64E-01	1.52E 00	3.02E-01	4.66E 00
91	1.78	0.	1.74E 00	0.	0.	0.	0.	0.	0.	6.62E-01	7.92E-01	1.82E 00	3.69E-01	5.37E 00
92	1.68	0.	1.23E 00	0.	0.	0.	0.	0.	0.	5.49E-01	9.93E-01	2.12E 00	4.29E-01	5.31E 00
93	1.58	0.	1.49E 00	0.	0.	0.	0.	0.	0.	2.94E-01	1.16E 00	2.69E 00	5.19E-01	6.12E 00
94	1.48	0.	1.51E 00	0.	0.	0.	0.	0.	0.	0.	1.43E 00	3.31E 00	6.12E-01	6.84E 00
95	1.38	0.	1.15E 00	0.	0.	0.	0.	0.	0.	0.	1.79E 00	4.22E 00	8.06E-01	7.97E 00
96	1.28	0.	1.11E 00	0.	0.	0.	0.	0.	0.	0.	2.29E 00	4.32E 00	7.09E-01	8.51E 00
97	1.18	0.	1.09E 00	0.	0.	0.	0.	2.80E-06	0.	0.	2.99E 00	5.33E 00	9.91E-01	1.03E 01
98	1.08	0.	9.20E-01	0.	0.	0.	0.	3.31E-05	0.	0.	4.07E 00	6.44E 00	1.11E 00	1.22E 01
99	0.98	0.	7.54E-01	0.	0.	0.	0.	1.04E-05	0.	0.	9.94E 00	7.34E 00	1.31E 00	1.94E 01
100	0.88	0.	5.95E-01	0.	0.	0.	0.	7.67E-04	0.	0.	7.94E 00	8.44E 00	1.94E 00	1.83E 01
101	0.78	0.	8.70E-02	0.	0.	0.	0.	5.97E-04	0.	0.	1.19E 01	9.27E 00	1.63E 00	2.29E 01
102	0.68	0.	1.02E-02	0.	0.	0.	0.	2.17E-03	0.	0.	1.92E 01	1.03E 01	1.83E 00	3.15E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. DENSITY (GM/CC) 1.2938-03 (1.00 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (1963)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.99E-01	0.	0.	0.	4.48E-02	2.03E-04	1.99E 01	1.47E-02	1.90E 01
2	10.60	0.	0.	1.76E-01	0.	0.	0.	4.48E-02	3.01E-04	7.79E-02	1.47E-02	1.14E-01
3	10.50	0.	0.	1.79E-01	0.	0.	0.	4.49E-02	3.10E-04	7.79E-02	1.46E-02	1.13E-01
4	10.40	0.	0.	1.62E-01	0.	0.	0.	4.50E-02	3.19E-04	7.82E-02	1.46E-02	1.00E-01
5	10.30	0.	0.	1.38E-01	0.	0.	0.	4.50E-02	3.29E-04	7.84E-02	1.48E-02	8.76E-01
6	10.20	0.	0.	1.40E-01	0.	0.	0.	4.51E-02	3.38E-04	7.86E-02	1.45E-02	8.79E-01
7	10.10	0.	0.	1.39E-01	0.	0	0.	4.51E-02	3.48E-04	7.87E-02	1.45E-02	2.68E-01
8	10.00	0.	0.	1.10E-01	0.	0.	0.	4.52E-02	3.59E-04	7.89E-02	1.44E-02	2.49E-01
9	9.90	0.	0.	1.12E-01	0.	0.	0.	4.53E-02	3.70E-04	7.91E-02	1.44E-02	2.51E-01
10	9.80	0.	0.	1.02E-01	0.	0.	0.	4.54E-02	3.82E-04	7.93E-02	1.44E-02	2.42E-01
11	9.70	0.	0.	8.94E-02	0.	0.	0.	4.55E-02	3.94E-04	7.95E-02	1.43E-02	2.33E-01
12	9.60	0.	0.	9.21E-02	0.	0.	0.	4.55E-02	4.06E-04	7.97E-02	1.43E-02	2.32E-01
13	9.50	0.	0.	7.61E-02	0.	0.	0.	4.56E-02	4.19E-04	7.99E-02	1.43E-02	2.16E-01
14	9.40	0.	0.	7.81E-02	0.	0.	0.	4.58E-02	4.33E-04	8.01E-02	1.43E-02	2.11E-01
15	9.30	0.	0.	7.13E-02	0.	0.	0.	4.60E-02	4.47E-04	8.04E-02	1.42E-02	2.12E-01
16	9.20	0.	0.	6.65E-02	0.	0.	0.	4.61E-02	4.61E-04	8.06E-02	1.42E-02	1.98E-01
17	9.10	0.	0.	5.78E-02	0.	0.	0.	4.63E-02	4.77E-04	8.09E-02	1.41E-02	1.84E-01
18	9.00	0.	0.	5.11E-02	0.	0.	0.	4.64E-02	4.93E-04	8.11E-02	1.41E-02	1.77E-01
19	8.90	0.	0.	4.68E-02	0.	0.	0.	4.66E-02	5.10E-04	8.14E-02	1.41E-02	1.72E-01
20	8.80	0.	0.	4.46E-02	0.	0.	0.	4.68E-02	5.28E-04	8.17E-02	1.40E-02	1.71E-01
21	8.70	0.	0.	3.74E-02	0.	0.	0.	4.69E-02	5.46E-04	8.19E-02	1.40E-02	1.64E-01
22	8.60	0.	0.	3.82E-02	0.	0.	0.	4.71E-02	5.65E-04	8.22E-02	1.40E-02	1.65E-01
23	8.50	0.	0.	3.35E-02	0.	0.	0.	4.73E-02	5.84E-04	8.25E-02	1.39E-02	1.60E-01
24	8.40	0.	0.	3.10E-02	0.	0.	0.	4.75E-02	6.07E-04	8.29E-02	1.39E-02	1.59E-01
25	8.30	0.	0.	2.99E-02	0.	0.	0.	4.78E-02	6.29E-04	8.33E-02	1.39E-02	1.58E-01
26	8.20	0.	0.	2.99E-02	0.	0.	0.	4.80E-02	6.52E-04	8.37E-02	1.38E-02	1.58E-01
27	8.10	0.	0.	2.16E-02	0.	0.	0.	4.82E-02	6.77E-04	8.40E-02	1.38E-02	1.58E-01
28	8.00	0.	0.	2.14E-02	0.	0.	0.	4.85E-02	7.02E-04	8.50E-02	1.41E-02	1.60E-01
29	7.90	0.	0.	1.79E-02	0.	0.	0.	4.88E-02	7.30E-04	8.50E-02	1.42E-02	1.57E-01
30	7.80	0.	0.	1.82E-02	0.	0.	0.	4.90E-02	7.58E-04	2.51E-02	1.43E-02	1.07E-01
31	7.78	0.	0.	1.95E-02	0.	0.	0.	4.93E-02	7.88E-04	2.52E-02	1.43E-02	1.05E-01
32	7.68	0.	0.	1.44E-02	0.	6.93E-07	0.	4.95E-02	8.20E-04	2.52E-02	1.44E-02	1.04E-01
33	7.58	0.	0.	1.30E-02	0.	2.08E-06	0.	4.98E-02	8.53E-04	2.53E-02	1.45E-02	1.03E-01
34	7.48	0.	0.	1.14E-02	0.	1.88E-05	0.	5.00E-02	8.88E-04	2.54E-02	1.44E-02	1.02E-01
35	7.38	0.	0.	1.05E-02	0.	8.49E-05	0.	5.02E-02	9.25E-04	2.54E-02	1.46E-02	1.02E-01
36	7.28	0.	0.	9.28E-03	0.	2.26E-04	0.	5.06E-02	9.65E-04	2.55E-02	1.47E-02	1.01E-01
37	7.18	0.	0.	8.71E-03	0.	6.61E-04	0.	5.10E-02	1.01E-03	2.56F-02	1.48E-02	1.02E-01
38	7.08	1.66E-06	0.	7.78E-03	0.	1.93E-03	0.	5.14E-02	1.05E-03	2.56F-02	1.48E-02	1.02E-01
39	6.98	3.19E-06	0.	6.96E-03	0.	1.88E-03	0.	5.18E-02	1.10E-03	2.57E-02	1.49E-02	1.02F-01
40	6.88	2.78E-06	0.	6.92E-03	0.	3.48E-03	0.	5.23E-02	1.15E-03	2.58E-02	1.50E-02	1.04E-01
41	6.78	1.93E-06	0.	5.95E-03	0.	3.81E-03	0.	5.27E-02	1.20E-03	2.58F-02	1.51E-02	1.04E-01
42	6.68	1.16E-06	0.	4.84E-03	0.	2.67E-03	0.	5.31E-02	1.25E-03	2.60F-02	1.52E-02	1.03E-01
43	6.58	6.55E-07	0.	3.72E-03	0.	4.39E-03	0.	5.35E-02	1.31E-03	2.62F-02	1.53E-02	1.04E-01
44	6.48	3.66E-07	0.	2.45E-03	1.97E-05	4.96E-03	0.	5.39E-02	1.38E-03	2.64E-02	1.54E-02	1.04E-01
45	6.38	2.07E-07	0.	1.45E-03	8.96E-05	2.75E-03	0.	5.43E-02	1.44E-03	2.66E-02	1.55E-02	1.02E-01
46	6.28	9.12E-08	0.	7.69E-04	1.23E-04	4.81E-03	0.	5.47E-02	1.51E-03	2.68E-02	1.57E-02	1.04E-01
47	6.19	4.87E-08	0.	3.46E-04	3.45E-04	5.47E-03	0.	5.52E-02	1.58E-03	2.70E-02	1.59E-02	1.06E-01
48	6.08	1.66E-08	0.	8.54E-05	5.13E-04	2.38E-03	0.	5.56E-02	1.67E-03	2.74F-02	1.61E-02	1.04E-01
49	5.98	4.82E-09	0.	6.18E-06	4.52E-04	2.41E-03	0.	5.56E-02	1.76E-03	2.77E-02	1.63E-02	1.04E-01
50	5.88	5.18E-10	0.	1.92E-07	6.28E-04	2.37E-03	0.	5.47E-02	1.85E-03	2.81E-02	1.65E-02	1.04E-01
51	5.78	3.75E-11	0.	0.	7.01E-04	2.62E-03	0.	5.14E-02	1.95E-03	2.84E-02	1.67E-02	1.02E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13900. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.69	1.60E-12	0.	0.	0.	5.66E-04	3.74E-03	0.	0.	4.78E-02	2.84E-03	2.30E-02	1.69E-02	9.99E-02
93	5.58	0.	0.	0.	0.	6.91E-04	3.50E-03	0.	0.	4.81E-02	2.18E-03	2.93E-02	1.72E-02	1.01E-01
94	5.48	0.	0.	0.	0.	6.12E-04	2.63E-03	0.	0.	4.83E-02	2.30E-03	3.00E-02	1.74E-02	1.01E-01
95	5.38	0.	0.	0.	0.	6.20E-04	3.52E-03	0.	0.	4.86E-02	2.43E-03	3.04E-02	1.77E-02	1.04E-01
96	5.28	0.	0.	0.	0.	6.65E-04	2.37E-03	0.	0.	4.89E-02	2.56E-03	3.13E-02	1.81E-02	1.04E-01
97	5.18	0.	0.	0.	0.	6.57E-04	3.13E-03	0.	0.	4.94E-02	2.73E-03	3.22E-02	1.89E-02	1.06E-01
98	5.08	2.15E-05	0.	0.	0.	5.91E-04	2.02E-03	0.	0.	4.90E-02	2.90E-03	3.31E-02	1.80E-02	1.08E-01
99	4.98	5.07E-05	0.	0.	0.	6.47E-04	2.90E-03	0.	0.	5.02E-02	3.08E-03	3.41E-02	1.92E-02	1.10E-01
100	4.88	9.19E-05	0.	0.	0.	6.88E-04	2.76E-03	0.	0.	5.04E-02	3.20E-03	3.52E-02	1.96E-02	1.12E-01
101	4.78	1.29E-04	0.	0.	0.	6.73E-04	3.49E-03	0.	0.	5.10E-02	3.36E-03	3.63E-02	2.01E-02	1.14E-01
102	4.68	1.60E-04	0.	0.	0.	6.82E-04	2.24E-03	0.	0.	5.14E-02	3.73E-03	3.76E-02	2.04E-02	1.16E-01
103	4.58	1.65E-04	0.	4.33E-04	0.	6.09E-04	1.66E-03	0.	0.	5.10E-02	3.99E-03	3.93E-02	2.11E-02	1.19E-01
104	4.48	1.71E-04	0.	1.41E-03	0.	6.03E-04	1.17E-03	0.	0.	5.23E-02	4.27E-03	4.09E-02	2.16E-02	1.22E-01
105	4.38	1.58E-04	0.	4.09E-03	0.	5.61E-04	7.07E-04	0.	0.	5.27E-02	4.97E-03	4.27E-02	2.22E-02	1.20E-01
106	4.28	1.45E-04	0.	1.44E-02	0.	5.87E-04	5.24E-04	0.	0.	5.31E-02	4.91E-03	4.49E-02	2.27E-02	1.41E-01
107	4.18	1.33E-04	0.	5.41E-03	0.	5.60E-04	1.49E-04	0.	0.	5.33E-02	5.20E-03	4.63E-02	2.30E-02	1.34E-01
108	4.08	1.20E-04	0.	2.09E-02	0.	5.38E-04	1.67E-04	0.	0.	5.39E-02	5.49E-03	4.81E-02	6.40E-03	1.35E-01
109	3.98	6.97E-05	0.	9.26E-03	8.79E-04	4.73E-04	4.32E-05	0.	0.	5.38E-02	6.14E-03	4.48E-02	6.60E-03	1.21E-01
110	3.88	1.88E-04	0.	1.42E-02	4.64E-03	5.84E-04	0.	0.	0.	5.31E-02	6.64E-03	4.58E-02	6.84E-03	1.31E-01
111	3.78	9.28E-05	0.	1.02E-02	1.47E-03	4.11E-04	0.	0.	0.	5.23E-02	7.28E-03	3.54E-02	7.58E-03	1.21E-01
112	3.68	8.21E-05	0.	1.80E-02	8.72E-03	4.46E-04	0.	0.	0.	4.80E-02	7.02E-03	3.05E-02	8.42E-03	1.23E-01
113	3.58	7.58E-05	0.	1.41E-02	2.07E-02	3.37E-04	0.	0.	0.	4.48E-02	8.52E-03	3.96E-02	9.34E-03	1.38E-01
114	3.48	6.68E-05	0.	8.11E-03	2.27E-03	3.70E-04	0.	0.	0.	2.90E-02	9.39E-03	4.44E-02	1.04E-02	1.01E-01
115	3.38	5.26E-05	0.	8.47E-03	1.04E-02	2.90E-04	0.	0.	0.	2.59E-02	1.02E-02	4.93E-02	1.14E-02	1.16E-01
116	3.28	4.46E-05	0.	5.24E-03	2.09E-02	3.88E-04	0.	0.	0.	2.59E-02	1.12E-02	5.42E-02	1.25E-02	1.38E-01
117	3.18	4.18E-05	0.	4.82E-03	3.96E-03	2.76E-04	0.	0.	0.	2.69E-02	1.23E-02	5.92E-02	1.36E-02	1.19E-01
118	3.08	3.64E-05	0.	2.30E-03	1.01E-02	2.53E-04	0.	0.	0.	2.68E-02	1.34E-02	6.42E-02	1.47E-02	1.31E-01
119	2.98	2.97E-05	0.	1.49E-03	9.95E-03	1.84E-04	0.	0.	0.	2.61E-02	1.51E-02	6.94E-02	1.58E-02	1.34E-01
120	2.88	3.03E-05	0.	6.94E-04	3.02E-03	1.21E-04	0.	0.	0.	2.61E-02	1.67E-02	7.53E-02	1.70E-02	1.39E-01
121	2.78	1.67E-05	0.	3.21E-04	4.64E-03	6.23E-05	0.	0.	0.	2.61E-02	1.81E-02	8.16E-02	1.84E-02	1.50E-01
122	2.68	8.37E-06	0.	1.61E-04	4.63E-04	2.61E-05	0.	0.	0.	2.61E-02	2.10E-02	8.84E-02	1.98E-02	1.56E-01
123	2.58	5.75E-07	0.	1.09E-05	4.12E-04	6.83E-06	0.	0.	0.	2.61E-02	2.36E-02	1.08E-01	9.76E-03	1.60E-01
124	2.48	0.	9.47E-04	0.	3.64E-04	4.27E-07	0.	0.	0.	2.61E-02	2.67E-02	1.16E-01	1.18E-02	1.82E-01
125	2.38	0.	3.43E-03	0.	0.	0.	0.	0.	0.	2.59E-02	3.04E-02	8.88E-02	1.41E-02	1.63E-01
126	2.28	0.	6.19E-03	0.	0.	0.	0.	0.	0.	2.98E-02	3.49E-02	1.05E-01	1.78E-02	1.91E-01
127	2.18	0.	9.73E-03	0.	0.	0.	0.	0.	0.	2.57E-02	4.00E-02	1.22E-01	1.96E-02	2.18E-01
128	2.08	0.	1.70E-02	0.	0.	0.	0.	0.	0.	2.49E-02	4.64E-02	1.40E-01	2.27E-02	2.51E-01
129	1.98	0.	2.71E-02	0.	0.	0.	0.	0.	0.	2.34E-02	5.43E-02	1.58E-01	2.60E-02	2.90E-01
130	1.88	0.	2.83E-02	0.	0.	0.	0.	0.	0.	2.29E-02	6.40E-02	1.38E-01	3.12E-02	3.29E-01
131	1.78	0.	2.65E-02	0.	0.	0.	0.	0.	0.	2.16E-02	7.61E-02	2.29E-01	3.78E-02	3.87E-01
132	1.68	0.	1.91E-02	0.	0.	0.	0.	0.	0.	1.82E-02	9.19E-02	2.81E-01	4.44E-02	4.35E-01
133	1.58	0.	2.20E-02	0.	0.	0.	0.	0.	0.	8.29E-03	1.11E-01	3.32E-01	5.37E-02	5.29E-01
134	1.48	0.	2.80E-02	0.	0.	0.	0.	0.	0.	0.	1.30E-01	4.09E-01	6.34E-02	6.32E-01
135	1.38	0.	1.72E-02	0.	0.	0.	0.	0.	0.	0.	1.72E-01	5.22E-01	8.34E-02	7.95E-01
136	1.28	0.	1.70E-02	0.	0.	0.	0.	0.	0.	0.	2.29E-01	5.33E-01	8.16E-02	8.72E-01
137	1.18	0.	1.93E-02	0.	0.	0.	0.	3.90E-08	0.	0.	2.87E-01	6.58E-01	1.03E-01	1.06E 00
138	1.08	0.	1.40E-02	0.	0.	0.	0.	4.23E-07	0.	0.	3.66E-01	7.96E-01	1.19E-01	1.31E 00
139	0.98	0.	1.19E-02	0.	0.	0.	0.	4.66E-07	0.	0.	5.34E-01	9.07E-01	1.35E-01	1.56E 00
140	0.88	0.	9.41E-03	0.	0.	0.	0.	9.83E-06	0.	0.	7.63E-01	1.04E 00	1.54E-01	1.97E 00
141	0.78	0.	1.34E-03	0.	0.	0.	0.	7.42E-06	0.	0.	1.16E 00	1.14E 00	1.60E-01	2.46E 00
142	0.68	0.	1.94E-04	0.	0.	0.	0.	2.77E-05	0.	0.	1.64E 00	1.28E 00	1.09E-01	3.31E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.2938-04 (1.00-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.91E-03	0.	0.	0.	1.39E-03	2.70E-05	1.98E 00	1.43E-03	1.53E 00
2	10.60	0.	0.	1.69E-03	0.	0.	0.	1.39E-03	2.64E-05	7.60E-03	1.43E-03	1.21E-02
3	10.50	0.	0.	1.69E-03	0.	0.	0.	1.39E-03	2.64E-05	7.63E-03	1.43E-03	1.21E-02
4	10.40	0.	0.	1.96E-03	0.	0.	0.	1.39E-03	2.63E-05	7.66E-03	1.43E-03	1.20E-02
5	10.30	0.	0.	1.32E-03	0.	0.	0.	1.38E-03	2.62E-05	7.68E-03	1.44E-03	1.18E-02
6	10.20	0.	0.	1.34E-03	0.	0.	0.	1.38E-03	2.61E-05	7.70E-03	1.42E-03	1.18E-02
7	10.10	0.	0.	1.24E-03	0.	0.	0.	1.38E-03	2.61E-05	7.71E-03	1.41E-03	1.18E-02
8	10.00	0.	0.	1.09E-03	0.	0.	0.	1.38E-03	2.61E-05	7.73E-03	1.41E-03	1.18E-02
9	9.90	0.	0.	1.07E-03	0.	0.	0.	1.38E-03	2.52E-05	7.75E-03	1.42E-03	1.16E-02
10	9.80	0.	0.	9.82E-04	0.	0.	0.	1.37E-03	2.62E-05	7.77E-03	1.40E-03	1.16E-02
11	9.70	0.	0.	8.22E-04	0.	0.	0.	1.37E-03	2.74E-05	7.79E-03	1.40E-03	1.14E-02
12	9.60	0.	0.	8.65E-04	0.	0.	0.	1.37E-03	2.84E-05	7.81E-03	1.39E-03	1.13E-02
13	9.50	0.	0.	7.31E-04	0.	0.	0.	1.37E-03	2.99E-05	7.83E-03	1.39E-03	1.14E-02
14	9.40	0.	0.	6.73E-04	0.	0.	0.	1.36E-03	4.11E-05	7.84E-03	1.39E-03	1.13E-02
15	9.30	0.	0.	6.85E-04	0.	0.	0.	1.36E-03	4.24E-05	7.88E-03	1.38E-03	1.14E-02
16	9.20	0.	0.	5.43E-04	0.	0.	0.	1.39E-03	4.38E-05	7.90E-03	1.38E-03	1.13E-02
17	9.10	0.	0.	5.56E-04	0.	0.	0.	1.39E-03	4.53E-05	2.44E-03	1.38E-03	5.82E-03
18	9.00	0.	0.	4.91E-04	0.	0.	0.	1.40E-03	4.68E-05	2.44E-03	1.37E-03	5.79E-03
19	8.90	0.	0.	4.42E-04	0.	0.	0.	1.40E-03	4.84E-05	2.44E-03	1.37E-03	5.71E-03
20	8.80	0.	0.	4.29E-04	0.	0.	0.	1.41E-03	5.01E-05	2.44E-03	1.37E-03	5.69E-03
21	8.70	0.	0.	3.59E-04	0.	0.	0.	1.41E-03	5.19E-05	2.44E-03	1.36E-03	5.62E-03
22	8.60	0.	0.	3.67E-04	0.	0.	0.	1.42E-03	5.37E-05	2.44E-03	1.36E-03	5.60E-03
23	8.50	0.	0.	3.10E-04	0.	0.	0.	1.42E-03	5.56E-05	2.44E-03	1.36E-03	5.59E-03
24	8.40	0.	0.	3.04E-04	0.	0.	0.	1.43E-03	5.77E-05	2.44E-03	1.36E-03	5.59E-03
25	8.30	0.	0.	2.49E-04	0.	0.	0.	1.44E-03	5.98E-05	2.44E-03	1.36E-03	5.54E-03
26	8.20	0.	0.	2.49E-04	0.	0.	0.	1.45E-03	6.20E-05	2.44E-03	1.36E-03	5.54E-03
27	8.10	0.	0.	2.00E-04	0.	0.	0.	1.45E-03	6.43E-05	2.44E-03	1.37E-03	5.54E-03
28	8.00	0.	0.	2.06E-04	0.	0.	0.	1.46E-03	6.68E-05	2.45E-03	1.36E-03	5.54E-03
29	7.90	0.	0.	1.72E-04	0.	0.	0.	1.47E-03	6.93E-05	2.45E-03	1.36E-03	5.55E-03
30	7.80	0.	0.	1.79E-04	0.	0.	0.	1.48E-03	7.20E-05	2.46E-03	1.36E-03	5.57E-03
31	7.70	0.	0.	1.49E-04	0.	0.	0.	1.48E-03	7.49E-05	2.47E-03	1.40E-03	5.57E-03
32	7.60	0.	0.	1.39E-04	0.	6.63E-09	0.	1.49E-03	7.79E-05	2.47E-03	1.41E-03	5.58E-03
33	7.50	0.	0.	1.29E-04	0.	2.76E-08	0.	1.50E-03	8.11E-05	2.48E-03	1.41E-03	5.60E-03
34	7.40	0.	0.	1.18E-04	0.	1.00E-07	0.	1.51E-03	8.44E-05	2.49E-03	1.42E-03	5.61E-03
35	7.30	0.	0.	1.81E-04	0.	8.12E-07	0.	1.51E-03	8.79E-05	2.49E-03	1.43E-03	5.62E-03
36	7.20	0.	0.	8.91E-05	0.	2.16E-06	0.	1.52E-03	9.17E-05	2.50E-03	1.43E-03	5.64E-03
37	7.10	0.	0.	8.37E-05	0.	6.32E-06	0.	1.54E-03	9.56E-05	2.51E-03	1.44E-03	5.67E-03
38	7.00	1.58E-08	0.	7.48E-05	0.	1.46E-05	0.	1.55E-03	9.98E-05	2.51E-03	1.45E-03	5.70E-03
39	6.90	3.83E-08	0.	6.69E-05	0.	1.72E-05	0.	1.56E-03	1.04E-04	2.52E-03	1.45E-03	5.72E-03
40	6.80	2.57E-08	0.	6.27E-05	0.	3.33E-05	0.	1.57E-03	1.09E-04	2.53E-03	1.46E-03	5.77E-03
41	6.70	1.84E-08	0.	5.36E-05	0.	3.64E-05	0.	1.59E-03	1.14E-04	2.53E-03	1.47E-03	5.79E-03
42	6.60	1.10E-08	0.	4.65E-05	0.	2.55E-05	0.	1.60E-03	1.19E-04	2.55E-03	1.48E-03	5.82E-03
43	6.50	6.23E-09	0.	3.58E-05	0.	4.20E-05	0.	1.61E-03	1.25E-04	2.57E-03	1.49E-03	5.87E-03
44	6.40	3.40E-09	0.	2.36E-05	1.69E-07	4.36E-05	0.	1.62E-03	1.31E-04	2.59E-03	1.50E-03	5.91E-03
45	6.30	1.97E-09	0.	1.40E-05	8.57E-07	2.63E-05	0.	1.64E-03	1.37E-04	2.61E-03	1.51E-03	5.93E-03
46	6.20	8.68E-10	0.	7.39E-06	1.18E-06	3.83E-05	0.	1.65E-03	1.44E-04	2.63E-03	1.53E-03	6.00E-03
47	6.10	3.80E-10	0.	3.32E-06	3.30E-06	5.23E-05	0.	1.66E-03	1.51E-04	2.65E-03	1.55E-03	6.07E-03
48	6.00	1.58E-10	0.	9.20E-07	3.00E-06	2.28E-05	0.	1.67E-03	1.59E-04	2.68E-03	1.57E-03	6.11E-03
49	5.90	3.82E-11	0.	5.00E-08	4.32E-06	2.30E-05	0.	1.67E-03	1.67E-04	2.72E-03	1.59E-03	6.18E-03
50	5.80	4.95E-12	0.	1.46E-09	5.93E-06	2.27E-05	0.	1.65E-03	1.76E-04	2.75E-03	1.61E-03	6.21E-03
51	5.70	3.58E-13	0.	0.	6.71E-06	2.51E-05	0.	1.59E-03	1.84E-04	2.78E-03	1.63E-03	6.18E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.66	1.99E-14	0.	0.	0.	5.42E-06	3.97E-05	0.	0.	1.44E-03	1.98E-04	2.82E-03	1.65E-03	6.15E-03
93	5.50	0.	0.	0.	0.	6.61E-06	3.39E-05	0.	0.	1.45E-03	2.07E-04	2.87E-03	1.68E-03	6.24E-03
94	5.48	0.	0.	0.	0.	5.88E-06	2.51E-05	0.	0.	1.45E-03	2.18E-04	2.94E-03	1.70E-03	6.34E-03
95	5.38	0.	0.	0.	0.	6.01E-06	3.37E-05	0.	0.	1.46E-03	2.31E-04	3.00E-03	1.73E-03	6.46E-03
96	5.28	0.	0.	0.	0.	6.36E-06	2.27E-05	0.	0.	1.47E-03	2.45E-04	3.07E-03	1.76E-03	6.58E-03
97	5.16	0.	0.	0.	0.	6.28E-06	2.99E-05	0.	0.	1.49E-03	2.60E-04	3.15E-03	1.80E-03	6.73E-03
98	5.08	2.05E-07	0.	0.	0.	5.65E-06	2.70E-05	0.	0.	1.50E-03	2.76E-04	3.24E-03	1.84E-03	6.89E-03
99	4.98	4.62E-07	0.	0.	0.	6.19E-06	2.85E-05	0.	0.	1.91E-03	2.93E-04	3.34E-03	1.87E-03	7.06E-03
00	4.88	8.74E-07	0.	0.	0.	6.38E-06	2.64E-05	0.	0.	1.92E-03	3.12E-04	3.45E-03	1.91E-03	7.25E-03
01	4.78	1.14E-06	0.	0.	0.	6.44E-06	2.34E-05	0.	0.	1.94E-03	3.32E-04	3.55E-03	1.96E-03	7.42E-03
02	4.68	1.52E-06	0.	0.	0.	6.52E-06	2.15E-05	0.	0.	1.95E-03	3.55E-04	3.69E-03	2.01E-03	7.63E-03
03	4.58	1.57E-06	0.	4.16E-06	0.	5.83E-06	1.39E-05	0.	0.	1.96E-03	3.79E-04	3.83E-03	2.06E-03	7.87E-03
04	4.48	1.63E-06	0.	1.36E-05	0.	5.76E-06	1.12E-05	0.	0.	1.97E-03	4.05E-04	4.01E-03	2.11E-03	8.13E-03
05	4.38	1.90E-06	0.	3.89E-05	0.	5.37E-06	6.76E-06	0.	0.	1.99E-03	4.34E-04	4.18E-03	2.16E-03	8.42E-03
06	4.28	1.38E-06	0.	1.39E-04	0.	5.61E-06	9.82E-06	0.	0.	1.60E-03	4.66E-04	4.36E-03	2.22E-03	8.79E-03
07	4.18	1.27E-06	0.	5.20E-05	0.	5.39E-06	1.34E-06	0.	0.	1.48E-03	5.02E-04	4.54E-03	2.25E-03	8.99E-03
08	4.08	1.15E-06	0.	1.97E-04	0.	5.07E-06	1.03E-06	0.	0.	1.61E-03	5.40E-04	4.71E-03	2.29E-03	9.19E-03
09	3.98	9.48E-07	0.	0.90E-05	2.72E-05	4.53E-06	4.13E-07	0.	0.	1.60E-03	5.83E-04	4.91E-03	2.44E-03	9.27E-03
10	3.88	1.03E-06	0.	1.30E-04	1.05E-04	4.82E-06	0.	0.	0.	1.60E-03	6.31E-04	4.41E-03	2.67E-03	7.68E-03
11	3.78	8.83E-07	0.	1.96E-04	4.99E-05	3.93E-06	0.	0.	0.	1.97E-03	6.84E-04	3.49E-03	2.39E-03	6.89E-03
12	3.68	7.81E-07	0.	9.64E-05	2.71E-04	4.27E-06	0.	0.	0.	1.47E-03	7.43E-04	3.77E-03	2.21E-03	7.18E-03
13	3.58	7.13E-07	0.	1.36E-04	6.45E-04	3.23E-06	0.	0.	0.	1.35E-03	8.09E-04	3.80E-03	2.11E-03	7.74E-03
14	3.48	6.35E-07	0.	7.79E-05	7.07E-05	3.59E-06	0.	0.	0.	7.70E-04	8.94E-04	4.35E-03	1.81E-03	7.10E-03
15	3.38	5.81E-07	0.	8.14E-05	3.22E-04	2.77E-06	0.	0.	0.	7.79E-04	9.67E-04	4.63E-03	1.11E-03	8.09E-03
16	3.28	4.25E-07	0.	5.83E-05	6.52E-04	2.07E-06	0.	0.	0.	7.06E-04	1.36E-03	5.31E-03	1.22E-03	9.87E-03
17	3.18	3.97E-07	0.	3.86E-05	1.11E-04	2.64E-06	0.	0.	0.	7.02E-04	1.17E-03	5.60E-03	1.32E-03	9.23E-03
18	3.08	3.40E-07	0.	2.29E-05	3.14E-04	2.42E-06	0.	0.	0.	7.84E-04	1.29E-03	6.29E-03	1.43E-03	1.01E-02
19	2.98	2.83E-07	0.	1.39E-05	1.05E-04	1.76E-06	0.	0.	0.	7.85E-04	1.43E-03	6.80E-03	1.54E-03	1.08E-02
20	2.88	2.88E-07	0.	6.67E-06	9.39E-05	1.15E-06	0.	0.	0.	7.87E-04	1.90E-03	7.30E-03	1.06E-03	1.15E-02
21	2.78	1.78E-07	0.	3.80E-06	1.91E-04	5.96F-37	0.	0.	0.	7.87E-04	1.78E-03	7.99E-03	1.79E-03	1.25E-02
22	2.68	7.97E-08	0.	1.54E-06	1.44E-05	2.50E-07	0.	0.	0.	7.67E-04	1.99E-03	8.66E-03	1.93E-03	1.34E-02
23	2.58	9.47E-09	0.	1.78E-07	1.28E-05	5.76E-08	0.	0.	0.	7.87E-04	2.24E-03	9.81E-03	0.52E-04	1.38E-02
24	2.48	0.	9.15E-06	0.	1.20E-05	6.00E-09	0.	0.	0.	7.87E-04	2.54E-03	1.14E-02	1.15E-03	1.59E-02
25	2.38	0.	7.38E-05	0.	0.	0.	0.	0.	0.	7.38E-04	2.89E-03	8.70E-03	1.38E-03	1.38E-02
26	2.28	0.	7.07E-05	0.	0.	0.	0.	0.	0.	7.77E-04	3.30E-03	1.03E-02	1.64E-03	1.41E-02
27	2.18	0.	9.39E-05	0.	0.	0.	0.	0.	0.	7.76E-04	3.80E-03	1.20E-02	1.94E-03	1.00E-02
28	2.08	0.	1.71E-04	0.	0.	0.	0.	0.	0.	7.49E-04	4.41E-03	1.37E-02	2.22E-03	2.12E-02
29	1.98	0.	2.61E-04	0.	0.	0.	0.	0.	0.	7.21E-04	5.16E-03	1.55E-02	2.53E-03	2.42E-02
30	1.88	0.	2.14E-04	0.	0.	0.	0.	0.	0.	6.89E-04	6.04E-03	1.84E-02	5.84E-03	2.05E-02
31	1.78	0.	2.54E-04	0.	0.	0.	0.	0.	0.	6.49E-04	7.23E-03	2.20E-02	3.69E-03	3.30E-02
32	1.68	0.	1.83E-04	0.	0.	0.	0.	0.	0.	5.49E-04	8.78E-03	2.56E-02	4.33E-03	3.94E-02
33	1.58	0.	2.19E-04	0.	0.	0.	0.	0.	0.	2.50E-04	1.06E-02	3.26E-02	5.24E-03	4.89E-02
34	1.48	0.	2.21E-04	0.	0.	0.	0.	0.	0.	0.	1.31E-02	4.80E-02	8.18E-03	5.95E-02
35	1.38	0.	1.68E-04	0.	0.	0.	0.	0.	0.	0.	1.64E-02	5.11E-02	8.13E-03	7.58E-02
36	1.28	0.	1.63E-04	0.	0.	0.	0.	0.	0.	0.	2.04E-02	5.23E-02	7.96E-03	8.13E-02
37	1.18	0.	1.47E-04	0.	0.	0.	0.	3.42E-10	0.	0.	2.73E-02	6.45E-02	1.00E-02	1.02E-01
38	1.08	0.	1.39E-04	0.	0.	0.	0.	4.89E-09	0.	0.	3.67E-02	7.80E-02	1.12E-02	1.26E-01
39	0.98	0.	1.11E-04	0.	0.	0.	0.	4.69E-09	0.	0.	5.07E-02	8.89E-02	1.32E-02	1.53E-01
100	0.88	0.	5.20E-05	0.	0.	0.	0.	9.37E-08	0.	0.	7.25E-02	1.02E-01	1.52E-02	1.98E-01
101	0.78	0.	1.29E-05	0.	0.	0.	0.	7.29E-08	0.	0.	1.09E-01	1.12E-01	1.65E-02	2.37E-01
102	0.68	0.	1.59E-06	0.	0.	0.	0.	2.69E-07	0.	0.	1.79E-01	1.25E-01	1.84E-02	3.19E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.793E-05 (19.9E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O+ PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.38E-05	0.	0.	0.	5.95E-05	2.37E-06	1.29E-01	1.29E-04	1.30E-01
2	10.60	0.	0.	1.27E-05	0.	0.	0.	5.56E-05	2.44E-06	6.45E-04	1.29E-04	8.24E-04
3	10.50	0.	0.	1.22E-05	0.	0.	0.	1.56E-05	2.51E-06	6.48E-04	1.29E-04	8.27E-04
4	10.40	0.	0.	1.12E-05	0.	0.	0.	3.57E-05	2.59E-06	6.51E-04	1.28E-04	8.28E-04
5	10.30	0.	0.	9.99E-06	0.	0.	0.	3.57E-05	2.66E-06	6.52E-04	1.28E-04	8.28E-04
6	10.20	0.	0.	9.69E-06	0.	0.	0.	3.58E-05	2.74E-06	6.54E-04	1.28E-04	8.30E-04
7	10.10	0.	0.	8.97E-06	0.	0.	0.	3.58E-05	2.83E-06	6.55E-04	1.27E-04	8.30E-04
8	10.00	0.	0.	7.68E-06	0.	0.	0.	3.59E-05	2.91E-06	6.57E-04	1.27E-04	8.30E-04
9	9.90	0.	0.	7.75E-06	0.	0.	0.	3.59E-05	3.00E-06	6.58E-04	1.27E-04	8.32E-04
10	9.80	0.	0.	7.09E-06	0.	0.	0.	3.60E-05	3.09E-06	6.60E-04	1.26E-04	8.33E-04
11	9.70	0.	0.	5.93E-06	0.	0.	0.	3.61E-05	3.19E-06	6.62E-04	1.26E-04	8.33E-04
12	9.60	0.	0.	6.30E-06	0.	0.	0.	3.61E-05	3.29E-06	6.63E-04	1.26E-04	8.35E-04
13	9.50	0.	0.	5.27E-06	0.	0.	0.	3.62E-05	3.40E-06	6.65E-04	1.25E-04	8.36E-04
14	9.40	0.	0.	4.86E-06	0.	0.	0.	3.63E-05	3.51E-06	6.67E-04	1.25E-04	8.37E-04
15	9.30	0.	0.	4.94E-06	0.	0.	0.	3.64E-05	3.62E-06	6.69E-04	1.25E-04	8.39E-04
16	9.20	0.	0.	3.92E-06	0.	0.	0.	3.66E-05	3.74E-06	6.71E-04	1.24E-04	8.40E-04
17	9.10	0.	0.	4.81E-06	0.	0.	0.	3.67E-05	3.89E-06	2.08E-04	1.24E-04	3.76E-04
18	9.00	0.	0.	3.94E-06	0.	0.	0.	3.68E-05	4.00E-06	2.07E-04	1.24E-04	3.76E-04
19	8.90	0.	0.	3.19E-06	0.	0.	0.	3.70E-05	4.14E-06	2.07E-04	1.24E-04	3.75E-04
20	8.80	0.	0.	3.09E-06	0.	0.	0.	3.71E-05	4.28E-06	2.07E-04	1.23E-04	3.75E-04
21	8.70	0.	0.	2.99E-06	0.	0.	0.	3.72E-05	4.43E-06	2.07E-04	1.23E-04	3.74E-04
22	8.60	0.	0.	2.64E-06	0.	0.	0.	3.74E-05	4.59E-06	2.07E-04	1.23E-04	3.74E-04
23	8.50	0.	0.	2.24E-06	0.	0.	0.	3.75E-05	4.75E-06	2.07E-04	1.22E-04	3.74E-04
24	8.40	0.	0.	2.19E-06	0.	0.	0.	3.77E-05	4.92E-06	2.07E-04	1.22E-04	3.74E-04
25	8.30	0.	0.	1.80E-06	0.	0.	0.	3.79E-05	5.10E-06	2.07E-04	1.22E-04	3.74E-04
26	8.20	0.	0.	1.79E-06	0.	0.	0.	3.81E-05	5.29E-06	2.07E-04	1.23E-04	3.75E-04
27	8.10	0.	0.	1.58E-06	0.	0.	0.	3.83E-05	5.49E-06	2.07E-04	1.23E-04	3.76E-04
28	8.00	0.	0.	1.49E-06	0.	0.	0.	3.85E-05	5.70E-06	2.08E-04	1.24E-04	3.78E-04
29	7.90	0.	0.	1.26E-06	0.	0.	0.	3.87E-05	5.92E-06	2.08E-04	1.25E-04	3.79E-04
30	7.80	0.	0.	1.26E-06	0.	0.	0.	3.89E-05	6.15E-06	2.09E-04	1.25E-04	3.80E-04
31	7.70	0.	0.	1.08E-06	0.	0.	0.	3.91E-05	6.39E-06	2.09E-04	1.26E-04	3.82E-04
32	7.60	0.	0.	1.00E-06	0.	5.07E-11	0.	3.93E-05	6.65E-06	2.10E-04	1.27E-04	3.84E-04
33	7.50	0.	0.	9.01E-07	0.	2.11E-10	0.	3.95E-05	6.92E-06	2.11E-04	1.27E-04	3.85E-04
34	7.40	0.	0.	7.91E-07	0.	1.38E-09	0.	3.97E-05	7.21E-06	2.11E-04	1.28E-04	3.87E-04
35	7.30	0.	0.	7.31E-07	0.	6.22E-09	0.	3.99E-05	7.51E-06	2.12E-04	1.29E-04	3.88E-04
36	7.20	0.	0.	6.43E-07	0.	1.65E-08	0.	4.01E-05	7.83E-06	2.12E-04	1.29E-04	3.90E-04
37	7.10	0.	0.	6.03E-07	0.	4.84E-08	0.	4.05E-05	8.17E-06	2.13E-04	1.30E-04	3.92E-04
38	7.00	1.28E-10	0.	5.39E-07	0.	1.12E-07	0.	4.08E-05	8.52E-06	2.13E-04	1.30E-04	3.94E-04
39	6.90	2.46E-10	0.	4.83E-07	0.	1.32E-07	0.	4.11E-05	8.90E-06	2.14E-04	1.31E-04	3.96E-04
40	6.80	2.09E-10	0.	4.52E-07	0.	2.55E-07	0.	4.14E-05	9.31E-06	2.15E-04	1.32E-04	3.98E-04
41	6.70	1.49E-10	0.	3.85E-07	0.	2.79E-07	0.	4.18E-05	9.73E-06	2.15E-04	1.33E-04	4.00E-04
42	6.60	8.95E-11	0.	3.36E-07	0.	1.96E-07	0.	4.21E-05	1.02E-05	2.16E-04	1.33E-04	4.03E-04
43	6.50	5.84E-11	0.	2.98E-07	0.	3.21E-07	0.	4.24E-05	1.07E-05	2.18E-04	1.34E-04	4.06E-04
44	6.40	2.83E-11	0.	1.70E-07	1.44E-09	3.34E-07	0.	4.28E-05	1.12E-05	2.20E-04	1.35E-04	4.09E-04
45	6.30	1.60E-11	0.	1.01E-07	6.56E-09	2.01E-07	0.	4.31E-05	1.17E-05	2.21E-04	1.36E-04	4.13E-04
46	6.20	7.85E-12	0.	5.35E-08	9.03E-09	2.93E-07	0.	4.14E-05	1.23E-05	2.23E-04	1.38E-04	4.17E-04
47	6.10	3.15E-12	0.	2.40E-08	2.53E-08	4.01E-07	0.	4.17E-05	1.29E-05	2.25E-04	1.40E-04	4.22E-04
48	6.00	1.28E-12	0.	5.92E-09	2.29E-08	1.74E-07	0.	4.11E-05	1.36E-05	2.28E-04	1.42E-04	4.27E-04
49	5.90	3.11E-13	0.	4.23E-10	3.31E-08	1.76E-07	0.	4.11E-05	1.43E-05	2.31E-04	1.43E-04	4.33E-04
50	5.80	3.94E-14	0.	1.05E-11	4.54E-08	1.74E-07	0.	4.14E-05	1.50E-05	2.34E-04	1.45E-04	4.38E-04
51	5.70	2.89E-15	0.	0.	5.13E-08	1.92E-07	0.	4.18E-05	1.58E-05	2.36E-04	1.47E-04	4.43E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.29E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.29E-16	0.	0.	0.	4.19E-08	2.74E-07	0.	0.	3.79E-05	1.67E-05	2.48E-04	1.49E-04	4.44E-04
53	5.50	0.	0.	0.	0.	5.06E-08	2.96E-07	0.	0.	3.81E-05	1.78E-05	2.44E-04	1.51E-04	4.51E-04
54	5.40	0.	0.	0.	0.	4.48E-08	1.92E-07	0.	0.	3.13E-05	1.87E-05	2.49E-04	1.53E-04	4.60E-04
55	5.30	0.	0.	0.	0.	4.60E-08	2.96E-07	0.	0.	3.16E-05	1.97E-05	2.55E-04	1.56E-04	4.69E-04
56	5.20	0.	0.	0.	0.	4.07E-08	1.74E-07	0.	0.	3.10E-05	2.09E-05	2.48E-04	1.59E-04	4.79E-04
57	5.10	0.	0.	0.	0.	4.81E-08	2.29E-07	0.	0.	3.11E-05	2.22E-05	2.68E-04	1.62E-04	4.91E-04
58	5.00	1.66E-09	0.	0.	0.	4.33E-08	2.07E-07	0.	0.	3.15E-05	2.35E-05	2.78E-04	1.65E-04	5.04E-04
59	4.90	3.92E-09	0.	0.	0.	4.74E-08	2.18E-07	0.	0.	3.19E-05	2.98E-05	2.84E-04	1.69E-04	5.18E-04
60	4.80	7.10E-09	0.	0.	0.	5.04E-08	2.02E-07	0.	0.	4.41E-05	2.66E-05	2.93E-04	1.72E-04	5.32E-04
61	4.70	9.27E-09	0.	0.	0.	4.93E-08	1.79E-07	0.	0.	4.69E-05	2.84E-05	3.02E-04	1.77E-04	5.48E-04
62	4.60	1.24E-08	0.	0.	0.	4.99E-08	1.44E-07	0.	0.	4.59E-05	3.03E-05	3.13E-04	1.81E-04	5.64E-04
63	4.50	1.27E-08	0.	3.00E-08	0.	4.45E-08	1.21E-07	0.	0.	4.11E-05	3.23E-05	3.27E-04	1.86E-04	5.86E-04
64	4.40	1.32E-08	0.	9.77E-08	0.	4.41E-08	8.59E-08	0.	0.	4.14E-05	3.46E-05	3.41E-04	1.90E-04	6.07E-04
65	4.30	1.22E-08	0.	2.81E-07	0.	4.11E-08	5.17E-08	0.	0.	4.18E-05	3.71E-05	3.55E-04	1.95E-04	6.30E-04
66	4.20	1.12E-08	0.	6.99E-07	0.	4.20E-08	3.04E-08	0.	0.	4.21E-05	3.98E-05	3.70E-04	2.00E-04	6.53E-04
67	4.10	1.03E-08	0.	3.75E-07	0.	4.10E-08	1.03E-08	0.	0.	4.23E-05	4.28E-05	3.85E-04	2.07E-04	6.73E-04
68	4.00	9.31E-09	0.	1.42E-06	0.	3.88E-08	7.85E-09	0.	0.	4.21E-05	4.61E-05	4.00E-04	5.62E-05	5.47E-04
69	3.90	7.71E-09	0.	6.42E-07	6.72E-07	3.46E-08	3.16E-09	0.	0.	4.21E-05	4.98E-05	3.66E-04	5.80E-05	5.18E-04
70	3.80	8.35E-09	0.	9.81E-07	3.57E-06	3.49E-08	0.	0.	0.	4.21E-05	5.39E-05	3.75E-04	6.01E-05	5.36E-04
71	3.70	7.17E-09	0.	1.18E-06	1.13E-06	3.01E-08	0.	0.	0.	4.11E-05	5.84E-05	2.90E-04	6.66E-05	4.65E-04
72	3.60	6.35E-09	0.	6.98E-07	6.70E-06	3.27E-08	0.	0.	0.	3.81E-05	6.35E-05	3.20E-04	7.48E-05	5.04E-04
73	3.50	9.88E-09	0.	9.88E-07	1.99E-05	2.47E-08	0.	0.	0.	3.51E-05	6.91E-05	3.30E-04	8.21E-05	5.34E-04
74	3.40	5.16E-09	0.	4.62E-07	1.74E-06	2.75E-08	0.	0.	0.	2.91E-05	7.55E-05	3.78E-04	9.11E-05	5.99E-04
75	3.30	4.07E-09	0.	5.07E-07	7.95E-06	2.12E-08	0.	0.	0.	2.91E-05	8.24E-05	4.10E-04	1.00E-04	6.23E-04
76	3.20	3.45E-09	0.	3.63E-07	1.61E-05	2.19E-08	0.	0.	0.	2.81E-05	9.07E-05	4.51E-04	1.10E-04	6.88E-04
77	3.10	3.23E-09	0.	2.70E-07	2.74E-06	2.02E-08	0.	0.	0.	2.81E-05	9.98E-05	4.93E-04	1.19E-04	7.35E-04
78	3.00	2.41E-09	0.	1.45E-07	7.75E-06	1.85E-08	0.	0.	0.	2.91E-05	1.10E-04	5.34E-04	1.29E-04	8.02E-04
79	2.90	2.30E-09	0.	1.01E-07	4.57E-06	1.39E-08	0.	0.	0.	2.91E-05	1.22E-04	5.78E-04	1.39E-04	8.64E-04
80	2.80	2.34E-09	0.	4.81E-08	2.32E-06	8.83E-09	0.	0.	0.	2.07E-05	1.34E-04	6.27E-04	1.50E-04	9.35E-04
81	2.70	1.49E-09	0.	9.25E-08	3.73E-06	4.56E-09	0.	0.	0.	2.81E-05	1.52E-04	6.79E-04	1.62E-04	1.02E-03
82	2.60	4.47E-10	0.	1.11E-08	3.55E-07	1.91E-09	0.	0.	0.	2.07E-05	1.70E-04	7.36E-04	1.74E-04	1.10E-03
83	2.50	4.44E-11	0.	1.20E-09	3.17E-07	4.41E-10	0.	0.	0.	2.07E-05	1.91E-04	8.33E-04	8.58E-05	1.13E-03
84	2.40	0.	4.96E-08	0.	2.96E-07	4.99E-11	0.	0.	0.	2.07E-05	2.17E-04	9.68E-04	1.03E-04	1.31E-03
85	2.30	0.	2.30E-07	0.	0.	0.	0.	0.	0.	2.06E-05	2.46E-04	7.39E-04	1.24E-04	1.13E-03
86	2.20	0.	5.60E-07	0.	0.	0.	0.	0.	0.	2.09E-05	2.82E-04	8.74E-04	1.49E-04	1.33E-03
87	2.10	0.	6.74E-07	0.	0.	0.	0.	0.	0.	2.04E-05	3.25E-04	1.52E-03	1.74E-04	1.94E-03
88	2.00	0.	1.24E-06	0.	0.	0.	0.	0.	0.	1.97E-05	3.77E-04	1.16E-03	2.00E-04	1.76E-03
89	1.90	0.	1.08E-06	0.	0.	0.	0.	0.	0.	1.90E-05	4.41E-04	1.32E-03	2.28E-04	2.01E-03
90	1.80	0.	1.59E-06	0.	0.	0.	0.	0.	0.	1.82E-05	5.19E-04	1.57E-03	2.74E-04	2.30E-03
91	1.70	0.	1.03E-06	0.	0.	0.	0.	0.	0.	1.71E-05	6.16E-04	1.87E-03	3.32E-04	2.84E-03
92	1.60	0.	1.32E-06	0.	0.	0.	0.	0.	0.	1.45E-05	7.43E-04	2.18E-03	3.98E-04	3.32E-03
93	1.50	0.	1.50E-06	0.	0.	0.	0.	0.	0.	4.50E-06	9.04E-04	2.77E-03	4.72E-04	4.13E-03
94	1.40	0.	1.60E-06	0.	0.	0.	0.	0.	0.	0.	1.12E-03	3.40E-03	5.57E-04	5.08E-03
95	1.30	0.	1.21E-06	0.	0.	0.	0.	0.	0.	0.	1.40E-03	4.34E-03	7.33E-04	6.48E-03
96	1.20	0.	1.18E-06	0.	0.	0.	0.	0.	0.	0.	1.78E-03	4.44E-03	7.17E-04	6.94E-03
97	1.10	0.	1.06E-06	0.	0.	0.	0.	2.62E-12	0.	0.	2.33E-03	5.40E-03	9.01E-04	8.71E-03
98	1.00	0.	9.72E-07	0.	0.	0.	0.	3.10E-11	0.	0.	3.13E-03	6.63E-03	1.81E-03	1.08E-02
99	0.90	0.	7.97E-07	0.	0.	0.	0.	3.56E-11	0.	0.	4.33E-03	7.55E-03	1.19E-03	1.31E-02
100	0.80	0.	3.75E-07	0.	0.	0.	0.	7.17E-10	0.	0.	6.19E-03	8.68E-03	1.37E-03	1.62E-02
101	0.70	0.	9.28E-08	0.	0.	0.	0.	5.98E-10	0.	0.	9.29E-03	9.53E-03	1.49E-03	2.03E-02
102	0.60	0.	1.80E-08	0.	0.	0.	0.	2.03E-09	0.	0.	1.49E-02	1.06E-02	1.66E-03	2.72E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.84E-08	0.	0.	0.	6.21E-07	1.47E-07	3.88E-05	9.07E-06	4.07E-05
2	10.60	0.	0.	4.47E-08	0.	0.	0.	6.21E-07	1.91E-07	3.90E-05	9.09E-06	4.09E-05
3	10.50	0.	0.	4.44E-08	0.	0.	0.	6.22E-07	1.95E-07	3.92E-05	9.03E-06	4.11E-05
4	10.40	0.	0.	4.11E-08	0.	0.	0.	6.22E-07	1.49E-07	3.93E-05	9.01E-06	4.12E-05
5	10.30	0.	0.	3.49E-08	0.	0.	0.	6.24E-07	1.69E-07	3.94E-05	8.99E-06	4.13E-05
6	10.20	0.	0.	3.94E-08	0.	0.	0.	6.25E-07	1.70E-07	3.95E-05	8.96E-06	4.13E-05
7	10.10	0.	0.	3.20E-08	0.	0.	0.	6.26E-07	1.75E-07	3.96E-05	8.94E-06	4.14E-05
8	10.00	0.	0.	2.78E-08	0.	0.	0.	6.26E-07	1.80E-07	3.97E-05	8.92E-06	4.15E-05
9	9.90	0.	0.	2.83E-08	0.	0.	0.	6.28E-07	1.86E-07	3.98E-05	8.90E-06	4.16E-05
10	9.80	0.	0.	2.99E-08	0.	0.	0.	6.29E-07	1.91E-07	3.99E-05	8.88E-06	4.16E-05
11	9.70	0.	0.	2.17E-08	0.	0.	0.	6.30E-07	1.97E-07	4.00E-05	8.85E-06	4.17E-05
12	9.60	0.	0.	2.33E-08	0.	0.	0.	6.31E-07	2.04E-07	4.01E-05	8.83E-06	4.18E-05
13	9.50	0.	0.	1.92E-08	0.	0.	0.	6.32E-07	2.10E-07	4.02E-05	8.81E-06	4.19E-05
14	9.40	0.	0.	1.78E-08	0.	0.	0.	6.34E-07	2.17E-07	4.03E-05	8.79E-06	5.00E-05
15	9.30	0.	0.	1.81E-08	0.	0.	0.	6.37E-07	2.24E-07	4.05E-05	8.76E-06	5.01E-05
16	9.20	0.	0.	1.43E-08	0.	0.	0.	6.39E-07	2.32E-07	1.26E-05	8.74E-06	2.22E-05
17	9.10	0.	0.	1.47E-08	0.	0.	0.	6.41E-07	2.39E-07	1.26E-05	8.72E-06	2.22E-05
18	9.00	0.	0.	1.33E-08	0.	0.	0.	6.44E-07	2.47E-07	1.25E-05	8.70E-06	2.21E-05
19	8.90	0.	0.	1.17E-08	0.	0.	0.	6.46E-07	2.54E-07	1.25E-05	8.68E-06	2.21E-05
20	8.80	0.	0.	1.13E-08	0.	0.	0.	6.48E-07	2.65E-07	1.25E-05	8.66E-06	2.21E-05
21	8.70	0.	0.	9.47E-09	0.	0.	0.	6.50E-07	2.74E-07	1.25E-05	8.64E-06	2.21E-05
22	8.60	0.	0.	9.67E-09	0.	0.	0.	6.53E-07	2.84E-07	1.25E-05	8.62E-06	2.21E-05
23	8.50	0.	0.	8.17E-09	0.	0.	0.	6.55E-07	2.94E-07	1.25E-05	8.60E-06	2.21E-05
24	8.40	0.	0.	8.01E-09	0.	0.	0.	6.59E-07	3.05E-07	1.25E-05	8.58E-06	2.21E-05
25	8.30	0.	0.	6.57E-09	0.	0.	0.	6.62E-07	3.16E-07	1.25E-05	8.56E-06	2.21E-05
26	8.20	0.	0.	6.96E-09	0.	0.	0.	6.65E-07	3.27E-07	1.25E-05	8.63E-06	2.22E-05
27	8.10	0.	0.	5.48E-09	0.	0.	0.	6.69E-07	3.40E-07	1.25E-05	8.67E-06	2.22E-05
28	8.00	0.	0.	5.43E-09	0.	0.	0.	6.72E-07	3.53E-07	1.26E-05	8.72E-06	2.23E-05
29	7.90	0.	0.	4.93E-09	0.	0.	0.	6.76E-07	3.66E-07	1.26E-05	8.76E-06	2.24E-05
30	7.80	0.	0.	4.62E-09	0.	0.	0.	6.79E-07	3.81E-07	1.26E-05	8.81E-06	2.25E-05
31	7.70	0.	0.	3.93E-09	0.	0.	0.	6.83E-07	3.96E-07	1.27E-05	8.85E-06	2.26E-05
32	7.60	0.	0.	3.66E-09	0.	2.15E-13	0.	6.86E-07	4.11E-07	1.27E-05	8.90E-06	2.27E-05
33	7.50	0.	0.	3.29E-09	0.	8.96E-13	0.	6.90E-07	4.28E-07	1.27E-05	8.94E-06	2.28E-05
34	7.40	0.	0.	2.89E-09	0.	5.86E-12	0.	6.93E-07	4.46E-07	1.28E-05	8.99E-06	2.29E-05
35	7.30	0.	0.	2.67E-09	0.	2.64E-11	0.	6.97E-07	4.64E-07	1.28E-05	9.03E-06	2.30E-05
36	7.20	0.	0.	2,35E-09	0.	7.02E-11	0.	7.01E-07	4.84E-07	1.28E-05	9.08E-06	2.31E-05
37	7.10	0.	0.	2.21E-09	0.	2.05E-10	0.	7.07E-07	5.05E-07	1.29E-05	9.12E-06	2.32E-05
38	7.00	6.32E-13	0.	1.97E-09	0.	4.74E-10	0.	7.13E-07	5.27E-07	1.29E-05	9.17E-06	2.33E-05
39	6.90	1.22E-12	0.	1.76E-09	0.	9.59E-10	0.	7.18E-07	5.51E-07	1.29E-05	9.21E-06	2.34E-05
40	6.80	1.93E-12	0.	1.65E-09	0.	1.08E-09	0.	7.24E-07	5.76E-07	1.30E-05	9.26E-06	2.35E-05
41	6.70	7.50E-13	0.	1.41E-09	0.	1.18E-09	0.	7.30E-07	6.02E-07	1.30E-05	9.31E-06	2.37E-05
42	6.60	4.41E-13	0.	1.23E-09	0.	8.30E-10	0.	7.36E-07	6.30E-07	1.31E-05	9.37E-06	2.38E-05
43	6.50	2.50E-13	0.	9.44E-10	0.	1.36E-09	0.	7.41E-07	6.60E-07	1.32E-05	9.43E-06	2.40E-05
44	6.40	1.39E-13	0.	6.22E-10	6.13E-12	1.42E-09	0.	7.47E-07	6.91E-07	1.33E-05	9.49E-06	2.42E-05
45	6.30	7.89E-14	0.	3.69E-10	2.78E-11	8.55E-10	0.	7.53E-07	7.25E-07	1.34E-05	9.57E-06	2.44E-05
46	6.20	3.48E-14	0.	1.95E-10	3.83E-11	1.25E-09	0.	7.59E-07	7.61E-07	1.35E-05	9.69E-06	2.47E-05
47	6.10	1.55E-14	0.	8.76E-11	1.07E-10	1.70E-09	0.	7.64E-07	7.99E-07	1.36E-05	9.82E-06	2.50E-05
48	6.00	6.34E-15	0.	2.16E-11	9.74E-11	7.40E-10	0.	7.70E-07	8.40E-07	1.38E-05	9.95E-06	2.53E-05
49	5.90	1.53E-15	0.	1.54E-12	1.40E-10	7.48E-10	0.	7.78E-07	8.83E-07	1.40E-05	1.01E-05	2.57E-05
50	5.80	1.94E-16	0.	3.85E-14	1.93E-10	7.38E-10	0.	7.59E-07	9.30E-07	1.41E-05	1.02E-05	2.60E-05
51	5.70	1.43E-17	0.	0.	2.18E-10	8.14E-10	0.	7.13E-07	9.80E-07	1.43E-05	1.03E-05	2.63E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13800. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ION)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.39E-19	0.	0.	0.	1.76E-10	1.16E-09	0.	0.	6.63E-07	1.03E-06	1.45E-05	1.05E-05	2.67E-05
53	5.50	0.	0.	0.	0.	2.17E-10	1.09E-09	0.	0.	6.66E-07	1.09E-06	1.48E-05	1.06E-05	2.71E-05
54	5.40	0.	0.	0.	0.	1.90E-10	8.17E-10	0.	0.	6.69E-07	1.15E-06	1.51E-05	1.08E-05	2.77E-05
55	5.30	0.	0.	0.	0.	1.95E-10	1.10E-09	0.	0.	6.74E-07	1.22E-06	1.54E-05	1.09E-05	2.82E-05
56	5.20	0.	0.	0.	0.	2.07E-10	7.37E-10	0.	0.	6.78E-07	1.29E-06	1.57E-05	1.12E-05	2.89E-05
57	5.10	0.	0.	0.	0.	2.04E-10	9.72E-10	0.	0.	6.84E-07	1.37E-06	1.62E-05	1.14E-05	2.96E-05
58	5.00	8.20E-12	0.	0.	0.	1.84E-10	8.78E-10	0.	0.	6.90E-07	1.46E-06	1.67E-05	1.16E-05	3.04E-05
59	4.90	1.93E-11	0.	0.	0.	2.01E-10	9.35E-10	0.	0.	6.99E-07	1.55E-06	1.72E-05	1.19E-05	3.13E-05
60	4.80	3.53E-11	0.	0.	0.	2.14E-10	8.50E-10	0.	0.	7.01E-07	1.65E-06	1.77E-05	1.21E-05	3.22E-05
61	4.70	4.97E-11	0.	0.	0.	2.09E-10	7.41E-10	0.	0.	7.07E-07	1.76E-06	1.83E-05	1.24E-05	3.31E-05
62	4.60	6.11E-11	0.	0.	0.	2.12E-10	6.97E-10	0.	0.	7.13E-07	1.87E-06	1.89E-05	1.27E-05	3.42E-05
63	4.50	6.27E-11	0.	1.10E-10	0.	1.89E-10	5.15E-10	0.	0.	7.18E-07	2.00E-06	1.96E-05	1.30E-05	3.55E-05
64	4.40	6.52E-11	0.	3.97E-10	0.	1.87E-10	3.65E-10	0.	0.	7.24E-07	2.14E-06	2.06E-05	1.34E-05	3.68E-05
65	4.30	6.82E-11	0.	1.03E-09	0.	1.74E-10	2.20E-10	0.	0.	7.30E-07	2.29E-06	2.15E-05	1.37E-05	3.82E-05
66	4.20	6.52E-11	0.	3.69E-09	0.	1.82E-10	1.63E-10	0.	0.	7.36E-07	2.46E-06	2.24E-05	1.39E-05	3.95E-05
67	4.10	5.80E-11	0.	1.37E-09	0.	1.74E-10	4.37E-11	0.	0.	7.38E-07	2.65E-06	2.33E-05	1.40E-05	3.97E-05
68	4.00	4.59E-11	0.	9.20E-09	0.	1.69E-10	3.33E-11	0.	0.	7.41E-07	2.85E-06	2.42E-05	1.40E-05	3.97E-05
69	3.90	3.80E-11	0.	2.39E-09	6.86E-09	1.47E-10	1.34E-11	0.	0.	7.38E-07	3.08E-06	2.18E-05	4.87E-06	2.98E-05
70	3.80	4.12E-11	0.	3.99E-09	5.24E-08	1.57E-10	0.	0.	0.	7.36E-07	3.33E-06	1.72E-05	4.22E-06	2.36E-05
71	3.70	3.59E-11	0.	4.10E-09	1.66E-08	1.28E-10	0.	0.	0.	7.24E-07	3.61E-06	1.79E-05	4.68E-06	2.69E-05
72	3.60	3.13E-11	0.	2.93E-09	9.84E-08	1.30E-10	0.	0.	0.	6.78E-07	3.93E-06	1.79E-05	5.20E-06	2.78E-05
73	3.50	2.96E-11	0.	3.59E-09	2.34E-07	1.05E-10	0.	0.	0.	6.21E-07	4.28E-06	1.99E-05	5.77E-06	3.08E-05
74	3.40	2.55E-11	0.	2.69E-09	2.96E-08	1.17E-10	0.	0.	0.	3.98E-07	4.67E-06	2.24E-05	6.40E-06	3.58E-05
75	3.30	2.01E-11	0.	2.19E-09	1.17E-07	9.01E-11	0.	0.	0.	3.59E-07	5.11E-06	2.48E-05	7.04E-06	3.74E-05
76	3.20	1.70E-11	0.	1.35E-09	2.36E-07	9.31E-11	0.	0.	0.	3.59E-07	5.61E-06	2.73E-05	7.71E-06	4.12E-05
77	3.10	1.59E-11	0.	1.02E-09	4.02E-08	8.89E-11	0.	0.	0.	3.60E-07	6.18E-06	2.98E-05	8.35E-06	4.47E-05
78	3.00	1.39E-11	0.	6.84E-10	1.14E-07	7.46E-11	0.	0.	0.	3.61E-07	6.82E-06	3.23E-05	9.04E-06	4.87E-05
79	2.90	1.13E-11	0.	3.40E-10	6.72E-08	5.75E-11	0.	0.	0.	3.61E-07	7.56E-06	3.49E-05	9.75E-06	5.27E-05
80	2.80	1.16E-11	0.	1.70E-10	3.41E-08	3.75E-11	0.	0.	0.	3.62E-07	8.40E-06	3.79E-05	1.04E-05	5.72E-05
81	2.70	7.14E-12	0.	8.13E-11	5.49E-08	1.94E-11	0.	0.	0.	3.62E-07	9.38E-06	4.11E-05	1.14E-05	6.22E-05
82	2.60	3.19E-12	0.	4.07E-11	5.22E-09	8.12E-12	0.	0.	0.	3.62E-07	1.05E-05	4.45E-05	1.12E-05	6.45E-05
83	2.50	2.19E-13	0.	4.78E-12	4.60E-09	1.87E-12	0.	0.	0.	3.62E-07	1.18E-05	5.03E-05	5.92E-06	6.84E-05
84	2.40	0.	2.40E-10	0.	4.35E-09	1.95E-13	0.	0.	0.	3.62E-07	1.33E-05	3.69E-05	7.27E-06	5.79E-05
85	2.30	0.	8.49E-10	0.	0.	0.	0.	0.	0.	3.59E-07	1.52E-05	4.47E-05	8.71E-06	6.90E-05
86	2.20	0.	2.88E-09	0.	0.	0.	0.	0.	0.	3.58E-07	1.74E-05	5.28E-05	1.05E-05	8.11E-05
87	2.10	0.	2.49E-09	0.	0.	0.	0.	0.	0.	3.56E-07	2.01E-05	6.15E-05	1.23E-05	9.42E-05
88	2.00	0.	4.52E-09	0.	0.	0.	0.	0.	0.	3.49E-07	2.33E-05	7.02E-05	1.40E-05	1.08E-04
89	1.90	0.	6.87E-09	0.	0.	0.	0.	0.	0.	3.32E-07	2.73E-05	7.90E-05	1.60E-05	1.23E-04
90	1.80	0.	5.69E-09	0.	0.	0.	0.	0.	0.	3.17E-07	3.21E-05	8.47E-05	1.93E-05	1.40E-04
91	1.70	0.	6.71E-09	0.	0.	0.	0.	0.	0.	2.99E-07	3.82E-05	1.13E-04	2.33E-05	1.79E-04
92	1.60	0.	4.83E-09	0.	0.	0.	0.	0.	0.	2.53E-07	4.53E-05	1.32E-04	2.74E-05	2.05E-04
93	1.50	0.	5.70E-09	0.	0.	0.	0.	0.	0.	1.15E-07	5.69E-05	1.67E-04	3.17E-05	2.55E-04
94	1.40	0.	3.83E-09	0.	0.	0.	0.	0.	0.	0.	6.91E-05	1.94E-04	3.91E-05	3.02E-04
95	1.30	0.	4.44E-09	0.	0.	0.	0.	0.	0.	0.	8.65E-05	1.99E-04	3.77E-05	3.23E-04
96	1.20	0.	4.38E-09	0.	0.	0.	0.	0.	0.	0.	1.10E-04	2.62E-04	5.04E-05	4.23E-04
97	1.10	0.	3.87E-09	0.	0.	0.	0.	1.11E-14	0.	0.	1.44E-04	3.31E-04	6.33E-05	5.39E-04
98	1.00	0.	3.55E-09	0.	0.	0.	0.	1.12E-13	0.	0.	1.84E-04	4.81E-04	7.10E-05	6.65E-04
99	0.90	0.	2.91E-09	0.	0.	0.	0.	1.92E-13	0.	0.	2.68E-04	4.56E-04	8.36E-05	8.03E-04
100	0.80	0.	1.87E-09	0.	0.	0.	0.	3.04E-12	0.	0.	3.83E-04	5.24E-04	9.61E-05	1.00E-03
101	0.70	0.	3.39E-10	0.	0.	0.	0.	2.37E-12	0.	0.	5.74E-04	5.76E-04	1.04E-04	1.25E-03
102	0.65	0.	3.96E-11	0.	0.	0.	0.	5.62E-12	0.	0.	9.24E-04	5.19E-04	8.76E-05	1.53E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000, DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-R NO. 1	O BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (INV*)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.98E-11	0.	0.	0.	3.62E-09	4.27E-09	1.09E-06	3.10E-07	1.41E-06
2	10.60	0.	0.	3.93E-11	0.	0.	0.	3.62E-09	4.48E-09	1.10E-06	3.09E-07	1.41E-06
3	10.50	0.	0.	3.90E-11	0.	0.	0.	3.62E-09	4.92E-09	1.10E-06	3.08E-07	1.42E-06
4	10.40	0.	0.	3.24E-11	0.	0.	0.	3.63E-09	4.68E-09	1.10E-06	3.08E-07	1.42E-06
5	10.30	0.	0.	2.79E-11	0.	0.	0.	3.63E-09	4.79E-09	1.11E-06	3.07E-07	1.42E-06
6	10.20	0.	0.	2.79E-11	0.	0.	0.	3.64E-09	4.94E-09	1.11E-06	3.06E-07	1.42E-06
7	10.10	0.	0.	2.93E-11	0.	0.	0.	3.64E-09	5.09E-09	1.11E-06	3.05E-07	1.42E-06
8	10.00	0.	0.	2.19E-11	0.	0.	0.	3.65E-09	5.24E-09	1.11E-06	3.05E-07	1.43E-06
9	9.90	0.	0.	2.23E-11	0.	0.	0.	3.66E-09	5.40E-09	1.12E-06	3.04E-07	1.43E-06
10	9.80	0.	0.	2.04E-11	0.	0.	0.	3.66E-09	5.57E-09	1.12E-06	3.03E-07	1.43E-06
11	9.70	0.	0.	1.71E-11	0.	0.	0.	3.67E-09	5.75E-09	1.12E-06	3.02E-07	1.44E-06
12	9.60	0.	0.	1.94E-11	0.	0.	0.	3.68E-09	5.93E-09	1.13E-06	3.02E-07	1.44E-06
13	9.50	0.	0.	1.92E-11	0.	0.	0.	3.69E-09	6.12E-09	1.13E-06	3.01E-07	1.44E-06
14	9.40	0.	0.	1.40E-11	0.	0.	0.	3.70E-09	6.32E-09	1.13E-06	3.00E-07	1.44E-06
15	9.30	0.	0.	1.42E-11	0.	0.	0.	3.71E-09	6.52E-09	3.53E-07	2.99E-07	6.63E-07
16	9.20	0.	0.	1.13E-11	0.	0.	0.	3.72E-09	6.74E-09	3.53E-07	2.99E-07	6.63E-07
17	9.10	0.	0.	1.16E-11	0.	0.	0.	3.74E-09	6.96E-09	3.52E-07	2.98E-07	6.61E-07
18	9.00	0.	0.	1.02E-11	0.	0.	0.	3.75E-09	7.20E-09	3.52E-07	2.97E-07	6.60E-07
19	8.90	0.	0.	9.19E-12	0.	0.	0.	3.76E-09	7.44E-09	3.52E-07	2.96E-07	6.60E-07
20	8.80	0.	0.	8.92E-12	0.	0.	0.	3.78E-09	7.70E-09	3.52E-07	2.96E-07	6.59E-07
21	8.70	0.	0.	7.46E-12	0.	0.	0.	3.79E-09	7.97E-09	3.52E-07	2.95E-07	6.58E-07
22	8.60	0.	0.	7.62E-12	0.	0.	0.	3.80E-09	8.25E-09	3.51E-07	2.94E-07	6.58E-07
23	8.50	0.	0.	6.44E-12	0.	0.	0.	3.82E-09	8.55E-09	3.52E-07	2.94E-07	6.58E-07
24	8.40	0.	0.	6.32E-12	0.	0.	0.	3.84E-09	8.86E-09	3.52E-07	2.93E-07	6.58E-07
25	8.30	0.	0.	5.18E-12	0.	0.	0.	3.86E-09	9.18E-09	3.52E-07	2.93E-07	6.58E-07
26	8.20	0.	0.	5.17E-12	0.	0.	0.	3.88E-09	9.53E-09	3.52E-07	2.95E-07	6.60E-07
27	8.10	0.	0.	4.32E-12	0.	0.	0.	3.90E-09	9.88E-09	3.52E-07	2.94E-07	6.62E-07
28	8.00	0.	0.	4.20E-12	0.	0.	0.	3.92E-09	1.03E-08	3.53E-07	2.90E-07	6.65E-07
29	7.90	0.	0.	3.57E-12	0.	0.	0.	3.94E-09	1.06E-08	3.54E-07	2.99E-07	6.67E-07
30	7.80	0.	0.	3.64E-12	0.	0.	0.	3.96E-09	1.11E-08	3.54E-07	3.81E-07	6.70E-07
31	7.70	0.	0.	3.10E-12	0.	0.	0.	3.98E-09	1.15E-08	3.55E-07	3.02E-07	6.71E-07
32	7.60	0.	0.	2.88E-12	0.	2.07E-16	0.	4.00E-09	1.20E-08	3.56E-07	3.04E-07	6.74E-07
33	7.50	0.	0.	2.60E-12	0.	8.59E-16	0.	4.02E-09	1.25E-08	3.57E-07	3.05E-07	6.79E-07
34	7.40	0.	0.	2.28E-12	0.	5.42E-15	0.	4.04E-09	1.30E-08	3.58E-07	3.07E-07	6.82E-07
35	7.30	0.	0.	2.11E-12	0.	2.53E-14	0.	4.06E-09	1.35E-08	3.59E-07	3.08E-07	6.85E-07
36	7.20	0.	0.	1.85E-12	0.	6.73E-14	0.	4.08E-09	1.41E-08	3.60E-07	3.10E-07	6.88E-07
37	7.10	0.	0.	1.74E-12	0.	1.97E-13	0.	4.12E-09	1.47E-08	3.61E-07	3.11E-07	6.92E-07
38	7.00	7.37E-16	0.	1.55E-12	0.	4.55E-13	0.	4.15E-09	1.53E-08	3.62E-07	3.13E-07	6.95E-07
39	6.90	1.42E-15	0.	1.39E-12	0.	5.36E-13	0.	4.18E-09	1.60E-08	3.63E-07	3.15E-07	6.98E-07
40	6.80	1.20E-15	0.	1.38E-12	0.	1.04E-12	0.	4.22E-09	1.67E-08	3.64E-07	3.16E-07	7.01E-07
41	6.70	8.59E-16	0.	1.11E-12	0.	1.14E-12	0.	4.25E-09	1.75E-08	3.65E-07	3.18E-07	7.05E-07
42	6.60	5.15E-16	0.	9.67E-13	0.	7.96E-13	0.	4.28E-09	1.83E-08	3.67E-07	3.20E-07	7.10E-07
43	6.50	2.91E-16	0.	7.44E-13	0.	1.31E-12	0.	4.32E-09	1.92E-08	3.70E-07	3.22E-07	7.16E-07
44	6.40	1.63E-16	0.	4.90E-13	5.88E-15	1.36E-12	0.	4.35E-09	2.01E-08	3.73E-07	3.24E-07	7.21E-07
45	6.30	9.21E-17	0.	2.91E-13	2.67E-14	8.28E-13	0.	4.39E-09	2.11E-08	3.76E-07	3.27E-07	7.28E-07
46	6.20	4.06E-17	0.	1.54E-13	3.68E-14	1.19E-12	0.	4.42E-09	2.21E-08	3.78E-07	3.31E-07	7.36E-07
47	6.10	1.81E-17	0.	6.91E-14	1.03E-13	1.63E-12	0.	4.45E-09	2.32E-08	3.82E-07	3.35E-07	7.45E-07
48	6.00	7.39E-18	0.	1.71E-14	9.34E-14	7.09E-13	0.	4.49E-09	2.44E-08	3.87E-07	3.40E-07	7.56E-07
49	5.90	1.79E-18	0.	1.22E-15	1.35E-13	7.17E-13	0.	4.49E-09	2.57E-08	3.92E-07	3.44E-07	7.66E-07
50	5.80	2.27E-19	0.	3.04E-17	1.85E-13	7.08E-13	0.	4.42E-09	2.70E-08	3.97E-07	3.49E-07	7.77E-07
51	5.70	1.47E-20	0.	0.	2.09E-13	7.81E-13	0.	4.15E-09	2.85E-08	4.01E-07	3.53E-07	7.87E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (TRANS)	A P.E.	O P.E.	TOTAL AIR
92	5.60	7.45E-22	0.	0.	0.	1.69E-13	1.11E-12	0.	0.	3.86E-09	3.01E-08	4.07E-07	3.57E-07	7.68E-07
93	5.50	0.	0.	0.	0.	2.04E-13	1.34E-12	0.	0.	3.88E-09	3.19E-08	4.14E-07	3.62E-07	8.12E-07
94	5.40	0.	0.	0.	0.	1.83E-13	7.83E-13	0.	0.	3.90E-09	3.36E-08	4.23E-07	3.68E-07	8.26E-07
95	5.30	0.	0.	0.	0.	1.87E-13	1.09E-12	0.	0.	3.92E-09	3.55E-08	4.33E-07	3.74E-07	8.46E-07
96	5.20	0.	0.	0.	0.	1.98E-13	7.07E-13	0.	0.	3.95E-09	3.76E-08	4.42E-07	3.81E-07	8.65E-07
97	5.10	0.	0.	0.	0.	1.96E-13	9.32E-13	0.	0.	3.96E-09	3.99E-08	4.54E-07	3.89E-07	8.87E-07
98	5.00	9.57E-15	0.	0.	0.	1.76E-13	8.42E-13	0.	0.	4.02E-09	4.24E-08	4.68E-07	3.97E-07	9.11E-07
99	4.90	2.25E-14	0.	0.	0.	1.93E-13	8.87E-13	0.	0.	4.05E-09	4.50E-08	4.82E-07	4.05E-07	9.36E-07
60	4.80	4.89E-14	0.	0.	0.	2.05E-13	8.23E-13	0.	0.	4.08E-09	4.79E-08	4.97E-07	4.13E-07	9.63E-07
61	4.70	5.33E-14	0.	0.	0.	2.01E-13	7.30E-13	0.	0.	4.12E-09	5.11E-08	5.13E-07	4.21E-07	9.92E-07
62	4.60	7.13E-14	0.	0.	0.	2.03E-13	6.69E-13	0.	0.	4.15E-09	5.45E-08	5.32E-07	4.30E-07	1.02E-06
63	4.50	7.32E-14	0.	8.64E-14	0.	1.81E-13	4.94E-13	0.	0.	4.18E-09	5.82E-08	5.55E-07	4.49E-07	1.06E-06
64	4.40	7.62E-14	0.	2.62E-13	0.	1.80E-13	3.50E-13	0.	0.	4.22E-09	6.23E-08	5.78E-07	4.56E-07	1.10E-06
65	4.30	7.42E-14	0.	8.09E-13	0.	1.67E-13	2.11E-13	0.	0.	4.25E-09	6.68E-08	6.03E-07	4.63E-07	1.14E-06
66	4.20	8.44E-14	0.	2.68E-12	0.	1.79E-13	1.54E-13	0.	0.	4.28E-09	7.17E-08	6.29E-07	4.36E-07	1.14E-06
67	4.10	9.93E-14	0.	1.79E-12	0.	1.67E-13	4.19E-14	0.	0.	4.30E-09	7.71E-08	6.54E-07	1.31E-07	8.66E-07
68	4.00	5.30E-14	0.	4.16E-12	0.	1.58E-13	3.20E-14	0.	0.	4.32E-09	8.30E-08	5.91E-07	1.39E-07	8.13E-07
69	3.90	4.44E-14	0.	1.89E-12	4.57E-11	1.41E-13	1.29E-14	0.	0.	4.30E-09	8.96E-08	4.66E-07	1.39E-07	6.99E-07
70	3.80	4.81E-14	0.	2.83E-12	2.42E-10	1.50E-13	0.	0.	0.	4.28E-09	9.69E-08	4.84E-07	1.44E-07	7.38E-07
71	3.70	4.13E-14	0.	5.23E-12	7.69E-11	1.23E-13	0.	0.	0.	4.22E-09	1.05E-07	4.59E-07	1.60E-07	7.28E-07
72	3.60	3.65E-14	0.	2.00E-12	4.55E-10	1.33E-13	0.	0.	0.	3.99E-09	1.14E-07	5.01E-07	1.78E-07	7.90E-07
73	3.50	3.34E-14	0.	2.42E-12	1.06E-09	1.01E-13	0.	0.	0.	3.62E-09	1.24E-07	5.68E-07	1.97E-07	8.86E-07
74	3.40	2.97E-14	0.	1.62E-12	1.18E-10	1.12E-13	0.	0.	0.	2.89E-09	1.36E-07	6.28E-07	2.19E-07	9.84E-07
75	3.30	2.34E-14	0.	1.69E-12	5.40E-10	8.64E-14	0.	0.	0.	2.09E-09	1.49E-07	6.96E-07	2.48E-07	1.09E-06
76	3.20	1.99E-14	0.	1.05E-12	1.09E-09	8.93E-14	0.	0.	0.	2.09E-09	1.63E-07	7.65E-07	2.63E-07	1.20E-06
77	3.10	1.86E-14	0.	8.83E-13	1.86E-10	8.24E-14	0.	0.	0.	2.10E-09	1.80E-07	8.36E-07	2.86E-07	1.30E-06
78	3.00	1.62E-14	0.	4.76E-13	5.27E-10	7.54E-14	0.	0.	0.	2.10E-09	1.98E-07	9.07E-07	3.09E-07	1.42E-06
79	2.90	1.32E-14	0.	2.99E-13	3.11E-10	5.50E-14	0.	0.	0.	2.11E-09	2.20E-07	9.81E-07	3.33E-07	1.54E-06
80	2.80	1.35E-14	0.	1.39E-13	1.57E-10	3.60E-14	0.	0.	0.	2.11E-09	2.44E-07	1.06E-06	3.59E-07	1.67E-06
81	2.70	8.33E-15	0.	5.41E-14	2.54E-10	1.88E-14	0.	0.	0.	2.11E-09	2.73E-07	1.15E-06	3.54E-07	1.78E-06
82	2.60	3.72E-15	0.	3.21E-14	2.41E-11	7.76E-15	0.	0.	0.	2.11E-09	3.04E-07	1.25E-06	1.75E-06	1.73E-06
83	2.50	2.56E-16	0.	3.71E-15	2.15E-11	1.80E-15	0.	0.	0.	2.11E-09	3.44E-07	8.38E-07	2.62E-07	1.39E-06
84	2.40	0.	1.84E-13	0.	2.01E-11	1.87E-16	0.	0.	0.	2.11E-09	3.90E-07	1.03E-06	2.48E-07	1.67E-06
85	2.30	0.	6.85E-13	0.	0.	0.	0.	0.	0.	2.09E-09	4.47E-07	1.25E-06	2.97E-07	2.08E-06
86	2.20	0.	1.64E-12	0.	0.	0.	0.	0.	0.	2.08E-09	5.07E-07	1.48E-06	3.58E-07	2.35E-06
87	2.10	0.	1.94E-12	0.	0.	0.	0.	0.	0.	2.08E-09	5.84E-07	1.73E-06	4.18E-07	2.73E-06
88	2.00	0.	3.56E-12	0.	0.	0.	0.	0.	0.	2.01E-09	6.78E-07	1.97E-06	4.79E-07	3.13E-06
89	1.90	0.	5.42E-12	0.	0.	0.	0.	0.	0.	1.93E-09	7.93E-07	2.24E-06	5.47E-07	3.58E-06
90	1.80	0.	4.44E-12	0.	0.	0.	0.	0.	0.	1.85E-09	9.34E-07	2.66E-06	6.58E-07	4.25E-06
91	1.70	0.	5.29E-12	0.	0.	0.	0.	0.	0.	1.74E-09	1.11E-06	3.18E-06	7.97E-07	5.09E-06
92	1.60	0.	3.81E-12	0.	0.	0.	0.	0.	0.	1.47E-09	1.34E-06	3.69E-06	8.84E-07	5.92E-06
93	1.50	0.	4.95E-12	0.	0.	0.	0.	0.	0.	6.70E-10	1.63E-06	4.38E-06	1.08E-06	7.09E-06
94	1.40	0.	4.60E-12	0.	0.	0.	0.	0.	0.	0.	2.01E-06	3.78E-06	1.28E-06	7.38E-06
95	1.30	0.	3.50E-12	0.	0.	0.	0.	0.	0.	0.	2.52E-06	5.58E-06	1.28E-06	9.38E-06
96	1.20	0.	3.39E-12	0.	0.	0.	0.	0.	0.	0.	3.21E-06	7.36E-06	1.72E-06	1.23E-05
97	1.10	0.	3.85E-12	0.	0.	0.	0.	1.07E-17	0.	0.	4.20E-06	9.38E-06	1.99E-06	1.59E-05
98	1.00	0.	2.68E-12	0.	0.	0.	0.	7.26E-16	0.	0.	5.64E-06	1.89E-05	2.42E-06	1.98E-05
99	0.90	0.	2.30E-12	0.	0.	0.	0.	1.46E-16	0.	0.	7.80E-06	1.28E-05	2.85E-06	2.35E-05
100	0.80	0.	1.88E-12	0.	0.	0.	0.	2.92E-15	0.	0.	1.11E-05	1.43E-05	3.15E-06	2.86E-05
101	0.70	0.	2.68E-13	0.	0.	0.	0.	2.27E-15	0.	0.	1.67E-05	1.29E-05	2.65E-06	3.23E-05
102	0.60	0.	3.12E-14	0.	0.	0.	0.	8.26E-15	0.	0.	2.63E-05	1.46E-05	2.99E-06	4.44E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.2938-08 (1.0E-09 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (1/CM)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.70E-19	0.	0.	0.	5.84E-12	5.84E-11	1.42E-08	4.34E-09	1.87E-08
2	10.60	0.	0.	5.99E-19	0.	0.	0.	5.87E-12	5.83E-11	1.43E-08	4.35E-09	1.87E-08
3	10.50	0.	0.	5.96E-19	0.	0.	0.	5.88E-12	6.60E-11	1.44E-08	4.34E-09	1.88E-08
4	10.40	0.	0.	5.91E-19	0.	0.	0.	5.88E-12	6.17E-11	1.44E-08	4.33E-09	1.88E-08
5	10.30	0.	0.	4.38E-19	0.	0.	0.	5.89E-12	6.35E-11	1.45E-08	4.32E-09	1.88E-08
6	10.20	0.	0.	4.75E-19	0.	0.	0.	5.90E-12	6.54E-11	1.45E-08	4.31E-09	1.89E-08
7	10.10	0.	0.	4.48E-19	0.	0.	0.	5.91E-12	6.74E-11	1.45E-08	4.30E-09	1.89E-08
8	10.00	0.	0.	3.73E-19	0.	0.	0.	5.91E-12	6.95E-11	1.46E-08	4.29E-09	1.89E-08
9	9.90	0.	0.	3.80E-19	0.	0.	0.	5.92E-12	7.16E-11	1.46E-08	4.28E-09	1.90E-08
10	9.80	0.	0.	3.40E-19	0.	0.	0.	5.94E-12	7.38E-11	1.46E-08	4.27E-09	1.90E-08
11	9.70	0.	0.	2.91E-19	0.	0.	0.	5.95E-12	7.62E-11	1.47E-08	4.26E-09	1.90E-08
12	9.60	0.	0.	3.13E-19	0.	0.	0.	5.96E-12	7.86E-11	1.47E-08	4.25E-09	1.90E-08
13	9.50	0.	0.	2.98E-19	0.	0.	0.	5.97E-12	8.11E-11	1.48E-08	4.24E-09	1.91E-08
14	9.40	0.	0.	2.38E-19	0.	0.	0.	5.99E-12	8.37E-11	1.48E-08	4.23E-09	1.91E-08
15	9.30	0.	0.	2.42E-19	0.	0.	0.	6.61E-12	8.64E-11	4.62E-09	4.22E-09	8.93E-09
16	9.29	0.	0.	1.92E-19	0.	0.	0.	6.83E-12	8.93E-11	4.62E-09	4.21E-09	8.97E-09
17	9.10	0.	0.	1.97E-19	0.	0.	0.	6.86E-12	9.23E-11	4.61E-09	4.20E-09	8.91E-09
18	9.00	0.	0.	1.74E-19	0.	0.	0.	6.88E-12	9.54E-11	4.61E-09	4.19E-09	8.90E-09
19	8.90	0.	0.	1.94E-19	0.	0.	0.	6.10E-12	9.87E-11	4.61E-09	4.18E-09	8.89E-09
20	8.80	0.	0.	1.92E-19	0.	0.	0.	6.12E-12	1.02E-10	4.60E-09	4.17E-09	8.88E-09
21	8.70	0.	0.	1.27E-19	0.	0.	0.	6.14E-12	1.06E-10	4.60E-09	4.16E-09	8.87E-09
22	8.60	0.	0.	1.38E-19	0.	0.	0.	6.16E-12	1.09E-10	4.60E-09	4.15E-09	8.86E-09
23	8.50	0.	0.	1.10E-19	0.	0.	0.	6.19E-12	1.13E-10	4.60E-09	4.14E-09	8.86E-09
24	8.40	0.	0.	1.07E-19	0.	0.	0.	6.22E-12	1.17E-10	4.60E-09	4.13E-09	8.86E-09
25	8.30	0.	0.	8.01E-16	0.	0.	0.	6.25E-12	1.22E-10	4.60E-09	4.13E-09	8.89E-09
26	8.20	0.	0.	8.80E-16	0.	0.	0.	6.28E-12	1.26E-10	4.60E-09	4.15E-09	8.88E-09
27	8.10	0.	0.	7.35E-16	0.	0.	0.	6.32E-12	1.31E-10	4.60E-09	4.17E-09	8.91E-09
28	8.00	0.	0.	7.29E-16	0.	0.	0.	6.35E-12	1.36E-10	4.61E-09	4.19E-09	8.94E-09
29	7.90	0.	0.	6.98E-16	0.	0.	0.	6.38E-12	1.41E-10	4.62E-09	4.22E-09	8.98E-09
30	7.80	0.	0.	6.20E-16	0.	0.	0.	6.41E-12	1.47E-10	4.63E-09	4.24E-09	9.02E-09
31	7.70	0.	0.	5.28E-16	0.	0.	0.	6.45E-12	1.52E-10	4.64E-09	4.26E-09	9.06E-09
32	7.60	0.	0.	4.90E-16	0.	3.79E-20	0.	6.48E-12	1.59E-10	4.66E-09	4.28E-09	9.10E-09
33	7.50	0.	0.	4.41E-16	0.	1.58E-19	0.	6.51E-12	1.65E-10	4.67E-09	4.30E-09	9.14E-09
34	7.40	0.	0.	3.88E-16	0.	1.03E-18	0.	6.55E-12	1.72E-10	4.68E-09	4.32E-09	9.19E-09
35	7.30	0.	0.	3.98E-16	0.	4.89E-18	0.	6.58E-12	1.79E-10	4.70E-09	4.34E-09	9.23E-09
36	7.20	0.	0.	3.15E-16	0.	1.24E-17	0.	6.62E-12	1.87E-10	4.71E-09	4.37E-09	9.27E-09
37	7.10	0.	0.	2.90E-16	0.	3.62E-17	0.	6.67E-12	1.95E-10	4.72E-09	4.39E-09	9.31E-09
38	7.00	1.46E-19	0.	2,64E-16	0.	8.35E-17	0.	6.73E-12	2.03E-10	4.74E-09	4.41E-09	9.35E-09
39	6.90	2.41E-19	0.	2,37E-16	0.	9.85E-17	0.	6.78E-12	2.12E-10	4.75E-09	4.43E-09	9.40E-09
40	6.80	2.38E-19	0.	2,22E-16	0.	1.91E-16	0.	6.84E-12	2.22E-10	4.76E-09	4.45E-09	9.44E-09
41	6.70	1.70E-19	0.	1.89E-16	0.	2.08E-16	0.	6.89E-12	2.32E-10	4.77E-09	4.48E-09	9.49E-09
42	6.60	1.82E-19	0.	1.64E-16	0.	1.46E-16	0.	6.94E-12	2.43E-10	4.80E-09	4.51E-09	9.56E-09
43	6.50	5.78E-20	0.	1.27E-16	0.	2.47E-16	0.	7.00E-12	2.54E-10	4.84E-09	4.53E-09	9.44E-09
44	6.40	3.22E-20	0.	8.34E-17	1.08E-18	2.50E-16	0.	7.05E-12	2.66E-10	4.88E-09	4.56E-09	9.71E-09
45	6.30	1.83E-20	0.	4.94E-17	4.90E-18	1.51E-16	0.	7.11E-12	2.79E-10	4.91E-09	4.60E-09	9.80E-09
46	6.20	8.04E-21	0.	2.61E-17	6.75E-18	2.19E-16	0.	7.18E-12	2.93E-10	4.95E-09	4.66E-09	9.91E-09
47	6.10	3.59E-21	0.	1.18E-17	1.89E-17	3.88E-16	0.	7.22E-12	3.08E-10	5.00E-09	4.72E-09	1.00E-08
48	6.00	1.47E-21	0.	2,90E-18	1.72E-17	1.30E-16	0.	7.27E-12	3.24E-10	5.05E-09	4.79E-09	1.02E-08
49	5.90	3.54E-22	0.	2.87E-19	2.47E-17	1.32E-16	0.	7.27E-12	3.40E-10	5.11E-09	4.85E-09	1.03E-08
50	5.80	4.49E-23	0.	5.17E-21	3.39E-17	1.30E-16	0.	7.19E-12	3.59E-10	5.17E-09	4.91E-09	1.04E-08
51	5.70	3.30E-24	0.	0.	3.84E-17	1.43E-16	0.	6.73E-12	3.78E-10	5.24E-09	4.97E-09	1.06E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-06 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.40E-25	0.	0.	0.	3.10E-17	2.85E-16	0.	0.	6.26E-12	3.99E-10	5.31E-09	5.84E-09	1.07E-08
53	5.59	0.	0.	0.	0.	3.79E-17	1.92E-16	0.	0.	6.29E-12	4.21E-10	5.41E-09	5.10E-09	1.09E-08
54	5.48	0.	0.	0.	0.	3.35E-17	1.44E-16	0.	0.	6.32E-12	4.45E-10	5.52E-09	5.18E-09	1.12E-08
55	5.30	0.	0.	0.	0.	3.44E-17	1.93E-16	0.	0.	6.36E-12	4.71E-10	5.65E-09	5.26E-09	1.14E-08
56	5.20	0.	0.	0.	0.	3.64E-17	1.38E-16	0.	0.	6.40E-12	4.99E-10	5.77E-09	5.47E-09	1.16E-08
57	5.10	0.	0.	0.	0.	3.59E-17	1.71E-16	0.	0.	6.46E-12	5.29E-10	5.93E-09	5.48E-09	1.19E-08
58	5.00	1.98E-18	0.	0.	0.	3.23E-17	1.55E-16	0.	0.	6.51E-12	5.62E-10	6.11E-09	5.59E-09	1.23E-08
59	4.90	4.47E-18	0.	0.	0.	3.54E-17	1.63E-16	0.	0.	6.57E-12	5.97E-10	6.29E-09	5.78E-09	1.26E-08
60	4.80	8.18E-18	0.	0.	0.	3.77E-17	1.51E-16	0.	0.	6.62E-12	6.35E-10	6.49E-09	5.82E-09	1.30E-08
61	4.70	1.06E-17	0.	0.	0.	3.68E-17	1.44E-16	0.	0.	6.67E-12	6.77E-10	6.69E-09	5.97E-09	1.33E-08
62	4.60	1.41E-17	0.	0.	0.	3.73E-17	1.23E-16	0.	0.	6.73E-12	7.22E-10	6.94E-09	6.12E-09	1.38E-08
63	4.50	1.45E-17	0.	1.47E-17	0.	3.33E-17	9.80E-17	0.	0.	6.78E-12	7.72E-10	7.24E-09	6.27E-09	1.43E-08
64	4.40	1.51E-17	0.	4.79E-17	0.	3.30E-17	8.42E-17	0.	0.	6.84E-12	8.26E-10	7.55E-09	6.43E-09	1.48E-08
65	4.30	1.39E-17	0.	1.38E-16	0.	3.07E-17	3.87E-17	0.	0.	6.89E-12	8.85E-10	7.87E-09	6.52E-09	1.53E-08
66	4.20	1.20E-17	0.	4.90E-16	0.	3.21E-17	2.87E-17	0.	0.	6.94E-12	9.50E-10	8.21E-09	1.79E-09	1.09E-08
67	4.10	1.15E-17	0.	1.84E-16	0.	3.86E-17	7.69E-18	0.	0.	6.97E-12	1.02E-09	7.52E-09	1.85E-09	1.04E-08
68	4.00	1.06E-17	0.	6.98E-16	0.	2.90E-17	5.07E-18	0.	0.	7.00E-12	1.10E-09	7.71E-09	1.90E-09	1.07E-08
69	3.90	8.79E-18	0.	3.15E-16	6.75E-14	2.59E-17	2.36E-18	0.	0.	6.97E-12	1.19E-09	6.68E-09	1.96E-09	9.23E-09
70	3.80	9.53E-18	0.	4.81E-16	3.58E-13	2.76E-17	0.	0.	0.	6.94E-12	1.28E-09	6.32E-09	2.03E-09	9.65E-09
71	3.70	8.18E-18	0.	2.50E-16	1.14E-13	2.29E-17	0.	0.	0.	6.64E-12	1.39E-09	6.08E-09	2.25E-09	9.65E-09
72	3.60	7.24E-18	0.	3.41E-16	6.72E-13	2.44E-17	0.	0.	0.	6.48E-12	1.51E-09	6.55E-09	2.50E-09	1.06E-08
73	3.50	6.61E-18	0.	4.80E-16	1.60E-12	1.85E-17	0.	0.	0.	5.86E-12	1.65E-09	7.31E-09	2.77E-09	1.17E-08
74	3.40	5.89E-18	0.	2.75E-16	1.75E-13	2.86E-17	0.	0.	0.	3.38E-12	1.86E-09	8.19E-09	3.08E-09	1.31E-08
75	3.30	4.64E-18	0.	2.88E-16	7.98E-13	1.59E-17	0.	0.	0.	3.39E-12	1.97E-09	9.08E-09	3.39E-09	1.44E-08
76	3.20	3.94E-18	0.	1.78E-16	1.61E-12	1.64E-17	0.	0.	0.	3.39E-12	2.16E-09	9.99E-09	3.71E-09	1.59E-08
77	3.10	3.68E-18	0.	1.37E-16	2.75E-13	1.51E-17	0.	0.	0.	3.40E-12	2.38E-09	1.09E-08	4.03E-09	1.73E-08
78	3.00	3.21E-18	0.	8.19E-17	7.79E-13	1.38E-17	0.	0.	0.	3.41E-12	2.63E-09	1.18E-08	4.36E-09	1.88E-08
79	2.90	2.62E-18	0.	4.93E-17	4.59E-13	1.81E-17	0.	0.	0.	3.41E-12	2.91E-09	1.28E-08	4.69E-09	2.04E-08
80	2.80	2.67E-18	0.	2.36E-17	2.33E-13	6.61E-18	0.	0.	0.	3.42E-12	3.24E-09	1.39E-08	5.06E-09	2.22E-08
81	2.70	1.45E-18	0.	1.09E-17	3.75E-13	3.41E-18	0.	0.	0.	3.42E-12	3.62E-09	1.50E-08	2.26E-09	2.09E-08
82	2.60	7.38E-19	0.	5.46E-18	3.57E-14	1.43E-18	0.	0.	0.	3.42E-12	4.05E-09	1.63E-08	2.46E-09	2.28E-08
83	2.50	5.87E-20	0.	4.38E-19	3.18E-14	3.38E-19	0.	0.	0.	3.42E-12	4.57E-09	1.09E-08	2.85E-09	1.83E-08
84	2.40	0.	3.22E-17	0.	2.97E-14	3.43E-20	0.	0.	0.	3.42E-12	5.17E-09	1.35E-08	3.98E-09	2.22E-08
85	2.30	0.	1.17E-16	0.	0.	0.	0.	0.	0.	3.39E-12	5.88E-09	1.64E-08	4.19E-09	2.64E-08
86	2.20	0.	2.78E-16	0.	0.	0.	0.	0.	0.	3.38E-12	6.73E-09	1.93E-08	5.04E-09	3.11E-08
87	2.10	0.	3.81E-16	0.	0.	0.	0.	0.	0.	3.36E-12	7.75E-09	2.25E-08	5.89E-09	3.62E-08
88	2.00	0.	6.06E-16	0.	0.	0.	0.	0.	0.	3.26E-12	8.99E-09	2.57E-08	6.75E-09	4.15E-08
89	1.90	0.	9.21E-16	0.	0.	0.	0.	0.	0.	3.13E-12	1.05E-08	2.62E-08	7.71E-09	4.74E-08
90	1.80	0.	7.58E-16	0.	0.	0.	0.	0.	0.	2.99E-12	1.24E-08	3.47E-08	9.24E-09	5.64E-08
91	1.70	0.	8.99E-16	0.	0.	0.	0.	0.	0.	2.82E-12	1.47E-08	4.14E-08	1.17E-08	6.74E-08
92	1.60	0.	6.48E-16	0.	0.	0.	0.	0.	0.	2.39E-12	1.77E-08	4.82E-08	1.25E-08	7.84E-08
93	1.50	0.	7.73E-16	0.	0.	0.	0.	0.	0.	1.08E-12	2.16E-08	5.71E-08	1.44E-08	9.32E-08
94	1.40	0.	7.83E-16	0.	0.	0.	0.	0.	0.	0.	2.66E-08	4.92E-08	1.27E-08	8.84E-08
95	1.30	0.	5.95E-16	0.	0.	0.	0.	0.	0.	0.	3.33E-08	7.07E-08	1.80E-08	1.22E-07
96	1.20	0.	5.77E-16	0.	0.	0.	0.	0.	0.	0.	4.29E-08	9.68E-08	2.21E-08	1.61E-07
97	1.10	0.	5.19E-16	0.	0.	0.	0.	1.96E-21	0.	0.	5.96E-08	1.17E-07	2.81E-08	2.01E-07
98	1.00	0.	4.77E-16	0.	0.	0.	0.	2.32E-20	0.	0.	7.49E-08	1.42E-07	3.41E-08	2.51E-07
99	0.95	0.	3.91E-16	0.	0.	0.	0.	2.68E-20	0.	0.	1.03E-07	1.62E-07	3.84E-08	3.84E-07
100	0.80	0.	1.84E-16	0.	0.	0.	0.	5.36E-19	0.	0.	1.49E-07	1.86E-07	4.44E-08	3.78E-07
101	0.75	0.	4.59E-17	0.	0.	0.	0.	4.17E-19	0.	0.	2.21E-07	1.69E-07	3.73E-08	4.28E-07
102	0.60	0.	5.31E-18	0.	0.	0.	0.	1.52E-18	0.	0.	3.96E-07	1.98E-07	4.22E-08	5.80E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	7.23E-19	0.	0.	0.	6.24E-15	5.87E-13	1.40E-10	4.34E-11	1.99E-10
2	10.60	0.	0.	6.41E-19	0.	0.	0.	6.24E-15	6.04E-13	1.40E-10	4.35E-11	1.99E-10
3	10.50	0.	0.	6.37E-19	0.	0.	0.	6.25E-15	6.21E-13	1.90E-10	4.34E-11	1.94E-10
4	10.40	0.	0.	5.99E-19	0.	0.	0.	6.26E-15	6.39E-13	1.50E-10	4.32E-11	1.90E-10
5	10.30	0.	0.	5.81E-19	0.	0.	0.	6.27E-15	6.58E-13	1.51E-10	4.32E-11	1.97E-10
6	10.20	0.	0.	5.88E-19	0.	0.	0.	6.28E-15	6.78E-13	1.51E-10	4.31E-11	1.97E-10
7	10.10	0.	0.	4.78E-19	0.	0.	0.	6.28E-15	6.98E-13	1.52E-10	4.49E-11	1.97E-10
8	10.00	0.	0.	3.98E-19	0.	0.	0.	6.29E-15	7.20E-13	1.92E-10	4.48E-11	1.96E-10
9	9.90	0.	0.	4.06E-19	0.	0.	0.	6.30E-15	7.42E-13	1.52E-10	4.47E-11	1.90E-10
10	9.82	0.	0.	3.77E-19	0.	0.	0.	6.32E-15	7.65E-13	1.93E-10	4.46E-11	1.90E-10
11	9.70	0.	0.	3.11E-19	0.	0.	0.	6.33E-15	7.89E-13	1.53E-10	4.45E-11	1.90E-10
12	9.60	0.	0.	3.39E-19	0.	0.	0.	6.34E-15	8.14E-13	1.94E-10	4.44E-11	1.99E-10
13	9.50	0.	0.	2.76E-19	0.	0.	0.	6.35E-15	8.40E-13	1.94E-10	4.43E-11	1.99E-10
14	9.40	0.	0.	2.95E-19	0.	0.	0.	6.37E-15	8.67E-13	4.93E-11	4.42E-11	9.44E-11
15	9.30	0.	0.	2.59E-19	0.	0.	0.	6.40E-15	8.96E-13	4.93E-11	4.41E-11	9.42E-11
16	9.20	0.	0.	2.85E-19	0.	0.	0.	6.42E-15	9.25E-13	4.92E-11	4.39E-11	9.41E-11
17	9.10	0.	0.	2.10E-19	0.	0.	0.	6.44E-15	9.56E-13	4.92E-11	4.38E-11	9.40E-11
18	9.00	0.	0.	1.86E-19	0.	0.	0.	6.47E-15	9.89E-13	4.92E-11	4.37E-11	9.39E-11
19	8.92	0.	0.	1.67E-19	0.	0.	0.	6.49E-15	1.02E-12	4.91E-11	4.36E-11	9.38E-11
20	8.80	0.	0.	1.62E-19	0.	0.	0.	6.51E-15	1.06E-12	4.91E-11	4.35E-11	9.37E-11
21	8.70	0.	0.	1.30E-19	0.	0.	0.	6.54E-15	1.09E-12	4.91E-11	4.34E-11	9.36E-11
22	8.60	0.	0.	1.39E-19	0.	0.	0.	6.56E-15	1.13E-12	4.91E-11	4.33E-11	9.36E-11
23	8.50	0.	0.	1.17E-19	0.	0.	0.	6.58E-15	1.17E-12	4.79E-11	4.32E-11	9.23E-11
24	8.40	0.	0.	1.15E-19	0.	0.	0.	6.62E-15	1.22E-12	4.79E-11	4.31E-11	9.23E-11
25	8.30	0.	0.	9.42E-20	0.	0.	0.	6.65E-15	1.26E-12	4.88E-11	4.31E-11	9.29E-11
26	8.20	0.	0.	9.41E-20	0.	0.	0.	6.69E-15	1.31E-12	4.88E-11	4.34E-11	9.27E-11
27	8.10	0.	0.	7.86E-20	0.	0.	0.	6.72E-19	1.36E-12	4.88F-11	4.36E-11	9.30E-11
28	8.00	0.	0.	7.79E-20	0.	0.	0.	6.75E-15	1.41E-12	4.81E-11	4.38E-11	9.34E-11
29	7.90	0.	0.	6.50E-20	0.	0.	0.	6.79E-15	1.46E-12	4.63E-11	4.48E-11	9.38E-11
30	7.80	0.	0.	6.63E-20	0.	0.	0.	6.82E-15	1.52E-12	4.84E-11	4.43E-11	9.42E-11
31	7.70	0.	0.	5.44E-20	0.	0.	0.	5.86E-15	1.58E-12	4.86E-11	4.45E-11	9.47E-11
32	7.60	0.	0.	5.24E-20	0.	4.10E-24	0.	6.89E-15	1.64E-12	4.87E-11	4.47E-11	9.51E-11
33	7.50	0.	0.	4.72E-20	0.	1.71E-23	0.	6.93E-15	1.71E-12	4.89E-11	4.49E-11	9.56E-11
34	7.40	0.	0.	4.14E-20	0.	1.12E-22	0.	6.97E-15	1.78E-12	4.98E-11	4.52E-11	9.68E-11
35	7.30	0.	0.	3.83E-20	0.	5.02E-22	0.	7.00E-15	1.85E-12	4.92E-11	4.54E-11	9.65E-11
36	7.20	0.	0.	3.37E-20	0.	1.34E-21	0.	7.04E-15	1.93E-12	4.94E-11	4.56E-11	9.69E-11
37	7.10	0.	0.	3.10E-20	0.	3.91E-21	0.	7.10E-15	2.02E-12	4.96E-11	4.58E-11	9.74E-11
38	7.00	1.60E-23	0.	2.85E-20	0.	9.03E-21	0.	7.16E-15	2.11E-12	4.97E-11	4.61E-11	9.79E-11
39	6.90	3.07E-23	0.	2.53E-20	0.	1.07E-20	0.	7.22E-15	2.20E-12	4.99E-11	4.63E-11	9.84E-11
40	6.80	2.60E-23	0.	2.37E-20	0.	2.08E-20	0.	7.27E-15	2.30E-12	5.01E-11	4.65E-11	9.89E-11
41	6.70	1.86E-23	0.	2.02E-20	0.	2.25E-20	0.	7.33E-15	2.40E-12	5.03E-11	4.68E-11	9.95E-11
42	6.60	1.12E-23	0.	1.76E-20	0.	1.58E-20	0.	7.39E-15	2.52E-12	5.06E-11	4.71E-11	1.00E-10
43	6.50	6.31E-24	0.	1.35E-20	0.	2.60E-20	0.	7.45E-15	2.63E-12	5.10E-11	4.74E-11	1.01E-10
44	6.40	3.52E-24	0.	8.92E-21	1.17E-22	2.78E-20	0.	7.51E-15	2.76E-12	5.14E-11	4.77E-11	1.02E-10
45	6.30	1.99E-24	0.	5.29E-21	5.30E-22	1.63E-20	0.	7.56E-15	2.89E-12	5.19E-11	4.81E-11	1.03E-10
46	6.20	8.79E-25	0.	2.79E-21	7.30E-22	2.37E-20	0.	7.62E-15	3.04E-12	5.23E-11	4.87E-11	1.04E-10
47	6.10	3.93E-25	0.	1.26E-21	2.04E-21	3.24E-20	0.	7.68E-15	3.19E-12	5.17E-11	4.94E-11	1.04E-10
48	6.00	1.60E-25	0.	3.10E-22	1.86E-21	1.41E-20	0.	7.74E-15	3.35E-12	5.23E-11	5.00E-11	1.06E-10
49	5.90	5.87E-26	0.	2.21E-23	2.67E-21	1.42E-20	0.	7.74E-15	3.53E-12	5.30E-11	5.06E-11	1.07E-10
50	5.80	4.91E-27	0.	5.52E-25	3.67E-21	1.41E-20	0.	7.62E-15	3.71E-12	5.36E-11	5.13E-11	1.09E-10
51	5.70	3.61E-28	0.	0.	4.15E-21	1.55E-20	0.	7.16E-15	3.92E-12	5.43E-11	5.19E-11	1.10E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.41E-29	0.	0.	0.	3.35E-21	2.21E-20	0.	0.	6.60E-15	4.13E-12	5.51E-11	5.26E-11	1.12E-10
53	5.51	0.	0.	0.	0.	4.09E-21	2.07E-20	0.	0.	6.69E-15	4.36E-12	5.61E-11	5.33E-11	1.14E-10
54	5.40	0.	0.	0.	0.	3.62E-21	1.56E-20	0.	0.	6.73E-15	4.61E-12	5.73E-11	5.41E-11	1.16E-10
55	5.30	0.	0.	0.	0.	3.72E-21	2.09E-20	0.	0.	6.77E-15	4.88E-12	5.86E-11	5.50E-11	1.18E-10
56	5.20	0.	0.	0.	0.	3.94E-21	1.40E-20	0.	0.	6.81E-15	5.17E-12	5.99E-11	5.61E-11	1.21E-10
57	5.11	0.	0.	0.	0.	3.89E-21	1.85E-20	0.	0.	6.87E-15	5.48E-12	6.15E-11	5.73E-11	1.24E-10
58	5.03	2.87E-22	0.	0.	0.	3.50E-21	1.67E-20	0.	0.	6.93E-15	5.82E-12	6.34E-11	5.84E-11	1.28E-10
59	4.90	4.88E-22	0.	0.	0.	3.83E-21	1.70E-20	0.	0.	6.99E-15	6.18E-12	6.53E-11	5.96E-11	1.31E-10
60	4.80	9.65E-22	0.	0.	0.	4.07E-21	1.63E-20	0.	0.	7.04E-15	6.58E-12	6.74E-11	6.08E-11	1.35E-10
61	4.70	1.16E-21	0.	0.	0.	3.98E-21	1.45E-20	0.	0.	7.10E-15	7.01E-12	6.95E-11	6.24E-11	1.39E-10
62	4.60	1.54E-21	0.	0.	0.	4.04E-21	1.33E-20	0.	0.	7.16E-15	7.48E-12	7.23E-11	6.39E-11	1.43E-10
63	4.50	1.99E-21	0.	1.57E-21	0.	3.60E-21	9.81E-21	0.	0.	7.22E-15	7.99E-12	7.52E-11	6.55E-11	1.49E-10
64	4.40	1.65E-21	0.	5.12E-21	0.	3.57E-21	6.94E-21	0.	0.	7.27E-15	8.55E-12	7.84E-11	6.65E-11	1.53E-10
65	4.30	1.52E-21	0.	1.47E-20	0.	3.32E-21	4.18E-21	0.	0.	7.33E-15	9.17E-12	8.18E-11	6.26E-11	1.54E-10
66	4.20	1.40E-21	0.	5.24E-20	0.	3.47E-21	3.10E-21	0.	0.	7.39E-15	9.84E-12	8.52E-11	1.07E-11	1.14E-10
67	4.10	1.28E-21	0.	1.97E-20	0.	3.31E-21	8.31E-22	0.	0.	7.42E-15	1.06E-11	7.76E-11	1.93E-11	1.07E-10
68	4.00	1.16E-21	0.	7.46E-20	0.	3.14E-21	6.35E-22	0.	0.	7.45E-15	1.14E-11	6.88E-11	1.99E-11	9.21E-11
69	3.90	9.61E-22	0.	3.36E-20	7.09E-17	2.80E-21	2.55E-22	0.	0.	7.42E-15	1.23E-11	6.33E-11	2.05E-11	9.61E-11
70	3.80	1.04E-21	0.	5.14E-20	3.76E-16	2.98E-21	0.	0.	0.	7.39E-15	1.33E-11	5.98E-11	2.12E-11	9.44E-11
71	3.70	8.94E-22	0.	9,88E-20	1.19E-16	2.43E-21	0.	0.	0.	7.27E-15	1.44E-11	6.25E-11	2.35E-11	1.00E-10
72	3.60	7.91E-22	0.	3,65E-20	7.06E-16	2.64E-21	0.	0.	0.	6.81E-15	1.57E-11	6.82E-11	2.61E-11	1.18E-10
73	3.50	7.23E-22	0.	5,14E-20	1.68E-15	2.00E-21	0.	0.	0.	6.24E-15	1.71E-11	7.56E-11	2.90E-11	1.22E-10
74	3.40	6.44E-22	0.	2,95E-20	1.84E-16	2.22E-21	0.	0.	0.	3.40E-15	1.86E-11	8.40E-11	3.22E-11	1.36E-10
75	3.30	5.87E-22	0.	3,08E-20	8.39E-16	1.72E-21	0.	0.	0.	3.60E-15	2.04E-11	9.48E-11	3.54E-11	1.50E-10
76	3.20	4.30E-22	0.	1,90E-20	1.70E-15	1.77E-21	0.	0.	0.	3.61E-15	2.24E-11	1.03E-10	3.86E-11	1.65E-10
77	3.10	4.02E-22	0.	1,46E-20	2.88E-16	1.64E-21	0.	0.	0.	3.62E-15	2.47E-11	1.13E-10	4.21E-11	1.80E-10
78	3.00	3.91E-22	0.	8,66E-21	8.18E-16	1,50E-21	0.	0.	0.	3.63E-15	2.72E-11	1.23E-10	4.55E-11	1.95E-10
79	2.90	2.80E-22	0.	5,27E-21	4.82E-16	1.09E-21	0.	0.	0.	3.63E-15	3.02E-11	1.32E-10	4.98E-11	2.12E-10
80	2.80	2.92E-22	0.	2,52E-21	2.44E-16	7.14E-22	0.	0.	0.	3.64E-15	3.36E-11	1.44E-10	4.82E-11	2.26E-10
81	2.70	1.80E-22	0.	1,17E-21	3.94E-16	3.69E-22	0.	0.	0.	3.64E-15	3.75E-11	1.55E-10	2.37E-11	2.17E-10
82	2.60	8.87E-23	0.	5,84E-22	3.75E-17	1.55E-22	0.	0.	0.	3.64E-15	4.20E-11	9.54E-11	2.57E-11	1.63E-10
83	2.50	5.54E-24	0.	6,74E-23	3.34E-17	3.57E-23	0.	0.	0.	3.64E-15	4.73E-11	1.13E-10	2.97E-11	1.90E-10
84	2.40	0.	3.44E-21	0.	3.12E-17	3.71E-24	0.	0.	0.	3.64E-15	5.35E-11	1.40E-10	3.65E-11	2.30E-10
85	2.39	0.	1.29E-20	0.	0.	0.	0.	0.	0.	3.61E-15	6.09E-11	1.78E-10	4.38E-11	2.74E-10
86	2.20	0.	2.99E-20	0.	0.	0.	0.	0.	0.	3.59E-15	6.97E-11	2.08E-10	5.27E-11	3.23E-10
87	2.10	0.	3.53E-20	0.	0.	0.	0.	0.	0.	3.58E-15	8.03E-11	2.33E-10	6.16E-11	3.75E-10
88	2.00	0.	6.44E-20	0.	0.	0.	0.	0.	0.	3.46E-15	9.31E-11	2.66E-10	7.05E-11	4.30E-10
89	1.90	0.	9.85E-20	0.	0.	0.	0.	0.	0.	3.33E-15	1.09E-10	3.02E-10	8.06E-11	4.92E-10
90	1.80	0.	8.10E-20	0.	0.	0.	0.	0.	0.	3.19E-15	1.28E-10	3.59E-10	9.69E-11	5.84E-10
91	1.70	0.	9,02E-20	0.	0.	0.	0.	0.	0.	3.00E-15	1.53E-10	4.28E-10	1.18E-10	6.91E-10
92	1.60	0.	6,93E-20	0.	0.	0.	0.	0.	0.	2.54E-15	1.83E-10	4.58E-10	1.38E-10	7.72E-10
93	1.55	0.	8.27E-20	0.	0.	0.	0.	0.	0.	1.15E-15	2.23E-10	3.84E-10	1.52E-10	7.59E-10
94	1.45	0.	8.37E-20	0.	0.	0.	0.	0.	0.	0.	2.74E-10	5.09E-10	1.31E-10	9.16E-10
95	1.35	0.	6.56E-20	0.	0.	0.	0.	0.	0.	0.	3.45E-10	7.38E-10	1.84E-10	1.26E-09
96	1.25	0.	6.17E-20	0.	0.	0.	0.	0.	0.	0.	4.40E-10	9.93E-10	2.38E-10	1.66E-09
97	1.10	0.	5.55E-20	0.	0.	0.	0.	2.12E-25	0.	0.	5.74E-10	1.21E-09	2.94E-10	2.08E-09
98	1.00	0.	5.10E-20	0.	0.	0.	0.	2.50E-24	0.	0.	7.79E-10	1.47E-09	3.57E-10	2.48E-09
99	0.90	0.	4.10E-20	0.	0.	0.	0.	2.90E-24	0.	0.	1.07E-09	1.67E-09	4.02E-10	3.15E-09
100	0.80	0.	.96E-20	0.	0.	0.	0.	5.80E-23	0.	0.	1.53E-09	1.53E-09	3.39E-10	3.39E-09
101	0.70	0.	4.86E-21	0.	0.	0.	0.	4.51E-23	0.	0.	2.29E-09	1.74E-09	3.96E-10	4.43E-09
102	0.60	0.	5.07E-22	0.	0.	0.	0.	1.64E-22	0.	0.	3.69E-09	1.96E-09	4.48E-10	6.09E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-O BANDS	O2 S-O CONT.	N2 S-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IPMB)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	0.36E 00	0.	0.	0.	1.04E 00	7.01E-03	1.66E 02	2.04E-01	1.77E 02
2	10.60	0.	0.	7.48E 00	0.	0.	0.	1.04E 00	6.74E-03	1.39E 00	2.03E-01	1.09E 01
3	10.50	0.	0.	7.45E 00	0.	0.	0.	1.04E 00	6.47E-03	1.39E 00	2.03E-01	1.09E 01
4	10.40	0.	0.	6.94E 00	0.	0.	0.	1.04E 00	6.22E-03	1.39E 00	2.02E-01	1.04E 01
5	10.30	0.	0.	5.94E 00	0.	0.	0.	1.05E 00	5.97E-03	1.38E 00	2.01E-01	9.43E 00
6	10.20	0.	0.	6.05E 00	0.	0.	0.	1.05E 00	5.14E-03	1.36E 00	2.00E-01	9.95E 00
7	10.10	0.	0.	5.63E 00	0.	0.	0.	1.05E 00	5.41E-03	1.36E 00	2.79E-01	9.13E 00
8	10.00	0.	0.	4.82E 00	0.	0.	0.	1.05E 00	5.70E-03	1.37E 00	2.79E-01	8.33E 00
9	9.90	0.	0.	4.92E 00	0.	0.	0.	1.04E 00	5.80E-03	1.37E 00	2.78E-01	8.43E 00
10	9.80	0.	0.	4.94E 00	0.	0.	0.	1.04E 00	1.03E-02	1.37E 00	2.77E-01	8.06E 00
11	9.70	0.	0.	3.03E 00	0.	0.	0.	1.04E 00	1.06E-02	1.38E 00	2.76E-01	7.39E 00
12	9.60	0.	0.	4.12E 00	0.	0.	0.	1.07E 00	1.10E-02	1.38E 00	2.75E-01	7.66E 00
13	9.50	0.	0.	3.44E 00	0.	0.	0.	1.07E 00	1.13E-02	1.38E 00	2.75E-01	6.98E 00
14	9.41	0.	0.	3.19E 00	0.	0.	0.	1.08E 00	1.17E-02	1.39E 00	2.74E-01	6.70E 00
15	9.30	0.	0.	3.25E 00	0.	0.	0.	1.08E 00	1.21E-02	1.39E 00	2.73E-01	6.81E 00
16	9.20	0.	0.	2.61E 00	0.	0.	0.	1.09E 00	1.25E-02	1.40E 00	3.72E-01	6.18E 00
17	9.10	0.	0.	2.67E 00	0.	0.	0.	1.98E 00	1.29E-02	4.40E-01	2.71E-01	5.31E 00
18	9.01	0.	0.	2.30E 00	0.	0.	0.	1.98E 00	1.33E-02	4.40E-01	2.71E-01	5.02E 00
19	8.90	0.	0.	2.16E 00	0.	0.	0.	1.91E 00	1.38E-02	4.40E-01	2.70E-01	4.88E 00
20	8.81	0.	0.	2.18E 00	0.	0.	0.	1.92E 00	1.42E-02	4.40E-01	2.69E-01	4.79E 00
21	8.70	0.	0.	1.78E 00	0.	0.	0.	1.92E 00	1.47E-02	4.40E-01	2.68E-01	4.44E 00
22	8.60	0.	0.	1.82E 00	0.	0.	0.	1.93E 00	1.51E-02	4.40E-01	2.68E-01	4.48E 00
23	8.50	0.	0.	1.55E 00	0.	0.	0.	1.94E 00	1.58E-02	4.40E-01	2.67E-01	4.23E 00
24	8.40	0.	0.	1.53E 00	0.	0.	0.	1.95E 00	1.64E-02	4.50E-01	2.66E-01	4.21E 00
25	8.30	0.	0.	1.27E 00	0.	0.	0.	1.96E 00	1.70E-02	4.50E-01	2.66E-01	3.96E 00
26	8.20	0.	0.	1.27E 00	0.	0.	0.	1.97E 00	1.76E-02	4.51E-01	2.67E-01	3.96E 00
27	8.10	0.	0.	1.37E 00	0.	0.	0.	1.98E 00	1.83E-02	4.91E-01	2.69E-01	3.79E 00
28	8.00	0.	0.	1.07E 00	0.	0.	0.	1.99E 00	1.90E-02	4.92E-01	2.70E-01	3.80E 00
29	7.93	0.	0.	8.96E-01	0.	0.	0.	2.00E 00	1.97E-02	4.94E-01	2.71E-01	3.64E 00
30	7.80	0.	0.	9.10E-01	0.	0.	0.	2.01E 00	2.05E-02	4.95E-01	2.72E-01	3.68E 00
31	7.70	0.	0.	7.80E-01	0.	0.	0.	2.02E 00	2.13E-02	4.97E-01	2.73E-01	3.56E 00
32	7.60	0.	0.	7.37E-01	0.	3.74E-03	0.	2.03E 00	2.21E-02	4.99E-01	2.74E-01	3.52E 00
33	7.50	0.	0.	6.69E-01	0.	1.48E-04	0.	2.04E 00	2.31E-02	4.03E-01	2.76E-01	3.47E 00
34	7.40	0.	0.	5.91E-01	0.	1.03E-03	0.	2.05E 00	2.46E-02	4.62E-01	2.77E-01	3.41E 00
35	7.30	0.	0.	5.98E-01	0.	4.48E-03	0.	2.06E 00	2.50E-02	4.64E-01	2.78E-01	3.30E 00
36	7.20	0.	0.	4.87E-01	0.	1.20E-02	0.	2.07E 00	2.61E-02	4.69E-01	2.79E-01	3.34E 00
37	7.10	0.	0.	4.60E-01	0.	3.57E-02	0.	2.09E 00	2.72E-02	4.67E-01	2.88E-01	3.34E 00
38	7.00	1.08E-04	0.	4.14E-01	0.	7.93E-02	0.	2.21E 00	2.84E-02	4.68E-01	2.81E-01	3.38E 00
39	6.90	1.93E-04	0.	3.73E-01	0.	9.75E-02	0.	2.13E 00	2.97E-02	4.78E-01	2.83E-01	3.38E 00
40	6.80	1.65E-04	0.	3.92E-01	0.	1.04E-01	0.	2.14E 00	3.10E-02	4.72E-01	2.84E-01	3.47E 00
41	6.70	1.18E-04	0.	3.82E-01	0.	1.96E-01	0.	2.16E 00	3.24E-02	4.73E-01	2.85E-01	3.45E 00
42	6.60	7.12E-05	0.	2.66E-01	0.	1.43E-01	0.	2.18E 00	3.39E-02	4.77E-01	2.87E-01	3.38E 00
43	6.50	4.85E-05	0.	2.86E-01	0.	2.29E-01	0.	2.19E 00	3.55E-02	4.81E-01	2.88E-01	3.43E 00
44	6.40	2.28E-05	0.	1.38E-01	9.68E-04	2.32E-01	0.	2.21E 00	3.72E-02	4.85E-01	2.98F-01	3.39E 00
45	6.30	1.30E-05	0.	8.29E-02	4.48E-03	1.44E-01	0.	2.23E 00	3.90E-02	4.88E-01	2.92E-01	3.28E 00
46	6.20	5.75E-06	0.	4.44E-02	6.11E-03	2.09E-01	0.	2.24E 00	4.10E-02	4.93E-01	2.96E-01	3.33E 00
47	6.10	2.49E-06	0.	2.02E-02	1.72E-02	2.79E-01	0.	2.26E 00	4.38E-02	4.99E-01	3.08E-01	3.42E 00
48	6.00	1.06E-06	0.	5.03E-03	1.58E-02	1.25E-01	0.	2.28E 00	4.57E-02	5.04E-01	3.03E-01	3.29E 00
49	5.90	2.58E-07	0.	3.59E-04	2.29E-02	1.25E-01	0.	2.28E 00	4.76E-02	5.11E-01	3.07E-01	3.29E 00
50	5.80	3.28E-08	0.	8.99E-06	3.16E-02	1.25E-01	0.	2.24E 00	9.01E-02	5.17E-01	3.10E-01	3.28E 00
51	5.70	2.41E-09	0.	0.	3.61E-02	1.39E-01	0.	2.11E 00	5.20E-02	5.23E-01	3.14E-01	3.17E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (TOTAL)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.08E-10	0.	0.	0.	2.96E-02	1.84E-01	0.	0.	1.96E 00	5.97E-02	5.31E-01	3.18E-01	3.09E 00
53	5.50	0.	0.	0.	0.	3.61E-02	1.81E-01	0.	0.	1.97E 00	5.88E-02	5.41E-01	3.22E-01	3.11E 00
54	5.40	0.	0.	0.	0.	3.23E-02	1.39E-01	0.	0.	1.98E 00	6.22E-02	5.54E-01	3.27E-01	3.18E 00
55	5.30	0.	0.	0.	0.	3.31E-02	1.83E-01	0.	0.	1.99E 00	6.59E-02	5.67E-01	3.32E-01	3.17E 00
56	5.20	0.	0.	0.	0.	3.52E-02	1.27E-01	0.	0.	2.01E 00	6.97E-02	5.80E-01	3.38E-01	3.18E 00
57	5.10	0.	0.	0.	0.	3.49E-02	1.66E-01	0.	0.	2.02E 00	7.30E-02	5.96E-01	3.45E-01	3.24E 00
58	5.00	1.41E-03	0.	0.	0.	3.15E-02	1.52E-01	0.	0.	2.04E 00	7.84E-02	6.14E-01	3.52E-01	3.27E 00
59	4.90	3.35E-03	0.	0.	0.	3.47E-02	1.61E-01	0.	0.	2.06E 00	8.34E-02	6.33E-01	3.59E-01	3.33E 00
60	4.80	6.13E-03	0.	0.	0.	3.70E-02	1.50E-01	0.	0.	2.07E 00	8.87E-02	6.54E-01	3.66E-01	3.38E 00
61	4.70	9.08E-03	0.	0.	0.	3.64E-02	1.34E-01	0.	0.	2.09E 00	9.45E-02	6.75E-01	3.75E-01	3.42E 00
62	4.60	1.09E-02	0.	0.	0.	3.70E-02	1.22E-01	0.	0.	2.11E 00	1.01E-01	7.01E-01	3.85E-01	3.47E 00
63	4.50	1.12E-02	0.	2.96E-02	0.	3.32E-02	9.11E-02	0.	0.	2.13E 00	1.09E-01	7.32E-01	3.95E-01	3.52E 00
64	4.40	1.18E-02	0.	8.16E-02	0.	3.30E-02	6.39E-02	0.	0.	2.14E 00	1.15E-01	7.64E-01	4.04E-01	3.62E 00
65	4.30	1.89E-02	0.	2.43E-01	0.	3.10E-02	3.90E-02	0.	0.	2.16E 00	1.24E-01	7.99E-01	4.15E-01	3.62E 00
66	4.20	1.81E-02	0.	8.39E-01	0.	3.25E-02	2.85E-02	0.	0.	2.18E 00	1.33E-01	8.34E-01	4.25E-01	4.46E 00
67	4.10	9.33E-03	0.	3.28E-01	0.	3.12E-02	7.71E-03	0.	0.	2.19E 00	1.43E-01	8.69E-01	4.50E-01	4.88E 00
68	4.00	8.48E-03	0.	1.20E 00	0.	2.97E-02	5.87E-03	0.	0.	2.19E 00	1.54E-01	9.04E-01	1.34E-01	4.63E 00
69	3.90	7.67E-03	0.	5.45E-01	1.98E-02	2.67E-02	2.33E-03	0.	0.	2.19E 00	1.66E-01	8.43E-01	1.38E-01	3.93E 00
70	3.80	7.69E-03	0.	8.44E-01	9.90E-02	2.86E-02	0.	0.	0.	2.18E 00	1.80E-01	8.61E-01	1.43E-01	4.24E 00
71	3.70	6.47E-03	0.	9.42E-01	3.38E-02	2.36E-02	0.	0.	0.	2.14E 00	1.95E-01	8.80E-01	1.50E-01	4.19E 00
72	3.60	5.93E-03	0.	6.85E-01	1.95E-01	2.56E-02	0.	0.	0.	2.01E 00	2.12E-01	7.42E-01	1.79E-01	3.97E 00
73	3.50	5.45E-03	0.	8.37E-01	4.39E-01	1.98E-02	0.	0.	0.	1.84E 00	2.31E-01	7.71E-01	1.94E-01	4.33E 00
74	3.40	4.90E-03	0.	4.94E-01	5.22E-02	2.18E-02	0.	0.	0.	1.06E 00	2.52E-01	8.62E-01	2.15E-01	2.96E 00
75	3.30	3.87E-03	0.	5.13E-01	2.28E-01	1.70E-02	0.	0.	0.	1.06E 00	2.75E-01	9.55E-01	2.36E-01	3.29E 00
76	3.20	3.31E-03	0.	3.23E-01	4.38E-01	1.77E-02	0.	0.	0.	1.08E 00	3.02E-01	1.05E 00	2.58E-01	3.45E 00
77	3.10	3.12E-03	0.	2.48E-01	8.20E-02	1.64E-02	0.	0.	0.	1.07E 00	3.33E-01	1.15E 00	2.88E-01	3.17E 00
78	3.00	2.74E-03	0.	1.49E-01	2.21E-01	1.51E-02	0.	0.	0.	1.07E 00	3.68E-01	1.24E 00	3.03E-01	3.37E 00
79	2.90	2.29E-03	0.	9.11E-02	1.28E-01	1.12E-02	0.	0.	0.	1.07E 00	4.07E-01	1.34E 00	3.26E-01	3.50E 00
80	2.80	2.31E-03	0.	4.36E-02	6.91E-02	7.44E-03	0.	0.	0.	1.07E 00	4.93E-01	1.46E 00	3.52E-01	3.46E 00
81	2.70	1.45E-03	0.	2.03E-02	1.06E-01	3.90E-03	0.	0.	0.	1.07E 00	5.06E-01	1.58E 00	3.80E-01	3.67E 00
82	2.60	6.57E-04	0.	1.01E-02	1.02E-02	1.66E-03	0.	0.	0.	1.07E 00	5.67E-01	1.71E 00	4.09E-01	3.78E 00
83	2.50	4.54E-05	0.	1.14E-03	9.34E-03	3.46E-04	0.	0.	0.	1.07E 00	6.38E-01	1.94E 00	2.13E-01	3.88E 00
84	2.40	0.	5.69E-02	0.	8.40E-03	4.05E-05	0.	0.	0.	1.07E 00	7.23E-01	2.26E 00	2.55E-01	4.38E 00
85	2.30	0.	1.98E-01	0.	0.	0.	0.	0.	0.	1.06E 00	8.22E-01	1.78E 00	3.05E-01	4.17E 00
86	2.20	0.	4.80E-01	0.	0.	0.	0.	0.	0.	1.06E 00	9.42E-01	2.11E 00	3.67E-01	4.96E 00
87	2.10	0.	5.52E-01	0.	0.	0.	0.	0.	0.	1.05E 00	1.08E 00	2.48E 00	4.29E-01	5.58E 00
88	2.00	0.	1.03E 00	0.	0.	0.	0.	0.	0.	1.02E 00	1.26E 00	2.88E 00	4.91E-01	6.61E 00
89	1.90	0.	1.49E 00	0.	0.	0.	0.	0.	0.	9.82E-01	1.47E 00	3.19E 00	5.63E-01	7.78E 00
90	1.84	0.	1.24E 00	0.	0.	0.	0.	0.	0.	9.39E-01	1.73E 00	3.88E 00	6.78E-01	8.38E 00
91	1.79	0.	1.46E 00	0.	0.	0.	0.	0.	0.	8.84E-01	2.04E 00	4.54E 00	8.22E-01	9.77E 00
92	1.69	0.	1.08E 00	0.	0.	0.	0.	0.	0.	7.48E-01	2.48E 00	5.28E 00	9.66E-01	1.05E 01
93	1.59	0.	1.25E 00	0.	0.	0.	0.	0.	0.	5.40E-01	3.02E 00	6.75E 00	1.17E 00	1.25E 01
94	1.49	0.	1.26E 00	0.	0.	0.	0.	0.	0.	0.	3.73E 00	8.33E 00	1.38E 00	1.47E 01
95	1.39	0.	9.60E-01	0.	0.	0.	0.	0.	0.	0.	4.67E 00	1.07E 01	1.83E 00	1.82E 01
96	1.29	0.	9.27E-01	0.	0.	0.	0.	0.	0.	0.	5.97E 00	1.12E 01	1.81E 00	1.99E 01
97	1.19	0.	8.47E-01	0.	0.	0.	0.	1.65E-06	0.	0.	7.83E 00	1.38E 01	2.28E 00	2.47E 01
98	1.09	0.	7.77E-01	0.	0.	0.	0.	2.33E-05	0.	0.	1.05E 01	1.67E 01	2.56E 00	3.05E 01
99	0.98	0.	6.38E-01	0.	0.	0.	0.	2.68E-05	0.	0.	1.45E 01	1.98E 01	3.02E 00	3.72E 01
100	0.89	0.	3.00E-01	0.	0.	0.	0.	5.50E-04	0.	0.	2.07E 01	2.19E 01	3.47E 00	4.63E 01
101	0.79	0.	7.54E-02	0.	0.	0.	0.	4.43E-04	0.	0.	3.11E 01	2.40E 01	3.74E 00	5.89E 01
102	0.69	0.	9.65E-03	0.	0.	0.	0.	1.57E-03	0.	0.	5.01E 01	2.68E 01	4.18E 00	8.11E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.05E-01	0.	0.	0.	9.07E-02	7.61E-04	1.86E 01	2.09E-02	1.88E 01
2	10.60	0.	0.	9.37E-02	0.	0.	0.	9.08E-02	7.83E-04	1.91E-01	2.08E-02	3.33E-01
3	10.50	0.	0.	9.36E-02	0.	0.	0.	5.89E-02	8.06E-04	1.91E-01	2.08E-02	3.33E-01
4	10.40	0.	0.	8.72E-02	0.	0.	0.	5.89E-02	8.30E-04	1.92E-01	2.07E-02	3.27E-01
5	10.30	0.	0.	7.46E-02	0.	0.	0.	5.90E-02	8.54E-04	1.92E-01	2.06E-02	3.15E-01
6	10.20	0.	0.	7.40E-02	0.	0.	0.	5.91E-02	8.80E-04	1.93E-01	2.05E-02	3.17E-01
7	10.10	0.	0.	7.37E-02	0.	0.	0.	5.92E-02	9.06E-04	1.93E-01	2.04E-02	3.12E-01
8	10.00	0.	0.	6.09E-02	0.	0.	0.	5.93E-02	9.34E-04	1.93E-01	2.04E-02	3.02E-01
9	9.90	0.	0.	6.19E-02	0.	0.	0.	5.94E-02	9.62E-04	1.94E-01	2.03E-02	3.04E-01
10	9.80	0.	0.	5.70E-02	0.	0.	0.	5.95E-02	9.92E-04	1.94E-01	2.02E-02	3.00E-01
11	9.70	0.	0.	4.81E-02	0.	0.	0.	5.96E-02	1.02E-03	1.94E-01	2.01E-02	2.91E-01
12	9.60	0.	0.	5.18E-02	0.	0.	0.	5.97E-02	1.06E-03	1.95E-01	2.00E-02	2.95E-01
13	9.50	0.	0.	4.32E-02	0.	0.	0.	5.98E-02	1.09E-03	1.95E-01	2.79E-02	2.87E-01
14	9.40	0.	0.	4.81E-02	0.	0.	0.	5.99E-02	1.12E-03	1.95E-01	2.79E-02	2.89E-01
15	9.30	0.	0.	4.08E-02	0.	0.	0.	6.02E-02	1.16E-03	1.96E-01	2.78E-02	2.86E-01
16	9.20	0.	0.	3.28E-02	0.	0.	0.	6.04E-02	1.20E-03	1.97E-01	2.77E-02	2.79E-01
17	9.10	0.	0.	3.36E-02	0.	0.	0.	6.07E-02	1.24E-03	5.03E-02	2.76E-02	1.73E-01
18	9.00	0.	0.	2.99E-02	0.	0.	0.	6.09E-02	1.28E-03	5.03E-02	2.75E-02	1.70E-01
19	8.90	0.	0.	2.71E-02	0.	0.	0.	6.11E-02	1.33E-03	5.03E-02	2.75E-02	1.67E-01
20	8.80	0.	0.	2.64E-02	0.	0.	0.	6.13E-02	1.37E-03	5.03E-02	2.74E-02	1.67E-01
21	8.70	0.	0.	2.23E-02	0.	0.	0.	6.15E-02	1.42E-03	5.03E-02	2.73E-02	1.63E-01
22	8.60	0.	0.	2.29E-02	0.	0.	0.	6.17E-02	1.47E-03	5.03E-02	2.72E-02	1.64E-01
23	8.50	0.	0.	1.99E-02	0.	0.	0.	6.20E-02	1.52E-03	5.03E-02	2.72E-02	1.61E-01
24	8.40	0.	0.	1.92E-02	0.	0.	0.	6.23E-02	1.58E-03	5.04E-02	2.71E-02	1.61E-01
25	8.30	0.	0.	1.99E-02	0.	0.	0.	6.26E-02	1.63E-03	5.05E-02	2.71E-02	1.58E-01
26	8.20	0.	0.	1.99E-02	0.	0.	0.	6.29E-02	1.78E-03	5.09E-02	2.72E-02	1.58E-01
27	8.10	0.	0.	1.34E-02	0.	0.	0.	6.33E-02	1.76E-03	5.05E-02	2.73E-02	1.56E-01
28	8.00	0.	0.	1.34E-02	0.	0.	0.	6.36E-02	1.83E-03	5.07E-02	2.79E-02	1.57E-01
29	7.90	0.	0.	1.13E-02	0.	0.	0.	6.39E-02	1.90E-03	5.09E-02	2.76E-02	1.56E-01
30	7.80	0.	0.	1.15E-02	0.	0.	0.	6.42E-02	1.97E-03	5.10E-02	2.77E-02	1.56E-01
31	7.70	0.	0.	9.98E-03	0.	0.	0.	6.46E-02	2.05E-03	5.12E-02	2.78E-02	1.56E-01
32	7.60	0.	0.	9.29E-03	0.	4.26E-07	0.	6.49E-02	2.13E-03	5.14E-02	2.79E-02	1.56E-01
33	7.50	0.	0.	8.40E-03	0.	1.69E-06	0.	6.52E-02	2.22E-03	5.16E-02	2.81E-02	1.55E-01
34	7.40	0.	0.	7.42E-03	0.	1.17E-05	0.	6.56E-02	2.31E-03	5.18E-02	2.82E-02	1.55E-01
35	7.30	0.	0.	6.91E-03	0.	5.11E-05	0.	6.60E-02	2.41E-03	5.20E-02	2.83E-02	1.56E-01
36	7.20	0.	0.	6.12E-03	0.	1.37E-04	0.	6.63E-02	2.51E-03	5.21E-02	2.84E-02	1.56E-01
37	7.10	0.	0.	5.78E-03	0.	4.07E-04	0.	6.69E-02	2.62E-03	5.23E-02	2.85E-02	1.57E-01
38	7.00	1.84E-06	0.	5.21E-03	0.	9.09E-04	0.	6.74E-02	2.73E-03	5.25E-02	2.86E-02	1.57E-01
39	6.90	2.08E-06	0.	4.69E-03	0.	1.11E-03	0.	6.79E-02	2.85E-03	5.27E-02	2.88E-02	1.58E-01
40	6.80	1.70E-06	0.	4.42E-03	0.	2.10E-03	0.	6.85E-02	2.98E-03	5.29E-02	2.89E-02	1.60E-01
41	6.70	1.22E-06	0.	3.86E-03	0.	2.24E-03	0.	6.90E-02	3.12E-03	5.31E-02	2.90E-02	1.60E-01
42	6.60	7.37E-07	0.	3.34E-03	0.	1.63E-03	0.	6.96E-02	3.26E-03	5.34E-02	2.92E-02	1.60E-01
43	6.50	4.10E-07	0.	2.99E-03	0.	2.61E-03	0.	7.01E-02	3.42E-03	5.39E-02	2.94E-02	1.62E-01
44	6.40	2.36E-07	0.	1.73E-03	1.09E-05	2.64E-03	0.	7.07E-02	3.58E-03	5.43E-02	2.95E-02	1.62E-01
45	6.30	1.34E-07	0.	1.04E-03	5.02E-05	1.66E-03	0.	7.12E-02	3.76E-03	5.47E-02	2.98E-02	1.62E-01
46	6.20	5.96E-08	0.	5.57E-04	6.97E-05	3.39E-03	0.	7.17E-02	3.94E-03	5.52E-02	3.01E-02	1.64E-01
47	6.10	2.68E-08	0.	2.94E-04	1.96E-04	3.28E-03	0.	7.23E-02	4.14E-03	5.58E-02	3.05E-02	1.66E-01
48	6.00	1.18E-08	0.	6.31E-05	1.81E-04	1.43E-03	0.	7.28E-02	4.35E-03	5.65E-02	3.09E-02	1.66E-01
49	5.90	2.67E-09	0.	4.91E-06	2.61E-04	1.43E-03	0.	7.28E-02	4.58E-03	5.72E-02	3.12E-02	1.68E-01
50	5.80	3.40E-10	0.	1.13E-07	3.61E-04	1.42E-03	0.	7.17E-02	4.82E-03	5.79E-02	3.16E-02	1.68E-01
51	5.70	2.50E-11	0.	0.	4.12E-04	1.58E-03	0.	6.74E-02	5.08E-03	5.87E-02	3.20E-02	1.65E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	C2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO3 VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.67	1.12E-12	0.	0.	0.	3.37E-04	2.21E-04	0.	0.	6.27E-02	5.36E-03	5.95E-02	3.24E-02	1.62E-01
53	5.50	0.	0.	0.	0.	4.12E-04	2.06E-03	0.	0.	6.30E-02	5.66E-03	6.07E-02	3.29E-02	1.65E-01
54	5.40	0.	0.	0.	0.	3.69E-04	1.58E-03	0.	0.	6.33E-02	5.99E-03	6.21E-02	3.32E-02	1.67E-01
55	5.30	0.	0.	0.	0.	3.74E-04	2.69E-03	0.	0.	6.37E-02	6.34E-03	6.35E-02	3.38E-02	1.70E-01
56	5.20	0.	0.	0.	0.	4.02E-04	1.45E-03	0.	0.	6.41E-02	6.71E-03	6.50E-02	3.44E-02	1.72E-01
57	5.10	0.	0.	0.	0.	3.98E-04	1.89E-03	0.	0.	6.47E-02	7.11E-03	6.68E-02	3.51E-02	1.76E-01
58	5.00	1.46E 05	0.	0.	0.	3.59E-04	1.73E-03	0.	0.	6.52E-02	7.55E-03	6.88E-02	3.58E-02	1.80E-01
59	4.90	3.47E-05	0.	0.	0.	3.96E-04	1.84E-03	0.	0.	6.58E-02	8.03E-03	7.10E-02	3.65E-02	1.84E-01
60	4.80	6.35E-05	0.	0.	0.	4.22E-04	1.71E-03	0.	0.	6.63E-02	8.54E-03	7.33E-02	3.73E-02	1.88E-01
61	4.70	9.36E-05	0.	0.	0.	4.15E-04	1.53E-03	0.	0.	6.69E-02	9.10E-03	7.57E-02	3.82E-02	1.92E-01
62	4.60	1.13E-04	0.	0.	0.	4.22E-04	1.40E-03	0.	0.	6.74E-02	9.71E-03	7.85E-02	3.92E-02	1.97E-01
63	4.50	1.10E-04	0.	3.21E-04	0.	3.79E-04	1.04E-03	0.	0.	6.79E-02	1.04E-02	8.21E-02	4.02E-02	2.02E-01
64	4.40	1.22E-04	0.	1.02E-03	0.	3.77E-04	7.29E-04	0.	0.	6.85E-02	1.11E-02	8.57E-02	4.12E-02	2.09E-01
65	4.30	1.13E-04	0.	3.05E-03	0.	3.53E-04	4.44E-04	0.	0.	6.90E-02	1.19E-02	8.95E-02	4.22E-02	2.17E-01
66	4.20	1.04E-04	0.	1.05E-02	0.	3.70E-04	3.25E-04	0.	0.	6.96E-02	1.28E-02	9.35E-02	4.33E-02	2.30E-01
67	4.10	9.47E-05	0.	4.12E-03	0.	3.98E-04	8.79E-05	0.	0.	6.98E-02	1.37E-02	9.74E-02	4.38E-02	2.29E-01
68	4.00	8.78E-05	0.	1.31E-02	0.	3.39E-04	6.69E-05	0.	0.	7.01E-02	1.48E-02	1.01E-01	1.46E-02	2.15E-01
69	3.90	7.33E-05	0.	6.84E-03	7.92E-04	3.05E-04	2.65E-05	0.	0.	6.98E-02	1.60E-02	9.44E-02	1.40E-02	2.02E-01
70	3.80	7.98E-05	0.	1.08E-02	3.06E-03	3.20E-04	0.	0.	0.	6.96E-02	1.73E-02	9.65E-02	1.46E-02	2.13E-01
71	3.70	6.91E-05	0.	1.18E-02	1.35E-03	2.69E-04	0.	0.	0.	6.85E-02	1.87E-02	7.69E-02	1.61E-02	1.94E-01
72	3.60	6.14E-05	0.	7.60E-03	7.80E-03	2.92E-04	0.	0.	0.	6.41E-02	2.04E-02	8.32E-02	1.78E-02	2.91E-01
73	3.50	5.65E-05	0.	1.05E-02	1.78E-02	2.23E-04	0.	0.	0.	5.87E-02	2.22E-02	8.64E-02	1.97E-02	2.15E-01
74	3.40	5.07E-05	0.	6.20E-03	2.09E-03	2.49E-04	0.	0.	0.	3.39E-02	2.42E-02	9.68E-02	2.19E-02	1.85E-01
75	3.30	4.81E-05	0.	6.44E-03	9.12E-03	1.94E-04	0.	0.	0.	3.39E-02	2.65E-02	1.07E-01	2.40E-02	2.07E-01
76	3.20	5.43E-05	0.	4.05E-03	1.75E-02	2.01E-04	0.	0.	0.	3.40E-02	2.91E-02	1.18E-01	2.63E-02	2.29E-01
77	3.10	3.23E-05	0.	3.11E-03	3.28E-03	1.87E-04	0.	0.	0.	3.41E-02	3.20E-02	1.28E-01	2.85E-02	2.38E-01
78	3.00	2.94E-05	0.	1.87E-03	8.85E-03	1.73E-04	0.	0.	0.	3.41E-02	3.54E-02	1.39E-01	3.08E-02	2.50E-01
79	2.90	2.33E-05	0.	1.14E-03	5.11E-03	1.20E-04	0.	0.	0.	3.42E-02	3.92E-02	1.50E-01	3.32E-02	2.63E-01
80	2.80	2.40E-05	0.	5.48E-04	2.77E-03	8.48E-05	0.	0.	0.	3.42E-02	4.36E-02	1.63E-01	3.58E-02	2.80E-01
81	2.70	1.50E-05	0.	2.54E-04	4.24E-03	4.15E-05	0.	0.	0.	3.42E-02	4.87E-02	1.77E-01	3.87E-02	3.03E-01
82	2.60	6.80E-06	0.	1.28E-04	4.09E-04	1.89E-05	0.	0.	0.	3.42E-02	5.44E-02	1.92E-01	4.16E-02	3.23E-01
83	2.50	4.70E-07	0.	1.43E-05	3.74E-04	4.40E-06	0.	0.	0.	3.42E-02	6.14E-02	2.10E-01	2.16E-02	3.35E-01
84	2.40	0.	7.10E-04	0.	3.56E-04	4.62E-07	0.	0.	0.	3.42E-02	6.94E-02	2.53E-01	2.60E-02	3.84E-01
85	2.30	0.	2.47E-03	0.	0.	0.	0.	0.	0.	3.40E-02	7.92E-02	2.00E-01	3.11E-02	3.47E-01
86	2.20	0.	6.02E-03	0.	0.	0.	0.	0.	0.	3.38E-02	9.06E-02	2.36E-01	3.74E-02	4.04E-01
87	2.10	0.	6.93E-03	0.	0.	0.	0.	0.	0.	3.37E-02	1.04E-01	2.75E-01	4.37E-02	4.64E-01
88	2.00	0.	1.30E-02	0.	0.	0.	0.	0.	0.	3.25E-02	1.21E-01	3.14E-01	5.00E-02	5.31E-01
89	1.90	0.	1.88E-02	0.	0.	0.	0.	0.	0.	3.14E-02	1.42E-01	3.58E-01	5.73E-02	6.07E-01
90	1.80	0.	1.95E-02	0.	0.	0.	0.	0.	0.	3.00E-02	1.67E-01	4.25E-01	6.90E-02	7.07E-01
91	1.70	0.	1.83E-02	0.	0.	0.	0.	0.	0.	2.83E-02	1.96E-01	5.09E-01	8.37E-02	8.37E-01
92	1.60	0.	1.33E-02	0.	0.	0.	0.	0.	0.	2.39E-02	2.30E-01	5.92E-01	9.84E-02	9.67E-01
93	1.50	0.	1.57E-02	0.	0.	0.	0.	0.	0.	1.09E-02	2.91E-01	7.56E-01	1.19E-01	1.19E 00
94	1.40	0.	1.58E-02	0.	0.	0.	0.	0.	0.	0.	3.59E-01	9.33E-01	1.41E-01	1.45E 00
95	1.30	0.	1.21E-02	0.	0.	0.	0.	0.	0.	0.	4.49E-01	1.20E 00	1.86E-01	1.85E 00
96	1.20	0.	1.16E-02	0.	0.	0.	0.	0.	0.	0.	5.75E-01	1.25E 00	1.84E-01	2.02E 00
97	1.10	0.	1.06E-02	0.	0.	0.	0.	2.12E-08	0.	0.	7.53E-01	1.94E 00	2.37E-01	2.54E 00
98	1.00	0.	9.75E-03	0.	0.	0.	0.	2.69E-07	0.	0.	1.01E 00	1.87E 00	2.81E-01	3.15E 00
99	0.90	0.	8.61E-03	0.	0.	0.	0.	3.06E-07	0.	0.	1.36E 00	2.13E 00	3.07E-01	3.84E 00
100	0.80	0.	3.77E-03	0.	0.	0.	0.	6.27E-06	0.	0.	1.99E 00	2.45E 00	3.53E-01	4.80E 00
101	0.70	0.	9.21E-04	0.	0.	0.	0.	5.05E-06	0.	0.	3.08E 00	2.69E 00	3.81E-01	6.07E 00
102	0.61	0.	1.21E-04	0.	0.	0.	0.	1.79E-05	0.	0.	4.87E 00	3.06E 00	4.26E-01	8.25E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INCLUDES CO2)

TEMPERATURE (DEGREES K): 14500. DENSITY (GM/CC) 1.8938-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 B-B BANDS	O2 B-B CONT.	N2 B-N NO. 1	NO DELTA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	9.13E-04	0.	0.	0.	1.70E-03	7.04E-09	1.74E 00	2.76E-03	1.74E 00
2	10.66	0.	0.	8.15E-04	0.	0.	0.	1.70E-03	7.20E-09	1.40E-02	2.75E-03	1.94E-02
3	10.50	0.	0.	3.14E-04	0.	0.	0.	1.70E-03	7.41E-09	1.41E-02	2.74E-03	1.94E-02
4	10.46	0.	0.	7.98E-04	0.	0.	0.	1.70E-03	7.63E-09	1.42E-02	2.73E-03	1.94E-02
5	10.38	0.	0.	6.46E-04	0.	0.	0.	1.71E-03	7.89E-09	1.42E-02	2.72E-03	1.94E-02
6	10.20	0.	0.	6.61E-04	0.	0.	0.	1.71E-03	8.09E-09	1.42E-02	2.72E-03	1.94E-02
7	10.15	0.	0.	6.13E-04	0.	0.	0.	1.71E-03	8.35E-09	1.43E-02	2.71E-03	1.94E-02
8	10.08	0.	0.	5.26E-04	0.	0.	0.	1.71E-03	8.59E-09	1.43E-02	2.70E-03	1.93E-02
9	9.90	0.	0.	5.07E-04	0.	0.	0.	1.72E-03	8.85E-09	1.43E-02	2.69E-03	1.94E-02
10	9.80	0.	0.	4.95E-04	0.	0.	0.	1.72E-03	9.13E-09	1.44E-02	2.69E-03	1.94E-02
11	9.76	0.	0.	4.18E-04	0.	0.	0.	1.72E-03	9.41E-09	1.44E-02	2.68E-03	1.93E-02
12	9.60	0.	0.	4.58E-04	0.	0.	0.	1.73E-03	9.71E-09	1.44E-02	2.67E-03	1.94E-02
13	9.50	0.	0.	3.79E-04	0.	0.	0.	1.73E-03	1.00E-08	1.45E-02	2.66E-03	1.93E-02
14	9.40	0.	0.	3.60E-04	0.	0.	0.	1.74E-03	1.03E-08	1.45E-02	2.66E-03	1.94E-02
15	9.36	0.	0.	3.55E-04	0.	0.	0.	1.74E-03	1.07E-08	1.46E-02	2.65E-03	1.94E-02
16	9.20	0.	0.	3.38E-04	0.	0.	0.	1.75E-03	1.10E-08	1.46E-02	2.64E-03	1.94E-02
17	9.16	0.	0.	2.82E-04	0.	0.	0.	1.75E-03	1.14E-08	4.69E-03	2.63E-03	9.49E-03
18	9.08	0.	0.	2.40E-04	0.	0.	0.	1.76E-03	1.18E-08	4.69E-03	2.63E-03	9.48E-03
19	8.92	0.	0.	2.24E-04	0.	0.	0.	1.77E-03	1.22E-08	4.69E-03	2.62E-03	9.48E-03
20	8.84	0.	0.	2.50E-04	0.	0.	0.	1.77E-03	1.26E-08	4.69E-03	2.61E-03	9.48E-03
21	8.72	0.	0.	1.94E-04	0.	0.	0.	1.78E-03	1.30E-08	4.69E-03	2.60E-03	9.48E-03
22	8.68	0.	0.	1.99E-04	0.	0.	0.	1.79E-03	1.35E-08	4.69E-03	2.60E-03	9.48E-03
23	8.56	0.	0.	1.78E-04	0.	0.	0.	1.79E-03	1.40E-08	4.69E-03	2.59E-03	9.39E-03
24	8.48	0.	0.	1.67E-04	0.	0.	0.	1.80E-03	1.45E-08	4.70E-03	2.58E-03	9.40E-03
25	8.36	0.	0.	1.37E-04	0.	0.	0.	1.81E-03	1.50E-08	4.71E-03	2.58E-03	9.39E-03
26	8.16	0.	0.	1.59E-04	0.	0.	0.	1.82E-03	1.56E-08	4.71E-03	2.59E-03	9.42E-03
27	8.16	0.	0.	1.17E-04	0.	0.	0.	1.84E-03	1.62E-08	4.71E-03	2.61E-03	9.43E-03
28	8.04	0.	0.	1.14E-04	0.	0.	0.	1.84E-03	1.68E-08	4.73E-03	2.62E-03	9.47E-03
29	7.98	0.	0.	9.78E-05	0.	0.	0.	1.85E-03	1.74E-08	4.74E-03	2.62E-03	9.49E-03
30	7.86	0.	0.	1.08E-04	0.	0.	0.	1.86E-03	1.81E-08	4.74E-03	2.64E-03	9.54E-03
31	7.76	0.	0.	8.04E-05	0.	0.	0.	1.87E-03	1.88E-08	4.78E-03	2.65E-03	9.57E-03
32	7.68	0.	0.	8.05E-05	0.	2.79E-08	0.	1.88E-03	1.96E-08	4.79E-03	2.66E-03	9.61E-03
33	7.52	0.	0.	7.30E-05	0.	1.56E-08	0.	1.89E-03	2.04E-08	4.81E-03	2.67E-03	9.65E-03
34	7.48	0.	0.	6.45E-05	0.	1.04E-07	0.	1.90E-03	2.13E-08	4.83E-03	2.69E-03	9.69E-03
35	7.38	0.	0.	6.51E-05	0.	4.54E-07	0.	1.91E-03	2.22E-08	4.84E-03	2.70E-03	9.73E-03
36	7.26	0.	0.	5.32E-05	0.	1.21E-06	0.	1.92E-03	2.31E-08	4.86E-03	2.71E-03	9.77E-03
37	7.16	0.	0.	5.03E-05	0.	3.62E-06	0.	1.93E-03	2.41E-08	4.86E-03	2.72E-03	9.83E-03
38	7.08	5.42E-09	0.	4.93E-05	0.	8.04E-06	0.	1.95E-03	2.51E-08	4.90E-03	2.73E-03	9.88E-03
39	6.98	1.46E-08	0.	4.88E-05	0.	9.88E-06	0.	1.97E-03	2.62E-08	4.91E-03	2.74E-03	9.93E-03
40	6.88	4.55E-08	0.	3.85E-05	0.	1.88E-05	0.	1.98E-03	2.74E-08	4.93E-03	2.75E-03	9.98E-03
41	6.78	1.11E-08	0.	3.38E-05	0.	1.99E-05	0.	2.00E-03	2.87E-08	4.95E-03	2.77E-03	1.01E-02
42	6.68	6.70E-09	0.	2.90E-05	0.	1.45E-05	0.	2.01E-03	3.00E-08	4.98E-03	2.78E-03	1.01E-02
43	6.58	3.91E-09	0.	2.25E-05	0.	2.32E-05	0.	2.03E-03	3.14E-08	5.02E-03	2.80E-03	1.02E-02
44	6.48	2.14E-09	0.	1.91E-05	9.72E-08	2.35E-05	0.	2.04E-03	3.29E-08	5.06E-03	2.81E-03	1.03E-02
45	6.38	1.22E-09	0.	9.89E-06	4.46E-07	1.48E-05	0.	2.06E-03	3.45E-08	5.11E-03	2.84E-03	1.04E-02
46	6.28	5.41E-10	0.	4.05E-06	6.19E-07	2.12E-05	0.	2.08E-03	3.63E-08	5.15E-03	2.87E-03	1.05E-02
47	6.18	2.44E-10	0.	2.21E-06	1.74E-06	2.82E-05	0.	2.09E-03	3.81E-08	5.20E-03	2.91E-03	1.06E-02
48	6.08	0.00E-11	0.	5.49E-07	1.60E-06	1.27E-05	0.	2.11E-03	4.00E-08	5.27E-03	2.94E-03	1.07E-02
49	5.98	2.43E-11	0.	3.92E-08	2.32E-06	1.27E-05	0.	2.11E-03	4.21E-08	5.34E-03	2.98E-03	1.09E-02
50	5.88	3.89E-12	0.	9.81E-10	3.20E-06	1.27E-05	0.	2.08E-03	4.44E-08	5.40E-03	3.01E-03	1.10E-02
51	5.78	2.27E-13	0.	0.	3.66E-06	1.40E-05	0.	1.95E-03	4.69E-08	5.47E-03	3.05E-03	1.10E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.02E-14	0.	0.	0.	3.00E-06	1.96E-05	0.	0.	1.81E-03	4.93E-04	5.55E-03	3.08E-03	1.18E-02
53	5.50	0.	0.	0.	0.	3.66E-06	1.83E-05	0.	0.	1.82E-03	5.21E-04	5.66E-03	3.12E-03	1.11E-02
54	5.40	0.	0.	0.	0.	3.27E-06	1.41E-05	0.	0.	1.83E-03	5.51E-04	5.79E-03	3.17E-03	1.14E-02
55	5.30	0.	0.	0.	0.	3.36E-06	1.85E-05	0.	0.	1.84E-03	5.83E-04	5.92E-03	3.22E-03	1.16E-02
56	5.20	0.	0.	0.	0.	3.47E-06	1.29E-05	0.	0.	1.86E-03	6.17E-04	6.06E-03	3.24E-03	1.18E-02
57	5.10	0.	0.	0.	0.	3.53E-06	1.68E-05	0.	0.	1.87E-03	6.54E-04	6.23E-03	3.35E-03	1.21E-02
58	5.00	1.33E-07	0.	0.	0.	3.19E-06	1.54E-05	0.	0.	1.89E-03	6.95E-04	6.42E-03	3.41E-03	1.24E-02
59	4.90	3.15E-07	0.	0.	0.	3.52E-06	1.63E-05	0.	0.	1.90E-03	7.38E-04	6.62E-03	3.48E-03	1.28E-02
60	4.80	5.77E-07	0.	0.	0.	3.75E-06	1.92E-05	0.	0.	1.92E-03	7.85E-04	6.84E-03	3.55E-03	1.31E-02
61	4.70	7.68E-07	0.	0.	0.	3.79E-06	1.36E-05	0.	0.	1.93E-03	8.37E-04	7.08E-03	3.64E-03	1.35E-02
62	4.60	1.02E-06	0.	0.	0.	3.79E-06	1.24E-05	0.	0.	1.95E-03	8.93E-04	7.32E-03	3.73E-03	1.39E-02
63	4.50	1.06E-06	0.	2.79E-06	0.	3.37E-06	9.23E-06	0.	0.	1.97E-03	9.54E-04	7.65E-03	3.83E-03	1.44E-02
64	4.40	1.11E-06	0.	8.91E-06	0.	3.35E-06	8.40E-06	0.	0.	1.98E-03	1.02E-03	7.99E-03	3.92E-03	1.49E-02
65	4.30	1.03E-06	0.	2.65E-05	0.	3.14E-06	3.95E-06	0.	0.	2.00E-03	1.09E-03	8.35E-03	4.02E-03	1.55E-02
66	4.20	9.49E-07	0.	9.10E-05	0.	3.29E-06	2.89E-06	0.	0.	2.01E-03	1.17E-03	8.71E-03	4.12E-03	1.61E-02
67	4.10	8.78E-07	0.	3.58E-05	0.	3.16E-06	7.81E-07	0.	0.	2.02E-03	1.24E-03	9.08E-03	4.17E-03	1.66E-02
68	4.00	7.98E-07	0.	1.31E-04	0.	3.01E-06	5.95E-07	0.	0.	2.03E-03	1.36E-03	9.44E-03	1.30E-03	1.43E-02
69	3.90	4.45E-07	0.	5.59E-05	2.27E-05	2.71E-06	2.36E-07	0.	0.	2.02E-03	1.47E-03	8.81E-03	1.34E-03	1.37E-02
70	3.80	7.24E-07	0.	9.22E-05	1.13E-04	2.98E-06	0.	0.	0.	2.01E-03	1.59E-03	9.00E-03	1.39E-03	1.42E-02
71	3.70	6.27E-07	0.	1.03E-04	5.87E-05	2.39E-06	0.	0.	0.	1.98E-03	1.72E-03	7.17E-03	1.53E-03	1.26E-02
72	3.60	5.58E-07	0.	6.61E-05	2.23E-04	2.59E-06	0.	0.	0.	1.86E-03	1.87E-03	7.76E-03	1.70E-03	1.35E-02
73	3.50	5.13E-07	0.	9.14E-05	5.03E-04	1.98E-06	0.	0.	0.	1.70E-03	2.04E-03	8.05E-03	1.88E-03	1.43E-02
74	3.40	4.61E-07	0.	5.39E-05	5.98E-05	2.21E-06	0.	0.	0.	1.80E-04	2.23E-03	9.81E-03	2.08E-03	1.44E-02
75	3.30	3.65E-07	0.	5.60E-05	2.61E-04	1.72E-06	0.	0.	0.	1.61E-04	2.44E-03	9.98E-03	2.29E-03	1.60E-02
76	3.20	3.11E-07	0.	3.92E-05	5.02E-04	1.79E-06	0.	0.	0.	1.43E-04	2.68E-03	1.10E-02	2.50E-03	1.77E-02
77	3.10	2.93E-07	0.	2.71E-05	9.40E-05	1.66E-06	0.	0.	0.	1.25E-04	2.95E-03	1.20E-02	2.72E-03	1.87E-02
78	3.00	2.58E-07	0.	1.62E-05	2.53E-04	1.53E-06	0.	0.	0.	1.08E-04	3.25E-03	1.38E-02	2.94E-03	2.04E-02
79	2.90	2.12E-07	0.	9.95E-06	1.46E-04	1.13E-06	0.	0.	0.	9.89E-04	3.61E-03	1.40E-02	3.16E-03	2.19E-02
80	2.80	2.18E-07	0.	4.77E-06	7.92E-05	7.54E-07	0.	0.	0.	9.91E-04	4.01E-03	1.52E-02	3.41E-03	2.37E-02
81	2.70	1.36E-07	0.	2.21E-06	1.22E-04	3.96E-07	0.	0.	0.	9.91E-04	4.44E-03	1.65E-02	3.69E-03	2.58E-02
82	2.60	6.18E-08	0.	1.10E-06	1.17E-05	1.68E-07	0.	0.	0.	9.91E-04	5.02E-03	1.79E-02	3.97E-03	2.79E-02
83	2.50	4.27E-09	0.	1.24E-07	1.07E-05	3.91E-08	0.	0.	0.	9.91E-04	5.65E-03	2.03E-02	2.06E-03	2.98E-02
84	2.40	0.	6.17E-06	0.	9.82E-06	4.10E-09	0.	0.	0.	9.91E-04	6.40E-03	2.36E-02	2.47E-03	3.35E-02
85	2.30	0.	2.14E-05	0.	0.	0.	0.	0.	0.	9.83E-04	7.29E-03	1.88E-02	2.96E-03	2.99E-02
86	2.20	0.	5.24E-05	0.	0.	0.	0.	0.	0.	9.79E-04	8.34E-03	2.28E-02	3.96E-03	3.50E-02
87	2.10	0.	6.82E-05	0.	0.	0.	0.	0.	0.	9.79E-04	9.61E-03	2.57E-02	4.16E-03	4.05E-02
88	2.00	0.	1.13E-04	0.	0.	0.	0.	0.	0.	9.44E-04	1.11E-02	2.93E-02	4.76E-03	3.63E-02
89	1.90	0.	1.63E-04	0.	0.	0.	0.	0.	0.	9.08E-04	1.30E-02	3.33E-02	5.44E-03	9.29E-02
90	1.80	0.	1.35E-04	0.	0.	0.	0.	0.	0.	8.68E-04	1.53E-02	3.97E-02	6.58E-03	6.26E-02
91	1.70	0.	1.99E-04	0.	0.	0.	0.	0.	0.	8.18E-04	1.83E-02	4.74E-02	7.98E-03	7.47E-02
92	1.60	0.	1.16E-04	0.	0.	0.	0.	0.	0.	6.92E-04	2.20E-02	5.52E-02	9.38E-03	8.74E-02
93	1.50	0.	1.37E-04	0.	0.	0.	0.	0.	0.	5.19E-04	2.68E-02	7.63E-02	1.14E-02	1.09E-01
94	1.40	0.	1.37E-04	0.	0.	0.	0.	0.	0.	0.	3.38E-02	8.78E-02	1.49E-02	1.34E-01
95	1.30	0.	1.65E-04	0.	0.	0.	0.	0.	0.	0.	4.13E-02	1.12E-01	1.78E-02	1.71E-01
96	1.20	0.	1.01E-04	0.	0.	0.	0.	0.	0.	0.	5.29E-02	1.17E-01	1.76E-02	1.87E-01
97	1.10	0.	9.25E-05	0.	0.	0.	0.	1.88E-10	0.	0.	6.93E-02	1.44E-01	2.21E-02	2.35E-01
98	1.00	0.	8.48E-05	0.	0.	0.	0.	2.36E-09	0.	0.	9.31E-02	1.74E-01	2.49E-02	2.92E-01
99	0.90	0.	6.96E-05	0.	0.	0.	0.	2.22E-09	0.	0.	1.28E-01	1.99E-01	2.93E-02	3.56E-01
100	0.80	0.	3.20E-05	0.	0.	0.	0.	5.57E-08	0.	0.	1.85E-01	2.29E-01	3.37E-02	4.45E-01
101	0.70	0.	8.81E-06	0.	0.	0.	0.	4.49E-08	0.	0.	2.74E-01	2.91E-01	3.63E-02	5.63E-01
102	0.60	0.	1.85E-06	0.	0.	0.	0.	1.59E-07	0.	0.	4.43E-01	2.48E-01	4.86E-02	7.64E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IPMB)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.51E-06	0.	0.	0.	3.96E-05	9.41E-06	1.53E-01	2.31E-04	1.53E-01
2	10.60	0.	0.	4.74E-06	0.	0.	0.	3.95E-05	9.39E-06	1.17E-03	2.31E-04	1.39E-03
3	10.50	0.	0.	4.74E-06	0.	0.	0.	3.97E-05	9.72E-06	1.00E-03	2.30E-04	1.34E-03
4	10.40	0.	0.	4.41E-06	0.	0.	0.	3.98E-05	9.89E-06	1.00E-03	2.30E-04	1.34E-03
5	10.30	0.	0.	3.77E-06	0.	0.	0.	3.98E-05	9.86E-06	1.00E-03	2.29E-04	1.34E-03
6	10.20	0.	0.	3.89E-06	0.	0.	0.	3.99E-05	9.85E-06	1.00E-03	2.28E-04	1.34E-03
7	10.10	0.	0.	3.90E-06	0.	0.	0.	3.99E-05	9.43E-06	1.00E-03	2.27E-04	1.34E-03
8	10.00	0.	0.	3.86E-06	0.	0.	0.	4.00E-05	9.83E-06	1.00E-03	2.27E-04	1.37E-03
9	9.90	0.	0.	3.13E-06	0.	0.	0.	3.00E-05	9.69E-06	1.00E-03	2.26E-04	1.37E-03
10	9.80	0.	0.	2.80E-06	0.	0.	0.	4.01E-05	9.84E-06	1.10E-03	2.25E-04	1.37E-03
11	9.70	0.	0.	2.43E-06	0.	0.	0.	4.02E-05	7.27E-06	1.10E-03	2.25E-04	1.37E-03
12	9.60	0.	0.	2.62E-06	0.	0.	0.	4.02E-05	7.90E-06	1.10E-03	2.24E-04	1.38E-03
13	9.50	0.	0.	2.58E-06	0.	0.	0.	4.03E-05	7.74E-06	1.10E-03	2.23E-04	1.38E-03
14	9.40	0.	0.	2.83E-06	0.	0.	0.	4.03E-05	7.99E-06	1.11E-03	2.23E-04	1.38E-03
15	9.30	0.	0.	2.07E-06	0.	0.	0.	4.04E-05	8.25E-06	1.11E-03	2.22E-04	1.36E-03
16	9.20	0.	0.	1.66E-06	0.	0.	0.	4.30E-05	8.57E-06	1.11E-03	2.21E-04	1.39E-03
17	9.10	0.	0.	1.70E-06	0.	0.	0.	4.09E-05	8.08E-06	3.90E-04	2.21E-04	6.30E-04
18	9.00	0.	0.	1.51E-06	0.	0.	0.	4.11E-05	9.10E-06	3.90E-04	2.20E-04	6.30E-04
19	8.90	0.	0.	1.37E-06	0.	0.	0.	4.12E-05	9.41E-06	3.90E-04	2.20E-04	6.29E-04
20	8.80	0.	0.	1.34E-06	0.	0.	0.	4.14E-05	9.74E-06	3.90E-04	2.19E-04	6.29E-04
21	8.70	0.	0.	1.13E-06	0.	0.	0.	4.15E-05	1.01E-05	3.90E-04	2.18E-04	6.29E-04
22	8.60	0.	0.	1.16E-06	0.	0.	0.	4.16E-05	1.04E-05	3.90E-04	2.18E-04	6.29E-04
23	8.50	0.	0.	9.88E-07	0.	0.	0.	4.18E-05	1.08E-05	3.90E-04	2.17E-04	6.29E-04
24	8.40	0.	0.	9.72E-07	0.	0.	0.	4.20E-05	1.12E-05	3.90E-04	2.17E-04	6.29E-04
25	8.30	0.	0.	8.89E-07	0.	0.	0.	4.22E-05	1.16E-05	3.59E-04	2.17E-04	6.30E-04
26	8.20	0.	0.	8.86E-07	0.	0.	0.	4.25E-05	1.20E-05	3.59E-04	2.16E-04	6.32E-04
27	8.10	0.	0.	6.80E-07	0.	0.	0.	4.27E-05	1.25E-05	3.60E-04	2.19E-04	6.34E-04
28	8.00	0.	0.	6.77E-07	0.	0.	0.	4.29E-05	1.30E-05	3.60E-04	2.20E-04	6.37E-04
29	7.90	0.	0.	5.69E-07	0.	0.	0.	4.31E-05	1.35E-05	3.62E-04	2.20E-04	6.39E-04
30	7.80	0.	0.	5.83E-07	0.	0.	0.	4.33E-05	1.40E-05	3.63E-04	2.21E-04	6.42E-04
31	7.70	0.	0.	5.01E-07	0.	0.	0.	4.36E-05	1.46E-05	3.64E-04	2.22E-04	6.45E-04
32	7.60	0.	0.	4.68E-07	0.	7.42E-11	0.	4.38E-05	1.51E-05	3.66E-04	2.23E-04	6.48E-04
33	7.50	0.	0.	4.25E-07	0.	9.58E-11	0.	4.40E-05	1.58E-05	3.67E-04	2.24E-04	6.51E-04
34	7.40	0.	0.	3.75E-07	0.	6.84E-10	0.	4.42E-05	1.64E-05	3.68E-04	2.25E-04	6.54E-04
35	7.30	0.	0.	3.49E-07	0.	2.91E-09	0.	4.45E-05	1.71E-05	3.70E-04	2.26E-04	6.58E-04
36	7.20	0.	0.	3.18E-07	0.	7.77E-09	0.	4.47E-05	1.78E-05	3.71E-04	2.27E-04	6.61E-04
37	7.10	0.	0.	2.92E-07	0.	2.32E-08	0.	4.51E-05	1.84E-05	3.72E-04	2.28E-04	6.64E-04
38	7.00	6.63E-11	0.	2.63E-07	0.	5.15E-08	0.	4.55E-05	1.94E-05	3.73E-04	2.29E-04	6.68E-04
39	6.90	1.28E-10	0.	2.37E-07	0.	6.32E-08	0.	4.58E-05	2.03E-05	3.75E-04	2.30E-04	6.71E-04
40	6.80	1.09E-10	0.	2.24E-07	0.	1.19E-07	0.	4.62E-05	2.12E-05	3.76E-04	2.31E-04	6.75E-04
41	6.70	9.82E-11	0.	1.92E-07	0.	1.27E-07	0.	4.66E-05	2.22E-05	3.77E-04	2.32E-04	6.79E-04
42	6.60	4.71E-11	0.	1.69E-07	0.	9.20E-08	0.	4.69E-05	2.32E-05	3.80E-04	2.33E-04	6.84E-04
43	6.50	2.60E-11	0.	1.31E-07	0.	1.49E-07	0.	4.73E-05	2.43E-05	3.82E-04	2.35E-04	6.90E-04
44	6.40	1.91E-11	0.	0.76E-08	6.22E-10	1.58E-07	0.	4.77E-05	2.54E-05	3.84E-04	2.36E-04	6.96E-04
45	6.30	8.59E-12	0.	9.27E-08	2.85E-09	9.46E-08	0.	4.88E-05	2.67E-05	3.89E-04	2.38E-04	7.02E-04
46	6.20	3.81E-12	0.	2.82E-08	3.96E-09	1.36E-07	0.	4.84E-05	2.80E-05	3.93E-04	2.41E-04	7.10E-04
47	6.10	1.71E-12	0.	1.28E-08	1.11E-08	1.81E-07	0.	4.88E-05	2.94E-05	3.97E-04	2.44E-04	7.19E-04
48	6.00	7.83E-13	0.	3.19E-09	1.83E-08	8.12E-08	0.	4.91E-05	3.09E-05	4.02E-04	2.47E-04	7.28E-04
49	5.90	1.71E-13	0.	2.28E-10	1.49E-08	8.12E-08	0.	4.91E-05	3.25E-05	4.07E-04	2.50E-04	7.38E-04
50	5.80	2.17E-14	0.	5.71E-12	2.65E-08	5.18E-08	0.	4.84E-05	3.42E-05	4.12E-04	2.53E-04	7.48E-04
51	5.70	1.40E-15	0.	0.	2.34E-08	8.90E-09	0.	4.59E-05	3.61E-05	4.17E-04	2.56E-04	7.55E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (TOTAL)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.16E-17	0.	0.	0.	1.92E-08	1.26E-07	0.	0.	4.23E-05	3.81E-05	4.23E-04	2.59E-04	7.63E-04
53	5.50	0.	0.	0.	0.	2.34E-08	1.17E-07	0.	0.	4.23E-05	4.02E-05	4.32E-04	2.62E-04	7.76E-04
54	5.40	0.	0.	0.	0.	2.09E-08	9.00E-08	0.	0.	4.27E-05	4.25E-05	4.42E-04	2.66E-04	7.93E-04
55	5.30	0.	0.	0.	0.	2.15E-08	1.19E-07	0.	0.	4.30E-05	4.50E-05	4.52E-04	2.70E-04	8.10E-04
56	5.20	0.	0.	0.	0.	2.28E-08	8.23E-08	0.	0.	4.33E-05	4.76E-05	4.62E-04	2.75E-04	8.29E-04
57	5.10	0.	0.	0.	0.	2.26E-08	1.08E-07	0.	0.	4.36E-05	5.05E-05	4.75E-04	2.81E-04	8.50E-04
58	5.00	9.35E-10	0.	0.	0.	2.04E-08	9.83E-08	0.	0.	4.40E-05	5.36E-05	4.90E-04	2.86E-04	8.73E-04
59	4.90	2.22E-09	0.	0.	0.	2.25E-08	1.05E-07	0.	0.	4.44E-05	5.70E-05	5.05E-04	2.92E-04	8.98E-04
60	4.80	4.06E-09	0.	0.	0.	2.40E-08	9.72E-08	0.	0.	4.47E-05	6.04E-05	5.21E-04	2.98E-04	9.25E-04
61	4.70	5.35E-09	0.	0.	0.	2.36E-08	8.69E-08	0.	0.	4.51E-05	6.46E-05	5.38E-04	3.05E-04	9.54E-04
62	4.60	7.21E-09	0.	0.	0.	2.40E-08	7.94E-08	0.	0.	4.55E-05	6.89E-05	5.59E-04	3.13E-04	9.86E-04
63	4.50	7.44E-09	0.	1,63E-08	0.	2.16E-08	5.91E-08	0.	0.	4.58E-05	7.37E-05	5.84E-04	3.21E-04	1.02E-03
64	4.40	7.80E-09	0.	5,18E-08	0.	2.14E-08	4.14E-08	0.	0.	4.62E-05	7.88E-05	6.09E-04	3.29E-04	1.06E-03
65	4.30	7.24E-09	0.	1,94E-07	0.	2.01E-08	2.93E-08	0.	0.	4.66E-05	8.45E-05	6.37E-04	3.37E-04	1.11E-03
66	4.20	6.68E-09	0.	5,33E-07	0.	2.10E-08	1.85E-08	0.	0.	4.69E-05	9.07E-05	6.65E-04	3.46E-04	1.15E-03
67	4.10	8.18E-09	0.	2,08E-07	0.	2.02E-08	5.00E-09	0.	0.	4.71E-05	9.76E-05	6.93E-04	3.50E-04	1.19E-03
68	4.00	5.61E-09	0.	7,62E-07	0.	1.92E-08	3.81E-09	0.	0.	4.73E-05	1.05E-04	7.20E-04	1.09E-04	9.82E-04
69	3.90	4.68E-09	0.	3,44E-07	4.75E-07	1.73E-08	1.51E-09	0.	0.	4.71E-05	1.13E-04	6.72E-04	1.12E-04	9.45E-04
70	3.80	5.89E-09	0.	5,36E-07	2.36E-06	1.85E-08	0.	0.	0.	4.69E-05	1.23E-04	6.86E-04	1.16E-04	9.75E-04
71	3.70	4.41E-09	0.	5,98E-07	8.11E-07	1.53E-08	0.	0.	0.	4.62E-05	1.33E-04	5.47E-04	1.29E-04	8.56E-04
72	3.60	3.93E-09	0.	3,84E-07	4.68E-06	1.66E-08	0.	0.	0.	4.33E-05	1.45E-04	5.92E-04	1.42E-04	9.27E-04
73	3.50	3.61E-09	0.	5,32E-07	1.09E-05	1.27E-08	0.	0.	0.	3.36E-05	1.58E-04	6.14E-04	1.58E-04	9.88E-04
74	3.40	3.24E-09	0.	3,14E-07	1.25E-06	1.42E-08	0.	0.	0.	2.28E-05	1.72E-04	6.87E-04	1.75E-04	1.06E-03
75	3.30	2.56E-09	0.	3,26E-07	9.47E-06	1.10E-08	0.	0.	0.	2.29E-05	1.88E-04	7.61E-04	1.92E-04	1.17E-03
76	3.20	2.19E-09	0.	2,85E-07	1.05E-05	1.15E-08	0.	0.	0.	2.29E-05	2.07E-04	8.36E-04	2.10E-04	1.29E-03
77	3.10	2.06E-09	0.	1,58E-07	1.97E-06	1.06E-08	0.	0.	0.	2.30E-05	2.28E-04	9.13E-04	2.28E-04	1.39E-03
78	3.00	1.81E-09	0.	9,44E-08	5.30E-06	9.82E-09	0.	0.	0.	2.30E-05	2.51E-04	9.90E-04	2.46E-04	1.52E-03
79	2.90	1.49E-09	0.	5,79E-08	3.07E-06	7.29E-09	0.	0.	0.	2.31E-05	2.78E-04	1.07E-03	2.65E-04	1.64E-03
80	2.80	1.53E-09	0.	2,77E-08	1.66E-06	4.82E-09	0.	0.	0.	2.31E-05	3.10E-04	1.16E-03	2.86E-04	1.78E-03
81	2.70	9.57E-10	0.	1,29E-08	2.54E-06	2.53E-09	0.	0.	0.	2.31E-05	3.46E-04	1.26E-03	3.09E-04	1.94E-03
82	2.60	4.35E-10	0.	6,49E-09	2.45E-07	1.08E-09	0.	0.	0.	2.31E-05	3.88E-04	1.38E-03	3.33E-04	2.11E-03
83	2.50	3.00E-11	0.	7,24E-10	2.24E-07	2.50E-10	0.	0.	0.	2.31E-05	4.36E-04	1.55E-03	1.73E-04	2.10E-03
84	2.40	0.	3.59E-08	0.	2.01E-07	2.63E-11	0.	0.	0.	2.31E-05	4.94E-04	1.80E-03	2.84E-04	2.53E-03
85	2.30	0.	1.29E-07	0.	0.	0.	0.	0.	0.	2.29E-05	5.62E-04	1.42E-03	2.49E-04	2.26E-03
86	2.20	0.	3.85E-07	0.	0.	0.	0.	0.	0.	2.28E-05	6.44E-04	1.68E-03	2.99E-04	2.65E-03
87	2.10	0.	3.50E-07	0.	0.	0.	0.	0.	0.	2.27E-05	7.42E-04	1.96E-03	3.49E-04	3.07E-03
88	2.00	0.	6.55E-07	0.	0.	0.	0.	0.	0.	2.20E-05	8.61E-04	2.24E-03	4.00E-04	3.52E-03
89	1.90	0.	9.50E-07	0.	0.	0.	0.	0.	0.	2.12E-05	1.01E-03	2.54E-03	4.58E-04	4.03E-03
90	1.80	0.	7.86E-07	0.	0.	0.	0.	0.	0.	2.02E-05	1.18E-03	3.03E-03	5.92E-04	4.78E-03
91	1.70	0.	9.25E-07	0.	0.	0.	0.	0.	0.	1.91E-05	1.41E-03	3.62E-03	6.69E-04	5.72E-03
92	1.60	0.	6.73E-07	0.	0.	0.	0.	0.	0.	1.61E-05	1.70E-03	4.21E-03	7.86E-04	6.71E-03
93	1.50	0.	7.96E-07	0.	0.	0.	0.	0.	0.	7.33E-06	2.07E-03	5.38E-03	9.53E-04	8.41E-03
94	1.40	0.	8.80E-07	0.	0.	0.	0.	0.	0.	0.	2.55E-03	6.64E-03	1.13E-03	1.03E-02
95	1.30	0.	8.19E-07	0.	0.	0.	0.	0.	0.	0.	3.19E-03	8.56E-03	1.49E-03	1.32E-02
96	1.20	0.	5.30E-07	0.	0.	0.	0.	0.	0.	0.	4.08E-03	8.98E-03	1.47E-03	1.45E-02
97	1.10	0.	5.20E-07	0.	0.	0.	0.	1.20E-12	0.	0.	5.35E-03	1.18E-02	1.85E-03	1.82E-02
98	1.00	0.	4.93E-07	0.	0.	0.	0.	1.51E-11	0.	0.	7.19E-03	1.33E-02	2.89E-03	2.26E-02
99	0.90	0.	4.85E-07	0.	0.	0.	0.	1.74E-11	0.	0.	9.89E-03	1.52E-02	2.49E-03	2.75E-02
100	0.80	0.	1.91E-07	0.	0.	0.	0.	3.56E-10	0.	0.	1.41E-02	1.75E-02	2.82E-03	3.44E-02
101	0.70	0.	4.66E-08	0.	0.	0.	0.	2.87E-18	0.	0.	2.13E-02	1.91E-02	3.84E-03	4.34E-02
102	0.60	0.	6.13E-09	0.	0.	0.	0.	1.02E-09	0.	0.	3.42E-02	2.14E-02	3.48E-03	5.98E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	O2	O- PHOTO-DET.	FREE-FREE (1/CM)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.11E-08	0.	0.	0.	4.75E-07	2.54E-07	4.67E-05	1.20E-05	6.28E-05
2	10.60	0.	0.	9.87E-09	0.	0.	0.	4.70E-07	2.53E-07	4.80E-05	1.20E-05	6.34E-05
3	10.50	0.	0.	9.06E-09	0.	0.	0.	4.74E-07	2.60E-07	4.91E-05	1.27E-05	6.26E-05
4	10.40	0.	0.	9.18E-09	0.	0.	0.	4.77E-07	2.77E-07	4.93E-05	1.27E-05	6.20E-05
5	10.30	0.	0.	7.66E-09	0.	0.	0.	4.78E-07	2.85E-07	4.94E-05	1.24E-05	6.29E-05
6	10.20	0.	0.	8.01E-09	0.	0.	0.	4.74E-07	2.94E-07	4.09E-05	1.24E-05	6.29E-05
7	10.10	0.	0.	7.49E-09	0.	0.	0.	4.79E-07	3.03E-07	4.96E-05	1.26E-05	6.30E-05
8	10.00	0.	0.	6.87E-09	0.	0.	0.	4.36E-07	3.12E-07	4.97E-05	1.25E-05	6.31E-05
9	9.90	0.	0.	6.98E-09	0.	0.	0.	4.80E-07	3.22E-07	4.99E-05	1.25E-05	6.32E-05
10	9.80	0.	0.	6.05E-09	0.	0.	0.	4.81E-07	3.32E-07	5.00E-05	1.25E-05	6.33E-05
11	9.70	0.	0.	5.06E-09	0.	0.	0.	4.82E-07	3.42E-07	5.01E-05	1.24E-05	6.34E-05
12	9.60	0.	0.	5.49E-09	0.	0.	0.	4.83E-07	3.53E-07	5.03E-05	1.24E-05	6.35E-05
13	9.50	0.	0.	4.99E-09	0.	0.	0.	4.84E-07	3.64E-07	5.04E-05	1.24E-05	6.36E-05
14	9.40	0.	0.	4.22E-09	0.	0.	0.	4.86E-07	3.76E-07	5.05E-05	1.23E-05	6.37E-05
15	9.30	0.	0.	4.38E-09	0.	0.	0.	4.86E-07	3.88E-07	5.07E-05	1.23E-05	6.38E-05
16	9.20	0.	0.	3.45E-09	0.	0.	0.	4.89E-07	4.01E-07	1.63E-05	1.22E-05	2.99E-05
17	9.10	0.	0.	3.94E-09	0.	0.	0.	4.91E-07	4.14E-07	1.63E-05	1.22E-05	2.99E-05
18	9.00	0.	0.	3.19E-09	0.	0.	0.	4.93E-07	4.28E-07	1.63E-05	1.22E-05	2.94E-05
19	8.90	0.	0.	2.86E-09	0.	0.	0.	4.99E-07	4.43E-07	1.62E-05	1.21E-05	2.94E-05
20	8.80	0.	0.	2.78E-09	0.	0.	0.	4.93E-07	4.58E-07	1.63E-05	1.21E-05	2.94E-05
21	8.70	0.	0.	2.39E-09	0.	0.	0.	4.90E-07	4.74E-07	1.63E-05	1.21E-05	2.94E-05
22	8.60	0.	0.	2.41E-09	0.	0.	0.	5.00E-07	4.91E-07	1.63E-05	1.20E-05	2.94E-05
23	8.50	0.	0.	2.06E-09	0.	0.	0.	5.02E-07	5.09E-07	1.63E-05	1.20E-05	2.94E-05
24	8.40	0.	0.	2.02E-09	0.	0.	0.	5.04E-07	5.27E-07	1.64E-05	1.20E-05	2.94E-05
25	8.30	0.	0.	1.69E-09	0.	0.	0.	5.07E-07	5.46E-07	1.64E-05	1.20E-05	2.94E-05
26	8.20	0.	0.	1.68E-09	0.	0.	0.	5.10E-07	5.67E-07	1.64E-05	1.20E-05	2.95E-05
27	8.10	0.	0.	1.41E-09	0.	0.	0.	5.12E-07	5.88E-07	1.64E-05	1.21E-05	2.94E-05
28	8.00	0.	0.	1.41E-09	0.	0.	0.	5.15E-07	6.10E-07	1.65E-05	1.21E-05	2.97E-05
29	7.90	0.	0.	1.19E-09	0.	0.	0.	5.17E-07	6.34E-07	1.65E-05	1.22E-05	2.99E-05
30	7.80	0.	0.	1.21E-09	0.	0.	0.	5.20E-07	6.59E-07	1.66E-05	1.22E-05	3.00E-05
31	7.70	0.	0.	1.04E-09	0.	0.	0.	5.23E-07	6.85E-07	1.66E-05	1.23E-05	3.01E-05
32	7.60	0.	0.	9.75E-10	0.	6.12E-14	0.	5.25E-07	7.13E-07	1.67E-05	1.24E-05	3.03E-05
33	7.50	0.	0.	8.84E-10	0.	2.42E-13	0.	5.28E-07	7.42E-07	1.67E-05	1.24E-05	3.04E-05
34	7.40	0.	0.	7.81E-10	0.	1.68E-12	0.	5.31E-07	7.73E-07	1.68E-05	1.25E-05	3.06E-05
35	7.30	0.	0.	7.27E-10	0.	7.34E-12	0.	5.34E-07	8.05E-07	1.69E-05	1.25E-05	3.07E-05
36	7.20	0.	0.	6.44E-10	0.	1.94E-11	0.	5.37E-07	8.39E-07	1.69E-05	1.26E-05	3.09E-05
37	7.10	0.	0.	6.09E-10	0.	5.05E-11	0.	5.41E-07	8.74E-07	1.70E-05	1.26E-05	3.10E-05
38	7.00	2.83E-13	0.	5.48E-10	0.	1.30E-10	0.	5.46E-07	9.14E-07	1.70E-05	1.27E-05	3.12E-05
39	6.90	3.01E-13	0.	4.94E-10	0.	1.60E-10	0.	5.50E-07	9.54E-07	1.71E-05	1.27E-05	3.13E-05
40	6.80	3.33E-13	0.	4.46E-10	0.	3.81E-10	0.	5.54E-07	9.97E-07	1.72E-05	1.28E-05	3.15E-05
41	6.70	2.39E-13	0.	4.08E-10	0.	3.21E-10	0.	5.59E-07	1.04E-06	1.72E-05	1.28E-05	3.17E-05
42	6.60	1.44E-13	0.	3.91E-10	0.	2.84E-10	0.	5.63E-07	1.09E-06	1.73E-05	1.29E-05	3.19E-05
43	6.50	8.88E-14	0.	2.73E-10	0.	3.74E-10	0.	5.68E-07	1.14E-06	1.75E-05	1.30E-05	3.22E-05
44	6.40	4.61E-14	0.	1.82E-10	1.97E-11	3.79E-10	0.	5.72E-07	1.20E-06	1.76E-05	1.31E-05	3.25E-05
45	6.30	2.63E-14	0.	1.10E-10	7.20E-12	2.39E-10	0.	5.76E-07	1.26E-06	1.78E-05	1.32E-05	3.28E-05
46	6.20	1.16E-14	0.	5.87E-11	10.08E-12	3.42E-10	0.	5.81E-07	1.32E-06	1.79E-05	1.33E-05	3.31E-05
47	6.10	9.24E-15	0.	2.67E-11	2.81E-11	4.56E-10	0.	5.85E-07	1.38E-06	1.81E-05	1.35E-05	3.36E-05
48	6.00	2.15E-15	0.	6.65E-12	2.50E-11	2.85E-10	0.	5.90E-07	1.45E-06	1.83E-05	1.36E-05	3.40E-05
49	5.90	5.23E-16	0.	4.79E-13	3.75E-11	2.85E-10	0.	5.90E-07	1.53E-06	1.86E-05	1.38E-05	3.45E-05
50	5.80	6.64E-17	0.	1.19E-14	5.18E-11	2.84E-10	0.	5.81E-07	1.61E-06	1.88E-05	1.40E-05	3.50E-05
51	5.70	4.88E-18	0.	0.	5.91E-11	2.27E-10	0.	5.46E-07	1.70E-06	1.90E-05	1.41E-05	3.54E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO V-R-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.19E-19	0.	0.	0.	4.84E-11	3.17E-10	0.	0.	5.07E-07	1.79E-06	1.93E-05	1.43E-05	3.59E-05
53	5.50	0.	0.	0.	0.	5.91E-11	2.96E-10	0.	0.	5.10E-07	1.89E-06	1.97E-05	1.45E-05	3.66E-05
54	5.40	0.	0.	0.	0.	5.20E-11	2.27E-10	0.	0.	5.13E-07	2.00E-06	2.02E-05	1.47E-05	3.74E-05
55	5.30	0.	0.	0.	0.	5.42E-11	2.99E-10	0.	0.	5.16E-07	2.12E-06	2.06E-05	1.49E-05	3.82E-05
56	5.20	0.	0.	0.	0.	5.76E-11	2.08E-10	0.	0.	5.19E-07	2.24E-06	2.11E-05	1.52E-05	3.91E-05
57	5.10	0.	0.	0.	0.	5.71E-11	2.72E-10	0.	0.	5.24E-07	2.38E-06	2.17E-05	1.55E-05	4.01E-05
58	5.00	2.86E-12	0.	0.	0.	5.16E-11	2.48E-10	0.	0.	5.28E-07	2.52E-06	2.23E-05	1.58E-05	4.12E-05
59	4.90	6.79E-12	0.	0.	0.	5.68E-11	2.64E-10	0.	0.	5.32E-07	2.68E-06	2.30E-05	1.61E-05	4.24E-05
60	4.80	1.24E-11	0.	0.	0.	6.05E-11	2.45E-10	0.	0.	5.37E-07	2.85E-06	2.38E-05	1.65E-05	4.37E-05
61	4.70	1.64E-11	0.	0.	0.	5.95E-11	2.19E-10	0.	0.	5.41E-07	3.04E-06	2.46E-05	1.69E-05	4.50E-05
62	4.60	2.28E-11	0.	0.	0.	6.05E-11	2.03E-10	0.	0.	5.46E-07	3.24E-06	2.55E-05	1.73E-05	4.66E-05
63	4.50	2.28E-11	0.	3.38E-11	0.	5.44E-11	1.49E-10	0.	0.	5.50E-07	3.47E-06	2.66E-05	1.78E-05	4.84E-05
64	4.40	2.39E-11	0.	1.08E-10	0.	5.41E-11	1.09E-10	0.	0.	5.54E-07	3.71E-06	2.78E-05	1.82E-05	5.03E-05
65	4.30	2.22E-11	0.	3.21E-10	0.	5.07E-11	6.37E-11	0.	0.	5.59E-07	3.98E-06	2.91E-05	1.87E-05	5.23E-05
66	4.20	2.64E-11	0.	1.11E-09	0.	5.31E-11	4.66E-11	0.	0.	5.63E-07	4.27E-06	3.03E-05	1.89E-05	5.41E-05
67	4.10	1.89E-11	0.	4.34E-10	0.	5.10E-11	1.26E-11	0.	0.	5.65E-07	4.59E-06	3.16E-05	1.75E-05	5.43E-05
68	4.00	1.72E-11	0.	1.99E-09	0.	4.86E-11	9.61E-12	0.	0.	5.68E-07	4.95E-06	3.29E-05	6.02E-06	4.44E-05
69	3.90	1.43E-11	0.	7.21E-10	4.55E-09	4.38E-11	3.81E-12	0.	0.	5.65E-07	5.34E-06	3.04E-05	6.20E-06	4.25E-05
70	3.80	1.96E-11	0.	1.12E-09	2.28E-08	4.68E-11	0.	0.	0.	5.63E-07	5.78E-06	2.40E-05	6.44E-06	3.68E-05
71	3.75	1.85E-11	0.	1.25E-09	7.78E-09	3.86E-11	0.	0.	0.	5.54E-07	6.27E-06	2.50E-05	7.11E-06	3.89E-05
72	3.65	1.20E-11	0.	8.60E-10	4.40E-08	4.19E-11	0.	0.	0.	5.19E-07	6.81E-06	2.52E-05	7.88E-06	4.04E-05
73	3.50	1.10E-11	0.	1.11E-09	1.01E-07	3.20E-11	0.	0.	0.	4.79E-07	7.42E-06	2.88E-05	8.72E-06	4.47E-05
74	3.40	9.91E-12	0.	6.93E-10	1.20E-08	3.57E-11	0.	0.	0.	2.74E-07	8.10E-06	3.14E-05	9.66E-06	4.44E-05
75	3.30	7.84E-12	0.	6.78E-10	5.25E-09	2.78E-11	0.	0.	0.	2.75E-07	8.84E-06	3.47E-05	1.06E-05	5.45E-05
76	3.20	6.73E-12	0.	4.27E-10	1.01E-07	2.89E-11	0.	0.	0.	2.75E-07	9.73E-06	3.82E-05	1.16E-05	5.99E-05
77	3.10	6.32E-12	0.	3.28E-10	1.79E-08	2.68E-11	0.	0.	0.	2.76E-07	1.07E-05	4.17E-05	1.26E-05	6.53E-05
78	3.00	5.55E-12	0.	1.96E-10	5.09E-08	2.46E-11	0.	0.	0.	2.76E-07	1.18E-05	4.52E-05	1.36E-05	7.09E-05
79	2.90	4.56E-12	0.	1.20E-10	2.94E-08	1.83E-11	0.	0.	0.	2.77E-07	1.31E-05	4.88E-05	1.47E-05	7.69E-05
80	2.80	4.69E-12	0.	5.77E-11	1.59E-08	1.22E-11	0.	0.	0.	2.77E-07	1.46E-05	5.30E-05	1.58E-05	8.37E-05
81	2.70	2.93E-12	0.	2.68E-11	2.44E-08	6.39E-12	0.	0.	0.	2.77E-07	1.63E-05	5.74E-05	1.71E-05	9.11E-05
82	2.60	1.33E-12	0.	1.33E-11	2.35E-09	2.71E-12	0.	0.	0.	2.77E-07	1.82E-05	6.23E-05	1.86E-05	9.74E-05
83	2.50	9.18E-14	0.	1.91E-12	2.15E-09	6.32E-13	0.	0.	0.	2.77E-07	2.05E-05	7.09E-05	9.36E-06	1.01E-04
84	2.45	0.	7.47E-11	0.	1.93E-09	6.63E-14	0.	0.	0.	2.77E-07	2.19E-05	5.35E-05	1.19E-05	8.85E-05
85	2.30	0.	2.60E-10	0.	0.	0.	0.	0.	0.	2.75E-07	2.65E-05	6.49E-05	1.37E-05	1.05E-04
86	2.20	0.	6.34E-10	0.	0.	0.	0.	0.	0.	2.74E-07	3.03E-05	7.67E-05	1.65E-05	1.24E-04
87	2.10	0.	7.29E-10	0.	0.	0.	0.	0.	0.	2.73E-07	3.49E-05	8.93E-05	1.93E-05	1.44E-04
88	2.00	0.	1.36E-09	0.	0.	0.	0.	0.	0.	2.84E-07	4.05E-05	1.02E-04	2.21E-05	1.65E-04
89	1.90	0.	1.98E-09	0.	0.	0.	0.	0.	0.	2.54E-07	4.73E-05	1.16E-04	2.53E-05	1.89E-04
90	1.80	0.	1.64E-09	0.	0.	0.	0.	0.	0.	2.43E-07	5.58E-05	1.38E-04	3.05E-05	2.25E-04
91	1.70	0.	1.93E-09	0.	0.	0.	0.	0.	0.	2.29E-07	6.64E-05	1.65E-04	3.70E-05	2.69E-04
92	1.60	0.	1.40E-09	0.	0.	0.	0.	0.	0.	1.94E-07	7.99E-05	1.92E-04	4.35E-05	3.16E-04
93	1.50	0.	1.66E-09	0.	0.	0.	0.	0.	0.	8.89E-08	9.73E-05	2.45E-04	5.27E-05	3.95E-04
94	1.40	0.	1.67E-09	0.	0.	0.	0.	0.	0.	0.	1.20E-04	2.86E-04	6.25E-05	4.69E-04
95	1.30	0.	1.27E-09	0.	0.	0.	0.	0.	0.	0.	1.50E-04	3.98E-04	7.91E-05	6.20E-04
96	1.20	0.	1.23E-09	0.	0.	0.	0.	0.	0.	0.	1.92E-04	4.86E-04	8.15E-05	6.80E-04
97	1.10	0.	1.12E-09	0.	0.	0.	0.	3.04E-15	0.	0.	2.52E-04	5.81E-04	1.82E-04	8.56E-04
98	1.00	0.	1.03E-09	0.	0.	0.	0	3.81E-14	0.	0.	3.38E-04	8.86E-04	1.15E-04	1.06E-03
99	0.90	0.	8.43E-10	0.	0.	0.	0.	4.39E-14	0.	0.	4.64E-04	6.92E-04	1.36E-04	1.29E-03
100	0.80	0.	5.97E-10	0.	0.	0.	0.	9.00E-13	0.	0.	6.65E-04	7.96E-04	1.56E-04	1.62E-03
101	0.70	0.	9.70E-11	0.	0.	0.	0.	7.25E-13	0.	0.	1.00E-03	8.72E-04	1.68E-04	2.04E-03
102	0.60	0.	1.26E-11	0.	0.	0.	0.	2.57E-12	0.	0.	1.61E-03	7.92E-04	1.42E-04	2.55E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.291E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	NE B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	H P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	3.97E-12	0.	0.	0.	1.47E-09	4.97E-09	9.26E-07	2.83E-07	1.22E-06
2	10.68	0.	0.	3.94E-12	0.	0.	0.	1.47E-09	5.11E-09	9.31E-07	2.83E-07	1.22E-06
3	10.58	0.	0.	3.94E-12	0.	0.	0.	1.47E-09	5.26E-09	9.31E-07	2.82E-07	1.22E-06
4	10.48	0.	0.	3.38E-12	0.	0.	0.	1.48E-09	5.41E-09	9.35E-07	2.81E-07	1.23E-06
5	10.38	0.	0.	2.81E-12	0.	0.	0.	1.48E-09	5.57E-09	9.34E-07	2.80E-07	1.23E-06
6	10.28	0.	0.	2.80E-12	0.	0.	0.	1.48E-09	5.74E-09	9.43E-07	2.79E-07	1.23E-06
7	10.18	0.	0.	2.67E-12	0.	0.	0.	1.48E-09	5.91E-09	9.41E-07	2.79E-07	1.23E-06
8	10.08	0.	0.	2.24E-12	0.	0.	0.	1.48E-09	6.09E-09	9.42E-07	2.78E-07	1.23E-06
9	9.98	0.	0.	2.54E-12	0.	0.	0.	1.49E-09	6.28E-09	9.45E-07	2.77E-07	1.23E-06
10	9.88	0.	0.	2.15E-12	0.	0.	0.	1.49E-09	6.47E-09	9.44E-07	2.76E-07	1.23E-06
11	9.78	0.	0.	1.82E-12	0.	0.	0.	1.49E-09	6.68E-09	9.95E-07	2.79E-07	1.23E-06
12	9.68	0.	0.	1.96E-12	0.	0.	0.	1.50E-09	6.89E-09	9.93E-07	2.79E-07	1.24E-06
13	9.58	0.	0.	1.63E-12	0.	0.	0.	1.50E-09	7.11E-09	9.99E-07	2.79E-07	1.24E-06
14	9.48	0.	0.	1.51E-12	0.	0.	0.	1.50E-09	7.34E-09	9.98E-07	2.78E-07	1.24E-06
15	9.38	0.	0.	1.94E-12	0.	0.	0.	1.51E-09	7.58E-09	3.11E-07	2.72E-07	5.92E-07
16	9.28	0.	0.	1.24E-12	0.	0.	0.	1.51E-09	7.83E-09	3.10E-07	2.71E-07	5.91E-07
17	9.18	0.	0.	1.27E-12	0.	0.	0.	1.52E-09	8.09E-09	3.10E-07	2.71E-07	5.91E-07
18	9.08	0.	0.	1.13E-12	0.	0.	0.	1.53E-09	8.14E-09	3.10E-07	2.70E-07	5.90E-07
19	8.98	0.	0.	1.03E-12	0.	0.	0.	1.53E-09	8.63E-09	3.10E-07	2.69E-07	5.89E-07
20	8.88	0.	0.	9.09E-13	0.	0.	0.	1.54E-09	8.95E-09	3.10E-07	2.68E-07	5.89E-07
21	8.78	0.	0.	8.45E-13	0.	0.	0.	1.54E-09	9.26E-09	3.13E-07	2.68E-07	5.89E-07
22	8.68	0.	0.	8.69E-13	0.	0.	0.	1.55E-09	9.59E-09	3.10E-07	2.67E-07	5.88E-07
23	8.58	0.	0.	7.33E-13	0.	0.	0.	1.55E-09	9.93E-09	3.10E-07	2.66E-07	5.88E-07
24	8.48	0.	0.	7.27E-13	0.	0.	0.	1.56E-09	1.03E-08	3.11E-07	2.66E-07	5.88E-07
25	8.38	0.	0.	6.82E-13	0.	0.	0.	1.57E-09	1.07E-08	3.11E-07	2.66E-07	5.89E-07
26	8.28	0.	0.	6.83E-13	0.	0.	0.	1.58E-09	1.11E-08	3.11E-07	2.67E-07	5.91E-07
27	8.18	0.	0.	5.88E-13	0.	0.	0.	1.58E-09	1.15E-08	3.12E-07	2.68E-07	5.93E-07
28	8.08	0.	0.	5.84E-13	0.	0.	0.	1.59E-09	1.19E-08	3.12E-07	2.69E-07	5.95E-07
29	7.98	0.	0.	4.26E-13	0.	0.	0.	1.60E-09	1.24E-08	3.13E-07	2.70E-07	5.97E-07
30	7.88	0.	0.	4,36E-13	0.	0.	0.	1.61E-09	1.29E-08	3.14E-07	2.71E-07	6.00E-07
31	7.78	0.	0.	3,79E-13	0.	0.	0.	1.62E-09	1.34E-08	3.15E-07	2.73E-07	6.03E-07
32	7.68	0.	0.	3,98E-13	0.	2.57E-17	0.	1.63E-09	1.39E-08	3.16E-07	2.74E-07	6.04E-07
33	7.58	0.	0.	3,10E-13	0.	1.82E-16	0.	1.63E-09	1.45E-08	3.18E-07	2.75E-07	6.09E-07
34	7.48	0.	0.	2,81E-13	0.	7.66E-16	0.	1.64E-09	1.51E-08	3.19E-07	2.76E-07	6.12E-07
35	7.38	0.	0.	2,41E-13	0.	3.88E-15	0.	1.65E-09	1.57E-08	3.20E-07	2.77E-07	6.14E-07
36	7.28	0.	0.	2,31E-13	0.	8.23E-15	0.	1.66E-09	1.64E-08	3.21E-07	2.78E-07	6.17E-07
37	7.18	0.	0.	2,19E-13	0.	2.45E-14	0.	1.67E-09	1.71E-08	3.22E-07	2.80E-07	6.21E-07
38	7.08	9.95E-17	0.	1,97E-13	0.	5.45E-14	0.	1.69E-09	1.78E-08	3.23E-07	2.81E-07	6.24E-07
39	6.98	1.92E-16	0.	1,77E-13	0.	6.70E-14	0.	1.70E-09	1.86E-08	3.25E-07	2.82E-07	6.27E-07
40	6.88	1.64E-16	0.	1,67E-13	0.	1.26E-13	0.	1.72E-09	1.95E-08	3.26E-07	2.83E-07	6.30E-07
41	6.78	1.17E-16	0.	1,44E-13	0.	1.35E-13	0.	1.73E-09	2.04E-08	3.27E-07	2.85E-07	6.33E-07
42	6.68	7.07E-17	0.	1,26E-13	0.	9.83E-14	0.	1.74E-09	2.13E-08	3.29E-07	2.86E-07	6.36E-07
43	6.58	4.83E-17	0.	9,88E-14	0.	1.97E-13	0.	1.76E-09	2.23E-08	3.32E-07	2.00E-07	6.44E-07
44	6.48	2.26E-17	0.	6,95E-14	6.79E-16	1.99E-13	0.	1.77E-09	2.34E-08	3.35E-07	2.89E-07	6.49E-07
45	6.38	1.29E-17	0.	3,94E-14	3,02E-15	1.88E-13	0.	1.78E-09	2.45E-08	3.37E-07	2.92E-07	6.55E-07
46	6.28	9.72E-18	0.	2,11E-14	4,20E-15	1.44E-13	0.	1.80E-09	2.57E-08	3.40E-07	2.95E-07	6.63E-07
47	6.18	2.57E-18	0.	9,60E-15	1,18E-14	1.91E-13	0.	1.81E-09	2.70E-08	3.43E-07	2.99E-07	6.71E-07
48	6.08	1.86E-18	0.	2,39E-15	1,89E-14	8.68E-14	0.	1.82E-09	2.84E-08	3.48E-07	3.02E-07	6.81E-07
49	5.98	2.57E-19	0.	1,71E-16	1,90E-14	8.68E-14	0.	1.82E-09	2.99E-08	3.53E-07	3.06E-07	6.90E-07
50	5.88	3.26E-20	0.	4,27E-18	2,17E-14	8.58E-14	0.	1.80E-09	3.15E-08	3.57E-07	3.10E-07	7.00E-07
51	5.78	2.48E-21	0.	0.	2,48E-14	9.92E-14	0.	1.69E-09	3.32E-08	3.61E-07	3.13E-07	7.09E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.203E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (CONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.07E-22	0.	0.	0.	2.03E-14	1.33E-13	0.	0.	1.57E-09	3.50E-08	3.66E-07	3.17E-07	7.20E-07
53	5.50	0.	0.	0.	0.	2.48E-14	1.24E-13	0.	0.	1.58E-09	3.70E-08	3.73E-07	3.21E-07	7.33E-07
54	5.40	0.	0.	0.	0.	2.22E-14	9.93E-14	0.	0.	1.59E-09	3.91E-08	3.82E-07	3.26E-07	7.48E-07
55	5.30	0.	0.	0.	0.	2.27E-14	1.26E-13	0.	0.	1.60E-09	4.13E-08	3.91E-07	3.31E-07	7.65E-07
56	5.20	0.	0.	0.	0.	2.42E-14	8.72E-14	0.	0.	1.61E-09	4.38E-08	4.00E-07	3.37E-07	7.83E-07
57	5.10	0.	0.	0.	0.	2.40E-14	1.14E-13	0.	0.	1.62E-09	4.64E-08	4.11E-07	3.44E-07	8.03E-07
58	5.00	1.40E-15	0.	0.	0.	2.17E-14	1.04E-13	0.	0.	1.63E-09	4.93E-08	4.24E-07	3.51E-07	8.25E-07
59	4.90	3.33E-15	0.	0.	0.	2.30E-14	1.11E-13	0.	0.	1.65E-09	5.24E-08	4.37E-07	3.58E-07	8.48E-07
60	4.80	6.10E-15	0.	0.	0.	2.54E-14	1.03E-13	0.	0.	1.66E-09	5.57E-08	4.51E-07	3.65E-07	8.74E-07
61	4.70	8.83E-15	0.	0.	0.	2.50E-14	9.21E-14	0.	0.	1.67E-09	5.94E-08	4.66E-07	3.74E-07	9.01E-07
62	4.60	1.08E-14	0.	0.	0.	2.54E-14	8.41E-14	0.	0.	1.69E-09	6.34E-08	4.83E-07	3.84E-07	9.32E-07
63	4.50	1.12E-14	0.	1.22E-14	0.	2.28E-14	6.26E-14	0.	0.	1.70E-09	6.77E-08	5.05E-07	3.93E-07	9.68E-07
64	4.40	1.17E-14	0.	3.86E-14	0.	2.27E-14	4.39E-14	0.	0.	1.72E-09	7.25E-08	5.27E-07	4.03E-07	1.00E-06
65	4.30	1.09E-14	0.	1.15E-13	0.	2.13E-14	2.68E-14	0.	0.	1.73E-09	7.77E-08	5.51E-07	4.08E-07	1.04E-06
66	4.20	1.03E-14	0.	3.99E-13	0.	2.23E-14	1.96E-14	0.	0.	1.74E-09	8.34E-08	5.75E-07	3.79E-07	1.04E-06
67	4.10	9.24E-15	0.	1.96E-13	0.	2.14E-14	5.29E-15	0.	0.	1.75E-09	8.97E-08	5.99E-07	1.29E-07	8.20E-07
68	4.00	8.43E-15	0.	5.70E-13	0.	2.04E-14	4.03E-15	0.	0.	1.76E-09	9.66E-08	5.95E-07	1.33E-07	7.80E-07
69	3.90	7.63E-15	0.	2.99E-13	1.17E-11	1.84E-14	1.60E-15	0.	0.	1.79E-09	1.04E-07	4.37E-07	1.37E-07	6.81E-07
70	3.80	7.64E-15	0.	4.81E-13	5.86E-11	1.96E-14	0.	0.	0.	1.74E-09	1.13E-07	4.55E-07	1.43E-07	7.13E-07
71	3.70	6.63E-15	0.	4.47E-13	2.05E-11	1.62E-14	0.	0.	0.	1.72E-09	1.22E-07	4.30E-07	1.50E-07	7.19E-07
72	3.60	5.90E-15	0.	2.87E-13	1.15E-10	1.76E-14	0.	0.	0.	1.61E-09	1.33E-07	4.77E-07	1.75E-07	7.86E-07
73	3.50	5.42E-15	0.	3.98E-13	2.60E-10	1.34E-14	0.	0.	0.	1.47E-09	1.45E-07	5.32E-07	1.93E-07	8.71E-07
74	3.40	4.87E-15	0.	2.35E-13	3.09E-11	1.50E-14	0.	0.	0.	8.49E-10	1.58E-07	5.95E-07	2.14E-07	9.68E-07
75	3.30	3.85E-15	0.	2.43E-13	1.35E-10	1.17E-14	0.	0.	0.	8.50E-10	1.73E-07	6.59E-07	2.35E-07	1.07E-06
76	3.20	3.29E-15	0.	1.33E-13	2.59E-10	1.21E-14	0.	0.	0.	8.51E-10	1.90E-07	7.24E-07	2.57E-07	1.17E-06
77	3.10	3.13E-15	0.	1.18E-13	4.85E-11	1.13E-14	0.	0.	0.	8.53E-10	2.09E-07	7.90E-07	2.80E-07	1.28E-06
78	3.00	2.72E-15	0.	7.90E-14	1.31E-10	1.04E-14	0.	0.	0.	8.55E-10	2.31E-07	8.58E-07	3.02E-07	1.39E-06
79	2.90	2.24E-15	0.	4.33E-14	7.56E-11	7.68E-15	0.	0.	0.	8.57E-10	2.56E-07	9.25E-07	3.25E-07	1.51E-06
80	2.80	2.30E-15	0.	2.07E-14	4.09E-11	5.11E-15	0.	0.	0.	8.58E-10	2.85E-07	1.00E-06	3.51E-07	1.64E-06
81	2.70	1.44E-15	0.	9.62E-15	6.28E-11	2.68E-15	0.	0.	0.	8.58E-10	3.18E-07	1.09E-06	3.41E-07	1.79E-06
82	2.60	8.52E-16	0.	4.78E-15	6.05E-12	1.14E-15	0.	0.	0.	8.58E-10	3.56E-07	1.18E-06	1.79E-07	1.71E-06
83	2.50	4.51E-17	0.	5.42E-16	5.53E-12	2.65E-16	0.	0.	0.	8.58E-10	4.01E-07	8.23E-07	2.87E-07	1.43E-06
84	2.43	0.	2.68E-14	0.	4.97E-12	2.78E-17	0.	0.	0.	8.58E-10	4.54E-07	1.01E-06	2.54E-07	1.72E-06
85	2.38	0.	9.32E-14	0.	0.	0.	0.	0.	0.	8.59E-10	5.17E-07	1.23E-06	3.85E-07	2.05E-06
86	2.29	0.	2.28E-13	0.	0.	0.	0.	0.	0.	8.48E-10	5.91E-07	1.45E-06	3.66E-07	2.41E-06
87	2.10	0.	2.62E-13	0.	0.	0.	0.	0.	0.	8.44E-10	6.82E-07	1.69E-06	4.20E-07	2.80E-06
88	2.00	0.	4.90E-13	0.	0.	0.	0.	0.	0.	9.17E-10	7.91E-07	1.93E-06	4.98E-07	3.22E-06
89	1.90	0.	7.10E-13	0.	0.	0.	0.	0.	0.	7.88E-10	9.24E-07	2.20E-06	5.81E-07	3.69E-06
90	1.80	0.	5.87E-13	0.	0.	0.	0.	0.	0.	7.52E-10	1.09E-06	2.62E-06	6.78E-07	4.38E-06
91	1.70	0.	8.52E-13	0.	0.	0.	0.	0.	0.	7.08E-10	1.30E-06	3.13E-06	8.20E-07	5.25E-06
92	1.60	0.	5.03E-13	0.	0.	0.	0.	0.	0.	5.99E-10	1.56E-06	3.5 E-06	9.15E-07	6.12E-06
93	1.50	0.	1.65E-13	0.	0.	0.	0.	0.	0.	2.72E-10	1.90E-06	4.39E-06	1.12E-06	7.37E-06
94	1.40	0.	5.88E-13	0.	0.	0.	0.	0.	0.	0.	2.34E-06	3.85E-06	1.03E-06	7.51E-06
95	1.30	0.	4.56E-13	0.	0.	0.	0.	0.	0.	0.	2.93E-06	5.69E-06	1.34E-06	9.96E-06
96	1.20	0.	4.40E-13	0.	0.	0.	0.	0.	0.	0.	3.75E-06	7.51E-06	1.71E-06	1.31E-05
97	1.10	0.	4.02E-13	0.	0.	0.	0.	1.27E-18	0.	0.	4.92E-06	9.58E-06	2.10E-06	1.65E-05
98	1.00	0.	3.69E-13	0.	0.	0.	0.	1.68E-17	0.	0.	6.61E-06	1.12E-05	2.41E-06	2.03E-05
99	0.90	0.	3.63E-13	0.	0.	0.	0.	1.86E-17	0.	0.	9.09E-06	1.31E- 5	3.01E-06	2.52E-05
100	0.80	0.	1.43E-13	0.	0.	0.	0.	3.78E-16	0.	0.	1.30E-05	1.46E-05	3.29E-06	3.09E-05
101	0.70	0.	3.48E-14	0.	0.	0.	0.	3.04E-16	0.	0.	1.95E-05	1.33E-05	2.79E-06	3.57E-05
102	0.60	0.	4.59E-14	0.	0.	0.	0.	1.08E-15	0.	0.	3.15E-05	1.50E-05	3.19E-06	4.96E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-00 (1.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (INMS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.99E-16	0.	0.	0.	1.01E-12	9.61E-11	1.04E-00	3.29E-09	1.37E-00
2	10.60	0.	0.	4.45E-16	0.	0.	0.	1.02E-12	9.77E-11	1.04E-00	3.28E-09	1.38E-00
3	10.50	0.	0.	4.44E-16	0.	0.	0.	1.02E-12	9.94E-11	1.09E-00	3.27E-09	1.38E-00
4	10.40	0.	0.	4.16E-16	0.	0.	0.	1.02E-12	6.11E-11	1.05E-00	3.26E-09	1.38E-00
5	10.30	0.	0.	3.94E-16	0.	0.	0.	1.02E-12	6.29E-11	1.05E-00	3.25E-09	1.39E-00
6	10.20	0.	0.	3.51E-16	0.	0.	0.	1.03E-12	6.48E-11	1.06E-00	3.24E-09	1.39E-00
7	10.10	0.	0.	3.36E-16	0.	0.	0.	1.03E-12	6.67E-11	1.06E-00	3.23E-09	1.39E-00
8	10.00	0.	0.	2.87E-16	0.	0.	0.	1.03E-12	6.88E-11	1.06E-00	3.22E-09	1.39E-00
9	9.90	0.	0.	2.93E-16	0.	0.	0.	1.03E-12	7.09E-11	1.06E-00	3.21E-09	1.39E-00
10	9.80	0.	0.	2.70E-16	0.	0.	0.	1.04E-12	7.31E-11	1.07E-00	3.21E-09	1.40E-00
11	9.70	0.	0.	2.78E-16	0.	0.	0.	1.04E-12	7.54E-11	1.07E-00	3.20E-09	1.40E-00
12	9.60	0.	0.	2.46E-16	0.	0.	0.	1.04E-12	7.78E-11	1.07E-00	3.19E-09	1.40E-00
13	9.50	0.	0.	2.65E-16	0.	0.	0.	1.05E-12	8.03E-11	1.08E-00	3.19E-09	1.40E-00
14	9.40	0.	0.	1.90E-16	0.	0.	0.	1.05E-12	8.29E-11	1.08E-00	3.17E-09	1.40E-00
15	9.30	0.	0.	1.94E-16	0.	0.	0.	1.06E-12	8.56E-11	3.54E-09	3.16E-09	6.70E-09
16	9.20	0.	0.	1.96E-16	0.	0.	0.	1.07E-12	8.84E-11	3.93E-09	3.15E-09	6.77E-09
17	9.10	0.	0.	1.99E-16	0.	0.	0.	1.08E-12	9.13E-11	3.93E-09	3.14E-09	6.77E-09
18	9.00	0.	0.	1,42E-16	0.	0.	0.	1.08E-12	9.44E-11	3,93E-09	3.13E-09	6.76E-09
19	8.90	0.	0.	1,29E-16	0.	0.	0.	1.09E-12	9.77E-11	3.95E-09	3.12E-09	6.75E-09
20	8.80	0.	0.	1.79E-16	0.	0.	0.	1.09E-12	1.01E-10	3.93E-09	3.11E-09	6.75E-09
21	8.70	0.	0.	1.86E-16	0.	0.	0.	1.90E-12	1.05E-10	3.93E-09	3.11E-09	6.74E-09
22	8.60	0.	0.	1.89E-16	0.	0.	0.	1.91E-12	1.08E-10	3.93E-09	3.10E-09	6.74E-09
23	8.50	0.	0.	9.27E-17	0.	0.	0.	1.91E-12	1.12E-10	3.94E-09	3.09E-09	6.74E-09
24	8.40	0.	0.	9,12E-17	0.	0.	0.	1.92E-12	1.16E-10	3.94E-09	3.08E-09	6.74E-09
25	8.30	0.	0.	7.59E-17	0.	0.	0.	1.93E-12	1.20E-10	3.90E-09	3.08E-09	6.70E-09
26	8.20	0.	0.	7.97E-17	0.	0.	0.	1.94E-12	1.25E-10	3.90E-09	3.09E-09	6.73E-09
27	8.10	0.	0.	6,80E-17	0.	0.	0.	1.96E-12	1.30E-10	3.91E-09	3.11E-09	6.75E-09
28	8.00	0.	0.	6.35E-17	0.	0.	0.	1.97E-12	1.35E-10	3.92E-09	3.12E-09	6.78E-09
29	7.90	0.	0.	5.84E-17	0.	0.	0.	1.98E-12	1.40E-10	3.93E-09	3.14E-09	6.81E-09
30	7.80	0.	0.	5,48E-17	0.	0.	0.	1.99E-12	1.45E-10	3.94E-09	3.15E-09	6.84E-09
31	7.70	0.	0.	4,78E-17	0.	0.	0.	2.00E-12	1.51E-10	3.93E-09	3.16E-09	6.87E-09
32	7.60	0.	0.	4,39E-17	0.	3.34E-21	0.	2.01E-12	1.57E-10	3.97E-09	3.18E-09	6.91E-09
33	7.50	0.	0.	3,99E-17	0.	1.32E-20	0.	2.02E-12	1.64E-10	3.98E-09	3.19E-09	6.94E-09
34	7.40	0.	0.	3,92E-17	0.	9.18E-20	0.	2.03E-12	1.70E-10	3.00E-09	3.20E-09	6.97E-09
35	7.30	0.	0.	3,28E-17	0.	4.81E-19	0.	2.04E-12	1.77E-10	3.61E-09	3.22E-09	7.01E-09
36	7.20	0.	0.	2,91E-17	0.	1.07E-18	0.	2.05E-12	1.85E-10	3.63E-09	3.23E-09	7.04E-09
37	7.10	0.	0.	2,74E-17	0.	3.19E-18	0.	2.07E-12	1.93E-10	3.64E-09	3.24E-09	7.08E-09
38	7.00	1.34E-20	0.	2,47E-17	0.	7.89E-18	0.	2.08E-12	2.01E-10	3.66E-09	3.26E-09	7.12E-09
39	6.90	2.59E-20	0.	2,23E-17	0.	0.71E-18	0.	2.10E-12	2.10E-10	3,67E-09	3.27E-09	7.15E-09
40	6.80	2.20E-20	0.	2,19E-17	0.	1.64E-17	0.	2.12E-12	2.20E-10	3.69E-09	3.28E-09	7.19E-09
41	6.70	1.58E-20	0.	1,88E-17	0.	1.75E-17	0.	2.13E-12	2.30E-10	3.70E-09	3.30E-09	7.23E-09
42	6.60	9.54E-21	0.	1,98E-17	0.	1.28E-17	0.	2.15E-12	2.40E-10	3,73E-09	3.32E-09	7.29E-09
43	6.50	5.43E-21	0.	1,23E-17	0.	2.04E-17	0.	2.17E-12	2.52E-10	3.76E-09	3.34E-09	7.35E-09
44	6.40	3.05E-21	0.	8,22E-18	8.57E-20	2.07E-17	0.	2.18E-12	2.64E-10	3.79E-09	3.36E-09	7.42E-09
45	6.30	1.74E-21	0.	4,94E-18	3,93E-19	1.38E-17	0.	2.20E-12	2.77E-10	3.82E-09	3.38E-09	7.49E-09
46	6.20	7.71E-22	0.	2,65E-18	5,46E-19	1.87E-17	0.	2.22E-12	2.90E-10	3,86E-09	3.43E-09	7.37E-09
47	6.10	3.47E-22	0.	1,20E-18	1.54E-18	2.49E-17	0.	2.23E-12	3.05E-10	3.90E-09	3.47E-09	7.47E-09
48	6.00	1.42E-22	0.	3,80E-19	1,42E-18	1.12E-17	0.	2.25E-12	3.21E-10	3.98E-09	3.51E-09	7.73E-09
49	5.90	3.46E-23	0.	2,14E-20	2.05E-18	1.12E-17	0.	2.25E-12	3.38E-10	3.95E-09	3.55E-09	7.84E-09
50	5.80	4.39E-24	0.	5,36E-22	2,33E-18	1.12E-17	0.	2.22E-12	3.55E-10	4.00E-09	3.59E-09	7.95E-09
51	5.70	3.23E-25	0.	0.	3,23E-18	1.24E-17	0.	2.08E-12	3.75E-10	4.05E-09	3.63E-09	8.06E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.45E-26	0.	0.	0.	2.64E-18	1.73E-17	0.	0.	1.94E-12	3.99E-10	4.11E-09	3.68E-09	8.19E-09
53	5.50	0.	0.	0.	0.	3.23E-18	1.62E-17	0.	0.	1.95E-12	4.17E-10	4.19E-09	3.73E-09	8.34E-09
54	5.40	0.	0.	0.	0.	2.98E-18	1.24E-17	0.	0.	1.96E-12	4.41E-10	4.29E-09	3.78E-09	8.51E-09
55	5.30	0.	0.	0.	0.	2.96E-18	1.64E-17	0.	0.	1.97E-12	4.67E-10	4.39E-09	3.84E-09	8.69E-09
56	5.20	0.	0.	0.	0.	3.15E-18	1.13E-17	0.	0.	1.98E-12	4.94E-10	4.49E-09	3.92E-09	8.90E-09
57	5.10	0.	0.	0.	0.	3.12E-18	1.48E-17	0.	0.	2.00E-12	5.24E-10	4.62E-09	3.99E-09	9.13E-09
58	5.00	1.89E-19	0.	0.	0.	2.82E-18	1.35E-17	0.	0.	2.02E-12	5.56E-10	4.75E-09	4.07E-09	9.38E-09
59	4.90	4.49E-19	0.	0.	0.	3.10E-18	1.43E-17	0.	0.	2.03E-12	5.91E-10	4.90E-09	4.15E-09	9.65E-09
60	4.80	8.22E-19	0.	0.	0.	3.30E-18	1.34E-17	0.	0.	2.05E-12	6.29E-10	5.06E-09	4.24E-09	9.93E-09
61	4.70	1.08E-18	0.	0.	0.	3.25E-18	1.20E-17	0.	0.	2.07E-12	6.70E-10	5.23E-09	4.34E-09	1.02E-08
62	4.60	1.46E-18	0.	0.	0.	3.31E-18	1.09E-17	0.	0.	2.08E-12	7.15E-10	5.43E-09	4.45E-09	1.06E-08
63	4.50	1.51E-18	0.	1.53E-18	0.	2.97E-18	8.14E-18	0.	0.	2.10E-12	7.64E-10	5.67E-09	4.57E-09	1.10E-08
64	4.40	1.58E-18	0.	4.86E-18	0.	2.95E-18	5.71E-18	0.	0.	2.12E-12	8.19E-10	5.92E-09	4.68E-09	1.14E-08
65	4.30	1.47E-18	0.	1.45E-17	0.	2.77E-18	3.48E-18	0.	0.	2.13E-12	8.77E-10	6.19E-09	4.74E-09	1.18E-08
66	4.20	1.35E-18	0.	5.00E-17	0.	2.90E-18	2.55E-18	0.	0.	2.15E-12	9.41E-10	6.46E-09	1.45E-09	8.86E-09
67	4.10	1.23E-18	0.	1.90E-17	0.	2.79E-18	6.89E-19	0.	0.	2.16E-12	1.01E-09	6.03E-09	1.50E-09	8.55E-09
68	4.00	1.14E-18	0.	7.15E-17	0.	2.65E-18	5.25E-19	0.	0.	2.17E-12	1.09E-09	4.71E-09	1.55E-09	7.36E-09
69	3.90	9.48E-19	0.	3.25E-17	1.38E-24	2.39E-18	2.08E-19	0.	0.	2.18E-12	1.18E-09	4.92E-09	1.68E-09	7.69E-09
70	3.80	1.03E-18	0.	5.03E-17	6.92E-14	2.55E-18	0.	0.	0.	2.19E-12	1.27E-09	5.12E-09	1.64E-09	8.05E-09
71	3.70	8.93E-19	0.	5.65E-17	2.36E-14	2.11E-18	0.	0.	0.	2.12E-12	1.38E-09	4.93E-09	1.83E-09	8.14E-09
72	3.60	7.95E-19	0.	3.61E-17	1.36E-13	2.29E-18	0.	0.	0.	1.98E-12	1.50E-09	5.37E-09	2.03E-09	8.90E-09
73	3.50	7.10E-19	0.	4.99E-17	3.07E-13	1.75E-18	0.	0.	0.	1.81E-12	1.63E-09	5.98E-09	2.24E-09	9.86E-09
74	3.40	6.56E-19	0.	2.99E-17	3.65E-14	1.95E-18	0.	0.	0.	1.65E-12	1.77E-09	6.66E-09	2.49E-09	1.09E-08
75	3.30	5.19E-19	0.	3.06E-17	2.59E-13	1.52E-18	0.	0.	0.	1.09E-12	1.95E-09	7.38E-09	2.73E-09	1.21E-08
76	3.20	4.43E-19	0.	1.92E-17	3.06E-13	1.58E-18	0.	0.	0.	1.09E-12	2.14E-09	8.11E-09	2.99E-09	1.32E-08
77	3.10	4.18E-19	0.	1.46E-17	5.73E-14	1.47E-18	0.	0.	0.	1.09E-12	2.36E-09	8.85E-09	3.24E-09	1.45E-08
78	3.00	3.67E-19	0.	8.86E-18	1.55E-13	1.35E-18	0.	0.	0.	1.09E-12	2.61E-09	9.69E-09	3.50E-09	1.57E-08
79	2.90	3.02E-19	0.	5.43E-18	8.93E-14	9.99E-19	0.	0.	0.	1.06E-12	2.89E-09	1.06E-08	3.77E-09	1.70E-08
80	2.80	2.10E-19	0.	2.60E-18	4.83E-14	6.65E-19	0.	0.	0.	1.06E-12	3.21E-09	1.13E-08	4.07E-09	1.85E-08
81	2.70	1.94E-19	0.	1.21E-18	7.41E-14	3.49E-19	0.	0.	0.	1.06E-12	3.59E-09	1.22E-08	1.91E-09	1.77E-08
82	2.60	8.60E-20	0.	4.01E-19	7.14E-15	1.48E-19	0.	0.	0.	1.06E-12	4.02E-09	1.32E-08	2.09E-09	1.93E-08
83	2.50	6.08E-21	0.	6.80E-20	6.53E-15	3.45E-20	0.	0.	0.	1.06E-12	4.53E-09	9.23E-09	2.41E-09	1.62E-08
84	2.40	0.	3.37E-18	0.	5.87E-15	3.62E-21	0.	0.	0.	1.06E-12	5.13E-09	1.14E-08	2.93E-09	1.95E-08
85	2.30	0.	1.17E-17	0.	0.	0.	0.	0.	0.	1.05E-12	5.83E-09	1.38E-08	3.53E-09	2.32E-08
86	2.20	0.	2.86E-17	0.	0.	0.	0.	0.	0.	1.05E-12	6.68E-09	1.63E-08	4.25E-09	2.72E-08
87	2.10	0.	5.29E-17	0.	0.	0.	0.	0.	0.	1.04E-12	7.69E-09	1.90E-08	4.96E-09	3.17E-08
88	2.00	0.	9.15E-17	0.	0.	0.	0.	0.	0.	1.01E-12	8.93E-09	2.17E-08	5.64E-09	3.63E-08
89	1.90	0.	8.91E-17	0.	0.	0.	0.	0.	0.	9.70E-13	1.04E-08	2.46E-08	6.51E-09	4.16E-08
90	1.80	0.	7.37E-17	0.	0.	0.	0.	0.	0.	9.27E-13	1.23E-08	2.93E-08	7.85E-09	4.94E-08
91	1.70	0.	8.69E-17	0.	0.	0.	0.	0.	0.	8.74E-13	1.44E-08	3.51E-08	9.51E-09	5.92E-08
92	1.60	0.	6.31E-17	0.	0.	0.	0.	0.	0.	7.39E-13	1.76E-08	4.08E-08	1.86E-08	6.90E-08
93	1.50	0.	7.47E-17	0.	0.	0.	0.	0.	0.	3.36E-13	2.14E-08	4.88E-08	1.23E-08	8.25E-08
94	1.40	0.	7.51E-17	0.	0.	0.	0.	0.	0.	0.	2.64E-08	4.29E-08	1.08E-08	8.02E-08
95	1.30	0.	5.73E-17	0.	0.	0.	0.	0.	0.	0.	3.31E-08	6.17E-08	1.56E-08	1.10E-07
96	1.20	0.	5.53E-17	0.	0.	0.	0.	0.	0.	0.	4.24E-08	8.41E-08	1.92E-08	1.46E-07
97	1.10	0.	5.05E-17	0.	0.	0.	0.	1.66E-22	0.	0.	5.55E-08	1.03E-07	2.44E-08	1.83E-07
98	1.00	0.	4.63E-17	0.	0.	0.	0.	2.08E-21	0.	0.	7.44E-08	1.25E-07	2.97E-08	2.29E-07
99	0.90	0.	3.80E-17	0.	0.	0.	0.	2.40E-21	0.	0.	1.03E-07	1.42E-07	3.31E-08	2.77E-07
100	0.80	0.	1.79E-17	0.	0.	0.	0.	4.91E-20	0.	0.	1.47E-07	1.63E-07	3.82E-08	3.48E-07
101	0.70	0.	4.37E-18	0.	0.	0.	0.	3.96E-20	0.	0.	2.21E-07	1.49E-07	3.24E-08	4.02E-07
102	0.60	0.	5.76E-19	0.	0.	0.	0.	1.40E-19	0.	0.	3.55E-07	1.68E-07	3.66E-08	5.68E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.11E-20	0.	0.	0.	1.86E-15	9.72E-13	1.10E-10	3.36E-11	1.45E-10
2	10.60	0.	0.	4.28E-20	0.	0.	0.	1.87E-15	9.89E-13	1.11E-10	3.39E-11	1.45E-10
3	10.50	0.	0.	4.93E-20	0.	0.	0.	1.87E-15	6.06E-13	1.12E-10	3.34E-11	1.44E-10
4	10.40	0.	0.	4.25E-20	0.	0.	0.	1.87E-15	6.24E-13	1.12E-10	3.33E-11	1.44E-10
5	10.30	0.	0.	3.63E-20	0.	0.	0.	1.87E-15	6.42E-13	1.12E-10	3.32E-11	1.44E-10
6	10.20	0.	0.	3.78E-20	0.	0.	0.	1.88E-15	6.61E-13	1.12E-10	3.31E-11	1.44E-10
7	10.10	0.	0.	3.44E-20	0.	0.	0.	1.88E-15	6.81E-13	1.13E-10	3.30E-11	1.46E-10
8	10.00	0	0.	2.95E-20	0.	0.	0.	1.88E-15	7.02E-13	1.13E-10	3.29E-11	1.47E-10
9	9.90	0.	0.	3.01E-20	0.	0.	0.	1.88E-15	7.23E-13	1.13E-10	3.28E-11	1.47E-10
10	9.80	0.	0.	2.77E-20	0.	0.	0.	1.89E-15	7.44E-13	1.14E-10	3.27E-11	1.47E-10
11	9.70	0.	0.	2.34E-20	0.	0.	0.	1.89E-15	7.69E-13	1.14E-10	3.26E-11	1.47E-10
12	9.60	0.	0.	2,92E-20	0.	0.	0.	1.89E-15	7.94E-13	1.14E-10	3.25E-11	1.48E-10
13	9.50	0.	0.	2,18E-20	0.	0.	0.	1.90E-15	8.19E-13	1.15E-10	3.24E-11	1.48E-10
14	9.40	0.	0.	1,95E-20	0.	0.	0.	1.91E-15	8.45E-13	4.17E-11	3.23E-11	7.49E-11
15	9.30	0.	0.	1,99E-20	0.	0.	0.	1.91E-15	8.73E-13	4.17E-11	3.22E-11	7.48E-11
16	9.20	0.	0.	1,60E-20	0.	0.	0.	1.92E-15	9.02E-13	4.17E-11	3.22E-11	7.48E-11
17	9.10	0.	0.	1,63E-20	0.	0.	0.	1.93E-15	9.32E-13	4.17E-11	3.21E-11	7.47E-11
18	9.00	0.	0.	1,46E-20	0.	0.	0.	1.93E-15	9.64E-13	4.18E-11	3.19E-11	7.47E-11
19	8.90	0.	0.	1,32E-20	0.	0.	0.	1.94E-15	9.97E-13	4.18E-11	3.18E-11	7.46E-11
20	8.80	0.	0.	1,29E-20	0.	0.	0.	1.95E-15	1.03E-12	4.18E-11	3.18E-11	7.46E-11
21	8.70	0.	0.	1,09E-20	0.	0.	0.	1.95E-15	1.07E-12	4.19E-11	3.17E-11	7.46E-11
22	8.60	0.	0.	1,11E-20	0.	0.	0.	1.96E-15	1.10E-12	4.19E-11	3.16E-11	7.46E-11
23	8.50	0.	0.	9,51E-21	0.	0.	0.	1.97E-15	1.14E-12	3.72E-11	3.15E-11	6.99E-11
24	8.40	0.	0.	9,36E-21	0.	0.	0.	1.98E-15	1.19E-12	3.73E-11	3.14E-11	7.00E-11
25	8.30	0.	0.	7,74E-21	0.	0.	0.	1.99E-15	1.23E-12	3.75E-11	3.14E-11	7.01E-11
26	8.20	0.	0.	7,76E-21	0.	0.	0.	2.00E-15	1.27E-12	3.76E-11	3.16E-11	7.05E-11
27	8.10	0.	0.	6,54E-21	0.	0.	0.	2.01E-15	1.32E-12	3.77E-11	3.17E-11	7.08E-11
28	8.00	0.	0.	6,51E-21	0.	0.	0.	2.02E-15	1.37E-12	3.80E-11	3.18E-11	7.12E-11
29	7.90	0.	0.	5,48E-21	0.	0.	0.	2.03E-15	1.43E-12	3.82E-11	3.20E-11	7.16E-11
30	7.80	0.	0.	5,42E-21	0.	0.	0.	2.04E-15	1.48E-12	3.84E-11	3.21E-11	7.20E-11
31	7.70	0.	0.	4,82E-21	0.	0.	0.	2.05E-15	1.54E-12	3.87E-11	3.23E-11	7.25E-11
32	7.60	0.	0.	4,91E-21	0.	3.44E-25	0.	2.06E-15	1.60E-12	3.89E-11	3.24E-11	7.29E-11
33	7.50	0.	0.	4,09E-21	0.	1.36E-24	0.	2.07E-15	1.67E-12	3.92E-11	3.25E-11	7.34E-11
34	7.40	0.	0.	3,61E-21	0.	9.46E-24	0.	2.08E-15	1.74E-12	3.93E-11	3.27E-11	7.37E-11
35	7.30	0.	0.	3,36E-21	0.	4.13E-23	0.	2.09E-15	1.81E-12	3.96E-11	3.28E-11	7.42E-11
36	7.20	0.	0.	2,98E-21	0.	1.10E-22	0.	2.10E-15	1.89E-12	3.99E-11	3.30E-11	7.48E-11
37	7.10	0.	0.	2,81E-21	0.	3.29E-22	0.	2.12E-15	1.97E-12	4.03E-11	3.31E-11	7.53E-11
38	7.00	1.39E-24	0.	2,53E-21	0.	7.31E-22	0.	2.14E-15	2.06E-12	4.06E-11	3.32E-11	7.59E-11
39	6.90	2.68E-24	0.	2,28E-21	0.	8.90E-22	0.	2.16E-15	2.15E-12	4.09E-11	3.34E-11	7.64E-11
40	6.80	2.20E-24	0.	2,15E-21	0.	1.49E-21	0.	2.17E-15	2.24E-12	4.12E-11	3.35E-11	7.70E-11
41	6.70	1.64E-24	0.	1,85E-21	0.	1.81E-21	0.	2.19E-15	2.35E-12	4.16E-11	3.37E-11	7.76E-11
42	6.60	9.69E-25	0.	1,62E-21	0.	1.32E-21	0.	2.21E-15	2.45E-12	4.20E-11	3.39E-11	7.84E-11
43	6.50	5.63E-25	0.	1,26E-21	0.	2.11E-21	0.	2.23E-15	2.57E-12	4.25E-11	3.41E-11	7.92E-11
44	6.40	3.16E-25	0.	8,43E-22	8.84E-24	2.14E-21	0.	2.24E-15	2.69E-12	4.31E-11	3.43E-11	8.00E-11
45	6.30	1.88E-25	0.	5,07E-22	4.06E-23	1.34E-21	0.	2.26E-15	2.82E-12	4.36E-11	3.45E-11	8.09E-11
46	6.20	7.99E-26	0.	2,71E-22	5.63E-23	1.93E-21	0.	2.28E-15	2.96E-12	4.41E-11	3.50E-11	8.28E-11
47	6.10	3.60E-26	0.	1,24E-22	1.98E-22	2.57E-21	0.	2.29E-15	3.11E-12	3.97E-11	3.33E-11	7.82E-11
48	6.00	1.48E-26	0.	5,07E-23	1.46E-22	1.15E-21	0.	2.31E-15	3.27E-12	4.02E-11	3.58E-11	7.93E-11
49	5.90	3.59E-27	0.	2,20E-24	2.11E-22	1.15E-21	0.	2.31E-15	3.44E-12	4.08E-11	3.62E-11	8.04E-11
50	5.80	4.55E-28	0.	5,50E-26	2.91E-22	1.15E-21	0.	2.28E-15	3.63E-12	4.13E-11	3.66E-11	8.16E-11
51	5.70	3.35E-29	0.	0.	3.33E-22	1.28E-21	0.	2.14E-15	3.82E-12	4.19E-11	3.71E-11	8.28E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.50E-30	0.	0.	0.	2.73E-22	1.78E-21	0.	0.	1.99E-15	4.03E-12	4.25E-11	3.75E-11	8.41E-11
53	5.50	0.	0.	0.	0.	3.33E-22	1.67E-21	0.	0.	2.00E-15	4.28E-12	4.34E-11	3.80E-11	8.57E-11
54	5.40	0.	0.	0.	0.	2.97E-22	1.20E-21	0.	0.	2.01E-15	4.50E-12	4.44E-11	3.85E-11	8.75E-11
55	5.30	0.	0.	0.	0.	3.05E-22	1.69E-21	0.	0.	2.02E-15	4.76E-12	4.55E-11	3.91E-11	8.94E-11
56	5.20	0.	0.	0.	0.	3.24E-22	1.17E-21	0.	0.	2.04E-15	5.04E-12	4.66E-11	3.99E-11	9.16E-11
57	5.10	0.	0.	0.	0.	3.21E-22	1.53E-21	0.	0.	2.05E-15	5.35E-12	4.79E-11	4.07E-11	9.40E-11
58	5.00	1.96E-23	0.	0.	0.	2.90E-22	1.40E-21	0.	0.	2.07E-15	5.69E-12	4.94E-11	4.15E-11	9.66E-11
59	4.90	4.66E-23	0.	0.	0.	3.20E-22	1.49E-21	0.	0.	2.09E-15	6.03E-12	5.10E-11	4.23E-11	9.93E-11
60	4.80	8.92E-23	0.	0.	0.	3.41E-22	1.38E-21	0.	0.	2.10E-15	6.42E-12	5.27E-11	4.32E-11	1.02E-10
61	4.70	1.12E-22	0.	0.	0.	3.35E-22	1.24E-21	0.	0.	2.12E-15	6.84E-12	5.44E-11	4.43E-11	1.06E-10
62	4.60	1.51E-22	0.	0.	0.	3.41E-22	1.13E-21	0.	0.	2.14E-15	7.30E-12	5.65E-11	4.54E-11	1.09E-10
63	4.50	1.56E-22	0.	1.56E-22	0.	3.06E-22	8.39E-22	0.	0.	2.16E-15	7.80E-12	5.91E-11	4.65E-11	1.13E-10
64	4.40	1.64E-22	0.	4.99E-22	0.	3.05E-22	5.89E-22	0.	0.	2.17E-15	8.35E-12	6.18E-11	4.71E-11	1.17E-10
65	4.30	1.52E-22	0.	1.48E-21	0.	2.85E-22	3.59E-22	0.	0.	2.19E-15	8.95E-12	6.46E-11	4.38E-11	1.17E-10
66	4.20	1.40E-22	0.	5.13E-21	0.	2.90E-22	2.63E-22	0.	0.	2.21E-15	9.60E-12	6.75E-11	1.48E-11	9.19E-11
67	4.10	1.30E-22	0.	2.01E-21	0.	2.87E-22	7.10E-23	0.	0.	2.22E-15	1.03E-11	6.28E-11	1.53E-11	8.84E-11
68	4.00	1.18E-22	0.	7.34E-21	0.	2.74E-22	5.41E-23	0.	0.	2.23E-15	1.11E-11	5.01E-11	1.58E-11	7.70E-11
69	3.90	9.82E-23	0.	3.33E-21	1.41E-17	2.46E-22	2.14E-23	0.	0.	2.22E-15	1.20E-11	5.23E-11	1.63E-11	8.06E-11
70	3.80	1.07E-22	0.	5.16E-21	7.03E-17	2.63E-22	0.	0.	0.	2.21E-15	1.30E-11	5.03E-11	1.69E-11	8.02E-11
71	3.70	9.28E-23	0.	5.70E-21	2.40E-17	2.17E-22	0.	0.	0.	2.17E-15	1.41E-11	5.26E-11	1.87E-11	8.54E-11
72	3.60	8.24E-23	0.	3.70E-21	1.39E-16	2.36E-22	0.	0.	0.	2.04E-15	1.53E-11	5.73E-11	2.07E-11	9.32E-11
73	3.50	7.57E-23	0.	5.12E-21	3.12E-16	1.80E-22	0.	0.	0.	1.86E-15	1.67E-11	6.09E-11	2.29E-11	1.00E-10
74	3.40	6.80E-23	0.	3.02E-21	3.71E-17	2.01E-22	0.	0.	0.	1.07E-15	1.82E-11	6.81E-11	2.53E-11	1.12E-10
75	3.30	5.38E-23	0.	3.13E-21	1.62E-16	1.57E-22	0.	0.	0.	1.08E-15	1.99E-11	7.54E-11	2.79E-11	1.23E-10
76	3.20	4.50E-23	0.	1.97E-21	3.11E-16	1.63E-22	0.	0.	0.	1.08E-15	2.19E-11	8.29E-11	3.04E-11	1.35E-10
77	3.10	4.33E-23	0.	1.52E-21	5.83E-17	1.51E-22	0.	0.	0.	1.08E-15	2.41E-11	9.06E-11	3.31E-11	1.48E-10
78	3.00	3.81E-23	0.	9.08E-22	1.57E-16	1.40E-22	0.	0.	0.	1.08E-15	2.66E-11	9.82E-11	3.57E-11	1.61E-10
79	2.90	3.13E-23	0.	5.57E-22	9.08E-17	1.03E-22	0.	0.	0.	1.08E-15	2.95E-11	1.06E-10	3.84E-11	1.74E-10
80	2.80	3.22E-23	0.	2.67E-22	4.91E-17	6.85E-23	0.	0.	0.	1.09E-15	3.28E-11	1.15E-10	3.73E-11	1.85E-10
81	2.70	2.91E-23	0.	1.24E-22	7.54E-17	3.60E-23	0.	0.	0.	1.09E-15	3.66E-11	1.25E-10	1.95E-11	1.81E-10
82	2.60	9.12E-24	0.	6.16E-23	7.26E-18	1.53E-23	0.	0.	0.	1.09E-15	4.10E-11	8.04E-11	2.12E-11	1.43E-10
83	2.50	5.30E-25	0.	4.97E-24	6.64E-18	3.56E-24	0.	0.	0.	1.09E-15	4.62E-11	9.51E-11	2.45E-11	1.66E-10
84	2.40	0.	3.46E-22	0.	5.97E-18	3.73E-25	0.	0.	0.	1.09E-15	5.23E-11	1.17E-10	3.01E-11	1.99E-10
85	2.30	0.	1.20E-21	0.	0.	0.	0.	0.	0.	1.08E-15	5.95E-11	1.42E-10	3.60E-11	2.37E-10
86	2.20	0.	2.93E-21	0.	0.	0.	0.	0.	0.	1.07E-15	6.81E-11	1.67E-10	4.33E-11	2.79E-10
87	2.10	0.	5.37E-21	0.	0.	0.	0.	0.	0.	1.07E-15	7.85E-11	1.93E-10	5.06E-11	3.22E-10
88	2.00	0.	6.31E-21	0.	0.	0.	0.	0.	0.	1.03E-15	9.11E-11	2.20E-10	5.79E-11	3.69E-10
89	1.90	0.	9.14E-21	0.	0.	0.	0.	0.	0.	9.96E-16	1.04E-10	2.51E-10	6.64E-11	4.23E-10
90	1.80	0.	7.56E-21	0.	0.	0.	0.	0.	0.	9.52E-16	1.25E-10	2.98E-10	8.00E-11	5.03E-10
91	1.70	0.	9.91E-21	0.	0.	0.	0.	0.	0.	8.97E-16	1.49E-10	3.56E-10	9.14E-11	5.97E-10
92	1.60	0.	6.47E-21	0.	0.	0.	0.	0.	0.	7.59E-16	1.80E-10	3.83E-10	1.09E-10	6.71E-10
93	1.50	0.	7.66E-21	0.	0.	0.	0.	0.	0.	3.45E-16	2.19E-10	3.29E-10	1.25E-10	6.74E-10
94	1.40	0.	7.70E-21	0.	0.	0.	0.	0.	0.	0.	2.78E-10	4.36E-10	1.10E-10	8.16E-10
95	1.30	0.	5.87E-21	0.	0.	0.	0.	0.	0.	0.	3.38E-10	6.25E-10	1.59E-10	1.12E-09
96	1.20	0.	5.67E-21	0.	0.	0.	0.	0.	0.	0.	4.32E-10	8.51E-10	1.95E-10	1.48E-09
97	1.10	0.	5.18E-21	0.	0.	0.	0.	1.71E-26	0.	0.	5.66E-10	1.04E-09	2.49E-10	1.86E-09
98	1.00	0.	4.75E-21	0.	0.	0.	0.	2.14E-25	0.	0.	7.61E-10	1.26E-09	3.02E-10	2.33E-09
99	0.90	0.	5.90E-21	0.	0.	0.	0.	2.47E-25	0.	0.	1.05E-09	1.44E-09	3.37E-10	2.82E-09
100	0.80	0.	1.83E-21	0.	0.	0.	0.	5.07E-24	0.	0.	1.50E-09	1.32E-09	2.87E-10	3.10E-09
101	0.70	0.	3.49E-22	0.	0.	0.	0.	4.08E-24	0.	0.	2.25E-09	1.51E-09	3.30E-10	4.09E-09
102	0.60	0.	5.90E-23	0.	0.	0.	0.	1.45E-23	0.	0.	3.62E-09	1.70E-09	3.73E-10	5.70E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-02 (1.00 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.29E 00	0.	0.	0.	2.34E 00	1.82E-02	2.04E 02	5.19E-01	2.12E 02
2	10.60	0.	0.	4.71E 00	0.	0.	0.	2.34E 00	1.87E-02	2.58E 00	5.17E-01	1.01E 01
3	10.50	0.	0.	4.72E 00	0.	0.	0.	2.35E 00	1.93E-02	2.51E 00	5.16E-01	1.01E 01
4	10.40	0.	0.	4.42E 00	0.	0.	0.	2.35E 00	1.98E-02	2.52E 00	5.14E-01	9.83E 00
5	10.30	0.	0.	3.81E 00	0.	0.	0.	2.35E 00	2.04E-02	2.53E 00	5.12E-01	9.22E 00
6	10.20	0.	0.	3.98E 00	0.	0.	0.	2.36E 00	2.10E-02	2.54E 00	5.11E-01	9.32E 00
7	10.10	0.	0.	3.64E 00	0.	0.	0.	2.36E 00	2.16E-02	2.54E 00	5.09E-01	9.87E 00
8	10.00	0.	0.	3.14E 00	0.	0.	0.	2.36E 00	2.23E-02	2.54E 00	5.07E-01	8.98E 00
9	9.90	0.	0.	3.21E 00	0.	0.	0.	2.37E 00	2.30E-02	2.55E 00	5.06E-01	8.66E 00
10	9.80	0.	0.	2.90E 00	0.	0.	0.	2.37E 00	2.37E-02	2.56E 00	5.04E-01	8.44E 00
11	9.70	0.	0.	2.93E 00	0.	0.	0.	2.38E 00	2.44E-02	2.56E 00	5.03E-01	8.08E 00
12	9.60	0.	0.	2.73E 00	0.	0.	0.	2.38E 00	2.52E-02	2.57E 00	5.01E-01	8.21E 00
13	9.50	0.	0.	2.38E 00	0.	0.	0.	2.38E 00	2.60E-02	2.58E 00	4.99E-01	7.70E 00
14	9.40	0.	0.	2.19E 00	0.	0.	0.	2.39E 00	2.69E-02	2.58E 00	4.98E-01	7.55E 00
15	9.30	0.	0.	2.19E 00	0.	0.	0.	2.40E 00	2.77E-02	2.59E 00	4.96E-01	7.71E 00
16	9.20	0.	0.	1.78E 00	0.	0.	0.	2.41E 00	2.87E-02	2.60E 00	4.94E-01	7.31E 00
17	9.10	0.	0.	1.82E 00	0.	0.	0.	2.42E 00	2.96E-02	8.67E-01	4.93E-01	5.63E 00
18	9.00	0.	0.	1.63E 00	0.	0.	0.	2.43E 00	3.06E-02	8.67E-01	4.91E-01	5.45E 00
19	8.90	0.	0.	1.49E 00	0.	0.	0.	2.44E 00	3.17E-02	8.67E-01	4.90E-01	5.32E 00
20	8.80	0.	0.	1.46E 00	0.	0.	0.	2.46E 00	3.28E-02	8.67E-01	4.89E-01	5.29E 00
21	8.70	0.	0.	1.24E 00	0.	0.	0.	2.49E 00	3.39E-02	8.67E-01	4.87E-01	5.08E 00
22	8.60	0.	0.	1.27E 00	0.	0.	0.	2.46E 00	3.51E-02	8.68E-01	4.85E-01	5.13E 00
23	8.50	0.	0.	1.18E 00	0.	0.	0.	2.47E 00	3.64E-02	8.69E-01	4.84E-01	4.98E 00
24	8.40	0.	0.	1.08E 00	0.	0.	0.	2.48E 00	3.77E-02	8.70E-01	4.83E-01	4.96E 00
25	8.30	0.	0.	9.69E-01	0.	0.	0.	2.56E 00	3.91E-02	8.72E-01	4.82E-01	4.88E 00
26	8.20	0.	0.	9.18E-01	0.	0.	0.	2.51E 00	4.05E-02	8.74E-01	4.84E-01	4.82E 00
27	8.10	0.	0.	7.73E-01	0.	0.	0.	2.52E 00	4.21E-02	8.75E-01	4.84E-01	4.79E 00
28	8.00	0.	0.	7.72E-01	0.	0.	0.	2.54E 00	4.37E-02	8.78E-01	4.88E-01	4.72E 00
29	7.90	0.	0.	6.95E-01	0.	0.	0.	2.55E 00	4.54E-02	8.81E-01	4.89E-01	4.62E 00
30	7.80	0.	0.	6.74E-01	0.	0.	0.	2.56E 00	4.72E-02	8.85E-01	4.91E-01	4.66E 00
31	7.70	0.	0.	5.82E-01	0.	0.	0.	2.57E 00	4.90E-02	8.89E-01	4.93E-01	4.59E 00
32	7.60	0.	0.	5.47E-01	0.	2.58E-05	0.	2.59E 00	5.10E-02	8.93E-01	4.95E-01	4.57E 00
33	7.50	0.	0.	5.00E-01	0.	9.76E-05	0.	2.60E 00	5.31E-02	8.97E-01	4.96E-01	4.55E 00
34	7.40	0.	0.	4.44E-01	0.	7.15E-04	0.	2.61E 00	5.53E-02	9.01E-01	4.98E-01	4.51E 00
35	7.30	0.	0.	4.16E-01	0.	3.84E-03	0.	2.63E 00	5.76E-02	9.05E-01	5.00E-01	4.51E 00
36	7.20	0.	0.	3.71E-01	0.	8.16E-03	0.	2.64E 00	6.00E-02	9.08E-01	5.02E-01	4.49E 00
37	7.10	0.	0.	3.92E-01	0.	2.47E-02	0.	2.67E 00	6.26E-02	9.12E-01	5.03E-01	4.52E 00
38	7.00	4.76E-05	0.	3.19E-01	0.	5.31E-02	0.	2.69E 00	6.54E-02	9.16E-01	5.05E-01	4.55E 00
39	6.90	1.31E-04	0.	2.89E-01	0.	6.76E-02	0.	2.71E 00	6.83E-02	9.20E-01	5.07E-01	4.56E 00
40	6.80	1.12E-04	0.	2.75E-01	0.	1.25E-01	0.	2.73E 00	7.13E-02	9.24E-01	5.09E-01	4.63E 00
41	6.70	8.88E-05	0.	2.37E-01	0.	1.38E-01	0.	2.79E 00	7.46E-02	9.28E-01	5.11E-01	4.63E 00
42	6.60	4.88E-05	0.	2.10E-01	0.	9.81E-02	0.	2.77E 00	7.81E-02	9.35E-01	5.14E-01	4.61E 00
43	6.50	2.79E-05	0.	1.64E-01	0.	1.93E-01	0.	2.80E 00	8.18E-02	9.43E-01	5.16E-01	4.66E 00
44	6.40	1.58E-05	0.	1.11E-01	6.06E-04	1.52E-01	0.	2.82E 00	8.57E-02	9.52E-01	5.19E-01	4.64E 00
45	6.30	9.05E-06	0.	6.76E-02	2.80E-03	9.92E-02	0.	2.84E 00	8.99E-02	9.60E-01	5.23E-01	4.58E 00
46	6.20	4.84E-06	0.	3.66E-02	3.91E-03	1.40E-01	0.	2.86E 00	9.43E-02	9.69E-01	5.29E-01	4.63E 00
47	6.10	1.83E-06	0.	1.69E-02	1.11E-02	1.83E-01	0.	2.88E 00	9.91E-02	9.79E-01	5.35E-01	4.71E 00
48	6.00	7.54E-07	0.	4.22E-03	1.03E-02	8.45E-02	0.	2.90E 00	1.04E-01	9.91E-01	5.41E-01	4.64E 00
49	5.90	1.84E-07	0.	3.02E-04	1.50E-02	8.39E-02	0.	2.90E 00	1.10E-01	1.01E 00	5.47E-01	4.66E 00
50	5.80	2.34E-08	0.	7.57E-06	2.08E-02	8.45E-02	0.	2.86E 00	1.15E-01	1.02E 00	5.53E-01	4.65E 00
51	5.70	1.72E-09	0.	0.	2.39E-02	9.40E-02	0.	2.69E 00	1.22E-01	1.03E 00	5.59E-01	4.52E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	N2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.73E-11	0.	0.	0.	1.98E-02	1.29E-01	0.	0.	2.50E 00	1.29E-01	1.05E 00	5.65E-01	4.39E 00
53	5.53	0.	0.	0.	0.	2.42E-02	1.20E-01	0.	0.	2.51E 00	1.35E-01	1.07E 00	5.72E-01	4.43E 00
54	5.49	0.	0.	0.	0.	2.18E-02	9.40E-02	0.	0.	2.52E 00	1.43E-01	1.09E 00	5.80E-01	4.46E 00
55	5.30	0.	0.	0.	0.	2.24E-02	1.22E-01	0.	0.	2.54E 00	1.51E-01	1.12E 00	5.89E-01	4.55E 00
56	5.20	0.	0.	0.	0.	2.39E-02	9.71E-02	0.	0.	2.56E 00	1.60E-01	1.15E 00	6.00E-01	4.58E 00
57	5.18	0.	0.	0.	0.	2.37E-02	1.13E-01	0.	0.	2.58E 00	1.70E-01	1.18E 00	6.12E-01	4.68E 00
58	5.00	1.03E-03	0.	0.	0.	2.15E-02	1.04E-01	0.	0.	2.60E 00	1.81E-01	1.22E 00	6.23E-01	4.75E 00
59	4.90	2.45E-03	0.	0.	0.	2.36E-02	1.12E-01	0.	0.	2.62E 00	1.92E-01	1.26E 00	6.35E-01	4.84E 00
60	4.80	4.52E-03	0.	0.	0.	2.54E-02	1.04E-01	0.	0.	2.64E 00	2.04E-01	1.30E 00	6.48E-01	4.93E 00
61	4.70	6.80E-03	0.	0.	0.	2.51E-02	9.37E-02	0.	0.	2.67E 00	2.18E-01	1.34E 00	6.65E-01	5.01E 00
62	4.60	8.14E-03	0.	0.	0.	2.57E-02	8.55E-02	0.	0.	2.69E 00	2.32E-01	1.39E 00	6.82E-01	5.11E 00
63	4.50	8.45E-03	0.	2.16E-02	0.	2.32E-02	6.38E-02	0.	0.	2.71E 00	2.48E-01	1.46E 00	6.99E-01	5.23E 00
64	4.40	8.92E-03	0.	6.75E-02	0.	2.31E-02	4.45E-02	0.	0.	2.73E 00	2.66E-01	1.52E 00	7.17E-01	5.38E 00
65	4.30	8.33E-03	0.	2.07E-01	0.	2.18E-02	2.74E-02	0.	0.	2.75E 00	2.85E-01	1.59E 00	7.36E-01	5.63E 00
66	4.20	7.71E-03	0.	6.98E-01	0.	2.29E-02	1.98E-02	0.	0.	2.77E 00	3.04E-01	1.67E 00	7.54E-01	6.25E 00
67	4.10	7.17E-03	0.	2.83E-01	0.	2.21E-02	5.40E-03	0.	0.	2.78E 00	3.29E-01	1.74E 00	7.61E-01	5.93E 00
68	4.00	6.54E-03	0.	1.00E 00	0.	2.12E-02	4.10E-03	0.	0.	2.80E 00	3.54E-01	1.81E 00	2.81E-01	6.25E 00
69	3.90	5.49E-03	0.	4.58E-01	1.98E-02	1.92E-02	1.60E-03	0.	0.	2.78E 00	3.83E-01	1.71E 00	2.69E-01	5.65E 00
70	3.80	5.99E-03	0.	7.17E-01	9.44E-02	2.06E-02	0.	0.	0.	2.77E 00	4.14E-01	1.75E 00	2.79E-01	6.05E 00
71	3.70	5.23E-03	0.	7.83E-01	3.44E-02	1.72E-02	0.	0.	0.	2.73E 00	4.49E-01	1.40E 00	3.08E-01	5.73E 00
72	3.60	4.48E-03	0.	9.18E-01	1.94E-01	1.86E-02	0.	0.	0.	2.56E 00	4.88E-01	1.52E 00	3.40E-01	5.64E 00
73	3.50	4.32E-03	0.	7.07E-01	4.14E-01	1.44E-02	0.	0.	0.	2.34E 00	5.31E-01	1.59E 00	3.75E-01	5.98E 00
74	3.40	3.91E-03	0.	4.27E-01	5.31E-02	1.61E-02	0.	0.	0.	1.35E 00	5.85E-01	1.77E 00	4.16E-01	4.62E 00
75	3.30	3.11E-03	0.	4.41E-01	2.23E-01	1.26E-02	0.	0.	0.	1.35E 00	6.35E-01	1.90E 00	4.50E-01	5.08E 00
76	3.20	2.67E-03	0.	2.92E-01	4.11E-01	1.32E-02	0.	0.	0.	1.35E 00	6.97E-01	2.15E 00	4.99E-01	5.41E 00
77	3.10	2.53E-03	0.	2.17E-01	8.36E-02	1.23E-02	0.	0.	0.	1.36E 00	7.67E-01	2.35E 00	5.41E-01	5.33E 00
78	3.00	2.24E-03	0.	1.31E-01	2.16E-01	1.14E-02	0.	0.	0.	1.36E 00	8.47E-01	2.54E 00	5.84E-01	5.70E 00
79	2.90	1.96E-03	0.	8.09E-02	1.23E-01	8.54E-03	0.	0.	0.	1.36E 00	9.34E-01	2.75E 00	6.29E-01	5.89E 00
80	2.80	1.91E-03	0.	3.88E-02	7.01E-02	5.76E-03	0.	0.	0.	1.36E 00	1.04E 00	2.99E 00	6.79E-01	6.19E 00
81	2.70	1.71E-03	0.	1.81E-02	1.03E-01	3.08E-03	0.	0.	0.	1.36E 00	1.17E 00	3.24E 00	7.34E-01	6.43E 00
82	2.61	5.56E-04	0.	4.93E-03	1.01E-02	1.32E-03	0.	0.	0.	1.36E 00	1.31E 00	3.51E 00	7.91E-01	7.00E 00
83	2.51	3.46E-05	0.	9.94E-04	9.38E-03	3.09E-04	0.	0.	0.	1.36E 00	1.47E 00	3.99E 00	4.30E-01	7.27E 00
84	2.40	0.	4.80E-02	0.	8.14E-03	3.26E-05	0.	0.	0.	1.36E 00	1.67E 00	4.65E 00	5.14E-01	8.25E 00
85	2.30	0.	1.61E-01	0.	0.	0.	0.	0.	0.	1.35E 00	1.90E 00	3.77E 00	6.15E-01	7.80E 00
86	2.20	0.	4.01E-01	0.	0.	0.	0.	0.	0.	1.35E 00	2.17E 00	4.45E 00	7.38E-01	9.12E 00
87	2.10	0.	4.49E-01	0.	0.	0.	0.	0.	0.	1.34E 00	2.50E 00	5.19E 00	8.67E-01	1.03E 01
88	2.09	0.	8.53E-01	0.	0.	0.	0.	0.	0.	1.30E 00	2.90E 00	5.92E 00	9.86E-01	1.20E 01
89	1.99	0.	1.19E 00	0.	0.	0.	0.	0.	0.	1.25E 00	3.36E 00	6.75E 00	1.13E 00	1.37E 01
90	1.89	0.	9.87E-01	0.	0.	0.	0.	0.	0.	1.20E 00	4.00E 00	8.04E 00	1.37E 00	1.56E 01
91	1.79	0.	1.19E 00	0.	0.	0.	0.	0.	0.	1.13E 00	4.74E 00	9.63E 00	1.66E 00	1.83E 01
92	1.69	0.	8.45E-01	0.	0.	0.	0.	0.	0.	9.54E-01	5.71E 00	1.12E 01	1.95E 00	2.07E 01
93	1.59	0.	9.93E-01	0.	0.	0.	0.	0.	0.	4.33E-01	6.97E 00	1.44E 01	2.37E 00	2.52E 01
94	1.49	0.	9.93E-01	0.	0.	0.	0.	0.	0.	0.	8.60E 00	1.78E 01	2.82E 00	3.02E 01
95	1.39	0.	7.59E-01	0.	0.	0.	0.	0.	0.	0.	1.04E 01	2.32E 01	3.72E 00	3.94E 01
96	1.29	0.	7.30E-01	0.	0.	0.	0.	0.	0.	0.	1.35E 01	2.45E 01	3.71E 00	4.28E 01
97	1.19	0.	6.75E-01	0.	0.	0.	0.	1.24E-06	0.	0.	1.82E 01	3.02E 01	4.64E 00	5.37E 01
98	1.09	0.	6.19E-01	0.	0.	0.	0.	1.43E-05	0.	0.	2.43E 01	3.66E 01	5.24E 00	6.47E 01
99	0.99	0.	5.09E-01	0.	0.	0.	0.	1.96E-05	0.	0.	3.34E 01	4.78E 01	6.19E 00	8.19E 01
100	0.89	0.	2.39E-01	0.	0.	0.	0.	5.93E-04	0.	0.	4.77E 01	6.81E 01	7.12E 00	1.33E 02
101	0.79	0.	5.79E-02	0.	0.	0.	0.	5.27E-04	0.	0.	7.21E 01	5.26E 01	7.61E 00	1.32E 02
102	0.69	0.	5.46E-03	0.	0.	0.	0.	1.13E-03	0.	0.	1.15E 02	5.87E 01	8.51E 00	1.85E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.76E-02	0.	0.	0.	7.31E-02	1.73E-03	2.13E-01	5.19E-02	2.15E-01
2	10.60	0.	0.	5.17E-02	0.	0.	0.	7.32E-02	1.79E-03	2.62E-01	5.18E-02	4.41E-01
3	10.50	0.	0.	5.18E-02	0.	0.	0.	7.33E-02	1.83E-03	2.63E-01	5.14E-02	4.42E-01
4	10.40	0.	0.	4.86E-02	0.	0.	0.	7.34E-02	1.89E-03	2.64E-01	5.15E-02	4.40E-01
5	10.30	0.	0.	4.10E-02	0.	0.	0.	7.39E-02	1.94E-03	2.65E-01	5.13E-02	4.33E-01
6	10.20	0.	0.	4.20E-02	0.	0.	0.	7.35E-02	2.00E-03	2.64E-01	5.11E-02	4.35E-01
7	10.10	0.	0.	3.99E-02	0.	0.	0.	7.36E-02	2.06E-03	2.64E-01	5.10E-02	4.33E-01
8	10.00	0.	0.	3.45E-02	0.	0.	0.	7.37E-02	2.12E-03	2.57E-01	5.68E-02	4.20E-01
9	9.90	0.	0.	3.92E-02	0.	0.	0.	7.39E-02	2.19E-03	2.67E-01	5.04E-02	4.29E-01
10	9.80	0.	0.	3.27E-02	0.	0.	0.	7.40E-02	2.26E-03	2.68E-01	5.05E-02	4.27E-01
11	9.70	0.	0.	2.70E-02	0.	0.	0.	7.41E-02	2.33E-03	2.69E-01	5.03E-02	4.23E-01
12	9.60	0.	0.	3.00E-02	0.	0.	0.	7.43E-02	2.40E-03	2.69E-01	5.01E-02	4.26E-01
13	9.50	0.	0.	2.92E-02	0.	0.	0.	7.44E-02	2.48E-03	2.70E-01	5.00E-02	4.22E-01
14	9.40	0.	0.	2.56E-02	0.	0.	0.	7.47E-02	2.56E-03	2.71E-01	4.98E-02	4.21E-01
15	9.30	0.	0.	2.40E-02	0.	0.	0.	7.50E-02	2.64E-03	2.72E-01	4.97E-02	4.23E-01
16	9.20	0.	0.	1.95E-02	0.	0.	0.	7.52E-02	2.73E-03	2.72E-01	4.95E-02	4.19E-01
17	9.10	0.	0.	2.09E-02	0.	0.	0.	7.95E-02	2.82E-03	9.08E-02	4.93E-02	2.30E-01
18	9.00	0.	0.	1.79E-02	0.	0.	0.	7.58E-02	2.92E-03	9.08E-02	4.92E-02	2.37E-01
19	8.90	0.	0.	1.64E-02	0.	0.	0.	7.60E-02	3.02E-03	9.08E-02	4.90E-02	2.35E-01
20	8.80	0.	0.	1.68E-02	0.	0.	0.	7.63E-02	3.12E-03	9.08E-02	4.89E-02	2.35E-01
21	8.70	0.	0.	1.36E-02	0.	0.	0.	7.66E-02	3.23E-03	9.09E-02	4.87E-02	2.33E-01
22	8.60	0.	0.	1.40E-02	0.	0.	0.	7.69E-02	3.34E-03	9.09E-02	4.86E-02	2.34E-01
23	8.50	0.	0.	1.21E-02	0.	0.	0.	7.71E-02	3.46E-03	9.10E-02	4.85E-02	2.32E-01
24	8.40	0.	0.	1.19E-02	0.	0.	0.	7.75E-02	3.59E-03	9.12E-02	4.83E-02	2.33E-01
25	8.30	0.	0.	9.93E-03	0.	0.	0.	7.79E-02	3.72E-03	9.14E-02	4.83E-02	2.31E-01
26	8.20	0.	0.	9.99E-03	0.	0.	0.	7.83E-02	3.86E-03	9.16E-02	4.85E-02	2.32E-01
27	8.10	0.	0.	8.49E-03	0.	0.	0.	7.87E-02	4.01E-03	9.16E-02	4.84E-02	2.32E-01
28	8.00	0.	0.	8.48E-03	0.	0.	0.	7.92E-02	4.16E-03	9.20E-02	4.80E-02	2.33E-01
29	7.90	0.	0.	7.19E-03	0.	0.	0.	7.96E-02	4.32E-03	9.23E-02	4.90E-02	2.32E-01
30	7.80	0.	0.	7.39E-03	0.	0.	0.	8.00E-02	4.49E-03	9.27E-02	4.92E-02	2.34E-01
31	7.70	0.	0.	6.39E-03	0.	0.	0.	8.04E-02	4.67E-03	9.31E-02	4.93E-02	2.34E-01
32	7.60	0.	0.	6.01E-03	0.	2.71E-07	0.	8.08E-02	4.86E-03	9.36E-02	4.79E-02	2.39E-01
33	7.50	0.	0.	5.49E-03	0.	1.02E-06	0.	8.12E-02	5.06E-03	9.40E-02	4.97E-02	2.35E-01
34	7.40	0.	0.	4.88E-03	0.	7.90E-06	0.	8.16E-02	5.27E-03	9.44E-02	4.99E-02	2.34E-01
35	7.30	0.	0.	4.97E-03	0.	3.18E-05	0.	8.21E-02	5.49E-03	9.48E-02	5.01E-02	2.37E-01
36	7.20	0.	0.	4.87E-03	0.	8.56E-05	0.	8.29E-02	5.72E-03	9.52E-02	5.02E-02	2.38E-01
37	7.10	0.	0.	3.87E-03	0.	2.99E-04	0.	8.32E-02	5.96E-03	9.56E-02	5.04E-02	2.39E-01
38	7.00	6.77E-07	0.	3.90E-03	0.	5.97E-04	0.	8.39E-02	6.23E-03	9.63E-02	5.06E-02	2.41E-01
39	6.90	1.31E-06	0.	3.18E-03	0.	7.89E-04	0.	8.46E-02	6.50E-03	9.64E-02	5.08E-02	2.42E-01
40	6.80	1.12E-06	0.	3.02E-03	0.	1.31E-03	0.	8.52E-02	6.79E-03	9.66E-02	5.09E-02	2.44E-01
41	6.70	8.89E-07	0.	2.61E-03	0.	1.36E-03	0.	8.59E-02	7.11E-03	9.72E-02	5.12E-02	2.45E-01
42	6.60	4.69E-07	0.	2.39E-03	0.	1.03E-03	0.	8.66E-02	7.44E-03	9.80E-02	5.14E-02	2.47E-01
43	6.50	2.88E-07	0.	1.81E-03	0.	1.61E-03	0.	8.73E-02	7.79E-03	9.88E-02	5.17E-02	2.49E-01
44	6.40	1.58E-07	0.	1.22E-03	6.35E-06	1.59E-03	0.	8.79E-02	8.16E-03	9.97E-02	5.19E-02	2.51E-01
45	6.30	9.86E-08	0.	7.43E-04	2.94E-05	1.04E-03	0.	8.86E-02	8.56E-03	1.01E-01	5.23E-02	2.52E-01
46	6.20	4.84E-08	0.	4.62E-04	4.10E-05	1.47E-03	0.	8.93E-02	8.98E-03	1.01E-01	5.29E-02	2.55E-01
47	6.10	1.43E-08	0.	1.89E-04	1.16E-04	1.92E-03	0.	9.00E-02	9.44E-03	1.03E-01	5.35E-02	2.58E-01
48	6.00	7.56E-09	0.	4.63E-05	1.08E-04	8.86E-04	0.	9.07E-02	9.92E-03	1.04E-01	5.41E-02	2.66E-01
49	5.90	1.04E-09	0.	3.32E-06	1.97E-04	8.79E-04	0.	9.07E-02	1.04E-02	1.05E-01	5.47E-02	2.62E-01
50	5.80	2.34E-10	0.	8.31E-08	2.18E-04	8.86E-04	0.	8.93E-02	1.10E-02	1.07E-01	5.53E-02	2.63E-01
51	5.70	1.72E-11	0.	0.	2.51E-04	9.09E-04	0.	8.39E-02	1.16E-02	1.08E-01	5.59E-02	2.61E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.69	7.75E-15	0.	0.	0.	2.08E-04	1.30E-03	0.	0.	7.80E-02	1.22E-02	1.10E-01	5.66E-02	2.58E-01
53	5.59	0.	0.	0.	0.	2.54E-04	1.20E-03	0.	0.	7.84E-02	1.25E-02	1.12E-01	5.73E-02	2.62E-01
54	5.49	0.	0.	0.	0.	2.29E-04	9.86E-04	0.	0.	7.98E-02	1.36E-02	1.15E-01	5.80E-02	2.66E-01
55	5.39	0.	0.	0.	0.	2.35E-04	1.28E-03	0.	0.	7.93E-02	1.44E-02	1.17E-01	5.89E-02	2.72E-01
56	5.29	0.	0.	0.	0.	2.51E-04	9.13E-04	0.	0.	7.98E-02	1.53E-02	1.20E-01	6.01E-02	2.77E-01
57	5.19	0.	0.	0.	0.	2.49E-04	1.19E-03	0.	0.	8.05E-02	1.62E-02	1.24E-01	6.12E-02	2.83E-01
58	5.08	1.83E-05	0.	0.	0.	2.26E-04	1.09E-03	0.	0.	8.12E-02	1.72E-02	1.27E-01	6.24E-02	2.90E-01
59	4.98	2.46E-05	0.	0.	0.	2.50E-04	1.17E-03	0.	0.	8.19E-02	1.83E-02	1.32E-01	6.36E-02	2.97E-01
60	4.88	4.53E-05	0.	0.	0.	2.47E-04	1.09E-03	0.	0.	8.25E-02	1.94E-02	1.36E-01	6.49E-02	3.04E-01
61	4.78	6.01E-05	0.	0.	0.	2.64E-04	9.83E-04	0.	0.	8.32E-02	2.07E-02	1.40E-01	6.66E-02	3.12E-01
62	4.68	8.15E-05	0.	0.	0.	2.69E-04	8.96E-04	0.	0.	8.39E-02	2.21E-02	1.46E-01	6.83E-02	3.21E-01
63	4.58	8.47E-05	0.	2.37E-04	0.	2.43E-04	6.70E-04	0.	0.	8.46E-02	2.36E-02	1.53E-01	7.00E-02	3.32E-01
64	4.48	8.93E-05	0.	7.41E-04	0.	2.43E-04	4.67E-04	0.	0.	8.52E-02	2.53E-02	1.68E-01	7.18E-02	3.43E-01
65	4.39	8.34E-05	0.	2.27E-03	0.	2.29E-04	2.87E-04	0.	0.	8.59E-02	2.71E-02	1.67E-01	7.36E-02	3.57E-01
66	4.28	7.72E-05	0.	7.66E-03	0.	2.40E-04	2.38E-04	0.	0.	8.66E-02	2.91E-02	1.75E-01	7.55E-02	3.74E-01
67	4.18	7.18E-05	0.	3.10E-03	0.	2.32E-04	5.66E-05	0.	0.	8.69E-02	3.13E-02	1.82E-01	7.62E-02	3.80E-01
68	4.08	9.55E-05	0.	1.10E-02	0.	2.22E-04	4.38E-05	0.	0.	8.73E-02	3.39E-02	1.90E-01	2.61E-02	3.48E-01
69	3.98	5.58E-05	0.	5.03E-03	6.99E-04	2.01E-04	1.68E-05	0.	0.	8.69E-02	3.65E-02	1.80E-01	2.69E-02	3.36E-01
70	3.88	6.08E-05	0.	7.87E-03	3.32E-03	2.16E-04	0.	0.	0.	8.66E-02	3.94E-02	1.83E-01	2.80E-02	3.40E-01
71	3.78	5.24E-05	0.	8.60E-03	5.25E-03	1.90E-04	0.	0.	0.	8.52E-02	4.20E-02	1.47E-01	3.08E-02	3.16E-01
72	3.68	4.69E-05	0.	5.49E-03	6.63E-03	1.95E-04	0.	0.	0.	7.98E-02	4.65E-02	1.59E-01	3.40E-02	3.32E-01
73	3.58	4.33E-05	0.	7.76E-03	1.46E-02	1.91E-04	0.	0.	0.	7.31E-02	5.06E-02	1.66E-01	3.76E-02	3.50E-01
74	3.48	3.92E-05	0.	4.69E-03	1.87E-03	1.69E-04	0.	0.	0.	4.21E-02	5.52E-02	1.86E-01	4.16E-02	3.31E-01
75	3.38	3.11E-05	0.	4.84E-03	7.87E-03	1.32E-04	0.	0.	0.	4.22E-02	6.05E-02	2.05E-01	4.56E-02	3.67E-01
76	3.28	2.48E-05	0.	3.09E-03	1.45E-02	1.38E-04	0.	0.	0.	4.23E-02	6.64E-02	2.25E-01	4.99E-02	4.02E-01
77	3.18	2.54E-05	0.	2.38E-03	2.94E-03	1.29E-04	0.	0.	0.	4.24E-02	7.31E-02	2.46E-01	5.42E-02	4.21E-01
78	3.08	2.24E-05	0.	1.44E-03	7.60E-03	1.20E-04	0.	0.	0.	4.25E-02	8.07E-02	2.67E-01	5.84E-02	4.57E-01
79	2.99	1.46E-05	0.	9.88E-04	4.32E-03	8.96E-05	0.	0.	0.	4.26E-02	8.84E-02	2.88E-01	6.29E-02	4.85E-01
80	2.89	1.92E-05	0.	4.26E-04	2.47E-03	6.04E-05	0.	0.	0.	4.26E-02	9.64E-02	3.13E-01	6.80E-02	5.26E-01
81	2.79	1.21E-05	0.	1.98E-04	5.63E-03	3.21E-05	0.	0.	0.	4.26E-02	1.11E-01	3.30E-01	7.35E-02	5.70E-01
82	2.69	5.57E-06	0.	9.80E-05	3.59E-04	1.36E-35	0.	0.	0.	4.26E-02	1.24E-01	3.60E-01	7.92E-02	6.15E-01
83	2.59	3.97E-07	0.	1.09E-05	3.30E-04	3.24E-06	0.	0.	0.	4.26E-02	1.40E-01	4.10E-01	4.31E-02	6.44E-01
84	2.49	0.	5.27E-04	0.	2.87E-04	3.42E-07	0.	0.	0.	4.26E-02	1.59E-01	4.87E-01	5.14E-02	7.41E-01
85	2.39	0.	1.77E-03	0.	0.	0.	0.	0.	0.	4.23E-02	1.81E-01	3.95E-01	6.15E-02	6.81E-01
86	2.29	0.	3.40E-03	0.	0.	0.	0.	0.	0.	4.21E-02	2.07E-01	4.67E-01	7.39E-02	7.94E-01
87	2.19	0.	4.93E-03	0.	0.	0.	0.	0.	0.	4.19E-02	2.38E-01	5.43E-01	8.63E-02	9.15E-01
88	2.09	0.	9.36E-03	0.	0.	0.	0.	0.	0.	4.86E-02	2.76E-01	6.28E-01	9.87E-02	1.05E 00
89	1.99	0.	1.30E-02	0.	0.	0.	0.	0.	0.	3.90E-02	3.23E-01	7.07E-01	1.13E-01	1.20E 00
90	1.89	0.	1.88E-02	0.	0.	0.	0.	0.	0.	3.73E-02	3.81E-01	8.42E-01	1.37E-01	1.41E 00
91	1.79	0.	1.27E-02	0.	0.	0.	0.	0.	0.	3.52E-02	4.54E-01	1.01E 00	1.66E-01	1.68E 00
92	1.69	0.	9.29E-03	0.	0.	0.	0.	0.	0.	2.98E-02	5.44E-01	1.18E 00	1.96E-01	1.96E 00
93	1.59	0.	1.09E-02	0.	0.	0.	0.	0.	0.	1.39E-02	6.64E-01	1.45E 00	2.37E-01	2.43E 00
94	1.49	0.	1.09E-02	0.	0.	0.	0.	0.	0.	0.	8.19E-01	1.87E 00	2.82E-01	2.98E 00
95	1.39	0.	6.33E-03	0.	0.	0.	0.	0.	0.	0.	1.03E 00	2.43E 00	3.73E-01	3.94E 00
96	1.29	0.	9.01E-03	0.	0.	0.	0.	0.	0.	0.	1.32E 00	2.96E 00	3.71E-01	4.26E 00
97	1.19	0.	7.41E-03	0.	0.	0.	0.	1.35E-08	0.	0.	1.73E 00	3.16E 00	4.64E-01	5.37E 00
98	1.09	0.	5.80E-03	0.	0.	0.	0.	1.71E-07	0.	0.	2.31E 00	3.83E 00	5.27E-01	6.67E 00
99	0.99	0.	5.55E-03	0.	0.	0.	0.	1.97E-07	0.	0.	3.14E 00	4.34E 00	6.20E-01	8.18E 00
100	0.89	0.	2.63E-03	0.	0.	0.	0.	4.12E-06	0.	0.	4.54E 00	5.04E 00	7.13E-01	1.03E 01
101	0.79	0.	6.35E-04	0.	0.	0.	0.	3.42E-06	0.	0.	5.87E 00	5.51E 00	7.41E-01	1.31E 01
102	0.69	0.	9.29E-05	0.	0.	0.	0.	1.19E-05	0.	0.	1.10E 01	6.15E 00	8.52E-01	1.81E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	N2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.40E-04	0.	0.	0.	2.00E-03	1.92E-04	1.00E 00	4.00E-03	1.00E 00
2	10.60	0.	0.	4.83E-04	0.	0.	0.	2.00E-03	1.97E-04	2.81E-02	4.78E-03	3.05E-02
3	10.50	0.	0.	4.04E-04	0.	0.	0.	2.01E-03	1.81E-04	2.32E-02	4.77E-03	3.06E-02
4	10.40	0.	0.	3.70E-04	0.	0.	0.	2.01E-03	1.66E-04	2.33E-02	4.75E-03	3.06E-02
5	10.30	0.	0.	3.35E-04	0.	0.	0.	2.01E-03	1.71E-04	2.34E-02	4.74E-03	3.06E-02
6	10.20	0.	0.	3.33E-04	0.	0.	0.	2.01E-03	1.74E-04	2.34E-02	4.72E-03	3.07E-02
7	10.10	0.	0.	3.11E-04	0.	0.	0.	2.02E-03	1.81E-04	2.35E-02	4.71E-03	3.07E-02
8	10.00	0.	0.	2.88E-04	0.	0.	0.	2.02E-03	1.87E-04	2.35E-02	4.69E-03	3.07E-02
9	9.90	0.	0.	2.74E-04	0.	0.	0.	2.02E-03	1.93E-04	2.36E-02	4.68E-03	3.08E-02
10	9.80	0.	0.	2.99E-04	0.	0.	0.	2.03E-03	1.99E-04	2.36E-02	4.66E-03	3.08E-02
11	9.70	0.	0.	2.17E-04	0.	0.	0.	2.03E-03	2.05E-04	2.37E-02	4.65E-03	3.08E-02
12	9.60	0.	0.	2.34E-04	0.	0.	0.	2.04E-03	2.11E-04	2.38E-02	4.63E-03	3.09E-02
13	9.50	0.	0.	1.90E-04	0.	0.	0.	2.04E-03	2.18E-04	2.38E-02	4.62E-03	3.09E-02
14	9.40	0.	0.	1.83E-04	0.	0.	0.	2.05E-03	2.25E-04	2.39E-02	4.60E-03	3.10E-02
15	9.30	0.	0.	1.67E-04	0.	0.	0.	2.05E-03	2.32E-04	2.40E-02	4.59E-03	3.10E-02
16	9.20	0.	0.	1.92E-04	0.	0.	0.	2.06E-03	2.40E-04	2.40E-02	4.57E-03	3.11E-02
17	9.10	0.	0.	1.94E-04	0.	0.	0.	2.07E-03	2.48E-04	8.02E-03	4.54E-03	1.50E-02
18	9.00	0.	0.	1.40E-04	0.	0.	0.	2.08E-03	2.56E-04	8.01E-03	4.54E-03	1.50E-02
19	8.90	0.	0.	1.20E-04	0.	0.	0.	2.08E-03	2.65E-04	8.01E-03	4.53E-03	1.50E-02
20	8.80	0.	0.	1.29E-04	0.	0.	0.	2.09E-03	2.74E-04	8.02E-03	4.51E-03	1.50E-02
21	8.70	0.	0.	1.60E-04	0.	0.	0.	2.10E-03	2.84E-04	8.02E-03	4.50E-03	1.50E-02
22	8.60	0.	0.	1.09E-04	0.	0.	0.	2.11E-03	2.94E-04	8.02E-03	4.49E-03	1.50E-02
23	8.50	0.	0.	9.39E-05	0.	0.	0.	2.11E-03	3.05E-04	8.04E-03	4.47E-03	1.50E-02
24	8.40	0.	0.	9.27E-05	0.	0.	0.	2.12E-03	3.16E-04	8.03E-03	4.46E-03	1.50E-02
25	8.33	0.	0.	7.73E-05	0.	0.	0.	2.14E-03	3.27E-04	8.06E-03	4.44E-03	1.51E-02
26	8.20	0.	0.	7.70E-05	0.	0.	0.	2.15E-03	3.39E-04	8.08E-03	4.42E-03	1.51E-02
27	8.10	0.	0.	6.61E-05	0.	0.	0.	2.16E-03	3.52E-04	8.09E-03	4.40E-03	1.52E-02
28	8.00	0.	0.	6.60E-05	0.	0.	0.	2.17E-03	3.64E-04	8.12E-03	4.51E-03	1.52E-02
29	7.90	0.	0.	5.59E-05	0.	0.	0.	2.18E-03	3.80E-04	8.15E-03	4.52E-03	1.53E-02
30	7.80	0.	0.	5.73E-05	0.	0.	0.	2.19E-03	3.95E-04	8.19E-03	4.54E-03	1.54E-02
31	7.70	0.	0.	4.90E-05	0.	0.	0.	2.20E-03	4.11E-04	8.22E-03	4.56E-03	1.54E-02
32	7.60	0.	0.	4.68E-05	0.	2.28E-09	0.	2.21E-03	4.27E-04	8.26E-03	4.57E-03	1.55E-02
33	7.50	0.	0.	4.27E-05	0.	8.34E-09	0.	2.22E-03	4.45E-04	8.29E-03	4.59E-03	1.56E-02
34	7.40	0.	0.	3.88E-05	0.	6.11E-08	0.	2.24E-03	4.63E-04	8.33E-03	4.61E-03	1.57E-02
35	7.30	0.	0.	3.99E-05	0.	2.99E-07	0.	2.25E-03	4.82E-04	8.36E-03	4.62E-03	1.58E-02
36	7.20	0.	0.	3.17E-05	0.	6.97E-07	0.	2.26E-03	5.03E-04	8.40E-03	4.64E-03	1.58E-02
37	7.10	0.	0.	3.01E-05	0.	2.11E-06	0.	2.28E-03	5.24E-04	8.44E-03	4.66E-03	1.59E-02
38	7.00	9.77E-09	0.	2.73E-05	0.	4.54E-06	0.	2.30E-03	5.47E-04	8.47E-03	4.67E-03	1.60E-02
39	6.90	1.12E-08	0.	2.47E-05	0.	9.77E-06	0.	2.32E-03	5.72E-04	8.51E-03	4.69E-03	1.61E-02
40	6.80	9.96E-09	0.	2.35E-05	0.	1.86E-05	0.	2.34E-03	5.97E-04	8.54E-03	4.70E-03	1.62E-02
41	6.70	6.98E-09	0.	2.13E-05	0.	1.11E-05	0.	2.35E-03	6.25E-04	8.58E-03	4.73E-03	1.63E-02
42	6.60	4.17E-09	0.	1.70E-05	0.	8.39E-06	0.	2.37E-03	6.54E-04	8.65E-03	4.75E-03	1.64E-02
43	6.50	2.30E-09	0.	1.41E-05	0.	1.31E-05	0.	2.39E-03	6.85E-04	8.72E-03	4.77E-03	1.66E-02
44	6.40	1.35E-09	0.	9.50E-06	9.17E-08	1.30E-05	0.	2.41E-03	7.19E-04	8.80E-03	4.80E-03	1.67E-02
45	6.30	7.73E-10	0.	5.70E-06	2.39E-07	8.48E-06	0.	2.43E-03	7.53E-04	8.88E-03	4.83E-03	1.69E-02
46	6.20	3.49E-10	0.	3.13E-06	3.34E-07	1.20E-05	0.	2.45E-03	7.90E-04	8.96E-03	4.89E-03	1.71E-02
47	6.10	1.56E-10	0.	1.44E-06	9.45E-07	1.97E-05	0.	2.47E-03	8.38E-04	9.05E-03	4.94E-03	1.73E-02
48	6.00	6.44E-11	0.	3.61E-07	8.82E-07	7.22E-06	0.	2.48E-03	8.72E-04	9.17E-03	5.00E-03	1.75E-02
49	5.90	1.97E-11	0.	2.50E-08	1.28E-06	7.17E-06	0.	2.48E-03	9.10E-04	9.29E-03	5.05E-03	1.78E-02
50	5.80	2.00E-12	0.	6.47E-10	1.78E-06	7.22E-06	0.	2.49E-03	9.67E-04	9.42E-03	5.11E-03	1.80E-02
51	5.70	1.47E-13	0.	0.	2.04E-06	8.03E-06	0.	2.30E-03	1.02E-03	9.54E-03	5.17E-03	1.80E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (TRNS)	N P.E.	O P.E.	TOTAL AIR
52	5.68	6.81E-15	0.	0.	0.	1.73E-06	1.10E-05	0.	0.	2.14E-03	1.07E-03	9.69E-03	5.22E-03	1.81E-02
53	5.59	0.	0.	0.	0.	2.07E-06	1.03E-05	0.	0.	2.15E-03	1.13E-03	9.88E-03	5.29E-03	1.85E-02
54	5.48	0.	0.	0.	0.	1.87E-06	8.04E-06	0.	0.	2.16E-03	1.20E-03	1.01E-02	5.36E-03	1.88E-02
55	5.38	0.	0.	0.	0.	1.91E-06	1.05E-05	0.	0.	2.17E-03	1.27E-03	1.04E-02	5.44E-03	1.93E-02
56	5.29	0.	0.	0.	0.	2.04E-06	7.44E-06	0.	0.	2.19E-03	1.34E-03	1.06E-02	5.55E-03	1.97E-02
57	5.19	0.	0.	0.	0.	2.03E-06	9.68E-06	0.	0.	2.21E-03	1.42E-03	1.09E-02	5.64E-03	2.02E-02
58	5.08	9.75E-08	0.	0.	0.	1.84E-06	8.91E-06	0.	0.	2.22E-03	1.91E-03	1.12E-02	5.76E-03	2.08E-02
59	4.93	2.09E-07	0.	0.	0.	2.03E-06	9.96E-06	0.	0.	2.24E-03	1.61E-03	1.16E-02	5.87E-03	2.13E-02
60	4.88	3.86E-07	0.	0.	0.	2.17E-06	8.91E-06	0.	0.	2.26E-03	1.71E-03	1.20E-02	5.99E-03	2.20E-02
61	4.78	5.12E-07	0.	0.	0.	2.15E-06	8.01E-06	0.	0.	2.28E-03	1.82E-03	1.24E-02	6.15E-03	2.27E-02
62	4.68	6.95E-07	0.	0.	0.	2.10E-06	7.30E-06	0.	0.	2.38E-03	1.94E-03	1.29E-02	6.30E-03	2.34E-02
63	4.59	7.22E-07	0.	1.84E-06	0.	1.99E-06	5.45E-06	0.	0.	2.32E-03	2.08E-03	1.35E-02	6.47E-03	2.43E-02
64	4.48	7.62E-07	0.	5.77E-06	0.	1.98E-06	3.88E-06	0.	0.	2.34E-03	2.22E-03	1.41E-02	6.63E-03	2.53E-02
65	4.38	7.11E-07	0.	1.77E-05	0.	1.86E-06	2.34E-06	0.	0.	2.35E-03	2.38E-03	1.47E-02	6.80E-03	2.63E-02
66	4.29	6.58E-07	0.	5.97E-05	0.	1.96E-06	1.69E-06	0.	0.	2.37E-03	2.56E-03	1.54E-02	6.97E-03	2.74E-02
67	4.18	6.12E-07	0.	2.41E-05	0.	1.89E-06	4.61E-07	0.	0.	2.38E-03	2.75E-03	1.61E-02	7.04E-03	2.83E-02
68	4.08	5.59E-07	0.	8.55E-05	0.	1.81E-06	3.50E-07	0.	0.	2.39E-03	2.97E-03	1.67E-02	2.41E-03	2.48E-02
69	3.98	4.69E-07	0.	3.92E-05	1.83E-05	1.64E-06	1.37E-07	0.	0.	2.38E-03	3.21E-03	1.58E-02	2.48E-03	2.48E-02
70	3.88	5.11E-07	0.	6.13E-05	8.72E-05	1.76E-06	0.	0.	0.	2.37E-03	3.47E-03	1.62E-02	2.58E-03	2.47E-02
71	3.78	4.47E-07	0.	6.70E-05	3.18E-05	1.47E-06	0.	0.	0.	2.34E-03	3.76E-03	1.36E-02	2.84E-03	2.28E-02
72	3.68	4.00E-07	0.	4.43E-05	1.79E-04	1.59E-06	0.	0.	0.	2.19E-03	4.09E-03	1.40E-02	3.14E-03	2.37E-02
73	3.58	3.69E-07	0.	8.03E-05	3.84E-04	1.23E-06	0.	0.	0.	2.00E-03	4.45E-03	1.47E-02	3.47E-03	2.50E-02
74	3.49	3.34E-07	0.	3.65E-05	4.91E-05	1.37E-06	0.	0.	0.	1.19E-03	4.84E-03	1.64E-02	3.84E-03	2.43E-02
75	3.38	2.65E-07	0.	3.77E-05	2.86E-04	1.08E-06	0.	0.	0.	1.16E-03	5.32E-03	1.81E-02	4.22E-03	2.91E-02
76	3.29	2.28E-07	0.	2.41E-05	3.80E-04	1.12E-06	0.	0.	0.	1.16E-03	5.84E-03	1.99E-02	4.61E-03	3.19E-02
77	3.13	2.16E-07	0.	1.86E-05	7.72E-05	1.05E-06	0.	0.	0.	1.16E-03	6.43E-03	2.17E-02	5.08E-03	3.44E-02
78	3.03	1.91E-07	0.	1.12E-05	1.99E-04	9.77E-07	0.	0.	0.	1.16E-03	7.10E-03	2.39E-02	5.48E-03	3.74E-02
79	2.99	1.59E-07	0.	6.91E-06	1.13E-04	7.38E-07	0.	0.	0.	1.17E-03	7.86E-03	2.54E-02	5.81E-03	4.04E-02
80	2.80	1.44E-07	0.	3.32E-06	6.48E-05	4.92E-07	0.	0.	0.	1.17E-03	8.74E-03	2.78E-02	6.28E-03	4.39E-02
81	2.70	1.83E-07	0.	1.95E-06	9.53E-05	2.62E-07	0.	0.	0.	1.17E-03	9.74E-03	2.99E-02	6.79E-03	4.76E-02
82	2.60	4.75E-08	0.	7.63E-07	9.30E-06	1.13E-07	0.	0.	0.	1.17E-03	1.09E-02	3.25E 2	7.31E-03	5.19E-02
83	2.50	3.58E-09	0.	8.49E-08	8.67E-06	2.64E-08	0.	0.	0.	1.17E-03	1.23E-02	3.69E-02	3.99E-03	5.44E-02
84	2.49	0.	4.10E-06	0.	7.52E-06	2.79E-09	0.	0.	0.	1.17E-03	1.47E-02	4.38E-02	4.75E-03	6.29E-02
85	2.39	0.	1.37E-05	0.	0.	0.	0.	0.	0.	1.16E-03	1.99E-02	3.43E-02	5.68E-03	5.76E-02
86	2.28	0.	3.43E-05	0.	0.	0.	0.	0.	0.	1.15E-03	1.82E-02	4.12E-02	6.83E-03	6.74E-02
87	2.19	0.	3.84E-05	0.	0.	0.	0.	0.	0.	1.15E-03	2.10E-02	4.88E-02	7.97E-03	7.81E-02
88	2.08	0.	7.20E-05	0.	0.	0.	0.	0.	0.	1.11E-03	2.43E-02	5.47E-02	9.11E-03	8.94E-02
89	1.98	0.	1.81E-04	0.	0.	0.	0.	0.	0.	1.07E-03	2.84E-02	6.24E-02	1.05E-02	1.02E-01
90	1.88	0.	8.44E-05	0.	0.	0.	0.	0.	0.	1.02E-03	3.35E-02	7.43E-02	1.27E-02	1.22E-01
91	1.78	0.	9.07E-05	0.	0.	0.	0.	0.	0.	9.64E-04	3.99E-02	8.90E-02	1.54E-02	1.45E-01
92	1.69	0.	7.22E-05	0.	0.	0.	0.	0.	0.	8.10E-04	4.80E-02	1.06E-01	1.81E-02	1.71E-01
93	1.58	0.	8.40E-05	0.	0.	0.	0.	0.	0.	3.71E-04	5.84E-02	1.33E-01	2.19E-02	2.14E-01
94	1.48	0.	8.48E-05	0.	0.	0.	0.	0.	0.	0.	7.20E-02	1.65E-01	2.80E-02	2.63E-01
95	1.38	0.	6.49E-05	0.	0.	0.	0.	0.	0.	0.	9.84E-02	2.14E-01	3.44E-02	3.39E-01
96	1.28	0.	6.24E-05	0.	0.	0.	0.	0.	0.	0.	1.16E-01	2.26E-01	3.43E-02	3.77E-01
97	1.18	0.	5.77E-05	0.	0.	0.	0.	1.06E-10	0.	0.	1.92E-01	2.79E-01	4.31E-02	4.74E-01
98	1.08	0.	5.29E-05	0.	0.	0.	0.	1.40E-09	0.	0.	2.03E-01	3.30E-01	4.86E-02	5.90E-01
99	0.99	0.	4.35E-05	0.	0.	0.	0.	1.41E-09	0.	0.	2.74E-01	3.87E-01	5.72E-02	7.23E-01
100	0.89	0.	2.85E-05	0.	0.	0.	0.	5.36E-08	0.	0.	4.80E-01	4.45E-01	6.59E-02	9.18E-01
101	0.79	0.	4.95E-06	0.	0.	0.	0.	2.79E-08	0.	0.	6.84E-01	4.86E-01	7.83E-02	1.16E 00
102	0.69	0.	1.23E-07	0.	0.	0.	0.	9.66E-08	0.	0.	9.72E-01	5.43E-01	7.86E-02	1.59E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.9938-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	NO B-A BANDS	NO B-A CONT.	NO B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS) N P.E.	S P.E.	TOTAL AIR
1	10.70	0.	0.	1.96E-06	0.	0.	0.	3.93E-09	1.83E-09 1.29E-01	3.42E-04	1.29E-01
2	10.60	0.	0.	1.78E-06	0.	0.	0.	3.97E-09	1.84E-09 1.97E-01	3.51E-04	1.49E-01
3	10.50	0.	0.	1.77E-06	0.	0.	0.	3.94E-09	1.89E-09 1.94E-03	3.60E-04	1.99E-03
4	10.40	0.	0.	1.69E-06	0.	0.	0.	3.94E-09	1.12E-09 1.94E-03	3.59E-04	1.94E-03
5	10.30	0.	0.	1.42E-06	0.	0.	0.	3.95E-09	1.15E-09 1.95E-03	3.58E-04	1.94E-03
6	10.20	0.	0.	1.44E-06	0.	0.	0.	3.99E-09	1.19E-09 1.99E-03	3.57E-04	1.94E-03
7	10.10	0.	0.	1.36E-06	0.	0.	0.	3.94E-09	1.22E-09 1.95E-03	3.59E-04	1.94E-03
8	10.00	0.	0.	1.17E-06	0.	0.	0.	3.90E-09	1.26E-09 1.90E-03	3.54E-04	1.94E-03
9	9.90	0.	0.	1.20E-06	0.	0.	0.	3.97E-09	1.30E-09 1.96E-03	3.53E-04	1.97E-03
10	9.80	0.	0.	1.11E-06	0.	0.	0.	3.90E-09	1.34E-09 1.90E-03	3.52E-04	1.97E-03
11	9.70	0.	0.	9.48E-07	0.	0.	0.	3.98E-09	1.38E-09 1.97E-03	3.51E-04	1.97E-03
12	9.60	0.	0.	1.02E-06	0.	0.	0.	3.99E-09	1.42E-09 1.97E-03	3.50E-04	1.98E-03
13	9.50	0.	0.	8.90E-07	0.	0.	0.	4.00E-09	1.47E-09 1.98E-03	3.49E-04	1.98E-03
14	9.40	0.	0.	8.32E-07	0.	0.	0.	4.01E-09	1.52E-09 1.98E-03	3.47E-04	1.98E-03
15	9.30	0.	0.	8.19E-07	0.	0.	0.	4.03E-09	1.57E-09 1.99E-03	3.46E-04	1.99E-03
16	9.20	0.	0.	6.69E-07	0.	0.	0.	4.04E-09	1.62E-09 1.99E-03	3.45E-04	1.99E-03
17	9.10	0.	0.	6.81E-07	0.	0.	0.	4.04E-09	1.67E-09 5.30E-04	3.44E-04	9.33E-04
18	9.00	0.	0.	6.11E-07	0.	0.	0.	4.07E-09	1.73E-09 5.30E-04	3.43E-04	9.32E-04
19	8.90	0.	0.	5.90E-07	0.	0.	0.	4.09E-09	1.79E-09 5.30E-04	3.42E-04	9.32E-04
20	8.80	0.	0.	5.49E-07	0.	0.	0.	4.10E-09	1.85E-09 5.30E-04	3.41E-04	9.31E-04
21	8.70	0.	0.	4.69E-07	0.	0.	0.	4.12E-09	1.91E-09 5.31E-04	3.40E-04	9.31E-04
22	8.60	0.	0.	4.77E-07	0.	0.	0.	4.13E-09	1.98E-09 5.31E-04	3.39E-04	9.31E-04
23	8.50	0.	0.	4.11E-07	0.	0.	0.	4.14E-09	2.05E-09 5.32E-04	3.38E-04	9.32E-04
24	8.40	0.	0.	4.06E-07	0.	0.	0.	4.17E-09	2.13E-09 5.33E-04	3.37E-04	9.33E-04
25	8.30	0.	0.	3.38E-07	0.	0.	0.	4.19E-09	2.20E-09 5.34E-04	3.37E-04	9.35E-04
26	8.20	0.	0.	3.48E-07	0.	0.	0.	4.21E-09	2.29E-09 5.35E-04	3.36E-04	9.36E-04
27	8.10	0.	0.	2.89E-07	0.	0.	0.	4.23E-09	2.37E-09 5.35E-04	3.39E-04	9.41E-04
28	8.00	0.	0.	2.89E-07	0.	0.	0.	4.25E-09	2.47E-09 5.37E-04	3.40E-04	9.45E-04
29	7.90	0.	0.	2.49E-07	0.	0.	0.	4.28E-09	2.56E-09 5.39E-04	3.42E-04	9.50E-04
30	7.80	0.	0.	2.92E-07	0.	0.	0.	4.39E-09	2.66E-09 5.42E-04	3.43E-04	9.54E-04
31	7.70	0.	0.	2.18E-07	0.	0.	0.	4.32E-09	2.77E-09 5.44E-04	3.44E-04	9.59E-04
32	7.60	0.	0.	2.09E-07	0.	1.19E-11	0.	4.34E-09	2.88E-09 5.46E-04	3.45E-04	9.64E-04
33	7.50	0.	0.	1.87E-07	0.	4.17E-11	0.	4.36E-09	3.00E-09 5.49E-04	3.47E-04	9.69E-04
34	7.40	0.	0.	1.66E-07	0.	1.04E-10	0.	4.39E-09	3.12E-09 5.51E-04	3.48E-04	9.74E-04
35	7.30	0.	0.	1.90E-07	0.	1.38E-09	0.	4.41E-09	3.25E-09 5.53E-04	3.49E-04	9.79E-04
36	7.20	0.	0.	1.39E-07	0.	3.44E-09	0.	4.44E-09	3.39E-09 5.56E-04	3.50E-04	9.85E-04
37	7.10	0.	0.	1.32E-07	0.	1.05E-08	0.	4.47E-09	3.53E-09 5.58E-04	3.52E-04	9.90E-04
38	7.00	3.29E-11	0.	1.19E-07	0.	2.27E-08	0.	4.51E-09	3.69E-09 5.61E-04	3.53E-04	9.95E-04
39	6.90	6.38E-11	0.	1.08E-07	0.	2.89E-08	0.	4.54E-09	3.85E-09 5.63E-04	3.54E-04	1.00E-03
40	6.80	5.46E-11	0.	1.03E-07	0.	5.32E-08	0.	4.58E-09	4.03E-09 5.65E-04	3.55E-04	1.01E-03
41	6.70	3.94E-11	0.	8.88E-08	0.	5.55E-08	0.	4.62E-09	4.21E-09 5.68E-04	3.57E-04	1.01E-03
42	6.60	2.38E-11	0.	7.05E-08	0.	4.19E-08	0.	4.65E-09	4.41E-09 5.72E-04	3.59E-04	1.02E-03
43	6.50	1.36E-11	0.	6.15E-08	0.	6.55E-08	0.	4.69E-09	4.61E-09 5.77E-04	3.60E-04	1.03E-03
44	6.40	7.69E-12	0.	4.16E-08	2.59E-10	6.49E-08	0.	4.73E-09	4.84E-09 5.82E-04	3.62E-04	1.04E-03
45	6.30	4.41E-12	0.	2.93E-08	1.20E-09	4.24E-08	0.	4.76E-09	5.07E-09 5.87E-04	3.65E-04	1.05E-03
46	6.20	1.97E-12	0.	1.37E-08	1.67E-09	6.80E-08	0.	4.80E-09	5.32E-09 5.93E-04	3.69E-04	1.06E-03
47	6.10	8.91E-13	0.	6.38E-09	4.73E-09	7.82E-08	0.	4.84E-09	5.59E-09 5.99E-04	3.73E-04	1.08E-03
48	6.00	3.68E-13	0.	1.50E-09	4.41E-09	3.61E-08	0.	4.87E-09	5.88E-09 6.07E-04	3.77E-04	1.09E-03
49	5.90	8.97E-14	0.	1.11E-10	6.41E-09	1.58E-08	0.	4.87E-09	6.19E-09 6.15E-04	3.82E-04	1.11E-03
50	5.80	1.14E-14	0.	2.83E-12	8.88E-09	3.61E-08	0.	4.88E-09	6.51E-09 6.23E-04	3.86E-04	1.12E-03
51	5.70	4.39E-16	0.	0.	1.82E-08	4.81E-08	0.	4.51E-09	6.87E-09 6.31E-04	3.90E-04	1.14E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.77E-17	0.	0.	0.	8.47E-09	5.92E-08	0.	0.	4.19E-05	7.24E-05	6.41E-04	3.95E-04	1.15E-03
53	5.50	0.	0.	0.	0.	1.05E-08	5.14E-08	0.	0.	4.21E-05	7.65E-05	6.54E-04	3.99E-04	1.17E-03
54	5.40	0.	0.	0.	0.	9.34E-09	4.02E-08	0.	0.	4.24E-05	8.08E-05	6.69E-04	4.05E-04	1.20E-03
55	5.30	0.	0.	0.	0.	9.56E-09	5.23E-08	0.	0.	4.26E-05	8.55E-05	6.85E-04	4.11E-04	1.22E-03
56	5.20	0.	0.	0.	0.	1.02E-08	3.72E-09	0.	0.	4.29E-05	9.05E-05	7.02E-04	4.19E-04	1.25E-03
57	5.10	0.	0.	0.	0.	1.01E-08	4.84E-09	0.	0.	4.33E-05	9.60E-05	7.22E-04	4.27E-04	1.29E-03
58	5.00	5.00E-10	0.	0.	0.	9.23E-09	4.45E-08	0.	0.	4.36E-05	1.02E-04	7.44E-04	4.35E-04	1.32E-03
59	4.90	1.19E-09	0.	0.	0.	1.02E-08	4.78E-08	0.	0.	4.40E-05	1.08E-04	7.68E-04	4.43E-04	1.36E-03
60	4.80	2.28E-09	0.	0.	0.	1.09E-08	4.45E-08	0.	0.	4.44E-05	1.14E-04	7.94E-04	4.53E-04	1.41E-03
61	4.70	2.92E-09	0.	0.	0.	1.07E-08	4.00E-08	0.	0.	4.47E-05	1.23E-04	8.20E-04	4.64E-04	1.45E-03
62	4.60	3.97E-09	0.	0.	0.	1.10E-08	3.65E-08	0.	0.	4.51E-05	1.31E-04	8.52E-04	4.76E-04	1.50E-03
63	4.50	4.12E-09	0.	8.07E-09	0.	9.91E-09	2.73E-08	0.	0.	4.54E-05	1.40E-04	8.82E-04	4.88E-04	1.57E-03
64	4.40	4.35E-09	0.	2.52E-08	0.	9.98E-09	1.90E-08	0.	0.	4.58E-05	1.50E-04	9.32E-04	5.01E-04	1.63E-03
65	4.30	4.96E-09	0.	7.73E-08	0.	9.32E-09	1.17E-08	0.	0.	4.62E-05	1.61E-04	9.75E-04	5.14E-04	1.70E-03
66	4.20	3.76E-09	0.	2.61E-07	0.	9.78E-09	8.45E-09	0.	0.	4.65E-05	1.71E-04	1.02E-03	5.27E-04	1.77E-03
67	4.10	3.49E-09	0.	1.06E-07	0.	9.45E-09	2.31E-09	0.	0.	4.67E-05	1.84E-04	1.06E-03	5.31E-04	1.83E-03
68	4.00	3.19E-09	0.	3.74E-07	0.	9.04E-09	1.75E-09	0.	0.	4.69E-05	2.00E-04	1.11E-03	1.02E-04	1.56E-03
69	3.90	2.48E-09	0.	1.71E-07	2.00E-07	8.21E-09	6.85E-10	0.	0.	4.47E-05	2.14E-04	1.05E-03	1.84E-04	1.50E-03
70	3.80	2.92E-09	0.	2.68E-07	1.47E-06	8.79E-09	0	0.	0.	4.69E-05	2.34E-04	1.07E-03	1.95E-04	1.55E-03
71	3.70	2.55E-09	0.	2.93E-07	5.35E-07	7.33E-09	0.	0.	0.	4.58E-05	2.53E-04	8.59E-04	2.15E-04	1.37E-03
72	3.60	2.28E-09	0.	1.94E-07	3.02E-06	7.94E-09	0.	0.	0.	4.28E-05	2.75E-04	9.28E-04	2.37E-04	1.49E-03
73	3.50	2.11E-09	0.	2.64E-07	6.47E-06	8.14E-09	0.	0.	0.	3.93E-05	3.00E-04	9.70E-04	2.62E-04	1.56E-03
74	3.40	1.91E-09	0.	1.63E-07	8.28E-07	6.87E-09	0.	0.	0.	2.38E-05	3.27E-04	1.38E-03	2.97E-04	1.73E-03
75	3.30	1.51E-09	0.	1.45E-07	3.48E-06	5.39E-09	0	0.	0.	2.27E-05	3.58E-04	1.25E-03	3.14E-04	1.80E-03
76	3.20	1.30E-09	0.	1.45E-07	6.41E-06	5.42E-09	0.	0.	0.	2.27E-05	3.97E-04	1.32E-03	3.48E-04	2.29E-03
77	3.10	1.23E-09	0.	8.12E-08	1.30E-06	5.25E-09	0.	0.	0.	2.28E-05	4.35E-04	1.44E-03	3.78E-04	2.27E-03
78	3.00	1.09E-09	0.	4.94E-08	3.36E-06	4.88E-09	0.	0.	0.	2.28E-05	4.78E-04	1.56E-03	4.36E-04	2.47E-03
79	2.90	9.95E-10	0.	3.02E-08	1.91E-06	3.65E-09	0.	0.	0.	2.29E-05	5.30E-04	1.68E-03	4.30E-04	2.68E-03
80	2.80	9.33E-10	0.	1.45E-06	1.09E-06	2.46E-09	0.	0.	0.	2.29E-05	5.89E-04	1.83E-03	4.74E-04	2.91E-03
81	2.75	5.99E-10	0.	4.76E-09	1.61E-06	1.31E-09	0.	0.	0.	2.29E-05	6.59E-04	1.98E-03	5.13E-04	3.18E-03
82	2.65	2.71E-10	0.	3.34E-09	1.57E-07	5.63E-10	0.	0.	0.	2.29E-05	7.34E-04	2.15E-03	5.52E-04	3.46E-03
83	2.50	1.88E-11	0.	3.72E-10	1.46E-07	1.32E-10	0.	0.	0.	2.29E-05	8.31E-04	2.44E-03	1.30E-04	3.60E-03
84	2.40	0.	1.80E-08	0.	1.27E-07	1.39E-11	0.	0.	0.	2.29E-05	9.41E-04	2.84E-03	1.59E-04	4.17E-03
85	2.30	0.	6.02E-08	0.	0.	0.	0.	0.	0.	2.27E-05	1.07E-03	2.31E-03	0.20E-04	3.83E-03
86	2.20	0.	1.50E-07	0.	0.	0.	0.	0.	0.	2.26E-05	1.23E-03	2.72E-03	5.15E-04	4.49E-03
87	2.10	0.	1.68E-07	0.	0.	0.	0.	0.	0.	2.25E-05	1.41E-03	3.17E-03	6.02E-04	5.21E-03
88	2.00	0.	3.12E-07	0.	0.	0.	0.	0.	0.	2.18E-05	1.64E-03	3.62E-03	6.88E-04	5.97E-03
89	1.90	0.	4.63E-07	0.	0.	0.	0.	0.	0.	2.10E-05	1.91E-03	4.13E-03	7.91E-04	6.85E-03
90	1.80	0.	5.83E-07	0.	0.	0.	0.	0.	0.	2.71E-05	2.24E-03	4.92E-03	9.55E-04	8.15E-03
91	1.70	0.	4.32E-07	0.	0.	0.	0.	0.	0.	1.89E-05	2.69E-03	5.89E-03	1.14E-03	9.76E-03
92	1.60	0.	3.14E-07	0.	0.	0.	0.	0.	0.	1.60E-05	3.27E-03	6.97E-03	1.34E-03	1.15E-02
93	1.50	0.	3.71E-07	0.	0.	0.	0.	0.	0.	7.27E-06	3.93E-03	8.81E-03	1.64E-03	1.44E-02
94	1.40	0.	5.71E-07	0.	0.	0.	0.	0.	0.	0.	4.85E-03	1.08E-02	1.97E-03	1.77E-02
95	1.30	0.	2.84E-07	0.	0.	0.	0.	0.	0.	0.	6.98E-03	1.42E-02	2.83E-03	2.29E-02
96	1.20	0.	2.73E-07	0.	0.	0.	0.	0.	0.	0.	7.82E-03	1.50E-02	2.59E-03	2.54E-02
97	1.10	0.	2.52E-07	0.	0.	0.	0.	5.24E-13	0.	0.	1.93E-02	1.95E-02	3.25E-03	3.28E-02
98	1.05	0.	2.32E-07	0.	0.	0.	0.	6.94E-12	0.	0.	1.37E-02	2.24E-02	3.67E-03	3.97E-02
99	1.00	0.	1.93E-07	0.	0.	0.	0.	8.03E-12	0.	0.	1.49E-02	2.56E-02	4.32E-03	4.87E-02
100	0.95	0.	8.95E-08	0.	0	0.	0.	1.44E-10	0.	0.	2.49E-02	1.94E-02	4.97E-03	6.13E-02
101	0.90	0.	2.16E-08	0.	0.	0	0.	1.13E-10	0.	0.	4.97E-02	2.72E-02	5.31E-03	7.81E-02
102	0.85	0.	3.14E-09	0.	0.	0.	0.	4.45E-10	0.	0.	8.55E-02	3.50E-02	5.94E-03	1.17E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.16E-09	0.	0.	0.	2.97E-07	3.93E-07	5.87E-05	1.48E-05	6.61E-05
2	10.60	0.	0.	1.94E-09	0.	0.	0.	2.97E-07	3.63E-07	5.89E-05	1.47E-05	6.63E-05
3	10.50	0.	0.	1.95E-09	0.	0.	0.	2.98E-07	3.74E-07	5.12E-05	1.47E-05	6.65E-05
4	10.40	0.	0.	1.82E-09	0.	0.	0.	2.98E-07	3.85E-07	5.14E-05	1.46E-05	6.67E-05
5	10.30	0.	0.	1.97E-09	0.	0.	0.	2.99E-07	3.96E-07	5.15E-05	1.46E-05	6.68E-05
6	10.20	0.	0.	1.41E-09	0.	0.	0.	2.99E-07	4.08E-07	5.16E-05	1.45E-05	6.69E-05
7	10.10	0.	0.	1.50E-09	0.	0.	0.	2.99E-07	4.20E-07	5.16E-05	1.45E-05	6.68E-05
8	10.00	0.	0.	1.30E-09	0.	0.	0.	3.00E-07	4.33E-07	5.17E-05	1.44E-05	6.69E-05
9	9.90	0.	0.	1.32E-09	0.	0.	0.	3.00E-07	4.46E-07	5.18E-05	1.44E-05	6.70E-05
10	9.80	0.	0.	1.23E-09	0.	0.	0.	3.01E-07	4.60E-07	5.19E-05	1.44E-05	6.71E-05
11	9.70	0.	0.	1.04E-09	0.	0.	0.	3.01E-07	4.75E-07	5.21E-05	1.43E-05	6.72E-05
12	9.60	0.	0.	1.13E-09	0.	0.	0.	3.02E-07	4.90E-07	5.22E-05	1.43E-05	6.73E-05
13	9.50	0.	0.	9.48E-10	0.	0.	0.	3.02E-07	5.05E-07	5.24E-05	1.42E-05	6.74E-05
14	9.40	0.	0.	8.85E-10	0.	0.	0.	3.04E-07	5.22E-07	5.25E-05	1.42E-05	6.75E-05
15	9.30	0.	0.	9.03E-10	0.	0.	0.	3.05E-07	5.39E-07	5.27E-05	1.41E-05	6.76E-05
16	9.20	0.	0.	7.38E-10	0.	0.	0.	3.06E-07	5.57E-07	5.28E-05	1.41E-05	6.78E-05
17	9.10	0.	0.	7.51E-10	0.	0.	0.	3.07E-07	5.75E-07	1.76E-05	1.40E-05	3.25E-05
18	9.00	0.	0.	6.74E-10	0.	0.	0.	3.08E-07	5.95E-07	1.76E-05	1.40E-05	3.25E-05
19	8.90	0.	0.	6.15E-10	0.	0.	0.	3.09E-07	6.15E-07	1.76E-05	1.39E-05	3.25E-05
20	8.80	0.	0.	6.01E-10	0.	0.	0.	3.10E-07	6.36E-07	1.76E-05	1.39E-05	3.25E-05
21	8.70	0.	0.	5.13E-10	0.	0.	0.	3.11E-07	6.58E-07	1.76E-05	1.30E-05	3.25E-05
22	8.60	0.	0.	5.26E-10	0.	0.	0.	3.12E-07	6.82E-07	1.76E-05	1.38E-05	3.25E-05
23	8.50	0.	0.	4.93E-10	0.	0.	0.	3.13E-07	7.06E-07	1.77E-05	1.36E-05	3.25E-05
24	8.40	0.	0.	4.47E-10	0.	0.	0.	3.15E-07	7.32E-07	1.77E-05	1.37E-05	3.25E-05
25	8.30	0.	0.	3.73E-10	0.	0.	0.	3.17E-07	7.59E-07	1.77E-05	1.37E-05	3.25E-05
26	8.20	0.	0.	3.75E-10	0.	0.	0.	3.18E-07	7.87E-07	1.78E-05	1.36E-05	3.27E-05
27	8.10	0.	0.	3.19E-10	0.	0.	0.	3.20E-07	8.17E-07	1.78E-05	1.35E-05	3.28E-05
28	8.00	0.	0.	3.19E-10	0.	0.	0.	3.22E-07	8.48E-07	1.78E-05	1.35E-05	3.29E-05
29	7.90	0.	0.	2.70E-10	0.	0.	0.	3.23E-07	8.81E-07	1.79E-05	1.35E-05	3.31E-05
30	7.80	0.	0.	2.70E-10	0.	0.	0.	3.25E-07	9.16E-07	1.80E-05	1.40E-05	3.32E-05
31	7.70	0.	0.	2.40E-10	0.	0.	0.	3.27E-07	9.52E-07	1.81E-05	1.40E-05	3.34E-05
32	7.60	0.	0.	2.26E-10	0.	1.49E-14	0.	3.28E-07	9.91E-07	1.81E-05	1.41E-05	3.35E-05
33	7.50	0.	0.	2,06E-10	0.	5.64E-14	0.	3.30E-07	1.03E-06	1.82E-05	1.41E-05	3.37E-05
34	7.40	0.	0.	1.83E-10	0.	4.13E-13	0.	3.32E-07	1.07E-06	1.83E-05	1.42E-05	3.39E-05
35	7.30	0.	0.	1.72E-10	0.	1.76E-12	0.	3.34E-07	1.12E-06	1.84E-05	1.42E-05	3.41E-05
36	7.20	0.	0.	1.93E-10	0.	4.72E-12	0.	3.35E-07	1.17E-06	1.85E-05	1.43E-05	3.42E-05
37	7.10	0.	0.	1.45E-10	0.	1.43E-11	0.	3.36E-07	1.22E-06	1.85E-05	1.43E-05	3.44E-05
38	7.00	5.48E-14	0.	1.32E-10	0.	3.07E-11	0.	3.41E-07	1.27E-06	1.86E-05	1.44E-05	3.46E-05
39	6.90	1.06E-13	0.	1,19E-10	0.	3.91E-11	0.	3.44E-07	1.33E-06	1.87E-05	1.44E-05	3.48E-05
40	6.80	9.07E-14	0.	1.13E-10	0.	7.20E-11	0.	3.46E-07	1.38E-06	1.88E-05	1.45E-05	3.50E-05
41	6.70	6.54E-14	0.	9.79E-11	0.	7.51E-11	0.	3.49E-07	1.45E-06	1.89E-05	1.46E-05	3.52E-05
42	6.60	3.96E-14	0.	8.66E-11	0.	5.67E-11	0.	3.52E-07	1.52E-06	1.90E-05	1.46E-05	3.55E-05
43	6.50	2.26E-14	0.	6.78E-11	0.	8.66E-11	0.	3.55E-07	1.59E-06	1.92E-05	1.47E-05	3.58E-05
44	6.40	1.28E-14	0.	4.58E-11	3.53E-13	8.79E-11	0.	3.57E-07	1.66E-06	1.93E-05	1.48E-05	3.61E-05
45	6.30	7.33E-15	0.	2.79E-11	1.62E-12	5.74E-11	0.	3.60E-07	1.74E-06	1.95E-05	1.49E-05	3.65E-05
46	6.20	3.27E-15	0.	1.51E-11	2.26E-12	3.12E-11	0.	3.63E-07	1.83E-06	1.97E-05	1.50E-05	3.69E-05
47	6.10	1.48E-15	0.	6.95E-12	6.40E-12	1.06E-10	0.	3.66E-07	1.92E-06	1.99E-05	1.52E-05	3.74E-05
48	6.00	6.11E-16	0.	1.74E-12	5.97E-12	4.88E-11	0.	3.68E-07	2.02E-06	2.02E-05	1.54E-05	3.79E-05
49	5.90	1.49E-16	0.	1.25E-13	8.67E-12	4.85E-11	0.	3.68E-07	2.13E-06	2.04E-05	1.56E-05	3.85E-05
50	5.80	1.49E-17	0.	3.12E-15	1.20E-11	4.88E-11	0.	3.63E-07	2.24E-06	2.07E-05	1.57E-05	3.90E-05
51	5.70	1.39E-18	0.	0.	1.38E-11	5.43E-11	0.	3.41E-07	2.36E-06	2.10E-05	1.59E-05	3.96E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO V'H-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.26E-20	0.	0.	0.	1.15E-11	7.47E-11	0.	0.	3.17E-07	2.49E-06	2.13E-05	1.61E-05	4.02E-05
53	5.50	0.	0.	0.	0.	1.40E-11	6.96E-11	0.	0.	3.19E-07	2.63E-06	2.17E-05	1.63E-05	4.10E-05
54	5.40	0.	0.	0.	0.	1.26E-11	5.44E-11	0.	0.	3.20E-07	2.78E-06	2.22E-05	1.65E-05	4.19E-05
55	5.30	0.	0.	0.	0	1.23E-11	7.07E-11	0.	0.	3.22E-07	2.94E-06	2.28E-05	1.68E-05	4.28E-05
56	5.20	0.	0.	0.	0.	1.38E-11	5.03E-11	0.	0.	3.24E-07	3.12E-06	2.33E-05	1.71E-05	4.38E-05
57	5.10	0.	0.	0.	0.	1.37E-11	4.55E-11	0.	0.	3.27E-07	3.30E-06	2.40E-05	1.74E-05	4.50E-05
58	5.00	9.30E-13	0.	0.	0.	1.25E-11	6.03E-11	0.	0.	3.30E-07	3.51E-06	2.47E-05	1.77E-05	4.63E-05
59	4.90	1.99E-12	0.	0.	0.	1.38E-11	6.46E-11	0.	0.	3.33E-07	3.73E-06	2.55E-05	1.81E-05	4.76E-05
60	4.80	3.46E-12	0.	0.	0.	1.47E-11	6.03E-11	0.	0.	3.35E-07	3.97E-06	2.64E-05	1.85E-05	4.91E-05
61	4.70	4.86E-12	0.	0.	0.	1.45E-11	5.42E-11	0.	0.	3.38E-07	4.23E-06	2.72E-05	1.89E-05	5.07E-05
62	4.60	6.59E-12	0.	0.	0.	1.48E-11	4.93E-11	0.	0.	3.41E-07	4.51E-06	2.83E-05	1.94E-05	5.26E-05
63	4.50	8.85E-12	0.	9.90E-12	0.	1.54E-11	3.69E-11	0.	0.	3.44E-07	4.82E-06	2.96E-05	1.99E-05	5.47E-05
64	4.40	7.22E-12	0.	2.78E-11	0.	1.34E-11	2.57E-11	0.	0.	3.46E-07	5.16E-06	3.09E-05	2.04E-05	5.69E-05
65	4.30	6.75E-12	0.	8.52E-11	0.	1.26E-11	1.58E-11	0.	0.	3.49E-07	5.53E-06	3.24E-05	2.09E-05	5.92E-05
66	4.20	6.24E-12	0.	2.88E-10	0.	1.32E-11	1.14E-11	0.	0.	3.52E-07	5.94E-06	3.39E-05	2.15E-05	6.16E-05
67	4.10	5.61E-12	0.	1.17E-10	0.	1.28E-11	3.12E-12	0.	0.	3.53E-07	6.39E-06	3.53E-05	2.17E-05	6.37E-05
68	4.00	5.30E-12	0.	4.13E-10	0.	1.22E-11	2.37E-12	0.	0.	3.55E-07	6.88E-06	3.68E-05	2.42E-06	6.15E-05
69	3.90	4.45E-12	0.	1.49E-10	1.84E-09	1.11E-11	9.27E-13	0.	0.	3.53E-07	7.43E-06	3.45E-05	2.65E-06	5.90E-05
70	3.80	4.85E-12	0.	2.96E-10	8.74E-09	1.19E-11	0	0.	0.	3.52E-07	8.04E-06	2.74E-05	2.95E-06	4.37E-05
71	3.70	4.24E-12	0.	3.23E-10	3.18E-09	9.52E-12	0.	0.	0.	3.46E-07	8.72E-06	2.85E-05	8.76E-06	4.64E-05
72	3.60	3.79E-12	0.	2.14E-10	1.79E-08	1.08E-11	0.	0.	0.	3.24E-07	9.47E-06	2.90E-05	9.67E-06	4.85E-05
73	3.50	3.50E-12	0.	2.92E-10	3.85E-08	8.31E-12	0.	0	0.	2.97E-07	1.03E-05	3.22E-05	1.07E-05	5.36E-05
74	3.40	3.17E-12	0.	1.76E-10	4.92E-09	9.29E-12	0.	0.	0.	1.71E-07	1.13E-05	3.60E-05	1.18E-05	5.93E-05
75	3.30	2.52E-12	0.	1.82E-10	2.07E-08	7.30E-12	0.	0.	0.	1.72E-07	1.23E-05	3.98E-05	1.30E-05	6.53E-05
76	3.20	2.16E-12	0.	1.16E-10	3.81E-08	7.60E-12	0.	0.	0.	1.72E-07	1.35E-05	4.37E-05	1.42E-05	7.16E-05
77	3.10	2.05E-12	0.	8.95E-11	7.74E-09	7.11E-12	0.	0.	0.	1.72E-07	1.49E-05	4.77E-05	1.54E-05	7.82E-05
78	3.00	1.81E-12	0.	5.41E-11	2.00E-08	6.61E-12	0.	0.	0.	1.73E-07	1.65E-05	5.17E-05	1.66E-05	8.50E-05
79	2.90	1.50E-12	0.	3.34E-11	1.13E-08	4.94E-12	0.	0.	0.	1.73E-07	1.82E-05	5.59E-05	1.79E-05	9.22E-05
80	2.80	1.55E-12	0.	1.60E-11	6.49E-09	3.33E-12	0.	0.	0.	1.73E-07	2.03E-05	6.07E-05	1.93E-05	1.00E-04
81	2.70	9.79E-13	0.	7.46E-12	9.54E-09	1.77E-12	0.	0.	0.	1.73E-07	2.24E-05	6.58E-05	2.09E-05	1.10E-04
82	2.60	4.50E-13	0.	3.48E-12	9.32E-10	7.62E-13	0.	0.	0.	1.73E-07	2.54E-05	7.13E-05	2.01E-05	1.17E-04
83	2.50	3.13E-14	0.	4.10E-13	8.68E-10	1.79E-13	0.	0.	0.	1.73E-07	2.96E-05	8.08E-05	1.19E-05	1.22E-04
84	2.40	0.	1.98E-11	0.	7.54E-10	1.89E-14	0.	0.	0.	1.73E-07	3.24E-05	6.31E-05	1.46E-05	1.10E-04
85	2.30	0.	6.64E-11	0.	0.	0.	0.	0.	0.	1.72E-07	3.69E-05	7.65E-05	1.75E-05	1.31E-04
86	2.20	0.	1.65E-10	0.	0.	0.	0.	0.	0.	1.71E-07	4.22E-05	9.05E-05	2.10E-05	1.54E-04
87	2.10	0.	1.85E-10	0	0.	0.	0.	0.	0.	1.70E-07	4.84E-05	1.05E-04	2.45E-05	1.79E-04
88	2.00	0.	3.52E-10	0.	0.	0.	0.	0.	0.	1.65E-07	5.64E-05	1.20E-04	2.81E-05	2.05E-04
89	1.90	0.	4.89E-10	0.	0.	0.	0.	0.	0.	1.59E-07	6.59E-05	1.37E-04	3.22E-05	2.35E-04
90	1.80	0.	4.07E-10	0.	0.	0.	0.	0.	0.	1.52E-07	7.77E-05	1.63E-04	3.80E-05	2.80E-04
91	1.70	0.	4.76E-10	0.	0.	0.	0.	0.	0.	1.43E-07	9.25E-05	1.96E-04	4.73E-05	3.36E-04
92	1.60	0.	3.49E-10	0.	0.	0.	0.	0.	0.	1.21E-07	1.11E-04	2.28E-04	5.56E-05	3.95E-04
93	1.50	0.	4.09E-10	0.	0.	0.	0.	0.	0.	5.50E-08	1.34E-04	2.92E-04	6.75E-05	4.95E-04
94	1.40	0.	4.09E-10	0.	0.	0.	0.	0.	0.	0.	1.67E-04	3.43E-04	8.02E-05	5.90E-04
95	1.30	0.	3.13E-10	0.	0.	0.	0.	0.	0.	0.	2.10E-04	4.71E-04	1.02E-04	7.84E-04
96	1.20	0.	3.01E-10	0.	0.	0.	0.	0.	0.	0.	2.69E-04	4.97E-04	1.05E-04	8.72E-04
97	1.10	0.	2.74E-10	0.	0.	0.	0.	7.14E-16	0.	0.	3.52E-04	6.13E-04	1.33E-04	1.10E-03
98	1.00	0.	2.55E-10	0.	0.	0.	0.	9.45E-15	0.	0.	4.71E-04	7.43E-04	1.58E-04	1.36E-03
99	0.90	0.	2.10E-10	0.	0.	0.	0.	1.09E-14	0.	0.	6.48E-04	8.69E-04	1.78E-04	1.67E-03
100	0.80	0.	9.87E-11	0.	0.	0.	0.	2.27E-13	0.	0.	9.27E-04	9.77E-04	2.03E-04	2.11E-03
101	0.70	0.	2.39E-11	0.	0.	0.	0.	1.39E-13	0.	0.	1.40E-03	1.07E-03	2.16E-04	2.68E-03
102	0.60	0.	3.49E-12	0.	0.	0.	0.	6.54E-13	0.	0.	2.25E-03	1.07E-03	1.84E-04	3.51E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.40E-13	0.	0.	0.	5.73E-10	5.19E-09	7.41E-07	2.35E-07	9.82E-07
2	10.60	0.	0.	4.03E-13	0.	0.	0.	5.74E-10	5.34E-09	7.49E-07	2.35E-07	9.89E-07
3	10.50	0.	0.	4.04E-13	0.	0.	0.	5.75E-10	5.49E-09	7.57E-07	2.34E-07	9.77E-07
4	10.40	0.	0.	3.70E-13	0.	0.	0.	5.76E-10	5.65E-09	7.39E-07	2.33E-07	9.70E-07
5	10.30	0.	0.	3.20E-13	0.	0.	0.	5.76E-10	5.82E-09	7.48E-07	2.32E-07	9.79E-07
6	10.20	0.	0.	3.33E-13	0.	0.	0.	5.77E-10	5.99E-09	7.42E-07	2.32E-07	9.80E-07
7	10.10	0.	0.	3.11E-13	0.	0.	0.	5.78E-10	6.17E-09	7.44E-07	2.31E-07	9.82E-07
8	10.00	0.	0.	2.60E-13	0.	0.	0.	5.79E-10	6.36E-09	7.48E-07	2.30E-07	9.83E-07
9	9.90	0.	0.	2.74E-13	0.	0.	0.	5.80E-10	6.54E-09	7.47E-07	2.29E-07	9.84E-07
10	9.80	0.	0.	2.55E-13	0.	0.	0.	5.81E-10	6.76E-09	7.49E-07	2.29E-07	9.85E-07
11	9.70	0.	0.	2.17E-13	0.	0.	0.	5.82E-10	6.97E-09	7.51E-07	2.28E-07	9.87E-07
12	9.60	0.	0.	2.34E-13	0.	0.	0.	5.83E-10	7.19E-09	7.53E-07	2.27E-07	9.88E-07
13	9.50	0.	0.	1.94E-13	0.	0.	0.	5.84E-10	7.42E-09	7.55E-07	2.26E-07	9.90E-07
14	9.40	0.	0.	1.83E-13	0.	0.	0.	5.86E-10	7.66E-09	7.58E-07	2.26E-07	9.92E-07
15	9.30	0.	0.	1.87E-13	0.	0.	0.	9.88E-10	7.91E-09	2.54E-07	2.25E-07	4.85E-07
16	9.20	0.	0.	1.92E-13	0.	0.	0.	9.90E-10	8.17E-09	2.56E-07	2.24E-07	4.85E-07
17	9.10	0.	0.	1.96E-13	0.	0.	0.	9.93E-10	8.45E-09	2.56E-07	2.24E-07	4.86E-07
18	9.00	0.	0.	1.40E-13	0.	0.	0.	9.95E-10	8.73E-09	2.55E-07	2.23E-07	4.86E-07
19	8.90	0.	0.	1.28E-13	0.	0.	0.	9.97E-10	9.03E-09	2.55E-07	2.22E-07	4.87E-07
20	8.80	0.	0.	1.29E-13	0.	0.	0.	9.99E-10	9.34E-09	2.56E-07	2.22E-07	4.87E-07
21	8.70	0.	0.	1.08E-13	0.	0.	0.	6.01E-10	9.67E-09	2.56E-07	2.21E-07	4.87E-07
22	8.60	0.	0.	1.09E-13	0.	0.	0.	6.03E-10	1.00E-08	2.56E-07	2.20E-07	4.87E-07
23	8.50	0.	0.	9.39E-14	0.	0.	0.	6.05E-10	1.04E-08	2.56E-07	2.20E-07	4.87E-07
24	8.40	0.	0.	9.27E-14	0.	0.	0.	6.08E-10	1.07E-08	2.57E-07	2.19E-07	4.87E-07
25	8.30	0.	0.	7.74E-14	0.	0.	0.	6.12E-10	1.11E-08	2.57E-07	2.19E-07	4.88E-07
26	8.20	0.	0.	7.78E-14	0.	0.	0.	6.15E-10	1.16E-08	2.58E-07	2.20E-07	4.90E-07
27	8.10	0.	0.	6.61E-14	0.	0.	0.	6.18E-10	1.20E-08	2.58E-07	2.20E-07	4.91E-07
28	8.00	0.	0.	6.60E-14	0.	0.	0.	6.21E-10	1.25E-08	2.57E-07	2.21E-07	4.92E-07
29	7.90	0.	0.	5.60E-14	0.	0.	0.	6.24E-10	1.29E-08	2.59E-07	2.22E-07	4.94E-07
30	7.80	0.	0.	5.76E-14	0.	0.	0.	6.28E-10	1.34E-08	2.60E-07	2.23E-07	4.97E-07
31	7.70	0.	0.	4.99E-14	0.	0.	0.	6.31E-10	1.40E-08	2.61E-07	2.24E-07	4.99E-07
32	7.60	0.	0.	4.68E-14	0.	3.42E-18	0.	6.34E-10	1.45E-08	2.62E-07	2.24E-07	5.02E-07
33	7.50	0.	0.	4.27E-14	0.	1.29E-17	0.	6.37E-10	1.51E-08	2.63E-07	2.25E-07	5.04E-07
34	7.40	0.	0.	3.80E-14	0.	9.49E-17	0.	6.41E-10	1.56E-08	2.64E-07	2.26E-07	5.07E-07
35	7.30	0.	0.	3.96E-14	0.	4.03E-16	0.	6.44E-10	1.64E-08	2.66E-07	2.27E-07	5.10E-07
36	7.20	0.	0.	3.17E-14	0.	1.08E-15	0.	6.48E-10	1.71E-08	2.67E-07	2.28E-07	5.12E-07
37	7.10	0.	0.	3.01E-14	0.	3.20E-15	0.	6.53E-10	1.79E-08	2.68E-07	2.28E-07	5.15E-07
38	7.00	1.39E-17	0.	2.73E-14	0.	7.04E-15	0.	6.58E-10	1.86E-08	2.69E-07	2.29E-07	5.18E-07
39	6.90	2.70E-17	0.	2.47E-14	0.	8.97E-15	0.	6.64E-10	1.95E-08	2.70E-07	2.30E-07	5.21E-07
40	6.80	2.30E-17	0.	2.35E-14	0.	1.65E-14	0.	6.69E-10	2.03E-08	2.72E-07	2.31E-07	5.23E-07
41	6.70	1.66E-17	0.	2.03E-14	0.	1.72E-14	0.	6.74E-10	2.13E-08	2.73E-07	2.32E-07	5.27E-07
42	6.60	1.01E-17	0.	1.79E-14	0.	1.30E-14	0.	6.80E-10	2.23E-08	2.75E-07	2.33E-07	5.31E-07
43	6.50	5.75E-18	0.	1.41E-14	0.	2.03E-14	0.	6.85E-10	2.33E-08	2.77E-07	2.34E-07	5.36E-07
44	6.40	3.25E-18	0.	9.90E-15	8.03E-17	2.02E-14	0.	6.90E-10	2.44E-08	2.80E-07	2.35E-07	5.41E-07
45	6.30	1.46E-18	0.	5.78E-15	3.71E-16	1.32E-14	0.	6.96E-10	2.56E-08	2.82E-07	2.37E-07	5.46E-07
46	6.20	8.31E-19	0.	3.13E-15	5.19E-16	1.86E-14	0.	7.01E-10	2.69E-08	2.85E-07	2.40E-07	5.52E-07
47	6.10	3.76E-19	0.	1.44E-15	1.47E-15	2.43E-14	0.	7.06E-10	2.82E-08	2.88E-07	2.43E-07	5.60E-07
48	6.00	1.55E-19	0.	3.61E-16	1.37E-15	1.12E-14	0.	7.11E-10	2.97E-08	2.92E-07	2.45E-07	5.68E-07
49	5.90	3.79E-20	0.	2.98E-17	1.99E-15	1.11E-14	0.	7.11E-10	3.12E-08	2.96E-07	2.49E-07	5.76E-07
50	5.80	4.82E-21	0.	6.47E-18	2.76E-15	1.12E-14	0.	7.01E-10	3.29E-08	3.00E-07	2.51E-07	5.84E-07
51	5.70	3.54E-22	0.	0.	3.17E-15	1.25E-14	0.	6.58E-10	3.47E-08	3.02E-07	2.54E-07	5.91E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.49E-23	0.	0.	0.	2.63E-15	1.71E-14	0.	0.	6.12E-10	3.66E-08	3.07E-07	2.56E-07	6.08E-07
53	5.53	0.	0.	0.	0.	3.21E-15	1.60E-14	0.	0.	6.15E-10	3.84E-08	3.13E-07	2.59E-07	6.11E-07
54	5.47	0.	0.	0.	0.	2.90E-15	1.25E-14	0.	0.	6.19E-10	4.04E-08	3.20E-07	2.63E-07	6.25E-07
55	5.39	0.	0.	0.	0.	2.97E-15	1.62E-14	0.	0.	6.23E-10	4.32E-08	3.28E-07	2.67E-07	6.39E-07
56	5.27	0.	0.	0.	0.	3.17E-15	1.15E-14	0.	0.	6.27E-10	4.57E-08	3.36E-07	2.72E-07	6.55E-07
57	5.13	0.	0.	0.	0.	3.15E-15	1.50E-14	0.	0.	6.32E-10	4.85E-08	3.45E-07	2.78E-07	6.72E-07
58	5.00	2.11E-16	0.	0.	0.	2.86E-15	1.38E-14	0.	0.	6.37E-10	5.15E-08	3.56E-07	2.83E-07	6.91E-07
59	4.99	5.05E-14	0.	0.	0.	3.16E-15	1.48E-14	0.	0.	6.42E-10	5.47E-08	3.67E-07	2.88E-07	7.11E-07
60	4.83	9.30E-16	0.	0.	0.	3.37E-15	1.38E-14	0.	0.	6.48E-10	5.82E-08	3.80E-07	2.94E-07	7.33E-07
61	4.79	1.23E-15	0.	0.	0.	3.74E-15	1.24E-14	0.	0.	6.53E-10	6.20E-08	3.93E-07	3.02E-07	7.57E-07
62	4.63	1.68E-15	0.	0.	0.	3.40E-15	1.13E-14	0.	0.	6.58E-10	6.62E-08	4.08E-07	3.09E-07	7.84E-07
63	4.59	1.74E-15	0.	1.84E-15	0.	3.08E-15	8.47E-15	0.	0.	6.64E-10	7.08E-08	4.27E-07	3.17E-07	8.15E-07
64	4.49	1.84E-15	0.	5.77E-15	0.	3.07E-15	5.91E-15	0.	0.	6.69E-10	7.57E-08	4.46E-07	3.25E-07	8.48E-07
65	4.39	1.71E-15	0.	1.77E-14	0.	2.49E-15	3.63E-15	0.	0.	6.74E-10	8.12E-08	4.67E-07	3.29E-07	8.77E-07
66	4.29	1.59E-15	0.	5.97E-14	0.	3.04E-15	2.63E-15	0.	0.	6.80E-10	8.72E-08	4.88E-07	3.32E-07	8.78E-07
67	4.19	1.48E-15	0.	2.42E-14	0.	2.93E-15	7.16E-16	0.	0.	6.82E-10	9.34E-08	5.09E-07	1.15E-07	7.18E-07
68	4.09	1.35E-15	0.	8.56E-14	0.	2.81E-15	5.44E-16	0.	0.	6.85E-10	1.01E-07	4.78E-07	1.19E-07	6.98E-07
69	3.99	1.13E-15	0.	3.92E-13	3.14E-12	2.55E-15	2.13E-16	0.	0.	6.82E-10	1.09E-07	3.79E-07	1.22E-07	6.11E-07
70	3.87	1.23E-15	0.	6.13E-14	1.49E-11	2.73E-15	0.	0.	0.	6.80E-10	1.19E-07	3.95E-07	1.27E-07	6.41E-07
71	3.73	1.08E-15	0.	6.70E-14	5.44E-12	2.28E-15	0.	0.	0.	6.69E-10	1.28E-07	3.84E-07	1.40E-07	6.53E-07
72	3.61	9.63E-16	0.	4.43E-14	3.07E-11	2.47E-15	0.	0.	0.	6.27E-10	1.39E-07	4.18E-07	1.54E-07	7.12E-07
73	3.51	8.90E-16	0.	4.04E-14	6.50E-11	1.91E-15	0.	0.	0.	5.73E-10	1.51E-07	4.65E-07	1.70E-07	7.87E-07
74	3.45	8.05E-16	0.	3.65E-14	8.41E-12	2.13E-15	0.	0.	0.	5.31E-10	1.65E-07	5.19E-07	1.89E-07	8.74E-07
75	3.33	6.39E-16	0.	3.77E-14	3.54E-11	1.68E-15	0.	0.	0.	3.31E-10	1.81E-07	5.79E-07	2.07E-07	9.63E-07
76	3.28	5.50E-16	0.	2.41E-14	6.51E-11	1.75E-15	0.	0.	0.	3.32E-10	1.99E-07	6.38E-07	2.28E-07	1.06E-06
77	3.10	5.21E-16	0.	1.96E-14	1.32E-11	1.63E-15	0.	0.	0.	3.33E-10	2.19E-07	6.87E-07	2.45E-07	1.15E-06
78	3.00	4.61E-16	0.	1.12E-14	3.41E-11	1.52E-15	0.	0.	0.	3.33E-10	2.42E-07	7.44E-07	2.65E-07	1.25E-06
79	2.93	3.82E-16	0.	6.91E-15	1.94E-11	1.13E-15	0.	0.	0.	3.34E-10	2.68E-07	8.04E-07	2.85E-07	1.36E-06
80	2.83	3.94E-16	0.	3.32E-15	1.11E-11	7.64E-16	0.	0.	0.	3.34E-10	2.98E-07	8.73E-07	3.08E-07	1.48E-06
81	2.73	2.49E-16	0.	1.55E-15	1.63E-11	4.07E-16	0.	0.	0.	3.34E-10	3.32E-07	9.47E-07	2.96E-07	1.58E-06
82	2.65	1.14E-16	0.	7.63E-16	1.59E-12	1.75E-16	0.	0.	0.	3.34E-10	3.73E-07	1.02E-06	1.64E-07	1.56E-06
83	2.59	7.95E-18	0.	8.49E-17	1.48E-12	4.10E-17	0.	0.	0.	3.34E-10	4.20E-07	7.39E-07	1.90E-07	1.35E-06
84	2.49	0.	4.11E-15	0.	1.29E-12	4.33E-18	0.	0.	0.	3.34E-10	4.75E-07	9.09E-07	2.33E-07	1.62E-06
85	2.33	0.	1.38E-14	0.	0.	0.	0.	0.	0.	3.32E-10	5.41E-07	1.10E-06	2.79E-07	1.92E-06
86	2.20	0.	3.13E-14	0.	0.	0.	0.	0.	0.	3.31E-10	6.20E-07	1.30E-06	3.35E-07	2.26E-06
87	2.15	0.	3.84E-14	0.	0.	0.	0.	0.	0.	3.29E-10	7.14E-07	1.52E-06	3.91E-07	2.62E-06
88	2.03	0.	7.29E-14	0.	0.	0.	0.	0.	0.	3.19E-10	8.29E-07	1.73E-06	4.47E-07	3.01E-06
89	1.98	0.	1.01E-13	0.	0.	0.	0.	0.	0.	3.06E-10	9.67E-07	1.97E-06	5.14E-07	3.45E-06
90	1.89	0.	8.44E-14	0.	0.	0.	0.	0.	0.	2.93E-10	1.14E-06	2.35E-06	6.21E-07	4.11E-06
91	1.79	0.	9.87E-14	0.	0.	0.	0.	0.	0.	2.76E-10	1.36E-06	2.82E-06	7.54E-07	4.93E-06
92	1.69	0.	7.23E-14	0.	0.	0.	0.	0.	0.	2.34E-10	1.63E-06	3.28E-06	8.44E-07	5.76E-06
93	1.59	0.	8.49E-14	0.	0.	0.	0.	0.	0.	1.06E-10	1.99E-06	3.95E-06	1.03E-06	6.97E-06
94	1.49	0.	8.49E-14	0.	0.	0.	0.	0.	0.	0.	2.45E-06	3.56E-06	1.21E-06	7.23E-06
95	1.38	0.	6.49E-14	0.	0.	0.	0.	0.	0.	0.	3.08E-06	5.28E-06	1.25E-06	9.61E-06
96	1.25	0.	6.24E-14	0.	0.	0.	0.	0.	0.	0.	3.95E-06	6.97E-06	1.68E-06	1.26E-05
97	1.10	0.	5.77E-14	0.	0.	0.	0.	1.64E-19	0.	0.	5.18E-06	8.83E-06	1.97E-06	1.60E-05
98	1.00	0.	5.29E-14	0.	0.	0.	0.	2.17E-18	0.	0.	6.92E-06	1.04E-05	2.39E-06	1.93E-05
99	0.98	0.	4.35E-14	0.	0.	0.	0.	2.49E-18	0.	0.	9.52E-06	1.22E-05	2.81E-06	2.45E-05
100	0.80	0.	2.05E-14	0.	0.	0.	0.	5.21E-17	0.	0.	1.34E-05	1.36E-05	3.04E-06	3.02E-05
101	0.70	0.	4.95E-15	0.	0.	0.	0.	4.33E-17	0.	0.	2.05E-05	1.25E-05	2.59E-06	3.56E-05
102	0.60	0.	7.23E-16	0.	0.	0.	0.	1.50E-16	0.	0.	3.31E-05	1.40E-05	2.93E-06	5.00E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.90E-17	0.	0.	0.	6.31E-13	5.98E-11	7.84E-09	2.52E-09	1.04E-08
2	10.60	0.	0.	4.49E-17	0.	0.	0.	6.32E-13	5.66E-11	7.88E-09	2.51E-09	1.05E-08
3	10.50	0.	0.	4.46E-17	0.	0.	0.	6.33E-13	5.87E-11	7.92E-09	2.51E-09	1.05E-08
4	10.40	0.	0.	4.18E-17	0.	0.	0.	6.34E-13	5.90E-11	7.95E-09	2.50E-09	1.05E-08
5	10.30	0.	0.	3.60E-17	0.	0.	0.	6.34E-13	6.17E-11	7.96E-09	2.49E-09	1.05E-08
6	10.20	0.	0.	3.69E-17	0.	0.	0.	6.35E-13	6.35E-11	7.98E-09	2.48E-09	1.05E-08
7	10.10	0.	0.	3.44E-17	0.	0.	0.	6.36E-13	6.54E-11	8.00E-09	2.47E-09	1.35E-08
8	10.00	0.	0.	2.97E-17	0.	0.	0.	6.37E-13	6.74E-11	8.02E-09	2.47E-09	1.06E-08
9	9.90	0.	0.	3.04E-17	0.	0.	0.	6.38E-13	6.95E-11	8.04E-09	2.46E-09	1.06E-08
10	9.80	0.	0.	2.82E-17	0.	0.	0.	6.39E-13	7.16E-11	8.06E-09	2.45E-09	1.06E-08
11	9.70	0.	0.	2.40E-17	0.	0.	0.	6.40E-13	7.39E-11	8.08E-09	2.44E-09	1.06E-08
12	9.60	0.	0.	2.90E-17	0.	0.	0.	6.42E-13	7.62E-11	8.11E-09	2.43E-09	1.06E-08
13	9.50	0.	0.	2.17E-17	0.	0.	0.	6.43E-13	7.86E-11	8.13E-09	2.43E-09	1.06E-08
14	9.40	0.	0.	2.03E-17	0.	0.	0.	6.45E-13	8.12E-11	8.16E-09	2.42E-09	1.07E-08
15	9.30	0.	0.	2.67E-17	0.	0.	0.	6.47E-13	8.39E-11	2.88E-09	2.41E-09	5.38E-09
16	9.20	0.	0.	1.68E-17	0.	0.	0.	6.50E-13	8.66E-11	2.88E-09	2.40E-09	5.37E-09
17	9.10	0.	0.	1.72E-17	0.	0.	0.	6.52E-13	8.95E-11	2.88E-09	2.40E-09	5.37E-09
18	9.00	0.	0.	1.55E-17	0.	0.	0.	6.54E-13	9.25E-11	2.88E-09	2.39E-09	5.36E-09
19	8.90	0.	0.	1.41E-17	0.	0.	0.	6.57E-13	9.57E-11	2.88E-09	2.38E-09	5.36E-09
20	8.80	0.	0.	1.30E-17	0.	0.	0.	6.59E-13	9.90E-11	2.89E-09	2.37E-09	5.36E-09
21	8.70	0.	0.	1.10E-17	0.	0.	0.	6.61E-13	1.02E-10	2.89E-09	2.36E-09	5.36E-09
22	8.60	0.	0.	1.21E-17	0.	0.	0.	6.64E-13	1.06E-10	2.89E-09	2.36E-09	5.36E-09
23	8.50	0.	0.	1.04E-17	0.	0.	0.	6.66E-13	1.10E-10	2.98E-09	2.35E-09	5.36E-09
24	8.40	0.	0.	1.03E-17	0.	0.	0.	6.70E-13	1.14E-10	2.91E-09	2.34E-09	5.36E-09
25	8.30	0.	0.	8.96E-18	0.	0.	0.	6.73E-13	1.18E-10	2.76E-09	2.34E-09	5.23E-09
26	8.20	0.	0.	8.60E-18	0.	0.	0.	6.77E-13	1.22E-10	2.77E-09	2.35E-09	5.25E-09
27	8.10	0.	0.	7.31E-18	0.	0.	0.	6.80E-13	1.27E-10	2.78E-09	2.36E-09	5.27E-09
28	8.00	0.	0.	7.30E-18	0.	0.	0.	6.84E-13	1.32E-10	2.79E-09	2.37E-09	5.30E-09
29	7.90	0.	0.	6.19E-18	0.	0.	0.	6.87E-13	1.37E-10	2.81E-09	2.38E-09	5.32E-09
30	7.80	0.	0.	6.37E-18	0.	0.	0.	6.91E-13	1.42E-10	2.82E-09	2.39E-09	5.35E-09
31	7.70	0.	0.	5.91E-18	0.	0.	0.	6.94E-13	1.48E-10	2.84E-09	2.39E-09	5.38E-09
32	7.60	0.	0.	5.10E-18	0.	3.85E-22	0.	6.98E-13	1.54E-10	2.86E-09	2.40E-09	5.42E-09
33	7.50	0.	0.	4.73E-18	0.	1.46E-21	0.	7.01E-13	1.60E-10	2.87E-09	2.41E-09	5.45E-09
34	7.40	0.	0.	4.20E-18	0.	1.07E-20	0.	7.05E-13	1.67E-10	2.89E-09	2.42E-09	5.48E-09
35	7.30	0.	0.	3.93E-18	0.	4.53E-20	0.	7.09E-13	1.74E-10	2.90E-09	2.43E-09	5.51E-09
36	7.20	0.	0.	3.91E-18	0.	1.22E-19	0.	7.13E-13	1.81E-10	2.92E-09	2.44E-09	5.54E-09
37	7.10	0.	0.	3.33E-18	0.	3.69E-19	0.	7.19E-13	1.89E-10	2.94E-09	2.45E-09	5.58E-09
38	7.00	1.59E-21	0.	3.82E-18	0.	7.92E-19	0.	7.25E-13	1.97E-10	2.96E-09	2.45E-09	5.61E-09
39	6.90	3.89E-21	0.	2.74E-18	0.	1.01E-18	0.	7.30E-13	2.06E-10	2.98E-09	2.46E-09	5.65E-09
40	6.80	2.64E-21	0.	2.60E-18	0.	1.86E-18	0.	7.36E-13	2.15E-10	3.00E-09	2.47E-09	5.69E-09
41	6.70	1.90E-21	0.	2.24E-18	0.	1.94E-18	0.	7.42E-13	2.25E-10	3.02E-09	2.48E-09	5.73E-09
42	6.60	1.15E-21	0.	1.99E-18	0.	1.46E-18	0.	7.48E-13	2.36E-10	3.05E-09	2.50E-09	5.78E-09
43	6.50	6.58E-22	0.	1.56E-18	0.	2.29E-18	0.	7.54E-13	2.47E-10	3.08E-09	2.51E-09	5.84E-09
44	6.40	3.72E-22	0.	1.09E-18	9.04E-21	2.27E-18	0.	7.60E-13	2.59E-10	3.11E-09	2.52E-09	5.89E-09
45	6.30	2.13E-22	0.	6.40E-19	4.18E-20	1.48E-18	0.	7.65E-13	2.71E-10	3.15E-09	2.54E-09	5.96E-09
46	6.20	9.51E-23	0.	3.46E-19	8.94E-20	2.10E-18	0.	7.71E-13	2.85E-10	3.18E-09	2.57E-09	6.03E-09
47	6.10	4.31E-23	0.	1.59E-19	1.65E-19	2.73E-18	0.	7.77E-13	2.99E-10	3.22E-09	2.60E-09	6.12E-09
48	6.00	1.78E-23	0.	3.99E-20	1.54E-19	1.26E-18	0.	7.83E-13	3.15E-10	3.08E-09	2.63E-09	6.02E-09
49	5.90	4.34E-24	0.	2.86E-21	2.24E-19	1.25E-18	0.	7.83E-13	3.31E-10	3.13E-09	2.65E-09	6.11E-09
50	5.80	5.51E-25	0.	7.16E-23	3.10E-19	1.26E-18	0.	7.71E-13	3.49E-10	3.17E-09	2.68E-09	6.20E-09
51	5.70	4.85E-26	0.	0.	3.57E-19	1.40E-18	0.	7.24E-13	3.67E-10	3.21E-09	2.71E-09	6.29E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E	TOTAL AIR
52	5.60	1.92E-27	0.	0.	0.	2.96E-19	1.93E-18	0.	0.	6.74E-13	3.8RE-10	3.26E-09	2.74E-09	6.39E-09
53	5.51	9.	0.	0.	0.	3.61E-19	1.80E-18	0.	0.	6.77E-13	4.09E-10	3.33E-09	2.78E-09	6.52E-09
54	5.40	0.	0.	0.	0.	3.26E-19	1.40E-18	0.	0.	6.81E-13	4.33E-10	3.41E-09	2.82E-09	6.66E-09
55	5.30	0.	0.	0.	0.	3.34E-19	1.83E-18	0.	0.	6.85E-13	4.58E-10	3.49E-09	2.86E-09	6.81E-09
56	5.20	0.	0.	0.	0.	3.57E-19	1.30E-18	0.	0.	6.89E-13	4.85E-10	3.58E-09	2.92E-09	6.98E-09
57	5.10	0.	0.	0.	0.	3.54E-19	1.69E-18	0.	0.	6.95E-13	5.14E-10	3.68E-09	2.97E-09	7.17E-09
58	5.00	2.42E-20	0.	0.	0.	3.22E-19	1.96E-18	0.	0.	7.01E-13	5.46E-10	3.80E-09	3.03E-09	7.37E-09
59	4.90	5.78E-20	0.	0.	0.	3.55E-19	1.67E-18	0.	0.	7.07E-13	5.80E-10	3.92E-09	3.08E-09	7.58E-09
60	4.80	1.07E-19	0.	0.	0.	3.80E-19	1.56E-18	0.	0.	7.13E-13	6.17E-10	4.05E-09	3.15E-09	7.82E-09
61	4.70	1.41E-19	0.	0.	0.	3.75E-19	1.48E-18	0.	0.	7.19E-13	6.57E-10	4.19E-09	3.23E-09	8.08E-09
62	4.60	1.92E-19	0.	0.	0.	3.83E-19	1.26E-18	0.	0.	7.25E-13	7.02E-10	4.35E-09	3.31E-09	8.37E-09
63	4.50	1.99E-19	0.	2.04E-19	0.	3.46E-19	9.53E-19	0.	0.	7.33E-13	7.50E-10	4.55E-09	3.40E-09	8.70E-09
64	4.40	2.10E-19	0.	4.38E-19	0.	3.45E-19	6.64E-19	0.	0.	7.36E-13	8.02E-10	4.77E-09	3.48E-09	9.05E-09
65	4.30	1.96E-19	0.	1.95E-18	0.	3.26E-19	4.09E-19	0.	0.	7.42E-13	8.60E-10	4.99E-09	3.52E-09	9.37E-09
66	4.20	1.42E-19	0.	6.60E-18	0.	3.42E-19	2.05E-19	0.	0.	7.48E-13	9.24E-10	5.22E-09	1.19E-09	7.33E-09
67	4.10	1.49E-19	0.	2.67E-18	0.	3.30E-19	8.06E-20	0.	0.	7.51E-13	9.94E-10	4.95E-09	1.23E-09	7.17E-09
68	4.00	1.54E-19	0.	9.46E-18	0.	3.16E-19	6.12E-20	0.	0.	7.54E-13	1.07E-09	3.91E-09	1.27E-09	6.25E-09
69	3.90	1.29E-19	0.	4.33E-18	3.38E-15	2.87E-19	2.39E-20	0.	0.	7.51E-13	1.16E-09	4.09E-09	1.31E-09	6.55E-09
70	3.80	1.41E-19	0.	6.78E-18	1.61E-14	3.07E-19	0.	0.	0.	7.48E-13	1.25E-09	4.26E-09	1.36E-09	6.87E-09
71	3.70	1.23E-19	0.	7.41E-18	5.85E-15	2.56E-19	0.	0.	0.	7.36E-13	1.36E-09	4.15E-09	1.49E-09	7.01E-09
72	3.60	1.10E-19	0.	4.90E-18	3.30E-14	2.78E-19	0.	0.	0.	6.89E-13	1.47E-09	4.52E-09	1.65E-09	7.64E-09
73	3.50	1.02E-19	0.	6.69E-18	7.07E-14	2.15E-19	0.	0.	0.	6.31E-13	1.60E-09	5.02E-09	1.82E-09	8.44E-09
74	3.40	9.21E-20	0.	4.04E-18	9.04E-15	2.40E-19	0.	0.	0.	3.64E-13	1.75E-09	5.48E-09	2.02E-09	9.25E-09
75	3.30	7.32E-20	0.	4.17E-18	3.80E-14	1.98E-19	0.	0.	0.	3.65E-13	1.92E-09	6.06E-09	2.21E-09	1.02E-08
76	3.20	4.90E-20	0.	2.66E-18	7.05E-14	1.96E-19	0.	0.	0.	3.69E-13	2.10E-09	6.65E-09	2.42E-09	1.12E-08
77	3.10	5.97E-20	0.	2.35E-18	1.42E-14	1.84E-19	0.	0.	0.	3.66E-13	2.32E-09	7.26E-09	2.63E-09	1.22E-08
78	3.00	5.78E-20	0.	1.24E-18	3.67E-14	1.71E-19	0.	0.	0.	3.67E-13	2.56E-09	7.87E-09	2.83E-09	1.33E-08
79	2.90	4.37E-20	0.	7.69E-19	2.09E-14	1.27E-19	0.	0.	0.	3.67E-13	2.84E-09	8.51E-09	3.05E-09	1.44E-08
80	2.80	4.51E-20	0.	3.67E-19	1.19E-14	8.60E-20	0.	0.	0.	3.68E-13	3.15E-09	9.24E-09	3.30E-09	1.57E-08
81	2.70	2.95E-20	0.	1.71E-19	1.76E-14	4.57E-20	0.	0.	0.	3.68E-13	3.52E-09	9.99E-09	1.61E-09	1.51E-08
82	2.60	1.31E-20	0.	9.44E-20	1.71E-15	1.97E-20	0.	0.	0.	3.68E-13	3.95E-09	1.08E-08	1.76E-09	1.65E-08
83	2.50	9.10E-22	0.	9.39E-21	1.80E-15	4.62E-21	0.	0.	0.	3.68E-13	4.45E-09	7.84E-09	2.04E-09	1.43E-08
84	2.40	0.	4.54E-19	0.	1.39E-15	4.87E-22	0.	0.	0.	3.68E-13	5.04E-09	9.64E-09	2.49E-09	1.72E-08
85	2.30	0.	1.52E-18	0.	0.	0.	0.	0.	0.	3.69E-13	5.73E-09	1.17E-08	2.99E-09	2.04E-08
86	2.20	0.	3.79E-18	0.	0.	0.	0.	0.	0.	3.64E-13	6.57E-09	1.38E-08	3.59E-09	2.40E-08
87	2.10	0.	4.24E-18	0.	0.	0.	0.	0.	0.	3.62E-13	7.56E-09	1.61E-08	4.19E-09	2.78E-08
88	2.00	0.	8.06E-18	0.	0.	0.	0.	0.	0.	3.51E-13	8.77E-09	1.83E-08	4.79E-09	3.19E-08
89	1.90	0.	1.12E-17	0.	0.	0.	0.	0.	0.	3.37E-13	1.02E-08	2.08E-08	5.50E-09	3.65E-08
90	1.80	0.	9.33E-18	0.	0.	0.	0.	0.	0.	3.22E-13	1.21E-08	2.48E-08	6.64E-09	4.35E-08
91	1.70	0.	1.09E-17	0.	0.	0.	0.	0.	0.	3.04E-13	1.44E-08	2.97E-08	8.87E-09	5.21E-08
92	1.60	0.	7.99E-18	0.	0.	0.	0.	0.	0.	2.57E-13	1.73E-08	3.46E-08	9.84E-09	6.09E-08
93	1.50	0.	9.39E-18	0.	0.	0.	0.	0.	0.	1.17E-13	2.11E-08	4.16E-08	1.04E-08	7.31E-08
94	1.40	0.	9.39E-18	0.	0.	0.	0.	0.	0.	0.	2.60E-08	3.74E-08	9.29E-09	7.27E-08
95	1.30	0.	7.17E-18	0.	0.	0.	0.	0.	0.	0.	3.24E-08	5.30E-08	1.34E-08	9.90E-08
96	1.20	0.	8.90E-18	0.	0.	0.	0.	0.	0.	0.	4.18E-08	7.33E-08	1.65E-08	1.32E-07
97	1.10	0.	6.38E-18	0.	0.	0.	0.	1.84E-23	0.	0.	5.49E-08	8.99E-08	2.10E-08	1.66E-07
98	1.00	0.	5.85E-18	0.	0.	0.	0.	2.44E-22	0.	0.	7.33E-08	1.09E-07	2.55E-08	2.08E-07
99	0.90	0.	4.81E-18	0.	0.	0.	0.	2.81E-22	0.	0.	1.01E-07	1.24E-07	2.87E-08	2.53E-07
100	0.80	0.	2.26E-18	0.	0.	0.	0.	5.86E-21	0.	0.	1.44E-07	1.43E-07	3.26E-08	3.19E-07
101	0.70	0.	5.47E-19	0.	0.	0.	0.	4.87E-21	0.	0.	2.18E-07	1.51E-07	2.79E-08	3.77E-07
102	0.60	0.	8.80E-20	0.	0.	0.	0.	1.69E-20	0.	0.	3.50E-07	1.49E-07	3.14E-08	5.29E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.00E-21	0.	0.	0.	6.47E-16	5.71E-13	9.59E-11	2.58E-11	1.22E-10
2	10.60	0.	0.	4.49E-21	0.	0.	0.	6.49E-16	5.87E-13	9.64E-11	2.57E-11	1.23E-10
3	10.50	0.	0.	4.50E-21	0.	0.	0.	6.49E-16	6.04E-13	9.68E-11	2.56E-11	1.23E-10
4	10.40	0.	0.	4.21E-21	0.	0.	0.	6.50E-16	6.22E-13	9.71E-11	2.55E-11	1.23E-10
5	10.30	0.	0.	3.63E-21	0.	0.	0.	6.51E-16	6.40E-13	9.74E-11	2.55E-11	1.23E-10
6	10.20	0.	0.	3.71E-21	0.	0.	0.	6.52E-16	6.59E-13	9.78E-11	2.54E-11	1.24E-10
7	10.10	0.	0.	3.47E-21	0.	0.	0.	6.53E-16	6.79E-13	9.81E-11	2.53E-11	1.24E-10
8	10.00	0.	0.	2.99E-21	0.	0.	0.	6.53E-16	7.00E-13	9.85E-11	2.52E-11	1.24E-10
9	9.90	0.	0.	3.06E-21	0.	0.	0.	6.55E-16	7.21E-13	9.89E-11	2.51E-11	1.25E-10
10	9.80	0.	0.	2.94E-21	0.	0.	0.	6.56E-16	7.43E-13	9.93E-11	2.51E-11	1.25E-10
11	9.70	0.	0.	2.41E-21	0.	0.	0.	6.57E-16	7.67E-13	9.97E-11	2.50E-11	1.25E-10
12	9.60	0.	0.	2.60E-21	0.	0.	0.	6.58E-16	7.91E-13	1.00E-10	2.49E-11	1.26E-10
13	9.50	0.	0.	2.10E-21	0.	0.	0.	6.59E-16	8.14E-13	1.00E-10	2.48E-11	1.25E-10
14	9.40	0.	0.	2.04E-21	0.	0.	0.	6.62E-16	8.43E-13	4.79E-11	2.47E-11	7.35E-11
15	9.30	0.	0.	2.09E-21	0.	0.	0.	6.64E-16	8.70E-13	4.88E-11	2.47E-11	7.36E-11
16	9.20	0.	0.	1.69E-21	0.	0.	0.	6.67E-16	8.99E-13	4.82E-11	2.46E-11	7.37E-11
17	9.10	0.	0.	1.74E-21	0.	0.	0.	6.69E-16	9.29E-13	4.84E-11	2.45E-11	7.38E-11
18	9.00	0.	0.	1.56E-21	0.	0.	0.	6.71E-16	9.60E-13	4.85E-11	2.43E-11	7.38E-11
19	8.90	0.	0.	1.42E-21	0.	0.	0.	6.74E-16	9.93E-13	4.87E-11	2.42E-11	7.39E-11
20	8.80	0.	0.	1.39E-21	0.	0.	0.	6.76E-16	1.03E-12	4.89E-11	2.41E-11	7.41E-11
21	8.70	0.	0.	1.18E-21	0.	0.	0.	6.79E-16	1.06E-12	4.91E-11	2.41E-11	7.42E-11
22	8.60	0.	0.	1.21E-21	0.	0.	0.	6.81E-16	1.10E-12	4.92E-11	2.40E-11	7.44E-11
23	8.50	0.	0.	1.05E-21	0.	0.	0.	6.83E-16	1.14E-12	3.47E-11	2.39E-11	5.98E-11
24	8.40	0.	0.	1.03E-21	0.	0.	0.	6.87E-16	1.18E-12	3.49E-11	2.39E-11	6.00E-11
25	8.30	0.	0.	8.62E-22	0.	0.	0.	6.91E-16	1.22E-12	3.53E-11	2.39E-11	6.04E-11
26	8.20	0.	0.	8.66E-22	0.	0.	0.	6.94E-16	1.27E-12	3.57E-11	2.40E-11	6.10E-11
27	8.10	0.	0.	7.36E-22	0.	0.	0.	6.98E-16	1.32E-12	3.62E-11	2.40E-11	6.15E-11
28	8.00	0.	0.	7.30E-22	0.	0.	0.	7.01E-16	1.37E-12	3.66E-11	2.41E-11	6.21E-11
29	7.90	0.	0.	6.73E-22	0.	0.	0.	7.05E-16	1.42E-12	3.71E-11	2.42E-11	6.28E-11
30	7.80	0.	0.	6.42E-22	0.	0.	0.	7.09E-16	1.48E-12	3.77E-11	2.43E-11	6.35E-11
31	7.70	0.	0.	5.55E-22	0.	0.	0.	7.12E-16	1.54E-12	3.82E-11	2.44E-11	6.42E-11
32	7.60	0.	0.	5.21E-22	0.	3.92E-26	0.	7.16E-16	1.60E-12	3.88E-11	2.45E-11	6.49E-11
33	7.50	0.	0.	4.76E-22	0.	1.48E-25	0.	7.19E-16	1.66E-12	3.93E-11	2.46E-11	6.56E-11
34	7.40	0.	0.	4.23E-22	0.	1.09E-24	0.	7.23E-16	1.73E-12	3.94E-11	2.47E-11	6.58E-11
35	7.30	0.	0.	3.90E-22	0.	4.62E-24	0.	7.27E-16	1.81E-12	4.01E-11	2.48E-11	6.67E-11
36	7.20	0.	0.	3.53E-22	0.	1.24E-23	0.	7.31E-16	1.89E-12	4.09E-11	2.49E-11	6.77E-11
37	7.10	0.	0.	3.36E-22	0.	3.75E-23	0.	7.37E-16	1.94E-12	4.16E-11	2.50E-11	6.87E-11
38	7.00	1.44E-25	0.	3.04E-22	0.	8.27E-23	0.	7.43E-16	2.05E-12	4.26E-11	2.51E-11	6.97E-11
39	6.90	5.18E-25	0.	2.76E-22	0.	1.83E-22	0.	7.49E-16	2.14E-12	4.35E-11	2.52E-11	7.08E-11
40	6.80	2.72E-25	0.	2.62E-22	0.	1.89E-22	0.	7.55E-16	2.24E-12	4.43E-11	2.53E-11	7.18E-11
41	6.70	1.96E-25	0.	2.26E-22	0.	1.97E-22	0.	7.61E-16	2.34E-12	4.52E-11	2.54E-11	7.29E-11
42	6.60	1.19E-25	0.	2.00E-22	0.	1.49E-22	0.	7.67E-16	2.45E-12	4.61E-11	2.55E-11	7.41E-11
43	6.50	6.77E-26	0.	1.57E-22	0.	2.33E-22	0.	7.73E-16	2.56E-12	4.71E-11	2.57E-11	7.53E-11
44	6.40	3.43E-26	0.	1.06E-22	9.21E-25	2.31E-22	0.	7.79E-16	2.69E-12	4.81E-11	2.58E-11	7.66E-11
45	6.30	2.20E-26	0.	8.44E-23	4.26E-24	1.91E-22	0.	7.85E-16	2.82E-12	4.91E-11	2.60E-11	7.79E-11
46	6.20	9.70E-27	0.	5.49E-23	5.95E-24	2.13E-22	0.	7.91E-16	2.94E-12	5.01E-11	2.63E-11	7.93E-11
47	6.10	4.44E-27	0.	1.60E-23	1.69E-23	2.78E-22	0.	7.97E-16	3.11E-12	3.30E-11	2.64E-11	6.31E-11
48	6.00	1.83E-27	0.	4.02E-24	1.57E-23	1.28E-22	0.	8.03E-16	3.27E-12	3.41E-11	2.67E-11	6.41E-11
49	5.90	4.48E-28	0.	2.98E-25	2.28E-23	1.27E-22	0.	8.03E-16	3.44E-12	3.47E-11	2.70E-11	6.51E-11
50	5.80	5.48E-29	0.	7.21E-27	3.16E-23	1.28E-22	0.	7.91E-16	3.62E-12	3.52E-11	2.73E-11	6.61E-11
51	5.70	4.17E-30	0.	0.	3.64E-23	1.43E-22	0.	7.43E-16	3.81E-12	3.58E-11	2.7[illegible]E-11	6.72E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15060. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	O2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	9.69	1.88E-31	0.	0.	0.	3.02E-23	1.96E-22	0.	0.	6.91E-16	4.82E-12	3.65E-11	2.79E-11	6.84E-11
53	5.58	0.	0.	0.	0.	3.68E-23	1.83E-22	0.	0.	6.95E-16	4.29E-12	3.74E-11	2.82E-11	6.99E-11
54	5.48	0.	0.	0.	0.	3.32E-23	1.43E-22	0.	0.	6.98E-16	4.49E-12	3.85E-11	2.84E-11	7.16E-11
55	5.38	0.	0.	0.	0.	3.48E-23	1.86E-22	0.	0.	7.03E-16	4.75E-12	3.96E-11	2.90E-11	7.34E-11
56	5.28	0.	0.	0.	0.	3.63E-23	1.32E-22	0.	0.	7.07E-16	5.03E-12	4.07E-11	2.96E-11	7.53E-11
57	5.18	0.	0.	0.	0.	3.61E-23	1.72E-22	0.	0.	7.13E-16	5.33E-12	4.19E-11	3.02E-11	7.75E-11
58	5.08	2.49E-24	0.	0.	0.	3.27E-23	1.58E-22	0.	0.	7.19E-16	5.66E-12	4.33E-11	3.07E-11	7.97E-11
59	4.98	5.95E-24	0.	0.	0.	3.62E-23	1.70E-22	0.	0.	7.29E-16	6.02E-12	4.48E-11	3.13E-11	8.22E-11
60	4.88	1.10E-23	0.	0.	0.	3.87E-23	1.59E-22	0.	0.	7.31E-16	6.48E-12	4.64E-11	3.20E-11	8.48E-11
61	4.78	1.46E-23	0.	0.	0.	3.82E-23	1.43E-22	0.	0.	7.37E-16	6.82E-12	4.81E-11	3.24E-11	8.78E-11
62	4.68	1.98E-23	0.	0.	0.	3.98E-23	1.30E-22	0.	0.	7.43E-16	7.29E-12	5.03E-11	3.37E-11	9.12E-11
63	4.58	2.85E-23	0.	2.85E-23	0.	3.53E-23	9.70E-23	0.	0.	7.49E-16	7.78E-12	5.28E-11	3.44E-11	9.51E-11
64	4.48	2.18E-23	0.	6.43E-23	0.	3.52E-23	6.77E-23	0.	0.	7.55E-16	8.33E-12	5.54E-11	3.48E-11	9.85E-11
65	4.38	2.02E-23	0.	1.97E-22	0.	3.32E-23	4.16E-23	0.	0.	7.61E-16	8.93E-12	5.81E-11	3.28E-11	9.96E-11
66	4.29	1.87E-23	0.	6.65E-22	0.	3.48E-23	3.01E-23	0.	0.	7.67E-16	9.59E-12	6.09E-11	1.21E-11	8.26E-11
67	4.19	1.74E-23	0.	2.69E-22	0.	3.36E-23	8.20E-24	0.	0.	7.70E-16	1.03E-11	5.84E-11	1.25E-11	8.12E-11
68	4.09	1.59E-23	0.	9.53E-22	0.	3.22E-23	8.23E-24	0.	0.	7.73E-16	1.11E-11	4.89E-11	1.29E-11	7.38E-11
69	3.99	1.33E-23	0.	4.36E-22	3.37E-18	2.92E-23	2.44E-24	0.	0.	7.78E-16	1.20E-11	5.13E-11	1.33E-11	7.66E-11
70	3.89	1.45E-23	0.	6.83E-22	1.60E-17	3.13E-23	0.	0.	0.	7.87E-16	1.30E-11	5.86E-11	1.39E-11	7.75E-11
71	3.79	1.27E-23	0.	7.46E-22	5.83E-18	2.61E-23	0.	0.	0.	7.59E-16	1.41E-11	5.31E-11	1.93E-11	8.24E-11
72	3.69	1.14E-23	0.	4.94E-22	3.29E-17	2.83E-23	0.	0.	0.	7.87E-16	1.53E-11	4.68E-11	1.68E-11	7.90E-11
73	3.59	1.05E-23	0.	6.74E-22	7.05E-17	2.19E-23	0.	0.	0.	6.47E-16	1.67E-11	5.19E-11	1.86E-11	8.71E-11
74	3.48	9.49E-24	0.	4.07E-22	9.01E-18	2.44E-23	0.	0.	0.	3.73E-16	1.82E-11	5.78E-11	2.06E-11	9.66E-11
75	3.39	7.54E-24	0.	4.20E-22	3.70E-17	1.92E-23	0.	0.	0.	3.74E-16	1.99E-11	6.39E-11	2.29E-11	1.06E-10
76	3.29	6.48E-24	0.	2.68E-22	6.98E-17	2.08E-23	0.	0.	0.	3.75E-16	2.19E-11	7.03E-11	2.46E-11	1.17E-10
77	3.19	6.14E-24	0.	2.87E-22	1.42E-17	1.87E-23	0.	0.	0.	3.76E-16	2.40E-11	7.69E-11	2.67E-11	1.28E-10
78	3.09	5.43E-24	0.	1.29E-22	3.66E-17	1.74E-23	0.	0.	0.	3.76E-16	2.64E-11	8.35E-11	2.88E-11	1.39E-10
79	2.99	4.58E-24	0.	7.70E-23	2.08E-17	1.38E-23	0.	0.	0.	3.77E-16	2.94E-11	9.04E-11	3.10E-11	1.51E-10
80	2.89	4.65E-24	0.	3.70E-23	1.19E-17	8.76E-24	0.	0.	0.	3.78E-16	3.27E-11	9.83E-11	2.99E-11	1.61E-10
81	2.79	2.93E-24	0.	1.72E-23	1.75E-17	4.66E-24	0.	0.	0.	3.78E-16	3.65E-11	1.06E-10	1.05E-11	1.59E-10
82	2.68	1.35E-24	0.	8.51E-24	1.71E-18	2.88E-24	0.	0.	0.	3.78E-16	4.10E-11	7.31E-11	1.79E-11	1.32E-10
83	2.58	9.37E-26	0.	9.46E-25	1.59E-18	4.70E-25	0.	0.	0.	3.78E-16	4.61E-11	8.58E-11	2.08E-11	1.93E-10
84	2.48	0.	4.57E-23	0.	1.38E-18	4.96E-26	0.	0.	0.	3.78E-16	5.22E-11	1.05E-10	2.54E-11	1.83E-10
85	2.38	0.	1.53E-22	0.	0	0.	0.	0.	0.	3.75E-16	5.95E-11	1.26E-10	3.04E-11	2.16E-10
86	2.28	0.	3.82E-22	0.	0.	0.	0.	0.	0.	3.73E-16	6.81E-11	1.48E-10	3.65E-11	2.53E-10
87	2.18	0.	4.27E-22	0.	0.	0.	0.	0.	0.	3.72E-16	7.84E-11	1.64E-10	4.25E-11	2.85E-10
88	2.08	0.	8.12E-22	0.	0.	0.	0.	0.	0.	3.68E-16	9.18E-11	1.88E-10	4.86E-11	3.27E-10
89	1.98	0.	1.13E-21	0.	0.	0.	0.	0.	0.	3.46E-16	1.08E-10	2.14E-10	5.59E-11	3.76E-10
90	1.88	0.	9.48E-22	0.	0.	0.	0.	0.	0.	3.31E-16	1.29E-10	2.94E-10	6.75E-11	4.47E-10
91	1.78	0.	1.18E-21	0.	0.	0.	0.	0.	0.	3.12E-16	1.49E-10	3.84E-10	7.75E-11	5.31E-10
92	1.68	0.	8.05E-22	0.	0.	0.	0.	0.	0.	2.84E-16	1.88E-10	3.28E-10	9.18E-11	5.99E-10
93	1.58	0.	9.45E-22	0.	0.	0.	0.	0.	0.	1.28E-16	2.19E-10	2.91E-10	1.06E-10	6.15E-10
94	1.48	0.	9.45E-22	0.	0.	0.	0.	0.	0.	0.	2.69E-10	3.83E-10	9.44E-11	7.47E-10
95	1.38	0.	7.23E-22	0.	0.	0.	0.	0.	0.	0.	3.30E-10	5.48E-10	1.34E-10	1.01E-09
96	1.29	0.	6.09E-22	0.	0.	0.	0.	0.	0.	0.	4.34E-10	7.36E-10	1.68E-10	1.34E-09
97	1.19	0.	6.43E-22	0.	0.	0.	0.	1.88E-27	0.	0.	5.69E-10	9.83E-10	2.13E-10	1.68E-09
98	1.09	0.	5.98E-22	0.	0.	0.	0.	2.48E-26	0.	0.	7.68E-10	1.18E-09	2.59E-10	2.11E-09
99	0.99	0.	4.84E-22	0.	0.	0.	0.	2.86E-26	0.	0.	1.09E-09	1.24E-09	2.86E-10	2.97E-09
100	0.89	0.	2.28E-22	0.	0.	0.	0.	5.97E-25	0.	0.	1.49E-09	1.15E-09	2.45E-10	2.90E-09
101	0.79	0.	5.51E-23	0.	0.	0.	0.	4.96E-25	0.	0.	2.24E-09	1.32E-09	2.82E-10	3.84E-09
102	0.69	0.	8.84E-24	0.	0.	0.	0.	1.72E-24	0	0.	3.63E-09	1.48E-09	3.19E-10	5.43E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IPHB)	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	3.29E 00	0.	0.	0.	2.86E 00	5.76E-02	2.36E 02	6.00E-01	2.43E 02
2	10.60	0.	0.	2.97E 00	0.	0.	0.	2.87E 00	3.87E-02	4.19E 00	8.77E-01	1.09E 01
3	10.50	0.	0.	2.99E 00	0.	0.	0.	2.87E 00	3.99E-02	4.21E 00	8.74E-01	1.10E 01
4	10.40	0.	0.	2.82E 00	0.	0.	0.	2.88E 00	4.19E-02	4.22E 00	8.71E-01	1.08E 01
5	10.30	0.	0.	2.44E 00	0.	0.	0.	2.88E 00	4.22E-02	4.23E 00	8.68E-01	1.05E 01
6	10.20	0.	0.	2.90E 00	0.	0.	0.	2.88E 00	4.35E-02	4.24E 00	8.65E-01	1.05E 01
7	10.10	0.	0.	2.35E 00	0.	0.	0.	2.89E 00	4.40E-02	4.25E 00	8.62E-01	1.04E 01
8	10.00	0.	0.	2.84E 00	0.	0.	0.	2.89E 00	4.42E-02	4.26E 00	8.59E-01	1.01E 01
9	9.90	0.	0.	2.09E 00	0.	0.	0.	2.90E 00	4.76E-02	4.27E 00	8.56E-01	1.02E 01
10	9.80	0.	0.	1,95E 00	0.	0.	0.	2.90E 00	4.90E-02	4.28E 00	8.53E-01	1.00E 01
11	9.70	0.	0.	1,67E 00	0.	0.	0.	2.91E 00	5.04E-02	4.29E 00	8.50E-01	9.76E 00
12	9.60	0.	0.	1,80E 00	0.	0.	0.	2.91E 00	5.22E-02	4.30E 00	8.47E-01	9.91E 00
13	9.50	0.	0.	1,92E 00	0.	0.	0.	2.92E 00	5.34E-02	4.31E 00	8.44E-01	9.65E 00
14	9.40	0.	0.	1,43E 00	0.	0.	0.	2.93E 00	5.54E-02	4.32E 00	8.41E-01	9.50E 00
15	9.30	0.	0.	1,40E 00	0.	0.	0.	2.94E 00	5.74E-02	4.34E 00	8.38E-01	9.63E 00
16	9.20	0.	0.	1,20E 00	0.	0.	0.	2.95E 00	5.93E-02	4.35E 00	8.35E-01	9.39E 00
17	9.10	0.	0.	1,23E 00	0.	0.	0.	2.96E 00	6.13E-02	1.58E 00	8.32E-01	6.58E 00
18	9.00	0.	0.	1,11E 00	0.	0.	0.	2.97E 00	6.34E-02	1,58E 00	8.29E-01	6.47E 00
19	8.90	0.	0.	1,02E 00	0.	0.	0.	2.98E 00	6.55E-02	1,58E 00	8.26E-01	6.30E 00
20	8.80	0.	0.	9,98E-01	0.	0.	0.	2.99E 00	6.78E-02	1,58E 00	8.24E-01	6.38E 00
21	8.70	0.	0.	8,98E-01	0.	0.	0.	3.00E 00	7.02E-02	1,58E 00	8.21E-01	6.25E 00
22	8.60	0.	0.	8,02E-01	0.	0.	0.	3.01E 00	7.27E-02	1,58E 00	8.18E-01	6.29E 00
23	8.50	0.	0.	7,45E-01	0.	0.	0.	3.02E 00	7.54E-02	1,51E 00	8.16E-01	6.18E 00
24	8.40	0.	0.	7,58E-01	0.	0.	0.	3.04E 00	7.81E-02	1,51E 00	8.13E-01	6.20E 00
25	8.30	0.	0.	6,37E-01	0.	0.	0.	3.05E 00	8.10E-02	1,51E 00	8.12E-01	6.10E 00
26	8.20	0.	0.	6,42E-01	0.	0.	0.	3.07E 00	8.40E-02	1,52E 00	8.15E-01	6.13E 00
27	8.10	0.	0.	5,49E-01	0.	0.	0.	3.09E 00	8.72E-02	1,52E 00	8.17E-01	6.06E 00
28	8.00	0.	0.	5,91E-01	0.	0.	0.	3.10E 00	9.05E-02	1,52E 00	8.20E-01	6.09E 00
29	7.90	0.	0.	4,78E-01	0.	0.	0.	3.12E 00	9.40E-02	1,53E 00	8.22E-01	6.04E 00
30	7.80	0.	0.	4,85E-01	0.	0.	0.	3.13E 00	9.77E-02	1,54E 00	8.25E-01	6.08E 00
31	7.70	0.	0.	4,22E-01	0.	0.	0.	3.15E 00	1.02E-01	1,55E 00	8.27E-01	6.05E 00
32	7.60	0.	0.	3,99E-01	0.	1.88E-05	0.	3.17E 00	1.06E-01	1,56E 00	8.30E-01	6.06E 00
33	7.50	0.	0.	3,66E-01	0.	6.95E-05	0.	3.18E 00	1.10E-01	1,56E 00	8.32E-01	6.05E 00
34	7.40	0.	0.	3,27E-01	0.	5.03E-04	0.	3.20E 00	1.14E-01	1,57E 00	8.34E-01	6.05E 00
35	7.30	0.	0.	3,08E-01	0.	2.88E-03	0.	3.22E 00	1.19E-01	1,58E 00	8.37E-01	6.06E 00
36	7.20	0.	0.	2,76E-01	0.	5.63E-03	0.	3.23E 00	1.24E-01	1,59E 00	8.39E-01	6.07E 00
37	7.10	0.	0.	2,63E-01	0.	1.72E-02	0.	3.26E 00	1.30E-01	1,59E 00	8.42E-01	6.11E 00
38	7.00	4.73E-05	0.	2,48E-01	0.	3.60E-02	0.	3.29E 00	1.35E-01	1,66E 00	8.44E-01	6.15E 00
39	6.90	9.19E-05	0.	2,19E-01	0.	4.73E-02	0.	3.31E 00	1.41E-01	1,61E 00	8.47E-01	6.18E 00
40	6.80	7.88E-05	0.	2,09E-01	0.	8.54E-02	0.	3.34E 00	1.48E-01	1,62E 00	8.49E-01	6.25E 00
41	6.70	9.71E-05	0.	1,81E-01	0.	8.75E-02	0.	3.37E 00	1.55E-01	1,63E 00	8.53E-01	6.27E 00
42	6.60	3.46E-05	0.	1,61E-01	0.	6.81E-02	0.	3.39E 00	1.62E-01	1,64E 00	8.57E-01	6.26E 00
43	6.50	1.99E-05	0.	1,27E-01	0.	1.04E-01	0.	3.42E 00	1.69E-01	1,65E 00	8.60E-01	6.34E 00
44	6.40	1.13E-05	0.	8,69E-02	3.98E-04	1.81E-01	0.	3.45E 00	1.78E-01	1,67E 00	8.64E-01	6.35E 00
45	6.30	6.91E-06	0.	5,35E-02	1.82E-03	6.84E-02	0.	3.47E 00	1.84E-01	1,69E 00	8.70E-01	6.34E 00
46	6.20	7.92E-06	0.	2,93E-02	2.54E-03	9.56E-02	0.	3.50E 00	1.96E-01	1,70E 00	8.79E-01	6.40E 00
47	6.10	1.33E-06	0.	1,36E-02	7.26E-03	1.22E-01	0.	3.53E 00	2.05E-01	1,72E 00	8.88E-01	6.49E 00
48	6.00	5.51E-07	0.	3,42E-03	6.85E-03	5.78E-02	0.	3.55E 00	2.16E-01	1,74E 00	8.98E-01	6.48E 00
49	5.90	1.35E-07	0.	2,45E-04	9.98E-03	5.70E-02	0.	3.55E 00	2.27E-01	1,77E 00	9.07E-01	6.52E 00
50	5.80	1.72E-08	0.	6,15E-06	1.39E-02	5.79E-02	0.	3.58E 00	2.39E-01	1,79E 00	9.16E-01	6.52E 00
51	5.70	1.26E-09	0.	0.	1.61E-02	6.46E-02	0.	3.29E 00	2.52E-01	1,82E 00	9.26E-01	6.36E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
52	5.60 5.49E-11	0.	0.	0.	1.35E-02	8.75E-02	0.	0.	3.86E 00	2.66E-01	1.85E 00	9.39E-01	6.26E 00
53	5.51 0.	0.	0.	0.	1.69E-02	8.14E-02	0.	0.	3.67E 00	2.81E-01	1.88E 00	9.46E-01	6.28E 00
54	5.48 0.	0.	0.	0.	1.70E-02	8.46E-02	0.	0.	3.89E 00	2.97E-01	1.93E 00	9.59E-01	6.35E 00
55	5.51 0.	0.	0.	0.	1.93E-02	8.30E-02	0.	0.	3.11E 00	3.14E-01	1.98E 00	9.73E-01	6.47E 00
56	5.27 0.	0.	0.	0.	1.44E-02	8.84E-02	0.	0.	3.13E 00	3.32E-01	2.03E 00	9.97E-01	6.56E 00
57	5.17 0.	0.	0.	0.	1.64E-02	7.82E-02	0.	0.	3.19E 00	3.53E-01	2.09E 00	1.01E 00	6.70E 00
58	5.08 7.63E-04	0.	0.	0.	1.49E-02	7.26E-02	0.	0.	3.18E 00	3.74E-01	2.15E 00	1.03E 00	6.82E 00
59	4.98 1.84E-03	0.	0.	0.	1.45E-02	7.84E-02	0.	0.	3.21E 00	3.98E-01	2.22E 00	1.05E 00	6.97E 00
60	4.83 3.41E-03	0.	0.	0.	1.77E-02	7.33E-02	0.	0.	3.23E 00	4.23E-01	2.30E 00	1.07E 00	7.12E 00
61	4.79 4.56E-03	0.	0.	0.	1.76E-02	6.62E-02	0.	0.	3.26E 00	4.51E-01	2.38E 00	1.10E 00	7.27E 00
62	4.69 6.22E-03	0.	0.	0.	1.40E-02	6.02E-02	0.	0.	3.29E 00	4.82E-01	2.47E 00	1.13E 00	7.45E 00
63	4.58 6.49E-03	0.	1.79E-02	0.	1.43E-02	4.91E-02	0.	0.	3.31E 00	5.19E-01	2.59E 00	1.15E 00	7.66E 00
64	4.49 6.49E-03	0.	9.48E-02	0.	1.63E-02	3.13E-02	0.	0.	3.34E 00	5.51E-01	2.71E 00	1.18E 00	7.89E 00
65	4.38 6.47E-03	0.	1.70E-01	0.	1.95E-02	1.94E-02	0.	0.	3.37E 00	5.91E-01	2.84E 00	1.22E 00	8.22E 00
66	4.29 6.81E-03	0.	5.61E-01	0.	1.63E-02	1.39E-02	0.	0.	3.39E 00	6.35E-01	2.97E 00	1.25E 00	8.44E 00
67	4.19 5.41E-03	0.	2.34E-01	0.	1.50E-02	5.81E-03	0.	0.	3.41E 00	6.85E-01	3.10E 00	1.26E 00	8.71E 00
68	4.08 5.14E-03	0.	8.87E-01	0.	1.52E-02	2.09E-03	0.	0.	3.42E 00	7.36E-01	3.24E 00	4.07E-01	8.69E 00
69	3.90 5.34E-03	0.	3.73E-01	1.89E-09	1.59E-02	1.12E-03	0.	0.	3.41E 00	7.94E-01	3.10E 00	4.82E-01	8.19E 00
70	3.84 4.74E-03	0.	5.87E-01	6.66E-02	1.49E-02	0.	0.	0.	3.39E 00	8.60E-01	3.19E 00	5.01E-01	8.68E 00
71	3.78 4.18E-03	0.	3.39E-01	3.32E-02	1.25E-02	0.	0.	0.	3.34E 00	9.32E-01	2.96E 00	5.51E-01	8.84E 00
72	3.69 3.75E-03	0.	4.28E-01	1.83E-01	1.36E-02	0.	0.	0.	3.13E 00	1.01E 00	2.76E 00	6.07E-01	8.14E 00
73	3.59 3.48E-03	0.	9.77E-01	3.76E-01	1.06E-02	0.	0.	0.	2.86E 00	1.10E 00	2.90E 00	6.69E-01	6.91E 00
74	3.48 3.17E-03	0.	3.56E-01	5.12E-02	1.19E-02	0.	0.	0.	1.45E 00	1.20E 00	3.24E 00	7.49E-01	7.26E 00
75	3.39 2.52E-03	0.	3.66E-01	1.89E-01	9.38E-03	0.	0.	0.	1.69E 00	1.32E 00	3.50E 00	8.11E-01	7.95E 00
76	3.29 2.18E-03	0.	2.36E-01	3.79E-01	9.81E-03	0.	0.	0.	1.46E 00	1.45E 00	3.92E 00	8.84E-01	8.53E 00
77	3.18 2.88E-33	0.	1.93E-01	8.87E-02	9.22E-03	0.	0.	0.	1.46E 00	1.59E 00	4.28E 00	9.61E-01	8.77E 00
78	3.08 1.85E-03	0.	1.11E-01	2.04E-01	6.43E-03	0.	0.	0.	1.66E 00	1.76E 00	4.64E 00	1.04E 00	9.42E 00
79	2.98 1.54E-03	0.	4.09E-02	1.12E-01	6.91E-03	0.	0.	0.	1.67E 00	1.95E 00	5.81E 00	1.17E 00	9.93E 00
80	2.88 1.48E-03	0.	3.31E-02	6.74E-02	4.44E-03	0.	0.	0.	1.67E 00	2.17E 00	5.44E 00	1.21E 00	1.06E 01
81	2.78 1.02E-03	0.	1.95E-02	9.59E-02	2.39E-03	0.	0.	0.	1.67E 00	2.42E 00	5.91E 00	1.30E 00	1.14E 01
82	2.69 4.74E-04	0.	7.90E-03	9.46E-03	1.84E-05	0.	0.	0.	1.67E 00	2.71E 00	6.41E 00	1.41E 00	1.22E 01
83	2.58 3.51E-05	0.	4.32E-04	8.94E-03	2.46E-04	0.	0.	0.	1.67E 00	3.04E 00	7.29E 00	7.95E-01	1.20E 01
84	2.48 0.	3.93E-02	0.	7.53E-03	2.60E-05	0.	0.	0.	1.67E 00	3.47E 00	8.58E 00	9.44E-01	1.46E 01
85	2.39 0.	1.28E-01	0.	0.	0.	0.	0.	0.	1.66E 00	3.95E 00	7.85E 00	1.13E 00	1.39E 01
86	2.27 0.	3.24E-01	0.	0.	0.	0.	0.	0.	1.65E 00	4.52E 00	8.33E 00	1.36E 00	1.62E 01
87	2.19 0.	3.54E-01	0.	0.	0.	0.	0.	0.	1.64E 00	5.20E 00	9.71E 00	1.59E 00	1.85E 01
88	2.08 0.	6.82E-01	0.	0.	0.	0.	0.	0.	1.59E 00	6.05E 00	1.11E 01	1.81E 00	2.12E 01
89	1.91 0.	9.14E-01	0.	0.	0.	0.	0.	0.	1.53E 00	7.04E 00	1.28E 01	2.08E 00	2.42E 01
90	1.80 0.	7.44E-01	0.	0.	0.	0.	0.	0.	1.46E 00	8.33E 00	1.51E 01	2.52E 00	2.82E 01
91	1.78 0.	8.98E-01	0.	0.	0.	0.	0.	0.	1.38E 00	9.91E 00	1.81E 01	3.06E 00	3.33E 01
92	1.68 0.	6.54E-01	0.	0.	0.	0.	0.	0.	1.17E 00	1.19E 01	2.11E 01	3.69E 00	3.94E 01
93	1.59 0.	7.65E-01	0.	0.	0.	0.	0.	0.	9.30E-01	1.45E 01	2.72E 01	4.37E 00	4.72E 01
94	1.48 0.	7.62E-01	0.	0.	0.	0.	0.	0.	0.	1.70E 01	3.37E 01	5.21E 00	5.76E 01
95	1.38 0.	5.83E-01	0.	0.	0.	0.	0.	0.	0.	2.25E 01	4.41E 01	6.89E 00	7.41E 01
96	1.23 0.	5.59E-01	0.	0.	0.	0.	0.	0.	0.	2.89E 01	4.72E 01	6.89E 00	8.36E 01
97	1.10 0.	5.23E-01	0.	0.	0.	0.	4.36E-07	0.	0.	3.70E 01	5.82E 01	8.66E 00	1.05E 02
98	1.00 0.	4.88E-01	0.	0.	0.	0.	1.14E-05	0.	0.	5.84E 01	7.86E 01	9.81E 00	1.31E 02
99	0.91 0.	3.94E-01	0.	0.	0.	0.	1.33E-05	0.	0.	8.04E 01	8.09E 01	1.15E 01	1.62E 02
100	0.89 0.	1.84E-01	0.	0.	0.	0.	2.02E-04	0.	0.	9.94E 01	9.31E 01	1.33E 01	2.06E 02
101	0.70 0.	4.44E-02	0.	0.	0.	0.	2.42E-04	0.	0.	1.58E 02	1.81E 02	1.40E 01	2.66E 02
102	0.61 0.	7.12E-03	0.	0.	0.	0.	8.19E-04	0.	0.	2.47E 02	1.13E 02	1.57E 01	3.71E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (HUGGINS CH.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 = 1.00 AT NORMAL

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (INVS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.27E-02	0.	0.	0.	8.69E-02	3.53E-03	2.35E 01	8.69E-02	2.37E 01
2	10.60	0.	0.	2.95E-02	0.	0.	0.	8.79E-02	3.63E-03	4.17E-01	8.62E-02	6.23E-01
3	10.50	0.	0.	2.97E-02	0.	0.	0.	8.71E-02	3.73E-03	4.19E-01	8.60E-02	6.25E-01
4	10.40	0.	0.	2.79E-02	0.	0.	0.	8.73E-02	3.84E-03	4.20E-01	8.57E-02	6.25E-01
5	10.30	0.	0.	2.42E-02	0.	0.	0.	8.74E-02	3.94E-03	4.21E-01	8.54E-02	6.12E-01
6	10.20	0.	0.	2.46E-02	0.	0.	0.	8.75E-02	4.07E-03	4.22E-01	8.51E-02	6.24E-01
7	10.10	0.	0.	2.33E-02	0.	0.	0.	8.76E-02	4.26E-03	4.23E-01	8.48E-02	6.23E-01
8	10.00	0.	0.	2.02E-02	0.	0.	0.	8.77E-02	4.32E-03	4.24E-01	8.45E-02	6.21E-01
9	9.90	0.	0.	2.07E-02	0.	0.	0.	8.79E-02	4.46E-03	4.25E-01	8.42E-02	6.22E-01
10	9.80	0.	0.	1.93E-02	0.	0.	0.	8.80E-02	4.66E-03	4.26E-01	8.39E-02	6.22E-01
11	9.70	0.	0.	1.65E-02	0.	0.	0.	8.82E-02	4.74E-03	4.27E-01	8.36E-02	6.20E-01
12	9.60	0.	0.	1.79E-02	0.	0.	0.	8.84E-02	4.89E-03	4.28E-01	8.33E-02	6.22E-01
13	9.50	0.	0.	1.91E-02	0.	0.	0.	8.85E-02	5.05E-03	4.29E-01	8.30E-02	6.21E-01
14	9.40	0.	0.	1.42E-02	0.	0.	0.	8.88E-02	5.21E-03	4.30E-01	8.27E-02	6.21E-01
15	9.30	0.	0.	1.45E-02	0.	0.	0.	8.92E-02	5.38E-03	4.32E-01	8.24E-02	6.23E-01
16	9.20	0.	0.	1.19E-02	0.	0.	0.	8.89E-02	5.56E-03	4.33E-01	8.21E-02	6.22E-01
17	9.10	0.	0.	1.22E-02	0.	0.	0.	8.98E-02	5.74E-03	1.49E-01	8.18E-02	3.39E-01
18	9.00	0.	0.	1.19E-02	0.	0.	0.	9.01E-02	5.94E-03	1.49E-01	8.15E-02	3.38E-01
19	8.90	0.	0.	1.01E-02	0.	0.	0.	9.05E-02	6.14E-03	1.49E-01	8.13E-02	3.37E-01
20	8.80	0.	0.	9.90E-03	0.	0.	0.	9.08E-02	6.36E-03	1.49E-01	8.10E-02	3.37E-01
21	8.70	0.	0.	8.91E-03	0.	0.	0.	9.11E-02	6.58E-03	1.49E-01	8.07E-02	3.36E-01
22	8.60	0.	0.	8.74E-03	0.	0.	0.	9.14E-02	6.81E-03	1.50E-01	8.05E-02	3.37E-01
23	8.50	0.	0.	7.59E-03	0.	0.	0.	9.17E-02	7.06E-03	1.50E-01	8.02E-02	3.36E-01
24	8.40	0.	0.	7.91E-03	0.	0.	0.	9.22E-02	7.32E-03	1.50E-01	8.00E-02	3.37E-01
25	8.30	0.	0.	6.32E-03	0.	0.	0.	9.27E-02	7.59E-03	1.51E-01	7.99E-02	3.37E-01
26	8.20	0.	0.	6.37E-03	0.	0.	0.	9.32E-02	7.87E-03	1.51E-01	7.81E-02	3.38E-01
27	8.10	0.	0.	5.45E-03	0.	0.	0.	9.37E-02	8.17E-03	1.51E-01	8.84E-02	3.39E-01
28	8.00	0.	0.	5.46E-03	0.	0.	0.	9.42E-02	8.48E-03	1.52E-01	8.84E-02	3.41E-01
29	7.90	0.	0.	4.66E-03	0.	0.	0.	9.46E-02	8.81E-03	1.53E-01	8.88E-02	3.42E-01
30	7.80	0.	0.	4.81E-03	0.	0.	0.	9.51E-02	9.15E-03	1.53E-01	8.11E-02	3.44E-01
31	7.70	0.	0.	4.19E-03	0.	0.	0.	9.56E-02	9.52E-03	1.54E-01	8.13E-02	3.45E-01
32	7.60	0.	0.	3.95E-03	0.	1.76E-07	0.	9.61E-02	9.90E-03	1.55E-01	8.16E-02	3.46E-01
33	7.50	0.	0.	3.63E-03	0.	6.42E-07	0.	9.66E-02	1.03E-02	1.56E-01	8.19E-02	3.48E-01
34	7.40	0.	0.	3.24E-03	0.	4.93E-06	0.	9.71E-02	1.07E-02	1.56E-01	8.20E-02	3.50E-01
35	7.30	0.	0.	3.05E-03	0.	2.04E-05	0.	9.76E-02	1.12E-02	1.57E-01	8.23E-02	3.51E-01
36	7.20	0.	0.	2.74E-03	0.	5.52E-05	0.	9.82E-02	1.16E-02	1.58E-01	8.25E-02	3.53E-01
37	7.10	0.	0.	2.61E-03	0.	1.69E-04	0.	9.88E-02	1.22E-02	1.59E-01	8.28E-02	3.55E-01
38	7.00	4.57E-07	0.	2.38E-03	0.	3.53E-04	0.	9.98E-02	1.27E-02	1.60E-01	8.30E-02	3.58E-01
39	6.90	8.49E-07	0.	2.17E-03	0.	4.64E-04	0.	1.01E-01	1.33E-02	1.08E-01	8.32E-02	3.60E-01
40	6.80	7.62E-07	0.	2.07E-03	0.	8.36E-04	0.	1.01E-01	1.39E-02	1.61E-01	8.35E-02	3.63E-01
41	6.70	5.52E-07	0.	1.80E-03	0.	8.57E-04	0.	1.02E-01	1.45E-02	1.62E-01	8.38E-02	3.65E-01
42	6.60	3.15E-07	0.	1.60E-03	0.	6.67E-04	0.	1.03E-01	1.52E-02	1.63E-01	8.42E-02	3.68E-01
43	6.50	1.92E-07	0.	1.26E-03	0.	1.07E-03	0.	1.04E-01	1.59E-02	1.65E-01	8.46E-02	3.71E-01
44	6.40	1.09E-07	0.	8.62E-04	3.82E-06	9.94E-04	0.	1.05E-01	1.66E-02	1.66E-01	8.50E-02	3.74E-01
45	6.30	4.30E-08	0.	5.30E-04	1.78E-05	6.69E-04	0.	1.05E-01	1.75E-02	1.68E-01	8.55E-02	3.77E-01
46	6.20	2.82E-08	0.	2.90E-04	2.50E-05	9.36E-04	0.	1.06E-01	1.83E-02	1.69E-01	8.64E-02	3.82E-01
47	6.10	1.29E-08	0.	1.35E-04	7.11E-05	1.28E-03	0	1.07E-01	1.92E-02	1.71E-01	8.74E-02	3.86E-01
48	6.00	5.33E-09	0.	5.39E-05	6.70E-05	5.64E-04	0.	1.08E-01	2.02E-02	1.74E-01	8.83E-02	3.91E-01
49	5.90	1.30E-09	0.	2.43E-06	9.78E-05	5.58E-04	0.	1.08E-01	2.13E-02	1.76E-01	8.92E-02	3.95E-01
50	5.81	1.46E-10	0.	6.10E-08	1.36E-04	5.67E-04	0.	1.08E-01	2.24E-02	1.78E-01	9.01E-02	3.96E-01
51	5.71	1.22E-11	0.	0.	1.58E-04	6.32E-04	0.	9.98E-02	2.36E-02	1.81E-01	9.10E-02	3.96E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (BMS)	N P.E.	O P.E.	TOTAL AIR
52	5.61	5.50E-13	0.	0.	0.	1.32E-04	8.57E-04	0.	0.	9.20E-02	2.49E-02	1.84E-01	9.20E-02	3.94E-01
53	5.59	0.	0.	0.	0.	1.61E-04	7.97E-04	0.	0.	9.33E-02	2.63E-02	1.87E-01	9.30E-02	4.01E-01
54	5.49	0.	0.	0.	0.	1.47E-04	6.32E-04	0.	0.	9.38E-02	2.78E-02	1.92E-01	9.43E-02	4.09E-01
55	5.39	0.	0.	0.	0.	1.50E-04	8.13E-04	0.	0.	9.44E-02	2.94E-02	1.97E-01	9.57E-02	4.17E-01
56	5.29	0.	0.	0.	0.	1.61E-04	5.92E-04	0.	0.	9.50E-02	3.12E-02	2.02E-01	9.75E-02	4.28E-01
57	5.19	0.	0.	0.	0.	1.68E-04	7.66E-04	0.	0.	9.58E-02	3.30E-02	2.08E-01	9.93E-02	4.37E-01
58	5.09	7.38E-06	0.	0.	0.	1.46E-04	7.11E-04	0.	0.	9.66E-02	3.51E-02	2.14E-01	1.01E-01	4.48E-01
59	4.99	1.78E-05	0.	0.	0.	1.62E-04	7.68E-04	0.	0.	9.74E-02	3.73E-02	2.21E-01	1.03E-01	4.59E-01
60	4.89	3.50E-05	0.	0.	0.	1.73E-04	7.18E-04	0.	0.	9.82E-02	3.97E-02	2.29E-01	1.05E-01	4.73E-01
61	4.79	4.41E-05	0.	0.	0.	1.72E-04	6.48E-04	0.	0.	9.90E-02	4.23E-02	2.37E-01	1.08E-01	4.87E-01
62	4.69	4.82E-05	0.	0.	0.	1.76E-04	5.90E-04	0.	0.	9.98E-02	4.51E-02	2.46E-01	1.11E-01	5.02E-01
63	4.59	4.28E-05	0.	1.74E-04	0.	1.60E-04	4.42E-04	0.	0.	1.01E-01	4.82E-02	2.58E-01	1.14E-01	5.21E-01
64	4.49	5.46E-05	0.	9.35E-04	0.	1.60E-04	3.07E-04	0.	0.	1.91E-01	5.16E-02	2.70E-01	1.14E-01	5.40E-01
65	4.39	5.25E-05	0.	1.48E-03	0.	1.52E-04	1.90E-04	0.	0.	1.02E-01	5.54E-02	2.83E-01	1.19E-01	5.62E-01
66	4.29	5.81E-05	0.	5.56E-03	0.	1.59E-04	1.36E-04	0.	0.	1.03E-01	5.95E-02	2.96E-01	1.23E-01	5.87E-01
67	4.19	5.42E-05	0.	2.32E-03	0.	1.55E-04	3.73E-05	0.	0.	1.03E-01	6.46E-02	3.09E-01	1.23E-01	6.02E-01
68	4.09	4.97E-05	0.	8.80E-03	0.	1.49E-04	2.83E-05	0.	0.	1.04E-01	6.89E-02	3.22E-01	4.59E-02	5.49E-01
69	3.99	4.20E-05	0.	3.69E-03	6.07E-04	1.36E-04	1.09E-05	0.	0.	1.03E-01	7.44E-02	3.08E-01	4.74E-02	5.30E-01
70	3.89	4.59E-05	0.	5.82E-03	2.76E-03	1.46E-04	0.	0.	0.	1.03E-01	8.05E-02	3.14E-01	4.93E-02	5.56E-01
71	3.79	4.04E-05	0.	4.25E-03	1.07E-03	1.23E-04	0.	0.	0.	1.01E-01	8.73E-02	2.55E-01	5.42E-02	5.05E-01
72	3.69	3.43E-05	0.	4.24E-03	5.68E-03	1.33E-04	0.	0.	0.	9.50E-02	9.49E-02	2.75E-01	5.97E-02	5.35E-01
73	3.59	3.37E-05	0.	5.72E-03	1.21E-02	1.04E-04	0.	0.	0.	8.69E-02	1.03E-01	2.89E-01	6.58E-02	5.63E-01
74	3.49	3.86E-05	0.	3.53E-03	1.65E-03	1.18E-04	0.	0.	0.	5.01E-02	1.15E-01	3.22E-01	7.20E-02	5.63E-01
75	3.39	2.44E-05	0.	3.63E-03	6.70E-03	9.19E-05	0.	0.	0.	5.02E-02	1.23E-01	3.56E-01	7.97E-02	6.20E-01
76	3.29	2.11E-05	0.	2.14E-03	1.19E-02	9.61E-05	0.	0.	0.	5.03E-02	1.35E-01	3.91E-01	8.71E-02	6.78E-01
77	3.19	2.01E-05	0.	1.81E-03	2.59E-03	9.03E-05	0.	0.	0.	5.04E-02	1.49E-01	4.26E-01	9.45E-02	7.25E-01
78	3.09	1.79E-05	0.	1.10E-03	6.44E-03	8.45E-05	0.	0.	0.	5.05E-02	1.65E-01	4.62E-01	1.02E-01	7.86E-01
79	2.99	1.49E-05	0.	4.83E-04	3.61E-03	8.37E-05	0.	0.	0.	5.06E-02	1.83E-01	4.99E-01	1.10E-01	8.46E-01
80	2.89	1.55E-05	0.	5.28E-04	2.17E-03	4.35E-05	0.	0.	0.	5.07E-02	2.03E-01	5.42E-01	1.19E-01	9.17E-01
81	2.79	9.45E-06	0.	1.53E-04	3.87E-03	2.34E-05	0.	0.	0.	5.07E-02	2.27E-01	5.89E-01	1.29E-01	9.97E-01
82	2.69	4.58E-06	0.	7.53E-05	3.04E-04	1.02E-15	0.	0.	0.	5.07E-02	2.54E-01	6.38E-01	1.38E-01	1.08E 00
83	2.59	3.20E-07	0.	8.25E-06	2.87E-04	2.41E-06	0.	0.	0.	5.07E-02	2.87E-01	7.20E-01	7.87E-02	1.14E 00
84	2.49	0.	3.90E-04	0.	2.42E-04	2.55E-07	0.	0.	0.	5.07E-02	3.25E-01	8.46E-01	9.29E-02	1.31E 00
85	2.39	0.	1.27E-03	0.	0.	0.	0.	0.	0.	5.03E-02	3.70E-01	7.02E-01	1.11E-01	1.23E 00
86	2.29	0.	3.21E-03	0.	0.	0.	0.	0.	0.	5.01E-02	4.23E-01	8.30E-01	1.33E-01	1.44E 00
87	2.19	0.	3.51E-03	0.	0.	0.	0.	0.	0.	4.99E-02	4.87E-01	9.46E-01	1.55E-01	1.66E 00
88	2.09	0.	8.76E-03	0.	0.	0.	0.	0.	0.	4.83E-02	5.65E-01	1.10E 00	1.79E-01	1.90E 00
89	1.99	0.	9.07E-03	0.	0.	0.	0.	0.	0.	4.64E-02	6.61E-01	1.26E 00	2.65E-01	2.13E 00
90	1.89	0.	7.60E-03	0.	0.	0.	0.	0.	0.	4.44E-02	7.80E-01	1.50E 00	2.40E-01	2.50E 00
91	1.79	0.	8.82E-03	0.	0.	0.	0.	0.	0.	4.18E-02	9.29E-01	1.80E 00	2.81E-01	3.00E 00
92	1.69	0.	6.51E-03	0.	0.	0.	0.	0.	0.	3.94E-02	1.12E 00	2.18E 00	3.54E-01	3.61E 00
93	1.59	0.	7.59E-03	0.	0.	0.	0.	0.	0.	1.61E-02	1.36E 00	2.70E 00	4.30E-01	4.52E 00
94	1.49	0.	7.56E-03	0.	0.	0.	0.	0.	0.	0.	1.68E 00	3.35E 00	5.12E-01	5.55E 00
95	1.39	0.	5.78E-03	0.	0.	0.	0.	0.	0.	0.	2.11E 00	4.39E 00	6.77E-01	7.19E 00
96	1.29	0.	5.55E-03	0.	0.	0.	0.	0.	0.	0.	2.71E 00	4.78E 00	6.77E-01	8.10E 00
97	1.19	0.	5.19E-03	0.	0.	0.	0.	8.18E-09	0.	0.	3.54E 00	5.00E 00	8.51E-01	1.02E 01
98	1.09	0.	4.76E-03	0.	0.	0.	0.	1.13E-07	0.	0.	4.72E 00	7.03E 00	9.64E-01	1.27E 01
99	0.99	0.	3.91E-03	0.	0.	0.	0.	1.36E-07	0.	0.	6.50E 00	8.05E 00	1.13E 00	1.57E 01
100	0.89	0.	1.84E-03	0.	0.	0.	0.	2.76E-06	0.	0.	9.31E 00	9.27E 00	1.38L 00	1.99E 01
101	0.79	0.	4.41E-04	0.	0.	0.	0.	2.37E-06	0.	0.	1.41E 01	1.01E 01	1.68E 00	2.56E 01
102	0.69	0.	7.84E-05	0.	0.	0.	0.	8.02E-06	0.	0.	2.27E 01	1.13E 01	1.54E 00	3.55E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. I	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.23E-04	0.	0.	0.	2.22E-03	2.02E-04	1.94E 00	7.66E-03	1.95E 00
2	10.60	0.	0.	2.01E-04	0.	0.	0.	2.22E-03	3.01E-04	3.44E-02	7.63E-03	4.48E-02
3	10.50	0.	0.	2.02E-04	0.	0.	0.	2.22E-03	3.09E-04	3.46E-02	7.61E-03	4.50E-02
4	10.40	0.	0.	1.90E-04	0.	0.	0.	2.22E-03	3.18E-04	3.47E-02	7.58E-03	4.50E-02
5	10.30	0.	0.	1.65E-04	0.	0.	0.	2.23E-03	3.28E-04	3.48E-02	7.56E-03	4.51E-02
6	10.20	0.	0.	1.69E-04	0.	0.	0.	2.23E-03	3.38E-04	3.49E-02	7.53E-03	4.52E-02
7	10.10	0.	0.	1.59E-04	0.	0.	0.	2.23E-03	3.49E-04	3.49E-02	7.50E-03	4.52E-02
8	10.00	0.	0.	1.38E-04	0.	0.	0.	2.24E-03	3.58E-04	3.50E-02	7.48E-03	4.52E-02
9	9.90	0.	0.	1.41E-04	0.	0.	0.	2.24E-03	3.69E-04	3.51E-02	7.45E-03	4.53E-02
10	9.80	0.	0.	1.32E-04	0.	0.	0.	2.24E-03	3.81E-04	3.52E-02	7.42E-03	4.54E-02
11	9.70	0.	0.	1.13E-04	0.	0.	0.	2.25E-03	3.93E-04	3.53E-02	7.40E-03	4.54E-02
12	9.60	0.	0.	1.22E-04	0.	0.	0.	2.25E-03	4.05E-04	3.53E-02	7.37E-03	4.55E-02
13	9.50	0.	0.	1.03E-04	0.	0.	0.	2.26E-03	4.18E-04	3.54E-02	7.34E-03	4.56E-02
14	9.40	0.	0.	9.69E-05	0.	0.	0.	2.26E-03	4.32E-04	3.56E-02	7.32E-03	4.57E-02
15	9.30	0.	0.	9.90E-05	0.	0.	0.	2.27E-03	4.46E-04	3.57E-02	7.29E-03	4.58E-02
16	9.20	0.	0.	8.11E-05	0.	0.	0.	2.28E-03	4.60E-04	3.58E-02	7.27E-03	4.59E-02
17	9.10	0.	0.	8.32E-05	0.	0.	0.	2.29E-03	4.76E-04	1.23E-02	7.24E-03	2.24E-02
18	9.00	0.	0.	7.51E-05	0.	0.	0.	2.30E-03	4.92E-04	1.23E-02	7.22E-03	2.24E-02
19	8.90	0.	0.	6.89E-05	0.	0.	0.	2.31E-03	5.09E-04	1.23E-02	7.19E-03	2.24E-02
20	8.80	0.	0.	6.75E-05	0.	0.	0.	2.31E-03	5.27E-04	1.23E-02	7.17E-03	2.24E-02
21	8.70	0.	0.	5.80E-05	0.	0.	0.	2.32E-03	5.45E-04	1.23E-02	7.15E-03	2.24E-02
22	8.60	0.	0.	5.96E-05	0.	0.	0.	2.33E-03	5.65E-04	1.24E-02	7.12E-03	2.24E-02
23	8.50	0.	0.	5.17E-05	0.	0.	0.	2.34E-03	5.85E-04	1.24E-02	7.10E-03	2.25E-02
24	8.40	0.	0.	5.12E-05	0.	0.	0.	2.35E-03	6.07E-04	1.24E-02	7.08E-03	2.25E-02
25	8.30	0.	0.	4.31E-05	0.	0.	0.	2.36E-03	6.29E-04	1.24E-02	7.07E-03	2.25E-02
26	8.20	0.	0.	4.34E-05	0.	0.	0.	2.38E-03	6.52E-04	1.25E-02	7.09E-03	2.26E-02
27	8.10	0.	0.	3.72E-05	0.	0.	0.	2.39E-03	6.77E-04	1.25E-02	7.11E-03	2.27E-02
28	8.00	0.	0.	3.72E-05	0.	0.	0.	2.40E-03	7.03E-04	1.25E-02	7.13E-03	2.28E-02
29	7.90	0.	0.	3.18E-05	0.	0.	0.	2.41E-03	7.30E-04	1.26E-02	7.16E-03	2.29E-02
30	7.80	0.	0.	3.28E-05	0.	0.	0.	2.42E-03	7.59E-04	1.27E-02	7.18E-03	2.31E-02
31	7.70	0.	0.	2.86E-05	0.	0.	0.	2.44E-03	7.89E-04	1.27E-02	7.20E-03	2.32E-02
32	7.60	0.	0.	2.70E-05	0.	1.29E-09	0.	2.45E-03	8.26E-04	1.28E-02	7.22E-03	2.33E-02
33	7.50	0.	0.	2.48E-05	0.	4.69E-09	0.	2.46E-03	8.54E-04	1.29E-02	7.24E-03	2.34E-02
34	7.40	0.	0.	2.21E-05	0.	3.60E-08	0.	2.48E-03	8.89E-04	1.29E-02	7.26E-03	2.36E-02
35	7.30	0.	0.	2.08E-05	0.	1.49E-07	0.	2.49E-03	9.24E-04	1.30E-02	7.28E-03	2.37E-02
36	7.20	0.	0.	1.87E-05	0.	4.03E-07	0.	2.50E-03	9.66E-04	1.31E-02	7.30E-03	2.38E-02
37	7.10	0.	0.	1.78E-05	0.	1.23E-06	0.	2.52E-03	1.01E-03	1.31E-02	7.33E-03	2.40E-02
38	7.00	3.58E-09	0.	1.62E-05	0.	2.58E-06	0.	2.54E-03	1.05E-03	1.32E-02	7.35E-03	2.41E-02
39	6.90	6.95E-09	0.	1.48E-05	0.	3.39E-06	0.	2.56E-03	1.10E-03	1.32E-02	7.37E-03	2.43E-02
40	6.80	5.96E-09	0.	1.41E-05	0.	6.11E-06	0.	2.58E-03	1.15E-03	1.33E-02	7.39E-03	2.45E-02
41	6.70	4.32E-09	0.	1.23E-05	0.	6.28E-06	0.	2.61E-03	1.20E-03	1.34E-02	7.42E-03	2.46E-02
42	6.60	2.62E-09	0.	1.09E-05	0.	4.87E-06	0.	2.63E-03	1.24E-03	1.35E-02	7.45E-03	2.48E-02
43	6.50	1.50E-09	0.	8.41E-06	0.	7.45E-06	0.	2.65E-03	1.32E-03	1.36E-02	7.49E-03	2.51E-02
44	6.40	8.55E-10	0.	5.88E-06	2.79E-08	7.20E-06	0.	2.67E-03	1.39E-03	1.37E-02	7.52E-03	2.53E-02
45	6.30	4.93E-10	0.	3.62E-06	1.30E-07	4.89E-06	0.	2.69E-03	1.46E-03	1.39E-02	7.57E-03	2.56E-02
46	6.20	2.21E-10	0.	1.98E-06	1.83E-07	6.84E-06	0.	2.71E-03	1.52E-03	1.40E-02	7.45E-03	2.59E-02
47	6.13	1.01E-10	0.	9.18E-07	5.18E-07	8.76E-06	0.	2.73E-03	1.59E-03	1.42E-02	7.73E-03	2.62E-02
48	6.01	4.17E-11	0.	2.31E-07	4.90E-07	4.14E-06	0.	2.75E-03	1.68E-03	1.43E-02	7.81E-03	2.66E-02
49	5.90	1.02E-11	0.	1.46E-08	7.14E-07	4.08E-06	0.	2.75E-03	1.76E-03	1.45E-02	7.89E-03	2.70E-02
50	5.80	1.30E-12	0.	4.16E-10	9.93E-07	4.14E-06	0.	2.71E-03	1.86E-03	1.47E-02	7.97E-03	2.73E-02
51	5.70	9.56E-14	0.	0.	1.15E-06	4.62E-06	0.	2.54E-03	1.96E-03	1.49E-02	8.06E-03	2.75E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NC VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IRMS)		H P.E.	O P.E.	TOTAL AIR
52	5.61	4.30E-05	0.	0.	0.	9.68E-07	6.26E-06	0.	0.	2.36E-03	2.84E-03	1.52E-02	8.14E-03	2.78E-02	
53	5.50	0.	0.	0.	0.	1.18E-06	5.82E-06	0.	0.	2.38E-03	2.78E-03	1.55E-02	8.24E-03	2.83E-02	
54	5.40	0.	0.	0.	0.	1.07E-06	4.62E-06	0.	0.	2.39E-03	2.38E-03	1.59E-02	8.35E-03	2.89E-02	
55	5.33	0.	0.	0.	0.	1.10E-06	5.04E-06	0.	0.	2.40E-03	2.44E-03	1.63E-02	8.47E-03	2.96E-02	
56	5.20	0.	0.	0.	0.	1.18E-06	4.32E-06	0.	0.	2.42E-03	2.58E-03	1.67E-02	8.63E-03	3.03E-02	
57	5.14	0.	0.	0.	0.	1.17E-06	5.60E-06	0.	0.	2.44E-03	2.74E-03	1.72E-02	8.79E-03	3.11E-02	
58	5.01	5.78E-08	0.	0.	0.	1.07E-06	5.19E-06	0.	0.	2.46E-03	2.91E-03	1.77E-02	8.99E-03	3.20E-02	
59	4.90	1.30E-07	0.	0.	0.	1.10E-06	5.61E-06	0.	0.	2.48E-03	3.09E-03	1.83E-02	9.12E-03	3.30E-02	
60	4.80	2.58E-07	0.	0.	0.	1.27E-06	5.24E-06	0.	0.	2.50E-03	3.29E-03	1.89E-02	9.31E-03	3.40E-02	
61	4.70	3.45E-07	0.	0.	0.	1.26E-06	4.73E-06	0.	0.	2.52E-03	3.50E-03	1.95E-02	9.55E-03	3.51E-02	
	4.60	4.71E-07	0.	0.	0.	1.29E-06	4.31E-06	0.	0.	2.54E-03	3.74E-03	2.03E-02	9.90E-03	3.64E-02	
63	4.59	4.92E-07	0.	1.19E-06	0.	1.17E-06	3.23E-06	0.	0.	2.56E-03	4.00E-03	2.13E-02	1.00E-02	3.79E-02	
64	4.49	5.71E-07	0.	3.65E-06	0.	1.17E-06	2.24E-06	0.	0.	2.58E-03	4.29E-03	2.23E-02	1.03E-02	3.94E-02	
65	4.33	4.89E-07	0.	1.15E-05	0.	1.11E-06	1.39E-06	0.	0.	2.61E-03	4.59E-03	2.33E-02	1.06E-02	4.11E-02	
66	4.2[illegible]	4.55E-07	0.	3.79E-05	0.	1.10E-06	9.93E-07	0.	0.	2.63E-03	4.93E-03	2.44E-02	1.09E-02	4.29E-02	
67	4.11	4.24E-07	0.	1.58E-05	0.	1.13E-06	2.73E-07	0.	0.	2.66E-03	5.30E-03	2.55E-02	1.09E-02	4.46E-02	
68	4.09	3.89E-07	0.	5.46E-05	0.	1.09E-06	2.07E-07	0.	0.	2.69E-03	5.71E-03	2.66E-02	4.06E-03	3.91E-02	
69	3.99	5.28E-07	0.	2.92E-05	1.44E-05	9.93E-07	7.99E-08	0.	0.	2.64E-03	6.17E-03	2.55E-02	4.19E-03	3.85E-02	
70	3.80	2.59E-07	0.	3.97E-05	6.55E-05	1.07E-06	0.	0.	0.	2.63E-03	6.67E-03	2.59E-02	4.36E-03	3.97E-02	
71	3.70	3.10E-07	0.	4.28E-05	2.52E-05	8.97E-07	0.	0.	0.	2.58E-03	7.23E-03	2.10E-02	4.79E-03	3.97E-02	
72	3.68	2.84E-07	0.	2.49E-05	1.39E-04	9.71E-07	0.	0.	0.	2.42E-03	7.84E-03	2.27E-02	5.28E-03	3.95E-02	
73	3.58	2.63E-07	0.	3.90E-05	2.84E-04	7.58E-07	0.	0.	0.	2.22E-03	8.50E-03	2.39E-02	5.82E-03	4.08E-02	
74	3.43	2.40E-07	0.	2.40E-05	3.90E-05	8.48E-07	0.	0.	0.	1.28E-03	9.35E-03	2.66E-02	6.44E-03	4.30E-02	
75	3.39	1.91E-07	0.	2.48E-05	1.59E-04	6.71E-07	0.	0.	0.	1.28E-03	1.02E-02	2.94E-02	7.86E-03	4.42E-02	
76	3.20	1.45E-07	0.	1.60E-05	2.81E-04	7.02E-07	0.	0.	0.	1.28E-03	1.12E-02	3.23E-02	7.71E-03	5.28E-02	
77	3.16	1.57E-07	0.	1.24E-05	6.14E-05	6.60E-07	0.	0.	0.	1.28E-03	1.24E-02	3.52E-02	8.36E-03	5.73E-02	
78	3.03	1.40E-07	0.	7.91E-06	1.52E-04	6.17E-07	0.	0.	0.	1.29E-03	1.36E-02	3.81E-02	9.01E-03	6.22E-02	
79	2.91	1.17E-07	0.	4.66E-06	8.55E-05	4.65E-07	0.	0.	0.	1.29E-03	1.51E-02	4.12E-02	9.71E-03	6.74E-02	
80	2.84	1.21E-07	0.	2.24E-06	5.13E-05	3.18E-07	0.	0.	0.	1.29E-03	1.68E-02	4.48E-02	1.05E-02	7.34E-02	
81	2.73	7.71E-08	0.	1.09E-06	7.27E-05	1.71E-07	0.	0.	0.	1.29E-03	1.88E-02	4.86E-02	1.14E-02	8.01E-02	
82	2.60	3.59E-08	0.	5.13E-07	7.20E-06	7.44E-08	0.	0.	0.	1.29E-03	2.11E-02	5.27E-02	1.22E-02	8.73E-02	
83	2.55	2.58E-09	0.	5.63E-08	6.80E-06	1.76E-08	0.	0.	0.	1.29E-03	2.38E-02	6.08E-02	6.92E-03	9.28E-02	
84	2.45	0.	2.64E-06	0.	9.73E-06	1.86E-09	0.	0.	0.	1.29E-03	2.69E-02	6.99E-02	8.22E-03	1.06E-01	
85	2.30	0.	8.63E-06	0.	0.	0.	0.	0.	0.	1.28E-03	3.04E-02	5.88E-02	9.63E-03	9.98E-02	
86	2.29	0.	2.19E-05	0.	0.	0.	0.	0.	0.	1.28E-03	3.51E-02	6.86E-02	1.18E-02	1.17E-01	
87	2.10	0.	2.39E-05	0.	0.	0.	0.	0.	0.	1.27E-03	4.04E-02	7.98E-02	1.38E-02	1.35E-01	
88	2.00	0.	4.61E-05	0.	0.	0.	0.	0.	0.	1.23E-03	4.68E-02	9.11E-02	1.57E-02	1.55E-01	
89	1.99	0.	6.18E-05	0.	0.	0.	0.	0.	0.	1.16E-03	5.44E-02	1.04E-01	1.81E-02	1.78E-01	
90	1.85	0.	5.18E-05	0.	0.	0.	0.	0.	0.	1.13E-03	6.44E-02	1.24E-01	2.19E-02	2.12E-01	
91	1.70	0.	4.02E-05	0.	0.	0.	0.	0.	0.	1.07E-03	7.69E-02	1.49E-01	2.66E-02	2.54E-01	
92	1.60	0.	4.48E-05	0.	0.	0.	0.	0.	0.	9.03E-04	9.25E-02	1.74E-01	3.14E-02	2.98E-01	
93	1.50	0.	5.17E-05	0.	0.	0.	0.	0.	0.	4.10E-04	1.12E-01	2.23E-01	3.81E-02	3.74E-01	
94	1.40	0.	5.15E-05	0.	0.	0.	0.	0.	0.	0.	1.39E-01	2.77E-01	4.53E-02	4.62E-01	
95	1.30	0.	3.94E-05	0.	0.	0.	0.	0.	0.	0.	1.75E-01	3.63E-01	5.99E-02	5.98E-01	
96	1.20	0.	3.78E-05	0.	0.	0.	0.	0.	0.	0.	2.24E-01	3.89E-01	6.03E-02	6.73E-01	
97	1.11	0.	3.54E-05	0.	0.	0.	0.	5.98E-11	0.	0.	2.93E-01	4.79E-01	7.94E-02	8.43E-01	
98	1.01	0.	3.25E-05	0.	0.	0.	0.	6.28E-10	0.	0.	3.91E-01	5.81E-01	8.53E-02	1.06E 00	
99	0.99	0.	2.67E-05	0.	0.	0.	0.	9.53E-10	0.	0.	5.30E-01	6.65E-01	1.00E-01	1.30E 00	
100	0.83	0.	1.28E-05	0.	0.	0.	0.	2.02E-08	0.	0.	7.77E-01	7.64E-01	1.19E-01	1.65E 00	
101	0.77	0.	3.00E-06	0.	0.	0.	0.	1.73E-08	0.	0.	1.17E 00	8.35E-01	1.22E-01	2.12E 00	
102	0.69	0.	4.81E-07	0.	0.	0.	0.	5.86E-08	0.	0.	1.88E 00	9.33E-01	1.37E-01	2.95E 00	

ABSORPTION COEFFICIENTS HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.85E-07	0.	0.	0.	3.46E-05	1.64E-05	1.00E-01	5.01E-04	1.00E-01
2	10.60	0.	0.	6.19E-07	0.	0.	0.	3.46E-05	1.71E-05	1.91E-03	5.00E-04	2.46E-03
3	10.50	0.	0.	6.22E-07	0.	0.	0.	3.47E-05	1.76E-05	1.92E-03	4.98E-04	2.47E-03
4	10.40	0.	0.	5.66E-07	0.	0.	0.	3.47E-05	1.81E-05	1.93E-03	4.96E-04	2.48E-03
5	10.30	0.	0.	5.07E-07	0.	0.	0.	3.48E-05	1.86E-05	1.93E-03	4.95E-04	2.48E-03
6	10.20	0.	0.	5.21E-07	0.	0.	0.	3.48E-05	1.92E-05	1.94E-03	4.93E 04	2.49E-03
7	10.10	0.	0.	4.48E-07	0.	0.	0.	3.49E-05	1.98E-05	1.94E-03	4.91E-04	2.49E-03
8	10.00	0.	0.	4.24E-07	0.	0.	0.	3.49E-05	2.04E-05	1.94E-03	4.89E-04	2.49E-03
9	9.90	0.	0.	4.35E-07	0.	0.	0.	3.50E-05	2.10E-05	1.95E-03	4.88E-04	2.49E-03
10	9.80	0.	0.	4.05E-07	0.	0.	0.	3.50E-05	2.17E-05	1.95E-03	4.86E-04	2.49E-03
11	9.70	0.	0.	3.47E-07	0.	0.	0.	3.51E-05	2.23E-05	1.96E-03	4.84E-04	2.50E-03
12	9.60	0.	0.	3.75E-07	0.	0.	0.	3.52E-05	2.30E-05	1.96E-03	4.82E-04	2.50E-03
13	9.50	0.	0.	3.17E-07	0.	0.	0.	3.52E-05	2.38E-05	1.97E-03	4.81E-04	2.51E-03
14	9.40	0.	0.	2.98E-07	0.	0.	0.	3.54E-05	2.46E-05	1.97E-03	4.79E-04	2.51E-03
15	9.30	0.	0.	3.05E-07	0.	0.	0.	3.55E-05	2.54E-05	1.98E-03	4.77E-04	2.52E-03
16	9.20	0.	0.	2.50E-07	0.	0.	0.	3.56E-05	2.62E-05	1.99E-03	4.76E-04	2.52E-03
17	9.10	0.	0.	2.96E-07	0.	0.	0.	3.58E-05	2.71E-05	6.84E-04	4.74E-04	1.22E-03
18	9.00	0.	0.	2.31E-07	0.	0.	0.	3.59E-05	2.80E-05	6.84E-04	4.72E-04	1.22E-03
19	8.90	0.	0.	2.12E-07	0.	0.	0.	3.60E-05	2.89E-05	6.84E-04	4.71E-04	1.22E-03
20	8.80	0.	0.	2.08E-07	0.	0.	0.	3.61E-05	3.00E-05	6.85E-04	4.69E-04	1.22E-03
21	8.70	0.	0.	1.78E-07	0.	0.	0.	3.63E-05	3.10E-05	6.85E-04	4.68E-04	1.22E-03
22	8.60	0.	0.	1.83E-07	0.	0.	0.	3.64E-05	3.21E-05	6.86E-04	4.66E-04	1.22E-03
23	8.50	0.	0.	1.59E-07	0.	0.	0.	3.65E-05	3.33E-05	6.87E-04	4.65E-04	1.22E-03
24	8.40	0.	0.	1.58E-07	0.	0.	0.	3.67E-05	3.45E-05	6.89E-04	4.63E-04	1.22E-03
25	8.30	0.	0.	1.33E-07	0.	0.	0.	3.69E-05	3.58E-05	6.90E-04	4.63E-04	1.23E-03
26	8.20	0.	0.	1.34E-07	0.	0.	0.	3.71E-05	3.71E-05	6.92E-04	4.64E-04	1.23E-03
27	8.10	0.	0.	1.14E-07	0.	0.	0.	3.73E-05	3.85E-05	6.93E-04	4.66E-04	1.23E-03
28	8.00	0.	0.	1.15E-07	0.	0.	0.	3.75E-05	4.00E-05	6.96E-04	4.67E-04	1.24E-03
29	7.90	0.	0.	9.77E-08	0.	0.	0.	3.77E-05	4.15E-05	7.00E-04	4.68E-04	1.25E-03
30	7.80	0.	0.	1.01E-07	0.	0.	0.	3.79E-05	4.31E-05	7.03E-04	4.70E-04	1.25E-03
31	7.70	0.	0.	8.78E-08	0.	0.	0.	3.81E-05	4.49E-05	7.07E-04	4.71E-04	1.26E-03
32	7.60	0.	0.	8.29E-08	0.	4.67E-12	0.	3.82E-05	4.67E-05	7.10E-04	6.72E-04	1.27E-03
33	7.50	0.	0.	7.62E-08	0.	1.70E-11	0.	3.84E-05	4.84E-05	7.14E-04	4.74E-04	1.27E-03
34	7.40	0.	0.	6.80E-08	0.	1.31E-10	0.	3.87E-05	5.06E-05	7.17E-04	4.75E-04	1.28E-03
35	7.30	0.	0.	6.40E-08	0.	5.41E-10	0.	3.89E-05	5.27E-05	7.21E-04	4.77E-04	1.29E-03
36	7.20	0.	0.	5.74E-08	0.	1.46E-09	0.	3.91E-05	5.49E-05	7.24E-04	4.78E-04	1.30E-03
37	7.10	0.	0.	5.48E-08	0.	4.48E-09	0.	3.94E-05	5.73E-05	7.28E-04	4.79E-04	1.30E-03
38	7.00	1.93E-11	0.	4.99E-08	0.	9.37E-09	0.	3.97E-05	5.98E-05	7.31E-04	4.81E-04	1.31E-03
39	6.90	2.98E-11	0.	4.95E-08	0.	1.23E-08	0.	4.00E-05	6.25E-05	7.35E-04	4.82E-04	1.32E-03
40	6.80	2.96E-11	0.	4.34E-08	0.	2.22E-08	0.	4.04E-05	6.53E-05	7.39E-04	4.84E-04	1.33E-03
41	6.70	1.65E-11	0.	3.78E-08	0.	2.27E-08	0.	4.07E-05	6.83E-05	7.42E-04	4.86E-04	1.34E-03
42	6.60	1.12E-11	0.	3.36E-08	0.	1.77E-08	0.	4.10E-05	7.15E-05	7.48E-04	4.88E-04	1.35E-03
43	6.50	6.45E-12	0.	2.65E-08	0.	2.71E-08	0.	4.13E-05	7.49E-05	7.55E-04	4.90E-04	1.36E-03
44	6.40	1.47E-12	0.	1.81E-08	1.01E-10	2.64E-08	0.	4.16E-05	7.85E-05	7.62E-04	4.92E-04	1.37E-03
45	6.30	2.11E-12	0.	1.11E-08	4.72E-10	1.78E-08	0.	4.20E-05	8.23E-05	7.70E-04	4.95E-04	1.39E-03
46	6.20	9.46E-13	0.	6.89E-09	6.64E-10	2.48E-08	0.	4.23E-05	8.64E-05	7.77E-04	5.81E-04	1.41E-03
47	6.10	4.31E-13	0.	2.82E-09	1.89E-09	3.18E-08	0.	4.26E-05	9.07E-05	7.85E-04	5.96E-04	1.42E-03
48	6.00	1.79E-13	0.	7.12E-10	1.78E-09	1.50E-08	0.	4.29E-05	9.54E-05	7.96E-04	5.11E-04	1.45E-03
49	5.90	4.38E-14	0.	5.10E-11	2.59E-09	1.48E-08	0.	4.29E-05	1.00E-04	8.07E-04	5.17E-04	1.47E-03
50	5.80	5.57E-15	0.	1.20E-12	3.61E-09	1.50E-08	0.	4.23E-05	1.04E-04	8.18E-04	5.22E-04	1.49E-03
51	5.70	4.10E-16	0.	0.	4.18E-09	1.68E-08	0.	3.97E-05	1.11E-04	8.29E-04	5.27E-04	1.51E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.45E-17	0.	0.	0.	3.51E-09	2.27E-08	0.	0.	3.69E-05	1.17E-04	8.42E-04	5.33E-04	1.53E-03
53	5.50	0.	0.	0.	0.	4.20E-09	2.11E-08	0.	0.	3.71E-05	1.24E-04	8.68E-04	5.39E-04	1.56E-03
54	5.40	0.	0.	0.	0.	3.89E-09	1.48E-08	0.	0.	3.73E-05	1.31E-04	8.81E-04	5.46E-04	1.58E-03
55	5.30	0.	0.	0.	0.	3.93E-09	2.16E-08	0.	0.	3.76E-05	1.39E-04	9.03E-04	5.54E-04	1.63E-03
56	5.20	0.	0.	0.	0.	4.27E-09	1.97E-08	0.	0.	3.78E-05	1.47E-04	9.25E-04	5.65E-04	1.67E-03
57	5.10	0.	0.	0.	0.	4.25E-09	2.83E-08	0.	0.	3.81E-05	1.56E-04	9.52E-04	5.75E-04	1.72E-03
58	5.00	2.48E-18	0.	0.	0.	3.87E-09	1.89E-08	0.	0.	3.84E-05	1.65E-04	9.81E-04	5.86E-04	1.77E-03
59	4.90	5.96E-18	0.	0.	0.	4.29E-09	2.04E-08	0.	0.	3.88E-05	1.76E-04	1.01E-03	5.97E-04	1.82E-03
60	4.80	1.11E-09	0.	0.	0.	4.59E-09	1.98E-08	0.	0.	3.91E-05	1.87E-04	1.05E-03	6.09E-04	1.88E-03
61	4.70	1.48E-09	0.	0.	0.	4.56E-09	1.72E-08	0.	0.	3.94E-05	1.99E-04	1.08E-03	6.25E-04	1.95E-03
62	4.60	2.02E-09	0.	0.	0.	4.67E-09	1.56E-08	0.	0.	3.97E-05	2.13E-04	1.13E-03	6.41E-04	2.02E-03
63	4.50	2.11E-09	0.	3.65E-09	0.	4.24E-09	1.17E-08	0.	0.	4.00E-05	2.27E-04	1.18E-03	6.58E-04	2.11E-03
64	4.40	2.23E-09	0.	1.12E-08	0.	4.24E-09	8.13E-09	0.	0.	4.04E-05	2.43E-04	1.24E-03	6.75E-04	2.19E-03
65	4.30	2.10E-09	0.	3.93E-08	0.	4.02E-09	5.04E-09	0.	0.	4.07E-05	2.61E-04	1.30E-03	6.92E-04	2.29E-03
66	4.20	1.95E-09	0.	1.17E-07	0.	4.25E-09	3.61E-09	0.	0.	4.10E-05	2.80E-04	1.36E-03	7.10E-04	2.39E-03
67	4.10	1.82E-09	0.	4.87E-09	0.	4.11E-09	9.90E-10	0.	0.	4.12E-05	3.02E-04	1.42E-03	7.15E-04	2.47E-03
68	4.00	1.67E-09	0.	1.68E-07	0.	3.94E-09	7.51E-10	0.	0.	4.13E-05	3.29E-04	1.48E-03	2.66E-04	2.11E-03
69	3.90	1.41E-09	0.	7.74E-08	1.85E-07	3.40E-09	2.90E-10	0.	0.	4.12E-05	3.51E-04	1.41E-03	2.74E-04	2.08E-03
70	3.80	1.54E-09	0.	1.22E-07	8.44E-07	3.87E-09	0.	0.	0.	4.10E-05	3.80E-04	1.44E-03	2.85E-04	2.15E-03
71	3.70	1.36E-09	0.	1.31E-07	3.25E-07	3.26E-09	0.	0.	0.	4.04E-05	4.12E-04	1.17E-03	3.14E-04	1.93E-03
72	3.60	1.22E-09	0.	8.90E-08	1.80E-06	3.53E-09	0.	0.	0.	3.78E-05	4.47E-04	1.26E-03	3.46E-04	2.09E-03
73	3.50	1.13E-09	0.	1.20E-07	3.69E-06	2.75E-09	0.	0.	0.	3.46E-05	4.87E-04	1.32E-03	3.81E-04	2.23E-03
74	3.40	1.03E-09	0.	7.40E-08	5.03E-07	3.08E-09	0.	0.	0.	2.00E-05	5.32E-04	1.48E-03	4.21E-04	2.45E-03
75	3.30	9.19E-10	0.	7.61E-08	2.05E-06	2.44E-09	0.	0.	0.	2.00E-05	5.82E-04	1.63E-03	4.62E-04	2.78E-03
76	3.20	7.09E-10	0.	4.92E-08	3.63E-06	2.55E-09	0.	0.	0.	2.00E-05	6.34E-04	1.79E-03	5.05E-04	2.96E-03
77	3.10	4.75E-10	0.	3.80E-08	7.92E-07	2.40E-09	0.	0.	0.	2.01E-05	7.03E-04	1.95E-03	5.47E-04	3.22E-03
78	3.00	4.00E-10	0.	2.31E-08	1.97E-06	2.24E-09	0.	0.	0.	2.01E-05	7.77E-04	2.12E-03	5.90E-04	3.50E-03
79	2.90	5.01E-10	0.	1.43E-08	1.10E-06	1.69E-09	0.	0.	0.	2.01E-05	8.61E-04	2.29E-03	6.36E-04	3.80E-03
80	2.80	5.19E-10	0.	6.86E-09	6.82E-07	1.15E-09	0.	0.	0.	2.02E-05	9.57E-04	2.48E-03	6.87E-04	4.15E-03
81	2.70	3.51E-10	0.	3.22E-09	9.37E-07	6.21E-10	0.	0.	0.	2.02E-05	1.07E-03	2.70E-03	7.43E-04	4.53E-03
82	2.60	1.54E-10	0.	1.58E-09	9.28E-08	2.70E-10	0.	0.	0.	2.02E-05	1.20E-03	2.92E-03	8.00E-04	4.94E-03
83	2.50	1.07E-11	0.	1.73E-10	8.77E-08	4.38E-11	0.	0.	0.	2.02E-05	1.39E-03	3.33E-03	6.51E-04	5.15E-03
84	2.40	0.	8.19E-09	0.	7.39E-08	6.77E-12	0.	0.	0.	2.02E-05	1.53E-03	3.88E-03	5.34E-04	5.97E-03
85	2.30	0.	2.66E-08	0.	0.	0.	0.	0.	0.	2.00E-05	1.74E-03	3.22E-03	6.43E-04	5.62E-03
86	2.20	0.	6.74E-08	0.	0.	0.	0.	0.	0.	1.99E-05	1.99E-03	3.80E-03	7.72E-04	6.59E-03
87	2.10	0.	7.37E-08	0.	0.	0.	0.	0.	0.	1.99E-05	2.30E-03	4.43E-03	9.08E-04	7.65E-03
88	2.00	0.	1.42E-07	0.	0.	0.	0.	0.	0.	1.92E-05	2.66E-03	5.06E-03	1.03E-03	8.77E-03
89	1.90	0.	1.90E-07	0.	0.	0.	0.	0.	0.	1.85E-05	3.12E-03	5.77E-03	1.19E-03	1.01E-02
90	1.80	0.	1.59E-07	0.	0.	0.	0.	0.	0.	1.77E-05	3.69E-03	6.89E-03	1.44E-03	1.20E-02
91	1.70	0.	1.85E-07	0.	0.	0.	0.	0.	0.	1.67E-05	4.39E-03	8.25E-03	1.74E-03	1.44E-02
92	1.60	0.	1.37E-07	0.	0.	0.	0.	0.	0.	1.41E-05	5.24E-03	9.63E-03	2.05E-03	1.70E-02
93	1.50	0.	1.59E-07	0.	0.	0.	0.	0.	0.	6.41E-06	6.40E-03	1.24E-02	2.40E-03	2.13E-02
94	1.40	0.	1.59E-07	0.	0.	0.	0.	0.	0.	0.	7.91E-03	1.54E-02	2.97E-03	2.63E-02
95	1.30	0.	1.21E-07	0.	0.	0.	0.	0.	0.	0.	9.96E-03	2.01E-02	3.92E-03	3.48E-02
96	1.20	0.	1.16E-07	0.	0.	0.	0.	0.	0.	0.	1.29E-02	2.16E-02	3.92E-03	3.83E-02
97	1.10	0.	1.09E-07	0.	0.	0.	0.	2.17E-13	0.	0.	1.67E-02	2.66E-02	4.93E-03	4.42E-02
98	1.00	0.	9.98E-08	0.	0.	0.	0.	3.01E-12	0.	0.	2.23E-02	3.22E-02	5.59E-03	6.01E-02
99	0.90	0.	8.20E-08	0.	0.	0.	0.	5.44E-12	0.	0.	3.04E-02	3.69E-02	6.57E-03	7.41E-02
100	0.80	0.	6.86E-08	0.	0.	0.	0.	7.34E-11	0.	0.	4.40E-02	4.25E-02	7.55E-03	8.40E-02
101	0.70	0.	9.24E-09	0.	0.	0.	0.	6.28E-11	3.	0.	6.65E-02	4.63E-02	8.80E-03	1.21E-01
102	0.60	0.	1.48E-09	0.	0.	0.	0.	2.13E-10	0.	0.	1.07E-01	5.17E-02	9.94E-03	1.68E-01

ABSORPTION COEFFICIENTS OF ATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 A-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	4.08E-16	0.	0.	0.	1.61E-07	4.19E-07	4.67E-05	1.47E-05	6.28E-05
2	10.60	0.	0.	3.46E-16	0.	0.	0.	1.42E-07	4.31E-07	4.69E-05	1.47E-05	6.22E-05
3	10.59	0.	0.	3.70E-16	0.	0.	0.	1.42E-07	4.44E-07	4.71E-05	1.48E-05	6.23E-05
4	10.49	0.	0.	3.49E-16	0.	0.	0.	1.42E-07	4.57E-07	4.73E-05	1.44E-05	6.25E-05
5	10.30	0.	0.	3.02E-16	0.	0.	0.	1.42E-07	4.70E-07	4.74E-05	1.45E-05	6.26E-05
6	10.20	0.	0.	3.13E-16	0.	0.	0.	1.42E-07	4.84E-07	4.75E-05	1.45E-05	6.26E-05
7	10.18	0.	0.	2.91E-16	0.	0.	0.	1.43E-07	4.99E-07	4.76E-05	1.44E-05	6.26E-05
8	10.00	0.	0.	2.53E-16	0.	0.	0.	1.43E-07	5.14E-07	4.74E-05	1.44E-05	6.24E-05
9	9.98	0.	0.	2.99E-16	0.	0.	0.	1.43E-07	5.30E-07	4.75E-05	1.43E-05	6.25E-05
10	9.80	0.	0.	2.41E-16	0.	0.	0.	1.43E-07	5.46E-07	4.76E-05	1.43E-05	6.26E-05
11	9.78	0.	0.	2.87E-16	0.	0.	0.	1.44E-07	5.63E-07	4.77E-05	1.42E-05	6.27E-05
12	9.68	0.	0.	2.23E-16	0.	0.	0.	1.44E-07	5.81E-07	4.79E-05	1.42E-05	6.28E-05
13	9.58	0.	0.	1.69E-16	0.	0.	0.	1.44E-07	6.00E-07	4.80E-05	1.41E-05	6.29E-05
14	9.48	0.	0.	1.77E-16	0.	0.	0.	1.65E-07	6.19E-07	4.81E-05	1.41E-05	6.30E-05
15	9.38	0.	0.	1.81E-16	0.	0.	0.	1.66E-07	6.39E-07	4.83E-05	1.40E-05	6.31E-05
16	9.28	0.	0.	1.49E-16	0.	0.	0.	1.66E-07	6.60E-07	4.84E-05	1.40E-05	6.32E-05
17	9.18	0.	0.	1.92E-16	0.	0.	0.	1.67E-07	6.82E-07	1.67E-05	1.39E-05	3.15E-05
18	9.08	0.	0.	1.38E-16	0.	0.	0.	1.67E-07	7.06E-07	1.67E-05	1.39E-05	3.15E-05
19	8.98	0.	0.	1.24E-16	0.	0.	0.	1.68E-07	7.30E-07	1.67E-05	1.38E-05	3.15E-05
20	8.89	0.	0.	1.24E-16	0.	0.	0.	1.69E-07	7.55E-07	1.67E-05	1.38E-05	3.14E-05
21	8.79	0.	0.	1.06E-16	0.	0.	0.	1.69E-07	7.82E-07	1.68E-05	1.37E-05	3.14E-05
22	8.68	0.	0.	1.69E-16	0.	0.	0.	1.70E-07	8.10E-07	1.68E-05	1.37E-05	3.14E-05
23	8.59	0.	0.	9.48E-11	0.	0.	0.	1.70E-07	8.39E-07	1.68E-05	1.36E-05	3.15E-05
24	8.49	0.	0.	9.38E-11	0.	0.	0.	1.71E-07	8.70E-07	1.68E-05	1.36E-05	3.15E-05
25	8.38	0.	0.	7.89E-11	0.	0.	0.	1.72E-07	9.02E-07	1.69E-05	1.36E-05	3.16E-05
26	8.28	0.	0.	7.95E-11	0.	0.	0.	1.73E-07	9.35E-07	1.69E-05	1.36E-05	3.17E-05
27	8.18	0.	0.	6.80E-11	0.	0.	0.	1.74E-07	9.71E-07	1.70E-05	1.37E-05	3.18E-05
28	8.06	0.	0.	6.82E-11	0.	0.	0.	1.75E-07	1.01E-06	1.70E-05	1.37E-05	3.19E-05
29	7.96	0.	0.	5.82E-11	0.	0.	0.	1.76E-07	1.05E-06	1.71E-05	1.38E-05	3.21E-05
30	7.88	0.	0.	6.01E-11	0.	0.	0.	1.77E-07	1.09E-06	1.72E-05	1.38E-05	3.23E-05
31	7.78	0.	0.	5.23E-11	0.	0.	0.	1.77E-07	1.13E-06	1.73E-05	1.38E-05	3.24E-05
32	7.68	0.	0.	4.94E-11	0.	3.35E-15	0.	1.78E-07	1.18E-06	1.73E-05	1.39E-05	3.26E-05
33	7.59	0.	0.	4.54E-11	0.	1.22E-14	0.	1.79E-07	1.22E-06	1.74E-05	1.39E-05	3.27E-05
34	7.49	0.	0.	4.05E-11	0.	9.37E-14	0.	1.88E-07	1.27E-06	1.75E-05	1.40E-05	3.29E-05
35	7.38	0.	0.	3.81E-11	0.	3.88E-13	0.	1.81E-07	1.33E-06	1.76E-05	1.40E-05	3.31E-05
36	7.28	0.	0.	3.42E-11	0.	1.85E-12	0.	1.82E-07	1.38E-06	1.77E-05	1.40E-05	3.33E-05
37	7.18	0.	0.	3.26E-11	0.	3.21E-12	0.	1.84E-07	1.44E-06	1.78E-05	1.41E-05	3.35E-05
38	7.09	1.32E-14	0.	2.97E-11	0.	6.71E-12	0.	1.85E-07	1.51E-06	1.79E-05	1.41E-05	3.37E-05
39	6.98	2.37E-14	0.	2.71E-11	0.	8.82E-12	0.	1.87E-07	1.57E-06	1.80E-05	1.42E-05	3.39E-05
40	6.89	2.21E-14	0.	2.59E-11	0.	1.59E-11	0.	1.88E-07	1.65E-06	1.80E-05	1.42E-05	3.41E-05
41	6.78	1.60E-14	0.	2.25E-11	0.	1.63E-11	0.	1.98E-07	1.72E-06	1.81E-05	1.43E-05	3.43E-05
42	6.68	9.70E-15	0.	2.00E-11	0.	1.27E-11	0.	1.91E-07	1.80E-06	1.83E-05	1.43E-05	3.46E-05
43	6.58	5.57E-15	0.	1.58E-11	0.	1.94E-11	0.	1.93E-07	1.89E-06	1.85E-05	1.44E-05	3.49E-05
44	6.48	3.18E-15	0.	1.08E-11	7.27E-14	1.89E-11	0.	1.94E-07	1.98E-06	1.86E-05	1.45E-05	3.53E-05
45	6.38	1.82E-15	0.	6.42E-12	3.38E-13	1.27E-11	0.	1.96E-07	2.07E-06	1.88E-05	1.46E-05	3.56E-05
46	6.28	9.17E-16	0.	3.62E-12	4.76E-13	1.78E-11	0.	1.97E-07	2.17E-06	1.90E-05	1.47E-05	3.61E-05
47	6.18	3.72E-16	0.	1.48E-12	1.35E-12	2.28E-11	0.	1.99E-07	2.28E-06	1.92E-05	1.49E-05	3.65E-05
48	6.08	1.54E-16	0.	4.24E-13	1.27E-12	1.88E-11	0.	2.00E-07	2.40E-06	1.94E-05	1.50E-05	3.71E-05
49	5.97	5.78E-17	0.	3.03E-14	1.86E-12	1.04E-11	0.	2.00E-07	2.53E-06	1.97E-05	1.52E-05	3.76E-05
50	5.87	4.91E-18	0.	7.62E-16	2.59E-12	1.08E-11	0.	1.97E-07	2.66E-06	2.00E-05	1.53E-05	3.82E-05
51	5.77	3.94E-19	0.	0.	3.00E-12	1.20E-11	0.	1.85E-07	2.81E-06	2.03E-05	1.55E-05	3.87E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.99E-20	0.	0.	0.	2.51E-12	1.63E-11	0.	0.	1.72E-07	2.96E-06	2.06E-05	1.56E-05	3.94E-05
53	5.50	0.	0.	0.	0.	3.07E-12	1.92E-11	0.	0.	1.73E-07	3.13E-06	2.10E-05	1.58E-05	4.01E-05
54	5.40	0.	0.	0.	0.	2.79E-12	1.20E-11	0.	0.	1.74E-07	3.30E-06	2.15E-05	1.60E-05	4.11E-05
55	5.30	0.	0.	0.	0.	2.84E-12	1.95E-11	0.	0.	1.75E-07	3.50E-06	2.21E-05	1.63E-05	4.20E-05
56	5.20	0.	0.	0.	0.	3.06E-12	1.13E-11	0.	0.	1.76E-07	3.70E-06	2.26E-05	1.66E-05	4.30E-05
57	5.10	0.	0.	0.	0.	3.05E-12	1.46E-11	0.	0.	1.78E-07	3.93E-06	2.32E-05	1.69E-05	4.42E-05
58	5.00	2.14E-13	0.	0.	0.	2.77E-12	1.39E-11	0.	0.	1.79E-07	4.17E-06	2.39E-05	1.72E-05	4.55E-05
59	4.90	5.15E-13	0.	0.	0.	3.08E-12	1.44E-11	0.	0.	1.81E-07	4.43E-06	2.47E-05	1.75E-05	4.69E-05
60	4.80	9.56E-13	0.	0.	0.	3.29E-12	1.36E-11	0.	0.	1.82E-07	4.71E-06	2.56E-05	1.79E-05	4.84E-05
61	4.70	1.28E-12	0.	0.	0.	3.27E-12	1.23E-11	0.	0.	1.84E-07	5.02E-06	2.66E-05	1.84E-05	5.00E-05
62	4.60	1.74E-12	0.	0.	0.	3.35E-12	1.12E-11	0.	0.	1.85E-07	5.36E-06	2.75E-05	1.88E-05	5.19E-05
63	4.50	1.82E-12	0.	2.17E-12	0.	3.84E-12	8.41E-12	0.	0.	1.87E-07	5.73E-06	2.88E-05	1.93E-05	5.40E-05
64	4.40	1.93E-12	0.	6.69E-12	0.	3.84E-12	5.83E-12	0.	0.	1.88E-07	6.14E-06	3.01E-05	1.98E-05	5.63E-05
65	4.30	1.81E-12	0.	2.10E-11	0.	2.88E-12	3.62E-12	0.	0.	1.90E-07	6.58E-06	3.14E-05	2.03E-05	5.87E-05
66	4.20	1.68E-12	0.	6.95E-11	0.	3.03E-12	2.98E-12	0.	0.	1.91E-07	7.07E-06	3.31E-05	2.09E-05	6.12E-05
67	4.10	1.97E-12	0.	2.98E-11	0.	2.94E-12	7.10E-13	0.	0.	1.92E-07	7.68E-06	3.45E-05	2.10E-05	6.33E-05
68	4.00	1.44E-12	0.	9.99E-11	0.	2.83E-12	5.30E-13	0.	0.	1.93E-07	8.19E-06	3.60E-05	7.81E-06	5.22E-05
69	3.90	1.22E-12	0.	4.61E-11	6.94E-10	2.58E-12	2.00E-13	0.	0.	1.92E-07	8.85E-06	3.42E-05	8.06E-06	5.13E-05
70	3.80	1.33E-12	0.	7.27E-11	3.16E-09	2.77E-12	0.	0.	0.	1.91E-07	9.57E-06	2.73E-05	8.38E-06	4.95E-05
71	3.70	1.17E-12	0.	7.81E-11	1.22E-09	2.34E-12	0.	0.	0.	1.88E-07	1.04E-05	2.85E-05	9.22E-06	4.83E-05
72	3.60	1.05E-12	0.	5.38E-11	6.73E-09	2.53E-12	0.	0.	0.	1.76E-07	1.13E-05	3.08E-05	1.02E-05	5.24E-05
73	3.50	9.75E-13	0.	7.14E-11	1.38E-08	1.97E-12	0.	0.	0.	1.61E-07	1.23E-05	3.23E-05	1.12E-05	5.68E-05
74	3.40	8.87E-13	0.	4.40E-11	1.88E-09	2.21E-12	0.	0.	0.	9.31E-08	1.34E-05	3.61E-05	1.24E-05	6.19E-05
75	3.30	7.87E-13	0.	4.93E-11	7.67E-09	1.75E-12	0.	0.	0.	9.32E-08	1.47E-05	3.99E-05	1.36E-05	6.82E-05
76	3.20	6.12E-13	0.	2.93E-11	1.36E-08	1.83E-12	0.	0.	0.	9.34E-08	1.61E-05	4.37E-05	1.48E-05	7.47E-05
77	3.10	5.83E-13	0.	2.26E-11	2.97E-09	1.72E-12	0.	0.	0.	9.36E-08	1.77E-05	4.77E-05	1.61E-05	8.16E-05
78	3.00	5.18E-13	0.	1.38E-11	7.37E-09	1.61E-12	0.	0.	0.	9.38E-08	1.93E-05	5.16E-05	1.73E-05	8.86E-05
79	2.90	4.32E-13	0.	8.93E-12	4.13E-09	1.21E-12	0.	0.	0.	9.40E-08	2.17E-05	5.58E-05	1.87E-05	9.63E-05
80	2.80	4.40E-13	0.	4.18E-12	2.48E-09	8.27E-13	0.	0.	0.	9.41E-08	2.41E-05	6.06E-05	2.02E-05	1.05E-04
81	2.70	2.86E-13	0.	1.91E-12	3.51E-09	4.45E-13	0.	0.	0.	9.41E-08	2.70E-05	6.57E-05	2.18E-05	1.15E-04
82	2.60	1.33E-13	0.	9.48E-13	3.48E-10	1.94E-13	0.	0.	0.	9.41E-08	3.02E-05	7.13E-05	2.35E-05	1.25E-04
83	2.50	9.26E-15	0.	1.83E-14	3.29E-10	4.57E-14	0.	0.	0.	9.41E-08	3.41E-05	8.08E-05	1.29E-05	1.28E-04
84	2.40	0.	4.87E-12	0.	2.77E-10	4.85E-15	0.	0.	0.	9.41E-08	3.84E-05	6.47E-05	1.50E-05	1.19E-04
85	2.30	0.	1.58E-11	0.	0.	0.	0.	0.	0.	9.36E-08	4.30E-05	7.05E-05	1.80E-05	1.41E-04
86	2.20	0.	4.81E-11	0.	0.	0.	0.	0.	0.	9.30E-08	5.83E-05	9.20E-05	2.27E-05	1.66E-04
87	2.10	0.	4.39E-11	0.	0.	0.	0.	0.	0.	9.26E-08	5.79E-05	1.08E-04	2.64E-05	1.92E-04
88	2.00	0.	8.45E-11	0.	0.	0.	0.	0.	0.	8.97E-08	6.72E-05	1.23E-04	3.02E-05	2.21E-04
89	1.90	0.	1.13E-10	0.	0.	0.	0.	0.	0.	8.62E-08	7.86E-05	1.41E-04	3.49E-05	2.54E-04
90	1.80	0.	9.49E-11	0.	0.	0.	0.	0.	0.	8.25E-08	9.27E-05	1.68E-04	4.22E-05	3.03E-04
91	1.70	0.	1.10E-10	0.	0.	0.	0.	0.	0.	7.77E-08	1.10E-04	2.01E-04	5.12E-05	3.63E-04
92	1.60	0.	8.13E-11	0.	0.	0.	0.	0.	0.	6.57E-08	1.33E-04	2.35E-04	6.83E-05	4.28E-04
93	1.50	0.	9.48E-11	0.	0.	0.	0.	0.	0.	2.99E-08	1.61E-04	3.02E-04	7.32E-05	5.37E-04
94	1.40	0.	9.44E-11	0.	0.	0.	0.	0.	0.	0.	1.99E-04	3.56E-04	8.71E-05	6.43E-04
95	1.30	0.	7.22E-11	0.	0.	0.	0.	0.	0.	0.	2.51E-04	4.91E-04	1.10E-04	8.52E-04
96	1.20	0.	6.93E-11	0.	0.	0.	0.	0.	0.	0.	3.22E-04	5.25E-04	1.15E-04	9.63E-04
97	1.10	0.	6.40E-11	0.	0.	0.	0.	1.56E-16	0.	0.	4.20E-04	6.48E-04	1.45E-04	1.21E-03
98	1.00	0.	5.94E-11	0.	0.	0.	0.	2.15E-15	0.	0.	5.61E-04	7.85E-04	1.64E-04	1.51E-03
99	0.90	0.	4.88E-11	0.	0.	0.	0.	2.48E-15	0.	0.	7.72E-04	9.86E-04	1.93E-04	1.87E-03
100	0.80	0.	2.30E-11	0.	0.	0.	0.	5.26E-14	0.	0.	1.11E-03	1.04E-03	2.22E-04	2.37E-03
101	0.70	0.	5.58E-12	0.	0.	0.	0.	4.58E-14	0.	0.	1.68E-03	1.13E-03	2.35E-04	3.04E-03
102	0.60	0.	8.81E-13	0.	0.	0.	0.	1.53E-13	0.	0.	2.70E-03	1.13E-03	2.63E-04	4.09E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000 DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 D-P	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.		6.06E-14	0.	0.	0.	2.33E-10	5.20E-09	6.00E-07	1.71E-07	7.96E-07
2	10.60	0.	0.	5.50E-14	0.	0.	0.	2.33E-10	5.35E-09	6.03E-07	1.91E-07	7.99E-07
3	10.50	0.	0.	5.53E-14	0.	0.	0.	2.34E-10	5.50E-09	5.77E-07	1.90E-07	7.73E-07
4	10.40	0.	0.	5.21E-14	0.	0.	0.	2.34E-10	5.66E-09	5.79E-07	1.09E-07	7.75E-07
5	10.30	0.	0.	4.91E-14	0.	0.	0.	2.34E-10	5.83E-09	5.80E-07	1.09E-07	7.75E-07
6	10.20	0.	0.	4.63E-14	0.	0.	0.	2.35E-10	6.00E-09	5.81E-07	1.00E-07	7.76E-07
7	10.10	0.	0.	4.34E-14	0.	0.	0.	2.35E-10	6.19E-09	5.83E-07	1.07E-07	7.77E-07
8	10.00	0.	0.	3.77E-14	0.	0.	0.	2.35E-10	6.37E-09	5.84E-07	1.07E-07	7.78E-07
9	9.90	0.	0.	3.86E-14	0.	0.	0.	2.36E-10	6.57E-09	5.86E-07	1.06E-07	7.79E-07
10	9.80	0.	0.	3.60E-14	0	0.	0.	2.36E-10	6.77E-09	5.87E-07	1.05E-07	7.80E-07
11	9.70	0.	0.	3.09E-14	0.	0.	0.	2.37E-10	6.99E-09	5.89E-07	1.05E-07	7.81E-07
12	9.60	0.	0.	3.33E-14	0.	0.	0.	2.37E-10	7.21E-09	5.90E-07	1.04E-07	7.82E-07
13	9.50	0.	0.	2.82E-14	0.	0.	0.	2.37E-10	7.44E-09	5.92E-07	1.03E-07	7.83E-07
14	9.40	0.	0.	2.65E-14	0.	0.	0.	2.39E-10	7.67E-09	5.94E-07	1.03E-07	7.84E-07
15	9.30	0.	0.	2.71E-14	0.	0.	0.	2.39E-10	7.93E-09	2.10E-07	1.02E-07	4.08E-07
16	9.20	0.	0.	2.22E-14	0.	0.	0.	2.40E-10	8.19E-09	2.10E-07	1.01E-07	4.08E-07
17	9.10	0.	0.	2.28E-14	0.	0.	0.	2.41E-10	8.44E-09	2.10E-07	1.01E-07	4.09E-07
18	9.00	0.	0.	2.05E-14	0.	0.	0.	2.42E-10	8.71E-09	2.10E-07	1.00E-07	4.09E-07
19	8.90	0.	0.	1.89E-14	0.	0.	0.	2.43E-10	9.05E-09	2.10E-07	1.00E-07	4.09E-07
20	8.80	0.	0.	1.85E-14	0.	0.	0.	2.43E-10	9.37E-09	2.10E-07	1.79E-07	3.99E-07
21	8.70	0.	0.	1.59E-14	0.	0.	0.	2.44E-10	9.70E-09	2.11E-07	1.78E-07	3.99E-07
22	8.60	0.	0.	1.63E-14	0.	0.	0.	2.45E-10	1.00E-08	2.11E-07	1.78E-07	3.99E-07
23	8.50	0.	0.	1.42E-14	0.	0.	0.	2.46E-10	1.04E-08	2.11E-07	1.77E-07	3.99E-07
24	8.40	0.	0.	1.48E-14	0.	0.	0.	2.47E-10	1.08E-08	2.12E-07	1.77E-07	3.99E-07
25	8.30	0.	0.	1.18E-14	0.	0.	0.	2.49E-10	1.12E-08	2.12E-07	1.76E-07	4.08E-07
26	8.20	0.	0.	1.19E-14	0.	0.	0.	2.50E-10	1.14E-08	2.13E-07	1.77E-07	4.02E-07
27	8.10	0.	0.	1.02E-14	0.	0.	0.	2.51E-10	1.20E-08	2.09E-07	1.78E-07	3.99E-07
28	8.00	0.	0.	1.02E-14	0.	0.	0.	2.53E-10	1.25E-08	2.10E-07	1.78E-07	4.01E-07
29	7.90	0.	0.	8.69E-15	0.	0.	0.	2.54E-10	1.30E-08	2.12E-07	1.79E-07	4.03E-07
30	7.80	0.	0.	8.47E-15	0.	0.	0.	2.55E-10	1.35E-08	2.13E-07	1.79E-07	4.06E-07
31	7.70	0.	0.	7.81E-15	0.	0.	0.	2.56E-10	1.40E-08	2.14E-07	1.80E-07	4.08E-07
32	7.60	0.	0.	7.37E-15	0.	5.31E-19	0.	2.58E-10	1.46E-08	2.15E-07	1.80E-07	4.10E-07
33	7.50	0.	0.	6.77E-15	0.	1.93E-18	0.	2.59E-10	1.52E-08	2.16E-07	1.81E-07	4.12E-07
34	7.40	0.	0.	6.85E-15	0.	1.48E-17	0.	2.60E-10	1.58E-08	2.18E-07	1.81E-07	4.15E-07
35	7.30	0.	0.	5.69E-15	0.	6.15E-17	0.	2.62E-10	1.65E-08	2.19E-07	1.82E-07	4.17E-07
36	7.20	0.	0.	5.10E-15	0.	1.88E-16	0.	2.63E-10	1.72E-08	2.20E-07	1.82E-07	4.20E-07
37	7.10	0.	0.	4.47E-15	0.	5.09E-16	0.	2.66E-10	1.79E-08	2.21E-07	1.83E-07	4.22E-07
38	7.00	2.23E-18	0.	4.44E-15	0.	1.06E-15	0.	2.68E-10	1.87E-08	2.22E-07	1.83E-07	4.25E-07
39	6.90	4.33E-18	0.	4.04E-15	0.	1.40E-15	0.	2.70E-10	1.95E-08	2.24E-07	1.84E-07	4.27E-07
40	6.80	3.72E-18	0.	3.96E-15	0.	2.52E-15	0.	2.72E-10	2.04E-08	2.25E-07	1.84E-07	4.30E-07
41	6.70	2.59E-18	0.	3.36E-15	0.	2.58E-15	0.	2.74E-10	2.14E-08	2.26E-07	1.85E-07	4.33E-07
42	6.60	1.63E-18	0.	2.99E-15	0.	2.81E-15	0.	2.76E-10	2.23E-08	2.28E-07	1.86E-07	4.37E-07
43	6.50	9.37E-19	0.	2.38E-15	0.	3.08E-15	0.	2.78E-10	2.34E-08	2.31E-07	1.87E-07	4.41E-07
44	6.40	5.33E-19	0.	1.41E-15	1.15E-17	3.00E-15	0.	2.81E-10	2.45E-08	2.33E-07	1.88E-07	4.46E-07
45	6.30	3.07E-19	0.	9.89E-16	5.37E-17	2.92E-15	0.	2.83E-10	2.57E-08	2.35E-07	1.89E-07	4.50E-07
46	6.20	1.38E-19	0.	5.41E-16	7.55E-17	2.82E-15	0.	2.85E-10	2.70E-08	2.38E-07	1.91E-07	4.56E-07
47	6.10	5.27E-20	0.	2.51E-16	2.14E-16	3.62E-15	0.	2.87E-10	2.84E-08	2.40E-07	1.93E-07	4.62E-07
48	6.00	2.60E-20	0.	6.33E-17	2.82E-16	1.71E-15	0.	2.89E-10	2.99E-08	2.44E-07	1.95E-07	4.69E-07
49	5.90	6.38E-21	0.	4.53E-18	2.95E-16	1.68E-15	0.	2.89E-10	3.14E-08	2.47E-07	1.97E-07	4.76E-07
50	5.80	9.10E-22	0.	1.14E-19	4.18E-16	1.71E-15	0.	2.85E-10	3.30E-08	2.51E-07	1.99E-07	4.83E-07
51	5.70	5.96E-23	0.	0.	4.75E-16	1.91E-15	0.	2.68E-10	3.48E-08	2.48E-07	2.01E-07	4.84E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.68E-24	0.	0.	0.	3.98E-16	2.50E-15	0.	0.	2.49E-10	3.67E-08	2.52E-07	2.03E-07	4.83E-07
53	5.50	0.	0.	0.	0.	4.06E-16	2.48E-15	0.	0.	2.50E-10	3.80E-08	2.58E-07	2.06E-07	5.02E-07
54	5.40	0.	0.	0.	0.	4.42E-16	1.91E-15	0.	0.	2.51E-10	4.10E-08	2.64E-07	2.09E-07	5.14E-07
55	5.30	0.	0.	0.	0.	4.53E-16	2.45E-15	0.	0.	2.53E-10	4.34E-08	2.71E-07	2.11E-07	5.26E-07
56	5.20	0.	0.	0.	0.	4.05E-16	1.70E-15	0.	0.	2.55E-10	4.50E-08	2.77E-07	2.19E-07	5.39E-07
57	5.19	0.	0.	0.	0.	4.63E-16	2.31E-15	0.	0.	2.57E-10	4.67E-08	2.84E-07	2.19E-07	5.54E-07
58	5.08	3.68E-17	0.	0.	0.	4.48E-16	2.14E-15	0.	0.	2.59E-10	5.17E-08	2.94E-07	2.23E-07	5.78E-07
59	4.98	8.67E-17	0.	0.	0.	4.88E-16	2.31E-15	0.	0.	2.61E-10	5.49E-08	3.04E-07	2.28E-07	5.87E-07
60	4.88	1.41E-16	0.	0.	0.	5.22E-16	2.14E-15	0.	0.	2.63E-10	5.85E-08	3.15E-07	2.32E-07	6.06E-07
61	4.78	2.15E-16	0.	0.	0.	5.19E-16	1.95E-15	0.	0.	2.66E-10	6.23E-08	3.29E-07	2.38E-07	6.26E-07
62	4.68	2.94E-16	0.	0.	0.	5.31E-16	1.78E-15	0.	0.	2.68E-10	6.65E-08	3.38E-07	2.44E-07	6.50E-07
63	4.58	3.86E-16	0.	3.25E-16	0.	4.82E-16	1.33E-15	0.	0.	2.70E-10	7.11E-08	3.55E-07	2.51E-07	6.77E-07
64	4.48	3.25E-16	0.	9.99E-16	0.	4.82E-16	9.24E-16	0.	0.	2.72E-10	7.61E-08	3.71E-07	2.57E-07	7.05E-07
65	4.38	3.05E-16	0.	3.14E-15	0.	4.57E-16	5.73E-16	0.	0.	2.74E-10	8.16E-08	3.89E-07	2.59E-07	7.30E-07
66	4.28	2.83E-16	0.	1.64E-14	0.	4.80E-16	4.10E-16	0.	0.	2.76E-10	8.76E-08	4.07E-07	2.35E-07	7.31E-07
67	4.18	2.65E-16	0.	4.33E-15	0.	4.67E-16	1.13E-16	0.	0.	2.77E-10	9.43E-08	4.26E-07	9.02E-08	6.18E-07
68	4.08	2.43E-16	0.	1.49E-14	0.	4.48E-16	8.53E-17	0.	0.	2.78E-10	1.02E-07	4.04E-07	1.01E-07	6.00E-07
69	3.98	2.05E-16	0.	6.80E-15	9.31E-13	4.10E-16	3.30E-17	0.	0.	2.77E-10	1.10E-07	3.24E-07	1.09E-07	5.38E-07
70	3.88	2.24E-16	0.	1.09E-14	4.25E-12	4.40E-16	0.	0.	0.	2.76E-10	1.19E-07	3.38E-07	1.09E-07	5.68E-07
71	3.78	1.97E-16	0.	1.17E-14	1.64E-12	3.78E-16	0.	0.	0.	2.72E-10	1.29E-07	3.32E-07	1.20E-07	5.80E-07
72	3.68	1.77E-16	0.	7.92E-15	9.03E-12	4.01E-16	0.	0.	0.	2.59E-10	1.40E-07	3.68E-07	1.32E-07	6.32E-07
73	3.58	1.64E-16	0.	1.07E-14	1.86E-11	3.13E-16	0.	0.	0.	2.33E-10	1.52E-07	4.08E-07	1.45E-07	6.98E-07
74	3.48	1.49E-16	0.	6.58E-15	2.53E-12	3.58E-16	0.	0.	0.	1.34E-10	1.66E-07	4.45E-07	1.61E-07	7.73E-07
75	3.38	1.19E-16	0.	6.77E-15	1.63E-11	2.77E-16	0.	0.	0.	1.35E-10	1.82E-07	4.92E-07	1.78E-07	8.50E-07
76	3.28	1.83E-16	0.	4.37E-15	1.02E-11	2.98E-16	0.	0.	0.	1.35E-10	2.00E-07	5.39E-07	1.92E-07	9.32E-07
77	3.18	9.81E-17	0.	3.38E-15	3.98E-12	2.72E-16	0.	0.	0.	1.35E-10	2.20E-07	5.84E-07	2.09E-07	1.01E-06
78	3.08	8.73E-17	0.	2.05E-15	9.09E-12	2.55E-16	0.	0.	0.	1.36E-10	2.43E-07	6.32E-07	2.25E-07	1.10E-06
79	2.98	7.20E-17	0.	1.27E-15	5.55E-12	1.92E-16	0.	0.	0.	1.36E-10	2.69E-07	6.83E-07	2.42E-07	1.20E-06
80	2.88	7.94E-17	0.	6.18E-16	3.33E-12	1.31E-16	0.	0.	0.	1.36E-10	2.99E-07	7.42E-07	2.62E-07	1.30E-06
81	2.78	4.81E-17	0.	2.86E-16	4.71E-12	7.66E-17	0.	0.	0.	1.36E-10	3.34E-07	8.06E-07	2.49E-07	1.39E-06
82	2.68	2.24E-17	0.	1.40E-16	4.67E-13	3.07E-17	0.	0.	0.	1.36E-10	3.75E-07	6.78E-07	1.49E-07	1.39E-06
83	2.58	1.56E-18	0.	1.94E-17	4.41E-13	7.25E-18	0.	0.	0.	1.36E-10	4.23E-07	6.47E-07	1.68E-07	1.24E-06
84	2.48	0.	7.28E-16	0.	3.72E-13	7.69E-19	0.	0.	0.	1.36E-10	4.79E-07	7.94E-07	2.09E-07	1.48E-06
85	2.38	0.	2.36E-15	0.	0.	0.	0.	0.	0.	1.35E-10	5.45E-07	9.63E-07	2.45E-07	1.75E-06
86	2.28	0.	5.99E-15	0.	0.	0.	0.	0.	0.	1.34E-10	6.24E-07	1.14E-06	2.84E-07	2.03E-06
87	2.18	0.	6.95E-15	0.	0.	0.	0.	0.	0.	1.34E-10	7.18E-07	1.32E-06	3.43E-07	2.39E-06
88	2.08	0.	1.20E-14	0.	0.	0.	0.	0.	0.	1.29E-10	8.33E-07	1.51E-06	3.92E-07	2.74E-06
89	1.98	0.	1.69E-14	0.	0.	0.	0.	0.	0.	1.25E-10	9.75E-07	1.72E-06	4.53E-07	3.15E-06
90	1.88	0.	1.42E-14	0.	0.	0.	0.	0.	0.	1.19E-10	1.15E-06	2.06E-06	5.47E-07	3.70E-06
91	1.78	0.	1.65E-14	0.	0.	0.	0.	0.	0.	1.12E-10	1.37E-06	2.46E-06	6.65E-07	4.50E-06
92	1.68	0.	1.21E-14	0.	0.	0.	0.	0.	0.	9.98E-11	1.64E-06	2.87E-06	7.47E-07	5.27E-06
93	1.58	0.	1.42E-14	0.	0.	0.	0.	0.	0.	4.32E-11	2.00E-06	3.48E-06	9.14E-07	6.39E-06
94	1.48	0.	1.41E-14	0.	0.	0.	0.	0.	0.	0.	2.47E-06	3.19E-06	1.07E-06	6.73E-06
95	1.38	0.	1.84E-14	0.	0.	0.	0.	0.	0.	0.	3.11E-06	4.74E-06	1.11E-06	8.97E-06
96	1.28	0.	1.83E-14	0.	0.	0.	0.	0.	0.	0.	3.99E-06	6.25E-06	1.50E-06	1.17E-05
97	1.18	0.	9.68E-15	0.	0.	0.	0.	2.47E-28	0.	0.	5.21E-06	7.93E-06	1.75E-06	1.49E-05
98	1.08	0.	8.88E-15	0.	0.	0.	0.	3.42E-19	0.	0.	6.96E-06	9.34E-06	2.13E-06	1.84E-05
99	0.98	0.	7.29E-15	0.	0.	0.	0.	3.93E-19	0.	0.	9.58E-06	1.19E-05	2.58E-06	2.31E-05
100	0.88	0.	3.43E-15	0.	0.	0.	0.	9.34E-18	0.	0.	1.38E-05	1.22E-05	2.69E-06	2.96E-05
101	0.78	0.	8.22E-16	0.	0.	0.	0.	7.13E-18	0.	0.	2.08E-05	1.13E-05	2.31E-06	3.44E-05
102	0.68	0.	1.32E-16	0.	0.	0.	0.	2.42E-17	0.	0.	3.34E-05	1.27E-05	2.61E-06	4.87E-05

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-00 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-A CONT.	N2 B-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (I-NS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.38E-18	0.	0.	0.	2.44E-13	9.41E-11	6.34E-09	1.99E-09	8.33E-09
2	10.60	0.	0.	5.76E-18	0.	0.	0.	2.44E-13	9.97E-11	6.37E-09	1.98E-09	8.41E-09
3	10.50	0.	0.	5.79E-18	0.	0.	0.	2.44E-13	9.73E-11	6.40E-09	1.98E-09	8.43E-09
4	10.40	0.	0.	5.45E-18	0.	0.	0.	2.44E-13	9.90E-11	6.42E-09	1.97E-09	8.45E-09
5	10.30	0.	0.	4.72E-18	0.	0.	0.	2.47E-13	6.87E-11	6.43E-09	1.96E-09	8.45E-09
6	10.20	0.	0.	4.05E-18	0.	0.	0.	2.47E-13	6.25E-11	6.45E-09	1.96E-09	8.47E-09
7	10.10	0.	0.	4,54E-18	0.	0.	0.	2.47E-13	6.44E-11	6.47E-09	1.95E-09	8.49E-09
8	10.00	0.	0.	3.95E-18	0.	0.	0.	2.48E-13	6.64E-11	6.49E-09	1.94E-09	8.50E-09
9	9.90	0.	0.	4,05E-18	0.	0.	0.	2.48E-13	6.84E-11	6.51E-09	1.93E-09	8.52E-09
10	9.80	0.	0.	3.77E-18	0.	0.	0.	2.49E-13	7.04E-11	6.53E-09	1.93E-09	8.53E-09
11	9.70	0.	0.	3.23E-18	0.	0.	0.	2.49E-13	7.27E-11	6.55E-09	1.92E-09	8.55E-09
12	9.61	0.	0.	3.49E-18	0.	0.	0.	2.50E-13	7.50E-11	6.58E-09	1.91E-09	8.56E-09
13	9.51	0.	0.	2.95E-18	0.	0.	0.	2.50E-13	7.75E-11	6.60E-09	1.91E-09	8.58E-09
14	9.41	0.	0.	2.77E-18	0.	0.	0.	2.51E-13	8.00E-11	6.62E-09	1.90E-09	8.60E-09
15	9.31	0.	0.	2,84E-18	0.	0.	0.	2.52E-13	8.26E-11	2.78E-09	1.89E-09	4.67E-09
16	9.21	0.	0.	2.32E-18	0.	0.	0.	2.53E-13	8.53E-11	2.78E-09	1.89E-09	4.67E-09
17	9.13	0.	0.	2,30E-18	0.	0.	0.	2.54E-13	8.82E-11	2.71E-09	1.88E-09	4.68E-09
18	9.09	0.	0.	2.15E-18	0.	0.	0.	2.55E-13	9.11E-11	2.71E-09	1.88E-09	4.68E-09
19	9.05	0.	0.	1.97E-18	0.	0.	0.	2.56E-13	9.43E-11	2.72E-09	1.86E-09	4.68E-09
20	8.88	0.	0.	1.93E-18	0.	0.	0.	2.56E-13	9.76E-11	2.73E-09	1.86E-09	4.68E-09
21	8.78	0.	0.	1.66E-18	0.	0.	0.	2.57E-13	1.01E-10	2.73E-09	1.85E-09	4.69E-09
22	8.69	0.	0.	1.71E-18	0.	0.	0.	2.58E-13	1.05E-10	2.74E-09	1.85E-09	4.69E-09
23	8.59	0.	0.	1.48E-18	0.	0.	0.	2.59E-13	1.09E-10	2.75E-09	1.84E-09	4.70E-09
24	8.49	0.	0.	1.47E-18	0.	0.	0.	2.61E-13	1.12E-10	2.76E-09	1.83E-09	4.71E-09
25	8.38	0.	0.	1.23E-18	0.	0.	0.	2.62E-13	1.16E-10	2.37E-09	1.83E-09	4.32E-09
26	8.28	0.	0.	1.24E-18	0.	0.	0.	2.63E-13	1.21E-10	2.30E-09	1.84E-09	4.35E-09
27	8.18	0.	0.	1.06E-18	0.	0.	0.	2.65E-13	1.25E-10	2.41E-09	1.84E-09	4.38E-09
28	8.08	0.	0.	1.07E-18	0.	0.	0.	2.66E-13	1.30E-10	2.43E-09	1.85E-09	4.41E-09
29	7.98	0.	0.	9,18E-19	0.	0.	0.	2.67E-13	1.35E-10	2.45E-09	1.84E-09	4.44E-09
30	7.88	0.	0.	9,39E-19	0.	0.	0.	2.69E-13	1.41E-10	2.47E-09	1.86E-09	4.47E-09
31	7.79	0.	0.	8.18E-19	0.	0.	0.	2.70E-13	1.46E-10	2.50E-09	1.87E-09	4.51E-09
32	7.68	0.	0.	7.72E-19	0.	5.63E-23	0.	2.71E-13	1.52E-10	2.52E-09	1.87E-09	4.55E-09
33	7.58	0.	0.	7.09E-19	0.	2.85E-22	0.	2.73E-13	1.59E-10	2.55E-09	1.86E-09	4.58E-09
34	7.48	0.	0.	6,33E-19	0.	1.57E-21	0.	2.74E-13	1.65E-10	2.57E-09	1.88E-09	4.62E-09
35	7.38	0.	0.	5,96E-19	0.	6.52E-21	0.	2.76E-13	1.72E-10	2.58E-09	1.89E-09	4.64E-09
36	7.28	0.	0.	5,34E-19	0.	1.76E-20	0.	2.77E-13	1.79E-10	2.61E-09	1.90E-09	4.69E-09
37	7.17	0.	0.	5,18E-19	0.	5.48E-20	0.	2.85E-13	1.87E-10	2.65E-09	1.90E-09	4.73E-09
38	7.07	2.19E-22	0.	4.65E-19	0.	1.13E-19	0.	2.92E-13	1.99E-10	2.68E-09	1.91E-09	4.78E-09
39	6.97	4.45E-22	0.	4,23E-19	0.	1.48E-19	0.	2.86E-13	2.03E-10	2.71E-09	1.91E-09	4.83E-09
40	6.86	3.99E-22	0.	4,04E-19	0.	2.67E-19	0.	2.86E-13	2.13E-10	2.75E-09	1.92E-09	4.88E-09
41	6.78	2.49E-22	0.	3,51E-19	0.	2.74E-19	0.	2.89E-13	2.22E-10	2.78E-09	1.93E-09	4.93E-09
42	6.69	1.75E-22	0.	3,13E-19	0.	2.13E-19	0.	2.91E-13	2.33E-10	2.82E-09	1.94E-09	4.99E-09
43	6.59	1.01E-22	0.	2,47E-19	0.	3.26E-19	0.	2.93E-13	2.44E-10	2.87E-09	1.95E-09	5.06E-09
44	6.48	5.72E-23	0.	1.68E-19	1.22E-21	3.18E-19	0.	2.96E-13	2.55E-10	2.91E-09	1.95E-09	5.12E-09
45	6.34	5.29E-23	0.	1.44E-19	5.59E-21	2.14E-19	0.	2.98E-13	2.68E-10	2.96E-09	1.97E-09	5.19E-09
46	6.29	1.48E-23	0.	5,47E-20	8.81E-21	2.99E-19	0.	3.00E-13	2.81E-10	3.00E-09	1.99E-09	5.27E-09
47	6.19	4.72E-24	0.	2.43E-20	2.27E-20	3.83E-19	0.	3.02E-13	2.95E-10	3.05E-09	2.01E-09	5.36E-09
48	6.09	2.79E-24	0.	4,43E-21	2.14E-20	1.81E-19	0.	3.05E-13	3.10E-10	2.55E-09	2.02E-09	4.48E-09
49	5.99	4.82E-25	0.	4,74E-22	3.13E-20	1.78E-19	0.	3.05E-13	3.27E-10	2.59E-09	2.04E-09	4.96E-09
50	5.89	4.60E-26	0.	1.19E-23	4.35E-20	1.81E-19	0.	3.08E-13	3.44E-10	2.63E-09	2.06E-09	5.04E-09
51	5.78	4.19E-27	0.	0.	5.84E-20	2.02E-19	0.	2.82E-13	3.67E-10	2.67E-09	2.09E-09	5.12E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-00 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIP
52	5.60	2.80E-20	0.	0.	0.	4.22E-20	2.74E-19	0.	0.	2.62E-13	3.82E-10	2.72E-09	2.11E-09	5.21E-09
53	5.59	0.	0.	0.	0.	5.16E-20	2.95E-19	0.	0.	2.63E-13	4.04E-10	2.78E-09	2.13E-09	5.31E-09
54	5.40	0.	0.	0.	0.	4.68E-20	2.82E-19	0.	0.	2.65E-13	4.27E-10	2.85E-09	2.16E-09	5.44E-09
55	5.30	0.	0.	0.	0.	4.80E-20	2.60E-19	0.	0.	2.67E-13	4.51E-10	2.93E-09	2.19E-09	5.57E-09
56	5.20	0.	0.	0.	0.	5.15E-20	1.89E-19	0.	0.	2.68E-13	4.78E-10	3.01E-09	2.24E-09	5.72E-09
57	5.10	0.	0.	0.	0.	5.12E-20	2.45E-19	0.	0.	2.71E-13	5.07E-10	3.10E-09	2.28E-09	5.88E-09
58	5.00	3.86E-21	0.	0.	0.	4.66E-20	2.27E-19	0.	0.	2.73E-13	5.38E-10	3.20E-09	2.32E-09	6.05E-09
59	4.90	9.30E-21	0.	0.	0.	5.17E-20	2.45E-19	0.	0.	2.75E-13	5.72E-10	3.30E-09	2.34E-09	6.24E-09
60	4.80	1.73E-20	0.	0.	0.	5.53E-20	2.29E-19	0.	0.	2.77E-13	6.09E-10	3.42E-09	2.41E-09	6.44E-09
61	4.70	2.31E-20	0.	0.	0.	5.50E-20	2.07E-19	0.	0.	2.80E-13	6.49E-10	3.54E-09	2.47E-09	6.67E-09
62	4.60	3.15E-20	0.	0.	0.	5.63E-20	1.89E-19	0.	0.	2.82E-13	6.93E-10	3.69E-09	2.54E-09	6.92E-09
63	4.50	3.29E-20	0.	3.48E-20	0.	5.11E-20	1.41E-19	0.	0.	2.84E-13	7.40E-10	3.88E-09	2.60E-09	7.22E-09
64	4.40	3.40E-20	0.	1.85E-19	0.	5.11E-20	9.80E-20	0.	0.	2.86E-13	7.92E-10	4.06E-09	2.67E-09	7.52E-09
65	4.30	3.27E-20	0.	3.29E-19	0.	4.89E-20	6.88E-20	0.	0.	2.89E-13	8.50E-10	4.26E-09	2.69E-09	7.80E-09
66	4.20	3.04E-20	0.	1.09E-18	0.	5.09E-20	4.34E-20	0.	0.	2.91E-13	9.12E-10	4.47E-09	9.88E-10	6.37E-09
67	4.10	2.84E-20	0.	4.24E-19	0.	4.95E-20	1.19E-20	0.	0.	2.92E-13	9.82E-10	4.32E-09	1.82E-09	6.32E-09
68	4.00	2.60E-20	0.	1.56E-18	0.	4.75E-20	9.84E-21	0.	0.	2.93E-13	1.06E-09	3.51E-09	1.85E-09	5.62E-09
69	3.90	2.20E-20	0.	7.21E-19	9.60E-16	4.34E-20	3.58E-21	0.	0.	2.92E-13	1.14E-09	3.67E-09	1.89E-09	5.98E-09
70	3.80	2.40E-20	0.	1.14E-18	4.37E-15	4.66E-20	0.	0.	0.	2.91E-13	1.24E-09	3.84E-09	1.13E-09	6.21E-09
71	3.70	2.11E-20	0.	1.22E-18	1.04E-15	3.92E-20	0.	0.	0.	2.88E-13	1.34E-09	3.79E-09	1.24E-09	6.38E-09
72	3.60	1.90E-20	0.	8.29E-19	9.31E-15	4.25E-20	0.	0.	0.	2.68E-13	1.44E-09	4.11E-09	1.37E-09	6.93E-09
73	3.50	1.76E-20	0.	1.12E-18	1.91E-14	3.32E-20	0.	0.	0.	2.46E-13	1.59E-09	4.53E-09	1.51E-09	7.63E-09
74	3.40	1.60E-20	0.	6.89E-19	2.60E-15	3.71E-20	0.	0.	0.	1.42E-13	1.73E-09	4.62E-09	1.67E-09	8.03E-09
75	3.30	1.28E-20	0.	7.89E-19	1.06E-14	2.94E-20	0.	0.	0.	1.42E-13	1.89E-09	5.11E-09	1.83E-09	8.83E-09
76	3.20	1.10E-20	0.	4.50E-19	1.80E-14	3.87E-20	0.	0.	0.	1.42E-13	2.08E-09	5.61E-09	2.00E-09	9.69E-09
77	3.10	1.05E-20	0.	3.94E-19	4.10E-15	2.89E-20	0.	0.	0.	1.42E-13	2.29E-09	6.12E-09	2.16E-09	1.06E-08
78	3.00	9.36E-21	0.	2.15E-19	1.02E-14	2.70E-20	0.	0.	0.	1.43E-13	2.53E-09	6.64E-09	2.33E-09	1.15E-08
79	2.90	7.81E-21	0.	1.38E-19	9.72E-15	2.84E-20	0.	0.	0.	1.43E-13	2.80E-09	7.18E-09	2.91E-09	1.25E-08
80	2.80	8.09E-21	0.	6.42E-20	3.43E-15	1.39E-20	0.	0.	0.	1.43E-13	3.12E-09	7.80E-09	2.72E-09	1.36E-08
81	2.70	5.16E-21	0.	2.99E-20	4.84E-15	7.49E-21	0.	0.	0.	1.43E-13	3.48E-09	8.44E-09	1.38E-09	1.33E-08
82	2.60	2.40E-21	0.	1.47E-20	4.81E-16	3.25E-21	0.	0.	0.	1.43E-13	3.90E-09	9.15E-09	1.50E-09	1.46E-08
83	2.50	1.67E-22	0.	1.61E-21	4.55E-16	7.69E-22	0.	0.	0.	1.43E-13	4.40E-09	6.88E-09	1.74E-09	1.30E-08
84	2.40	0.	7.62E-20	0.	3.83E-16	8.15E-23	0.	0.	0.	1.43E-13	4.99E-09	8.43E-09	2.13E-09	1.55E-08
85	2.30	0.	2.47E-19	0.	0.	0.	0.	0.	0.	1.42E-13	5.67E-09	1.02E-08	2.59E-09	1.84E-08
86	2.20	0.	6.27E-19	0.	0.	0.	0.	0.	0.	1.41E-13	6.49E-09	1.20E-08	3.06E-09	2.16E-08
87	2.10	0.	6.84E-19	0.	0.	0.	0.	0.	0.	1.41E-13	7.49E-09	1.40E-08	3.56E-09	2.50E-08
88	2.00	0.	1.32E-18	0.	0.	0.	0.	0.	0.	1.36E-13	8.69E-09	1.59E-08	4.07E-09	2.87E-08
89	1.90	0.	1.77E-18	0.	0.	0.	0.	0.	0.	1.31E-13	1.01E-08	1.78E-08	4.60E-09	3.26E-08
90	1.80	0.	1.48E-18	0.	0.	0.	0.	0.	0.	1.29E-13	1.20E-08	2.12E-08	5.60E-09	3.89E-08
91	1.70	0.	1.72E-18	0.	0.	0.	0.	0.	0.	1.10E-13	1.42E-08	2.54E-08	6.09E-09	4.66E-08
92	1.60	0.	1.27E-18	0.	0.	0.	0.	0.	0.	1.08E-13	1.71E-08	2.97E-08	7.75E-09	5.45E-08
93	1.50	0.	1.48E-18	0.	0.	0.	0.	0.	0.	4.55E-14	2.08E-08	3.59E-08	8.85E-09	6.56E-08
94	1.40	0.	1.48E-18	0.	0.	0.	0.	0.	0.	0.	2.57E-08	3.28E-08	8.02E-09	6.66E-08
95	1.30	0.	1.13E-18	0.	0.	0.	0.	0.	0.	0.	3.24E-08	4.72E-08	1.15E-08	9.11E-08
96	1.20	0.	1.08E-18	0.	0.	0.	0.	0.	0.	0.	4.16E-08	6.40E-08	1.43E-08	1.20E-07
97	1.10	0.	1.01E-18	0.	0.	0.	0.	2.62E-24	0.	0.	5.43E-08	7.07E-08	1.82E-08	1.51E-07
98	1.00	0.	9.29E-19	0.	0.	0.	0.	3.62E-23	0.	0.	7.25E-08	9.56E-08	2.21E-08	1.98E-07
99	0.90	0.	7.64E-19	0.	0.	0.	0.	4.17E-23	0.	0.	9.97E-08	1.08E-07	2.41E-08	2.32E-07
100	0.89	0.	3.59E-19	0.	0.	0.	0.	8.84E-22	0.	0.	1.43E-07	1.25E-07	2.78E-08	2.96E-07
101	0.78	0.	8.60E-20	0.	0.	0.	0.	7.56E-22	0.	0.	2.10E-07	1.15E-07	2.39E-08	3.56E-07
102	0.68	0.	1.30E-20	0.	0.	0.	0.	2.50E-21	0.	0.	3.49E-07	1.30E-07	2.70E-08	5.05E-07

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	N2 S-R RANGE	N2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (FFB)	N P.E	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.30E-22	0.	0.	0.	2.62E-16	6.16E-13	1.09E-10	2.13E-11	1.31E-10
2	10.60	0.	0.	5.69E-22	0.	0.	0.	2.63E-16	6.34E-13	1.10E-10	2.12E-11	1.32E-10
3	10.50	0.	0.	5.72E-22	0.	0.	0.	2.64E-16	6.92E-13	1.12E-10	2.12E-11	1.33E-10
4	10.40	0.	0.	5.30E-22	0.	0.	0.	2.64E-16	6.71E-13	1.11E-10	2.11E-11	1.32E-10
5	10.30	0.	0.	4.67E-22	0.	0.	0.	2.64E-16	6.91E-13	1.11E-10	2.10E-11	1.32E-10
6	10.20	0.	0.	4.70E-22	0.	0.	0.	2.65E-16	7.12E-13	1.13E-10	2.10E-11	1.34E-10
7	10.10	0.	0.	4.40E-22	0.	0.	0.	2.65E-16	7.33E-13	1.13E-10	2.09E-11	1.34E-10
8	10.00	0.	0.	3.90E-22	0.	0.	0.	2.65E-16	7.55E-13	1.13E-10	2.08E-11	1.35E-10
9	9.90	0.	0.	4.00E-22	0.	0.	0.	2.66E-16	7.79E-13	1.14E-10	2.08E-11	1.36E-10
10	9.80	0.	0.	3.73E-22	0.	0.	0.	2.66E-16	8.03E-13	1.15E-10	2.07E-11	1.36E-10
11	9.74	0.	0.	3.19E-22	0.	0.	0.	2.67E-16	8.29E-13	1.16E-10	2.06E-11	1.37E-10
12	9.68	0.	0.	3.45E-22	0.	0.	0.	2.67E-16	8.54E-13	1.16E-10	2.06E-11	1.38E-10
13	9.61	0.	0.	2.92E-22	0.	0.	0.	2.68E-16	8.81E-13	1.17E-10	2.05E-11	1.38E-10
14	9.41	0.	0.	2.74E-22	0.	0.	0.	2.69E-16	9.10E-13	7.07E-11	2.04E-11	1.00E-10
15	9.33	0.	0.	2.90E-22	0.	0.	0.	2.70E-16	9.40E-13	7.92E-11	2.04E-11	1.01E-10
16	9.21	0.	0.	2.29E-22	0.	0.	0.	2.71E-16	9.71E-13	7.98E-11	2.03E-11	1.01E-10
17	9.14	0.	0.	2.35E-22	0.	0.	0.	2.72E-16	1.00E-12	8.03E-11	2.02E-11	1.02E-10
18	9.11	0.	0.	2.13E-22	0.	0.	0.	2.73E-16	1.04E-12	8.08E-11	1.97E-11	1.02E-10
19	8.99	0.	0.	1.99E-22	0.	0.	0.	2.74E-16	1.07E-12	8.14E-11	1.96E-11	1.02E-10
20	8.88	0.	0.	1.91E-22	0.	0.	0.	2.75E-16	1.11E-12	8.19E-11	1.95E-11	1.03E-10
21	8.78	0.	0.	1.64E-22	0.	0.	0.	2.76E-16	1.15E-12	8.25E-11	1.95E-11	1.03E-10
22	8.68	0.	0.	1.69E-22	0.	0.	0.	2.77E-16	1.19E-12	8.30E-11	1.94E-11	1.04E-10
23	8.58	0.	0.	1.44E-22	0.	0.	0.	2.78E-16	1.23E-12	4.58E-11	1.94E-11	6.56E-11
24	8.48	0.	0.	1.49E-22	0.	0.	0.	2.79E-16	1.29E-12	4.56E-11	1.93E-11	6.63E-11
25	8.38	0.	0.	1.22E-22	0.	0.	0.	2.81E-16	1.32E-12	4.66E-11	1.93E-11	6.72E-11
26	8.28	0.	0.	1.23E-22	0.	0.	0.	2.82E-16	1.39E-12	4.78E-11	1.94E-11	6.86E-11
27	8.18	0.	0.	1.05E-22	0.	0.	0.	2.84E-16	1.43E-12	4.90E-11	1.95E-11	6.99E-11
28	8.03	0.	0.	1.05E-22	0.	0.	0.	2.85E-16	1.49E-12	5.03E-11	1.94E-11	7.13E-11
29	7.93	0.	0.	8.99E-23	0.	0.	0.	2.86E-16	1.54E-12	5.16E-11	1.96E-11	7.27E-11
30	7.83	0.	0.	9.28E-23	0.	0.	0.	2.88E-16	1.60E-12	5.29E-11	1.97E-11	7.42E-11
31	7.78	0.	0.	8.08E-23	0.	0.	0.	2.89E-16	1.66E-12	5.42E-11	1.98E-11	7.57E-11
32	7.69	0.	0.	7.63E-23	0.	5.79E-27	0.	2.91E-16	1.73E-12	5.57E-11	1.99E-11	7.73E-11
33	7.58	0.	0.	7.81E-23	0.	2.11E-26	0.	2.92E-16	1.80E-12	5.72E-11	2.00E-11	7.89E-11
34	7.49	0.	0.	6.26E-23	0.	1.02E-25	0.	2.94E-16	1.87E-12	5.86E-11	2.00E-11	7.85E-11
35	7.33	0.	0.	5.80E-23	0.	6.71E-25	0.	2.96E-16	1.95E-12	5.84E-11	2.01E-11	8.05E-11
36	7.29	0.	0.	5.29E-23	0.	1.91E-24	0.	2.97E-16	2.03E-12	6.07E-11	2.02E-11	8.30E-11
37	7.13	0.	0.	5.04E-23	0.	5.55E-24	0.	3.00E-16	2.12E-12	6.30E-11	2.03E-11	8.54E-11
38	7.03	2.56E-26	0.	4.59E-23	0.	1.16E-23	0.	3.02E-16	2.22E-12	6.53E-11	2.04E-11	8.79E-11
39	6.98	4.98E-26	0.	4.18E-23	0.	1.52E-23	0.	3.04E-16	2.31E-12	6.76E-11	2.05E-11	9.04E-11
40	6.88	4.27E-26	0.	4.00E-23	0.	2.75E-23	0.	3.07E-16	2.42E-12	6.99E-11	2.06E-11	9.29E-11
41	6.79	3.09E-26	0.	3.47E-23	0.	2.82E-23	0.	3.09E-16	2.53E-12	7.22E-11	2.07E-11	9.54E-11
42	6.69	1.48E-26	0.	3.09E-23	0.	2.19E-23	0.	3.12E-16	2.65E-12	7.45E-11	2.08E-11	9.80E-11
43	6.59	1.08E-26	0.	2.44E-23	0.	3.35E-23	0.	3.14E-16	2.77E-12	7.69E-11	2.09E-11	1.01E-10
44	6.49	6.12E-27	0.	1.66E-23	1.26E-25	3.27E-23	0.	3.17E-16	2.90E-12	7.93E-11	2.11E-11	1.03E-10
45	6.39	3.53E-27	0.	1.02E-23	5.95E-25	2.28E-23	0.	3.19E-16	3.05E-12	8.17E-11	2.13E-11	1.06E-10
46	6.29	1.58E-27	0.	5.60E-24	8.73E-25	3.08E-23	0.	3.22E-16	3.20E-12	8.42E-11	2.15E-11	1.09E-10
47	6.19	7.20E-28	0.	2.60E-24	2.34E-24	3.94E-23	0.	3.24E-16	3.36E-12	3.52E-11	2.09E-11	5.95E-11
48	6.09	2.98E-28	0.	4.55E-25	2.28E-24	1.86E-23	0.	3.26E-16	3.53E-12	3.59E-11	2.11E-11	6.06E-11
49	5.99	7.31E-29	0.	4.69E-26	3.21E-24	1.83E-23	0.	3.26E-16	3.71E-12	3.67E-11	2.14E-11	6.18E-11
50	5.89	9.50E-30	0.	1.10E-27	4.47E-24	1.86E-23	0.	3.22E-16	3.91E-12	3.75E-11	2.16E-11	6.30E-11
51	5.78	6.84E-31	0.	0.	5.16E-24	2.00E-23	0.	3.02E-16	4.12E-12	3.84E-11	2.18E-11	6.44E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	OZ S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (INVS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.08E-32	0.	0.	0.	4.34E-24	2.82E-23	0.	0.	2.81E-16	4.35E-12	3.97E-11	2.21E-11	6.61E-11
53	5.50	0.	0.	0.	0.	5.36E-24	2.62E-23	0.	0.	2.82E-16	4.50E-12	4.11E-11	2.23E-11	6.88E-11
54	5.40	0.	0.	0.	0.	4.82E-24	2.88E-23	0.	0.	2.84E-16	4.65E-12	4.26E-11	2.26E-11	7.01E-11
55	5.30	0.	0.	0.	0.	4.94E-24	2.67E-23	0.	0.	2.86E-16	5.13E-12	4.42E-11	2.29E-11	7.22E-11
56	5.20	0.	0.	0.	0.	5.29E-24	1.95E-23	0.	0.	2.87E-16	5.44E-12	4.58E-11	2.33E-11	7.45E-11
57	5.10	0.	0.	0.	0.	5.27E-24	2.52E-23	0.	0.	2.90E-16	5.76E-12	4.75E-11	2.37E-11	7.70E-11
58	5.00	4.14E-25	0.	0.	0.	4.79E-24	2.34E-23	0.	0.	2.92E-16	6.12E-12	4.93E-11	2.42E-11	7.96E-11
59	4.90	9.96E-25	0.	0.	0.	5.32E-24	2.92E-23	0.	0.	2.95E-16	6.50E-12	5.12E-11	2.46E-11	8.23E-11
60	4.80	1.85E-24	0.	0.	0.	5.60E-24	2.36E-23	0.	0.	2.97E-16	6.92E-12	5.32E-11	2.52E-11	8.52E-11
61	4.70	2.47E-24	0.	0.	0.	5.65E-24	2.13E-23	0.	0.	3.00E-16	7.36E-12	5.56E-11	2.58E-11	8.88E-11
62	4.60	3.37E-24	0.	0.	0.	5.79E-24	1.94E-23	0.	0.	3.02E-16	7.87E-12	5.87E-11	2.65E-11	9.31E-11
63	4.50	3.92E-24	0.	3.36E-24	0.	5.26E-24	1.45E-23	0.	0.	3.04E-16	8.41E-12	6.22E-11	2.72E-11	9.78E-11
64	4.40	3.73E-24	0.	1.82E-23	0.	5.26E-24	1.01E-23	0.	0.	3.07E-16	9.01E-12	6.56E-11	2.74E-11	1.02E-10
65	4.30	3.50E-24	0.	3.25E-23	0.	4.94E-24	6.25E-24	0.	0.	3.09E-16	9.64E-12	6.92E-11	2.49E-11	1.04E-10
66	4.20	3.25E-24	0.	1.87E-22	0.	5.24E-24	4.47E-24	0.	0.	3.12E-16	1.04E-11	7.31E-11	1.05E-11	9.48E-11
67	4.10	3.04E-24	0.	4.48E-23	0.	5.09E-24	1.23E-24	0.	0.	3.13E-16	1.12E-11	7.27E-11	1.39E-11	9.47E-11
68	4.00	2.79E-24	0.	1.94E-22	0.	4.69E-24	9.30E-25	0.	0.	3.14E-16	1.20E-11	6.74E-11	1.13E-11	9.07E-11
69	3.90	2.35E-24	0.	7.12E-23	9.18E-19	4.47E-24	5.69E-25	0.	0.	3.13E-16	1.30E-11	7.09E-11	1.16E-11	9.56E-11
70	3.80	2.57E-24	0.	1.12E-22	4.17E-18	4.79E-24	0.	0.	0.	3.12E-16	1.40E-11	7.23E-11	1.21E-11	9.85E-11
71	3.70	2.26E-24	0.	1.21E-22	1.61E-18	4.84E-24	0.	0.	0.	3.07E-16	1.52E-11	7.60E-11	1.33E-11	1.05E-10
72	3.60	2.03E-24	0.	8.19E-23	6.86E-18	4.37E-24	0.	0.	0.	2.87E-16	1.65E-11	6.43E-11	1.46E-11	7.74E-11
73	3.50	1.80E-24	0.	1.10E-22	1.83E-17	3.41E-24	0.	0.	0.	2.63E-16	1.80E-11	5.05E-11	1.61E-11	8.46E-11
74	3.40	1.72E-24	0.	5.80E-23	2.48E-18	3.82E-24	0.	0.	0.	1.52E-16	1.97E-11	5.60E-11	1.78E-11	9.34E-11
75	3.30	1.37E-24	0.	7.98E-23	1.81E-17	3.82E-24	0.	0.	0.	1.52E-16	2.15E-11	6.16E-11	1.92E-11	1.02E-10
76	3.20	1.18E-24	0.	4.52E-23	1.79E-17	3.16E-24	0.	0.	0.	1.52E-16	2.36E-11	6.61E-11	2.09E-11	1.13E-10
77	3.10	1.13E-24	0.	3.49E-23	3.92E-18	2.97E-24	0.	0.	0.	1.53E-16	2.60E-11	7.50E-11	2.24E-11	1.24E-10
78	3.00	1.00E-24	0.	2.12E-23	9.72E-18	2.78E-24	0.	0.	0.	1.53E-16	2.87E-11	8.20E-11	2.44E-11	1.35E-10
79	2.90	0.36E-25	0.	1.32E-23	5.45E-18	2.89E-24	0.	0.	0.	1.53E-16	3.18E-11	8.92E-11	2.63E-11	1.47E-10
80	2.80	9.67E-25	0.	6.54E-24	3.27E-18	1.48E-24	0.	0.	0.	1.53E-16	3.54E-11	9.72E-11	2.50E-11	1.58E-10
81	2.70	5.52E-25	0.	2.96E-24	4.63E-18	7.78E-25	0.	0.	0.	1.53E-16	3.95E-11	1.05E-10	1.46E-11	1.59E-10
82	2.60	2.57E-25	0.	1.49E-24	4.94E-19	3.35E-25	0.	0.	0.	1.53E-16	4.43E-11	8.12E-11	1.50E-11	1.42E-10
83	2.50	1.79E-26	0.	1.59E-25	4.54E-19	7.91E-26	0.	0.	0.	1.53E-16	5.00E-11	9.39E-11	1.65E-11	1.62E-10
84	2.40	0.	7.93E-24	0.	3.65E-19	8.38E-27	0.	0.	0.	1.53E-16	5.66E-11	1.13E-10	2.25E-11	1.92E-10
85	2.30	0.	2.44E-23	0.	0.	0.	0.	0.	0.	1.52E-16	6.44E-11	1.33E-10	2.69E-11	2.25E-10
86	2.20	0.	6.19E-23	0.	0.	0.	0.	0.	0.	1.52E-16	7.37E-11	1.59E-10	3.22E-11	2.61E-10
87	2.10	0.	6.78E-23	0.	0.	0.	0.	0.	0.	1.51E-16	8.49E-11	1.49E-10	3.71E-11	2.71E-10
88	2.00	0.	1.30E-22	0.	0.	0.	0.	0.	0.	1.46E-16	9.85E-11	1.71E-10	4.24E-11	3.11E-10
89	1.90	0.	1.75E-22	0.	0.	0.	0.	0.	0.	1.41E-16	1.15E-10	1.94E-10	4.89E-11	3.50E-10
90	1.80	0.	1.47E-22	0.	0.	0.	0.	0.	0.	1.34E-16	1.34E-10	2.38E-10	5.91E-11	4.25E-10
91	1.70	0.	1.70E-22	0.	0.	0.	0.	0.	0.	1.27E-16	1.62E-10	2.74E-10	6.88E-11	5.04E-10
92	1.60	0.	1.26E-22	0.	0.	0.	0.	0.	0.	1.07E-16	1.94E-10	2.97E-10	8.84E-11	5.72E-10
93	1.50	0.	1.44E-22	0.	0.	0.	0.	0.	0.	4.87E-17	2.36E-10	2.72E-10	9.20E-11	6.08E-10
94	1.40	0.	1.44E-22	0.	0.	0.	0.	0.	0.	0.	2.92E-10	3.53E-10	8.35E-11	7.20E-10
95	1.30	0.	2.12E-22	0.	0.	0.	0.	0.	0.	0.	3.64E-10	4.66E-10	1.19E-10	9.53E-10
96	1.20	0.	1.87E-22	0.	0.	0.	0.	0.	0.	0.	4.71E-10	6.36E-10	1.48E-10	1.26E-09
97	1.10	0.	1.00E-22	0.	0.	0.	0.	2.69E-28	0.	0.	6.15E-10	7.82E-10	1.88E-10	1.59E-09
98	1.00	0.	9.10E-23	0.	0.	0.	0.	3.72E-27	0.	0.	8.22E-10	9.49E-10	2.20E-10	2.00E-09
99	0.90	0.	7.95E-23	0.	0.	0.	0.	4.29E-27	0.	0.	1.13E-09	1.07E-09	2.49E-10	2.45E-09
100	0.80	0.	3.95E-23	0.	0.	0.	0.	9.89E-26	0.	0.	1.42E-09	1.00E-09	2.15E-10	2.84E-09
101	0.70	0.	8.50E-24	0.	0.	0.	0.	7.78E-26	0.	0.	2.45E-09	1.15E-09	2.47E-10	3.84E-09
102	0.60	0.	1.36E-24	0.	0.	0.	0.	2.64E-25	0.	0.	3.94E-09	1.20E-09	2.80E-10	5.51E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-N CONT.	N2 R-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.71	0.	0.	2.10E 00	0.	0.	0.	3.38E 00	7.14E-02	2.63E 02	1.40E 00	7.78E 02
2	10.60	0.	0.	1.90E 00	0.	0.	0.	3.39E 00	7.35E-02	6.47E 00	1.39E 00	1.32E 01
3	10.50	0.	0.	1.92E 00	0.	0.	0.	3.39E 00	7.56E-02	6.50E 00	1.39E 00	1.33E 01
4	10.49	0.	0.	1.91E 00	0.	0.	0.	3.40E 00	7.78E-02	6.52E 00	1.38E 00	1.32E 01
5	10.39	0.	0.	1.58E 00	0.	0.	0.	3.40E 00	8.01E-02	6.54E 00	1.38E 00	1.30E 01
6	10.29	0.	0.	1.63E 00	0.	0.	0.	3.41E 00	8.25E-02	6.55E 00	1.37E 00	1.30E 01
7	10.19	0.	0.	1.53E 00	0.	0.	0.	3.41E 00	8.50E-02	6.56E 00	1.37E 00	1.29E 01
8	10.08	0.	0.	1.34E 00	0.	0.	0.	3.42E 00	8.76E-02	6.57E 00	1.36E 00	1.28E 01
9	9.91	0.	0.	1.37E 00	0.	0.	0.	3.42E 00	9.03E-02	6.59E 00	1.36E 00	1.28E 01
10	9.83	0.	0.	1.29E 00	0.	0.	0.	3.43E 00	9.31E-02	6.60E 00	1.35E 00	1.28E 01
11	9.74	0.	0.	1.11E 00	0.	0.	0.	3.44E 00	9.60E-02	6.62E 00	1.34E 00	1.26E 01
12	9.64	0.	0.	1.20E 00	0.	0.	0.	3.44E 00	9.91E-02	6.64E 00	1.34E 00	1.27E 01
13	9.57	0.	0.	1.02E 00	0.	0.	0.	3.45E 00	1.02E-01	6.65E 00	1.33E 00	1.26E 01
14	9.49	0.	0.	9.62E-01	0.	0.	0.	3.46E 00	1.05E-01	6.67E 00	1.33E 00	1.25E 01
15	9.31	0.	0.	9.85E-01	0.	0.	0.	3.47E 00	1.09E-01	6.70E 00	1.32E 00	1.26E 01
16	9.23	0.	0.	8.14E-01	0.	0.	0.	3.49E 00	1.13E-01	6.72E 00	1.32E 00	1.24E 01
17	9.13	0.	0.	8.35E-01	0.	0.	0.	3.50E 00	1.16E-01	2.39E 00	1.31E 00	8.15E 00
18	9.01	0.	0.	7.58E-01	0.	0.	0.	3.51E 00	1.20E-01	2.39E 00	1.31E 00	8.09E 00
19	8.93	0.	0.	6.99E-01	0.	0.	0.	3.52E 00	1.25E-01	2.39E 00	1.30E 00	8.04E 00
20	8.80	0.	0.	6.86E-01	0.	0.	0.	3.54E 00	1.29E-01	2.39E 00	1.30E 00	8.04E 00
21	8.71	0.	0.	5.94E-01	0.	0.	0.	3.55E 00	1.33E-01	2.39E 00	1.30E 00	7.97E 00
22	8.64	0.	0.	6.11E-01	0.	0.	0.	3.56E 00	1.38E-01	2.40E 00	1.29E 00	8.00E 00
23	8.51	0.	0.	5.34E-01	0.	0.	0.	3.57E 00	1.43E-01	2.40E 00	1.29E 00	7.94E 00
24	8.40	0.	0.	5.30E-01	0.	0.	0.	3.59E 00	1.48E-01	2.41E 00	1.28E 00	7.96E 00
25	8.30	0.	0.	4.49E-01	0.	0.	0.	3.61E 00	1.54E-01	2.42E 00	1.28E 00	7.91E 00
26	8.20	0.	0.	4.53E-01	0.	0.	0.	3.63E 00	1.60E-01	2.42E 00	1.28E 00	7.95E 00
27	8.11	0.	0.	3.90E-01	0.	0.	0.	3.65E 00	1.66E-01	2.43E 00	1.29E 00	7.92E 00
28	8.01	0.	0.	3.92E-01	0.	0.	0.	3.67E 00	1.72E-01	2.44E 00	1.29E 00	7.96E 00
29	7.93	0.	0.	3.37E-01	0.	0.	0.	3.69E 00	1.79E-01	2.45E 00	1.29E 00	7.95E 00
30	7.83	0.	0.	3.40E-01	0.	0.	0.	3.70E 00	1.86E-01	2.47E 00	1.30E 00	8.00E 00
31	7.73	0.	0.	3.05E-01	0.	0.	0.	3.72E 00	1.93E-01	2.48E 00	1.30E 00	8.00E 00
32	7.63	0.	0.	2.89E-01	0.	1.27E-05	0.	3.74E 00	2.01E-01	2.50E 00	1.30E 00	8.03E 00
33	7.54	0.	0.	2.67E-01	0.	4.48E-05	0.	3.76E 00	2.09E-01	2.51E 00	1.31E 00	8.05E 00
34	7.44	0.	0.	2.39E-01	0.	3.58E-04	0.	3.78E 00	2.18E-01	2.52E 00	1.31E 00	8.07E 00
35	7.35	0.	0.	2.26E-01	0.	1.45E-03	0.	3.80E 00	2.27E-01	2.54E 00	1.31E 00	8.11E 00
36	7.29	0.	0.	2.04E-01	0.	3.95E-03	0.	3.82E 00	2.36E-01	2.55E 00	1.32E 00	8.13E 00
37	7.13	0.	0.	1.95E-01	0.	1.22E-02	0.	3.84E 00	2.47E-01	2.56E 00	1.32E 00	8.19E 00
38	7.03	1.40E-05	0.	1.79E-01	0.	2.49E-02	0.	3.89E 00	2.57E-01	2.58E 00	1.32E 00	8.25E 00
39	6.93	6.44E-05	0.	1.64E-01	0.	3.36E-02	0.	3.92E 00	2.69E-01	2.59E 00	1.32E 00	8.30E 00
40	6.88	5.71E-05	0.	1.57E-01	0.	5.05E-02	0.	3.95E 00	2.81E-01	2.61E 00	1.33E 00	8.38E 00
41	6.78	4.15E-05	0.	1.37E-01	0.	6.80E-02	0.	3.98E 00	2.94E-01	2.62E 00	1.33E 00	8.43E 00
42	6.68	2.52E-05	0.	1.23E-01	0.	4.80E-02	0.	4.01E 00	3.08E-01	2.64E 00	1.34E 00	8.47E 00
43	6.58	1.45E-05	0.	9.76E-02	0.	7.20E-02	0.	4.04E 00	3.22E-01	2.67E 00	1.34E 00	8.55E 00
44	6.48	8.38E-06	0.	8.72E-02	2.57E-04	6.91E-02	0.	4.07E 00	3.38E-01	2.70E 00	1.35E 00	8.59E 00
45	6.38	4.91E-06	0.	4.17E-02	1.21E-03	4.79E-02	0.	4.11E 00	3.54E-01	2.72E 00	1.36E 00	8.63E 00
46	6.23	2.16E-06	0.	2.30E-02	1.71E-03	6.62E-02	0.	4.14E 00	3.72E-01	2.75E 00	1.37E 00	8.72E 00
47	6.13	9.98E-07	0.	1.08E-02	4.86E-03	8.38E-02	0.	4.17E 00	3.90E-01	2.78E 00	1.38E 00	8.82E 00
48	6.00	4.12E-07	0.	2.73E-03	4.63E-03	4.02E-02	0.	4.20E 00	4.10E-01	2.82E 00	1.40E 00	8.87E 00
49	5.93	1.81E-07	0.	1.95E-04	6.78E-03	3.94E-02	0.	4.20E 00	4.32E-01	2.86E 00	1.41E 00	8.95E 00
50	5.83	1.29E-08	0.	4.92E-06	9.45E-03	4.04E-02	0.	4.14E 00	4.55E-01	2.90E 00	1.42E 00	8.97E 00
51	5.73	9.49E-10	0.	0.	1.10E-02	4.51E-02	0.	3.89E 00	4.79E-01	2.94E 00	1.44E 00	8.80E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O+ PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.20E-11	0.	0.	0.	9.34E-03	6.04E-02	0.	0.	3.61E 00	5.05E-01	2.99E 00	1.45E 00	8.63E 00
53	5.50	0.	0.	0.	0.	1.14E-02	5.61E-02	0.	0.	3.63E 00	5.34E-01	3.05E 00	1.47E 00	8.75E 00
54	5.40	0.	0.	0.	0.	1.04E-02	4.91E-02	0.	0.	3.65E 00	5.64E-01	3.13E 00	1.49E 00	8.89E 00
55	5.30	0.	0.	0.	0.	1.07E-02	5.74E-02	0.	0.	3.67E 00	5.97E-01	3.21E 00	1.51E 00	9.06E 00
56	5.20	0.	0.	0.	0.	1.15E-02	4.26E-02	0.	0.	3.70E 00	6.32E-01	3.29E 00	1.54E 00	9.21E 00
57	5.10	0.	0.	0.	0.	1.19E-02	5.49E-02	0.	0.	3.73E 00	6.70E-01	3.38E 00	1.56E 00	9.42E 00
58	5.00	5.81E-04	0.	0.	0.	1.05E-02	5.13E-02	0.	0.	3.76E 00	7.12E-01	3.49E 00	1.59E 00	9.62E 00
59	4.90	1.41E-03	0.	0.	0.	1.16E-02	5.57E-02	0.	0.	3.79E 00	7.57E-01	3.61E 00	1.62E 00	9.85E 00
60	4.80	2.63E-03	0.	0.	0.	1.25E-02	5.22E-02	0.	0.	3.82E 00	8.05E-01	3.73E 00	1.66E 00	1.01E 01
61	4.70	3.53E-03	0.	0.	0.	1.24E-02	4.73E-02	0.	0.	3.86E 00	8.56E-01	3.86E 00	1.70E 00	1.03E 01
62	4.60	4.85E-03	0.	0.	0.	1.28E-02	4.30E-02	0.	0.	3.89E 00	9.17E-01	4.02E 00	1.74E 00	1.06E 01
63	4.50	5.88E-03	0.	2.40E-02	0.	1.17E-02	3.23E-02	0.	0.	3.92E 00	9.80E-01	4.22E 00	1.79E 00	1.10E 01
64	4.40	5.41E-03	0.	4.20E-02	0.	1.17E-02	2.23E-02	0.	0.	3.95E 00	1.05E 00	4.42E 00	1.84E 00	1.13E 01
65	4.30	5.11E-03	0.	1.37E-01	0.	1.11E-02	1.39E-02	0.	0.	3.98E 00	1.13E 00	4.64E 00	1.88E 00	1.18E 01
66	4.20	4.76E-03	0.	4.44E-01	0.	1.17E-02	9.86E-03	0.	0.	4.01E 00	1.21E 00	4.86E 00	1.93E 00	1.25E 01
67	4.10	4.46E-03	0.	1.90E-01	0.	1.24E-02	2.73E-03	0.	0.	4.03E 00	1.30E 00	5.08E 00	1.94E 00	1.26E 01
68	4.00	4.10E-03	0.	6.48E-01	0.	1.10E-02	2.84E-03	0.	0.	4.04E 00	1.40E 00	5.30E 00	7.77E-01	1.22E 01
69	3.90	3.48E-03	0.	2.97E-01	1.74E-02	1.01E-02	7.89E-04	0.	0.	4.03E 00	1.51E 00	5.12E 00	8.81E-01	1.18E 01
70	3.80	3.81E-03	0.	4.72E-01	7.66E-02	1.09E-02	0.	0.	0.	4.01E 00	1.64E 00	5.21E 00	8.34E-01	1.23E 01
71	3.70	3.38E-03	0.	5.88E-01	3.10E-02	9.24E-03	0.	0.	0.	3.95E 00	1.77E 00	4.24E 00	9.15E-01	1.14E 01
72	3.60	3.84E-03	0.	3.47E-01	1.68E-01	1.60E-02	0.	0.	0.	3.70E 00	1.93E 00	4.68E 00	1.81E 00	1.18E 01
73	3.50	2.84E-03	0.	4.62E-01	3.33E-01	7.86E-03	0.	0.	0.	3.38E 00	2.18E 00	4.95E 00	1.11E 00	1.22E 01
74	3.40	2.60E-03	0.	2.98E-01	4.79E-02	8.82E-03	0.	0.	0.	1.95E 00	2.29E 00	5.40E 00	1.22E 00	1.12E 01
75	3.30	2.87E-03	0.	2.98E-01	1.98E-01	7.82E-03	0.	0.	0.	1.96E 00	2.91E 00	5.97E 00	1.34E 00	1.23E 01
76	3.20	1.80E-03	0.	1.94E-01	3.25E-01	7.16E-03	0.	0.	0.	1.96E 00	2.79E 00	6.54E 00	1.44E 00	1.32E 01
77	3.10	1.73E-03	0.	1.91E-01	7.56E-02	6.96E-03	0.	0.	0.	1.96E 00	3.03E 00	7.13E 00	1.59E 00	1.39E 01
78	3.00	1.54E-03	0.	9.20E-02	1.81E-01	6.54E-03	0.	0.	0.	1.97E 00	3.39E 00	7.71E 00	1.71E 00	1.50E 01
79	2.90	1.38E-03	0.	5.74E-02	1.81E-01	4.97E-03	0.	0.	0.	1.97E 00	3.71E 00	8.34E 00	1.84E 00	1.60E 01
80	2.80	1.35E-03	0.	2.76E-02	6.29E-02	3.43E-03	0.	0.	0.	1.97E 00	4.13E 00	9.06E 00	1.99E 00	1.73E 01
81	2.70	8.65E-04	0.	1.29E-02	8.62E-02	1.87E-03	0.	0.	0.	1.97E 00	4.61E 00	9.84E 00	2.15E 00	1.87E 01
82	2.60	4.86E-04	0.	6.91E-03	8.69E-03	8.20E-04	0.	0.	0.	1.97E 00	5.18E 00	1.07E 01	2.32E 00	2.02E 01
83	2.50	2.89E-05	0.	6.82E-04	8.27E-03	1.95E-04	0.	0.	0.	1.97E 00	5.83E 00	1.22E 01	1.36E 00	2.13E 01
84	2.40	0.	3.17E-02	0.	6.78E-03	2.87E-05	0.	0.	0.	1.97E 00	6.61E 00	1.42E 01	1.61E 00	2.44E 01
85	2.30	0.	9.89E-02	0.	0.	0.	0.	0.	0.	1.96E 00	7.52E 00	1.20E 01	1.92E 00	2.35E 01
86	2.20	0.	2.57E-01	0.	0.	0.	0.	0.	0.	1.95E 00	8.61E 00	1.42E 01	2.38E 00	2.73E 01
87	2.10	0.	2.76E-01	0.	0.	0.	0.	0.	0.	1.94E 00	9.92E 00	1.65E 01	2.68E 00	3.13E 01
88	2.00	0.	5.37E-01	0.	0.	0.	0.	0.	0.	1.88E 00	1.15E 01	1.88E 01	3.06E 00	3.58E 01
89	1.90	0.	6.90E-01	0.	0.	0.	0.	0.	0.	1.81E 00	1.35E 01	2.15E 01	3.54E 00	4.10E 01
90	1.80	0.	5.88E-01	0.	0.	0.	0.	0.	0.	1.73E 00	1.59E 01	2.57E 01	4.30E 00	4.82E 01
91	1.70	0.	6.79E-01	0.	0.	0.	0.	0.	0.	1.63E 00	1.89E 01	3.08E 01	5.22E 00	5.73E 01
92	1.60	0.	5.04E-01	0.	0.	0.	0.	0.	0.	1.38E 00	2.27E 01	3.60E 01	6.15E 00	6.68E 01
93	1.50	0.	5.84E-01	0.	0.	0.	0.	0.	0.	6.27E-01	2.77E 01	4.65E 01	7.47E 00	8.28E 01
94	1.40	0.	5.79E-01	0.	0.	0.	0.	0.	0.	0.	3.43E 01	5.70E 01	8.91E 00	1.02E 02
95	1.30	0.	4.44E-01	0.	0.	0.	0.	0.	0.	0.	4.32E 01	7.62E 01	1.18E 01	1.32E 02
96	1.20	0.	4.25E-01	0.	0.	0.	0.	0.	0.	0.	5.52E 01	8.25E 01	1.18E 01	1.56E 02
97	1.10	0.	4.81E-01	0.	0.	0.	0.	5.75E-07	0.	0.	7.19E 01	1.02E 02	1.49E 01	1.89E 02
98	1.00	0.	3.68E-01	0.	0.	0.	0.	5.29E-06	0.	0.	9.61E 01	1.23E 02	1.69E 01	2.37E 02
99	0.90	0.	3.02E-01	0.	0.	0.	0.	9.56E-06	0.	0.	1.32E 02	1.42E 02	1.98E 01	2.94E 02
100	0.80	0.	1.42E-01	0.	0.	0.	0.	2.05E-04	0.	0.	1.91E 02	1.63E 02	2.28E 01	3.77E 02
101	0.70	0.	3.38E-02	0.	0.	0.	0.	1.80E-04	0.	0.	2.88E 02	1.77E 02	2.39E 01	4.89E 02
102	0.60	0.	5.84E-03	0.	0.	0.	0.	6.00E-04	0.	0.	4.64E 02	1.98E 02	2.67E 01	6.89E 02

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.90E-02	0.	0.	0.	9.94E-02	6.54E-03	2.51E 01	1.35E-01	2.54E 01
2	10.60	0.	0.	1.73E-02	0.	0.	0.	9.96E-02	6.73E-03	6.17E-01	1.34E-01	8.74E-01
3	10.50	0.	0.	1.74E-02	0.	0.	0.	9.97E-02	6.92E-03	6.19E-01	1.34E-01	8.77E-01
4	10.40	0.	0.	1.65E-02	0.	0.	0.	9.98E-02	7.12E-03	6.22E-01	1.33E-01	8.78E-01
5	10.30	0.	0.	1.43E-02	0.	0.	0.	10.00E-02	7.33E-03	6.23E-01	1.33E-01	8.77E-01
6	10.20	0.	0.	1.40E-02	0.	0.	0.	1.00E-01	7.55E-03	6.25E-01	1.32E-01	8.79E-01
7	10.10	0.	0.	1.39E-02	0.	0.	0.	1.00E-01	7.78E-03	6.25E-01	1.32E-01	8.78E-01
8	10.00	0.	0.	1.21E-02	0.	0.	0.	1.00E-01	8.02E-03	6.26E-01	1.31E-01	8.78E-01
9	9.90	0.	0.	1.25E-02	0.	0.	0.	1.00E-01	8.26E-03	6.28E-01	1.31E-01	8.79E-01
10	9.80	0.	0.	1.17E-02	0.	0.	0.	1.01E-01	8.52E-03	6.29E-01	1.30E-01	8.80E-01
11	9.70	0.	0.	1.01E-02	0.	0.	0.	1.01E-01	8.79E-03	6.31E-01	1.30E-01	8.80E-01
12	9.60	0.	0.	1.09E-02	0.	0.	0.	1.01E-01	9.06E-03	6.32E-01	1.29E-01	8.82E-01
13	9.50	0.	0.	9.26E-03	0.	0.	0.	1.01E-01	9.34E-03	6.34E-01	1.29E-01	8.83E-01
14	9.40	0.	0.	8.74E-03	0.	0.	0.	1.02E-01	9.64E-03	6.36E-01	1.28E-01	8.84E-01
15	9.30	0.	0.	8.04E-03	0.	0.	0.	1.02E-01	9.95E-03	6.38E-01	1.28E-01	8.86E-01
16	9.20	0.	0.	7.38E-03	0.	0.	0.	1.02E-01	1.03E-02	6.40E-01	1.27E-01	8.87E-01
17	9.10	0.	0.	7.58E-03	0.	0.	0.	1.03E-01	1.07E-02	2.27E-01	1.27E-01	4.75E-01
18	9.00	0.	0.	6.88E-03	0.	0.	0.	1.03E-01	1.10E-02	2.28E-01	1.26E-01	4.75E-01
19	8.90	0.	0.	6.35E-03	0.	0.	0.	1.03E-01	1.14E-02	2.28E-01	1.26E-01	4.75E-01
20	8.80	0.	0.	6,23E-03	0.	0.	0.	1.04E-01	1.18E-02	2.28E-01	1.25E-01	4.75E-01
21	8.70	0.	0.	5,39E-03	0.	0.	0.	1.04E-01	1.22E-02	2.28E-01	1.25E-01	4.75E-01
22	8.60	0.	0.	5,55E-03	0.	0.	0.	1.05E-01	1.26E-02	2.28E-01	1.24E-01	4.76E-01
23	8.50	0.	0.	4,85E-03	0.	0.	0.	1.05E-01	1.31E-02	2.29E-01	1.24E-01	4.76E-01
24	8.40	0.	0.	4,91E-03	0.	0.	0.	1.05E-01	1.36E-02	2.30E-01	1.24E-01	4.77E-01
25	8.30	0.	0.	4,07E-03	0.	0.	0.	1.06E-01	1.41E-02	2.30E-01	1.23E-01	4.78E-01
26	8.20	0.	0.	4,11E-03	0.	0.	0.	1.07E-01	1.46E-02	2.31E-01	1.24E-01	4.80E-01
27	8.10	0.	0.	3,94E-03	0.	0.	0.	1.07E-01	1.52E-02	2.31E-01	1.24E-01	4.81E-01
28	8.00	0.	0.	3,56E-03	0.	0.	0.	1.08E-01	1.57E-02	2.32E-01	1.24E-01	4.84E-01
29	7.90	0.	0.	3,05E-03	0.	0.	0.	1.08E-01	1.63E-02	2.34E-01	1.25E-01	4.86E-01
30	7.80	0.	0.	3,16E-03	0.	0.	0.	1.09E-01	1.70E-02	2.35E-01	1.25E-01	4.89E-01
31	7.70	0	0.	2,77E-03	0.	0.	0.	1.09E-01	1.77E-02	2.36E-01	1.25E-01	4.91E-01
32	7.60	0.	0.	2,62E-03	0.	1.17E-07	0.	1.10E-01	1.84E-02	2.38E-01	1.26E-01	4.94E-01
33	7.50	0.	0.	2,42E-03	0.	4.11E-07	0.	1.10E-01	1.91E-02	2.39E-01	1.26E-01	4.97E-01
34	7.40	0.	0.	2,17E-03	0.	3.29E-06	0.	1.11E-01	1.99E-02	2.40E-01	1.26E-01	5.00E-01
35	7.30	0.	0.	2,05E-03	0.	1.33E-05	0.	1.12E-01	2.08E-02	2.42E-01	1.26E-01	5.03E-01
36	7.20	0.	0.	1,85E-03	0.	3.63E-05	0.	1.12E-01	2.16E-02	2.43E-01	1.27E-01	5.06E-01
37	7.10	0.	0.	1,77E-03	0.	1.12E-04	0.	1.13E-01	2.26E-02	2.44E-01	1.27E-01	5.09E-01
38	7.00	3.16E-07	0.	1,62E-03	0.	2.29E-04	0.	1.14E-01	2.36E-02	2.46E-01	1.27E-01	5.13E-01
39	6.90	6.15E-07	0.	1,49E-03	0.	3.09E-04	0.	1.15E-01	2.46E-02	2.47E-01	1.28E-01	5.16E-01
40	6.80	5.30E-07	0.	1,43E-03	0.	5.46E-04	0.	1.16E-01	2.57E-02	2.48E-01	1.28E-01	5.20E-01
41	6.70	3.85E-07	0.	1,25E-03	0.	5.51E-04	0.	1.17E-01	2.69E-02	2.50E-01	1.28E-01	5.24E-01
42	6.60	2.14E-07	0.	1,12E-03	0.	4.41E-04	0.	1.18E-01	2.82E-02	2.52E-01	1.29E-01	5.28E-01
43	6.50	1.35E-07	0.	8,86E-04	0.	6.61E-04	0.	1.19E-01	2.95E-02	2.54E-01	1.29E-01	5.34E-01
44	6.40	7.71E-08	0.	6,10E-04	2.36E-08	6.34E-04	0.	1.20E-01	3.09E-02	2.57E-01	1.30E-01	5.39E-01
45	6.30	4.46E-08	0.	3,79E-04	1.11E-05	4.39E-04	0.	1.21E-01	3.24E-02	2.59E-01	1.31E-01	5.44E-01
46	6.20	2.81E-08	0.	2,09E-04	1.57E-05	6.08E-04	0.	1.21E-01	3.40E-02	2.62E-01	1.32E-01	5.50E-01
47	6.10	9.20E-09	0.	9,77E-05	4,47E-05	7.67E-04	0.	1.22E-01	3.57E-02	2.65E-01	1.33E-01	5.57E-01
48	6.00	3.83E-09	0.	2,48E-05	4.25E-05	3.69E-04	0.	1.23E-01	3.74E-02	2,68E-01	1.35E-01	5,44E-01
49	5.90	9.40E-10	0.	1,77E-06	6.22E-05	3.62E-04	0.	1.23E-01	3.95E-02	2.72E-01	1.36E-01	5.72E-01
50	5.80	1.20E-10	0.	4,46E-08	8.66E-05	3.71E-04	0.	1.21E-01	4.16E-02	2.76E-01	1.37E-01	5.77E-01
51	5.70	8.81E-12	0.	0.	1.01E-04	4.14E-04	0.	1.14E-01	4.38E-02	2.80E-01	1.39E-01	5.77E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.68	3.97E-13	0.	0.	0.	8.57E-05	5.54E-04	0.	0.	1.06E-01	4.63E-02	2.89E-01	1.40E-01	5.78E-01
93	5.58	0.	0.	0.	0.	1.05E-04	5.15E-04	0.	0.	1.07E-01	4.68E-02	2.98E-01	1.42E-01	5.85E-01
94	5.48	0.	0.	0.	0.	9.57E-05	4.14E-04	0.	0.	1.07E-01	5.16E-02	2.98E-01	1.43E-01	6.01E-01
95	5.38	0.	0.	0.	0.	9.81E-05	5.27E-04	0.	0.	1.08E-01	5.46E-02	3.05E-01	1.45E-01	6.14E-01
96	5.28	0.	0.	0.	0.	1.05E-04	3.91E-04	0.	0.	1.09E-01	5.79E-02	3.13E-01	1.48E-01	6.28E-01
97	5.18	0.	0.	0.	0.	1.05E-04	5.84E-04	0.	0.	1.10E-01	6.14E-02	3.22E-01	1.51E-01	6.45E-01
98	5.08	5.48E-08	0.	0.	0.	9.60E-05	4.71E-04	0.	0.	1.10E-01	6.51E-02	3.32E-01	1.53E-01	6.62E-01
99	4.98	1.31E-05	0.	0.	0.	1.07E-04	5.12E-04	0.	0.	1.11E-01	6.92E-02	3.43E-01	1.56E-01	6.81E-01
60	4.88	2.44E-05	0.	0.	0.	1.15E-04	4.79E-04	0.	0.	1.12E-01	7.37E-02	3.56E-01	1.60E-01	7.02E-01
61	4.78	3.28E-05	0.	0.	0.	1.14E-04	4.34E-04	0.	0.	1.13E-01	7.86E-02	3.68E-01	1.64E-01	7.24E-01
62	4.68	4.58E-05	0.	0.	0.	1.17E-04	3.95E-04	0.	0.	1.14E-01	8.36E-02	3.83E-01	1.68E-01	7.50E-01
63	4.58	4.72E-05	0.	1.27E-04	0.	1.07E-04	2.97E-04	0.	0.	1.15E-01	8.97E-02	4.02E-01	1.72E-01	7.79E-01
64	4.48	5.03E-05	0.	3.86E-04	0.	1.07E-04	2.85E-04	0.	0.	1.16E-01	9.68E-02	4.21E-01	1.77E-01	8.10E-01
65	4.38	4.74E-05	0.	1.24E-03	0.	1.02E-04	1.20E-04	0.	0.	1.17E-01	1.03E-01	4.42E-01	1.82E-01	8.44E-01
66	4.28	4.42E-05	0.	4.03E-03	0.	1.07E-04	9.05E-05	0.	0.	1.18E-01	1.10E-01	4.63E-01	1.86E-01	8.82E-01
67	4.18	4.14E-05	0.	1.73E-03	0.	1.05E-04	2.50E-05	0.	0.	1.18E-01	1.19E-01	4.84E-01	1.87E-01	9.18E-01
68	4.08	5.81E-05	0.	5.81E-03	0.	1.01E-04	1.89E-05	0.	0.	1.19E-01	1.28E-01	5.05E-01	7.46E-02	8.33E-01
69	3.98	3.23E-05	0.	2.70E-03	5.20E-04	9.29E-05	7.24E-06	0.	0.	1.18E-01	1.35E-01	4.80E-01	7.72E-02	8.25E-01
70	3.88	3.54E-05	0.	4.29E-03	2.28E-03	9.99E-05	0.	0.	0.	1.18E-01	1.50E-01	4.96E-01	8.04E-02	8.51E-01
71	3.78	3.14E-05	0.	4.94E-03	9.25E-04	8.48E-05	0.	0.	0.	1.18E-01	1.62E-01	4.86E-01	8.02E-02	7.78E-01
72	3.68	2.83E-05	0.	3.19E-03	5.01E-03	9.18E-05	0.	0.	0.	1.09E-01	1.76E-01	4.38E-01	9.78E-02	8.28E-01
73	3.58	2.64E-05	0.	4.20E-03	9.92E-03	7.22E-05	0.	0.	0.	9.94E-02	1.92E-01	4.62E-01	1.07E-01	8.75E-01
74	3.48	2.41E-05	0.	2.63E-03	1.43E-03	8.10E-05	0.	0.	0.	9.74E-02	2.10E-01	5.19E-01	1.18E-01	9.84E-01
75	3.38	1.93E-05	0.	2.70E-03	5.65E-03	6.45E-05	0.	0.	0.	9.74E-02	2.29E-01	5.69E-01	1.29E-01	9.93E-01
76	3.28	1.68E-05	0.	1.76E-03	9.68E-03	6.70E-05	0.	0.	0.	9.79E-02	2.52E-01	6.23E-01	1.41E-01	1.88E 00
77	3.18	1.48E-05	0.	1.37E-03	2.25E-03	6.39E-05	0.	0.	0.	9.77E-02	2.77E-01	6.79E-01	1.53E-01	1.17E 00
78	3.08	1.43E-05	0.	8.36E-04	5.41E-03	6.81E-05	0.	0.	0.	9.78E-02	3.06E-01	7.35E-01	1.65E-01	1.27E 00
79	2.98	1.28E-05	0.	5.21E-04	3.88E-03	4.57E-05	0.	0.	0.	9.79E-02	3.44E-01	7.94E-01	1.77E-01	1.37E 00
80	2.88	1.25E-05	0.	2.91E-04	1.87E-03	3.15E-05	0.	0.	0.	9.80E-02	3.78E-01	8.63E-01	1.92E-01	1.49E 00
81	2.78	8.83E-06	0.	1.17E-04	2.57E-03	1.72E-05	0.	0.	0.	5.60E-02	4.22E-01	9.37E-01	2.08E-01	1.63E 00
82	2.68	3.77E-06	0.	5.73E-05	2.58E-04	7.53E-06	0.	0.	0.	5.80E-02	4.74E-01	1.02E 00	2.24E-01	1.77E 00
83	2.58	2.44E-07	0.	6.28E-06	2.46E-04	1.79E-06	0.	0.	0.	5.80E-02	5.34E-01	1.16E 00	1.31E-01	1.30E 00
84	2.48	0.	2.87E-04	0.	2.82E-04	1.98E-07	0.	0.	0.	5.80E-02	6.05E-01	1.35E 00	1.55E-01	2.17E 00
85	2.38	0.	9.87E-04	0.	0.	0.	0.	0.	0.	5.75E-02	6.88E-01	1.14E 00	1.85E-01	2.07E 00
86	2.28	0.	2.34E-03	0.	0.	0.	0.	0.	0.	5.73E-02	7.80E-01	1.35E 00	2.22E-01	2.42E 00
87	2.18	0.	2.50E-03	0.	0.	0.	0.	0.	0.	5.71E-02	9.89E-01	1.57E 00	2.58E-01	2.80E 00
88	2.08	0.	4.84E-03	0.	0.	0.	0.	0.	0.	5.52E-02	1.85E 00	1.79E 00	2.95E-01	3.20E 00
89	1.98	0.	6.34E-03	0.	0.	0.	0.	0.	0.	5.31E-02	1.23E 00	2.05E 00	3.41E-01	3.69E 00
90	1.88	0.	5.34E-03	0.	0.	0.	0.	0.	0.	5.08E-02	1.45E 00	2.45E 00	4.14E-01	4.37E 00
91	1.78	0.	6.16E-03	0.	0.	0.	0.	0.	0.	4.79E-02	1.73E 00	2.94E 00	5.03E-01	5.22E 00
92	1.68	0.	4.57E-03	0.	0.	0.	0.	0.	0.	4.85E-02	2.08E 00	3.43E 00	5.93E-01	6.15E 00
93	1.58	0.	5.38E-03	0.	0.	0.	0.	0.	0.	1.84E-02	2.53E 00	4.43E 00	7.20E-01	7.70E 00
94	1.48	0.	5.26E-03	0.	0.	0.	0.	0.	0.	0.	3.14E 00	5.51E 00	8.58E-01	9.51E 00
95	1.38	0.	4.83E-03	0.	0.	0.	0.	0.	0.	0.	3.83E 00	7.26E 00	1.13E 00	1.23E 01
96	1.28	0.	3.86E-03	0.	0.	0.	0.	0.	0.	0.	5.65E 00	7.85E 00	1.14E 00	1.41E 01
97	1.18	0.	3.64E-03	0.	0.	0.	0.	5.28E-09	0.	0.	6.58E 00	9.78E 00	1.43E 00	1.77E 01
98	1.08	0.	3.34E-03	0.	0.	0.	0.	7.61E-08	0.	0.	8.79E 00	1.18E 01	1.62E 00	2.22E 01
99	0.98	0.	2.74E-03	0.	0.	0.	0.	8.78E-08	0.	0.	1.21E 01	1.35E 01	1.91E 00	2.75E 01
100	0.88	0.	1.29E-03	0.	0.	0.	0.	1.88E-06	0.	0.	1.74E 01	1.95E 01	2.26E 00	3.57E 01
101	0.78	0.	3.84E-04	0.	0.	0.	0.	1.65E-06	0.	0.	2.64E 01	1.69E 01	2.30E 00	4.59E 01
102	0.68	0.	5.32E-05	0.	0.	0.	0.	9.51E-06	0.	0.	4.24E 01	1.89E 01	2.57E 00	6.39E 01

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	O2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	1.11E-04	0.	0.	0.	2.31E-03	5.03E-04	1.91E 00	1.13E-02	1.93E 00
2	10.61	0.	0.	1.10E-04	0.	0.	0.	2.31E-03	5.19E-04	4.78E-02	1.12E-02	6.12E-02
3	10.58	0.	0.	1.01E-04	0.	0.	0.	2.31E-03	5.33E-04	4.73E-02	1.12E-02	6.14E-02
4	10.48	0.	0.	9.58E-05	0.	0.	0.	2.32E-03	5.48E-04	4.74E-02	1.11E-02	6.15E-02
5	10.39	0.	0.	8.34E-05	0.	0.	0.	2.32E-03	5.64E-04	4.75E-02	1.11E-02	6.16E-02
6	10.28	0.	0.	8.59E-05	0.	0.	0.	2.32E-03	5.81E-04	4.76E-02	1.11E-02	6.17E-02
7	10.18	0.	0.	8.80E-05	0.	0.	0.	2.33E-03	5.99E-04	4.77E-02	1.10E-02	6.17E-02
8	10.09	0.	0.	7.06E-05	0.	0.	0.	2.33E-03	6.17E-04	4.78E-02	1.10E-02	6.17E-02
9	9.99	0.	0.	7.24E-05	0.	0.	0.	2.33E-03	6.36E-04	4.79E-02	1.09E-02	6.18E-02
10	9.88	0.	0.	6.79E-05	0.	0.	0.	2.34E-03	6.56E-04	4.80E-02	1.09E-02	6.19E-02
11	9.78	0.	0.	5.05E-05	0.	0.	0.	2.34E-03	6.76E-04	4.81E-02	1.08E-02	6.20E-02
12	9.68	0.	0.	4.32E-05	0.	0.	0.	2.35E-03	6.98E-04	4.82E-02	1.08E-02	6.21E-02
13	9.58	0.	0.	5.38E-05	0.	0.	0.	2.35E-03	7.20E-04	4.84E-02	1.08E-02	6.22E-02
14	9.48	0.	0.	5.08E-05	0.	0.	0.	2.36E-03	7.44E-04	4.85E-02	1.07E-02	6.24E-02
15	9.38	0.	0.	5.20E-05	0.	0.	0.	2.37E-03	7.68E-04	4.87E-02	1.07E-02	6.25E-02
16	9.28	0.	0.	4.38E-05	0.	0.	0.	2.38E-03	7.94E-04	4.88E-02	1.96E-02	6.27E-02
17	9.19	0.	0.	4.41E-05	0.	0.	0.	2.38E-03	8.21E-04	1.74E-02	1.66E-02	3.12E-02
18	9.08	0.	0.	4.08E-05	0.	0.	0.	2.39E-03	8.49E-04	1.74E-02	1.06E-02	3.12E-02
19	8.98	0.	0.	3.69E-05	0.	0.	0.	2.40E-03	8.78E-04	1.74E-02	1.05E-02	3.12E-02
20	8.88	0.	0.	3.62E-05	0.	0.	0.	2.41E-03	9.09E-04	1.74E-02	1.05E-02	3.12E-02
21	8.78	0.	0.	3.13E-05	0.	0.	0.	2.42E-03	9.40E-04	1.74E-02	1.04E-02	3.12E-02
22	8.68	0.	0.	3.23E-05	0.	0.	0.	2.43E-03	9.74E-04	1.74E-02	1.04E-02	3.13E-02
23	8.58	0.	0.	2.82E-05	0.	0.	0.	2.44E-03	1.01E-03	1.75E-02	1.04E-02	3.13E-02
24	8.48	0.	0.	2.88E-05	0.	0.	0.	2.45E-03	1.04E-03	1.75E-02	1.03E-02	3.14E-02
25	8.38	0.	0.	2.37E-05	0.	0.	0.	2.46E-03	1.08E-03	1.76E-02	1.03E-02	3.15E-02
26	8.28	0.	0.	2.39E-05	0.	0.	0.	2.47E-03	1.12E-03	1.76E-02	1.04E-02	3.16E-02
27	8.18	0.	0.	2.00E-05	0.	0.	0.	2.49E-03	1.17E-03	1.77E-02	1.04E-02	3.17E-02
28	8.08	0.	0.	2.07E-05	0.	0.	0.	2.50E-03	1.21E-03	1.77E-02	1.04E-02	3.19E-02
29	7.98	0.	0.	1.78E-05	0.	0.	0.	2.51E-03	1.26E-03	1.78E-02	1.04E-02	3.21E-02
30	7.88	0.	0.	1.84E-05	0.	0.	0.	2.53E-03	1.31E-03	1.79E-02	1.05E-02	3.22E-02
31	7.78	0.	0.	1.41E-05	0.	0.	0.	2.54E-03	1.36E-03	1.80E-02	1.05E-02	3.24E-02
32	7.68	0.	0.	1.53E-05	0.	7.45E-10	0.	2.55E-03	1.41E-03	1.81E-02	1.05E-02	3.26E-02
33	7.58	0.	0.	1.41E-05	0.	2.62E-09	0.	2.56E-03	1.47E-03	1.82E-02	1.05E-02	3.28E-02
34	7.48	0.	0.	1.26E-05	0.	2.10E-08	0.	2.58E-03	1.53E-03	1.83E-02	1.06E-02	3.30E-02
35	7.38	0.	0.	1.20E-05	0.	8.51E-08	0.	2.59E-03	1.60E-03	1.84E-02	1.06E-02	3.32E-02
36	7.28	0.	0.	1.08E-05	0.	2.32E-07	0.	2.61E-03	1.67E-03	1.85E-02	1.06E-02	3.34E-02
37	7.18	0.	0.	1.03E-05	0.	7.15E-07	0.	2.63E-03	1.74E-03	1.86E-02	1.06E-02	3.36E-02
38	7.08	2.21E-09	0.	9.45E-06	0.	1.46E-06	0.	2.65E-03	1.81E-03	1.87E-02	1.07E-02	3.39E-02
39	6.98	4.31E-09	0.	8.65E-06	0.	1.97E-06	0.	2.67E-03	1.89E-03	1.88E-02	1.07E-02	3.41E-02
40	6.88	3.71E-09	0.	8.31E-06	0.	3.49E-06	0.	2.69E-03	1.98E-03	1.89E-02	1.07E-02	3.43E-02
41	6.78	2.70E-09	0.	7.25E-06	0.	3.52E-06	0.	2.71E-03	2.07E-03	1.90E-02	1.07E-02	3.46E-02
42	6.68	1.64E-09	0.	6.49E-06	0.	2.81E-06	0.	2.74E-03	2.17E-03	1.92E-02	1.08E-02	3.49E-02
43	6.58	9.45E-10	0.	5.15E-06	0.	4.22E-06	0.	2.76E-03	2.27E-03	1.94E-02	1.08E-02	3.53E-02
44	6.48	5.48E-10	0.	3.55E-06	1.51E-08	4.85E-06	0.	2.78E-03	2.38E-03	1.96E-02	1.09E-02	3.56E-02
45	6.38	3.12E-10	0.	2.28E-06	7.07E-08	2.88E-06	0.	2.80E-03	2.49E-03	1.98E-02	1.09E-02	3.60E-02
46	6.28	1.41E-10	0.	1.22E-06	1.00E-07	3.88E-06	0.	2.82E-03	2.62E-03	2.00E-02	1.11E-02	3.65E-02
47	6.18	6.44E-11	0.	5.68E-07	2.85E-07	4.90E-06	0.	2.84E-03	2.75E-03	2.02E-02	1.12E-02	3.70E-02
48	6.08	2.68E-11	0.	1.44E-07	2.71E-07	2.36E-06	0.	2.86E-03	2.90E-03	2.05E-02	1.13E-02	3.75E-02
49	5.98	8.58E-12	0.	1.83E-08	3.07E-07	2.31E-06	0.	2.88E-03	3.04E-03	2.08E-02	1.14E-02	3.81E-02
50	5.88	8.38E-13	0.	2.68E-10	5.54E-07	2.36E-06	0.	2.82E-03	3.20E-03	2.11E-02	1.15E-02	3.86E-02
51	5.78	6.17E-14	0.	0.	6.48E-07	2.64E-06	0.	2.65E-03	3.37E-03	2.14E-02	1.16E-02	3.90E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	O2 VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.69	2.78E-10	0.	0.	0.	5.47E-07	3.94E-06	0.	0.	2.46E-03	3.96E-03	2.17E-02	1.17E-02	3.94E-02
53	5.58	0.	0.	0.	0.	6.68E-07	3.20E-06	0.	0.	2.48E-03	3.76E-03	2.22E-02	1.18E-02	4.02E-02
54	5.49	0.	0.	0.	0.	6.11E-07	2.64E-06	0.	0.	2.49E-03	3.97E-03	2.27E-02	1.20E-02	4.12E-02
55	5.38	0.	0.	0.	0.	6.26E-07	3.36E-06	0.	0.	2.51E-03	4.20E-03	2.33E-02	1.22E-02	4.22E-02
56	5.28	0.	0.	0.	0.	6.73E-07	2.50E-06	0.	0.	2.52E-03	4.45E-03	2.39E-02	1.24E-02	4.33E-02
57	5.18	0.	0.	0.	0.	6.71E-07	3.22E-06	0.	0.	2.54E-03	4.72E-03	2.46E-02	1.26C-02	4.45E-02
58	5.08	3.70E-08	0.	0.	0.	6.15E-07	3.01E-06	0.	0.	2.56E-03	5.01E-03	2.54E-02	1.28E-02	4.58E-02
59	4.98	9.15E-08	0.	0.	0.	6.01E-07	3.27E-06	0.	0.	2.59E-03	5.33E-03	2.62E-02	1.31E-02	4.72E-02
60	4.88	1.71E-07	0.	0.	0.	7.31E-07	3.06E-06	0.	0.	2.61E-03	5.67E-03	2.71E-02	1.34E-02	4.88E-02
61	4.78	2.29E-07	0.	0.	0.	7.29E-07	2.77E-06	0.	0.	2.63E-03	6.05E-03	2.81E-02	1.37E-02	5.05E-02
62	4.68	3.15E-07	0.	0.	0.	7.48E-07	2.92E-06	0.	0.	2.69E-03	6.44E-03	2.92E-02	1.41E-02	5.24E-02
63	4.58	3.38E-07	0.	7.41E-07	0.	6.83E-07	1.89E-06	0.	0.	2.67E-03	6.90E-03	3.06E-02	1.44E-02	5.46E-02
64	4.48	3.52E-07	0.	2.29E-06	0.	6.89E-07	1.31E-06	0.	0.	2.69E-03	7.30E-03	3.21E-02	1.48E-02	5.70E-02
65	4.38	3.32E-07	0.	7.22E-06	0.	6.52E-07	8.16E-07	0.	0.	2.71E-03	7.92E-03	3.27E-02	1.52E-02	5.95E-02
66	4.28	3.09E-07	0.	2.39E-05	0.	6.86E-07	5.78E-07	0.	0.	2.74E-03	8.51E-03	3.53E-02	1.56E-02	6.22E-02
67	4.18	2.90E-07	0.	1.01E-05	0.	6.69E-07	1.60E-07	0.	0.	2.79E-03	9.15E-03	3.69E-02	1.57E-02	6.49E-02
68	4.08	2.67E-07	0.	3.39E-05	0.	6.45E-07	1.21E-07	0.	0.	2.76E-03	9.86E-03	3.85E-02	6.26E-03	5.74E-02
69	3.98	2.26E-07	0.	1.97E-05	1.89E-05	5.93E-07	4.62E-08	0.	0.	2.79E-03	1.06E-02	3.72E-02	6.46E-03	5.71E-02
70	3.88	2.48E-07	0.	2.49E-05	4.78E-05	6.38E-07	0.	0.	0.	2.74E-03	1.15E-02	3.78E-02	6.73E-03	5.89E-02
71	3.78	2.28E-07	0.	2.64E-05	1.04E-05	5.41E-07	0.	0.	0.	2.69E-03	1.25E-02	3.89E-02	7.30E-03	5.95E-02
72	3.68	1.98E-07	0.	1.83E-05	1.05E-04	5.86E-07	0.	0.	0.	2.52E-03	1.36E-02	3.34E-02	8.12E-03	5.77E-02
73	3.58	1.84E-07	0.	2.44E-05	2.08E-04	4.61E-07	0.	0.	0.	2.31E-03	1.48E-02	3.52E-02	8.94E-03	6.15E-02
74	3.48	1.69E-07	0.	1.93E-05	2.99E-05	5.17E-07	0.	0.	0.	1.33E-03	1.61E-02	3.93E-02	9.87E-03	6.66E-02
75	3.38	1.35E-07	0.	1.97E-05	1.58E-04	4.11E-07	0.	0.	0.	1.33E-03	1.77E-02	4.34E-02	1.08E-02	7.33E-02
76	3.28	1.17E-07	0.	1.83E-05	2.83E-04	4.31E-07	0.	0.	0.	1.34E-03	1.94E-02	4.79E-02	1.18E-02	8.13E-02
77	3.18	1.12E-07	0.	7.95E-06	4.72E-05	5.88E-07	0.	0.	0.	1.34E-03	2.13E-02	5.18E-02	1.28E-02	8.73E-02
78	3.08	1.08E-07	0.	4.86E-06	1.13E-04	3.83E-07	0.	0.	0.	1.34E-03	2.36E-02	5.61E-02	1.38E-02	9.49E-02
79	2.98	8.42E-08	0.	3.83E-06	6.39E-05	2.91E-07	0.	0.	0.	1.34E-03	2.61E-02	6.06E-02	1.48E-02	1.03E-01
80	2.88	9.76E-08	0.	1.48E-06	3.93E-05	2.01E-07	0.	0.	0.	1.39E-03	2.91E-02	6.58E-02	1.61E-02	1.12E-01
81	2.78	5.62E-08	0.	4.82E-07	3.38E-05	1.09E-07	0.	0.	0.	1.35E-03	3.25E-02	7.15E-02	1.74E-02	1.23E-01
82	2.68	2.64E-08	0.	3.33E-07	5.40E-06	4.80E-08	0.	0.	0.	1.39E-03	3.65E-02	7.78E-02	1.87E-02	1.34E-01
83	2.58	1.85E-09	0.	3.66E-08	5.16E-06	1.14E-08	0.	0.	0.	1.39E-03	4.11E-02	8.54E-02	1.10E-02	1.42E-01
84	2.48	0.	1.67E-06	0.	4.23E-06	1.22E-09	0.	0.	0.	1.35E-03	4.65E-02	1.03E-01	1.30E-02	1.44E-01
85	2.38	0.	5.28E-06	0.	0.	0.	0.	0.	0.	1.34E-03	5.30E-02	8.70E-02	1.99E-02	1.47E-01
86	2.28	0.	1.36E-05	0.	0.	0.	0.	0.	0.	1.33E-03	6.06E-02	1.03E-01	1.06E-02	1.63E-01
87	2.18	0.	1.40E-05	0.	0.	0.	0.	0.	0.	1.32E-03	6.99E-02	1.20E-01	2.16E-02	2.13E-01
88	2.08	0.	2.84E-05	0.	0.	0.	0.	0.	0.	1.20E-03	8.11E-02	1.37E-01	2.47E-02	2.44E-01
89	1.98	0.	3.69E-05	0.	0.	0.	0.	0.	0.	1.23E-03	9.44E-02	1.56E-01	2.86E-02	2.81E-01
90	1.88	0.	3.10E-05	0.	0.	0.	0.	0.	0.	1.18E-03	1.12E-01	1.87E-01	3.46E-02	3.34E-01
91	1.78	0.	3.50E-05	0.	0.	0.	0.	0.	0.	1.11E-03	1.33E-01	2.24E-01	4.21E-02	4.00E-01
92	1.68	0.	2.66E-05	0.	0.	0.	0.	0.	0.	9.48E-04	1.60E-01	2.62E-01	4.96E-02	4.72E-01
93	1.58	0.	3.00E-05	0.	0.	0.	0.	0.	0.	4.27E-04	1.95E-01	3.38E-01	6.02E-02	5.93E-01
94	1.48	0.	3.00E-05	0.	0.	0.	0.	0.	0.	0.	2.41E-01	4.70E-01	7.18E-02	7.33E-01
95	1.38	0.	2.36E-05	0.	0.	0.	0.	0.	0.	0.	3.04E-01	5.54E-01	9.58E-02	9.53E-01
96	1.28	0.	2.24E-05	0.	0.	0.	0.	0.	0.	0.	3.00E-01	5.99E-01	9.54E-02	1.00E 00
97	1.18	0.	2.12E-05	0.	0.	0.	0.	3.37E-11	0.	0.	5.07E-01	7.49E-01	1.28E-01	1.37E 00
98	1.08	0.	1.94E-05	0.	0.	0.	0.	4.86E-10	0.	0.	6.77E-01	8.96E-01	1.36E-01	1.71E 00
99	0.98	0.	1.60E-05	0.	0.	0.	0.	5.40E-10	0.	0.	9.33E-01	1.03E 00	1.60E-01	2.12E 00
100	0.88	0.	7.31E-06	0.	0.	0.	0.	1.20E-08	0.	0.	1.34E 00	1.18E 00	1.84E-01	2.71E 00
101	0.78	0.	1.70E-06	0.	0.	0.	0.	1.86E-08	0.	0.	2.03E 00	1.29E 00	1.93E-01	3.51E 00
102	0.68	0.	3.09E-07	0.	0.	0.	0.	3.51E-08	0.	0.	3.27E 00	1.44E 00	2.15E-01	4.92E 00

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.203E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	N2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	2.27E-07	0.	0.	0.	2.72E-05	2.34E-05	8.67E-02	6.15E-04	8.73E-02
2	10.68	0.	0.	2.08E-07	0.	0.	0.	2.73E-05	2.42E-05	2.13E-03	6.12E-04	2.80E-03
3	10.56	0.	0.	2.08E-07	0.	[illegible]	0.	2.73E-05	2.39E-05	2.14E-03	6.10E-04	2.81E-03
4	10.43	0.	0.	1.97E-07	0.	[illegible]	0.	2.73E-05	2.56E-05	2.15E-03	6.08E-04	2.81E-03
5	10.31	0.	0.	1.71E-07	0.	[illegible]	0.	2.74E-05	2.63E-05	2.16E-03	6.06E-04	2.82E-03
6	10.20	0.	0.	1.76E-07	0.	[illegible]	0.	2.74E-05	2.71E-05	2.16E-03	6.03E-04	2.82E-03
7	10.10	0.	0.	1.66E-07	0.	0.	0.	2.75E-05	2.88E-05	2.16E-03	6.01E-04	2.82E-03
8	10.00	0.	0.	1.45E-07	0.	0.	0.	2.75E-05	2.88E-05	2.16E-03	5.99E-04	2.82E-03
9	9.91	0.	0.	1.45E-07	0.	[illegible]	0.	2.75E-05	2.97E-05	2.17E-03	5.97E-04	2.82E-03
10	9.82	0.	0.	1.39E-07	0.	[illegible]	0.	2.76E-05	3.04E-05	2.17E-03	5.94E-04	2.83E-03
11	9.73	0.	0.	1.20E-07	0.	0	0.	2.76E-05	3.16E-05	2.18E-03	5.92E-04	2.83E-03
12	9.65	0.	0.	1.38E-07	[illegible]	0.	0.	2.77E-05	3.26E-05	2.18E-03	5.90E-04	2.83E-03
13	9.57	0.	0.	1.18E-07	[illegible]	0.	0.	2.77E-05	3.36E-05	2.19E-03	5.87E-04	2.84E-03
14	9.49	0.	0.	1.04E-07	0.	0.	0.	2.78E-05	3.47E-05	2.20E-03	5.85E-04	2.84E-03
15	9.41	0.	0.	1.07E-07	0.	0.	0.	2.78E-05	3.59E-05	2.20E-03	5.83E-04	2.85E-03
16	9.33	0.	0.	8.81E-08	0.	0.	0.	2.88E-05	3.71E-05	2.21E-03	5.81E-04	2.86E-03
17	9.26	0.	0.	9.05E-08	0.	0.	0.	2.81E-05	3.83E-05	7.87E-04	5.79E-04	1.43E-03
18	9.19	0.	0.	8.21E-08	0.	0.	0.	2.82E-05	3.94E-05	7.87E-04	5.77E-04	1.43E-03
19	9.11	0.	0.	7.58E-08	0.	0.	0.	2.83E-05	4.10E-05	7.87E-04	5.75E-04	1.43E-03
20	9.04	0.	0.	7.44E-08	0.	0.	0.	2.84E-05	4.24E-05	7.88E-04	5.72E-04	1.43E-03
21	8.97	0.	0.	6.43E-08	0.	0.	0.	2.85E-05	4.39E-05	7.89E-04	5.70E-04	1.43E-03
22	8.90	0.	0.	6.62E-08	0.	0.	0.	2.86E-05	4.54E-05	7.90E-04	5.68E-04	1.43E-03
23	8.84	0.	0.	5.79E-08	0.	0.	0.	2.87E-05	4.71E-05	7.92E-04	5.67E-04	1.43E-03
24	8.77	0.	0.	5.74E-08	0.	0.	0.	2.89E-05	4.88E-05	7.94E-04	5.65E-04	1.44E-03
25	8.71	0.	0.	4.86E-08	0.	0.	0.	2.91E-05	5.04E-05	7.96E-04	5.64E-04	1.44E-03
26	8.65	0.	0.	4.91E-08	0.	0.	0.	2.92E-05	5.25E-05	7.99E-04	5.65E-04	1.45E-03
27	8.59	0.	0.	4.23E-08	0.	0.	0.	2.94E-05	5.42E-05	8.00E-04	5.67E-04	1.45E-03
28	8.53	0.	0.	4.25E-08	0.	0.	0.	2.95E-05	5.65E-05	8.04E-04	5.68E-04	1.46E-03
29	7.98	0.	0.	3.65E-08	0.	0.	0.	2.97E-05	5.87E-05	8.09E-04	5.69E-04	1.47E-03
30	7.87	0.	0.	3.70E-08	0.	0.	0.	2.98E-05	6.10E-05	8.13E-04	5.71E-04	1.47E-03
31	7.78	0.	0.	3.31E-08	0.	0.	0.	3.88E-05	6.35E-05	8.18E-04	5.72E-04	1.48E-03
32	7.69	0.	0.	3.13E-08	0.	1.94E-12	0.	3.81E-05	6.68E-05	8.22E-04	5.74E-04	1.49E-03
33	7.59	0.	0.	2.89E-08	0.	6.49E-12	0.	3.83E-05	6.87E-05	8.26E-04	5.75E-04	1.50E-03
34	7.49	0.	0.	2.59E-08	0.	5.19E-11	0.	3.84E-05	7.14E-05	8.31E-04	5.76E-04	1.51E-03
35	7.39	0.	0.	2.45E-08	0.	2.10E-10	0.	3.86E-05	7.44E-05	8.35E-04	5.78E-04	1.52E-03
36	7.29	0.	0.	2.21E-08	0.	5.73E-10	0.	3.88E-05	7.78E-05	8.40E-04	5.79E-04	1.53E-03
37	7.19	0.	0.	2.12E-08	0.	1.77E-09	0.	3.10E-05	8.11E-05	8.45E-04	5.81E-04	1.54E-03
38	7.09	5.40E-12	0.	1.94E-08	0.	3.61E-09	0.	3.13E-05	8.47E-05	8.49E-04	5.82E-04	1.55E-03
39	6.99	1.29E-11	0.	1.77E-08	0.	4.87E-09	0.	3.15E-05	8.85E-05	8.54E-04	5.83E-04	1.56E-03
40	6.89	1.11E-11	0.	1.70E-08	0.	8.62E-09	0.	3.18E-05	9.25E-05	8.59E-04	5.85E-04	1.57E-03
41	6.79	8.04E-12	0.	1.49E-08	0.	8.70E-09	0.	3.20E-05	9.67E-05	8.63E-04	5.87E-04	1.58E-03
42	6.69	4.94E-12	0.	1.33E-08	0.	6.95E-09	0.	3.23E-05	1.01E-04	8.71E-04	5.89E-04	1.59E-03
43	6.59	2.42E-12	0.	1.06E-08	0.	1.04E-08	0.	3.25E-05	1.06E-04	8.79E-04	5.92E-04	1.61E-03
44	6.49	1.41E-12	0.	7.28E-09	3.75E-11	1.00E-08	0.	3.28E-05	1.11E-04	8.88E-04	5.94E-04	1.63E-03
45	6.38	9.31E-13	0.	4.52E-09	1.75E-10	6.94E-09	0.	3.30E-05	1.16E-04	8.97E-04	5.98E-04	1.64E-03
46	6.29	4.19E-13	0.	2.49E-09	2.47E-10	9.68E-09	0.	3.33E-05	1.22E-04	9.06E-04	6.03E-04	1.66E-03
47	6.19	1.92E-13	0.	1.17E-09	7.05E-10	1.21E-08	0.	3.35E-05	1.28E-04	9.16E-04	6.09E-04	1.69E-03
48	6.09	7.99E-14	0.	2.95E-10	6.71E-10	5.83E-09	0.	3.38E-05	1.35E-04	9.28E-04	6.15E-04	1.71E-03
49	5.99	1.98E-14	0.	2.12E-11	9.42E-10	5.71E-09	0.	3.38E-05	1.42E-04	9.42E-04	6.21E-04	1.74E-03
50	5.89	2.50E-15	0.	5.33E-13	1.37E-09	5.85E-09	0.	3.33E-05	1.49E-04	9.55E-04	6.27E-04	1.77E-03
51	5.79	1.44E-16	0.	0.	1.60E-09	6.53E-09	0.	3.13E-05	1.58E-04	9.68E-04	6.33E-04	1.79E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	8.30E-10	0.	0.	0.	1.35E-09	8.75E-09	0.	0.	2.91E-05	1.64E-04	9.84E-04	6.39E-04	1.82E-03
93	5.50	0.	0.	0.	0.	1.65E-09	8.12E-09	0.	0.	2.92E-05	1.79E-04	1.00E-03	6.47E-04	1.86E-03
94	5.40	0.	0.	0.	0.	1.51E-09	6.53E-09	0.	0.	2.94E-05	1.85E-04	1.03E-03	6.55E-04	1.90E-03
95	5.30	0.	0.	0.	0.	1.55E-09	8.32E-09	0.	0.	2.96E-05	1.96E-04	1.06E-03	6.65E-04	1.95E-03
96	5.20	0.	0.	0.	0.	1.66E-09	6.17E-09	0.	0.	2.98E-05	2.08E-04	1.08E-03	6.77E-04	2.00E-03
97	5.10	0.	0.	0.	0.	1.66E-09	7.96E-09	0.	0.	3.00E-05	2.20E-04	1.11E-03	6.89E-04	2.05E-03
98	5.00	1.13E-10	0.	0.	0.	1.92E-09	7.43E-09	0.	0.	3.02E-05	2.34E-04	1.15E-03	7.01E-04	2.11E-03
99	4.90	2.73E-10	0.	0.	0.	1.68E-09	8.00E-09	0.	0.	3.05E-05	2.49E-04	1.19E-03	7.14E-04	2.18E-03
100	4.80	5.09E-10	0.	0.	0.	1.81E-09	7.57E-09	0.	0.	3.08E-05	2.65E-04	1.23E-03	7.29E-04	2.25E-03
101	4.70	8.84E-10	0.	0.	0.	1.88E-09	6.86E-09	0.	0.	3.10E-05	2.82E-04	1.27E-03	7.48E-04	2.33E-03
102	4.60	9.39E-10	0.	0.	0.	1.85E-09	6.23E-09	0.	0.	3.13E-05	3.01E-04	1.32E-03	7.68E-04	2.42E-03
103	4.50	9.85E-10	0.	1.52E-09	0.	1.69E-09	4.68E-09	0.	0.	3.15E-05	3.22E-04	1.39E-03	7.88E-04	2.53E-03
104	4.40	1.05E-09	0.	4.61E-09	0.	1.49E-09	3.23E-09	0.	0.	3.18E-05	3.45E-04	1.45E-03	8.08E-04	2.64E-03
105	4.30	9.96E-10	0.	1.40E-08	0.	1.41E-09	2.02E-09	0.	0.	3.20E-05	3.70E-04	1.53E-03	8.30E-04	2.76E-03
106	4.20	9.23E-10	0.	4.81E-08	0.	1.70E-09	1.43E-09	0.	0.	3.23E-05	3.97E-04	1.60E-03	8.52E-04	2.88E-03
107	4.10	8.44E-10	0.	2.06E-08	0.	1.66E-09	3.95E-10	0.	0.	3.24E-05	4.27E-04	1.67E-03	8.54E-04	2.90E-03
108	4.00	7.95E-10	0.	6.93E-08	0.	1.59E-09	2.99E-10	0.	0.	3.25E-05	4.60E-04	1.74E-03	8.42E-04	2.90E-03
109	3.90	6.75E-10	0.	3.22E-08	1.03E-07	1.47E-09	1.14E-10	0.	0.	3.24E-05	4.97E-04	1.69E-03	8.53E-04	2.57E-03
110	3.80	7.39E-10	0.	9.12E-08	4.54E-07	1.50E-09	0.	0.	0.	3.23E-05	5.38E-04	1.71E-03	8.67E-04	2.65E-03
111	3.70	4.55E-10	0.	5.41E-08	1.84E-07	1.34E-09	0.	0.	0.	3.10E-05	5.83E-04	1.48E-03	4.83E-04	2.42E-03
112	3.60	5.98E-10	0.	3.76E-08	9.97E-07	1.45E-09	0.	0.	0.	2.98E-05	6.34E-04	1.51E-03	4.43E-04	2.42E-03
113	3.50	5.50E-10	0.	5.81E-08	1.97E-06	1.14E-09	0.	0.	0.	2.72E-05	6.90E-04	1.60E-03	4.80E-04	2.80E-03
114	3.40	5.03E-10	0.	3.14E-08	2.84E-07	1.20E-09	0.	0.	0.	1.57E-05	7.53E-04	1.70E-03	5.39E-04	3.09E-03
115	3.30	4.02E-10	0.	3.23E-08	1.12E-06	1.02E-09	0.	0.	0.	1.57E-05	8.25E-04	1.96E-03	5.90E-04	3.40E-03
116	3.20	3.50E-10	0.	2.10E-08	1.93E-06	1.07E-09	0.	0.	0.	1.50E-05	9.05E-04	2.15E-03	6.44E-04	3.72E-03
117	3.10	3.35E-10	0.	1.43E-08	4.40E-07	1.01E-09	0.	0.	0.	1.56E-05	9.97E-04	2.35E-03	6.98E-04	4.06E-03
118	3.00	2.99E-10	0.	9.97E-09	1.00E-06	9.40E-10	0.	0.	0.	1.50E-05	1.10E-03	2.54E-03	7.52E-04	4.41E-03
119	2.90	2.91E-10	0.	6.22E-09	5.97E-07	7.21E-10	0.	0.	0.	1.50E-05	1.22E-03	2.74E-03	8.11E-04	4.79E-03
120	2.80	2.61E-10	0.	2.99E-09	3.73E-07	4.90E-10	0.	0.	0.	1.50E-05	1.36E-03	2.98E-03	8.77E-04	5.23E-03
121	2.70	1.68E-10	0.	1.40E-09	5.11E-07	2.71E-10	0.	0.	0.	1.50E-05	1.52E-03	3.24E-03	9.49E-04	5.72E-03
122	2.60	7.88E-11	0.	6.84E-10	5.13E-08	1.19E-10	0.	0.	0.	1.50E-05	1.70E-03	3.51E-03	1.02E-03	6.25E-03
123	2.50	5.92E-12	0.	7.39E-11	4.91E-08	2.82E-11	0.	0.	0.	1.50E-05	1.92E-03	4.80E-03	5.90E-04	6.53E-03
124	2.40	0.	3.43E-09	0.	4.82E-08	3.91E-12	0.	0.	0.	1.50E-05	2.17E-03	4.66E-03	7.88E-04	7.56E-03
125	2.30	0.	1.00E-08	0.	0.	0.	0.	0.	0.	1.50E-05	2.47E-03	3.94E-03	8.46E-04	7.27E-03
126	2.20	0.	2.79E-08	0.	0.	0.	0.	0.	0.	1.57E-05	2.83E-03	4.66E-03	1.01E-03	8.52E-03
127	2.10	0.	2.99E-08	0.	0.	0.	0.	0.	0.	1.56E-05	3.26E-03	5.42E-03	1.18E-03	9.88E-03
128	2.03	0.	5.82E-08	0.	0.	0.	0.	0.	0.	1.51E-05	3.79E-03	6.19E-03	1.35E-03	1.13E-02
129	1.99	0.	7.54E-08	0.	0.	0.	0.	0.	0.	1.46E-05	4.43E-03	7.07E-03	1.56E-03	1.31E-02
130	1.88	0.	6.37E-08	0.	0.	0.	0.	0.	0.	1.39E-05	5.22E-03	8.45E-03	1.89E-03	1.56E-02
131	1.78	0.	7.35E-08	0.	0.	0.	0.	0.	0.	1.31E-05	6.21E-03	1.01F-02	2.30E-03	1.87F-02
132	1.68	0.	5.46E-08	0.	0.	0.	0.	0.	0.	1.11E-05	7.47E-03	1.18E-02	2.71E-03	2.20E-02
133	1.58	0.	6.33E-08	0.	0.	0.	0.	0.	0.	5.84E-06	9.18E-03	1.53E-02	3.29E-03	2.77E-02
134	1.48	0.	6.28E-08	0.	0.	0.	0.	0.	0.	0.	1.13E-02	1.90E-02	3.92E-03	3.42E-02
135	1.38	0.	4.81E-08	0.	0.	0.	0.	0.	0.	0.	1.43E-02	2.51E-02	5.19E-03	4.44E-02
136	1.28	0.	4.84E-08	0.	0.	0.	0.	0.	0.	0.	1.82E-02	2.72E-02	5.21E-03	5.05E-02
137	1.18	0.	4.35E-08	0.	0.	0.	0.	0.33E-14	0.	0.	2.37E-02	3.35E-02	6.54E-03	6.37E-02
138	1.08	0.	3.99E-08	0.	0.	0.	0.	1.29E-12	0.	0.	3.16E-02	4.06E-02	7.42E-03	7.96E-02
139	0.98	0.	3.20E-08	0.	0.	0.	0.	1.39E-12	0.	0.	4.34E-02	4.66E-02	8.72E-03	9.49E-02
140	0.88	0.	1.54E-08	0.	0.	0.	0.	2.97E-11	0.	0.	6.27E-02	5.36E-02	1.08E-02	1.20E-01
141	0.78	0.	3.64E-09	0.	0.	0.	0.	2.61E-11	0.	0.	9.47E-02	9.03E-02	1.85E-02	1.64E-01
142	0.68	0.	6.35E-10	0.	0.	0.	0.	8.69E-11	0.	0.	1.92E-01	6.52E-02	1.18E-02	2.29E-01

ABSORPTION COEFFICIEN OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-W NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	8.02E-11	0.	0.	0.	8.25E-08	4.54E-07	4.05E-05	1.34E-05	5.45E-05
2	10.61	0.	0.	7.77E-11	0.	0.	0.	8.26E-08	4.67E-07	4.07E-05	1.33E-05	5.46E-05
3	10.54	0.	0.	7.53E-11	0.	0.	0.	8.27E-08	4.81E-07	4.09E-05	1.33E-05	5.48E-05
4	10.48	0.	0.	6.94E-11	0.	0.	0.	8.29E-08	4.99E-07	4.11E-05	1.33E-05	5.49E-05
5	10.33	0.	0.	6.83E-11	0.	0.	0.	8.30E-08	5.00E-07	4.12E-05	1.32E-05	5.50E-05
6	10.20	0.	0.	6.22E-11	0.	0.	0.	8.31E-08	5.25E-07	4.13E-05	1.32E-05	5.50E-05
7	10.10	0.	0.	5.49E-11	0.	0.	0.	8.32E-08	5.48E-07	4.13E-05	1.31E-05	5.50E-05
8	10.03	0.	0.	5.11E-11	0.	0.	0.	8.33E-08	5.97E-07	4.08E-05	1.31E-05	5.45E-05
9	9.98	0.	0.	5.24E-11	0.	0.	0.	8.34E-08	5.74E-07	4.09E-05	1.30E-05	5.45E-05
10	9.89	0.	0.	4.91E-11	0.	0.	0.	8.36E-08	5.92E-07	4.10E-05	1.30E-05	5.46E-05
11	9.71	0.	0.	4.23E-11	0.	0.	0.	8.37E-08	6.17E-07	4.11E-05	1.29E-05	5.47E-05
12	9.61	0.	0.	4.47E-11	0.	0.	0.	8.39E-08	6.36E-07	4.12E-05	1.29E-05	5.47E-05
13	9.57	0.	0.	3.98E-11	0.	0.	0.	8.41E-08	6.95E-07	4.13E-05	1.28E-05	5.48E-05
14	9.41	0.	0.	3.46E-11	0.	0.	0.	8.44E-08	6.71E-07	4.14E-05	1.27E-05	5.49E-05
15	9.39	0.	0.	3.77E-11	0.	0.	0	8.47E-08	6.93E-07	4.15E-05	1.27E-05	5.50E-05
16	9.23	0.	0.	3.11E-11	0.	0.	0.	8.50E-08	7.16E-07	4.17E-05	1.27E-05	5.51E-05
17	9.11	0.	0.	3.19E-11	0.	0.	0.	8.53E-08	7.41E-07	1.49E-05	1.26E-05	2.44E-05
18	9.08	0.	0.	2.98E-11	0.	0.	0.	8.56E-08	7.64E-07	1.49E-05	1.26E-05	2.43E-05
19	8.99	0.	0.	2.67E-11	0.	0.	0.	8.59E-08	7.92E-07	1.49E-05	1.25E-05	2.43E-05
20	8.83	0.	0.	2.62E-11	0.	0.	0.	8.62E-08	8.25E-07	1.49E-05	1.25E-05	2.43E-05
21	8.73	0.	0.	2.27E-11	0.	0.	0.	9.65E-08	8.48E-07	1.50E-05	1.24E-05	2.43E-05
22	8.69	0.	0.	2.34E-11	0.	0.	0.	8.68E-08	8.79E-07	1.50E-05	1.24E-05	2.43E-05
23	8.53	0.	0.	2.04E-11	0.	0.	0.	8.71E-08	9.10E-07	1.50E-05	1.23E-05	2.84E-05
24	8.48	0.	0.	2.03E-11	0.	0.	0.	8.76E-08	9.43E-07	1.51E-05	1.23E-05	2.84E-05
25	8.33	0.	0.	1.71E-11	0.	0.	0.	8.80E-08	9.78E-07	1.51E-05	1.23E-05	2.85E-05
26	8.28	0.	0.	1.73E-11	0.	0.	0.	8.85E-08	1.01E-06	1.52E-05	1.23E-05	2.86E-05
27	8.10	0.	0.	1.49E-11	0.	0.	0.	8.89E-08	1.05E-06	1.52E-05	1.23E-05	2.87E-05
28	8.03	0.	0.	1.50E-11	0.	0.	0.	8.94E-08	1.08E-06	1.53E-05	1.24E-05	2.88E-05
29	7.90	0.	0.	1.29E-11	0.	0.	0.	8.99E-08	1.13E-06	1.53E-05	1.24E-05	2.90E-05
30	7.80	0.	0.	1.33E-11	0.	0.	0.	9.03E-08	1.16E-06	1.54E-05	1.24E-05	2.91E-05
31	7.79	0.	0.	1.17E-11	0.	0.	0.	9.08E-08	1.23E-06	1.55E-05	1.25E-05	2.93E-05
32	7.68	0.	0.	1.18E-11	0.	7.54E-16	0.	9.12E-08	1.28E-06	1.55E-05	1.25E-05	2.94E-05
33	7.59	0.	0.	1.02E-11	0.	2.66E-15	0.	9.17E-08	1.33E-06	1.56E-05	1.25E-05	2.96E-05
34	7.48	0.	0.	9.15E-12	0.	2.13E-14	0.	9.22E-08	1.38E-06	1.57E-05	1.26E-05	2.97E-05
35	7.39	0.	0.	8.65E-12	0.	8.61E-14	0.	9.27E-08	1.44E-06	1.58E-05	1.26E-05	2.99E-05
36	7.29	0.	0.	7.79E-12	0.	2.35E-13	0.	9.32E-08	1.50E-06	1.59E-05	1.26E-05	3.01E-05
37	7.18	0.	0.	7.47E-12	0.	7.24E-13	0.	9.40E-08	1.57E-06	1.60E-05	1.27E-05	3.03E-05
38	7.08	3.13E-15	0.	6.84E-12	0.	1.48E-12	0.	9.48E-08	1.64E-06	1.61E-05	1.27E-05	3.05E-05
39	6.98	5.11E-15	0.	6.26E-12	0.	2.08E-12	0.	9.55E-08	1.71E-06	1.62E-05	1.27E-05	3.07E-05
40	6.89	5.26E-15	0.	6.01E-12	0.	3.53E-12	0.	9.63E-08	1.79E-06	1.63E-05	1.27E-05	3.09E-05
41	6.79	3.42E-15	0.	5.25E-12	0.	3.56E-12	0.	9.70E-08	1.87E-06	1.63E-05	1.28E-05	3.11E-05
42	6.69	2.12E-15	0.	4.78E-12	0.	2.85E-12	0.	9.78E-08	1.94E-06	1.65E-05	1.28E-05	3.14E-05
43	6.59	1.34E-15	0.	3.73E-12	0.	4.27E-12	0.	9.86E-08	2.05E-06	1.67E-05	1.29E-05	3.17E-05
44	6.49	7.64E-16	0.	2.57E-12	1.53E-14	4.10E-12	0.	9.93E-08	2.15E-06	1.68E-05	1.29E-05	3.20E-05
45	6.39	4.42E-16	0.	1.99E-12	7.16E-14	2.84E-12	0.	1.00E-07	2.25E-06	1.78E-05	1.30E-05	3.24E-05
46	6.29	1.99E-16	0.	8.48E-13	1.81E-13	3.93E-12	0.	1.01E-07	2.36E-06	1.72E-05	1.32E-05	3.28E-05
47	6.19	9.12E-17	0.	4.11E-13	2.68E-13	4.98E-12	0.	1.02E-07	2.48E-06	1.74E-05	1.33E-05	3.32E-05
48	6.09	3.79E-17	0.	1.84E-13	2.75E-13	2.39E-12	0.	1.02E-07	2.61E-06	1.76E-05	1.34E-05	3.37E-05
49	5.99	9.52E-18	0.	7.47E-15	4.02E-13	2.34E-12	0.	1.02E-07	2.74E-06	1.79E-05	1.35E-05	3.42E-05
50	5.89	1.19E-18	0.	1.88E-16	5.61E-13	2.39E-12	0.	1.01E-07	2.89E-06	1.81E-05	1.37E-05	3.48E-05
51	5.79	8.74E-20	0.	0.	6.54E-13	2.67E-12	0.	9.47E-08	3.05E-06	1.84E-05	1.38E-05	3.53E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.94E-21	0.	0.	0.	5.54E-13	3.58E-12	0.	0.	6.81E-08	3.21E-06	1.87E-05	1.39E-05	3.59E-05
53	5.50	0.	0.	0.	0.	6.76E-13	3.33E-12	0.	0.	8.06E-08	3.30E-06	1.91E-05	1.41E-05	3.66E-05
54	5.40	0.	0.	0.	0.	6.19E-13	2.67E-12	0.	0.	8.98E-08	3.50E-06	1.95E-05	1.43E-05	3.75E-05
55	5.30	0.	0.	0.	0.	6.34E-13	3.41E-12	0.	0.	8.96E-08	3.79E-06	2.00E-05	1.45E-05	3.84E-05
56	5.20	0.	0.	0.	0.	6.81E-13	2.53E-12	0.	0.	9.82E-08	4.02E-06	2.04E-05	1.47E-05	3.92E-05
57	5.10	0.	0.	0.	0.	6.79E-13	3.26E-12	0.	0.	9.86E-08	4.26E-06	2.10E-05	1.50E-05	4.03E-05
58	5.00	9.95E-14	0.	0.	0.	6.28E-13	3.04E-12	0.	0.	9.17E-08	4.92E-06	2.16E-05	1.53E-05	4.15E-05
59	4.90	1.80E-13	0.	0.	0.	6.98E-13	3.31E-12	0.	0.	9.29E-08	4.81E-06	2.24E-05	1.56E-05	4.28E-05
60	4.80	2.42E-13	0.	0.	0.	7.40E-13	3.10E-12	0.	0.	9.32E-08	5.12E-06	2.31E-05	1.59E-05	4.42E-05
61	4.70	3.25E-13	0.	0.	0.	7.30E-13	2.81E-12	0.	0.	9.40E-08	5.44E-06	2.40E-05	1.63E-05	4.58E-05
62	4.60	4.46E-13	0.	0.	0.	7.97E-13	2.95E-12	0.	0.	9.48E-08	5.83E-06	2.49E-05	1.67E-05	4.76E-05
63	4.50	4.66E-13	0.	5.36E-13	0.	6.92E-13	1.92E-12	0.	0.	9.95E-08	6.23E-06	2.61E-05	1.72E-05	4.96E-05
64	4.40	4.90E-13	0.	1.63E-12	0.	6.43E-13	1.32E-12	0.	0.	9.63E-08	6.67E-06	2.74E-05	1.76E-05	5.18E-05
65	4.30	4.70E-13	0.	5.23E-12	0.	6.60E-13	8.26E-13	0.	0.	9.78E-08	7.15E-06	2.87E-05	1.81E-05	5.41E-05
66	4.20	4.30E-13	0.	1.70E-11	0.	6.94E-13	5.85E-13	0.	0.	9.78E-08	7.60E-06	3.01E-05	1.86E-05	5.65E-05
67	4.10	4.11E-13	0.	7.27E-12	0.	6.70E-13	1.62E-13	0.	0.	9.82E-08	8.26E-06	3.15E-05	1.86E-05	5.85E-05
68	4.00	3.70E-13	0.	2.45E-11	0.	6.93E-13	1.27E-13	0.	0.	9.86E-08	8.90E-06	3.29E-05	7.45E-06	4.93E-05
69	3.90	3.20E-13	0.	1.14E-11	2.62E-10	6.80E-13	4.60E-14	0.	0.	9.82E-08	9.61E-06	3.15E-05	7.69E-06	4.89E-05
70	3.80	3.91E-13	0.	1.88E-11	1.15E-09	6.45E-13	0.	0.	0.	9.78E-08	1.04E-05	2.53E-05	8.81E-06	4.38E-05
71	3.75	3.11E-13	0.	1.91E-11	4.67E-10	5.48E-13	0.	0.	0.	9.63E-08	1.13E-05	2.64E-05	8.79E-06	4.66E-05
72	3.68	2.88E-13	0.	1.33E-11	2.93E-09	5.03E-13	0.	0.	0.	9.82E-08	1.22E-05	2.86E-05	9.64E-06	5.06E-05
73	3.59	2.61E-13	0.	1.77E-11	5.61E-09	4.64E-13	0.	0.	0.	8.25E-08	1.33E-05	3.81E-05	1.06E-05	5.42E-05
74	3.48	2.39E-13	0.	1.11E-11	7.20E-10	5.23E-13	0.	0.	0.	4.70E-08	1.44E-05	3.35E-05	1.17E-05	5.99E-05
75	3.38	1.91E-13	0.	1.14E-11	2.85E-09	4.17E-13	0.	0.	0.	4.77E-08	1.56E-05	3.71E-05	1.29E-05	6.59E-05
76	3.29	1.66E-13	0.	7.48E-12	4.89E-09	4.37E-13	0.	0.	0.	4.78E-08	1.75E-05	4.06E-05	1.40E-05	7.22E-05
77	3.18	1.99E-13	0.	9.79E-12	1.14E-09	4.13E-13	0.	0.	0.	4.79E-08	1.83E-05	4.42E-05	1.52E-05	7.88E-05
78	3.08	1.42E-13	0.	3.93E-12	1.73E-09	3.88E-13	0.	0.	0.	4.84E-08	2.13E-05	4.79E-05	1.64E-05	8.54E-05
79	2.98	1.19E-13	0.	2.19E-12	1.51E-09	2.95E-13	0.	0.	0.	4.81E-08	2.34E-05	5.18E-05	1.77E-05	9.31E-05
80	2.88	1.24E-13	0.	1.86E-12	9.46E-10	2.84E-13	0.	0.	0.	4.81E-08	2.62E-05	5.62E-05	1.91E-05	1.02E-04
81	2.78	7.97E-14	0.	4.94E-13	1.30E-09	1.11E-13	0.	0.	0.	4.81E-08	2.93E-05	6.09E-05	2.07E-05	1.11E-04
82	2.68	5.74E-14	0.	2.41E-13	1.38E-10	4.86E-14	0.	0.	0.	4.81E-08	3.29E-05	6.61E-05	2.23E-05	1.21E-04
83	2.58	2.62E-15	0.	2.61E-14	1.24E-10	1.16E-14	0.	0.	0.	4.81E-08	3.71E-05	7.49E-05	1.26E-05	1.25E-04
84	2.48	0.	1.21E-12	0.	1.02E-10	1.23E-15	0.	0.	0.	4.81E-08	4.20E-05	8.11E-05	1.54E-05	1.19E-04
85	2.38	0.	5.82E-12	0.	0.	0.	0.	0.	0.	4.78E-08	4.78E-05	7.41E-05	1.84E-05	1.48E-04
86	2.28	0.	9.83E-12	0.	0.	0.	0.	0.	0.	4.76E-08	5.47E-05	8.76E-05	2.21E-05	1.64E-04
87	2.18	0.	1.09E-11	0.	0.	0.	0.	0.	0.	4.74E-08	6.30E-05	1.02E-04	2.57E-05	1.91E-04
88	2.08	0.	2.09E-11	0.	0.	0.	0.	0.	0.	4.58E-08	7.32E-05	1.16E-04	2.94E-05	2.19E-04
89	1.98	0.	2.67E-11	0.	0.	0.	0.	0.	0.	4.41E-08	8.94E-05	1.33E-04	3.40E-05	2.53E-04
90	1.88	0.	2.25E-11	0.	0.	0.	0.	0.	0.	4.22E-08	1.01E-04	1.50E-04	4.12E-05	3.01E-04
91	1.78	0.	2.59E-11	0.	0.	0.	0.	0.	0.	3.97E-08	1.20E-04	1.91E-04	5.01E-05	3.61E-04
92	1.68	0.	1.93E-11	0.	0.	0.	0.	0.	0.	3.36E-08	1.44E-04	2.23E-04	5.90E-05	4.26E-04
93	1.58	0.	2.23E-11	0.	0.	0.	0.	0.	0.	1.93E-08	1.76E-04	2.80E-04	7.17E-05	5.35E-04
94	1.48	0.	2.21E-11	0.	0.	0.	0.	0.	0.	0.	2.18E-04	3.48E-04	8.95E-05	6.44E-04
95	1.38	0.	1.70E-11	0.	0.	0.	0.	0.	0.	0.	2.74E-04	4.71E-04	1.07E-04	8.53E-04
96	1.28	0.	1.62E-11	0.	0.	0.	0.	0.	0.	0.	3.51E-04	5.10E-04	1.13E-04	9.75E-04
97	1.19	0.	1.53E-11	0.	0.	0.	0.	3.41E-17	0.	0.	4.57E-04	6.20E-04	1.43E-04	1.23E-03
98	1.08	0.	1.41E-11	0.	0.	0.	0.	4.92E-16	0.	0.	6.11E-04	7.63E-04	1.62E-04	1.54E-03
99	0.98	0.	1.10E-11	0.	0.	0.	0.	5.67E-16	0.	0.	8.42E-04	9.75E-04	1.98E-04	1.91E-03
100	0.89	0.	5.44E-12	0.	0.	0.	0.	1.22E-14	0.	0.	1.21E-03	1.01E-03	2.19E-04	2.44E-03
101	0.78	0.	1.20E-12	0.	0.	0.	0.	1.87E-14	0.	0.	1.83E-03	1.10E-03	2.29E-04	3.16E-03
102	0.68	0.	2.24E-13	0.	0.	0.	0.	3.56E-14	0.	0.	2.95E-03	1.10E-03	2.54E-04	4.31E-03

ABSORPTION COEFFICIENT OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	PT S-R RATIO%	O2 S-R CONT.	N2 R-H NO. 1	O2 BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (FMS)	% P.E.	O P.E.	TOTAL AIR
1	10.70	0.	1.	1.00E-16	0.	0.	0.	1.01E-10	5.14E-08	5.18E-07	1.59E-07	6.79E-07
2	10.60	1.	0.	9.07E-15	0.	0.	0.	1.02E-10	5.20E-08	5.22E-07	1.59E-07	6.82E-07
3	10.51	0.	0.	9.15E-15	0.	0.	0.	1.02E-10	5.40E-08	4.63E-07	1.54E-07	6.22E-07
4	10.41	0.	0.	8.66E-15	0.	0.	0.	1.02E-10	5.08E-08	4.64E-07	1.54E-07	6.23E-07
5	10.36	0.	0.	7.55E-15	0.	0.	0.	1.02E-10	5.74E-08	4.64E-07	1.53E-07	6.23E-07
6	10.29	0.	0.	7.78E-15	0.	0.	0.	1.02E-10	5.03E-08	4.65E-07	1.52E-07	6.24E-07
7	10.18	0.	0.	7.29E-15	0.	0.	0.	1.02E-10	6.11E-08	4.67E-07	1.52E-07	6.25E-07
8	10.03	0.	0.	6.38E-15	0.	0.	0.	1.02E-10	6.38E-08	4.68E-07	1.51E-07	6.26E-07
9	9.94	0.	0.	6.54E-15	0.	0.	0.	1.02E-10	6.40E-08	4.69E-07	1.51E-07	6.26E-07
10	9.87	0.	0.	6.13E-15	0.	0.	0.	1.03E-10	6.69E-08	4.71E-07	1.50E-07	6.27E-07
11	9.77	0.	0.	5.20E-15	0.	0.	0.	1.03E-10	6.90E-08	4.72E-07	1.50E-07	6.29E-07
12	9.67	0.	0.	5.71E-15	0.	0.	0.	1.03E-10	7.17E-08	4.73E-07	1.49E-07	6.29E-07
13	9.57	0.	0.	4.86E-15	0.	0.	0.	1.03E-10	7.35E-08	4.74E-07	1.49E-07	6.30E-07
14	9.49	0.	0.	4.90E-15	0.	0.	0.	1.04E-10	7.90E-08	4.76E-07	1.48E-07	6.32E-07
15	9.39	0.	0.	4.78E-15	0.	0.	0.	1.04E-10	7.84E-08	1.80E-07	1.47E-07	3.35E-07
16	9.29	0.	0.	3.88E-15	0.	0.	0.	1.04E-10	8.10E-08	1.80E-07	1.47E-07	3.35E-07
17	9.19	0.	0.	3.90E-15	0.	0.	0.	1.05E-10	8.37E-08	1.81E-07	1.46E-07	3.35E-07
18	9.09	0.	0.	3.41E-15	0.	0.	0.	1.05E-10	8.64E-08	1.81E-07	1.46E-07	3.35E-07
19	8.99	0.	0.	3.33E-15	0.	0.	0.	1.05E-10	8.94E-08	1.81E-07	1.45E-07	3.35E-07
20	8.88	0.	0.	3.27E-15	0.	0.	0.	1.06E-10	9.27E-08	1.81E-07	1.45E-07	3.35E-07
21	8.78	0.	0.	2.83E-15	0.	0.	0.	1.06E-10	9.60E-08	1.82E-07	1.44E-07	3.36E-07
22	8.68	0.	0.	2.92E-15	0.	0.	0.	1.07E-10	9.94E-08	1.82E-07	1.43E-07	3.36E-07
23	8.58	0.	0.	2.95E-15	0.	0.	0.	1.07E-10	1.03E-08	1.83E-07	1.43E-07	3.36E-07
24	8.48	0.	0.	2.58E-15	0.	0.	0.	1.08E-10	1.07E-08	1.83E-07	1.43E-07	3.36E-07
25	8.38	0.	0.	2.14E-15	0.	0.	0.	1.08E-10	1.11E-08	1.84E-07	1.42E-07	3.37E-07
26	8.28	0.	0.	2.14E-15	0.	0.	0.	1.09E-10	1.15E-08	1.85E-07	1.42E-07	3.38E-07
27	8.18	0.	0.	1.84E-15	0.	0.	0.	1.09E-10	1.19E-08	1.76E-07	1.43E-07	3.31E-07
28	8.08	0.	0.	1.87E-15	0.	0.	0.	1.10E-10	1.24E-08	1.77E-07	1.43E-07	3.33E-07
29	7.97	0.	0.	1.60E-15	0.	0.	0.	1.10E-10	1.29E-08	1.78E-07	1.44E-07	3.35E-07
30	7.88	0.	0.	1.66E-15	0.	0.	0.	1.11E-10	1.33E-08	1.79E-07	1.44E-07	3.37E-07
31	7.78	0.	0.	1.45E-15	0.	0.	0.	1.11E-10	1.38E-08	1.81E-07	1.44E-07	3.38E-07
32	7.68	0.	0.	1.38E-15	0.	9.75E-20	0.	1.12E-10	1.44E-08	1.82E-07	1.45E-07	3.41E-07
33	7.58	0.	0.	1.27E-15	0.	3.43E-19	0.	1.13E-10	1.50E-08	1.83E-07	1.45E-07	3.44E-07
34	7.48	0.	0.	1.14E-15	0.	2.75E-18	0.	1.13E-10	1.56E-08	1.85E-07	1.44E-07	3.46E-07
35	7.38	0.	0.	1.00E-15	0.	1.11E-17	0.	1.14E-10	1.63E-08	1.86E-07	1.44E-07	3.49E-07
36	7.28	0.	0.	9.73E-16	0.	3.83E-17	0.	1.14E-10	1.70E-08	1.88E-07	1.44E-07	3.51E-07
37	7.18	0.	0.	9.32E-16	0.	9.36E-17	0.	1.15E-10	1.77E-08	1.89E-07	1.43E-07	3.54E-07
38	7.08	4.19E-19	0.	8.54E-16	0.	1.91E-16	0.	1.16E-10	1.85E-08	1.90E-07	1.42E-07	3.56E-07
39	6.98	9.18E-19	0.	7.91E-16	0.	2.58E-16	0.	1.17E-10	1.93E-08	1.92E-07	1.42E-07	3.59E-07
40	6.88	7.03E-19	0.	7.58E-16	0.	4.56E-16	0.	1.18E-10	2.02E-08	1.93E-07	1.41E-07	3.61E-07
41	6.78	5.11E-19	0.	4.95E-16	0.	4.68E-16	0.	1.19E-10	2.11E-08	1.95E-07	1.40E-07	3.63E-07
42	6.68	3.11E-19	0.	5.06E-16	0.	3.68E-16	0.	1.20E-10	2.21E-08	1.97E-07	1.40E-07	3.68E-07
43	6.58	1.79E-19	0.	4.65E-16	0.	5.52E-16	0.	1.21E-10	2.32E-08	2.00E-07	1.40E-07	3.72E-07
44	6.48	1.02E-19	0.	3.20E-16	1.97E-18	5.38E-16	0.	1.22E-10	2.43E-08	2.02E-07	1.39E-07	3.77E-07
45	6.38	5.92E-20	0.	1.99E-16	9.25E-18	3.67E-16	0.	1.23E-10	2.55E-08	2.04E-07	1.51E-07	3.91E-07
46	6.28	2.46E-20	0.	1.18E-16	1.31E-17	5.88E-16	0.	1.24E-10	2.67E-08	2.07E-07	1.53E-07	3.96E-07
47	6.19	1.22E-20	0.	5.14E-17	3.73E-17	6.41E-16	0.	1.25E-10	2.81E-08	2.10E-07	1.54E-07	3.92E-07
48	6.09	5.00E-21	0.	1.30E-17	5.55E-17	3.88E-16	0.	1.26E-10	2.95E-08	2.13E-07	1.56E-07	3.98E-07
49	5.99	1.25E-21	0.	9.32E-19	5.28E-17	3.82E-16	0.	1.26E-10	3.10E-08	2.16E-07	1.57E-07	4.05E-07
50	5.89	1.50E-22	0.	2.35E-20	7.25E-17	3.09E-16	0.	1.26E-10	3.27E-08	2.20E-07	1.59E-07	4.11E-07
51	5.78	1.17E-23	0.	0.	9.46E-17	3.46E-16	0.	1.19E-10	3.44E-08	2.07E-07	1.60E-07	4.01E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	O2 1ST POS.	O2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IRNS)	N P.E.	O P.E.	TOTAL AIR
57	5.60	1.27E-25	0.	0.	0.	7.16E-17	4.63E-16	0.	0.	1.00E-10	3.63E-08	2.11E-07	1.61E-07	4.60E-07
53	5.50	0.	0.	0.	0.	8.74E-17	4.30E-16	0.	0.	1.09E-10	3.83E-08	2.15E-07	1.63E-07	4.17E-07
54	5.40	0.	0.	0.	0.	8.08E-17	3.46E-16	0.	0.	1.09E-10	4.05E-08	2.21E-07	1.65E-07	4.27E-07
55	5.30	0.	0.	0.	0.	8.20E-17	4.40E-16	0.	0.	1.10E-10	4.20E-08	2.27E-07	1.68E-07	4.37E-07
56	5.20	0.	0.	0.	0.	8.81E-17	5.27E-16	0.	0.	1.11E-10	4.54E-08	2.32E-07	1.71E-07	4.49E-07
57	5.10	0.	0.	0.	0.	8.78E-17	4.21E-16	0.	0.	1.12E-10	4.87E-08	2.39E-07	1.74E-07	4.62E-07
58	5.00	7.16E-18	0.	0.	0.	8.82E-17	3.93E-16	0.	0.	1.13E-10	5.12E-08	2.47E-07	1.77E-07	4.75E-07
59	4.90	1.73E-17	0.	0.	0.	8.91E-17	4.27E-16	0.	0.	1.14E-10	5.44E-08	2.55E-07	1.80E-07	4.90E-07
60	4.80	3.24E-17	0.	0.	0.	9.57E-17	4.80E-16	0.	0.	1.14E-10	5.79E-08	2.64E-07	1.84E-07	5.06E-07
61	4.70	4.95E-17	0.	0.	0.	9.54E-17	3.63E-16	0.	0.	1.16E-10	6.17E-08	2.74E-07	1.89E-07	5.24E-07
62	4.60	5.97E-17	0.	0.	0.	9.79E-17	3.30E-16	0.	0.	1.16E-10	6.59E-08	2.85E-07	1.94E-07	5.45E-07
63	4.50	4.26E-17	0.	6.60E-17	0.	8.94E-17	2.48E-16	0.	0.	1.17E-10	7.04E-08	2.99E-07	1.99E-07	5.69E-07
64	4.40	6.47E-17	0.	2.05E-16	0.	8.96E-17	1.71E-16	0.	0.	1.18E-10	7.54E-08	3.14E-07	2.04E-07	5.93E-07
65	4.30	8.29E-17	0.	6.52E-16	0.	8.53E-17	1.07E-16	0.	0.	1.19E-10	8.08E-08	3.29E-07	2.05E-07	6.15E-07
66	4.20	5.97E-17	0.	2.12E-15	0.	8.97E-17	7.56E-17	0.	0.	1.20E-10	8.68E-08	3.45E-07	1.84E-07	6.17E-07
67	4.10	5.58E-17	0.	9.00E-16	0.	8.76E-17	2.09E-17	0.	0.	1.21E-10	9.34E-08	3.61E-07	8.36E-08	5.30E-07
68	4.00	5.06E-17	0.	3.05E-15	0.	8.44E-17	1.50E-17	0.	0.	1.21E-10	1.01E-07	3.47E-07	8.64E-08	5.34E-07
69	3.90	4.29E-17	0.	1.42E-15	3.80E-13	7.76E-17	6.05E-18	0.	0.	1.21E-10	1.09E-07	2.81E-07	6.51E-08	4.70E-07
70	3.80	4.70E-17	0.	2.25E-15	1.35E-12	8.34E-17	0.	0.	0.	1.20E-10	1.19E-07	2.94E-07	9.28E-08	5.05E-07
71	3.70	4.10E-17	0.	2.30E-15	5.49E-13	7.89E-17	0.	0.	0.	1.18E-10	1.27E-07	2.92E-07	1.02E-07	5.21E-07
72	3.60	3.75E-17	0.	1.65E-15	2.97E-12	7.67E-17	0.	0.	0.	1.11E-10	1.38E-07	3.16E-07	1.12E-07	5.67E-07
73	3.50	3.50E-17	0.	7.21E-15	5.89E-12	6.03E-17	0.	0.	0.	1.01E-10	1.51E-07	3.50E-07	1.23E-07	6.24E-07
74	3.40	3.20E-17	0.	1.30E-15	8.46E-13	6.76E-17	0.	0.	0.	9.49E-11	1.69E-07	3.90E-07	1.36E-07	6.99E-07
75	3.30	2.56E-17	0.	1.42E-15	3.35E-12	5.38E-17	0.	0.	0.	9.86E-11	1.86E-07	4.28E-07	1.49E-07	7.58E-07
76	3.20	2.22E-17	0.	9.26E-16	5.74E-12	5.64E-17	0.	0.	0.	9.97E-11	1.98E-07	4.69E-07	1.63E-07	8.29E-07
77	3.10	2.18E-17	0.	7.18E-16	1.34E-12	5.33E-17	0.	0.	0.	9.80E-11	2.10E-07	4.97E-07	1.76E-07	8.91E-07
78	3.00	1.99E-17	0.	4.39E-16	3.21E-12	5.02E-17	0.	0.	0.	9.90E-11	2.41E-07	5.30E-07	1.90E-07	9.64E-07
79	2.90	1.60E-17	0.	2.74E-16	1.70E-12	3.81E-17	0.	0.	0.	9.90E-11	2.67E-07	5.82E-07	2.05E-07	1.05E-06
80	2.80	1.66E-17	0.	1.32E-16	1.11E-12	2.63E-17	0.	0.	0.	9.91E-11	2.97E-07	6.33E-07	2.21E-07	1.15E-06
81	2.70	1.07E-17	0.	6.16E-17	1.52E-12	1.43E-17	0.	0.	0.	9.91E-11	3.32E-07	6.87E-07	2.40E-07	1.23E-06
82	2.60	5.81E-18	0.	3.81E-17	1.53E-13	6.28E-18	0.	0.	0.	9.91E-11	3.72E-07	7.42E-07	1.26E-07	1.24E-06
83	2.50	3.51E-19	0.	3.29E-18	1.44E-13	1.49E-18	0.	0.	0.	9.91E-11	4.19E-07	5.69E-07	1.44E-07	1.13E-06
84	2.40	0.	1.51E-16	0.	1.28E-13	1.59E-19	0.	0.	0.	9.91E-11	4.75E-07	6.92E-07	1.79E-07	1.35E-06
85	2.30	0.	4.77E-16	0.	0.	0.	0.	0.	0.	9.87E-11	5.48E-07	8.38E-07	2.14E-07	1.59E-06
86	2.20	0.	1.23E-15	0.	0.	0.	0.	0.	0.	9.84E-11	6.19E-07	9.98E-07	2.54E-07	1.86E-06
87	2.10	0.	1.32E-15	0.	0.	0.	0.	0.	0.	9.83E-11	7.13E-07	1.15E-06	2.98E-07	2.16E-06
88	2.00	0.	2.56E-15	0.	0.	0.	0.	0.	0.	9.63E-11	8.29E-07	1.31E-06	3.40E-07	2.43E-06
89	1.90	0.	3.33E-15	0.	0.	0.	0.	0.	0.	9.42E-11	9.68E-07	1.50E-06	3.94E-07	2.84E-06
90	1.80	0.	2.80E-15	0.	0.	0.	0.	0.	0.	9.18E-11	1.14E-06	1.79E-06	4.77E-07	3.41E-06
91	1.70	0.	3.24E-15	0.	0.	0.	0.	0.	0.	4.88E-11	1.36E-06	2.14E-06	5.88E-07	4.07E-06
92	1.60	0.	2.40E-15	0.	0.	0.	0.	0.	0.	8.13E-11	1.63E-06	2.49E-06	6.54E-07	4.78E-06
93	1.50	0.	2.78E-15	0.	0.	0.	0.	0.	0.	1.88E-11	1.99E-06	3.04E-06	8.08E-07	5.82E-06
94	1.40	0.	2.76E-15	0.	0.	0.	0.	0.	0.	0.	2.46E-06	2.83E-06	9.27E-07	6.23E-06
95	1.30	0.	2.12E-15	0.	0.	0.	0.	0.	0.	0.	3.18E-06	4.28E-06	9.77E-07	8.28E-06
96	1.20	0.	2.83E-15	0.	0.	0.	0.	0.	0.	0.	3.97E-06	5.95E-06	1.31E-06	1.08E-05
97	1.10	0.	1.91E-15	0.	0.	0.	0.	4.41E-21	0.	0.	5.17E-06	7.04E-06	1.54E-06	1.38E-05
98	1.00	0.	1.76E-15	0.	0.	0.	0.	4.36E-20	0.	0.	6.91E-06	8.31E-06	1.87E-06	1.71E-05
99	0.90	0.	1.44E-15	0.	0.	0.	0.	7.53E-20	0.	0.	9.92E-06	9.77E-06	2.20E-06	2.15E-05
100	0.80	0.	6.79E-16	0.	0.	0.	0.	1.57E-18	0.	0.	1.37E-05	1.98E-05	2.34E-06	2.58E-05
101	0.70	0.	1.61E-16	0.	0.	0.	0.	1.38E-18	0.	0.	2.07E-05	1.08E-05	2.01E-06	3.27E-05
102	0.60	0.	2.08E-17	0.	0.	0.	0.	4.60E-18	0.	0.	3.33E-05	1.13E-05	2.28E-06	4.69E-05

ABSORPTION COEFFICIEN . OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-00 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.73	0.	0.	1.82E-18	0.	0.	0.	1.08E-13	5.49E-11	5.82E-09	1.62E-09	7.49E-09
2	10.68	0.	0.	9.24E-19	0.	0.	0.	1.07E-13	5.65E-11	5.85E-09	1.61E-09	7.52E-09
3	10.58	0.	0.	9.32E-19	0.	0.	0.	1.07E-13	5.81E-11	5.87E-09	1.61E-09	7.54E-09
4	10.47	0.	0.	8.82E-19	0.	0.	0.	1.07E-13	5.98E-11	5.90E-09	1.60E-09	7.56E-09
5	10.37	0.	0.	7.67E-19	0.	0.	0.	1.07E-13	6.16E-11	5.91E-09	1.60E-09	7.57E-09
6	10.28	0.	0.	7.91E-19	0.	0.	0.	1.07E-13	6.34E-11	5.94E-09	1.59E-09	7.59E-09
7	10.19	0.	0.	7.43E-19	0.	0.	0.	1.07E-13	6.53E-11	5.96E-09	1.59E-09	7.62E-09
8	10.09	0.	0.	6.50E-19	0.	0.	0.	1.07E-13	6.73E-11	5.99E-09	1.58E-09	7.64E-09
9	9.99	0.	0.	6.67E-19	0.	0.	0.	1.08E-13	6.94E-11	6.02E-09	1.57E-09	7.66E-09
10	9.88	0.	0.	6.25E-19	0.	0.	0.	1.08E-13	7.15E-11	6.05E-09	1.57E-09	7.69E-09
11	9.78	0.	0.	5.38E-19	0.	0.	0.	1.08E-13	7.38E-11	6.07E-09	1.56E-09	7.71E-09
12	9.68	0.	0.	5.81E-19	0.	0.	0.	1.08E-13	7.61E-11	6.10E-09	1.56E-09	7.74E-09
13	9.57	0.	0.	4.95E-19	0.	0.	0.	1.08E-13	7.84E-11	6.13E-09	1.55E-09	7.76E-09
14	9.47	0.	0.	4.68E-19	0.	0.	0.	1.09E-13	8.11E-11	6.16E-09	1.55E-09	7.79E-09
15	9.37	0.	0.	4.79E-19	0.	0.	0.	1.09E-13	8.38E-11	3.19E-09	1.54E-09	4.81E-09
16	9.27	0.	0.	3.95E-19	0.	0.	0.	1.10E-13	8.66E-11	3.20E-09	1.53E-09	4.83E-09
17	9.17	0.	0.	4.06E-19	0.	0.	0.	1.10E-13	8.95E-11	3.22E-09	1.53E-09	4.84E-09
18	9.08	0.	0.	3.68E-19	0.	0.	0.	1.10E-13	9.24E-11	3.24E-09	1.52E-09	4.85E-09
19	8.98	0.	0.	3.40E-19	0.	0.	0.	1.11E-13	9.58E-11	3.25E-09	1.50E-09	4.85E-09
20	8.88	0.	0.	3.33E-19	0.	0.	0.	1.11E-13	9.91E-11	3.27E-09	1.50E-09	4.87E-09
21	8.78	0.	0.	2.88E-19	0.	0.	0.	1.12E-13	1.03E-10	3.29E-09	1.49E-09	4.88E-09
22	8.68	0.	0.	2.97E-19	0.	0.	0.	1.12E-13	1.06E-10	3.30E-09	1.49E-09	4.90E-09
23	8.58	0.	0.	2.59E-19	0.	0.	0	1.12E-13	1.10E-10	3.33E-09	1.48E-09	4.92E-09
24	8.48	0.	0.	2.58E-19	0.	0.	0.	1.13E-13	1.14E-10	3.35E-09	1.48E-09	4.94E-09
25	8.38	0.	0.	2.18E-19	0.	0.	0.	1.14E-13	1.18E-10	2.42E-09	1.48E-09	4.01E-09
26	8.28	0.	0.	2.20E-19	0.	0.	0.	1.14E-13	1.23E-10	2.46E-09	1.48E-09	4.06E-09
27	8.18	0.	0.	1.90E-19	0.	0.	0	1.15E-13	1.27E-10	2.49E-09	1.49E-09	4.11E-09
28	8.08	0.	0.	1.91E-19	0.	0.	0.	1.15E-13	1.32E-10	2.53E-09	1.49E-09	4.16E-09
29	7.98	0.	0.	1.64E-19	0.	0.	0.	1.16E-13	1.37E-10	2.58E-09	1.49E-09	4.21E-09
30	7.88	0.	0.	1.69E-19	0.	0.	0.	1.17E-13	1.43E-10	2.62E-09	1.50E-09	4.28E-09
31	7.78	0.	0.	1.48E-19	0.	0.	0.	1.17E-13	1.48E-10	2.66E-09	1.50E-09	4.32E-09
32	7.68	0.	0.	1.48E-19	0.	1.01E-23	0.	1.18E-13	1.54E-10	2.71E-09	1.51E-09	4.38E-09
33	7.58	0.	0.	1.30E-19	0.	3.97E-23	0.	1.18E-13	1.61E-10	2.78E-09	1.51E-09	4.44E-09
34	7.48	0.	0.	1.16E-19	0.	2.85E-22	0.	1.19E-13	1.67E-10	2.81E-09	1.52E-09	4.50E-09
35	7.37	0.	0.	1.10E-19	0.	1.16E-21	0.	1.20E-13	1.74E-10	2.80E-09	1.52E-09	4.49E-09
36	7.29	0.	0.	9.91E-20	0.	3.15E-21	0.	1.20E-13	1.82E-10	2.87E-09	1.53E-09	4.57E-09
37	7.19	0.	0.	9.50E-20	0.	9.72E-21	0.	1.21E-13	1.89E-10	2.94E-09	1.53E-09	4.66E-09
38	7.08	4.44E-23	0.	8.70E-20	0.	1.98E-20	0.	1.22E-13	1.98E-10	3.01E-09	1.54E-09	4.74E-09
39	6.98	4.66E-23	0.	7.98E-20	0.	2.68E-20	0.	1.23E-13	2.07E-10	3.08E-09	1.54E-09	4.82E-09
40	6.88	7.45E-23	0.	7.64E-20	0.	4.74E-20	0.	1.24E-13	2.16E-10	3.15E-09	1.55E-09	4.91E-09
41	6.78	5.41E-23	0.	6.68E-20	0.	4.78E-20	0.	1.25E-13	2.26E-10	3.22E-09	1.55E-09	5.00E-09
42	6.68	3.29E-23	0.	5.97E-20	0.	5.02E-20	0.	1.26E-13	2.36E-10	3.29E-09	1.56E-09	5.09E-09
43	6.58	1.98E-23	0.	4.74E-20	0.	5.73E-20	0.	1.27E-13	2.48E-10	3.37E-09	1.57E-09	5.19E-09
44	6.48	1.08E-23	0.	3.26E-20	2.05E-22	5.50E-20	0.	1.28E-13	2.59E-10	3.45E-09	1.57E-09	5.29E-09
45	6.38	5.27E-24	0.	2.03E-20	9.41E-22	5.81E-20	0.	1.29E-13	2.72E-10	3.53E-09	1.58E-09	5.39E-09
46	6.25	2.82E-24	0.	1.12E-20	1.38E-21	5.27E-20	0.	1.30E-13	2.84E-10	3.61E-09	1.60E-09	5.50E-09
47	6.19	1.29E-24	0.	5.23E-21	3.87E-21	6.65E-20	0.	1.31E-13	3.00E-10	3.70E-09	1.62E-09	5.62E-09
48	6.03	5.38E-25	0.	1.33E-21	3.49E-21	3.20E-20	0.	1.32E-13	3.15E-10	2.33E-09	1.61E-09	4.25E-09
49	5.98	1.32E-25	0.	9.49E-23	5.48E-21	3.14E-20	0.	1.32E-13	3.32E-10	2.37E-09	1.62E-09	4.33E-09
50	5.89	1.40E-26	0.	2.39E-24	7.53E-21	3.21E-20	0.	1.30E-13	3.49E-10	2.41E-09	1.64E-09	4.40E-09
51	5.78	1.24E-27	0.	-.	8.78E-21	3.59E-20	0.	1.22E-13	3.68E-10	2.46E-09	1.65E-09	4.48E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (CONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.59E-20	0.	0.	0.	7.44E-21	4.81E-20	0.	0.	1.14E-13	3.86E-10	2.52E-09	1.67E-09	4.58E-09
53	5.50	0.	0.	0.	0.	9.08E-21	4.44E-20	0.	0.	1.14E-13	4.18E-10	2.59E-09	1.69E-09	4.69E-09
54	5.40	0.	0.	0.	0.	8.38E-21	3.59E-20	0.	0.	1.15E-13	4.33E-10	2.67E-09	1.71E-09	4.82E-09
55	5.30	0.	0.	0.	0.	6.51E-21	4.57E-20	0.	0.	1.16E-13	4.50E-10	2.76E-09	1.74E-09	4.95E-09
56	5.20	0.	0.	0.	0.	9.15E-21	3.39E-20	0.	0.	1.16E-13	4.86E-10	2.84E-09	1.77E-09	5.10E-09
57	5.10	0.	0.	0.	0.	9.12E-21	4.37E-20	0.	0.	1.17E-13	5.15E-10	2.94E-09	1.80E-09	5.25E-09
58	5.00	2.58E-22	0.	0.	0.	8.33E-21	4.89E-20	0.	0.	1.18E-13	5.47E-10	3.04E-09	1.83E-09	5.42E-09
59	4.90	1.84E-21	0.	0.	0.	9.26E-21	4.44E-20	0.	0.	1.19E-13	5.81E-10	3.15E-09	1.86E-09	5.59E-09
60	4.80	3.43E-21	0.	0.	0.	9.93E-21	4.18E-20	0.	0.	1.20E-13	6.19E-10	3.27E-09	1.90E-09	5.79E-09
61	4.70	4.61E-21	0.	0.	0.	9.91E-21	3.77E-20	0.	0.	1.21E-13	6.59E-10	3.40E-09	1.95E-09	6.01E-09
62	4.60	5.32E-21	0.	0.	0.	1.02E-20	3.43E-20	0.	0.	1.22E-13	7.04E-10	3.56E-09	2.00E-09	6.27E-09
63	4.50	6.43E-21	0.	6.42E-21	0.	9.28E-21	2.57E-20	0.	0.	1.23E-13	7.52E-10	3.76E-09	2.06E-09	6.56E-09
64	4.40	7.06E-21	0.	2.87E-20	0.	9.31E-21	1.78E-20	0.	0.	1.24E-13	8.06E-10	3.95E-09	2.11E-09	6.87E-09
65	4.30	8.60E-21	0.	6.65E-20	0.	8.86E-21	1.11E-20	0.	0.	1.25E-13	8.64E-10	4.16E-09	2.12E-09	7.15E-09
66	4.20	8.21E-21	0.	2.16E-19	0.	9.32E-21	7.85E-21	0.	0.	1.26E-13	9.28E-10	4.38E-09	8.44E-10	6.15E-09
67	4.10	9.82E-21	0.	9.25E-20	0.	9.10E-21	2.17E-21	0.	0.	1.27E-13	9.98E-10	4.34E-09	8.74E-10	6.21E-09
68	4.00	9.36E-21	0.	3.11E-19	0.	8.76E-21	1.44E-21	0.	0.	1.27E-13	1.07E-09	3.72E-09	9.03E-10	5.78E-09
69	3.90	4.54E-21	0.	1.44E-19	3.08E-16	8.06E-21	6.28E-22	0.	0.	1.27E-13	1.14E-09	3.91E-09	9.32E-10	6.01E-09
70	3.80	4.97E-21	0.	2.29E-19	1.35E-15	8.66E-21	0.	0.	0.	1.26E-13	1.24E-09	4.10E-09	9.71E-10	6.33E-09
71	3.70	4.41E-21	0.	2.43E-19	5.48E-16	7.36E-21	0.	0.	0.	1.24E-13	1.34E-09	4.13E-09	1.07E-09	6.56E-09
72	3.60	3.97E-21	0.	1.68E-19	2.97E-15	7.96E-21	0.	0.	0.	1.16E-13	1.44E-09	4.44E-09	1.17E-09	7.09E-09
73	3.50	3.70E-21	0.	2.25E-19	5.88E-15	6.26E-21	0.	0.	0.	1.06E-13	1.61E-09	4.84E-09	1.29E-09	7.74E-09
74	3.40	3.39E-21	0.	1.41E-19	8.44E-16	7.02E-21	0.	0.	0.	6.14E-14	1.78E-09	4.13E-09	1.42E-09	7.31E-09
75	3.30	2.71E-21	0.	1.45E-19	3.34E-15	5.59E-21	0.	0.	0.	6.15E-14	1.93E-09	4.55E-09	1.55E-09	8.03E-09
76	3.20	2.35E-21	0.	9.44E-20	5.73E-15	5.86E-21	0.	0.	0.	6.16E-14	2.11E-09	5.01E-09	1.69E-09	8.81E-09
77	3.10	2.25E-21	0.	7.31E-20	1.33E-15	5.54E-21	0.	0.	0.	6.18E-14	2.33E-09	5.48E-09	1.82E-09	9.63E-09
78	3.00	2.01E-21	0.	4.47E-20	3.20E-15	5.21E-21	0.	0.	0.	6.19E-14	2.57E-09	5.96E-09	1.98E-09	1.05E-08
79	2.90	1.69E-21	0.	2.79E-20	1.78E-15	3.96E-21	0.	0.	0.	6.20E-14	2.85E-09	6.46E-09	2.12E-09	1.14E-08
80	2.80	1.76E-21	0.	1.34E-20	1.11E-15	2.73E-21	0.	0.	0.	6.21E-14	3.17E-09	7.03E-09	2.29E-09	1.25E-08
81	2.70	1.13E-21	0.	6.28E-21	1.52E-15	1.49E-21	0.	0.	0.	6.21E-14	3.54E-09	7.68E-09	1.21E-09	1.23E-08
82	2.60	5.38E-22	0.	3.07E-21	1.53E-16	6.53E-22	0.	0.	0.	6.21E-14	3.97E-09	8.25E-09	1.31E-09	1.35E-08
83	2.50	3.71E-23	0.	3.32E-22	1.46E-16	1.55E-22	0.	0.	0.	6.21E-14	4.48E-09	6.54E-09	1.52E-09	1.25E-08
84	2.40	0.	1.54E-20	0.	1.20E-16	1.65E-23	0.	0.	0.	6.21E-14	5.07E-09	7.93E-09	1.86E-09	1.49E-08
85	2.30	0.	4.86E-20	0.	0.	0.	0.	0.	0.	6.16E-14	5.77E-09	9.52E-09	2.22E-09	1.75E-08
86	2.20	0.	1.24E-19	0.	0.	0.	0.	0.	0.	6.14E-14	6.61E-09	1.12E-08	2.66E-09	2.04E-08
87	2.10	0.	1.34E-19	0.	0.	0.	0.	0.	0.	6.11E-14	7.61E-09	1.29E-08	3.09E-09	2.36E-08
88	2.00	0.	2.61E-19	0.	0.	0.	0.	0.	0.	5.92E-14	8.84E-09	1.47E-08	3.51E-09	2.70E-08
89	1.90	0.	3.79E-19	0.	0.	0.	0.	0.	0.	5.69E-14	1.03E-08	1.56E-08	4.04E-09	3.00E-08
90	1.80	0.	2.86E-19	0.	0.	0.	0.	0.	0.	5.44E-14	1.22E-08	1.86E-08	4.92E-09	3.57E-08
91	1.70	0.	3.30E-19	0.	0.	0.	0.	0.	0.	5.13E-14	1.45E-08	2.23E-08	5.98E-09	4.28E-08
92	1.60	0.	2.45E-19	0.	0.	0.	0.	0.	0.	4.34E-14	1.74E-08	2.59E-08	6.75E-09	5.01E-08
93	1.50	0.	2.84E-19	0.	0.	0.	0.	0.	0.	1.97E-14	2.12E-08	3.15E-08	7.65E-09	6.04E-08
94	1.40	0.	2.81E-19	0.	0.	0.	0.	0.	0.	0.	2.63E-08	2.93E-08	7.03E-09	6.27E-08
95	1.30	0.	2.16E-19	0.	0.	0.	0.	0.	0.	0.	3.31E-08	4.19E-08	1.01E-08	8.51E-08
96	1.20	0.	2.04E-19	0.	0.	0.	0.	0.	0.	0.	4.24E-08	5.59E-08	1.25E-08	1.11E-07
97	1.10	0.	1.95E-19	0.	0.	0.	0.	4.58E-25	0.	0.	5.52E-08	6.88E-08	1.59E-08	1.48E-07
98	1.00	0.	1.79E-19	0.	0.	0.	0.	6.68E-24	0.	0.	7.37E-08	8.37E-08	1.93E-08	1.77E-07
99	0.90	0.	1.47E-19	0.	0.	0.	0.	7.61E-24	0.	0.	1.02E-07	9.44E-08	2.08E-08	2.17E-07
100	0.80	0.	6.91E-20	0.	0.	0.	0.	1.63E-22	0.	0.	1.46E-07	1.09E-07	2.41E-08	2.79E-07
101	0.70	0.	1.64E-20	0.	0.	0.	0.	1.43E-22	0.	0.	2.21E-07	1.01E-07	2.07E-08	3.43E-07
102	0.60	0.	2.85E-21	0.	0.	0.	0.	4.77E-22	0.	0.	3.56E-07	1.14E-07	2.34E-08	4.93E-07

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	K2 B-M NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	9.41E-23	0.	0.	0.	1.29E-16	7.84E-13	1.59E-10	1.99E-11	1.88E-10
2	10.69	0.	0.	8.54E-23	0.	0.	0.	1.29E-16	8.64E-13	1.60E-10	1.98E-11	1.88E-10
3	10.59	0.	0.	8.41E-23	0.	0.	0.	1.29E-16	8.29E-13	1.61E-10	1.99E-11	1.81E-10
4	10.49	0.	0.	8.14E-23	0.	0.	0.	1.29E-16	8.54E-13	1.61E-10	1.97E-11	1.82E-10
5	10.39	0.	0.	7.89E-23	0.	0.	0.	1.29E-16	8.79E-13	1.62E-10	1.96E-11	1.83E-10
6	10.29	0.	0.	7.38E-23	0.	0.	0.	1.29E-16	9.05E-13	1.64E-10	1.96E-11	1.84E-10
7	10.19	0.	0.	6.86E-23	0.	0.	0.	1.30E-16	9.32E-13	1.65E-10	1.95E-11	1.86E-10
8	10.09	0.	0.	6.88E-23	0.	0.	0.	1.30E-16	9.60E-13	1.67E-10	1.95E-11	1.88E-10
9	9.99	0.	0.	6.16E-23	0.	0.	0.	1.30E-16	9.90E-13	1.69E-10	1.94E-11	1.89E-10
10	9.89	0.	0.	5.77E-23	0.	0.	0.	1.30E-16	1.02E-12	1.70E-10	1.94E-11	1.91E-10
11	9.79	0.	0.	4.97E-23	0.	0.	0.	1.30E-16	1.05E-12	1.72E-10	1.94E-11	1.92E-10
12	9.69	0.	0.	5.37E-23	0.	0.	0.	1.31E-16	1.08E-12	1.73E-10	1.93E-11	1.94E-10
13	9.59	0.	0.	4.57E-23	0.	0.	0.	1.31E-16	1.12E-12	1.75E-10	1.93E-11	1.95E-10
14	9.49	0.	0.	4.32E-23	0.	0.	0.	1.31E-16	1.16E-12	1.47E-10	1.92E-11	1.40E-10
15	9.39	0.	0.	4.42E-23	0.	0.	0.	1.32E-16	1.19E-12	1.49E-10	1.92E-11	1.69E-10
16	9.29	0.	0.	3.65E-23	0.	0.	0.	1.32E-16	1.23E-12	1.50E-10	1.91E-11	1.71E-10
17	9.19	0.	0.	3.75E-23	0.	0.	0.	1.33E-16	1.28E-12	1.52E-10	1.91E-11	1.72E-10
18	9.09	0.	0.	3.48E-23	0.	0.	0.	1.33E-16	1.32E-12	1.55E-10	1.77E-11	1.72E-10
19	8.99	0.	0.	3.14E-23	0.	0.	0.	1.34E-16	1.37E-12	1.54E-10	1.75E-11	1.73E-10
20	8.89	0.	0.	3.08E-23	0.	0.	0.	1.34E-16	1.41E-12	1.56E-10	1.75E-11	1.75E-10
21	8.79	0.	0.	2.46E-23	0.	0.	0.	1.35E-16	1.46E-12	1.57E-10	1.75E-11	1.76E-10
22	8.69	0.	0.	2.74E-23	0.	0.	0.	1.35E-16	1.51E-12	1.58E-10	1.74E-11	1.77E-10
23	8.59	0.	0.	2.48E-23	0.	0.	0.	1.36E-16	1.57E-12	7.63E-11	1.74E-11	9.53E-11
24	8.49	0.	0.	2.38E-23	0.	0.	0.	1.36E-16	1.63E-12	7.79E-11	1.74E-11	9.69E-11
25	8.39	0.	0.	2.81E-23	0.	0.	0.	1.37E-16	1.68E-12	8.01E-11	1.74E-11	9.92E-11
26	8.29	0.	0.	2.03E-23	0.	0.	0.	1.38E-16	1.75E-12	8.38E-11	1.75E-11	1.02E-10
27	8.19	0.	0.	1.75E-23	0.	0.	0.	1.39E-16	1.81E-12	8.60E-11	1.76E-11	1.05E-10
28	8.09	0.	0.	1.76E-23	0.	0.	0.	1.39E-16	1.88E-12	8.89E-11	1.77E-11	1.09E-10
29	7.99	0.	0.	1.51E-23	0.	0.	0.	1.40E-16	1.96E-12	9.19E-11	1.74E-11	1.12E-10
30	7.89	0.	0.	1.56E-23	0.	0.	0.	1.41E-16	2.03E-12	9.49E-11	1.79E-11	1.15E-10
31	7.79	0.	0.	1.37E-23	0.	0.	0.	1.41E-16	2.11E-12	9.81E-11	1.80E-11	1.18E-10
32	7.69	0.	0.	1.30E-23	0.	1.06E-27	0.	1.42E-16	2.20E-12	1.02E-10	1.81E-11	1.22E-10
33	7.59	0.	0.	1.20E-23	0.	3.75E-27	0.	1.43E-16	2.29E-12	1.05E-10	1.83E-11	1.26E-10
34	7.49	0.	0.	1.07E-23	0.	5.00E-26	0.	1.44E-16	2.38E-12	1.02E-10	1.84E-11	1.23E-10
35	7.39	0.	0.	1.02E-23	0.	1.21E-25	0.	1.44E-16	2.48E-12	1.07E-10	1.85E-11	1.27E-10
36	7.29	0.	0.	9.15E-24	0.	3.31E-25	0.	1.45E-16	2.59E-12	1.12E-10	1.87E-11	1.33E-10
37	7.19	0.	1.	8.77E-24	0.	1.02E-24	0.	1.46E-16	2.70E-12	1.17E-10	1.88E-11	1.39E-10
38	7.09	5.10E-27	0.	8.03E-24	0.	2.08E-24	0.	1.48E-16	2.82E-12	1.23E-10	1.90E-11	1.44E-10
39	6.99	1.03E-26	0.	7.35E-24	0.	2.81E-24	0.	1.49E-16	2.94E-12	1.28E-10	1.91E-11	1.50E-10
40	6.89	9.59E-27	0.	7.06E-24	0.	4.98E-24	0.	1.50E-16	3.08E-12	1.33E-10	1.93E-11	1.56E-10
41	6.79	6.47E-27	0.	6.17E-24	0.	5.07E-24	0.	1.51E-16	3.22E-12	1.39E-10	1.95E-11	1.61E-10
42	6.69	3.93E-27	1.	5.51E-24	0.	6.01E-24	0.	1.52E-16	3.37E-12	1.44E-10	1.97E-11	1.67E-10
43	6.59	2.27E-27	0.	4.38E-24	0.	6.02E-24	0.	1.54E-16	3.53E-12	1.50E-10	1.99E-11	1.73E-10
44	6.49	1.29E-27	0.	3.81E-24	2.15E-26	5.78E-24	0.	1.55E-16	3.69E-12	1.55E-10	2.01E-11	1.79E-10
45	6.39	7.49E-28	0.	1.87E-24	1.01E-25	4.00E-24	0.	1.56E-16	3.87E-12	1.60E-10	2.03E-11	1.85E-10
46	6.29	3.97E-28	0.	1.03E-24	1.43E-25	5.54E-24	0.	1.57E-16	4.07E-12	1.66E-10	2.06E-11	1.91E-10
47	6.19	1.54E-28	0.	4.83E-25	4.07E-25	6.99E-24	0.	1.58E-16	4.27E-12	4.95E-11	1.81E-11	7.18E-11
48	6.09	4.42E-29	0.	1.22E-25	5.87E-25	5.36E-24	0.	1.59E-16	4.46E-12	5.09E-11	1.83E-11	7.37E-11
49	5.99	1.58E-29	0.	8.77E-27	5.67E-25	5.30E-24	0.	1.59E-16	4.72E-12	5.23E-11	1.85E-11	7.55E-11
50	5.89	2.01E-30	0.	2.21E-28	7.91E-25	5.38E-24	0.	1.57E-16	4.97E-12	5.37E-11	1.87E-11	7.74E-11
51	5.79	1.48E-31	0.	0.	9.22E-25	4.77E-24	0.	1.48E-16	5.24E-12	5.57E-11	1.89E-11	7.99E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.47E-33	0.	0.	0.	7.81E-25	5.05E-24	0.	0.	1.37E-16	5.53E-12	5.83E-11	1.91E-11	8.29E-11
53	5.58	0.	0.	0.	0.	9.53E-25	4.69E-24	0.	0.	1.38E-16	5.83E-12	6.10E-11	1.94E-11	8.63E-11
54	5.48	0.	0.	0.	0.	8.72E-25	3.77E-24	0.	0.	1.39E-16	6.17E-12	6.40E-11	1.97E-11	8.99E-11
55	5.38	0.	0.	0.	0.	8.94E-25	4.88E-24	0.	0.	1.40E-16	6.52E-12	6.70E-11	1.94E-11	9.31E-11
56	5.28	0.	0.	0.	0.	9.61E-25	3.56E-24	0.	0.	1.40E-16	6.91E-12	7.01E-11	2.00E-11	9.69E-11
57	5.18	0.	0.	0.	0.	9.58E-25	4.59E-24	0.	0.	1.42E-16	7.33E-12	7.32E-11	2.04E-11	1.01E-10
58	5.08	9.86E-26	0.	0.	0.	8.74E-25	4.29E-24	0.	0.	1.43E-16	7.78E-12	7.64E-11	2.08E-11	1.05E-10
59	4.98	2.19E-25	0.	0.	0.	9.72E-25	4.66E-24	0.	0.	1.44E-16	8.27E-12	7.96E-11	2.12E-11	1.09E-10
60	4.88	4.89E-25	0.	0.	0.	1.04E-24	4.37E-24	0.	0.	1.45E-16	8.80E-12	8.29E-11	2.16E-11	1.13E-10
61	4.78	5.58E-25	0.	0.	0.	1.04E-24	3.96E-24	0.	0.	1.46E-16	9.38E-12	8.75E-11	2.22E-11	1.19E-10
62	4.68	7.55E-25	0.	0.	0.	1.07E-24	3.68E-24	0.	0.	1.48E-16	1.00E-11	9.34E-11	2.28E-11	1.26E-10
63	4.58	7.92E-25	0.	4.38E-25	0.	9.75E-25	2.70E-24	0.	0.	1.49E-16	1.07E-11	9.96E-11	2.35E-11	1.34E-10
64	4.48	8.44E-25	0.	1.91E-24	0.	9.77E-25	1.87E-24	0.	0.	1.50E-16	1.15E-11	1.06E-10	2.38E-11	1.41E-10
65	4.38	7.96E-25	0.	6.14E-24	0.	9.30E-25	1.17E-24	0.	0.	1.51E-16	1.23E-11	1.12E-10	2.14E-11	1.46E-10
66	4.28	7.42E-25	0.	1.09E-23	0.	9.79E-25	8.25E-25	0.	0.	1.52E-16	1.32E-11	1.19E-10	1.84E-11	1.43E-10
67	4.18	6.95E-25	0.	8.54E-24	0.	9.55E-25	2.28E-25	0.	0.	1.53E-16	1.42E-11	1.24E-10	1.88E-11	1.49E-10
68	4.08	6.48E-25	0.	2.87E-23	0.	9.28E-25	1.72E-25	0.	0.	1.54E-16	1.53E-11	1.23E-10	1.12E-11	1.50E-10
69	3.98	5.42E-25	0.	1.33E-23	2.57E-19	8.47E-25	5.63E-26	0.	0.	1.53E-16	1.65E-11	1.30E-10	1.17E-11	1.58E-10
70	3.88	5.94E-25	0.	2.12E-23	1.13E-18	9.18E-25	0.	0.	0.	1.52E-16	1.79E-11	1.36E-10	1.22E-11	1.66E-10
71	3.78	5.27E-25	0.	2.24E-23	4.58E-19	7.73E-25	0.	0.	0.	1.50E-16	1.94E-11	1.43E-10	1.33E-11	1.75E-10
72	3.68	4.74E-25	0.	1.56E-23	2.48E-18	8.36E-25	0.	0.	0.	1.48E-16	2.10E-11	1.51E-10	1.43E-11	1.86E-10
73	3.58	4.42E-25	0.	2.87E-23	4.91E-18	6.58E-25	0.	0.	0.	1.29E-16	2.29E-11	6.20E-11	1.57E-11	1.01E-10
74	3.48	4.05E-25	0.	1.38E-23	7.61E-19	7.37E-25	0.	0.	0.	7.42E-17	2.50E-11	6.82E-11	1.73E-11	1.11E-10
75	3.38	3.23E-25	0.	1.34E-23	2.81E-18	5.87E-25	0.	0.	0.	7.43E-17	2.74E-11	7.45E-11	1.81E-11	1.20E-10
76	3.28	2.81E-25	0.	8.72E-24	4.78E-18	6.16E-25	0.	0.	0.	7.44E-17	3.00E-11	8.32E-11	1.92E-11	1.32E-10
77	3.18	2.69E-25	0.	6.75E-24	1.11E-18	5.82E-25	0.	0.	0.	7.46E-17	3.31E-11	9.29E-11	2.09E-11	1.47E-10
78	3.08	2.41E-25	0.	4.13E-24	2.68E-18	5.47E-25	0.	0.	0.	7.48E-17	3.69E-11	1.03E-10	2.26E-11	1.62E-10
79	2.98	2.02E-25	0.	2.57E-24	1.49E-18	4.16E-25	0.	0.	0.	7.49E-17	4.05E-11	1.12E-10	2.44E-11	1.77E-10
80	2.88	2.10E-25	0.	1.24E-24	9.20E-19	2.87E-25	0.	0.	0.	7.50E-17	4.50E-11	1.23E-10	2.31E-11	1.91E-10
81	2.78	1.35E-25	0.	5.88E-25	1.27E-18	1.56E-25	0.	0.	0.	7.50E-17	5.03E-11	1.34E-10	1.46E-11	1.99E-10
82	2.68	6.33E-26	0.	2.83E-25	1.28E-19	6.86E-26	0.	0.	0.	7.50E-17	5.64E-11	1.19E-10	1.59E-11	1.92E-10
83	2.58	4.44E-27	0.	3.86E-26	1.22E-19	1.63E-26	0.	0.	0.	7.50E-17	6.36E-11	1.35E-10	1.84E-11	2.17E-10
84	2.48	0.	1.42E-24	0.	1.80E-19	1.74E-27	0.	0.	0.	7.50E-17	7.20E-11	1.58E-10	2.23E-11	2.52E-10
85	2.38	0.	4.48E-24	0.	0.	0.	0.	0.	0.	7.44E-17	8.19E-11	1.83E-10	2.64E-11	2.91E-10
86	2.28	0.	1.15E-23	0.	0.	0.	0.	0.	0.	7.41E-17	9.37E-11	2.08E-10	3.14E-11	3.35E-10
87	2.18	0.	1.24E-23	0.	0.	0.	0.	0.	0.	7.38E-17	1.08E-10	1.55E-10	3.45E-11	2.97E-10
88	2.08	0.	2.41E-23	0.	0.	0.	0.	0.	0.	7.14E-17	1.25E-10	1.76E-10	3.95E-11	3.41E-10
89	1.98	0.	3.13E-23	0.	0.	0.	0.	0.	0.	6.87E-17	1.47E-10	2.00E-10	4.56E-11	3.92E-10
90	1.88	0.	2.64E-23	0.	0.	0.	0.	0.	0.	6.57E-17	1.73E-10	2.34E-10	5.51E-11	4.62E-10
91	1.78	0.	3.85E-23	0.	0.	0.	0.	0.	0.	6.19E-17	2.05E-10	2.75E-10	6.37E-11	5.44E-10
92	1.68	0.	2.26E-23	0.	0.	0.	0.	0.	0.	5.24E-17	2.47E-10	2.99E-10	7.53E-11	6.21E-10
93	1.58	0.	2.62E-23	0.	0.	0.	0.	0.	0.	2.38E-17	3.01E-10	2.47E-10	8.53E-11	6.73E-10
94	1.48	0.	2.68E-23	0.	0.	0.	0.	0.	0.	0.	3.72E-10	3.59E-10	7.84E-11	8.10E-10
95	1.38	0.	1.99E-23	0.	0.	0.	0.	0.	0.	0.	4.68E-10	3.93E-10	1.10E-10	9.71E-10
96	1.28	0.	1.91E-23	0.	0.	0.	0.	0.	0.	0.	5.99E-10	5.37E-10	1.37E-10	1.27E-09
97	1.18	0.	1.80E-23	0.	0.	0.	0.	4.81E-29	0.	0.	7.80E-10	6.62E-10	1.73E-10	1.62E-09
98	1.08	0.	1.65E-23	0.	0.	0.	0.	6.93E-28	0.	0.	1.04E-09	8.83E-10	2.18E-10	2.06E-09
99	0.98	0.	1.36E-23	0.	0.	0.	0.	8.88E-28	0.	0.	1.44E-09	9.88E-10	2.27E-10	2.57E-09
100	0.88	0.	6.38E-24	0.	0.	0.	0.	1.72E-26	0.	0.	2.07E-09	8.52E-10	1.97E-10	3.11E-09
101	0.78	0.	1.51E-24	0.	0.	0.	0.	1.51E-26	0.	0.	3.11E-09	9.74E-10	2.24E-10	4.32E-09
102	0.68	0.	2.63E-25	0.	0.	0.	0.	5.62E-26	0.	0.	5.01E-09	1.09E-09	2.56E-10	6.36E-09

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.36E 00	0.	0.	0.	3.89E 00	1.24E-01	2.84E 02	2.10E 00	2.91E 02
2	10.60	0.	0.	1.24E 00	0.	0.	0.	3.89E 00	1.30E-01	9.29E 02	2.09E 00	1.66E 01
3	10.50	0.	0.	1.25E 00	0.	0.	0.	3.90E 00	1.33E-01	9.33E 02	2.08E 00	1.67E 01
4	10.40	0.	0.	1.19E 00	0.	0.	0.	3.90E 00	1.37E-01	9.36E 00	2.07E 00	1.67E 01
5	10.30	0.	0.	1.04E 00	0.	0.	0.	3.91E 00	1.41E-01	9.38E 00	2.06E 00	1.65E 01
6	10.20	0.	0.	1.08E 00	0.	0.	0.	3.91E 00	1.44E-01	9.40E 00	2.06E 00	1.66E 01
7	10.10	0.	0.	1.01E 00	0.	0.	0.	3.92E 00	1.50E-01	9.40E 00	2.05E 00	1.65E 01
8	10.00	0.	0.	8.91E-01	0.	0.	0.	3.92E 00	1.55E-01	9.42E 00	2.04E 00	1.64E 01
9	9.90	0.	0.	9.15E-01	0.	0.	0.	3.93E 00	1.56E-01	9.44E 00	2.03E 00	1.65E 01
10	9.80	0.	0.	8.61E-01	0.	0.	0.	3.94E 00	1.64E-01	9.47E 00	2.02E 00	1.65E 01
11	9.70	0.	0.	7.46E-01	0.	0.	0.	3.94E 00	1.69E-01	9.49E 00	2.02E 00	1.64E 01
12	9.60	0.	0.	8.06E-01	0.	0.	0.	3.95E 00	1.74E-01	9.51E 00	2.01E 00	1.65E 01
13	9.50	0.	0.	8.91E-01	0.	0.	0.	3.96E 00	1.81E-01	9.54E 00	2.00E 00	1.64E 01
14	9.40	0.	0.	6.55E-01	0.	0.	0.	3.97E 00	1.84E-01	9.57E 00	1.99E 00	1.64E 01
15	9.30	0.	0.	6.72E-01	0.	0.	0.	3.99E 00	1.93E-01	9.60E 00	1.98E 00	1.64E 01
16	9.20	0.	0.	5.58E-01	0.	0.	0.	4.00E 00	1.99E-01	9.63E 00	1.98E 00	1.64E 01
17	9.10	0.	0.	5.74E-01	0.	0.	0.	4.02E 00	2.04E-01	3.53E 00	1.97E 00	1.03E 01
18	9.00	0.	0.	5.23E-01	0.	0.	0.	4.03E 00	2.13E-01	3.53E 00	1.96E 00	1.03E 01
19	8.90	0.	0.	4.85E-01	0.	0.	0.	4.04E 00	2.20E-01	3.53E 00	1.95E 00	1.02E 01
20	8.80	0.	0.	4.77E-01	0.	0.	0.	4.06E 00	2.28E-01	3.54E 00	1.94E 00	1.02E 01
21	8.70	0.	0.	4.15E-01	0.	0.	0.	4.07E 00	2.36E-01	3.54E 00	1.94E 00	1.02E 01
22	8.60	0.	0.	4.28E-01	0.	0.	0.	4.09E 00	2.44E-01	3.55E 00	1.93E 00	1.02E 01
23	8.50	0.	0.	3.76E-01	0.	0.	0.	4.10E 00	2.53E-01	3.56E 00	1.92E 00	1.02E 01
24	8.40	0.	0.	3.74E-01	0.	0.	0.	4.13E 00	2.62E-01	3.57E 00	1.92E 00	1.02E 01
25	8.30	0.	0.	3.18E-01	0.	0.	0.	4.15E 00	2.72E-01	3.58E 00	1.91E 00	1.02E 01
26	8.20	0.	0.	3.22E-01	0.	0.	0.	4.17E 00	2.82E-01	3.59E 00	1.92E 00	1.03E 01
27	8.10	0.	0.	2.79E-01	0.	0.	0.	4.19E 00	2.92E-01	3.60E 00	1.92E 00	1.03E 01
28	8.00	0.	0.	2.81E-01	0.	0.	0.	4.21E 00	3.04E-01	3.62E 00	1.93E 00	1.03E 01
29	7.90	0.	0.	2.42E-01	0.	0.	0.	4.23E 00	3.15E-01	3.64E 00	1.93E 00	1.04E 01
30	7.80	0.	0.	2.52E-01	0.	0.	0.	4.25E 00	3.28E-01	3.66E 00	1.93E 00	1.04E 01
31	7.70	0.	0.	2.21E-01	0.	0.	0.	4.28E 00	3.41E-01	3.69E 00	1.94E 00	1.05E 01
32	7.60	0.	0.	2.11E-01	0.	9.13E-06	0.	4.30E 00	3.55E-01	3.71E 00	1.94E 00	1.05E 01
33	7.50	0.	0.	1.96E-01	0.	3.12E-05	0.	4.32E 00	3.69E-01	3.73E 00	1.94E 00	1.06E 01
34	7.40	0.	0.	1.76E-01	0.	2.59E-04	0.	4.34E 00	3.84E-01	3.76E 00	1.95E 00	1.06E 01
35	7.30	0.	0.	1.67E-01	0.	1.03E-03	0.	4.37E 00	4.01E-01	3.78E 00	1.95E 00	1.07E 01
36	7.20	0.	0.	1.51E-01	0.	2.82E-03	0.	4.39E 00	4.19E-01	3.80E 00	1.96E 00	1.07E 01
37	7.10	0.	0.	1.45E-01	0.	6.78E-03	0.	4.43E 00	4.36E-01	3.82E 00	1.96E 00	1.08E 01
38	7.00	2.51E-05	0.	1.34E-01	0.	1.75E-02	0.	4.46E 00	4.55E-01	3.85E 00	1.96E 00	1.09E 01
39	6.90	4.90E-05	0.	1.23E-01	0.	2.43E-02	0.	4.50E 00	4.75E-01	3.87E 00	1.97E 00	1.10E 01
40	6.80	4.23E-05	0.	1.19E-01	0.	4.22E-02	0.	4.53E 00	4.97E-01	3.89E 00	1.97E 00	1.11E 01
41	6.70	3.09E-15	0.	1.04E-01	0.	4.20E-02	0.	4.57E 00	5.19E-01	3.91E 00	1.98E 00	1.11E 01
42	6.60	1.88E-05	0.	9.34E-02	0.	3.44E-02	0.	4.61E 00	5.44E-01	3.95E 00	1.98E 00	1.12E 01
43	6.50	1.09E-05	0.	7.46E-02	0.	5.07E-02	0.	4.64E 00	5.69E-01	3.99E 00	1.99E 00	1.13E 01
44	6.40	6.23E-06	0.	5.17E-02	1.74E-04	4.80E-02	0.	4.68E 00	5.96E-01	4.03E 00	2.00E 00	1.14E 01
45	6.30	3.62E-06	0.	3.24E-02	8.19E-04	3.41E-02	0.	4.71E 00	6.24E-01	4.07E 00	2.01E 00	1.15E 01
46	6.20	1.84E-06	0.	1.80E-02	1.16E-03	4.67E-02	0.	4.75E 00	6.57E-01	4.12E 00	2.03E 00	1.16E 01
47	6.10	7.53E-07	0.	8.49E-03	3.33E-03	5.81E-02	0.	4.79E 00	6.90E-01	4.16E 00	2.05E 00	1.18E 01
48	6.00	3.14E-07	0.	2.16E-03	3.20E-03	2.85E-02	0.	4.82E 00	7.25E-01	4.22E 00	2.06E 00	1.19E 01
49	5.90	7.74E-08	0.	1.55E-04	4.69E-03	2.78E-02	0.	4.82E 00	7.63E-01	4.28E 00	2.08E 00	1.20E 01
50	5.80	9.87E-09	0.	3.90E-06	6.56E-03	2.86E-02	0.	4.75E 00	8.03E-01	4.34E 00	2.10E 00	1.20E 01
51	5.70	7.27E-10	0.	0.	7.70E-03	3.20E-02	0.	4.46E 00	8.44E-01	4.40E 00	2.12E 00	1.19E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-02 (1.86 01 NORMAL)

	PHOTON ENERGY	N2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.20E-11	0.	0.	0.	4.50E-03	4.24E-02	0.	0.	4.15E 00	8.93E-01	4.48E 00	2.14E 00	1.17E 01
53	5.50	0.	0.	0.	0.	4.83E-03	5.93E-02	0.	0.	4.17E 00	9.43E-01	4.57E 00	2.14E 00	1.19E 01
54	5.40	0.	0.	0.	0.	7.39E-03	3.20E-02	0.	0.	4.19E 00	9.97E-01	4.69E 00	2.19E 00	1.21E 01
55	5.30	0.	0.	0.	0.	7.57E-03	4.84E-02	0.	0.	4.22E 00	1.05E 00	4.81E 00	2.22E 00	1.24E 01
56	5.20	0.	0.	0.	0.	8.16E-03	3.85E-02	0.	0.	4.25E 00	1.12E 00	4.94E 00	2.24E 00	1.26E 01
57	5.10	0.	0.	0.	0.	8.15E-03	3.92E-02	0.	0.	4.28E 00	1.18E 00	5.08E 00	2.30E 00	1.29E 01
58	5.00	4.50E-04	0.	0.	0.	7.46E-03	3.69E-02	0.	0.	4.32E 00	1.24E 00	5.24E 00	2.34E 00	1.32E 01
59	4.90	1.10E-03	0.	0.	0.	8.32E-03	4.02E-02	0.	0.	4.35E 00	1.34E 00	5.42E 00	2.38E 00	1.35E 01
60	4.80	2.06E-03	0.	0.	0.	8.04E-03	3.70E-02	0.	0.	4.39E 00	1.42E 00	5.62E 00	2.43E 00	1.39E 01
61	4.70	2.78E-03	0.	0.	0.	8.35E-03	3.43E-02	0.	0.	4.43E 00	1.52E 00	5.82E 00	2.50E 00	1.43E 01
62	4.60	3.93E-03	0.	0.	0.	9.20E-03	3.12E-02	0.	0.	4.46E 00	1.62E 00	6.06E 00	2.54E 00	1.47E 01
63	4.50	4.63E-03	0.	1.11E-02	0.	8.44E-03	2.35E-02	0.	0.	4.50E 00	1.73E 00	6.36E 00	2.63E 00	1.53E 01
64	4.40	4.32E-03	0.	3.34E-02	0.	8.40E-03	1.61E-02	0.	0.	4.53E 00	1.85E 00	6.67E 00	2.70E 00	1.58E 01
65	4.30	4.19E-03	0.	1.99E-01	0.	8.18E-03	1.01E-02	0.	0.	4.57E 00	1.96E 00	7.01E 00	2.77E 00	1.65E 01
66	4.20	3.62E-03	0.	3.50E-01	0.	8.53E-03	7.11E-03	0.	0.	4.61E 00	2.14E 00	7.35E 00	2.85E 00	1.73E 01
67	4.10	3.59E-03	0.	1.53E-01	0.	9.36E-03	1.98E-03	0.	0.	4.63E 00	2.30E 00	7.69E 00	2.85E 00	1.76E 01
68	4.00	3.62E-03	0.	5.05E-01	0.	8.88E-03	1.49E-03	0.	0.	4.64E 00	2.48E 00	8.04E 00	1.21E 00	1.69E 01
69	3.90	2.83E-03	0.	2.34E-01	1.59E-02	7.47E-03	5.66E-04	0.	0.	4.63E 00	2.67E 00	7.83E 00	1.25E 00	1.66E 01
70	3.80	3.18E-03	0.	3.77E-01	6.73E-02	8.85E-03	0.	0.	0.	4.61E 00	2.89E 00	7.94E 00	1.30E 00	1.72E 01
71	3.70	2.76E-03	0.	3.94E-01	2.86E-02	6.88E-03	0.	0.	0.	4.53E 00	3.14E 00	6.54E 00	1.43E 00	1.61E 01
72	3.60	2.50E-03	0.	2.79E-01	1.52E-01	7.45E-03	0.	0.	0.	4.25E 00	3.41E 00	7.56E 00	1.57E 00	1.67E 01
73	3.50	2.44E-03	0.	3.60E-01	2.91E-01	5.89E-03	0.	0.	0.	3.89E 00	3.71E 00	7.48E 00	1.72E 00	1.75E 01
74	3.40	2.15E-03	0.	2.35E-01	4.39E-02	6.62E-03	0.	0.	0.	2.24E 00	4.05E 00	8.32E 00	1.90E 00	1.48E 01
75	3.30	1.72E-03	0.	2.48E-01	1.78E-01	5.38E-03	0.	0.	0.	2.29E 00	4.43E 00	9.18E 00	2.08E 00	1.84E 01
76	3.20	1.50E-03	0.	1.58E-01	2.82E-01	5.57E-03	0.	0.	0.	2.29E 00	4.87E 00	1.01E 01	2.27E 00	1.99E 01
77	3.10	1.44E-03	0.	1.23E-01	6.94E-02	5.29E-03	0.	0.	0.	2.29E 00	5.36E 00	1.09E 01	2.44E 00	2.12E 01
78	3.00	1.30E-03	0.	7.55E-02	1.62E-01	5.00E-03	0.	0.	0.	2.26E 00	5.93E 00	1.18E 01	2.65E 00	2.29E 01
79	2.90	1.09E-03	0.	4.73E-02	8.91E-02	3.83E-03	0.	0.	0.	2.26E 00	6.57E 00	1.28E 01	2.84E 00	2.46E 01
80	2.80	1.14E-03	0.	2.28E-02	5.76E-02	2.67E-03	0.	0.	0.	2.27E 00	7.31E 00	1.39E 01	3.09E 00	2.67E 01
81	2.70	7.39E-04	0.	1.87E-02	7.67E-02	1.47E-03	0.	0.	0.	2.27E 00	8.17E 00	1.51E 01	3.35E 00	2.90E 01
82	2.60	3.58E-04	0.	5.19E-03	7.80E-03	6.48E-04	0.	0.	0.	2.27E 00	9.17E 00	1.64E 01	3.61E 00	3.15E 01
83	2.50	2.46E-05	0.	5.54E-04	7.53E-03	1.55E-04	0.	0.	0.	2.27E 00	1.03E 01	1.87E 01	2.17E 00	3.35E 01
84	2.40	0.	2.53E-02	0.	6.82E-03	1.66E-05	0.	0.	0.	2.27E 00	1.17E 01	2.18E 01	2.54E 00	3.84E 01
85	2.30	0.	7.79E-02	0.	0.	0.	0.	0.	0.	2.25E 00	1.33E 01	1.87E 01	3.05E 00	3.74E 01
86	2.20	0.	2.03E-01	0.	0.	0.	0.	0.	0.	2.24E 00	1.52E 01	2.22E 01	3.65E 00	4.35E 01
87	2.10	0.	2.14E-01	0.	0.	0.	0.	0.	0.	2.23E 00	1.74E 01	2.58E 01	4.25E 00	5.01E 01
88	2.00	0.	4.21E-01	0.	0.	0.	0.	0.	0.	2.16E 00	2.04E 01	2.94E 01	4.84E 00	5.73E 01
89	1.90	0.	5.32E-01	0.	0.	0.	0.	0.	0.	2.08E 00	2.36E 01	3.37E 01	5.63E 00	6.58E 01
90	1.80	0.	4.51E-01	0.	0.	0.	0.	0.	0.	1.99E 00	2.81E 01	4.05E 01	6.84E 00	7.77E 01
91	1.70	0.	5.17E-01	0.	0.	0.	0.	0.	0.	1.87E 00	3.36E 01	4.84E 01	8.32E 00	9.26E 01
92	1.60	0.	3.84E-01	0.	0.	0.	0.	0.	0.	1.58E 00	4.03E 01	5.66E 01	9.80E 00	1.09E 02
93	1.50	0.	4.45E-01	0.	0.	0.	0.	0.	0.	7.20E-01	4.92E 01	7.32E 01	1.19E 01	1.35E 02
94	1.40	0.	4.40E-01	0.	0.	0.	0.	0.	0.	0.	6.06E 01	9.12E 01	1.42E 01	1.67E 02
95	1.30	0.	3.37E-01	0.	0.	0.	0.	0.	0.	0.	7.47E 01	1.21E 02	1.88E 01	2.17E 02
96	1.20	0.	3.22E-01	0.	0.	0.	0.	0.	0.	0.	9.79E 01	1.32E 02	1.89E 01	2.49E 02
97	1.10	0.	3.87E-01	0.	0.	0.	0.	4.03E-07	0.	0.	1.27E 02	1.63E 02	2.37E 01	3.15E 02
98	1.00	0.	2.87E-01	0.	0.	0.	0.	4.03E-06	0.	0.	1.78E 02	1.98E 02	2.78E 01	3.95E 02
99	0.90	0.	2.32E-01	0.	0.	0.	0.	4.97E-06	0.	0.	2.35E 02	2.27E 02	3.17E 01	4.95E 02
100	0.80	0.	1.89E-01	0.	0.	0.	0.	1.51E-04	0.	0.	3.36E 02	2.61E 02	3.64E 01	6.37E 02
101	0.79	0.	2.54E-02	0.	0.	0.	0.	1.36E-04	0.	0.	5.12E 02	2.84E 02	3.78E 01	8.34E 02
102	0.63	0.	4.78E-03	0.	0.	0.	0.	4.44E-04	0.	0.	8.24E 02	3.17E 02	4.23E 01	1.19E 03

ABSORPTION COEFFICIENT OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ITNS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.13E-02	0.	0.	0.	1.10E-01	1.12E-02	2.59E 01	1.97E-01	2.62E 01
2	10.60	0.	0.	1.03E-02	0.	0.	0.	1.10E-01	1.15E-02	8.48E-01	1.97E-01	1.18E 00
3	10.50	0.	0.	1.05E-02	0.	0.	0.	1.10E-01	1.19E-02	8.52E-01	1.96E-01	1.18E 00
4	10.40	0.	0.	9.93E-03	0.	0.	0.	1.10E-01	1.22E-02	8.55E-01	1.95E-01	1.18E 00
5	10.30	0.	0.	8.67E-03	0.	0.	0.	1.10E-01	1.24E-02	8.57E-01	1.94E-01	1.18E 00
6	10.20	0.	0.	8.07E-03	0.	0.	0.	1.11E-01	1.29E-02	8.59E-01	1.94E-01	1.18E 00
7	10.10	0.	0.	8.45E-03	0.	0.	0.	1.11E-01	1.33E-02	8.58E-01	1.93E-01	1.18E 00
8	10.00	0.	0.	7.43E-03	0.	0.	0.	1.11E-01	1.37E-02	8.60E-01	1.92E-01	1.18E 00
9	9.90	0.	0.	7.43E-03	0.	0.	0.	1.11E-01	1.42E-02	8.62E-01	1.91E-01	1.19E 00
10	9.80	0.	0.	7.18E-03	0.	0.	0.	1.11E-01	1.44E-02	8.64E-01	1.91E-01	1.19E 00
11	9.71	0.	0.	6.22E-03	0.	0.	0.	1.11E-01	1.51E-02	8.66E-01	1.90E-01	1.19E 00
12	9.61	0.	0.	6.72E-03	0.	0.	0.	1.12E-01	1.54E-02	8.68E-01	1.89E-01	1.19E 00
13	9.52	0.	0.	5.74E-03	0.	0.	0.	1.12E-01	1.61E-02	8.71E-01	1.88E-01	1.19E 00
14	9.42	0.	0.	5.46E-03	0.	0.	0.	1.12E-01	1.66E-02	8.74E-01	1.87E-01	1.20E 00
15	9.33	0.	0.	5.68E-03	0.	0.	0.	1.13E-01	1.71E-02	8.76E-01	1.87E-01	1.20E 00
16	9.29	0.	0.	4.66E-03	0.	0.	0.	1.13E-01	1.77E-02	8.79E-01	1.86E-01	1.20E 00
17	9.13	0.	0.	4.78E-03	0.	0.	0.	1.13E-01	1.83E-02	3.22E-01	1.85E-01	6.44E-01
18	9.04	0.	0.	4.36E-03	0.	0.	0.	1.14E-01	1.89E-02	3.22E-01	1.85E-01	6.44E-01
19	8.95	0.	0.	4.04E-03	0.	0.	0.	1.14E-01	1.96E-02	3.22E-01	1.84E-01	6.44E-01
20	8.85	0.	0.	3.97E-03	0.	0.	0.	1.15E-01	2.02E-02	3.23E-01	1.83E-01	6.45E-01
21	8.71	0.	0.	3.40E-03	0.	0.	0.	1.15E-01	2.10E-02	3.23E-01	1.82E-01	6.45E-01
22	8.63	0.	0.	3.57E-03	0.	0.	0.	1.15E-01	2.17E-02	3.24E-01	1.82E-01	6.46E-01
23	8.58	0.	0.	3.13E-03	0.	0.	0.	1.16E-01	2.25E-02	3.25E-01	1.81E-01	6.47E-01
24	8.48	0.	0.	3.12E-03	0.	0.	0.	1.16E-01	2.33E-02	3.26E-01	1.80E-01	6.49E-01
25	8.38	0.	0.	2.65E-03	0.	0.	0.	1.17E-01	2.42E-02	3.27E-01	1.80E-01	6.51E-01
26	8.23	0.	0.	2.69E-03	0.	0.	0.	1.18E-01	2.51E-02	3.28E-01	1.81E-01	6.54E-01
27	8.18	0.	0.	2.33E-03	0.	0.	0.	1.18E-01	2.60E-02	3.29E-01	1.81E-01	6.56E-01
28	8.03	0.	0.	2.34E-03	0.	0.	0.	1.19E-01	2.70E-02	3.31E-01	1.81E-01	6.60E-01
29	7.93	0.	0.	2.02E-03	0.	0.	0.	1.20E-01	2.81E-02	3.33E-01	1.82E-01	6.64E-01
30	7.83	0.	0.	2.18E-03	0.	0.	0.	1.20E-01	2.92E-02	3.35E-01	1.82E-01	6.68E-01
31	7.73	0.	0.	1.85E-03	0.	0.	0.	1.21E-01	3.03E-02	3.37E-01	1.82E-01	6.72E-01
32	7.62	0.	0.	1.78E-03	0.	7.85E-08	0.	1.21E-01	3.15E-02	3.39E-01	1.83E-01	6.76E-01
33	7.52	0.	0.	1.63E-03	0.	2.68E-07	0.	1.22E-01	3.28E-02	3.41E-01	1.83E-01	6.80E-01
34	7.47	0.	0.	1.47E-03	0.	7.23E-06	0.	1.23E-01	3.42E-02	3.43E-01	1.83E-01	6.85E-01
35	7.37	0.	0.	1.39E-03	0.	8.85E-06	0.	1.23E-01	3.56E-02	3.45E-01	1.84E-01	6.89E-01
36	7.27	0.	0.	1.26E-03	0.	2.44E-05	0.	1.24E-01	3.72E-02	3.47E-01	1.84E-01	6.94E-01
37	7.17	0.	0.	1.21E-03	0.	7.55E-05	0.	1.25E-01	3.88E-02	4.49E-01	1.84E-01	6.99E-01
38	7.07	2.22E-07	0.	1.11E-03	0.	1.51E-04	0.	1.26E-01	4.05E-02	3.51E-01	1.85E-01	7.04E-01
39	6.90	4.35E-07	0.	1.02E-03	0.	2.89E-04	0.	1.27E-01	4.23E-02	3.53E-01	1.85E-01	7.09E-01
40	6.88	3.75E-07	0.	9.88E-04	0.	3.43E-04	0.	1.28E-01	4.42E-02	3.55E-01	1.84E-01	7.15E-01
41	6.78	2.73E-07	0.	8.67E-04	0.	3.61E-04	0.	1.29E-01	4.62E-02	3.57E-01	1.86E-01	7.20E-01
42	6.68	1.67E-07	0.	7.73E-04	0.	2.95E-04	0.	1.30E-01	4.84E-02	3.61E-01	1.87E-01	7.27E-01
43	6.58	9.64E-08	0.	6.22E-04	0.	4.36E-04	0.	1.31E-01	5.06E-02	3.64E-01	1.87E-01	7.35E-01
44	6.49	5.53E-08	0.	4.31E-04	1.49E-06	4.12E-04	0.	1.32E-01	5.31E-02	3.68E-01	1.88E-01	7.42E-01
45	6.39	3.21E-08	0.	2.70E-04	7.04E-06	2.93E-04	0.	1.33E-01	5.56E-02	3.72E-01	1.89E-01	7.51E-01
46	6.29	1.45E-08	0.	1.58E-04	1.00E-05	4.02E-04	0.	1.34E-01	5.84E-02	3.76E-01	1.91E-01	7.60E-01
47	6.19	6.67E-09	0.	7.88E-05	2.46E-05	5.00E-04	0.	1.35E-01	6.13E-02	3.80E-01	1.93E-01	7.70E-01
48	6.09	2.79E-09	0.	1.48E-05	2.75E-05	2.45E-04	0.	1.36E-01	6.45E-02	3.85E-01	1.94E-01	7.81E-01
49	5.97	4.96E-10	0.	1.29E-06	4.03E-05	2.39E-04	0.	1.36E-01	6.78E-02	3.91E-01	1.94E-01	7.92E-01
50	5.89	8.75E-11	0.	3.26E-08	5.64E-05	2.46E-04	0.	1.34E-01	7.14E-02	3.97E-01	1.98E-01	8.03E-01
51	5.71	6.44E-12	0.	0.	6.62E-05	2.75E-04	0.	1.26E-01	7.53E-02	4.02E-01	2.00E-01	8.04E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICMS)	* P.E.	O P.E.	TOTAL AIR
52	5.60	2.91E-13	0.	0.	0.	5.65E-05	3.65E-04	0.	0.	1.17E-01	7.94E-02	4.09E-01	2.02E-01	8.08E-01
53	5.53	0.	0.	0.	0.	6.98E-05	3.38E-04	0.	0.	1.18E-01	8.36E-02	4.18E-01	2.04E-01	8.24E-01
54	5.48	0.	0.	0.	0.	6.35E-05	2.75E-04	0.	0.	1.18E-01	8.87E-02	4.28E-01	2.06E-01	8.42E-01
55	5.33	0.	0.	0.	0.	6.51E-05	3.48E-04	0.	0.	1.19E-01	9.39E-02	4.40E-01	2.09E-01	8.62E-01
56	5.29	0.	0.	0.	0.	7.02E-05	2.62E-04	0.	0.	1.20E-01	9.94E-02	4.51E-01	2.13E-01	8.84E-01
57	5.18	0.	0.	0.	0.	7.01E-05	3.37E-04	0.	0.	1.21E-01	1.05E-01	4.64E-01	2.17E-01	9.08E-01
58	5.08	3.99E-06	0.	0.	0.	6.41E-05	3.17E-04	0.	0.	1.22E-01	1.12E-01	4.79E-01	2.20E-01	9.34E-01
59	4.98	9.71E-06	0.	0.	0.	7.15E-05	3.46E-04	0.	0.	1.23E-01	1.19E-01	4.95E-01	2.24E-01	9.62E-01
60	4.88	1.02E-05	0.	0.	0.	7.69E-05	3.25E-04	0.	0.	1.24E-01	1.27E-01	5.13E-01	2.29E-01	9.93E-01
61	4.77	2.46E-05	0.	0.	0.	7.69E-05	2.95E-04	0.	0.	1.25E-01	1.35E-01	5.31E-01	2.35E-01	1.03E 00
62	4.69	3.40E-05	0.	0.	0.	7.91E-05	2.68E-04	0.	0.	1.26E-01	1.44E-01	5.53E-01	2.41E-01	1.07E 00
63	4.58	3.50E-05	0.	9.29E-05	0.	7.26E-05	2.82E-04	0.	0.	1.27E-01	1.54E-01	5.81E-01	2.48E-01	1.11E 00
64	4.49	3.83E-05	0.	2.78E-04	0.	7.29E-05	1.39E-04	0.	0.	1.28E-01	1.65E-01	6.09E-01	2.54E-01	1.16E 00
65	4.38	3.62E-05	0.	9.13E-04	0.	6.97E-05	8.71E-05	0.	0.	1.29E-01	1.77E-01	6.40E-01	2.61E-01	1.21E 00
66	4.29	3.39E-05	0.	2.92E-03	0.	7.34E-05	6.11E-05	0.	0.	1.30E-01	1.90E-01	6.71E-01	2.68E-01	1.26E 00
67	4.18	3.18E-05	0.	1.23E-03	0.	7.19E-05	1.70E-05	0.	0.	1.31E-01	2.04E-01	7.02E-01	2.69E-01	1.31E 00
68	4.08	2.94E-05	0.	4.21E-03	0.	6.95E-05	1.20E-05	0.	0.	1.31E-01	2.20E-01	7.34E-01	1.14E-01	1.28E 00
69	3.98	2.58E-05	0.	1.97E-03	4.41E-04	6.43E-05	4.87E-06	0.	0.	1.31E-01	2.38E-01	7.15E-01	1.18E-01	1.28E 00
70	3.88	2.75E-05	0.	3.15E-03	1.07E-03	6.92E-05	0.	0.	0.	1.30E-01	2.57E-01	7.25E-01	1.23E-01	1.24E 00
71	3.78	2.45E-05	0.	3.29E-03	7.94E-04	5.92E-05	0.	0.	0.	1.28E-01	2.79E-01	5.97E-01	1.35E-01	1.14E 00
72	3.68	2.21E-05	0.	2.32E-03	4.22E-03	6.40E-05	0.	0.	0.	1.20E-01	3.03E-01	4.45E-01	1.44E-01	1.22E 00
73	3.58	2.87E-05	0.	3.87E-03	8.09E-03	5.87E-05	0.	0.	0.	1.10E-01	3.30E-01	6.83E-01	1.62E-01	1.30E 00
74	3.48	1.98E-05	0.	1.96E-03	1.22E-03	5.69E-05	0.	0.	0.	6.34E-02	3.60E-01	7.59E-01	1.70E-01	1.17E 00
75	3.38	1.53E-05	0.	2.81E-03	4.71E-03	4.56E-05	0.	0.	0.	6.35E-02	3.94E-01	8.38E-01	1.96E-01	1.50E 00
76	3.28	1.33E-05	0.	1.32E-03	7.85E-03	4.79E-05	0.	0.	0.	6.36E-02	4.33E-01	9.18E-01	2.14E-01	1.64E 00
77	3.18	1.28E-05	0.	1.82E-03	1.93E-03	4.55E-05	0.	0.	0.	6.37E-02	4.77E-01	10.00E-01	2.32E-01	1.78E 00
78	3.08	1.15E-05	0.	6.30E-04	4.50E-03	4.38E-05	0.	0.	0.	6.39E-02	5.27E-01	1.08E 00	2.49E-01	1.93E 00
79	2.98	9.78E-06	0.	3.94E-04	2.47E-03	3.29E-05	0.	0.	0.	6.40E-02	5.84E-01	1.17E 00	2.69E-01	2.09E 00
80	2.88	1.01E-05	0.	1.98E-04	1.60E-03	2.29E-05	0.	0.	0.	6.41E-02	6.51E-01	1.27E 00	2.91E-01	2.28E 00
81	2.78	6.55E-06	0.	8.98E-05	2.13E-03	1.26E-05	0.	0.	0.	6.41E-02	7.27E-01	1.38E 00	3.15E-01	2.49E 00
82	2.68	3.18E-06	0.	4.38E-05	2.17E-04	5.57E-06	0.	0.	0.	6.41E-02	8.16E-01	1.50E 00	3.40E-01	2.72E 00
83	2.58	2.18E-07	0.	4.62E-06	2.89E-04	1.33E-06	0.	0.	0.	6.41E-02	9.19E-01	1.71E 00	2.05E-01	2.98E 00
84	2.48	0.	2.11E-04	0.	1.67E-04	1.42E-07	0.	0.	0.	6.41E-02	1.04E 00	1.99E 00	2.41E-01	3.34E 00
85	2.38	0.	6.58E-04	0.	0.	0.	0.	0.	0.	6.36E-02	1.19E 00	1.71E 00	2.88E-01	3.25E 00
86	2.28	0.	1.78E-03	0.	0.	0.	0.	0.	0.	6.33E-02	1.36E 00	2.02E 00	3.44E-01	3.79E 00
87	2.18	0.	1.79E-03	0.	0.	0.	0.	0.	0.	6.30E-02	1.54E 00	2.36E 00	4.01E-01	4.38E 00
88	2.08	0.	3.51E-03	0.	0.	0.	0.	0.	0.	6.18E-02	1.81E 00	2.69E 00	4.57E-01	5.03E 00
89	1.98	0.	4.44E-03	0.	0.	0.	0.	0.	0.	5.87E-02	2.12E 00	3.08E 00	5.31E-01	5.79E 00
90	1.88	0.	5.76E-03	0.	0.	0.	0.	0.	0.	5.61E-02	2.50E 00	3.68E 00	6.44E-01	6.89E 00
91	1.78	0.	4.31E-03	0.	0.	0.	0.	0.	0.	5.29E-02	2.98E 00	4.42E 00	7.83E-01	8.24E 00
92	1.68	0.	3.22E-03	0.	0.	0.	0.	0.	0.	4.47E-02	3.58E 00	5.17E 00	9.23E-01	9.72E 00
93	1.58	0.	3.71E-03	0.	0.	0.	0.	0.	0.	2.03E-02	4.35E 00	6.68E 00	1.12E 00	1.22E 01
94	1.48	0.	3.67E-03	0.	0.	0.	0.	0.	0.	0.	5.42E 00	8.33E 00	1.34E 00	1.51E 01
95	1.38	0.	2.81E-03	0.	0.	0.	0.	0.	0.	0.	6.82E 00	1.10E 01	1.77E 00	1.96E 01
96	1.28	0.	2.69E-03	0.	0.	0.	0.	0.	0.	0.	8.70E 00	1.21E 01	1.74E 00	2.26E 01
97	1.18	0.	2.55E-03	0.	0.	0.	0.	3.47E-08	0.	0.	1.13E 01	1.49E 01	2.23E 00	2.85E 01
98	1.07	0.	2.35E-03	0.	0.	0.	0.	5.18E-08	0.	0.	1.51E 01	1.81E 01	2.54E 00	3.57E 01
99	0.97	0.	1.93E-03	0.	0.	0.	0.	5.99E-08	0.	0.	2.06E 01	2.07E 01	2.98E 00	4.47E 01
100	0.84	0.	9.80E-04	0.	0.	0.	0.	1.38E-06	0.	0.	3.81E 01	2.39E 01	3.43E 00	5.74E 01
101	0.73	0.	2.14E-04	0.	0.	0.	0.	1.17E-06	0.	0.	4.55E 01	2.59E 01	3.54E 00	7.50E 01
102	0.60	0.	3.99E-05	0.	0.	0.	0.	3.42E-06	0.	0.	7.34E 01	2.90E 01	3.98E 00	1.06E 02

ABSORPTION COEFFICI. . OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.47E-05	0.	0.	0.	2.27E-03	7.89E-04	1.88E 00	1.54E-02	1.82E 00
2	10.60	0.	0.	4.90E-05	0.	0.	0.	2.27E-03	8.11E-04	5.80E-02	1.53E-02	7.73E-02
3	10.50	0.	0.	5.03E-05	0.	0.	0.	2.27E-03	8.39E-04	5.91E-02	1.52E-02	7.76E-02
4	10.40	0.	0.	4.70E-05	0.	0.	0.	2.28E-03	8.59E-04	5.93E-02	1.52E-02	7.77E-02
5	10.30	0.	0.	4.18E-05	0.	0.	0.	2.28E-03	8.85E-04	5.95E-02	1.51E-02	7.78E-02
6	10.20	0.	0.	4.32E-05	0.	0.	0.	2.28E-03	9.11E-04	5.96E-02	1.51E-02	7.79E-02
7	10.10	0.	0.	4.07E-05	0.	0.	0.	2.29E-03	9.3PE-04	5.96E-02	1.50E-02	7.79E-02
8	10.00	0.	0.	3.50E-05	0.	0.	0.	2.29E-03	9.67E-04	5.97E-02	1.49E-02	7.79E-02
9	9.90	0.	0.	3.67E-05	0.	0.	0.	2.29E-03	9.97E-04	5.98E-02	1.49E-02	7.80E-02
10	9.80	0.	0.	3.46E-05	0.	0.	0.	2.30E-03	1.03E-03	6.00E-02	1.48E-02	7.82E-02
11	9.70	0.	0.	2.99E-05	0.	0.	0.	2.30E-03	1.06E-03	6.01E-02	1.48E-02	7.83E-02
12	9.60	0.	0.	3.24E-05	0.	0.	0.	2.31E-03	1.09E-03	6.03E-02	1.47E-02	7.84E-02
13	9.50	0.	0.	2.77E-05	0.	0.	0.	2.31E-03	1.13E-03	6.04E-02	1.46E-02	7.85E-02
14	9.40	0.	0.	2.63E-05	0.	0.	0.	2.32E-03	1.17E-03	6.06E-02	1.46E-02	7.87E-02
15	9.30	0.	0.	2.70E-05	0.	0.	0.	2.33E-03	1.21E-03	6.08E-02	1.45E-02	7.89E-02
16	9.20	0.	0.	2.24E-05	0.	0.	0.	2.34E-03	1.25E-03	6.10E-02	1.45E-02	7.91E-02
17	9.10	0.	0.	2.30E-05	0.	0.	0.	2.34E-03	1.29E-03	2.24E-02	1.44E-02	4.64E-02
18	9.00	0.	0.	2.10E-05	0.	0.	0.	2.35E-03	1.33E-03	2.24E-02	1.44E-02	4.64E-02
19	8.90	0.	0.	1.95E-05	0.	0.	0.	2.36E-03	1.38E-03	2.24E-02	1.43E-02	4.64E-02
20	8.80	0.	0.	1.91E-05	0.	0.	0.	2.37E-03	1.42E-03	2.24E-02	1.42E-02	4.65E-02
21	8.70	0.	0.	1.67E-05	0.	0.	0.	2.38E-03	1.47E-03	2.24E-02	1.42E-02	4.65E-02
22	8.60	0.	0.	1.72E-05	0.	0.	0.	2.39E-03	1.53E-03	2.25E-02	1.41E-02	4.66E-02
23	8.50	0.	0.	1,51E-05	0.	0.	0.	2.39E-03	1.58E-03	2.25E-02	1.41E-02	4.66E-02
24	8.40	0.	0.	1.50E-05	0.	0.	0.	2.41E-03	1.64E-03	2.26E-02	1.40E-02	4.67E-02
25	8.30	0.	0.	1,28E-05	0.	0.	0.	2.42E-03	1.70E-03	2.27E-02	1.40E-02	4.68E-02
26	8.20	0.	0.	1,29E-05	0.	0.	0.	2.43E-03	1.76E-03	2.28E-02	1.40E-02	4.10E-02
27	8.10	0.	0.	1.12E-05	0.	0.	0.	2.44E-03	1.83E-03	2.28E-02	1.41E-02	4.12E-02
28	8.00	0.	0.	1.13E-05	0.	0.	0.	2.46E-03	1.90E-03	2.29E-02	1.41E-02	4.14E-02
29	7.90	0.	0.	9,73E-06	0.	0.	0.	2.47E-03	1.97E-03	2.31E-02	1.41E-02	4.17E-02
30	7.80	0.	0.	1.01E-05	0.	0.	0.	2.48E-03	2.05E-03	2.32E-02	1.42E-02	4.19E-02
31	7.70	0.	0.	8.89E-06	0.	0.	0.	2.49E-03	2.13E-03	2.34E-02	1.42E-02	4.22E-02
32	7.60	0.	0.	8.46E-06	0.	4.24E-10	0.	2.51E-03	2.22E-03	2.35E-02	1.42E-02	4.25E-02
33	7.50	0.	0.	7.83E-06	0.	1.45E-09	0.	2.52E-03	2.31E-03	2.37E-02	1.42E-02	4.27E-02
34	7.40	0.	0.	7.86E-06	0.	1.20E-08	0.	2.53E-03	2.41E-03	2.38E-02	1.43E-02	4.30E-02
35	7.30	0.	0.	6.71E-06	0.	4.78E-08	0.	2.55E-03	2.51E-03	2.39E-02	1.43E-02	4.33E-02
36	7.20	0.	0.	6.87E-06	0.	1.31E-07	0.	2.56E-03	2.61E-03	2.41E-02	1.43E-02	4.36E-02
37	7.10	0.	0.	5.84E-06	0.	4.08E-07	0.	2.58E-03	2.73E-03	2.42E-02	1.43E-02	4.39E-02
38	7.00	1.35E-09	0.	5.37E-06	0.	8.15E-07	0.	2.60E-03	2.85E-03	2.44E-02	1.44E-02	4.42E-02
39	6.90	2.63E-09	0.	4.93E-06	0.	1.13E-06	0.	2.63E-03	2.97E-03	2.45E-02	1.44E-02	4.45E-02
40	6.80	2.27E-09	0.	4.76E-06	0.	1.96E-06	0.	2.65E-03	3.11E-03	2.47E-02	1.44E-02	4.49E-02
41	6.70	1.66E-09	0.	4.18E-06	0.	1.95E-06	0.	2.67E-03	3.25E-03	2.48E-02	1.45E-02	4.52E-02
42	6.60	1.01E-09	0.	3.75E-06	0.	1.68E-06	0.	2.69E-03	3.40E-03	2.50E-02	1.45E-02	4.57E-02
43	6.50	5.84E-10	0.	3.88E-06	0.	2.35E-06	0.	2.71E-03	3.56E-03	2.53E-02	1.46E-02	4.62E-02
44	6.40	1.35E-10	0.	2.88E-06	8.07E-09	2.23E-06	0.	2.73E-03	3.73E-03	2.56E-02	1.46E-02	4.67E-02
45	6.30	1.95E-10	0.	1.30E-06	3.80E-08	1.58E-06	0.	2.75E-03	3.91E-03	2.58E-02	1.47E-02	4.72E-02
46	6.20	9.79E-11	0.	7.24E-07	5.41E-08	2.17E-06	0.	2.77E-03	4.11E-03	2.61E-02	1.49E-02	4.78E-02
47	6.10	4.94E-11	0.	3.41E-07	1.55E-07	2.70E-06	0.	2.79E-03	4.32E-03	2.64E-02	1.50E-02	4.85E-02
48	6.00	1.69E-11	0.	8.67E-08	1.40E-07	1.32E-06	0.	2.81E-03	4.54E-03	2.67E-02	1.51E-02	4.92E-02
49	5.90	4.16E-12	0.	6.22E-09	2.10E-07	1.29E-06	0.	2.81E-03	4.77E-03	2.71E-02	1.53E-02	5.00E-02
50	5.80	5.30E-13	0.	1.57E-10	3.05E-07	1.33E-06	0.	2.77E-03	5.03E-03	2.75E-02	1.54E-02	5.07E-02
51	5.70	3.90E-14	0.	0.	3.50E-07	1.49E-06	0.	2.68E-03	5.30E-03	2.79E-02	1.55E-02	5.14E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) .293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.48	1.76E-15	0.	0.	0.	3.85E-07	1.97E-06	0.	0.	2.42E-03	5.59E-03	2.84E-02	1.57E-02	5.21E-02
53	5.53	0.	0.	0.	0.	3.73E-07	1.83E-06	0.	0.	2.43E-03	5.98E-03	2.98E-02	1.58E-02	5.32E-02
54	5.43	0.	0.	0.	0.	3.43E-07	1.49E-06	0.	0.	2.45E-03	6.24E-03	2.97E-02	1.60E-02	5.45E-02
55	5.57	0.	0.	0.	0.	3.52E-07	1.88E-06	0.	0.	2.46E-03	6.68E-03	3.05E-02	1.63E-02	5.59E-02
56	5.20	0.	0.	0.	0.	3.79E-07	1.42E-06	0.	0.	2.48E-03	6.99E-03	3.13E-02	1.64E-02	5.73E-02
57	5.11	0.	0.	0.	0.	3.78E-07	1.82E-06	0.	0.	2.50E-03	7.42E-03	3.22E-02	1.69E-02	5.90E-02
58	5.03	2.42E-08	0.	0.	0.	3.46E-07	1.71E-06	0.	0.	2.52E-03	7.88E-03	3.32E-02	1.71E-02	6.08E-02
59	4.99	5.99E-08	0.	0.	0.	3.86E-07	1.87E-06	0.	0.	2.54E-03	8.37E-03	3.44E-02	1.75E-02	6.27E-02
60	4.87	1.18E-07	0.	0.	0.	4.15E-07	1.75E-06	0.	0.	2.56E-03	8.91E-03	3.56E-02	1.78E-02	6.49E-02
61	4.74	1.49E-07	0.	0.	0.	4.16E-07	1.59E-06	0.	0.	2.58E-03	9.58E-03	3.69E-02	1.83E-02	6.73E-02
62	4.64	2.26E-07	0.	0.	0.	4.27E-07	1.45E-06	0.	0.	2.60E-03	1.01E-02	3.84E-02	1.88E-02	6.99E-02
63	4.51	2.77E-07	0.	4.48E-07	0.	3.92E-07	1.09E-06	0.	0.	2.63E-03	1.09E-02	4.03E-02	1.93E-02	7.30E-02
64	4.49	2.92E-07	0.	1.34E-06	0.	3.94E-07	7.50E-07	0.	0.	2.65E-03	1.16E-02	4.22E-02	1.99E-02	7.63E-02
65	4.31	2.78E-07	0.	4.46E-06	0.	3.75E-07	4.71E-07	0.	0.	2.67E-03	1.24E-02	4.44E-02	2.03E-02	7.99E-02
66	4.21	2.55E-07	0.	1.48E-05	0.	3.96E-07	3.30E-07	0.	0.	2.69E-03	1.34E-02	4.66E-02	2.09E-02	8.35E-02
67	4.11	1.93E-07	0.	4.16E-06	0.	3.88E-07	9.19E-08	0.	0.	2.70E-03	1.44E-02	4.87E-02	2.09E-02	8.67E-02
68	4.01	1.78E-07	0.	2.03E-05	0.	3.75E-07	6.93E-08	0.	0.	2.71E-03	1.55E-02	5.09E-02	8.89E-03	7.80E-02
69	3.91	1.52E-07	0.	9.49E-06	7.99E-06	3.47E-07	2.63E-08	0.	0.	2.70E-03	1.67E-02	4.96E-02	9.17E-03	7.42E-02
70	3.81	1.47E-07	0.	1.51E-05	3.39E-05	3.74E-07	0.	0.	0.	2.69E-03	1.81E-02	5.03E-02	9.54E-03	8.07E-02
71	3.73	1.48E-07	0.	1.58E-05	1.44E-05	3.28E-07	0.	0.	0.	2.65E-03	1.96E-02	4.15E-02	1.05E-02	7.42E-02
72	3.63	1.54E-07	0.	1.12E-05	7.66E-05	3.46E-07	0.	0.	0.	2.44E-03	2.13E-02	4.48E-02	1.15E-02	8.01E-02
73	3.55	1.76E-07	0.	1.48E-05	1.47E-04	2.74E-07	0.	0.	0.	2.27E-03	2.32E-02	4.74E-02	1.26E-02	8.57E-02
74	3.43	1.15E-07	0.	9.42E-06	2.21E-05	3.07E-07	0.	0.	0.	1.31E-03	2.53E-02	5.27E-02	1.38E-02	9.33E-02
75	3.39	9.25E-08	0.	9.66E-06	8.55E-05	2.46E-07	0.	0.	0.	1.31E-03	2.77E-02	5.82E-02	1.53E-02	1.03E-01
76	3.23	8.08E-08	0.	6.35E-06	1.42E-04	2.59E-07	0.	0.	0.	1.31E-03	3.05E-02	6.37E-02	1.66E-02	1.12E-01
77	3.13	7.76E-08	0.	4.94E-06	3.50E-05	2.46E-07	0.	0.	0.	1.32E-03	3.36E-02	6.94E-02	1.80E-02	1.22E-01
78	3.01	4.97E-08	0.	3.83E-06	8.16E-05	2.32E-07	0.	0.	0.	1.32E-03	3.71E-02	7.51E-02	1.94E-02	1.33E-01
79	2.93	5.48E-08	0.	1.90E-06	4.40E-05	1.78E-07	0.	0.	0.	1.32E-03	4.11E-02	8.12E-02	2.09E-02	1.45E-01
80	2.81	4.13E-08	0.	9.15E-07	2.98E-05	1.24E-07	0.	0.	0.	1.32E-03	4.58E-02	8.82E-02	2.26E-02	1.58E-01
81	2.71	3.37E-08	0.	4.29E-07	3.87E-05	6.88E-08	0.	0.	0.	1.32E-03	5.11E-02	9.58E-02	2.45E-02	1.73E-01
82	2.68	1.48E-08	0.	2.08E-07	3.93E-06	3.01E-08	0.	0.	0.	1.32E-03	5.74E-02	1.04E-01	2.64E-02	1.89E-01
83	2.53	1.32E-09	0.	2.23E-08	3.79E-06	7.19E-09	0.	0.	0.	1.32E-03	6.44E-02	1.13E-01	1.50E-02	2.00E-01
84	2.43	0.	1.82E-06	0.	3.84E-06	7.49E-10	0.	0.	0.	1.32E-03	7.32E-02	1.36E-01	1.87E-02	2.31E-01
85	2.33	0.	3.13E-06	0.	0.	0.	0.	0.	0.	1.31E-03	8.33E-02	1.19E-01	2.24E-02	2.26E-01
86	2.27	0.	8.17E-06	0.	0.	0.	0.	0.	0.	1.31E-03	9.54E-02	1.48E-01	2.68E-02	2.44E-01
87	2.17	0.	8.69E-06	0.	0.	0.	0.	0.	0.	1.30E-03	1.10E-01	1.63E-01	3.12E-02	3.86E-01
88	2.07	0.	1.69E-05	0.	0.	0.	0.	0.	0.	1.26E-03	1.20E-01	1.47E-01	3.56E-02	3.51E-01
89	1.97	0.	2.14E-05	0.	0.	0.	0.	0.	0.	1.21E-03	1.49E-01	2.13E-01	4.13E-02	4.05E-01
90	1.87	0.	1.81E-05	0.	0.	0.	0.	0.	0.	1.16E-03	1.74E-01	2.55E-01	5.01E-02	4.93E-01
91	1.77	0.	2.04E-05	0.	0.	0.	0.	0.	0.	1.09E-03	2.09E-01	3.07E-01	6.10E-02	5.78E-01
92	1.69	0.	1.55E-05	0.	0.	0.	0.	0.	0.	9.24E-04	2.52E-01	3.58E-01	7.18E-02	6.83E-01
93	1.57	0.	1.79E-05	0.	0.	0.	0.	0.	0.	4.26E-04	3.09E-01	4.64E-01	8.72E-02	8.59E-01
94	1.47	0.	1.77E-05	0.	0.	0.	0.	0.	0.	0.	3.81E-01	5.78E-01	1.04E-01	1.06E 00
95	1.37	0.	1.35E-05	0.	0.	0.	0.	0.	0.	0.	4.88E-01	7.66E-01	1.38E-01	1.38E 00
96	1.27	0.	1.29E-05	0.	0.	0.	0.	0.	0.	0.	6.52E-01	8.38E-01	1.39E-01	1.59E 00
97	1.17	0.	1.23E-05	0.	0.	0.	0.	1.87E-11	0.	0.	7.97E-01	1.03E 00	1.74E-01	2.00E 00
98	1.07	0.	1.13E-05	0.	0.	0.	0.	2.88E-10	0.	0.	1.06E 00	1.25E 00	1.98E-01	2.52E 00
99	0.97	0.	9.38E-06	0.	0.	0.	0.	3.24E-10	0.	0.	1.47E 00	1.44E 00	2.32E-01	3.14E 00
100	0.87	1.	4.37E-06	0.	0.	0.	0.	7.01E-09	0.	0.	2.12E 00	1.46E 00	2.67E-01	4.04E 00
101	0.77	0.	1.03E-06	0.	0.	0.	0.	6.30E-09	0.	0.	3.28E 00	1.88E 00	2.77E-01	5.28E 00
102	0.69	0.	1.92E-07	0.	0.	0.	0.	2.60E-08	0.	0.	5.17E 00	2.01E 00	3.10E-01	7.49E 00

ABSORPTION COEFFICIENT OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-H CONT.	O2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.73	0.	0.	7.28E-08	0.	0.	0.	1.95E-05	2.97E-05	6.56E-02	6.80E-04	6.63E-02
2	10.60	0.	0.	4.63E-08	0.	0.	0.	1.95E-05	3.04E-05	2.16E-03	6.77E-04	2.89E-03
3	10.51	0.	0.	6.70E-08	0.	0.	0.	1.95E-05	3.15E-05	2.17E-03	6.75E-04	2.89E-03
4	10.44	0.	0.	6.37E-08	0.	0.	0.	1.95E-05	3.24E-05	2.18E-03	6.72E-04	2.90E-03
5	10.38	0.	0.	5.96E-08	0.	0.	0.	1.96E-05	3.34E-05	2.19E-03	6.69E-04	2.90E-03
6	10.28	0.	0.	5.75E-08	0.	0.	0.	1.96E-05	3.44E-05	2.19E-03	6.67E-04	2.91E-03
7	10.18	0.	0.	5.42E-08	0.	0.	0.	1.96E-05	3.54E-05	2.19E-03	6.64E-04	2.91E-03
8	10.08	0.	0.	4.77E-08	0.	0.	0.	1.97E-05	3.65E-05	2.18E-03	6.61E-04	2.90E-03
9	9.98	0.	0.	4.89E-08	0.	0.	0.	1.97E-05	3.76E-05	2.19E-03	6.59E-04	2.90E-03
10	9.81	0.	0.	4.61E-08	0.	0.	0.	1.97E-05	3.84E-05	2.19E-03	6.56E-04	2.91E-03
11	9.71	0.	0.	3.99E-08	0.	0.	0.	1.98E-05	4.00E-05	2.20E-03	6.53E-04	2.91E-03
12	9.61	0.	0.	4.51E-08	0.	0.	0.	1.98E-05	4.13E-05	2.20E-03	6.51E-04	2.91E-03
13	9.51	0.	0.	3.70E-08	0.	0.	0.	1.98E-05	4.24E-05	2.21E-03	6.48E-04	2.92E-03
14	9.41	0.	0.	3.58E-08	0.	0.	0.	1.99E-05	4.40E-05	2.22E-03	6.45E-04	2.92E-03
15	9.31	0.	0.	3.59E-08	0.	0.	0.	2.00E-05	4.55E-05	2.22E-03	6.43E-04	2.93E-03
16	9.21	0.	0.	2.99E-08	0.	0.	0.	2.00E-05	4.70E-05	2.23E-03	6.40E-04	2.94E-03
17	9.11	0.	0.	3.87E-08	0.	0.	0.	2.01E-05	4.84E-05	8.10E-04	6.38E-04	1.52E-03
18	9.01	0.	0.	2.80E-08	0.	0.	0.	2.02E-05	5.02E-05	8.19E-04	6.35E-04	1.52E-03
19	8.90	0.	0.	2.59E-08	0.	0.	0.	2.03E-05	5.19E-05	8.19E-04	6.33E-04	1.52E-03
20	8.80	0.	0.	2.55E-08	0.	0.	0.	2.03E-05	5.37E-05	8.21E-04	6.30E-04	1.53E-03
21	8.70	0.	0.	2.22E-08	0.	0.	0.	2.04E-05	5.54E-05	8.22E-04	6.28E-04	1.53E-03
22	8.60	0.	0.	2.29E-08	0.	0.	0.	2.05E-05	5.76E-05	8.23E-04	6.26E-04	1.53E-03
23	8.50	0.	0.	2.01E-08	0.	0.	0.	2.06E-05	5.97E-05	8.25E-04	6.23E-04	1.53E-03
24	8.40	0.	0.	2.08E-08	0.	0.	0.	2.07E-05	6.19E-05	8.28E-04	6.21E-04	1.53E-03
25	8.30	0.	0.	1.78E-08	0.	0.	0.	2.08E-05	6.41E-05	8.31E-04	6.20E-04	1.54E-03
26	8.20	0.	0.	1.72E-08	0.	0.	0.	2.09E-05	6.65E-05	8.34E-04	6.22E-04	1.54E-03
27	8.10	0.	0.	1.49E-08	0.	0.	0.	2.10E-05	6.90E-05	8.36E-04	6.23E-04	1.55E-03
28	8.00	0.	0.	1.50E-08	0.	0.	0.	2.11E-05	7.17E-05	8.40E-04	6.24E-04	1.56E-03
29	7.93	0.	0.	1.30E-08	0.	0.	0.	2.12E-05	7.44E-05	8.45E-04	6.25E-04	1.57E-03
30	7.88	0.	0.	1.35E-08	0.	0.	0.	2.13E-05	7.74E-05	8.51E-04	6.26E-04	1.58E-03
31	7.73	0.	0.	1.18E-08	0.	0.	0.	2.14E-05	8.05E-05	8.56E-04	6.28E-04	1.59E-03
32	7.66	0.	0.	1.13E-08	0.	6.84E-13	0.	2.15E-05	8.37E-05	8.61E-04	6.29E-04	1.60E-03
33	7.59	0.	0.	1.05E-08	0.	2.34E-12	0.	2.16E-05	8.71E-05	8.65E-04	6.30E-04	1.60E-03
34	7.48	0.	0.	9.41E-09	0.	1.94E-11	0.	2.18E-05	9.08E-05	8.70E-04	6.31E-04	1.61E-03
35	7.38	0.	0.	8.93E-09	0.	7.72E-11	0.	2.19E-05	9.46E-05	8.76E-04	6.32E-04	1.62E-03
36	7.24	0.	0.	8.08E-09	0.	2.12E-10	0.	2.20E-05	9.84E-05	8.81E-04	6.34E-04	1.64E-03
37	7.10	0.	0.	7.78E-09	0.	6.58E-10	0.	2.22E-05	1.03E-04	8.86E-04	6.35E-04	1.65E-03
38	7.00	2.94E-12	0.	7.15E-09	0.	1.31E-09	0.	2.24E-05	1.07E-04	8.92E-04	6.36E-04	1.66E-03
39	6.90	5.15E-12	0.	6.57E-09	0.	1.82E-09	0.	2.25E-05	1.12E-04	8.97E-04	6.37E-04	1.67E-03
40	6.80	4.45E-12	0.	6.34E-09	0.	3.16E-09	0.	2.27E-05	1.17E-04	9.03E-04	6.39E-04	1.68E-03
41	6.70	3.24E-12	0.	5.58E-09	0.	3.15E-09	0.	2.29E-05	1.23E-04	9.08E-04	6.41E-04	1.69E-03
42	6.60	1.98E-12	0.	5.08E-09	0.	2.57E-09	0.	2.31E-05	1.29E-04	9.16E-04	6.43E-04	1.71E-03
43	6.50	1.14E-12	0.	3.99E-09	0.	3.80E-09	0.	2.33E-05	1.34E-04	9.26E-04	6.45E-04	1.73E-03
44	6.49	4.95E-13	0.	2.77E-09	1.38E-11	3.59E-09	0.	2.34E-05	1.41E-04	9.35E-04	6.48E-04	1.75E-03
45	6.39	3.41E-13	0.	1.73E-09	4.14E-11	2.55E-09	0.	2.36E-05	1.48E-04	9.45E-04	6.51E-04	1.77E-03
46	6.23	1.72E-13	0.	9.64E-10	8.73E-11	3.50E-09	0.	2.38E-05	1.55E-04	9.55E-04	6.57E-04	1.79E-03
47	6.13	7.91E-14	0.	4.54E-10	2.49E-10	4.36E-09	0.	2.40E-05	1.63E-04	9.66E-04	6.63E-04	1.82E-03
48	6.03	3.98E-14	0.	1.16E-10	2.48E-10	2.13E-09	0.	2.42E-05	1.71E-04	9.79E-04	6.69E-04	1.84E-03
49	5.93	9.13E-15	0.	1.26E-12	3.52E-10	2.08E-09	0.	2.42E-05	1.80E-04	9.94E-04	6.75E-04	1.87E-03
50	5.83	1.04E-15	0.	2.99E-13	4.92E-10	2.15E-09	0.	2.38E-05	1.90E-04	1.01E-03	6.81E-04	1.90E-03
51	5.78	7.64E-17	0.	0.	5.77E-10	2.40E-09	0.	2.20E-05	2.00E-04	1.02E-03	6.87E-04	1.93E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	N2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IPRS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.45E-10	0.	0.	0.	4.93E-10	3.18E-09	0.	0.	2.08E-05	2.11E-04	1.04E-03	6.94E-04	1.96E-03
53	5.59	0.	0.	0.	0.	4.82E-10	2.95E-09	0.	0.	2.09E-05	2.23E-04	1.06E-03	7.01E-04	2.01E-03
54	5.40	0.	0.	0.	0.	5.54E-10	2.48E-09	0.	0.	2.10E-05	2.35E-04	1.09E-03	7.10E-04	2.06E-03
55	5.39	0.	0.	0.	0.	5.68E-10	3.83E-09	0.	0.	2.11E-05	2.49E-04	1.12E-03	7.20E-04	2.11E-03
56	5.29	0.	0.	0.	0.	6.12E-10	2.29E-09	0.	0.	2.13E-05	2.64E-04	1.14E-03	7.33E-04	2.13E-03
57	5.10	0.	0.	0.	0.	6.11E-10	2.94E-09	0.	0.	2.15E-05	2.80E-04	1.18E-03	7.46E-04	2.22E-03
58	5.09	4.73E-11	0.	0.	0.	5.59E-10	2.76E-09	0.	0.	2.16E-05	2.97E-04	1.21E-03	7.59E-04	2.29E-03
59	4.90	1.15E-10	0.	0.	0.	6.25E-10	3.02E-09	0.	0.	2.18E-05	3.14E-04	1.29E-03	7.73E-04	2.37E-03
60	4.80	2.16E-16	0.	0.	0.	6.70E-10	2.83E-09	0.	0.	2.20E-05	3.34E-04	1.30E-03	7.89E-04	2.45E-03
61	4.70	2.92E-10	0.	0.	0.	6.71E-10	2.57E-09	0.	0.	2.22E-05	3.50E-04	1.35E-03	8.10E-04	2.54E-03
62	4.61	4.03E-10	0.	0.	0.	6.98E-10	2.34E-09	0.	0.	2.24E-05	3.83E-04	1.48E-03	8.31E-04	2.66E-03
63	4.51	4.24E-10	0.	5.96E-10	0.	6.33E-10	1.76E-09	0.	0.	2.25E-05	4.00E-04	1.47E-03	8.53E-04	2.76E-03
64	4.43	4.54E-10	0.	1.70E-09	0.	6.35E-10	1.21E-09	0.	0.	2.27E-05	4.38E-04	1.54E-03	8.75E-04	2.88E-03
65	4.33	4.30E-10	0.	5.85E-09	0.	6.07E-10	7.48E-10	0.	0.	2.29E-05	4.60E-04	1.62E-03	8.99E-04	3.01E-03
66	4.27	4.02E-10	0.	1.47E-08	0.	6.49E-10	5.33E-10	0.	0.	2.31E-05	5.04E-04	1.78E-03	9.23E-04	3.15E-03
67	4.18	3.77E-10	0.	8.21E-09	0.	6.27E-10	1.48E-10	0.	0.	2.32E-05	5.42E-04	1.78E-03	9.25E-04	3.27E-03
68	4.08	3.49E-10	0.	2.70E-08	0.	6.06E-10	1.12E-10	0.	0.	2.33E-05	5.84E-04	1.86E-03	3.93E-04	2.86E-03
69	3.93	2.97E-10	0.	1.26E-08	5.48E-08	5.60E-10	4.24E-11	0.	0.	2.32E-05	6.31E-04	1.81E-03	4.86E-04	2.87E-03
70	3.84	3.26E-10	0.	2.02E-08	2.33E-07	6.85E-10	0.	0.	0.	2.31E-05	6.83E-04	1.84E-03	4.23E-04	2.97E-03
71	3.71	2.98E-10	0.	2.11E-08	9.07E-08	5.14E-10	0.	0.	0.	2.27E-05	7.40E-04	1.92E-03	4.63E-04	2.74E-03
72	3.60	2.42E-10	0.	1.40E-08	5.25E-07	5.58E-10	0.	0.	0.	3.13E-05	8.04E-04	1.64E-03	5.08E-04	2.97E-03
73	3.50	2.46E-10	0.	1.97E-08	1.01E-06	4.42E-10	0.	0.	0.	1.09E-05	8.76E-04	1.73E-03	5.59E-04	3.19E-03
74	3.40	2.26E-10	0.	1.26E-08	1.52E-07	4.96E-10	0.	0.	0.	1.12E-05	9.48E-04	1.93E-03	6.17E-04	3.51E-03
75	3.30	1.91E-10	0.	1.29E-08	5.87E-07	3.97E-10	0.	0.	0.	1.12E-05	1.05E-03	2.13E-03	6.75E-04	3.86E-03
76	3.20	1.58E-10	0.	8.46E-09	9.76E-07	4.18E-10	0.	0.	0.	1.13E-05	1.14E-03	2.33E-03	7.34E-04	4.23E-03
77	3.10	1.52E-10	0.	6.57E-09	2.48E-07	3.96E-10	0.	0.	0.	1.13E-05	1.27E-03	2.54E-03	7.97E-04	4.61E-03
78	3.00	1.36E-10	0.	4.84E-09	5.60E-07	3.79E-10	0.	0.	0.	1.13E-05	1.40E-03	2.74E-03	8.59E-04	5.01E-03
79	2.90	1.15E-10	0.	2.53E-09	3.08E-07	2.87E-10	0.	0.	0.	1.13E-05	1.55E-03	2.97E-03	9.26E-04	5.45E-03
80	2.80	1.20E-10	0.	1.22E-09	1.99E-07	2.98E-10	0.	0.	0.	1.14E-05	1.73E-03	3.22E-03	1.00E-03	5.96E-03
81	2.70	7.78E-11	0.	5.71E-10	2.65E-07	1.10E-10	0.	0.	0.	1.14E-05	1.93E-03	3.50E-03	1.08E-03	6.53E-03
82	2.60	3.68E-11	0.	2.78E-10	2.70E-08	4.86E-11	0.	0.	0.	1.14E-05	2.16E-03	3.80E-03	1.17E-03	7.14E-03
83	2.50	2.59E-12	0.	2.97E-11	2.68E-08	1.16E-11	0.	0.	0.	1.14E-05	2.44E-03	4.33E-03	7.84E-04	7.48E-03
84	2.40	0.	1.35E-09	0.	2.08E-08	1.24E-12	0.	0.	0.	1.14E-05	2.74E-03	5.04E-03	8.29E-04	8.44E-03
85	2.33	0.	4.17E-09	0.	0.	0.	0.	0.	0.	1.13E-05	3.14E-03	4.34E-03	9.98E-04	8.48E-03
86	2.20	0.	1.09E-08	0.	0.	0.	0.	0.	0.	1.12E-05	3.68E-03	5.13E-03	1.18E-03	9.92E-03
87	2.11	0.	1.15E-08	0.	0.	0.	0.	0.	0.	1.12E-05	4.19E-03	5.97E-03	1.38E-03	1.15E-02
88	2.07	0.	2.25E-08	0.	0.	0.	0.	0.	0.	1.08E-05	4.87E-03	6.81E-03	1.57E-03	1.32E-02
89	1.99	0.	2.05E-08	0.	0.	0.	0.	0.	0.	1.04E-05	5.67E-03	7.79E-03	1.83E-03	1.53E-02
90	1.93	0.	2.41E-08	0.	0.	0.	0.	0.	0.	9.95E-06	6.64E-03	9.32E-03	2.22E-03	1.82E-02
91	1.78	0.	2.77E-08	0.	0.	0.	0.	0.	0.	9.36E-06	7.99E-03	1.12E-02	2.70E-03	2.18E-02
92	1.68	0.	2.87E-08	0.	0.	0.	0.	0.	0.	7.93E-06	9.58E-03	1.31E-02	3.18E-03	2.58E-02
93	1.58	0.	2.34E-08	0.	0.	0.	0.	0.	0.	5.61E-06	1.16E-02	1.69E-02	3.86E-03	3.24E-02
94	1.48	0.	2.35E-08	0.	0.	0.	0.	0.	0.	0.	1.44E-02	2.11E-02	4.61E-03	4.01E-02
95	1.37	0.	1.88E-08	0.	0.	0.	0.	0.	0.	0.	1.81E-02	2.88E-02	6.09E-03	5.22E-02
96	1.23	0.	1.72E-08	0.	0.	0.	0.	0.	0.	0.	2.31E-02	3.86E-02	8.13E-03	9.98E-02
97	1.10	0.	1.64E-08	0.	0.	0.	0.	3.92E-14	0.	0.	3.01E-02	3.77E-02	7.69E-03	7.55E-02
98	1.03	0.	1.51E-08	0.	0.	0.	0.	4.57E-13	0.	0.	3.87E-02	4.57E-02	8.74E-03	9.46E-02
99	0.98	0.	1.24E-08	0.	0.	0.	0.	5.22E-13	0.	0.	5.54E-02	5.29E-02	1.03E-02	1.18E-01
100	0.88	0.	5.87E-09	0.	0.	0.	0.	1.15E-11	0.	0.	8.00E-02	6.05E-02	1.18E-02	1.52E-01
101	0.77	0.	1.37E-09	0.	0.	0.	0.	1.87E-11	0.	0.	1.21E-01	6.56E-02	1.27E-02	1.99E-01
102	0.63	0.	2.56E-16	0.	0.	0.	0.	3.35E-11	0.	0.	1.95E-01	7.34E-02	1.37E-02	2.82E-01

ABSORPTION COEFFICIEN F HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY EV.	O2 I-R RATIO	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (CONS)	N P.F.	O P.F.	TOTAL AIR
1	19.70	0.	0.	1.72E-11	0.	0.	0.	4.10E-08	4.60E-07	3.44E-05	1.17E-05	4.65E-05
2	19.50	0.	0.	1.57E-11	0.	0.	0.	4.20E-08	4.72E-07	3.45E-05	1.16E-05	4.67E-05
3	19.30	0.	0.	1.39E-11	0.	0.	0.	4.20E-08	4.84E-07	3.47E-05	1.16E-05	4.68E-05
4	19.10	0.	0.	1.51E-11	0.	0.	0.	4.21E-08	5.10E-07	3.48E-05	1.15E-05	4.69E-05
5	18.90	0.	0.	1.32E-11	0.	0.	0.	4.22E-08	5.26E-07	3.49E-05	1.15E-05	4.70E-05
6	18.70	0.	0.	1.36E-11	0.	0.	0.	4.22E-08	5.41E-07	3.51E-05	1.14E-05	4.71E-05
7	18.50	0.	0.	1.28E-11	0.	0.	0.	4.23E-08	5.56E-07	3.51E-05	1.14E-05	4.71E-05
8	18.30	0.		1.13E-11	0.	0.	0.	4.23E-08	5.75E-07	3.38E-05	1.14E-05	4.58E-05
9	18.10	0.	0.	1.14E-11	0.	0.	0.	4.24E-08	5.92E-07	3.39E-05	1.13E-05	4.59E-05
10	17.90	0.	0.	1.09E-11	0.	0.	0.	4.25E-08	6.11E-07	3.40E-05	1.13E-05	4.59E-05
11	17.70	0.	0.	9.44E-12	0.	0.	0.	4.26E-08	6.30E-07	3.41E-05	1.12E-05	4.60E-05
12	17.50	0.	0.	1.02E-11	0.	0.	0.	4.28E-08	6.51E-07	3.42E-05	1.12E-05	4.60E-05
13	17.30	0.	0.	8.75E-12	0.	0.	0.	4.27E-08	6.72E-07	3.43E-05	1.11E-05	4.61E-05
14	17.10	0.	0.	8.29E-12	0.	0.	0.	4.29E-08	6.93E-07	3.44E-05	1.11E-05	4.62E-05
15	16.90	0.	0.	8.50E-12	0.	0.	0.	4.33E-08	7.16E-07	3.45E-05	1.10E-05	4.63E-05
16	16.70	0.	0.	7.07E-12	0.	0.	0.	4.32E-08	7.40E-07	3.46E-05	1.10E-05	4.64E-05
17	16.50	0.	0.	7.28E-12	0.	0.	0.	4.33E-08	7.64E-07	1.29E-05	1.13E-05	2.47E-05
18	16.30	0.	0.	6.42E-12	0.	0.	0.	4.35E-08	7.9.E-07	1.29E-05	1.18E-05	2.47E-05
19	16.10	0.	0.	6.16E-12	0.	0.	0.	4.36E-08	8.19E-07	1.29E-05	1.18E-05	2.47E-05
20	15.90	0.	0.	6.34E-12	0.	0.	0.	4.38E-08	8.46E-07	1.29E-05	1.08E-05	2.47E-05
21	15.70	0.	0.	5.25E-12	0.	0.	0.	4.40E-08	8.76E-07	1.30E-05	1.08E-05	2.47E-05
22	15.60	0.	0.	5.42E-12	0.	0.	0.	4.41E-08	9.07E-07	1.30E-05	1.07E-05	2.47E-05
23	15.50	0.	0.	4.78E-12	0.	0.	0.	4.43E-08	9.40E-07	1.30E-05	1.07E-05	2.47E-05
24	15.40	0.	0.	4.74E-12	0.	0.	0.	4.45E-08	9.74E-07	1.31E-05	1.07E-05	2.48E-05
25	15.30	0.	0.	4.03E-12	0.	0.	0.	4.47E-08	1.01E-06	1.31E-05	1.07E-05	2.48E-05
26	15.20	0.	0.	4.08E-12	0.	0.	0.	4.50E-08	1.05E-06	1.32E-05	1.07E-05	2.49E-05
27	15.10	0.	0.	3.53E-12	0.	0.	0.	4.52E-08	1.09E-06	1.32E-05	1.07E-05	2.50E-05
28	15.00	0.	0.	3.56E-12	0.	0.	0.	4.54E-08	1.13E-06	1.33E-05	1.07E-05	2.52E-05
29	14.90	0.	0.	3.07E-12	0.	0.	0.	4.57E-08	1.17E-06	1.34E-05	1.07E-05	2.53E-05
30	14.80	0.	0.	3.19E-12	0.	0.	0.	4.59E-08	1.22E-06	1.35E-05	1.08E-05	2.55E-05
31	14.70	0.	0.	2.80E-12	0.	0.	0.	4.61E-08	1.27E-06	1.36E-05	1.08E-05	2.56E-05
32	14.60	0.	0.	2.67E-12	0.	1.81E-16	0.	4.64E-08	1.32E-06	1.36E-05	1.08E-05	2.56E-05
33	14.50	0.	0.	2.46E-12	0.	6.18E-16	0.	4.66E-08	1.37E-06	1.35E-05	1.08E-05	2.58E-05
34	14.40	0.	0.	2.23E-12	0.	5.13E-15	0.	4.69E-08	1.43E-06	1.36E-05	1.08E-05	2.59E-05
35	14.30	0.	0.	2.11E-12	0.	2.04E-14	0.	4.71E-08	1.49E-06	1.37E-05	1.09E-05	2.61E-05
36	14.20	0.	0.	1.91E-12	0.	5.59E-14	0.	4.74E-08	1.55E-06	1.38E-05	1.09E-05	2.63E-05
37	14.10	0.	0.	1.94E-12	0.	1.74E-13	0.	4.78E-08	1.62E-06	1.39E-05	1.09E-05	2.65E-05
38	14.00	7.26E-16	0.	1.69E-12	0.	3.47E-13	0.	4.81E-08	1.69E-06	1.40E-05	1.09E-05	2.67E-05
39	13.90	1.42E-15	0.	1.56E-12	0.	4.80E-13	0.	4.85E-08	1.77E-06	1.41E-05	1.09E-05	2.69E-05
40	13.80	1.31E-15	0.	1.50E-12	0.	8.45E-13	0.	4.89E-08	1.85E-06	1.42E-05	1.10E-05	2.71E-05
41	13.70	9.55E-16	0.	1.32E-12	0.	9.31E-13	0.	4.93E-08	1.93E-06	1.43E-05	1.10E-05	2.73E-05
42	13.60	5.92E-16	0.	1.18E-12	0.	8.80E-13	0.	4.97E-08	2.01E-06	1.44E-05	1.10E-05	2.75E-05
43	13.50	3.86E-16	0.	9.45E-13	0.	1.00E-12	0.	5.01E-08	2.12E-06	1.46E-05	1.11E-05	2.78E-05
44	13.40	1.93E-16	0	8.55E-13	3.44E-15	9.49E-13	0.	5.05E-08	2.22E-06	1.47E-05	1.11E-05	2.81E-05
45	13.30	1.12E-16	0.	4.11E-13	1.42E-14	6.75E-13	0.	5.09E-08	2.33E-06	1.49E-05	1.12E-05	2.85E-05
46	13.20	5.07E-17	0.	2.28E-13	2.31E-14	9.25E-13	0.	5.13E-08	2.44E-06	1.51E-05	1.13E-05	2.88E-05
47	13.10	2.53E-17	0.	1.07E-13	6.53E-14	1.15E-12	0.	5.16E-08	2.56E-06	1.52E-05	1.14E-05	2.92E-05
48	13.00	9.73E-18	0.	2.74E-14	6.13E-14	5.63E-13	0.	5.20E-08	2.70E-06	1.55E-05	1.14E-05	2.97E-05
49	12.90	2.40E-18	0.	1.06E-15	9.24E-14	5.50E-13	0.	5.20E-08	2.84E-06	1.57E-05	1.16E-05	3.02E-05
50	12.80	1.95E-19	0.	4.94E-17	1.30E-13	5.67E-13	0.	5.13E-08	2.99E-06	1.59E-05	1.17E-05	3.07E-05
51	12.70	2.25E-20	0.	0.	1.52E-13	6.34E-13	0.	4.81E-08	3.15E-06	1.62E-05	1.18E-05	3.12E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.02E-21	0.	0.	0.	1.30E-13	8.48E-13	0.	0.	4.48E-08	3.32E-06	1.64E-05	1.19E-05	3.17E-05
53	5.50	0.	0.	0.	0.	1.59E-13	7.79E-13	0.	0.	4.50E-08	3.51E-06	1.68E-05	1.20E-05	3.24E-05
54	5.40	0.	0.	0.	0.	1.46E-13	6.33E-13	0.	0.	4.52E-08	3.71E-06	1.72E-05	1.22E-05	3.32E-05
55	5.30	0.	0.	0.	0.	1.50E-13	8.00E-13	0.	0.	4.55E-08	3.92E-06	1.77E-05	1.24E-05	3.40E-05
56	5.20	0.	0.	0.	0.	1.62E-13	6.04E-13	0.	0.	4.58E-08	4.15E-06	1.77E-05	1.26E-05	3.45E-05
57	5.10	0.	0.	0.	0.	1.61E-13	7.76E-13	0.	0.	4.62E-08	4.41E-06	1.82E-05	1.28E-05	3.55E-05
58	5.00	1.39E-14	0.	0.	0.	1.48E-13	7.29E-13	0.	0.	4.66E-08	4.68E-06	1.88E-05	1.30E-05	3.66E-05
59	4.90	1.39E-14	0.	0.	0.	1.65E-13	7.96E-13	0.	0.	4.70E-08	4.97E-06	1.95E-05	1.33E-05	3.77E-05
60	4.80	1.36E-14	0.	0.	0.	1.77E-13	7.48E-13	0.	0.	4.74E-08	5.30E-06	2.02E-05	1.35E-05	3.91E-05
61	4.70	1.40E-14	0.	0.	0.	1.77E-13	6.80E-13	0.	0.	4.78E-08	5.65E-06	2.09E-05	1.39E-05	4.05E-05
62	4.60	1.19E-13	0.	0.	0.	1.82E-13	6.17E-13	0.	0.	4.81E-08	6.03E-06	2.18E-05	1.43E-05	4.21E-05
63	4.50	1.25E-13	0.	1.41E-13	0.	1.67E-13	4.65E-13	0.	0.	4.85E-08	6.44E-06	2.28E-05	1.46E-05	4.40E-05
64	4.40	1.34E-13	0.	4.23E-13	0.	1.68E-13	3.20E-13	0.	0.	4.89E-08	6.90E-06	2.40E-05	1.50E-05	4.59E-05
65	4.30	1.27E-13	0.	1.39E-12	0.	1.60E-13	2.01E-13	0.	0.	4.93E-08	7.39E-06	2.52E-05	1.54E-05	4.81E-05
66	4.20	1.18E-13	0.	4.43E-12	0.	1.69E-13	1.41E-13	0.	0.	4.97E-08	7.94E-06	2.66E-05	1.58E-05	5.03E-05
67	4.10	1.11E-13	0.	1.94E-12	0.	1.66E-13	3.92E-14	0.	0.	4.99E-08	8.54E-06	2.77E-05	1.59E-05	5.21E-05
68	4.00	1.03E-13	0.	6.39E-12	0.	1.60E-13	2.95E-14	0.	0.	5.01E-08	9.21E-06	2.89E-05	6.76E-06	4.49E-05
69	3.90	8.74E-14	0.	2.99E-12	1.03E-10	1.48E-13	1.12E-14	0.	0.	4.99E-08	9.94E-06	2.79E-05	6.87E-06	4.49E-05
70	3.80	9.59E-14	0.	4.78E-12	4.39E-10	1.59E-13	0.	0.	0.	4.97E-08	1.08E-05	2.26E-05	7.26E-06	4.07E-05
71	3.70	8.55E-14	0.	4.99E-12	1.86E-10	1.36E-13	0.	0.	0.	4.39E-08	1.17E-05	2.36E-05	7.96E-06	4.33E-05
72	3.60	7.73E-14	0.	3.53E-12	9.92E-10	1.47E-13	0.	0.	0.	4.58E-08	1.27E-05	2.55E-05	8.73E-06	4.70E-05
73	3.51	7.23E-14	0.	4.67E-12	1.90E-09	1.17E-13	0.	0.	0.	4.19E-08	1.38E-05	2.70E-05	9.60E-06	5.04E-05
74	3.40	6.65E-14	0.	2.97E-12	2.87E-10	1.31E-13	0.	0.	0.	2.42E-08	1.51E-05	3.00E-05	1.06E-05	5.57E-05
75	3.30	5.33E-14	0.	3.05E-12	1.11E-09	1.05E-13	0.	0.	0.	2.42E-08	1.65E-05	3.31E-05	1.16E-05	6.12E-05
76	3.20	4.65E-14	0.	2.00E-12	1.84E-09	1.10E-13	0.	0.	0.	2.43E-08	1.81E-05	3.62E-05	1.26E-05	6.70E-05
77	3.10	4.47E-14	0.	1.56E-12	4.53E-10	1.05E-13	0.	0.	0.	2.43E-08	1.99E-05	3.94E-05	1.37E-05	7.31E-05
78	3.00	4.02E-14	0.	9.56E-13	1.06E-09	9.90E-14	0.	0.	0.	2.44E-08	2.20E-05	4.27E-05	1.47E-05	7.95E-05
79	2.90	3.39E-14	0.	5.99E-13	5.81E-10	7.54E-14	0.	0.	0.	2.44E-08	2.44E-05	4.61E-05	1.59E-05	8.65E-05
80	2.80	3.53E-14	0.	2.88E-13	3.74E-10	5.28E-14	0.	0.	0.	2.45E-08	2.72E-05	5.01E-05	1.72E-05	9.45E-05
81	2.70	2.29E-14	0.	1.35E-13	5.01E-10	2.90E-14	0.	0.	0.	2.45E-08	3.04E-05	5.44E-05	1.86E-05	1.03E-04
82	2.60	1.08E-14	0.	4.57E-14	5.09E-11	1.28E-14	0.	0.	0.	2.45E-08	3.41E-05	5.86E-05	2.01E-05	1.13E-04
83	2.50	7.42E-16	0.	7.02E-15	4.91E-11	3.04E-15	0.	0.	0.	2.45E-08	3.84E-05	6.65E-05	1.17E-05	1.17E-04
84	2.48	0.	3.20E-13	0.	3.93E-11	9.28E-16	0.	0.	0.	2.45E-08	4.35E-05	5.53E-05	1.42E-05	1.13E-04
85	2.30	0.	9.87E-13	0.	0.	0.	0.	0.	0.	2.43E-08	4.95E-05	6.70E-05	1.70E-05	1.34E-04
86	2.20	0.	2.58E-12	0.	0.	0.	0.	0.	0.	2.42E-08	5.67E-05	7.92E-05	2.03E-05	1.56E-04
87	2.10	0.	2.71E-12	0.	0.	0.	0.	0.	0.	2.41E-08	6.54E-05	9.22E-05	2.37E-05	1.81E-04
88	2.00	0.	5.34E-12	0.	0.	0.	0.	0.	0.	2.33E-08	7.59E-05	1.05E-04	2.70E-05	2.08E-04
89	1.90	0.	6.74E-12	0.	0.	0.	0.	0.	0.	2.24E-08	9.87E-05	1.20E-04	3.14E-05	2.40E-04
90	1.80	0.	5.71E-12	0.	0.	0.	0.	0.	0.	2.14E-08	1.05E-04	1.44E-04	3.81E-05	2.87E-04
91	1.70	0.	4.55E-12	0.	0.	0.	0.	0.	0.	2.02E-08	1.24E-04	1.73E-04	4.63E-05	3.44E-04
92	1.60	0.	4.89E-12	0.	0.	0.	0.	0.	0.	1.71E-08	1.50E-04	2.02E-04	5.45E-05	4.06E-04
93	1.50	0.	5.63E-12	0.	0.	0.	0.	0.	0.	7.77E-09	1.83E-04	2.61E-04	6.62E-05	5.10E-04
94	1.40	0.	5.57E-12	0.	0.	0.	0.	0.	0.	0.	2.27E-04	3.10E-04	7.91E-05	6.16E-04
95	1.30	0.	4.27E-12	0.	0.	0.	0.	0.	0.	0.	2.85E-04	4.31E-04	9.87E-05	8.15E-04
96	1.20	0.	4.08E-12	0.	0.	0.	0.	0.	0.	0.	3.64E-04	4.71E-04	1.05E-04	9.40E-04
97	1.10	0.	3.89E-12	0.	0.	0.	0.	7.98E-18	0.	0.	4.74E-04	5.61E-04	1.32E-04	1.19E-03
98	1.00	0.	3.57E-12	0.	0.	0.	0.	1.19E-16	0.	0.	6.33E-04	7.04E-04	1.53E-04	1.39E-03
99	0.90	0.	2.93E-12	0.	0.	0.	0.	1.38E-16	0.	0.	8.74E-04	8.09E-04	1.76E-04	1.58E-03
100	0.80	0.	1.38E-12	0.	0.	0.	0.	2.99E-15	0.	0.	1.24E-03	9.31E-04	2.04E-04	2.39E-03
101	0.70	0.	3.25E-13	0.	0.	0.	0.	2.69E-15	0.	0.	1.63E-03	1.91E-03	2.10E-04	3.12E-03
102	0.60	0.	6.05E-14	0.	0.	0.	0.	8.79E-15	0.	0.	3.07E-03	1.02E-03	2.35E-04	4.33E-03

ABSORPTION COEFFICIEN OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 B-F BANDS	O2 F-D CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	N- PHOTO-DET	FREE-FREE (I-MS)	N P.E.	O P.E.	TOTAL AIR
1	18.79	0.	0.	1.95E-15	0.	0.	0.	4.75E-11	5.19E-09	5.88E-07	1.28E-07	6.33E-07
2	18.68	0.	0.	1.78E-15	0.	0.	0.	4.76E-11	5.25E-09	5.84E-07	1.27E-07	6.37E-07
3	18.55	0.	0.	1.99E-15	0.	0.	0.	4.76E-11	5.48E-09	5.84E-07	1.27E-07	5.16E-07
4	18.43	0.	0.	1.73E-15	0.	0.	0.	4.77E-11	5.56E-09	5.85E-07	1.24E-07	5.17E-07
5	18.38	0.	0.	1.49E-15	0.	0.	0.	4.78E-11	5.72E-09	5.85E-07	1.26E-07	5.17E-07
6	18.20	0.	0.	1.56E-15	0.	0.	0.	4.78E-11	5.90E-09	5.87E-07	1.25E-07	5.18E-07
7	18.18	0.	0.	1.45E-15	0.	0.	0.	4.79E-11	6.07E-09	5.88E-07	1.25E-07	5.19E-07
8	18.07	0.	0.	1.28E-15	0.	0.	0.	4.79E-11	6.24E-09	5.89E-07	1.24E-07	5.20E-07
9	17.97	0.	0.	1.31E-15	0.	0.	0.	4.80E-11	6.45E-09	5.90E-07	1.24E-07	5.21E-07
10	17.85	0.	0.	1.24E-15	0.	0.	0.	4.81E-11	6.64E-09	5.92E-07	1.23E-07	5.22E-07
11	17.73	0.	0.	1.07E-15	0.	0.	0.	4.82E-11	6.87E-09	5.93E-07	1.23E-07	5.23E-07
12	17.63	0.	0.	1.16E-15	0.	0.	0.	4.83E-11	7.05E-09	5.94E-07	1.22E-07	5.24E-07
13	17.55	0.	0.	9.91E-16	0.	0.	0.	4.84E-11	7.31E-09	5.96E-07	1.22E-07	5.25E-07
14	17.43	0.	0.	9.36E-16	0.	0.	0.	4.84E-11	7.55E-09	5.97E-07	1.21E-07	5.26E-07
15	17.30	0.	0.	9.63E-16	0.	0.	0.	4.87E-11	7.80E-09	1.69E-07	1.21E-07	2.98E-07
16	17.20	0.	0.	8.87E-16	0.	0.	0.	4.89E-11	8.06E-09	1.69E-07	1.21E-07	2.98E-07
17	17.10	0.	0.	8.23E-16	0.	0.	0.	4.91E-11	8.33E-09	1.70E-07	1.20E-07	2.98E-07
18	17.00	0.	0.	7.58E-16	0.	0.	0.	4.93E-11	8.61E-09	1.70E-07	1.20E-07	2.98E-07
19	16.89	0.	0.	6.99E-16	0.	0.	0.	4.94E-11	8.91E-09	1.71E-07	1.19E-07	2.99E-07
20	16.80	0.	0.	6.84E-16	0.	0.	0.	4.96E-11	9.22E-09	1.71E-07	1.19E-07	2.99E-07
21	16.76	0.	0.	5.95E-16	0.	0.	0.	4.98E-11	9.54E-09	1.72E-07	1.18E-07	3.00E-07
22	16.65	0.	0.	5.14E-16	0.	0.	0.	5.00E-11	9.88E-09	1.72E-07	1.17E-07	3.00E-07
23	16.58	0.	0.	5.30E-16	0.	0.	0.	5.01E-11	1.02E-08	1.73E-07	1.17E-07	3.00E-07
24	16.46	0.	0.	5.36E-16	0.	0.	0.	5.04E-11	1.06E-08	1.74E-07	1.17E-07	3.01E-07
25	16.38	0.	0.	4.59E-16	0.	0.	0.	5.07E-11	1.10E-08	1.75E-07	1.16E-07	3.02E-07
26	16.27	0.	0.	4.62E-16	0.	0.	0.	5.09E-11	1.14E-08	1.76E-07	1.17E-07	3.04E-07
27	16.18	0.	0.	4.98E-16	0.	0.	0.	5.12E-11	1.19E-08	1.56E-07	1.17E-07	2.85E-07
28	16.08	0.	0.	4.83E-16	0.	0.	0.	5.15E-11	1.23E-08	1.58E-07	1.17E-07	2.88E-07
29	15.98	0.	0.	3.48E-16	0.	0.	0.	5.17E-11	1.28E-08	1.60E-07	1.17E-07	2.90E-07
30	15.88	0.	0.	4.61E-16	0.	0.	0.	5.20E-11	1.33E-08	1.61E-07	1.18E-07	2.92E-07
31	15.78	0.	0.	3.18E-16	0.	0.	0.	5.23E-11	1.38E-08	1.63E-07	1.18E-07	2.95E-07
32	15.68	0.	0.	3.80E-16	0.	7.10E-20	0.	5.25E-11	1.44E-08	1.65E-07	1.18E-07	2.97E-07
33	15.57	0.	0.	2.88E-16	0.	7.17E-20	0.	5.28E-11	1.49E-08	1.67E-07	1.18E-07	3.00E-07
34	15.49	0.	0.	2.52E-16	0.	5.95E-19	0.	5.31E-11	1.56E-08	1.69E-07	1.19E-07	3.03E-07
35	15.36	0.	0.	2.48E-16	0.	2.36E-18	0.	5.34E-11	1.62E-08	1.71E-07	1.19E-07	3.06E-07
36	15.28	0.	0.	2.17E-16	0.	6.48E-18	0.	5.37E-11	1.69E-08	1.73E-07	1.19E-07	3.09E-07
37	15.19	0.	0.	2.09E-16	0.	2.02E-17	0.	5.41E-11	1.76E-08	1.75E-07	1.19E-07	3.13E-07
38	15.09	9.22E-20	0.	1.92E-16	0.	4.33E-17	0.	5.45E-11	1.84E-08	1.75E-07	1.20E-07	3.14E-07
39	14.99	1.80E-19	0.	1.76E-16	0.	5.57E-17	0.	5.50E-11	1.92E-08	1.78E-07	1.20E-07	3.17E-07
40	14.88	1.06E-19	0.	1.78E-16	0.	9.69E-17	0.	5.54E-11	2.01E-08	1.80E-07	1.20E-07	3.21E-07
41	14.78	1.13E-19	0.	1.49E-16	0.	9.64E-17	0.	5.59E-11	2.10E-08	1.82E-07	1.21E-07	3.24E-07
42	14.68	4.92E-20	0.	1.34E-16	0.	7.89E-17	0.	5.63E-11	2.20E-08	1.85E-07	1.21E-07	3.29E-07
43	14.58	4.80E-20	0.	1.07E-16	0.	1.16E-16	0.	5.67E-11	2.30E-08	1.88E-07	1.22E-07	3.33E-07
44	14.48	2.29E-20	0.	7.42E-17	3.99E-19	1.10E-16	0.	5.72E-11	2.42E-08	1.91E-07	1.22E-07	3.38E-07
45	14.38	1.33E-20	0.	4.65E-17	1.88E-18	7.83E-17	0.	5.76E-11	2.53E-08	1.94E-07	1.23E-07	3.43E-07
46	14.28	5.82E-21	0.	2.58E-17	2.67E-18	1.07E-16	0.	5.81E-11	2.64E-08	1.97E-07	1.24E-07	3.48E-07
47	14.18	2.77E-21	0.	1.22E-17	7.64E-18	1.34E-16	0.	5.85E-11	2.79E-08	2.01E-07	1.25E-07	3.54E-07
48	14.08	1.16E-21	0.	3.18E-18	7.34E-18	6.54E-17	0.	5.89E-11	2.94E-08	2.05E-07	1.26E-07	3.60E-07
49	13.98	2.85E-22	0.	2.22E-19	1.08E-17	6.38E-17	0.	5.89E-11	3.09E-08	2.09E-07	1.27E-07	3.67E-07
50	13.88	3.63E-23	0.	5.68E-21	1.51E-17	6.57E-17	0.	5.81E-11	3.25E-08	2.13E-07	1.29E-07	3.74E-07
51	13.78	2.67E-24	0.	0.	1.77E-17	7.35E-17	0.	5.45E-11	3.43E-08	1.78E-07	1.29E-07	3.41E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.21E-25	0.	0.	0.	1.51E-17	9.74E-17	0.	0.	5.87E-11	3.62E-08	1.81E-07	1.38E-07	3.48E-07
53	5.50	0.	0.	0.	0.	1.44E-17	9.03E-17	0.	0.	5.18E-11	3.87E-08	1.86E-07	1.32E-07	3.55E-07
54	5.40	0.	0.	0.	0.	1.70E-17	7.35E-17	0.	0.	5.12E-11	4.04E-08	1.91E-07	1.33E-07	3.65E-07
55	5.30	0.	0.	0.	0.	1.74E-17	9.20E-17	0.	0.	5.16E-11	4.27E-08	1.96E-07	1.35E-07	3.74E-07
56	5.20	0.	0.	0.	0.	1.87E-17	7.81E-17	0.	0.	5.19E-11	4.52E-08	2.02E-07	1.38E-07	3.85E-07
57	5.10	0.	0.	0.	0.	1.87E-17	9.80E-17	0.	0.	5.23E-11	4.80E-08	2.08E-07	1.40E-07	3.96E-07
58	5.00	1.66E-18	0.	0.	0.	1.71E-17	8.46E-17	0.	0.	5.28E-11	5.10E-08	2.15E-07	1.42E-07	4.08E-07
59	4.90	4.83E-18	0.	0.	0.	1.91E-17	9.24E-17	0.	0.	5.32E-11	5.42E-08	2.22E-07	1.45E-07	4.22E-07
60	4.80	7.56E-18	0.	0.	0.	2.05E-17	8.68E-17	0.	0.	5.37E-11	5.77E-08	2.31E-07	1.48E-07	4.36E-07
61	4.70	1.02E-17	0.	0.	0.	2.05E-17	7.88E-17	0.	0.	5.41E-11	6.15E-08	2.39E-07	1.52E-07	4.53E-07
62	4.60	1.41E-17	0.	0.	0.	2.11E-17	7.16E-17	0.	0.	5.45E-11	6.56E-08	2.50E-07	1.56E-07	4.71E-07
63	4.50	1.48E-17	0.	1.68E-17	0.	1.94E-17	5.39E-17	0.	0.	5.50E-11	7.02E-08	2.63E-07	1.60E-07	4.93E-07
64	4.40	1.59E-17	0.	4.79E-17	0.	1.95E-17	3.71E-17	0.	0.	5.54E-11	7.51E-08	2.78E-07	1.64E-07	5.15E-07
65	4.30	1.59E-17	0.	1.57E-16	0.	1.88E-17	2.53E-17	0.	0.	5.59E-11	8.05E-08	2.90E-07	1.65E-07	5.36E-07
66	4.20	1.40E-17	0.	5.32E-16	0.	1.96E-17	1.63E-17	0.	0.	5.63E-11	8.65E-08	3.05E-07	1.47E-07	5.30E-07
67	4.10	1.32E-17	0.	2.20E-16	0.	1.92E-17	4.54E-18	0.	0.	5.69E-11	9.30E-08	3.20E-07	7.17E-08	4.45E-07
68	4.00	1.22E-17	0.	7.24E-16	0.	1.86E-17	3.43E-18	0.	0.	5.57E-11	1.00E-07	3.07E-07	7.41E-08	4.41E-07
69	3.90	1.04E-17	0.	3.39E-16	1.13E-13	1.72E-17	1.30E-18	0.	0.	5.65E-11	1.08E-07	2.59E-07	7.65E-08	4.44E-07
70	3.80	1.14E-17	0.	5.41E-16	4.79E-13	1.85E-17	0.	0.	0.	5.63E-11	1.17E-07	2.71E-07	7.97E-08	4.68E-07
71	3.70	1.62E-17	0.	5.65E-16	2.03E-13	1.58E-17	0.	0.	0.	5.54E-11	1.27E-07	2.72E-07	8.73E-08	4.66E-07
72	3.60	9.18E-18	0.	4.80E-16	1.08E-12	1.71E-17	0.	0.	0.	5.19E-11	1.38E-07	2.93E-07	9.58E-08	5.27E-07
73	3.50	8.59E-18	0.	5.28E-16	2.07E-12	1.35E-17	0.	0.	0.	4.75E-11	1.50E-07	3.23E-07	1.05E-07	5.78E-07
74	3.40	7.98E-18	0.	3.37E-16	3.12E-13	1.52E-17	0.	0.	0.	2.74E-11	1.64E-07	3.57E-07	1.16E-07	6.37E-07
75	3.30	6.33E-18	0.	3.45E-16	1.21E-12	1.22E-17	0.	0.	0.	2.74E-11	1.79E-07	3.91E-07	1.27E-07	6.98E-07
76	3.20	5.53E-18	0.	2.27E-16	2.01E-12	1.28E-17	0.	0.	0.	2.75E-11	1.97E-07	3.94E-07	1.38E-07	7.30E-07
77	3.10	5.31E-18	0.	1.76E-16	4.94E-13	1.21E-17	0.	0.	0.	2.78E-11	2.17E-07	4.29E-07	1.50E-07	7.96E-07
78	3.00	4.77E-18	0.	1.00E-16	1.15E-12	1.15E-17	0.	0.	0.	2.78E-11	2.40E-07	4.65E-07	1.62E-07	8.66E-07
79	2.90	4.02E-18	0.	6.78E-17	6.34E-13	8.79E-18	0.	0.	0.	2.77E-11	2.66E-07	5.03E-07	1.74E-07	9.43E-07
80	2.80	4.20E-18	0.	3.27E-17	4.13E-13	6.13E-18	0.	0.	0.	2.77E-11	2.96E-07	5.47E-07	1.88E-07	1.03E-06
81	2.70	2.72E-18	0.	1.53E-17	5.46E-13	3.36E-18	0.	0.	0.	2.77E-11	3.31E-07	5.94E-07	1.76E-07	1.10E-06
82	2.60	1.29E-18	0.	7.44E-18	5.55E-14	1.49E-18	0.	0.	0.	2.77E-11	3.71E-07	6.41E-07	1.10E-07	1.12E-06
83	2.50	9.05E-20	0.	7.95E-19	5.35E-14	3.56E-19	0.	0.	0.	2.77E-11	4.18E-07	5.04E-07	1.28E-07	1.05E-06
84	2.40	0.	3.63E-17	0.	4.28E-14	3.60E-20	0.	0.	0.	2.77E-11	4.73E-07	6.15E-07	1.56E-07	1.24E-06
85	2.30	0.	1.17E-16	0.	0.	0.	0.	0.	0.	2.75E-11	5.30E-07	7.43E-07	1.88E-07	1.47E-06
86	2.20	0.	2.97E-16	0.	0.	0.	0.	0.	0.	2.74E-11	6.17E-07	8.75E-07	2.22E-07	1.72E-06
87	2.10	0.	3.87E-16	0.	0.	0.	0.	0.	0.	2.73E-11	7.12E-07	1.02E-06	2.59E-07	1.99E-06
88	2.00	0.	6.04E-16	0.	0.	0.	0.	0.	0.	2.64E-11	8.24E-07	1.16E-06	2.96E-07	2.28E-06
89	1.90	0.	7.63E-16	0.	0.	0.	0.	0.	0.	2.54E-11	9.66E-07	1.32E-06	3.43E-07	2.63E-06
90	1.80	0.	6.47E-16	0.	0.	0.	0.	0.	0.	2.43E-11	1.14E-06	1.58E-06	4.16E-07	3.13E-06
91	1.70	0.	7.42E-16	0.	0.	0.	0.	0.	0.	2.29E-11	1.35E-06	1.85E-06	5.05E-07	3.72E-06
92	1.60	0.	5.54E-16	0.	0.	0.	0.	0.	0.	1.93E-11	1.63E-06	2.17E-06	5.71E-07	4.37E-06
93	1.50	0.	4.38E-16	0.	0.	0.	0.	0.	0.	8.88E-12	1.99E-06	2.65E-06	6.98E-07	5.34E-06
94	1.40	0.	4.31E-16	0.	0.	0.	0.	0.	0.	0.	2.47E-06	2.51E-06	8.83E-07	5.78E-06
95	1.30	0.	4.84E-16	0.	0.	0.	0.	0.	0.	0.	3.10E-06	3.71E-06	8.54E-07	7.47E-06
96	1.20	0.	4.67E-16	0.	0.	0.	0.	0.	0.	0.	3.94E-06	4.89E-06	1.15E-06	10.00E-06
97	1.10	0.	4.48E-16	0.	0.	0.	0.	9.26E-22	0.	0.	5.14E-06	6.21E-06	1.35E-06	1.27E-05
98	1.00	0.	4.04E-16	0.	0.	0.	0.	1.38E-20	0.	0.	6.09E-06	7.33E-06	1.64E-06	1.54E-05
99	0.90	0.	3.32E-16	0.	0.	0.	0.	1.40E-20	0.	0.	9.53E-06	8.57E-06	1.92E-06	2.00E-05
100	0.80	0.	1.56E-16	0.	0.	0.	0.	3.47E-19	0.	0.	1.37E-05	9.48E-06	2.07E-06	2.52E-05
101	0.70	0.	3.64E-17	0.	0.	0.	0.	3.12E-19	0.	0.	2.07E-05	8.86E-06	1.79E-06	3.13E-05
102	0.60	0.	6.64E-19	0.	0.	0.	0.	1.03E-18	0.	0.	3.34E-05	9.98E-06	1.98E-06	4.54E-05

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-03 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	N2 GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	A P.E.	O P.E.	TOTAL AIR
1	10.76	0.	0.	1.94E-19	0.	0.	0.	5.20E-14	6.01E-11	6.38E-09	1.40E-09	7.84E-09
2	10.60	0.	0.	1.76E-19	0.	0.	0.	5.21E-14	6.10E-11	6.42E-09	1.39E-09	7.87E-09
3	10.50	0.	0.	1.78E-19	0.	0.	0.	5.21E-14	6.17E-11	6.45E-09	1.39E-09	7.90E-09
4	10.40	0.	0.	1.49E-19	0.	0.	0.	5.22E-14	6.25E-11	6.48E-09	1.38E-09	7.93E-09
5	10.30	0.	0.	1.48E-19	0.	0.	0.	5.23E-14	6.75E-11	6.51E-09	1.38E-09	7.95E-09
6	10.20	0.	0.	1.93E-19	0.	0.	0.	5.24E-14	6.95E-11	6.55E-09	1.37E-09	8.00E-09
7	10.10	0.	0.	1.44E-19	0.	0.	0.	5.24E-14	7.16E-11	6.60E-09	1.37E-09	8.04E-09
8	10.00	0.	0.	1.27E-19	0.	0.	0.	5.25E-14	7.37E-11	6.65E-09	1.36E-09	8.09E-09
9	9.90	0.	0.	1.30E-19	0.	0.	0.	5.26E-14	7.60E-11	6.70E-09	1.36E-09	8.13E-09
10	9.80	0.	0.	1.22E-19	0.	0.	0.	5.27E-14	7.84E-11	6.75E-09	1.36E-09	8.19E-09
11	9.71	0.	0.	1.06E-19	0.	0.	0.	5.28E-14	8.09E-11	6.79E-09	1.35E-09	8.22E-09
12	9.61	0.	0.	1.15E-19	0.	0.	0.	5.29E-14	8.35E-11	6.84E-09	1.35E-09	8.27E-09
13	9.51	0.	0.	9.82E-20	0.	0.	0.	5.30E-14	8.62E-11	6.89E-09	1.34E-09	8.31E-09
14	9.41	0.	0.	9.31E-20	0.	0.	0.	5.32E-14	8.90E-11	6.94E-09	1.34E-09	8.36E-09
15	9.30	0.	0.	9.55E-20	0.	0.	0.	5.34E-14	9.19E-11	4.78E-09	1.33E-09	6.12E-09
16	9.20	0.	0.	7.94E-20	0.	0.	0.	5.36E-14	9.49E-11	4.73E-09	1.33E-09	6.16E-09
17	9.10	0.	0.	8.16E-20	0.	0.	0.	5.37E-14	9.81E-11	4.77E-09	1.32E-09	6.19E-09
18	9.00	0.	0.	7.43E-20	0.	0.	0.	5.39E-14	1.02E-10	4.81E-09	1.32E-09	6.23E-09
19	8.90	0.	0.	6.89E-20	0.	0.	0.	5.41E-14	1.05E-10	4.85E-09	1.28E-09	6.23E-09
20	8.80	0.	0.	6.78E-20	0.	0.	0.	5.43E-14	1.09E-10	4.89E-09	1.27E-09	6.27E-09
21	8.70	0.	0.	5.98E-20	0.	0.	0.	5.45E-14	1.12E-10	4.93E-09	1.27E-09	6.31E-09
22	8.60	0.	0.	6.08E-20	0.	0.	0.	5.47E-14	1.16E-10	4.97E-09	1.26E-09	6.35E-09
23	8.50	0.	0.	5.34E-20	0.	0.	0.	5.49E-14	1.21E-10	5.01E-09	1.26E-09	6.39E-09
24	8.40	0.	0.	5.32E-20	0.	0.	0.	5.52E-14	1.25E-10	5.05E-09	1.26E-09	6.44E-09
25	8.30	0.	0.	4.52E-20	0.	0.	0.	5.55E-14	1.29E-10	3.11E-09	1.26E-09	4.50E-09
26	8.20	0.	0.	4.58E-20	0.	0.	0.	5.58E-14	1.34E-10	3.19E-09	1.26E-09	4.59E-09
27	8.10	0.	0.	3.97E-20	0.	0.	0.	5.61E-14	1.39E-10	3.28E-09	1.27E-09	4.68E-09
28	8.00	0.	0.	4.08E-20	0.	0.	0.	5.63E-14	1.45E-10	3.36E-09	1.27E-09	4.78E-09
29	7.90	0.	0.	3.45E-20	0.	0.	0.	5.66E-14	1.50E-10	3.45E-09	1.27E-09	4.87E-09
30	7.80	0.	0.	3.58E-20	0.	0.	0.	5.69E-14	1.56E-10	3.53E-09	1.28E-09	4.97E-09
31	7.70	0.	0.	3.15E-20	0.	0.	0.	5.72E-14	1.62E-10	3.63E-09	1.28E-09	5.07E-09
32	7.60	0.	0.	2.99E-20	0.	2.18E-24	0.	5.75E-14	1.69E-10	3.73E-09	1.29E-09	5.19E-09
33	7.50	0.	0.	2.78E-20	0.	7.47E-24	0.	5.78E-14	1.76E-10	3.83E-09	1.29E-09	5.30E-09
34	7.40	0.	0.	2.56E-20	0.	6.28E-23	0.	5.81E-14	1.83E-10	3.93E-09	1.30E-09	5.41E-09
35	7.30	0.	0.	2.37E-20	0.	2.46E-22	0.	5.84E-14	1.91E-10	3.84E-09	1.30E-09	5.34E-09
36	7.20	0.	0.	2.15E-20	0.	6.75E-22	0.	5.88E-14	1.99E-10	3.99E-09	1.31E-09	5.50E-09
37	7.10	0.	0.	2.07E-20	0.	2.10E-21	0.	5.92E-14	2.08E-10	4.14E-09	1.31E-09	5.46E-09
38	7.00	1.81E-23	0.	1.90E-20	0.	4.20E-21	0.	5.97E-14	2.17E-10	4.29E-09	1.32E-09	5.83E-09
39	6.90	1.97E-23	0.	1.75E-20	0.	5.89E-21	0.	6.02E-14	2.26E-10	4.44E-09	1.33E-09	6.00E-09
40	6.80	1.70E-23	0.	1.68E-20	0.	1.01E-20	0.	6.07E-14	2.37E-10	4.59E-09	1.33E-09	6.16E-09
41	6.70	1.24E-23	0.	1.48E-20	0.	1.80E-20	0.	6.12E-14	2.48E-10	4.74E-09	1.34E-09	6.33E-09
42	6.60	7.58E-24	0.	1.33E-20	0.	8.22E-21	0.	6.16E-14	2.59E-10	4.90E-09	1.35E-09	6.50E-09
43	6.50	4.38E-24	0.	1.88E-20	0.	1.21E-20	0.	6.21E-14	2.71E-10	5.05E-09	1.36E-09	6.68E-09
44	6.40	2.51E-24	0.	7.36E-21	4.18E-23	1.15E-20	0.	6.26E-14	2.84E-10	5.21E-09	1.37E-09	6.86E-09
45	6.30	1.46E-24	0.	4.41E-21	1.96E-22	8.15E-21	0.	6.31E-14	2.99E-10	5.37E-09	1.38E-09	7.04E-09
46	6.20	6.59E-25	0.	2.56E-21	2.79E-22	1.12E-20	0.	6.36E-14	3.13E-10	5.53E-09	1.39E-09	7.23E-09
47	6.10	3.83E-25	0.	1.21E-21	7.96E-22	1.39E-20	0.	6.40E-14	3.29E-10	5.70E-09	1.41E-09	7.44E-09
48	6.00	1.27E-25	0.	3.87E-22	7.65E-22	6.81E-21	0.	6.45E-14	3.45E-10	2.54E-09	1.34E-09	4.22E-09
49	5.90	3.12E-26	0.	2.20E-23	1.12E-21	6.64E-21	0.	6.45E-14	3.63E-10	2.60E-09	1.35E-09	4.31E-09
50	5.80	3.98E-27	0.	5.55E-25	1.57E-21	6.85E-21	0.	6.36E-14	3.83E-10	2.65E-09	1.36E-09	4.40E-09
51	5.70	2.93E-28	0.	0.	1.84E-21	7.46E-21	0.	5.97E-14	4.03E-10	2.73E-09	1.38E-09	4.51E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.32E-29	0.	0.	0.	1.57E-21	1.01E-20	0.	0.	5.55E-14	4.25E-10	2.82E-09	1.39E-09	4.64E-09
53	5.55	0.	0.	0.	0.	1.92E-21	9.41E-21	0.	0.	5.50E-14	4.40E-10	2.93E-09	1.41E-09	4.78E-09
54	5.40	0.	0.	0.	0.	1.77E-21	7.65E-21	0.	0.	5.61E-14	4.75E-10	3.04E-09	1.43E-09	4.94E-09
55	5.30	0.	0.	0.	0.	1.81E-21	9.67E-21	0.	0.	5.65E-14	5.02E-10	3.16E-09	1.45E-09	5.11E-09
56	5.20	0.	0.	0.	0.	1.95E-21	7.30E-21	0.	0.	5.68E-14	5.32E-10	3.20E-09	1.47E-09	5.29E-09
57	5.15	0.	0.	0.	0.	1.95E-21	9.38E-21	0.	0.	5.73E-14	5.64E-10	3.41E-09	1.49E-09	5.47E-09
58	5.60	1.81E-22	0.	0.	0.	1.78E-21	8.42E-21	0.	0.	5.78E-14	5.99E-10	3.55E-09	1.51E-09	5.66E-09
59	4.99	4.41E-22	0.	0.	0.	1.99E-21	9.42E-21	0.	0.	5.83E-14	6.37E-10	3.69E-09	1.54E-09	5.87E-09
60	4.80	9.28E-22	0.	0.	0.	2.14E-21	9.04E-21	0.	0.	5.88E-14	6.78E-10	3.83E-09	1.58E-09	6.09E-09
61	4.70	1.17E-21	0.	0.	0.	2.14E-21	8.21E-21	0.	0.	5.92E-14	7.23E-10	4.02E-09	1.62E-09	6.36E-09
62	4.60	1.56E-21	0.	0.	0.	2.20E-21	7.46E-21	0.	0.	5.97E-14	7.72E-10	4.25E-09	1.66E-09	6.59E-09
63	4.50	1.62E-21	0.	1.58E-21	0.	2.02E-21	5.61E-21	0.	0.	6.02E-14	8.25E-10	4.51E-09	1.71E-09	7.04E-09
64	4.40	1.74E-21	0.	4.74E-21	0.	2.03E-21	3.86E-21	0.	0.	6.07E-14	8.83E-10	4.77E-09	1.75E-09	7.41E-09
65	4.30	1.65E-21	0.	1.96E-20	0.	1.94E-21	2.42E-21	0.	0.	6.12E-14	9.47E-10	5.04E-09	1.76E-09	7.75E-09
66	4.20	1.54E-21	0.	4.97E-20	0.	2.04E-21	1.70E-21	0.	0.	6.16E-14	1.02E-09	5.33E-09	7.65E-10	7.11E-09
67	4.10	1.45E-21	0.	2.18E-20	0.	2.00E-21	4.73E-22	0.	0.	6.19E-14	1.09E-09	5.44E-09	7.93E-10	7.32E-09
68	4.00	1.34E-21	0.	7.18E-20	0.	1.93E-21	3.57E-22	0.	0.	6.21E-14	1.18E-09	5.06E-09	8.22E-10	7.06E-09
69	3.90	1.14E-21	0.	3.36E-20	1.07E-16	1.79E-21	1.35E-22	0.	0.	6.19E-14	1.27E-09	5.34E-09	8.50E-10	7.46E-09
70	3.80	1.25E-21	0.	5.36E-20	4.54E-16	1.92E-21	0.	0.	0.	6.16E-14	1.38E-09	5.61E-09	8.87E-10	7.88E-09
71	3.70	1.11E-21	0.	5.68E-20	1.03E-16	1.65E-21	0.	0.	0.	6.07E-14	1.49E-09	5.77E-09	9.70E-10	8.23E-09
72	3.60	1.41E-21	0.	3.96E-20	1.02E-15	1.78E-21	0.	0.	0.	5.88E-14	1.62E-09	6.14E-09	1.06E-09	8.82E-09
73	3.50	9.41E-22	0.	5.24E-20	1.96E-15	1.41E-21	0.	0.	0.	5.20E-14	1.77E-09	6.59E-09	1.16E-09	9.52E-09
74	3.40	9.65E-22	0.	3.34E-20	2.96E-16	1.58E-21	0.	0.	0.	3.00E-14	1.93E-09	4.13E-09	1.27E-09	7.33E-09
75	3.30	6.93E-22	0.	3.42E-20	1.14E-15	1.27E-21	0.	0.	0.	3.00E-14	2.11E-09	4.53E-09	1.39E-09	8.03E-09
76	3.20	6.86E-22	0.	2.29E-20	1.90E-15	1.33E-21	0.	0.	0.	3.01E-14	2.32E-09	5.01E-09	1.49E-09	8.82E-09
77	3.10	5.82E-22	0.	1.75E-20	4.60E-16	1.26E-21	0.	0.	0.	3.02E-14	2.55E-09	5.53E-09	1.60E-09	9.68E-09
78	3.00	5.23E-22	0.	1.07E-20	1.09E-15	1.20E-21	0.	0.	0.	3.02E-14	2.82E-09	6.04E-09	1.72E-09	1.06E-08
79	2.90	4.41E-22	0.	6.72E-21	6.80E-16	9.16E-22	0.	0.	0.	3.03E-14	3.13E-09	6.58E-09	1.86E-09	1.16E-08
80	2.80	4.68E-22	0.	3.24E-21	3.88E-16	6.58E-22	0.	0.	0.	3.03E-14	3.48E-09	7.18E-09	2.01E-09	1.27E-08
81	2.70	2.97E-22	0.	1.52E-21	5.17E-16	3.58E-22	0.	0.	0.	3.03E-14	3.89E-09	7.77E-09	1.11E-09	1.20E-08
82	2.60	1.41E-22	0.	7.38E-22	5.26E-17	1.55E-22	0.	0.	0.	3.03E-14	4.36E-09	8.43E-09	1.21E-09	1.40E-08
83	2.50	9.91E-24	0.	7.88E-23	5.07E-17	3.70E-23	0.	0.	0.	3.03E-14	4.91E-09	7.26E-09	1.40E-09	1.36E-08
84	2.40	0.	3.68E-21	0.	4.86E-17	3.95E-24	0.	0.	0.	3.03E-14	5.56E-09	8.67E-09	1.78E-09	1.59E-08
85	2.30	0.	1.11E-20	0.	0.	0.	0.	0.	0.	3.01E-14	6.33E-09	1.02E-08	2.02E-09	1.86E-08
86	2.20	0.	2.89E-20	0.	0.	0.	0.	0.	0.	3.00E-14	7.25E-09	1.19E-08	2.41E-09	2.15E-08
87	2.10	0.	3.85E-20	0.	0.	0.	0.	0.	0.	2.99E-14	8.36E-09	1.36E-08	2.88E-09	2.47E-08
88	2.00	0.	5.99E-20	0.	0.	0.	0.	0.	0.	2.89E-14	9.78E-09	1.53E-08	3.13E-0	2.81E-08
89	1.90	0.	7.57E-20	0.	0.	0.	0.	0.	0.	2.78E-14	1.13E-08	1.45E-08	3.62E-09	2.94E-08
90	1.80	0.	4.41E-20	0.	0.	0.	0.	0.	0.	2.66E-14	1.34E-08	1.72E-08	4.39E-09	3.49E-08
91	1.70	0.	7.35E-20	0.	0.	0.	0.	0.	0.	2.50E-14	1.59E-08	2.04E-08	5.34E-09	4.17E-08
92	1.60	0.	5.49E-20	0.	0.	0.	0.	0.	0.	2.12E-14	1.91E-08	2.37E-08	6.03E-09	4.89E-08
93	1.50	0.	6.33E-20	0.	0.	0.	0.	0.	0.	9.63E-15	2.34E-08	2.86E-08	6.79E-09	5.88E-08
94	1.40	0.	4.26E-20	0.	0.	0.	0.	0.	0.	0.	2.89E-08	2.72E-08	6.31E-09	6.25E-08
95	1.30	0.	4.88E-20	0.	0.	0.	0.	0.	0.	0.	3.64E-08	3.83E-08	9.01E-09	8.57E-08
96	1.20	0.	4.58E-20	0.	0.	0.	0.	0.	0.	0.	4.64E-08	4.84E-08	1.11E-08	1.06E-07
97	1.10	0.	4.37E-20	0.	0.	0.	0.	9.44E-26	0.	0.	6.05E-08	5.98E-08	1.41E-08	1.34E-07
98	1.00	0.	4.01E-20	0.	0.	0.	0.	1.44E-24	0.	0.	8.09E-08	7.27E-08	1.71E-08	1.71E-07
99	0.90	0.	3.29E-20	0.	0.	0.	0.	1.47E-24	0.	0.	1.12E-07	9.18E-08	1.83E-08	2.12E-07
100	0.80	0.	1.55E-20	0.	0.	0.	0.	3.61E-23	0.	0.	1.61E-07	9.44E-08	2.12E-08	2.76E-07
101	0.70	0.	3.04E-21	0.	0.	0.	0.	3.25E-23	0.	0.	2.43E-07	8.83E-08	1.83E-08	3.49E-07
102	0.60	0.	6.88E-22	0.	0.	0.	0.	1.06E-22	0.	0.	3.91E-07	9.94E-08	2.07E-08	5.11E-07

ABSORPTION COEFFICI OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.43E-23	0.	0.	0.	7.41E-17	1.15E-12	2.35E-10	2.21E-11	2.58E-10
2	10.60	0.	0.	1.31E-23	0.	0.	0.	7.42E-17	1.19E-12	2.36E-10	2.20E-11	2.60E-10
3	10.50	0.	0.	1.32E-23	0.	0.	0.	7.43E-17	1.22E-12	2.38E-10	2.20E-11	2.61E-10
4	10.40	0.	0.	1.25E-23	0.	0.	0.	7.44E-17	1.24E-12	2.39E-10	2.19E-11	2.62E-10
5	10.30	0.	0.	1.10E-23	0.	0.	0.	7.45E-17	1.29E-12	2.41E-10	2.18E-11	2.64E-10
6	10.20	0.	0.	1.13E-23	0.	0.	0.	7.46E-17	1.33E-12	2.44E-10	2.18E-11	2.67E-10
7	10.10	0.	0.	1.07E-23	0.	0.	0.	7.47E-17	1.37E-12	2.47E-10	2.18E-11	2.70E-10
8	10.00	0.	0.	9.39E-24	0.	0.	0.	7.48E-17	1.41E-12	2.50E-10	2.18E-11	2.73E-10
9	9.90	0.	0.	9.64E-24	0.	0.	0.	7.49E-17	1.44E-12	2.52E-10	2.18E-11	2.76E-10
10	9.80	0.	0.	8.87E-24	0.	0.	0.	7.50E-17	1.50E-12	2.55E-10	2.18E-11	2.79E-10
11	9.70	0.	0.	7.85E-24	0.	0.	0.	7.52E-17	1.55E-12	2.58E-10	2.18E-11	2.82E-10
12	9.61	0.	0.	8.49E-24	0.	0.	0.	7.53E-17	1.48E-12	2.61E-10	2.18E-11	2.84E-10
13	9.59	0.	0.	7.28E-24	0.	0.	0.	7.55E-17	1.65E-12	2.64E-10	2.18E-11	2.87E-10
14	9.49	0.	0.	6.90E-24	0.	0.	0.	7.57E-17	1.70E-12	2.47E-10	2.18E-11	2.70E-10
15	9.39	0.	0.	7.07E-24	0.	0.	0.	7.60E-17	1.76E-12	2.50E-10	2.19E-11	2.73E-10
16	9.20	0.	0.	6.88E-24	0.	0.	0.	7.63E-17	1.87E-12	2.52E-10	2.19E-11	2.76E-10
17	9.19	0.	0.	6.04E-24	0.	0.	0.	7.66E-17	1.88E-12	2.55E-10	2.19E-11	2.79E-10
18	9.09	0.	0.	5.51E-24	0.	0.	0.	7.68E-17	1.94E-12	2.58E-10	1.84E-11	2.78E-10
19	8.99	0.	0.	5.10E-24	0.	0.	0.	7.71E-17	2.01E-12	2.60E-10	1.80E-11	2.80E-10
20	8.88	0.	0.	5.02E-24	0.	0.	0.	7.74E-17	2.08E-12	2.63E-10	1.81E-11	2.83E-10
21	8.78	0.	0.	4.37E-24	0.	0.	0.	7.77E-17	2.15E-12	2.66E-10	1.81E-11	2.86E-10
22	8.68	0.	0.	4.51E-24	0.	0.	0.	7.79E-17	2.23E-12	2.68E-10	1.82E-11	2.89E-10
23	8.58	0.	0.	3.96E-24	0.	0.	0.	7.82E-17	2.31E-12	1.29E-10	1.82E-11	1.49E-10
24	8.48	0.	0.	3.94E-24	0.	0.	0.	7.86E-17	2.39E-12	1.32E-10	1.83E-11	1.53E-10
25	8.38	0.	0.	3.35E-24	0.	0.	0.	7.90E-17	2.48E-12	1.36E-10	1.83E-11	1.57E-10
26	8.28	0.	0.	3.39E-24	0.	0.	0.	7.94E-17	2.57E-12	1.42E-10	1.86E-11	1.63E-10
27	8.18	0.	0.	2.94E-24	0.	0.	0.	7.98E-17	2.67E-12	1.47E-10	1.88E-11	1.69E-10
28	8.08	0.	0.	2.96E-24	0.	0.	0.	8.03E-17	2.77E-12	1.53E-10	1.90E-11	1.75E-10
29	7.98	0.	0.	2.55E-24	0.	0.	0.	8.07E-17	2.88E-12	1.58E-10	1.92E-11	1.80E-10
30	7.88	0.	0.	2.65E-24	0.	0.	0.	8.11E-17	2.99E-12	1.64E-10	1.94E-11	1.86E-10
31	7.78	0.	0.	2.33E-24	0.	0.	0.	8.15E-17	3.11E-12	1.70E-10	1.96E-11	1.93E-10
32	7.63	0.	0.	2.22E-24	0.	2.20E-28	0.	8.19E-17	3.23E-12	1.77E-10	1.99E-11	2.00E-10
33	7.58	0.	0.	2.06E-24	0.	7.53E-28	0.	8.23E-17	3.37E-12	1.83E-10	2.01E-11	2.07E-10
34	7.48	0.	0.	1.85E-24	0.	6.25E-27	0.	8.28E-17	3.50E-12	1.75E-10	2.03E-11	1.95E-10
35	7.38	0.	0.	1.76E-24	0.	2.48E-26	0.	8.32E-17	3.65E-12	1.83E-10	2.04E-11	2.03E-10
36	7.23	0.	0.	1.59E-24	0.	6.41E-26	0.	8.37E-17	3.81E-12	1.93E-10	2.10E-11	2.14E-10
37	7.18	0.	0.	1.53E-24	0.	2.12E-25	0.	8.44E-17	3.97E-12	2.03E-10	2.14E-11	2.29E-10
38	7.03	1.38E-27	0.	1.41E-24	0.	4.23E-25	0.	8.51E-17	4.14E-12	2.13E-10	2.18E-11	2.39E-10
39	6.98	2.71E-27	0.	1.29E-24	0.	5.85E-25	0.	8.57E-17	4.33E-12	2.24E-10	2.21E-11	2.50E-10
40	6.88	2.34E-27	0.	1.25E-24	0.	1.02E-24	0.	8.64E-17	4.52E-12	2.34E-10	2.25E-11	2.61E-10
41	6.78	1.70E-27	0.	1.10E-24	0.	1.01E-24	0.	8.71E-17	4.73E-12	2.44E-10	2.29E-11	2.71E-10
42	6.68	1.04E-27	0.	9.94E-25	0.	8.28E-25	0.	8.78E-17	4.95E-12	2.54E-10	2.34E-11	2.82E-10
43	6.58	5.81E-28	0.	7.96E-25	0.	1.22E-24	0.	8.85E-17	5.18E-12	2.64E-10	2.38E-11	2.93E-10
44	6.48	3.44E-28	0.	5.45E-25	4.19E-27	1.16E-24	0.	8.92E-17	5.43E-12	2.74E-10	2.42E-11	3.04E-10
45	6.38	2.80E-28	0.	3.42E-25	1.97E-26	8.22E-25	0.	8.99E-17	5.69E-12	2.84E-10	2.47E-11	3.14E-10
46	6.29	9.84E-29	0.	1.90E-25	2.81E-26	1.13E-24	0.	9.06E-17	5.99E-12	2.95E-10	2.52E-11	3.26E-10
47	6.19	4.16E-29	0.	8.94E-26	8.03E-26	1.40E-24	0.	9.12E-17	6.29E-12	7.80E-11	1.76E-11	1.02E-10
48	6.09	1.74E-29	0.	2.27E-26	7.71E-26	6.86E-25	0.	9.19E-17	6.60E-12	8.06E-11	1.80E-11	1.05E-10
49	5.99	4.28E-30	0.	1.63E-27	1.13E-25	6.70E-25	0.	9.19E-17	6.94E-12	8.32E-11	1.82E-11	1.08E-10
50	5.80	5.45E-31	0.	4.11E-29	1.59E-25	5.90E-25	0.	9.05E-17	7.31E-12	8.58E-11	1.85E-11	1.12E-10
51	5.70	4.01E-32	0.	0.	1.86E-25	7.72E-25	0.	8.51E-17	7.78E-12	8.97E-11	1.87E-11	1.16E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.81E-33	0.	0.	0.	1.59E-25	1.02E-24	0.	0.	7.91E-17	8.12E-12	9.46E-11	1.99E-11	1.22E-10
53	5.50	0.	0.	0.	0.	1.94E-25	9.49E-25	0.	0.	7.95E-17	8.58E-12	9.98E-11	1.93E-11	1.28E-10
54	5.40	0.	0.	0.	0.	1.78E-25	7.72E-25	0.	0.	7.99E-17	9.0AE-12	1.05E-10	1.97E-11	1.34E-10
55	5.30	0.	0.	0.	0.	1.83E-25	9.75E-25	0.	0.	8.04E-17	9.50E-12	1.11E-10	1.8AE-11	1.39E-10
56	5.20	0.	0.	0.	0.	1.97E-25	7.36E-25	0.	0.	8.09E-17	1.02E-11	1.17E-10	1.93E-11	1.46E-10
57	5.10	0.	0.	0.	0.	1.97E-25	9.45E-25	0.	0.	8.16E-17	1.08E-11	1.22E-10	1.97E-11	1.53E-10
58	5.00	2.49E-26	0.	0.	0.	1.80E-25	8.89E-25	0.	0.	8.23E-17	1.14E-11	1.28E-10	2.02E-11	1.60E-10
59	4.90	6.05E-26	0.	0.	0.	2.01E-25	9.70E-25	0.	0.	8.30E-17	1.22E-11	1.34E-10	2.07E-11	1.67E-10
60	4.80	1.14E-25	0.	0.	0.	2.16E-25	9.11E-25	0.	0.	8.37E-17	1.29E-11	1.40E-10	2.12E-11	1.74E-10
61	4.70	1.53E-25	0.	0.	0.	2.16E-25	8.28E-25	0.	0.	8.44E-17	1.38E-11	1.48E-10	2.18E-11	1.84E-10
62	4.60	2.12E-25	0.	0.	0.	2.22E-25	7.52E-25	0.	0.	8.51E-17	1.47E-11	1.59E-10	2.25E-11	1.96E-10
63	4.50	2.23E-25	0.	1.17E-25	0.	2.04E-25	5.66E-25	0.	0.	8.57E-17	1.57E-11	1.70E-10	2.32E-11	2.09E-10
64	4.40	2.18E-25	0.	3.52E-25	0.	2.04E-25	3.89E-25	0.	0.	8.64E-17	1.68E-11	1.81E-10	2.35E-11	2.21E-10
65	4.30	2.26E-25	0.	1.15E-24	0.	1.95E-25	2.44E-25	0.	0.	8.71E-17	1.81E-11	1.92E-10	2.13E-11	2.12E-10
66	4.20	2.11E-25	0.	3.48E-24	0.	2.06E-25	1.72E-25	0.	0.	8.78E-17	1.94E-11	2.05E-10	1.27E-11	2.37E-10
67	4.10	1.98E-25	0.	1.62E-24	0.	2.02E-25	4.77E-26	0.	0.	8.81E-17	2.09E-11	2.16E-10	1.33E-11	2.50E-10
68	4.00	1.83E-25	0.	5.32E-24	0.	1.95E-25	5.40E-26	0.	0.	8.85E-17	2.25E-11	2.24E-10	1.40E-11	2.60E-10
69	3.90	1.56E-25	0.	2.49E-24	6.51E-20	1.80E-25	1.36E-26	0.	0.	8.81E-17	2.43E-11	2.37E-10	1.44E-11	2.76E-10
70	3.80	1.71E-25	0.	3.97E-24	2.74E-19	1.94E-25	0.	0.	0.	8.78E-17	2.62E-11	2.49E-10	1.54E-11	2.91E-10
71	3.70	1.53E-25	0.	4.15E-24	1.17E-19	1.68E-25	0.	0.	0.	8.44E-17	2.84E-11	2.62E-10	1.67E-11	3.07E-10
72	3.60	1.58E-25	0.	2.93E-24	6.24E-19	1.80E-25	0.	0.	0.	8.09E-17	3.09E-11	2.76E-10	1.71E-11	3.24E-10
73	3.50	1.29E-25	0.	3.88E-24	1.19E-18	1.42E-25	0.	0.	0.	7.41E-17	3.36E-11	2.86E-11	1.89E-11	1.41E-10
74	3.40	1.19E-25	0.	2.47E-24	1.80E-19	1.43E-25	0.	0.	0.	4.27E-17	3.67E-11	9.70E-11	2.96E-11	1.54E-10
75	3.30	9.51E-26	0.	2.53E-24	6.96E-19	1.28E-25	0.	0.	0.	4.28E-17	4.02E-11	1.05E-10	1.99E-11	1.65E-10
76	3.20	8.31E-26	0.	1.67E-24	1.16E-18	1.34E-25	0.	0.	0.	4.29E-17	4.41E-11	1.19E-10	2.01E-11	1.83E-10
77	3.10	7.98E-26	0.	1.29E-24	2.85E-19	1.28E-25	0.	0.	0.	4.30E-17	4.86E-11	1.34E-10	2.19E-11	2.05E-10
78	3.00	7.17E-26	0.	7.95E-25	6.64E-19	1.21E-25	0.	0.	0.	4.31E-17	5.37E-11	1.50E-10	2.38E-11	2.27E-10
79	2.90	4.04E-26	0.	4.90E-25	3.65E-19	9.23E-26	0.	0.	0.	4.31E-17	5.95E-11	1.65E-10	2.57E-11	2.51E-10
80	2.80	6.31E-26	0.	2.40E-25	2.36E-19	6.44E-26	0.	0.	0.	4.32E-17	6.62E-11	1.81E-10	2.47E-11	2.72E-10
81	2.70	4.08E-26	0.	1.12E-25	3.15E-19	3.53E-26	0.	0.	0.	4.32E-17	7.40E-11	1.98E-10	1.77E-11	2.89E-10
82	2.60	1.93E-26	0.	5.47E-26	3.20E-20	1.56E-26	0.	0.	0.	4.32E-17	8.30E-11	1.96E-10	1.93E-11	2.98E-10
83	2.50	1.36E-27	0.	5.84E-27	3.09E-20	5.73E-27	0.	0.	0.	4.32E-17	9.34E-11	2.18E-10	2.20E-11	3.34E-10
84	2.40	0.	2.66E-25	0.	2.47E-20	3.99E-28	0.	0.	0.	4.32E-17	1.04E-10	2.51E-10	2.63E-11	3.83E-10
85	2.30	0.	8.21E-25	0.	0.	0.	0.	0.	0.	4.29E-17	1.20E-10	2.85E-10	3.08E-11	4.36E-10
86	2.20	0.	2.14E-24	0.	0.	0.	0.	0.	0.	4.27E-17	1.38E-10	3.20E-10	3.61E-11	4.94E-10
87	2.10	0.	2.26E-24	0.	0.	0.	0.	0.	0.	4.25E-17	1.50E-10	1.82E-10	3.52E-11	3.76E-10
88	2.00	0.	4.44E-24	0.	0.	0.	0.	0.	0.	4.12E-17	1.84E-10	2.08E-10	4.02E-11	4.32E-10
89	1.90	0.	5.61E-24	0.	0.	0.	0.	0.	0.	3.96E-17	2.14E-10	2.35E-10	4.64E-11	4.97E-10
90	1.80	0.	4.75E-24	0.	0.	0.	0.	0.	0.	3.79E-17	2.54E-10	2.78E-10	5.59E-11	5.79E-10
91	1.70	0.	5.45E-24	0.	0.	0.	0.	0.	0.	3.57E-17	3.02E-10	3.18E-10	6.45E-11	6.76E-10
92	1.60	0.	4.07E-24	0.	0.	0.	0.	0.	0.	3.02E-17	3.63E-10	3.37E-10	7.59E-11	7.76E-10
93	1.50	0.	4.69E-24	0.	0.	0.	0.	0.	0.	1.37E-17	4.43E-10	3.39E-10	8.52E-11	8.47E-10
94	1.40	0.	4.64E-24	0.	0.	0.	0.	0.	0.	0.	5.47E-10	4.04E-10	8.88E-11	1.03E-09
95	1.30	0.	3.55E-24	0.	0.	0.	0.	0.	0.	0.	6.88E-10	3.04E-10	1.05E-10	1.10E-09
96	1.20	0.	3.40E-24	0.	0.	0.	0.	0.	0.	0.	8.79E-10	4.17E-10	1.30E-10	1.42E-09
97	1.10	0.	3.23E-24	0.	0.	0.	0.	9.72E-30	0.	0.	1.14E-09	5.14E-10	1.65E-10	1.82E-09
98	1.00	0.	2.97E-24	0.	0.	0.	0.	1.45E-28	0.	0.	1.53E-09	6.25E-10	2.08E-10	2.35E-09
99	0.90	0.	2.44E-24	0.	0.	0.	0.	1.68E-28	0.	0.	2.11E-09	7.83E-10	2.14E-10	3.03E-09
100	0.80	0.	1.15E-24	0.	0.	0.	0.	3.64E-27	0.	0.	3.03E-09	6.44E-10	1.86E-10	3.88E-09
101	0.77	1.	2.70E-25	0.	0.	0.	0.	3.27E-27	0.	0.	4.54E-09	7.60E-10	2.14E-10	5.54E-09
102	0.69	0.	5.04E-26	0.	0.	0.	0.	1.07E-26	0.	0.	7.34E-09	8.52E-10	2.42E-10	8.44E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7	0.	0.	9.08E-01	0.	0.	0.	4.35E 00	2.09E-01	2.97E 02	2.99E 00	3.05E 02
2	10.6	0.	0.	8.23E-01	0.	0.	0.	4.35E 00	2.15E-01	1.26E 01	2.98E 00	2.69E 01
3	10.5	0.	0.	8.34E-01	0.	0.	0.	4.36E 00	2.21E-01	1.26E 01	2.96E 00	2.18E 01
4	10.4	0.	0.	7.95E-01	0.	0.	0.	4.37E 00	2.27E-01	1.26E 01	2.95E 00	2.18E 01
5	10.3	0.	0.	6.97E-01	0.	0.	0.	4.37E 00	2.34E-01	1.27E 01	2.94E 00	2.09E 01
6	10.2	0.	0.	7.23E-01	0.	0.	0.	4.38E 00	2.41E-01	1.27E 01	2.93E 00	2.18E 01
7	10.1	0.	0.	6.83E-01	0.	0.	0.	4.38E 00	2.49E-01	1.27E 01	2.91E 00	2.09E 01
8	10.0	0.	0.	6.04E-01	0.	0.	0.	4.39E 00	2.56E-01	1.27E 01	2.90E 00	2.09E 01
9	9.9	0.	0.	6.20E-01	0.	0.	0.	4.40E 00	2.64E-01	1.28E 01	2.89E 00	2.09E 01
10	9.8	0.	0.	5.86E-01	0.	0.	0.	4.40E 00	2.72E-01	1.28E 01	2.88E 00	2.09E 01
11	9.7	0.	0.	5.19E-01	0.	0.	0.	4.41E 00	2.81E-01	1.28E 01	2.87E 00	2.09E 01
12	9.6	0.	0.	5.52E-01	0.	0.	0.	4.42E 00	2.90E-01	1.28E 01	2.85E 00	2.10E 01
13	9.5	0.	0.	4.75E-01	0.	0.	0.	4.43E 00	2.99E-01	1.29E 01	2.84E 00	2.09E 01
14	9.4	0.	0.	4.52E-01	0.	0.	0.	4.44E 00	3.09E-01	1.29E 01	2.83E 00	2.18E 01
15	9.3	0.	0.	4.64E-01	0.	0.	0.	4.46E 00	3.19E-01	1.38E 01	2.87E 00	2.18E 01
16	9.2	0.	0.	3.88E-01	0.	0.	0.	4.48E 00	3.30E-01	1.38E 01	2.81E 00	2.18E 01
17	9.1	0.	0.	3.99E-01	0.	0.	0.	4.49E 00	3.41E-01	4.98E 00	2.79E 00	1.29E 01
18	9.0	0.	0.	3.65E-01	0.	0.	0.	4.51E 00	3.52E-01	4.91E 00	2.78E 00	1.29E 01
19	8.9	0.	0.	3.40E-01	0.	0.	0.	4.53E 00	3.64E-01	4.91E 00	2.77E 00	1.29E 01
20	8.8	0.	0.	3.35E-01	0.	0.	0.	4.54E 00	3.77E-01	4.92E 00	2.76E 00	1.29E 01
21	8.7	0.	0.	2.93E-01	0.	0.	0.	4.56E 00	3.90E-01	4.93E 00	2.75E 00	1.29E 01
22	8.6	0.	0.	3.03E-01	0.	0.	0.	4.57E 00	4.04E-01	4.94E 00	2.74E 00	1.38E 01
23	8.5	0.	0.	2.67E-01	0.	0.	0.	4.59E 00	4.19E-01	4.95E 00	2.73E 00	1.38E 01
24	8.4	0.	0.	2.67E-01	0.	0.	0.	4.61E 00	4.34E-01	4.97E 00	2.72E 00	1.38E 01
25	8.3	0.	0.	2.20E-01	0.	0.	0.	4.64E 00	4.50E-01	4.99E 00	2.71E 00	1.38E 01
26	8.2	0.	0.	2.31E-01	0.	0.	0.	4.66E 00	4.67E-01	5.01E 00	2.72E 00	1.31E 01
27	8.1	0.	0.	2.01E-01	0.	0.	0.	4.69E 00	4.85E-01	5.02E 00	2.72E 00	1.31E 01
28	8.0	0.	0.	2.03E-01	0.	0.	0.	4.71E 00	5.03E-01	5.05E 00	2.73E 00	1.32E 01
29	7.9	0.	0.	1.76E-01	0.	0.	0.	4.73E 00	5.23E-01	5.08E 00	2.73E 00	1.32E 01
30	7.8	0.	0.	1.83E-01	0.	0.	0.	4.76E 00	5.43E-01	5.12E 00	2.73E 00	1.33E 01
31	7.7	0.	0.	1.62E-01	0.	0.	0.	4.78E 00	5.65E-01	5.15E 00	2.74E 00	1.34E 01
32	7.6	0.	0.	1.55E-01	0.	6.69E-06	0.	4.81E 00	5.88E-01	5.19E 00	2.74E 00	1.35E 01
33	7.5	0.	0.	1.44E-01	0.	2.21E-05	0.	4.83E 00	6.12E-01	5.22E 00	2.75E 00	1.36E 01
34	7.4	0.	0.	1.33E-01	0.	1.90E-04	0.	4.86E 00	6.37E-01	5.25E 00	2.75E 00	1.36E 01
35	7.3	0.	0.	1.24E-01	0.	7.42E-04	0.	4.89E 00	6.64E-01	5.29E 00	2.75E 00	1.37E 01
36	7.2	0.	0.	1.13E-01	0.	2.05E-03	0.	4.91E 00	6.92E-01	5.32E 00	2.76E 00	1.38E 01
37	7.1	0.	0.	1.09E-01	0.	6.40E-03	0.	4.95E 00	7.22E-01	5.36E 00	2.76E 00	1.39E 01
38	7.0	1.80E-05	0.	1.00E-01	0.	1.26E-02	0.	4.99E 00	7.54E-01	5.39E 00	2.77E 00	1.40E 01
39	6.9	3.70E-05	0.	9.25E-02	0.	1.78E-02	0.	5.03E 00	7.87E-01	5.43E 00	2.77E 00	1.41E 01
40	6.8	3.20E-05	0.	8.96E-02	0.	3.04E-02	0.	5.07E 00	8.23E-01	5.46E 00	2.78E 00	1.43E 01
41	6.7	2.34E-05	0.	7.89E-02	0.	2.99E-02	0.	5.11E 00	8.61E-01	5.50E 00	2.78E 00	1.44E 01
42	6.6	1.43E-05	0.	7.12E-02	0.	2.50E-02	0.	5.15E 00	9.01E-01	5.55E 00	2.79E 00	1.45E 01
43	6.5	9.29E-06	0.	5.72E-02	0.	3.63E-02	0.	5.19E 00	9.41E-01	5.61E 00	2.80E 00	1.46E 01
44	6.4	4.77E-06	0.	3.99E-02	1.20E-04	3.39E-02	0.	5.23E 00	9.89E-01	5.67E 00	2.81E 00	1.48E 01
45	6.3	2.78E-06	0.	2.52E-02	5.67E-04	2.46E-02	0.	5.27E 00	1.04E 00	5.73E 00	2.83E 00	1.49E 01
46	6.2	1.26E-06	0.	1.41E-02	8.10E-04	3.35E-02	0.	5.31E 00	1.09E 00	5.79E 00	2.85E 00	1.51E 01
47	6.1	5.82E-07	0.	6.68E-03	2.32E-03	4.12E-02	0.	5.36E 00	1.14E 00	5.86E 00	2.87E 00	1.53E 01
48	6.0	2.44E-07	0.	1.71E-03	2.25E-03	2.95E-02	0.	5.40E 00	1.20E 00	5.94E 00	2.90E 00	1.55E 01
49	5.9	6.02E-08	0.	1.22E-04	3.31E-03	1.99E-02	0.	5.40E 00	1.26E 00	6.03E 00	2.92E 00	1.56E 01
50	5.8	7.69E-09	0.	3.09E-06	4.64E-03	2.06E-02	0.	5.31E 00	1.33E 00	6.11E 00	2.95E 00	1.57E 01
51	5.7	5.66E-10	0.	0.	5.47E-03	2.31E-02	0.	4.99E 00	1.40E 00	6.20E 00	2.97E 00	1.56E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.56E-11	0.	0.	0.	4.71E-03	3.03E-02	0.	0.	4.64E 00	1.40E 00	6.31E 00	3.00E 00	1.55E 01
53	5.50	0.	0.	0.	0.	5.75E-03	2.81E-02	0.	0.	4.67E 00	1.50E 00	6.44E 00	3.03E 00	1.57E 01
54	5.40	0.	0.	0.	0.	5.32E-03	2.31E-02	0.	0.	4.69E 00	1.65E 00	6.51E 00	3.07E 00	1.61E 01
55	5.30	0.	0.	0.	0.	5.45E-03	2.90E-02	0.	0.	4.72E 00	1.75E 00	6.79E 00	3.11E 00	1.64E 01
56	5.20	0.	0.	0.	0.	5.89E-03	2.22E-02	0.	0.	4.75E 00	1.85E 00	6.97E 00	3.16E 00	1.68E 01
57	5.10	0.	0.	0.	0.	5.89E-03	2.84E-02	0.	0.	4.79E 00	1.97E 00	7.17E 00	3.22E 00	1.72E 01
58	5.00	3.54E-04	0.	0.	0.	5.48E-03	2.69E-02	0.	0.	4.83E 00	2.09E 00	7.49E 00	3.27E 00	1.76E 01
59	4.90	8.66E-04	0.	0.	0.	6.94E-03	2.95E-02	0.	0.	4.87E 00	2.22E 00	7.65E 00	3.33E 00	1.81E 01
60	4.80	1.63E-03	0.	0.	0.	6.58E-03	2.77E-02	0.	0.	4.91E 00	2.36E 00	7.93E 00	3.40E 00	1.86E 01
61	4.70	2.22E-03	0.	0.	0.	6.53E-03	2.52E-02	0.	0.	4.95E 00	2.52E 00	8.23E 00	3.49E 00	1.92E 01
62	4.60	3.07E-03	0.	0.	0.	6.73E-03	2.29E-02	0.	0.	4.99E 00	2.69E 00	8.57E 00	3.58E 00	1.99E 01
63	4.50	3.24E-03	0.	0.83E-03	0.	6.19E-03	1.73E-02	0.	0.	5.03E 00	2.87E 00	9.00E 00	3.68E 00	2.06E 01
64	4.40	3.49E-03	0.	2.62E-02	0.	6.23E-03	1.18E-02	0.	0.	5.07E 00	3.08E 00	9.45E 00	3.78E 00	2.14E 01
65	4.30	3.31E-03	0.	8.73E-02	0.	5.98E-03	7.47E-03	0.	0.	5.11E 00	3.30E 00	9.94E 00	3.88E 00	2.23E 01
66	4.20	3.10E-03	0.	2.75E-01	0.	6.30E-03	5.20E-03	0.	0.	5.15E 00	3.54E 00	1.04E 01	3.99E 00	2.34E 01
67	4.10	2.93E-03	0.	1.23E-01	0.	6.20E-03	1.46E-03	0.	0.	5.17E 00	3.81E 00	1.09E 01	3.99E 00	2.40E 01
68	4.00	2.71E-03	0.	3.98E-01	0.	6.01E-03	1.09E-03	0.	0.	5.19E 00	4.11E 00	1.14E 01	1.79E 00	2.29E 01
69	3.90	2.32E-03	0.	1.07E-01	1.43E-02	5.58E-03	4.12E-04	0.	0.	5.17E 00	4.43E 00	1.12E 01	1.85E 00	2.29E 01
70	3.80	2.55E-03	0.	3.80E-01	5.87E-02	6.82E-03	0.	0.	0.	5.15E 00	4.80E 00	1.14E 01	1.93E 00	2.36E 01
71	3.70	2.20E-03	0.	3.10E-01	2.40E-02	5.18E-03	0.	0.	0.	5.07E 00	5.20E 00	9.42E 00	2.11E 00	2.21E 01
72	3.60	2.07E-03	0.	2.23E-01	1.36E-01	5.60E-03	0.	0.	0.	4.75E 00	5.65E 00	1.02E 01	2.31E 00	2.32E 01
73	3.50	1.94E-03	0.	2.93E-01	2.53E-01	4.46E-03	0.	0.	0.	4.35E 00	6.15E 00	1.08E 01	2.53E 00	2.44E 01
74	3.40	1.79E-03	0.	1.89E-01	3.98E-02	5.82E-03	0.	0.	0.	2.51E 00	6.72E 00	1.28E 01	2.79E 00	2.42E 01
75	3.30	1.44E-03	0.	1.94E-01	1.51E-01	4.84E-03	0.	0.	0.	2.51E 00	7.36E 00	1.32E 01	3.05E 00	2.65E 01
76	3.20	1.26E-03	0.	1.20E-01	2.44E-01	4.26E-03	0.	0.	0.	2.52E 00	8.08E 00	1.45E 01	3.33E 00	2.88E 01
77	3.10	1.22E-03	0.	9.99E-02	6.38E-02	4.45E-03	0.	0.	0.	2.52E 00	8.91E 00	1.57E 01	3.68E 00	3.09E 01
78	3.00	1.10E-03	0.	6.16E-02	1.43E-01	3.85E-03	0.	0.	0.	2.53E 00	9.84E 00	1.70E 01	3.88E 00	3.35E 01
79	2.90	9.30E-04	0.	3.87E-02	7.82E-02	2.97E-03	0.	0.	0.	2.53E 00	1.09E 01	1.84E 01	4.18E 00	3.62E 01
80	2.80	9.74E-04	0.	1.87E-02	5.22E-02	2.89E-03	0.	0.	0.	2.54E 00	1.21E 01	2.08E 01	4.53E 00	3.93E 01
81	2.70	6.34E-04	0.	8.77E-03	6.77E-02	1.16E-03	0.	0.	0.	2.54E 00	1.36E 01	2.17E 01	4.91E 00	4.29E 01
82	2.60	3.83E-04	0.	4.24E-03	6.97E-03	5.15E-04	0.	0.	0.	2.54E 00	1.52E 01	2.36E 01	5.29E 00	4.67E 01
83	2.50	2.14E-05	0.	4.48E-04	6.77E-03	1.24E-04	0.	0.	0.	2.54E 00	1.72E 01	2.69E 01	3.27E 00	4.99E 01
84	2.40	0.	2.01E-02	0.	9.38E-03	1.33E-05	0.	0.	0.	2.54E 00	1.94E 01	3.14E 01	3.80E 00	5.72E 01
85	2.30	0.	6.67E-02	0.	0.	0.	0.	0.	0.	2.52E 00	2.21E 01	2.74E 01	4.58E 00	5.67E 01
86	2.20	0.	1.60E-01	0.	0.	0.	0.	0.	0.	2.51E 00	2.53E 01	3.24E 01	5.47E 00	6.58E 01
87	2.10	0.	1.66E-01	0.	0.	0.	0.	0.	0.	2.50E 00	2.92E 01	3.77E 01	6.36E 00	7.59E 01
88	2.00	0.	3.30E-01	0.	0.	0.	0.	0.	0.	2.42E 00	3.39E 01	4.38E 01	7.20E 00	8.69E 01
89	1.90	0.	4.96E-01	0.	0.	0.	0.	0.	0.	2.32E 00	3.96E 01	4.93E 01	8.44E 00	1.00E 02
90	1.80	0.	3.46E-01	0.	0.	0.	0.	0.	0.	2.22E 00	4.67E 01	5.90E 01	1.03E 01	1.19E 02
91	1.70	0.	3.95E-01	0.	0.	0.	0.	0.		2.09E 00	5.56E 01	7.09E 01	1.25E 01	1.42E 02
92	1.60	0.	2.96E-01	0.	0.	0.	0.	0.	0.	1.77E 00	6.71E 01	9.29E 01	1.47E 01	1.67E 02
93	1.50	0.	3.40E-01	0.	0.	0.	0.	0.	0.	0.05E-01	8.20E 01	1.08E 02	1.79E 01	2.09E 02
94	1.40	0.	3.35E-01	0.	0.	0.	0.	0.	0.	0.	1.02E 02	1.34E 02	2.13E 01	2.57E 02
95	1.30	0.	2.97E-01	0.	0.	0.	0.	0.	0.	0.	1.27E 02	1.79E 02	2.82E 01	3.35E 02
96	1.20	0.	2.49E-01	0.	0.	0.	0.	0.	0.	0.	1.63E 02	1.98E 02	2.64E 01	3.69E 02
97	1.10	0.	2.35E-01	0.	0.	0.	0.	2.87E-07	0.	0.	2.12E 02	2.44E 02	3.56E 01	4.91E 02
98	1.00	0.	2.16E-01	0.	0.	0.	0.	4.44E-06	0.	0.	2.83E 02	2.96E 02	4.05E 01	6.28E 02
99	0.90	0.	1.77E-01	0.	0.	0.	0.	5.15E-06	0.	0.	3.93E 02	3.48E 02	4.76E 01	7.80E 02
100	0.80	0.	8.34E-02	0.	0.	0.	0.	1.12E-04	0.	0.	5.65E 02	3.91E 02	5.47E 01	1.01E 03
101	0.70	0.	1.95E-02	0.	0.	0.	0.	1.88E-04	0.	0.	8.53E 02	4.24E 02	5.83E 01	1.33E 03
102	0.60	0.	3.08E-03	0.	0.	0.	0.	3.33E-04	0.	0.	1.38E 03	4.74E 02	6.29E 01	1.92E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	N0 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.07E-03	0.	0.	0.	1.17E-01	1.79E-02	2.59E 01	2.73E-01	2.64E 01
2	10.60	0.	0.	6.20E-03	0.	0.	0.	1.17E-01	1.64E-02	1.10E 00	2.72E-01	1.51E 00
3	10.50	0.	0.	6.36E-03	0.	0.	0.	1.18E-01	1.90E-02	1.10E 00	2.71E-01	1.52E 00
4	10.40	0.	0.	6.06E-03	0.	0.	0.	1.18E-01	1.95E-02	1.11E 00	2.70E-01	1.52E 00
5	10.30	0.	0.	5.32E-03	0.	0.	0.	1.18E-01	2.01E-02	1.11E 00	2.69E-01	1.52E 00
6	10.20	0.	0.	5.51E-03	0.	0.	0.	1.18E-01	2.07E-02	1.11E 00	2.68E-01	1.52E 00
7	10.10	0.	0.	5.21E-03	0.	0.	0.	1.18E-01	2.14E-02	1.11E 00	2.67E-01	1.52E 00
8	10.00	0.	0.	4.60E-03	0.	0.	0.	1.18E-01	2.20E-02	1.11E 00	2.66E-01	1.52E 00
9	9.90	0.	0.	4.73E-03	0.	0.	0.	1.19E-01	2.27E-02	1.11E 00	2.65E-01	1.52E 00
10	9.80	0.	0.	4.47E-03	0.	0.	0.	1.19E-01	2.34E-02	1.12E 00	2.63E-01	1.53E 00
11	9.70	0.	0.	3.89E-03	0.	0.	0.	1.19E-01	2.42E-02	1.12E 00	2.62E-01	1.53E 00
12	9.60	0.	0.	4.21E-03	0.	0.	0.	1.19E-01	2.49E-02	1.12E 00	2.61E-01	1.53E 00
13	9.50	0.	0.	3.62E-03	0.	0.	0.	1.19E-01	2.57E-02	1.13E 00	2.60E-01	1.53E 00
14	9.40	0.	0.	3.45E-03	0.	0.	0.	1.20E-01	2.66E-02	1.13E 00	2.59E-01	1.54E 00
15	9.30	0.	0.	3.54E-03	0.	0.	0.	1.20E-01	2.74E-02	1.13E 00	2.58E-01	1.54E 00
16	9.20	0.	0.	2.96E-03	0.	0.	0.	1.21E-01	2.83E-02	1.14E 00	2.57E-01	1.54E 00
17	9.10	0.	0.	3.05E-03	0.	0.	0.	1.21E-01	2.93E-02	4.28E-01	2.56E-01	8.38E-01
18	9.00	0.	0.	2.79E-03	0.	0.	0.	1.22E-01	3.03E-02	4.29E-01	2.55E-01	8.38E-01
19	8.90	0.	0.	2.59E-03	0.	0.	0.	1.22E-01	3.13E-02	4.29E-01	2.54E-01	8.39E-01
20	8.80	0.	0.	2.56E-03	0.	0.	0.	1.22E-01	3.24E-02	4.30E-01	2.53E-01	8.40E-01
21	8.70	0.	0.	2.24E-03	0.	0.	0.	1.23E-01	3.36E-02	4.31E-01	2.52E-01	8.41E-01
22	8.60	0.	0.	2.31E-03	0.	0.	0.	1.23E-01	3.48E-02	4.31E-01	2.51E-01	8.42E-01
23	8.50	0.	0.	2.04E-03	0.	0.	0.	1.24E-01	3.60E-02	4.33E-01	2.50E-01	8.44E-01
24	8.40	0.	0.	2.03E-03	0.	0.	0.	1.24E-01	3.73E-02	4.34E-01	2.49E-01	8.47E-01
25	8.30	0.	0.	1.74E-03	0.	0.	0.	1.25E-01	3.87E-02	4.35E-01	2.48E-01	8.50E-01
26	8.20	0.	0.	1.76E-03	0.	0.	0.	1.26E-01	4.01E-02	4.37E-01	2.49E-01	8.54E-01
27	8.10	0.	0.	1.53E-03	0.	0.	0.	1.26E-01	4.17E-02	4.39E-01	2.49E-01	8.58E-01
28	8.00	0.	0.	1.55E-03	0.	0.	0.	1.27E-01	4.33E-02	4.41E-01	2.50E-01	8.63E-01
29	7.90	0.	0.	1.34E-03	0.	0.	0.	1.28E-01	4.49E-02	4.44E-01	2.50E-01	8.68E-01
30	7.80	0.	0.	1.4_E-03	0.	0.	0.	1.28E-01	4.67E-02	4.47E-01	2.50E-01	8.74E-01
31	7.70	0.	0.	1.24E-03	0.	0.	0.	1.29E-01	4.86E-02	4.50E-01	2.51E-01	8.80E-01
32	7.60	0.	0.	1.18E-03	0.	5.31E-08	0.	1.30E-01	5.05E-02	4.53E-01	2.51E-01	8.86E-01
33	7.50	0.	0.	1.10E-03	0.	1.77E-07	0.	1.30E-01	5.26E-02	4.56E-01	2.51E-01	8.92E-01
34	7.40	0.	0.	9.92E-04	0.	1.52E-06	0.	1.31E-01	5.48E-02	4.59E-01	2.52E-01	8.98E-01
35	7.30	0.	0.	9.45E-04	0.	5.93E-06	0.	1.32E-01	5.71E-02	4.62E-01	2.52E-01	9.04E-01
36	7.20	0.	0.	8.58E-04	0.	1.64E-05	0.	1.32E-01	5.95E-02	4.65E-01	2.53E-01	9.11E-01
37	7.10	0.	0.	8.29E-04	0.	5.12E-05	0.	1.34E-01	6.21E-02	4.68E-01	2.53E-01	9.18E-01
38	7.00	1.58E-07	0.	7.65E-04	0.	1.00E-04	0.	1.35E-01	6.48E-02	4.71E-01	2.53E-01	9.25E-01
39	6.90	3.10E-07	0.	7.05E-04	0.	1.42E-04	0.	1.36E-01	6.77E-02	4.74E-01	2.54E-01	9.32E-01
40	6.80	2.68E-07	0.	6.83E-04	0.	2.43E-04	0.	1.37E-01	7.08E-02	4.77E-01	2.54E-01	9.40E-01
41	6.70	1.96E-07	0.	6.02E-04	0.	2.39E-04	0.	1.38E-01	7.40E-02	4.80E-01	2.55E-01	9.48E-01
42	6.60	1.20E-07	0.	5.43E-04	0.	1.99E-04	0.	1.39E-01	7.75E-02	4.85E-01	2.56E-01	9.58E-01
43	6.50	6.94E-08	0.	4.36E-04	0.	2.90E-04	0.	1.40E-01	8.11E-02	4.90E-01	2.56E-01	9.68E-01
44	6.40	4.00E-08	0.	3.04E-04	9.57E-07	2.71E-04	0.	1.41E-01	8.50E-02	4.95E-01	2.57E-01	9.79E-01
45	6.30	2.33E-08	0.	1.92E-04	4.53E-06	1.97E-04	0.	1.42E-01	8.91E-02	5.01E-01	2.59E-01	9.91E-01
46	6.20	1.06E-08	0.	1.08E-04	6.48E-06	2.60E-04	0.	1.43E-01	9.34E-02	5.06E-01	2.61E-01	1.00E 00
47	6.10	4.80E-09	0.	5.10E-05	1.86E-05	3.29E-04	0.	1.44E-01	9.83E-02	5.12E-01	2.63E-01	1.02E 00
48	6.00	2.04E-09	0.	1.30E-05	1.88E-05	1.84E-04	0.	1.46E-01	1.03E-01	5.19E-01	2.65E-01	1.03E 00
49	5.90	5.05E-10	0.	9.34E-07	2.64E-05	1.59E-04	0.	1.46E-01	1.09E-01	5.27E-01	2.68E-01	1.05E 00
50	5.80	6.44E-11	0.	2.56E-08	3.71E-05	1.65E-04	0.	1.47E-01	1.14E-01	5.34E-01	2.70E-01	1.06E 00
51	5.70	9.74E-12	0.	0.	4.37E-05	1.35E-04	0.	1.35E-01	1.21E-01	5.42E-01	2.72E-01	1.07E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-03 (1.6[illegible] % NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.6[illegible]	2.15E-13	0.	0.	0.	3.76E-05	2.42E-04	0.	0.	1.25E-01	1.27E-01	5.51E-01	2.74E-01	1.08E 00
53	5.5[illegible]	0.	0.	0.	0.	4.68E-05	2.25E-04	0.	0.	1.26E-01	1.34E-01	5.63E-01	2.77E-01	1.10E 00
54	5.4[illegible]	0.	0.	0.	0.	4.25E-05	1.84E-04	0.	0.	1.26E-01	1.42E-01	5.74E-01	2.81E-01	1.13E 00
55	5.3[illegible]	0.	0.	0.	0.	4.36E-05	2.31E-04	0.	0.	1.27E-01	1.50E-01	5.93E-01	2.85E-01	1.16E 00
56	5.2[illegible]	0.	0.	0.	0.	4.71E-05	1.77E-04	0.	0.	1.28E-01	1.59E-01	6.09E-01	2.90E-01	1.19E 00
57	5.1[illegible]	0.	0.	0.	0.	4.71E-05	2.27E-04	0.	0.	1.29E-01	1.69E-01	6.27E-01	2.94E-01	1.22E 00
58	5.0[illegible]	2.97E-06	0.	0.	0.	4.32E-05	2.15E-04	0.	0.	1.30E-01	1.79E-01	6.47E-01	2.99E-01	1.26E 00
59	4.9[illegible]	7.26E-06	0.	0.	0.	4.83E-05	2.35E-04	0.	0.	1.31E-01	1.91E-01	6.69E-01	3.05E-01	1.30E 00
60	4.8[illegible]	[illegible].37E-05	0.	0.	0.	5.20E-05	2.22E-04	0.	0.	1.32E-01	2.03E-01	6.93E-01	3.11E-01	1.34E 00
61	4.7[illegible]	1.86E-05	0.	0.	0.	5.22E-05	2.02E-04	0.	0.	1.34E-01	2.[illegible]7E-01	7.19E-01	3.20E-01	1.39E 00
62	4.6[illegible]	2.57E-05	0.	0.	0.	5.38E-05	1.83E-04	0.	0.	1.35[illegible]	2.31E-01	7.48E-01	3.28E-01	1.44E 00
63	4.5[illegible]	2.72E-05	0.	6.74E-05	0.	4.95E-05	1.38E-04	0.	0.	1.36E-01	2.47E-01	7.86E-01	3.37E-01	1.51E 00
64	4.4[illegible]	2.92E-05	0.	1.99E-04	0.	4.98E-05	9.46E-05	0.	0.	1.37E-01	2.65E-01	8.25E-01	3.46E-01	1.57E 00
65	4.3[illegible]	2.78E-05	0.	6.66E-04	0.	4.78E-05	5.97E-05	0.	0.	1.38E-01	2.84E-01	8.68E-01	3.55E-01	1.65E 00
66	4.2[illegible]	2.60E-05	0.	2.10E-03	0.	5.04E-05	4.16E-05	0.	0.	1.39E-01	3.05E-01	9.12E-01	3.65E-01	1.72E 00
67	4.1[illegible]	2.45E-05	0.	9.48E-04	0.	4.95E-05	1.16E-05	0.	0.	1.40E-01	3.28E-01	9.55[illegible]-01	3.65E-01	1.79E 00
68	4.0[illegible]	2.27E-05	0.	3.83E-03	0.	4.88E-05	8.79E-06	0.	0.	1.40E-01	3.53E-01	9.9[illegible]E-01	1.64E-01	1.66E 00
69	3.9[illegible]	1.94E-05	0.	1.43E-03	3.69E-04	4.46E-05	3.29E-06	0.	0.	1.40E-01	3.81E-01	9.79E-01	1.69E-01	1.67E 00
70	3.8[illegible]	2.13E-05	0.	2.29E-03	1.52E-03	4.81E-05	0.	0.	0.	1.39E-01	4.13E-01	9.92E-01	1.76E-01	1.72E 00
71	3.7[illegible]	1.91E-05	0.	2.37E-03	6.72E-04	4.14E-05	0.	0.	0.	1.37E-01	4.47E-01	9.25E-01	1.93E-01	1.69E 00
72	3.60	1.73E-05	0.	1.78E-03	3.52E-03	4.48E-05	0.	0.	0.	1.20E-01	4.86E-01	8.88E-01	2.11E-01	1.72E 00
73	3.5[illegible]	1.43E-05	0.	2.23E-03	6.51E-03	3.57E-05	0.	0.	0.	1.17E-01	5.29E-01	9.42E-01	2.32E-01	1.83E 00
74	3.4[illegible]	1.50E-05	0.	1.44E-03	1.03E-03	4.01E-05	0.	0.	0.	6.77E-02	5.78E-01	1.05E 0[illegible]	2.56E-01	1.95E 00
75	3.30	1.21E-05	0.	1.48E-03	3.98E-03	3.23E-05	0.	0.	0.	6.78E-02	6.33E-01	1.15E 00	2.80E-01	2.14E 00
76	3.2[illegible]	1.06E-05	0.	9.77E-04	6.31E-03	3.48E-05	0.	0.	0.	6.79E-02	6.95E-01	1.26E 00	3.05E-01	2.34E 00
77	3.1[illegible]	1.02E-05	0.	7.62E-04	1.63E-03	3.24E-05	0.	0.	0.	6.80E-02	7.66E-01	1.38E 00	3.38E-01	2.54E 00
78	3.9[illegible]	9.20E-06	0.	4.78E-04	3.78E-03	3.08E-05	0.	0.	0.	6.82E-02	8.46E-01	1.49E 00	3.55E-01	2.76E 00
79	2.9[illegible]	7.79E-06	0.	2.95E-04	2.82E-03	2.37E-05	0.	0.	0.	6.83E-02	9.39E-01	1.61E 00	3.83E-01	3.88E 00
80	2.8[illegible]	8.16E-06	0.	1.42E-04	1.35E-03	1.67E-05	0.	0.	0.	6.84E-02	1.04E 00	1.75E 00	4.15E-01	3.28E 00
81	2.7[illegible]	5.31E-06	0.	6.69E-05	1.75E-03	9.23E-06	0.	0.	0.	6.84E-02	1.17E 00	1.90E 00	4.49E-01	3.59E 00
82	2.60	2.54E-06	0.	3.24E-05	1.68E-04	4.11E-06	0.	0.	0.	6.84E-02	1.31E 00	2.06E 00	4.84E-01	3.95E 00
83	2.5[illegible]	1.79E-07	0.	3.42E-06	1.75E-04	9.87E-07	0.	0.	0.	6.84E-02	1.47E 00	2.35E 00	2.99E-01	4.20E 00
84	2.40	0.	1.54E-04	0.	1.37E-04	1.86E-07	0.	0.	0.	6.84E-02	1.67E 00	2.74E 00	3.51E-01	4.83E 00
85	2.3[illegible]	0.	4.63E-04	0.	0.	0.	0.	0.	0.	6.79E-02	1.90E 00	2.39E 00	4.19E-01	4.78E 00
86	2.2[illegible]	0.	1.22E-03	0.	0.	0.	0.	0.	0.	6.76E-02	2.18E 00	2.83E 00	5.00E-01	5.58E 00
87	2.1[illegible]	0.	1.27E-03	0.	0.	0.	0.	0.	0.	6.73E-02	2.51E 00	3.29E 00	5.82E-01	6.45E 00
88	2.0[illegible]	0.	2.52E-03	0.	0.	0.	0.	0.	0.	6.32E-02	2.92E 00	3.76E 00	6.64E-01	7.41E 00
89	1.9[illegible]	0.	3.10E-03	0.	0.	0.	0.	0.	0.	6.27E-02	3.41E 00	4.30E 00	7.73E-01	8.55E 00
90	1.8[illegible]	0.	2.64E-03	0.	0.	0.	0.	0.	0.	6.08E-02	4.02E 00	5.15E 00	9.39E-01	1.02E 01
91	1.7[illegible]	0.	3.81E-03	0.	0.	0.	0.	0.	0.	5.65E-02	4.79E 00	6.19E 00	1.14E 00	1.22E 01
92	1.6[illegible]	0.	2.26E-03	0.	0.	0.	0.	0.	0.	4.78E-02	5.77E 00	7.24E 00	1.35E 00	1.44[illegible] 01
93	1.5[illegible]	0.	2.59E-03	0.	0.	0.	0.	0.	0.	2.17E-02	7.[illegible]5E 00	9.40E 00	[illegible].63E 00	1.81E 01
94	1.4[illegible]	0.	2.56E-03	0.	0.	0.	0.	0.	0.	0.	8.73E 00	1.17E 01	1.95E 00	2.24E 01
95	1.3[illegible]	0.	1.96E-03	0.	0.	0.	0.	0.	0.	0.	1.09E 01	1.56E 01	2.58E 00	2.92E 01
96	1.2[illegible]	0.	1.87E-03	0.	0.	0.	0.	0.	0.	0.	1.40E 01	1.73E [illegible]1	2.69E 00	3.38E 01
97	1.1[illegible]	0.	1.88E-03	0.	0.	0.	0.	2.38E-09	0.	0.	[illegible].82E 01	2.13E 01	3.26E 00	4.28E 01
98	1.0[illegible]	0.	1.65E-03	0.	0.	0.	0.	3.55E-08	0.	0.	[illegible].44E 01	2.58E 01	3.71E 00	5.39E 01
99	0.9[illegible]	0.	1.35E-03	0.	0.	0.	0.	4.12E-08	0.	0.	3.3[illegible]E 01	2.97E 01	4.36E 00	6.78E 01
100	0.8[illegible]	0.	6.36E-04	0.	0.	0.	0.	8.90E-07	0.	0.	4.66E 01	3.42E 01	5.08E 00	8.78E 01
101	0.7[illegible]	0.	1.49E-04	0.	0.	0.	0.	8.25E-07	0.	0.	7.34E 01	3.78E [illegible]1	5.15E [illegible]1	1.16E 02
102	0.6[illegible]	0.	2.96E-05	0.	0.	0.	0.	2.66E-06	0.	0.	1.10E 02	4.14E 01	5.76E 00	1.66E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R RAYDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	2.66E-05	0.	0.	0.	2.11E-03	1.14E-03	1.62E 00	1.95E-02	1.64E 00
2	10.6e	0.	0.	2.43E-05	0.	0.	0.	2.11E-03	1.17E-03	6.84E-02	1.94E-02	9.11E-02
3	10.5e	0.	0.	2.47E-05	0.	0.	0.	2.11E-03	1.20E-03	6.87E-02	1.93E-02	9.14E-02
4	10.4e	0.	0.	2.35E-05	0.	0.	0.	2.11E-03	1.24E-03	6.90E-02	1.92E-02	9.16E-02
5	10.3e	0.	0.	2.06E-05	0.	0.	0.	2.12E-03	1.28E-03	6.91E-02	1.92E-02	9.17E-02
6	10.2e	0.	0.	2.14E-05	0.	0.	0.	2.12E-03	1.32E-03	6.93E-02	1.91E-02	9.18E-02
7	10.1e	0.	0.	2.02E-05	0.	0.	0.	2.12E-03	1.36E-03	6.92E-02	1.90E-02	9.17E-02
8	10.0e	0.	0.	1.79E-05	0.	0.	0.	2.13E-03	1.40E-03	6.93E-02	1.89E-02	9.17E-02
9	9.9e	0.	0.	1.84E-05	0.	0.	0.	2.13E-03	1.44E-03	6.94E-02	1.88E-02	9.19E-02
10	9.8e	0.	0.	1.73E-05	0.	0.	0.	2.13E-03	1.49E-03	6.96E-02	1.88E-02	9.20E-02
11	9.7e	0.	0.	1.91E-05	0.	0.	0.	2.14E-03	1.53E-03	6.97E-02	1.87E-02	9.21E-02
12	9.6e	0.	0.	1.63E-05	0.	0.	0.	2.14E-03	1.58E-03	6.99E-02	1.86E-02	9.23E-02
13	9.5e	0.	0.	1.41E-05	0.	0.	0.	2.14E-03	1.63E-03	7.01E-02	1.85E-02	9.24E-02
14	9.4e	0.	0.	1.34E-05	0.	0.	0.	2.15E-03	1.68E-03	7.03E-02	1.84E-02	9.26E-02
15	9.3e	0.	0.	1.37E-05	0.	0.	0.	2.16E-03	1.74E-03	7.06E-02	1.84E-02	9.29E-02
16	9.2e	0.	0.	1.15E-05	0.	0.	0.	2.17E-03	1.80E-03	7.08E-02	1.83E-02	9.31E-02
17	9.1e	0.	0.	1.18E-05	0.	0.	0.	2.18E-03	1.84E-03	2.67E-02	1.82E-02	4.90E-02
18	9.0e	0.	0.	1.08E-05	0.	0.	0.	2.18E-03	1.92E-03	2.67E-02	1.81E-02	4.90E-02
19	8.9e	0.	0.	1.01E-05	0.	0.	0.	2.19E-03	1.99E-03	2.68E-02	1.81E-02	4.90E-02
20	8.8e	0.	0.	9.91E-06	0.	0.	0.	2.20E-03	2.06E-03	2.68E-02	1.80E-02	4.91E-02
21	8.7e	0.	0.	8.67E-06	0.	0.	0.	2.21E-03	2.13E-03	2.68E-02	1.79E-02	4.91E-02
22	8.6e	0.	0.	8.96E-06	0.	0.	0.	2.21E-03	2.20E-03	2.69E-02	1.79E-02	4.92E-02
23	8.5e	0.	0.	7.91E-06	0.	0.	0.	2.22E-03	2.28E-03	2.70E-02	1.78E-02	4.93E-02
24	8.4e	0.	0.	7.89E-06	0.	0.	0.	2.23E-03	2.37E-03	2.71E-02	1.77E-02	4.94E-02
25	8.3e	0.	0.	6.75E-06	0.	0.	0.	2.25E-03	2.45E-03	2.72E-02	1.77E-02	4.96E-02
26	8.2e	0.	0.	6.84E-06	0.	0.	0.	2.26E-03	2.55E-03	2.73E-02	1.77E-02	4.98E-02
27	8.1e	0.	0.	5.95E-06	0.	0.	0.	2.27E-03	2.64E-03	2.74E-02	1.77E-02	5.00E-02
28	8.0e	0.	0.	6.01E-06	0.	0.	0.	2.28E-03	2.74E-03	2.75E-02	1.78E-02	5.03E-02
29	7.9e	0.	0.	5.21E-06	0.	0.	0.	2.29E-03	2.85E-03	2.77E-02	1.78E-02	5.07E-02
30	7.8e	0.	0.	5.42E-06	0.	0.	0.	2.30E-03	2.96E-03	2.79E-02	1.78E-02	5.10E-02
31	7.7e	0.	0.	4.79E-06	0.	0.	0.	2.32E-03	3.08E-03	2.81E-02	1.79E-02	5.13E-02
32	7.6e	0.	0.	4.57E-06	0.	2.36E-10	0.	2.33E-03	3.21E-03	2.83E-02	1.79E-02	5.17E-02
33	7.5e	0.	0.	4.26E-06	0.	7.85E-10	0.	2.34E-03	3.34E-03	2.84E-02	1.79E-02	5.20E-02
34	7.4e	0.	0.	3.85E-06	0.	6.73E-09	0.	2.35E-03	3.48E-03	2.86E-02	1.79E-02	5.24E-02
35	7.3e	0.	0.	3.66E-06	0.	2.63E-08	0.	2.37E-03	3.62E-03	2.88E-02	1.80E-02	5.28E-02
36	7.2e	0.	0.	3.33E-06	0.	7.26E-08	0.	2.38E-03	3.78E-03	2.90E-02	1.80E-02	5.32E-02
37	7.1e	0.	0.	3.21E-06	0.	2.27E-07	0.	2.40E-03	3.94E-03	2.92E-02	1.80E-02	5.36E-02
38	7.0e	8.03E-10	0.	2.97E-06	0.	4.45E-07	0.	2.42E-03	4.11E-03	2.94E-02	1.80E-02	5.40E-02
39	6.9e	1.57E-09	0.	2.74E-06	0.	6.29E-07	0.	2.44E-03	4.30E-03	2.96E-02	1.81E-02	5.44E-02
40	6.8e	1.36E-09	0.	2.65E-06	0.	1.08E-06	0.	2.46E-03	4.49E-03	2.98E-02	1.81E-02	5.48E-02
41	6.7e	9.95E-10	0.	2.33E-06	0.	1.06E-06	0.	2.48E-03	4.69E-03	2.99E-02	1.82E-02	5.53E-02
42	6.6e	6.08E-10	0.	2.11E-06	0.	8.85E-07	0.	2.50E-03	4.91E-03	3.02E-02	1.82E-02	5.59E-02
43	6.5e	3.52E-10	0.	1.69E-06	0.	1.29E-06	0.	2.52E-03	5.15E-03	3.06E-02	1.83E-02	5.65E-02
44	6.4e	2.03E-10	0.	1.18E-06	4.25E-09	1.20E-06	0.	2.53E-03	5.39E-03	3.09E-02	1.83E-02	5.71E-02
45	6.3e	1.10E-10	0.	7.45E-07	2.01E-08	8.74E-07	0.	2.55E-03	5.65E-03	3.12E-02	1.84E-02	5.79E-02
46	6.2e	5.36E-11	0.	4.17E-07	2.87E-08	1.19E-06	0.	2.57E-03	5.91E-03	3.15E-02	1.86E-02	5.86E-02
47	6.1e	2.48E-11	0.	1.98E-07	8.23E-08	1.46E-06	0.	2.59E-03	6.23E-03	3.19E-02	1.87E-02	5.95E-02
48	6.0e	1.04E-11	0.	5.85E-08	7.97E-08	7.26E-07	0.	2.61E-03	6.55E-03	3.23E-02	1.89E-02	6.04E-02
49	5.9e	2.50E-12	0.	3.62E-09	1.17E-07	7.85E-07	0.	2.61E-03	6.90E-03	3.28E-02	1.91E-02	6.14E-02
50	5.8e	3.27E-13	0.	9.15E-11	1.65E-07	7.32E-07	0.	2.57E-03	7.24E-03	3.33E-02	1.92E-02	6.24E-02
51	5.7e	2.41E-14	0.	0.	1.94E-07	8.19E-07	0.	2.42E-03	7.65E-03	3.38E-02	1.94E-02	6.32E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.09E-15	0.	0.	0.	1.67E-07	1.00E-06	0.	0.	2.25E-03	8.87E-03	3.44E-02	1.96E-02	6.42E-02
53	5.50	0.	0.	0.	0.	2.04E-07	9.96E-07	0.	0.	2.26E-03	8.53E-03	3.51E-02	1.98E-02	6.57E-02
54	5.40	0.	0.	0.	0.	1.89E-07	8.18E-07	0.	0.	2.27E-03	9.01E-03	3.60E-02	2.00E-02	6.73E-02
55	5.30	0.	0.	0.	0.	1.93E-07	1.03E-06	0.	0.	2.29E-03	9.54E-03	3.70E-02	2.03E-02	6.91E-02
56	5.20	0.	0.	0.	0.	2.09E-07	7.87E-07	0.	0.	2.30E-03	1.01E-02	3.79E-02	2.06E-02	7.10E-02
57	5.10	0.	0.	0.	0.	2.09E-07	1.01E-06	0.	0.	2.32E-03	1.07E-02	3.91E-02	2.10E-02	7.31E-02
58	5.00	1.51E-08	0.	0.	0.	1.92E-07	9.53E-07	0.	0.	2.34E-03	1.14E-02	4.03E-02	2.13E-02	7.54E-02
59	4.90	3.68E-08	0.	0.	0.	2.14E-07	1.04E-06	0.	0.	2.36E-03	1.21E-02	4.17E-02	2.17E-02	7.79E-02
60	4.80	6.94E-08	0.	0.	0.	2.30E-07	9.83E-07	0.	0.	2.38E-03	1.29E-02	4.32E-02	2.22E-02	8.06E-02
61	4.70	9.42E-08	0.	0.	0.	2.31E-07	8.95E-07	0.	0.	2.40E-03	1.37E-02	4.48E-02	2.28E-02	8.37E-02
62	4.60	1.31E-07	0.	0.	0.	2.39E-07	8.17E-07	0.	0.	2.42E-03	1.47E-02	4.66E-02	2.34E-02	8.71E-02
63	4.50	1.36E-07	0.	2.61E-07	0.	2.29E-07	6.12E-07	0.	0.	2.44E-03	1.57E-02	4.90E-02	2.40E-02	9.11E-02
64	4.40	1.48E-07	0.	7.74E-07	0.	2.21E-07	4.20E-07	0.	0.	2.46E-03	1.68E-02	5.14E-02	2.46E-02	9.53E-02
65	4.30	1.41E-07	0.	2.58E-06	0.	2.12E-07	2.65E-07	0.	0.	2.48E-03	1.80E-02	5.41E-02	2.53E-02	9.99E-02
66	4.20	1.32E-07	0.	8.13E-06	0.	2.23E-07	1.84E-07	0.	0.	2.50E-03	1.93E-02	5.68E-02	2.60E-02	1.05E-01
67	4.10	1.24E-07	0.	3.64E-06	0.	2.20E-07	5.14E-08	0.	0.	2.51E-03	2.08E-02	5.95E-02	2.60E-02	1.09E-01
68	4.00	1.15E-07	0.	1.18E-05	0.	2.13E-07	3.88E-08	0.	0.	2.52E-03	2.24E-02	6.22E-02	1.17E-02	9.88E-02
69	3.90	9.85E-08	0.	5.54E-06	5.68E-06	1.98E-07	1.46E-08	0.	0.	2.51E-03	2.42E-02	6.10E-02	1.20E-02	9.98E-02
70	3.80	1.08E-07	0.	8.89E-03	2.34E-05	2.13E-07	0.	0.	0.	2.50E-03	2.62E-02	6.18E-02	1.26E-02	1.03E-01
71	3.70	9.79E-08	0.	9.18E-06	1.83E-05	1.84E-07	0.	0.	0.	2.46E-03	2.84E-02	5.13E-02	1.37E-02	9.59E-02
72	3.60	8.79E-08	0.	6.60E-06	5.41E-05	1.99E-07	0.	0.	0.	2.38E-03	3.08E-02	5.54E-02	1.50E-02	1.04E-01
73	3.50	8.26E-08	0.	8.67E-06	1.01E-04	1.58E-07	0.	0.	0.	2.11E-03	3.36E-02	5.87E-02	1.65E-02	1.11E-01
74	3.40	7.62E-08	0.	5.59E-06	1.59E-05	1.78E-07	0.	0.	0.	1.21E-03	3.67E-02	6.52E-02	1.82E-02	1.21E-01
75	3.30	6.12E-08	0.	5.72E-06	5.99E-05	1.43E-07	0.	0.	0.	1.22E-03	4.01E-02	7.20E-02	1.99E-02	1.33E-01
76	3.20	5.37E-08	0.	3.79E-06	9.72E-05	1.51E-07	0.	0.	0.	1.22E-03	4.41E-02	7.87E-02	2.17E-02	1.46E-01
77	3.10	5.18E-08	0.	2.95E-06	2.51E-05	1.44E-07	0.	0.	0.	1.22E-03	4.86E-02	8.57E-02	2.35E-02	1.59E-01
78	3.00	4.67E-08	0.	1.82E-06	5.78E-05	1.37E-07	0.	0.	0.	1.22E-03	5.37E-02	9.27E-02	2.53E-02	1.73E-01
79	2.90	3.95E-08	0.	1.15E-06	3.11E-05	1.05E-07	0.	0.	0.	1.23E-03	5.95E-02	1.00E-01	2.73E-02	1.88E-01
80	2.80	4.14E-08	0.	5.52E-07	2.08E-05	7.40E-08	0.	0.	0.	1.23E-03	6.63E-02	1.09E-01	2.95E-02	2.06E-01
81	2.70	2.69E-08	0.	2.99E-07	2.69E-05	4.18E-08	0.	0.	0.	1.23E-03	7.40E-02	1.18E-01	3.20E-02	2.24E-01
82	2.60	1.29E-08	0.	1.25E-07	2.78E-06	1.82E-08	0.	0.	0.	1.23E-03	8.31E-02	1.29E-01	3.45E-02	2.47E-01
83	2.50	9.08E-10	0.	1.33E-08	2.78E-06	4.58E-09	0.	0.	0.	1.23E-03	9.36E-02	1.47E-01	2.13E-02	2.63E-01
84	2.40	0.	5.04E-07	0.	2.11E-06	4.78E-10	0.	0.	0.	1.23E-03	1.06E-01	1.71E-01	2.50E-02	3.03E-01
85	2.30	0.	1.69E-06	0.	0.	0.	0.	0.	0.	1.22E-03	1.21E-01	1.49E-01	2.98E-02	3.01E-01
86	2.20	0.	4.74E-06	0.	0.	0.	0.	0.	0.	1.21E-03	1.38E-01	1.76E-01	5.56E-02	3.51E-01
87	2.10	0.	4.92E-06	0.	0.	0.	0.	0.	0.	1.21E-03	1.59E-01	2.05E-01	4.15E-02	4.07E-01
88	2.00	0.	9.76E-06	0.	0.	0.	0.	0.	0.	1.17E-03	1.85E-01	2.34E-01	4.73E-02	4.68E-01
89	1.90	0.	1.20E-05	0.	0.	0.	0.	0.	0.	1.12E-03	2.16E-01	2.68E-01	5.51E-02	5.41E-01
90	1.80	0.	1.82E-05	0.	0.	0.	0.	0.	0.	1.08E-03	2.55E-01	3.21E-01	6.69E-02	6.44E-01
91	1.70	0.	1.17E-05	0.	0.	0.	0.	0.	0.	1.01E-03	3.03E-01	3.86E-01	8.14E-02	7.72E-01
92	1.60	0.	8.77E-06	0.	0.	0.	0.	0.	0.	8.58E-04	3.66E-01	4.51E-01	9.59E-02	9.14E-01
93	1.50	0.	1.80E-05	0.	0.	0.	0.	0.	0.	3.96E-04	4.47E-01	5.85E-01	1.16E-01	1.15E 00
94	1.40	0.	9.92E-06	0.	0.	0.	0.	0.	0.	0.	5.54E-01	7.31E-01	1.39E-01	1.42E 00
95	1.30	0.	7.60E-06	0.	0.	0.	0.	0.	0.	0.	6.95E-01	9.74E-01	1.84E-01	1.89E 00
96	1.20	0.	7.20E-06	0.	0.	0.	0.	0.	0.	0.	8.86E-01	1.07E 00	1.85E-01	2.15E 00
97	1.10	0.	8.96E-06	0.	0.	0.	0.	1.82E-11	0.	0.	1.15E 00	1.33E 00	2.32E-01	2.71E 00
98	1.00	0.	8.39E-06	0.	0.	0.	0.	1.57E-10	0.	0.	1.55E 00	1.61E 00	2.64E-01	3.42E 00
99	0.90	0.	5.25E-06	0.	0.	0.	0.	1.03E-10	0.	0.	2.14E 00	1.85E 00	3.10E-01	4.30E 00
100	0.80	0.	2.47E-06	0.	0.	0.	0.	3.90E-09	0.	0.	3.08E 00	2.13E 00	3.57E-01	5.57E 00
101	0.70	0.	5.77E-07	0.	0.	0.	0.	3.66E-09	0.	0.	4.64E 00	2.31E 00	3.67E-01	7.33E 00
102	0.60	0.	1.15E-07	0.	0.	0.	0.	1.18E-08	0.	0.	7.52E 00	2.58E 00	4.10E-01	1.05E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.31E-08	0.	0.	0.	1.30E-05	3.46E-05	4.76E-02	6.89E-04	4.83E-02
2	10.60	0.	0.	2.11E-08	0.	0.	0.	1.30E-05	3.56E-05	2.84E-03	6.86E-04	2.77E-03
3	10.50	0.	0.	2.14E-08	0.	0.	0.	1.30E-05	3.67E-05	2.85E-03	6.83E-04	2.78E-03
4	10.40	0.	0.	2.04E-08	0.	0.	0.	1.30E-05	3.77E-05	2.85E-03	6.80E-04	2.78E-03
5	10.30	0.	0.	1.79E-08	0.	0.	0.	1.30E-05	3.89E-05	2.86E-03	6.77E-04	2.79E-03
6	10.20	0.	0.	1.86E-08	0.	0.	0.	1.31E-05	4.00E-05	2.86E-03	6.75E-04	2.79E-03
7	10.10	0.	0.	1.75E-08	0.	0.	0.	1.31E-05	4.13E-05	2.86E-03	6.72E-04	2.79E-03
8	10.00	0.	0.	1.55E-08	0.	0.	0.	1.31E-05	4.25E-05	2.85E-03	6.69E-04	2.77E-03
9	9.94	0.	0.	1.59E-08	0.	0.	0.	1.31E-05	4.38E-05	2.85E-03	6.65E-04	2.77E-03
10	9.80	0.	0.	1.50E-08	0.	0.	0.	1.31E-05	4.52E-05	2.85E-03	6.63E-04	2.78E-03
11	9.70	0.	0.	1.31E-08	0.	0.	0.	1.32E-05	4.66E-05	2.86E-03	6.61E-04	2.78E-03
12	9.60	0.	0.	1.42E-08	0.	0.	0.	1.32E-05	4.81E-05	2.86E-03	6.58E-04	2.78E-03
13	9.50	0.	0.	1.22E-08	0.	0.	0.	1.32E-05	4.97E-05	2.87E-03	6.55E-04	2.79E-03
14	9.40	0.	0.	1.16E-08	0.	0.	0.	1.33E-05	5.13E-05	2.88E-03	6.52E-04	2.79E-03
15	9.30	0.	0.	1.19E-08	0.	0.	0.	1.33E-05	5.30E-05	2.88E-03	6.49E-04	2.80E-03
16	9.20	0.	0.	9.97E-09	0.	0.	0.	1.34E-05	5.47E-05	2.89E-03	6.47E-04	2.81E-03
17	9.10	0.	0.	1.03E-08	0.	0.	0.	1.34E-05	5.64E-05	7.92E-04	6.44E-04	1.51E-03
18	9.00	0.	0.	9.38E-09	0.	0.	0.	1.35E-05	5.85E-05	7.93E-04	6.41E-04	1.51E-03
19	8.90	0.	0.	8.73E-09	0.	0.	0.	1.35E-05	6.05E-05	7.94E-04	6.39E-04	1.51E-03
20	8.80	0.	0.	8.40E-09	0.	0.	0.	1.36E-05	6.26E-05	7.95E-04	6.36E-04	1.51E-03
21	8.70	0.	0.	7.53E-09	0.	0.	0.	1.36E-05	6.48E-05	7.97E-04	6.34E-04	1.51E-03
22	8.60	0.	0.	7.78E-09	0.	0.	0.	1.37E-05	6.71E-05	7.98E-04	6.31E-04	1.51E-03
23	8.50	0.	0.	6.87E-09	0.	0.	0.	1.37E-05	6.95E-05	8.01E-04	6.29E-04	1.51E-03
24	8.40	0.	0.	6.85E-09	0.	0.	0.	1.38E-05	7.21E-05	8.03E-04	6.27E-04	1.52E-03
25	8.30	0.	0.	5.86E-09	0.	0.	0.	1.38E-05	7.47E-05	8.07E-04	6.26E-04	1.52E-03
26	8.20	0.	0.	5.94E-09	0.	0.	0.	1.39E-05	7.75E-05	8.10E-04	6.27E-04	1.53E-03
27	8.10	0.	0.	5.17E-09	0.	0.	0.	1.40E-05	8.04E-05	8.12E-04	6.27E-04	1.53E-03
28	8.00	0.	0.	5.22E-09	0.	0.	0.	1.41E-05	8.35E-05	8.17E-04	6.28E-04	1.54E-03
29	7.90	0.	0.	4.52E-09	0.	0.	0.	1.41E-05	8.68E-05	8.23E-04	6.29E-04	1.55E-03
30	7.80	0.	0.	4.71E-09	0.	0.	0.	1.42E-05	9.02E-05	8.28E-04	6.30E-04	1.56E-03
31	7.70	0.	0.	4.16E-09	0.	0.	0.	1.43E-05	9.39E-05	8.34E-04	6.31E-04	1.57E-03
32	7.60	0.	0.	3.97E-09	0.	2.45E-13	0.	1.43E-05	9.76E-05	8.40E-04	6.32E-04	1.58E-03
33	7.50	0.	0.	3.70E-09	0.	8.17E-13	0.	1.44E-05	1.02E-04	8.42E-04	6.33E-04	1.59E-03
34	7.40	0.	0.	3.34E-09	0.	7.01E-12	0.	1.45E-05	1.06E-04	8.47E-04	6.34E-04	1.60E-03
35	7.30	0.	0.	3.18E-09	0.	2.74E-11	0.	1.46E-05	1.10E-04	8.53E-04	6.35E-04	1.61E-03
36	7.20	0.	0.	2.89E-09	0.	7.56E-11	0.	1.47E-05	1.15E-04	8.59E-04	6.36E-04	1.62E-03
37	7.10	0.	0.	2.79E-09	0.	2.36E-10	0.	1.48E-05	1.20E-04	8.65E-04	6.37E-04	1.64E-03
38	7.00	1.88E-12	0.	2.57E-09	0.	4.63E-10	0.	1.49E-05	1.25E-04	8.71E-04	6.38E-04	1.65E-03
39	6.90	1.96E-12	0.	2.37E-09	0.	6.59E-10	0.	1.50E-05	1.31E-04	8.76E-04	6.39E-04	1.66E-03
40	6.80	1.70E-12	0.	2.30E-09	0.	1.12E-09	0.	1.51E-05	1.37E-04	8.82E-04	6.40E-04	1.67E-03
41	6.70	1.24E-12	0.	2.03E-09	0.	1.10E-09	0.	1.53E-05	1.43E-04	8.88E-04	6.42E-04	1.69E-03
42	6.60	7.60E-13	0.	1.83E-09	0.	9.21E-10	0.	1.54E-05	1.49E-04	8.97E-04	6.44E-04	1.71E-03
43	6.50	4.40E-13	0.	1.47E-09	0.	1.34E-09	0.	1.55E-05	1.57E-04	9.06E-04	6.46E-04	1.72E-03
44	6.40	2.53E-13	0.	1.02E-09	4.42E-12	1.25E-09	0.	1.56E-05	1.64E-04	9.16E-04	6.48E-04	1.74E-03
45	6.30	1.48E-13	0.	6.47E-10	2.09E-11	9.10E-10	0.	1.57E-05	1.72E-04	9.26E-04	6.51E-04	1.77E-03
46	6.20	8.70E-14	0.	3.62E-10	2.99E-11	1.24E-09	0.	1.59E-05	1.81E-04	9.36E-04	6.57E-04	1.79E-03
47	6.10	3.09E-14	0.	1.72E-10	8.57E-11	1.52E-09	0.	1.60E-05	1.91E-04	9.47E-04	6.63E-04	1.82E-03
48	6.00	1.30E-14	0.	4.38E-11	8.29E-11	7.56E-10	0.	1.61E-05	1.99E-04	9.60E-04	6.68E-04	1.84E-03
49	5.90	3.20E-15	0.	3.14E-12	1.22E-10	7.34E-10	0.	1.61E-05	2.10E-04	9.75E-04	6.74E-04	1.87E-03
50	5.80	4.88E-16	0.	7.94E-14	1.71E-10	7.62E-10	0.	1.59E-05	2.21E-04	9.89E-04	6.79E-04	1.91E-03
51	5.70	3.01E-17	0.	0.	2.02E-10	8.52E-10	0.	1.49E-05	2.33E-04	1.00E-03	6.85E-04	1.94E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.36E-10	0.	0.	0.	1.74E-10	1.12E-09	0.	0.	1.39E-05	2.40E-04	1.02E-03	6.91E-04	1.97E-03
53	5.57	0.	0.	0.	0.	2.12E-10	1.34E-09	0.	0.	1.39E-05	2.59E-04	1.04E-03	6.98E-04	2.01E-03
54	5.49	0.	0.	0.	0.	1.96E-10	8.52E-10	0.	0.	1.40E-05	2.74E-04	1.07E-03	7.07E-04	2.07E-03
55	5.30	0.	0.	0.	0.	2.01E-10	1.07E-09	0.	0.	1.41E-05	2.90E-04	1.10E-03	7.17E-04	2.12E-03
56	5.20	0.	0.	0.	0.	2.17E-10	8.19E-10	0.	0.	1.42E-05	3.08E-04	1.12E-03	7.29E-04	2.17E-03
57	5.10	0.	0.	0.	0.	2.17E-10	1.05E-09	0.	0.	1.43E-05	3.26E-04	1.15E-03	7.42E-04	2.24E-03
58	5.00	1.88E-11	0.	0.	0.	1.99E-10	9.92E-10	0.	0.	1.44E-05	3.47E-04	1.19E-03	7.54E-04	2.30E-03
59	4.91	4.46E-11	0.	0.	0.	2.23E-10	1.09E-09	0.	0.	1.45E-05	3.68E-04	1.23E-03	7.68E-04	2.38E-03
60	4.80	5.67E-11	0.	0.	0.	2.40E-10	1.02E-09	0.	0.	1.47E-05	3.92E-04	1.28E-03	7.84E-04	2.47E-03
61	4.70	1.10E-10	0.	0.	0.	2.41E-10	9.32E-10	0.	0.	1.48E-05	4.18E-04	1.32E-03	8.05E-04	2.56E-03
62	4.60	1.63E-10	0.	0.	0.	2.48E-10	8.44E-10	0.	0.	1.49E-05	4.46E-04	1.38E-03	8.26E-04	2.66E-03
63	4.50	1.72E-10	0.	2.27E-10	0.	2.29E-10	6.38E-10	0.	0.	1.50E-05	4.77E-04	1.45E-03	8.48E-04	2.79E-03
64	4.40	1.85E-10	0.	6.72E-10	0.	2.30E-10	4.37E-10	0.	0.	1.51E-05	5.11E-04	1.52E-03	8.71E-04	2.92E-03
65	4.30	1.70E-10	0.	2.24E-09	0.	2.21E-10	2.74E-10	0.	0.	1.53E-05	5.48E-04	1.60E-03	8.95E-04	3.06E-03
66	4.20	1.65E-10	0.	7.86E-09	0.	2.33E-10	1.92E-10	0.	0.	1.54E-05	5.88E-04	1.68E-03	9.19E-04	3.20E-03
67	4.10	1.55E-10	0.	3.16E-09	0.	2.29E-10	5.37E-11	0.	0.	1.54E-05	6.33E-04	1.78E-03	9.19E-04	3.33E-03
68	4.00	1.44E-10	0.	1.82E-08	0.	2.22E-10	4.04E-11	0.	0.	1.55E-05	6.82E-04	1.84E-03	4.13E-04	2.95E-03
69	3.90	1.23E-10	0.	4.81E-09	2.82E-08	2.06E-10	1.52E-11	0.	0.	1.56E-05	7.34E-04	1.80E-03	4.24E-04	2.90E-03
70	3.80	1.35E-10	0.	7.71E-09	1.16E-07	2.22E-10	0.	0.	0.	1.54E-05	7.90E-04	1.83E-03	4.44E-04	3.08E-03
71	3.70	1.21E-10	0.	7.97E-09	5.14E-08	1.91E-10	0.	0.	0.	1.51E-05	8.63E-04	1.52E-03	4.86E-04	2.88E-03
72	3.60	1.10E-10	0.	5.73E-09	2.69E-07	2.07E-10	0.	0.	0.	1.42E-05	9.38E-04	1.64E-03	5.32E-04	3.12E-03
73	3.50	1.03E-10	0.	7.52E-09	5.91E-07	1.65E-10	0.	0.	0.	1.30E-05	1.02E-03	1.74E-03	5.84E-04	3.34E-03
74	3.40	9.52E-11	0.	4.85E-09	7.89E-08	1.45E-10	0.	0.	0.	7.49E-06	1.12E-03	1.93E-03	6.44E-04	3.70E-03
75	3.30	7.65E-11	0.	4.97E-09	2.98E-07	1.49E-10	0.	0.	0.	7.58E-06	1.22E-03	2.13E-03	7.04E-04	4.08E-03
76	3.20	8.71E-11	0.	3.29E-09	4.83E-07	1.57E-10	0.	0.	0.	7.51E-06	1.34E-03	2.33E-03	7.87E-04	4.45E-03
77	3.10	6.47E-11	0.	2.56E-09	1.25E-07	1.58E-10	0.	0.	0.	7.53E-06	1.48E-03	2.53E-03	8.31E-04	4.85E-03
78	3.00	5.83E-11	0.	1.58E-09	2.04E-07	1.42E-10	0.	0.	0.	7.55E-06	1.63E-03	2.74E-03	8.94E-04	5.28E-03
79	2.90	4.96E-11	0.	9.95E-10	1.55E-07	1.10E-10	0.	0.	0.	7.56E-06	1.81E-03	2.96E-03	9.65E-04	5.75E-03
80	2.80	5.17E-11	0.	4.88E-10	1.03E-07	7.70E-11	0.	0.	0.	7.57E-06	2.02E-03	3.22E-03	1.04E-03	6.29E-03
81	2.70	3.37E-11	0.	2.25E-10	1.34E-07	4.26E-11	0.	0.	0.	7.57E-06	2.25E-03	3.50E-03	1.13E-03	6.89E-03
82	2.60	1.61E-11	0.	1.09E-10	1.38E-08	1.98E-11	0.	0.	0.	7.57E-06	2.53E-03	3.79E-03	1.22E-03	7.55E-03
83	2.50	1.13E-12	0.	1.19E-11	1.34E-08	4.56E-12	0.	0.	0.	7.57E-06	2.85E-03	4.32E-03	7.54E-04	7.93E-03
84	2.40	0.	5.17E-10	0.	1.05E-08	4.89E-13	0.	0.	0.	7.57E-06	3.22E-03	5.04E-03	8.84E-04	9.15E-03
85	2.30	0.	1.56E-09	0.	0.	0.	0.	0.	0.	7.51E-06	3.67E-03	4.40E-03	1.05E-03	9.13E-03
86	2.20	0.	4.12E-09	0.	0.	0.	0.	0.	0.	7.48E-06	4.27E-03	5.20E-03	1.26E-03	1.07E-02
87	2.10	0.	4.27E-09	0.	0.	0.	0.	0.	0.	7.45E-06	4.85E-03	6.05E-03	1.47E-03	1.24E-02
88	2.00	0.	8.47E-09	0.	0.	0.	0.	0.	0.	7.21E-06	5.63E-03	6.98E-03	1.67E-03	1.42E-02
89	1.90	0.	1.84E-08	0.	0.	0.	0.	0.	0.	6.94E-06	6.58E-03	7.91E-03	1.95E-03	1.64E-02
90	1.80	0.	8.09E-09	0.	0.	0.	0.	0.	0.	6.63E-06	7.76E-03	9.47E-03	2.37E-03	1.96E-02
91	1.70	0.	1.81E-08	0.	0.	0.	0.	0.	0.	6.25E-06	9.23E-03	1.14E-02	2.88E-03	2.35E-02
92	1.60	0.	7.61E-09	0.	0.	0.	0.	0.	0.	5.29E-06	1.11E-02	1.33E-02	3.39E-03	2.78E-02
93	1.50	0.	8.72E-09	0.	0.	0.	0.	0.	0.	2.40E-06	1.36E-02	1.73E-02	4.12E-03	3.50E-02
94	1.40	0.	8.61E-09	0.	0.	0.	0.	0.	0.	0.	1.68E-02	2.15E-02	4.92E-03	4.33E-02
95	1.30	0.	6.60E-09	0.	0.	0.	0.	0.	0.	0.	2.11E-02	2.87E-02	6.58E-03	5.63E-02
96	1.20	0.	6.38E-09	0.	0.	0.	0.	0.	0.	0.	2.70E-02	3.71E-02	6.55E-03	6.52E-02
97	1.10	0.	6.04E-09	0.	0.	0.	0.	1.08E-14	0.	0.	3.51E-02	3.91E-02	8.21E-03	8.24E-02
98	1.00	0.	5.59E-09	0.	0.	0.	0.	1.64E-13	0.	0.	4.70E-02	4.74E-02	9.35E-03	1.04E-01
99	0.99	0.	4.96E-09	0.	0.	0.	0.	1.90E-13	0.	0.	6.52E-02	5.45E-02	1.10E-02	1.31E-01
100	0.80	0.	2.14E-09	0.	0.	0.	0.	4.15E-12	0.	0.	9.38E-02	6.27E-02	1.24E-02	1.69E-01
101	0.70	0.	5.01E-10	0.	0.	0.	0.	3.81E-12	0.	0.	1.47E-01	6.80E-02	1.38E-02	2.23E-01
102	0.60	0.	9.99E-11	0.	0.	0.	0.	1.23E-11	0.	0.	2.29E-01	7.60E-02	1.45E-02	3.19E-01

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.13E-12	0.	0.	0.	2.10E-08	4.72E-07	2.96E-05	9.95E-06	4.08E-05
2	10.60	0.	0.	3.77E-12	0.	0.	0.	2.19E-08	4.86E-07	2.97E-05	9.20E-06	4.02E-05
3	10.50	0.	0.	3.82E-12	0.	0.	0.	2.19E-08	5.00E-07	2.99E-05	9.04E-06	4.04E-05
4	10.40	0.	0.	3.44E-12	0.	0.	0.	2.19E-08	5.15E-07	3.00E-05	9.02E-06	4.04E-05
5	10.30	0.	0.	3.28E-12	0.	0.	0.	2.19E-08	5.30E-07	3.02E-05	9.78E-06	4.05E-05
6	10.20	0.	0.	3.31E-12	0.	0.	0.	2.20E-08	5.46E-07	3.03E-05	9.74E-06	4.06E-05
7	10.10	0.	0.	3.13E-12	0.	0.	0.	2.20E-08	5.63E-07	3.03E-05	9.70E-06	4.06E-05
8	10.00	0.	0.	2.77E-12	0.	0.	0.	2.20E-08	5.80E-07	2.79E-05	9.66E-06	3.82E-05
9	9.90	0.	0.	2.84E-12	0.	0.	0.	2.21E-08	5.98E-07	2.80E-05	9.62E-06	3.82E-05
10	9.80	0.	0.	2.49E-12	0.	0.	0.	2.21E-08	6.16E-07	2.81E-05	9.58E-06	3.83E-05
11	9.70	0.	0.	2.34E-12	0.	0.	0.	2.22E-08	6.35E-07	2.81E-05	9.54E-06	3.83E-05
12	9.61	0.	0.	2.53E-12	0.	0.	0.	2.22E-08	6.55E-07	2.82E-05	9.50E-06	3.84E-05
13	9.51	0.	0.	2.10E-12	0.	0.	0.	2.22E-08	6.77E-07	2.83E-05	9.46E-06	3.85E-05
14	9.41	0.	0.	2.07E-12	0.	0.	0.	2.23E-08	6.99E-07	2.84E-05	9.42E-06	3.85E-05
15	9.31	0.	0.	2.13E-12	0.	0.	0.	2.24E-08	7.22E-07	2.85E-05	9.38E-06	3.86E-05
16	9.20	0.	0.	1.78E-12	0.	0.	0.	2.25E-08	7.46E-07	2.86E-05	9.34E-06	3.87E-05
17	9.10	0.	0.	1.83E-12	0.	0.	0.	2.26E-08	7.71E-07	1.13E-05	9.30E-06	2.14E-05
18	9.00	0.	0.	1.47E-12	0.	0.	0.	2.26E-08	7.97E-07	1.13E-05	9.27E-06	2.14E-05
19	8.90	0.	0.	1.56E-12	0.	0.	0.	2.27E-08	8.25E-07	1.13E-05	9.23E-06	2.14E-05
20	8.80	0.	0.	1.54E-12	0.	0.	0.	2.28E-08	8.54E-07	1.13E-05	9.19E-06	2.14E-05
21	8.70	0.	0.	1.34E-12	0.	0.	0.	2.29E-08	8.84E-07	1.13E-05	9.16E-06	2.14E-05
22	8.60	0.	0.	1.39E-12	0.	0.	0.	2.30E-08	9.15E-07	1.14E-05	9.12E-06	2.14E-05
23	8.50	0.	0.	1.23E-12	0.	0.	0.	2.30E-08	9.48E-07	1.14E-05	9.09E-06	2.15E-05
24	8.40	0.	0.	1.22E-12	0.	0.	0.	2.32E-08	9.83E-07	1.15E-05	9.05E-06	2.15E-05
25	8.30	0.	0.	1.05E-12	0.	0.	0.	2.33E-08	1.02E-06	1.15E-05	9.04E-06	2.16E-05
26	8.20	0.	0.	1.06E-12	0.	0.	0.	2.34E-08	1.05E-06	1.16E-05	9.05E-06	2.17E-05
27	8.10	0.	0.	9.23E-13	0.	0.	0.	2.35E-08	1.10E-06	1.16E-05	9.06E-06	2.18E-05
28	8.00	0.	0.	9.32E-13	0.	0.	0.	2.36E-08	1.14E-06	1.17E-05	9.07E-06	2.19E-05
29	7.90	0.	0.	8.07E-13	0.	0.	0.	2.38E-08	1.18E-06	1.18E-05	9.09E-06	2.21E-05
30	7.80	0.	0.	8.40E-13	0.	0.	0.	2.39E-08	1.23E-06	1.19E-05	9.10E-06	2.22E-05
31	7.70	0.	0.	7.42E-13	0.	0.	0.	2.40E-08	1.28E-06	1.20E-05	9.12E-06	2.24E-05
32	7.60	0.	0.	7.88E-13	0.	4.73E-17	0.	2.41E-08	1.33E-06	1.17E-05	9.13E-06	2.21E-05
33	7.50	0.	0.	6.60E-13	0.	1.58E-16	0.	2.43E-08	1.38E-06	1.17E-05	9.14E-06	2.23E-05
34	7.40	0.	0.	5.96E-13	0.	1.35E-15	0.	2.44E-08	1.44E-06	1.18E-05	9.15E-06	2.25E-05
35	7.30	0.	0.	5.69E-13	0.	5.28E-15	0.	2.45E-08	1.50E-06	1.19E-05	9.17E-06	2.26E-05
36	7.20	0.	0.	5.16E-13	0.	1.46E-14	0.	2.47E-08	1.57E-06	1.21E-05	9.19E-06	2.28E-05
37	7.10	0.	0.	4.98E-13	0.	4.55E-14	0.	2.49E-08	1.63E-06	1.22E-05	9.20E-06	2.30E-05
38	7.00	2.89E-16	0.	4.40E-13	0.	8.93E-14	0.	2.51E-08	1.71E-06	1.23E-05	9.22E-06	2.32E-05
39	6.90	4.89E-16	0.	4.24E-13	0.	1.26E-13	0.	2.53E-08	1.78E-06	1.24E-05	9.23E-06	2.34E-05
40	6.80	3.53E-16	0.	4.11E-13	0.	2.14E-13	0.	2.55E-08	1.86E-06	1.25E-05	9.25E-06	2.36E-05
41	6.70	2.59E-16	0.	3.62E-13	0.	2.13E-13	0.	2.57E-08	1.95E-06	1.26E-05	9.26E-06	2.38E-05
42	6.60	1.58E-16	0.	3.26E-13	0.	1.78E-13	0.	2.59E-08	2.04E-06	1.27E-05	9.31E-06	2.41E-05
43	6.50	9.16E-17	0.	2.62E-13	0.	2.58E-13	0.	2.61E-08	2.13E-06	1.28E-05	9.34E-06	2.43E-05
44	6.40	5.27E-17	0.	1.83E-13	8.52E-16	2.41E-13	0.	2.63E-08	2.24E-06	1.30E-05	9.37E-06	2.46E-05
45	6.30	1.87E-17	0.	1.16E-13	4.93E-15	1.75E-13	0.	2.65E-08	2.35E-06	1.32E-05	9.42E-06	2.49E-05
46	6.20	1.39E-17	0.	6.46E-14	5.77E-15	2.38E-13	0.	2.67E-08	2.46E-06	1.33E-05	9.50E-06	2.53E-05
47	6.10	6.43E-18	0.	3.86E-14	1.65E-14	2.93E-13	0.	2.69E-08	2.59E-06	1.35E-05	9.58E-06	2.57E-05
48	6.00	2.70E-18	0.	7.83E-15	1.68E-14	1.46E-13	0.	2.71E-08	2.72E-06	1.37E-05	9.66E-06	2.61E-05
49	5.90	6.65E-19	0.	5.61E-16	2.35E-14	1.42E-13	0.	2.71E-08	2.84E-06	1.38E-05	9.74E-06	2.66E-05
50	5.80	8.49E-20	0.	1.42E-17	3.30E-14	1.47E-13	0.	2.72E-08	3.01E-06	1.42E-05	9.83E-06	2.70E-05
51	5.70	6.25E-21	0.	0.	3.89E-14	1.64E-13	0.	2.51E-08	3.19E-06	1.46E-05	9.91E-06	2.75E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.69	2.83E-22	0.	0.	0.	3.35E-14	2.16E-13	0.	0.	2.33E-08	3.35E-06	1.46E-05	10.00E-06	2.80E-05
53	5.58	0.	0.	0.	0.	4.09E-14	2.00E-13	0.	0.	2.34E-08	3.54E-06	1.50E-05	1.01E-05	2.86E-05
54	5.48	0.	0.	0.	0.	3.79E-14	1.64E-13	0.	0.	2.35E-08	3.74E-06	1.54E-05	1.02E-05	2.94E-05
55	5.39	0.	0.	0.	0.	3.88E-14	2.06E-13	0.	0.	2.37E-08	3.94E-06	1.58E-05	1.04E-05	3.02E-05
56	5.27	0.	0.	0.	0.	4.19E-14	1.58E-13	0.	0.	2.39E-08	4.19E-06	1.53E-05	1.05E-05	3.08E-05
57	5.18	0.	0.	0.	0.	4.19E-14	2.07E-13	0.	0.	2.41E-08	4.45E-06	1.57E-05	1.07E-05	3.09E-05
58	5.08	3.91E-15	0.	0.	0.	3.84E-14	1.91E-13	0.	0.	2.43E-08	4.73E-06	1.62E-05	1.09E-05	3.19E-05
59	4.98	0.57E-15	0.	0.	0.	4.38E-14	2.10E-13	0.	0.	2.45E-08	5.07E-06	1.68E-05	1.11E-05	3.29E-05
60	4.89	1.88E-14	0.	0.	0.	4.62E-14	1.97E-13	0.	0.	2.47E-08	5.35E-06	1.74E-05	1.13E-05	3.41E-05
61	4.79	2.45E-14	0.	0.	0.	4.65E-14	1.88E-13	0.	0.	2.49E-08	5.70E-06	1.81E-05	1.16E-05	3.54E-05
62	4.69	3.39E-14	0.	0.	0.	4.79E-14	1.63E-13	0.	0.	2.51E-08	6.09E-06	1.88E-05	1.19E-05	3.69E-05
63	4.59	3.50E-14	0.	4.05E-14	0.	4.41E-14	1.23E-13	0.	0.	2.53E-08	6.51E-06	1.98E-05	1.22E-05	3.86E-05
64	4.49	3.85E-14	0.	1.20E-13	0.	4.43E-14	8.42E-14	0.	0.	2.55E-08	6.96E-06	2.08E-05	1.26E-05	4.03E-05
65	4.39	1.46E-14	0.	4.08E-13	0.	4.25E-14	5.31E-14	0.	0.	2.57E-08	7.47E-06	2.19E-05	1.29E-05	4.23E-05
66	4.29	3.43E-14	0.	1.70E-12	0.	4.48E-14	3.70E-14	0.	0.	2.59E-08	8.02E-06	2.30E-05	1.33E-05	4.43E-05
67	4.19	3.23E-14	0.	5.65E-13	0.	4.41E-14	1.84E-14	0.	0.	2.60E-08	8.63E-06	2.41E-05	1.33E-05	4.60E-05
68	4.09	2.99E-14	0.	1.02E-12	0.	4.27E-14	7.78E-15	0.	0.	2.61E-08	9.38E-06	2.52E-05	5.96E-06	4.05E-05
69	3.99	2.56E-14	0.	8.59E-13	4.32E-11	3.97E-14	2.93E-15	0.	0.	2.60E-08	1.00E-05	2.45E-05	6.16E-06	4.07E-05
70	3.89	2.81E-14	0.	1.38E-12	1.70E-10	4.20E-14	0.	0.	0.	2.59E-08	1.09E-05	2.81E-05	6.42E-06	3.74E-05
71	3.79	2.52E-14	0.	1.42E-12	7.08E-11	3.69E-14	0.	0.	0.	2.55E-08	1.18E-05	2.18E-05	7.82E-06	3.98E-05
72	3.69	2.20E-14	0.	1.02E-12	4.12E-10	3.99E-14	0.	0.	0.	2.39E-08	1.28E-05	2.27E-05	7.69E-06	4.12E-05
73	3.59	2.15E-14	0.	1.34E-12	7.67E-10	3.18E-14	0.	0.	0.	2.18E-08	1.39E-05	2.48E-05	8.44E-06	4.64E-05
74	3.49	1.98E-14	0.	8.67E-13	1.21E-10	3.57E-14	0.	0.	0.	1.26E-08	1.52E-05	2.67E-05	9.31E-06	5.12E-05
75	3.39	1.59E-14	0.	8.87E-13	4.57E-10	2.67E-14	0.	0.	0.	1.26E-08	1.67E-05	2.93E-05	1.02E-05	5.62E-05
76	3.29	1.48E-14	0.	5.87E-13	7.48E-10	3.03E-14	0.	0.	0.	1.26E-08	1.83E-05	3.21E-05	1.11E-05	6.15E-05
77	3.19	1.35E-14	0.	4.58E-13	1.91E-10	2.80E-14	0.	0.	0.	1.27E-08	2.02E-05	3.49E-05	1.20E-05	6.71E-05
78	3.09	1.21E-14	0.	2.82E-13	4.34E-10	2.74E-14	0.	0.	0.	1.27E-08	2.23E-05	3.77E-05	1.29E-05	7.29E-05
79	2.98	1.32E-14	0.	1.78E-13	2.37E-10	2.11E-14	0.	0.	0.	1.27E-08	2.47E-05	4.08E-05	1.39E-05	7.96E-05
80	2.88	1.08E-14	0.	8.56E-14	1.50E-10	1.48E-14	0.	0.	0.	1.27E-08	2.75E-05	4.43E-05	1.51E-05	8.69E-05
81	2.78	7.00E-15	0.	4.02E-14	2.85E-10	8.22E-15	0.	0.	0.	1.27E-08	3.07E-05	4.71E-05	1.63E-05	9.42E-05
82	2.68	3.35E-15	0.	1.94E-14	2.12E-11	3.66E-15	0.	0.	0.	1.27E-08	3.45E-05	5.12E-05	1.76E-05	1.03E-04
83	2.58	2.36E-16	0.	2.06E-15	2.05E-11	8.79E-16	0.	0.	0.	1.27E-08	3.88E-05	5.79E-05	1.95E-05	1.07E-04
84	2.48	0.	9.23E-14	0.	1.61E-11	9.43E-17	0.	0.	0.	1.27E-08	4.48E-05	4.91E-05	1.28E-05	1.05E-04
85	2.38	0.	2.78E-13	0.	0.	0.	0.	0.	0.	1.26E-08	5.01E-05	5.95E-05	1.52E-05	1.25E-04
86	2.28	0.	7.35E-13	0.	0.	0.	0.	0.	0.	1.26E-08	5.74E-05	7.02E-05	1.8.E-05	1.46E-04
87	2.18	0.	7.63E-13	0.	0.	0.	0.	0.	0.	1.25E-08	6.62E-05	8.17E-05	2.12E-05	1.69E-04
88	2.08	0.	1.91E-12	0.	0.	0.	0.	0.	0.	1.21E-08	7.68E-05	9.32E-05	2.42E-05	1.94E-04
89	1.98	0.	1.04E-12	0.	0.	0.	0.	0.	0.	1.17E-08	8.97E-05	1.07E-04	2.81E-05	2.24E-04
90	1.88	0.	1.59E-12	0.	0.	0.	0.	0.	0.	1.12E-08	1.06E-04	1.28E-04	3.41E-05	2.68E-04
91	1.78	0.	1.61E-12	0.	0.	0.	0.	0.	0.	1.05E-08	1.24E-04	1.53E-04	4.15E-05	3.21E-04
92	1.68	0.	1.34E-12	0.	0.	0.	0.	0.	0.	8.89E-09	1.52E-04	1.79E-04	4.89E-05	3.80E-04
93	1.58	0.	1.56E-12	0.	0.	0.	0.	0.	0.	4.84E-09	1.86E-04	2.32E-04	5.94E-05	4.77E-04
94	1.48	0.	1.94E-12	0.	0.	0.	0.	0.	0.	0.	2.38E-04	2.76E-04	7.18E-05	5.77E-04
95	1.38	0.	2.16E-12	0.	0.	0.	0.	0.	0.	0.	2.88E-04	3.85E-04	8.81E-05	7.61E-04
96	1.28	0.	1.12E-12	0.	0.	0.	0.	0.	0.	0.	3.64E-04	4.24E-04	9.44E-05	8.86E-04
97	1.18	0.	2.00E-12	0.	0.	0.	0.	2.04E-18	0.	0.	4.79E-04	5.23E-04	1.18E-04	1.12E-03
98	1.08	0.	9.91E-13	0.	0.	0.	0.	3.16E-17	0.	0.	6.41E-04	6.34E-04	1.35E-04	1.41E-03
99	0.98	0.	8.14E-13	0.	0.	0.	0.	3.44E-17	0.	0.	8.68E-04	7.20E-04	1.58E-04	1.78E-03
100	0.88	0.	3.82E-13	0.	0.	0.	0.	0.00E-18	0.	0.	1.28E-03	8.39E-04	1.82E-04	2.36E-03
101	0.78	0.	8.94E-14	0.	0.	0.	0.	7.35E-16	0.	0.	1.91E-03	9.89E-04	1.87E-04	3.83E-03
102	0.68	0.	1.78E-14	0.	0.	0.	0.	2.37E-15	0.	0.	3.17E-03	9.21E-04	2.09E-04	4.25E-03

ABSORPTION COEFFICIEN . OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	C2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.42E-16	0.	0.	0.	2.40E-11	5.18E-09	5.60E-07	1.07E-07	6.72E-07
2	10.60	0.	0.	4.04E-16	0.	0.	0.	2.40E-11	5.35E-09	5.66E-07	1.07E-07	6.78E-07
3	10.50	0.	0.	4.10E-16	0.	0.	0.	2.40E-11	5.49E-09	3.44E-07	1.06E-07	4.55E-07
4	10.40	0.	0.	3.91E-16	0.	0.	0.	2.41E-11	5.65E-09	3.45E-07	1.06E-07	4.56E-07
5	10.30	0.	0.	3.43E-16	0.	0.	0.	2.41E-11	5.82E-09	3.45E-07	1.05E-07	4.56E-07
6	10.20	0.	0.	3.55E-16	0.	0.	0.	2.41E-11	5.99E-09	3.47E-07	1.05E-07	4.56E-07
7	10.10	0.	0.	3.36E-16	0.	0.	0.	2.42E-11	6.17E-09	3.48E-07	1.05E-07	4.59E-07
8	10.00	0.	0.	2.87E-16	0.	0.	0.	2.42E-11	6.34E-09	3.50E-07	1.04E-07	4.60E-07
9	9.90	0.	0.	3.05E-16	0.	0.	0.	2.42E-11	6.50E-09	3.52E-07	1.04E-07	4.62E-07
10	9.80	0.	0.	2.88E-16	0.	0.	0.	2.43E-11	6.74E-09	3.53E-07	1.03E-07	4.63E-07
11	9.70	0.	0.	2.51E-16	0.	0.	0.	2.43E-11	6.98E-09	3.55E-07	1.03E-07	4.65E-07
12	9.60	0.	0.	2.71E-16	0.	0.	0.	2.44E-11	7.20E-09	3.56E-07	1.02E-07	4.66E-07
13	9.50	0.	0.	2.33E-16	0.	0.	0.	2.44E-11	7.43E-09	3.58E-07	1.02E-07	4.68E-07
14	9.40	0.	0.	2.22E-16	0.	0.	0.	2.45E-11	7.67E-09	3.60E-07	1.02E-07	4.69E-07
15	9.30	0.	0.	2.20E-16	0.	0.	0.	2.46E-11	7.92E-09	1.83E-07	1.01E-07	2.92E-07
16	9.20	0.	0.	1.91E-16	0.	0.	0.	2.47E-11	8.19E-09	1.84E-07	1.01E-07	2.93E-07
17	9.10	0.	0.	1.98E-16	0.	0.	0.	2.48E-11	8.46E-09	1.85E-07	1.00E-07	2.94E-07
18	9.00	0.	0.	1.80E-16	0.	0.	0.	2.49E-11	8.75E-09	1.86E-07	1.00E-07	2.94E-07
19	8.90	0.	0.	1.67E-16	0.	0.	0.	2.50E-11	9.05E-09	1.87E-07	9.97E-08	2.95E-07
20	8.80	0.	0.	1.65E-16	0.	0.	0.	2.50E-11	9.34E-09	1.88E-07	9.93E-08	2.96E-07
21	8.70	0.	0.	1.44E-16	0.	0.	0.	2.51E-11	9.69E-09	1.89E-07	9.90E-08	2.97E-07
22	8.60	0.	0.	1.49E-16	0.	0.	0.	2.52E-11	1.00E-08	1.90E-07	9.78E-08	2.98E-07
23	8.50	0.	0.	1.31E-16	0.	0.	0.	2.53E-11	1.04E-08	1.91E-07	9.74E-08	2.99E-07
24	8.40	0.	0.	1.31E-16	0.	0.	0.	2.54E-11	1.08E-08	1.93E-07	9.70E-08	3.00E-07
25	8.30	0.	0.	1.12E-16	0.	0.	0.	2.56E-11	1.12E-08	1.94E-07	9.69E-08	3.02E-07
26	8.20	0.	0.	1.14E-16	0.	0.	0.	2.57E-11	1.16E-08	1.96E-07	9.71E-08	3.05E-07
27	8.10	0.	0.	9.89E-17	0.	0.	0.	2.58E-11	1.20E-08	1.97E-07	9.73E-08	2.66E-07
28	8.00	0.	0.	9.99E-17	0.	0.	0.	2.60E-11	1.25E-08	1.99E-07	9.75E-08	2.69E-07
29	7.90	0.	0.	8.65E-17	0.	0.	0.	2.61E-11	1.30E-08	1.62E-07	9.77E-08	2.72E-07
30	7.80	0.	0.	9.01E-17	0.	0.	0.	2.62E-11	1.35E-08	1.64E-07	9.79E-08	2.74E-07
31	7.70	0.	0.	7.96E-17	0.	0.	0.	2.64E-11	1.40E-08	1.67E-07	9.81E-08	2.79E-07
32	7.60	0.	0.	7.60E-17	0.	5.20E-21	0.	2.65E-11	1.46E-08	1.70E-07	9.83E-08	2.83E-07
33	7.50	0.	0.	7.08E-17	0.	1.73E-20	0.	2.66E-11	1.52E-08	1.73E-07	9.85E-08	2.87E-07
34	7.40	0.	0.	6.39E-17	0.	1.49E-19	0.	2.68E-11	1.58E-08	1.76E-07	9.87E-08	2.91E-07
35	7.30	0.	0.	6.09E-17	0.	5.80E-19	0.	2.69E-11	1.65E-08	1.79E-07	9.89E-08	2.95E-07
36	7.20	0.	0.	5.53E-17	0.	1.60E-18	0.	2.71E-11	1.72E-08	1.84E-07	9.91E-08	3.00E-07
37	7.10	0.	0.	5.34E-17	0.	5.01E-18	0.	2.73E-11	1.79E-08	1.88E-07	9.94E-08	3.05E-07
38	7.00	2.35E-20	0.	4.93E-17	0.	9.82E-18	0.	2.75E-11	1.87E-08	1.86E-07	9.96E-08	3.04E-07
39	6.90	4.61E-20	0.	4.[illegible]E-17	0.	1.39E-17	0.	2.78E-11	1.95E-08	1.90E-07	9.99E-08	3.09E-07
40	6.80	3.99E-20	0.	4.4 E-17	0.	2.30E-17	0.	2.80E-11	2.04E-08	1.94E-07	1.00E-07	3.14E-07
41	6.70	2.92E-20	0.	3.88E-17	0.	2.34E-17	0.	2.82E-11	2.14E-08	1.98E-07	1.01E-07	3.20E-07
42	6.60	1.78E-20	0.	3.50E-17	0.	1.95E-17	0.	2.84E-11	2.24E-08	2.02E-07	1.01E-07	3.25E-07
43	6.50	1.03E-20	0.	2.81E-17	0.	2.84E-17	0.	2.86E-11	2.34E-08	2.07E-07	1.01E-07	3.31E-07
44	6.40	5.94E-21	0.	1.96E-17	9.17E-20	2.65E-17	0.	2.89E-11	2.45E-08	2.11E-07	1.02E-07	3.38E-07
45	6.30	3.47E-21	0.	1.24E-17	4.44E-19	1.93E-17	0.	2.91E-11	2.57E-08	2.16E-07	1.02E-07	3.44E-07
46	6.20	1.57E-21	0.	6.93E-18	6.34E-19	2.82E-17	0.	2.93E-11	2.70E-08	2.20E-07	1.03E-07	3.51E-07
47	6.10	7.26E-22	0.	3.29E-18	1.82E-18	3.22E-17	0.	2.95E-11	2.84E-08	2.25E-07	1.04E-07	3.58E-07
48	6.00	3.04E-22	0.	8.39E-19	1.76E-18	1.60E-17	0.	2.98E-11	2.98E-08	2.31E-07	1.05E-07	3.66E-07
49	5.90	7.50E-23	0.	8.02E-20	2.59E-18	1.56E-17	0.	2.98E-11	3.14E-08	2.36E-07	1.04E-07	3.74E-07
50	5.80	9.58E-24	0.	1.52E-21	3.43E-18	1.61E-17	0.	2.93E-11	3.30E-08	2.42E-07	1.07E-07	3.82E-07
51	5.70	7.05E-25	0.	0.	4.28E-18	1.81E-17	0.	2.75E-11	3.48E-08	1.84E-07	1.05E-07	3.05E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (LUNS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.19E-26	0.	0.	0.	3.68E-18	2.37E-17	0.	0.	2.96E-11	3.67E-08	1.48E-07	1.07E-07	3.12E-07
53	5.50	0.	0.	0.	0.	4.55E-18	2.28E-17	0.	0.	2.97E-11	3.88E-08	1.73E-07	1.08E-07	3.20E-07
54	5.40	0.	0.	0.	0.	4.16E-18	1.81E-17	0.	0.	2.99E-11	4.10E-08	1.79E-07	1.09E-07	3.29E-07
55	5.30	0.	0.	0.	0.	4.27E-18	2.26E-17	0.	0.	2.98E-11	4.34E-08	1.84E-07	1.11E-07	3.38E-07
56	5.20	0.	0.	0.	0.	4.61E-18	1.74E-17	0.	0.	2.62E-11	4.60E-08	1.90E-07	1.13E-07	3.49E-07
57	5.10	0.	0.	0.	0.	4.61E-18	2.22E-17	0.	0.	2.64E-11	4.88E-08	1.97E-07	1.15E-07	3.60E-07
58	5.00	4.41E-19	0.	0.	0.	4.23E-18	2.18E-17	0.	0.	2.66E-11	5.18E-08	2.03E-07	1.17E-07	3.72E-07
59	4.90	1.08E-18	0.	0.	0.	4.72E-18	2.30E-17	0.	0.	2.69E-11	5.51E-08	2.11E-07	1.18E-07	3.84E-07
60	4.80	2.04E-18	0.	0.	0.	5.09E-18	2.17E-17	0.	0.	2.71E-11	5.87E-08	2.19E-07	1.21E-07	3.99E-07
61	4.70	2.76E-18	0.	0.	0.	5.11E-18	1.90E-17	0.	0.	2.73E-11	6.25E-08	2.28E-07	1.24E-07	4.15E-07
62	4.60	3.83E-18	0.	0.	0.	5.26E-18	2.79E-17	0.	0.	2.75E-11	6.67E-08	2.39E-07	1.26E-07	4.34E-07
63	4.50	4.04E-18	0.	4.34E-18	0.	4.85E-18	1.35E-17	0.	0.	2.78E-11	7.13E-08	2.52E-07	1.31E-07	4.55E-07
64	4.40	4.34E-18	0.	1.29E-17	0.	4.88E-18	9.26E-18	0.	0.	2.80E-11	7.64E-08	2.66E-07	1.34E-07	4.77E-07
65	4.30	4.13E-18	0.	4.29E-17	0.	4.68E-18	5.84E-18	0.	0.	2.82E-11	8.19E-08	2.80E-07	1.35E-07	4.97E-07
66	4.20	3.87E-18	0.	1.35E-16	0.	4.93E-18	4.07E-18	0.	0.	2.84E-11	8.79E-08	2.95E-07	1.20E-07	5.03E-07
67	4.10	3.65E-18	0.	6.86E-17	0.	4.95E-18	1.14E-18	0.	0.	2.85E-11	9.44E-08	3.11E-07	6.26E-08	4.68E-07
68	4.00	3.38E-18	0.	1.99E-16	0.	4.78E-18	8.54E-19	0.	0.	2.88E-11	1.02E-07	3.04E-07	6.48E-08	4.70E-07
69	3.90	2.99E-18	0.	9.21E-17	4.48E-14	4.37E-18	3.22E-19	0.	0.	2.85E-11	1.10E-07	2.68E-07	6.68E-08	4.45E-07
70	3.80	3.17E-18	0.	1.40E-16	1.85E-13	4.71E-18	0.	0.	0.	2.84E-11	1.19E-07	2.81E-07	6.97E-08	4.73E-07
71	3.70	2.84E-18	0.	1.53E-16	8.16E-14	4.85E-18	0.	0.	0.	2.88E-11	1.29E-07	2.85E-07	7.62E-08	4.90E-07
72	3.60	2.58E-18	0.	1.10E-16	4.27E-13	4.38E-18	0.	0.	0.	2.62E-11	1.40E-07	3.06E-07	8.34E-08	5.30E-07
73	3.50	2.42E-18	0.	1.44E-16	7.99E-13	3.49E-18	0.	0.	0.	2.40E-11	1.53E-07	3.34E-07	9.15E-08	5.78E-07
74	3.40	2.23E-18	0.	9.29E-17	1.25E-13	3.93E-18	0.	0.	0.	1.38E-11	1.67E-07	3.65E-07	1.01E-07	6.33E-07
75	3.30	1.79E-18	0.	9.51E-17	4.73E-13	3.16E-18	0.	0.	0.	1.39E-11	1.83E-07	3.98E-07	1.10E-07	6.90E-07
76	3.20	1.57E-18	0.	6.38E-17	7.67E-13	3.33E-18	0.	0.	0.	1.39E-11	2.01E-07	3.55E-07	1.20E-07	6.75E-07
77	3.10	1.52E-18	0.	4.91E-17	1.98E-13	3.17E-18	0.	0.	0.	1.39E-11	2.21E-07	3.85E-07	1.30E-07	7.36E-07
78	3.00	1.37E-18	0.	3.83E-17	4.58E-13	3.01E-18	0.	0.	0.	1.39E-11	2.44E-07	4.19E-07	1.40E-07	8.02E-07
79	2.90	1.16E-18	0.	1.90E-17	2.46E-13	2.32E-18	0.	0.	0.	1.40E-11	2.71E-07	4.54E-07	1.50E-07	8.74E-07
80	2.80	1.21E-18	0.	9.10E-18	1.64E-13	1.63E-18	0.	0.	0.	1.40E-11	3.01E-07	4.94E-07	1.61E-07	9.57E-07
81	2.70	7.90E-19	0.	4.31E-18	2.13E-13	9.64E-19	0.	0.	0.	1.40E-11	3.37E-07	5.37E-07	1.90E-07	1.02E-06
82	2.60	3.77E-19	0.	2.89E-18	2.19E-14	4.03E-19	0.	0.	0.	1.40E-11	3.79E-07	5.79E-07	9.73E-08	1.05E-06
83	2.50	2.66E-20	0.	2.20E-19	2.13E-14	9.46E-20	0.	0.	0.	1.40E-11	4.20E-07	4.74E-07	1.13E-07	1.01E-06
84	2.40	0.	9.90E-18	0.	1.67E-14	1.84E-20	0.	0.	0.	1.40E-11	4.82E-07	5.75E-07	1.38E-07	1.19E-06
85	2.30	0.	2.99E-17	0.	0.	0.	0.	0.	0.	1.39E-11	5.49E-07	6.90E-07	1.64E-07	1.41E-06
86	2.20	0.	7.88E-17	0.	0.	0.	0.	0.	0.	1.38E-11	6.29E-07	8.09E-07	1.94E-07	1.63E-06
87	2.10	0.	8.18E-17	0.	0.	0.	0.	0.	0.	1.38E-11	7.25E-07	9.36E-07	2.27E-07	1.88E-06
88	2.00	0.	1.67E-16	0.	0.	0.	0.	0.	0.	1.33E-11	8.41E-07	1.08E-06	2.59E-07	2.16E-06
89	1.90	0.	2.08E-16	0.	0.	0.	0.	0.	0.	1.28E-11	9.83E-07	1.21E-06	3.01E-07	2.49E-06
90	1.80	0.	1.70E-16	0.	0.	0.	0.	0.	0.	1.23E-11	1.16E-06	1.43E-06	3.66E-07	2.96E-06
91	1.70	0.	1.94E-16	0.	0.	0.	0.	0.	0.	1.15E-11	1.38E-06	1.63E-06	4.42E-07	3.45E-06
92	1.60	0.	1.44E-16	0.	0.	0.	0.	0.	0.	9.77E-12	1.66E-06	1.90E-06	5.01E-07	4.07E-06
93	1.50	0.	1.67E-16	0.	0.	0.	0.	0.	0.	4.44E-12	2.03E-06	2.33E-06	6.12E-07	4.97E-06
94	1.40	0.	1.65E-16	0.	0.	0.	0.	0.	0.	0.	2.52E-06	2.24E-06	7.80E-07	5.45E-06
95	1.30	0.	1.20E-16	0.	0.	0.	0.	0.	0.	0.	3.14E-06	1.36E-06	7.50E-07	7.28E-06
96	1.20	0.	1.21E-16	0.	0.	0.	0.	0.	0.	0.	4.03E-06	4.33E-06	1.88E-06	9.37E-06
97	1.10	0.	1.10E-16	0.	0.	0.	0.	2.29E-22	0.	0.	5.25E-06	5.49E-06	1.18E-06	1.19E-05
98	1.00	0.	1.84E-16	0.	0.	0.	0.	3.47E-21	0.	0.	7.03E-06	6.49E-06	1.43E-06	1.49E-05
99	0.90	0.	8.72E-17	0.	0.	0.	0.	4.93E-21	0.	0.	9.73E-06	7.51E-06	1.68E-06	1.89E-05
100	0.80	0.	4.18E-17	0.	0.	0.	0.	8.79E-20	0.	0.	1.40E-05	8.29E-06	1.75E-06	2.48E-05
101	0.70	0.	9.56E-18	0.	0.	0.	0.	9.80E-20	0.	0.	2.11E-05	7.79E-06	1.52E-06	3.04E-05
102	0.60	0.	1.91E-18	0.	0.	0.	0.	2.68E-19	0.	0.	3.41E-05	8.77E-06	1.72E-06	4.46E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (REVERSE CH.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IBHS.	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	4.12E-26	0.	0.	0.	2.89E-14	7.39E-11	8.19E-09	1.31E-09	9.56E-09
2	10.6e	0.	0.	3.77E-28	0.	0.	0.	2.89E-14	7.60E-11	8.24E-09	1.31E-09	9.63E-09
3	10.5e	0.	0.	3.82E-28	0.	0.	0.	2.90E-14	7.83E-11	8.29E-09	1.31E-09	9.68E-09
4	10.4e	0.	0.	3.84E-28	0.	0.	0.	2.90E-14	8.04E-11	8.34E-09	1.30E-09	9.72E-09
5	10.3e	0.	0.	3.19E-28	0.	0.	0.	2.91E-14	8.30E-11	8.39E-09	1.30E-09	9.77E-09
6	10.2e	0.	0.	3.31E-28	0.	0.	0.	2.91E-14	8.54E-11	8.40E-09	1.29E-09	9.85E-09
7	10.1e	0.	0.	3.13E-28	0.	0.	0.	2.91E-14	8.80E-11	8.56E-09	1.29E-09	9.94E-09
8	10.0e	0.	0.	2.77E-28	0.	0.	0.	2.92E-14	9.07E-11	8.65E-09	1.29E-09	1.00E-08
9	9.9e	0.	0.	2.84E-28	0.	0.	0.	2.92E-14	9.35E-11	8.74E-09	1.28E-09	1.01E-08
10	9.8e	0.	0.	2.69E-28	0.	0.	0.	2.93E-14	9.64E-11	8.83E-09	1.28E-09	1.02E-08
11	9.7e	0.	0.	2.34E-28	0.	0.	0.	2.93E-14	9.95E-11	8.91E-09	1.28E-09	1.03E-08
12	9.6e	0.	0.	2.53E-28	0.	0.	0.	2.94E-14	1.03E-10	9.00E-09	1.27E-09	1.04E-08
13	9.5e	0.	0.	2.10E-28	0.	0.	0.	2.94E-14	1.06E-10	9.08E-09	1.27E-09	1.05E-08
14	9.4e	0.	0.	2.07E-28	0.	0.	0.	2.96E-14	1.09E-10	9.17E-09	1.27E-09	1.05E-08
15	9.3e	0.	0.	2.13E-28	0.	0.	0.	2.97E-14	1.13E-10	7.53E-09	1.27E-09	8.51E-09
16	9.2e	0.	0.	1.78E-28	0.	0.	0.	2.98E-14	1.17E-10	7.61E-09	1.26E-09	8.94E-09
17	9.1e	0.	0.	1.83E-28	0.	0.	0.	2.99E-14	1.21E-10	7.69E-09	1.26E-09	9.07E-09
18	9.0e	0.	0.	1.67E-28	0.	0.	0.	3.00E-14	1.25E-10	7.77E-09	1.26E-09	9.15E-09
19	8.9e	0.	0.	1.56E-28	0.	0.	0.	3.01E-14	1.29E-10	7.85E-09	1.17E-09	9.15E-09
20	8.8e	0.	0.	1.54E-28	0.	0.	0.	3.02E-14	1.33E-10	7.93E-09	1.16E-09	9.22E-09
21	8.7e	0.	0.	1.34E-28	0.	0.	0.	3.03E-14	1.39E-10	8.01E-09	1.16E-09	9.31E-09
22	8.6e	0.	0.	1.39E-28	0.	0.	0.	3.04E-14	1.43E-10	8.09E-09	1.16E-09	9.39E-09
23	8.5e	0.	0.	1.23E-28	0.	0.	0.	3.05E-14	1.48E-10	8.18E-09	1.16E-09	9.48E-09
24	8.4e	0.	0.	1.22E-28	0.	0.	0.	3.07E-14	1.54E-10	8.27E-09	1.16E-09	9.58E-09
25	8.3e	0.	0.	1.04E-28	0.	0.	0.	3.08E-14	1.59E-10	4.72E-09	1.16E-09	6.04E-09
26	8.2e	0.	0.	1.06E-28	0.	0.	0.	3.10E-14	1.65E-10	4.89E-09	1.16E-09	6.22E-09
27	8.1e	0.	0.	9.22E-21	0.	0.	0.	3.12E-14	1.71E-10	5.05E-09	1.17E-09	6.39E-09
28	8.0e	0.	0.	9.31E-21	0.	0.	0.	3.13E-14	1.79E-10	5.21E-09	1.18E-09	6.57E-09
29	7.9e	0.	0.	8.07E-21	0.	0.	0.	3.15E-14	1.85E-10	5.38E-09	1.19E-09	6.75E-09
30	7.8e	0.	0.	8.48E-21	0.	0.	0.	3.16E-14	1.97E-10	5.54E-09	1.19E-09	6.93E-09
31	7.7e	0.	0.	7.42E-21	0.	0.	0.	3.18E-14	2.08E-10	5.73E-09	1.20E-09	7.12E-09
32	7.6e	0.	0.	7.88E-21	0.	5.47E-25	0.	3.19E-14	2.09E-10	5.93E-09	1.20E-09	7.34E-09
33	7.5e	0.	0.	6.68E-21	0.	1.82E-24	0.	3.21E-14	2.19E-10	6.13E-09	1.21E-09	7.55E-09
34	7.4e	0.	0.	5.96E-21	0.	1.56E-23	0.	3.23E-14	2.25E-10	6.31E-09	1.22E-09	7.77E-09
35	7.3e	0.	0.	5.68E-21	0.	6.11E-23	0.	3.25E-14	2.35E-10	6.85E-09	1.23E-09	7.51E-09
36	7.2e	0.	0.	5.15E-21	0.	1.69E-22	0.	3.27E-14	2.45E-10	6.34E-09	1.24E-09	7.83E-09
37	7.1e	0	0.	4.98E-21	0.	5.27E-22	0.	3.29E-14	2.55E-10	6.63E-09	1.25E-09	8.14E-09
38	7.0e	2.00E-24	0.	4.59E-21	0.	1.03E-21	0.	3.32E-14	2.66E-10	6.93E-09	1.26E-09	8.45E-09
39	6.9e	5.48E-24	0.	4.24E-21	0.	1.46E-21	0.	3.34E-14	2.78E-10	7.22E-09	1.27E-09	8.77E-09
40	6.8e	4.74E-24	0.	4.19E-21	0.	2.50E-21	0.	3.37E-14	2.91E-10	7.51E-09	1.29E-09	9.08E-09
41	6.7e	7.47E-24	0.	3.82E-21	0.	2.46E-21	0.	3.40E-14	3.04E-10	7.80E-09	1.30E-09	9.40E-09
42	6.6e	2.12E-24	0.	3.26E-21	0.	2.86E-21	0.	3.43E-14	3.19E-10	8.10E-09	1.31E-09	9.72E-09
43	6.5e	1.23E-24	0.	2.62E-21	0.	2.99E-21	0.	3.45E-14	3.33E-10	8.39E-09	1.32E-09	1.01E-08
44	6.4e	7.03E-25	0.	1.83E-21	9.86E-24	2.79E-21	0.	3.48E-14	3.47E-10	8.69E-09	1.34E-09	1.04E-08
45	6.3e	4.12E-25	0.	1.15E-21	4.47E-23	2.03E-21	0.	3.51E-14	3.60E-10	8.99E-09	1.35E-09	1.07E-08
46	6.2e	1.87E-25	0.	6.46E-22	6.67E-23	2.74E-21	0.	3.53E-14	3.84E-10	9.30E-09	1.37E-09	1.11E-08
47	6.1e	8.63E-26	0.	3.06E-22	1.91E-22	3.39E-21	0.	3.56E-14	4.04E-10	9.62E-09	1.39E-09	1.14E-08
48	6.0e	3.62E-26	0.	7.82E-23	1.85E-22	1.69E-21	0.	3.59E-14	4.24E-10	3.34E-09	1.19E-09	4.96E-09
49	5.9e	9.92E-27	0.	5.51E-24	2.72E-22	1.84E-21	0.	3.59E-14	4.46E-10	5.44E-09	1.20E-09	5.09E-09
50	5.8e	1.14E-27	0.	1.42E-25	3.82E-22	1.78E-21	0.	3.53E-14	4.70E-10	1.53E-09	1.22E-09	5.22E-09
51	5.7e	8.39E-29	0.	0.	4.51E-22	1.90E-21	0.	3.32E-14	4.95E-10	3.66E-09	1.23E-09	5.39E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-03 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.6[illegible]	3.79E-30	0.	0.	0.	3.88E-22	2.58E-21	0.	0.	3.89E-14	5.23E-10	3.83E-09	[illegible].24E-09	5.6[illegible]-09
53	5.5[illegible]	0.	0.	0.	0.	4.74E-22	2.31E-21	0.	0.	3.19E-14	5.52E-10	4.01E-09	1.26E-09	5.[illegible]E-09
54	5.4[illegible]	0.	0.	0.	0.	4.38E-22	1.98E-21	0.	0.	3.12E-14	5.83E-10	4.21E-09	1.28E-09	6.07E-09
55	5.3[illegible]	0.	0.	0.	0.	4.49E-22	2.38E-21	0.	0.	3.14E-[illegible]4	6.18E-10	4.41E-09	1.30E-09	6.33E-09
56	5.2[illegible]	0.	0.	0.	0.	4.85E-22	1.83E-21	0.	0.	3.18E-14	6.54E-10	4.61E-09	1.33E-09	6.59E-09
57	5.1[illegible]	0.	0.	0.	0.	4.85E-22	2.34E-21	0.	0.	3.18E-14	6.94E-10	4.81E-09	1.32E-09	6.82E-09
58	5.0[illegible]	5.25E-23	0.	0.	0.	4.45E-22	2.21E-21	0.	0.	3.21E-14	7.37E-10	5.02E-09	1.34E-09	7.10E-09
59	4.9[illegible]	1.28E-22	0.	0.	0.	4.97E-22	2.43E-21	0.	0.	3.24E-14	7.83E-10	5.24E-09	1.37E-09	7.39E-09
60	4.8[illegible]	2.42E-22	0.	0.	0.	5.35E-22	2.28E-21	0.	0.	3.27E-14	8.34E-10	5.46E-09	1.40E-09	7.72E-09
61	4.7[illegible]	3.28E-22	0.	0.	0.	5.38E-22	2.88E-21	0.	0.	3.29E-14	8.89E-10	5.76E-09	1.44E-09	8.09E-09
62	4.6[illegible]	4.55E-22	0.	0.	0.	5.54E-22	1.89E-21	0.	0.	3.32E-14	9.49E-10	6.14E-09	1.46E-09	8.58E-09
63	4.5[illegible]	4.81E-22	0.	4.85E-22	0.	5.10E-22	1.42E-21	0.	0.	3.34E-14	1.01E-09	6.55E-09	1.53E-09	9.09E-09
64	4.4[illegible]	5.16E-22	0.	1.20E-21	0.	5.13E-22	9.75E-22	0.	0.	3.37E-14	1.09E-09	6.96E-09	1.57E-09	9.61E-09
65	4.3[illegible]	4.91E-22	0.	4.80E-21	0.	4.93E-22	6.15E-22	0.	0.	[illegible]40E-14	1.15E-09	7.37E-09	1.59E-09	1.01E-08
66	4.2[illegible]	4.60E-22	0.	1.26E-20	0.	5.19E-22	4.29E-22	0.	0.	3.43E-14	1.25E-09	7.84E-09	7.71E-10	9.96E-09
67	4.1[illegible]	4.34E-22	0.	5.64E-21	0.	5.18E-22	1.20E-22	0.	0.	3.44E-14	1.34E-09	8.18E-09	8.84E-10	1.03E-08
68	4.0[illegible]	4.02E-22	0.	1.82E-20	0.	4.95E-22	9.01E-23	0.	0.	3.45E-14	1.45E-09	8.12E-09	8.37E-10	1.04E-08
69	3.9[illegible]	3.43E-22	0.	8.58E-21	3.78E-17	4.68E-22	3.39E-23	0.	0.	3.44E-14	1.56E-09	8.58E-09	8.78E-10	1.10E-08
70	3.8[illegible]	3.77E-22	0.	1.38E-20	1.56E-16	4.96E-22	0.	0.	0.	3.43E-14	1.69E-09	9.04E-09	9.12E-10	1.16E-08
71	3.7[illegible]	3.38E-22	0.	1.42E-20	6.89E-17	4.27E-22	0.	0.	0.	3.37E-14	1.83E-09	9.42E-09	9.92E-10	1.22E-08
72	3.6[illegible]	3.06E-22	0.	1.82E-20	3.41E-16	4.61E-22	0.	0.	0.	3.16E-14	1.99E-09	9.96E-09	1.09E-09	1.30E-08
73	3.5[illegible]	2.88E-22	0.	1.34E-20	8.71E-16	3.68E-22	0.	0.	0.	2.99E-14	2.17E-09	1.06E-08	1.19E-09	1.39E-08
74	3.4[illegible]	2.66E-22	0.	8.68E-21	1.86E-16	4.13E-22	0.	0.	0.	1.67E-14	2.37E-09	4.82E-09	1.27E-09	8.48E-09
75	3.3[illegible]	2.13E-22	0.	8.86E-21	3.99E-16	3.33E-22	0.	0.	0.	1.67E-14	2.59E-09	5.26E-09	1.38E-09	9.24E-09
76	3.2[illegible]	1.87E-22	0.	5.87E-21	6.48E-16	3.50E-22	0.	0.	0.	1.67E-14	2.85E-09	5.80E-09	1.43E-09	1.02E-08
77	3.1[illegible]	1.80E-22	0.	4.58E-21	1.67E-16	3.34E-22	0.	0.	0.	1.68E-14	3.14E-09	6.56E-09	1.50E-09	1.12E-08
78	3.0[illegible]	1.63E-22	0.	2.82E-21	3.80E-16	3.17E-22	0.	0.	0.	1.68E-14	3.47E-09	7.23E-09	1.62E-09	1.23E-08
79	2.9[illegible]	1.58E-22	0.	1.77E-21	2.88E-16	2.44E-22	0.	0.	0.	1.68E-14	3.84E-09	7.93E-09	1.75E-09	1.35E-08
80	2.8[illegible]	1.44E-22	0.	8.56E-22	1.38E-16	1.72E-22	0.	0.	0.	1.69E-14	4.29E-09	8.68E-09	1.90E-09	1.49E-08
81	2.7[illegible]	9.39E-23	0.	4.02E-22	1.88E-16	9.51E-23	0.	0.	0.	1.69E-14	4.[illegible]E-09	9.42E-09	1.12E-09	1.53E-08
82	2.6[illegible]	4.49E-23	0.	1.94E-22	1.85E-17	4.24E-23	0.	0.	0.	1.69E-14	5.[illegible]E-09	1.02E-08	1.22E-09	1.68E-08
83	2.5[illegible]	3.16E-24	0.	2.0[illegible]-23	1.80E-17	1.82E-23	0.	0.	0.	1.69E-14	6.84E-09	1.07E-08	1.41E-09	1.71E-08
84	2.4[illegible]	0.	9.23E-22	0.	1.41E-17	1.89E-24	0.	0.	0.	1.69E-14	6.83E-09	1.13E-08	1.72E-09	1.99E-08
85	2.3[illegible]	0.	2.70E-21	0.	0.	0.	0.	0.	0.	1.67[illegible]14	7.78E-09	1.31E-08	2.01E-09	2.29E-08
86	2.2[illegible]	0.	7.35E-21	0.	0.	0.	0.	0.	0.	1.67E-14	8.91E-09	1.49E-08	2.38E-09	2.62E-08
87	2.1[illegible]	0.	7.62E-21	0.	0.	0.	0.	0.	0.	1.68E-14	1.03E-08	1.68E-08	2.75E-09	2.99E-08
88	2.0[illegible]	0.	1.51E-20	0.	0.	0.	0.	0.	0.	1.61E-14	1.19E-08	1.87E-08	2.92E-09	3.36E-08
89	1.9[illegible]	0.	1.86E-20	0.	0.	0.	0.	0.	0.	1.55E-14	1.39E-08	1.47E-08	3.39E-09	3.23E-08
90	1.8[illegible]	0.	1.59E-20	0.	0.	0.	0.	0.	0.	1.48E-14	1.64E-08	1.72E-08	4.11E-09	3.77E-08
91	1.7[illegible]	0.	1.81E-20	0.	0.	0.	0.	0.	0.	1.39E-14	1.95E-08	2.02E-08	4.98E-09	4.47E-08
92	1.6[illegible]	0.	1.38E-20	0.	0.	0.	0.	0.	0.	1.18E-14	2.34E-08	2.32E-08	5.64E-09	5.24E-08
93	1.5[illegible]	0.	1.50E-20	0.	0.	0.	0.	0.	0.	5.35E-15	2.87E-08	2.77E-08	6.30E-09	6.25E-08
94	1.4[illegible]	0.	1.54E-20	0.	0.	0.	0.	0.	0.	0.	3.56E-08	2.71E-08	5.93E-09	6.96E-08
95	1.3[illegible]	0.	1.10E-20	0.	0.	0.	0.	0.	0.	0.	4.44E-08	3.67E-08	8.39E-09	8.97E-08
96	1.2[illegible]	0.	1.12E-20	0.	0.	0.	0.	0.	0.	0.	5.6[illegible]E-08	4.18E-08	1.02E-08	1.09E-07
97	1.1[illegible]	0.	1.08E-20	0.	0.	0.	0.	2.37E-26	0.	0.	7.42E-08	5.07E-08	1.29E-08	1.38E-07
98	1.0[illegible]	0.	9.90E-21	0.	0.	0.	0.	3.66E-25	0.	0.	9.93E-08	6.17E-08	1.56E-08	1.77E-07
99	0.9[illegible]	0.	8.13E-21	0.	0.	0.	0.	4.24E-25	0.	0.	1.37E-07	8.93E-08	1.65E-08	2.23E-07
100	0.8[illegible]	0.	3.82E-21	0.	0.	0.	0.	9.26E-24	0.	0.	1.97E-07	8.88E-08	1.91E-08	2.97E-07
101	0.7[illegible]	0.	8.93E-22	0.	0.	0.	0.	8.58E-24	0.	0.	2.90E-07	7.52E-08	1.66E-08	3.93E-07
102	0.6[illegible]	0.	1.78E-22	0.	0.	0.	0.	2.74E-23	0.	0.	4.00E-07	8.47E-08	1.87E-08	5.04E-07

ABSORPTION COEFFICIEN.. OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	1.87E-24	0.	0.	0.	4.46E-17	1.78E-12	3.01E-10	2.82E-11	3.31E-10
2	10.68	0.	0.	1.71E-24	0.	0.	0.	4.47E-17	1.75E-12	3.03E-10	2.82E-11	3.33E-10
3	10.58	0.	0.	1.73E-24	0.	0.	0.	4.48E-17	1.80E-12	3.05E-10	2.81E-11	3.35E-10
4	10.48	0.	0.	1.45E-24	0.	0.	0.	4.48E-17	1.85E-12	3.07E-10	2.81E-11	3.37E-10
5	10.38	0.	0.	1.45E-24	0.	0.	0.	4.49E-17	1.91E-12	3.10E-10	2.80E-11	3.40E-10
6	10.28	0.	0.	1.50E-24	0.	0.	0.	4.49E-17	1.97E-12	3.14E-10	2.81E-11	3.44E-10
7	10.18	0.	0.	1.42E-24	0.	0.	0.	4.50E-17	2.03E-12	3.18E-10	2.82E-11	3.48E-10
8	10.08	0.	0.	1.26E-24	0.	0.	0.	4.50E-17	2.69E-12	3.22E-10	2.83E-11	3.53E-10
9	9.98	0.	0.	1.29E-24	0.	0.	0.	4.51E-17	2.15E-12	3.27E-10	2.84E-11	3.57E-10
10	9.88	0.	0.	1.22E-24	0.	0.	0.	4.52E-17	2.22E-12	3.31E-10	2.85E-11	3.62E-10
11	9.78	0.	0.	1.06E-24	0.	0.	0.	4.53E-17	2.29E-12	3.35E-10	2.86E-11	3.66E-10
12	9.68	0.	0.	1.15E-24	0.	0.	0.	4.54E-17	2.36E-12	3.39E-10	2.87E-11	3.70E-10
13	9.58	0.	0.	9.80E-25	0.	0.	0.	4.55E-17	2.44E-12	3.43E-10	2.88E-11	3.74E-10
14	9.48	0.	0.	9.48E-25	0.	0.	0.	4.56E-17	2.51E-12	3.36E-10	2.89E-11	3.67E-10
15	9.38	0.	0.	9.45E-25	0.	0.	0.	4.58E-17	2.60E-12	3.46E-10	2.90E-11	3.71E-10
16	9.28	0.	0.	8.88E-25	0.	0.	0.	4.60E-17	2.68E-12	3.44E-10	2.91E-11	3.76E-10
17	9.18	0.	0.	8.31E-25	0.	0.	0.	4.61E-17	2.77E-12	3.48E-10	2.93E-11	3.80E-10
18	9.08	0.	0.	7.68E-25	0.	0.	0.	4.63E-17	2.87E-12	3.52E-10	2.19E-11	3.77E-10
19	8.98	0.	0.	7.87E-25	0.	0.	0.	4.65E-17	2.96E-12	3.56E-10	2.11E-11	3.80E-10
20	8.88	0.	0.	6.97E-25	0.	0.	0.	4.66E-17	3.07E-12	3.60E-10	2.13E-11	3.84E-10
21	8.78	0.	0.	6.18E-25	0.	0.	0.	4.68E-17	3.17E-12	3.64E-10	2.15E-11	3.89E-10
22	8.68	0.	0.	6.38E-25	0.	0.	0.	4.70E-17	3.29E-12	3.68E-10	2.17E-11	3.93E-10
23	8.58	0.	0.	5.56E-25	0.	0.	0.	4.71E-17	3.41E-12	3.72E-10	2.19E-11	3.98E-10
24	8.48	0.	0.	5.55E-25	0.	0.	0.	4.74E-17	3.53E-12	1.89E-10	2.21E-11	2.14E-10
25	8.38	0.	0.	4.74E-25	0.	0.	0.	4.76E-17	3.66E-12	1.95E-10	2.24E-11	2.21E-10
26	8.28	0.	0.	4.81E-25	0.	0.	0.	4.79E-17	3.80E-12	2.03E-10	2.29E-11	2.30E-10
27	8.18	0.	0.	4.19E-25	0.	0.	0.	4.81E-17	3.94E-12	2.11E-10	2.33E-11	2.38E-10
28	8.08	0.	0.	4.23E-25	0.	0.	0.	4.84E-17	4.09E-12	2.19E-10	2.38E-11	2.47E-10
29	7.98	0.	0.	3.66E-25	0.	0.	0.	4.86E-17	4.25E-12	2.27E-10	2.43E-11	2.56E-10
30	7.88	0.	0.	3.81E-25	0.	0.	0.	4.89E-17	4.41E-12	2.36E-10	2.48E-11	2.65E-10
31	7.78	0.	0.	3.37E-25	0.	0.	0.	4.91E-17	4.59E-12	2.45E-10	2.52E-11	2.74E-10
32	7.68	0.	0.	3.21E-25	0.	4.34E-29	0.	4.93E-17	4.77E-12	2.55E-10	2.57E-11	2.85E-10
33	7.58	0.	0.	3.08E-25	0.	1.45E-28	0.	4.96E-17	4.97E-12	2.64E-10	2.62E-11	2.96E-10
34	7.48	0.	0.	2.71E-25	0.	1.24E-27	0.	4.99E-17	5.17E-12	2.48E-10	2.68E-11	2.80E-10
35	7.38	0.	0.	2.58E-25	0.	4.84E-27	0.	5.01E-17	5.39E-12	2.80E-10	2.74E-11	2.93E-10
36	7.28	0.	0.	2.34E-25	0.	1.34E-26	0.	5.04E-17	5.62E-12	2.75E-10	2.82E-11	3.08E-10
37	7.18	0.	0.	2.26E-25	0.	4.18E-26	0.	5.08E-17	5.86E-12	2.89E-10	2.91E-11	3.24E-10
38	7.08	3.87E-28	0.	2.09E-25	0.	8.20E-26	0.	5.12E-17	6.12E-12	3.04E-10	3.00E-11	3.40E-10
39	6.98	7.59E-28	0.	1.92E-25	0.	1.16E-25	0.	5.17E-17	6.39E-12	3.18E-10	3.09E-11	3.56E-10
40	6.88	6.56E-28	0.	1.86E-25	0.	1.98E-25	0.	5.21E-17	6.67E-12	3.33E-10	3.18E-11	3.72E-10
41	6.78	4.80E-28	0.	1.64E-25	0.	1.95E-25	0.	5.25E-17	6.98E-12	3.48E-10	3.27E-11	3.87E-10
42	6.68	2.93E-28	0.	1.48E-25	0.	1.63E-25	0.	5.29E-17	7.30E-12	3.62E-10	3.36E-11	4.03E-10
43	6.58	1.70E-28	0.	1.19E-25	0.	2.37E-25	0.	5.33E-17	7.64E-12	3.77E-10	3.45E-11	4.19E-10
44	6.48	9.78E-29	0.	8.38E-26	7.82E-28	2.21E-25	0.	5.37E-17	8.01E-12	3.92E-10	3.55E-11	4.35E-10
45	6.38	5.71E-29	0.	5.24E-26	3.78E-27	1.61E-25	0.	5.41E-17	8.40E-12	4.06E-10	3.64E-11	4.51E-10
46	6.28	2.59E-29	0.	2.93E-26	5.29E-27	2.19E-25	0.	5.46E-17	8.81E-12	4.22E-10	3.75E-11	4.68E-10
47	6.18	1.19E-29	0.	1.39E-26	1.52E-26	2.69E-25	0.	5.50E-17	9.26E-12	1.11E-10	1.97E-11	1.40E-10
48	6.08	5.01E-30	0.	3.55E-27	1.47E-26	1.34E-25	0.	5.54E-17	9.73E-12	1.15E-10	1.99E-11	1.44E-10
49	5.98	1.23E-30	0.	2.55E-28	2.10E-26	1.30E-25	0.	5.54E-17	1.02E-11	1.19E-10	2.03E-11	1.49E-10
50	5.88	1.50E-31	0.	6.43E-30	3.03E-26	1.35E-25	0.	5.46E-17	1.08E-11	1.23E-10	2.07E-11	1.54E-10
51	5.78	1.16E-32	0.	0.	3.57E-26	1.51E-25	0.	5.12E-17	1.14E-11	1.29E-10	2.11E-11	1.61E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.6A	5.25E-34	0.	0.	0.	3.07E-26	1.98E-25	0.	0.	4.77E-17	1.20E-11	1.36E-10	2.16E-11	1.70E-10
53	5.5A	0.	0.	0.	0.	3.75E-26	1.83E-25	0.	0.	4.79E-17	1.26E-11	1.44E-10	2.20E-11	1.79E-10
54	5.4A	0.	0.	0.	0.	3.47E-26	1.51E-25	0.	0.	4.81E-17	1.34E-11	1.53E-10	2.27E-11	1.89E-10
55	5.3A	0.	0.	0.	0.	3.56E-26	1.09E-25	0.	0.	4.85E-17	1.41E-11	1.61E-10	2.03E-11	1.96E-10
56	5.2A	0.	0.	0.	0.	3.85E-26	1.45E-25	0.	0.	4.88E-17	1.50E-11	1.70E-10	2.10E-11	2.06E-10
57	5.1A	0.	0.	0.	0.	3.85E-26	1.86E-25	0.	0.	4.92E-17	1.59E-11	1.78E-10	2.16E-11	2.16E-10
58	5.0A	7.26E-27	0.	0.	0.	3.53E-26	1.75E-25	0.	0.	4.96E-17	1.69E-11	1.87E-10	2.23E-11	2.26E-10
59	4.9A	1.70E-26	0.	0.	0.	3.94E-26	1.92E-25	0.	0.	5.00E-17	1.79E-11	1.96E-10	2.30E-11	2.37E-10
60	4.8A	3.35E-26	0.	0.	0.	4.24E-26	1.81E-25	0.	0.	5.04E-17	1.91E-11	2.04E-10	2.37E-11	2.47E-10
61	4.7A	4.55E-26	0.	0.	0.	4.26E-26	1.65E-25	0.	0.	5.08E-17	2.04E-11	2.17E-10	2.44E-11	2.62E-10
62	4.6A	6.38E-26	0.	0.	0.	4.39E-26	1.50E-25	0.	0.	5.12E-17	2.17E-11	2.33E-10	2.54E-11	2.81E-10
63	4.5A	6.65E-26	0.	1.84E-26	0.	4.64E-26	1.13E-25	0.	0.	5.17E-17	2.32E-11	2.50E-10	2.64E-11	3.00E-10
64	4.4A	7.15E-26	0.	5.44E-26	0.	4.87E-26	7.73E-26	0.	0.	5.21E-17	2.48E-11	2.67E-10	2.78E-11	3.19E-10
65	4.3A	6.79E-26	0.	1.02E-25	0.	3.90E-26	4.88E-26	0.	0.	5.25E-17	2.66E-11	2.83E-10	2.51E-11	3.35E-10
66	4.2A	5.37E-26	0.	5.72E-25	0.	4.12E-26	3.40E-26	0.	0.	5.29E-17	2.86E-11	3.05E-10	1.89E-11	3.50E-10
67	4.1A	6.80E-26	0.	2.56E-25	0.	4.85E-26	9.50E-27	0.	0.	5.31E-17	3.08E-11	3.21E-10	2.01E-11	3.72E-10
68	4.0A	5.56E-26	0.	8.27E-25	0.	3.92E-26	7.14E-27	0.	0.	5.33E-17	3.31E-11	3.38E-10	2.14E-11	3.93E-10
69	3.9A	4.75E-26	0.	3.98E-25	1.31E-28	3.64E-26	2.69E-27	0.	0.	5.31E-17	3.58E-11	3.50E-10	2.26E-11	4.16E-10
70	3.8A	5.22E-26	0.	6.25E-25	5.39E-28	3.93E-26	0.	0.	0.	5.29E-17	3.87E-11	3.77E-10	2.39E-11	4.48E-10
71	3.7A	4.68E-26	0.	6.46E-25	2.30E-28	3.38E-26	0.	0.	0.	5.21E-17	4.19E-11	3.97E-10	2.57E-11	4.65E-10
72	3.6A	4.24E-26	0.	4.44E-25	1.25E-19	3.66E-26	0.	0.	0.	4.88E-17	4.56E-11	4.18E-10	2.55E-11	4.89E-10
73	3.5A	3.98E-26	0.	4.09E-25	2.32E-19	2.91E-26	0.	0.	0.	4.46E-17	4.96E-11	1.22E-10	2.75E-11	2.00E-10
74	3.4A	3.68E-26	0.	3.93E-25	3.65E-28	3.28E-26	0.	0.	0.	2.57E-17	5.42E-11	1.33E-10	2.98E-11	2.17E-10
75	3.3A	2.95E-26	0.	4.02E-25	1.38E-19	2.64E-26	0.	0.	0.	2.58E-17	5.93E-11	1.44E-10	2.57E-11	2.29E-10
76	3.2A	2.50E-26	0.	2.66E-25	2.24E-19	2.78E-26	0.	0.	0.	2.58E-17	6.51E-11	1.66E-10	2.39E-11	2.53E-10
77	3.1A	2.50E-26	0.	2.88E-25	5.79E-28	2.69E-26	0.	0.	0.	2.59E-17	7.17E-11	1.86E-10	2.63E-11	2.84E-10
78	3.0A	2.25E-26	0.	1.20E-25	1.31E-19	2.51E-26	0.	0.	0.	2.63E-17	7.92E-11	2.09E-10	2.88E-11	3.17E-10
79	2.9A	1.91E-26	0.	8.86E-26	7.10E-28	1.94E-26	0.	0.	0.	2.68E-17	8.78E-11	2.31E-10	3.14E-11	3.50E-10
80	2.8A	2.08E-26	0.	3.86E-26	4.79E-28	1.36E-26	0.	0.	0.	2.68E-17	9.77E-11	2.54E-10	3.12E-11	3.83E-10
81	2.7A	1.38E-26	0.	1.82E-26	6.21E-28	7.54E-27	0.	0.	0.	2.68E-17	1.09E-10	2.77E-10	2.61E-11	4.12E-10
82	2.6A	6.21E-27	0.	8.82E-27	6.40E-21	3.38E-27	0.	0.	0.	2.68E-17	1.22E-10	2.89E-10	2.84E-11	4.40E-10
83	2.5A	4.38E-28	0.	9.33E-28	6.21E-21	8.07E-28	0.	0.	0.	2.68E-17	1.38E-10	3.20E-10	3.20E-11	4.98E-10
84	2.4A	0.	4.19E-26	0.	4.87E-21	8.66E-29	0.	0.	0.	2.68E-17	1.56E-10	3.65E-10	3.75E-11	5.58E-10
85	2.3A	0.	1.20E-25	0.	0.	0.	0.	0.	0.	2.58E-17	1.77E-10	4.11E-10	4.32E-11	6.32E-10
86	2.2A	0.	3.34E-25	0.	0.	0.	0.	0.	0.	2.57E-17	2.03E-10	4.58E-10	4.95E-11	7.18E-10
87	2.1A	0.	5.44E-25	0.	0.	0.	0.	0.	0.	2.56E-17	2.34E-10	2.21E-10	3.89E-11	4.94E-10
88	2.0A	0.	6.86E-25	0.	0.	0.	0.	0.	0.	2.48E-17	2.71E-10	2.51E-10	4.44E-11	5.67E-10
89	1.9A	0.	8.45E-25	0.	0.	0.	0.	0.	0.	2.39E-17	3.17E-10	2.83E-10	5.11E-11	6.52E-10
90	1.8A	0.	7.28E-25	0.	0.	0.	0.	0.	0.	2.28E-17	3.74E-10	3.20E-10	6.07E-11	7.55E-10
91	1.7A	0.	8.21E-25	0.	0.	0.	0.	0.	0.	2.15E-17	4.45E-10	3.60E-10	6.97E-11	8.74E-10
92	1.6A	0.	6.16E-25	0.	0.	0.	0.	0.	0.	1.82E-17	5.36E-10	3.92E-10	8.11E-11	1.01E-09
93	1.5A	0.	7.07E-25	0.	0.	0.	0.	0.	0.	8.27E-18	6.53E-10	4.09E-10	9.88E-11	1.15E-09
94	1.4A	0.	6.97E-25	0.	0.	0.	0.	0.	0.	0.	8.08E-10	4.66E-10	8.60E-11	1.36E-09
95	1.3A	0.	5.34E-25	0.	0.	0.	0.	0.	0.	0.	1.01E-09	2.82E-10	9.59E-11	1.31E-09
96	1.2A	0.	5.10E-25	0.	0.	0.	0.	0.	0.	0.	1.29E-09	2.76E-10	1.20E-10	1.69E-09
97	1.1A	0.	4.90E-25	0.	0.	0.	0.	1.88E-30	0.	0.	1.68E-09	3.42E-10	1.52E-10	2.18E-09
98	1.0A	0.	4.58E-25	0.	0.	0.	0.	2.98E-29	0.	0.	2.25E-09	4.16E-10	1.84E-10	2.85E-09
99	0.9A	0.	3.69E-25	0.	0.	0.	0.	3.36E-29	0.	0.	3.11E-09	4.67E-10	1.94E-10	3.77E-09
100	0.8A	0.	1.74E-25	0.	0.	0.	0.	7.34E-28	0.	0.	4.46E-09	4.43E-10	1.69E-10	5.08E-09
101	0.7A	0.	4.09E-26	0.	0.	0.	0.	6.74E-28	0.	0.	6.72E-09	5.07E-10	1.95E-10	7.42E-09
102	0.6A	0.	8.04E-27	0.	0.	0.	0.	2.17E-27	0.	0.	1.08E-08	5.64E-10	2.20E-10	1.16E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-03 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	N6 2	O- PHOTO-DET	FREE-FREE (ONS)	N F.E.	O P.E.	TOTAL AIR
1	10.7E	0.	0.	6.86E-01	0.	0.	0.	4.76E 00	3.27E-01	3.83E 02	4.06E 00	3.13E 02
2	10.6E	0.	0.	5.96E-01	0.	0.	0.	4.76E 00	3.37E-01	1.61E 01	4.05E 00	2.58E 01
3	10.5E	0.	0.	5.64E-01	0.	0.	0.	4.77E 00	3.47E-01	1.62E 01	4.03E 00	2.59E 01
4	10.4E	0.	0.	5.48E-01	0.	0.	0.	4.78E 00	3.57E-01	1.62E 01	4.01E 00	2.59E 01
5	10.3E	0.	0.	4.75E-01	0.	0.	0.	4.79E 00	3.68E-01	1.63E 01	4.00E 00	2.59E 01
6	10.2E	0.	0.	4.93E-01	0.	0.	0.	4.79E 00	3.79E-01	1.63E 01	3.98E 00	2.59E 01
7	10.1E	0.	0.	4.67E-01	0.	0.	0.	4.80E 00	3.90E-01	1.63E 01	3.96E 00	2.59E 01
8	10.0E	0.	0.	4.15E-01	0.	0.	0.	4.80E 00	4.02E-01	1.63E 01	3.94E 00	2.59E 01
9	9.9E	0.	0.	4.27E-01	0.	0.	0.	4.81E 00	4.14E-01	1.63E 01	3.93E 00	2.59E 01
10	9.8E	0.	0.	4.05E-01	0.	0.	0.	4.82E 00	4.27E-01	1.64E 01	3.91E 00	2.59E 01
11	9.7E	0.	0.	3.53E-01	0.	0.	0.	4.83E 00	4.41E-01	1.64E 01	3.89E 00	2.59E 01
12	9.6E	0.	0.	3.83E-01	0.	0.	0.	4.84E 00	4.55E-01	1.65E 01	3.87E 00	2.60E 01
13	9.5E	0.	0.	3.31E-01	0.	0.	0.	4.85E 00	4.69E-01	1.65E 01	3.86E 00	2.60E 01
14	9.4E	0.	0.	3.16E-01	0.	0.	0.	4.86E 00	4.85E-01	1.66E 01	3.84E 00	2.61E 01
15	9.3E	0.	0.	3.25E-01	0.	0.	0.	4.88E 00	5.01E-01	1.66E 01	3.82E 00	2.61E 01
16	9.2E	0.	0.	2.73E-01	0.	0.	0.	4.90E 00	5.17E-01	1.67E 01	3.81E 00	2.62E 01
17	9.1E	0.	0.	2.81E-01	0.	0.	0.	4.92E 00	5.35E-01	6.44E 00	3.79E 00	1.60E 01
18	9.0E	0.	0.	2.58E-01	0.	0.	0.	4.93E 00	5.53E-01	6.45E 00	3.77E 00	1.60E 01
19	8.9E	0.	0.	2.41E-01	0.	0.	0.	4.95E 00	5.72E-01	6.46E 00	3.76E 00	1.60E 01
20	8.8E	0.	0.	2.38E-01	0.	0.	0.	4.97E 00	5.97E-01	6.47E 00	3.74E 00	1.60E 01
21	8.7E	0.	0.	2.89E-01	0.	0.	0.	4.99E 00	6.13E-01	6.48E 00	3.73E 00	1.60E 01
22	8.6E	0.	0.	2.17E-01	0.	0.	0.	5.00E 00	6.35E-01	6.50E 00	3.71E 00	1.61E 01
23	8.5E	0.	0.	1.92E-01	0.	0.	0.	5.02E 00	6.58E-01	6.52E 00	3.70E 00	1.61E 01
24	8.4E	0.	0.	1.92E-01	0.	0.	0.	5.05E 00	6.82E-01	6.54E 00	3.68E 00	1.61E 01
25	8.3E	0.	0.	1.65E-01	0.	0.	0.	5.08E 00	7.07E-01	6.57E 00	3.66E 00	1.62E 01
26	8.2E	0.	0.	1.60E-01	0.	0.	0.	5.10E 00	7.33E-01	6.60E 00	3.66E 00	1.63E 01
27	8.1E	0.	0.	1.46E-01	0.	0.	0.	5.13E 00	7.61E-01	6.62E 00	3.69E 00	1.63E 01
28	8.0E	0.	0.	1.40E-01	0.	0.	0.	5.15E 00	7.90E-01	6.66E 00	3.69E 00	1.64E 01
29	7.9E	0.	0.	1.29E-01	0.	0.	0.	5.18E 00	8.21E-01	6.71E 00	3.69E 00	1.65E 01
30	7.8E	0.	0.	1.34E-01	0.	0.	0.	5.21E 00	8.53E-01	6.76E 00	3.70E 00	1.67E 01
31	7.7E	0.	0.	1.19E-01	0.	0.	0.	5.23E 00	8.87E-01	6.81E 00	3.70E 00	1.67E 01
32	7.6E	0.	0.	1.14E-01	0.	4.89E-06	0.	5.26E 00	9.25E-01	6.85E 00	3.71E 00	1.68E 01
33	7.5E	0.	0.	1.07E-01	0.	1.59E-05	0.	5.29E 00	9.61E-01	6.90E 00	3.71E 00	1.70E 01
34	7.4E	0.	0.	9.67E-02	0.	1.41E-04	0.	5.32E 00	1.00E 00	6.95E 00	3.72E 00	1.71E 01
35	7.3E	0.	0.	9.25E-02	0.	5.41E-04	0.	5.35E 00	1.04E 00	7.00E 00	3.72E 00	1.72E 01
36	7.2E	0.	0.	8.42E-02	0.	1.50E-03	0.	5.38E 00	1.09E 00	7.05E 00	3.72E 00	1.73E 01
37	7.1E	0.	0.	8.16E-02	0.	4.72E-03	0.	5.42E 00	1.13E 00	7.09E 00	3.73E 00	1.75E 01
38	7.0E	1.44E-05	0.	7.56E-02	0.	9.11E-03	0.	5.46E 00	1.18E 00	7.14E 00	3.73E 00	1.76E 01
39	6.9E	2.84E-05	0.	6.99E-02	0.	1.31E-02	0.	5.51E 00	1.24E 00	7.19E 00	3.74E 00	1.78E 01
40	6.8E	2.46E-05	0.	6.88E-02	0.	2.21E-02	0.	5.55E 00	1.29E 00	7.24E 00	3.74E 00	1.79E 01
41	6.7E	1.80E-05	0.	6.81E-02	0.	2.16E-02	0.	5.59E 00	1.35E 00	7.29E 00	3.75E 00	1.81E 01
42	6.6E	1.10E-05	0.	5.44E-02	0.	1.83E-02	0.	5.64E 00	1.41E 00	7.36E 00	3.76E 00	1.82E 01
43	6.5E	6.41E-06	0.	4.39E-02	0.	2.63E-02	0.	5.68E 00	1.48E 00	7.44E 00	3.77E 00	1.85E 01
44	6.4E	3.70E-06	0.	3.88E-02	8.39E-05	2.43E-02	0.	5.73E 00	1.55E 00	7.53E 00	3.78E 00	1.86E 01
45	6.3E	2.17E-06	0.	1.96E-02	3.99E-04	1.80E-02	0.	5.77E 00	1.63E 00	7.61E 00	3.80E 00	1.88E 01
46	6.2E	9.05E-07	0.	1.10E-02	5.73E-04	2.43E-02	0.	5.82E 00	1.71E 00	7.69E 00	3.83E 00	1.91E 01
47	6.1E	4.56E-07	0.	5.24E-03	1.65E-03	2.96E-02	0.	5.86E 00	1.79E 00	7.78E 00	3.86E 00	1.93E 01
48	6.0E	1.92E-07	0.	1.35E-03	1.68E-03	1.49E-02	0.	5.90E 00	1.89E 00	7.89E 00	3.89E 00	1.96E 01
49	5.9E	4.74E-08	0.	9.68E-05	2.36E-03	1.44E-02	0.	5.90E 00	1.98E 00	8.01E 00	3.92E 00	1.98E 01
50	5.8E	6.86E-09	0.	2.45E-06	3.33E-03	1.51E-02	0.	5.82E 00	2.09E 00	8.13E 00	3.95E 00	2.00E 01
51	5.7E	4.48E-10	0.	0.	3.94E-03	1.69E-02	0.	5.46E 00	2.20E 00	8.24E 00	3.99E 00	1.99E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.793E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.6a	2.02E-11	0.	0.	0.	3.41E-03	2.20E-02	0.	0.	5.08E 00	2.35E 00	8.39E 00	4.02E 00	1.98E 01
53	5.5a	0.	0.	0.	0.	4.17E-03	2.03E-02	0.	0.	5.11E 00	2.46E 00	8.57E 00	4.06E 00	2.02E 01
54	5.4a	0.	0.	0.	0.	3.80E-03	1.60E-02	0.	0.	5.13E 00	2.60E 00	8.80E 00	4.11E 00	2.07E 01
55	5.3a	0.	0.	0.	0.	3.97E-03	2.10E-02	0.	0.	5.17E 00	2.75E 00	9.04E 00	4.16E 00	2.11E 01
56	5.2a	0.	0.	0.	0.	4.30E-03	1.63E-02	0.	0.	5.20E 00	2.91E 00	9.28E 00	4.24E 00	2.16E 01
57	5.1a	0.	0.	0.	0.	4.31E-03	2.09E-02	0.	0.	5.24E 00	3.09E 00	9.56E 00	4.31E 00	2.22E 01
58	5.0a	2.02E-04	0.	0.	0.	3.96E-03	1.98E-02	0.	0.	5.29E 00	3.28E 00	9.86E 00	4.38E 00	2.28E 01
59	4.9a	6.92E-04	0.	0.	0.	4.43E-03	2.10E-02	0.	0.	5.33E 00	3.49E 00	1.02E 01	4.46E 00	2.35E 01
60	4.8a	1.31E-03	0.	0.	0.	4.70E-03	2.06E-02	0.	0.	5.38E 00	3.71E 00	1.06E 01	4.55E 00	2.42E 01
61	4.7a	1.79E-03	0.	0.	0.	4.82E-03	1.88E-02	0.	0.	5.42E 00	3.94E 00	1.10E 01	4.67E 00	2.51E 01
62	4.6a	2.49E-03	0.	0.	0.	4.97E-03	1.70E-02	0.	0.	5.48E 00	4.23E 00	1.14E 01	4.84E 00	2.59E 01
63	4.5a	2.43E-03	0.	6.99E-03	0.	4.59E-03	1.28E-02	0.	0.	5.51E 00	4.54E 00	1.20E 01	4.93E 00	2.70E 01
64	4.4a	2.84E-03	0.	2.05E-02	0.	4.63E-03	8.78E-03	0.	0.	5.55E 00	4.84E 00	1.26E 01	5.04E 00	2.81E 01
65	4.3a	2.71E-03	0.	6.94E-02	0.	4.46E-03	5.56E-03	0.	0.	5.59E 00	5.19E 00	1.33E 01	5.20E 00	2.94E 01
66	4.2a	2.54E-03	0.	2.16E-01	0.	4.78E-03	3.85E-03	0.	0.	5.64E 00	5.57E 00	1.40E 01	5.34E 00	3.08E 01
67	4.1a	2.48E-03	0.	9.87E-02	0.	4.64E-03	1.09E-03	0.	0.	5.66E 00	5.99E 00	1.47E 01	5.53E 00	3.17E 01
68	4.0a	2.23E-03	0.	3.13E-01	0.	4.58E-03	8.11E-04	0.	0.	5.68E 00	6.45E 00	1.53E 01	2.51E 00	3.83E 01
69	3.9a	1.91E-03	0.	1.40E-01	1.27E-02	4.20E-03	3.03E-04	0.	0.	5.66E 00	6.97E 00	1.51E 01	2.59E 00	3.85E 01
70	3.8a	2.11E-03	0.	2.39E-01	5.10E-02	4.54E-03	0.	0.	0.	5.64E 00	7.54E 00	1.53E 01	2.78E 00	3.15E 01
71	3.7a	1.98E-03	0.	2.45E-01	2.34E-02	3.93E-03	0.	0.	0.	5.55E 00	8.17E 00	1.20E 01	2.95E 00	2.97E 01
72	3.6a	1.72E-03	0.	1.78E-01	1.21E-01	4.25E-03	0.	0.	0.	5.20E 00	8.88E 00	1.38E 01	3.22E 00	3.14E 01
73	3.5a	1.62E-03	0.	2.33E-01	2.19E-01	3.40E-03	0.	0.	0.	4.76E 00	9.68E 00	1.46E 01	3.54E 00	3.31E 01
74	3.4a	1.50E-03	0.	1.52E-01	3.58E-02	3.83E-03	0.	0.	0.	2.74E 00	1.06E 01	1.63E 01	3.90E 00	3.37E 01
75	3.3a	1.21E-03	0.	1.55E-01	1.33E-01	3.10E-03	0.	0.	0.	2.75E 00	1.16E 01	1.79E 01	4.20E 00	3.60E 01
76	3.2a	1.07E-03	0.	1.03E-01	2.16E-01	3.27E-03	0.	0.	0.	2.75E 00	1.27E 01	1.96E 01	4.64E 00	4.08E 01
77	3.1a	1.03E-03	0.	8.09E-02	5.67E-02	3.13E-03	0.	0.	0.	2.76E 00	1.40E 01	2.13E 01	5.02E 00	4.35E 01
78	3.0a	9.33E-04	0.	5.01E-02	1.26E-01	2.90E-03	0.	0.	0.	2.77E 00	1.55E 01	2.31E 01	5.48E 00	4.69E 01
79	2.9a	7.94E-04	0.	3.16E-02	6.83E-02	2.31E-03	0.	0.	0.	2.77E 00	1.72E 01	2.49E 01	5.82E 00	5.08E 01
80	2.8a	8.33E-04	0.	1.52E-02	4.68E-02	1.64E-03	0.	0.	0.	2.78E 00	1.91E 01	2.71E 01	6.31E 00	5.54E 01
81	2.7a	5.46E-04	0.	7.17E-03	5.93E-02	9.13E-04	0.	0.	0.	2.78E 00	2.14E 01	2.95E 01	6.83E 00	6.35E 01
82	2.6a	2.62E-04	0.	3.45E-03	6.19E-03	4.18E-04	0.	0.	0.	2.78E 00	2.40E 01	3.20E 01	7.37E 00	6.61E 01
83	2.5a	1.86E-05	0.	3.62E-04	6.84E-03	9.87E-05	0.	0.	0.	2.78E 00	2.70E 01	3.65E 01	4.66E 00	7.10E 01
84	2.4a	0.	1.60E-02	0.	4.64E-03	1.06E-05	0.	0.	0.	2.78E 00	3.06E 01	4.25E 01	5.44E 00	8.14E 01
85	2.3a	0.	4.74E-02	0.	0.	0.	0.	0.	0.	2.75E 00	3.48E 01	3.76E 01	6.49E 00	8.17E 01
86	2.2a	0.	1.24E-01	0.	0.	0.	0.	0.	0.	2.74E 00	3.99E 01	4.44E 01	7.74E 00	9.58E 01
87	2.1a	0.	1.29E-01	0.	0.	0.	0.	0.	0.	2.73E 00	4.60E 01	5.17E 01	9.08E 00	1 18E 02
88	2.0a	0.	2.59E-01	0.	0.	0.	0.	0.	0.	2.44E 00	5.34E 01	5.98E 01	1.03E 01	1.26E 02
89	1.9a	0.	3.11E-01	0.	0.	0.	0.	0.	0.	2.54E 00	6.24E 01	6.77E 01	1.20E 01	1.45E 02
90	1.8a	0.	2.87E-01	0.	0.	0.	0.	0.	0.	2.43E 00	7.36E 01	8.12E 01	1.44E 01	1.72E 02
91	1.7a	0.	3.82E-01	0.	0.	0.	0.	0.	0.	2.29E 00	8.78E 01	9.76E 01	1.77E 01	2.06E 02
92	1.6a	0.	2.29E-01	0.	0.	0.	0.	0.	0.	1.94E 00	1.06E 02	1.14E 02	2.69E 01	2.43E 02
93	1.5a	0.	2.60E-01	0.	0.	0.	0.	0.	0.	8.81E-01	1.29E 02	1.48E 02	2.54E 01	3.04E 02
94	1.4a	0.	2.56E-01	0.	0.	0.	0.	0.	0.	0.	1.60E 02	1.85E 02	3.83E 01	3.76E 02
95	1.3a	0.	1.94E-01	0.	0.	0.	0.	0.	0.	0.	2.08E 02	2.48E 02	4.60E 01	4.89E 02
96	1.2a	0.	1.87E-01	0.	0.	0.	0.	0.	0.	0.	2.96E 02	2.76E 02	4.84E 01	5.72E 02
97	1.1a	0.	1.81E-01	0.	0.	0.	0.	2.08E-07	0.	0.	3.33E 02	3.40E 02	5.84E 01	7.24E 02
98	1.0a	0.	1.66E-01	0.	0.	0.	0.	3.30E-06	0.	0.	4.47E 02	4.13E 02	5.77E 01	9.10E 02
99	0.9a	0.	1.34E-01	0.	0.	0.	0.	3.04E-04	0.	0.	6.20E 02	4.75E 02	6.77E 01	1.16E 03
100	0.8a	0.	6.41E-02	0.	0.	0.	0.	8.44E-05	0.	0.	8.07E 02	5.47E 02	7.77E 01	1.52E 03
101	0.7a	0.	1.00E-02	0.	0.	0.	0.	7.91E-05	0.	0.	1.35E 03	5.91E 02	7.92E 01	2.02E 03
102	0.6a	0.	3.13E-03	0.	0.	0.	0.	2.51E-04	0.	0.	2.18E 03	6.61E 02	8.84E 01	2.93E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.20E-03	0.	0.	0.	1.22E-01	2.71E-02	2.52E 01	3.68E-01	2.57E 01
2	10.60	0.	0.	3.85E-03	0.	0.	0.	1.22E-01	2.70E-02	1.34E 00	3.58E-01	1.85E 00
3	10.50	0.	0.	3.91E-03	0.	0.	0.	1.22E-01	2.87E-02	1.35E 00	3.57E-01	1.86E 00
4	10.40	0.	0.	3.74E-03	0.	0.	0.	1.22E-01	2.95E-02	1.35E 00	3.55E-01	1.86E 00
5	10.30	0.	0.	3.30E-03	0.	0.	0.	1.22E-01	3.04E-02	1.35E 00	3.54E-01	1.86E 00
6	10.20	0.	0.	3.42E-03	0.	0.	0.	1.22E-01	3.13E-02	1.36E 00	3.52E-01	1.87E 00
7	10.10	0.	0.	3.24E-03	0.	0.	0.	1.23E-01	3.22E-02	1.36E 00	3.51E-01	1.86E 00
8	10.00	0.	0.	2.88E-03	0.	0.	0.	1.23E-01	3.32E-02	1.36E 00	3.49E-01	1.87E 00
9	9.90	0.	0.	2.96E-03	0.	0.	0.	1.23E-01	3.42E-02	1.36E 00	3.48E-01	1.87E 00
10	9.80	0.	0.	2.81E-03	0.	0.	0.	1.23E-01	3.53E-02	1.36E 00	3.46E-01	1.87E 00
11	9.70	0.	0.	2.45E-03	0.	0.	0.	1.23E-01	3.64E-02	1.37E 00	3.45E-01	1.87E 00
12	9.60	0.	0.	2.65E-03	0.	0.	0.	1.24E-01	3.76E-02	1.37E 00	3.43E-01	1.88E 00
13	9.50	0.	0.	2.30E-03	0.	0.	0.	1.24E-01	3.88E-02	1.37E 00	3.41E-01	1.88E 00
14	9.40	0.	0.	2.19E-03	0.	0.	0.	1.24E-01	4.00E-02	1.38E 00	3.40E-01	1.89E 00
15	9.30	0.	0.	2.29E-03	0.	0.	0.	1.25E-01	4.14E-02	1.38E 00	3.39E-01	1.89E 00
16	9.20	0.	0.	1.90E-03	0.	0.	0.	1.25E-01	4.27E-02	1.39E 00	3.37E-01	1.89E 00
17	9.10	0.	0.	1.95E-03	0.	0.	0.	1.26E-01	4.42E-02	5.37E-01	3.36E-01	1.04E 00
18	9.00	0.	0.	1.79E-03	0.	0.	0.	1.26E-01	4.57E-02	5.37E-01	3.34E-01	1.05E 00
19	8.90	0.	0.	1.67E-03	0.	0.	0.	1.27E-01	4.73E-02	5.38E-01	3.33E-01	1.05E 00
20	8.80	0.	0.	1.55E-03	0.	0.	0.	1.27E-01	4.89E-02	5.39E-01	3.31E-01	1.05E 00
21	8.70	0.	0.	1.45E-03	0.	0.	0.	1.27E-01	5.06E-02	5.40E-01	3.30E-01	1.05E 00
22	8.60	0.	0.	1.50E-03	0.	0.	0.	1.28E-01	5.24E-02	5.41E-01	3.29E-01	1.05E 00
23	8.50	0.	0.	1.33E-03	0.	0.	0.	1.28E-01	5.43E-02	5.43E-01	3.27E-01	1.05E 00
24	8.40	0.	0.	1.33E-03	0.	0.	0.	1.29E-01	5.63E-02	5.45E-01	3.26E-01	1.06E 00
25	8.30	0.	0.	1.14E-03	0.	0.	0.	1.30E-01	5.84E-02	5.47E-01	3.26E-01	1.06E 00
26	8.20	0.	0.	1.16E-03	0.	0.	0.	1.30E-01	6.06E-02	5.50E-01	3.26E-01	1.07E 00
27	8.10	0.	0.	1.02E-03	0.	0.	0.	1.31E-01	6.29E-02	5.52E-01	3.26E-01	1.07E 00
28	8.00	0.	0.	1.03E-03	0.	0.	0.	1.32E-01	6.53E-02	5.55E-01	3.27E-01	1.08E 00
29	7.90	0.	0.	8.94E-04	0.	0.	0.	1.32E-01	6.78E-02	5.59E-01	3.27E-01	1.09E 00
30	7.80	0.	0.	9.33E-04	0.	0.	0.	1.33E-01	7.05E-02	5.63E-01	3.27E-01	1.10E 00
31	7.70	0.	0.	8.27E-04	0.	0.	0.	1.34E-01	7.33E-02	5.67E-01	3.28E-01	1.10E 00
32	7.60	0.	0.	7.92E-04	0.	3.61E-08	0.	1.34E-01	7.63E-02	5.71E-01	3.28E-01	1.11E 00
33	7.50	0.	0.	7.41E-04	0.	1.17E-07	0.	1.35E-01	7.94E-02	5.75E-01	3.29E-01	1.12E 00
34	7.40	0.	0.	6.71E-04	0.	1.04E-06	0.	1.36E-01	8.27E-02	5.79E-01	3.29E-01	1.13E 00
35	7.30	0.	0.	6.41E-04	0.	3.99E-06	0.	1.37E-01	8.61E-02	5.83E-01	3.29E-01	1.14E 00
36	7.20	0.	0.	5.84E-04	0.	1.11E-05	0.	1.37E-01	8.98E-02	5.87E-01	3.30E-01	1.14E 00
37	7.10	0.	0.	5.44E-04	0.	3.48E-05	0.	1.38E-01	9.37E-02	5.91E-01	3.30E-01	1.15E 00
38	7.00	1.13E-07	0.	5.24E-04	0.	6.72E-05	0.	1.40E-01	9.78E-02	5.95E-01	3.30E-01	1.16E 00
39	6.90	2.22E-07	0.	4.85E-04	0.	9.69E-05	0.	1.41E-01	1.02E-01	5.99E-01	3.31E-01	1.17E 00
40	6.80	1.93E-07	0.	4.72E-04	0.	1.63E-04	0.	1.42E-01	1.07E-01	6.03E-01	3.31E-01	1.18E 00
41	6.70	1.41E-07	0.	4.17E-04	0.	1.59E-04	0.	1.43E-01	1.12E-01	6.07E-01	3.32E-01	1.19E 00
42	6.60	8.66E-08	0.	3.78E-04	0.	1.35E-04	0.	1.44E-01	1.17E-01	6.13E-01	3.33E-01	1.21E 00
43	6.50	5.83E-08	0.	3.95E-04	0.	1.94E-04	0.	1.45E-01	1.22E-01	6.20E-01	3.34E-01	1.22E 00
44	6.40	2.96E-08	0.	2.14E-04	6.19E-07	1.79E-04	0.	1.46E-01	1.28E-01	6.27E-01	3.35E-01	1.24E 00
45	6.30	1.70E-08	0.	1.36E-04	2.94E-06	1.33E-04	0.	1.47E-01	1.34E-01	6.34E-01	3.37E-01	1.25E 00
46	6.20	7.72E-09	0.	7.45E-05	4.22E-06	1.79E-04	0.	1.49E-01	1.41E-01	6.41E-01	3.39E-01	1.27E 00
47	6.10	3.58E-09	0.	3.65E-05	1.21E-05	2.19E-04	0.	1.50E-01	1.48E-01	6.49E-01	3.42E-01	1.29E 00
48	6.00	1.50E-09	0.	9.36E-06	1.18E-05	1.10E-04	0.	1.51E-01	1.56E-01	6.57E-01	3.45E-01	1.31E 00
49	5.90	3.72E-10	0.	6.71E-07	1.74E-05	1.84E-04	0.	1.51E-01	1.64E-01	6.67E-01	3.47E-01	1.33E 00
50	5.80	4.75E-11	0.	1.70E-08	2.45E-05	1.11E-04	0.	1.49E-01	1.73E-01	6.77E-01	3.50E-01	1.35E 00
51	5.70	3.58E-12	0.	0.	2.91E-05	1.24E-04	0.	1.48E-01	1.82E-01	6.87E-01	3.53E-01	1.36E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R α_A VBS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO βET_A	NO $\theta_A mn_A$	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.68	1.59E-13	0.	0.	0.	2.52E-05	1.62E-04	0.	0.	1.30E-01	1.92E-01	6.99E-01	3.56E-01	1.38E 00
53	5.59	0.	0.	0.	0.	3.00E-05	1.50E-04	0.	0.	1.30E-01	2.03E-01	7.14E-01	3.59E-01	1.41E 00
54	5.49	0.	0.	0.	0.	2.86E-05	1.24E-04	0.	0.	1.31E-01	2.15E-01	7.33E-01	3.64E-01	1.44E 00
55	5.30	0.	0.	0.	0.	2.93E-05	1.59E-04	0.	0.	1.32E-01	2.27E-01	7.53E-01	3.69E-01	1.48E 00
56	5.29	0.	0.	0.	0.	3.17E-05	1.20E-04	0.	0.	1.33E-01	2.41E-01	7.73E-01	3.75E-01	1.52E 00
57	5.19	0.	0.	0.	0.	3.18E-05	1.54E-04	0.	0.	1.34E-01	2.55E-01	7.96E-01	3.81E-01	1.57E 00
58	5.00	2.21E-06	0.	0.	0.	2.92E-05	1.46E-04	0.	0.	1.35E-01	2.71E-01	8.21E-01	3.87E-01	1.62E 00
59	4.90	5.43E-06	0.	0.	0.	3.27E-05	1.61E-04	0.	0.	1.36E-01	2.88E-01	8.50E-01	3.94E-01	1.67E 00
60	4.80	1.03E-05	0.	0.	0.	3.53E-05	1.52E-04	0.	0.	1.37E-01	3.07E-01	8.81E-01	4.03E-01	1.73E 00
61	4.79	1.40E-05	0.	0.	0.	3.59E-05	1.38E-04	0.	0.	1.38E-01	3.27E-01	9.14E-01	4.14E-01	1.79E 00
62	4.60	1.95E-05	0.	0.	0.	3.67E-05	1.25E-04	0.	0.	1.40E-01	3.49E-01	9.53E-01	4.25E-01	1.87E 00
63	4.50	2.06E-05	0.	4.09E-05	0.	3.39E-05	9.47E-05	0.	0.	1.41E-01	3.73E-01	1.00E 00	4.36E-01	1.95E 00
64	4.40	2.23E-05	0.	1.42E-04	0.	3.42E-05	6.47E-05	0.	0.	1.42E-01	4.00E-01	1.05E 00	4.48E-01	2.04E 00
65	4.30	2.12E-05	0.	4.82E-04	0.	3.29E-05	4.10E-05	0.	0.	1.43E-01	4.29E-01	1.11E 00	4.60E-01	2.14E 00
66	4.20	1.99E-05	0.	1.58E-03	0.	3.47E-05	2.84E-05	0.	0.	1.44E-01	4.60E-01	1.16E 00	4.73E-01	2.24E 00
67	4.10	1.88E-05	0	6.05E-04	0.	3.42E-05	7.97E-06	0.	0.	1.45E-01	4.95E-01	1.22E 00	4.72E-01	2.33E 00
68	4.00	1.75E-05	0.	2.17E-03	0.	3.32E-05	5.98E-06	0.	0.	1.45E-01	5.33E-01	1.28E 00	2.22E-01	2.16E 00
69	3.90	1.50E-05	0.	1.03E-03	3.05E-04	3.10E-05	2.23E-06	0.	0.	1.45E-01	5.74E-01	1.26E 00	2.29E-01	2.21E 00
70	3.80	1.45E-05	0.	1.66E-03	1.22E-03	3.35E-05	0.	0.	0.	1.44E-01	6.23E-01	1.27E 00	2.39E-01	2.28E 00
71	3.70	1.49E-05	0.	1.70E-03	5.62E-04	2.98E-05	0.	0.	0.	1.42E-01	6.75E-01	1.06E 00	2.61E-01	2.14E 00
72	3.60	1.35E-05	0.	1.24E-03	2.90E-03	3.13E-05	0.	0.	0.	1.33E-01	7.34E-01	1.15E 00	2.85E-01	2.30E 00
73	3.50	1.27E-05	0.	1.41E-03	5.25E-03	2.51E-05	0.	0.	0.	1.22E-01	8.00E-01	1.22E 00	3.13E-01	2.46E 00
74	3.40	1.18E-05	0.	1.05E-03	8.59E-04	2.03E-05	0.	0.	0.	7.82E-02	8.74E-01	1.35E 00	3.45E-01	2.64E 00
75	3.30	9.50E-06	0.	1.08E-03	3.19E-03	2.28E-05	0.	0.	0.	7.03E-02	9.57E-01	1.49E 00	3.77E-01	2.90E 00
76	3.20	8.36E-06	0.	7.18E-04	9.65E-03	2.41E-05	0.	0.	0.	7.04E-02	1.05E 00	1.63E 00	4.10E-01	3.17E 00
77	3.10	8.09E-06	0.	5.61E-04	1.36E-03	2.31E-05	0.	0.	0.	7.06E-02	1.16E 00	1.78E 00	4.44E-01	3.45E 00
78	3.00	7.32E-06	0.	3.47E-04	3.02E-03	2.20E-05	0.	0.	0.	7.07E-02	1.28E 00	1.92E 00	4.78E-01	3.75E 00
79	2.90	6.23E-06	0.	2.19E-04	1.64E-03	1.71E-05	0.	0.	0.	7.08E-02	1.42E 00	2.08E 00	5.16E-01	4.08E 00
80	2.80	6.53E-06	0.	1.06E-04	1.12E-03	1.21E-05	0.	0.	0.	7.09E-02	1.59E 00	2.26E 00	5.58E-01	4.47E 00
81	2.70	4.20E-06	0.	4.90E-05	1.42E-03	6.74E-06	0.	0.	0.	7.09E-02	1.76E 00	2.45E 00	6.05E-01	4.90E 00
82	2.60	2.06E-06	0.	2.40E-05	1.49E-04	3.82E-06	0.	0.	0.	7.09E-02	1.98E 00	2.67E 00	6.52E-01	5.37E 00
83	2.50	1.46E-07	0.	2.51E-06	1.45E-04	7.20E-07	0.	0.	0.	7.09E-02	2.23E 00	3.04E 00	4.13E-01	5.76E 00
84	2.49	0.	1.11E-04	0.	1.11E-04	7.04E-08	0.	0.	0.	7.09E-02	2.53E 00	3.54E 00	4.82E-01	6.62E 00
85	2.38	0.	3.29E-04	0.	0.	0.	0.	0.	0.	7.04E-02	2.88E 00	3.13E 00	5.74E-01	6.65E 00
86	2.29	0.	8.77E-04	0.	0.	0.	0.	0.	0.	7.81E-02	3.30E 00	3.78E 00	6.85E-01	7.76E 00
87	2.19	0.	8.98E-04	0.	0.	0.	0.	0.	0.	6.98E-02	3.84E 00	4.31E 00	7.96E-01	8.97E 00
88	2.09	0.	1.79E-03	0.	0.	0.	0.	0.	0.	6.70E-02	4.41E 00	4.92E 00	9.09E-01	1.03E 01
89	1.99	0.	2.16E-03	0.	0.	0.	0.	0.	0.	6.58E-02	5.15E 00	5.64E 00	1.00E 00	1.19E 01
90	1.88	0.	1.85E-03	0.	0.	0.	0.	0.	0.	6.22E-02	6.08E 00	6.76E 00	1.29E 00	1.42E 01
91	1.79	0.	2.10E-03	0.	0.	0.	0.	0.	0.	5.84E-02	7.25E 00	8.13E 00	1.57E 00	1.78E 01
92	1.69	0.	1.58E-03	0.	0.	0.	0.	0.	0.	4.95E-02	8.75E 00	9.51E 00	1.85E 00	2.02E 01
93	1.59	0.	1.81E-03	0.	0.	0.	0.	0.	0.	2.25E-02	1.07E 01	1.24E 01	2.25E 00	2.53E 01
94	1.49	0.	1.70E-03	0.	0.	0.	0.	0.	0.	0.	1.32E 01	1.54E 01	2.69E 00	3.13E 01
95	1.38	0.	1.30E-03	0.	0.	0.	0.	0.	0.	0.	1.66E 01	2.07E 01	3.54E 00	4.08E 01
96	1.29	0.	1.30E-03	0.	0.	0.	0.	0.	0.	0.	2.11E 01	2.38E 01	3.57E 00	4.77E 01
97	1.18	0.	1.20E-03	0.	0.	0.	0.	1.53E-09	0.	0.	2.75E 01	2.83E 01	4.48E 00	6.04E 01
98	1.08	0.	1.15E-03	0.	0.	0.	0.	2.44E-08	0.	0.	3.79E 01	3.44E 01	5.11E 00	7.64E 01
99	0.98	0.	9.47E-04	0.	0.	0.	0.	2.84E-08	0.	0.	5.12E 01	3.95E 01	5.99E 00	9.67E 01
100	0.89	0.	4.49E-04	0.	0.	0.	0.	6.23E-07	0.	0.	7.37E 01	4.55E 01	6.88E 00	1.26E 02
101	0.78	0.	1.03E-04	0.	0.	0.	0.	5.04E-07	0.	0.	1.11E 02	4.92E 01	7.81E 00	1.60E 02
102	0.69	0.	2.17E-05	0.	0.	0.	0.	1.05E-06	0.	0.	1.80E 02	5.51E 01	7.85E 00	2.43E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.2035-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7*	0.	0.	1.20E-05	0.	0.	0.	1.05E-03	1.93E-03	1.39E 00	2.31E-02	1.42E 00
2	10.6*	0.	0.	1.18E-05	0.	0.	0.	1.04E-03	1.57E-03	7.44E-02	2.30E-02	1.01E-01
3	10.5*	0.	0.	1.19E-05	0.	0.	0.	1.06E-03	1.62E-03	7.47E-02	2.29E-02	1.01E-01
4	10.4*	0.	0.	1.14E-05	0.	0.	0.	1.06E-03	1.67E-03	7.49E-02	2.28E-02	1.01E-01
5	10.3*	0.	0.	1.01E-05	0.	0.	0.	1.06E-03	1.71E-03	7.51E-02	.27E-02	1.01E-01
6	10.2*	0.	0.	1.04E-05	0.	0.	0.	1.07E-03	1.77E-03	7.53E-02	2.26E-02	1.02E-01
7	10.1*	0.	0.	9.09E-06	0.	0.	0.	1.07E-03	1.82E-03	7.52E-02	2.25E-02	1.01E-01
8	10.0*	0.	0.	8.79E-06	0.	0.	0.	1.07E-03	1.87E-03	7.51E-02	2.24E-02	1.01E-01
9	9.9*	0.	0.	9.84E-06	0.	0.	0.	1.07E-03	1.93E-03	7.52E-02	2.23E-02	1.01E-01
10	9.8*	0.	0.	8.57E-06	0.	0.	0.	1.08E-03	1.99E-03	7.54E-02	2.22E-02	1.02E-01
11	9.7*	0.	0.	7.48E-06	0.	0.	0.	1.09E-03	2.06E-03	7.56E-02	2.21E-02	1.02E-01
12	9.6*	0.	0.	8.18E-06	0.	0.	0.	1.08E-03	2.12E-03	7.58E-02	2.20E-02	1.02E-01
13	9.5*	0.	0.	7.01E-06	0.	0.	0.	1.09E-03	2.19E-03	7.60E-02	2.19E-02	1.02E-01
14	9.4*	0.	0.	6.69E-06	0.	0.	0.	1.09E-03	2.26E-03	7.63E-02	2.18E-02	1.02E-01
15	9.3*	0.	0.	6.88E-06	0.	0.	0.	1.90E-03	2.34E-03	7.65E-02	2.17E-02	1.02E-01
16	9.2*	0.	0.	5.79E-06	0.	0.	0.	1.91E-03	2.41E-03	7.67E-02	2.16E-02	1.03E-01
17	9.1*	0.	0.	5.96E-06	0.	0.	0.	1.91E-03	2.49E-03	2.97E-02	2.15E-02	5.57E-02
18	9.0*	0.	0.	5.47E-06	0.	0.	0.	1.92E-03	2.58E-03	2.98E-02	2.14E-02	5.57E-02
19	8.9*	0.	0.	5.11E-06	0.	0.	0.	1.93E-03	2.67E-03	2.98E-02	2.13E-02	5.57E-02
20	8.8*	0.	0.	5.04E-06	0.	0.	0.	1.94E-03	2.76E-03	2.99E-02	2.12E-02	5.58E-02
21	8.7*	0.	0.	4.43E-06	0.	0.	0.	1.94E-03	2.84E-03	2.99E-02	2.12E-02	5.59E-02
22	8.6*	0.	0.	4.90E-06	0.	0.	0.	1.95E-03	2.95E-03	3.00E-02	2.11E-02	5.60E-02
23	8.5*	0.	0.	4.87E-06	0.	0.	0.	1.96E-03	3.07E-03	3.01E-02	2.10E-02	5.61E-02
24	8.4*	0.	0.	4.86E-06	0.	0.	0.	1.97E-03	3.18E-03	3.02E-02	2.09E-02	5.63E-02
25	8.3*	0.	0.	3.49E-06	0.	0.	0.	1.98E-03	3.30E-03	3.03E-02	2.09E-02	5.65E-02
26	8.2*	0.	0.	3.59E-06	0.	0.	0.	1.99E-03	3.42E-03	3.05E-02	2.09E-02	5.68E-02
27	8.1*	0.	0.	3.18E-06	0.	0.	0.	2.00E-03	3.55E-03	3.06E-02	2.09E-02	5.70E-02
28	8.0*	0.	0.	3.14E-06	0.	0.	0.	2.01E-03	3.69E-03	3.08E-02	2.09E-02	5.74E-02
29	7.9*	0.	0.	2.73E-06	0.	0.	0.	2.02E-03	3.83E-03	3.10E-02	2.10E-02	5.78E-02
30	7.8*	0.	0.	2.85E-06	0.	0.	0.	2.03E-03	3.98E-03	3.12E-02	2.10E-02	5.82E-02
31	7.7*	0.	0.	2.53E-06	0.	0.	0.	2.04E-03	4.14E-03	3.14E-02	2.10E-02	5.86E-02
32	7.6*	0.	0.	2.42E-06	0.	1.20E-10	0.	2.05E-03	4.31E-03	3.16E-02	2.10E-02	5.90E-02
33	7.5*	0.	0.	2.26E-06	0.	4.14E-10	0.	2.06E-03	4.48E-03	3.18E-02	2.11E-02	5.94E-02
34	7.4*	0.	0.	2.05E-06	0.	3.64E-09	0.	2.07E-03	4.67E-03	3.20E-02	2.11E-02	5.99E-02
35	7.3*	0.	0.	1.96E-06	0.	1.41E-08	0.	2.08E-03	4.84E-03	3.23E-02	2.11E-02	6.03E-02
36	7.2*	0.	0.	1.78E-06	0.	3.93E-08	0.	2.09E-03	5.07E-03	3.25E-02	2.11E-02	6.08E-02
37	7.1*	0.	0.	1.73E-06	0.	1.23E-07	0.	2.11E-03	5.29E-03	3.27E-02	2.12E-02	6.13E-02
38	7.0*	4.65E-10	0.	1.60E-06	0.	2.38E-07	0.	2.13E-03	5.52E-03	3.30E-02	2.12E-02	6.18E-02
39	6.9*	9.13E-10	0.	1.40E-06	0.	3.43E-07	0.	2.14E-03	5.77E-03	3.32E-02	2.12E-02	6.23E-02
40	6.8*	7.92E-10	0.	1.44E-06	0.	5.78E-07	0.	2.16E-03	6.03E-03	3.34E-02	2.12E-02	6.28E-02
41	6.7*	5.83E-10	0.	1.27E-06	0.	5.64E-07	0.	2.18E-03	6.30E-03	3.36E-02	2.13E-02	6.34E-02
42	6.6*	3.56E-10	0.	1.15E-06	0.	4.79E-07	0.	2.20E-03	6.60E-03	3.40E-02	2.14E-02	6.41E-02
43	6.5*	2.38E-10	0.	9.38E-07	0.	6.84E-07	0.	2.21E-03	6.91E-03	3.43E-02	2.14E-02	6.49E-02
44	6.4*	1.19E-10	0.	6.53E-07	2.19E-09	6.35E-07	0.	2.23E-03	7.24E-03	3.47E-02	2.15E-02	6.57E-02
45	6.3*	6.98E-11	0.	4.15E-07	1.84E-08	4.71E-07	0.	2.25E-03	7.59E-03	3.51E-02	2.16E-02	6.65E-02
46	6.2*	3.17E-11	0.	2.34E-07	1.50E-08	6.35E-07	0.	2.26E-03	7.97E-03	3.55E-02	2.17E-02	6.75E-02
47	6.1*	1.47E-11	0.	1.11E-07	4.19E-08	7.23E-07	0.	2.28E-03	8.37E-03	3.59E-02	2.19E-02	6.85E-02
48	6.0*	6.18E-12	0.	2.86E-08	4.19E-08	3.69E-07	0.	2.30E-03	8.80E-03	3.64E-02	2.21E-02	6.96E-02
49	5.9*	1.53E-12	0.	2.05E-09	6.18E-08	3.77E-07	0.	2.30E-03	9.26E-03	3.70E-02	2.23E-02	7.08E-02
50	5.8*	1.95E-13	0.	5.18E-11	8.69E-08	3.94E-07	0.	2.20E-03	9.75E-03	3.75E 02	2.24E-02	7.20E-02
51	5.7*	1.54E-14	0.	0.	1.03E-07	4.40E-07	0.	2.13E-03	1.03E-02	3.81E-02	2.26E-02	7.31E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.295E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.68	6.91E-10	0.	0.	0.	8.92E-08	5.74E-07	0.	0.	1.90E-03	1.08E-02	3.97E-02	2.20E-02	7.44E-02
93	5.50	0.	0.	0.	0.	1.09E-07	5.31E-07	0.	0.	1.99E-03	1.15E-02	3.96E-02	2.30E-02	7.61E-02
94	5.48	0.	0.	0.	0.	1.01E-07	4.48E-07	0.	0.	2.00E-03	1.21E-02	4.06E-02	2.33E-02	7.81E-02
95	5.38	0.	0.	0.	0.	2.04E-07	3.49E-07	0.	0.	2.01E-03	1.28E-02	4.17E-02	2.36E-02	8.02E-02
96	5.28	0.	0.	0.	0.	1.12E-07	4.26E-07	0.	0.	2.02E-03	1.36E-02	4.27E-02	2.40E-02	8.24E-02
97	5.18	0.	0.	0.	0.	1.13E-07	5.45E-07	0.	0.	2.04E-03	1.44E-02	4.48E-02	2.44E-02	8.49E-02
98	5.08	9.88E-09	0.	0.	0.	1.03E-07	5.18E-07	0.	0.	2.06E-03	1.53E-02	4.54E-02	2.48E-02	8.76E-02
99	4.98	2.23E-08	0.	0.	0.	1.14E-07	5.78E-07	0.	0.	2.08E-03	1.63E-02	4.78E-02	2.53E-02	9.06E-02
100	4.88	4.22E-08	0.	0.	0.	1.25E-07	5.37E-07	0.	0.	2.09E-03	1.73E-02	4.87E-02	2.58E-02	9.40E-02
101	4.78	5.76E-08	0.	0.	0.	1.26E-07	4.98E-07	0.	0.	2.11E-03	1.85E-02	5.06E-02	2.65E-02	9.76E-02
102	4.68	8.81E-08	0.	0.	0.	1.38E-07	4.44E-07	0.	0.	2.13E-03	1.97E-02	5.27E-02	2.72E-02	1.02E-01
103	4.58	8.48E-08	0.	1.48E-07	0.	1.20E-07	3.35E-07	0.	0.	2.14E-03	2.11E-02	5.54E-02	2.80E-02	1.07E-01
104	4.48	9.14E-08	0.	4.34E-07	0.	1.21E-07	2.29E-07	0.	0.	2.16E-03	2.26E-02	5.82E-02	2.87E-02	1.12E-01
105	4.38	8.72E-08	0.	1.47E-06	0.	1.14E-07	1.45E-07	0.	0.	2.18E-03	2.42E-02	6.13E-02	2.95E-02	1.17E-01
106	4.28	8.19E-08	0.	4.58E-06	0.	1.23E-07	1.88E-07	0.	0.	2.20E-03	2.60E-02	6.44E-02	3.03E-02	1.23E-01
107	4.18	7.74E-08	0.	2.09E-06	0.	1.21E-07	2.82E-08	0.	0.	2.20E-03	2.79E-02	6.75E-02	3.03E-02	1.28E-01
108	4.08	7.19E-08	0.	6.63E-06	0.	1.18E-07	2.12E-08	0.	0.	2.21E-03	3.01E-02	7.06E-02	1.42E-02	1.17E-01
109	3.98	6.17E-08	0.	3.14E-06	3.92E-06	1.10E-07	7.91E-09	0.	0.	2.20E-03	3.25E-02	6.96E-02	1.47E-02	1.19E-01
110	3.88	6.79E-08	0.	9.06E-06	1.57E-05	1.19E-07	0.	0.	0.	2.20E-03	3.52E-02	7.05E-02	1.53E-02	1.23E-01
111	3.78	6.11E-08	0.	5.18E-06	7.22E-06	1.03E-07	0.	0.	0.	2.10E-03	3.81E-02	5.88E-02	1.07E-02	1.16E-01
112	3.68	5.95E-08	0.	3.78E-06	3.72E-05	1.11E-07	0.	0.	0.	2.62E-03	4.14E-02	6.35E-02	1.03E-02	1.25E-01
113	3.58	5.23E-08	0.	4.54E-06	6.74E-05	8.09E-08	0.	0.	0.	1.85E-03	4.51E-02	6.75E-02	2.01E-02	1.35E-01
114	3.48	4.85E-08	0.	3.22E-06	1.10E-05	1.00E-07	0.	0.	0.	1.87E-03	4.93E-02	7.49E-02	2.21E-02	1.47E-01
115	3.38	3.90E-08	0.	3.29E-06	4.09E-05	8.09E-08	0.	0.	0.	1.87E-03	5.40E-02	8.26E-02	2.42E-02	1.62E-01
116	3.28	3.43E-08	0.	2.19E-06	6.49E-05	8.54E-08	0.	0.	0.	1.87E-03	5.93E-02	9.03E-02	2.63E-02	1.77E-01
117	3.18	3.32E-08	0.	1.71E-06	1.75E-05	8.16E-08	0.	0.	0.	1.87E-03	6.54E-02	9.82E-02	2.85E-02	1.93E-01
118	3.08	3.81E-08	0.	1.06E-06	3.80E-05	7.79E-08	0.	0.	0.	1.87E-03	7.23E-02	1.06E-01	3.06E-02	2.10E-01
119	2.98	2.54E-08	0.	6.69E-07	2.11E-05	6.84E-08	0.	0.	0.	1.88E-03	8.01E-02	1.15E-01	3.30E-02	2.29E-01
120	2.88	2.68E-08	0.	3.23E-07	1.44E-05	4.20E-08	0.	0.	0.	1.86E-03	8.92E-02	1.25E-01	3.58E-02	2.51E-01
121	2.78	1.76E-08	0.	1.52E-07	1.03E-05	2.39E-08	0.	0.	0.	1.88E-03	9.96E-02	1.36E-01	3.88E-02	2.75E-01
122	2.68	6.45E-09	0.	7.31E-08	1.91E-06	1.67E-08	0.	0.	0.	1.86E-03	1.12E-01	1.47E-01	4.18E-02	3.02E-01
123	2.58	5.98E-10	0.	7.66E-09	1.86E-06	2.58E-09	0.	0.	0.	1.84E-03	1.24E-01	1.68E-01	2.65E-02	3.22E-01
124	2.48	0.	3.39E-07	0.	1.43E-06	2.70E-10	0.	0.	0.	1.88E-03	1.43E-01	1.96E-01	3.09E-02	3.78E-01
125	2.38	0.	1.88E-06	0.	0.	0.	0.	0.	0.	1.87E-03	1.63E-01	1.73E-01	3.68E-02	3.74E-01
126	2.28	0.	2.68E-06	0.	0.	0.	0.	0.	0.	1.87E-03	1.86E-01	2.85E-01	4.39E-02	4.36E-01
127	2.18	0.	2.74E-06	0.	0.	0.	0.	0.	0.	1.88E-03	2.15E-01	2.38E-01	5.18E-02	5.05E-01
128	2.08	0.	5.47E-06	0.	0.	0.	0.	0.	0.	1.83E-03	2.49E-01	2.72E-01	5.82E-02	5.88E-01
129	1.98	0.	6.59E-06	0.	0.	0.	0.	0.	0.	9.98E-04	2.91E-01	3.12E-01	6.79E-02	6.72E-01
130	1.88	0.	5.64E-06	0.	0.	0.	0.	0.	0.	9.47E-04	3.43E-01	3.74E-01	6.27E-02	8.08E-01
131	1.78	0.	6.48E-06	0.	0.	0.	0.	0.	0.	8.92E-04	4.10E-01	4.49E-01	1.01E-01	9.68E-01
132	1.68	0.	4.83E-06	0.	0.	0.	0.	0.	0.	7.59E-04	4.94E-01	5.26E-01	1.19E-01	1.14E 00
133	1.58	0.	5.51E-06	0.	0.	0.	0.	0.	0.	3.43E-04	6.03E-01	6.03E-01	1.44E-01	1.43E 00
134	1.48	0.	5.43E-06	0.	0.	0.	0.	0.	0.	0.	7.46E-01	8.54E-01	1.72E-01	1.77E 00
135	1.38	0.	4.10E-06	0.	0.	0.	0.	0.	0.	0.	9.35E-01	1.14E 00	2.27E-01	2.30E 00
136	1.28	0.	3.97E-06	0.	0.	0.	0.	0.	0.	0.	1.19E 00	1.27E 00	2.29E-01	2.69E 00
137	1.18	0.	3.83E-06	0.	0.	0.	0.	5.42E-12	0.	0.	1.56E 00	1.56E 00	2.87E-01	3.41E 00
138	1.08	0.	3.58E-06	0.	0.	0.	0.	8.62E-11	0.	0.	2.09E 00	1.98E 00	3.27E-01	4.31E 00
139	0.98	0.	2.00E-06	0.	0.	0.	0.	1.08E-10	0.	0.	2.89E 00	2.18E 00	3.84E-01	5.46E 00
140	0.88	0.	1.38E-06	0.	0.	0.	0.	2.21E-09	0.	0.	4.16E 00	2.52E 00	4.41E-01	7.12E 00
141	0.78	0.	3.19E-07	0.	0.	0.	0.	7.87E-09	0.	0.	6.29E 00	2.72E 00	4.49E-01	9.46E 00
142	0.68	0.	8.64E-08	0.	0.	0.	0.	6.57E-09	0.	0.	1.02E 01	3.04E 00	5.03E-01	1.37E 01

ABSORPTION COEFFICIEN.. OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.99E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2- S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE FREE (IBHS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	7.40E-09	0.	0.	0.	8.30E-06	3.91E-05	3.37E-02	6.55E-04	3.44E-02
2	10.6e	0.	0.	6.86E-09	0.	0.	0.	8.31E-06	3.92E-05	1.84E-03	6.53E-04	2.54E-03
3	10.5e	0.	0.	6.96E-09	0.	0.	0.	8.32E-06	4.03E-05	1.89E-03	6.50E-04	2.54E-03
4	10.4e	0.	0.	6.66E-09	0.	0.	0.	8.32E-06	4.14E-05	1.85E-03	6.47E-04	2.55E-03
5	10.3e	0.	0.	5.86E-09	0.	0.	0.	8.34E-06	4.27E-05	1.86E-03	6.44E-04	2.55E-03
6	10.2e	0.	0.	6.09E-09	0.	0.	0.	8.35E-06	4.40E-05	1.86E-03	6.41E-04	2.56E-03
7	10.1e	0.	0.	5.77E-09	0.	0.	0.	8.37E-06	4.53E-05	1.86E-03	6.39E-04	2.55E-03
8	10.0e	0.	0.	5.12E-09	0.	0.	0.	8.38E-06	4.67E-05	1.82E-03	6.36E-04	2.52E-03
9	9.9e	0.	0.	5.27E-09	0.	0.	0.	8.39E-06	4.82E-05	1.83E-03	6.33E-04	2.52E-03
10	9.8e	0.	0.	4.90E-09	0.	0.	0.	8.41E-06	4.97E-05	1.83E-03	6.30E-04	2.52E-03
11	9.7e	0.	0.	4.36E-09	0.	0.	0.	8.42E-06	5.12E-05	1.84E-03	6.27E-04	2.52E-03
12	9.6e	0.	0.	4.72E-09	0.	0.	0.	8.44E-06	5.29E-05	1.84E-03	6.25E-04	2.53E-03
13	9.5e	0.	0.	4.89E-09	0.	0.	0.	8.45E-06	5.44E-05	1.84E-03	6.22E-04	2.53E-03
14	9.4e	0.	0.	3.90E-09	0.	0.	0.	8.48E-06	5.63E-05	1.85E-03	6.19E-04	2.54E-03
15	9.3e	0.	0.	4.81E-09	0.	0.	0.	8.51E-06	5.82E-05	1.86E-03	6.16E-04	2.54E-03
16	9.2e	0.	0.	3.37E-09	0.	0.	0.	8.55E-06	6.01E-05	1.87E-03	6.14E-04	2.55E-03
17	9.1e	0.	0.	3.47E-09	0.	0.	0.	8.58E-06	6.22E-05	7.30E-04	6.11E-04	1.41E-03
18	9.0e	0.	0.	3.19E-09	0.	0.	0.	8.61E-06	6.43E-05	7.31E-04	6.09E-04	1.41E-03
19	8.9e	0.	0.	2.90E-09	0.	0.	0.	8.64E-06	6.65E-05	7.32E-04	6.06E-04	1.41E-03
20	8.8e	0.	0.	2.94E-09	0.	0.	0.	8.67E-06	6.88E-05	7.33E-04	6.04E-04	1.41E-03
21	8.7e	0.	0.	2.50E-09	0.	0.	0.	8.70E-06	7.12E-05	7.35E-04	6.01E-04	1.42E-03
22	8.6e	0.	0.	2.67E-09	0.	0.	0.	8.73E-06	7.38E-05	7.37E-04	5.99E-04	1.42E-03
23	8.5e	0.	0.	2.37E-09	0.	0.	0.	8.76E-06	7.64E-05	7.39E-04	5.96E-04	1.42E-03
24	8.4e	0.	0.	2.37E-09	0.	0.	0.	8.81E-06	7.92E-05	7.42E-04	5.94E-04	1.42E-03
25	8.3e	0.	0.	2.04E-09	0.	0.	0.	8.85E-06	8.22E-05	7.45E-04	5.93E-04	1.43E-03
26	8.2e	0.	0.	2.07E-09	0.	0.	0.	8.90E-06	8.52E-05	7.49E-04	5.94E-04	1.44E-03
27	8.1e	0.	0.	1.81E-09	0.	0.	0.	8.94E-06	8.85E-05	7.52E-04	5.94E-04	1.44E-03
28	8.0e	0.	0.	1.83E-09	0.	0.	0.	8.99E-06	9.19E-05	7.57E-04	5.95E-04	1.45E-03
29	7.9e	0.	0.	1.59E-09	0.	0.	0.	9.04E-06	9.54E-05	7.62E-04	5.96E-04	1.46E-03
30	7.8e	0.	0.	1.66E-09	0.	0.	0.	9.08E-06	9.92E-05	7.68E-04	5.96E-04	1.47E-03
31	7.7e	0.	0.	1.47E-09	0.	0.	0.	9.13E-06	1.03E-04	7.73E-04	5.97E-04	1.48E-03
32	7.6e	0.	0.	1.41E-09	0.	8.76E-14	0.	9.18E-06	1.07E-04	7.79E-04	5.98E-04	1.49E-03
33	7.5e	0.	0.	1.32E-09	0.	2.85E-13	0.	9.22E-06	1.12E-04	7.78E-04	5.98E-04	1.50E-03
34	7.4e	0.	0.	1.19E-09	0.	2.52E-12	0.	9.27E-06	1.16E-04	7.84E-04	5.99E-04	1.51E-03
35	7.3e	0.	0.	1.14E-09	0.	9.68E-12	0.	9.32E-06	1.21E-04	7.90E-04	6.00E-04	1.52E-03
36	7.2e	0.	0.	1.04E-09	0.	2.69E-11	0.	9.38E-06	1.26E-04	7.96E-04	6.00E-04	1.53E-03
37	7.1e	0.	0.	1.01E-09	0.	8.44E-11	0.	9.45E-06	1.32E-04	8.02E-04	6.01E-04	1.54E-03
38	7.0e	3.75E-13	0.	9.33E-10	0.	1.43E-10	0.	9.53E-06	1.38E-04	8.08E-04	6.02E-04	1.56E-03
39	6.9e	7.35E-13	0.	8.63E-10	0.	2.35E-10	0.	9.61E-06	1.44E-04	8.14E-04	6.02E-04	1.57E-03
40	6.8e	6.37E-13	0.	8.39E-10	0.	2.96E-10	0.	9.68E-06	1.50E-04	8.20E-04	6.03E-04	1.58E-03
41	6.7e	4.47E-13	0.	7.42E-10	0.	3.86E-10	0.	9.76E-06	1.57E-04	8.26E-04	6.05E-04	1.60E-03
42	6.6e	2.84E-13	0.	6.72E-10	0.	3.28E-10	0.	9.84E-06	1.64E-04	8.34E-04	6.07E-04	1.62E-03
43	6.5e	1.44E-13	0.	5.42E-10	0.	4.78E-10	0.	9.91E-06	1.72E-04	8.43E-04	6.08E-04	1.63E-03
44	6.4e	9.68E-14	0.	3.81E-10	1.58E-12	4.35E-10	0.	9.99E-06	1.80E-04	8.52E-04	6.10E-04	1.65E-03
45	6.3e	5.42E-14	0.	2.42E-10	7.14E-12	3.23E-10	0.	1.01E-05	1.89E-04	8.62E-04	6.13E-04	1.67E-03
46	6.2e	2.54E-14	0.	1.10E-10	1.92E-11	4.35E-10	0.	1.01E-05	1.99E-04	8.72E-04	6.16E-04	1.70E-03
47	6.1e	1.18E-14	0.	6.49E-11	2.94E-11	5.38E-10	0.	1.02E-05	2.09E-04	8.83E-04	6.23E-04	1.72E-03
48	6.0e	4.98E-15	0.	1.66E-11	2.87E-11	2.67E-10	0.	1.03E-05	2.19E-04	8.95E-04	6.28E-04	1.75E-03
49	5.9e	1.23E-15	0.	1.19E-12	4.23E-11	2.58E-10	0.	1.03E-05	2.31E-04	9.09E-04	6.33E-04	1.78E-03
50	5.8e	1.57E-16	0.	3.82E-14	5.05E-11	2.73E-10	0.	1.01E-05	2.43E-04	9.23E-04	6.38E-04	1.81E-03
51	5.7e	1.13E-17	0.	0.	7.05E-11	3.02E-10	0.	9.53E-06	2.54E-04	9.37E-04	6.43E-04	1.85E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON EnERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.24E-19	0.	0.	0.	4.11E-11	3.93E-10	0.	0.	8.86E-06	2.70E-04	9.54E-04	6.48E-04	1.88E-03
53	5.50	0.	0.	0.	0.	7.47E-11	3.64E-10	0.	0.	8.91E-06	2.86E-04	9.75E-04	6.55E-04	1.92E-03
54	5.40	0.	0.	0.	0.	6.94E-11	3.82E-10	0.	0.	8.95E-06	3.02E-04	1.00E-03	6.63E-04	1.97E-03
55	5.30	0.	0.	0.	0.	7.11E-11	3.76E-10	0.	0.	9.01E-06	3.20E-04	1.03E-03	6.72E-04	2.03E-03
56	5.20	0.	0.	0.	0.	7.70E-11	2.92E-10	0.	0.	9.07E-06	3.39E-04	1.06E-03	6.83E-04	2.07E-03
57	5.10	0.	0.	0.	0.	7.71E-11	3.73E-10	0.	0.	9.14E-06	3.59E-04	1.07E-03	6.94E-04	2.13E-03
58	5.00	7.31E-12	0.	0.	0.	7.09E-11	3.55E-10	0.	0.	9.22E-06	3.81E-04	1.10E-03	7.05E-04	2.20E-03
59	4.90	1.80E-11	0.	0.	0.	7.54E-11	3.90E-10	0.	0.	9.30E-06	4.04E-04	1.14E-03	7.18E-04	2.27E-03
60	4.80	3.40E-11	0.	0.	0.	8.56E-11	3.69E-10	0.	0.	9.38E-06	4.32E-04	1.18E-03	7.33E-04	2.36E-03
61	4.70	4.63E-11	0.	0.	0.	8.42E-11	3.36E-10	0.	0.	9.45E-06	4.60E-04	1.23E-03	7.53E-04	2.45E-03
62	4.60	6.45E-11	0.	0.	0.	8.90E-11	3.04E-10	0.	0.	9.53E-06	4.91E-04	1.28E-03	7.73E-04	2.55E-03
63	4.50	6.83E-11	0.	8.63E-11	0.	8.22E-11	2.30E-10	0.	0.	9.61E-06	5.25E-04	1.35E-03	7.94E-04	2.68E-03
64	4.40	7.36E-11	0.	2.53E-10	0.	8.29E-11	1.57E-10	0.	0.	9.68E-06	5.67E-04	1.41E-03	8.15E-04	2.80E-03
65	4.30	7.02E-11	0.	8.50E-10	0.	7.98E-11	9.99E-11	0.	0.	9.76E-06	6.13E-04	1.49E-03	8.38E-04	2.94E-03
66	4.20	6.40E-11	0.	2.67E-09	0.	9.41E-11	6.88E-11	0.	0.	9.84E-06	6.67E-04	1.57E-03	8.61E-04	3.08E-03
67	4.10	6.23E-11	0.	1.22E-09	0.	8.38E-11	1.93E-11	0.	0.	9.87E-06	6.96E-04	1.64E-03	8.59E-04	3.21E-03
68	4.00	5.79E-11	0.	3.87E-09	0.	8.86E-11	1.49E-11	0.	0.	9.91E-06	7.58E-04	1.72E-03	4.84E-04	2.88E-03
69	3.90	4.97E-11	0.	1.83E-09	1.49E-08	7.52E-11	5.49E-12	0.	0.	9.87E-06	8.10E-04	1.70E-03	4.17E-04	2.93E-03
70	3.80	5.47E-11	0.	2.95E-09	5.81E-08	8.13E-11	0.	0.	0.	9.84E-06	8.70E-04	1.72E-03	4.35E-04	3.04E-03
71	3.70	4.92E-11	0.	3.02E-09	2.67E-08	7.84E-11	0.	0.	0.	9.68E-06	9.50E-04	1.44E-03	4.75E-04	2.87E-03
72	3.60	4.47E-11	0.	2.28E-09	1.34E-07	7.61E-11	0.	0.	0.	9.07E-06	1.03E-03	1.55E-03	5.20E-04	3.11E-03
73	3.50	4.21E-11	0.	2.87E-09	2.49E-07	6.09E-11	0.	0.	0.	8.38E-06	1.12E-03	1.65E-03	5.71E-04	3.35E-03
74	3.40	3.90E-11	0.	1.87E-09	4.08E-08	6.86E-11	0.	0.	0.	4.79E-06	1.23E-03	1.83E-03	4.20E-04	3.49E-03
75	3.30	3.14E-11	0.	1.92E-09	1.51E-07	5.54E-11	0.	0.	0.	4.78E-06	1.35E-03	2.01E-03	4.86E-04	4.15E-03
76	3.20	2.77E-11	0.	1.20E-09	2.39E-07	5.85E-11	0.	0.	0.	4.83E-06	1.48E-03	2.20E-03	7.47E-04	4.43E-03
77	3.10	2.67E-11	0.	9.98E-10	4.44E-08	5.59E-11	0.	0.	0.	4.81E-06	1.63E-03	2.39E-03	8.89E-04	4.84E-03
78	3.00	2.42E-11	0.	6.18E-10	1.43E-07	5.36E-11	0.	0.	0.	4.83E-06	1.80E-03	2.59E-03	8.78E-04	5.26E-03
79	2.90	2.06E-11	0.	3.90E-10	7.79E-08	4.14E-11	0.	0.	0.	4.83E-06	2.00E-03	2.86E-03	9.39E-04	5.78E-03
80	2.80	2.16E-11	0.	1.88E-10	5.34E-08	2.93E-11	0.	0.	0.	4.84E-06	2.27E-03	3.84E-03	1.02E-03	6.29E-03
81	2.70	1.42E-11	0.	8.85E-11	6.76E-08	1.63E-11	0.	0.	0.	4.84E-06	2.48E-03	3.31E-03	1.10E-03	6.89E-03
82	2.60	6.81E-12	0.	4.26E-11	7.05E-09	7.33E-12	0.	0.	0.	4.84E-06	2.78E-03	3.57E-03	1.19E-03	7.55E-03
83	2.50	4.82E-13	0.	4.46E-12	6.88E-09	1.77E-12	0.	0.	0.	4.84E-06	3.14E-03	4.87E-03	7.52E-04	7.97E-03
84	2.40	0.	1.98E-10	0.	5.29E-09	1.98E-13	0.	0.	0.	4.84E-06	3.56E-03	4.74E-03	8.77E-04	9.18E-03
85	2.30	0.	5.84E-10	0.	0.	0.	0.	0.	0.	4.89E-06	4.05E-03	4.19E-03	1.05E-03	9.30E-03
86	2.20	0.	1.56E-09	0.	0.	0.	0.	0.	0.	4.78E-06	4.64E-03	4.96E-03	1.25E-03	1.09E-02
87	2.10	0.	1.60E-09	0.	0.	0.	0.	0.	0.	4.78E-06	5.35E-03	5.77E-03	1.45E-03	1.26E-02
88	2.00	0.	3.19E-09	0.	0.	0.	0.	0.	0.	4.81E-06	6.20E-03	6.58E-03	1.65E-03	1.44E-02
89	1.90	0.	3.84E-09	0.	0.	0.	0.	0.	0.	4.43E-06	7.25E-03	7.55E-03	1.93E-03	1.67E-02
90	1.80	0.	3.29E-09	0.	0.	0.	0.	0.	0.	4.24E-06	8.55E-03	9.85E-03	2.35E-03	2.00E-02
91	1.70	0.	3.73E-09	0.	0.	0.	0.	0.	0.	4.00E-06	1.02E-02	1.09E-02	2.84E-03	2.39E-02
92	1.60	0.	2.81E-09	0.	0.	0.	0.	0.	0.	3.38E-06	1.23E-02	1.27E-02	3.37E-03	2.84E-02
93	1.50	0.	3.21E-09	0.	0.	0.	0.	0.	0.	1.51E-06	1.50E-02	1.65E-02	4.09E-03	3.57E-02
94	1.40	0.	3.16E-09	0.	0.	0.	0.	0.	0.	0.	1.84E-02	2.06E-02	4.89E-03	4.41E-02
95	1.30	0.	2.42E-09	0.	0.	0.	0.	0.	0.	0.	2.23E-02	2.76E-02	4.45E-03	5.74E-02
96	1.20	0.	2.31E-09	0.	0.	0.	0.	0.	0.	0.	2.97E-02	3.07E-02	6.50E-03	6.69E-02
97	1.10	0.	2.23E-09	0.	0.	0.	0.	3.72E-15	0.	0.	3.80E-02	3.70E-02	8.15E-03	8.47E-02
98	1.00	0.	2.05E-09	0.	0.	0.	0.	5.91E-14	0.	0.	5.20E-02	4.59E-02	9.29E-03	1.07E-01
99	0.90	0.	1.60E-09	0.	0.	0.	0.	6.80E-14	0.	0.	7.20E-02	5.20E-02	1.09E-02	1.36E-01
100	0.80	0.	7.91E-10	0.	0.	0.	0.	1.51E+12	0.	0.	1.04E-01	6.80E-02	1.25E-02	1.77E-01
101	0.70	0.	1.84E-10	0.	0.	0.	0.	1.42E-12	0.	0.	1.57E-01	6.57E-02	1.20E-02	2.35E-01
102	0.60	0.	3.87E-11	0.	0.	0.	0.	4.50E-12	0.	0.	2.93E-01	7.39E-02	1.43E-02	3.41E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	N2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO ?	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	1.10E-12	0.	0.	0.	1.10E-08	4.74E-07	2.67E-05	8.44E-06	3.56E-05
2	10.6e	0.	0.	1.01E-12	0.	0.	0.	1.10E-08	4.08E-07	2.69E-05	8.39E-06	3.58E-05
3	10.5e	0	0.	1.03E-12	0.	0.	0.	1.19E-08	5.07E-07	2.70E-05	8.36E-06	3.59E-05
4	10.4e	0.	0.	9.83E-13	0.	0.	0.	1.19E-08	5.17E-07	2.72E-05	8.32E-06	3.60E-05
5	10.3e	0.	0.	8.65E-13	0.	0.	0.	1.19E-08	5.32E-07	2.73E-05	8.29E-06	3.62E-05
6	10.2e	0.	0.	8.99E-13	0.	0.	0.	1.19E-08	5.40E-07	2.75E-05	8.25E-06	3.63E-05
7	10.1e	0.	0.	8.51E-13	0.	0.	0.	1.19E-08	5.65E-07	2.75E-05	8.22E-06	3.63E-05
8	10.0e	0.	0.	7.56E-13	0.	0.	0.	1.19E-08	5.82E-07	2.33E-05	8.18E-06	3.21E-05
9	9.9e	0.	0.	7.77E-13	0.	0.	0.	1.20E-08	6.00E-07	2.34E-05	8.15E-06	3.22E-05
10	9.8e	0.	0.	7.37E-13	0.	0.	0.	1.20E-08	6.10E-07	2.35E-05	8.11E-06	3.22E-05
11	9.7e	0.	0.	6.44E-13	0.	0.	0.	1.20E-08	6.30E-07	2.35E-05	8.08E-06	3.23E-05
12	9.6e	0.	0.	6.97E-13	0.	0.	0.	1.20E-08	6.50E-07	2.36E-05	8.04E-06	3.23E-05
13	9.5e	0.	0.	6.03E-13	0.	0.	0.	1.20E-08	6.79E-07	2.37E-05	8.00E-06	3.24E-05
14	9.4e	0.	0.	5.76E-13	0.	0.	0.	1.21E-08	7.07E-07	2.38E-05	7.97E-06	3.25E-05
15	9.3e	0.	0.	5.92E-13	0.	0.	0.	1.21E-08	7.25E-07	2.39E-05	7.94E-06	3.25E-05
16	9.2e	0.	0.	4.90E-13	0.	0.	0.	1.22E-08	7.49E-07	2.40E-05	7.90E-06	3.26E-05
17	9.1e	0.	0.	5.12E-13	0.	0.	0.	1.22E-08	7.74E-07	1.02E-05	7.87E-06	1.89E-05
18	9.0e	0.	0.	4.78E-13	0.	0.	0.	1.23E-08	8.00E-07	1.02E-05	7.84E-06	1.89E-05
19	8.9e	0.	0.	4.40E-13	0.	0.	0.	1.23E-08	8.20E-07	1.03E-05	7.80E-06	1.89E-05
20	8.8e	0.	0.	4.34E-13	0.	0.	0.	1.23E-08	8.57E-07	1.03E-05	7.77E-06	1.89E-05
21	8.7e	0.	0.	3.81E-13	0.	0.	0.	1.24E-08	8.87E-07	1.03E-05	7.74E-06	1.90E-05
22	8.6e	0.	0.	3.94E-13	0.	0.	0.	1.24E-08	9.10E-07	1.04E-05	7.71E-06	1.90E-05
23	8.5e	0.	0.	3.56E-13	0.	0.	0.	1.25E-08	9.52E-07	1.04E-05	7.68E-06	1.91E-05
24	8.4e	0.	0.	3.58E-13	0.	0.	0.	1.26E-08	9.84E-07	1.05E-05	7.65E-06	1.91E-05
25	8.3e	0.	0.	3.08E-13	0.	0.	0.	1.26E-08	1.02E-06	1.05E-05	7.64E-06	1.92E-05
26	8.2e	0.	0.	3.05E-13	0.	0.	0.	1.27E-08	1.06E-06	1.06E-05	7.65E-06	1.93E-05
27	8.1e	0.	0.	2.67E-13	0.	0.	0.	1.28E-08	1.10E-06	1.07E-05	7.64E-06	1.94E-05
28	8.0e	0.	0.	2.70E-13	0.	0.	0.	1.28E-08	1.14E-06	1.08E-05	7.65E-06	1.96E-05
29	7.9e	0.	0.	2.35E-13	0.	0.	0.	1.29E-08	1.19E-06	1.09E-05	7.66E-06	1.97E-05
30	7.8e	0.	0.	2.45E-13	0.	0.	0.	1.29E-08	1.23E-06	1.10E-05	7.67E-06	1.99E-05
31	7.7e	0.	0.	2.27E-13	0.	0.	0.	1.30E-08	1.28E-06	1.11E-05	7.68E-06	2.00E-05
32	7.6e	0.	0.	2.06E-13	0.	1.36E-17	0.	1.31E-08	1.34E-06	1.04E-05	7.39E-06	1.94E-05
33	7.5e	0.	0.	1.95E-13	0.	4.44E-17	0.	1.31E-08	1.39E-06	1.05E-05	7.70E-06	1.96E-05
34	7.4e	0.	0.	1.76E-13	0.	3.92E-16	0.	1.32E-08	1.45E-06	1.06E-05	7.71E-06	1.98E-05
35	7.3e	0.	0.	1.60E-13	0.	1.51E-15	0.	1.33E-08	1.51E-06	1.08E-05	7.72E-06	2.00E-05
36	7.2e	0.	0.	1.53E-13	0.	4.19E-15	0.	1.34E-08	1.57E-06	1.09E-05	7.73E-06	2.02E-05
37	7.1e	0.	0.	1.49E-13	0.	1.32E-14	0.	1.35E-08	1.64E-06	1.10E-05	7.74E-06	2.04E-05
38	7.0e	6.16E-17	0.	1.38E-13	0.	2.54E-14	0.	1.36E-08	1.71E-06	1.12E-05	7.75E-06	2.06E-05
39	6.9e	1.21E-16	0.	1.27E-13	0.	3.66E-14	0.	1.37E-08	1.79E-06	1.13E-05	7.76E-06	2.09E-05
40	6.8e	1.05E-16	0.	1.24E-13	0.	6.17E-14	0.	1.38E-08	1.87E-06	1.14E-05	7.78E-06	2.11E-05
41	6.7e	7.68E-17	0.	1.09E-13	0.	6.01E-14	0.	1.39E-08	1.96E-06	1.16E-05	7.80E-06	2.13E-05
42	6.6e	4.71E-17	0.	9.91E-14	0.	5.11E-14	0.	1.40E-08	2.05E-06	1.17E-05	7.82E-06	2.16E-05
43	6.5e	2.73E-17	0.	7.99E-14	0.	7.33E-14	0.	1.41E-08	2.14E-06	1.17E-05	7.85E-06	2.17E-05
44	6.4e	1.58E-17	0.	5.52E-14	2.14E-16	6.77E-14	0.	1.42E-08	2.25E-06	1.19E-05	7.87E-06	2.20E-05
45	6.3e	9.24E-18	0.	3.57E-14	1.11E-15	5.83E-14	0.	1.44E-08	2.36E-06	1.21E-05	7.91E-06	2.24E-05
46	6.2e	4.20E-18	0.	2.01E-14	1.60E-15	6.77E-14	0.	1.45E-08	2.47E-06	1.23E-05	7.98E-06	2.27E-05
47	6.1e	1.95E-18	0.	9.58E-15	4.59E-15	8.25E-14	0.	1.46E-08	2.66E-06	1.25E-05	8.04E-06	2.31E-05
48	6.0e	8.18E-19	0.	2.46E-15	4.47E-15	4.16E-14	0.	1.47E-08	2.73E-06	1.27E-05	8.11E-06	2.35E-05
49	5.9e	2.82E-19	0.	1.76E-16	8.59E-15	4.82E-14	0	1.47E-08	2.87E-06	1.29E-05	8.18E-06	2.40E-05
50	5.8e	2.50E-20	0.	4.46E-18	9.27E-15	4.28E-14	0.	1.45E-08	3.07E-06	1.32E-05	8.2-E-06	2.44E-05
51	5.7e	1.98E-21	0.	0.	1.10E-14	4.78E-14	0.	1.36E-08	3.19E-06	1.34E-05	8.31E-06	2.49E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	N+2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.62E-23	0.	0.	0.	9.51E-15	6.12E-14	0.	0.	1.26E-08	3.36E-06	1.37E-05	8.38E-06	2.54E-05
53	5.50	0.	0.	0.	0.	1.16E-14	5.67E-14	0.	0.	1.27E-08	3.55E-06	1.40E-05	8.47E-06	2.61E-05
54	5.40	0.	0.	0.	0.	1.08E-14	4.78E-14	0.	0.	1.28E-08	3.76E-06	1.44E-05	8.57E-06	2.68E-05
55	5.30	0.	0.	0.	0.	1.11E-14	5.06E-14	0.	0.	1.28E-08	3.98E-06	1.48E-05	8.69E-06	2.75E-05
56	5.20	0.	0.	0.	0.	1.20E-14	4.55E-14	0.	0.	1.29E-08	4.21E-06	1.33E-05	8.77E-06	2.63E-05
57	5.10	0.	0.	0.	0.	1.20E-14	5.01E-14	0.	0.	1.30E-08	4.47E-06	1.37E-05	8.92E-06	2.71E-05
58	5.00	1.28E-15	0.	0.	0.	1.10E-14	5.52E-14	0.	0.	1.31E-08	4.75E-06	1.42E-05	9.06E-06	2.80E-05
59	4.90	2.05E-15	0.	0.	0.	1.24E-14	6.08E-14	0.	0.	1.33E-08	5.05E-06	1.47E-05	9.23E-06	2.90E-05
60	4.80	9.59E-15	0.	0.	0.	1.33E-14	5.73E-14	0.	0.	1.34E-08	5.37E-06	1.52E-05	9.43E-06	3.00E-05
61	4.70	7.62E-15	0.	0.	0.	1.34E-14	5.23E-14	0.	0.	1.35E-08	5.73E-06	1.58E-05	9.68E-06	3.12E-05
62	4.60	1.06E-14	0.	0.	0.	1.39E-14	4.74E-14	0.	0.	1.36E-08	6.11E-06	1.65E-05	9.94E-06	3.26E-05
63	4.50	1.12E-14	0.	1.27E-14	0.	1.28E-14	3.50E-14	0.	0.	1.37E-08	6.54E-06	1.74E-05	1.02E-05	3.42E-05
64	4.40	1.21E-14	0.	3.73E-14	0.	1.29E-14	2.45E-14	0.	0.	1.38E-08	7.00E-06	1.83E-05	1.05E-05	3.58E-05
65	4.30	1.15E-14	0.	1.27E-13	0.	1.24E-14	1.54E-14	0.	0.	1.39E-08	7.50E-06	1.93E-05	1.09E-05	3.76E-05
66	4.20	1.10E-14	0.	3.94E-13	0.	1.31E-14	1.07E-14	0.	0.	1.40E-08	8.06E-06	2.03E-05	1.11E-05	3.94E-05
67	4.10	1.02E-14	0.	1.80E-13	0.	1.29E-14	3.01E-15	0.	0.	1.41E-08	8.67E-06	2.13E-05	1.13E-05	4.10E-05
68	4.00	9.52E-15	0.	5.71E-13	0.	1.26E-14	2.29E-15	0.	0.	1.41E-08	9.34E-06	2.23E-05	5.22E-06	3.69E-05
69	3.90	9.16E-15	0.	2.70E-13	1.92E-11	1.17E-14	8.44E-16	0.	0.	1.41E-08	1.01E-05	2.19E-05	5.39E-06	3.74E-05
70	3.80	8.99E-15	0.	4.35E-13	7.71E-11	1.27E-14	0.	0.	0.	1.40E-08	1.09E-05	1.83E-05	5.62E-06	3.48E-05
71	3.70	8.08E-15	0.	4.45E-13	3.54E-11	1.10E-14	0.	0.	0.	1.38E-08	1.18E-05	1.91E-05	6.14E-06	3.71E-05
72	3.60	7.35E-15	0.	3.25E-13	1.82E-10	1.18E-14	0.	0.	0.	1.29E-08	1.29E-05	2.06E-05	6.71E-06	4.02E-05
73	3.50	6.93E-15	0.	4.24E-13	3.30E-10	9.49E-15	0.	0.	0.	1.18E-08	1.40E-05	2.19E-05	7.36E-06	4.32E-05
74	3.40	6.42E-15	0.	2.77E-13	5.41E-11	1.07E-14	0.	0.	0.	6.83E-09	1.53E-05	2.41E-05	8.10E-06	4.76E-05
75	3.30	5.16E-15	0.	2.83E-13	2.00E-10	8.64E-15	0.	0.	0.	6.84E-09	1.68E-05	2.65E-05	8.85E-06	5.21E-05
76	3.20	4.55E-15	0.	1.88E-13	3.17E-10	9.12E-15	0.	0.	0.	6.85E-09	1.84E-05	2.89E-05	9.64E-06	5.70E-05
77	3.10	4.40E-15	0.	1.47E-13	8.58E-11	8.71E-15	0.	0.	0.	6.87E-09	2.03E-05	3.14E-05	1.04E-05	6.21E-05
78	3.00	3.98E-15	0.	9.12E-14	1.90E-10	8.31E-15	0.	0.	0.	6.88E-09	2.24E-05	3.39E-05	1.12E-05	6.76E-05
79	2.90	3.38E-15	0.	5.76E-14	1.03E-10	6.44E-15	0.	0.	0.	6.89E-09	2.49E-05	3.66E-05	1.21E-05	7.36E-05
80	2.80	3.55E-15	0.	2.78E-14	7.08E-11	4.57E-15	0.	0.	0.	6.90E-09	2.77E-05	3.98E-05	1.31E-05	8.05E-05
81	2.70	2.33E-15	0.	1.31E-14	8.96E-11	2.55E-15	0.	0.	0.	6.90E-09	3.09E-05	4.11E-05	1.42E-05	8.62E-05
82	2.60	1.12E-15	0.	6.29E-15	9.36E-12	1.14E-15	0.	0.	0.	6.90E-09	3.47E-05	4.45E-05	1.53E-05	9.45E-05
83	2.50	7.92E-17	0.	4.58E-16	9.13E-12	2.75E-16	0.	0.	0.	6.90E-09	3.91E-05	5.04E-05	9.31E-06	9.88E-05
84	2.40	0.	2.92E-14	0.	7.01E-12	2.94E-17	0.	0.	0.	6.90E-09	4.43E-05	4.35E-05	1.13E-05	9.91E-05
85	2.30	0.	8.62E-14	0.	0.	0.	0.	0.	0.	6.85E-09	5.04E-05	5.26E-05	1.35E-05	1.17E-04
86	2.20	0.	2.38E-13	0.	0.	0.	0.	0.	0.	6.82E-09	5.79E-05	6.26E-05	1.61E-05	1.36E-04
87	2.10	0.	2.36E-13	0.	0.	0.	0.	0.	0.	6.79E-09	6.66E-05	7.21E-05	1.87E-05	1.57E-04
88	2.00	0.	4.71E-13	0.	0.	0.	0.	0.	0.	6.97E-09	7.72E-05	8.22E-05	2.13E-05	1.81E-04
89	1.90	0.	5.67E-13	0.	0.	0.	0.	0.	0.	6.32E-09	9.02E-05	9.41E-05	2.48E-05	2.09E-04
90	1.80	0.	4.85E-13	0.	0.	0.	0.	0.	0.	6.85E-09	1.06E-04	1.12E-04	3.02E-05	2.49E-04
91	1.70	0.	5.91E-13	0.	0.	0.	0.	0.	0.	5.78E-09	1.27E-04	1.35E-04	3.67E-05	2.99E-04
92	1.60	0.	4.15E-13	0.	0.	0.	0.	0.	0.	4.82E-09	1.53E-04	1.57E-04	4.33E-05	3.54E-04
93	1.50	0.	4.74E-13	0.	0.	0.	0.	0.	0.	2.19E-09	1.87E-04	2.04E-04	5.25E-05	4.43E-04
94	1.40	0.	4.67E-13	0.	0.	0.	0.	0.	0.	0.	2.31E-04	2.43E-04	6.29E-05	5.37E-04
95	1.30	0.	3.58E-13	0.	0.	0.	0.	0.	0.	0.	2.90E-04	3.39E-04	7.75E-05	7.06E-04
96	1.20	0.	3.41E-13	0.	0.	0.	0.	0.	0.	0.	3.70E-04	3.74E-04	8.34E-05	8.27E-04
97	1.10	0.	3.38E-13	0.	0.	0.	0.	5.70E-19	0.	0.	4.82E-04	4.61E-04	1.05E-04	1.05E-03
98	1.00	0.	3.03E-13	0.	0.	0.	0.	9.20E-18	0.	0.	6.47E-04	5.59E-04	1.29E-04	1.33E-03
99	0.90	0.	2.48E-13	0.	0.	0.	0.	1.87E-17	0.	0.	8.96E-04	6.43E-04	1.48E-04	1.68E-03
100	0.80	0.	1.17E-13	0.	0.	0.	0.	2.39E-16	0.	0.	1.29E-03	7.48E-04	1.68E-04	2.19E-03
101	0.70	0.	2.71E-14	0.	0.	0.	0.	2.21E-16	0.	0.	1.95E-03	8.38E-04	1.84E-04	2.91E-03
102	0.60	0.	5.71E-15	0.	0.	0.	0.	7.01E-16	0.	0.	3.15E-03	9.12E-04	1.83E-04	4.15E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 C-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	18.75	0.	0.	1.14E-16	0.	0.	0.	1.31E-11	5.52E-09	7.18E-07	9.26E-08	8.08E-07
2	18.60	0.	0.	1.04E-16	0.	0.	0.	1.31E-11	5.60E-09	7.19E-07	9.23E-08	8.17E-07
3	18.50	0.	0.	1.06E-16	0.	0.	0.	1.32E-11	5.64E-09	3.43E-07	9.19E-08	4.41E-07
4	18.40	0.	0.	1.01E-16	0.	0.	0.	1.32E-11	5.82E-09	3.45E-07	9.15E-08	4.42E-07
5	18.30	0.	0.	8.91E-17	0.	0.	0.	1.32E-11	6.19E-09	3.46E-07	9.12E-08	4.43E-07
6	18.20	0.	0.	9.26E-17	0.	0.	0.	1.32E-11	6.38E-09	3.48E-07	9.08E-08	4.45E-07
7	18.10	0.	0.	8.77E-17	0.	0.	0.	1.32E-11	6.57E-09	3.50E-07	9.05E-08	4.47E-07
8	18.00	0.	0.	7.79E-17	0.	0.	0.	1.32E-11	6.77E-09	3.53E-07	9.02E-08	4.50E-07
9	9.90	0.	0.	8.01E-17	0.	0.	0.	1.33E-11	6.98E-09	3.55E-07	8.98E-08	4.52E-07
10	9.80	0.	0.	7.59E-17	0.	0.	0.	1.33E-11	7.20E-09	3.57E-07	8.95E-08	4.54E-07
11	9.70	0.	0.	6.63E-17	0.	0.	0.	1.33E-11	7.45E-09	3.60E-07	8.92E-08	4.56E-07
12	9.60	0.	0.	7.18E-17	0.	0.	0.	1.33E-11	7.66E-09	3.62E-07	8.88E-08	4.59E-07
13	9.50	0.	0.	6.21E-17	0.	0.	0.	1.34E-11	7.91E-09	3.65E-07	8.85E-08	4.61E-07
14	9.40	0.	0.	5.93E-17	0.	0.	0.	1.34E-11	8.17E-09	3.67E-07	8.82E-08	4.64E-07
15	9.30	0.	0.	6.10E-17	0.	0.	0.	1.35E-11	8.43E-09	2.30E-07	8.78E-08	3.27E-07
16	9.20	0.	0.	5.13E-17	0.	0.	0.	1.35E-11	8.72E-09	2.32E-07	8.75E-08	3.29E-07
17	9.10	0.	0.	5.28E-17	0.	0.	0.	1.36E-11	9.01E-09	2.34E-07	8.72E-08	3.31E-07
18	9.00	0.	0.	4.85E-17	0.	0.	0.	1.36E-11	9.31E-09	2.36E-07	8.69E-08	3.32E-07
19	8.90	0.	0.	4.53E-17	0.	0.	0.	1.37E-11	9.63E-09	2.38E-07	8.66E-08	3.34E-07
20	8.80	0.	0.	4.47E-17	0.	0.	0.	1.37E-11	9.97E-09	2.40E-07	8.63E-08	3.36E-07
21	8.70	0.	0.	3.93E-17	0.	0.	0.	1.38E-11	1.03E-08	2.42E-07	8.61E-08	3.39E-07
22	8.60	0.	0.	4.07E-17	0.	0.	0.	1.38E-11	1.07E-08	2.44E-07	8.58E-08	3.39E-07
23	8.50	0.	0.	3.61E-17	0.	0.	0.	1.38E-11	1.11E-08	2.47E-07	8.55E-08	3.41E-07
24	8.40	0.	0.	3.60E-17	0.	0.	0.	1.39E-11	1.15E-08	2.49E-07	8.53E-08	3.44E-07
25	8.30	0.	0.	3.10E-17	0.	0.	0.	1.40E-11	1.19E-08	2.52E-07	8.52E-08	3.47E-07
26	8.20	0.	0.	3.15E-17	0.	0.	0.	1.41E-11	1.23E-08	2.56E-07	8.34E-08	3.51E-07
27	8.10	0.	0.	2.79E-17	0.	0.	0.	1.41E-11	1.28E-08	1.84E-07	8.36E-08	2.88E-07
28	8.00	0.	0.	2.70E-17	0.	0.	0.	1.42E-11	1.33E-08	1.88E-07	8.39E-08	2.85E-07
29	7.90	0.	0.	2.42E-17	0.	0.	0.	1.43E-11	1.38E-08	1.92E-07	8.41E-08	2.90E-07
30	7.80	0.	0.	2.52E-17	0.	0.	0.	1.44E-11	1.44E-08	1.96E-07	8.43E-08	2.95E-07
31	7.70	0.	0.	2.24E-17	0.	0.	0.	1.44E-11	1.49E-08	2.01E-07	8.45E-08	3.01E-07
32	7.60	0.	0.	2.14E-17	0.	1.47E-21	0.	1.45E-11	1.55E-08	2.06E-07	8.47E-08	3.07E-07
33	7.50	0.	0.	2.01E-17	0.	4.77E-21	0.	1.46E-11	1.62E-08	2.11E-07	8.49E-08	3.13E-07
34	7.40	0.	0.	1.82E-17	0.	4.22E-20	0.	1.47E-11	1.68E-08	2.17E-07	8.52E-08	3.19E-07
35	7.30	0.	0.	1.74E-17	0.	1.42E-19	0.	1.47E-11	1.75E-08	2.23E-07	8.54E-08	3.26E-07
36	7.20	0.	0.	1.58E-17	0.	4.50E-19	0.	1.48E-11	1.83E-08	2.30E-07	8.58E-08	3.34E-07
37	7.10	0.	0.	1.53E-17	0.	1.41E-18	0.	1.49E-11	1.91E-08	2.37E-07	8.61E-08	3.42E-07
38	7.00	6.91E-21	0.	1.42E-17	0.	2.73E-18	0.	1.51E-11	1.99E-08	2.30E-07	8.64E-08	3.37E-07
39	6.90	1.36E-20	0.	1.31E-17	0.	3.94E-18	0.	1.52E-11	2.08E-08	2.37E-07	8.67E-08	3.45E-07
40	6.80	1.18E-20	0.	1.28E-17	0.	6.64E-18	0.	1.53E-11	2.17E-08	2.44E-07	8.71E-08	3.53E-07
41	6.70	8.62E-21	0.	1.[illegible]E-17	0.	6.47E-18	0.	1.54E-11	2.27E-08	2.52E-07	8.75E-08	3.62E-07
42	6.60	5.29E-21	0.	1.02E-17	0.	5.58E-18	0.	1.56E-11	2.38E-08	2.59E-07	8.80E-08	3.71E-07
43	6.50	3.07E-21	0.	8.24E-18	0.	7.88E-18	0.	1.57E-11	2.49E-08	2.67E-07	8.84E-08	3.83E-07
44	6.40	1.77E-21	0.	5.79E-18	2.51E-20	7.29E-18	0.	1.58E-11	2.61E-08	2.74E-07	8.89E-08	3.89E-07
45	6.30	1.04E-21	0.	3.58E-18	1.20E-19	5.41E-18	0.	1.59E-11	2.74E-08	2.82E-07	8.96E-08	3.99E-07
46	6.20	4.72E-22	0.	2.07E-18	1.72E-19	7.29E-18	0.	1.60E-11	2.88E-08	2.90E-07	9.05E-08	4.09E-07
47	6.10	2.19E-22	0.	9.87E-19	4.93E-19	8.88E-18	0.	1.62E-11	3.02E-08	2.98E-07	9.14E-08	4.20E-07
48	6.00	9.19E-23	0.	2.53E-19	4.80E-19	4.47E-18	0.	1.63E-11	3.18E-08	3.07E-07	9.24E-08	4.31E-07
49	5.90	2.27E-23	0.	1.02E-20	7.09E-19	4.33E-18	0.	1.63E-11	3.34E-08	3.15E-07	9.33E-08	4.42E-07
50	5.80	2.98E-24	0.	4.59E-22	9.97E-19	4.52E-18	0.	1.68E-11	3.52E-08	3.24E-07	9.43E-08	4.54E-07
51	5.70	2.14E-25	0.	0.	1.18E-18	5.05E-18	0.	1.51E-11	3.71E-08	1.70E-07	8.94E-08	2.97E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO ?	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	9.68E-27	0.	0.	0.	1.02E-18	6.50E-18	0.	0.	1.40E-11	3.91E-08	1.76E-07	9.82E-08	3.05E-07
53	5.50	0.	0.	0.	0.	1.25E-18	6.10E-18	0.	0.	1.41E-11	4.13E-08	1.82E-07	9.12E-08	3.15E-07
54	5.40	0.	0.	0.	0.	1.16E-18	5.05E-18	0.	0.	1.42E-11	4.37E-08	1.89E-07	9.24E-08	3.25E-07
55	5.30	0.	0.	0.	0.	1.19E-18	4.30E-18	0.	0.	1.42E-11	4.63E-08	1.97E-07	9.38E-08	3.37E-07
56	5.20	0.	0.	0.	0.	1.22E-18	4.89E-18	0.	0.	1.43E-11	4.90E-08	2.04E-07	9.55E-08	3.48E-07
57	5.10	0.	0.	0.	0.	1.29E-18	6.25E-18	0.	0.	1.45E-11	5.20E-08	2.12E-07	9.71E-08	3.61E-07
58	5.00	1.35E-19	0.	0.	0.	1.19E-18	5.94E-18	0.	0.	1.48E-11	5.52E-08	2.20E-07	9.88E-08	3.74E-07
59	4.90	3.31E-19	0.	0.	0.	1.33E-18	6.54E-18	0.	0.	1.47E-11	5.87E-08	2.29E-07	9.98E-08	3.87E-07
60	4.80	6.28E-19	0.	0.	0.	1.43E-18	8.16E-18	0.	0.	1.48E-11	6.25E-08	2.38E-07	1.02E-07	4.02E-07
61	4.70	8.56E-19	0.	0.	0.	1.44E-18	5.62E-18	0.	0.	1.49E-11	6.66E-08	2.49E-07	1.05E-07	4.20E-07
62	4.60	1.19E-18	0.	0.	0.	1.49E-18	5.10E-18	0.	0.	1.51E-11	7.11E-08	2.63E-07	1.08E-07	4.42E-07
63	4.50	1.26E-18	0.	1.31E-18	0.	1.38E-18	3.85E-18	0.	0.	1.52E-11	7.60E-08	2.79E-07	1.11E-07	4.65E-07
64	4.40	1.36E-18	0.	3.85E-18	0.	1.39E-18	2.63E-18	0.	0.	1.53E-11	8.14E-08	2.95E-07	1.14E-07	4.90E-07
65	4.30	1.30E-18	0.	1.31E-17	0.	1.34E-18	1.67E-18	0.	0.	1.54E-11	8.72E-08	3.11E-07	1.14E-07	5.12E-07
66	4.20	1.22E-18	0.	4.06E-17	0.	1.41E-18	1.15E-18	0.	0.	1.56E-11	9.37E-08	3.30E-07	1.01E-07	5.24E-07
67	4.10	1.15E-18	0.	1.85E-17	0.	1.39E-18	3.24E-19	0.	0.	1.56E-11	1.01E-07	3.48E-07	5.69E-08	5.06E-07
68	4.00	1.07E-18	0.	5.88E-17	0.	1.35E-18	2.43E-19	0.	0.	1.57E-11	1.09E-07	3.49E-07	5.90E-08	5.16E-07
69	3.90	9.13E-19	0.	2.79E-17	1.89E-14	1.20E-18	9.08E-20	0.	0.	1.56E-11	1.17E-07	3.26E-07	6.08E-08	5.04E-07
70	3.80	1.01E-18	0.	4.49E-17	7.59E-14	1.36E-18	0.	0.	0.	1.56E-11	1.27E-07	3.43E-07	6.36E-08	5.35E-07
71	3.70	9.08E-19	0.	4.59E-17	3.48E-14	1.18E-18	0.	0.	0.	1.53E-11	1.37E-07	3.52E-07	6.93E-08	5.59E-07
72	3.60	8.25E-19	0.	3.35E-17	1.80E-13	1.27E-18	0.	0.	0.	1.43E-11	1.49E-07	3.76E-07	7.56E-08	6.01E-07
73	3.50	7.78E-19	0.	4.37E-17	3.25E-13	1.02E-18	0.	0.	0.	1.31E-11	1.63E-07	4.04E-07	8.28E-08	6.50E-07
74	3.40	7.20E-19	0.	2.85E-17	5.32E-14	1.15E-18	0.	0.	0.	7.57E-12	1.78E-07	4.38E-07	9.13E-08	7.06E-07
75	3.30	5.80E-19	0.	2.92E-17	1.97E-13	9.29E-19	0.	0.	0.	7.58E-12	1.95E-07	4.71E-07	9.92E-08	7.69E-07
76	3.20	5.10E-19	0.	1.94E-17	3.13E-13	9.80E-19	0.	0.	0.	7.60E-12	2.14E-07	5.45E-07	1.07E-07	8.66E-07
77	3.10	4.94E-19	0.	1.52E-17	8.44E-14	9.37E-19	0.	0.	0.	7.61E-12	2.36E-07	5.73E-07	1.16E-07	7.25E-07
78	3.00	4.47E-19	0.	9.40E-18	1.87E-13	8.94E-19	0.	0.	0.	7.63E-12	2.60E-07	4.07E-07	1.25E-07	7.93E-07
79	2.90	3.80E-19	0.	5.93E-18	1.82E-13	6.93E-19	0.	0.	0.	7.64E-12	2.89E-07	4.43E-07	1.33E-07	8.65E-07
80	2.80	3.99E-19	0.	3.86E-18	6.97E-14	4.91E-19	0.	0.	0.	7.66E-12	3.21E-07	4.83E-07	1.42E-07	9.47E-07
81	2.70	2.61E-19	0.	1.35E-18	8.82E-14	2.74E-19	0.	0.	0.	7.66E-12	3.59E-07	5.26E-07	1.31E-07	1.02E-06
82	2.60	1.26E-19	0.	6.48E-19	9.21E-15	1.23E-19	0.	0.	0.	7.66E-12	4.03E-07	5.67E-07	8.90E-08	1.06E-06
83	2.50	8.89E-21	0.	6.79E-20	8.99E-15	2.96E-20	0.	0.	0.	7.66E-12	4.54E-07	4.93E-07	1.03E-07	1.05E-06
84	2.40	0.	3.01E-18	0.	6.91E-15	3.19E-21	0.	0.	0.	7.66E-12	5.14E-07	5.90E-07	1.25E-07	1.23E-06
85	2.30	0.	8.89E-18	0.	0.	0.	0.	0.	0.	7.60E-12	5.85E-07	6.99E-07	1.49E-07	1.43E-06
86	2.20	0.	2.37E-17	0.	0.	0.	0.	0.	0.	7.57E-12	6.71E-07	8.13E-07	1.77E-07	1.66E-06
87	2.10	0.	2.43E-17	0.	0.	0.	0.	0.	0.	7.53E-12	7.73E-07	9.32E-07	2.05E-07	1.91E-06
88	2.00	0.	4.85E-17	0.	0.	0.	0.	0.	0.	7.29E-12	8.94E-07	1.05E-06	2.33E-07	2.18E-06
89	1.90	0.	5.84E-17	0.	0.	0.	0.	0.	0.	7.01E-12	1.05E-06	1.19E-06	2.72E-07	2.51E-06
90	1.80	0.	5.00E-17	0.	0.	0.	0.	0.	0.	6.71E-12	1.23E-06	1.39E-06	3.29E-07	2.90E-06
91	1.70	0.	5.60E-17	0.	0.	0.	0.	0.	0.	6.32E-12	1.47E-06	1.47E-06	3.93E-07	3.33E-06
92	1.60	0.	4.28E-17	0.	0.	0.	0.	0.	0.	5.35E-12	1.78E-06	1.71E-06	4.46E-07	3.93E-06
93	1.50	0.	4.88E-17	0.	0.	0.	0.	0.	0.	2.43E-12	2.17E-06	2.08E-06	5.43E-07	4.88E-06
94	1.40	0.	4.81E-17	0.	0.	0.	0.	0.	0.	0.	2.68E-06	2.03E-06	6.18E-07	5.33E-06
95	1.30	0.	3.69E-17	0.	0.	0.	0.	0.	0.	0.	3.36E-06	2.95E-06	6.66E-07	6.98E-06
96	1.20	0.	3.52E-17	0.	0.	0.	0.	0.	0.	0.	4.29E-06	3.85E-06	8.98E-07	9.03E-06
97	1.10	0.	3.40E-17	0.	0.	0.	0.	6.22E-23	0.	0.	5.59E-06	4.86E-06	1.05E-06	1.15E-05
98	1.00	0.	3.12E-17	0.	0.	0.	0.	9.90E-22	0.	0.	7.50E-06	5.73E-06	1.27E-06	1.45E-05
99	0.90	0.	2.56E-17	0.	0.	0.	0.	1.15E-21	0.	0.	1.04E-05	6.48E-06	1.40E-06	1.83E-05
100	0.80	0.	1.20E-17	0.	0.	0.	0.	2.53E-20	0.	0.	1.49E-05	7.14E-06	1.53E-06	2.36E-05
101	0.70	0.	2.79E-18	0.	0.	0.	0.	2.37E-20	0.	0.	2.26E-05	6.74E-06	1.33E-06	3.86E-05
102	0.60	0.	5.80E-19	0.	0.	0.	0.	7.54E-20	0.	0.	3.65E-05	7.59E-06	1.58E-06	4.55E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-03 ; 1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	B- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	9.09E-21	0.	0.	0.	1.08E-14	1.08E-10	1.99E-08	1.38E-09	1.24E-08
2	10.69	0.	0.	8.33E-21	0.	0.	0.	1.08E-14	1.03E-10	1.10E-08	1.37E-09	1.25E-08
3	10.59	0.	0.	8.46E-21	0.	0.	0.	1.08E-14	1.04E-10	1.11E-08	1.37E-09	1.26E-08
4	10.49	0.	0.	8.09E-21	0.	0.	0.	1.08E-14	1.09E-10	1.12E-08	1.37E-09	1.26E-08
5	10.39	0.	0.	7.12E-21	0.	0.	0.	1.08E-14	1.13E-10	1.12E-08	1.36E-09	1.27E-08
6	10.29	0.	0.	7.40E-21	0.	0.	0.	1.01E-14	1.16E-10	1.14E-08	1.36E-09	1.29E-08
7	10.19	0.	0.	7.81E-21	0.	0.	0.	1.01E-14	1.20E-10	1.15E-08	1.36E-09	1.30E-08
8	10.09	0.	0.	6.22E-21	0.	0.	0.	1.01E-14	1.23E-10	1.17E-08	1.36E-09	1.32E-08
9	9.99	0.	0.	6.48E-21	0.	0.	0.	1.02E-14	1.27E-10	1.18E-08	1.36E-09	1.33E-08
10	9.89	0.	0.	6.87E-21	0.	0.	0.	1.02E-14	1.31E-10	1.20E-08	1.36E-09	1.35E-08
11	9.79	0.	0.	5.38E-21	0.	0.	0.	1.02E-14	1.35E-10	1.21E-08	1.36E-09	1.36E-08
12	9.69	0.	0.	5.74E-21	0.	0.	0.	1.03E-14	1.39E-10	1.23E-08	1.36E-09	1.38E-08
13	9.59	0.	0.	4.97E-21	0.	0.	0.	1.03E-14	1.44E-10	1.24E-08	1.36E-09	1.39E-08
14	9.49	0.	0.	4.74E-21	0.	0.	0.	1.04E-14	1.48E-10	1.25E-08	1.36E-09	1.41E-08
15	9.39	0.	0.	4.87E-21	0.	0.	0.	1.04E-14	1.53E-10	1.14E-08	1.36E-09	1.30E-08
16	9.29	0.	0.	4.10E-21	0.	0.	0.	1.05E-14	1.59E-10	1.16E-08	1.36E-09	1.31E-08
17	9.19	0.	0.	4.22E-21	0.	0.	0.	1.06E-14	1.64E-10	1.17E-08	1.36E-09	1.32E-08
18	9.09	0.	0.	3.87E-21	0.	0.	0.	1.06E-14	1.69E-10	1.19E-08	1.36E-09	1.34E-08
19	8.99	0.	0.	3.62E-21	0.	0.	0.	1.07E-14	1.75E-10	1.20E-08	1.19E-09	1.34E-08
20	8.89	0.	0.	3.57E-21	0.	0.	0.	1.08E-14	1.81E-10	1.21E-08	1.17E-09	1.35E-08
21	8.79	0.	0.	3.14E-21	0.	0.	0.	1.08E-14	1.87E-10	1.23E-08	1.17E-09	1.36E-08
22	8.69	0.	0.	3.29E-21	0.	0.	0.	1.09E-14	1.94E-10	1.24E-08	1.18E-09	1.38E-08
23	8.59	0.	0.	2.88E-21	0.	0.	0.	1.90E-14	2.01E-10	1.26E-08	1.13E-09	1.40E-08
24	8.49	0.	0.	2.88E-21	0.	0.	0.	1.91E-14	2.08E-10	1.27E-08	1.18E-09	1.41E-08
25	8.39	0.	0.	2.47E-21	0.	0.	0.	1.92E-14	2.16E-10	7.22E-09	1.19E-09	8.63E-09
26	8.29	0.	0.	2.51E-21	0.	0.	0.	1.93E-14	2.24E-10	7.50E-09	1.28E-09	8.92E-09
27	8.19	0.	0.	2.28E-21	0.	0.	0.	1.94E-14	2.33E-10	7.73E-09	1.21E-09	9.22E-09
28	8.09	0.	0.	2.22E-21	0.	0.	0.	1.95E-14	2.42E-10	8.05E-09	1.22E-09	9.52E-09
29	7.99	0.	0.	1.98E-21	0.	0.	0.	1.95E-14	2.51E-10	8.33E-09	1.24E-09	9.82E-09
30	7.89	0.	0.	2.02E-21	0.	0.	0.	1.96E-14	2.61E-10	8.61E-09	1.25E-09	1.01E-08
31	7.79	0.	0.	1.79E-21	0.	0.	0.	1.97E-14	2.71E-10	8.92E-09	1.26E-09	1.05E-08
32	7.69	0.	0.	1.71E-21	0.	1.58E-25	0.	1.98E-14	2.82E-10	9.26E-09	1.28E-09	1.08E-08
33	7.59	0.	0.	1.60E-21	0.	4.89E-25	0.	1.99E-14	2.94E-10	9.60E-09	1.29E-09	1.12E-08
34	7.49	0.	0.	1.45E-21	0.	4.32E-24	0.	2.01E-14	3.06E-10	9.94E-09	1.30E-09	1.16E-08
35	7.39	0.	0.	1.39E-21	0.	1.66E-23	0.	2.02E-14	3.19E-10	9.32E-09	1.32E-09	1.19E-08
36	7.29	0.	0.	1.26E-21	0.	4.61E-23	0.	2.03E-14	3.32E-10	9.81E-09	1.34E-09	1.15E-08
37	7.19	0.	0.	1.22E-21	0.	1.45E-22	0.	2.05E-14	3.46E-10	1.03E-08	1.37E-09	1.20E-08
38	7.09	9.88E-25	0.	1.13E-21	0.	2.80E-22	0.	2.06E-14	3.61E-10	1.08E-08	1.39E-09	1.25E-08
39	6.99	1.78E-24	0.	1.05E-21	0.	4.03E-22	0.	2.08E-14	3.77E-10	1.13E-08	1.41E-09	1.31E-08
40	6.89	1.55E-24	0.	1.02E-21	0.	6.08E-22	0.	2.09E-14	3.94E-10	1.18E-08	1.44E-09	1.36E-08
41	6.79	1.13E-24	0.	9.02E-22	0.	6.62E-22	0.	2.11E-14	4.12E-10	1.23E-08	1.46E-09	1.41E-08
42	6.69	6.94E-25	0.	8.17E-22	0.	5.63E-22	0.	2.13E-14	4.32E-10	1.28E-08	1.49E-09	1.47E-08
43	6.59	4.13E-25	0.	6.58E-22	0.	8.07E-22	0.	2.14E-14	4.52E-10	1.32E-08	1.51E-09	1.52E-08
44	6.49	2.33E-25	0.	4.63E-22	2.58E-24	7.47E-22	0.	2.16E-14	4.74E-10	1.37E-08	1.54E-09	1.58E-08
45	6.39	1.36E-25	0.	2.94E-22	1.23E-23	5.54E-22	0.	2.18E-14	4.97E-10	1.42E-08	1.57E-09	1.63E-08
46	6.29	6.19E-26	0.	1.65E-22	1.76E-23	7.47E-22	0.	2.19E-14	5.21E-10	1.48E-08	1.60E-09	1.69E-08
47	6.19	2.87E-26	0.	7.89E-23	5.85E-23	9.89E-22	0.	2.21E-14	5.47E-10	1.53E-08	1.63E-09	1.75E-08
48	6.09	1.21E-26	0.	2.02E-23	4.92E-23	4.58E-22	0.	2.23E-14	5.75E-10	4.79E-09	1.17E-09	6.53E-09
49	5.99	2.98E-27	0.	1.45E-24	7.26E-23	4.43E-22	0.	2.23E-14	4.83E-10	4.94E-09	1.18E-09	6.73E-09
50	5.89	3.81E-28	0.	3.67E-26	1.02E-22	4.63E-22	0.	2.19E-14	6.37E-10	5.10E-09	1.19E-09	6.93E-09
51	5.78	2.81E-29	0.	0.	1.21E-22	5.18E-22	0.	2.06E-14	6.72E-10	5.32E-09	1.21E-09	7.20E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON EnERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.6[illegible]	1.27E-3[illegible]	0.	0.	0.	1.05E-22	6.74E-22	0.	0.	1.92E-14	7.09E-10	5.61E-09	1.23E-09	7.54E-09
53	5.5[illegible]	0.	0.	[illegible]	0.	1.20E-22	6.24E-22	0.	0.	1.93E-14	7.49E-10	5.91E-09	1.25E-09	7.90E-09
54	5.4[illegible]	0.	0.	[illegible]	0.	1.19E-22	5.17E-22	0.	0.	1.94E-14	7.92E-10	6.23E-09	1.27E-09	8.30E-09
55	5.3[illegible]	0.	0.	0.	0.	1.22E-22	6.49E-22	0.	0.	1.95E-14	8.3[illegible]E-10	6.56E-09	1.30E-09	8.70E-09
56	5.2[illegible]	0.	0.	0.	0.	1.32E-22	5.01E-22	0.	0.	1.96E-14	8.8[illegible]E-10	6.89E-09	1.33E-09	9.11E-09
57	5.1[illegible]	0.	0.	0.	0.	1.32E-22	6.40E-22	0.	0.	1.98E-14	9.41E-10	7.22E-09	1.28E-09	9.44E-09
58	5.0[illegible]	1.77E-23	0.	0.	0.	1.22E-22	6.09E-22	0.	0.	1.99E-14	10.0[illegible]E-10	7.56E-09	1.31E-09	9.87E-09
59	4.9[illegible]	4.35E-23	0.	0.	0.	1.36E-22	6.70E-22	0.	0.	2.01E-14	1.06E-09	7.98E-09	1.34E-09	1.03E-08
60	4.8[illegible]	8.24E-23	0.	0.	0.	1.47E-22	6.31E-22	0.	0.	2.03E-14	1.13E-09	8.25E-09	1.38E-09	1.08E-08
61	4.7[illegible]	1.12E-22	0.	0.	0.	1.48E-22	5.76E-22	0.	0.	2.05E-14	1.21E-09	8.74E-09	1.42E-09	1.14E-08
62	4.6[illegible]	1.56E-22	0.	0.	0.	1.53E-22	5.22E-22	0.	0.	2.06E-14	1.29E-09	9.36E-09	1.46E-09	1.21E-08
63	4.5[illegible]	1.66E-22	0.	1.05E-22	0.	1.41E-22	3.94E-22	0.	0.	2.08E-14	1.37E-09	1.00E-08	1.51E-09	1.29E-08
64	4.4[illegible]	1.78E-22	0.	3.08E-22	0.	1.42E-22	2.69E-22	0.	0.	2.09E-14	1.47E-09	1.07E-08	1.56E-09	1.37E-08
65	4.3[illegible]	1.71E-22	0.	1.84E-21	0.	1.37E-22	1.71E-22	0.	0.	2.11E-14	1.58E-09	1.13E-08	1.58E-09	1.45E-08
66	4.2[illegible]	1.40E-22	0.	3.24E-21	0.	1.44E-22	1.18E-22	0.	0.	2.13E-14	1.69E-09	1.21E-08	9.09E-10	1.47E-08
67	4.1[illegible]	1.51E-22	0.	1.48E-21	0.	1.42E-22	3.32E-23	0.	0.	2.14E-14	1.82E-09	1.27E-08	9.57E-10	1.55E-08
68	4.0[illegible]	1.40E-22	0.	4.78E-21	0.	1.38E-22	2.49E-23	0.	0.	2.14E-14	1.96E-09	1.35E-08	1.01E-09	1.64E-08
69	3.9[illegible]	1.20E-22	0.	2.23E-21	1.27E-17	1.29E-22	9.30E-24	0.	0.	2.14E-14	2.12E-09	1.39E-08	1.05E-09	1.70E-08
70	3.8[illegible]	1.33E-22	0.	3.58E-21	5.08E-17	1.39E-22	0.	0.	0.	2.13E-14	2.29E-09	1.46E-08	1.11E-09	1.80E-08
71	3.7[illegible]	1.19E-22	0.	3.67E-21	2.33E-17	1.21E-22	0.	0.	0.	2.09E-14	2.48E-09	1.53E-08	1.20E-09	1.90E-08
72	3.6[illegible]	1.98E-22	0.	2.68E-21	1.20E-16	1.30E-22	0.	0.	0.	1.96E-14	2.70E-09	1.62E-08	1.30E-09	2.02E-08
73	3.5[illegible]	1.32E-22	0.	3.49E-21	2.18E-16	1.05E-22	0.	0.	0.	1.80E-14	2.94E-09	1.71E-08	1.40E-09	2.14E-08
74	3.40	9.46E-23	0.	2.28E-21	3.56E-17	1.18E-22	0.	0.	0.	1.04E-14	3.21E-09	6.30E-09	1.46E-09	1.10E-08
75	3.3[illegible]	7.61E-23	0.	2.33E-21	1.32E-16	9.51E-23	0.	0.	0.	1.04E-14	3.52E-09	4.84E-09	1.58E-09	1.19E-08
76	3.2[illegible]	6.70E-23	0.	1.55E-21	2.89E-16	1.00E-22	0.	0.	0.	1.04E-14	3.86E-09	7.71E-09	1.54E-09	1.31E-08
77	3.1[illegible]	6.48E-23	0.	1.21E-21	5.65E-17	9.68E-23	0.	0.	0.	1.04E-14	4.26E-09	8.69E-09	1.55E-09	1.45E-08
78	3.0[illegible]	5.87E-23	0.	7.51E-22	1.25E-16	9.15E-23	0.	0.	0.	1.04E-14	4.70E-09	9.66E-09	1.68E-09	1.60E-08
79	2.9[illegible]	4.99E-23	0.	4.74E-22	6.80E-17	7.10E-23	0.	0.	0.	1.05E-14	5.21E-09	1.07E-08	1.82E-09	1.77E-08
80	2.8[illegible]	5.24E-23	0.	2.29E-22	4.66E-17	5.03E-23	0.	0.	0.	1.05E-14	5.80E-09	1.17E-08	1.98E-09	1.95E-08
81	2.7[illegible]	3.43E-23	0.	1.08E-22	5.91E-17	2.80E-23	0.	0.	0.	1.05E-14	6.48E-09	1.27E-08	1.32E-09	2.15E-08
82	2.6[illegible]	1.65E-23	0.	5.10E-23	6.14E-18	1.24E-23	0.	0.	0.	1.05E-14	7.26E-09	1.38E-08	1.43E-09	2.25E-08
83	2.5[illegible]	1.17E-24	0.	5.42E-24	6.82E-18	3.03E-24	0.	0.	0.	1.05E-14	8.18E-09	1.40E-08	1.84E-09	2.38E-08
84	2.4[illegible]	0.	2.48E-22	0.	4.42E-18	3.26E-25	0.	0.	0.	1.05E-14	9.27E-09	1.62E-08	1.95E-09	2.74E-08
85	2.3[illegible]	0.	7.10E-22	0.	0.	0.	0.	0.	0.	1.04E-14	1.05E-08	1.84E-08	2.20E-09	3.13E-08
86	2.2[illegible]	0.	1.90E-21	0.	0.	0.	0.	0.	0.	1.03E-14	1.21E-08	2.07E-08	2.66E-09	3.55E-08
87	2.1[illegible]	0.	1.04E-21	0.	0.	0.	0.	0.	0.	1.03E-14	1.39E-08	2.31E-08	3.04E-09	4.01E-08
88	2.0[illegible]	0.	3.80E-21	0.	0.	0.	0.	0.	0.	9.98E-15	1.61E-08	2.55E-08	2.97E-09	4.46E-08
89	1.9[illegible]	0.	4.07E-21	0.	0.	0.	0.	0.	0.	9.68E-15	1.89E-08	1.63E-08	3.38E-09	3.85E-08
90	1.8[illegible]	0.	4.08E-21	0.	0.	0.	0.	0.	0.	9.18E-15	2.22E-08	1.88E-08	4.07E-09	4.51E-08
91	1.7[illegible]	0.	4.54E-21	0.	0.	0.	0.	0.	0.	8.65E-15	2.65E-08	2.17E-08	4.91E-09	5.31E-08
92	1.6[illegible]	0.	3.42E-21	0.	0.	0.	0.	0.	0.	7.32E-15	3.20E-08	2.46E-08	5.55E-09	6.21E-08
93	1.5[illegible]	0.	3.90E-21	0.	0.	0.	0.	0.	0.	3.33E-15	3.90E-08	2.87E-08	6.16E-09	7.38E-08
94	1.4[illegible]	0.	3.84E-21	0.	0.	0.	0.	0.	0.	0.	4.82E-08	2.88E-08	5.88E-09	8.29E-08
95	1.3[illegible]	0.	2.99E-21	0.	0.	0.	0.	0.	0.	0.	6.04E-08	3.70E-08	8.18E-09	1.06E-07
96	1.2[illegible]	0.	2.81E-21	0.	0.	0.	0.	0.	0.	0.	7.78E-08	3.28E-08	9.44E-09	1.19E-07
97	1.1[illegible]	0.	2.71E-21	0.	0.	0.	0.	6.37E-27	0.	0.	1.08E-07	4.85E-08	1.20E-08	1.53E-07
98	1.0[illegible]	0.	2.49E-21	0.	0.	0.	0.	1.01E-25	0.	0.	1.34E-07	4.94E-08	1.45E-08	1.98E-07
99	0.9[illegible]	0.	2.05E-21	0.	0.	0.	0.	1.18E-25	0.	0.	1.86E-07	5.53E-08	1.51E-08	2.56E-07
100	0.8[illegible]	0.	9.61E-22	0.	0.	0.	0.	2.59E-24	0.	0.	2.67E-07	6.36E-08	1.75E-08	3.48E-07
101	0.7[illegible]	0.	2.23E-22	0.	0.	0.	0.	2.43E-24	0.	0.	4.03E-07	6.02E-08	1.52E-08	4.78E-07
102	0.6[illegible]	0.	4.70E-23	0.	0.	0.	0.	7.72E-24	0.	0.	6.49E-07	6.70E-08	1.72E-08	7.35E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7[illegible]	0.	0.	1.97E-25	0.	0.	0.	2.44E-17	2.20E-12	3.23E-10	3.78E-11	3.63E-10
2	10.6[illegible]	0.	0.	1.81E-25	0.	0.	0.	2.44E-17	2.35E-12	3.25E-10	3.77E-11	3.65E-10
3	10.5[illegible]	0.	0.	1.84E-25	0.	0.	0.	2.44E-17	2.42E-12	3.27E-10	3.77E-11	3.67E-10
4	10.4[illegible]	0.	0.	1.76E-25	0.	0.	0.	2.45E-17	2.49E-12	3.30E-10	3.76E-11	3.70E-10
5	10.3[illegible]	0.	0.	1.55E-25	0.	0.	0.	2.45E-17	2.56E-12	3.33E-10	3.76E-11	3.73E-10
6	10.2[illegible]	0.	0.	1.61E-25	0.	0.	0.	2.45E-17	2.64E-12	3.36E-10	3.79E-11	3.78E-10
7	10.1[illegible]	0.	0.	1.52E-25	0.	0.	0.	2.46E-17	2.72E-12	3.43E-10	3.81E-11	3.83E-10
8	10.0[illegible]	0.	0.	1.35E-25	0.	0.	0.	2.46E-17	2.80E-12	3.48E-10	3.84E-11	3.89E-10
9	9.9[illegible]	0.	0.	1.39E-25	0.	0.	0.	2.46E-17	2.89E-12	3.52E-10	3.87E-11	3.94E-10
10	9.8[illegible]	0.	0.	1.32E-25	0.	0.	0.	2.47E-17	2.98E-12	3.57E-10	3.90E-11	3.99E-10
11	9.7[illegible]	0.	0.	1.15E-25	0.	0.	0.	2.47E-17	3.07E-12	3.62E-10	3.93E-11	4.05E-10
12	9.6 [illegible]	0.	0.	1.25E-25	0.	0.	0.	2.48E-17	3.17E-12	3.67E-10	3.95E-11	4.10E-10
13	9.5[illegible]	0.	0.	1.08E-25	0.	0.	0.	2.48E-17	3.27E-12	3.72E-10	3.98E-11	4.15E-10
14	9.4[illegible]	0.	0.	1.03E-25	0.	0.	0.	2.49E-17	3.37E-12	3.71E-10	4.02E-11	4.15E-10
15	9.3[illegible]	0.	0.	1.06E-25	0.	0	0.	2.50E-17	3.48E-12	3.76E-10	4.05E-11	4.20E-10
16	9.2[illegible]	0.	0.	8.98E-26	0.	0.	0.	2.51E-17	3.60E-12	3.81E-10	4.07E-11	4.25E-10
17	9.1[illegible]	0.	0.	9.16E-26	0.	0.	0.	2.52E-17	3.72E-12	3.86E-10	4.11E-11	4.30E-10
18	9.0[illegible]	0.	0.	8.41E-26	0.	0.	0.	2.53E-17	3.84E-12	3.90E-10	2.01E-11	4.22E-10
19	8.9[illegible]	0.	0.	7.86E-26	0.	0.	0.	2.54E-17	3.98E-12	3.95E-10	2.67E-11	4.26E-10
20	8.8[illegible]	0.	0.	7.76E-26	0.	0.	0.	2.54E-17	4.11E-12	4.00E-10	2.72E-11	4.31E-10
21	8.7[illegible]	0.	0.	6.82E-26	0.	0.	0.	2.55E-17	4.26E-12	4.05E-10	2.77E-11	4.37E-10
22	8.6[illegible]	0.	0.	7.05E-26	0.	0.	0.	2.56E-17	4.41E-12	4.10E-10	2.81E-11	4.42E-10
23	8.5[illegible]	0.	0.	6.26E-26	0.	0.	0.	2.57E-17	4.57E-12	4.15E-10	2.86E-11	4.48E-10
24	8.4[illegible]	0.	0.	6.25E-26	0.	0.	0.	2.58E-17	4.73E-12	2.21E-10	2.90E-11	2.54E-10
25	8.3[illegible]	0.	0.	5.37E-26	0.	0.	0.	2.60E-17	4.91E-12	2.28E-10	2.95E-11	2.62E-10
26	8.2[illegible]	0.	0.	5.46E-26	0.	0.	0.	2.61E-17	5.09E-12	2.38E-10	3.04E-11	2.73E-10
27	8.1[illegible]	0.	0.	4.77E-26	0.	0.	0.	2.63E-17	5.28E-12	2.47E-10	3.14E-11	2.84E-10
28	8.0[illegible]	0.	0.	4.82E-26	0.	0.	0.	2.64E-17	5.48E-12	2.57E-10	3.23E-11	2.94E-10
29	7.9[illegible]	0.	0.	4.20E-26	0.	0.	0.	2.65E-17	5.70E-12	2.66E-10	3.32E-11	3.05E-10
30	7.8[illegible]	0.	0.	4.38E-26	0.	0.	0.	2.67E-17	5.92E-12	2.76E-10	3.41E-11	3.16E-10
31	7.7[illegible]	0.	0.	3.80E-26	0.	0.	0.	2.68E-17	6.15E-12	2.86E-10	3.50E-11	3.28E-10
32	7.6[illegible]	0.	0.	3.72E-26	0.	7.13E-30	0.	2.69E-17	6.40E-12	2.98E-10	3.59E-11	3.40E-10
33	7.5[illegible]	0.	0.	3.48E-26	0.	2.32E-29	0.	2.71E-17	6.66E-12	3.10E-10	3.69E-11	3.5[illegible]E-10
34	7.4[illegible]	0.	0.	3.15E-26	0.	2.05E-28	0.	2.72E-17	6.94E-12	2.86E-10	3.79E-11	3.31E-10
35	7.3[illegible]	0.	0.	3.01E-26	0.	7.88E-28	0.	2.74E-17	7.23E-12	2.99E-10	3.91E-11	3.46E-10
36	7.2[illegible]	0.	0.	2.74E-26	0.	2.19E-27	0.	2.75E-17	7.53E-12	3.10E-10	4.08E-11	3.65E-10
37	7.1[illegible]	0.	0.	2.66E-26	0.	6.87E-27	0.	2.77E-17	7.84E-12	3.33E-10	4.25E-11	3.84E-10
38	7.0[illegible]	9.41E-29	0.	2.46E-26	0.	1.33E-26	0.	2.80E-17	8.20E-12	3.50E-10	4.43E-11	4.03E-10
39	6.9[illegible]	1.85E-28	0.	2.28E-26	0.	1.91E-26	0.	2.82E-17	8.56E-12	3.67E-10	4.60E-11	4.22E-10
40	6.8[illegible]	1.68E-28	0.	2.21E-26	0.	3.23E-26	0.	2.84E-17	8.95E-12	3.84E-10	4.7[illegible]E-11	4.41E-10
41	6.7[illegible]	1.17E-28	0.	1.96E-26	0.	3.14E-26	0.	2.86E-17	9.36E-12	4.01E-10	4.95E-11	4.60E-10
42	6.6[illegible]	7.20E-29	0.	1.77E-26	0.	2.67E-26	0.	2.89E-17	9.79E-12	4.18E-10	5.12E-11	4.79E-10
43	6.5[illegible]	4.18E-29	0.	1.43E-26	0.	3.83E-26	0.	2.91E-17	1.02E-11	4.35E-10	5.30E-11	4.98E-10
44	6.4[illegible]	2.41E-29	0.	1.80E-26	1.22E-28	3.54E-26	0.	2.93E-17	1.07E-11	4.52E-10	5.48E-11	5.19E-10
45	6.3[illegible]	1.41E-29	0.	6.38E-27	5.81E-28	2.63E-26	0.	2.95E-17	1.11E-11	4.69E-10	5.66E-11	5.37E-10
46	6.2[illegible]	6.42E-30	0.	3.59E-27	8.34E-28	3.54E-26	0.	2.98E-17	1.16E-11	4.87E-10	5.87E-11	5.58E-10
47	6.1[illegible]	2.98E-30	0.	1.71E-27	2.40E-27	4.31E-26	0.	3.00E-17	1.24E-11	1.33E-10	2.39E-11	1.69E-10
48	6.0[illegible]	1.25E-30	0.	4.39E-28	2.34E-27	2.17E-26	0.	3.02E-17	1.30E-11	1.38E-10	2.42E-11	1.75E-10
49	5.9[illegible]	3.09E-31	0.	3.15E-29	3.45E-27	2.19E-26	0.	3.02E-17	1.37E-11	1.43E-10	2.49E-11	1.82E-10
50	5.8[illegible]	3.95E-32	0.	7.97E-31	4.85E-27	2.19E-26	0.	2.98E-17	1.44E-11	1.48E-10	2.56E-11	1.88E-10
51	5.7[illegible]	2.91E-33	0.	0.	5.74E-27	2.46E-26	0.	2.80E-17	1.52E-11	1.55E-10	2.63E-11	1.97E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. DENSITY (GM/CC) 1.203E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.64	1.32E-34	0.	0.	0.	4.97E-27	3.20E-26	0.	0.	2.60E-17	1.61E-11	1.65E-10	2.78E-11	2.08E-10
53	5.58	0.	0.	0.	0.	6.08E-27	2.96E-26	0.	0.	2.61E-17	1.78E-11	1.75E-10	2.78E-11	2.19E-10
54	5.48	0.	0.	0.	0.	5.65E-27	2.49E-26	0.	0.	2.63E-17	1.79E-11	1.85E-10	2.89E-11	2.32E-10
55	5.38	0.	0.	0.	0.	5.79E-27	3.06E-26	0.	0.	2.64E-17	1.90E-11	1.96E-10	3.02E-11	2.45E-10
56	5.28	0.	0.	0.	0.	6.27E-27	2.38E-26	0.	0.	2.66E-17	2.01E-11	2.06E-10	2.52E-11	2.52E-10
57	5.18	0.	0.	0.	0.	6.20E-27	3.84E-26	0.	0.	2.68E-17	2.13E-11	2.17E-10	2.62E-11	2.64E-10
58	5.08	1.84E-27	0.	0.	0.	5.77E-27	2.89E-26	0.	0.	2.71E-17	2.26E-11	2.27E-10	2.73E-11	2.77E-10
59	4.98	4.51E-27	0.	0.	0.	6.46E-27	3.10E-26	0.	0.	2.73E-17	2.41E-11	2.38E-10	2.84E-11	2.91E-10
60	4.88	8.54E-27	0.	0.	0.	6.96E-27	3.08E-26	0.	0.	2.75E-17	2.56E-11	2.49E-10	2.95E-11	3.04E-10
61	4.78	1.16E-26	0.	0.	0.	7.82E-27	2.73E-26	0.	0.	2.77E-17	2.73E-11	2.64E-10	3.08E-11	3.23E-10
62	4.68	1.62E-26	0.	0.	0.	7.29E-27	2.48E-26	0.	0.	2.80E-17	2.91E-11	2.85E-10	3.21E-11	3.46E-10
63	4.58	1.72E-26	0.	2.20E-27	0.	6.69E-27	1.87E-26	0.	0.	2.82E-17	3.11E-11	3.05E-10	3.36E-11	3.70E-10
64	4.48	1.85E-26	0.	6.48E-27	0.	6.75E-27	1.38E-26	0.	0.	2.84E-17	3.33E-11	3.25E-10	3.49E-11	3.94E-10
65	4.38	1.70E-26	0.	2.26E-26	0.	6.49E-27	8.10E-27	0.	0.	2.86E-17	3.57E-11	3.46E-10	3.35E-11	4.15E-10
66	4.28	1.66E-26	0.	7.84E-26	0.	6.85E-27	5.60E-27	0.	0.	2.89E-17	3.84E-11	3.69E-10	3.05E-11	4.38E-10
67	4.18	1.57E-26	0.	3.21E-26	0.	6.75E-27	1.50E-27	0.	0.	2.90E-17	4.12E-11	3.94E-10	3.28E-11	4.68E-10
68	4.08	1.49E-26	0.	1.02E-25	0.	6.56E-27	1.10E-27	0.	0.	2.91E-17	4.44E-11	4.16E-10	3.51E-11	4.96E-10
69	3.98	1.25E-26	0.	4.83E-26	2.86E-21	4.13E-27	4.41E-28	0.	0.	2.90E-17	4.80E-11	4.41E-10	3.75E-11	5.27E-10
70	3.88	1.37E-26	0.	7.78E-26	8.27E-21	4.61E-27	0.	0.	0.	2.89E-17	5.19E-11	4.66E-10	3.99E-11	5.57E-10
71	3.78	1.24E-26	0.	7.96E-26	3.79E-21	5.73E-27	0.	0.	0.	2.84E-17	5.62E-11	4.98E-10	4.26E-11	5.89E-10
72	3.68	1.12E-26	0.	5.81E-26	1.96E-26	6.19E-27	0.	0.	0.	2.66E-17	6.11E-11	5.15E-10	4.07E-11	6.17E-10
73	3.58	1.86E-26	0.	7.58E-26	3.54E-20	4.98E-27	0.	0.	0.	2.44E-17	6.65E-11	1.47E-10	4.35E-11	2.57E-10
74	3.48	9.81E-27	0.	4.95E-26	5.80E-21	5.58E-27	0.	0.	0.	1.41E-17	7.27E-11	1.60E-10	4.68E-11	2.79E-10
75	3.38	7.89E-27	0.	5.86E-26	2.15E-20	4.51E-27	0.	0.	0.	1.41E-17	7.96E-11	1.72E-10	3.68E-11	2.89E-10
76	3.28	6.95E-27	0.	3.37E-26	3.41E-20	4.76E-27	0.	0.	0.	1.41E-17	8.74E-11	1.97E-10	3.13E-11	3.15E-10
77	3.18	6.72E-27	0.	2.63E-26	9.28E-21	4.59E-27	0.	0.	0.	1.41E-17	9.62E-11	2.24E-10	3.50E-11	3.56E-10
78	3.08	6.09E-27	0.	1.43E-26	2.84E-20	4.34E-27	0.	0.	0.	1.42E-17	1.06E-10	2.52E-10	3.86E-11	3.97E-10
79	2.98	5.10E-27	0.	1.03E-26	1.11E-20	3.37E-27	0.	0.	0.	1.42E-17	1.18E-10	2.83E-10	4.24E-11	4.40E-10
80	2.88	5.43E-27	0.	4.96E-27	7.60E-21	2.39E-27	0.	0.	0.	1.42E-17	1.31E-10	3.08E-10	4.39E-11	4.83E-10
81	2.78	3.56E-27	0.	2.34E-27	9.62E-21	1.33E-27	0.	0.	0.	1.42E-17	1.46E-10	3.36E-10	4.20E-11	5.24E-10
82	2.68	1.71E-27	0.	1.12E-27	1.80E-21	5.97E-28	0.	0.	0.	1.42E-17	1.64E-10	3.58E-10	4.55E-11	5.68E-10
83	2.58	1.21E-28	0	1.18E-28	9.80E-22	1.44E-28	0.	0.	0.	1.42E-17	1.85E-10	3.95E-10	5.08E-11	6.31E-10
84	2.48	0.	5.22E-27	0.	7.53E-22	1.95E-29	0.	0.	0.	1.42E-17	2.09E-10	4.58E-10	5.85E-11	7.17E-10
85	2.38	0.	1.54E-26	0.	0.	0.	0.	0.	0.	1.41E-17	2.38E-10	5.05E-10	6.64E-11	8.09E-10
86	2.28	0.	4.12E-26	0.	0.	0.	0.	0.	0.	1.40E-17	2.73E-10	5.68E-10	7.48E-11	9.07E-10
87	2.18	0.	4.21E-26	0.	0.	0.	0.	0.	0.	1.40E-17	3.14E-10	2.49E-10	4.50E-11	8.69E-10
88	2.08	0.	8.42E-26	0.	0.	0.	0.	0.	0.	1.35E-17	3.64E-10	2.83E-10	5.21E-11	6.99E-10
89	1.98	0.	1.81E-25	0.	0.	0.	0.	0.	0.	1.38E-17	4.25E-10	3.18E-10	5.96E-11	8.03E-10
90	1.88	0.	8.68E-26	0.	0.	0.	0.	0.	0.	1.24E-17	5.01E-10	3.56E-10	6.93E-11	9.26E-10
91	1.78	0.	9.85E-26	0.	0.	0.	0.	0.	0.	1.17E-17	5.97E-10	3.95E-10	7.85E-11	1.07E-09
92	1.68	0.	7.43E-26	0.	0.	0.	0.	0.	0.	9.93E-18	7.20E-10	4.31E-10	8.96E-11	1.24E-09
93	1.58	0.	8.47E-26	0.	0.	0.	0.	0.	0.	4.51E-18	8.77E-10	4.58E-10	9.85E-11	1.43E-09
94	1.48	0.	8.34E-26	0.	0.	0.	0.	0.	0.	0.	1.08E-09	5.87E-10	9.84E-11	1.69E-09
95	1.38	0.	6.29E-26	0.	0.	0.	0.	0.	0.	0.	1.34E-09	1.11E-10	7.69E-11	1.55E-09
96	1.28	0.	6.10E-26	0.	0.	0.	0.	0.	0.	0.	1.73E-09	1.53E-10	9.61E-11	1.98E-09
97	1.18	0.	5.09E-26	0.	0.	0.	0.	3.02E-31	0.	0.	2.24E-09	1.88E-10	1.22E-10	2.57E-09
98	1.08	0.	5.41E-26	0.	0.	0.	0.	4.81E-30	0.	0.	3.02E-09	2.30E-10	1.47E-10	3.40E-09
99	0.98	0.	4.44E-26	0.	0.	0.	0.	5.40E-30	0.	0.	4.17E-09	2.57E-10	1.54E-10	4.59E-09
100	0.88	0.	2.89E-26	0.	0.	0.	0.	1.23E-28	0.	0.	5.09E-09	2.45E-10	1.35E-10	4.37E-09
101	0.78	0.	4.85E-27	0.	0.	0.	0.	1.19E-28	0.	0.	9.02E-09	2.01E-10	1.55E-10	9.45E-09
102	0.68	0.	1.82E-27	0.	0.	0.	0.	3.66E-28	0.	0.	1.45E-08	3.14E-10	1.75E-10	1.50E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7(000. DENSITY (GM/CC) 1.293E-02 (1.00 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 V-K 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (BMS)	N P.E.	O P.E.	TOTAL AIR
1	10.7n	0.	?	4.14E-01	0.	0.	0.	5.10E 00	4.90E-01	3.02E 02	5.20E 00	3.13E 02
2	10.6n	0.	3.	3.81E-01	0.	0.	0.	5.11E 00	5.84E-01	1.97E 01	5.20E 00	3.09E 01
3	10.5n	0.	0.	3.80E-01	0.	0.	0.	5.11E 00	5.19E-01	1.97E 01	5.24E 00	3.10E 01
4	10.4n	0.	0.	3.72E-01	0.	0.	0.	5.12E 00	5.34E-01	1.98E 01	5.22E 00	3.11E 01
5	10.3n	0.	0.	3.20E-01	0.	0.	0.	5.13E 00	5.50E-01	1.99E 01	5.19E 00	3.11E 01
6	10.2n	0.	0.	3.42E-01	0.	0.	0.	5.13E 00	5.67E-01	1.99E 01	5.17E 00	3.11E 01
7	10.1n	0.	0.	3.24E-01	0.	0.	0.	5.14E 00	5.84E-01	1.99E 01	5.15E 00	3.11E 01
8	10.0n	0.	0.	2.89E-01	0.	0.	0.	5.15E 00	6.02E-01	1.99E 01	5.12E 00	3.11E 01
9	9.9n	0.	0.	2.58E-01	0.	0.	0.	5.16E 00	6.20E-01	1.99E 01	5.10E 00	3.11E 01
10	9.8n	0.	0.	2.83E-01	0.	0.	0.	5.17E 00	6.40E-01	2.00E 01	5.08E 00	3.11E 01
11	9.7n	0.	0.	2.48E-01	0.	0.	0.	5.18E 00	6.60E-01	2.00E 01	5.05E 00	3.12E 01
12	9.6n	0.	0.	2.69E-01	0.	0.	0.	5.19E 00	6.81E-01	2.01E 01	5.03E 00	3.12E 01
13	9.5n	0.	0.	2.33E-01	0.	0.	0.	5.19E 00	7.03E-01	2.01E 01	5.01E 00	3.13E 01
14	9.4n	0.	0.	2.24E-01	0.	0.	0.	5.21E 00	7.24E-01	2.02E 01	4.98E 00	3.13E 01
15	9.3n	0.	0.	2.30E-01	0.	0.	0.	5.23E 00	7.50E-01	2.03E 01	4.96E 00	3.14E 01
16	9.2n	0.	0.	1.95E-01	0.	0.	0.	5.25E 00	7.75E-01	2.03E 01	4.94E 00	3.15E 01
17	9.1n	0.	0.	2.00E-01	0.	0.	0.	5.27E 00	8.01E-01	8.07E 00	4.92E 00	1.93E 01
18	9.0n	0.	0.	1.85E-01	0.	0.	0.	5.29E 00	8.28E-01	8.08E 00	4.90E 00	1.93E 01
19	8.9n	0.	0.	1.73E-01	0.	0.	0.	5.31E 00	8.57E-01	8.09E 00	4.87E 00	1.93E 01
20	8.8n	0.	0.	1.71E-01	0.	0.	0.	5.33E 00	8.86E-01	8.11E 00	4.85E 00	1.93E 01
21	8.7n	0.	0.	1.51E-01	0.	0.	0.	5.35E 00	9.18E-01	8.12E 00	4.83E 00	1.94E 01
22	8.6n	0.	0.	1.56E-01	0.	0.	0.	5.36E 00	9.50E-01	8.14E 00	4.81E 00	1.94E 01
23	8.5n	0.	0.	1.39E-01	0.	0.	0.	5.38E 00	9.85E-01	8.17E 00	4.79E 00	1.95E 01
24	8.4n	0.	0.	1.39E-01	0.	0.	0.	5.41E 00	1.02E 00	8.20E 00	4.77E 00	1.96E 01
25	8.3n	0.	0.	1.20E-01	0.	0.	0.	5.44E 00	1.06E 00	8.24E 00	4.76E 00	1.96E 01
26	8.2n	0.	0.	1.22E-01	0.	0.	0.	5.47E 00	1.10E 00	8.28E 00	4.77E 00	1.97E 01
27	8.1n	0.	0.	1.07E-01	0.	0.	0.	5.50E 00	1.14E 00	8.31E 00	4.77E 00	1.98E 01
28	8.0n	0.	0.	1.09E-01	0.	0.	0.	5.53E 00	1.19E 00	8.37E 00	4.78E 00	2.00E 01
29	7.9n	0.	0.	9.50E-02	0.	0.	0.	5.55E 00	1.23E 00	8.43E 00	4.78E 00	2.01E 01
30	7.8n	0.	0.	9.94E-02	0.	0.	0.	5.58E 00	1.28E 00	8.49E 00	4.78E 00	2.02E 01
31	7.7n	0.	0.	8.85E-02	0.	0.	0.	5.61E 00	1.33E 00	8.56E 00	4.79E 00	2.04E 01
32	7.6n	0.	0.	8.49E-02	0.	3.64E-06	0.	5.64E 00	1.38E 00	8.62E 00	4.79E 00	2.05E 01
33	7.5n	0.	0.	7.97E-02	0.	1.14E-05	0.	5.67E 00	1.44E 00	8.69E 00	4.79E 00	2.07E 01
34	7.4n	0.	0.	7.24E-02	0.	1.05E-04	0.	5.70E 00	1.50E 00	8.75E 00	4.80E 00	2.08E 01
35	7.3n	0.	0.	6.94E-02	0.	3.99E-04	0.	5.73E 00	1.56E 00	8.81E 00	4.80E 00	2.10E 01
36	7.2n	0.	0.	6.34E-02	0.	1.12E-03	0.	5.76E 00	1.63E 00	8.88E 00	4.81E 00	2.11E 01
37	7.1n	0.	0.	6.16E-02	0.	3.51E-03	0.	5.81E 00	1.70E 00	8.94E 00	4.81E 00	2.13E 01
38	7.0n	1.12E-05	0.	5.72E-02	0.	6.68E-03	0.	5.86E 00	1.77E 00	9.01E 00	4.81E 00	2.15E 01
39	6.9n	2.20E-05	0.	5.31E-02	0.	9.81E-03	0.	5.90E 00	1.85E 00	9.07E 00	4.82E 00	2.17E 01
40	6.8n	1.91E-05	0.	5.18E-02	0.	1.63E-02	0.	5.95E 00	1.93E 00	9.14E 00	4.82E 00	2.19E 01
41	6.7n	1.48E-05	0.	4.60E-02	0.	1.58E-02	0.	6.00E 00	2.02E 00	9.20E 00	4.83E 00	2.21E 01
42	6.6n	8.62E-06	0.	4.18E-02	0.	1.36E-02	0.	6.04E 00	2.12E 00	9.29E 00	4.85E 00	2.24E 01
43	6.5n	5.02E-06	0.	3.38E-02	0.	1.93E-02	0.	6.09E 00	2.22E 00	9.40E 00	4.86E 00	2.26E 01
44	6.4n	2.91E-06	0.	2.39E-02	5.96E-05	1.77E-02	0.	6.14E 00	2.32E 00	9.51E 00	4.87E 00	2.29E 01
45	6.3n	1.71E-06	0.	1.53E-02	2.85E-04	1.33E-02	0.	6.19E 00	2.44E 00	9.61E 00	4.89E 00	2.32E 01
46	6.2n	7.77E-07	0.	8.64E-03	4.10E-04	1.79E-02	0.	6.23E 00	2.56E 00	9.72E 00	4.93E 00	2.35E 01
47	6.1n	3.41E-07	0.	4.14E-03	1.18E-03	2.16E-02	0.	6.28E 00	2.69E 00	9.84E 00	4.97E 00	2.38E 01
48	6.0n	1.52E-07	0.	1.07E-03	1.16E-03	1.10E-02	0.	6.33E 00	2.83E 00	9.97E 00	5.00E 00	2.41E 01
49	5.9n	5.77E-08	0.	7.65E-05	1.71E-03	1.04E-02	0.	6.33E 00	2.97E 00	1.01E 01	5.04E 00	2.45E 01
50	5.8n	4.82E-09	0.	1.94E-06	2.41E-03	1.11E-02	0.	6.23E 00	3.13E 00	1.03E 01	5.09E 00	2.47E 01
51	5.7n	3.55E-10	0.	0.	2.87E-03	1.24E-02	0.	5.86E 00	3.30E 00	1.04E 01	5.11E 00	2.47E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.61E-11	0.	0.	0.	2.50E-03	1.61E-02	0.	0.	5.45E 00	3.49E 00	1.06E 01	5.15E 00	2.47E 01
53	5.50	0.	0.	0.	0.	3.06E-03	1.49E-02	0.	0.	5.47E 00	3.68E 00	1.08E 01	5.20E 00	2.52E 01
54	5.40	0.	0.	0.	0.	2.86E-03	1.24E-02	0.	0.	5.50E 00	3.89E 00	1.11E 01	5.27E 00	2.58E 01
55	5.30	0.	0.	0.	0.	2.93E-03	1.54E-02	0.	0.	5.54E 00	4.12E 00	1.14E 01	5.34E 00	2.65E 01
56	5.20	0.	0.	0.	0.	3.10E-03	1.21E-02	0.	0.	5.57E 00	4.37E 00	1.17E 01	5.42E 00	2.71E 01
57	5.10	0.	0.	0.	0.	3.19E-03	1.55E-02	0.	0.	5.62E 00	4.63E 00	1.21E 01	5.51E 00	2.79E 01
58	5.00	2.20E-04	0.	0.	0.	2.98E-03	1.40E-02	0.	0.	5.67E 00	4.92E 00	1.25E 01	5.60E 00	2.87E 01
59	4.90	5.58E-04	0.	0.	0.	3.29E-03	1.63E-02	0.	0.	5.71E 00	5.23E 00	1.29E 01	5.70E 00	2.96E 01
60	4.80	1.06E-03	0.	0.	0.	3.55E-03	1.54E-02	0.	0.	5.76E 00	5.57E 00	1.34E 01	5.82E 00	3.06E 01
61	4.70	1.45E-03	0.	0.	0.	3.59E-03	1.41E-02	0.	0.	5.81E 00	5.93E 00	1.39E 01	5.90E 00	3.17E 01
62	4.60	2.03E-03	0.	0.	0.	3.71E-03	1.28E-02	0.	0.	5.86E 00	6.33E 00	1.45E 01	6.14E 00	3.29E 01
63	4.50	2.15E-03	0.	5.54E-03	0.	3.44E-03	9.64E-03	0.	0.	5.98E 00	6.77E 00	1.53E 01	6.31E 00	3.43E 01
64	4.40	2.33E-03	0.	1.61E-02	0.	3.47E-03	6.57E-03	0.	0.	5.95E 00	7.25E 00	1.61E 01	6.48E 00	3.58E 01
65	4.30	2.23E-03	0.	5.53E-02	0.	3.35E-03	4.18E-03	0.	0.	6.88E 00	7.77E 00	1.69E 01	6.66E 00	3.74E 01
66	4.20	2.18E-03	0.	1.78E-01	0.	3.54E-03	2.87E-03	0.	0.	6.84E 00	8.34E 00	1.78E 01	6.85E 00	3.92E 01
67	4.10	1.90E-03	0.	7.98E-02	0.	3.50E-03	8.11E-04	0.	0.	6.87E 00	8.97E 00	1.87E 01	6.82E 00	4.06E 01
68	4.00	1.05E-03	0.	2.47E-01	0.	3.41E-03	6.67E-04	0.	0.	6.89E 00	9.67E 00	1.95E 01	3.35E 00	3.09E 01
69	3.90	1.59E-03	0.	1.18E-01	1.13E-02	3.19E-03	2.29E-04	0.	0.	6.87E 00	1.04E 01	1.94E 01	3.44E 00	3.95E 01
70	3.80	1.75E-03	0.	1.90E-01	4.41E-02	3.45E-03	0.	0.	0.	6.84E 00	1.13E 01	1.96E 01	3.61E 00	4.08E 01
71	3.70	1.58E-03	0.	1.93E-01	2.09E-02	3.88E-03	0.	0.	0.	5.95E 00	1.23E 01	1.64E 01	3.94E 00	3.88E 01
72	3.60	1.44E-03	0.	1.42E-01	1.06E-01	3.25E-03	0.	0.	0.	5.97E 00	1.33E 01	1.77E 01	4.30E 00	4.12E 01
73	3.50	1.36E-03	0.	1.05E-01	1.08E-01	2.61E-03	0.	0.	0.	5.10E 00	1.45E 01	1.89E 01	4.71E 00	4.36E 01
74	3.40	1.27E-03	0.	1.22E-01	3.19E-02	2.95E-03	0.	0.	0.	2.64E 00	1.59E 01	2.89E 01	5.10E 00	4.51E 01
75	3.30	1.02E-03	0.	1.25E-01	1.16E-01	2.39E-03	0.	0.	0.	2.95E 00	1.74E 01	2.31E 01	5.66E 00	4.93E 01
76	3.20	9.03E-04	0.	8.34E-02	1.08E-01	2.53E-03	0.	0.	0.	2.95E 00	1.91E 01	2.52E 01	6.16E 00	5.37E 01
77	3.10	8.76E-04	0.	6.54E-02	5.06E-02	2.42E-03	0.	0.	0.	2.96E 00	2.10E 01	2.74E 01	6.66E 00	5.82E 01
78	3.00	7.95E-04	0.	4.86E-02	1.10E-01	2.32E-03	0.	0.	0.	2.97E 00	2.32E 01	2.97E 01	7.16E 00	6.32E 01
79	2.95	6.79E-04	0.	2.57E-02	5.94E-02	1.81E-03	0.	0.	0.	2.97E 00	2.58E 01	3.21E 01	7.73E 00	6.86E 01
80	2.80	7.14E-04	0.	1.24E-02	4.17E-02	1.29E-03	0.	0.	0.	2.97E 00	2.87E 01	3.49E 01	8.38E 00	7.50E 01
81	2.70	4.70E-04	0.	5.85E-03	5.17E-02	7.29E-04	0.	0.	0.	2.97E 00	3.20E 01	3.79E 01	9.08E 00	8.21E 01
82	2.60	2.20E-04	0.	2.00E-03	5.46E-03	3.27E-04	0.	0.	0.	2.97E 00	3.60E 01	4.12E 01	9.86E 00	8.99E 01
83	2.50	1.61E-05	0.	2.91E-04	5.35E-03	7.91E-05	0.	0.	0.	2.97E 00	4.05E 01	4.78E 01	6.33E 00	9.69E 01
84	2.40	0.	1.27E-02	0.	4.04E-03	3.54E-06	0.	0.	0.	2.97E 00	4.59E 01	5.48E 01	7.36E 00	1.11E 02
85	2.30	0.	3.70E-02	0.	0.	0.	0.	0.	0.	2.95E 00	5.23E 01	4.09E 01	8.77E 00	1.13E 02
86	2.20	0.	9.97E-02	0.	0.	0.	0.	0.	0.	2.94E 00	5.99E 01	5.78E 01	1.05E 01	1.31E 02
87	2.10	0.	1.01E-01	0.	0.	0.	0.	0.	0.	2.93E 00	6.90E 01	6.73E 01	1.21E 01	1.52E 02
88	2.00	0.	2.03E-01	0.	0.	0.	0.	0.	0.	2.83E 00	8.01E 01	7.69E 01	1.38E 01	1.74E 02
89	1.90	0.	2.39E-01	0.	0.	0.	0.	0.	0.	2.73E 00	9.36E 01	8.83E 01	1.62E 01	2.01E 02
90	1.80	0.	2.04E-01	0.	0.	0.	0.	0.	0.	2.61E 00	1.11E 02	1.06E 02	1.97E 01	2.39E 02
91	1.70	0.	2.32E-01	0.	0.	0.	0.	0.	0.	2.44E 00	1.32E 02	1.27E 02	2.40E 01	2.84E 02
92	1.60	0.	1.76E-01	0.	0.	0.	0.	0.	0.	2.08E 00	1.59E 02	1.49E 02	2.93E 01	3.39E 02
93	1.50	0.	2.00E-01	0.	0.	0.	0.	0.	0.	9.45E-01	1.94E 02	1.94E 02	3.43E 01	4.24E 02
94	1.40	0.	1.07E-01	0.	0.	0.	0.	0.	0.	0.	2.40E 02	2.43E 02	4.10E 01	5.24E 02
95	1.30	0.	1.51E-01	0.	0.	0.	0.	0.	0.	0.	3.01E 02	3.26E 02	5.41E 01	6.82E 02
96	1.20	0.	1.44E-01	0.	0.	0.	0.	0.	0.	0.	3.84E 02	3.65E 02	5.46E 01	8.04E 02
97	1.10	0.	1.48E-01	0.	0.	0.	0.	1.52E-07	0.	0.	5.02E 02	4.50E 02	6.83E 01	1.02E 03
98	1.00	0.	1.29E-01	0.	0.	0.	0.	2.40E-06	0.	0.	6.74E 02	5.47E 02	7.88E 01	1.30E 03
99	0.90	0.	1.05E-01	0.	0.	0.	0.	2.90E-06	0.	0.	9.33E 02	6.30E 02	9.15E 01	1.65E 03
100	0.80	0.	4.94E-02	0.	0.	0.	0.	6.40E-05	0.	0.	1.34E 03	7.25E 02	1.05E 02	2.17E 03
101	0.70	0.	1.14E-02	0.	0.	0.	0.	6.10E-05	0.	0.	2.03E 03	7.03E 02	1.04E 02	2.92E 03
102	0.60	0.	2.53E-03	0.	0.	0.	0.	1.91E-04	0.	0.	3.20E 03	8.76E 02	1.19E 02	4.20E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-03 (1.00 OO NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	2.59E-03	0.	0.	0.	1.22E-01	3.87E-02	2.39E 01	4.59E-01	2.45E 01
2	10.6e	0.	0.	2.38E-03	0.	0.	0.	1.23E-01	3.99E-02	1.56E 00	4.40E-01	2.17E 00
3	10.5e	0.	0.	2.43E-03	0.	0.	0.	1.23E-01	4.10E-02	1.56E 00	4.44E-01	2.18E 00
4	10.4e	0.	0.	2.33E-03	0.	0.	0.	1.24E-01	4.22E-02	1.57E 00	4.44E-01	2.18E 00
5	10.3e	0.	0.	2.05E-03	0.	0.	0.	1.23E-01	4.34E-02	1.57E 00	4.42E-01	2.18E 00
6	10.2e	0.	0.	2.14E-03	0.	0.	0.	1.23E-01	4.47E-02	1.58E 00	4.40E-01	2.19E 00
7	10.1e	0.	0.	2.03E-03	0.	0.	0.	1.23E-01	4.61E-02	1.57E 00	4.38E-01	2.18E 00
8	10.0e	0.	0.	1.81E-03	0.	0.	0.	1.24E-01	4.75E-02	1.57E 00	4.37E-01	2.18E 00
9	9.9e	0.	0.	1.86E-03	0.	0.	0.	1.24E-01	4.89E-02	1.58E 00	4.35E-01	2.19E 00
10	9.8e	0.	0.	1.77E-03	0.	0.	0.	1.24E-01	5.05E-02	1.58E 00	4.33E-01	2.19E 00
11	9.7e	0.	0.	1.55E-03	0.	0.	0.	1.24E-01	5.21E-02	1.58E 00	4.31E-01	2.19E 00
12	9.6e	0.	0.	1.60E-03	0.	0.	0.	1.25E-01	5.37E-02	1.59E 00	4.28E-01	2.20E 00
13	9.5e	0.	0.	1.46E-03	0.	0.	0.	1.25E-01	5.55E-02	1.59E 00	4.26E-01	2.20E 00
14	9.4e	0.	0.	1.40E-03	0.	0.	0.	1.25E-01	5.73E-02	1.60E 00	4.25E-01	2.21E 00
15	9.3e	0.	0.	1.44E-03	0.	0.	0.	1.26E-01	5.92E-02	1.60E 00	4.23E-01	2.21E 00
16	9.2e	0.	0.	1.22E-03	0.	0.	0.	1.26E-01	6.11E-02	1.61E 00	4.21E-01	2.22E 00
17	9.1e	0.	0.	1.25E-03	0.	0.	0.	1.27E-01	6.32E-02	6.39E-01	4.19E-01	1.25E 00
18	9.0e	0.	0.	1.16E-03	0.	0.	0.	1.27E-01	6.53E-02	6.40E-01	4.17E-01	1.25E 00
19	8.9e	0.	0.	1.08E-03	0.	0.	0.	1.27E-01	6.76E-02	6.41E-01	4.15E-01	1.25E 00
20	8.8e	0.	0.	1.07E-03	0.	0.	0.	1.28E-01	6.99E-02	6.42E-01	4.14E-01	1.25E 00
21	8.7e	0.	0.	9.45E-04	0.	0.	0.	1.28E-01	7.24E-02	6.43E-01	4.12E-01	1.24E 00
22	8.6e	0.	0.	9.79E-04	0.	0.	0.	1.29E-01	7.50E-02	6.45E-01	4.10E-01	1.24E 00
23	8.5e	0.	0.	8.72E-04	0.	0.	0.	1.29E-01	7.77E-02	6.47E-01	4.08E-01	1.24E 00
24	8.4e	0.	0.	8.73E-04	0.	0.	0.	1.30E-01	8.05E-02	6.50E-01	4.07E-01	1.27E 00
25	8.3e	0.	0.	7.53E-04	0.	0.	0.	1.31E-01	8.35E-02	6.53E-01	4.06E-01	1.27E 00
26	8.2e	0.	0.	7.66E-04	0.	0.	0.	1.31E-01	8.66E-02	6.56E-01	4.06E-01	1.28E 00
27	8.1e	0.	0.	6.72E-04	0.	0.	0.	1.32E-01	8.99E-02	6.58E-01	4.07E-01	1.29E 00
28	8.0e	0.	0.	6.81E-04	0.	0.	0.	1.33E-01	9.34E-02	6.63E-01	4.07E-01	1.30E 00
29	7.9e	0.	0.	5.95E-04	0.	0.	0.	1.33E-01	9.70E-02	4.68E-01	4.07E-01	1.31E 00
30	7.8e	0.	0.	6.22E-04	0.	0.	0.	1.34E-01	1.01E-01	6.73E-01	4.08E-01	1.32E 00
31	7.7e	0.	0.	5.54E-04	0.	0.	0.	1.35E-01	1.05E-01	6.78E-01	4.08E-01	1.33E 00
32	7.6e	0.	0.	5.31E-04	0.	2.49E-08	0.	1.35E-01	1.09E-01	6.83E-01	4.08E-01	1.34E 00
33	7.5e	0.	0.	4.99E-04	0.	7.32E-08	0.	1.36E-01	1.13E-01	6.88E-01	4.09E-01	1.35E 00
34	7.4e	0.	0.	4.53E-04	0.	7.09E-07	0.	1.37E-01	1.18E-01	6.93E-01	4.09E-01	1.36E 00
35	7.3e	0.	0.	4.34E-04	0.	2.69E-06	0.	1.38E-01	1.23E-01	6.98E-01	4.09E-01	1.37E 00
36	7.2e	0.	0.	3.97E-04	0.	7.52E-06	0.	1.38E-01	1.28E-01	7.03E-01	4.10E-01	1.38E 00
37	7.1e	0.	0.	3.85E-04	0.	2.37E-05	0.	1.39E-01	1.34E-01	7.08E-01	4.10E-01	1.39E 00
38	7.0e	8.12E-08	0.	3.50E-04	0.	4.51E-05	0.	1.41E-01	1.40E-01	7.13E-01	4.10E-01	1.40E 00
39	6.9e	1.60E-07	0.	3.32E-04	0.	6.61E-05	0.	1.42E-01	1.46E-01	7.18E-01	4.11E-01	1.42E 00
40	6.8e	1.39E-07	0.	3.24E-04	0.	1.10E-04	0.	1.43E-01	1.53E-01	7.23E-01	4.11E-01	1.43E 00
41	6.7e	1.82E-07	0.	2.88E-04	0.	1.86E-04	0.	1.44E-01	1.60E-01	7.29E-01	4.12E-01	1.44E 00
42	6.6e	6.25E-08	0.	2.61E-04	0.	9.10E-05	0.	1.45E-01	1.67E-01	7.36E-01	4.13E-01	1.46E 00
43	6.5e	3.64E-08	0.	2.12E-04	0.	1.30E-04	0.	1.46E-01	1.75E-01	7.44E-01	4.14E-01	1.48E 00
44	6.4e	2.11E-08	0.	1.50E-04	4.82E-07	1.19E-04	0.	1.47E-01	1.83E-01	7.53E-01	4.15E-01	1.50E 00
45	6.3e	1.24E-08	0.	9.56E-05	1.92E-06	9.80E-05	0.	1.49E-01	1.92E-01	7.61E-01	4.17E-01	1.52E 00
46	6.2e	5.64E-09	0.	5.41E-05	2.77E-06	1.28E-04	0.	1.50E-01	2.02E-01	7.70E-01	4.20E-01	1.54E 00
47	6.1e	2.62E-09	0.	2.59E-05	7.96E-06	1.45E-04	0.	1.51E-01	2.12E-01	7.79E-01	4.23E-01	1.57E 00
48	6.0e	1.11E-09	0.	6.67E-06	7.81E-06	7.48E-05	0.	1.52E-01	2.23E-01	7.98E-01	4.26E-01	1.59E 00
49	5.9e	2.74E-10	0.	4.79E-07	1.15E-05	7.15E-05	0.	1.52E-01	2.35E-01	8.02E-01	4.29E-01	1.62E 00
50	5.8e	3.50E-11	0.	1.21E-08	1.63E-05	7.50E-05	0.	1.50E-01	2.47E-01	8.14E-01	4.33E-01	1.64E 00
51	5.7e	2.50E-12	0.	0.	1.94E-05	8.39E-05	0.	1.41E-01	2.61E-01	8.26E-01	4.36E-01	1.66E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.17E-13	0.	0.	0.	1.69E-05	1.09E-04	0.	0.	1.31E-01	2.75E-01	8.40E-01	4.39E-01	1.69E 00
53	5.50	0.	0.	0.	0.	2.06E-05	1.08E-04	0.	0.	1.31E-01	2.91E-01	8.59E-01	4.43E-01	1.72E 00
54	5.40	0.	0.	0.	0.	1.93E-05	8.38E-05	0.	0.	1.32E-01	3.07E-01	8.82E-01	4.49E-01	1.77E 00
55	5.30	0.	0.	0.	0.	1.97E-05	1.04E-04	0.	0.	1.33E-01	3.25E-01	9.06E-01	4.55E-01	1.82E 00
56	5.20	0.	0.	0.	0.	2.14E-05	8.10E-05	0.	0.	1.34E-01	3.44E-01	9.30E-01	4.62E-01	1.87E 00
57	5.10	0.	0.	0.	0.	2.15E-05	1.04E-04	0.	0.	1.35E-01	3.65E-01	9.58E-01	4.70E-01	1.93E 00
58	5.00	1.64E-06	0.	0.	0.	1.90E-05	9.96E-05	0.	0.	1.36E-01	3.88E-01	9.88E-01	4.77E-01	1.99E 00
59	4.90	4.05E-06	0.	0.	0.	2.22E-05	1.10E-04	0.	0.	1.37E-01	4.13E-01	1.02E 00	4.86E-01	2.06E 00
60	4.80	7.70E-06	0.	0.	0.	2.39E-05	1.04E-04	0.	0.	1.38E-01	4.39E-01	1.06E 00	4.96E-01	2.14E 00
61	4.70	1.05E-05	0.	0.	0.	2.42E-05	9.49E-05	0.	0.	1.39E-01	4.68E-01	1.10E 00	5.09E-01	2.22E 00
62	4.60	1.47E-05	0.	0.	0.	2.50E-05	8.60E-05	0.	0.	1.41E-01	5.00E-01	1.15E 00	5.23E-01	2.31E 00
63	4.50	1.56E-05	0.	3.47E-05	0.	2.32E-05	6.49E-05	0.	0.	1.42E-01	5.34E-01	1.21E 00	5.37E-01	2.42E 00
64	4.40	1.69E-05	0.	1.01E-04	0.	2.34E-05	4.43E-05	0.	0.	1.43E-01	5.72E-01	1.27E 00	5.52E-01	2.54E 00
65	4.30	1.62E-05	0.	3.44E-04	0.	2.26E-05	2.81E-05	0.	0.	1.44E-01	6.13E-01	1.34E 00	5.67E-01	2.66E 00
66	4.20	1.52E-05	0.	1.06E-03	0.	2.38E-05	1.93E-05	0.	0.	1.45E-01	6.58E-01	1.41E 00	5.83E-01	2.80E 00
67	4.10	1.44E-05	0.	4.94E-04	0.	2.36E-05	5.46E-06	0.	0.	1.46E-01	7.08E-01	1.48E 00	5.81E-01	2.91E 00
68	4.00	1.36E-05	0.	1.54E-03	0.	2.38E-05	4.09E-06	0.	0.	1.46E-01	7.63E-01	1.55E 00	2.85E-01	2.74E 00
69	3.90	1.15E-05	0.	7.37E-04	2.50E-04	2.15E-05	1.52E-06	0.	0.	1.46E-01	8.24E-01	1.53E 00	2.95E-01	2.80E 00
70	3.80	1.27E-05	0.	1.19E-03	9.70E-04	2.33E-05	0.	0.	0.	1.45E-01	8.91E-01	1.55E 00	3.07E-01	2.89E 00
71	3.70	1.15E-05	0.	1.21E-03	4.64E-04	2.42E-05	0.	0.	0.	1.43E-01	9.67E-01	1.30E 00	3.35E-01	2.75E 00
72	3.60	1.09E-05	0.	8.92E-04	2.34E-03	2.19E-05	0.	0.	0.	1.34E-01	1.05E 00	1.40E 00	3.66E-01	2.96E 00
73	3.50	9.90E-06	0.	1.16E-03	4.18E-03	1.70E-05	0.	0.	0.	1.22E-01	1.15E 00	1.49E 00	4.01E-01	3.17E 00
74	3.40	9.20E-06	0.	2.43E-04	7.07E-04	1.99E-05	0.	0.	0.	7.07E-02	1.25E 00	1.66E 00	4.42E-01	3.42E 00
75	3.30	7.42E-06	0.	1.68E-04	2.58E-03	1.61E-05	0.	0.	0.	7.00E-02	1.37E 00	1.83E 00	4.82E-01	3.75E 00
76	3.20	6.55E-06	0.	3.22E-04	4.00E-03	1.70E-05	0.	0.	0.	7.09E-02	1.51E 00	2.00E 00	5.25E-01	4.10E 00
77	3.10	6.36E-06	0.	4.89E-04	1.12E-03	1.63E-05	0.	0.	0.	7.11E-02	1.66E 00	2.17E 00	5.67E-01	4.47E 00
78	3.00	5.77E-06	0.	2.54E-04	2.44E-03	1.56E-05	0.	0.	0.	7.12E-02	1.83E 00	2.35E 00	6.10E-01	4.87E 00
79	2.90	4.93E-06	0.	1.41E-04	1.32E-03	1.22E-05	0.	0.	0.	7.14E-02	2.03E 00	2.54E 00	6.59E-01	5.38E 00
80	2.80	5.10E-06	0.	7.77E-05	9.26E-04	8.70E-06	0.	0.	0.	7.15E-02	2.26E 00	2.76E 00	7.14E-01	5.81E 00
81	2.70	3.41E-06	0.	3.66E-05	1.15E-03	6.80E-06	0.	0.	0.	7.15E-02	2.53E 00	3.00E 00	7.74E-01	6.38E 00
82	2.60	1.65E-06	0.	1.75E-05	1.21E-04	4.20E-06	0.	0.	0.	7.15E-02	2.84E 00	3.26E 00	8.35E-01	7.00E 00
83	2.50	1.17E-07	0.	1.82E-06	1.19E-04	5.33E-07	0.	0.	0.	7.15E-02	3.20E 00	3.72E 00	5.39E-01	7.53E 00
84	2.40	0.	7.97E-05	0.	8.96E-05	5.78E-08	0.	0.	0.	7.15E-02	3.63E 00	4.33E 00	6.27E-01	8.66E 00
85	2.30	0.	2.32E-04	0.	0.	0.	0.	0.	0.	7.09E-02	4.13E 00	3.87E 00	7.47E-01	8.82E 00
86	2.20	0.	6.24E-04	0.	0.	0.	0.	0.	0.	7.00E-02	4.73E 00	4.58E 00	8.90E-01	1.03E 01
87	2.10	0.	6.32E-04	0.	0.	0.	0.	0.	0.	7.02E-02	5.45E 00	5.33E 00	1.03E 00	1.19E 01
88	2.00	0.	1.27E-03	0.	0.	0.	0.	0.	0.	6.81E-02	6.32E 00	6.08E 00	1.18E 00	1.37E 01
89	1.90	0.	1.50E-03	0.	0.	0.	0.	0.	0.	6.55E-02	7.39E 00	6.98E 00	1.38E 00	1.58E 01
90	1.80	0.	1.29E-03	0.	0.	0.	0.	0.	0.	6.24E-02	8.73E 00	8.30E 00	1.68E 00	1.89E 01
91	1.70	0.	1.48E-03	0.	0.	0.	0.	0.	0.	5.90E-02	1.04E 01	1.01E 01	2.04E 00	2.26E 01
92	1.60	0.	1.10E-03	0.	0.	0.	0.	0.	0.	4.99E-02	1.24E 01	1.18E 01	2.41E 00	2.68E 01
93	1.50	0	1.25E-03	0.	0.	0.	0.	0.	0.	2.27E-02	1.53E 01	1.54E 01	2.92E 00	3.37E 01
94	1.40	0.	1.23E-03	0.	0.	0.	0.	0.	0.	0.	1.89E 01	1.92E 01	3.90E 00	4.17E 01
95	1.30	0.	9.43E-04	0.	0.	0.	0.	0.	0.	0.	2.37E 01	2.50E 01	4.61E 00	5.42E 01
96	1.20	0.	8.99E-04	0.	0.	0.	0.	0.	0.	0.	3.03E 01	2.09E 01	4.65E 00	6.38E 01
97	1.10	0.	8.73E-04	0.	0.	0.	0.	1.02E-09	0.	0.	3.96E 01	3.56E 01	5.82E 00	8.10E 01
98	1.00	0.	8.83E-04	0.	0.	0.	0.	1.67E-08	0.	0.	5.32E 01	4.32E 01	6.64E 00	1.03E 02
99	0.90	0.	6.59E-04	0.	0.	0.	0.	1.99E-08	0.	0.	7.36E 01	4.90E 01	7.79E 00	1.31E 02
100	0.80	0.	3.09E-04	0.	0.	0.	0.	4.31E-07	0.	0.	1.06E 02	5.74E 01	8.94E 00	1.72E 02
101	0.70	0.	7.14E-05	0.	0.	0.	0.	4.11E-07	0.	0.	1.68E 02	6.19E 01	9.83E 00	2.31E 02
102	0.60	0.	1.58E-05	0.	0.	0.	0.	1.79E-06	0.	0.	2.59E 02	6.93E 01	1.81E 01	3.38E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.2936-04 (1.0E-01 NORMAL)

	PHOTON EMERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS) N P.E.	O P.F.	TOTAL AIR
1	10.79	0.	0.	6.11E-06	0.	0.	0.	1.95E-03	1.93E-03 1.16E 00	2.94E-02	1.19E 00
2	10.60	0.	0.	5.62E-06	0.	0.	0.	1.95E-03	1.90E-03 7.61E-02	2.95E-02	1.05E-01
3	10.59	0.	0.	5.72E-06	0.	0.	0.	1.94E-03	2.04E-03 7.64E-02	2.94E-02	1.05E-01
4	10.40	0.	0.	5.49E-06	0.	0.	0.	1.94E-03	2.10E-03 7.67E-02	2.92E-02	1.06E-01
5	10.30	0.	0.	4.83E-06	0.	0.	0.	1.94E-03	2.16E-03 7.69E-02	2.91E-02	1.06E-01
6	10.20	0.	0.	5.09E-06	0.	0.	0.	1.94E-03	2.23E-03 7.71E-02	2.90E-02	1.06E-01
7	10.10	0.	0.	4.79E-06	0.	0.	0.	1.93E-03	2.29E-03 7.69E-02	2.49E-02	1.06E-01
8	10.00	0.	0.	4.27E-06	0.	0.	0.	1.93E-03	2.36E-03 7.66E-02	2.48E-02	1.05E-01
9	9.90	0.	0.	4.48E-06	0.	0.	0.	1.93E-03	2.44E-03 7.68E-02	2.47E-02	1.05E-01
10	9.80	0.	0.	4.18E-06	0.	0.	0.	1.93E-03	2.51E-03 7.69E-02	2.46E-02	1.06E-01
11	9.70	0.	0.	3.66E-06	0.	0.	0.	1.50E-03	2.59E-03 7.71E-02	2.45E-02	1.06E-01
12	9.60	0.	0.	3.97E-06	0.	0.	0.	1.50E-03	2.67E-03 7.73E-02	2.43E-02	1.06E-01
13	9.50	0.	0.	3.45E-06	0.	0.	0.	1.50E-03	2.74E-03 7.75E-02	2.42E-02	1.06E-01
14	9.40	0.	0.	3.30E-06	0.	0.	0.	1.59E-03	2.85E-03 7.78E-02	2.41E-02	1.06E-01
15	9.30	0.	0.	3.40E-06	0.	0.	0.	1.59E-03	2.94E-03 7.80E-02	2.40E-02	1.07E-01
16	9.20	0.	0.	2.87E-06	0.	0.	0.	1.60E-03	3.04E-03 7.83E-02	2.39E-02	1.07E-01
17	9.10	0.	0.	2.96E-06	0.	0.	0.	1.60E-03	3.14E-03 3.12E-02	2.38E-02	5.97E-02
18	9.00	0.	0.	2.73E-06	0.	0.	0.	1.61E-03	3.25E-03 3.12E-02	2.37E-02	5.98E-02
19	8.90	0.	0.	2.56E-06	0.	0.	0.	1.62E-03	3.36E-03 3.13E-02	2.36E-02	5.98E-02
20	8.80	0.	0.	2.53E-06	0.	0.	0.	1.62E-03	3.48E-03 3.13E-02	2.35E-02	5.99E-02
21	8.70	0.	0.	2.23E-06	0.	0.	0.	1.63E-03	3.60E-03 3.14E-02	2.34E-02	6.00E-02
22	8.60	0.	0.	2.31E-06	0.	0	0.	1.63E-03	3.73E-03 3.15E-02	2.33E-02	6.01E-02
23	8.50	0.	0.	2.04E-06	0.	0.	0.	1.64E-03	3.87E-03 3.16E-02	2.32E-02	6.03E-02
24	8.40	0.	0.	2.06E-06	0.	0.	0.	1.65E-03	4.01E-03 3.17E-02	2.31E-02	6.05E-02
25	8.30	0.	0.	1.70E-06	0.	0.	0.	1.66E-03	4.16E-03 3.19E-02	2.31E-02	6.08E-02
26	8.20	0.	0.	1.81E-06	0.	0.	0.	1.67E-03	4.31E-03 3.20E-02	2.31E-02	6.11E-02
27	8.10	0.	0.	1.59E-06	0.	0.	0.	1.67E-03	4.48E-03 3.21E-02	2.31E-02	6.14E-02
28	8.00	0.	0.	1.61E-06	0.	0.	0.	1.68E-03	4.65E-03 3.24E-02	2.31E-02	6.18E-02
29	7.90	0.	0.	1.48E-06	0.	0.	0.	1.69E-03	4.83E-03 3.26E-02	2.31E-02	6.23E-02
30	7.80	0.	0.	1.47E-06	0.	0.	0.	1.70E-03	5.02E-03 3.29E-02	2.32E-02	6.27E-02
31	7.70	0.	0.	1.31E-06	0.	0.	0.	1.71E-03	5.22E-03 3.31E-02	2.32E-02	6.32E-02
32	7.60	0.	0.	1.29E-06	0.	6.77E-11	0.	1.72E-03	5.43E-03 3.34E-02	2.32E-02	6.37E-02
33	7.50	0.	0.	1.10E-06	0.	2.16E-10	0.	1.73E-03	5.65E-03 3.35E-02	2.32E-02	6.41E-02
34	7.40	0.	0.	1.07E-06	0.	1.96E-09	0.	1.74E-03	5.88E-03 3.38E-02	2.32E-02	6.46E-02
35	7.30	0.	0.	1.02E-06	0.	7.41E-09	0.	1.74E-03	6.13E-03 3.40E-02	2.32E-02	6.52E-02
36	7.20	0.	0.	9.36E-07	0.	2.07E-08	0.	1.75E-03	6.39E-03 3.43E-02	2.33E-02	6.57E-02
37	7.10	0.	0.	9.09E-07	0.	6.93E-08	0.	1.77E-03	6.67E-03 3.45E-02	2.33E-02	6.63E-02
38	7.00	2.62E-10	0.	8.45E-07	0.	1.24E-07	0.	1.78E-03	6.96E-03 3.48E-02	2.33E-02	6.68E-02
39	6.90	5.15E-10	0.	7.84E-07	0.	1.82E-07	0.	1.80E-03	7.27E-03 3.51E-02	2.33E-02	6.74E-02
40	6.80	4.47E-10	0.	7.65E-07	0.	3.03E-07	0.	1.81E-03	7.60E-03 3.53E-02	2.33E-02	6.81E-02
41	6.70	3.29E-10	0.	6.79E-07	0.	2.93E-07	0.	1.83E-03	7.95E-03 3.56E-02	2.34E-02	6.87E-02
42	6.60	2.02E-10	0.	6.17E-07	0.	2.53E-07	0.	1.84E-03	8.32E-03 3.59E-02	2.35E-02	6.94E-02
43	6.50	1.17E-10	0.	4.99E-07	0.	3.50E-07	0.	1.85E-03	8.71E-03 3.63E-02	2.35E-02	7.04E-02
44	6.40	6.88E-11	0.	3.53E-07	1.11E-09	3.29E-07	0.	1.87E-03	9.13E-03 3.67E-02	2.36E-02	7.15E-02
45	6.30	3.99E-11	0.	2.26E-07	5.38E-09	2.48E-07	0.	1.88E-03	9.58E-03 3.72E-02	2.37E-02	7.23E-02
46	6.20	1.82E-11	0.	1.28E-07	7.63E-09	3.32E-07	0.	1.90E-03	1.00E-02 3.76E-02	2.39E-02	7.34E-02
47	6.10	9.46E-12	0.	6.12E-08	2.28E-08	4.01E-07	0.	1.91E-03	1.04E-02 3.81E-02	2.40E-02	7.46E-02
48	6.00	3.57E-12	0.	1.57E-08	2.15E-08	2.84E-07	0.	1.93E-03	1.11E-02 3.86E-02	2.42E-02	7.58E-02
49	5.90	8.84E-13	0.	1.13E-09	3.19E-08	1.97E-07	0.	1.93E-03	1.17E-02 3.92E-02	2.44E-02	7.72E-02
50	5.80	1.13E-13	0.	2.86E-11	4.49E-08	2.87E-07	0.	1.90E-03	1.23E-02 3.98E-02	2.46E-02	7.85E-02
51	5.70	8.32E-15	0.	0.	5.34E-08	2.31E-07	0.	1.78E-03	1.30E-02 4.03E-02	2.48E-02	7.93E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.203E-04 (1.0E-01 NORMAL)

	PHOTON EN ENERGY	S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.77E-16	0.	0.	0.	4.06E-08	2.99E-07	0.	0.	1.66E+03	1.37E-02	4.11E-02	2.50E-02	8.14E-02
53	5.50	0.	0.	0.	0.	5.69E-08	2.77E-07	0.	0.	1.67E+03	1.45E-02	4.20E-02	2.52E-02	8.33E-02
54	5.40	0.	0.	0.	0.	5.32E-08	2.31E-07	0.	0.	1.68E+03	1.53E-02	4.31E-02	2.55E-02	8.54E-02
55	5.30	0.	0.	0.	0.	5.45E-08	2.87E-07	0.	0.	1.69E+03	1.62E-02	4.43E-02	2.58E-02	8.80E-02
56	5.20	0.	0.	0.	0.	5.91E-08	2.26E-07	0.	0.	1.70E+03	1.71E-02	4.53E-02	2.63E-02	9.04E-02
57	5.10	0.	0.	0.	0.	5.93E-08	2.88E-07	0.	0.	1.71E+03	1.82E-02	4.66E-02	2.67E-02	9.32E-02
58	5.00	9.30E-09	0.	0.	0.	5.45E-08	2.79E-07	0.	0.	1.73E+03	1.93E-02	4.81E-02	2.71E-02	9.63E-02
59	4.90	1.31E-08	0.	0.	0.	6.12E-08	3.03E-07	0.	0.	1.74E+03	2.05E-02	4.96E-02	2.76E-02	9.97E-02
60	4.80	2.40E-08	0.	0.	0.	6.61E-08	2.84E-07	0.	0.	1.75E+03	2.19E-02	5.17E-02	2.82E-02	1.03E-01
61	4.70	3.40E-08	0.	0.	0.	6.67E-08	2.62E-07	0.	0.	1.77E+03	2.33E-02	5.36E-02	2.89E-02	1.08E-01
62	4.60	4.75E-08	0.	0.	0.	6.98E-08	2.37E-07	0.	0.	1.78E+03	2.49E-02	5.59E-02	2.97E-02	1.12E-01
63	4.50	5.84E-08	0.	8.18E-08	0.	6.40E-08	1.79E-07	0.	0.	1.80E+03	2.66E-02	5.80E-02	3.05E-02	1.18E-01
64	4.40	6.49E-08	0.	2.37E-07	0.	6.46E-08	1.22E-07	0.	0.	1.81E+03	2.85E-02	6.10E-02	3.14E-02	1.23E-01
65	4.30	5.21E-08	0.	8.17E-07	0.	6.23E-08	7.77E-08	0.	0.	1.83E+03	3.05E-02	6.52E-02	3.22E-02	1.30E-01
66	4.20	4.91E-08	0.	2.51E-06	0.	6.50E-08	5.34E-08	0.	0.	1.84E+03	3.20E-02	6.85E-02	3.31E-02	1.36E-01
67	4.10	4.65E-08	0.	1.17E-06	0.	6.51E-08	1.51E-08	0.	0.	1.85E+03	3.52E-02	7.19E-02	3.30E-02	1.42E-01
68	4.00	4.33E-08	0.	3.44E-06	0.	6.34E-08	1.13E-08	0.	0.	1.85E+03	3.80E-02	7.53E-02	1.62E-02	1.31E-01
69	3.90	3.72E-08	0.	1.74E-06	2.64E-06	5.94E-08	4.19E-09	0.	0.	1.85E+03	4.10E-02	7.46E-02	1.67E-02	1.34E-01
70	3.80	4.10E-08	0.	2.81E-06	1.03E-05	6.42E-08	0.	0.	0.	1.84E+03	4.44E-02	7.54E-02	1.75E-02	1.39E-01
71	3.70	3.71E-08	0.	2.85E-06	4.91E-06	5.59E-08	0.	0.	0.	1.81E+03	4.81E-02	6.34E-02	1.91E-02	1.32E-01
72	3.60	3.38E-08	0.	2.18E-06	2.50E-05	6.84E-08	0.	0.	0.	1.78E+03	5.23E-02	6.84E-02	2.80E-02	1.43E-01
73	3.50	3.19E-08	0.	2.73E-06	4.42E-05	4.86E-08	0.	0.	0.	1.55E+03	5.70E-02	7.20E-02	2.20E-02	1.54E-01
74	3.40	2.97E-08	0.	1.89E-06	7.40E-06	5.48E-08	0.	0.	0.	8.96E-04	6.23E-02	8.08E-02	2.51E-02	1.49E-01
75	3.30	2.39E-08	0.	1.84E-06	2.73E-05	4.45E-08	0.	0.	0.	8.97E-04	6.83E-02	8.98E-02	2.74E-02	1.84E-01
76	3.20	2.11E-08	0.	1.23E-06	4.23E-05	4.78E-08	0.	0.	0.	8.99E-04	7.50E-02	9.72E-02	2.98E-02	2.03E-01
77	3.10	2.49E-08	0.	9.64E-07	1.19E-05	4.51E-08	0.	0.	0.	9.01E-04	8.26E-02	1.06E-01	3.22E-02	2.22E-01
78	3.00	1.84E-08	0.	5.99E-07	2.58E-05	4.32E-08	0.	0.	0.	9.03E-04	9.13E-02	1.14E-01	3.47E-02	2.41E-01
79	2.90	1.59E-08	0.	3.80E-07	1.39E-05	3.37E-08	0.	0.	0.	9.05E-04	1.01E-01	1.24E-01	3.74E-02	2.63E-01
80	2.80	1.67E-08	0.	1.83E-07	9.79E-06	2.48E-08	0.	0.	0.	9.06E-04	1.13E-01	1.34E-01	4.06E-02	2.89E-01
81	2.70	1.18E-08	0.	8.63E-08	1.21E-05	1.35E-08	0.	0.	0.	9.08E-04	1.26E-01	1.46E-01	4.49E-02	3.17E-01
82	2.60	9.33E-09	0.	4.14E-08	1.20E-04	6.88E-09	0.	0.	0.	9.08E-04	1.41E-01	1.58E-01	4.74E-02	3.48E-01
83	2.50	3.70E-10	0.	4.38E-09	1.26E-04	1.47E-09	0.	0.	0.	9.06E-04	1.59E-01	1.81E-01	3.06E-02	3.72E-01
84	2.40	0.	1.88E-07	0.	9.48E-07	1.59E-10	0.	0.	0.	9.06E-04	1.80E-01	2.11E-01	3.56E-02	4.24E-01
85	2.30	0.	5.44E-07	0.	0.	0.	0.	0.	0.	8.99E-04	2.06E-01	1.88E-01	4.25E-02	4.37E-01
86	2.20	0.	1.47E-06	0.	0.	0.	0.	0.	0.	8.95E-04	2.35E-01	2.23E-01	5.04E-02	5.09E-01
87	2.10	0.	1.49E-06	0.	0.	0.	0.	0.	0.	8.92E-04	2.71E-01	2.59E-01	5.87E-02	5.90E-01
88	2.00	0.	2.99E-06	0.	0.	0.	0.	0.	0.	8.63E-04	3.15E-01	2.96E-01	6.70E-02	6.78E-01
89	1.90	0.	3.93E-06	0.	0.	0.	0.	0.	0.	8.38E-04	3.60E-01	3.40E-01	7.83E-02	7.86E-01
90	1.80	0.	3.84E-06	0.	0.	0.	0.	0.	0.	7.94E-04	4.35E-01	4.07E-01	9.54E-02	9.38E-01
91	1.70	0.	3.43E-06	0.	0.	0.	0.	0.	0.	7.48E-04	5.19E-01	4.98E-01	1.14E-01	1.13E 00
92	1.60	0.	2.60E-06	0.	0.	0.	0.	0.	0.	6.33E-04	6.26E-01	5.73E-01	1.37E-01	1.34E 00
93	1.50	0.	2.95E-06	0.	0.	0.	0.	0.	0.	2.86E-04	7.64E-01	7.46E-01	1.66E-01	1.68E 00
94	1.40	0.	2.90E-06	0.	0.	0.	0.	0.	0.	0.	9.43E-01	9.34E-01	1.99E-01	2.08E 00
95	1.30	0.	2.22E-06	0.	0.	0.	0.	0.	0.	0.	1.10E 00	1.26E 00	2.62E-01	2.70E 00
96	1.20	0.	2.12E-06	0.	0.	0.	0.	0.	0.	0.	1.51E 00	1.40E 00	2.64E-01	3.18E 00
97	1.10	0.	2.66E-06	0.	0.	0.	0.	2.02E-12	0.	0.	1.97E 00	1.73E 00	3.31E-01	4.03E 00
98	1.00	0.	1.09E-06	0.	0.	0.	0.	4.61E-11	0.	0.	2.65E 00	2.18E 00	3.77E-01	5.12E 00
99	0.90	0.	1.55E-06	0.	0.	0.	0.	5.39E-11	0.	0.	3.64E 00	2.42E 00	4.43E-01	6.53E 00
100	0.80	0.	7.29E-07	0.	0.	0.	0.	1.19E-09	0.	0.	5.27E 00	2.79E 00	5.08E-01	8.57E 00
101	0.70	0.	1.68E-07	0.	0.	0.	0.	1.13E-09	0.	0.	7.98E 00	3.81E 00	5.13E-01	1.15E 01
102	0.60	0.	3.74E-08	0.	0.	0.	0.	3.56E-09	0.	0.	1.29E 01	3.36E 00	5.74E-01	1.60E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-05 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	18.70	0.	0.	2.31E-09	0.	0.	0.	5.21E-06	4.82E-05	2.36E-02	5.95E-04	2.42E-02
2	16.60	0.	0.	2.31E-09	0.	0.	0.	5.22E-06	4.1 E-05	1.01E-03	5.92E-04	2.25E-03
3	19.30	0.	0.	2.35E-09	0.	0.	0.	5.22E-06	4.25E-05	1.62E-03	5.89E-04	2.28E-03
4	18.40	0.	0.	2.26E-09	0.	0.	0.	5.23E-06	4.38E-05	1.63E-03	5.87E-04	2.26E-03
5	18.30	0.	0.	1.99E-09	0.	0.	0.	5.24E-06	4.51E-05	1.63E-03	5.84E-04	2.27E-03
6	18.20	0.	0.	2.08E-09	0.	0.	0.	5.24E-06	4.64E-05	1.64E-03	5.82E-04	2.27E-03
7	18.10	0.	0.	1.97E-09	0.	0.	0.	5.25E-06	4.79E-05	1.63E-03	5.79E-04	2.27E-03
8	18.00	0.	0.	1.76E-09	0.	0.	0.	5.26E-06	4.93E-05	1.57E-03	5.76E-04	2.20E-03
9	9.90	0.	0.	1.81E-09	0.	0.	0.	5.27E-06	5.08E-05	1.58E-03	5.74E-04	2.21E-03
10	9.80	0.	0.	1.72E-09	0.	0.	0.	5.28E-06	5.24E-05	1.53E-03	5.71E-04	2.21E-03
11	9.70	0.	0.	1.51E-09	0.	0.	0.	5.29E-06	5.41E-05	1.58E-03	5.69E-04	2.21E-03
12	9.60	0.	0.	1.63E-09	0.	0.	0.	5.30E-06	5.58E-05	1.59E-03	5.66E-04	2.22E-03
13	9.50	0.	0.	1.42E-09	0.	0.	0.	5.31E-06	5.76E-05	1.59E-03	5.63E-04	2.22E-03
14	9.40	0.	0.	1.36E-09	0.	0.	0.	5.32E-06	5.95E-05	1.60E-03	5.61E-04	2.22E-03
15	9.30	0.	0.	1.48E-09	0.	0.	0.	5.34E-06	6.14E-05	1.60E-03	5.58E-04	2.23E-03
16	9.20	0.	0.	1.18E-09	0.	0.	0.	5.36E-06	6.35E-05	1.61E-03	5.56E-04	2.23E-03
17	9.10	0.	0.	1.22E-09	0.	0.	0.	5.38E-06	6.56E-05	6.55E-04	5.53E-04	1.28E-03
18	9.00	0.	0.	1.12E-09	0.	0.	0.	5.40E-06	6.79E-05	6.56E-04	5.51E-04	1.28E-03
19	8.90	0.	0.	1.02E-09	0.	0.	0.	5.42E-06	7.02E-05	6.57E-04	5.49E-04	1.28E-03
20	8.80	0.	0.	1.04E-09	0.	0.	0.	5.44E-06	7.26E-05	6.59E-04	5.46E-04	1.28E-03
21	8.70	0.	0.	9.17E-10	0.	0.	0.	5.46E-06	7.52E-05	6.61E-04	5.44E-04	1.29E-03
22	8.60	0.	0.	9.50E-10	0.	0.	0.	5.48E-06	7.79E-05	6.62E-04	5.42E-04	1.29E-03
23	8.50	0.	0.	8.46E-10	0.	0.	0.	5.50E-06	8.07E-05	6.65E-04	5.39E-04	1.29E-03
24	8.40	0.	0.	8.47E-10	0.	0.	0.	5.53E-06	8.37E-05	6.68E-04	5.37E-04	1.29E-03
25	8.30	0.	0.	7.31E-10	0.	0.	0.	5.56E-06	8.67E-05	6.71E-04	5.36E-04	1.30E-03
26	8.20	0.	0.	7.44E-10	0.	0.	0.	5.59E-06	9.00E-05	6.75E-04	5.37E-04	1.31E-03
27	8.10	0.	0.	6.52E-10	0.	0.	0.	5.61E-06	9.34E-05	6.78E-04	5.37E-04	1.31E-03
28	8.00	0.	0.	6.61E-10	0.	0.	0.	5.64E-06	9.70E-05	6.83E-04	5.37E-04	1.32E-03
29	7.90	0.	0.	5.77E-10	0.	0.	0.	5.67E-06	1.01E-04	6.89E-04	5.38E-04	1.33E-03
30	7.80	0.	0.	5.83E-10	0.	0.	0.	5.70E-06	1.05E-04	6.94E-04	5.38E-04	1.34E-03
31	7.70	0.	0.	5.37E-10	0.	0.	0.	5.73E-06	1.09E-04	7.00E-04	5.39E-04	1.35E-03
32	7.60	0.	0.	5.16E-10	0.	3.19E-14	0.	5.76E-06	1.13E-04	7.06E-04	5.39E-04	1.36E-03
33	7.50	0.	0.	4.84E-10	0.	1.02E-13	0.	5.79E-06	1.18E-04	6.99E-04	5.40E-04	1.36E-03
34	7.40	0.	0.	4.40E-10	0.	9.22E-13	0.	5.82E-06	1.23E-04	7.05E-04	5.40E-04	1.37E-03
35	7.30	0.	0.	4.21E-10	0.	3.49E-12	0.	5.85E-06	1.28E-04	7.11E-04	5.40E-04	1.38E-03
36	7.20	0.	0.	3.85E-10	0.	9.77E-12	0.	5.88E-06	1.33E-04	7.17E-04	5.41E-04	1.40E-03
37	7.10	0.	0.	3.74E-10	0.	3.02E-11	0.	5.93E-06	1.39E-04	7.23E-04	5.41E-04	1.41E-03
38	7.00	1.41E-13	0.	3.47E-10	0.	5.86E-11	0.	5.98E-06	1.45E-04	7.29E-04	5.42E-04	1.42E-03
39	6.90	2.78E-13	0.	3.23E-10	0.	8.68E-11	0.	6.03E-06	1.52E-04	7.36E-04	5.42E-04	1.44E-03
40	6.80	2.42E-13	0.	3.15E-10	0.	1.43E-10	0.	6.08E-06	1.59E-04	7.42E-04	5.43E-04	1.45E-03
41	6.70	1.77E-13	0.	2.79E-10	0.	1.36E-10	0.	6.13E-06	1.66E-04	7.48E-04	5.44E-04	1.46E-03
42	6.60	1.09E-13	0.	2.56E-10	0.	1.19E-10	0.	6.17E-06	1.74E-04	7.57E-04	5.46E-04	1.48E-03
43	6.50	5.34E-14	0.	2.05E-10	0.	1.69E-10	0.	6.22E-06	1.82E-04	7.63E-04	5.47E-04	1.50E-03
44	6.40	3.67E-14	0.	1.45E-10	5.23E-13	1.35E-10	0.	6.27E-06	1.90E-04	7.72E-04	5.48E-04	1.52E-03
45	6.30	2.16E-14	0.	9.20E-11	2.50E-12	1.17E-10	0.	6.32E-06	2.00E-04	7.82E-04	5.51E-04	1.54E-03
46	6.20	9.83E-15	0.	5.25E-11	3.69E-12	1.37E-10	0.	6.37E-06	2.10E-04	7.91E-04	5.55E-04	1.56E-03
47	6.10	4.57E-15	0.	2.52E-11	1.04E-11	1.19E-10	0.	6.41E-06	2.20E-04	8.02E-04	5.59E-04	1.59E-03
48	6.00	1.93E-15	0.	8.47E-12	1.82E-11	9.62E-11	0.	6.46E-06	2.32E-04	8.13E-04	5.64E-04	1.62E-03
49	5.90	4.77E-16	0.	4.65E-13	1.50E-11	9.25E-11	0.	6.46E-06	2.44E-04	8.27E-04	5.68E-04	1.64E-03
50	5.80	6.10E-17	0.	1.18E-14	2.12E-11	9.74E-11	0.	6.37E-06	2.57E-04	8.40E-04	5.72E-04	1.68E-03
51	5.70	4.49E-18	0.	0.	2.52E-11	1.09E-10	0.	5.98E-06	2.71E-04	8.53E-04	5.76E-04	1.71E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.94E-10	0.	0.	0.	2.19E-11	1.41E-10	0.	0.	5.56E-06	2.66E-04	8.69E-04	5.81E-04	1.74E-03
53	5.50	0.	0.	0.	0.	2.68E-11	1.31E-10	0.	0.	5.99E-06	3.02E-04	8.89E-04	5.86E-04	1.78E-03
54	5.40	0.	0.	0.	0.	2.51E-11	1.09E-10	0.	0.	5.62E-06	3.19E-04	9.14E-04	5.93E-04	1.83E-03
55	5.30	0.	0.	0.	0.	2.97E-11	1.35E-10	0.	0.	5.66E-06	3.38E-04	9.39E-04	6.01E-04	1.88E-03
56	5.20	0.	0.	0.	0.	2.79E-11	1.06E-10	0.	0.	5.69E-06	3.58E-04	9.31E-04	6.11E-04	1.91E-03
57	5.10	0.	0.	0.	0.	2.79E-11	1.35E-10	0.	0.	5.74E-06	3.88E-04	9.59E-04	6.20E-04	1.96E-03
58	5.00	2.06E-12	0.	0.	0.	2.57E-11	1.29E-10	0.	0.	5.79E-06	4.03E-04	9.98E-04	6.30E-04	2.03E-03
59	4.90	7.05E-12	0.	0.	0.	2.88E-11	1.43E-10	0.	0	5.84E-06	4.29E-04	1.02E-03	6.41E-04	2.10E-03
60	4.80	1.34E-11	0.	0.	0.	3.11E-11	1.35E-10	0.	0.	5.88E-06	4.56E-04	1.06E-03	6.55E-04	2.18E-03
61	4.70	1.84E-11	0.	0.	0	3.14E-11	1.23E-10	0.	0.	5.93E-06	4.86E-04	1.10E-03	6.73E-04	2.27E-03
62	4.60	2.56E-11	0.	0.	0.	3.29E-11	1.17E-10	0.	0.	5.98E-06	5.19E-04	1.15E-03	6.91E-04	2.37E-03
63	4.50	2.72E-11	0.	3.36E-11	0.	3.01E-11	8.44E-11	0.	0.	6.03E-06	5.55E-04	1.21E-03	7.10E-04	2.48E-03
64	4.40	2.94E-11	0.	9.77E-11	0.	3.04E-11	5.76E-11	0.	0.	6.08E-06	5.94E-04	1.27E-03	7.29E-04	2.60E-03
65	4.30	2.82E-11	0.	3.36E-10	0.	2.94E-11	3.66E-11	0.	0.	6.13E-06	6.37E-04	1.34E-03	7.49E-04	2.74E-03
66	4.20	2.65E-11	0.	1.03E-09	0.	3.10E-11	2.92E-11	0.	0.	6.17E-06	6.84E-04	1.41E-03	7.70E-04	2.87E-03
67	4.10	2.51E-11	0.	4.08E-10	0.	3.07E-11	7.10E-12	0.	0.	6.20E-06	7.36E-04	1.48E-03	7.87E-04	2.99E-03
68	4.00	2.34E-11	0.	1.90E-09	0.	2.99E-11	5.32E-12	0.	0.	6.22E-06	7.93E-04	1.55E-03	3.77E-04	2.73E-03
69	3.90	2.01E-11	0.	7.15E-10	7.92E-09	2.80E-11	1.97E-12	0.	0.	6.20E-06	8.56E-04	1.54E-03	3.89E-04	2.79E-03
70	3.80	2.22E-11	0.	1.15E-09	2.95E-08	3.82E-11	0.	0.	0.	6.17E-06	9.26E-04	1.56E-03	4.06E-04	2.90E-03
71	3.70	2.08E-11	0.	1.17E-09	1.48E-08	2.63E-11	0.	0.	0.	6.08E-06	1.00E-03	1.32E-03	4.43E-04	2.77E-03
72	3.60	1.82E-11	0.	8.65E-10	7.11E-08	2.85E-11	0.	0.	0.	5.69E-06	1.09E-03	1.42E-03	4.84E-04	3.00E-03
73	3.50	1.72E-11	0.	1.12E-09	1.26E-07	2.29E-11	0.	0.	0.	5.21E-06	1.19E-03	1.51E-03	5.31E-04	3.24E-03
74	3.40	1.68E-11	0.	7.40E-10	2.13E-08	2.50E-11	0.	0.	0.	3.00E-06	1.30E-03	1.67E-03	5.84E-04	3.56E-03
75	3.30	1.29E-11	0.	7.98E-10	7.77E-08	2.10E-11	0.	0.	0.	3.01E-06	1.42E-03	1.84E-03	6.37E-04	3.91E-03
76	3.20	1.14E-11	0.	5.07E-10	1.20E-07	2.22E-11	0.	0.	0.	3.01E-06	1.56E-03	2.01E-03	6.94E-04	4.27E-03
77	3.10	1.11E-11	0.	3.97E-10	3.38E-08	2.12E-11	0.	0.	0.	3.02E-06	1.72E-03	2.19E-03	7.58E-04	4.67E-03
78	3.00	1.01E-11	0.	2.46E-10	7.35E-08	2.03E-11	0.	0.	0.	3.03E-06	1.90E-03	2.36E-03	8.27E-04	5.08E-03
79	2.90	6.59E-12	0.	1.56E-10	3.97E-08	1.59E-11	0.	0.	0.	3.03E-06	2.11E-03	2.56E-03	8.71E-04	5.54E-03
80	2.80	9.83E-12	0.	7.54E-11	2.79E-08	1.13E-11	0.	0.	0.	3.04E-06	2.35E-03	2.78E-03	9.43E-04	6.08E-03
81	2.70	5.94E-12	0.	3.95E-11	3.44E-08	6.35E-12	0.	0.	0.	3.04E-06	2.63E-03	3.02E-03	1.02E-03	6.67E-03
82	2.60	2.88E-12	0.	1.70E-11	3.65E-09	2.86E-12	0.	0.	0.	3.04E-06	2.95E-03	3.24E-03	1.10E-03	7.29E-03
83	2.50	2.84E-13	0.	1.77E-12	3.50E-09	6.93E-13	0.	0.	0.	3.04E-06	3.32E-03	3.69E-03	7.13E-04	7.73E-03
84	2.40	0.	7.74E-11	0.	2.78E-09	7.48E-14	0.	0.	0.	3.04E-06	3.77E-03	4.38E-03	8.29E-04	8.98E-03
85	2.30	0.	2.25E-10	0.	0.	0.	0.	0.	0.	3.81E-06	4.29E-03	3.85E-03	9.87E-04	9.13E-03
86	2.20	0.	6.06E-10	0.	0.	0.	0.	0.	0.	3.08E-06	4.91E-03	4.55E-03	1.18E-03	1.06E-02
87	2.10	0.	6.15E-10	0.	0.	0.	0.	0.	0.	2.99E-06	5.66E-03	5.29E-03	1.37E-03	1.23E-02
88	2.00	0.	1.23E-09	0.	0.	0.	0.	0.	0.	2.89E-06	6.56E-03	6.84E-03	1.56E-03	1.42E-02
89	1.90	0.	1.45E-09	0.	0.	0.	0.	0.	0.	2.78E-06	7.67E-03	6.93E-03	1.82E-03	1.64E-02
90	1.80	0.	1.29E-09	0.	0.	0.	0.	0.	0.	2.66E-06	9.07E-03	8.31E-03	2.22E-03	1.96E-02
91	1.70	0.	1.41E-09	0.	0.	0.	0.	0.	0.	2.51E-06	1.08E-02	9.98E-03	2.70E-03	2.35E-02
92	1.60	0.	1.87E-09	0.	0.	0.	0.	0.	0.	2.12E-06	1.31E-02	1.17E-02	3.18E-03	2.79E-02
93	1.50	0.	1.21E-09	0.	0.	0.	0.	0.	0.	9.65E-07	1.59E-02	1.52E-02	3.86E-03	3.50E-02
94	1.40	0.	1.19E-09	0.	0.	0.	0.	0.	0.	0.	1.97E-02	1.90E-02	4.61E-03	4.33E-02
95	1.30	0.	9.19E-10	0.	0.	0.	0.	0.	0.	0.	2.47E-02	2.55E-02	6.08E-03	5.62E-02
96	1.20	0.	8.73E-10	0.	0.	0.	0.	0.	0.	0.	3.15E-02	2.85E-02	6.13E-03	6.61E-02
97	1.10	0.	8.47E-10	0.	0.	0.	0.	1.33E-15	0.	0.	4.11E-02	3.51E-02	7.68E-03	8.39E-02
98	1.00	0.	7.79E-10	0.	0.	0.	0.	2.17E-14	0.	0.	5.92E-02	4.26E-02	8.76E-03	1.07E-01
99	0.90	0.	6.39E-10	0.	0.	0.	0.	2.54E-14	0.	0.	7.65E-02	4.91E-02	1.03E-02	1.36E-01
100	0.80	0.	3.08E-10	0.	0.	0.	0.	5.61E-13	0.	0.	1.10E-01	5.65E-02	1.18E-02	1.78E-01
101	0.70	0.	6.92E-11	0.	0.	0.	0.	5.35E-13	0.	0.	1.66E-01	6.18E-02	1.19E-02	2.39E-01
102	0.60	0.	1.94E-11	0.	0.	0.	0.	1.60E-12	0.	0.	2.69E-01	6.83E-02	1.33E-02	3.51E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.2936-03 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.27E-13	0.	0.	0.	6.71E-09	4.79E-07	2.59E-05	7.17E-04	3.36E-05
2	10.60	0.	0.	3.01E-13	0.	0.	0.	6.71E-09	4.93E-07	2.61E-05	7.12E-04	3.37E-05
3	10.50	0.	0.	3.06E-13	0.	0.	0.	6.72E-09	5.07E-07	2.63E-05	7.09E-04	3.39E-05
4	10.40	0.	0.	2.93E-13	0.	0.	0.	6.73E-09	5.22E-07	2.65E-05	7.06E-04	3.41E-05
5	10.30	0.	0.	2.59E-13	0.	0.	0.	6.74E-09	5.37E-07	2.67E-05	7.03E-04	3.43E-05
6	10.20	0.	0.	2.78E-13	0.	0.	0.	6.75E-09	5.53E-07	2.69E-05	7.00E-04	3.45E-05
7	10.10	0.	0.	2.56E-13	0.	0.	0.	6.76E-09	5.70E-07	2.70E-05	6.97E-04	3.46E-05
8	10.00	0.	0.	2.20E-13	0.	0.	0.	6.77E-09	5.86E-07	2.81E-05	6.94E-04	2.77E-05
9	9.90	0.	0.	2.35E-13	0.	0.	0.	6.78E-09	6.06E-07	2.82E-05	6.91E-04	2.77E-05
10	9.80	0.	0.	2.23E-13	0.	0.	0.	6.79E-09	6.25E-07	2.83E-05	6.88E-04	2.78E-05
11	9.71	0.	0.	1.96E-13	0.	0.	0.	6.81E-09	6.44E-07	2.84E-05	6.84E-04	2.78E-05
12	9.60	0.	0.	2.12E-13	0.	0.	0.	6.82E-09	6.65E-07	2.84E-05	6.81E-04	2.79E-05
13	9.50	0.	0.	1.84E-13	0.	0.	0.	6.83E-09	6.86E-07	2.85E-05	6.78E-04	2.80E-05
14	9.40	0.	0.	1.77E-13	0.	0.	0.	6.85E-09	7.09E-07	2.86E-05	6.75E-04	2.81E-05
15	9.30	0.	0.	1.82E-13	0.	0.	0.	6.88E-09	7.32E-07	2.87E-05	6.73E-04	2.82E-05
16	9.20	0.	0.	1.54E-13	0.	0.	0.	6.90E-09	7.56E-07	2.88E-05	6.70E-04	2.83E-05
17	9.10	0.	0.	1.58E-13	0.	0.	0.	6.93E-09	7.82E-07	9.96E-06	6.67E-04	1.74E-05
18	9.00	0.	0.	1.46E-13	0.	0.	0.	6.99E-09	8.08E-07	1.00E-05	6.64E-04	1.75E-05
19	8.90	0.	0.	1.37E-13	0.	0.	0.	6.98E-09	8.36E-07	1.00E-05	6.61E-04	1.75E-05
20	8.80	0.	0.	1.35E-13	0.	0.	0.	7.00E-09	8.65E-07	1.01E-05	6.59E-04	1.76E-05
21	8.70	0.	0.	1.19E-13	0.	0.	0.	7.03E-09	8.93E-07	1.02E-05	6.56E-04	1.76E-05
22	8.60	0.	0.	1.23E-13	0.	0.	0.	7.05E-09	9.28E-07	1.02E-05	6.54E-04	1.77E-05
23	8.50	0.	0.	1.10E-13	0.	0.	0.	7.08E-09	9.61E-07	1.03E-05	6.51E-04	1.78E-05
24	8.40	0.	0.	1.10E-13	0.	0.	0.	7.12E-09	9.97E-07	1.03E-05	6.49E-04	1.78E-05
25	8.30	0.	0.	9.49E-14	0.	0.	0.	7.15E-09	1.03E-06	1.04E-05	6.47E-04	1.79E-05
26	8.20	0.	0.	9.66E-14	0.	0.	0.	7.19E-09	1.07E-06	1.05E-05	6.48E-04	1.81E-05
27	8.10	0.	0.	8.47E-14	0.	0.	0.	7.23E-09	1.11E-06	1.06E-05	6.46E-04	1.82E-05
28	8.00	0.	0.	8.59E-14	0.	0.	0.	7.20E-09	1.15E-06	1.08E-05	6.46E-04	1.84E-05
29	7.90	0.	0.	7.50E-14	0.	0.	0.	7.30E-09	1.20E-06	1.09E-05	6.47E-04	1.86E-05
30	7.80	0.	0.	7.84E-14	0.	0.	0.	7.34E-09	1.25E-06	1.10E-05	6.47E-04	1.87E-05
31	7.70	0.	0.	6.98E-14	0.	0.	0.	7.38E-09	1.30E-06	1.11E-05	6.48E-04	1.89E-05
32	7.60	0.	0.	6.70E-14	0.	4.32E-18	0.	7.41E-09	1.35E-06	9.92E-06	6.49E-04	1.78E-05
33	7.50	0.	0.	6.29E-14	0.	1.38E-17	0.	7.45E-09	1.40E-06	1.01E-05	6.50E-04	1.80E-05
34	7.40	0.	0.	5.71E-14	0.	1.25E-16	0.	7.49E-09	1.46E-06	1.02E-05	6.51E-04	1.82E-05
35	7.30	0.	0.	5.47E-14	0.	4.74E-16	0.	7.53E-09	1.52E-06	1.04E-05	6.51E-04	1.84E-05
36	7.20	0.	0.	5.00E-14	0.	1.33E-15	0.	7.58E-09	1.59E-06	1.06E-05	6.52E-04	1.87E-05
37	7.10	0.	0.	4.66E-14	0.	4.17E-15	0.	7.64E-09	1.66E-06	1.08E-05	6.53E-04	1.90E-05
38	7.00	2.98E-17	0.	4.51E-14	0.	7.94E-15	0.	7.70E-09	1.73E-06	1.10E-05	6.54E-04	1.92E-05
39	6.90	3.94E-17	0.	4.19E-14	0.	1.17E-14	0.	7.76E-09	1.81E-06	1.11E-05	6.56E-04	1.95E-05
40	6.80	3.42E-17	0.	4.09E-14	0.	1.94E-14	0.	7.82E-09	1.89E-06	1.13E-05	6.57E-04	1.98E-05
41	6.70	2.51E-17	0.	3.63E-14	0.	1.87E-14	0.	7.89E-09	1.98E-06	1.15E-05	6.59E-04	2.01E-05
42	6.60	1.54E-17	0.	3.29E-14	0.	1.62E-14	0.	7.95E-09	2.07E-06	1.17E-05	6.61E-04	2.04E-05
43	6.50	8.97E-18	0.	2.67E-14	0.	2.29E-14	0.	8.01E-09	2.16E-06	1.16E-05	6.63E-04	2.04E-05
44	6.40	5.20E-18	0.	1.89E-14	7.09E-17	2.10E-14	0.	8.07E-09	2.27E-06	1.18E-05	6.65E-04	2.07E-05
45	6.30	3.85E-18	0.	1.21E-14	3.39E-16	1.59E-14	0.	8.13E-09	2.38E-06	1.20E-05	6.68E-04	2.11E-05
46	6.20	1.39E-18	0.	6.82E-15	4.88E-16	2.17E-14	0.	8.20E-09	2.50E-06	1.23E-05	6.74E-04	2.15E-05
47	6.10	6.47E-19	0.	3.27E-15	1.40E-15	2.54E-14	0.	8.26E-09	2.62E-06	1.25E-05	6.80E-04	2.19E-05
48	6.00	2.73E-19	0.	8.41E-16	1.38E-15	1.30E-14	0.	8.32E-09	2.74E-06	1.28E-05	6.85E-04	2.24E-05
49	5.90	6.75E-20	0.	6.84E-17	2.04E-15	1.24E-14	0.	8.32E-09	2.90E-06	1.30E-05	6.91E-04	2.29E-05
50	5.80	8.43E-21	0.	1.93E-18	2.87E-15	1.32E-14	0.	8.20E-09	3.04E-06	1.33E-05	6.96E-04	2.34E-05
51	5.70	8.30E-22	0.	0.	3.41E-15	1.48E-14	0.	7.78E-09	3.22E-06	1.36E-05	7.02E-04	2.39E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2500. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.ROT	NO 2	O- PHOTO.DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.88E-23	0.	0.	0.	2.98E-15	1.91E-14	0.	0.	7.16E-09	3.40E-06	1.39E-05	7.08E-06	2.44E-05
53	5.50	0.	0.	0.	0.	3.64E-15	1.77E-14	0.	0.	7.20E-09	3.59E-06	1.43E-05	7.15E-06	2.51E-05
54	5.40	0.	0.	0.	0.	3.48E-15	1.48E-14	0.	0.	7.23E-09	3.80E-06	1.48E-05	7.24E-06	2.58E-05
55	5.30	0.	0.	0.	0.	3.48E-15	1.83E-14	0.	0.	7.20E-09	4.02E-06	1.17E-05	7.34E-06	2.31E-05
56	5.20	0.	0.	0.	0.	3.78E-15	1.44E-14	0.	0.	7.33E-09	4.24E-06	1.21E-05	7.32E-06	2.36E-05
57	5.10	0.	0.	0.	0.	3.79E-15	1.84E-14	0.	0.	7.39E-09	4.92E-06	1.25E-05	7.44E-06	2.44E-05
58	5.00	4.05E-16	0.	0.	0.	3.48E-15	1.76E-14	0.	0.	7.45E-09	4.88E-06	1.29E-05	7.56E-06	2.53E-05
59	4.90	9.98E-16	0.	0.	0.	3.91E-15	1.94E-14	0.	0.	7.51E-09	5.10E-06	1.34E-05	7.70E-06	2.62E-05
60	4.80	1.90E-15	0.	0.	0.	4.22E-15	1.83E-14	0.	0.	7.58E-09	5.43E-06	1.39E-05	7.87E-06	2.72E-05
61	4.70	2.60E-15	0.	0.	0.	4.26E-15	1.67E-14	0.	0.	7.64E-09	5.79E-06	1.44E-05	8.08E-06	2.83E-05
62	4.60	3.63E-15	0.	0.	0.	4.41E-15	1.52E-14	0.	0.	7.70E-09	6.18E-06	1.51E-05	8.30E-06	2.96E-05
63	4.50	3.85E-15	0.	4.37E-15	0.	4.09E-15	1.14E-14	0.	0.	7.76E-09	6.61E-06	1.60E-05	8.53E-06	3.11E-05
64	4.40	4.16E-15	0.	1.27E-14	0.	4.13E-15	7.80E-15	0.	0.	7.82E-09	7.07E-06	1.68E-05	8.74E-06	3.26E-05
65	4.30	3.98E-15	0.	4.37E-14	0.	3.98E-15	4.96E-15	0.	0.	7.89E-09	7.58E-06	1.77E-05	8.99E-06	3.43E-05
66	4.20	8.75E-15	0.	1.84E-13	0.	4.20E-15	3.41E-15	0.	0.	7.95E-09	8.14E-06	1.87E-05	9.24E-06	3.61E-05
67	4.10	3.95E-15	0.	6.23E-14	0.	4.16E-15	9.63E-16	0.	0.	7.98E-09	8.76E-06	1.97E-05	9.22E-06	3.77E-05
68	4.00	3.31E-15	0.	1.95E-13	0.	4.65E-15	7.21E-16	0.	0.	8.01E-09	9.44E-06	2.07E-05	4.58E-06	3.47E-05
69	3.90	2.68E-15	0.	9.20E-14	9.93E-12	3.79E-15	2.67E-16	0.	0.	7.98E-09	1.02E-05	2.05E-05	4.73E-06	3.54E-05
70	3.80	3.14E-15	0.	1.50E-13	3.54E-11	4.10E-15	0.	0.	0.	7.95E-09	1.10E-05	1.76E-05	4.94E-06	3.34E-05
71	3.70	2.83E-15	0.	1.52E-13	1.60E-11	3.57E-15	0.	0.	0.	7.82E-09	1.20E-05	1.85E-05	5.38E-06	3.58E-05
72	3.60	2.58E-15	0.	1.12E-13	8.54E-11	3.86E-15	0.	0.	0.	7.33E-09	1.30E-05	1.98E-05	5.88E-06	3.87E-05
73	3.50	2.44E-15	0.	1.46E-13	1.51E-10	3.11E-15	0.	0.	0.	6.71E-09	1.42E-05	2.11E-05	6.44E-06	4.17E-05
74	3.40	2.27E-15	0.	9.61E-14	2.56E-11	3.50E-15	0.	0.	0.	3.87E-09	1.55E-05	2.31E-05	7.07E-06	4.57E-05
75	3.30	1.43E-15	0.	9.83E-14	9.33E-11	2.84E-15	0.	0.	0.	3.87E-09	1.70E-05	2.53E-05	7.72E-06	4.99E-05
76	3.20	1.62E-15	0.	6.58E-14	1.45E-10	3.01E-15	0.	0.	0.	3.88E-09	1.86E-05	2.75E-05	8.48E-06	5.45E-05
77	3.10	1.57E-15	0.	5.18E-14	4.07E-11	2.88E-15	0.	0.	0.	3.89E-09	2.05E-05	2.98E-05	9.08E-06	5.94E-05
78	3.00	1.42E-15	0.	3.28E-14	8.02E-11	2.76E-15	0.	0.	0.	3.98E-09	2.27E-05	3.22E-05	9.77E-06	6.46E-05
79	2.90	1.21E-15	0.	2.03E-14	4.77E-11	2.15E-15	0.	0.	0.	3.91E-09	2.51E-05	3.47E-05	1.05E-05	7.03E-05
80	2.80	1.28E-15	0.	9.79E-15	3.35E-11	1.53E-15	0.	0.	0.	3.91E-09	2.80E-05	3.75E-05	1.14E-05	7.69E-05
81	2.70	8.41E-16	0.	4.01E-15	4.15E-11	8.61E-16	0.	0.	0.	3.91E-09	3.13E-05	3.65E-05	1.23E-05	8.01E-05
82	2.60	4.87E-16	0.	2.21E-15	4.38E-12	3.88E-16	0.	0.	0.	3.91E-09	3.51E-05	3.95E-05	1.33E-05	8.79E-05
83	2.50	2.89E-17	0.	2.38E-16	4.30E-12	9.48E-17	0.	0.	0.	3.91E-09	3.96E-05	4.46E-05	8.31E-06	9.25E-05
84	2.40	0.	1.81E-14	0.	3.24E-12	1.81E-17	0.	0.	0.	3.91E-09	4.48E-05	3.94E-05	1.00E-05	9.43E-05
85	2.30	0.	2.92E-14	0.	0.	0.	0.	0.	0.	3.88E-09	5.11E-05	4.75E-05	1.19E-05	1.16E-04
86	2.20	0.	7.87E-14	0.	0.	0.	0.	0.	0.	3.87E-09	5.85E-05	5.58E-05	1.42E-05	1.28E-04
87	2.10	0.	7.94E-14	0.	0.	0.	0.	0.	0.	3.85E-09	6.74E-05	6.47E-05	1.64E-05	1.48E-04
88	2.00	0.	1.60E-13	0.	0.	0.	0.	0.	0.	3.73E-09	7.81E-05	7.36E-05	1.87E-05	1.70E-04
89	1.90	0.	1.89E-13	0.	0.	0.	0.	0.	0.	3.58E-09	9.13E-05	8.41E-05	2.19E-05	1.97E-04
90	1.80	0.	1.67E-13	0.	0.	0.	0.	0.	0.	3.43E-09	1.08E-04	1.00E-04	2.66E-05	2.35E-04
91	1.70	0.	1.33E-13	0.	0.	0.	0.	0.	0.	3.23E-09	1.29E-04	1.20E-04	3.24E-05	2.81E-04
92	1.60	0.	1.39E-13	0.	0.	0.	0.	0.	0.	2.73E-09	1.55E-04	1.39E-04	3.81E-05	3.33E-04
93	1.50	0.	1.58E-13	0.	0.	0.	0.	0.	0.	1.24E-09	1.88E-04	1.88E-04	4.62E-05	4.16E-04
94	1.40	0.	1.95E-13	0.	0.	0.	0.	0.	0.	0.	2.34E-04	2.15E-04	5.52E-05	5.04E-04
95	1.30	0.	1.19E-13	0.	0.	0.	0.	0.	0.	0.	2.93E-04	2.98E-04	6.78E-05	6.68E-04
96	1.20	0.	1.13E-13	0.	0.	0.	0.	0.	0.	0.	3.75E-04	3.20E-04	7.32E-05	7.70E-04
97	1.10	0.	1.10E-13	0.	0.	0.	0.	1.80E-19	0.	0.	4.89E-04	6.04E-04	9.10E-05	9.85E-04
98	1.00	0.	1.01E-13	0.	0.	0.	0.	2.95E-18	0.	0.	6.57E-04	4.90E-04	1.04E-04	1.25E-03
99	0.90	0.	8.39E-14	0.	0.	0.	0.	3.44E-18	0.	0.	9.10E-04	5.64E-04	1.23E-04	1.68E-03
100	0.80	0.	3.90E-14	0.	0.	0.	0.	7.60E-17	0.	0.	1.31E-03	6.49E-04	1.41E-04	2.19E-03
101	0.70	0.	8.99E-15	0.	0.	0.	0.	7.25E-17	0.	0.	1.98E-03	7.81E-04	1.42E-04	2.82E-03
102	0.60	0.	2.08E-15	0.	0.	0.	0.	2.28E-16	0.	0.	3.20E-03	7.13E-04	1.59E-04	4.07E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 B-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.22E-17	0.	0.	0.	7.83E-12	6.31E-09	9.54E-07	8.39E-08	1.04E-06
2	10.60	0.	0.	2.98E-17	0.	0.	0.	7.84E-12	6.49E-09	9.60E-07	8.36E-08	1.06E-06
3	10.50	0.	0.	3.01E-17	0.	0.	0.	7.85E-12	6.68E-09	3.85E-07	8.33E-08	4.75E-07
4	10.40	0.	0.	2.89E-17	0.	0.	0.	7.86E-12	6.88E-09	3.87E-07	8.30E-08	4.77E-07
5	10.30	0.	0.	2.95E-17	0.	0.	0.	7.87E-12	7.08E-09	3.89E-07	8.27E-08	4.79E-07
6	10.20	0.	0.	2.69E-17	0.	0.	0.	7.88E-12	7.29E-09	3.93E-07	8.24E-08	4.83E-07
7	10.10	0.	0.	2.52E-17	0.	0.	0.	7.89E-12	7.52E-09	3.97E-07	8.22E-08	4.86E-07
8	10.00	0.	0.	2.25E-17	0.	0.	0.	7.90E-12	7.74E-09	4.01E-07	8.19E-08	4.90E-07
9	9.90	0.	0.	2.31E-17	0.	0.	0.	7.91E-12	7.98E-09	4.04E-07	8.17E-08	4.94E-07
10	9.80	0.	0.	2.29E-17	0.	0.	0.	7.93E-12	8.23E-09	4.08E-07	8.15E-08	4.98E-07
11	9.70	0.	0.	1.93E-17	0.	0.	0.	7.94E-12	8.49E-09	4.12E-07	8.12E-08	5.02E-07
12	9.60	0.	0.	2.09E-17	0.	0.	0.	7.96E-12	8.76E-09	4.16E-07	8.10E-08	5.06E-07
13	9.50	0.	0.	1.81E-17	0.	0.	0.	7.97E-12	9.04E-09	4.20E-07	8.07E-08	5.10E-07
14	9.40	0.	0.	1.74E-17	0.	0.	0.	8.08E-12	9.34E-09	4.24E-07	8.05E-08	5.14E-07
15	9.30	0.	0.	1.79E-17	0.	0.	0.	8.03E-12	9.64E-09	3.20E-07	8.03E-08	4.18E-07
16	9.20	0.	0.	1.51E-17	0.	0.	0.	8.06E-12	9.97E-09	3.24E-07	8.01E-08	4.14E-07
17	9.10	0.	0.	1.56E-17	0.	0.	0.	8.09E-12	1.03E-08	3.27E-07	7.99E-08	4.17E-07
18	9.00	0.	0.	1.43E-17	0.	0.	0.	8.12E-12	1.06E-08	3.31E-07	7.97E-08	4.21E-07
19	8.90	0.	0.	1.34E-17	0.	0.	0.	8.14E-12	1.10E-08	3.34E-07	7.95E-08	4.25E-07
20	8.80	0.	0.	1.33E-17	0.	0.	0.	8.17E-12	1.14E-08	3.38E-07	7.93E-08	4.29E-07
21	8.70	0.	0.	1.17E-17	0.	0.	0.	8.20E-12	1.18E-08	5.41E-07	7.92E-08	4.32E-07
22	8.60	0.	0.	1.21E-17	0.	0.	0.	8.23E-12	1.22E-08	3.45E-07	7.55E-08	4.33E-07
23	8.50	0.	0.	1.08E-17	0.	0.	0.	8.26E-12	1.27E-08	3.49E-07	7.49E-08	4.37E-07
24	8.40	0.	0.	1.08E-17	0.	0.	0.	8.30E-12	1.31E-08	3.53E-07	7.48E-08	4.41E-07
25	8.30	0.	0.	9.34E-18	0.	0.	0.	8.35E-12	1.36E-08	3.58E-07	7.48E-08	4.47E-07
26	8.20	0.	0.	9.51E-18	0.	0.	0.	8.39E-12	1.41E-08	3.65E-07	7.51E-08	4.54E-07
27	8.10	0.	0.	8.36E-18	0.	0.	0.	8.43E-12	1.46E-08	2.45E-07	7.54E-08	3.36E-07
28	8.00	0.	0.	8.45E-18	0.	0.	0.	8.48E-12	1.52E-08	2.53E-07	7.57E-08	3.44E-07
29	7.90	0.	0.	7.38E-18	0.	0.	0.	8.52E-12	1.58E-08	2.60E-07	7.61E-08	3.52E-07
30	7.80	0.	0.	7.72E-18	0.	0.	0.	8.56E-12	1.64E-08	2.67E-07	7.64E-08	3.60E-07
31	7.70	0.	0.	6.87E-18	0.	0.	0.	8.61E-12	1.71E-08	2.75E-07	7.67E-08	3.69E-07
32	7.60	0.	0.	6.99E-18	0.	4.63E-22	0.	8.65E-12	1.78E-08	2.84E-07	7.70E-08	3.79E-07
33	7.50	0.	0.	6.19E-18	0.	1.47E-21	0.	8.70E-12	1.85E-08	2.93E-07	7.74E-08	3.88E-07
34	7.40	0.	0.	5.62E-18	0.	1.34E-20	0.	8.74E-12	1.93E-08	3.01E-07	7.77E-08	3.98E-07
35	7.30	0.	0.	5.39E-18	0.	5.07E-20	0.	8.79E-12	2.01E-08	3.12E-07	7.81E-08	4.10E-07
36	7.20	0.	0.	4.92E-18	0.	1.42E-19	0.	8.84E-12	2.09E-08	3.25E-07	7.87E-08	4.24E-07
37	7.10	0.	0.	4.78E-18	0.	4.47E-19	0.	8.91E-12	2.18E-08	3.36E-07	7.93E-08	4.38E-07
38	7.00	2.33E-21	0.	4.44E-18	0.	8.50E-19	0.	8.99E-12	2.28E-08	3.19E-07	7.98E-08	4.22E-07
39	6.90	4.58E-21	0.	4.12E-18	0.	1.25E-18	0.	9.06E-12	2.38E-08	3.32E-07	8.04E-08	4.36E-07
40	6.80	3.97E-21	0.	4.02E-18	0.	2.07E-18	0.	9.13E-12	2.49E-08	3.44E-07	8.10E-08	4.50E-07
41	6.70	2.92E-21	0.	3.57E-18	0.	2.00E-18	0.	9.20E-12	2.60E-08	3.56E-07	8.16E-08	4.64E-07
42	6.60	1.79E-21	0.	3.24E-18	0.	1.73E-18	0.	9.27E-12	2.72E-08	3.69E-07	8.23E-08	4.78E-07
43	6.50	1.84E-21	0.	2.63E-18	0.	2.45E-18	0.	9.35E-12	2.85E-08	3.81E-07	8.30E-08	4.93E-07
44	6.40	6.84E-22	0.	1.86E-18	7.58E-21	2.25E-18	0.	9.42E-12	2.99E-08	3.94E-07	8.37E-08	5.07E-07
45	6.30	3.55E-22	0.	1.19E-18	3.62E-20	1.78E-18	0.	9.49E-12	3.13E-08	4.06E-07	8.46E-08	5.22E-07
46	6.20	1.62E-22	0.	6.71E-19	5.22E-20	2.27E-18	0.	9.56E-12	3.29E-08	4.20E-07	8.57E-08	5.38E-07
47	6.10	7.52E-23	0.	3.22E-19	1.58E-19	2.74E-18	0.	9.64E-12	3.45E-08	4.33E-07	8.68E-08	5.55E-07
48	6.00	3.17E-23	0.	8.28E-20	1.47E-19	1.40E-18	0.	9.71E-12	3.63E-08	4.47E-07	8.79E-08	5.72E-07
49	5.90	7.89E-24	0.	5.94E-21	2.18E-19	1.35E-18	0.	9.71E-12	3.82E-08	4.62E-07	8.90E-08	5.89E-07
50	5.80	1.88E-24	0.	1.58E-22	3.87E-19	1.41E-18	0.	9.58E-12	4.02E-08	4.76E-07	9.02E-08	6.06E-07
51	5.70	7.39E-26	0.	0.	3.65E-19	1.58E-18	0.	8.99E-12	4.24E-08	2.83E-07	7.88E-08	3.24E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.35E-27	0.	0.	0.	3.18E-19	2.09E-18	0.	0.	0.35E-12	4.47E-08	2.12E-07	7.96E-08	3.36E-07
53	5.50	0.	0.	0.	0.	3.89E-19	1.89E-18	0.	0.	0.48E-12	4.73E-08	2.21E-07	8.86E-08	3.49E-07
54	5.40	0.	0.	0.	0.	3.64E-19	1.58E-18	0.	0.	0.44E-12	5.00E-08	2.31E-07	8.17E-08	3.63E-07
55	5.30	0.	0.	0.	0.	3.73E-19	1.90E-18	0.	0.	0.50E-12	5.29E-08	2.42E-07	8.31E-08	3.78E-07
56	5.20	0.	0.	0.	0.	4.04E-19	1.54E-18	0.	0.	0.55E-12	5.60E-08	2.52E-07	8.47E-08	3.93E-07
57	5.10	0.	0.	0.	0.	4.05E-19	1.97E-18	0.	0.	0.62E-12	5.94E-08	2.63E-07	8.63E-08	4.09E-07
58	5.00	4.71E-28	0.	0.	0.	3.73E-19	1.88E-18	0.	0.	0.70E-12	6.31E-08	2.74E-07	8.79E-08	4.25E-07
59	4.90	1.14E-19	0.	0.	0.	4.10E-19	2.07E-18	0.	0.	0.77E-12	6.71E-08	2.86E-07	8.77E-08	4.41E-07
60	4.80	2.21E-19	0.	0.	0.	4.52E-19	1.96E-18	0.	0.	0.84E-12	7.14E-08	2.98E-07	8.98E-08	4.59E-07
61	4.70	3.02E-19	0.	0.	0.	4.56E-19	1.79E-18	0.	0.	0.91E-12	7.61E-08	3.14E-07	9.23E-08	4.82E-07
62	4.60	4.21E-19	0.	0.	0.	4.72E-19	1.62E-18	0.	0.	0.99E-12	8.13E-08	3.34E-07	9.56E-08	5.13E-07
63	4.50	4.48E-19	0.	4.30E-19	0.	4.37E-19	1.23E-18	0.	0.	9.06E-12	8.69E-08	3.55E-07	9.78E-08	5.40E-07
64	4.40	4.64E-19	0.	1.25E-18	0.	4.41E-19	8.35E-19	0.	0.	9.13E-12	9.30E-08	3.77E-07	1.01E-07	5.70E-07
65	4.30	4.63E-19	0.	4.30E-18	0.	4.20E-19	5.31E-19	0.	0.	9.20E-12	9.97E-08	3.99E-07	1.01E-07	6.00E-07
66	4.20	4.36E-19	0.	1.32E-17	0.	4.58E-19	3.69E-19	0.	0.	9.27E-12	1.07E-07	4.24E-07	9.82E-08	6.21E-07
67	4.10	4.13E-19	0.	6.13E-18	0.	4.45E-19	1.03E-19	0.	0.	9.31E-12	1.15E-07	4.50E-07	5.59E-08	6.21E-07
68	4.00	3.84E-19	0.	1.92E-17	0.	4.33E-19	7.71E-20	0.	0.	9.35E-12	1.24E-07	4.61E-07	5.81E-08	6.43E-07
69	3.90	3.31E-19	0.	9.14E-18	8.22E-15	4.04E-19	2.06E-20	0.	0.	9.31E-12	1.34E-07	4.53E-07	5.98E-08	6.47E-07
70	3.80	3.69E-19	0.	1.40E-17	3.22E-14	4.39E-19	0.	0.	0.	9.27E-12	1.45E-07	4.78E-07	6.27E-08	6.86E-07
71	3.70	3.38E-19	0.	1.58E-17	1.53E-14	3.82E-19	0.	0.	0.	9.13E-12	1.57E-07	4.97E-07	6.81E-08	7.22E-07
72	3.60	3.00E-19	0.	1.11E-17	7.70E-14	4.13E-19	0.	0.	0.	8.55E-12	1.71E-07	5.27E-07	7.46E-08	7.71E-07
73	3.50	2.84E-19	0.	1.44E-17	1.38E-13	3.32E-19	0.	0.	0.	7.83E-12	1.86E-07	5.41E-07	8.07E-08	8.28E-07
74	3.40	2.64E-19	0.	9.44E-18	2.33E-14	3.75E-19	0.	0.	0.	4.51E-12	2.03E-07	6.01E-07	4.83E-08	8.93E-07
75	3.30	2.13E-19	0.	9.67E-18	8.49E-14	3.84E-19	0.	0.	0.	4.52E-12	2.23E-07	6.41E-07	9.60E-08	9.60E-07
76	3.20	1.88E-19	0.	6.48E-18	1.32E-13	3.22E-19	0.	0.	0.	4.53E-12	2.45E-07	3.77E-07	1.03E-07	7.24E-07
77	3.10	1.82E-19	0.	5.08E-18	3.78E-14	3.08E-19	0.	0.	0.	4.54E-12	2.69E-07	4.04E-07	1.11E-07	7.84E-07
78	3.00	1.65E-19	0.	3.15E-18	8.03E-14	2.95E-19	0.	0.	0.	4.55E-12	2.98E-07	4.44E-07	1.20E-07	8.61E-07
79	2.90	1.41E-19	0.	2.08E-18	4.34E-14	2.30E-19	0.	0.	0.	4.56E-12	3.30E-07	4.85E-07	1.24E-07	9.40E-07
80	2.80	1.49E-19	0.	9.64E-19	3.05E-14	1.64E-19	0.	0.	0.	4.56E-12	3.67E-07	5.31E-07	1.31E-07	1.03E-06
81	2.70	9.78E-20	0.	4.54E-19	3.78E-14	9.22E-20	0.	0.	0.	4.59E-12	4.10E-07	5.78E-07	1.21E-07	1.11E-06
82	2.60	4.73E-20	0.	2.18E-19	3.99E-15	4.16E-20	0.	0.	0.	4.56E-12	4.60E-07	6.24E-07	8.60E-08	1.17E-06
83	2.50	3.36E-21	0.	2.26E-20	3.91E-15	1.01E-20	0.	0.	0.	4.56E-12	5.19E-07	5.82E-07	1.80E-07	1.28E-06
84	2.40	0.	9.89E-19	0.	2.95E-15	1.09E-21	0.	0.	0.	4.56E-12	5.68E-07	6.86E-07	1.21E-07	1.39E-06
85	2.38	0.	2.07E-18	0.	0.	0.	0.	0.	0.	4.53E-12	6.70E-07	8.81E-07	1.43E-07	1.61E-06
86	2.20	0.	7.79E-18	0.	0.	0.	0.	0.	0.	4.51E-12	7.67E-07	9.18E-07	1.69E-07	1.85E-06
87	2.10	0.	7.83E-18	0.	0.	0.	0.	0.	0.	4.49E-12	8.83E-07	1.04E-06	1.95E-07	2.12E-06
88	2.00	0.	1.57E-17	0.	0.	0.	0.	0.	0.	4.35E-12	1.02E-06	1.16E-06	2.21E-07	2.41E-06
89	1.90	0.	1.86E-17	0.	0.	0.	0.	0.	0.	4.18E-12	1.20E-06	1.38E-06	2.57E-07	2.76E-06
90	1.80	0.	1.48E-17	0.	0.	0.	0.	0.	0.	4.08E-12	1.41E-06	1.58E-06	3.09E-07	3.22E-06
91	1.70	0.	1.81E-17	0.	0.	0.	0.	0.	0.	3.77E-12	1.69E-06	1.39E-06	3.58E-07	3.43E-06
92	1.60	0.	1.37E-17	0.	0.	0.	0.	0.	0.	3.19E-12	2.03E-06	1.40E-06	4.07E-07	4.84E-06
93	1.50	0.	1.95E-17	0.	0.	0.	0.	0.	0.	1.45E-12	2.48E-06	1.94E-06	4.94E-07	4.91E-06
94	1.40	0.	1.93E-17	0.	0.	0.	0.	0.	0.	0.	3.06E-06	1.92E-06	5.58E-07	5.54E-06
95	1.38	0.	1.17E-17	0.	0.	0.	0.	0.	0.	0.	3.84E-06	2.72E-06	6.84E-07	7.16E-06
96	1.20	0.	1.12E-17	0.	0.	0.	0.	0.	0.	0.	4.98E-06	3.50E-06	8.84E-07	9.21E-06
97	1.10	0.	1.08E-17	0.	0.	0.	0.	1.93E-23	0.	0.	6.40E-06	4.37E-06	9.48E-07	1.17E-05
98	1.00	0.	9.96E-18	0.	0.	0.	0.	3.15E-22	0.	0.	8.59E-06	5.13E-06	1.14E-06	1.49E-05
99	0.90	0.	8.17E-18	0.	0.	0.	0.	3.69E-22	0.	0.	1.19E-05	5.53E-06	1.32E-06	1.87E-05
100	0.80	0.	3.03E-18	0.	0.	0.	0.	8.13E-21	0.	0.	1.71E-05	6.00E-06	1.35E-06	2.45E-05
101	0.70	0.	8.89E-19	0.	0.	0.	0.	7.76E-21	0.	0.	2.38E-05	5.76E-06	1.10E-06	3.20E-05
102	0.60	0.	1.96E-19	0.	0.	0.	0.	2.43E-20	0.	0.	4.17E-05	6.49E-06	1.33E-06	4.95E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-08 (1.9E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-H NO. 1	N2 BETA	N2 GAMMA	NO ?	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.76	0.	0.	1.08E-21	0.	0.	0.	1.17E-14	1.39E-10	1.37E-08	1.50E-09	1.54E-08
2	10.66	0.	0.	1.73E-21	0.	0.	0.	1.17E-14	1.43E-10	1.38E-08	1.50E-09	1.55E-08
3	10.56	0.	0.	1.76E-21	0.	0.	0.	1.17E-14	1.47E-10	1.39E-08	1.50E-09	1.56E-08
4	10.46	0.	0.	2.00E-21	0.	0.	0.	1.17E-14	1.52E-10	1.40E-08	1.50E-09	1.57E-08
5	10.36	0.	0.	1.49E-21	0.	0.	0.	1.17E-14	1.54E-10	1.42E-08	1.37E-09	1.59E-08
6	10.26	0.	0.	1.55E-21	0.	0.	0.	1.18E-14	1.61E-10	1.44E-08	1.50E-09	1.61E-08
7	10.16	0.	0.	1.48E-21	0.	0.	0.	1.18E-14	1.66E-10	1.46E-08	1.50E-09	1.63E-08
8	10.06	0.	0.	1.32E-21	0.	0.		1.18E-14	1.71E-10	1.48E-08	1.39E-09	1.65E-08
9	9.96	0.	0.	1.35E-21	0.	0.		1.18E-14	1.76E-10	1.50E-08	1.50E-09	1.67E-08
10	9.86	0.	0.	1.29E-21	0.	0.	0.	1.18E-14	1.81E-10	1.52E-08	1.40E-09	1.70E-08
11	9.76	0.	0.	1.13E-21	0.	0.	0.	1.19E-14	1.87E-10	1.54E-08	1.40E-09	1.72E-08
12	9.66	0.	0.	1.22E-21	0.	0.	0.	1.19E-14	1.93E-10	1.56E-08	1.61E-09	1.74E-08
13	9.56	0.	0.	1.06E-21	0.	0.	0.	1.19E-14	1.99E-10	1.58E-08	1.41E-09	1.76E-08
14	9.46	0.	0.	1.02E-21	0.	0.	0.	1.19E-14	2.06E-10	1.60E-08	1.42E-09	1.78E-08
15	9.36	0.	0.	1.05E-21	0.	0.	0.	1.20E-14	2.13E-10	1.54E-08	1.64E-09	1.72E-08
16	9.26	0.	0.	8.84E-22	0.	0.	0.	1.20E-14	2.20E-10	1.56E-08	1.63E-09	1.75E-08
17	9.16	0.	0.	9.12E-22	0.	0.	0.	1.21E-14	2.27E-10	1.58E-08	1.64E-09	1.77E-08
18	9.06	0.	0.	8.40E-22	0.	0.	0.	1.21E-14	2.35E-10	1.60E-08	1.64E-09	1.79E-08
19	8.96	0.	0.	7.88E-22	0.	0.	0.	1.22E-14	2.43E-10	1.62E-08	1.65E-09	1.81E-08
20	8.86	0.	0.	7.79E-22	0.	0.	0.	1.22E-14	2.51E-10	1.64E-08	1.38E-09	1.80E-08
21	8.76	0.	0.	6.87E-22	0.	0.	0.	1.22E-14	2.60E-10	1.66E-08	1.38E-09	1.82E-08
22	8.66	0.	0.	7.12E-22	0.	0.	0.	1.23E-14	2.69E-10	1.68E-08	1.31E-09	1.84E-08
23	8.56	0.	0.	6.34E-22	0.	0.	0.	1.23E-14	2.79E-10	1.71E-08	1.32E-09	1.87E-08
24	8.46	0.	0.	6.35E-22	0.	0.	0.	1.24E-14	2.89E-10	1.73E-08	1.33E-09	1.89E-08
25	8.36	0.	0.	5.47E-22	0.	0.	0.	1.25E-14	3.00E-10	1.00E-08	1.35E-09	1.17E-08
26	8.26	0.	0.	5.57E-22	0.	0.	0.	1.25E-14	3.11E-10	1.04E-08	1.37E-09	1.21E-08
27	8.16	0.	0.	4.89E-22	0.	0.	0.	1.26E-14	3.23E-10	1.08E-08	1.40E-09	1.25E-08
28	8.06	0.	0.	4.95E-22	0.	0.	0.	1.27E-14	3.35E-10	1.12E-08	1.42E-09	1.30E-08
29	7.96	0.	0.	4.32E-22	0.	0.	0.	1.27E-14	3.48E-10	1.16E-08	1.45E-09	1.34E-08
30	7.86	0.	0.	4.52E-22	0.	0.	0.	1.28E-14	3.61E-10	1.20E-08	1.47E-09	1.39E-08
31	7.76	0.	0.	4.03E-22	0.	0.	0.	1.28E-14	3.76E-10	1.25E-08	1.50E-09	1.43E-08
32	7.66	0.	0.	3.86E-22	0.	4.12E-24	0.	1.29E-14	3.91E-10	1.30E-08	1.52E-09	1.49E-08
33	7.56	0.	0.	3.63E-22	0.	1.31E-23	0.	1.30E-14	4.07E-10	1.35E-08	1.55E-09	1.54E-08
34	7.46	0.	0.	3.29E-22	0.	1.19E-24	0.	1.31E-14	4.24E-10	1.40E-08	1.58E-09	1.60E-08
35	7.36	0.	0.	3.16E-22	0.	4.51E-24	0.	1.31E-14	4.41E-10	1.20E-08	1.61E-09	1.49E-08
36	7.26	0.	0.	2.89E-22	0.	1.26E-23	0.	1.32E-14	4.60E-10	1.35E-08	1.65E-09	1.56E-08
37	7.16	0.	0.	2.80E-22	0.	3.97E-23	0.	1.33E-14	4.80E-10	1.42E-08	1.70E-09	1.64E-08
38	7.06	3.15E-25	0.	2.68E-22	0.	7.54E-23	0.	1.34E-14	5.01E-10	1.49E-08	1.75E-09	1.72E-08
39	6.96	6.19E-25	0.	2.47E-22	0.	1.11E-22	0.	1.35E-14	5.23E-10	1.56E-08	1.79E-09	1.79E-08
40	6.86	5.37E-25	0.	2.36E-22	0.	1.85E-22	0.	1.36E-14	5.47E-10	1.63E-08	1.84E-09	1.87E-08
41	6.76	3.95E-25	0.	2.09E-22	0.	1.70E-22	0.	1.37E-14	5.72E-10	1.70E-08	1.89E-09	1.95E-08
42	6.66	2.42E-25	0.	1.90E-22	0.	1.54E-22	0.	1.39E-14	5.99E-10	1.77E-08	1.94E-09	2.03E-08
43	6.56	1.41E-25	0.	1.54E-22	0.	2.18E-22	0.	1.40E-14	6.26E-10	1.84E-08	1.99E-09	2.10E-08
44	6.46	8.17E-26	0.	1.89E-22	6.75E-25	2.08E-22	0.	1.41E-14	6.56E-10	1.91E-08	2.04E-09	2.18E-08
45	6.36	4.88E-26	0.	6.95E-23	3.22E-24	1.51E-22	0.	1.42E-14	6.85E-10	1.98E-08	2.09E-09	2.26E-08
46	6.26	2.19E-26	0.	3.93E-23	4.64E-24	2.02E-22	0.	1.43E-14	7.22E-10	2.06E-08	2.15E-09	2.34E-08
47	6.16	1.02E-26	0.	1.88E-23	1.34E-23	2.44E-22	0.	1.44E-14	7.59E-10	2.13E-08	2.21E-09	2.43E-08
48	6.06	4.20E-27	0.	4.85E-24	1.31E-23	1.24E-22	0.	1.45E-14	7.97E-10	6.56E-09	1.26E-09	8.62E-09
49	5.96	1.86E-27	0.	3.49E-25	1.94E-23	1.24E-22	0.	1.45E-14	8.39E-10	6.79E-09	1.27E-09	8.98E-09
50	5.86	1.34E-28	0.	8.81E-27	2.73E-23	1.24E-22	0.	1.43E-14	8.84E-10	7.02E-09	1.29E-09	9.19E-09
51	5.76	9.99E-30	0.	0.	3.25E-23	1.41E-22	0.	1.34E-14	9.31E-10	7.34E-09	1.31E-09	9.59E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.2036-03 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	O2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	4.53E-31	0.	0.	0.	2.83E-23	1.92E-22	0.	0.	1.25E-14	9.83E-10	7.77E-09	1.34E-09	1.01E-08
93	5.50	0.	0.	0.	0.	3.44E-23	1.60E-22	0.	0.	1.25E-14	1.04E-09	8.21E-09	1.37E-09	1.06E-08
94	5.40	0.	0.	0.	0.	3.23E-23	1.41E-22	0.	0.	1.26E-14	1.10E-09	8.70E-09	1.41E-09	1.12E-08
95	5.30	0.	0.	0.	0.	3.31E-23	1.74E-22	0.	0.	1.27E-14	1.16E-09	9.18E-09	1.45E-09	1.18E-08
96	5.20	0.	0.	0.	0.	3.60E-23	1.37E-22	0.	0.	1.28E-14	1.23E-09	9.66E-09	1.50E-09	1.24E-08
97	5.10	0.	0.	0.	0.	3.60E-23	1.75E-22	0.	0.	1.29E-14	1.30E-09	1.01E-08	1.37E-09	1.28E-08
98	5.00	6.37E-24	0.	0.	0.	3.32E-23	1.67E-22	0.	0.	1.30E-14	1.38E-09	1.06E-08	1.41E-09	1.34E-08
99	4.90	1.57E-23	0.	0.	0.	3.72E-23	1.89E-22	0.	0.	1.31E-14	1.47E-09	1.11E-08	1.45E-09	1.41E-08
100	4.80	2.90E-23	0.	0.	0.	4.02E-23	1.74E-22	0.	0.	1.32E-14	1.57E-09	1.16E-08	1.50E-09	1.47E-08
101	4.70	4.00E-23	0.	0.	0.	4.00E-23	1.59E-22	0.	0.	1.33E-14	1.67E-09	1.23E-08	1.55E-09	1.56E-08
102	4.60	5.70E-23	0.	0.	0.	4.28E-23	1.44E-22	0.	0.	1.34E-14	1.78E-09	1.33E-08	1.61E-09	1.66E-08
103	4.50	6.85E-23	0.	2.92E-23	0.	3.89E-23	1.09E-22	0.	0.	1.35E-14	1.90E-09	1.42E-08	1.67E-09	1.78E-08
104	4.40	8.54E-23	0.	7.32E-23	0.	3.93E-23	7.43E-23	0.	0.	1.36E-14	2.04E-09	1.51E-08	1.74E-09	1.89E-08
105	4.30	6.26E-23	0.	2.52E-22	0.	3.79E-23	4.72E-23	0.	0.	1.37E-14	2.19E-09	1.60E-08	1.78E-09	2.00E-08
106	4.20	5.89E-23	0.	7.74E-22	0.	4.08E-23	3.25E-23	0.	0.	1.39E-14	2.35E-09	1.71E-08	1.24E-09	2.07E-08
107	4.10	5.50E-23	0.	3.59E-22	0.	3.96E-23	9.17E-24	0.	0.	1.39E-14	2.52E-09	1.82E-08	1.32E-09	2.21E-08
108	4.00	5.20E-23	0.	1.12E-21	0.	3.85E-23	6.86E-24	0.	0.	1.40E-14	2.72E-09	1.93E-08	1.40E-09	2.34E-08
109	3.90	4.47E-23	0.	5.35E-22	3.75E-18	3.61E-23	2.55E-24	0.	0.	1.39E-14	2.94E-09	2.02E-08	1.40E-09	2.46E-08
110	3.80	4.93E-23	0.	8.64E-22	1.47E-17	3.90E-23	0.	0.	0.	1.39E-14	3.17E-09	2.13E-08	1.57E-09	2.60E-08
111	3.70	4.46E-23	0.	8.77E-22	2.97E-18	3.48E-23	0.	0.	0.	1.36E-14	3.44E-09	2.24E-08	1.66E-09	2.75E-08
112	3.60	4.06E-23	0.	6.40E-22	3.55E-17	3.67E-23	0.	0.	0.	1.20E-14	3.74E-09	2.36E-08	1.81E-09	2.91E-08
113	3.50	3.83E-23	0.	8.41E-22	4.27E-17	2.96E-23	0.	0.	0.	1.17E-14	4.08E-09	2.48E-08	1.94E-09	3.08E-08
114	3.40	3.57E-23	0.	5.55E-22	1.06E-17	3.33E-23	0.	0.	0.	6.74E-15	4.45E-09	8.26E-09	1.94E-09	1.47E-08
115	3.30	2.87E-23	0.	5.67E-22	3.87E-17	2.78E-23	0.	0.	0.	4.75E-15	4.88E-09	8.94E-09	2.09E-09	1.59E-08
116	3.20	2.54E-23	0.	3.86E-22	6.88E-17	2.06E-23	0.	0.	0.	6.70E-15	5.35E-09	1.01E-08	1.89E-09	1.74E-08
117	3.10	2.40E-23	0.	2.98E-22	1.69E-17	2.74E-23	0.	0.	0.	6.78E-15	3.98E-09	1.15E-08	1.78E-09	1.92E-08
118	3.00	2.24E-23	0.	1.09E-22	3.66E-17	2.63E-23	0.	0.	0.	6.79E-15	6.51E-09	1.29E-08	1.94E-09	2.13E-08
119	2.90	1.91E-23	0.	1.17E-22	1.98E-17	2.85E-23	0.	0.	0.	6.81E-15	7.22E-09	1.43E-08	2.12E-09	2.36E-08
120	2.80	2.81E-23	0.	5.69E-23	1.39E-17	1.44E-23	0.	0.	0.	6.82E-15	8.03E-09	1.57E-08	2.31E-09	2.60E-08
121	2.70	1.32E-22	0.	2.66E-23	1.72E-17	8.20E-24	0.	0.	0.	6.82E-15	8.97E-09	1.71E-08	1.78E-09	2.78E-08
122	2.60	8.48E-24	0.	1.20E-23	1.82E-18	3.78E-24	0.	0.	0.	6.82E-15	1.01E-08	1.85E-08	1.94E-09	3.05E-08
123	2.50	4.54E-25	0.	1.32E-24	1.78E-18	8.95E-25	0.	0.	0.	6.82E-15	1.13E-08	1.96E-08	2.19E-09	3.31E-08
124	2.40	0.	5.80E-23	0.	1.35E-18	9.66E-26	0.	0.	0.	6.82E-15	1.28E-08	2.24E-08	2.57E-09	3.78E-08
125	2.30	0.	1.80E-22	0.	0.	0.	0.	0.	0.	6.76E-15	1.46E-08	2.53E-08	2.94E-09	4.29E-08
126	2.20	0.	4.54E-22	0.	0.	0.	0.	0.	0.	6.73E-15	1.67E-08	2.83E-08	3.40E-09	4.84E-08
127	2.10	0.	4.59E-22	0.	0.	0.	0.	0.	0.	6.71E-15	1.93E-08	3.12E-08	3.84E-09	5.43E-08
128	2.00	0.	9.23E-22	0.	0.	0.	0.	0.	0.	6.49E-15	2.23E-08	3.42E-08	4.20E-09	6.09E-08
129	1.90	0.	1.09E-21	0.	0.	0.	0.	0.	0.	6.24E-15	2.61E-08	1.80E-08	3.59E-09	4.86E-08
130	1.80	0.	9.36E-22	0.	0.	0.	0.	0.	0.	5.97E-15	3.08E-08	2.14E-08	4.20E-09	5.65E-08
131	1.70	0.	1.06E-21	0.	0.	0.	0.	0.	0.	5.63E-15	3.68E-08	2.43E-08	5.04E-09	6.61E-08
132	1.60	0.	8.81E-22	0.	0.	0.	0.	0.	0.	4.76E-15	4.43E-08	2.71E-08	5.73E-09	7.72E-08
133	1.50	0.	9.10E-22	0.	0.	0.	0.	0.	0.	2.10E-15	5.40E-08	3.09E-08	6.83E-09	9.10E-08
134	1.40	0.	8.94E-22	0.	0.	0.	0.	0.	0.	0.	6.66E-08	3.19E-08	6.15E-09	1.05E-07
135	1.30	0.	6.89E-22	0.	0.	0.	0.	0.	0.	0.	8.35E-08	3.86E-08	8.20E-09	1.30E-07
136	1.20	0.	6.54E-22	0.	0.	0.	0.	0.	0.	0.	1.07E-07	2.39E-08	8.55E-09	1.30E-07
137	1.10	0.	6.39E-22	0.	0.	0.	0.	1.72E-27	0.	0.	1.39E-07	2.96E-08	1.08E-08	1.79E-07
138	1.00	0.	5.84E-22	0.	0.	0.	0.	2.80E-26	0.	0.	1.84E-07	3.68E-08	1.31E-08	2.35E-07
139	0.90	0.	4.79E-22	0.	0.	0.	0.	3.28E-26	0.	0.	2.57E-07	4.83E-08	1.35E-08	3.11E-07
140	0.80	0.	2.29E-22	0.	0.	0.	0.	7.24E-25	0.	0.	3.09E-07	4.65E-08	1.57E-08	4.32E-07
141	0.70	0.	5.19E-23	0.	0.	0.	0.	6.98E-25	0.	0.	5.58E-07	4.41E-08	1.37E-08	6.15E-07
142	0.60	0.	1.19E-23	0.	0.	0.	0.	2.17E-24	0.	0.	8.98E-07	4.97E-08	1.55E-08	9.64E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO ?	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	1.02E-26	0.	0.	0.	1.11E-17	2.74E-12	3.03E-10	4.05E-11	3.52E-10
2	10.68	0.	0.	1.07E-26	0.	0.	0.	1.11E-17	2.84E-12	3.06E-10	4.05E-11	3.55E-10
3	10.58	0.	0.	1.70E-26	0.	0.	0.	1.11E-17	2.92E-12	3.08E-10	4.05E-11	3.57E-10
4	10.48	0.	0.	1.63E-26	0.	0.	0.	1.11E-17	3.01E-12	3.10E-10	4.05E-11	3.60E-10
5	10.38	0.	0.	1.44E-26	0.	0.	0.	1.11E-17	3.10E-12	3.14E-10	4.06E-11	3.63E-10
6	10.28	0.	0.	1.58E-26	0.	0.	0.	1.12E-17	3.19E-12	3.18E-10	4.78E-11	3.69E-10
7	10.18	0.	0.	1.42E-26	0.	0.	0.	1.12E-17	3.29E-12	3.23E-10	4.75E-11	3.74E-10
8	10.08	0.	0.	1.27E-26	0.	0.	0.	1.12E-17	3.39E-12	3.28E-10	4.80E-11	3.80E-10
9	9.98	0.	0.	1.31E-26	0.	0.	0.	1.12E-17	3.49E-12	3.33E-10	4.85E-11	3.85E-10
10	9.88	0.	0.	1.24E-26	0.	0.	0.	1.12E-17	3.60E-12	3.38E-10	4.93E-11	3.91E-10
11	9.78	0.	0.	1.89E-26	0.	0.	0.	1.12E-17	3.7[illegible]E-12	3.43E-10	4.95E-11	3.96E-10
12	9.68	0.	0.	1.10E-26	0.	0.	0.	1.13E-17	[illegible]	3.48E-10	5.06E-11	4.02E-10
13	9.58	0.	0.	1.03E-26	0.	0.	0.	1.13E-17	[illegible]E-12	3.53E-10	5.05E-11	4.07E-10
14	9.48	0.	0.	9.84E-27	0.	0.	0.	1.13E-17	[illegible]E-12	3.55E-10	5.18E-11	4.10E-10
15	9.38	0.	0.	1.81E-26	0.	0.	0.	1.14E-17	4.21E-12	3.45E-10	5.15E-11	4.10E-10
16	9.27	0.	0.	8.56E-27	0.	0.	0.	1.14E-17	4.35E-12	3.65E-10	5.20E-11	4.22E-10
17	9.18	0.	0.	8.81E-27	0.	0.	0.	1.14E-17	4.59E-12	3.78E-10	5.24E-11	4.27E-10
18	9.08	0.	0.	8.12E-27	0.	0.	0.	1.15E-17	[illegible]E-12	3.75E-10	5.47E-11	4.14E-10
19	8.98	0.	0.	7.61E-27	0.	0.	0.	1.15E-17	[illegible]	3.80E-10	5.27E-11	4.18E-10
20	8.88	0.	0.	7.52E-27	0.	0.	0.	1.16E-17	[illegible]E-12	3.85E-10	5.34E-11	4.23E-10
21	8.78	0.	0.	8.64E-27	0.	0.	0.	1.16E-17	5.15E-12	3.90E-10	5.42E-11	4.29E-10
22	8.68	0.	0.	6.88E-27	0.	0.	0.	1.17E-17	5.33E-12	3.95E-10	5.49E-11	4.35E-10
23	8.58	0.	0.	6.12E-27	0.	0.	0.	1.17E-17	5.52E-12	4.[illegible]E-10	5.57E-11	4.42E-10
24	8.48	0.	0.	8.13E-27	0.	0.	0.	1.18E-17	5.72E-12	2.[illegible]E-10	5.67E-11	2.65E-10
25	8.38	0.	0.	5.29E-27	0.	0.	0.	1.18E-17	5.93E-12	2.31E-10	3.72E-11	2.74E-10
26	8.28	0.	0.	5.38E-27	0.	0.	0.	1.19E-17	6.15E-12	2.40E-10	3.86E-11	2.85E-10
27	8.18	0.	0.	4.72E-27	0.	0.	0.	1.19E-17	6.38E-12	2.49E-10	4.00E-11	2.96E-10
28	8.08	0.	0.	4.79E-27	0.	0.	0.	1.20E-17	6.63E-12	2.59E-10	4.16E-11	3.07E-10
29	7.98	0.	0.	4.18E-27	0.	0.	0.	1.21E-17	6.89E-12	2.69E-10	4.27E-11	3.18E-10
30	7.88	0.	0.	4.37E-27	0.	0.	0.	1.21E-17	7.16E-12	2.78E-10	4.41E-11	3.30E-10
31	7.78	0.	0.	3.89E-27	0.	0.	0.	1.22E-17	7.44E-12	2.89E-10	4.55E-11	3.42E-10
32	7.68	0.	0.	3.73E-27	0.	9.43E-31	0.	1.22E-17	7.74E-12	3.01E-10	4.70E-11	3.55E-10
33	7.58	0.	0.	3.50E-27	0.	3.01E-30	0.	1.23E-17	8.05E-12	3.13E-10	4.84E-11	3.69E-10
34	7.48	0.	0.	3.10E-27	0.	2.73E-29	0.	1.24E-17	8.39E-12	2.83E-10	5.01E-11	3.42E-10
35	7.38	0.	0.	3.05E-27	0.	1.03E-28	0.	1.24E-17	8.74E-12	2.97E-10	5.18E-11	3.57E-10
36	7.28	0.	0.	2.79E-27	0.	2.09E-28	0.	1.25E-17	9.11E-12	3.14E-10	5.45E-11	3.77E-10
37	7.18	0.	0.	2.71E-27	0.	9.11E-28	0.	1.26E-17	9.50E-12	3.30E-10	5.71E-11	3.97E-10
38	7.08	1.71E-29	0.	2.52E-27	0.	1.73E-27	0.	1.27E-17	9.91E-12	3.47E-10	5.98E-11	4.17E-10
39	6.98	3.36E-29	0.	2.33E-27	0.	2.54E-27	0.	1.28E-17	1.03E-11	3.64E-10	6.24E-11	4.37E-10
40	6.88	2.92E-29	0.	2.28E-27	0.	4.23E-27	0.	1.29E-17	1.08E-11	3.81E-10	6.51E-11	4.57E-10
41	6.78	2.15E-29	0.	2.02E-27	0.	4.89E-27	0.	1.30E-17	1.13E-11	3.97E-10	6.77E-11	4.76E-10
42	6.68	1.32E-29	0.	1.84E-27	0.	3.53E-27	0.	1.31E-17	1.18E-11	4.14E-10	7.04E-11	4.96E-10
43	6.58	7.67E-30	0.	1.49E-27	0.	5.88E-27	0.	1.32E-17	1.24E-11	4.31E-10	7.30E-11	5.16E-10
44	6.48	4.44E-30	0.	1.05E-27	1.55E-29	4.59E-27	0.	1.33E-17	1.30E-11	4.48E-10	7.58E-11	5.37E-10
45	6.38	2.61E-30	0.	8.72E-28	7.39E-29	3.46E-27	0.	1.34E-17	1.34E-11	4.65E-10	7.86E-11	5.57E-10
46	6.28	1.19E-30	0.	3.80E-28	1.06E-28	4.63E-27	0.	1.35E-17	1.43E-11	4.83E-10	8.17E-11	5.79E-10
47	6.18	5.52E-31	0.	1.02E-28	1.06E-28	5.59E-27	0.	1.36E-17	1.50E-11	1.39E-10	2.91E-11	1.83E-10
48	6.08	2.33E-31	0.	4.68E-29	3.38E-28	2.85E-27	0.	1.37E-17	1.58E-11	1.44E-10	2.54E-11	1.89E-10
49	5.98	5.77E-32	0.	3.36E-30	4.44E-28	2.75E-27	0	1.37E-17	1.66E-11	1.49E-10	3.04E-11	1.96E-10
50	5.88	7.57E-33	0.	8.51E-32	6.26E-28	2.88E-27	0.	1.35E-17	1.75E-11	1.55E-10	3.14E-11	2.04E-10
51	5.78	5.43E-34	0.	0.	7.45E-28	3.23E-27	0.	1.27E-17	1.84E-11	1.62E-10	3.25E-11	2.13E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R	O2 BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.68	2.46E-35	0.	0.	0.	6.49E-28	4.17E-27	0.	0.		1.10E-17	1.94E-11	1.72E-10	3.34E-11	2.25E-10
53	5.58	0.	0.	0.	0.	7.94E-28	5.06E-27	0.	0.		1.19E-17	2.05E-11	1.83E-10	3.49E-11	2.38E-10
54	5.48	0.	0.	0.	0.	7.41E-28	5.22E-27	0.	0.		1.20E-17	2.17E-11	1.94E-10	3.65E-11	2.52E-10
55	5.38	0.	0.	0.	0.	7.68E-28	4.88E-27	0.	0.		1.20E-17	2.30E-11	2.05E-10	3.84E-11	2.67E-10
56	5.28	0.	0.	0.	0.	8.24E-28	5.15E-27	0.	0.		1.21E-17	2.43E-11	2.16E-10	3.87E-11	2.71E-10
57	5.18	0.	0.	0.	0.	8.26E-28	4.81E-27	0.	0.		1.22E-17	2.58E-11	2.28E-10	3.23E-11	2.84E-10
58	5.08	3.46E-28	0.	0.	0.	7.60E-28	3.83E-27	0.	0.		1.23E-17	2.74E-11	2.39E-10	3.38E-11	3.00E-10
59	4.98	8.53E-28	0.	0.	0.	8.53E-28	4.23E-27	0.	0.		1.24E-17	2.91E-11	2.50E-10	3.54E-11	3.15E-10
60	4.88	1.62E-27	0.	0.	0.	9.21E-28	3.99E-27	0.	0.		1.25E-17	3.10E-11	2.61E-10	3.71E-11	3.29E-10
61	4.78	2.22E-27	0.	0.	0.	9.38E-28	3.65E-27	0.	0.		1.26E-17	3.30E-11	2.70E-10	3.89E-11	3.50E-10
62	4.68	3.10E-27	0.	0.	0.	9.62E-28	3.31E-27	0.	0.		1.27E-17	3.52E-11	2.99E-10	4.08E-11	3.75E-10
63	4.58	3.20E-27	0.	2.43E-28	0.	8.92E-28	2.50E-27	0.	0.		1.28E-17	3.77E-11	3.20E-10	4.28E-11	4.01E-10
64	4.48	3.56E-27	0.	7.87E-28	0.	9.88E-28	1.78E-27	0.	0.		1.29E-17	4.03E-11	3.42E-10	4.51E-11	4.27E-10
65	4.38	3.48E-27	0.	2.43E-27	0.	8.69E-28	1.08E-27	0.	0.		1.30E-17	4.32E-11	3.63E-10	4.44E-11	4.51E-10
66	4.28	3.28E-27	0.	7.48E-27	0.	9.17E-28	7.44E-28	0.	0.		1.31E-17	4.64E-11	3.80E-10	4.49E-11	4.80E-10
67	4.18	3.03E-27	0.	3.47E-27	0.	9.07E-28	2.10E-28	0.	0.		1.32E-17	4.99E-11	4.14E-10	4.86E-11	5.13E-10
68	4.08	2.82E-27	0.	1.88E-26	0.	8.83E-28	1.57E-28	0.	0.		1.32E-17	5.37E-11	4.39E-10	5.22E-11	5.45E-10
69	3.98	2.48E-27	0.	5.17E-27	2.81E-22	8.28E-28	5.84E-29	0.	0.		1.32E-17	5.80E-11	4.66E-10	5.59E-11	5.79E-10
70	3.88	2.68E-27	0.	8.39E-27	1.18E-21	8.95E-28	0.	0.	0.		1.31E-17	6.27E-11	4.92E-10	5.96E-11	6.14E-10
71	3.78	2.42E-27	0.	8.47E-27	5.23E-22	7.79E-28	0.	0.	0.		1.29E-17	6.80E-11	5.18E-10	6.35E-11	6.49E-10
72	3.68	2.21E-27	0.	6.26E-27	2.66E-21	8.42E-28	0.	0.	0.		1.21E-17	7.39E-11	5.44E-10	5.91E-11	6.77E-10
73	3.58	2.08E-27	0.	8.13E-27	4.71E-21	6.78E-28	0.	0.	0.		1.11E-17	8.65E-11	1.56E-10	6.31E-11	3.80E-10
74	3.48	1.94E-27	0.	5.36E-27	7.97E-22	7.64E-28	0.	0.	0.		6.39E-18	8.79E-11	1.70E-10	6.70E-11	3.25E-10
75	3.38	1.56E-27	0.	5.47E-27	2.91E-21	6.20E-28	0.	0.	0.		6.40E-18	9.63E-11	1.83E-10	5.86E-11	3.30E-10
76	3.28	1.38E-27	0.	3.67E-27	4.96E-21	6.56E-28	0.	0.	0.		6.41E-18	1.06E-10	2.09E-10	4.89E-11	3.55E-10
77	3.18	1.34E-27	0.	2.87E-27	1.27E-21	6.20E-28	0.	0.	0.		6.43E-18	1.16E-10	2.39E-10	4.01E-11	4.01E-10
78	3.08	1.22E-27	0.	1.70E-27	2.79E-21	6.62E-28	0.	0.	0.		6.44E-18	1.29E-10	2.66E-10	3.13E-11	4.48E-10
79	2.98	1.04E-27	0.	1.13E-27	1.49E-21	4.69E-28	0.	0.	0.		6.45E-18	1.42E-10	2.98E-10	5.67E-11	4.97E-10
80	2.88	1.09E-27	0.	5.45E-28	1.84E-21	3.35E-28	0.	0.	0.		6.47E-18	1.58E-10	3.20E-10	6.04E-11	5.47E-10
81	2.78	7.19E-28	0.	2.57E-28	1.29E-21	1.88E-28	0.	0.	0.		6.47E-18	1.77E-10	3.58E-10	6.22E-11	5.97E-10
82	2.68	3.48E-28	0.	1.23E-28	1.37E-22	8.47E-29	0.	0.	0.		6.47E-18	1.98E-10	3.84E-10	6.74E-11	6.51E-10
83	2.58	2.47E-28	0.	1.20E-29	1.34E-22	2.85E-29	0.	0.	0.		6.47E-18	2.24E-10	4.25E-10	7.49E-11	7.23E-10
84	2.48	0.	5.60E-28	0.	1.81E-22	2.21E-30	0.	0.	0.		6.47E-18	2.53E-10	4.83E-10	8.54E-11	8.22E-10
85	2.38	0.	1.63E-27	0.	0.	0.	0.	0.	0.		6.41E-18	2.88E-10	5.41E-10	9.01E-11	9.20E-10
86	2.28	0.	4.38E-27	0.	0.	0.	0.	0.	0.		6.39E-18	3.30E-10	6.80E-10	1.07E-10	1.04E-09
87	2.18	0.	4.43E-27	0.	0.	0.	0.	0.	0.		6.36E-18	3.80E-10	2.59E-10	5.44E-11	6.93E-10
88	2.08	0.	8.91E-27	0.	0.	0.	0.	0.	0.		6.16E-18	4.40E-10	2.94E-10	6.20E-11	7.94E-10
89	1.98	0.	1.05E-26	0.	0.	0.	0.	0.	0.		5.92E-18	5.14E-10	3.30E-10	7.03E-11	9.15E-10
90	1.88	0.	9.05E-27	0.	0.	0.	0.	0.	0.		5.66E-18	6.07E-10	3.67E-10	8.00E-11	1.05E-09
91	1.78	0.	1.02E-26	0.	0.	0.	0.	0.	0.		5.34E-18	7.24E-10	4.05E-10	8.94E-11	1.22E-09
92	1.68	0.	7.74E-27	0.	0.	0.	0.	0.	0.		4.52E-18	8.72E-10	4.41E-10	10.00E-11	1.41E-09
93	1.58	0.	8.79E-27	0.	0.	0.	0.	0.	0.		2.85E-18	1.04E-09	4.74E-10	1.07E-10	1.65E-09
94	1.48	0.	8.44E-27	0.	0.	0.	0.	0.	0.		0.	1.31E-09	5.16E-10	1.12E-10	1.94E-09
95	1.38	0.	6.62E-27	0.	0.	0.	0.	0.	0.		0.	1.64E-09	5.40E-11	5.04E-11	1.75E-09
96	1.28	0.	6.82E-27	0.	0.	0.	0.	0.	0.		0.	2.10E-09	7.42E-11	6.30E-11	2.23E-09
97	1.18	0.	6.13E-27	0.	0.	0.	0.	3.93E-32	0.		0.	2.73E-09	9.19E-11	7.97E-11	2.91E-09
98	1.08	0.	5.64E-27	0.	0.	0.	0.	6.48E-31	0.		0.	3.66E-09	1.12E-10	9.64E-11	3.87E-09
99	0.98	0.	4.62E-27	0.	0.	0.	0.	7.51E-31	0.		0.	5.05E-09	1.25E-10	9.97E-11	5.20E-09
100	0.88	0.	2.17E-27	0.	0.	0.	0.	1.04E-29	0.		0.	7.25E-09	1.20E-10	8.75E-11	7.44E-09
101	0.78	0.	5.01E-28	0.	0.	0.	0.	1.98E-29	0.		0.	1.09E-08	1.37E-10	1.01E-10	1.12E-08
102	0.68	0.	1.11E-28	0.	0.	0.	0.	4.96E-29	0.		0.	1.76E-08	1.53E-10	1.14E-10	1.79E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.20JE-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	11.70	0.	0.	2.07E-01	0.	0.	0.	5.37E 00	7.94E-01	2.94E 02	6.60E 00	3.07E 02
2	10.64	0.	0.	2.64E-01	0.	0.	0.	5.37E 00	7.24E-01	2.31E 01	6.57E 00	3.64E 01
3	10.56	0.	0.	2.76E-01	0.	0.	0.	5.38E 00	7.45E-01	2.32E 01	6.54E 00	3.61E 01
4	10.40	0.	0.	2.59E-01	0.	0.	0.	5.39E 00	7.67E-01	2.33E 01	6.51E 00	3.62E 01
5	10.34	0.	0.	2.30E-01	0.	0.	0.	5.40E 00	7.90E-01	2.33E 01	6.48E 00	3.62E 01
6	10.26	0.	0.	2.30E-01	0.	0.	0.	5.40E 00	8.14E-01	2.34E 01	6.45E 00	3.63E 01
7	10.14	0.	0.	2.28E-01	0.	0.	0.	5.41E 00	8.38E-01	2.33E 01	6.42E 00	3.62E 01
8	10.06	0.	0.	2.04E-01	0.	0.	0.	5.42E 00	8.64E-01	2.33E 01	6.39E 00	3.62E 01
9	9.96	0.	0.	2.18E-01	0.	0.	0.	5.43E 00	8.91E-01	2.34E 01	6.36E 00	3.63E 01
10	9.84	0.	0.	2.08E-01	0.	0.	0.	5.44E 00	9.19E-01	2.34E 01	6.33E 00	3.63E 01
11	9.79	0.	0.	1.76E-01	0.	0.	0.	5.45E 00	9.48E-01	2.35E 01	6.30E 00	3.63E 01
12	9.69	0.	0.	1.91E-01	0.	0.	0.	5.46E 00	9.78E-01	2.35E 01	6.27E 00	3.64E 01
13	9.59	0.	0.	1.66E-01	0.	0.	0.	5.47E 00	1.01E 00	2.36E 01	6.24E 00	3.65E 01
14	9.48	0.	0.	1.68E-01	0.	0.	0.	5.49E 00	1.04E 00	2.37E 01	6.21E 00	3.66E 01
15	9.36	0.	0.	1.65E-01	0.	0.	0.	5.51E 00	1.07E 00	2.38E 01	6.18E 00	3.67E 01
16	9.29	0.	0.	1.48E-01	0.	0.	0.	5.53E 00	1.11E 00	2.38E 01	6.15E 00	3.68E 01
17	9.19	0.	0.	1.44E-01	0.	0.	0.	5.55E 00	1.15E 00	9.67E 00	6.13E 00	2.26E 01
18	9.08	0.	0.	1.33E-01	0.	0.	0.	5.57E 00	1.19E 00	9.69E 00	6.10E 00	2.27E 01
19	8.98	0.	0.	1.25E-01	0.	0.	0.	5.59E 00	1.23E 00	9.70E 00	6.07E 00	2.27E 01
20	8.84	0.	0.	1.24E-01	0.	0.	0.	5.61E 00	1.27E 00	9.72E 00	6.04E 00	2.28E 01
21	8.78	0.	0.	1.10E-01	0.	0.	0.	5.63E 00	1.32E 00	9.75E 00	6.02E 00	2.28E 01
22	8.68	0.	0.	1.14E-01	0.	0.	0.	5.65E 00	1.36E 00	9.77E 00	5.99E 00	2.29E 01
23	8.54	0.	0.	1.02E-01	0.	0.	0.	5.66E 00	1.41E 00	9.81E 00	5.97E 00	2.30E 01
24	8.48	0.	0.	1.02E-01	0.	0.	0.	5.69E 00	1.47E 00	9.85E 00	5.94E 00	2.31E [illegible]
25	8.38	0.	0.	8.84E-02	0.	0.	0.	5.72E 00	1.52E 00	9.90E 00	5.93E 00	2.32E [illegible]
26	8.26	0.	0.	9.01E-02	0.	0.	0.	5.75E 00	1.58E 00	9.95E 00	5.93E 00	2.33E [illegible]
27	8.18	0.	0.	7.93E-02	0.	0.	0.	5.78E 00	1.64E 00	9.99E 00	5.94E 00	2.34E 01
28	8.08	0.	0.	8.05E-02	0.	0.	0.	5.81E 00	1.70E 00	1.01E 01	5.94E 00	2.36E 01
29	7.94	0.	0.	7.85E-02	0.	0.	0.	5.84E 00	1.77E 00	1.01E 01	5.94E 00	2.38E 01
30	7.88	0.	0.	7.39E-02	0.	0.	0.	5.87E 00	1.83E 00	1.02E 01	5.94E 00	2.39E 01
31	7.78	0.	0.	6.68E-02	0.	0.	0.	5.90E 00	1.91E 00	1.03E 01	5.95E 00	2.41E 01
32	7.69	0.	0.	6.35E-02	0.	2.73E-06	0.	5.93E 00	1.98E 00	1.04E 01	5.95E 00	2.43E 01
33	7.58	0.	0.	5.98E-02	0.	0.53E-06	0.	5.96E 00	2.07E 00	1.05E 01	5.95E 00	2.45E 01
34	7.48	0.	0.	5.44E-02	0.	7.93E-05	0.	6.00E 00	2.15E 00	1.05E 01	5.96E 00	2.47E 01
35	7.38	0.	0.	5.23E-02	0.	2.94E-04	0.	6.03E 00	2.24E 00	1.06E 01	5.96E 00	2.49E 01
36	7.28	0.	0.	4.79E-02	0.	8.35E-04	0.	6.06E 00	2.34E 00	1.07E 01	5.96E 00	2.51E 01
37	7.18	0.	0.	4.67E-02	0.	2.64E-03	0.	6.11E 00	2.44E 00	1.08E 01	5.97E 00	2.54E 01
38	7.08	5.75E-06	0.	4.35E-02	0.	4.95E-03	0.	6.16E 00	2.55E 00	1.09E 01	5.97E 00	2.56E 01
39	6.98	1.72E-05	0.	4.05E-02	0.	7.30E-03	0.	6.21E 00	2.64E 00	1.10E 01	5.97E 00	2.58E 01
40	6.88	1.50E-05	0.	3.96E-02	0.	1.21E-02	0.	6.26E 00	2.78E 00	1.10E 01	5.98E 00	2.61E 01
41	6.78	1.10E-05	0.	3.52E-02	0.	1.16E-02	0.	6.31E 00	2.91E 00	1.11E 01	5.99E 00	2.64E 01
42	6.68	8.79E-06	0.	3.21E-02	0.	1.92E-02	0.	6.36E 00	3.04E 00	1.12E 01	6.00E 00	2.67E 01
43	6.58	3.96E-06	0.	2.61E-02	0.	1.43E-02	0.	6.41E 00	3.19E 00	1.14E 01	6.01E 00	2.70E 01
44	6.48	2.30E-06	0.	1.05E-02	4.79E-05	1.30E-02	0.	6.48E 00	3.34E 00	1.15E 01	6.03E 00	2.74E 01
45	6.38	1.35E-06	0.	1.19E-02	2.66E-04	9.96E-03	0.	6.53E 00	3.50E 00	1.16E 01	6.05E 00	2.77E 01
46	6.28	6.19E-07	0.	6.78E-03	2.97E-04	1.33E-02	0.	6.56E 00	3.68E 00	1.18E 01	6.09E 00	2.81E 01
47	6.18	2.89E-07	0.	3.26E-03	0.58E-04	1.58E-02	0.	6.61E 00	3.84E 00	1.19E 01	6.14E 00	2.85E 01
48	6.08	1.72E-07	0.	6.42E-04	8.46E-04	8.16E-03	0.	6.66E 00	4.04E 00	1.21E 01	6.18E 00	2.90E 01
49	5.98	3.82E-08	0.	6.04E-05	1.25E-03	7.86E-03	0.	6.66E 00	4.20E 00	1.22E 01	6.22E 00	2.94E 01
50	5.88	3.87E-07	0.	1.53E-06	1.77E-03	8.28E-03	0.	6.50E 00	4.50E 00	1.24E 01	6.27E 00	2.98E 01
51	5.78	2.05E-10	0.	0.	2.11E-03	9.27E-03	0.	6.16E 00	4.75E 00	1.26E 01	6.31E 00	2.99E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.29E-11	0.	0.	0.	1.05E-03	2.19E-02	0.	0.	5.73E 00	5.81E 00	1.28E 01	6.36E 00	3.00E 01
53	5.50	0.	0.	0.	0.	2.27E-03	1.10E-02	0.	0.	5.76E 00	5.29E 00	1.31E 01	6.42E 00	3.06E 01
54	5.40	0.	0.	0.	0.	2.13E-03	9.26E-03	0.	0.	5.79E 00	5.60E 00	1.35E 01	6.49E 00	3.14E 01
55	5.30	0.	0.	0.	0.	2.18E-03	1.14E-02	0.	0.	5.83E 00	5.92E 00	1.39E 01	6.58E 00	3.22E 01
56	5.20	0.	0.	0.	0.	2.37E-03	9.89E-03	0.	0.	5.86E 00	6.20E 00	1.42E 01	6.68E 00	3.31E 01
57	5.10	0.	0.	0.	0.	2.38E-03	1.16E-02	0.	0.	5.91E 00	6.66E 00	1.47E 01	6.79E 00	3.40E 01
58	5.00	1.63E-04	0.	0.	0.	2.19E-03	1.11E-02	0.	0.	5.96E 00	7.07E 00	1.51E 01	6.89E 00	3.51E 01
59	4.90	4.52E-04	0.	0.	0.	2.46E-03	1.23E-02	0.	0.	6.01E 00	7.52E 00	1.57E 01	7.02E 00	3.62E 01
60	4.80	8.63E-04	0.	0.	0.	2.66E-03	1.15E-02	0.	0.	6.06E 00	8.00E 00	1.63E 01	7.17E 00	3.75E 01
61	4.70	1.19E-03	0.	0.	0.	2.69E-03	1.34E-02	0.	0.	6.11E 00	8.53E 00	1.69E 01	7.34E 00	3.89E 01
62	4.60	1.68E-03	0.	0.	0.	2.79E-03	9.63E-03	0.	0.	6.16E 00	9.10E 00	1.76E 01	7.56E 00	4.05E 01
63	4.50	1.77E-03	0.	4.38E-03	0.	2.99E-03	7.28E-03	0.	0.	6.21E 00	9.73E 00	1.86E 01	7.77E 00	4.23E 01
64	4.40	1.92E-03	0.	1.26E-02	0.	2.62E-03	4.95E-03	0.	0.	6.26E 00	1.04E 01	1.95E 01	7.98E 00	4.42E 01
65	4.30	1.84E-03	0.	4.40E-02	0.	2.54E-03	3.16E-03	0.	0.	6.31E 00	1.12E 01	2.06E 01	8.21E 00	4.63E 01
66	4.20	1.73E-03	0.	1.34E-01	0.	2.68E-03	2.16E-03	0.	0.	6.36E 00	1.20E 01	2.17E 01	8.44E 00	4.86E 01
67	4.10	1.65E-03	0.	6.31E-02	0.	2.66E-03	6.12E-04	0.	0.	6.39E 00	1.29E 01	2.27E 01	8.48E 00	5.05E 01
68	4.00	1.54E-03	0.	1.95E-01	0.	2.59E-03	4.57E-04	0.	0.	6.41E 00	1.37E 01	2.38E 01	4.20E 00	4.86E 01
69	3.90	1.33E-03	0.	9.33E-02	9.92E-03	2.44E-03	1.69E-04	0.	0.	6.39E 00	1.50E 01	2.37E 01	4.42E 00	4.96E 01
70	3.80	1.46E-03	0.	1.51E-01	3.88E-02	2.64E-03	0.	0.	0.	6.36E 00	1.63E 01	2.39E 01	4.61E 00	5.13E 01
71	3.70	1.33E-03	0.	1.52E-01	1.86E-02	2.31E-03	0.	0.	0.	6.20E 00	1.76E 01	2.02E 01	5.83E 00	4.93E 01
72	3.60	1.21E-03	0.	1.14E-01	9.35E-02	2.49E-03	0.	0.	0.	5.86E 00	1.92E 01	2.18E 01	5.48E 00	5.25E 01
73	3.50	1.15E-03	0.	1.47E-01	1.62E-01	2.82E-03	0.	0.	0.	5.37E 00	2.09E 01	2.32E 01	6.01E 00	5.58E 01
74	3.40	1.07E-03	0.	9.77E-02	2.83E-02	2.27E-03	0.	0.	0.	3.10E 00	2.28E 01	2.57E 01	6.66E 00	5.84E 01
75	3.30	8.64E-04	0.	9.98E-02	1.01E-01	1.85E-03	0.	0.	0.	3.10E 00	2.50E 01	2.83E 01	7.20E 00	6.39E 01
76	3.20	7.66E-04	0.	6.71E-02	1.94E-01	1.96E-03	0.	0.	0.	3.11E 00	2.75E 01	3.18E 01	7.84E 00	6.96E 01
77	3.10	7.45E-04	0.	5.28E-02	4.58E-02	1.89E-03	0.	0.	0.	3.11E 00	3.03E 01	3.37E 01	8.47E 00	7.56E 01
78	3.00	6.79E-04	0.	3.28E-02	9.57E-02	1.81E-03	0.	0.	0.	3.12E 00	3.34E 01	3.64E 01	9.11E 00	8.22E 01
79	2.90	5.81E-04	0.	2.09E-02	5.16E-02	1.42E-03	0.	0.	0.	3.13E 00	3.71E 01	3.95E 01	9.83E 00	8.95E 01
80	2.80	6.13E-04	0.	1.01E-02	3.79E-02	1.02E-03	0.	0.	0.	3.14E 00	4.13E 01	4.28E 01	1.07E 01	9.79E 01
81	2.70	4.05E-04	0.	4.75E-03	4.49E-02	5.76E-04	0.	0.	0.	3.13E 00	4.61E 01	4.66E 01	1.16E 01	1.07E 02
82	2.60	1.97E-04	0.	2.27E-03	4.80E-03	2.61E-04	0.	0.	0.	3.13E 00	5.18E 01	5.06E 01	1.25E 01	1.18E 02
83	2.50	1.48E-05	0.	2.34E-04	4.72E-03	6.34E-05	0.	0.	0.	3.13E 00	5.84E 01	5.78E 01	8.21E 00	1.28E 02
84	2.40	0.	1.81E-02	0.	3.51E-03	4.87E-06	0.	0.	0.	3.13E 00	6.62E 01	6.72E 01	9.51E 00	1.46E 02
85	2.30	0.	2.09E-02	0.	0.	0.	0.	0.	0.	3.11E 00	7.53E 01	6.87E 01	1.13E 01	1.58E 02
86	2.20	0.	7.07E-02	0.	0.	0.	0.	0.	0.	3.09E 00	8.63E 01	7.17E 01	1.35E 01	1.75E 02
87	2.10	0.	7.80E-02	0.	0.	0.	0.	0.	0.	3.08E 00	9.94E 01	8.34E 01	1.56E 01	2.02E 02
88	2.00	0.	1.59E-01	0.	0.	0.	0.	0.	0.	2.98E 00	1.15E 02	9.53E 01	1.78E 01	2.32E 02
89	1.90	0.	1.64E-01	0.	0.	0.	0.	0.	0.	2.87E 00	1.35E 02	1.19E 02	2.09E 01	2.69E 02
90	1.80	0.	1.59E-01	0.	0.	0.	0.	0.	0.	2.74E 00	1.68E 02	1.31E 02	2.55E 01	3.20E 02
91	1.70	0.	1.78E-01	0.	0.	0.	0.	0.	0.	2.58E 00	1.91E 02	1.58E 02	3.18E 01	3.83E 02
92	1.60	0.	1.36E-01	0.	0.	0.	0.	0.	0.	2.19E 00	2.38E 02	1.85E 02	3.66E 01	4.54E 02
93	1.50	0.	1.54E-01	0.	0.	0.	0.	0.	0.	9.94E-01	2.88E 02	2.42E 02	4.43E 01	5.67E 02
94	1.40	0.	1.51E-01	0.	0.	0.	0.	0.	0.	0.	3.46E 02	3.03E 02	5.30E 01	7.02E 02
95	1.30	0.	1.16E-01	0.	0.	0.	0.	0.	0.	0.	4.33E 02	4.00E 02	6.96E 01	9.12E 02
96	1.20	0.	1.11E-01	0.	0.	0.	0.	0.	0.	0.	5.53E 02	4.59E 02	7.84E 01	1.08E 03
97	1.10	0.	1.08E-01	0.	0.	0.	0.	1.12E-07	0.	0.	7.24E 02	5.66E 02	8.81E 01	1.30E 03
98	1.00	0.	9.92E-02	0.	0.	0.	0.	1.07E-06	0.	0.	9.72E 02	6.88E 02	1.01E 02	1.76E 03
99	0.90	0.	8.13E-02	0.	0.	0.	0.	2.20E-06	0.	0.	1.35E 03	7.93E 02	1.18E 02	2.26E 03
100	0.80	0.	3.81E-02	0.	0.	0.	0.	4.08E-05	0.	0.	1.94E 03	9.13E 02	1.35E 02	2.99E 03
101	0.70	0.	8.76E-03	0.	0.	0.	0.	4.73E-05	0.	0.	2.94E 03	9.84E 02	1.36E 02	4.86E 03
102	0.60	0.	2.04E-03	0.	0.	0.	0.	1.47E-04	0.	0.	4.75E 03	1.10E 03	1.52E 02	6.98E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2230. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	L P.E.	O P.E.	TOTAL AIR
1	10.7C	0.	0.	1.08E-03	0.	0.	0.	1.20E-01	9.28E-02	2.28E 01	5.37E-01	2.27E 01
2	10.4C	0.	0.	1.40E-03	0.	0.	0.	1.20E-01	9.43E-02	1.73E 00	5.35E-01	2.44E 00
3	10.9C	0.	0.	1.51E-03	0.	0.	0.	1.20E-01	9.47E-02	1.74E 00	5.43E-01	2.45E 00
4	10.4C	0.	0.	1.45E-03	0.	0.	0.	1.20E-01	9.75E-02	1.74E 00	5.30E-01	2.45E 00
5	10.3C	0.	0.	1.28E-03	0.	0.	0.	1.21E-01	9.97E-02	1.75E 00	5.28E-01	2.44E 00
6	10.2C	0.	0.	1.30E-03	0.	0.	0.	1.21E-01	0.10E-02	1.75E 00	5.25E-01	2.46E 00
7	10.1C	0.	0.	1.27E-03	0.	0.	0.	1.21E-01	0.28E-02	1.75E 00	5.23E-01	2.45E 00
8	10.0C	0.	0.	1.14E-03	0.	0.	0.	1.21E-01	0.48E-02	1.75E 00	5.20E-01	2.45E 00
9	9.9C	0.	0.	1.17E-03	0.	0.	0.	1.21E-01	0.68E-02	1.75E 00	5.18E-01	2.46E 00
10	9.8C	0.	0.	1.12E-03	0.	0.	0.	1.22E-01	6.88E-02	1.75E 00	5.16E-01	2.46E 00
11	9.7C	0.	0.	9.85E-04	0.	0.	0.	1.22E-01	7.10E-02	1.76E 00	5.13E-01	2.46E 00
12	9.6C	0.	0.	1.07E-03	0.	0.	0.	1.22E-01	7.33E-02	1.76E 00	5.11E-01	2.47E 00
13	9.5C	0.	0.	9.31E-04	0.	0.	0.	1.22E-01	7.57E-02	1.77E 00	5.08E-01	2.47E 00
14	9.4C	0.	0.	8.94E-04	0.	0.	0.	1.23E-01	7.81E-02	1.77E 00	5.06E-01	2.48E 00
15	9.3C	0.	0.	9.21E-04	0.	0.	0.	1.24E-01	8.07E-02	1.78E 00	5.03E-01	2.49E 00
16	9.2C	0.	0.	7.62E-04	0.	0.	0.	1.24E-01	8.34E-02	1.78E 00	5.01E-01	2.49E 00
17	9.1C	0.	0.	8.68E-04	0.	0.	0.	1.24E-01	8.62E-02	7.25E-01	4.99E-01	1.44E 00
18	9.0C	0.	0.	7.45E-04	0.	0.	0.	1.24E-01	8.91E-02	7.26E-01	4.97E-01	1.44E 00
19	8.9C	0.	0.	7.83E-04	0.	0.	0.	1.25E-01	9.22E-02	7.27E-01	4.94E-01	1.44E 00
20	8.8C	0.	0.	6.93E-04	0.	0.	0.	1.25E-01	9.54E-02	7.29E-01	4.92E-01	1.44E 00
21	8.7C	0.	0.	6.14E-04	0.	0.	0.	1.26E-01	9.88E-02	7.31E-01	4.90E-01	1.45E 00
22	8.6C	0.	0.	6.37E-04	0.	0.	0.	1.26E-01	1.02E-01	7.32E-01	4.88E-01	1.45E 00
23	8.5C	0.	0.	5.89E-04	0.	0.	0.	1.27E-01	1.06E-01	7.35E-01	4.86E-01	1.45E 00
24	8.4C	0.	0.	5.75E-04	0.	0.	0.	1.27E-01	1.10E-01	7.39E-01	4.84E-01	1.46E 00
25	8.3C	0.	0.	4.90E-04	0.	0.	0.	1.28E-01	1.14E-01	7.42E-01	4.83E-01	1.47E 00
26	8.2C	0.	0.	5.04E-04	0.	0.	0.	1.29E-01	1.18E-01	7.46E-01	4.83E-01	1.48E 00
27	8.1C	0.	0.	4.44E-04	0.	0.	0.	1.29E-01	2.23E-01	7.49E-01	4.83E-01	1.48E 00
28	8.0C	0.	0.	4.58E-04	0.	0.	0.	1.30E-01	1.27E-01	7.54E-01	4.84E-01	1.50E 00
29	7.9C	0.	0.	3.94E-04	0.	0.	0.	1.31E-01	1.32E-01	7.60E-01	4.84E-01	1.51E 00
30	7.8C	0.	0.	4.13E-04	0.	0.	0.	1.31E-01	1.37E-01	7.66E-01	4.84E-01	1.52E 00
31	7.7C	0.	0.	3.69E-04	0.	0.	0.	1.32E-01	1.43E-01	7.73E-01	4.34E-01	1.53E 00
32	7.6C	0.	0.	3.55E-04	0.	1.66E-08	0.	1.33E-01	1.49E-01	7.79E-01	4.85E-01	1.55E 00
33	7.5C	0.	0.	3.34E-04	0.	5.19E-08	0.	1.33E-01	1.55E-01	7.84E-01	4.85E-01	1.56E 00
34	7.4C	0.	0.	3.04E-04	0.	4.83E-07	0.	1.34E-01	1.61E-01	7.90E-01	4.85E-01	1.57E 00
35	7.3C	0.	0.	2.93E-04	0.	1.51E-06	0.	1.35E-01	1.68E-01	7.96E-01	4.85E-01	1.58E 00
36	7.2C	0.	0.	2.68E-04	0.	5.89E-06	0.	1.36E-01	1.75E-01	8.02E-01	4.86E-01	1.60E 00
37	7.1C	0.	0.	2.61E-04	0.	1.61E-05	0.	1.37E-01	1.83E-01	8.09E-01	4.86E-01	1.61E 00
38	7.0C	5.80E-08	0.	2.43E-04	0.	3.92E-05	0.	1.38E-01	1.91E-01	8.15E-01	4.86E-01	1.63E 00
39	6.9C	1.14E-07	0.	2.26E-04	0.	4.50E-05	0.	1.39E-01	1.99E-01	8.21E-01	4.86E-01	1.65E 00
40	6.8C	9.95E-08	0.	2.21E-04	0.	7.39E-05	0.	1.40E-01	2.08E-01	8.27E-01	4.87E-01	1.66E 00
41	6.7C	7.32E-08	0.	1.97E-04	0.	7.09E-05	0.	1.41E-01	2.17E-01	8.33E-01	4.86E-01	1.68E 00
42	6.6C	4.58E-08	0.	1.88E-04	0.	4.21E-05	0.	1.42E-01	2.26E-01	8.42E-01	4.89E-01	1.70E 00
43	6.5C	2.63E-08	0.	1.46E-04	0.	8.69E-05	0.	1.43E-01	2.39E-01	8.52E-01	4.90E-01	1.72E 00
44	6.4C	1.53E-08	0.	1.84E-04	2.61E-07	7.90E-05	0.	1.44E-01	2.50E-01	8.62E-01	4.91E-01	1.75E 00
45	6.3C	5.93E-09	0.	8.65E-05	1.25E-06	6.87E-05	0.	1.46E-01	2.62E-01	8.72E-01	4.93E-01	1.77E 00
46	6.2C	4.10E-09	0.	3.79E-05	1.81E-06	8.07E-05	0.	1.47E-01	2.76E-01	8.82E-01	4.96E-01	1.80E 00
47	6.1C	1.91E-09	0.	1.82E-05	5.23E-06	9.65E-05	0.	1.48E-01	2.90E-01	8.93E-01	5.00E-01	1.83E 00
48	6.0C	8.00E-10	0.	4.71E-06	5.15E-06	4.97E-05	0.	1.49E-01	3.04E-01	9.04E-01	5.03E-01	1.86E 00
49	5.9C	2.81E-10	0.	3.30E-07	7.64E-06	4.79E-05	0.	1.49E-01	3.20E-01	9.18E-01	5.07E-01	1.89E 00
50	5.8C	2.57E-11	0.	8.57E-09	1.08E-05	5.04E-05	0.	1.47E-01	3.38E-01	9.33E-01	5.10E-01	1.93E 00
51	5.7C	1.09E-12	0.	0.	1.29E-05	5.65E-05	0.	1.38E-01	3.56E-01	9.46E-01	5.14E-01	1.95E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.7936-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.58E-14	0.	0.	0.	1.13E-05	7.26E-05	0.	0.	1.20E-01	3.76E-01	9.63E-01	9.10E-01	1.98E 00
53	5.50	0.	0.	0.	0.	1.30E-05	6.71E-05	0.	0.	1.20E-01	3.97E-01	9.85E-01	9.23E-01	2.07E 00
54	5.40	0.	0.	0.	0.	1.30E-05	5.64E-05	0.	0.	1.20E-01	4.19E-01	1.01E 00	9.2[illegible]E-01	2.09E 00
55	5.30	0.	0.	0.	0.	1.33E-05	6.96E-05	0.	0.	1.30E-01	4.44E-01	1.04E 00	9.36E-01	2.15E 00
56	5.20	0.	0.	0.	0.	1.44E-05	5.54E-05	0.	0.	1.31E-01	4.70E-01	1.07E 00	9.44E-01	2.21E 00
57	5.10	0.	0.	0.	0.	1.49E-05	7.04E-05	0.	0.	1.32E-01	4.99E-01	1.10E 00	9.53E-01	2.28E 00
58	5.00	1.21E-06	0.	0.	0.	1.33E-05	6.76E-05	0.	0.	1.33E-01	5.30E-01	1.13E 00	9.61E-01	2.36E 00
59	4.90	3.88E-06	0.	0.	0.	1.50E-05	7.49E-05	0.	0.	1.34E-01	5.63E-01	1.17E 00	9.71E-01	2.44E 00
60	4.80	5.72E-06	0.	0.	0.	1.62E-05	7.08E-05	0.	0.	1.36E-01	6.00E-01	1.22E 00	9.84E-01	2.54E 00
61	4.70	7.86E-06	0.	0.	0.	1.64E-05	6.48E-05	0.	0.	1.37E-01	6.39E-01	1.27E 00	6.00E-01	2.64E 00
62	4.60	1.10E-05	0.	0.	0.	1.70E-05	5.87E-05	0.	0.	1.38E-01	6.82E-01	1.32E 00	6.16E-01	2.76E 00
63	4.50	1.17E-05	0.	2.45E-05	0.	1.58E-05	4.44E-05	0.	0.	1.39E-01	7.29E-01	1.39E 00	6.33E-01	2.89E 00
64	4.40	1.27E-05	0.	7.06E-05	0.	1.60E-05	3.02E-05	0.	0.	1.40E-01	7.81E-01	1.46E 00	6.50E-01	3.03E 00
65	4.30	1.22E-05	0.	2.46E-04	0.	1.55E-05	1.92E-05	0.	0.	1.41E-01	8.37E-01	1.54E 00	6.69E-01	3.19E 00
66	4.20	1.15E-05	0.	7.49E-04	0.	1.67E-05	1.31E-05	0.	0.	1.42E-01	8.99E-01	1.63E 00	6.87E-01	3.35E 00
67	4.10	1.09E-05	0.	3.53E-04	0.	1.62E-05	3.73E-06	0.	0.	1.43E-01	9.67E-01	1.70E 00	6.84E-01	3.50E 00
68	4.00	1.02E-05	0.	1.89E-03	0.	1.58E-05	2.78E-06	0.	0.	1.43E-01	1.04E 00	1.78E 00	3.49E-01	3.32E 00
69	3.90	8.79E-06	0.	5.22E-04	2.82E-04	1.49E-05	1.03E-06	0.	0.	1.43E-01	1.13E 00	1.77E 00	3.60E-01	3.40E 00
70	3.80	9.78E-06	0.	8.44E-04	7.79E-04	1.61E-05	0.	0.	0.	1.42E-01	1.22E 00	1.79E 00	3.76E-01	3.53E 00
71	3.70	8.81E-06	0.	8.90E-04	3.79E-04	1.41E-05	0.	0.	0.	1.40E-01	1.32E 00	1.51E 00	4.19E-01	3.79E 00
72	3.60	8.04E-06	0.	6.36E-04	1.90E-03	1.52E-05	0.	0.	0.	1.31E-01	1.44E 00	1.63E 00	4.47E-01	3.65E 00
73	3.50	7.61E-06	0.	8.21E-04	3.29E-03	1.21E 05	0.	0.	0.	1.20E-01	1.57E 00	1.74E 00	4.89E-01	3.92E 00
74	3.40	7.18E-06	0.	5.46E-04	5.76E-04	1.39E-05	0.	0.	0.	6.93E-02	1.71E 00	1.93E 00	5.38E-01	4.29E 00
75	3.30	5.73E-06	0.	5.98E-04	2.07E-03	1.[illegible]E-05	0.	0.	0.	6.94E-02	1.88E 00	2.12E 00	5.87E-01	4.66E 00
76	3.20	5.88E-06	0.	3.75E-04	3.14E-03	1.20E-05	0.	0.	0.	6.95E-02	2.06E 00	2.32E 00	6.38E-01	5.09E 00
77	3.10	4.94E-06	0.	2.95E-04	9.14E-04	1.15E-05	0.	0.	0.	6.96E-02	2.27E 00	2.52E 00	6.90E-01	5.55E 00
78	3.00	4.56E-06	0.	1.84E-04	1.95E-03	1.10E-05	0.	0.	0.	6.98E-02	2.51E 00	2.72E 00	7.42E-01	6.05E 00
79	2.90	5.84E-06	0.	1.17E-04	1.85E-03	8.69E-06	0.	0.	0.	6.99E-02	2.78E 00	2.95E 00	8.01E-01	6.68E 00
80	2.80	4.07E-06	0.	5.63E-05	7.93E-04	6.21E-06	0.	0.	0.	7.00E-02	3.09E 00	3.21E 00	8.68E-01	7.24E 00
81	2.70	2.69E-06	0.	2.66E-05	9.15E-04	3.51E-06	0.	0.	0.	7.00E-02	3.46E 00	3.49E 00	9.41E-01	7.96E 00
82	2.60	1.31E-06	0.	1.27E-05	9.78E-05	1.59E-06	0.	0.	0.	7.00E-02	3.88E 00	3.79E 00	1.02E 00	8.75E 00
83	2.50	9.31E-08	0.	1.31E-06	9.62E-05	3.86E-07	0.	0.	0.	7.00E-02	4.38E 00	4.32E 00	6.68E-01	9.44E 00
84	2.40	0.	5.66E-05	0.	7.14E-05	4.18E-08	0.	0.	0.	7.00E-02	4.96E 00	5.03E 00	7.74E-01	1.08E 01
85	2.30	0.	1.62E-04	0.	0.	0.	0.	0.	0.	6.95E-02	5.85E 00	4.54E 00	9.22E-01	1.12E 01
86	2.20	0.	4.40E-04	0.	0.	0.	0.	0.	0.	6.92E-02	6.46E 00	5.37E 00	1.19E 00	1.36E 01
87	2.10	0.	4.41E-04	0.	0.	0.	0.	0.	0.	6.89E-02	7.45E 00	6.24E 00	1.27E 00	1.58E 01
88	2.00	0.	6.90E-04	0.	0.	0.	0.	0.	0.	6.47E-02	8.54E 00	7.13E 00	1.45E 00	1.73E 01
89	1.90	0.	1.03E-03	0.	0.	0.	0.	0.	0.	6.42E-02	1.01E 01	8.20E 00	1.70E 00	2.01E 01
90	1.80	0.	8.91E-04	0.	0.	0.	0.	0.	0.	6.14E-02	1.20E 01	9.84E 00	2.08E 00	2.37E 01
91	1.70	0.	1.88E-03	0.	0.	0.	0.	0.	0.	5.70E-02	1.43E 01	1.18E 01	2.53E 00	2.87E 01
92	1.60	0.	7.62E-04	0.	0.	0.	0.	0.	0.	4.89E-02	1.72E 01	1.39E 01	2.98E 00	3.41E 01
93	1.50	0.	8.62E-04	0.	0.	0.	0.	0.	0.	2.22E-02	2.10E 01	1.81E 01	3.61E 00	4.27E 01
94	1.40	0.	8.46E-04	0.	0.	0.	0.	0.	0.	0.	2.59E 01	2.27E 01	4.32E 00	5.29E 01
95	1.30	0.	6.48E-04	0.	0.	0.	0.	0.	0.	0.	3.25E 01	3.06E 01	5.68E 00	6.87E 01
96	1.20	0.	6.18E-04	0.	0.	0.	0.	0.	0.	0.	4.15E 01	3.44E 01	5.74E 00	8.16E 01
97	1.10	0.	6.83E-04	0.	0.	0.	0.	4.82E-10	0.	0.	3.43E 01	4.24E 01	7.18E 00	1.04E 02
98	1.00	0.	5.59E-04	0.	0.	0.	0.	1.14E-08	0.	0.	7.29E 01	5.15E 01	8.20E 00	1.33E 02
99	0.90	0.	4.95E-04	0.	0.	0.	0.	1.34E-08	0.	0.	1.01E 02	5.93E 01	9.61E 00	1.78E 02
100	0.80	0.	2.13E-04	0.	0.	0.	0.	2.97E-07	0.	0.	1.45E 02	6.83E 01	1.10E 01	2.25E 02
101	0.70	0.	4.96E-05	0.	0.	0.	0.	2.80E-07	0.	0.	2.20E 02	7.36E 01	1.10E 01	3.05E 02
102	0.60	0.	1.14E-05	0.	0.	0.	0.	8.93E-07	0.	0.	3.56E 02	8.23E 01	1.23E 01	4.50E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	N2 BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	2.98E-06	0.	0.	0.	1.25E-03	2.30E-03	9.34E-01	2.60E-02	9.65E-01
2	10.60	0.	0.	2.87E-06	0.	0.	0.	1.29E-03	2.37E-03	7.44E-02	2.65E-02	1.05E-01
3	10.50	0.	0.	2.73E-06	0.	0.	0.	1.29E-03	2.44E-03	7.47E-02	2.65E-02	1.05E-01
4	10.40	0.	0.	2.62E-06	0.	0.	0.	1.29E-03	2.51E-03	7.49E-02	2.64E-02	1.05E-01
5	10.30	0.	0.	2.32E-06	0.	0.	0.	1.24E-03	2.59E-03	7.51E-02	2.63E-02	1.05E-01
6	10.20	0.	0.	2.42E-06	0.	0.	0.	1.24E-03	2.66E-03	7.53E-02	2.62E-02	1.05E-01
7	10.10	0.	0.	2.30E-06	0.	0.	0.	1.24E-03	2.74E-03	7.51E-02	2.60E-02	1.05E-01
8	10.00	0.	0.	2.06E-06	0.	0.	0.	1.24E-03	2.83E-03	7.45E-02	2.59E-02	1.04E-01
9	9.90	0.	0.	2.12E-06	0.	0.	0.	1.24E-03	2.91E-03	7.46E-02	2.58E-02	1.05E-01
10	9.80	0.	0.	2.82E-06	0.	0.	0.	1.24E-03	3.01E-03	7.48E-02	2.57E-02	1.05E-01
11	9.70	0.	0.	1.78E-06	0.	0.	0.	1.27E-03	3.19E-03	7.50E-02	2.56E-02	1.05E-01
12	9.60	0.	0.	1.93E-06	0.	0.	0.	1.27E-03	3.20E-03	7.52E-02	2.54E-02	1.05E-01
13	9.50	0.	0.	1.68E-06	0.	0.	0.	1.27E-03	3.30E-03	7.54E-02	2.53E-02	1.05E-01
14	9.40	0.	0.	1.42E-06	0.	0.	0.	1.20E-03	3.41E-03	7.56E-02	2.52E-02	1.06E-01
15	9.30	0.	0.	1.46E-06	0.	0.	0.	1.20E-03	3.52E-03	7.59E-02	2.51E-02	1.06E-01
16	9.20	0.	0.	1.41E-06	0.	0.	0.	1.29E-03	3.64E-03	7.61E-02	2.50E-02	1.06E-01
17	9.10	0.	0.	1.46E-06	0.	0.	0.	1.29E-03	3.76E-03	3.11E-02	2.49E-02	6.10E-02
18	9.00	0.	0.	1.55E-06	0.	0.	0.	1.29E-03	3.89E-03	3.11E-02	2.47E-02	6.11E-02
19	8.90	0.	0.	1.37E-06	0.	0.	0.	1.30E-03	4.03E-03	3.12E-02	2.46E-02	6.12E-02
20	8.80	0.	0.	1.25E-06	0.	0.	0.	1.30E-03	4.17E-03	3.13E-02	2.45E-02	6.13E-02
21	8.70	0.	0.	1.11E-06	0.	0.	0.	1.31E-03	4.31E-03	3.14E-02	2.44E-02	6.14E-02
22	8.60	0.	0.	1.15E-06	0.	0.	0.	1.31E-03	4.47E-03	3.14E-02	2.43E-02	6.15E-02
23	8.50	0.	0.	1.03E-06	0.	0.	0.	1.32E-03	4.63E-03	3.16E-02	2.42E-02	6.17E-02
24	8.40	0.	0.	1.03E-06	0.	0.	0.	1.32E-03	4.80E-03	3.17E-02	2.41E-02	6.19E-02
25	8.30	0.	0.	8.94E-07	0.	0.	0.	1.33E-03	4.97E-03	3.19E-02	2.41E-02	6.22E-02
26	8.20	0.	0.	9.11E-07	0.	0.	0.	1.34E-03	5.16E-03	3.20E-02	2.41E-02	6.26E-02
27	8.10	0.	0.	8.32E-07	0.	0.	0.	1.35E-03	5.36E-03	3.22E-02	2.41E-02	6.30E-02
28	8.00	0.	0.	8.14E-07	0.	0.	0.	1.35E-03	5.56E-03	3.24E-02	2.41E-02	6.34E-02
29	7.90	0.	0.	7.13E-07	0.	0.	0.	1.36E-03	5.78E-03	3.27E-02	2.41E-02	6.39E-02
30	7.80	0.	0.	7.47E-07	0.	0.	0.	1.37E-03	6.00E-03	3.29E-02	2.41E-02	6.44E-02
31	7.70	0.	0.	6.67E-07	0.	0.	0.	1.37E-03	6.24E-03	3.32E-02	2.41E-02	6.49E-02
32	7.60	0.	0.	6.42E-07	0.	3.52E-11	0.	1.38E-03	6.49E-03	3.35E-02	2.41E-02	6.55E-02
33	7.50	0.	0.	6.05E-07	0.	1.10E-10	0.	1.39E-03	6.76E-03	3.36E-02	2.42E-02	6.59E-02
34	7.40	0.	0.	5.50E-07	0.	1.02E-09	0.	1.39E-03	7.04E-03	3.38E-02	2.42E-02	6.64E-02
35	7.30	0.	0.	5.29E-07	0.	3.82E-09	0.	1.40E-03	7.34E-03	3.41E-02	2.42E-02	6.70E-02
36	7.20	0.	0.	4.85E-07	0.	1.08E-08	0.	1.41E-03	7.65E-03	3.44E-02	2.42E-02	6.76E-02
37	7.10	0.	0.	4.72E-07	0.	3.48E-08	0.	1.42E-03	7.98E-03	3.47E-02	2.42E-02	6.83E-02
38	7.00	1.44E-10	0.	4.40E-07	0.	8.38E-08	0.	1.43E-03	8.33E-03	3.49E-02	2.42E-02	6.89E-02
39	6.90	2.83E-10	0.	4.09E-07	0.	9.52E-08	0.	1.45E-03	8.70E-03	3.52E-02	2.42E-02	6.96E-02
40	6.80	2.47E-10	0.	4.09E-07	0.	1.56E-07	0.	1.46E-03	9.09E-03	3.55E-02	2.42E-02	7.03E-02
41	6.70	1.82E-10	0.	3.56E-07	0.	1.59E-07	0.	1.47E-03	9.51E-03	3.58E-02	2.43E-02	7.11E-02
42	6.60	1.12E-10	0.	3.25E-07	0.	1.32E-07	0.	1.48E-03	9.95E-03	3.62E-02	2.43E-02	7.19E-02
43	6.50	6.51E-11	0.	2.64E-07	0.	1.84E-07	0.	1.49E-03	1.04E-02	3.65E-02	2.44E-02	7.29E-02
44	6.40	3.78E-11	0.	1.87E-07	5.53E-10	1.67E-07	0.	1.53E-03	1.09E-02	3.70E-02	2.45E-02	7.39E-02
45	6.30	2.23E-11	0.	1.21E-07	2.65E-09	1.28E-07	0.	1.51E-03	1.15E-02	3.74E-02	2.46E-02	7.49E-02
46	6.20	1.02E-11	0.	6.85E-08	3.83E-09	1.71E-07	0.	1.53E-03	1.20E-02	3.79E-02	2.47E-02	7.61E-02
47	6.10	4.74E-12	0.	3.30E-08	1.11E-08	2.04E-07	0.	1.54E-03	1.26E-02	3.83E-02	2.49E-02	7.74E-02
48	6.00	2.00E-12	0.	0.51E-09	1.09E-08	1.05E-07	0.	1.55E-03	1.33E-02	3.88E-02	2.51E-02	7.88E-02
49	5.90	4.97E-13	0.	4.11E-10	1.62E-08	1.01E-07	0.	1.55E-03	1.40E-02	3.95E-02	2.53E-02	8.03E-02
50	5.80	6.33E-14	0.	1.55E-11	2.28E-08	1.07E-07	0.	1.53E-03	1.47E-02	4.01E-02	2.54E-02	8.18E-02
51	5.70	4.69E-15	0.	0.	2.73E-08	1.20E-07	0.	1.43E-03	1.55E-02	4.07E-02	2.56E-02	8.33E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS*)	N P.E.	O P.E.	TOTAL AIR
52	5.40	2.13E-10	0.	0.	0.	2.39E-08	1.94E-07	0.	0.	1.33E-03	1.64E-02	4.14E-02	2.58E-02	8.58E-02
53	5.30	0.	0.	0.	0.	2.92E-08	1.42E-07	0.	0.	1.34E-03	1.73E-02	4.24E-02	2.60E-02	8.71E-02
54	5.40	0.	0.	0.	0.	2.74E-08	1.19E-07	0.	0.	1.35E-03	1.83E-02	4.35E-02	2.63E-02	8.95E-02
55	5.30	0.	0.	0.	0.	2.91E-08	1.42E-07	0.	0.	1.36E-03	1.94E-02	4.47E-02	2.67E-02	9.22E-02
56	5.20	0.	0.	0.	0.	3.05E-08	1.17E-07	0.	0.	1.36E-03	2.05E-02	4.55E-02	2.71E-02	9.45E-02
57	5.10	0.	0.	0.	0.	3.06E-08	1.40E-07	0.	0.	1.38E-03	2.18E-02	4.69E-02	2.75E-02	9.76E-02
58	5.00	3.81E-09	0.	0.	0.	2.82E-08	1.43E-07	0.	0.	1.39E-03	2.31E-02	4.84E-02	2.80E-02	1.01E-01
59	4.90	7.44E-09	0.	0.	0.	3.17E-08	1.58E-07	0.	0.	1.40E-03	2.46E-02	5.01E-02	2.85E-02	1.05E-01
60	4.80	1.42E-08	0.	0.	0.	3.43E-08	1.50E-07	0.	0.	1.41E-03	2.62E-02	5.20E-02	2.91E-02	1.09E-01
61	4.70	1.95E-08	0.	0.	0.	3.47E-08	1.37E-07	0.	0.	1.42E-03	2.79E-02	5.40E-02	2.99E-02	1.13E-01
62	4.60	2.73E-08	0.	0.	0.	3.60E-08	1.24E-07	0.	0.	1.43E-03	2.98E-02	5.63E-02	3.07E-02	1.18E-01
63	4.50	2.91E-08	0.	4.43E-08	0.	3.34E-08	9.30E-08	0.	0.	1.45E-03	3.19E-02	5.93E-02	3.15E-02	1.24E-01
64	4.40	3.15E-08	0.	1.28E-07	0.	3.38E-08	6.39E-08	0.	0.	1.46E-03	3.41E-02	6.24E-02	3.24E-02	1.30E-01
65	4.30	3.02E-08	0.	4.45E-07	0.	3.27E-08	4.07E-08	0.	0.	1.47E-03	3.65E-02	6.58E-02	3.33E-02	1.37E-01
66	4.20	2.85E-08	0.	1.35E-06	0.	3.45E-08	2.78E-08	0.	0.	1.48E-03	3.92E-02	6.92E-02	3.42E-02	1.44E-01
67	4.10	2.71E-08	0.	6.39E-07	0.	3.43E-08	7.89E-09	0.	0.	1.49E-03	4.22E-02	7.27E-02	3.41E-02	1.50E-01
68	4.00	2.53E-08	0.	1.97E-06	0.	3.34E-08	5.89E-09	0.	0.	1.49E-03	4.55E-02	7.62E-02	1.74E-02	1.41E-01
69	3.90	2.18E-08	0.	9.43E-07	1.75E-06	3.14E-08	2.17E-09	0.	0.	1.49E-03	4.91E-02	7.98E-02	1.79E-02	1.44E-01
70	3.80	2.41E-08	0.	1.53E-06	6.70E-06	3.48E-08	0.	0.	0.	1.48E-03	5.32E-02	7.65E-02	1.87E-02	1.50E-01
71	3.70	2.18E-08	0.	1.54E-06	3.28E-06	2.90E-08	0.	0.	0.	1.46E-03	5.77E-02	6.47E-02	2.84E-02	1.44E-01
72	3.60	1.99E-08	0.	1.15E-06	1.65E-05	3.22E-08	0.	0.	0.	1.36E-03	6.28E-02	6.98E-02	2.23E-02	1.56E-01
73	3.50	1.89E-08	0.	1.48E-06	2.85E-05	2.60E-08	0.	0.	0.	1.25E-03	6.84E-02	7.44E-02	2.44E-02	1.68E-01
74	3.40	1.76E-08	0.	9.88E-07	4.98E-06	2.93E-08	0.	0.	0.	7.20E-04	7.47E-02	8.24E-02	2.68E-02	1.85E-01
75	3.30	1.42E-08	0.	1.81E-06	1.79E-05	2.39E-08	0.	0.	0.	7.22E-04	8.18E-02	9.87E-02	2.92E-02	2.03E-01
76	3.20	1.26E-08	0.	6.79E-07	2.72E-05	2.53E-08	0.	0.	0.	7.23E-04	8.99E-02	9.91E-02	3.18E-02	2.22E-01
77	3.10	1.28E-08	0.	5.34E-07	7.92E-06	2.43E-08	0.	0.	0.	7.24E-04	9.90E-02	1.88E-01	3.44E-02	2.42E-01
78	3.00	1.12E-08	0.	3.32E-07	1.49E-05	2.34E-08	0.	0.	0.	7.26E-04	1.89E-01	1.16E-01	3.78E-02	2.64E-01
79	2.90	9.56E-09	0.	2.11E-07	9.80E-06	1.63E-08	0.	0.	0.	7.27E-04	1.21E-01	1.26E-01	3.99E-02	2.88E-01
80	2.80	1.01E-08	0.	1.02E-07	6.91E-06	1.32E-08	0.	0.	0.	7.29E-04	1.35E-01	1.37E-01	4.32E-02	3.16E-01
81	2.70	6.66E-09	0.	4.81E-08	7.92E-06	7.43E-09	0.	0.	0.	7.29E-04	1.91E-01	1.49E-01	4.69E-02	3.48E-01
82	2.60	3.25E-09	0.	2.38E-08	8.46E-07	3.37E-09	0.	0.	0.	7.29E-04	1.69E-01	1.61E-01	5.06E-02	3.82E-01
83	2.50	2.31E-10	0.	2.36E-09	8.32E-07	6.18E-10	0.	0.	0.	7.29E-04	1.91E-01	1.84E-01	3.33E-02	4.09E-01
84	2.40	0.	1.82E-07	0.	6.17E-07	8.85E-11	0.	0.	0.	7.29E-04	2.16E-01	2.14E-01	3.86E-02	4.76E-01
85	2.30	0.	2.93E-07	0.	0.	0.	0.	0.	0.	7.23E-04	2.46E-01	1.93E-01	4.59E-02	4.87E-01
86	2.20	0.	7.94E-07	0.	0.	0.	0.	0.	0.	7.20E-04	2.82E-01	2.29E-01	5.47E-02	5.66E-01
87	2.10	0.	7.97E-07	0.	0.	0.	0.	0.	0.	7.17E-04	3.25E-01	2.66E-01	6.34E-02	4.55E-01
88	2.00	0.	1.61E-06	0.	0.	0.	0.	0.	0.	6.94E-04	3.77E-01	3.04E-01	7.23E-02	7.54E-01
89	1.90	0.	1.84E-06	0.	0.	0.	0.	0.	0.	6.67E-04	4.42E-01	3.49E-01	8.47E-02	8.76E-01
90	1.80	0.	1.81E-06	0.	0.	0.	0.	0.	0.	6.38E-04	5.22E-01	4.19E-01	1.03E-01	1.05E 00
91	1.70	0.	1.81E-06	0.	0.	0.	0.	0.	0.	6.01E-04	6.23E-01	5.04E-01	1.26E-01	1.25E 00
92	1.60	0.	1.38E-06	0.	0.	0.	0.	0.	0.	5.09E-04	7.52E-01	5.98E-01	1.48E-01	1.49E 00
93	1.50	0.	1.56E-06	0.	0.	0.	0.	0.	0.	2.31E-04	9.16E-01	7.49E-01	1.88E-01	1.87E 00
94	1.40	0.	1.93E-06	0.	0.	0.	0.	0.	0.	0.	1.13E 00	9.64E-01	2.15E-01	2.31E 00
95	1.30	0.	1.17E-06	0.	0.	0.	0.	0.	0.	0.	1.42E 00	1.38E 00	2.83E-01	3.00E 00
96	1.20	0.	1.12E-06	0.	0.	0.	0.	0.	0.	0.	1.81E 00	1.46E 00	2.86E-01	3.56E 00
97	1.10	0.	1.09E-06	0.	0.	0.	0.	1.44E-12	0.	0.	2.37E 00	1.80E 00	3.37E-01	4.53E 00
98	1.00	0.	1.80E-06	0.	0.	0.	0.	2.42E-11	0.	0.	3.18E 00	2.19E 00	4.08E-01	5.70E 00
99	0.90	0.	8.22E-07	0.	0.	0.	0.	2.84E-11	0.	0.	4.41E 00	2.52E 00	4.78E-01	7.41E 00
100	0.80	0.	3.84E-07	0.	0.	0.	0.	6.29E-10	0.	0.	6.34E 00	2.9BE 00	5.49E-01	9.79E 00
101	0.70	0.	8.84E-08	0.	0.	0.	0.	4.18E-10	0.	0.	9.61E 00	3.13E 00	5.49E-01	1.33E 01
102	0.60	0.	2.84E-08	0.	0.	0.	0.	1.89E-09	0.	0.	1.95E 01	3.58E 00	6.15E-01	1.96E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	8.00E-18	0.	0.	0.	3.20E-06	4.15E-05	1.65E-03	5.25E-04	1.70E-02
2	10.60	0.	0.	8.20E-18	0.	0.	0.	3.20E-06	4.27E-05	1.42E-03	5.23E-04	1.99E-03
3	10.50	0.	0.	8.35E-18	0.	0.	0.	3.20E-06	4.39E-05	1.43E-03	5.20E-04	1.99E-03
4	10.40	0.	0.	8.03E-18	0.	0.	0.	3.20E-06	4.52E-05	1.43E-03	5.18E-04	2.00E-03
5	10.30	0.	0.	7.11E-18	0.	0.	0.	3.20E-06	4.64E-05	1.44E-03	5.16E-04	2.00E-03
6	10.20	0.	0.	7.42E-18	0.	0.	0.	3.36E-06	4.80E-05	1.44E-03	5.13E-04	2.01E-03
7	10.10	0.	0.	7.05E-18	0.	0.	0.	3.30E-06	4.94E-05	1.44E-03	5.11E-04	2.01E-03
8	10.00	0.	0.	6.31E-18	0.	0.	0.	3.31E-06	5.09E-05	1.34E-03	5.08E-04	1.98E-03
9	9.90	0.	0.	6.51E-18	0.	0.	0.	3.31E-06	5.25E-05	1.34E-03	5.06E-04	1.98E-03
10	9.80	0.	0.	6.20E-18	0.	0.	0.	3.32E-06	5.42E-05	1.35E-03	5.04E-04	1.91E-03
11	9.70	0.	0.	5.44E-18	0.	0.	0.	3.32E-06	5.59E-05	1.35E-03	5.01E-04	1.91E-03
12	9.60	0.	0.	5.92E-18	0.	0.	0.	3.33E-06	5.77E-05	1.35E-03	4.99E-04	1.91E-03
13	9.50	0.	0.	5.16E-18	0.	0.	0.	3.34E-06	5.95E-05	1.36E-03	4.97E-04	1.92E-03
14	9.40	0.	0.	4.96E-18	0.	0.	0.	3.35E-06	6.15E-05	1.36E-03	4.94E-04	1.92E-03
15	9.30	0.	0.	5.10E-18	0.	0.	0.	3.36E-06	6.35E-05	1.37E-03	4.92E-04	1.93E-03
16	9.20	0.	0.	4.33E-18	0.	0.	0.	3.37E-06	6.56E-05	1.37E-03	4.96E-04	1.93E-03
17	9.10	0.	0.	4.47E-18	0.	0.	0.	3.38E-06	6.78E-05	5.80E-04	4.88E-04	1.14E-03
18	9.00	0.	0.	4.13E-18	0.	0.	0.	3.40E-06	7.01E-05	5.87E-04	4.85E-04	1.15E-03
19	8.90	0.	0.	3.80E-18	0.	0.	0.	3.41E-06	7.25E-05	5.89E-04	4.83E-04	1.15E-03
20	8.80	0.	0.	3.84E-18	0.	0.	0.	3.42E-06	7.51E-05	5.90E-04	4.81E-04	1.15E-03
21	8.70	0.	0.	3.48E-18	0.	0.	0.	3.43E-06	7.77E-05	5.92E-04	4.79E-04	1.15E-03
22	8.60	0.	0.	3.51E-18	0.	0.	0.	3.45E-06	8.05E-05	5.95E-04	4.77E-04	1.16E-03
23	8.50	0.	0.	3.16E-18	0.	0.	0.	3.46E-06	8.34E-05	5.97E-04	4.75E-04	1.16E-03
24	8.40	0.	0.	3.16E-18	0.	0.	0.	3.48E-06	8.64E-05	6.00E-04	4.73E-04	1.16E-03
25	8.30	0.	0.	2.74E-18	0.	0.	0.	3.49E-06	8.96E-05	6.04E-04	4.72E-04	1.17E-03
26	8.20	0.	0.	2.79E-18	0.	0.	0.	3.51E-06	9.30E-05	6.08E-04	4.73E-04	1.18E-03
27	8.10	0.	0.	2.46E-18	0.	0.	0.	3.53E-06	9.65E-05	6.12E-04	4.73E-04	1.18E-03
28	8.00	0.	0.	2.50E-18	0.	0.	0.	3.55E-06	1.00E-04	6.17E-04	4.72E-04	1.19E-03
29	7.90	0.	0.	2.19E-18	0.	0.	0.	3.57E-06	1.04E-04	6.22E-04	4.73E-04	1.20E-03
30	7.80	0.	0.	2.20E-18	0.	0.	0.	3.58E-06	1.08E-04	6.28E-04	4.73E-04	1.21E-03
31	7.70	0.	0.	2.05E-18	0.	0.	0.	3.60E-06	1.12E-04	6.34E-04	4.73E-04	1.22E-03
32	7.60	0.	0.	1.97E-18	0.	1.21E-14	0.	3.62E-06	1.17E-04	6.40E-04	4.74E-04	1.23E-03
33	7.50	0.	0.	1.85E-18	0.	3.77E-14	0.	3.64E-06	1.22E-04	6.24E-04	4.74E-04	1.22E-03
34	7.40	0.	0.	1.49E-18	0.	3.50E-13	0.	3.66E-06	1.27E-04	6.30E-04	4.74E-04	1.24E-03
35	7.30	0.	0.	1.42E-18	0.	1.31E-12	0.	3.68E-06	1.32E-04	6.37E-04	4.74E-04	1.25E-03
36	7.20	0.	0.	1.49E-18	0.	3.69E-12	0.	3.70E-06	1.38E-04	6.44E-04	4.75E-04	1.26E-03
37	7.10	0.	0.	1.45E-18	0.	1.16E-11	0.	3.73E-06	1.44E-04	6.50E-04	4.75E-04	1.27E-03
38	7.00	5.51E-14	0.	1.35E-18	0.	2.19E-11	0.	3.76E-06	1.50E-04	6.57E-04	4.75E-04	1.29E-03
39	6.90	1.89E-13	0.	1.25E-18	0.	3.26E-11	0.	3.79E-06	1.57E-04	6.64E-04	4.76E-04	1.30E-03
40	6.80	9.44E-14	0.	1.23E-18	0.	5.36E-11	0.	3.82E-06	1.64E-04	6.71E-04	4.76E-04	1.32E-03
41	6.70	6.95E-14	0.	1.09E-18	0.	5.14E-11	0.	3.85E-06	1.71E-04	6.78E-04	4.77E-04	1.33E-03
42	6.60	4.20E-14	0.	9.95E-11	0.	4.51E-11	0.	3.88E-06	1.79E-04	6.87E-04	4.78E-04	1.35E-03
43	6.50	2.49E-14	0.	8.89E-11	0.	4.38E-11	0.	3.91E-06	1.88E-04	6.39E-04	4.80E-04	1.36E-03
44	6.40	1.45E-14	0.	5.75E-11	1.90E-13	5.73E-11	0.	3.94E-06	1.97E-04	6.99E-04	4.81E-04	1.38E-03
45	6.30	8.53E-15	0.	3.69E-11	9.89E-13	4.40E-11	0.	3.97E-06	2.06E-04	7.08E-04	4.83E-04	1.40E-03
46	6.20	3.90E-15	0.	2.18E-11	1.31E-12	5.06E-11	0.	4.00E-06	2.17E-04	7.18E-04	4.86E-04	1.43E-03
47	6.10	1.82E-15	0.	1.81E-11	3.79E-12	7.00E-11	0.	4.03E-06	2.28E-04	7.29E-04	4.90E-04	1.45E-03
48	6.00	7.68E-16	0.	2.61E-12	3.74E-12	3.68E-11	0.	4.00E-06	2.40E-04	7.39E-04	4.93E-04	1.48E-03
49	5.90	1.91E-16	0.	1.87E-13	5.54E-12	3.47E-11	0.	4.06E-06	2.52E-04	7.52E-04	4.97E-04	1.51E-03
50	5.80	2.44E-17	0.	4.75E-15	7.82E-12	3.64E-11	0.	4.09E-06	2.64E-04	7.65E-04	5.00E-04	1.54E-03
51	5.70	1.80E-18	0.	0.	9.34E-12	4.10E-11	0.	3.70E-06	2.80E-04	7.78E-04	5.04E-04	1.57E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.2936-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	8.15E-20	0.	0.	0.	8.19E-12	5.26E-11	0.	0.	3.50E-06	2.95E-04	7.94E-04	5.06E-04	1.68E-03
53	5.50	0.	0.	0.	0.	1.00E-11	4.87E-11	0.	0.	3.51E-06	3.12E-04	8.13E-04	5.13E-04	1.64E-03
54	5.40	0.	0.	0.	0.	9.40E-12	4.09E-11	0.	0.	3.53E-06	3.30E-04	8.36E-04	5.19E-04	1.69E-03
55	5.30	0.	0.	0.	0.	9.63E-12	5.05E-11	0.	0.	3.56E-06	3.49E-04	8.60E-04	5.26E-04	1.74E-03
56	5.20	0.	0.	0.	0.	1.05E-11	4.82E-11	0.	0.	3.58E-06	3.70E-04	8.22E-04	5.34E-04	1.73E-03
57	5.10	0.	0.	0.	0.	1.85E-11	5.11E-11	0.	0.	3.61E-06	3.92E-04	8.48E-04	5.40E-04	1.78E-03
58	5.00	1.15E-12	0.	0.	0.	9.68E-12	4.90E-11	0.	0.	3.64E-06	4.17E-04	8.75E-04	5.48E-04	1.84E-03
59	4.90	2.89E-12	0.	0.	0.	1.09E-11	5.43E-11	0.	0.	3.67E-06	4.43E-04	9.07E-04	5.58E-04	1.91E-03
60	4.80	5.44E-12	0.	0.	0.	1.18E-11	5.14E-11	0.	0.	3.70E-06	4.72E-04	9.42E-04	5.70E-04	1.99E-03
61	4.70	7.47E-12	0.	0.	0.	1.19E-11	4.70E-11	0.	0.	3.73E-06	5.03E-04	9.79E-04	5.86E-04	2.07E-03
62	4.60	1.05E-11	0.	0.	0.	1.23E-11	4.26E-11	0.	0.	3.76E-06	5.37E-04	1.02E-03	6.02E-04	2.16E-03
63	4.50	1.11E-11	0.	1.36E-11	0.	1.15E-11	3.22E-11	0.	0.	3.79E-06	5.74E-04	1.08E-03	6.18E-04	2.27E-03
64	4.40	1.21E-11	0.	3.91E-11	0.	1.16E-11	2.19E-11	0.	0.	3.82E-06	6.14E-04	1.13E-03	6.35E-04	2.39E-03
65	4.30	1.16E-11	0.	1.36E-10	0.	1.12E-11	1.40E-11	0.	0.	3.85E-06	6.58E-04	1.20E-03	6.53E-04	2.51E-03
66	4.20	1.09E-11	0.	4.15E-10	0.	1.18E-11	9.54E-12	0.	0.	3.88E-06	7.07E-04	1.26E-03	6.71E-04	2.64E-03
67	4.10	1.04E-11	0.	1.96E-10	0.	1.17E-11	2.71E-12	0.	0.	3.90E-06	7.60E-04	1.32E-03	6.88E-04	2.75E-03
68	4.00	9.68E-12	0.	6.03E-10	0.	1.15E-11	2.02E-12	0.	0.	3.91E-06	8.19E-04	1.39E-03	3.42E-04	2.55E-03
69	3.90	8.35E-12	0.	2.09E-10	3.99E-09	1.08E-11	7.45E-13	0.	0.	3.90E-06	8.85E-04	1.38E-03	3.53E-04	2.43E-03
70	3.80	9.22E-12	0.	4.68E-10	1.53E-08	1.17E-11	0.	0.	0.	3.88E-06	9.58E-04	1.40E-03	3.68E-04	2.73E-03
71	3.70	8.36E-12	0.	4.71E-10	7.50E-09	1.02E-11	0.	0.	0.	3.82E-06	1.04E-03	1.20E-03	4.01E-04	2.64E-03
72	3.60	7.63E-12	0.	3.92E-10	3.77E-08	1.10E-11	0.	0.	0.	3.58E-06	1.13E-03	1.27E-03	4.38E-04	2.86E-03
73	3.50	7.23E-12	0.	4.55E-10	6.51E-08	8.91E-12	0.	0.	0.	3.28E-06	1.23E-03	1.37E-03	4.79E-04	3.09E-03
74	3.40	6.74E-12	0.	3.03E-10	1.14E-08	1.01E-11	0.	0.	0.	1.89E-06	1.35E-03	1.52E-03	5.27E-04	3.39E-03
75	3.30	5.44E-12	0.	3.09E-10	4.09E-08	8.19E-12	0.	0.	0.	1.89E-06	1.47E-03	1.66E-03	5.75E-04	3.72E-03
76	3.20	4.82E-12	0.	2.88E-10	6.22E-08	8.68E-12	0.	0.	0.	1.90E-06	1.62E-03	1.82E-03	6.25E-04	4.06E-03
77	3.10	4.69E-12	0.	1.64E-10	1.81E-08	8.34E-12	0.	0.	0.	1.90E-06	1.78E-03	1.97E-03	6.76E-04	4.44E-03
78	3.00	4.28E-12	0.	1.82E-10	3.86E-08	8.01E-12	0.	0.	0.	1.90E-06	1.97E-03	2.13E-03	7.26E-04	4.83E-03
79	2.90	3.66E-12	0.	6.47E-11	2.88E-08	6.28E-12	0.	0.	0.	1.91E-06	2.19E-03	2.30E-03	7.84E-04	5.28E-03
80	2.80	3.84E-12	0.	3.12E-11	1.49E-08	4.51E-12	0.	0.	0.	1.91E-06	2.43E-03	2.50E-03	8.50E-04	5.79E-03
81	2.70	2.55E-12	0.	1.47E-11	1.81E-08	2.55E-12	0.	0.	0.	1.91E-06	2.72E-03	2.72E-03	9.21E-04	6.36E-03
82	2.60	1.24E-12	0.	7.84E-12	1.93E-09	1.15E-12	0.	0.	0.	1.91E-06	3.05E-03	2.87E-03	9.94E-04	6.92E-03
83	2.50	8.84E-14	0.	7.24E-13	1.96E-09	2.80E-13	0.	0.	0.	1.91E-06	3.44E-03	3.27E-03	8.56E-04	7.17E-03
84	2.40	0.	3.14E-11	0.	1.41E-09	3.03E-14	0.	0.	0.	1.91E-06	3.90E-03	3.81E-03	7.56E-04	8.47E-03
85	2.30	0.	8.97E-11	0.	0.	0.	0.	0.	0.	1.90E-06	4.44E-03	3.45E-03	9.82E-04	8.90E-03
86	2.20	0.	2.44E-10	0.	0.	0.	0.	0.	0.	1.89E-06	5.08E-03	4.07E-03	1.07E-03	1.02E-02
87	2.10	0.	2.44E-10	0.	0.	0.	0.	0.	0.	1.88E-06	5.84E-03	4.74E-03	1.24E-03	1.18E-02
88	2.00	0.	4.93E-10	0.	0.	0.	0.	0.	0.	1.82E-06	6.80E-03	5.48E-03	1.42E-03	1.36E-02
89	1.90	0.	5.71E-10	0.	0.	0.	0.	0.	0.	1.75E-06	7.96E-03	6.28E-03	1.66E-03	1.90E-02
90	1.80	0.	4.94E-10	0.	0.	0.	0.	0.	0.	1.67E-06	9.41E-03	7.43E-03	2.03E-03	1.89E-02
91	1.70	0.	5.59E-10	0.	0.	0.	0.	0.	0.	1.50E-06	1.12E-02	8.93E-03	2.47E-03	2.26E-02
92	1.60	0.	4.22E-10	0.	0.	0.	0.	0.	0.	1.33E-06	1.35E-02	1.04E-02	2.91E-03	2.69E-02
93	1.50	0.	4.70E-10	0.	0.	0.	0.	0.	0.	6.87E-07	1.65E-02	1.36E-02	3.52E-03	3.36E-02
94	1.40	0.	4.69E-10	0.	0.	0.	0.	0.	0.	0.	2.04E-02	1.78E-02	4.22E-03	4.10E-02
95	1.30	0.	3.59E-10	0.	0.	0.	0.	0.	0.	0.	2.55E-02	2.29E-02	5.54E-03	5.40E-02
96	1.20	0.	3.42E-10	0.	0.	0.	0.	0.	0.	0.	3.26E-02	2.57E-02	5.68E-03	6.39E-02
97	1.10	0.	3.34E-10	0.	0.	0.	0.	4.95E-16	0.	0.	4.27E-02	3.16E-02	7.08E-03	8.13E-02
98	1.00	0.	3.07E-10	0.	0.	0.	0.	8.28E-15	0.	0.	5.73E-02	3.84E-02	7.99E-03	1.04E-01
99	0.90	0.	2.52E-10	0.	0.	0.	0.	9.72E-15	0.	0.	7.94E-02	4.42E-02	9.37E-03	1.33E-01
100	0.80	0.	1.18E-10	0.	0.	0.	0.	2.15E-13	0.	0.	1.14E-01	5.09E-02	1.07E-02	1.76E-01
101	0.70	0.	2.71E-11	0.	0.	0.	0.	2.09E-13	0.	0.	1.73E-01	5.78E-02	1.80E-02	2.39E-01
102	0.60	0.	6.31E-12	0.	0.	0.	0.	6.48E-13	0.	0.	2.80E-01	6.14E-02	1.20E-02	3.53E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.2938-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.74	0.	0.	1.86E-13	0.	0.	0.	3.99E-09	4.93E-07	7.76E-05	6.15E-06	3.42E-05
2	10.66	0.	0.	9.77E-14	0.	0.	0.	4.08E-09	5.07E-07	[illegible]	6.09E-06	3.45E-05
3	10.58	0.	0.	9.96E-14	0.	0.	0.	4.08E-09	5.22E-07	2.82E-05	6.06E-06	3.47E-05
4	10.48	0.	0.	9.98E-14	0.	0.	0.	4.01E-09	5.37E-07	2.86E-05	6.03E-06	3.50E-05
5	10.38	0.	0.	8.48E-14	0.	0.	0.	4.01E-09	5.53E-07	2.87E-05	6.01E-06	3.51E-05
6	10.28	0.	0.	8.05E-14	0.	0.	0.	4.02E-09	5.72E-07	2.88E-05	5.98E-06	3.55E-05
7	10.18	0.	0.	8.41E-14	0.	0.	0.	4.02E-09	5.87E-07	2.92E-05	5.96E-06	3.57E-05
8	10.08	0.	0.	7.53E-14	0.	0.	0.	4.03E-09	6.05E-07	1.84E-05	5.93E-06	2.50E-05
9	9.98	0.	0.	7.76E-14	0.	0.	0.	4.04E-09	6.24E-07	1.85E-05	5.91E-06	2.51E-05
10	9.87	0.	0.	7.40E-14	0.	0.	0.	4.04E-09	6.43E-07	1.86E-05	5.88E-06	2.52E-05
11	9.78	0.	0.	6.91E-14	0.	0.	0.	4.05E-09	6.64E-07	1.87E-05	5.86E-06	2.53E-05
12	9.68	0.	0.	7.05E-14	0.	0.	0.	4.06E-09	6.85E-07	1.88E-05	5.83E-06	2.54E-05
13	9.58	0.	0.	6.15E-14	0.	0.	0.	4.07E-09	7.07E-07	1.89E-05	5.81E-06	2.55E-05
14	9.49	0.	0.	5.91E-14	0.	0.	0.	4.08E-09	7.30E-07	1.91E-05	5.78E-06	2.56E-05
15	9.38	0.	0.	6.08E-14	0.	0.	0.	4.10E-09	7.54E-07	1.92E-05	5.76E-06	2.57E-05
16	9.28	0.	0.	5.17E-14	0.	0.	0.	4.11E-09	7.79E-07	1.93E-05	5.74E-06	2.58E-05
17	9.18	0.	0.	5.33E-14	0.	0.	0.	4.12E-09	8.05E-07	1.87E-05	5.71E-06	1.73E-05
18	9.08	0.	0.	4.92E-14	0.	0.	0.	4.14E-09	8.33E-07	1.88E-05	5.69E-06	1.73E-05
19	8.99	0.	0.	4.63E-14	0.	0.	0.	4.15E-09	8.61E-07	1.89E-05	5.67E-06	1.74E-05
20	8.88	0.	0.	4.58E-14	0.	0.	0.	4.17E-09	8.91E-07	1.10E-05	5.65E-06	1.75E-05
21	8.78	0.	0.	4.06E-14	0.	0.	0.	4.18E-09	9.23E-07	1.11E-05	5.63E-06	1.76E-05
22	8.69	0.	0.	4.21E-14	0.	0.	0.	4.20E-09	9.56E-07	1.12E-05	5.61E-06	1.77E-05
23	8.58	0.	0.	3.76E-14	0.	0.	0.	4.21E-09	9.90E-07	1.12E-05	5.59E-06	1.78E-05
24	8.48	0.	0.	3.77E-14	0.	0.	0.	4.24E-09	1.03E-06	1.13E-05	5.56E-06	1.79E-05
25	8.38	0.	0.	3.27E-14	0.	0.	0.	4.26E-09	1.06E-06	1.15E-05	5.54E-06	1.81E-05
26	8.28	0.	0.	3.33E-14	0.	0.	0.	4.28E-09	1.10E-06	1.16E-05	5.52E-06	1.83E-05
27	8.18	0.	0.	2.93E-14	0.	0.	0.	4.30E-09	1.15E-06	1.18E-05	5.51E-06	1.84E-05
28	8.08	0.	0.	2.98E-14	0.	0.	0.	4.32E-09	1.19E-06	1.29E-05	5.51E-06	1.87E-05
29	7.98	0.	0.	2.41E-14	0.	0.	0.	4.35E-09	1.24E-06	1.21E-05	5.52E-06	1.89E-05
30	7.88	0.	0.	2.73E-14	0.	0.	0.	4.37E-09	1.28E-06	1.23E-05	5.52E-06	1.91E-05
31	7.78	0.	0.	2.44E-14	0.	0.	0.	4.39E-09	1.34E-06	1.25E-05	5.53E-06	1.94E-05
32	7.68	0.	0.	2.35E-14	0.	1.58E-18	0.	4.41E-09	1.39E-06	1.85E-05	5.54E-06	1.74E-05
33	7.58	0.	0.	2.21E-14	0.	4.68E-18	0.	4.44E-09	1.45E-06	1.87E-05	5.55E-06	1.77E-05
34	7.49	0.	0.	2.81E-14	0.	4.39E-17	0.	4.46E-09	1.51E-06	1.89E-05	5.56E-06	1.79E-05
35	7.38	0.	0.	1.93E-14	0.	1.63E-16	0.	4.48E-09	1.57E-06	1.11E-05	5.57E-06	1.83E-05
36	7.28	0.	0.	1.77E-14	0.	4.58E-16	0.	4.51E-09	1.64E-06	1.14E-05	5.58E-06	1.86E-05
37	7.18	0.	0.	1.72E-14	0.	1.49E-15	0.	4.95E-09	1.71E-06	1.17E-05	5.59E-06	1.90E-05
38	7.08	7.14E-18	0.	1.61E-14	0.	2.72E-15	0.	4.58E-09	1.78E-06	1.20E-05	5.61E-06	1.94E-05
39	5.98	1.41E-17	0.	1.58E-14	0.	4.05E-15	0.	4.62E-09	1.86E-06	1.23E-05	5.62E-06	1.98E-05
40	6.89	1.22E-17	0.	1.46E-14	0.	6.66E-15	0.	4.64E-09	1.95E-06	1.26E-05	5.63E-06	2.02E-05
41	6.78	9.01E-18	0.	1.38E-14	0.	6.39E-15	0.	4.69E-09	2.03E-06	1.29E-05	5.66E-06	2.06E-05
42	6.67	5.54E-18	0.	1.19E-14	0.	5.60E-15	0.	4.73E-09	2.13E-06	1.24E-05	5.68E-06	2.03E-05
43	6.58	3.23E-18	0.	9.45E-15	0.	7.83E-15	0.	4.77E-09	2.23E-06	1.27E-05	5.70E-06	2.07E-05
44	6.48	1.88E-18	0.	6.85E-15	2.36E-17	7.12E-15	0.	4.81E-09	2.34E-06	1.30E-05	5.72E-06	2.11E-05
45	6.38	1.11E-18	0.	4.40E-15	1.13E-16	5.47E-15	0.	4.84E-09	2.45E-06	1.33E-05	5.76E-06	2.16E-05
46	6.28	5.05E-19	0.	2.50E-15	1.63E-16	7.28E-15	0.	4.88E-09	2.57E-06	1.37E-05	5.81E-06	2.21E-05
47	6.18	2.36E-19	0.	1.21E-15	4.71E-16	8.78E-15	0.	4.92E-09	2.70E-06	1.48E-05	5.86E-06	2.26E-05
48	6.07	9.95E-20	0.	3.11E-16	4.65E-16	4.48E-15	0.	4.95E-09	2.84E-06	1.44E-05	5.91E-06	2.31E-05
49	5.98	7.47E-20	0.	2.23E-17	6.88E-16	4.32E-15	0.	4.95E-09	2.99E-06	1.47E-05	5.96E-06	2.37E-05
50	5.88	3.16E-21	0.	5.46E-19	9.72E-16	4.55E-15	0.	4.88E-09	3.15E-06	1.51E-05	6.01E-06	2.43E-05
51	5.78	2.33E-22	0.	0.	1.16E-15	5.09E-15	0.	4.58E-09	3.32E-06	1.55E-05	6.06E-06	2.49E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-04 (10.00-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.-ROT	NO 2	O- PHOTO.-DET	FREE.-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.86E-23	0.	0.	0.	1.82E-15	6.54E-15	0.	0.	4.26E-09	3.51E-04	1.59E-05	6.12E-06	2.56E-05
53	5.50	0.	0.	0.	0.	1.24E-15	6.05E-15	0.	0.	4.28E-09	3.70E-04	1.64E-05	6.19E-06	2.63E-05
54	5.40	0.	0.	0.	0.	1.17E-15	5.89E-15	0.	0.	4.31E-09	3.92E-04	1.70E-05	6.27E-06	2.72E-05
55	5.30	0.	0.	0.	0.	1.20E-15	6.20E-15	0.	0.	4.33E-09	4.14E-04	1.13E-05	6.36E-06	2.19E-05
56	5.20	0.	0.	0.	0.	1.30E-15	5.00E-15	0.	0.	4.36E-09	4.39E-04	1.17E-05	6.10E-06	2.23E-05
57	5.10	0.	0.	0.	0.	1.38E-15	6.35E-15	0.	0.	4.40E-09	4.68E-04	1.22E-05	6.20E-06	2.31E-05
58	5.00	1.49E-16	0.	0.	0.	1.20E-15	6.80E-15	0.	0.	4.44E-09	4.95E-04	1.26E-05	6.30E-06	2.39E-05
59	4.90	3.69E-16	0.	0.	0.	1.35E-15	8.75E-15	0.	0.	4.47E-09	5.20E-04	1.31E-05	6.50E-06	2.47E-05
60	4.80	7.05E-16	0.	0.	0.	1.46E-15	6.30E-15	0.	0.	4.51E-09	5.60E-04	1.36E-05	6.65E-06	2.59E-05
61	4.70	9.68E-16	0.	0.	0.	1.48E-15	5.84E-15	0.	0.	4.55E-09	5.97E-04	1.42E-05	6.83E-06	2.70E-05
62	4.60	1.36E-15	0.	0.	0.	1.53E-15	5.29E-15	0.	0.	4.58E-09	6.37E-04	1.50E-05	7.02E-06	2.84E-05
63	4.50	1.44E-15	0.	1.62E-15	0.	1.42E-15	4.00E-15	0.	0.	4.62E-09	6.81E-04	1.58E-05	7.22E-06	2.99E-05
64	4.40	1.57E-15	0.	4.67E-15	0.	1.44E-15	2.72E-15	0.	0.	4.63E-09	7.29E-04	1.67E-05	7.37E-06	3.14E-05
65	4.30	1.58E-15	0.	1.63E-14	0.	1.39E-15	1.73E-15	0.	0.	4.69E-09	7.81E-04	1.77E-05	7.59E-06	3.31E-05
66	4.20	1.42E-15	0.	4.95E-14	0.	1.47E-15	1.19E-15	0.	0.	4.73E-09	8.39E-04	1.87E-05	7.81E-06	3.49E-05
67	4.10	1.34E-15	0.	2.33E-14	0.	1.46E-15	3.34E-16	0.	0.	4.75E-09	9.02E-04	1.97E-05	7.79E-06	3.65E-05
68	4.00	1.25E-15	0.	7.19E-14	0.	1.42E-15	2.51E-16	0.	0.	4.77E-09	9.72E-04	2.08E-05	8.00E-06	3.46E-05
69	3.90	1.08E-15	0.	3.45E-14	4.45E-12	1.34E-15	9.26E-17	0.	0.	4.79E-09	1.05E-05	2.09E-05	4.23E-06	3.55E-05
70	3.80	1.19E-15	0.	5.58E-14	1.71E-11	1.45E-15	0.	0.	0.	4.73E-09	1.14E-05	1.87E-05	4.42E-06	3.45E-05
71	3.70	1.08E-15	0.	5.62E-14	8.36E-12	1.27E-15	0.	0.	0.	4.66E-09	1.23E-05	1.97E-05	4.81E-06	3.68E-05
72	3.60	9.89E-16	0.	4.20E-14	4.20E-11	1.37E-15	0.	0.	0.	4.30E-09	1.34E-05	2.10E-05	5.23E-06	3.97E-05
73	3.50	9.37E-16	0.	5.43E-14	7.26E-11	1.11E-15	0.	0.	0.	3.99E-09	1.44E-05	2.23E-05	5.72E-06	4.26E-05
74	3.40	8.74E-16	0.	3.61E-14	1.27E-11	1.25E-15	0.	0.	0.	2.30E-09	1.60E-05	2.43E-05	6.27E-06	4.65E-05
75	3.30	7.06E-16	0.	3.69E-14	4.55E-11	1.02E-15	0.	0.	0.	2.31E-09	1.75E-05	2.63E-05	6.83E-06	5.06E-05
76	3.20	6.25E-16	0.	2.48E-14	6.93E-11	1.08E-15	0.	0.	0.	2.31E-09	1.92E-05	2.85E-05	7.43E-06	5.52E-05
77	3.10	5.08E-16	0.	1.95E-14	2.02E-11	1.04E-15	0.	0.	0.	2.32E-09	2.12E-05	3.08E-05	8.03E-06	6.00E-05
78	3.00	5.54E-16	0.	1.21E-14	4.38E-11	9.96E-16	0.	0.	0.	2.32E-09	2.34E-05	3.32E-05	8.63E-06	6.52E-05
79	2.90	4.74E-16	0.	7.71E-15	2.31E-11	7.80E-16	0.	0.	0.	2.32E-09	2.59E-05	3.57E-05	9.32E-06	7.09E-05
80	2.80	5.00E-16	0.	3.72E-15	1.66E-11	5.60E-16	0.	0.	0.	2.33E-09	2.89E-05	3.85E-05	1.01E-05	7.74E-05
81	2.70	3.31E-16	0.	1.76E-15	2.02E-11	3.10E-16	0.	0.	0.	2.33E-09	3.23E-05	3.38E-05	1.09E-05	7.70E-05
82	2.60	1.41E-16	0.	8.39E-16	2.16E-12	1.43E-16	0.	0.	0.	2.33E-09	3.62E-05	3.33E-05	1.17E-05	8.43E-05
83	2.50	1.15E-17	0.	8.64E-17	2.12E-12	3.40E-17	0.	0.	0.	2.33E-09	4.08E-05	4.09E-05	7.57E-06	8.93E-05
84	2.40	0.	3.74E-15	0.	1.57E-12	3.77E-18	0.	0.	0.	2.33E-09	4.63E-05	3.74E-05	9.82E-06	9.27E-05
85	2.30	0.	1.87E-14	0.	0.	0.	0.	0.	0.	2.31E-09	5.27E-05	4.47E-05	1.06E-05	1.08E-04
86	2.20	0.	2.81E-14	0.	0.	0.	0.	0.	0.	2.30E-09	6.03E-05	5.23E-05	1.26E-05	1.25E-04
87	2.10	0.	2.91E-14	0.	0.	0.	0.	0.	0.	2.29E-09	6.95E-05	6.02E-05	1.46E-05	1.44E-04
88	2.00	0.	5.80E-14	0.	0.	0.	0.	0.	0.	2.22E-09	8.06E-05	6.83E-05	1.66E-05	1.65E-04
89	1.90	0.	6.81E-14	0.	0.	0.	0.	0.	0.	2.13E-09	9.44E-05	7.78E-05	1.94E-05	1.92E-04
90	1.80	0.	5.89E-14	0.	0.	0.	0.	0.	0.	2.04E-09	1.12E-04	9.20E-05	2.36E-05	2.27E-04
91	1.70	0.	6.62E-14	0.	0.	0.	0.	0.	0.	1.92E-09	1.33E-04	1.09E-04	2.86E-05	2.71E-04
92	1.60	0.	5.83E-14	0.	0.	0.	0.	0.	0.	1.63E-09	1.60E-04	1.26E-04	3.37E-05	3.21E-04
93	1.50	0.	5.69E-14	0.	0.	0.	0.	0.	0.	7.39E-10	1.96E-04	1.61E-04	4.07E-05	3.98E-04
94	1.40	0.	5.59E-14	0.	0.	0.	0.	0.	0.	0.	2.41E-04	1.92E-04	4.87E-05	4.82E-04
95	1.30	0.	4.28E-14	0.	0.	0.	0.	0.	0.	0.	3.83E-04	2.65E-04	5.94E-05	6.27E-04
96	1.20	0.	4.08E-14	0.	0.	0.	0.	0.	0.	0.	3.86E-04	2.87E-04	6.48E-05	7.38E-04
97	1.10	0.	3.99E-14	0.	0.	0.	0.	6.15E-28	0.	0.	5.06E-04	3.53E-04	8.88E-05	9.39E-04
98	1.00	0.	3.67E-14	0.	0.	0.	0.	1.03E-18	0.	0.	6.79E-04	4.27E-04	9.14E-05	1.20E-03
99	0.90	0.	3.01E-14	0.	0.	0.	0.	1.21E-18	0.	0.	9.40E-04	4.92E-04	1.07E-04	1.54E-03
100	0.80	0.	1.41E-14	0.	0.	0.	0.	2.68E-17	0.	0.	1.35E-03	5.65E-04	1.23E-04	2.04E-03
101	0.70	0.	3.24E-15	0.	0.	0.	0.	2.48E-17	0.	0.	2.05E-03	6.09E-04	1.23E-04	2.78E-03
102	0.60	0.	7.53E-16	0.	0.	0.	0.	8.85E-17	0.	0.	3.31E-03	6.21E-04	1.38E-04	4.07E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.993E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.63E-18	0.	0.	0.	5.00E-12	7.76E-09	1.27E-06	8.10E-08	1.36E-06
2	10.60	0.	0.	8.89E-18	0.	0.	0.	5.07E-12	7.99E-09	1.29E-06	8.07E-08	1.38E-06
3	10.50	0.	0.	9.06E-18	0.	0.	0.	5.07E-12	8.22E-09	4.66E-07	8.05E-08	5.55E-07
4	10.40	0.	0.	8.71E-18	0.	0.	0.	5.08E-12	8.44E-09	4.69E-07	8.02E-08	5.58E-07
5	10.30	0.	0.	7.71E-18	0.	0.	0.	5.09E-12	8.71E-09	4.73E-07	7.99E-08	5.62E-07
6	10.20	0.	0.	8.05E-18	0.	0.	0.	5.09E-12	8.97E-09	4.79E-07	7.98E-08	5.68E-07
7	10.10	0.	0.	7.45E-18	0.	0.	0.	5.10E-12	9.24E-09	4.85E-07	7.97E-08	5.74E-07
8	10.00	0.	0.	6.84E-18	0.	0.	0.	5.11E-12	9.52E-09	4.91E-07	7.96E-08	5.80E-07
9	9.90	0.	0.	7.05E-18	0.	0.	0.	5.12E-12	9.82E-09	4.97E-07	7.95E-08	5.86E-07
10	9.80	0.	0.	6.72E-18	0.	0.	0.	5.13E-12	1.01E-08	5.03E-07	7.94E-08	5.92E-07
11	9.70	0.	0.	5.92E-18	0.	0.	0.	5.13E-12	1.04E-08	5.08E-07	7.93E-08	5.98E-07
12	9.60	0.	0.	6.41E-18	0.	0.	0.	5.14E-12	1.08E-08	5.14E-07	7.92E-08	6.04E-07
13	9.50	0.	0.	5.59E-18	0.	0.	0.	5.15E-12	1.11E-08	5.20E-07	7.91E-08	6.11E-07
14	9.40	0.	0.	5.37E-18	0.	0.	0.	5.17E-12	1.15E-08	5.27E-07	7.91E-08	6.17E-07
15	9.30	0.	0.	5.53E-18	0.	0.	0.	5.19E-12	1.19E-08	4.51E-07	7.90E-08	5.42E-07
16	9.20	0.	0.	4.70E-18	0.	0.	0.	5.21E-12	1.22E-08	4.57E-07	7.90E-08	5.48E-07
17	9.10	0.	0.	4.84E-18	0.	0.	0.	5.23E-12	1.27E-08	4.63E-07	7.90E-08	5.54E-07
18	9.00	0.	0.	4.47E-18	0.	0.	0.	5.25E-12	1.31E-08	4.69E-07	7.89E-08	5.61E-07
19	8.90	0.	0.	4.21E-18	0.	0.	0.	5.27E-12	1.35E-08	4.75E-07	7.89E-08	5.67E-07
20	8.80	0.	0.	4.16E-18	0.	0.	0.	5.29E-12	1.40E-08	4.80E-07	7.88E-08	5.73E-07
21	8.70	0.	0.	3.69E-18	0.	0.	0.	5.30E-12	1.45E-08	4.86E-07	7.88E-08	5.80E-07
22	8.60	0.	0.	3.83E-18	0.	0.	0.	5.32E-12	1.50E-08	4.92E-07	7.25E-08	5.80E-07
23	8.50	0.	0.	3.42E-18	0.	0.	0.	5.34E-12	1.56E-08	4.99E-07	7.15E-08	5.86E-07
24	8.40	0.	0.	3.43E-18	0.	0.	0.	5.37E-12	1.61E-08	5.05E-07	7.16E-08	5.93E-07
25	8.30	0.	0.	2.97E-18	0.	0.	0.	5.40E-12	1.67E-08	5.14E-07	7.18E-08	6.02E-07
26	8.20	0.	0.	3.03E-18	0.	0.	0.	5.42E-12	1.73E-08	5.25E-07	7.23E-08	6.14E-07
27	8.10	0.	0.	2.66E-18	0.	0.	0.	5.45E-12	1.80E-08	5.35E-07	7.29E-08	6.26E-07
28	8.00	0.	0.	2.71E-18	0.	0.	0.	5.48E-12	1.87E-08	3.57E-07	7.35E-08	4.49E-07
29	7.90	0.	0.	2.37E-18	0.	0.	0.	5.51E-12	1.94E-08	3.68E-07	7.40E-08	4.62E-07
30	7.80	0.	0.	2.40E-18	0.	0.	0.	5.54E-12	2.02E-08	3.80E-07	7.46E-08	4.74E-07
31	7.70	0.	0.	2.22E-18	0.	0.	0.	5.56E-12	2.10E-08	3.92E-07	7.52E-08	4.89E-07
32	7.60	0.	0.	2.13E-18	0.	1.59E-22	0.	5.59E-12	2.18E-08	4.07E-07	7.57E-08	5.04E-07
33	7.50	0.	0.	2.81E-18	0.	4.96E-22	0.	5.62E-12	2.27E-08	4.21E-07	7.63E-08	5.20E-07
34	7.40	0.	0.	1.83E-18	0.	4.82E-21	0.	5.65E-12	2.37E-08	4.35E-07	7.70E-08	5.35E-07
35	7.30	0.	0.	1.76E-18	0.	1.73E-20	0.	5.68E-12	2.46E-08	4.52E-07	7.77E-08	5.54E-07
36	7.20	0.	0.	1.41E-18	0.	4.86E-20	0.	5.71E-12	2.57E-08	4.72E-07	7.84E-08	5.77E-07
37	7.10	0.	0.	1.57E-18	0.	1.53E-19	0.	5.76E-12	2.68E-08	4.93E-07	7.94E-08	6.00E-07
38	7.00	0.82E-22	0.	1.46E-18	0.	2.88E-19	0.	5.81E-12	2.80E-08	4.56E-07	8.09E-08	5.65E-07
39	6.90	1.74E-21	0.	1.36E-18	0.	4.30E-19	0.	5.86E-12	2.92E-08	4.75E-07	8.19E-08	5.86E-07
40	6.80	1.51E-21	0.	1.33E-18	0.	7.04E-19	0.	5.90E-12	3.05E-08	4.94E-07	8.30E-08	6.08E-07
41	6.70	1.11E-21	0.	1.18E-18	0.	6.77E-19	0.	5.95E-12	3.19E-08	5.14E-07	8.41E-08	6.30E-07
42	6.60	6.85E-22	0.	1.08E-18	0.	5.94E-19	0.	6.00E-12	3.34E-08	5.33E-07	8.53E-08	6.52E-07
43	6.50	3.99E-22	0.	8.77E-19	0.	8.30E-19	0.	6.04E-12	3.50E-08	5.53E-07	8.64E-08	6.75E-07
44	6.40	2.32E-22	0.	6.23E-19	2.50E-21	7.55E-19	0.	6.09E-12	3.67E-08	5.73E-07	8.76E-08	6.97E-07
45	6.30	1.37E-22	0.	4.80E-19	1.20E-20	5.80E-19	0.	6.14E-12	3.85E-08	5.93E-07	8.90E-08	7.20E-07
46	6.20	6.24E-23	0.	2.26E-19	1.73E-20	7.72E-19	0.	6.18E-12	4.04E-08	6.14E-07	9.06E-08	7.45E-07
47	6.10	2.91E-23	0.	1.18E-19	4.99E-20	9.23E-19	0.	6.23E-12	4.24E-08	6.35E-07	9.22E-08	7.70E-07
48	6.00	1.23E-23	0.	2.83E-20	4.92E-20	4.75E-19	0.	6.28E-12	4.46E-08	6.57E-07	9.38E-08	7.96E-07
49	5.90	3.85E-24	0.	2.83E-21	7.38E-20	4.57E-19	0.	6.28E-12	4.69E-08	6.79E-07	9.54E-08	8.22E-07
50	5.80	3.98E-25	0.	5.15E-23	1.83E-19	4.82E-19	0.	6.18E-12	4.94E-08	7.01E-07	9.70E-08	8.48E-07
51	5.70	2.87E-26	0.	0.	1.23E-19	5.40E-19	0.	5.81E-12	5.21E-08	2.66E-07	7.44E-08	3.92E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22500. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N_2 1ST POS.	N_2 2ND POS.	N_2^+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.-ROT	NO_2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	.E.	TOTAL AIR
52	5.60	1.38E-27	0.	0.	0.	1.08E-19	6.93E-19	0.	0.	5.40E-12	5.90E-08	2.79E-07	7.49E-08	4.09E-07
53	5.50	0.	0.	0.	0.	1.32E-19	6.41E-19	0.	0.	5.43E-12	5.81E-08	2.93E-07	7.60E-08	4.27E-07
54	5.40	0.	0.	0.	0.	1.24E-19	5.39E-19	0.	0.	5.46E-12	6.14E-08	3.09E-07	7.74E-08	4.47E-07
55	5.30	0.	0.	0.	0.	1.27E-19	4.66E-19	0.	0.	5.49E-12	6.50E-08	3.24E-07	7.98E-08	4.68E-07
56	5.20	0.	0.	0.	0.	1.38E-19	5.29E-19	0.	0.	5.53E-12	6.89E-08	3.40E-07	8.08E-08	4.89E-07
57	5.10	0.	0.	0.	0.	1.38E-19	6.73E-19	0.	0.	5.57E-12	7.30E-08	3.56E-07	8.25E-08	5.11E-07
58	5.00	1.05E-20	0.	0.	0.	1.27E-19	6.44E-19	0.	0.	5.62E-12	7.75E-08	3.72E-07	8.43E-08	5.34E-07
59	4.90	4.56E-20	0.	0.	0.	1.43E-19	7.15E-19	0.	0.	5.67E-12	8.24E-08	3.88E-07	8.23E-08	5.53E-07
60	4.80	8.70E-20	0.	0.	0.	1.55E-19	6.77E-19	0.	0.	5.71E-12	8.76E-08	4.05E-07	8.44E-08	5.78E-07
61	4.70	1.28E-19	0.	0.	0.	1.57E-19	6.19E-19	0.	0.	5.76E-12	9.35E-08	4.29E-07	8.71E-08	6.09E-07
62	4.60	1.67E-19	0.	0.	0.	1.62E-19	5.61E-19	0.	0.	5.81E-12	9.98E-08	4.58E-07	8.98E-08	6.48E-07
63	4.50	1.78E-19	0.	1.47E-19	0.	1.51E-19	4.24E-19	0.	0.	5.86E-12	1.07E-07	4.89E-07	9.26E-08	6.88E-07
64	4.40	1.93E-19	0.	4.24E-19	0.	1.53E-19	2.80E-19	0.	0.	5.90E-12	1.14E-07	5.20E-07	9.57E-08	7.30E-07
65	4.30	1.85E-19	0.	1.48E-18	0.	1.48E-19	1.84E-19	0.	0.	5.95E-12	1.22E-07	5.52E-07	9.65E-08	7.78E-07
66	4.20	1.75E-19	0.	4.98E-18	0.	1.56E-19	1.26E-19	0.	0.	6.00E-12	1.31E-07	5.88E-07	8.79E-08	8.27E-07
67	4.10	1.66E-19	0.	2.12E-18	0.	1.55E-19	3.50E-20	0.	0.	6.02E-12	1.41E-07	6.25E-07	6.12E-08	8.20E-07
68	4.00	1.55E-19	0.	6.94E-18	0.	1.51E-19	2.66E-20	0.	0.	6.04E-12	1.52E-07	6.55E-07	6.41E-08	8.71E-07
69	3.90	1.34E-19	0.	3.13E-18	3.55E-15	1.42E-19	9.81E-21	0.	0.	6.02E-12	1.64E-07	6.63E-07	6.59E-08	8.93E-07
70	3.80	1.48E-19	0.	5.07E-18	1.36E-14	1.54E-19	0.	0.	0.	6.08E-12	1.78E-07	6.99E-07	6.93E-08	9.47E-07
71	3.70	1.34E-19	0.	5.11E-18	6.66E-15	1.34E-19	0.	0.	0.	5.90E-12	1.93E-07	7.32E-07	7.49E-08	10.08E-07
72	3.60	1.22E-19	0.	3.82E-18	3.35E-14	1.45E-19	0.	0.	0.	5.53E-12	2.10E-07	7.72E-07	8.09E-08	1.06E-06
73	3.50	1.16E-19	0.	4.93E-18	5.79E-14	1.17E-19	0.	0.	0.	5.06E-12	2.29E-07	8.18E-07	8.78E-08	1.13E-06
74	3.40	1.08E-19	0.	3.20E-18	1.01E-14	1.32E-19	0.	0.	0.	2.92E-12	2.50E-07	8.78E-07	9.56E-08	1.22E-06
75	3.30	8.72E-20	0.	3.35E-18	3.63E-14	1.08E-19	0.	0.	0.	2.92E-12	2.74E-07	9.22E-07	1.03E-07	1.30E-06
76	3.20	7.73E-20	0.	2.26E-18	5.52E-14	1.14E-19	0.	0.	0.	2.93E-12	3.01E-07	9.98E-07	1.08E-07	1.40E-06
77	3.10	7.51E-20	0.	1.77E-18	1.61E-14	1.10E-19	0.	0.	0.	2.93E-12	3.31E-07	4.92E-07	1.17E-07	9.30E-07
78	3.00	6.85E-20	0.	1.18E-18	3.43E-14	1.06E-19	0.	0.	0.	2.94E-12	3.66E-07	5.34E-07	1.27E-07	1.03E-06
79	2.90	5.06E-20	0.	7.01E-19	1.85E-14	8.27E-20	0.	0.	0.	2.95E-12	4.05E-07	5.87E-07	1.26E-07	1.12E-06
80	2.80	6.18E-20	0.	3.38E-19	1.32E-14	5.94E-20	0.	0.	0.	2.95E-12	4.51E-07	6.43E-07	1.29E-07	1.22E-06
81	2.70	4.09E-20	0.	1.68E-19	1.61E-14	3.35E-20	0.	0.	0.	2.95E-12	5.04E-07	7.01E-07	1.21E-07	1.33E-06
82	2.60	1.99E-20	0.	7.63E-20	1.72E-15	1.52E-20	0.	0.	0.	2.95E-12	5.66E-07	7.57E-07	9.34E-08	1.42E-06
83	2.50	1.41E-21	0.	7.85E-21	1.69E-15	3.69E-21	0.	0.	0.	2.95E-12	6.38E-07	7.52E-07	1.07E-07	1.50E-06
84	2.48	0.	3.48E-19	0.	1.25E-15	4.08E-22	0.	0.	0.	2.95E-12	7.22E-07	8.74E-07	1.28E-07	1.72E-06
85	2.38	0.	9.72E-19	0.	0.	0.	0.	0.	0.	2.93E-12	8.22E-07	1.91E-06	1.58E-07	1.90E-06
86	2.28	0.	2.64E-18	0.	0.	0.	0.	0.	0.	2.92E-12	9.41E-07	1.14E-06	1.75E-07	2.20E-06
87	2.18	0.	2.65E-18	0.	0.	0.	0.	0.	0.	2.90E-12	1.08E-06	1.20E-06	2.01E-07	2.50E-06
88	2.08	0.	5.35E-18	0.	0.	0.	0.	0.	0.	2.81E-12	1.26E-06	1.42E-06	2.26E-07	2.90E-06
89	1.98	0.	6.19E-18	0.	0.	0.	0.	0.	0.	2.78E-12	1.47E-06	1.57E-06	2.61E-07	3.38E-06
90	1.88	0.	5.35E-18	0.	0.	0.	0.	0.	0.	2.59E-12	1.74E-06	1.77E-06	3.11E-07	3.82E-06
91	1.78	0.	6.83E-18	0.	0.	0.	0.	0.	0.	2.44E-12	2.07E-06	1.39E-06	3.30E-07	3.89E-06
92	1.68	0.	4.58E-18	0.	0.	0.	0.	0.	0.	2.06E-12	2.50E-06	1.59E-06	3.03E-07	4.47E-06
93	1.58	0.	5.18E-18	0.	0.	0.	0.	0.	0.	9.37E-13	3.05E-06	1.09E-06	4.03E-07	5.49E-06
94	1.48	0.	5.80E-18	0.	0.	0.	0.	0.	0.	0.	3.74E-06	1.91E-06	5.20E-07	6.19E-06
95	1.38	0.	3.89E-18	0.	0.	0.	0.	0.	0.	0.	4.71E-06	2.59E-06	5.65E-07	7.87E-06
96	1.28	0.	3.71E-18	0.	0.	0.	0.	0.	0.	0.	6.01E-06	3.26E-06	7.49E-07	1.00E-05
97	1.18	0.	3.62E-18	0.	0.	0.	0.	6.52E-24	0.	0.	7.86E-06	4.01E-06	8.77E-07	1.27E-05
98	1.08	0.	3.38E-18	0.	0.	0.	0.	1.09E-22	0.	0.	1.05E-05	4.66E-06	1.05E-06	1.63E-05
99	0.98	0.	2.73E-18	0.	0.	0.	0.	1.20E-22	0.	0.	1.46E-05	4.60E-06	1.18E-06	2.34E-05
100	0.88	..	1.20E-18	0.	0.	0.	0.	2.04E-21	0.	0.	2.09E-05	5.83E-06	1.20E-06	2.72E-05
101	0.78	0.	2.54E-19	0.	0.	0.	0.	2.75E-21	0.	0.	3.17E-05	4.78E-06	1.05E-06	3.75E-05
102	0.68	0.	6.09E-20	0.	0.	0.	0.	8.54E-21	0.	0.	5.11E-05	5.36E-06	1.19E-06	5.77E-05

ABSORPTION COEFFICIEA OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	B- PHOTO-DET	FREE-FREE (BMS)	N P.E.	O P.E.	TOTAL AIR
1	18.78	0.	0.	3.48E-22	0.	0.	0.	7.33E-15	1.84E-10	1.55E-08	1.91E-09	1.76E-08
2	18.68	0.	0.	3.21E-22	0.	0.	0.	7.34E-15	1.89E-10	1.56E-08	1.91E-09	1.77E-08
3	18.58	0.	0.	3.27E-22	0.	0.	0.	7.34E-15	1.95E-10	1.57E-08	1.91E-09	1.78E-08
4	18.48	0.	0.	3.15E-22	0.	0.	0.	7.35E-15	2.01E-10	1.59E-08	1.91E-09	1.80E-08
5	18.38	0.	0.	2.79E-22	0.	0.	0.	7.36E-15	2.07E-10	1.60E-08	1.91E-09	1.81E-08
6	18.28	0.	0.	2.91E-22	0.	0.	0.	7.37E-15	2.13E-10	1.63E-08	1.92E-09	1.84E-08
7	18.18	0.	0.	2.76E-22	0.	0.	0.	7.38E-15	2.19E-10	1.65E-08	1.93E-09	1.87E-08
8	18.08	0.	0.	2.47E-22	0.	0.	0.	7.39E-15	2.26E-10	1.68E-08	1.95E-09	1.90E-08
9	9.98	0.	0.	2.55E-22	0.	0.	0.	7.41E-15	2.33E-10	1.70E-08	1.96E-09	1.92E-08
10	9.88	0.	0.	2.43E-22	0.	0.	0.	7.42E-15	2.40E-10	1.73E-08	1.97E-09	1.95E-08
11	9.78	0.	0.	2.14E-22	0.	0.	0.	7.43E-15	2.48E-10	1.76E-08	1.99E-09	1.98E-08
12	9.68	0.	0.	2.32E-22	0.	0.	0.	7.45E-15	2.55E-10	1.78E-08	2.00E-09	2.01E-08
13	9.58	0.	0.	2.02E-22	0.	0.	0.	7.46E-15	2.64E-10	1.81E-08	2.01E-09	2.03E-08
14	9.48	0.	0.	1.94E-22	0.	0.	0.	7.49E-15	2.72E-10	1.83E-08	2.03E-09	2.06E-08
15	9.38	0.	0.	2.08E-22	0.	0.	0.	7.52E-15	2.81E-10	1.81E-08	2.05E-09	2.04E-08
16	9.28	0.	0.	1.78E-22	0.	0.	0.	7.54E-15	2.90E-10	1.84E-08	2.06E-09	2.07E-08
17	9.18	0.	0.	1.75E-22	0.	0.	0.	7.57E-15	3.00E-10	1.86E-08	2.07E-09	2.10E-08
18	9.08	0.	0.	1.62E-22	0.	0.	0.	7.60E-15	3.10E-10	1.89E-08	2.09E-09	2.13E-08
19	8.98	0.	0.	1.92E-22	0.	0.	0.	7.62E-15	3.21E-10	1.91E-08	2.11E-09	2.16E-08
20	8.88	0.	0.	1.58E-22	0.	0.	0.	7.65E-15	3.32E-10	1.94E-08	1.53E-09	2.15E-08
21	8.78	0.	0.	1.83E-22	0.	0.	0.	7.68E-15	3.44E-10	1.97E-08	1.55E-09	2.17E-08
22	8.68	0.	0.	1.38E-22	0.	0.	0.	7.71E-15	3.56E-10	1.99E-08	1.57E-09	2.18E-08
23	8.58	0.	0.	1.24E-22	0.	0.	0.	7.73E-15	3.69E-10	2.02E-08	1.59E-09	2.22E-08
24	8.48	0.	0.	1.24E-22	0.	0.	0.	7.77E-15	3.82E-10	2.05E-08	1.61E-09	2.25E-08
25	8.38	0.	0.	1.07E-22	0.	0.	0.	7.81E-15	3.96E-10	1.23E-08	1.64E-09	1.43E-08
26	8.28	0.	0.	1.09E-22	0.	0.	0.	7.85E-15	4.11E-10	1.28E-08	1.68E-09	1.49E-08
27	8.18	0.	0.	9.62E-23	0.	0.	0.	7.90E-15	4.26E-10	1.33E-08	1.72E-09	1.54E-08
28	8.08	0.	0.	9.77E-23	0.	0.	0.	7.94E-15	4.43E-10	1.38E-08	1.76E-09	1.60E-08
29	7.98	0.	0.	8.56E-23	0.	0.	0.	7.98E-15	4.60E-10	1.43E-08	1.81E-09	1.65E-08
30	7.88	0.	0.	8.96E-23	0.	0.	0.	8.02E-15	4.78E-10	1.48E-08	1.85E-09	1.71E-08
31	7.78	0.	0.	8.81E-23	0.	0.	0.	8.06E-15	4.97E-10	1.53E-08	1.90E-09	1.77E-08
32	7.68	0.	0.	7.78E-23	0.	1.03E-26	0.	8.10E-15	5.17E-10	1.59E-08	1.94E-09	1.84E-08
33	7.58	0.	0.	7.25E-23	0.	3.23E-26	0.	8.14E-15	5.38E-10	1.65E-08	1.99E-09	1.91E-08
34	7.48	0.	0.	6.68E-23	0.	3.01E-25	0.	8.18E-15	5.60E-10	1.72E-08	2.04E-09	1.98E-08
35	7.38	0.	0.	6.35E-23	0.	1.17E-24	0.	8.23E-15	5.83E-10	1.55E-08	2.09E-09	1.81E-08
36	7.28	0.	0.	5.82E-23	0.	3.16E-24	0.	8.27E-15	6.08E-10	1.63E-08	2.18E-09	1.91E-08
37	7.18	0.	0.	5.66E-23	0.	9.99E-24	0.	8.34E-15	6.34E-10	1.72E-08	2.26E-09	2.01E-08
38	7.08	1.03E-25	0.	5.29E-23	0.	1.88E-23	0.	8.41E-15	6.62E-10	1.82E-08	2.34E-09	2.10E-08
39	6.98	2.84E-25	0.	4.91E-23	0.	2.80E-23	0.	8.48E-15	6.91E-10	1.89E-08	2.43E-09	2.20E-08
40	6.88	1.77E-25	0.	4.89E-23	0.	4.68E-23	0.	8.55E-15	7.22E-10	1.97E-08	2.51E-09	2.30E-08
41	6.78	1.31E-25	0.	4.20E-23	0.	4.41E-23	0.	8.61E-15	7.56E-10	2.06E-08	2.59E-09	2.39E-08
42	6.68	8.83E-26	0.	3.90E-23	0.	3.87E-23	0.	8.68E-15	7.90E-10	2.14E-08	2.68E-09	2.49E-08
43	6.58	4.69E-26	0.	3.17E-23	0.	5.40E-23	0.	8.75E-15	8.28E-10	2.23E-08	2.76E-09	2.59E-08
44	6.48	2.72E-26	0.	2.25E-23	1.63E-25	4.92E-23	0.	8.82E-15	8.67E-10	2.31E-08	2.85E-09	2.69E-08
45	6.38	1.68E-26	0.	1.45E-23	7.80E-25	3.78E-23	0.	8.89E-15	9.10E-10	2.40E-08	2.94E-09	2.79E-08
46	6.28	7.32E-27	0.	8.22E-24	1.13E-24	5.02E-23	0.	8.95E-15	9.55E-10	2.49E-08	3.04E-09	2.89E-08
47	6.18	3.41E-27	0.	3.96E-24	3.25E-24	6.01E-23	0.	9.02E-15	1.00E-09	2.59E-08	3.14E-09	3.00E-08
48	6.08	1.44E-27	0.	1.82E-24	3.21E-24	3.09E-23	0.	9.09E-15	1.05E-09	8.10E-09	3.81E-09	1.22E-08
49	5.98	3.58E-28	0.	7.33E-26	4.75E-24	2.98E-23	0.	9.69E-15	1.11E-09	8.39E-09	1.47E-09	1.10E-08
50	5.88	4.58E-29	0.	1.84E-27	6.71E-24	3.14E-23	0.	8.95E-15	1.17E-09	8.68E-09	1.51E-09	1.14E-08
51	5.78	3.37E-30	0.	0.	8.81E-24	3.51E-23	0.	8.41E-15	1.23E-09	9.10E-09	1.55E-09	1.19E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2*800. DENSITY (GM/CC) 1.703E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.66	1.53E-31	0.	0.	0.	7.03E-24	4.51E-23	0.	0.	7.82E-15	1.30E-09	9.64E-09	1.59E-09	1.25E-08
53	5.50	0.	0.	0.	0.	8.59E-24	4.19E-23	0.	0.	7.86E-15	1.37E-09	1.02E-08	1.63E-09	1.32E-08
54	5.40	0.	0.	0.	0.	8.00E-24	3.91E-23	0.	0.	7.90E-15	1.45E-09	1.08E-08	1.69E-09	1.40E-08
55	5.30	0.	0.	0.	0.	8.28E-24	4.33E-23	0.	0.	7.95E-15	1.53E-09	1.14E-08	1.76E-09	1.47E-08
56	5.20	0.	0.	0.	0.	8.98E-24	3.45E-23	0.	0.	8.00E-15	1.63E-09	1.21E-08	1.83E-09	1.55E-08
57	5.10	0.	0.	0.	0.	9.01E-24	4.38E-23	0.	0.	8.07E-15	1.72E-09	1.27E-08	1.59E-09	1.63E-08
58	5.00	2.18E-24	0.	0.	0.	8.30E-24	4.20E-23	0.	0.	8.14E-15	1.83E-09	1.33E-08	1.66E-09	1.69E-08
59	4.90	5.35E-24	0.	0.	0.	9.33E-24	4.66E-23	0.	0.	8.21E-15	1.95E-09	1.39E-08	1.72E-09	1.76E-08
60	4.80	1.02E-23	0.	0.	0.	1.01E-23	4.41E-23	0.	0.	8.27E-15	2.07E-09	1.45E-08	1.78E-09	1.84E-08
61	4.70	1.40E-23	0.	0.	0.	1.02E-23	4.09E-23	0.	0.	8.34E-15	2.21E-09	1.54E-08	1.86E-09	1.95E-08
62	4.60	1.95E-23	0.	0.	0.	1.06E-23	3.69E-23	0.	0.	8.41E-15	2.36E-09	1.66E-08	1.94E-09	2.09E-08
63	4.50	2.09E-23	0.	5.32E-24	0.	9.83E-24	2.70E-23	0.	0.	8.48E-15	2.52E-09	1.78E-08	2.02E-09	2.23E-08
64	4.40	2.27E-23	0.	1.93E-23	0.	9.94E-24	1.88E-23	0.	0.	8.55E-15	2.69E-09	1.90E-08	2.13E-09	2.38E-08
65	4.30	2.18E-23	0.	5.34E-23	0.	9.52E-24	1.20E-23	0.	0.	8.61E-15	2.89E-09	2.01E-08	2.22E-09	2.52E-08
66	4.20	2.05E-23	0.	1.62E-22	0.	1.02E-23	8.18E-24	0.	0.	8.68E-15	3.10E-09	2.15E-08	1.82E-09	2.64E-08
67	4.10	1.95E-23	0.	7.86E-23	0.	1.01E-23	2.32E-24	0.	0.	8.72E-15	3.33E-09	2.29E-08	1.95E-09	2.82E-08
68	4.00	1.82E-23	0.	2.36E-22	0.	9.83E-24	1.73E-24	0.	0.	8.75E-15	3.59E-09	2.43E-08	2.09E-09	3.00E-08
69	3.90	1.57E-23	0.	1.13E-22	9.56E-19	9.24E-24	6.39E-25	0.	0.	8.72E-15	3.88E-09	2.56E-08	2.22E-09	3.17E-08
70	3.80	1.73E-23	0.	1.53E-22	3.68E-18	1.00E-23	0.	0.	0.	8.68E-15	4.20E-09	2.71E-08	2.36E-09	3.36E-08
71	3.70	1.57E-23	0.	1.84E-22	1.88E-18	8.75E-24	0.	0.	0.	8.55E-15	4.55E-09	2.85E-08	2.52E-09	3.55E-08
72	3.60	1.43E-23	0.	1.38E-22	9.04E-18	9.45E-24	0.	0.	0.	8.00E-15	4.95E-09	2.99E-08	2.69E-09	3.76E-08
73	3.50	1.36E-23	0.	1.78E-22	1.56E-17	7.64E-24	0.	0.	0.	7.33E-15	5.39E-09	3.15E-08	2.88E-09	3.98E-08
74	3.40	1.27E-23	0.	1.19E-22	2.73E-18	8.62E-24	0.	0.	0.	4.23E-15	5.89E-09	3.11E-08	2.77E-09	1.98E-08
75	3.30	1.02E-23	0.	1.21E-22	9.80E-18	7.02E-24	0.	0.	0.	4.23E-15	6.45E-09	3.08E-08	2.97E-09	2.03E-08
76	3.20	9.06E-24	0.	8.15E-23	1.49E-17	7.44E-24	0.	0.	0.	4.24E-15	7.08E-09	3.23E-08	2.52E-09	2.19E-08
77	3.10	8.81E-24	0.	6.40E-23	4.35E-18	7.15E-24	0.	0.	0.	4.25E-15	7.79E-09	3.41E-08	2.77E-09	2.46E-08
78	3.00	8.03E-24	0.	3.98E-23	9.25E-18	6.87E-24	0.	0.	0.	4.26E-15	8.61E-09	3.58E-08	2.45E-09	2.69E-08
79	2.90	6.88E-24	0.	2.53E-23	4.98E-18	5.38E-24	0.	0.	0.	4.27E-15	9.54E-09	1.75E-08	2.69E-09	2.97E-08
80	2.80	7.25E-24	0.	1.22E-23	3.57E-18	3.87E-24	0.	0.	0.	4.27E-15	1.06E-08	1.92E-08	2.94E-09	3.28E-08
81	2.70	4.79E-24	0.	5.77E-24	4.34E-18	2.18E-24	0.	0.	0.	4.27E-15	1.18E-08	2.10E-08	2.64E-09	3.55E-08
82	2.60	2.33E-24	0.	2.76E-24	4.64E-19	9.98E-25	0.	0.	0.	4.27E-15	1.33E-08	2.27E-08	2.82E-09	3.89E-08
83	2.50	1.66E-25	0.	2.84E-25	4.56E-19	2.40E-25	0.	0.	0.	4.27E-15	1.50E-08	2.45E-08	3.17E-09	4.27E-08
84	2.40	0.	1.23E-23	0.	3.39E-19	2.60E-26	0.	0.	0.	4.27E-15	1.70E-08	2.85E-08	3.66E-09	4.86E-08
85	2.30	0.	3.51E-23	0.	0.	0.	0.	0.	0.	4.24E-15	1.93E-08	3.15E-08	4.17E-09	5.50E-08
86	2.20	0.	9.55E-23	0.	0.	0.	0.	0.	0.	4.22E-15	2.21E-08	3.50E-08	4.71E-09	6.18E-08
87	2.10	0.	9.56E-23	0.	0.	0.	0.	0.	0.	4.21E-15	2.54E-08	3.86E-08	5.25E-09	6.93E-08
88	2.00	0.	1.93E-22	0.	0.	0.	0.	0.	0.	4.07E-15	2.95E-08	4.21E-08	5.80E-09	7.75E-08
89	1.90	0.	2.24E-22	0.	0.	0.	0.	0.	0.	3.91E-15	3.45E-08	4.13E-08	4.02E-09	5.98E-08
90	1.80	0.	1.93E-22	0.	0.	0.	0.	0.	0.	3.74E-15	4.08E-08	2.39E-08	4.71E-09	6.94E-08
91	1.70	0.	2.17E-22	0.	0.	0.	0.	0.	0.	3.53E-15	4.86E-08	2.67E-08	5.49E-09	8.08E-08
92	1.60	0.	1.65E-22	0.	0.	0.	0.	0.	0.	2.98E-15	5.86E-08	2.95E-08	6.15E-09	9.43E-08
93	1.50	0.	1.87E-22	0.	0.	0.	0.	0.	0.	1.38E-15	7.13E-08	3.38E-08	7.18E-09	1.11E-07
94	1.40	0.	1.84E-22	0.	0.	0.	0.	0.	0.	0.	8.80E-08	3.46E-08	8.72E-09	1.29E-07
95	1.30	0.	1.41E-22	0.	0.	0.	0.	0.	0.	0.	1.10E-07	4.08E-08	8.60E-09	1.59E-07
96	1.20	0.	1.34E-22	0.	0.	0.	0.	0.	0.	0.	1.41E-07	1.55E-08	7.17E-09	1.63E-07
97	1.10	0.	1.31E-22	0.	0.	0.	0.	4.24E-28	0.	0.	1.84E-07	1.92E-08	9.86E-09	2.12E-07
98	1.00	0.	1.20E-22	0.	0.	0.	0.	7.10E-27	0.	0.	2.46E-07	2.34E-08	1.89E-08	2.80E-07
99	0.90	0.	9.87E-23	0.	0.	0.	0.	8.34E-27	0.	0.	3.40E-07	2.61E-08	1.12E-08	3.77E-07
100	0.80	0.	4.63E-23	0.	0.	0.	0.	1.85E-25	0.	0.	4.86E-07	3.02E-08	1.30E-08	5.31E-07
101	0.70	0.	1.86E-23	0.	0.	0.	0.	1.79E-25	0.	0.	7.37E-07	2.87E-08	1.13E-08	7.77E-07
102	0.60	0.	2.47E-24	0.	0.	0.	0.	9.56E-25	0.	0.	1.19E-06	3.23E-08	1.28E-08	1.23E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 32000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-C (DET.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
1	19.70	0.	0.	1.45E-27	0.	0.	0.	4.19E-18	3.88E-12	2.65E-10	4.85E-11	3.17E-10
2	19.60	0.	0.	1.42E-27	0.	0.	0.	4.20E-18	3.17E-12	2.67E-10	4.85E-11	3.19E-10
3	19.50	0.	0.	1.35E-27	0.	0.	0.	4.20E-18	3.20E-12	2.69E-10	4.86E-11	3.22E-10
4	19.40	0.	0.	1.49E-27	0.	0.	0.	4.21E-18	3.26E-12	2.71E-10	4.86E-11	3.24E-10
5	19.30	0.	0.	1.32E-27	0.	0.	0.	4.21E-18	3.46E-12	2.74E-10	4.87E-11	3.27E-10
6	19.20	0.	0.	1.58E-27	0.	0.	0.	4.22E-18	3.56E-12	2.79E-10	5.03E-11	3.33E-10
7	19.10	0.	0.	1.31E-27	0.	0.	0.	4.22E-18	3.67E-12	2.83E-10	5.09E-11	3.38E-10
8	19.00	0.	0.	1.17E-27	0.	0.	0.	4.23E-18	3.78E-12	2.88E-10	5.16E-11	3.43E-10
9	18.90	0.	0.	1.21E-27	0.	0.	0.	4.24E-18	3.89E-12	2.92E-10	5.22E-11	3.48E-10
10	18.80	0.	0.	1.15E-27	0.	0.	0.	4.24E-18	4.02E-12	2.97E-10	5.28E-11	3.54E-10
11	18.70	0.	0.	1.01E-27	0.	0.	0.	4.25E-18	4.14E-12	3.01E-10	5.35E-11	3.59E-10
12	18.60	0.	0.	1.10E-27	0.	0.	0.	4.26E-18	4.27E-12	3.06E-10	5.41E-11	3.64E-10
13	18.50	0.	0.	9.56E-28	0.	0.	0.	4.27E-18	4.41E-12	3.10E-10	5.47E-11	3.70E-10
14	18.40	0.	0.	9.19E-28	0.	0.	0.	4.28E-18	4.55E-12	3.14E-10	5.55E-11	3.74E-10
15	18.30	0.	0.	9.46E-28	0.	0.	0.	4.30E-18	4.70E-12	3.19E-10	5.62E-11	3.80E-10
16	18.20	0.	0.	8.84E-28	0.	0.	0.	4.31E-18	4.86E-12	3.23E-10	5.68E-11	3.85E-10
17	18.10	0.	0.	8.29E-28	0.	0.	0.	4.33E-18	5.02E-12	3.28E-10	5.75E-11	3.91E-10
18	18.00	0.	0.	7.65E-28	0.	0.	0.	4.35E-18	5.19E-12	3.33E-10	5.82E-11	3.96E-10
19	17.90	0.	0.	7.28E-28	0.	0.	0.	4.36E-18	5.37E-12	3.37E-10	5.87E-11	4.00E-10
20	17.80	0.	0.	7.12E-28	0.	0.	0.	4.38E-18	5.55E-12	3.42E-10	5.96E-11	4.04E-10
21	17.70	0.	0.	6.31E-28	0.	0.	0.	4.39E-18	5.75E-12	3.47E-10	6.05E-11	4.08E-10
22	17.60	0.	0.	6.54E-28	0.	0.	0.	4.41E-18	5.95E-12	3.52E-10	6.04E-11	4.06E-10
23	17.50	0.	0.	5.85E-28	0.	0.	0.	4.42E-18	6.17E-12	3.57E-10	6.04E-11	4.02E-10
24	17.40	0.	0.	5.87E-28	0.	0.	0.	4.45E-18	6.39E-12	2.08E-10	4.03E-11	2.55E-10
25	17.30	0.	0.	5.08E-28	0.	0.	0.	4.47E-18	6.63E-12	2.15E-10	4.13E-11	2.63E-10
26	17.20	0.	0.	5.18E-28	0.	0.	0.	4.49E-18	3.81E-12	2.24E-10	4.29E-11	2.74E-10
27	17.10	0.	0.	4.59E-28	0.	0.	0.	4.52E-18	7.13E-12	2.33E-10	4.46E-11	2.84E-10
28	17.00	0.	0.	4.61E-28	0.	0.	0.	4.54E-18	7.40E-12	2.41E-10	4.63E-11	2.95E-10
29	16.90	0.	0.	4.85E-28	0.	0.	0.	4.56E-18	7.69E-12	2.50E-10	4.79E-11	3.06E-10
30	16.80	0.	0.	4.25E-28	0.	0.	0.	4.59E-18	7.99E-12	2.59E-10	4.94E-11	3.16E-10
31	16.70	0.	0.	3.79E-28	0.	0.	0.	4.61E-18	8.30E-12	2.69E-10	5.13E-11	3.28E-10
32	16.60	0.	0.	3.65E-28	0.	1.08E-31	0.	4.63E-18	8.64E-12	2.80E-10	5.30E-11	3.41E-10
33	16.50	0.	0.	3.44E-28	0.	3.30E-31	0.	4.66E-18	8.99E-12	2.91E-10	5.48E-11	3.54E-10
34	16.40	0.	0.	3.13E-28	0.	3.07E-30	0.	4.68E-18	9.36E-12	2.59E-10	5.67E-11	3.25E-10
35	16.30	0.	0.	3.01E-28	0.	1.15E-29	0.	4.71E-18	9.75E-12	2.71E-10	5.89E-11	3.38E-10
36	16.20	0.	0.	2.75E-28	0.	3.23E-29	0.	4.73E-18	1.02E-11	2.86E-10	6.21E-11	3.58E-10
37	16.10	0.	0.	2.42E-28	0.	1.[illegible]E-28	0.	4.77E-18	1.06E-11	3.01E-10	6.53E-11	3.77E-10
38	16.00	2.25E-30	0.	2.50E-28	0.	1.[illegible]E-28	0.	4.81E-18	1.11E-11	3.17E-10	6.85E-11	3.96E-10
39	15.90	4.58E-30	0.	2.33E-28	0.	2.86E-28	0.	4.85E-18	1.16E-11	3.32E-10	7.17E-11	4.15E-10
40	15.80	3.92E-30	0.	2.28E-28	0.	4.70E-28	0.	4.89E-18	1.21E-11	3.47E-10	7.49E-11	4.34E-10
41	15.70	2.88E-30	0.	2.83E-28	0.	4.50E-28	0.	4.93E-18	1.26E-11	3.62E-10	7.81E-11	4.53E-10
42	15.60	1.77E-30	0.	1.85E-28	0.	3.95E-28	0.	4.97E-18	1.32E-11	3.77E-10	8.13E-11	4.72E-10
43	15.50	1.03E-30	0.	2.50E-28	0.	5.52E-28	0.	5.00E-18	1.38E-11	3.93E-10	8.45E-11	4.91E-10
44	15.40	6.01E-31	0.	1.07E-28	1.66E-30	5.03E-28	0.	5.04E-18	1.45E-11	4.08E-10	8.78E-11	5.10E-10
45	15.30	3.54E-31	0.	6.05E-29	7.97E-30	3.80E-28	0.	5.08E-18	1.52E-11	4.24E-10	9.12E-11	5.30E-10
46	15.20	1.62E-31	0.	3.[illegible]E-29	1.15E-29	5.14E-28	0.	5.12E-18	1.60E-11	4.40E-10	9.50E-11	5.50E-10
47	15.10	7.54E-32	0.	1.67E-29	3.32E-29	6.14E-28	0.	5.16E-18	1.68E-11	1.33E-10	3.23E-11	1.82E-10
48	15.00	3.18E-32	0.	4.54E-30	3.28E-29	5.16E-28	0.	5.20E-18	1.76E-11	1.38E-10	3.26E-11	1.89E-10
49	14.90	7.98E-33	0.	3.47E-31	4.86E-29	3.84E-28	0.	5.20E-18	1.85E-11	1.43E-10	3.38E-11	1.96E-10
50	14.80	1.01E-33	0.	8.86E-33	6.86E-29	3.21E-28	0.	5.12E-18	1.95E-11	1.49E-10	3.51E-11	2.03E-10
51	14.70	7.44E-35	0.	0.	8.19E-29	3.59E-28	0.	4.81E-18	2.06E-11	1.56E-10	3.54E-11	2.13E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. DENSITY (GM/CC) 1.2936-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.-ROT	N2 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	J P.E.	TOTAL AIR
92	5.60	3.38E-36	0.	0.	0.	7.16E-29	4.61E-28	0.	0.	4.47E-18	2.17E-11	1.66E-10	3.70E-11	2.25E-10
93	5.50	0.	0.	0.	0.	8.70E-29	6.27E-28	0.	0.	4.50E-18	2.29E-11	1.76E-10	3.94E-11	2.38E-10
94	5.40	0.	0.	0.	0.	8.24E-29	3.99E-28	0.	0.	4.52E-18	2.42E-11	1.86E-10	4.15E-11	2.52E-10
95	5.30	0.	0.	0.	0.	8.44E-29	4.43E-28	0.	0.	4.55E-18	2.56E-11	1.97E-10	4.38E-11	2.67E-10
96	5.20	0.	0.	0.	0.	9.18E-29	3.92E-28	0.	0.	4.58E-18	2.72E-11	2.09E-10	3.46E-11	2.70E-10
97	5.10	0.	0.	0.	0.	9.21E-29	4.48E-28	0.	0.	4.62E-18	2.89E-11	2.17E-10	3.65E-11	2.84E-10
98	5.00	4.78E-29	0.	0.	0.	8.49E-29	4.36E-28	0.	0.	4.66E-18	3.06E-11	2.30E-10	3.85E-11	2.99E-10
99	4.90	1.18E-28	0.	0.	0.	9.54E-29	6.76E-28	0.	0.	4.69E-18	3.25E-11	2.41E-10	4.05E-11	3.14E-10
90	4.80	2.29E-28	0.	0.	0.	1.03E-28	4.90E-28	0.	0.	4.73E-18	3.46E-11	2.52E-10	4.25E-11	3.29E-10
91	4.70	3.10E-28	0.	0.	0.	1.04E-28	4.12E-28	0.	0.	4.77E-18	3.69E-11	2.67E-10	4.47E-11	3.49E-10
92	4.60	4.34E-28	0.	0.	0.	1.08E-28	3.73E-28	0.	0.	4.81E-18	3.93E-11	2.88E-10	4.70E-11	3.74E-10
93	4.50	4.62E-28	0.	2.92E-29	0.	1.00E-28	2.82E-28	0.	0.	4.65E-18	4.20E-11	3.08E-10	4.95E-11	4.00E-10
94	4.40	5.01E-28	0.	7.26E-29	0.	1.02E-28	1.92E-28	0.	0.	4.89E-18	4.50E-11	3.29E-10	5.25E-11	4.26E-10
95	4.30	4.80E-28	0.	2.93E-28	0.	9.83E-29	1.22E-28	0.	0.	4.93E-18	4.82E-11	3.49E-10	5.24E-11	4.50E-10
96	4.20	4.93E-28	0.	7.69E-28	0.	1.04E-28	0.36E-29	0.	0.	4.97E-18	5.18E-11	3.73E-10	5.95E-11	4.81E-10
97	4.10	4.38E-28	0.	3.63E-28	0.	1.03E-28	2.37E-29	0.	0.	4.99E-18	5.57E-11	3.98E-10	6.02E-11	5.14E-10
98	4.00	4.01E-28	0.	1.12E-27	0.	1.08E-28	1.77E-29	0.	0.	5.00E-18	6.00E-11	4.23E-10	6.48E-11	5.48E-10
99	3.90	3.44E-28	0.	9.36E-28	3.73E-23	9.45E-29	6.53E-30	0.	0.	4.99E-18	6.48E-11	4.48E-10	6.94E-11	5.83E-10
70	3.80	3.02E-28	0.	8.60E-28	1.43E-22	1.02E-28	0.	0.	0.	4.97E-18	7.01E-11	4.74E-10	7.41E-11	6.10E-10
71	3.70	3.47E-28	0.	8.74E-28	7.88E-23	8.94E-29	0.	0.	0.	4.89E-18	7.60E-11	4.99E-10	7.88E-11	6.54E-10
72	3.60	3.16E-28	0.	6.93E-28	3.52E-22	9.66E-29	0.	0.	0.	4.58E-18	8.26E-11	5.24E-10	7.29E-11	6.80E-10
73	3.50	3.00E-28	0.	8.44E-28	6.08E-22	7.81E-29	0.	0.	0.	4.19E-18	9.30E-11	1.52E-10	7.72E-11	3.29E-10
74	3.40	2.80E-28	0.	5.61E-28	1.86E-22	8.81E-29	0.	0.	0.	2.42E-18	9.83E-11	1.65E-10	8.26E-11	3.48E-10
75	3.30	2.26E-28	0.	5.73E-28	3.82E-22	7.10E-29	0.	0.	0.	2.42E-18	1.08E-10	1.79E-10	8.87E-11	3.47E-10
76	3.20	2.88E-28	0.	3.86E-28	5.86E-22	7.61E-29	0.	0.	0.	2.42E-18	1.15E-10	2.04E-10	4.81E-11	3.75E-10
77	3.10	1.95E-28	0.	3.83E-28	1.69E-22	7.31E-29	0.	0.	0.	2.43E-18	1.30E-10	2.33E-10	5.46E-11	4.18E-10
78	3.00	1.77E-28	0.	1.09E-28	3.66E-22	7.83E-29	0.	0.	0.	2.44E-18	1.44E-10	2.62E-10	6.10E-11	4.67E-10
79	2.90	1.52E-28	0.	1.28E-28	1.94E-22	5.58E-29	0.	0.	0.	2.44E-18	1.59E-10	2.91E-10	6.75E-11	5.18E-10
80	2.80	1.48E-28	0.	5.79E-29	1.39E-22	3.95E-29	0.	0.	0.	2.44E-18	1.77E-10	3.21E-10	7.32E-11	5.71E-10
81	2.70	1.06E-28	0.	2.73E-29	1.69E-22	2.23E-29	0.	0.	0.	2.44E-18	1.98E-10	3.55E-10	7.79E-11	6.25E-10
82	2.60	9.16E-29	0.	1.31E-29	1.01E-23	1.91E-29	0.	0.	0.	2.44E-18	2.22E-10	3.70E-10	8.43E-11	6.84E-10
83	2.50	3.66E-30	0.	1.34E-30	1.78E-23	2.48E-30	0.	0.	0.	2.44E-18	2.30E-10	4.16E-10	9.34E-11	7.49E-10
84	2.40	0.	5.82E-29	0.	1.32E-23	2.66E-31	0.	0.	0.	2.44E-18	2.83E-10	4.73E-10	1.06E-10	8.62E-10
85	2.30	0.	1.66E-28	0.	0.	0.	0.	0.	0.	2.42E-18	3.22E-10	5.30E-10	1.19E-10	9.71E-10
86	2.20	0.	4.92E-28	0.	0.	0.	0.	0.	0.	2.41E-18	3.68E-10	5.88E-10	1.32E-10	1.09E-09
87	2.10	0.	4.93E-28	0.	0.	0.	0.	0.	0.	2.41E-18	4.24E-10	2.91E-10	6.12E-11	7.37E-10
88	2.00	0.	9.19E-28	0.	0.	0.	0.	0.	0.	2.38E-18	4.92E-10	2.88E-10	6.95E-11	8.47E-10
89	1.90	0.	1.06E-27	0.	0.	0.	0.	0.	0.	2.24E-18	5.76E-10	3.20E-10	7.82E-11	9.74E-10
90	1.80	0.	9.19E-28	0.	0.	0.	0.	0.	0.	2.14E-18	6.80E-10	3.56E-10	8.77E-11	1.12E-09
91	1.70	0.	1.03E-27	0.	0.	0.	0.	0.	0.	2.02E-10	8.10E-10	3.91E-10	9.71E-11	1.30E-09
92	1.60	0.	7.03E-28	0.	0.	0.	0.	0.	0.	1.71E-18	9.70E-10	4.26E-10	1.07E-10	1.51E-09
93	1.50	0.	8.86E-28	0.	0.	0.	0.	0.	0.	7.70E-19	1.19E-09	4.59E-10	1.16E-10	1.76E-09
94	1.40	0.	8.69E-28	0.	0.	0.	0.	0.	0.	0.	1.47E-09	4.97E-10	1.22E-10	2.09E-09
95	1.30	0.	6.66E-28	0.	0.	0.	0.	0.	0.	0.	1.84E-09	2.46E-11	2.09E-11	1.89E-09
96	1.20	0.	6.35E-28	0.	0.	0.	0.	0.	0.	0.	2.34E-09	3.38E-11	3.37E-11	2.41E-09
97	1.10	0.	6.28E-28	0.	0.	0.	0.	4.34E-33	0.	0.	3.06E-09	4.19E-11	4.26E-11	3.14E-09
98	1.00	0.	5.70E-28	0.	0.	0.	0.	7.20E-32	0.	0.	4.09E-09	5.10E-11	5.14E-11	4.29E-09
99	0.90	0.	4.47E-28	0.	0.	0.	0.	8.92E-32	0.	0.	5.65E-09	5.49E-11	5.27E-11	5.76E-09
100	0.80	0.	2.19E-28	0.	0.	0.	0.	1.89E-30	0.	0.	8.11E-09	5.46E-11	4.63E-11	8.91E-09
101	0.70	0.	5.03E-29	0.	0.	0.	0.	1.83E-30	0.	0.	1.22E-08	4.23E-11	5.33E-11	1.24E-08
102	0.60	0.	1.17E-29	0.	0.	0.	0.	9.68E-30	0.	0.	1.97E-08	6.99E-11	6.83E-11	1.98E-08

ABSORPTION COEFFICIENT OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23300. DENSITY (GM/CC) 1.2936-02 (1.00 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 S-R NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	2.80E-01	0.	0.	0.	5.55E 00	9.74E-01 2.81E 02	7.94E 00	2.75E 02	
2	10.68	0.	0.	1.83E-01	0.	0.	0.	5.56E 00	1.00E 00 2.61E 01	7.91E 00	4.87E 01	
3	10.59	0.	0.	1.80E-01	0.	0.	0.	5.56E 00	1.03E 00 2.62E 01	7.87E 00	4.88E 01	
4	10.48	0.	0.	1.82E-01	0.	0.	0.	5.57E 00	1.06E 00 2.63E 01	7.83E 00	4.89E 01	
5	10.38	0.	0.	1.82E-01	0.	0.	0.	5.58E 00	1.09E 00 2.63E 01	7.80E 00	4.15E 01	
6	10.28	0.	0.	1.69E-01	0.	0.	0.	5.59E 00	1.13E 00 2.64E 01	7.76E 00	4.10E 01	
7	10.18	0.	0.	1.61E-01	0.	0.	0.	5.59E 00	1.16E 00 2.63E 01	7.72E 00	4.09E 01	
8	10.08	0.	0.	1.45E-01	0.	0.	0.	5.60E 00	1.20E 00 2.63E 01	7.69E 00	4.09E 01	
9	9.98	0.	0.	1.49E-01	0.	0.	0.	5.61E 00	1.23E 00 2.64E 01	7.65E 00	4.10E 01	
10	9.85	0.	0.	1.45E-01	0.	0.	0.	5.62E 00	1.27E 00 2.64E 01	7.61E 00	4.11E 01	
11	9.78	0.	0.	1.28E-01	0.	0.	0.	5.63E 00	1.31E 00 2.65E 01	7.57E 00	4.11E 01	
12	9.68	0.	0.	1.37E-01	0.	0.	0.	5.64E 00	1.35E 00 2.66E 01	7.54E 00	4.12E 01	
13	9.58	0.	0.	1.19E-01	0.	0.	0.	5.65E 00	1.40E 00 2.66E 01	7.50E 00	4.13E 01	
14	9.38	0.	0.	1.13E-01	0.	0.	0.	5.67E 00	1.44E 00 2.67E 01	7.46E 00	4.14E 01	
15	9.48	0.	0.	1.19E-01	0.	0.	0.	5.69E 00	1.49E 00 2.68E 01	7.42E 00	4.15E 01	
16	9.28	0.	0.	1.01E-01	0.	0.	0.	5.71E 00	1.54E 00 2.69E 01	7.35E 00	4.16E 01	
17	9.18	0.	0.	1.00E-01	0.	0.	0.	5.73E 00	1.59E 00 1.12E 01	7.36E 00	2.60E 01	
18	9.08	0.	0.	9.66E-02	0.	0.	0.	5.76E 00	1.65E 00 1.12E 01	7.32E 00	2.60E 01	
19	8.98	0.	0.	9.11E-02	0.	0.	0.	5.78E 00	1.70E 00 1.12E 01	7.29E 00	2.61E 01	
20	8.88	0.	0.	9.03E-02	0.	0.	0.	5.80E 00	1.76E 00 1.12E 01	7.26E 00	2.61E 01	
21	8.78	0.	0.	8.82E-02	0.	0.	0.	5.82E 00	1.82E 00 1.13E 01	7.23E 00	2.62E 01	
22	8.68	0.	0.	8.33E-02	0.	0.	0.	5.84E 00	1.89E 00 1.13E 01	7.19E 00	2.63E 01	
23	8.58	0.	0.	7.48E-02	0.	0.	0.	5.86E 00	1.96E 00 1.13E 01	7.16E 00	2.64E 01	
24	8.49	0.	0.	7.51E-02	0.	0.	0.	5.89E 00	2.03E 00 1.14E 01	7.13E 00	2.65E 01	
25	8.39	0.	0.	6.92E-02	0.	0.	0.	5.92E 00	2.10E 00 1.15E 01	7.12E 00	2.67E 01	
26	8.29	0.	0.	6.46E-02	0.	0.	0.	5.95E 00	2.18E 00 1.15E 01	7.12E 00	2.68E 01	
27	8.19	0.	0.	5.35E-02	0.	0.	0.	5.98E 00	2.26E 00 1.16E 01	7.12E 00	2.70E 01	
28	8.09	0.	0.	5.98E-02	0.	0.	0.	6.01E 00	2.35E 00 1.16E 01	7.12E 00	2.72E 01	
29	7.99	0.	0.	5.25E-02	0.	0.	0.	6.04E 00	2.44E 00 1.17E 01	7.12E 00	2.74E 01	
30	7.80	0.	0.	5.51E-02	0.	0.	0.	6.07E 00	2.54E 00 1.18E 01	7.12E 00	2.76E 01	
31	7.79	0.	0.	4.94E-02	0.	0.	0.	6.10E 00	2.64E 00 1.19E 01	7.13E 00	2.79E 01	
32	7.69	0.	0.	4.76E-02	0.	2.04E-06	0.	6.14E 00	2.75E 00 1.20E 01	7.13E 00	2.81E 01	
33	7.59	0.	0.	4.50E-02	0.	6.31E-06	0.	6.17E 00	2.86E 00 1.21E 01	7.13E 00	2.83E 01	
34	7.49	0.	0.	4.10E-02	0.	8.00E-05	0.	6.20E 00	2.98E 00 1.22E 01	7.13E 00	2.86E 01	
35	7.39	0.	0.	3.95E-02	0.	2.22E-04	0.	6.24E 00	3.10E 00 1.23E 01	7.13E 00	2.88E 01	
36	7.30	0.	0.	3.63E-02	0.	6.28E-04	0.	6.27E 00	3.24E 00 1.24E 01	7.13E 00	2.91E 01	
37	7.19	0.	0.	3.54E-02	0.	1.99E-03	0.	6.32E 00	3.38E 00 1.25E 01	7.14E 00	2.94E 01	
38	7.08	0.89E-06	0.	3.31E-02	0.	3.69E-03	0.	6.37E 00	3.52E 00 1.26E 01	7.14E 00	2.97E 01	
39	6.98	1.36E-05	0.	3.09E-02	0.	5.59E-03	0.	6.42E 00	3.68E 00 1.27E 01	7.14E 00	3.00E 01	
40	6.88	1.18E-05	0.	3.03E-02	0.	9.07E-03	0.	6.47E 00	3.85E 00 1.28E 01	7.14E 00	3.03E 01	
41	6.78	5.74E-06	0.	2.70E-02	0.	8.64E-03	0.	6.53E 00	4.02E 00 1.29E 01	7.15E 00	3.07E 01	
42	6.68	5.38E-06	0.	2.47E-02	0.	7.68E-03	0.	6.58E 00	4.21E 00 1.31E 01	7.17E 00	3.10E 01	
43	6.58	3.15E-06	0.	2.02E-02	0.	1.06E-02	0.	6.63E 00	4.41E 00 1.32E 01	7.18E 00	3.15E 01	
44	6.48	1.83E-06	0.	1.44E-02	3.11E-05	9.59E-03	0.	6.68E 00	4.63E 00 1.34E 01	7.20E 00	3.17E 01	
45	6.38	1.08E-06	0.	9.29E-03	1.50E-04	7.48E-03	0.	6.73E 00	4.85E 00 1.35E 01	7.22E 00	3.24E 01	
46	6.28	4.95E-07	0.	5.30E-03	2.17E-04	9.89E-03	0.	6.78E 00	5.09E 00 1.37E 01	7.27E 00	3.28E 01	
47	6.18	2.31E-07	0.	2.56E-03	6.28E-04	1.17E-02	0.	6.83E 00	5.35E 00 1.39E 01	7.32E 00	3.34E 01	
48	6.08	9.80E-08	0.	6.64E-04	6.23E-04	6.10E-03	0.	6.89E 00	5.63E 00 1.40E 01	7.37E 00	3.39E 01	
49	5.97	2.44E-08	0.	4.77E-05	9.24E-04	5.86E-03	0.	6.89E 00	5.92E 00 1.43E 01	7.42E 00	3.45E 01	
50	5.88	3.12E-09	0.	1.21E-06	1.31E-03	6.20E-03	0.	6.78E 00	6.24E 00 1.45E 01	7.46E 00	3.50E 01	
51	5.78	2.30E-10	0.	0.	1.57E-03	6.94E-03	0.	6.37E 00	6.58E 00 1.47E 01	7.51E 00	3.52E 01	

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.2936-02 (1.0E 0_1 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	1.84E-11	0.	6.	0.	1.30E-03	8.87E-03	0.	0.	5.92E 00	6.94E 00	1.90E 01	7.57E 00	3.54E 01
93	5.50	0.	0.	0.	0.	1.69E-03	8.20E-03	0.	0.	5.96E 00	7.33E 00	1.93E 01	7.64E 00	3.62E 01
94	5.40	0.	0.	0.	0.	1.59E-03	5.94E-03	0.	0.	5.99E 00	7.75E 00	1.97E 01	7.72E 00	3.72E 01
95	5.30	0.	0.	0.	0.	1.63E-03	8.93E-03	0.	0.	6.03E 00	8.20E 00	1.62E 01	7.82E 00	3.82E 01
96	5.20	0.	0.	0.	0.	1.70E-03	6.86E-03	0.	0.	6.06E 00	8.69E 00	1.66E 01	7.94E 00	3.93E 01
97	5.10	0.	0.	0.	0.	1.78E-03	8.70E-03	0.	0.	6.12E 00	9.22E 00	1.71E 01	8.07E 00	4.05E 01
98	5.00	1.48E-04	0.	0.	0.	1.64E-03	8.30E-03	0.	0.	6.17E 00	9.79E 00	1.76E 01	8.19E 00	4.18E 01
99	4.90	3.68E-04	0.	0.	0.	1.85E-03	7.31E-03	0.	0.	6.22E 00	1.04E 01	1.83E 01	8.34E 00	4.32E 01
60	4.80	7.65E-04	0.	0.	0.	2.00E-03	8.81E-03	0.	0.	6.27E 00	1.11E 01	1.90E 01	8.52E 00	4.48E 01
61	4.70	9.71E-04	0.	0.	0.	2.03E-03	8.07E-03	0.	0.	6.32E 00	1.18E 01	1.97E 01	8.75E 00	4.66E 01
62	4.60	1.36E-03	0.	0.	0.	2.11E-03	7.31E-03	0.	0.	6.37E 00	1.26E 01	2.06E 01	8.99E 00	4.85E 01
63	4.50	1.46E-03	0.	3.46E-03	0.	1.97E-03	5.53E-03	0.	0.	6.42E 00	1.35E 01	2.17E 01	9.24E 00	5.08E 01
64	4.40	1.58E-03	0.	9.89E-03	0.	1.99E-03	3.75E-03	0.	0.	6.47E 00	1.44E 01	2.28E 01	9.49E 00	5.32E 01
65	4.30	1.52E-03	0.	3.49E-02	0.	1.93E-03	2.40E-03	0.	0.	6.53E 00	1.55E 01	2.41E 01	9.76E 00	5.58E 01
66	4.20	1.44E-03	0.	1.09E-01	0.	2.04E-03	1.63E-03	0.	0.	6.58E 00	1.66E 01	2.53E 01	1.00E 01	5.87E 01
67	4.10	1.37E-03	0.	5.03E-02	0.	2.03E-03	4.65E-04	0.	0.	6.68E 00	1.79E 01	2.66E 01	9.97E 00	6.11E 01
68	4.00	1.20E-03	0.	1.93E-01	0.	1.98E-03	3.46E-04	0.	0.	6.63E 00	1.93E 01	2.79E 01	5.26E 00	5.92E 01
69	3.90	1.11E-03	0.	7.38E-02	8.69E-03	1.87E-03	1.27E-04	0.	0.	6.68E 00	2.08E 01	2.79E 01	9.43E 00	6.08E 01
70	3.80	1.22E-03	0.	1.20E-01	3.27E-02	2.03E-03	0.	0.	0.	6.98E 00	2.25E 01	2.31E 01	5.67E 00	6.30E 01
71	3.70	1.11E-03	0.	1.20E-01	1.64E-02	1.70E-03	0.	0.	0.	6.47E 00	2.45E 01	2.36E 01	6.17E 00	6.11E 01
72	3.60	1.82E-03	0.	9.84E-02	8.17E-02	1.92E-03	0.	0.	0.	6.66E 00	2.66E 01	2.57E 01	6.72E 00	6.53E 01
73	3.50	9.67E-04	0.	1.16E-01	1.38E-01	1.56E-03	0.	0.	0.	5.59E 00	2.90E 01	2.74E 01	7.35E 00	6.96E 01
74	3.40	9.84E-04	0.	7.88E-02	2.49E-02	1.76E-03	0.	0.	0.	3.23E 00	3.17E 01	3.84E 01	8.88E 00	7.35E 01
75	3.30	7.31E-04	0.	7.96E-02	8.81E-02	1.44E-03	0.	0.	0.	3.21E 00	3.47E 01	3.35E 01	8.81E 00	8.03E 01
76	3.20	8.50E-04	0.	5.38E-02	1.32E-01	1.93E-03	0.	0.	0.	3.21E 00	3.81E 01	3.65E 01	9.58E 00	8.74E 01
77	3.10	6.33E-04	0.	4.24E-02	3.97E-02	1.47E-03	0.	0.	0.	3.22E 00	4.20E 01	3.97E 01	1.03E 01	9.53E 01
78	3.00	9.79E-04	0.	2.64E-02	8.38E-02	1.42E-03	0.	0.	0.	3.23E 00	4.64E 01	4.29E 01	1.11E 01	1.04E 02
79	2.90	4.97E-04	0.	1.69E-02	4.49E-02	1.12E-03	0.	0.	0.	3.23E 00	5.14E 01	4.64E 01	1.20E 01	1.13E 02
80	2.80	5.25E-04	0.	8.14E-03	3.26E-02	8.07E-04	0.	0.	0.	3.24E 00	5.73E 01	5.05E 01	1.30E 01	1.24E 02
81	2.70	3.49E-04	0.	3.85E-03	3.89E-02	4.58E-04	0.	0.	0.	3.24E 00	6.40E 01	5.49E 01	1.41E 01	1.36E 02
82	2.60	1.71E-04	0.	1.83E-03	4.20E-03	2.09E-04	0.	0.	0.	3.24E 00	7.19E 01	5.97E 01	1.52E 01	1.50E 02
83	2.50	1.22E-05	0.	1.87E-04	4.14E-03	5.08E-05	0.	0.	0.	3.24E 00	8.10E 01	6.82E 01	1.82E 01	1.63E 02
84	2.40	0.	8.82E-03	0.	3.83E-03	5.52E-06	0.	0.	0.	3.24E 00	9.18E 01	7.92E 01	1.18E 01	1.86E 02
85	2.30	0.	2.26E-02	0.	0.	0.	0.	0.	0.	3.21E 00	1.04E 02	7.21E 01	1.40E 01	1.94E 02
86	2.20	0.	6.20E-02	0.	0.	0.	0.	0.	0.	3.20E 00	1.20E 02	8.52E 01	1.67E 01	2.25E 02
87	2.10	0.	6.14E-02	0.	0.	0.	0.	0.	0.	3.19E 00	1.38E 02	9.92E 01	1.93E 01	2.60E 02
88	2.00	0.	1.25E-01	0.	0.	0.	0.	0.	0.	3.00E 00	1.60E 02	1.13E 02	2.20E 01	2.99E 02
89	1.90	0.	1.42E-01	0.	0.	0.	0.	0.	0.	2.97E 00	1.88E 02	1.30E 02	2.58E 01	3.47E 02
90	1.80	0.	1.23E-01	0.	0.	0.	0.	0.	0.	2.84E 00	2.22E 02	1.57E 02	3.16E 01	4.13E 02
91	1.70	0.	1.38E-01	0.	0.	0.	0.	0.	0.	2.67E 00	2.65E 02	1.88E 02	3.84E 01	4.94E 02
92	1.60	0.	1.85E-01	0.	0.	0.	0.	0.	0.	2.26E 00	3.19E 02	2.21E 02	4.53E 01	5.87E 02
93	1.50	0.	1.19E-01	0.	0.	0.	0.	0.	0.	1.03E 00	3.88E 02	2.89E 02	5.49E 01	7.33E 02
94	1.40	0.	1.16E-01	0.	0.	0.	0.	0.	0.	0.	4.79E 02	3.62E 02	6.97E 01	9.07E 02
95	1.30	0.	8.91E-02	0.	0.	0.	0.	0.	0.	0.	6.81E 02	4.90E 02	8.62E 01	1.18E 03
96	1.20	0.	8.50E-02	0.	0.	0.	0.	0.	0.	0.	7.69E 02	5.54E 02	8.70E 01	1.41E 03
97	1.10	0.	8.33E-02	0.	0.	0.	0.	8.32E-08	0.	0.	1.01E 03	6.83E 02	1.09E 02	1.88E 03
98	1.00	0.	7.67E-02	0.	0.	0.	0.	1.42E-06	0.	0.	1.35E 03	8.38E 02	1.24E 02	2.31E 03
99	0.90	0.	6.20E-02	0.	0.	0.	0.	1.68E-06	0.	0.	1.87E 03	9.57E 02	1.45E 02	2.98E 03
100	0.80	0.	2.94E-02	0.	0.	0.	0.	3.73E-05	0.	0.	2.70E 03	1.10E 03	1.67E 02	3.97E 03
101	0.70	0.	6.73E-03	0.	0.	0.	0.	3.60E-05	0.	0.	4.09E 03	1.19E 03	1.66E 02	5.44E 03
102	0.60	0.	1.63E-03	0.	0.	0.	0.	1.13E-04	0.	0.	6.61E 03	1.33E 03	1.65E 02	8.12E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.2936-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	9.85E-04	0.	0.	0.	1.15E-01	6.98E-02	1.98E 01	6.15E-01	2.06E 01
2	10.6e	0.	0.	9.20E-04	0.	0.	0.	1.15E-01	7.18E-02	1.84E 00	6.13E-01	2.64E 00
3	10.5e	0.	0.	9.39E-04	0.	0.	0.	1.15E-01	7.30E-02	1.85E 00	6.10E-01	2.65E 00
4	10.4e	0.	0.	9.85E-04	0.	0.	0.	1.15E-01	7.52E-02	1.86E 00	6.07E-01	2.66E 00
5	10.3e	0.	0.	8.04E-04	0.	0.	0.	1.15E-01	7.74E-02	1.86E 00	6.04E-01	2.66E 00
6	10.2e	0.	0.	8.48E-04	0.	0.	0.	1.15E-01	7.90E-02	1.87E 00	6.01E-01	2.66E 00
7	10.1e	0.	0.	8.88E-04	0.	0.	0.	1.16E-01	8.22E-02	1.86E 00	5.98E-01	2.66E 00
8	10.0e	0.	0.	7.18E-04	0.	0.	0.	1.16E-01	8.47E-02	1.86E 00	5.95E-01	2.65E 00
9	9.9e	0.	0.	7.41E-04	0.	0.	0.	1.16E-01	8.73E-02	1.86E 00	5.93E-01	2.66E 00
10	9.8e	0.	0.	7.88E-04	0.	0.	0.	1.16E-01	9.00E-02	1.87E 00	5.90E-01	2.66E 00
11	9.7e	0.	0.	6.25E-04	0.	0.	0.	1.16E-01	9.29E-02	1.87E 00	5.87E-01	2.67E 00
12	9.6e	0.	0.	6.78E-04	0.	0.	0.	1.17E-01	9.59E-02	1.87E 00	5.84E-01	2.67E 00
13	9.5e	0.	0.	5.93E-04	0.	0.	0.	1.17E-01	9.90E-02	1.88E 00	5.81E-01	2.68E 00
14	9.4e	0.	0.	5.71E-04	0.	0.	0.	1.17E-01	1.02E-01	1.89E 00	5.78E-01	2.68E 00
15	9.3e	0.	0.	5.88E-04	0.	0.	0.	1.18E-01	1.06E-01	1.89E 00	5.76E-01	2.69E 00
16	9.2e	0.	0.	5.02E-04	0.	0.	0.	1.18E-01	1.09E-01	1.90E 00	5.73E-01	2.70E 00
17	9.1e	0.	0.	5.18E-04	0.	0.	0.	1.19E-01	1.13E-01	7.90E-01	5.70E-01	1.59E 00
18	9.0e	0.	0.	4.80E-04	0.	0.	0.	1.19E-01	1.17E-01	7.91E-01	5.67E-01	1.59E 00
19	8.9e	0.	0.	4.52E-04	0.	0.	0.	1.19E-01	1.21E-01	7.92E-01	5.65E-01	1.60E 00
20	8.8e	0.	0.	4.48E-04	0.	0.	0.	1.20E-01	1.25E-01	7.94E-01	5.62E-01	1.60E 00
21	8.7e	0.	0.	3.98E-04	0.	0.	0.	1.20E-01	1.29E-01	7.96E-01	5.60E-01	1.61E 00
22	8.6e	0.	0.	4.14E-04	0.	0.	0.	1.21E-01	1.34E-01	7.99E-01	5.57E-01	1.61E 00
23	8.5e	0.	0.	3.71E-04	0.	0.	0.	1.21E-01	1.39E-01	8.02E-01	5.55E-01	1.62E 00
24	8.4e	0.	0.	3.73E-04	0.	0.	0.	1.22E-01	1.44E-01	8.06E-01	5.53E-01	1.62E 00
25	8.3e	0.	0.	3.24E-04	0.	0.	0.	1.22E-01	1.49E-01	8.10E-01	5.51E-01	1.63E 00
26	8.2e	0.	0.	3.30E-04	0.	0.	0.	1.23E-01	1.55E-01	8.14E-01	5.52E-01	1.64E 00
27	8.1e	0.	0.	2.92E-04	0.	0.	0.	1.24E-01	1.60E-01	8.18E-01	5.52E-01	1.65E 00
28	8.0e	0.	0.	2.97E-04	0.	0.	0.	1.24E-01	1.67E-01	8.24E-01	5.52E-01	1.67E 00
29	7.9e	0.	0.	2.81E-04	0.	0.	0.	1.25E-01	1.73E-01	8.31E-01	5.52E-01	1.68E 00
30	7.8e	0.	0.	2.74E-04	0.	0.	0.	1.26E-01	1.80E-01	8.38E-01	5.52E-01	1.70E 00
31	7.7e	0.	0.	2.45E-04	0.	0.	0.	1.26E-01	1.87E-01	8.45E-01	5.52E-01	1.71E 00
32	7.6e	0.	0.	2.36E-04	0.	1.12E-08	0.	1.27E-01	1.95E-01	8.52E-01	5.52E-01	1.73E 00
33	7.5e	0.	0.	2.23E-04	0.	3.44E-08	0.	1.27E-01	2.03E-01	8.57E-01	5.52E-01	1.74E 00
34	7.4e	0.	0.	2.04E-04	0.	3.27E-07	0.	1.28E-01	2.11E-01	8.64E-01	5.53E-01	1.76E 00
35	7.3e	0.	0.	1.96E-04	0.	1.21E-06	0.	1.29E-01	2.20E-01	8.71E-01	5.53E-01	1.77E 00
36	7.2e	0.	0.	1.80E-04	0.	3.43E-06	0.	1.30E-01	2.29E-01	8.78E-01	5.53E-01	1.79E 00
37	7.1e	0.	0.	1.76E-04	0.	1.08E-05	0.	1.31E-01	2.39E-01	8.85E-01	5.53E-01	1.81E 00
38	7.0e	4.13E-08	0.	1.64E-04	0.	2.01E-05	0.	1.32E-01	2.50E-01	8.92E-01	5.53E-01	1.83E 00
39	6.9e	8.15E-08	0.	1.53E-04	0.	3.05E-05	0.	1.33E-01	2.61E-01	8.99E-01	5.53E-01	1.85E 00
40	6.8e	7.10E-08	0.	1.50E-04	0.	4.95E-05	0.	1.34E-01	2.72E-01	9.07E-01	5.53E-01	1.87E 00
41	6.7e	5.24E-08	0.	1.34E-04	0.	4.71E-05	0.	1.35E-01	2.85E-01	9.14E-01	5.54E-01	1.89E 00
42	6.6e	3.23E-08	0.	1.23E-04	0.	4.19E-05	0.	1.36E-01	2.98E-01	9.24E-01	5.55E-01	1.91E 00
43	6.5e	1.89E-08	0.	1.00E-04	0.	5.78E-05	0.	1.37E-01	3.15E-01	9.34E-01	5.57E-01	1.94E 00
44	6.4e	1.18E-08	0.	7.14E-05	1.78E-07	5.23E-05	0.	1.38E-01	3.28E-01	9.45E-01	5.58E-01	1.97E 00
45	6.3e	8.46E-09	0.	4.61E-05	8.17E-07	4.08E-05	0.	1.39E-01	3.44E-01	9.57E-01	5.60E-01	2.00E 00
46	6.2e	2.97E-09	0.	2.63E-05	1.18E-06	5.39E-05	0.	1.40E-01	3.61E-01	9.68E-01	5.64E-01	2.03E 00
47	6.1e	1.39E-09	0.	1.27E-05	3.43E-06	6.48E-05	0.	1.41E-01	3.79E-01	9.80E-01	5.67E-01	2.07E 00
48	6.0e	5.87E-10	0.	3.29E-06	3.39E-06	3.33E-05	0.	1.42E-01	3.99E-01	9.93E-01	5.71E-01	2.10E 00
49	5.9e	1.46E-10	0.	2.37E-07	5.84E-06	3.20E-05	0.	1.42E-01	4.20E-01	1.01E 00	5.75E-01	2.15E 00
50	5.8e	1.87E-11	0.	6.00E-09	7.13E-06	3.32E-05	0.	1.40E-01	4.42E-01	1.02E 00	5.78E-01	2.18E 00
51	5.7e	1.38E-12	0.	0.	8.55E-06	3.79E-05	0.	1.32E-01	4.66E-01	1.04E 00	5.82E-01	2.22E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.2936-03 (1.00 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	6.25E-14	0.	0.	0.	7.53E-06	4.84E-05	0.	0.	1.22E-01	4.92E-01	1.06E 00	5.06E-01	2.26E 00
93	5.50	0.	0.	0.	0.	9.21E-06	4.47E-05	0.	0.	1.23E-01	5.19E-01	1.08E 00	5.92E-01	2.32E 00
94	5.40	0.	0.	0.	0.	2.68E-06	3.78E-05	0.	0.	1.24E-01	5.49E-01	1.11E 00	5.98E-01	2.38E 00
95	5.30	0.	0.	0.	0.	8.89E-06	4.42E-05	0.	0.	1.25E-01	5.81E-01	1.14E 00	6.06E-01	2.46E 00
96	5.20	0.	0.	0.	0.	9.68E-06	3.74E-05	0.	0.	1.25E-01	6.16E-01	1.17E 00	6.16E-01	2.53E 00
97	5.10	0.	0.	0.	0.	9.72E-06	4.74E-05	0.	0.	1.26E-01	6.53E-01	1.21E 00	6.25E-01	2.61E 00
98	5.00	8.90E-07	0.	0.	0.	8.97E-06	4.57E-05	0.	0.	1.27E-01	6.94E-01	1.24E 00	6.35E-01	2.70E 00
99	4.90	2.21E-06	0.	0.	0.	1.01E-05	5.00E-05	0.	0.	1.29E-01	7.37E-01	1.29E 00	6.46E-01	2.80E 00
60	4.80	4.22E-06	0.	0.	0.	1.09E-05	4.81E-05	0.	0.	1.30E-01	7.85E-01	1.34E 00	6.60E-01	2.91E 00
61	4.70	5.82E-06	0.	0.	0.	1.11E-05	4.40E-05	0.	0.	1.31E-01	8.37E-01	1.39E 00	6.78E-01	3.04E 00
62	4.60	8.18E-06	0.	0.	0.	1.19E-05	5.99E-05	0.	0.	1.32E-01	8.93E-01	1.45E 00	6.97E-01	3.17E 00
63	4.50	8.73E-06	0.	1.72E-05	0.	1.07E-05	3.02E-05	0.	0.	1.33E-01	9.54E-01	1.53E 00	7.16E-01	3.33E 00
64	4.40	9.49E-06	0.	4.91E-05	0.	1.08E-05	2.09E-05	0.	0.	1.34E-01	1.02E 00	1.61E 00	7.36E-01	3.50E 00
65	4.30	9.12E-06	0.	1.73E-04	0.	1.05E-05	1.31E-05	0.	0.	1.35E-01	1.09E 00	1.70E 00	7.57E-01	3.68E 00
66	4.20	8.62E-06	0.	5.22E-04	0.	1.11E-05	8.90E-06	0.	0.	1.36E-01	1.18E 00	1.79E 00	7.78E-01	3.88E 00
67	4.10	8.20E-06	0.	2.50E-04	0.	1.11E-05	2.93E-06	0.	0.	1.36E-01	1.26E 00	1.88E 00	7.73E-01	4.05E 00
68	4.00	7.66E-06	0.	7.60E-04	0.	1.08E-05	1.89E-06	0.	0.	1.37E-01	1.36E 00	1.97E 00	4.07E-01	3.88E 00
69	3.90	6.63E-06	0.	3.66E-04	1.61E-04	1.02E-05	6.92E-07	0.	0.	1.36E-01	1.47E 00	1.97E 00	4.21E-01	4.08E 00
70	3.80	7.33E-06	0.	5.94E-04	6.07E-04	1.10E-05	0.	0.	0.	1.36E-01	1.60E 00	1.98E 00	4.39E-01	4.16E 00
71	3.70	6.67E-06	0.	3.94E-04	3.06E-04	9.70E-06	0.	0.	0.	1.34E-01	1.73E 00	1.68E 00	4.78E-01	4.03E 00
72	3.60	6.10E-06	0.	4.49E-04	1.92E-03	1.05E-05	0.	0.	0.	1.25E-01	1.88E 00	1.82E 00	5.21E-01	4.35E 00
73	3.50	5.79E-06	0.	5.77E-04	2.57E-03	8.51E-06	0.	0.	0.	1.15E-01	2.05E 00	1.94E 00	5.70E-01	4.68E 00
74	3.40	5.42E-06	0.	3.87E-04	4.63E-04	9.61E-06	0.	0.	0.	6.62E-02	2.24E 00	2.15E 00	6.26E-01	5.08E 00
75	3.30	4.38E-06	0.	3.93E-04	1.64E-03	7.86E-06	0.	0.	0.	6.63E-02	2.46E 00	2.36E 00	6.83E-01	5.57E 00
76	3.20	3.89E-06	0.	2.67E-04	2.45E-03	8.34E-06	0.	0.	0.	6.64E-02	2.70E 00	2.58E 00	7.42E-01	6.19E 00
77	3.10	3.86E-06	0.	2.10E-04	7.38E-04	8.03E-06	0.	0.	0.	6.66E-02	2.97E 00	2.86E 00	8.02E-01	6.65E 00
78	3.00	3.47E-06	0.	1.31E-04	1.54E-03	7.74E-06	0.	0.	0.	6.67E-02	3.29E 00	3.03E 00	8.62E-01	7.25E 00
79	2.90	2.90E-06	0.	8.37E-05	8.28E-04	6.89E-06	0.	0.	0.	6.68E-02	3.64E 00	3.28E 00	9.31E-01	7.92E 00
80	2.80	3.15E-06	0.	4.84E-05	6.05E-04	4.40E-06	0.	0.	0.	6.69E-02	4.06E 00	3.57E 00	1.01E 00	8.78E 00
81	2.70	2.09E-06	0.	1.91E-05	7.23E-04	2.90E-06	0.	0.	0.	6.69E-02	4.53E 00	3.88E 00	1.09E 00	9.57E 00
82	2.60	1.02E-06	0.	9.09E-06	7.81E-05	1.14E-06	0.	0.	0.	6.69E-02	5.09E 00	4.21E 00	1.18E 00	1.05E 01
83	2.50	7.29E-08	0.	9.29E-07	7.69E-05	2.77E-07	0.	0.	0.	6.69E-02	5.74E 00	4.81E 00	7.91E-01	1.14E 01
84	2.40	0.	3.98E-05	0.	5.61E-05	3.01E-08	0.	0.	0.	6.69E-02	6.50E 00	5.59E 00	9.13E-01	1.31E 01
85	2.30	0.	1.12E-04	0.	0.	0.	0.	0.	0.	6.64E-02	7.40E 00	5.09E 00	1.09E 00	1.36E 01
86	2.20	0.	3.88E-04	0.	0.	0.	0.	0.	0.	6.61E-02	8.47E 00	6.81E 00	1.29E 00	1.58E 01
87	2.10	0.	3.09E-04	0.	0.	0.	0.	0.	0.	6.59E-02	9.76E 00	6.99E 00	1.50E 00	1.83E 01
88	2.00	0.	6.19E-04	0.	0.	0.	0.	0.	0.	6.37E-02	1.13E 01	7.99E 00	1.71E 00	2.11E 01
89	1.90	0.	7.85E-04	0.	0.	0.	0.	0.	0.	6.13E-02	1.33E 01	9.19E 00	2.00E 00	2.46E 01
90	1.80	0.	6.12E-04	0.	0.	0.	0.	0.	0.	5.86E-02	1.57E 01	1.10E 01	2.45E 00	2.93E 01
91	1.70	0.	6.85E-04	0.	0.	0.	0.	0.	0.	5.52E-02	1.87E 01	1.33E 01	2.90E 00	3.51E 01
92	1.60	0.	5.23E-04	0.	0.	0.	0.	0.	0.	4.67E-02	2.26E 01	1.56E 01	3.51E 00	4.17E 01
93	1.50	0.	5.89E-04	0.	0.	0.	0.	0.	0.	2.12E-02	2.75E 01	2.03E 01	4.25E 00	5.21E 01
94	1.40	0.	5.78E-04	0.	0.	0.	0.	0.	0.	0.	3.40E 01	2.55E 01	5.09E 00	6.46E 01
95	1.30	0.	4.42E-04	0.	0.	0.	0.	0.	0.	0.	4.24E 01	3.45E 01	6.68E 00	8.38E 01
96	1.20	0.	4.22E-04	0.	0.	0.	0.	0.	0.	0.	5.45E 01	3.91E 01	6.74E 00	1.00E 02
97	1.10	0.	4.14E-04	0.	0.	0.	0.	4.54E-10	0.	0.	7.13E 01	4.02E 01	8.42E 00	1.20E 02
98	1.00	0.	3.81E-04	0.	0.	0.	0.	7.76E-09	0.	0.	9.58E 01	5.05E 01	9.62E 00	1.64E 02
99	0.90	0.	3.12E-04	0.	0.	0.	0.	9.19E-09	0.	0.	1.33E 02	6.79E 01	1.13E 01	2.11E 02
100	0.80	0.	1.46E-04	0.	0.	0.	0.	2.84E-07	0.	0.	1.91E 02	7.77E 01	1.29E 01	2.82E 02
101	0.70	0.	3.84E-05	0.	0.	0.	0.	2.08E-07	0.	0.	2.90E 02	8.36E 01	1.28E 01	3.86E 02
102	0.60	0.	8.11E-06	0.	0.	0.	0.	6.19E-07	0.	0.	4.68E 02	9.36E 01	1.43E 01	5.76E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23308. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-C BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.75	0.	0.	1.38E-06	0.	0.	0.	9.72E-04	2.44E-03	7.35E-01	2.67E-02	7.65E-01
2	10.60	0.	0.	1.27E-06	0.	0.	0.	9.73E-04	2.71E-03	6.80E-02	2.66E-02	9.83E-02
3	10.50	0.	0.	1.38E-06	0.	0.	0.	9.75E-04	2.79E-03	6.83E-02	2.64E-02	9.85E-02
4	10.40	0.	0.	1.25E-06	0.	0.	0.	9.76E-04	2.87E-03	6.86E-02	2.63E-02	9.87E-02
5	10.30	0.	0.	1.11E-06	0.	0.	0.	9.77E-04	2.96E-03	6.88E-02	2.62E-02	9.89E-02
6	10.20	0.	0.	1.16E-06	0.	0.	0.	9.79E-04	3.05E-03	6.89E-02	2.61E-02	9.90E-02
7	10.10	0.	0.	1.11E-06	0.	0.	0.	9.80E-04	3.14E-03	6.87E-02	2.59E-02	9.87E-02
8	10.00	0.	0.	9.93E-07	0.	0.	0.	9.81E-04	3.24E-03	6.75E-02	2.58E-02	9.74E-02
9	9.90	0.	0.	1.02E-06	0.	0.	0.	9.83E-04	3.34E-03	6.77E-02	2.57E-02	9.77E-02
10	9.80	0.	0.	9.79E-07	0.	0.	0.	9.85E-04	3.44E-03	6.78E-02	2.56E-02	9.78E-02
11	9.70	0.	0.	8.64E-07	0.	0.	0.	9.86E-04	3.55E-03	6.80E-02	2.54E-02	9.80E-02
12	9.60	0.	0.	9.37E-07	0.	0.	0.	9.88E-04	3.66E-03	6.82E-02	2.53E-02	9.81E-02
13	9.50	0.	0.	8.19E-07	0.	0.	0.	9.90E-04	3.78E-03	4.83E-02	2.52E-02	9.83E-02
14	9.40	0.	0.	7.89E-07	0.	0.	0.	9.94E-04	3.91E-03	6.85E-02	2.51E-02	9.85E-02
15	9.30	0.	0.	8.13E-07	0.	0.	0.	9.97E-04	4.04E-03	6.87E-02	2.50E-02	9.87E-02
16	9.20	0.	0.	6.94E-07	0.	0.	0.	1.00E-03	4.17E-03	6.89E-02	2.48E-02	9.89E-02
17	9.10	0.	0.	7.16E-07	0.	0.	0.	1.00E-03	4.31E-03	2.77E-02	2.47E-02	5.78E-02
18	9.00	0.	0.	6.83E-07	0.	0.	0.	1.01E-03	4.44E-03	2.77E-02	2.46E-02	5.78E-02
19	8.90	0.	0.	6.25E-07	0.	0.	0.	1.01E-03	4.61E-03	2.77E-02	2.45E-02	5.79E-02
20	8.80	0.	0.	6.20E-07	0.	0.	0.	1.01E-03	4.77E-03	2.78E-02	2.44E-02	5.80E-02
21	8.70	0.	0.	5.91E-07	0.	0.	0.	1.02E-03	4.94E-03	2.78E-02	2.43E-02	5.81E-02
22	8.60	0.	0.	5.72E-07	0.	0.	0.	1.02E-03	5.12E-03	2.79E-02	2.42E-02	5.82E-02
23	8.50	0.	0.	5.13E-07	0.	0.	0.	1.03E-03	5.30E-03	2.80E-02	2.41E-02	5.84E-02
24	8.40	0.	0.	5.15E-07	0.	0.	0.	1.03E-03	5.49E-03	2.81E-02	2.40E-02	5.86E-02
25	8.30	0.	0.	4.47E-07	0.	0.	0.	1.04E-03	5.70E-03	2.82E-02	2.39E-02	5.89E-02
26	8.20	0.	0.	4.57E-07	0.	0.	0.	1.04E-03	5.91E-03	2.84E-02	2.39E-02	5.92E-02
27	8.10	0.	0.	4.03E-07	0.	0.	0.	1.05E-03	6.13E-03	2.95E-02	2.39E-02	5.96E-02
28	8.00	0.	0.	4.10E-07	0.	0.	0.	1.05E-03	6.37E-03	2.87E-02	2.39E-02	6.00E-02
29	7.90	0.	0.	3.60E-07	0.	0.	0.	1.06E-03	6.62E-03	2.89E-02	2.39E-02	6.05E-02
30	7.80	0.	0.	3.78E-07	0.	0.	0.	1.06E-03	6.88E-03	2.91E-02	2.39E-02	6.10E-02
31	7.70	0.	0.	3.39E-07	0.	0.	0.	1.07E-03	7.15E-03	2.94E-02	2.39E-02	6.15E-02
32	7.60	0.	0.	3.27E-07	0.	1.81E-11	0.	1.07E-03	7.44E-03	2.96E-02	2.39E-02	6.21E-02
33	7.50	0.	0.	3.08E-07	0.	5.55E-11	0.	1.08E-03	7.74E-03	2.96E-02	2.40E-02	6.24E-02
34	7.40	0.	0.	2.81E-07	0.	5.20E-10	0.	1.09E-03	8.07E-03	2.98E-02	2.40E-02	6.29E-02
35	7.30	0.	0.	2.71E-07	0.	1.95E-09	0.	1.09E-03	8.41E-03	3.01E-02	2.40E-02	6.35E-02
36	7.20	0.	0.	2.49E-07	0.	5.52E-09	0.	1.10E-03	8.76E-03	3.03E-02	2.40E-02	6.41E-02
37	7.10	0.	0.	2.43E-07	0.	1.75E-08	0.	1.11E-03	9.14E-03	3.06E-02	2.40E-02	6.48E-02
38	7.00	7.74E-11	0.	2.27E-07	0.	3.24E-08	0.	1.12E-03	9.54E-03	3.08E-02	2.40E-02	6.55E-02
39	6.90	1.53E-10	0.	2.12E-07	0.	4.91E-08	0.	1.12E-03	9.97E-03	3.11E-02	2.40E-02	6.62E-02
40	6.80	1.33E-10	0.	2.08E-07	0.	7.97E-08	0.	1.13E-03	1.04E-02	3.13E-02	2.40E-02	6.69E-02
41	6.70	9.84E-11	0.	1.85E-07	0.	7.59E-08	0.	1.14E-03	1.09E-02	3.16E-02	2.40E-02	6.77E-02
42	6.60	5.06E-11	0.	1.70E-07	0.	6.79E-08	0.	1.15E-03	1.14E-02	3.19E-02	2.41E-02	6.86E-02
43	6.50	3.54E-11	0.	1.38E-07	0.	9.33E-08	0.	1.16E-03	1.19E-02	3.22E-02	2.41E-02	6.95E-02
44	6.40	2.06E-11	0.	9.86E-08	2.74E-10	8.43E-08	0.	1.17E-03	1.25E-02	3.26E-02	2.42E-02	7.05E-02
45	6.30	1.22E-11	0.	6.37E-08	1.32E-09	6.57E-08	0.	1.18E-03	1.31E-02	3.30E-02	2.43E-02	7.16E-02
46	6.20	5.58E-12	0.	3.64E-08	1.91E-09	8.69E-08	0.	1.19E-03	1.38E-02	3.34E-02	2.44E-02	7.29E-02
47	6.10	2.61E-12	0.	1.76E-08	5.52E-09	1.03E-07	0.	1.20E-03	1.45E-02	3.39E-02	2.46E-02	7.42E-02
48	6.00	1.10E-12	0.	4.55E-09	5.47E-09	5.36E-08	0.	1.21E-03	1.52E-02	3.43E-02	2.48E-02	7.56E-02
49	5.90	2.74E-13	0.	3.27E-10	9.12E-09	5.15E-08	0.	1.21E-03	1.60E-02	3.49E-02	2.49E-02	7.71E-02
50	5.80	3.51E-14	0.	8.29E-12	1.15E-08	5.45E-08	0.	1.19E-03	1.69E-02	3.55E-02	2.51E-02	7.87E-02
51	5.70	2.59E-15	0.	0.	1.38E-08	6.10E-08	0.	1.12E-03	1.78E-02	3.61E-02	2.53E-02	8.03E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	1.17E-16	0.	0.	0.	1.21E-08	7.80E-08	0.	0.	1.04E-03	1.88E-02	3.66E-02	2.54E-02	8.19E-02
93	5.50	0.	0.	0.	0.	1.48E-08	7.21E-08	0.	0.	1.04E-03	1.99E-02	3.74E-02	2.57E-02	8.39E-02
94	5.40	0.	0.	0.	0.	1.40E-08	6.10E-08	0.	0.	1.05E-03	2.10E-02	3.83E-02	2.60E-02	8.63E-02
95	5.30	0.	0.	0.	0.	1.43E-08	7.50E-08	0.	0.	1.05E-03	2.22E-02	3.93E-02	2.63E-02	8.89E-02
96	5.20	0.	0.	0.	0.	1.56E-08	6.02E-08	0.	0.	1.06E-03	2.35E-02	3.94E-02	2.67E-02	9.07E-02
97	5.10	0.	0.	0.	0.	1.57E-08	7.64E-08	0.	0.	1.07E-03	2.50E-02	4.05E-02	2.71E-02	9.37E-02
98	5.00	1.67E-09	0.	0.	0.	1.45E-08	7.36E-08	0.	0.	1.08E-03	2.65E-02	4.18E-02	2.75E-02	9.69E-02
99	4.90	4.15E-09	0.	0.	0.	1.63E-08	8.18E-08	0.	0.	1.09E-03	2.82E-02	4.33E-02	2.80E-02	1.01E-01
100	4.80	7.94E-09	0.	0.	0.	1.76E-08	7.75E-08	0.	0.	1.10E-03	3.00E-02	4.49E-02	2.86E-02	1.05E-01
101	4.70	1.09E-08	0.	0.	0.	1.79E-08	7.09E-08	0.	0.	1.11E-03	3.20E-02	4.67E-02	2.94E-02	1.09E-01
102	4.60	1.54E-08	0.	0.	0.	1.85E-08	6.42E-08	0.	0.	1.12E-03	3.41E-02	4.87E-02	3.02E-02	1.14E-01
103	4.50	1.64E-08	0.	2.37E-08	0.	1.73E-08	4.86E-08	0.	0.	1.12E-03	3.65E-02	5.15E-02	3.10E-02	1.20E-01
104	4.40	1.78E-08	0.	6.79E-08	0.	1.75E-08	3.30E-08	0.	0.	1.13E-03	3.90E-02	5.43E-02	3.19E-02	1.26E-01
105	4.30	1.71E-08	0.	2.49E-07	0.	1.70E-08	2.11E-08	0.	0.	1.14E-03	4.19E-02	5.74E-02	3.28E-02	1.33E-01
106	4.20	1.62E-08	0.	7.22E-07	0.	1.79E-08	1.43E-08	0.	0.	1.15E-03	4.50E-02	6.06E-02	3.37E-02	1.40E-01
107	4.10	1.54E-08	0.	3.09E-07	0.	1.78E-08	4.08E-09	0.	0.	1.16E-03	4.84E-02	6.38E-02	3.45E-02	1.47E-01
108	4.00	1.44E-08	0.	1.05E-06	0.	1.74E-08	3.04E-09	0.	0.	1.16E-03	5.22E-02	6.70E-02	1.77E-02	1.38E-01
109	3.90	1.25E-08	0.	5.86E-07	1.14E-06	1.64E-08	1.12E-09	0.	0.	1.16E-03	5.64E-02	6.67E-02	1.83E-02	1.43E-01
110	3.80	1.38E-08	0.	8.21E-07	4.34E-06	1.78E-08	0.	0.	0.	1.15E-03	6.11E-02	6.71E-02	1.91E-02	1.48E-01
111	3.70	1.25E-08	0.	8.21E-07	2.16E-06	1.56E-08	0.	0.	0.	1.13E-03	6.62E-02	5.59E-02	2.07E-02	1.44E-01
112	3.60	1.15E-08	0.	6.20E-07	1.07E-05	1.69E-08	0.	0.	0.	1.06E-03	7.20E-02	6.03E-02	2.26E-02	1.56E-01
113	3.50	1.09E-08	0.	7.98E-07	1.82E-05	1.37E-08	0.	0.	0.	9.72E-04	7.85E-02	6.43E-02	2.47E-02	1.69E-01
114	3.40	1.02E-08	0.	5.35E-07	3.27E-06	1.55E-08	0.	0.	0.	5.61E-04	8.58E-02	7.15E-02	2.72E-02	1.85E-01
115	3.30	8.23E-09	0.	5.46E-07	1.16E-05	1.27E-08	0.	0.	0.	5.62E-04	9.39E-02	7.89E-02	2.96E-02	2.03E-01
116	3.20	7.32E-09	0.	3.49E-07	1.73E-05	1.34E-08	0.	0.	0.	5.63E-04	1.03E-01	8.64E-02	3.22E-02	2.22E-01
117	3.10	7.13E-09	0.	2.91E-07	5.21E-06	1.29E-08	0.	0.	0.	5.64E-04	1.14E-01	9.42E-02	3.48E-02	2.43E-01
118	3.00	6.52E-09	0.	1.81E-07	1.09E-05	1.25E-08	0.	0.	0.	5.65E-04	1.26E-01	1.02E-01	3.74E-02	2.66E-01
119	2.90	5.60E-09	0.	1.16E-07	5.85E-06	9.62E-09	0.	0.	0.	5.66E-04	1.39E-01	1.11E-01	4.04E-02	2.91E-01
120	2.80	5.91E-09	0.	5.98E-08	4.28E-06	7.09E-09	0.	0.	0.	5.67E-04	1.55E-01	1.21E-01	4.38E-02	3.20E-01
121	2.70	5.93E-09	0.	2.64E-08	5.11E-06	6.03E-09	0.	0.	0.	5.67E-04	1.73E-01	1.32E-01	4.75E-02	3.53E-01
122	2.60	1.92E-09	0.	1.26E-08	5.52E-07	1.83E-09	0.	0.	0.	5.67E-04	1.95E-01	1.42E-01	5.12E-02	3.88E-01
123	2.50	1.37E-10	0.	1.28E-09	5.44E-07	4.47E-10	0.	0.	0.	5.67E-04	2.19E-01	1.62E-01	3.43E-02	4.17E-01
124	2.40	0.	5.58E-08	0.	3.99E-07	4.85E-11	0.	0.	0.	5.67E-04	2.48E-01	1.90E-01	3.96E-02	4.78E-01
125	2.30	0.	1.95E-07	0.	0.	0.	0.	0.	0.	5.63E-04	2.83E-01	1.69E-01	4.71E-02	5.00E-01
126	2.20	0.	4.29E-07	0.	0.	0.	0.	0.	0.	5.60E-04	3.24E-01	2.02E-01	5.60E-02	5.83E-01
127	2.10	0.	4.21E-07	0.	0.	0.	0.	0.	0.	5.58E-04	3.73E-01	2.37E-01	6.49E-02	6.75E-01
128	2.00	0.	8.56E-07	0.	0.	0.	0.	0.	0.	5.40E-04	4.34E-01	2.72E-01	7.39E-02	7.80E-01
129	1.90	0.	9.75E-07	0.	0.	0.	0.	0.	0.	5.19E-04	5.08E-01	3.15E-01	8.48E-02	9.11E-01
130	1.80	0.	8.46E-07	0.	0.	0.	0.	0.	0.	4.97E-04	6.01E-01	3.62E-01	1.06E-01	1.09E 00
131	1.70	0.	9.47E-07	0.	0.	0.	0.	0.	0.	4.60E-04	7.17E-01	4.54E-01	1.29E-01	1.31E 00
132	1.60	0.	7.23E-07	0.	0.	0.	0.	0.	0.	3.96E-04	8.63E-01	5.47E-01	1.52E-01	1.56E 00
133	1.50	0.	8.15E-07	0.	0.	0.	0.	0.	0.	1.88E-04	1.05E 00	7.22E-01	1.84E-01	1.96E 00
134	1.40	0.	7.98E-07	0.	0.	0.	0.	0.	0.	0.	1.30E 00	9.13E-01	2.21E-01	2.43E 00
135	1.30	0.	6.11E-07	0.	0.	0.	0.	0.	0.	0.	1.64E 00	1.24E 00	2.98E-01	3.20E 00
136	1.20	0.	5.83E-07	0.	0.	0.	0.	0.	0.	0.	2.04E 00	1.49E 00	2.92E-01	3.83E 00
137	1.10	0.	5.72E-07	0.	0.	0.	0.	7.31E-13	0.	0.	2.73E 00	1.79E 00	3.65E-01	4.84E 00
138	1.00	0.	5.26E-07	0.	0.	0.	0.	1.25E-11	0.	0.	3.64E 00	2.18E 00	4.17E-01	6.25E 00
139	0.90	0.	4.31E-07	0.	0.	0.	0.	1.47E-11	0.	0.	5.07E 00	2.51E 00	4.88E-01	8.07E 00
140	0.80	0.	2.02E-07	0.	0.	0.	0.	3.20E-10	0.	0.	7.30E 00	2.89E 00	5.60E-01	1.08E 01
141	0.70	0.	4.62E-08	0.	0.	0.	0.	3.23E-10	0.	0.	1.11E 01	3.11E 00	5.56E-01	1.47E 01
142	0.60	0.	1.12E-08	0.	0.	0.	0.	9.91E-10	0.	0.	1.79E 01	3.48E 00	6.22E-01	2.20E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 27900. DENSITY (GM/CC) 1.20[illegible]E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R RAYBS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.F.	TOTAL AIR
1	10.79	0.	0.	3.32E-10	0.	0.	0.	2.09E-06	4.24E-05	1.16E-02	4.97E-04	1.21E-02
2	10.69	0.	0.	3.07E-10	0.	0.	0.	2.09E-06	4.37E-05	1.24E-03	4.95E-04	1.74E-03
3	10.59	0.	0.	3.13E-10	0.	0.	0.	2.09E-06	4.49E-05	1.25E-03	4.52E-04	1.75E-03
4	10.49	0.	0.	3.02E-10	0.	0.	0.	2.10E-06	4.63E-05	1.26E-03	4.50E-04	1.76E-03
5	10.39	0.	0.	2.68E-10	0.	0.	0.	2.10E-06	4.76E-05	1.26E-03	4.48E-04	1.76E-03
6	10.29	0.	0.	2.88E-10	0.	0.	0.	2.10E-06	4.91E-05	1.27E-03	4.46E-04	1.77E-03
7	10.19	0.	0.	2.67E-10	0.	0.	0.	2.10E-06	5.06E-05	1.27E-03	4.44E-04	1.77E-03
8	10.09	0.	0.	2.48E-10	0.	0.	0.	2.11E-06	5.21E-05	1.11E-03	4.42E-04	1.61E-03
9	9.99	0.	0.	2.47E-10	0.	0.	0.	2.11E-06	5.37E-05	1.11E-03	4.39E-04	1.61E-03
10	9.89	0.	0.	2.36E-10	0.	0.	0.	2.11E-06	5.54E-05	1.12E-03	4.37E-04	1.61E-03
11	9.79	0.	0.	2.89E-10	0.	0.	0.	2.12E-06	5.72E-05	1.12E-03	4.35E-04	1.62E-03
12	9.69	0.	0.	2.26E-10	0.	0.	0.	2.12E-06	5.90E-05	1.13E-03	4.33E-04	1.62E-03
13	9.59	0.	0.	1.98E-10	0.	0.	0.	2.13E-06	6.09E-05	1.13E-03	4.31E-04	1.62E-03
14	9.49	0.	0.	1.91E-10	0.	0.	0.	2.13E-06	6.29E-05	1.13E-03	4.29E-04	1.63E-03
15	9.39	0.	0.	1.96E-10	0.	0.	0.	2.14E-06	6.49E-05	1.14E-03	4.27E-04	1.63E-03
16	9.29	0.	0.	1.60E-10	0.	0.	0.	2.15E-06	6.71E-05	1.14E-03	4.25E-04	1.64E-03
17	9.19	0.	0.	1.73E-10	0.	0.	0.	2.16E-06	6.94E-05	5.02E-04	4.23E-04	9.97E-04
18	9.09	0.	0.	1.60E-10	0.	0.	0.	2.16E-06	7.17E-05	5.03E-04	4.21E-04	9.98E-04
19	8.99	0.	0.	1.51E-10	0.	0.	0.	2.17E-06	7.42E-05	5.05E-04	4.19E-04	1.00E-03
20	8.89	0.	0.	1.59E-10	0.	0.	0.	2.18E-06	7.68E-05	5.06E-04	4.18E-04	1.00E-03
21	8.79	0.	0.	1.33E-10	0.	0.	0.	2.19E-06	7.95E-05	5.08E-04	4.16E-04	1.01E-03
22	8.69	0.	0.	1.38E-10	0.	0.	0.	2.20E-06	8.23E-05	5.10E-04	4.14E-04	1.01E-03
23	8.59	0.	0.	1.24E-10	0.	0.	0.	2.20E-06	8.53E-05	5.13E-04	4.12E-04	1.01E-03
24	8.49	0.	0.	1.24E-10	0.	0.	0.	2.22E-06	8.84E-05	5.15E-04	4.11E-04	1.02E-03
25	8.39	0.	0.	1.08E-10	0.	0.	0.	2.23E-06	9.17E-05	5.19E-04	4.10E-04	1.02E-03
26	8.29	0.	0.	1.10E-10	0.	0.	0.	2.24E-06	9.51E-05	5.23E-04	4.10E-04	1.03E-03
27	8.19	0.	0.	9.74E-11	0.	0.	0.	2.25E-06	9.87E-05	5.27E-04	4.10E-04	1.04E-03
28	8.09	0.	0.	9.90E-11	0.	0.	0.	2.26E-06	1.02E-04	5.32E-04	4.09E-04	1.05E-03
29	7.99	0.	0.	8.70E-11	0.	0.	0.	2.27E-06	1.06E-04	5.37E-04	4.09E-04	1.06E-03
30	7.89	0.	0.	9.13E-11	0.	0.	0.	2.28E-06	1.11E-04	5.43E-04	4.10E-04	1.07E-03
31	7.79	0.	0.	8.18E-11	0.	0.	0.	2.30E-06	1.15E-04	5.48E-04	4.10E-04	1.08E-03
32	7.69	0.	0.	7.88E-11	0.	4.77E-15	0.	2.31E-06	1.20E-04	5.55E-04	4.10E-04	1.09E-03
33	7.59	0.	0.	7.45E-11	0.	1.47E-14	0.	2.32E-06	1.25E-04	5.25E-04	4.10E-04	1.06E-03
34	7.49	0.	0.	6.79E-11	0.	1.39E-13	0.	2.33E-06	1.30E-04	5.32E-04	4.10E-04	1.07E-03
35	7.39	0.	0.	6.55E-11	0.	5.15E-13	0.	2.35E-06	1.35E-04	5.38E-04	4.11E-04	1.09E-03
36	7.29	0.	0.	6.01E-11	0.	1.44E-12	0.	2.36E-06	1.41E-04	5.46E-04	4.11E-04	1.10E-03
37	7.19	0.	0.	5.87E-11	0.	4.62E-12	0.	2.38E-06	1.47E-04	5.53E-04	4.11E-04	1.11E-03
38	7.09	2.24E-14	0.	5.48E-11	0.	8.57E-12	0.	2.40E-06	1.54E-04	5.61E-04	4.11E-04	1.13E-03
39	6.99	4.43E-14	0.	5.12E-11	0.	1.38E-11	0.	2.42E-06	1.66E-04	5.68E-04	4.12E-04	1.14E-03
40	6.89	3.86E-14	0.	5.02E-11	0.	2.11E-11	0.	2.44E-06	1.68E-04	5.76E-04	4.12E-04	1.16E-03
41	6.79	2.84E-14	0.	4.48E-11	0.	2.01E-11	0.	2.45E-06	1.75E-04	5.84E-04	4.13E-04	1.17E-03
42	6.69	1.75E-14	0.	4.09E-11	0.	1.78E-11	0.	2.47E-06	1.84E-04	5.93E-04	4.14E-04	1.19E-03
43	6.59	1.02E-14	0.	3.34E-11	0.	2.47E-11	0.	2.49E-06	1.92E-04	5.88E-04	4.15E-04	1.20E-03
44	6.49	5.97E-15	0.	2.38E-11	7.23E-14	2.23E-11	0.	2.51E-06	2.02E-04	5.98E-04	4.16E-04	1.22E-03
45	6.39	3.52E-15	0.	1.54E-11	3.46E-13	1.74E-11	0.	2.53E-06	2.11E-04	6.07E-04	4.18E-04	1.24E-03
46	6.29	1.61E-15	0.	8.79E-12	5.05E-13	2.30E-11	0.	2.55E-06	2.22E-04	6.17E-04	4.21E-04	1.26E-03
47	6.19	7.54E-16	0.	4.25E-12	1.46E-12	2.73E-11	0.	2.57E-06	2.33E-04	6.28E-04	4.24E-04	1.29E-03
48	6.09	3.19E-16	0.	1.10E-12	1.45E-12	1.42E-11	0.	2.59E-06	2.45E-04	6.39E-04	4.27E-04	1.31E-03
49	5.99	7.93E-17	0.	7.90E-14	2.15E-12	1.36E-11	0.	2.59E-06	2.58E-04	6.51E-04	4.30E-04	1.34E-03
50	5.89	1.01E-17	0.	2.00E-15	3.84E-12	1.44E-11	0.	2.58E-06	2.72E-04	6.64E-04	4.33E-04	1.37E-03
51	5.79	7.48E-19	0.	0.	3.64E-12	1.61E-11	0.	2.40E-06	2.87E-04	6.77E-04	4.36E-04	1.40E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-05 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.48E-20	0.	0.	0.	3.21E-12	2.04E-11	0.	0.	2.23E-06	3.02E-04	6.91E-04	4.39E-04	1.43E-03
53	5.50	0.	0.	0.	0.	3.92E-12	1.91E-11	0.	0.	2.24E-06	3.19E-04	7.07E-04	4.43E-04	1.47E-03
54	5.40	0.	0.	0.	0.	3.69E-12	1.61E-11	0.	0.	2.25E-06	3.38E-04	7.27E-04	4.48E-04	1.51E-03
55	5.30	0.	0.	0.	0.	3.78E-12	1.90E-11	0.	0.	2.27E-06	3.57E-04	7.47E-04	4.54E-04	1.56E-03
56	5.20	0.	0.	0.	0.	4.12E-12	1.99E-11	0.	0.	2.28E-06	3.79E-04	6.61E-04	4.61E-04	1.50E-03
57	5.10	0.	0.	0.	0.	4.14E-12	2.07E-11	0.	0.	2.30E-06	4.02E-04	6.81E-04	4.63E-04	1.55E-03
58	5.00	4.83E-18	0.	0.	0.	3.82E-12	1.95E-11	0.	0.	2.32E-06	4.27E-04	7.03E-04	4.71E-04	1.60E-03
59	4.90	1.20E-12	0.	0.	0.	4.30E-12	2.14E-21	0.	0.	2.34E-06	4.54E-04	7.29E-04	4.79E-04	1.66E-03
60	4.80	2.29E-12	0.	0.	0.	4.69E-12	2.05E-11	0.	0.	2.36E-06	4.83E-04	7.57E-04	4.90E-04	1.73E-03
61	4.70	3.16E-12	0.	0.	0.	4.72E-12	1.87E-11	0.	0.	2.38E-06	5.15E-04	7.88E-04	5.03E-04	1.81E-03
62	4.60	4.44E-12	0.	0.	0.	4.90E-12	1.78E-11	0.	0.	2.40E-06	5.49E-04	8.25E-04	5.17E-04	1.89E-03
63	4.50	4.74E-12	0.	5.73E-12	0.	4.56E-12	1.28E-11	0.	0.	2.42E-06	5.87E-04	8.72E-04	5.31E-04	1.99E-03
64	4.40	5.16E-12	0.	1.64E-11	0.	4.62E-12	8.71E-12	0.	0.	2.44E-06	6.28E-04	9.20E-04	5.46E-04	2.10E-03
65	4.30	4.96E-12	0.	5.78E-11	0.	4.48E-12	5.97E-12	0.	0.	2.45E-06	6.74E-04	9.74E-04	5.61E-04	2.21E-03
66	4.20	4.68E-12	0.	1.74E-10	0.	4.73E-12	3.79E-12	0.	0.	2.47E-06	7.23E-04	1.03E-03	5.77E-04	2.33E-03
67	4.10	4.44E-12	0.	6.33E-11	0.	4.71E-12	1.08E-12	0.	0.	2.48E-06	7.78E-04	1.08E-03	5.73E-04	2.44E-03
68	4.00	4.16E-12	0.	2.53E-10	0.	4.60E-12	8.04E-13	0.	0.	2.49E-06	8.40E-04	1.14E-03	3.04E-04	2.29E-03
69	3.90	3.68E-12	0.	1.22E-10	2.18E-09	4.34E-12	2.99E-13	0.	0.	2.48E-06	9.07E-04	1.14E-03	3.14E-04	2.37E-03
70	3.80	3.98E-12	0.	1.98E-10	8.22E-09	4.71E-12	0.	0.	0.	2.47E-06	9.82E-04	1.15E-03	3.20E-04	2.47E-03
71	3.70	3.62E-12	0.	1.98E-10	4.13E-09	4.13E-12	0.	0.	0.	2.44E-06	1.07E-03	9.86E-04	3.57E-04	2.41E-03
72	3.60	3.31E-12	0.	1.90E-10	2.05E-08	4.46E-12	0.	0.	0.	2.20E-06	1.16E-03	1.06E-03	3.89E-04	2.61E-03
73	3.50	3.15E-12	0.	1.93E-10	3.48E-08	3.62E-12	0.	0.	0.	2.09E-06	1.26E-03	1.13E-03	4.26E-04	2.82E-03
74	3.40	2.94E-12	0.	1.29E-10	6.24E-09	4.09E-12	0.	0.	0.	1.20E-06	1.37E-03	1.25E-03	4.67E-04	3.10E-03
75	3.30	2.33E-12	0.	1.32E-10	2.21E-08	3.35E-12	0.	0.	0.	1.21E-06	1.51E-03	1.37E-03	5.09E-04	3.39E-03
76	3.20	2.12E-12	0.	8.91E-11	3.31E-08	3.55E-12	0.	0.	0.	1.21E-06	1.66E-03	1.50E-03	5.53E-04	3.71E-03
77	3.10	2.06E-12	0.	7.82E-11	9.97E-09	3.42E-12	0.	0.	0.	1.21E-06	1.83E-03	1.63E-03	5.98E-04	4.06E-03
78	3.00	1.88E-12	0.	4.38E-11	2.89E-08	3.30E-12	0.	0.	0.	1.21E-06	2.02E-03	1.76E-03	6.43E-04	4.43E-03
79	2.90	1.62E-12	0.	2.79E-11	1.12E-08	2.59E-12	0.	0.	0.	1.22E-06	2.24E-03	1.91E-03	6.94E-04	4.84E-03
80	2.80	1.71E-12	0.	1.35E-11	8.19E-09	1.87E-12	0.	0.	0.	1.22E-06	2.49E-03	2.08E-03	7.52E-04	5.32E-03
81	2.70	1.14E-12	0.	6.37E-12	9.77E-09	1.06E-12	0.	0.	0.	1.22E-06	2.79E-03	2.26E-03	8.16E-04	5.87E-03
82	2.60	9.56E-13	0.	3.83E-12	1.06E-09	4.85E-13	0.	0.	0.	1.22E-06	3.13E-03	2.30E-03	8.79E-04	6.32E-03
83	2.50	3.96E-14	0.	3.10E-13	1.04E-09	1.10E-13	0.	0.	0.	1.22E-06	3.53E-03	2.62E-03	5.92E-04	6.75E-03
84	2.40	0.	1.33E-11	0.	7.61E-10	1.20E-14	0.	0.	0.	1.22E-06	4.00E-03	3.00E-03	6.81E-04	7.74E-03
85	2.30	0.	3.74E-11	0.	0.	0.	0.	0.	0.	1.21E-06	4.55E-03	2.76E-03	8.08E-04	8.12E-03
86	2.20	0.	1.03E-10	0.	0.	0.	0.	0.	0.	1.20E-06	5.21E-03	3.20E-03	9.60E-04	9.45E-03
87	2.10	0.	1.02E-10	0.	0.	0.	0.	0.	0.	1.20E-06	6.00E-03	3.83E-03	1.11E-03	1.10E-02
88	2.00	0.	2.07E-10	0.	0.	0.	0.	0.	0.	1.16E-06	6.90E-03	4.39E-03	1.27E-03	1.26E-02
89	1.90	0.	2.35E-10	0.	0.	0.	0.	0.	0.	1.12E-06	8.18E-03	5.08E-03	1.49E-03	1.47E-02
90	1.80	0.	2.06E-10	0.	0.	0.	0.	0.	0.	1.07E-06	9.66E-03	6.13E-03	1.81E-03	1.76E-02
91	1.70	0.	2.29E-10	0.	0.	0.	0.	0.	0.	1.00E-06	1.15E-02	7.42E-03	2.21E-03	2.12E-02
92	1.60	0.	1.74E-10	0.	0.	0.	0.	0.	0.	8.51E-07	1.39E-02	8.72E-03	2.60E-03	2.52E-02
93	1.50	0.	1.09E-10	0.	0.	0.	0.	0.	0.	3.87E-07	1.69E-02	1.15E-02	3.15E-03	3.15E-02
94	1.40	0.	1.93E-10	0.	0.	0.	0.	0.	0.	0.	2.09E-02	1.44E-02	3.76E-03	3.91E-02
95	1.30	0.	1.48E-10	0.	0.	0.	0.	0.	0.	0.	2.62E-02	2.02E-02	4.94E-03	5.14E-02
96	1.20	0.	1.41E-10	0.	0.	0.	0.	0.	0.	0.	3.35E-02	2.29E-02	4.98E-03	6.14E-02
97	1.10	0.	1.38E-10	0.	0.	0.	0.	1.93E-16	0.	0.	4.38E-02	2.88E-02	6.21E-03	7.81E-02
98	1.00	0.	1.27E-10	0.	0.	0.	0.	3.31E-	0.	0.	5.89E-02	3.48E-02	7.10E-03	9.99E-02
99	0.90	0.	1.84E-10	0.	0.	0.	0.	3,98E-1.	0.	0.	8.15E-02	3.92E-02	8.31E-03	1.29E-01
100	0.80	0.	4.88E-11	0.	0.	0.	0.	8,67E-14	0.	0.	1.17E-01	4.51E-02	9.53E-03	1.72E-01
101	0.70	0.	1.11E-11	0.	0.	0.	0.	9,54E-14	0.	0.	1.78E-01	4.85E-02	9.46E-03	2.36E-01
102	0.60	0.	2.71E-12	0.	0.	0.	0.	2.62E-13	0.	0.	2.88E-01	5.43E-02	1.04E-02	3.52E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-06 10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7e	0.	0.	3.72E-14	0.	0.	0.	2.50E-09	5.25E-07	3.15E-05	5.40E-06	3.74E-05
2	10.6e	0.	0.	3.44E-14	0.	0.	0.	2.51E-09	5.40E-07	3.19E-05	5.32E-06	3.77E-05
3	10.5e	0.	0.	3.51E-14	0.	0.	0.	2.51E-09	5.54E-07	3.23E-05	5.29E-06	3.81E-05
4	10.4e	0.	0.	3.58E-14	0.	0.	0.	2.51E-09	5.72E-07	3.26E-05	5.27E-06	3.85E-05
5	10.3e	0.	0.	3.69E-14	0.	0.	0.	2.52E-09	5.89E-07	3.30E-05	5.25E-06	3.88E-05
6	10.2e	0.	0.	3.14E-14	0.	0.	0.	2.52E-09	6.07E-07	3.34E-05	5.23E-06	3.93E-05
7	10.1e	0.	0.	2.99E-14	0.	0.	0.	2.52E-09	6.25E-07	3.38E-05	5.21E-06	3.96E-05
8	10.0e	0.	0.	2.68E-14	0.	0.	0.	2.53E-09	6.45E-07	1.88E-05	5.19E-06	2.30E-05
9	9.9e	0.	0.	2.77E-14	0.	0.	0.	2.53E-09	6.64E-07	1.81E-05	5.17E-06	2.19E-05
10	9.8e	0.	0.	2.64E-14	0.	0.	0.	2.54E-09	6.85E-07	1.82E-05	5.15E-06	2.41E-05
11	9.7e	0.	0.	2.33E-14	0.	0.	0.	2.54E-09	7.07E-07	1.84E-05	5.13E-06	2.42E-05
12	9.6e	0.	0.	2.53E-14	0.	0.	0.	2.55E-09	7.29E-07	1.85E-05	5.11E-06	2.44E-05
13	9.5e	0.	0.	2.21E-14	0.	0.	0.	2.55E-09	7.53E-07	1.87E-05	5.09E-06	2.45E-05
14	9.4e	0.	0.	2.13E-14	0.	0.	0.	2.56E-09	7.77E-07	1.88E-05	5.07E-06	2.47E-05
15	9.3e	0.	0.	2.20E-14	0.	0.	0.	2.57E-09	8.03E-07	1.90E-05	5.06E-06	2.48E-05
16	9.2e	0.	0.	1.88E-14	0.	0.	0.	2.58E-09	8.30E-07	1.91E-05	5.04E-06	2.50E-05
17	9.1e	0.	0.	1.93E-14	0.	0.	0.	2.59E-09	8.58E-07	1.24E-05	3.02E-06	1.63E-05
18	9.0e	0.	0.	1.79E-14	0.	0.	0.	2.60E-09	8.87E-07	1.26E-05	5.00E-06	1.85E-05
19	8.9e	0.	0.	1.69E-14	0.	0.	0.	2.61E-09	9.18E-07	1.27E-05	4.99E-06	1.86E-05
20	8.8e	0.	0.	1.67E-14	0.	0.	0.	2.62E-09	9.50E-07	1.28E-05	4.97E-06	1.87E-05
21	8.7e	0.	0.	1.49E-14	0.	0.	0.	2.63E-09	9.83E-07	1.29E-05	4.96E-06	1.89E-05
22	8.6e	0.	0.	1.55E-14	0.	0.	0.	2.63E-09	1.02E-06	1.31E-05	4.94E-06	1.90E-05
23	8.5e	0.	0.	1.39E-14	0.	0.	0.	2.64E-09	1.05E-06	1.32E-05	4.93E-06	1.92E-05
24	8.4e	0.	0.	1.39E-14	0.	0.	0.	2.66E-09	1.09E-06	1.34E-05	4.91E-06	1.94E-05
25	8.3e	0.	0.	1.21E-14	0.	0.	0.	2.67E-09	1.13E-06	1.35E-05	4.90E-06	1.96E-05
26	8.2e	0.	0.	1.23E-14	0.	0.	0.	2.69E-09	1.18E-06	1.38E-05	4.92E-06	1.99E-05
27	8.1e	0.	0.	1.09E-14	0.	0.	0.	2.70E-09	1.22E-06	1.40E-05	4.92E-06	2.00E-05
28	8.0e	0.	0.	1.11E-14	0.	0.	0.	2.71E-09	1.27E-06	1.42E-05	4.91E-06	2.03E-05
29	7.9e	0.	0.	9.74E-15	0.	0.	0.	2.73E-09	1.32E-06	1.45E-05	4.92E-06	2.06E-05
30	7.8e	0.	0.	1.02E-14	0.	0.	0.	2.74E-09	1.37E-06	1.47E-05	4.93E-06	2.09E-05
31	7.7e	0.	0.	9.15E-15	0.	0.	0.	2.75E-09	1.42E-06	1.50E-05	4.94E-06	2.13E-05
32	7.6e	0.	0.	8.82E-15	0.	5.63E-19	0.	2.77E-09	1.48E-06	1.18E-05	4.86E-06	1.82E-05
33	7.5e	0.	0.	8.33E-15	0.	1.73E-18	0.	2.78E-09	1.54E-06	1.21E-05	4.87E-06	1.86E-05
34	7.4e	0.	0.	7.40E-15	0.	1.65E-17	0.	2.80E-09	1.60E-06	1.25E-05	4.88E-06	1.90E-05
35	7.3e	0.	0.	7.33E-15	0.	6.09E-17	0.	2.81E-09	1.67E-06	1.28E-05	4.90E-06	1.94E-05
36	7.2e	0.	0.	6.73E-15	0.	1.72E-16	0.	2.83E-09	1.74E-06	1.33E-05	4.92E-06	1.99E-05
37	7.1e	0.	0.	6.57E-15	0.	5.45E-16	0.	2.85E-09	1.82E-06	1.37E-05	4.94E-06	2.05E-05
38	7.0e	2.79E-18	0.	6.14E-15	0.	1.01E-15	0.	2.88E-09	1.90E-06	1.42E-05	4.96E-06	2.10E-05
39	6.9e	5.51E-18	0.	5.72E-15	0.	1.53E-15	0.	2.90E-09	1.98E-06	1.46E-05	4.98E-06	2.16E-05
40	6.8e	4.80E-18	0.	5.62E-15	0.	2.40E-15	0.	2.92E-09	2.07E-06	1.50E-05	5.00E-06	2.21E-05
41	6.7e	3.54E-18	0.	5.01E-15	0.	2.37E-15	0.	2.95E-09	2.17E-06	1.55E-05	5.03E-06	2.27E-05
42	6.6e	2.10E-18	0.	4.58E-15	0.	2.10E-15	0.	2.97E-09	2.27E-06	1.45E-05	5.06E-06	2.19E-05
43	6.5e	1.20E-18	0.	3.74E-15	0.	2.91E-15	0.	2.99E-09	2.38E-06	1.50E-05	5.09E-06	2.24E-05
44	6.4e	7.43E-19	0.	2.67E-15	8.54E-18	2.63E-15	0.	3.01E-09	2.49E-06	1.54E-05	5.12E-06	2.30E-05
45	6.3e	4.38E-19	0.	1.72E-15	4.11E-17	2.09E-15	0.	3.04E-09	2.61E-06	1.58E-05	5.16E-06	2.36E-05
46	6.2e	2.81E-19	0.	9.83E-16	5.95E-17	2.71E-15	0.	3.06E-09	2.74E-06	1.63E-05	5.21E-06	2.43E-05
47	6.1e	9.58E-20	0.	4.75E-16	1.72E-16	3.22E-15	0.	3.08E-09	2.88E-06	1.68E-05	5.27E-06	2.50E-05
48	6.0e	3.97E-20	0.	1.23E-16	1.71E-16	1.67E-15	0.	3.11E-09	3.03E-06	1.73E-05	5.32E-06	2.56E-05
49	5.9e	9.87E-21	0.	8.84E-18	2.53E-16	1.61E-15	0.	3.11E-09	3.19E-06	1.78E-05	5.37E-06	2.64E-05
50	5.8e	1.26E-21	0.	2.24E-19	3.58E-16	1.70E-15	0.	3.06E-09	3.36E-06	1.83E-05	5.43E-06	2.71E-05
51	5.7e	9.31E-23	0.	0.	4.29E-16	1.98E-15	0.	2.88E-09	3.54E-06	1.69E-05	5.48E-06	2.79E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-06 :10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB.ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.23E-24	0.	0.	0.	3.78E-16	2.43E-15	0.	0.	2.67E-09	3.74E-06	1.95E-05	5.54E-06	2.80E-05
53	5.50	0.	0.	0.	0.	4.63E-16	2.29E-15	0.	0.	2.69E-09	3.95E-06	2.02E-05	5.61E-06	2.97E-05
54	5.40	0.	0.	0.	0.	4.36E-16	1.90E-15	0.	0.	2.70E-09	4.17E-06	2.09E-05	5.70E-06	3.08E-05
55	5.30	0.	0.	0.	0.	4.47E-16	2.34E-15	0.	0.	2.72E-09	4.42E-06	1.14E-05	5.79E-06	2.16E-05
56	5.20	0.	0.	0.	0.	4.86E-16	1.83E-15	0.	0.	2.74E-09	4.68E-06	1.19E-05	5.34E-06	2.19E-05
57	5.10	0.	0.	0.	0.	4.80E-16	2.30E-15	0.	0.	2.76E-09	4.96E-06	1.23E-05	5.44E-06	2.27E-05
58	5.00	6.82E-17	0.	0.	0.	4.91E-16	2.33E-15	0.	0.	2.78E-09	5.27E-06	1.28E-05	3.93E-06	2.38E-05
59	4.90	1.49E-16	0.	0.	0.	5.07E-16	2.59E-15	0.	0.	2.81E-09	5.60E-06	1.34E-05	5.64E-06	2.46E-05
60	4.80	2.86E-16	0.	0.	0.	5.49E-16	2.42E-15	0.	0.	2.83E-09	5.96E-06	1.39E-05	5.77E-06	2.56E-05
61	4.70	3.94E-16	0.	0.	0.	5.57E-16	2.21E-15	0.	0.	2.85E-09	6.35E-06	1.46E-05	5.93E-06	2.69E-05
62	4.60	5.53E-16	0.	0.	0.	5.70E-16	2.00E-15	0.	0.	2.88E-09	6.78E-06	1.55E-05	6.10E-06	2.84E-05
63	4.50	5.90E-16	0.	6.42E-16	0.	5.39E-16	1.92E-15	0.	0.	2.90E-09	7.25E-06	1.65E-05	6.28E-06	3.00E-05
64	4.40	8.42E-16	0.	1.83E-15	0.	5.45E-16	1.03E-15	0.	0.	2.92E-09	7.76E-06	1.74E-05	6.37E-06	3.16E-05
65	4.30	8.17E-16	0.	8.47E-15	0.	5.29E-16	6.58E-16	0.	0.	2.95E-09	8.32E-06	1.85E-05	6.57E-06	3.34E-05
66	4.20	9.83E-16	0.	1.95E-14	0.	3.59E-16	4.47E-16	0.	0.	2.97E-09	8.93E-06	1.96E-05	6.78E-06	3.54E-05
67	4.10	9.55E-16	0.	9.32E-15	0.	5.59E-16	1.27E-16	0.	0.	2.98E-09	9.61E-06	2.08E-05	6.76E-06	3.72E-05
68	4.00	5.10E-16	0.	2.84E-14	0.	5.43E-16	9.48E-17	0.	0.	2.99E-09	1.04E-05	2.20E-05	3.79E-06	3.62E-05
69	3.90	4.49E-16	0.	1.37E-14	2.27E-12	5.12E-16	3.48E-17	0.	0.	2.98E-09	1.12E-05	2.25E-05	3.93E-06	3.76E-05
70	3.80	4.96E-16	0.	2.22E-14	6.55E-12	5.55E-16	0.	0.	0.	2.97E-09	1.21E-05	2.11E-05	4.12E-06	3.71E-05
71	3.70	4.51E-16	0.	2.22E-14	4.30E-12	4.80E-16	0.	0.	0.	2.92E-09	1.31E-05	2.22E-05	4.47E-06	3.90E-05
72	3.60	4.13E-16	0.	1.68E-14	2.14E-12	5.27E-16	0.	0.	0.	2.74E-09	1.43E-05	2.35E-05	4.65E-06	4.27E-05
73	3.50	3.92E-16	0.	2.16E-14	3.82E-11	4.28E-16	0.	0.	0.	2.50E-09	1.56E-05	2.49E-05	5.29E-06	4.58E-05
74	3.40	3.66E-16	0.	1.45E-14	6.51E-12	4.63E-16	0.	0.	0.	1.44E-09	1.70E-05	2.69E-05	5.76E-06	4.97E-05
75	3.30	2.96E-16	0.	1.48E-14	2.30E-11	3.95E-16	0.	0.	0.	1.45E-09	1.86E-05	2.89E-05	6.26E-06	5.38E-05
76	3.20	2.63E-16	0.	9.98E-15	3.44E-11	4.19E-16	0.	0.	0.	1.45E-09	2.05E-05	3.12E-05	6.81E-06	5.85E-05
77	3.10	2.57E-16	0.	7.96E-15	1.84E-11	4.84E-16	0.	0.	0.	1.45E-09	2.26E-05	3.37E-05	7.36E-06	6.36E-05
78	3.00	2.35E-16	0.	4.98E-15	2.17E-11	3.89E-16	0.	0.	0.	1.46E-09	2.49E-05	3.62E-05	7.91E-06	6.91E-05
79	2.96	2.81E-16	0.	3.13E-15	1.14E-11	3.06E-16	0.	0.	0.	1.46E-09	2.76E-05	3.89E-05	8.54E-06	7.50E-05
80	2.80	2.13E-16	0.	1.51E-15	9.51E-12	2.21E-16	0.	0.	0.	1.46E-09	3.08E-05	4.17E-05	9.25E-06	8.18E-05
81	2.70	1.41E-16	0.	7.13E-16	1.82E-11	1.26E-16	0.	0.	0.	1.46E-09	3.44E-05	3.15E-05	9.90E-06	7.58E-05
82	2.60	8.92E-17	0.	3.39E-16	1.18E-12	5.72E-17	0.	0.	0.	1.46E-09	3.86E-05	3.33E-05	1.07E-05	8.26E-05
83	2.50	4.93E-18	0.	5.47E-17	1.68E-12	1.39E-17	0.	0.	0.	1.46E-09	4.35E-05	3.74E-05	7.21E-06	8.82E-05
84	2.40	0.	1.49E-15	0.	7.92E-13	1.51E-18	0.	0.	0.	1.46E-09	4.93E-05	3.52E-05	8.39E-06	9.29E-05
85	2.30	0.	4.19E-15	0.	0.	0.	0.	0.	0.	1.45E-09	5.61E-05	4.19E-05	9.71E-06	1.08E-04
86	2.20	0.	1.19E-14	0.	0.	0.	0.	0.	0.	1.44E-09	6.42E-05	4.88E-05	1.15E-05	1.24E-04
87	2.10	0.	1.14E-14	0.	0.	0.	0.	0.	0.	1.44E-09	7.41E-05	5.68E-05	1.32E-05	1.43E-04
88	2.00	0.	2.31E-14	0.	0.	0.	0.	0.	0.	1.39E-09	8.60E-05	6.33E-05	1.50E-05	1.64E-04
89	1.90	0.	2.63E-14	0.	0.	0.	0.	0.	0.	1.34E-09	1.01E-04	7.19E-05	1.70E-05	1.90E-04
90	1.80	0.	2.29E-14	0.	0.	0.	0.	0.	0.	1.28E-09	1.19E-04	8.44E-05	2.13E-05	2.25E-04
91	1.70	0.	2.56E-14	0.	0.	0.	0.	0.	0.	1.21E-09	1.42E-04	9.94E-05	2.50E-05	2.67E-04
92	1.60	0.	1.95E-14	0.	0.	0.	0.	0.	0.	1.02E-09	1.71E-04	1.15E-04	3.02E-05	3.16E-04
93	1.50	0.	2.20E-14	0.	0.	0.	0.	0.	0.	4.64E-10	2.08E-04	1.45E-04	3.64E-05	3.90E-04
94	1.40	0.	2.16E-14	0.	0.	0.	0.	0.	0.	0.	2.57E-04	1.78E-04	4.33E-05	4.78E-04
95	1.30	0.	1.69E-14	0.	0.	0.	0.	0.	0.	0.	3.23E-04	2.41E-04	5.25E-05	6.16E-04
96	1.20	0.	1.58E-14	0.	0.	0.	0.	0.	0.	0.	4.12E-04	2.54E-04	5.62E-05	7.22E-04
97	1.10	0.	1.54E-14	0.	0.	0.	0.	2.28E-28	0.	0.	5.48E-04	3.10E-04	7.01E-05	9.28E-04
98	1.00	0.	1.42E-14	0.	0.	0.	0.	3,90E-19	0.	0.	7.24E-04	3.74E-04	8.88E-05	1.18E-03
99	0.90	0.	1.16E-14	0.	0.	0.	0.	4.68E-18	0.	0.	1.00E-03	4.30E-04	9.36E-05	1.53E-03
100	0.80	0.	5.46E-15	0.	0.	0.	0.	1.82E-17	0.	0.	1.44E-03	4.94E-04	1.07E-04	2.04E-03
101	0.70	0.	1.25E-15	0.	0.	0.	0.	1.81E-17	0.	0.	2.17E-03	5.31E-04	1.06E-04	2.82E-03
102	0.60	0.	3.83E-16	0.	0.	0.	0.	3.09E-17	0.	0.	3.53E-03	5.42E-04	1.19E-04	4.19E-03

ABSORPTION COEFFICIE.. OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.79	0.	0.	2.91E-18	0.	0.	0.	3.46E-12	10.80E-09	1.68E-06	8.38E-08	1.78E-06
2	10.66	0.	0.	2.78E-18	0.	0.	0.	3.47E-12	1.03E-08	1.63E-06	8.36E-08	1.72E-06
3	10.50	0.	0.	2.75E-18	0.	0.	0.	3.47E-12	1.04E-08	5.69E-07	8.34E-08	6.63E-07
4	10.40	0.	0.	2.65E-18	0.	0.	0.	3.48E-12	1.09E-08	5.74E-07	8.32E-08	6.68E-07
5	10.30	0.	0.	2.35E-18	0.	0.	0.	3.48E-12	1.12E-08	5.79E-07	8.30E-08	6.73E-07
6	10.20	0.	0.	2.46E-18	0.	0.	0.	3.49E-12	1.16E-08	5.87E-07	8.30E-08	6.82E-07
7	10.10	0.	0.	2.34E-18	0.	0.	0.	3.49E-12	1.19E-08	5.96E-07	8.32E-08	6.91E-07
8	10.00	0.	0.	2.10E-18	0.	0.	0.	3.50E-12	1.23E-08	6.04E-07	8.33E-08	7.00E-07
9	9.90	0.	0.	2.17E-18	0.	0.	0.	3.50E-12	1.26E-08	6.13E-07	8.34E-08	7.09E-07
10	9.80	0.	0.	2.07E-18	0.	0.	0.	3.51E-12	1.30E-08	6.22E-07	8.36E-08	7.18E-07
11	9.70	0.	0.	1.83E-18	0.	0.	0.	3.52E-12	1.34E-08	6.30E-07	8.37E-08	7.27E-07
12	9.60	0.	0.	1.99E-18	0.	0.	0.	3.52E-12	1.39E-08	6.39E-07	8.38E-08	7.36E-07
13	9.50	0.	0.	1.74E-18	0.	0.	0.	3.53E-12	1.43E-08	6.47E-07	8.39E-08	7.46E-07
14	9.40	0.	0.	1.67E-18	0.	0.	0.	3.54E-12	1.48E-08	6.56E-07	8.41E-08	7.55E-07
15	9.30	0.	0.	1.72E-18	0.	0.	0.	3.55E-12	1.53E-08	6.06E-07	8.43E-08	7.05E-07
16	9.20	0.	0.	1.47E-18	0.	0.	0.	3.57E-12	1.58E-08	6.14E-07	8.45E-08	7.15E-07
17	9.10	0.	0.	1.92E-18	0.	0.	0.	3.58E-12	1.63E-08	6.23E-07	8.47E-08	7.24E-07
18	9.00	0.	0.	1.48E-18	0.	0.	0.	3.59E-12	1.69E-08	6.32E-07	8.49E-08	7.34E-07
19	8.90	0.	0.	1.32E-18	0.	0.	0.	3.61E-12	1.74E-08	6.40E-07	8.51E-08	7.43E-07
20	8.80	0.	0.	1.31E-18	0.	0.	0.	3.62E-12	1.80E-08	6.49E-07	8.53E-08	7.53E-07
21	8.70	0.	0.	1.17E-18	0.	0.	0.	3.63E-12	1.87E-08	6.58E-07	8.55E-08	7.62E-07
22	8.60	0.	0.	1.21E-18	0.	0.	0.	3.64E-12	1.93E-08	6.67E-07	7.51E-08	7.61E-07
23	8.50	0.	0.	1.09E-18	0.	0.	0.	3.66E-12	2.00E-08	6.77E-07	7.36E-08	7.70E-07
24	8.40	0.	0.	1.09E-18	0.	0.	0.	3.68E-12	2.08E-08	6.86E-07	7.39E-08	7.81E-07
25	8.30	0.	0.	9.48E-19	0.	0.	0.	3.70E-12	2.15E-08	6.98E-07	7.44E-08	7.94E-07
26	8.20	0.	0.	9.68E-19	0.	0.	0.	3.71E-12	2.23E-08	7.14E-07	7.54E-08	8.12E-07
27	8.10	0.	0.	8.55E-19	0.	0.	0.	3.73E-12	2.32E-08	7.30E-07	7.64E-08	8.29E-07
28	8.00	0.	0.	8.69E-19	0.	0.	0.	3.75E-12	2.41E-08	4.88E-07	7.74E-08	5.90E-07
29	7.90	0.	0.	7.64E-19	0.	0.	0.	3.77E-12	2.50E-08	5.05E-07	7.84E-08	6.08E-07
30	7.80	0.	0.	8.81E-19	0.	0.	0.	3.79E-12	2.60E-08	5.21E-07	7.94E-08	6.27E-07
31	7.70	0.	0.	7.18E-19	0.	0.	0.	3.81E-12	2.70E-08	5.40E-07	8.04E-08	6.47E-07
32	7.60	0.	0.	6.92E-19	0.	5.49E-23	0.	3.83E-12	2.81E-08	5.60E-07	8.14E-08	6.70E-07
33	7.50	0.	0.	6.54E-19	0.	1.75E-22	0.	3.85E-12	2.92E-08	5.81E-07	8.25E-08	6.93E-07
34	7.40	0.	0.	5.96E-19	0.	1.68E-21	0.	3.87E-12	3.05E-08	6.02E-07	8.37E-08	7.16E-07
35	7.30	0.	0.	5.75E-19	0.	6.13E-21	0.	3.89E-12	3.17E-08	6.26E-07	8.50E-08	7.43E-07
36	7.20	0.	0.	5.20E-19	0.	1.74E-20	0.	3.91E-12	3.31E-08	6.57E-07	8.69E-08	7.76E-07
37	7.10	0.	0.	5.15E-19	0.	5.56E-20	0.	3.95E-12	3.45E-08	6.87E-07	8.88E-08	8.10E-07
38	7.00	3.62E-22	0.	4.81E-19	0.	1.82E-19	0.	3.98E-12	3.60E-08	6.21E-07	9.07E-08	7.48E-07
39	6.90	7.15E-22	0.	4.49E-19	0.	1.54E-19	0.	4.01E-12	3.76E-08	6.49E-07	9.26E-08	7.79E-07
40	6.80	4.23E-22	0.	4.41E-19	0.	2.51E-19	0.	4.04E-12	3.93E-08	6.77E-07	9.45E-08	8.11E-07
41	6.70	4.60E-22	0.	3.93E-19	0.	2.39E-19	0.	4.07E-12	4.11E-08	7.05E-07	9.65E-08	8.42E-07
42	6.60	2.83E-22	0.	3.59E-19	0.	2.12E-19	0.	4.11E-12	4.30E-08	7.33E-07	9.84E-08	8.74E-07
43	6.50	1.66E-22	0.	2.93E-19	0.	2.94E-19	0.	4.14E-12	4.51E-08	7.61E-07	1.00E-07	9.06E-07
44	6.40	9.64E-23	0.	2.89E-19	8.62E-22	2.65E-19	0.	4.17E-12	4.72E-08	7.89E-07	1.02E-07	9.39E-07
45	6.30	5.69E-23	0.	1.35E-19	4.14E-21	2.07E-19	0.	4.20E-12	4.95E-08	8.17E-07	1.05E-07	9.71E-07
46	6.20	2.61E-23	0.	7.71E-20	6.01E-21	2.74E-19	0.	4.23E-12	5.20E-08	8.48E-07	1.07E-07	1.01E-06
47	6.10	1.22E-23	0.	3.73E-20	1.74E-20	3.25E-19	0.	4.27E-12	5.46E-08	8.79E-07	1.10E-07	1.04E-06
48	6.00	5.16E-24	0.	9.65E-21	1.72E-20	1.69E-19	0.	4.30E-12	5.74E-08	9.10E-07	1.12E-07	1.08E-06
49	5.90	1.28E-24	0.	6.93E-22	2.56E-20	1.62E-19	0.	4.30E-12	6.04E-08	9.42E-07	1.15E-07	1.12E-06
50	5.80	1.64E-25	0.	1.76E-23	3.62E-20	1.72E-19	0.	4.23E-12	6.37E-08	9.73E-07	1.17E-07	1.15E-06
51	5.70	1.21E-26	0.	0.	4.33E-20	1.92E-19	0.	3.98E-12	6.71E-08	3.50E-07	7.58E-08	4.92E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.49E-28	0.	0.	0.	3.82E-20	2.69E-19	0.	0.	3.70E+12	7.08E-08	3.69E-07	7.62E-08	5.16E-07
53	5.50	0.	0.	0.	0.	4.67E-20	2.27E-19	0.	0.	3.72E+12	7.48E-08	3.89E-07	7.77E-08	5.42E-07
54	5.40	0.	0.	0.	0.	4.40E-20	1.92E-19	0.	0.	3.74E+12	7.96E-08	4.11E-07	7.96E-08	5.70E-07
55	5.30	0.	0.	0.	0.	4.21E-20	2.36E-19	0.	0.	3.76E+12	8.37E-08	4.33E-07	8.17E-08	5.99E-07
56	5.20	0.	0.	0.	0.	4.91E-20	1.90E-19	0.	0.	3.78E+12	8.86E-08	4.56E-07	8.41E-08	6.28E-07
57	5.10	0.	0.	0.	0.	4.95E-20	2.41E-19	0.	0.	3.82E+12	9.40E-08	4.76E-07	8.64E-08	6.59E-07
58	5.00	7.81E-21	0.	0.	0.	4.95E-20	2.32E-19	0.	0.	3.85E+12	9.98E-08	5.01E-07	8.87E-08	6.89E-07
59	4.90	1.94E-20	0.	0.	0.	5.12E-20	2.57E-19	0.	0.	3.88E+12	1.06E-07	5.24E-07	9.12E-08	7.21E-07
60	4.80	3.71E-20	0.	0.	0.	5.54E-20	2.44E-19	0.	0.	3.91E+12	1.13E-07	5.47E-07	8.63E-08	7.46E-07
61	4.70	5.11E-20	0.	0.	0.	5.62E-20	2.23E-19	0.	0.	3.95E+12	1.20E-07	5.80E-07	8.93E-08	7.89E-07
62	4.60	7.18E-20	0.	0.	0.	5.84E-20	2.02E-19	0.	0.	3.98E+12	1.28E-07	6.22E-07	9.24E-08	8.43E-07
63	4.50	7.66E-20	0.	5.03E-20	0.	5.44E-20	1.53E-19	0.	0.	4.01E+12	1.37E-07	6.65E-07	9.57E-08	8.98E-07
64	4.40	8.33E-20	0.	1.44E-19	0.	5.50E-20	1.04E-19	0.	0.	4.04E+12	1.47E-07	7.09E-07	9.95E-08	9.55E-07
65	4.30	8.01E-20	0.	5.88E-19	0.	5.34E-20	6.84E-20	0.	0.	4.07E+12	1.57E-07	7.52E-07	1.01E-07	1.01E-06
66	4.20	7.57E-20	0.	1.53E-18	0.	5.64E-20	4.51E-20	0.	0.	4.11E+12	1.69E-07	8.03E-07	9.54E-08	1.07E-06
67	4.10	7.20E-20	0.	7.31E-19	0.	5.61E-20	1.28E-20	0.	0.	4.12E+12	1.82E-07	8.56E-07	7.56E-08	1.11E-06
68	4.00	6.73E-20	0.	2.22E-18	0.	5.48E-20	9.57E-21	0.	0.	4.14E+12	1.96E-07	9.83E-07	7.97E-08	1.18E-06
69	3.90	5.92E-20	0.	1.07E-18	1.47E-15	5.17E-20	3.51E-21	0.	0.	4.12E+12	2.12E-07	9.34E-07	8.17E-08	1.23E-06
70	3.80	6.43E-20	0.	1.74E-18	5.52E-15	5.60E-20	0.	0.	0.	4.11E+12	2.29E-07	9.86E-07	8.64E-08	1.30E-06
71	3.70	5.86E-20	0.	1.74E-18	2.78E-15	4.92E-20	0.	0.	0.	4.04E+12	2.47E-07	1.04E-06	9.29E-08	1.36E-06
72	3.60	5.36E-20	0.	1.31E-18	1.38E-14	5.32E-20	0.	0.	0.	3.78E+12	2.70E-07	1.09E-06	9.97E-08	1.46E-06
73	3.50	5.09E-20	0.	1.69E-18	2.34E-14	4.32E-20	0.	0.	0.	3.46E+12	2.94E-07	1.15E-06	1.07E-07	1.55E-06
74	3.40	4.76E-20	0.	1.13E-18	4.21E-15	4.87E-20	0.	0.	0.	2.80E+12	3.22E-07	1.22E-06	1.16E-07	1.66E-06
75	3.30	3.85E-20	0.	1.16E-18	1.49E-14	3.90E-20	0.	0.	0.	2.00E+12	3.52E-07	1.29E-06	1.25E-07	1.77E-06
76	3.20	3.42E-20	0.	7.82E-19	2.23E-14	4.23E-20	0.	0.	0.	2.00E+12	3.87E-07	1.38E-06	1.28E-07	1.90E-06
77	3.10	3.33E-20	0.	6.16E-19	8.71E-15	4.07E-20	0.	0.	0.	2.01E+12	4.26E-07	1.50E-06	1.39E-07	1.15E-06
78	3.00	3.84E-20	0.	3.84E-19	1.40E-14	3.93E-20	0.	0.	0.	2.01E+12	4.70E-07	1.59E-06	1.50E-07	1.28E-06
79	2.90	2.62E-20	0.	2.49E-19	7.53E-15	3.09E-20	0.	0.	0.	2.02E+12	5.21E-07	7.28E-07	1.42E-07	1.39E-06
80	2.80	2.76E-20	0.	1.18E-19	5.50E-15	2.23E-20	0.	0.	0.	2.02E+12	5.80E-07	8.00E-07	1.38E-07	1.52E-06
81	2.70	1.54E-20	0.	5.99E-20	6.57E-15	1.27E-20	0.	0.	0.	2.02E+12	6.49E-07	8.73E-07	1.34E-07	1.66E-06
82	2.60	8.99E-21	0.	2.66E-20	7.10E-16	5.77E-21	0.	0.	0.	2.02E+12	7.28E-07	9.44E-07	1.12E-07	1.78E-06
83	2.50	6.48E-22	0.	2.72E-21	6.99E-16	1.41E-21	0.	0.	0.	2.02E+12	8.20E-07	9.77E-07	1.28E-07	1.93E-06
84	2.40	0.	1.17E-19	0.	9.12E-16	1.53E-22	0.	0.	0.	2.02E+12	9.29E-07	1.13E-06	1.51E-07	2.21E-06
85	2.30	0.	3.29E-19	0.	0.	0.	0.	0.	0.	2.00E+12	1.06E-06	1.28E-06	1.74E-07	2.52E-06
86	2.20	0.	9.81E-19	0.	0.	0.	0.	0.	0.	2.00E+12	1.21E-06	1.44E-06	2.01E-07	2.85E-06
87	2.10	0.	8.93E-19	0.	0.	0.	0.	0.	0.	1.99E+12	1.39E-06	1.61E-06	2.28E-07	3.23E-06
88	2.00	0.	1.81E-18	0.	0.	0.	0.	0.	0.	1.92E+12	1.62E-06	1.77E-06	2.55E-07	3.64E-06
89	1.90	0.	2.87E-18	0.	0.	0.	0.	0.	0.	1.85E+12	1.80E-06	1.94E-06	2.91E-07	4.13E-06
90	1.80	0.	1.79E-18	0.	0.	0.	0.	0.	0.	1.77E+12	2.24E-06	2.15E-06	3.40E-07	4.73E-06
91	1.70	0.	2.01E-18	0.	0.	0.	0.	0.	0.	1.67E+12	2.67E-06	1.43E-06	3.32E-07	4.43E-06
92	1.60	0.	1.53E-18	0.	0.	0.	0.	0.	0.	1.41E+12	3.21E-06	1.62E-06	3.76E-07	5.21E-06
93	1.50	0.	1.73E-18	0.	0.	0.	0.	0.	0.	6.42E+13	3.91E-06	1.94E-06	4.50E-07	6.30E-06
94	1.40	0.	1.69E-18	0.	0.	0.	0.	0.	0.	0.	4.83E-06	2.00E-06	5.01E-07	7.33E-06
95	1.30	0.	1.38E-18	0.	0.	0.	0.	0.	0.	0.	6.05E-06	2.58E-06	5.45E-07	9.18E-06
96	1.20	0.	1.24E-18	0.	0.	0.	0.	0.	0.	0.	7.73E-06	3.14E-06	7.80E-07	1.16E-05
97	1.10	0.	1.21E-18	0.	0.	0.	0.	2.38E-24	0.	0.	1.01E-05	3.77E-06	8.28E-07	1.47E-05
98	1.00	0.	1.12E-18	0.	0.	0.	0.	3.94E-23	0.	0.	1.35E-05	4.33E-06	9.87E-07	1.89E-05
99	0.90	0.	9.14E-19	0.	0.	0.	0.	4.64E-23	0.	0.	1.87E-05	3.65E-06	1.06E-06	2.34E-05
100	0.80	0.	4.28E-19	0.	0.	0.	0.	1.03E-21	0.	0.	2.69E-05	3.99E-06	1.06E-06	3.20E-05
101	0.70	0.	9.78E-20	0.	0.	0.	0.	1.02E-21	0.	0.	4.07E-05	3.81E-06	9.26E-07	4.55E-05
102	0.60	0.	2.38E-20	0.	0.	0.	0.	3.12E-21	0.	0.	6.57E-05	4.29E-06	1.05E-06	7.10E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	5.76E-23	0.	0.	0.	4.17E-15	2.27E-10	1.58E-08	2.28E-09	1.83E-08
2	10.60	0.	0.	5.33E-23	0.	0.	0.	4.17E-15	2.34E-10	1.60E-08	2.28E-09	1.85E-08
3	10.50	0.	0.	5.44E-23	0.	0.	0.	4.18E-15	2.41E-10	1.61E-08	2.28E-09	1.86E-08
4	10.40	0.	0.	5.24E-23	0.	0.	0.	4.19E-15	2.48E-10	1.63E-08	2.28E-09	1.88E-08
5	10.30	0.	0.	4.65E-23	0.	0.	0.	4.19E-15	2.55E-10	1.64E-08	2.28E-09	1.90E-08
6	10.20	0.	0.	4.86E-23	0.	0.	0.	4.20E-15	2.63E-10	1.67E-08	2.31E-09	1.93E-08
7	10.10	0.	0.	4.63E-23	0.	0.	0.	4.20E-15	2.70E-10	1.70E-08	2.33E-09	1.96E-08
8	10.00	0.	0.	4.16E-23	0.	0.	0.	4.21E-15	2.77E-10	1.73E-08	2.35E-09	1.99E-08
9	9.90	0.	0.	4.29E-23	0.	0.	0.	4.22E-15	2.87E-10	1.76E-08	2.38E-09	2.02E-08
10	9.80	0.	0.	4.10E-23	0.	0.	0.	4.22E-15	2.96E-10	1.78E-08	2.40E-09	2.05E-08
11	9.70	0.	0.	3.62E-23	0.	0.	0.	4.23E-15	3.06E-10	1.81E-08	2.43E-09	2.09E-08
12	9.60	0.	0.	3.92E-23	0.	0.	0.	4.24E-15	3.15E-10	1.84E-08	2.45E-09	2.12E-08
13	9.50	0.	0.	3.43E-23	0.	0.	0.	4.25E-15	3.25E-10	1.87E-08	2.47E-09	2.15E-08
14	9.40	0.	0.	3.31E-23	0.	0.	0.	4.26E-15	3.36E-10	1.90E-08	2.50E-09	2.19E-08
15	9.30	0.	0.	3.41E-23	0.	0.	0.	4.28E-15	3.47E-10	1.90E-08	2.53E-09	2.19E-08
16	9.20	0.	0.	2.91E-23	0.	0.	0.	4.29E-15	3.58E-10	1.93E-08	2.56E-09	2.22E-08
17	9.10	0.	0.	3.08E-23	0.	0.	0.	4.31E-15	3.70E-10	1.96E-08	2.58E-09	2.25E-08
18	9.00	0.	0.	2.78E-23	0.	0.	0.	4.32E-15	3.83E-10	1.99E-08	2.61E-09	2.29E-08
19	8.90	0.	0.	2.62E-23	0.	0.	0.	4.34E-15	3.96E-10	2.02E-08	2.64E-09	2.32E-08
20	8.80	0.	0.	2.50E-23	0.	0.	0.	4.35E-15	4.10E-10	2.04E-08	1.83E-09	2.27E-08
21	8.70	0.	0.	2.31E-23	0.	0.	0.	4.37E-15	4.24E-10	2.07E-08	1.85E-09	2.30E-08
22	8.60	0.	0.	2.30E-23	0.	0.	0.	4.39E-15	4.39E-10	2.10E-08	1.89E-09	2.34E-08
23	8.50	0.	0.	2.15E-23	0.	0.	0.	4.40E-15	4.55E-10	2.13E-08	1.92E-09	2.37E-08
24	8.40	0.	0.	2.16E-23	0.	0.	0.	4.42E-15	4.72E-10	2.17E-08	1.96E-09	2.41E-08
25	8.30	0.	0.	1.87E-23	0.	0.	0.	4.45E-15	4.89E-10	1.35E-08	2.00E-09	1.59E-08
26	8.20	0.	0.	1.91E-23	0.	0.	0.	4.47E-15	5.07E-10	1.40E-08	2.06E-09	1.66E-08
27	8.10	0.	0.	1.69E-23	0.	0.	0.	4.49E-15	5.26E-10	1.45E-08	2.13E-09	1.72E-08
28	8.00	0.	0.	1.72E-23	0.	0.	0.	4.52E-15	5.46E-10	1.51E-08	2.19E-09	1.78E-08
29	7.90	0.	0.	1.51E-23	0.	0.	0.	4.54E-15	5.67E-10	1.56E-08	2.26E-09	1.84E-08
30	7.80	0.	0.	1.58E-23	0.	0.	0.	4.56E-15	5.89E-10	1.61E-08	2.33E-09	1.91E-08
31	7.70	0.	0.	1.42E-23	0.	0.	0.	4.59E-15	6.13E-10	1.67E-08	2.40E-09	1.94E-08
32	7.60	0.	0.	1.37E-23	0.	2.27E-27	0.	4.61E-15	6.37E-10	1.74E-08	2.46E-09	2.05E-08
33	7.50	0.	0.	1.29E-23	0.	6.98E-27	0.	4.63E-15	6.63E-10	1.81E-08	2.53E-09	2.13E-08
34	7.40	0.	0.	1.18E-23	0.	6.44E-26	0.	4.66E-15	6.91E-10	1.88E-08	2.61E-09	2.21E-08
35	7.30	0.	0.	1.14E-23	0.	2.49E-25	0.	4.68E-15	7.20E-10	1.66E-08	2.70E-09	2.00E-08
36	7.20	0.	0.	1.04E-23	0.	6.95E-25	0.	4.71E-15	7.50E-10	1.75E-08	2.83E-09	2.11E-08
37	7.10	0.	0.	1.02E-23	0.	2.28E-24	0.	4.75E-15	7.83E-10	1.84E-08	2.95E-09	2.22E-08
38	7.00	2.94E-26	0.	9.51E-24	0.	4.88E-24	0.	4.79E-15	8.17E-10	1.94E-08	3.09E-09	2.33E-08
39	6.90	5.79E-26	0.	8.87E-24	0.	6.13E-24	0.	4.83E-15	8.53E-10	2.03E-08	3.21E-09	2.43E-08
40	6.80	5.85E-26	0.	8.71E-24	0.	1.00E-23	0.	4.86E-15	8.91E-10	2.12E-08	3.33E-09	2.54E-08
41	6.70	3.72E-26	0.	7.77E-24	0.	9.55E-24	0.	4.90E-15	9.32E-10	2.21E-08	3.46E-09	2.65E-08
42	6.60	2.29E-26	0.	7.18E-24	0.	8.50E-24	0.	4.94E-15	9.76E-10	2.30E-08	3.59E-09	2.76E-08
43	6.50	1.34E-26	0.	5.79E-24	0.	1.17E-23	0.	4.98E-15	1.02E-09	2.40E-08	3.72E-09	2.87E-08
44	6.40	7.81E-27	0.	4.13E-24	3.45E-26	1.06E-23	0.	5.02E-15	1.07E-09	2.49E-08	3.85E-09	2.98E-08
45	6.30	4.61E-27	0.	2.87E-24	1.66E-25	8.27E-24	0.	5.06E-15	1.12E-09	2.58E-08	3.99E-09	3.09E-08
46	6.20	2.11E-27	0.	1.52E-24	2.40E-25	1.09E-23	0.	5.10E-15	1.18E-09	2.68E-08	4.14E-09	3.21E-08
47	6.10	9.84E-28	0.	7.37E-25	6.95E-25	1.30E-23	0.	5.13E-15	1.24E-09	2.78E-08	4.29E-09	3.34E-08
48	6.00	4.18E-28	0.	1.81E-25	6.89E-25	6.75E-24	0.	5.17E-15	1.30E-09	9.01E-09	4.44E-09	1.48E-08
49	5.90	1.84E-28	0.	1.37E-26	1.02E-24	6.48E-24	0.	5.17E-15	1.37E-09	9.34E-09	1.76E-09	1.25E-08
50	5.80	1.33E-29	0.	3.47E-28	1.45E-24	6.86E-24	0.	5.18E-15	1.44E-09	9.67E-09	1.81E-09	1.29E-08
51	5.70	9.79E-31	0.	0.	1.73E-24	7.68E-24	0.	4.79E-15	1.52E-09	1.01E-08	1.87E-09	1.35E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.45E-32	0.	0.	0.	1.53E-24	9.81E-24	0.	0.	4.45E-15	1.60E-09	1.08E-08	1.93E-09	1.43E-08
53	5.50	0.	0.	0.	0.	1.47E-24	9.07E-24	0.	0.	4.47E-15	1.69E-09	1.14E-08	2.00E-09	1.51E-08
54	5.40	0.	0.	0.	0.	1.76E-24	7.68E-24	0.	0.	4.50E-15	1.79E-09	1.21E-08	2.09E-09	1.60E-08
55	5.30	0.	0.	0.	0.	1.80E-24	9.44E-24	0.	0.	4.53E-15	1.89E-09	1.28E-08	2.19E-09	1.69E-08
56	5.20	0.	0.	0.	0.	1.96E-24	7.58E-24	0.	0.	4.56E-15	2.01E-09	1.35E-08	2.30E-09	1.78E-08
57	5.10	0.	0.	0.	0.	1.97E-24	9.62E-24	0.	0.	4.59E-15	2.13E-09	1.42E-08	1.93E-09	1.83E-08
58	5.00	6.33E-25	0.	0.	0.	1.62E-24	9.27E-24	0.	0.	4.63E-15	2.26E-09	1.49E-08	2.02E-09	1.92E-08
59	4.90	1.57E-24	0.	0.	0.	2.05E-24	1.03E-23	0.	0.	4.67E-15	2.40E-09	1.56E-08	2.11E-09	2.01E-08
60	4.80	3.00E-24	0.	0.	0.	2.22E-24	9.75E-24	0.	0.	4.71E-15	2.56E-09	1.63E-08	2.20E-09	2.11E-08
61	4.70	4.16E-24	0.	0.	0.	2.25E-24	8.93E-24	0.	0.	4.75E-15	2.72E-09	1.73E-08	2.31E-09	2.24E-08
62	4.60	5.81E-24	0.	0.	0.	2.33E-24	8.59E-24	0.	0.	4.79E-15	2.91E-09	1.87E-08	2.42E-09	2.41E-08
63	4.50	6.20E-24	0.	9.94E-25	0.	2.17E-24	6.17E-24	0.	0.	4.83E-15	3.11E-09	2.00E-08	2.53E-09	2.59E-08
64	4.40	6.75E-24	0.	2.04E-24	0.	2.20E-24	4.15E-24	0.	0.	4.86E-15	3.32E-09	2.13E-08	2.68E-09	2.73E-08
65	4.30	6.49E-24	0.	1.00E-23	0.	2.14E-24	2.45E-24	0.	0.	4.90E-15	3.56E-09	2.26E-08	2.83E-09	2.90E-08
66	4.20	6.13E-24	0.	3.02E-23	0.	2.26E-24	1.81E-24	0.	0.	4.94E-15	3.83E-09	2.42E-08	2.59E-09	3.08E-08
67	4.10	5.63E-24	0.	1.45E-23	0.	2.24E-24	5.14E-25	0.	0.	4.99E-15	4.12E-09	2.58E-08	2.80E-09	3.27E-08
68	4.00	5.45E-24	0.	4.40E-23	0.	2.19E-24	3.83E-25	0.	0.	4.98E-15	4.44E-09	2.74E-08	3.00E-09	3.48E-08
69	3.90	4.72E-24	0.	2.12E-23	2.17E-19	2.07E-24	1.40E-25	0.	0.	4.98E-15	4.79E-09	2.90E-08	3.20E-09	3.69E-08
70	3.80	5.21E-24	0.	3.44E-23	8.16E-19	2.24E-24	0.	0.	0.	4.94E-15	5.15E-09	3.06E-08	3.41E-09	3.92E-08
71	3.70	4.74E-24	0.	3.44E-23	4.11E-19	1.97E-24	0.	0.	0.	4.86E-15	5.62E-09	3.22E-08	3.64E-09	4.15E-08
72	3.60	4.34E-24	0.	2.60E-23	2.04E-18	2.13E-24	0.	0.	0.	4.50E-15	6.11E-09	3.38E-08	3.87E-09	4.38E-08
73	3.50	4.12E-24	0.	3.34E-23	3.46E-18	1.73E-24	0.	0.	0.	4.17E-15	6.64E-09	3.56E-08	4.12E-09	4.64E-08
74	3.40	3.85E-24	0.	2.24E-23	6.22E-19	1.95E-24	0.	0.	0.	2.40E-15	7.27E-09	1.27E-08	3.87E-09	2.38E-08
75	3.30	3.12E-24	0.	2.29E-23	2.20E-18	1.59E-24	0.	0.	0.	2.41E-15	7.96E-09	1.21E-08	4.13E-09	2.42E-08
76	3.20	2.77E-24	0.	1.55E-23	3.29E-18	1.69E-24	0.	0.	0.	2.41E-15	8.74E-09	1.38E-08	3.36E-09	2.59E-08
77	3.10	2.70E-24	0.	1.22E-23	9.80E-19	1.63E-24	0.	0.	0.	2.42E-15	9.62E-09	1.57E-08	3.72E-09	2.91E-08
78	3.00	2.47E-24	0.	7.60E-24	2.07E-18	1.57E-24	0.	0.	0.	2.42E-15	1.06E-08	1.77E-08	3.16E-09	3.14E-08
79	2.90	2.12E-24	0.	4.84E-24	1.11E-18	1.24E-24	0.	0.	0.	2.43E-15	1.18E-08	1.96E-08	3.48E-09	3.49E-08
80	2.80	2.24E-24	0.	2.34E-24	8.13E-19	8.93E-25	0.	0.	0.	2.43E-15	1.31E-08	2.16E-08	3.81E-09	3.85E-08
81	2.70	1.49E-24	0.	1.11E-24	5.70E-19	5.07E-25	0.	0.	0.	2.43E-15	1.44E-08	2.36E-08	3.75E-09	4.19E-08
82	2.60	7.28E-25	0.	5.26E-25	1.05E-19	2.31E-25	0.	0.	0.	2.43E-15	1.64E-08	2.55E-08	4.03E-09	4.60E-08
83	2.50	5.18E-26	0.	5.38E-26	1.03E-19	5.62E-26	0.	0.	0.	2.43E-15	1.85E-08	2.78E-08	4.49E-09	5.08E-08
84	2.40	0.	2.31E-24	0.	7.56E-20	6.10E-27	0.	0.	0.	2.43E-15	2.09E-08	3.17E-08	5.14E-09	5.78E-08
85	2.30	0.	6.49E-24	0.	0.	0.	0.	0.	0.	2.41E-15	2.39E-08	3.56E-08	5.81E-09	6.53E-08
86	2.20	0.	1.78E-23	0.	0.	0.	0.	0.	0.	2.40E-15	2.73E-08	3.95E-08	9.50E-09	7.33E-08
87	2.10	0.	1.76E-23	0.	0.	0.	0.	0.	0.	2.39E-15	3.14E-08	4.35E-08	7.19E-09	8.21E-08
88	2.00	0.	3.58E-23	0.	0.	0.	0.	0.	0.	2.32E-15	3.65E-08	4.74E-08	7.88E-09	9.10E-08
89	1.90	0.	4.08E-23	0.	0.	0.	0.	0.	0.	2.23E-15	4.27E-08	2.28E-08	4.65E-09	7.01E-08
90	1.80	0.	3.54E-23	0.	0.	0.	0.	0.	0.	2.13E-15	5.04E-08	2.54E-08	5.33E-09	8.12E-08
91	1.70	0.	3.97E-23	0.	0.	0.	0.	0.	0.	2.01E-15	6.01E-08	2.82E-08	6.10E-09	9.44E-08
92	1.60	0.	3.03E-23	0.	0.	0.	0.	0.	0.	1.70E-15	7.24E-08	3.09E-08	6.76E-09	1.10E-07
93	1.50	0.	3.41E-23	0.	0.	0.	0.	0.	0.	7.72E-16	8.81E-08	3.43E-08	7.70E-09	1.30E-07
94	1.40	0.	3.34E-23	0.	0.	0.	0.	0.	0.	0.	1.09E-07	3.84E-08	7.54E-09	1.53E-07
95	1.30	0.	2.54E-23	0.	0.	0.	0.	0.	0.	0.	1.36E-07	4.07E-08	9.10E-09	1.86E-07
96	1.20	0.	2.44E-23	0.	0.	0.	0.	0.	0.	0.	1.74E-07	9.10E-09	5.33E-09	1.88E-07
97	1.10	0.	2.39E-23	0.	0.	0.	0.	9.20E-29	0.	0.	2.27E-07	1.13E-08	8.72E-09	2.45E-07
98	1.00	0.	2.20E-23	0.	0.	0.	0.	1.57E-27	0.	0.	3.04E-07	1.38E-08	8.11E-09	3.26E-07
99	0.90	0.	1.81E-23	0.	0.	0.	0.	1.65E-27	0.	0.	4.20E-07	1.94E-08	8.22E-09	4.43E-07
100	0.80	0.	8.43E-24	0.	0.	0.	0.	4.13E-26	0.	0.	6.83E-07	1.77E-08	9.21E-09	6.30E-07
101	0.70	0.	1.93E-24	0.	0.	0.	0.	4.07E-26	0.	0.	9.11E-07	1.69E-08	8.33E-09	9.36E-07
102	0.60	0.	4.70E-25	0.	0.	0.	0.	1.29E-25	0.	0.	1.47E-06	1.90E-08	9.43E-09	1.50E-06

ABSORPTION COEFFICIEN OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	O2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7A	0.	0.	1.58E-28	0.	0.	0.	1.41E-18	3.24E-12	2.23E-10	4.65E-11	2.73E-10
2	10.6A	0.	0.	1.46E-28	0.	0.	0.	1.41E-18	3.34E-12	2.26E-10	4.64E-11	2.73E-10
3	10.5A	0.	0.	1.49E-28	0.	0.	0.	1.41E-18	3.43E-12	2.27E-10	4.66E-11	2.70E-10
4	10.4A	0.	0.	1.44E-28	0.	0.	0.	1.41E-18	3.53E-12	2.29E-10	4.67E-11	2.80E-10
5	10.3A	0.	0.	1.20E-28	0.	0.	0.	1.42E-18	3.64E-12	2.32E-10	4.69E-11	2.83E-10
6	10.2A	0.	0.	1.33E-28	0.	0.	0.	1.42E-18	3.75E-12	2.36E-10	4.75E-11	2.87E-10
7	10.1A	0.	0.	1.27E-28	0.	0.	0.	1.42E-18	3.86E-12	2.40E-10	4.81E-11	2.92E-10
8	10.0A	0.	0.	1.14E-28	0.	0.	0.	1.42E-18	3.98E-12	2.44E-10	4.88E-11	2.97E-10
9	9.9A	0.	0.	1.10E-28	0.	0.	0.	1.42E-18	4.10E-12	2.48E-10	4.95E-11	3.02E-10
10	9.8A	0.	0.	1.12E-28	0.	0.	0.	1.43E-18	4.23E-12	2.52E-10	5.01E-11	3.07E-10
11	9.7A	0.	0.	9.92E-29	0.	0.	0.	1.43E-18	4.34E-12	2.56E-10	5.08E-11	3.11E-10
12	9.6A	0.	0.	1.08E-28	0.	0.	0.	1.43E-18	4.50E-12	2.60E-10	5.15E-11	3.16E-10
13	9.5A	0.	0.	9.41E-29	0.	0.	0.	1.43E-18	4.64E-12	2.64E-10	5.22E-11	3.21E-10
14	9.4A	0.	0.	9.07E-29	0.	0.	0.	1.44E-18	4.79E-12	2.68E-10	5.29E-11	3.26E-10
15	9.3A	0.	0.	9.34E-29	0.	0.	0.	1.44E-18	4.95E-12	2.72E-10	5.37E-11	3.31E-10
16	9.2A	0.	0.	7.97E-29	0.	0.	0.	1.45E-18	5.11E-12	2.76E-10	5.43E-11	3.36E-10
17	9.1A	0.	0.	8.22E-29	0.	0.	0.	1.46E-18	5.29E-12	2.81E-10	5.51E-11	3.41E-10
18	9.0A	0.	0.	7.61E-29	0.	0.	0.	1.46E-18	5.46E-12	2.85E-10	3.71E-11	3.27E-10
19	8.9A	0.	0.	7.18E-29	0.	0.	0.	1.47E-18	5.65E-12	2.89E-10	3.48E-11	3.29E-10
20	8.8A	0.	0.	7.12E-29	0.	0.	0.	1.47E-18	5.85E-12	2.93E-10	3.57E-11	3.35E-10
21	8.7A	0.	0.	6.32E-29	0.	0.	0.	1.48E-18	6.05E-12	2.97E-10	3.67E-11	3.40E-10
22	8.6A	0.	0.	6.57E-29	0.	0.	0.	1.48E-18	6.27E-12	3.02E-10	3.76E-11	3.46E-10
23	8.5A	0.	0.	5.39E-29	0.	0.	0.	1.49E-18	6.49E-12	3.06E-10	3.86E-11	3.51E-10
24	8.4A	0.	0.	5.92E-29	0.	0.	0.	1.49E-18	6.73E-12	1.87E-10	3.95E-11	2.33E-10
25	8.3A	0.	0.	5.14E-29	0.	0.	0.	1.50E-18	6.97E-12	1.93E-10	4.05E-11	2.40E-10
26	8.2A	0.	0.	5.24E-29	0.	0.	0.	1.51E-18	7.23E-12	2.00E-10	4.22E-11	2.50E-10
27	8.1A	0.	0.	4.63E-29	0.	0.	0.	1.52E-18	7.51E-12	2.08E-10	4.39E-11	2.60E-10
28	8.0A	0.	0.	4.71E-29	0.	0.	0.	1.53E-18	7.79E-12	2.16E-10	4.56E-11	2.69E-10
29	7.9A	0.	0.	4.14E-29	0.	0.	0.	1.53E-18	8.09E-12	2.24E-10	4.72E-11	2.79E-10
30	7.8A	0.	0.	4.34E-29	0.	0.	0.	1.54E-18	8.41E-12	2.31E-10	4.89E-11	2.89E-10
31	7.7A	0.	0.	3.89E-29	0.	0.	0.	1.55E-18	8.74E-12	2.40E-10	5.07E-11	2.99E-10
32	7.6A	0.	0.	3.75E-29	0.	1.11E-32	0.	1.56E-18	9.09E-12	2.50E-10	5.24E-11	3.11E-10
33	7.5A	0.	0.	3.54E-29	0.	3.40E-32	0.	1.56E-18	9.46E-12	2.59E-10	5.42E-11	3.23E-10
34	7.4A	0.	0.	3.23E-29	0.	3.23E-31	0.	1.57E-18	9.85E-12	2.26E-10	5.62E-11	2.92E-10
35	7.3A	0.	0.	3.11E-29	0.	1.19E-30	0.	1.58E-18	1.03E-11	2.37E-10	5.85E-11	3.06E-10
36	7.2A	0.	0.	2.86E-29	0.	3.38E-30	0.	1.59E-18	1.07E-11	2.50E-10	6.17E-11	3.23E-10
37	7.1A	0.	0.	2.79E-29	0.	1.07E-29	0.	1.60E-18	1.12E-11	2.63E-10	6.49E-11	3.40E-10
38	7.0A	2.53E-31	0.	2.61E-29	0.	1.99E-29	0.	1.62E-18	1.16E-11	2.77E-10	6.82E-11	3.57E-10
39	6.9A	5.88E-31	0.	2.43E-29	0.	3.01E-29	0.	1.63E-18	1.22E-11	2.90E-10	7.14E-11	3.74E-10
40	6.8A	4.36E-31	0.	2.39E-29	0.	4.09E-29	0.	1.64E-18	1.27E-11	3.03E-10	7.47E-11	3.91E-10
41	6.7A	3.21E-31	0.	2.13E-29	0.	4.65E-29	0.	1.66E-18	1.33E-11	3.16E-10	7.79E-11	4.08E-10
42	6.6A	1.98E-31	0.	1.95E-29	0.	4.14E-29	0.	1.67E-18	1.39E-11	3.30E-10	8.12E-11	4.25E-10
43	6.5A	1.16E-31	0.	1.59E-29	0.	5.72E-29	0.	1.68E-18	1.44E-11	3.43E-10	8.44E-11	4.42E-10
44	6.4A	6.74E-32	0.	1.13E-29	1.68E-31	5.18E-29	0.	1.70E-18	1.51E-11	3.56E-10	8.76E-11	4.59E-10
45	6.3A	3.98E-32	0.	7.32E-30	8.87E-31	4.03E-29	0.	1.71E-18	1.60E-11	3.69E-10	9.12E-11	4.77E-10
46	6.2A	1.82E-32	0.	4.18E-30	1.17E-30	5.33E-29	0.	1.72E-18	1.69E-11	3.84E-10	9.50E-11	4.96E-10
47	6.1A	8.51E-33	0.	2.07E-30	3.38E-30	6.32E-29	0.	1.73E-18	1.77E-11	1.75E-10	3.24E-11	1.73E-10
48	6.0A	3.61E-33	0.	5.23E-31	3.35E-30	3.20E-29	0.	1.75E-18	1.84E-11	1.27E-10	3.26E-11	1.57E-10
49	5.9A	8.96E-34	0.	3.76E-32	4.98E-30	3.14E-29	0.	1.75E-18	1.95E-11	1.32E-10	3.39E-11	1.84E-10
50	5.8A	1.15E-34	0.	9.52E-34	7.84E-30	3.34E-29	0.	1.72E-18	2.06E-11	1.37E-10	3.52E-11	1.91E-10
51	5.7A	8.45E-36	0.	0.	8.44E-30	3.74E-29	0.	1.62E-18	2.17E-11	1.44E-10	3.67E-11	2.02E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	3.84E-37	0.	0.	0.	7.44E-30	4.78E-29	0.	0.	1.50E-18	2.29E-11	1.53E-10	3.81E-11	2.14E-10
93	5.50	0.	0.	0.	0.	9.19E-30	4.42E-29	0.	0.	1.51E-18	2.41E-11	1.62E-10	3.98E-11	2.26E-10
94	5.40	0.	0.	0.	0.	8.57E-30	3.74E-29	0.	0.	1.52E-18	2.55E-11	1.72E-10	4.23E-11	2.39E-10
95	5.30	0.	0.	0.	0.	8.78E-30	4.59E-29	0.	0.	1.53E-18	2.72E-11	1.82E-10	4.45E-11	2.53E-10
96	5.20	0.	0.	0.	0.	9.56E-30	3.69E-29	0.	0.	1.54E-18	2.86E-11	1.92E-10	3.52E-11	2.56E-10
97	5.10	0.	0.	0.	0.	9.60E-30	4.60E-29	0.	0.	1.55E-18	3.03E-11	2.02E-10	3.73E-11	2.70E-10
98	5.00	9.46E-30	0.	0.	0.	8.84E-30	4.51E-29	0.	0.	1.56E-18	3.22E-11	2.12E-10	3.94E-11	2.84E-10
99	4.90	1.35E-29	0.	0.	0.	9.97E-30	5.01E-29	0.	0.	1.58E-18	3.42E-11	2.22E-10	4.15E-11	2.98E-10
100	4.80	2.59E-29	0.	0.	0.	1.08E-29	4.73E-29	0.	0.	1.59E-18	3.64E-11	2.32E-10	4.37E-11	3.12E-10
101	4.70	3.57E-29	0.	0.	0.	1.10E-29	4.39E-29	0.	0.	1.60E-18	3.88E-11	2.47E-10	4.60E-11	3.31E-10
102	4.60	5.02E-29	0.	0.	0.	1.14E-29	3.84E-29	0.	0.	1.62E-18	4.14E-11	2.65E-10	4.85E-11	3.55E-10
103	4.50	5.36E-29	0.	2.73E-30	0.	1.06E-29	2.98E-29	0.	0.	1.63E-18	4.43E-11	2.84E-10	5.11E-11	3.79E-10
104	4.40	5.82E-29	0.	7.60E-30	0.	1.07E-29	2.02E-29	0.	0.	1.64E-18	4.74E-11	3.02E-10	5.43E-11	4.04E-10
105	4.30	5.60E-29	0.	2.75E-29	0.	1.04E-29	1.29E-29	0.	0.	1.66E-18	5.04E-11	3.21E-10	5.47E-11	4.27E-10
106	4.20	5.29E-29	0.	8.29E-29	0.	1.10E-29	8.79E-30	0.	0.	1.67E-18	5.45E-11	3.44E-10	5.90E-11	4.57E-10
107	4.10	5.03E-29	0.	3.96E-29	0.	1.09E-29	2.55E-30	0.	0.	1.68E-18	5.87E-11	3.67E-10	6.39E-11	4.89E-10
108	4.00	4.70E-29	0.	1.21E-28	0.	1.07E-29	1.86E-30	0.	0.	1.69E-18	6.32E-11	3.90E-10	6.89E-11	5.22E-10
109	3.90	4.07E-29	0.	5.81E-29	5.17E-24	1.01E-29	8.84E-31	0.	0.	1.68E-18	6.83E-11	4.13E-10	7.38E-11	5.55E-10
110	3.80	4.50E-29	0.	9.43E-29	1.95E-23	1.09E-29	0.	0.	0.	1.67E-18	7.39E-11	4.37E-10	7.88E-11	5.89E-10
111	3.70	4.10E-29	0.	9.43E-29	9.77E-24	9.58E-30	0.	0.	0.	1.64E-18	8.01E-11	4.60E-10	8.38E-11	6.24E-10
112	3.60	3.74E-29	0.	7.13E-29	4.86E-23	1.04E-29	0.	0.	0.	1.94E-18	8.71E-11	4.83E-10	7.68E-11	6.47E-10
113	3.50	3.56E-29	0.	9.16E-29	8.24E-23	8.40E-30	0.	0.	0.	1.41E-18	9.48E-11	1.43E-10	8.12E-11	3.19E-10
114	3.40	3.33E-29	0.	6.14E-29	1.40E-23	9.49E-30	0.	0.	0.	8.13E-19	1.04E-10	1.56E-10	8.69E-11	3.46E-10
115	3.30	2.69E-29	0.	6.28E-29	5.24E-23	7.76E-30	0.	0.	0.	8.14E-19	1.13E-10	1.68E-10	6.38E-11	3.45E-10
116	3.20	2.39E-29	0.	4.24E-29	7.84E-23	8.23E-30	0.	0.	0.	8.15E-19	1.24E-10	1.92E-10	5.85E-11	3.57E-10
117	3.10	2.33E-29	0.	3.34E-29	2.36E-23	7.93E-30	0.	0.	0.	8.17E-19	1.37E-10	2.19E-10	5.74E-11	4.14E-10
118	3.00	2.13E-29	0.	2.08E-29	4.94E-23	7.69E-30	0.	0.	0.	8.19E-19	1.51E-10	2.46E-10	6.42E-11	4.62E-10
119	2.90	1.83E-29	0.	1.33E-29	2.69E-23	6.02E-30	0.	0.	0.	8.20E-19	1.68E-10	2.74E-10	7.11E-11	5.12E-10
120	2.80	1.93E-29	0.	6.41E-30	1.94E-23	4.34E-30	0.	0.	0.	8.22E-19	1.87E-10	3.01E-10	7.77E-11	5.65E-10
121	2.70	1.28E-29	0.	3.03E-30	2.31E-23	2.47E-30	0.	0.	0.	8.22E-19	2.08E-10	3.29E-10	8.38E-11	6.21E-10
122	2.60	6.28E-30	0.	1.44E-30	2.50E-24	1.12E-30	0.	0.	0.	8.22E-19	2.34E-10	3.58E-10	9.06E-11	6.88E-10
123	2.50	4.47E-31	0.	1.47E-31	2.46E-24	2.74E-31	0.	0.	0.	8.22E-19	2.63E-10	3.92E-10	1.00E-10	7.59E-10
124	2.40	0.	6.32E-30	0.	1.80E-24	2.97E-32	0.	0.	0.	8.22E-19	2.98E-10	4.45E-10	1.14E-10	8.58E-10
125	2.30	0.	1.70E-29	0.	0.	0.	0.	0.	0.	8.15E-19	3.39E-10	4.99E-10	1.28E-10	9.66E-10
126	2.20	0.	4.80E-29	0.	0.	0.	0.	0.	0.	8.12E-19	3.84E-10	5.53E-10	1.41E-10	1.08E-09
127	2.10	0.	4.84E-29	0.	0.	0.	0.	0.	0.	8.09E-19	4.47E-10	2.37E-10	6.33E-11	7.47E-10
128	2.00	0.	9.83E-29	0.	0.	0.	0.	0.	0.	7.83E-19	5.19E-10	2.89E-10	7.18E-11	8.69E-10
129	1.90	0.	1.12E-28	0.	0.	0.	0.	0.	0.	7.53E-19	6.04E-10	3.02E-10	8.86E-11	9.98E-10
130	1.80	0.	9.71E-29	0.	0.	0.	0.	0.	0.	7.20E-19	7.18E-10	3.35E-10	8.97E-11	1.14E-09
131	1.70	0.	1.09E-28	0.	0.	0.	0.	0.	0.	6.78E-19	8.56E-10	3.68E-10	9.87E-11	1.32E-09
132	1.60	0.	8.30E-29	0.	0.	0.	0.	0.	0.	5.74E-19	1.03E-09	4.01E-10	1.08E-10	1.54E-09
133	1.50	0.	9.36E-29	0.	0.	0.	0.	0.	0.	2.61E-19	1.25E-09	4.33E-10	1.17E-10	1.80E-09
134	1.40	0.	9.17E-29	0.	0.	0.	0.	0.	0.	0.	1.55E-09	4.67E-10	1.25E-10	2.14E-09
135	1.30	0.	7.02E-29	0.	0.	0.	0.	0.	0.	0.	1.94E-09	1.10E-11	1.25E-11	1.96E-09
136	1.20	0.	6.70E-29	0.	0.	0.	0.	0.	0.	0.	2.47E-09	1.51E-11	1.57E-11	2.58E-09
137	1.10	0.	6.97E-29	0.	0.	0.	0.	4.48E-34	0.	0.	3.23E-09	1.87E-11	1.97E-11	3.27E-09
138	1.00	0.	6.04E-29	0.	0.	0.	0.	7.47E-33	0.	0.	4.37E-09	2.20E-11	2.38E-11	4.37E-09
139	0.90	0.	4.85E-29	0.	0.	0.	0.	9.04E-33	0.	0.	5.97E-09	2.54E-11	2.42E-11	6.02E-09
140	0.80	0.	2.32E-29	0.	0.	0.	0.	2.01E-31	0.	0.	8.57E-09	2.45E-11	2.13E-11	8.81E-09
141	0.70	0.	5.30E-30	0.	0.	0.	0.	1.98E-31	0.	0.	1.29E-08	2.88E-11	2.45E-11	1.30E-08
142	0.60	0.	1.29E-30	0.	0.	0.	0.	4.07E-31	0.	0.	2.84E-08	3.13E-11	2.77E-11	2.89E-08

ABSORPTION COEFFICIEn OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24886. DENSITY (GM/CC) 1.293E-02 (1.0E 01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R RATIOS	O2 S-R CROSS.	O2 S-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.41E-01	0.	0.	0.	5.65E 00	1.30E 00	2.64E 02	9.22E 00	2.80E 02
2	10.60	0.	0.	1.31E-01	0.	0.	0.	5.66E 00	1.34E 00	2.85E 01	9.18E 00	4.48E 01
3	10.50	0.	0.	1.34E-01	0.	0.	0.	5.66E 00	1.38E 00	2.86E 01	9.14E 00	4.49E 01
4	10.40	0.	0.	1.29E-01	0.	0.	0.	5.67E 00	1.42E 00	2.87E 01	9.09E 00	4.50E 01
5	10.30	0.	0.	1.15E-01	0.	0.	0.	5.66E 00	1.46E 00	2.88E 01	9.05E 00	4.51E 01
6	10.20	0.	0.	1.20E-01	0.	0.	0.	5.69E 00	1.51E 00	2.88E 01	9.01E 00	4.52E 01
7	10.10	0.	0.	1.15E-01	0.	0.	0.	5.69E 00	1.55E 00	2.87E 01	8.96E 00	4.50E 01
8	10.00	0.	0.	1.03E-01	0.	0.	0.	5.78E 00	1.60E 00	2.87E 01	8.92E 00	4.50E 01
9	9.90	0.	0.	1.07E-01	0.	0.	0.	5.71E 00	1.65E 00	2.88E 01	8.87E 00	4.51E 01
10	9.80	0.	0.	1.02E-01	0.	0.	0.	5.72E 00	1.70E 00	2.88E 01	8.83E 00	4.52E 01
11	9.70	0.	0.	9.85E-02	0.	0.	0.	5.73E 00	1.75E 00	2.89E 01	8.79E 00	4.53E 01
12	9.60	0.	0.	9.82E-02	0.	0.	0.	5.74E 00	1.81E 00	2.90E 01	8.74E 00	4.54E 01
13	9.50	0.	0.	9.61E-02	0.	0.	0.	5.75E 00	1.87E 00	2.91E 01	8.70E 00	4.55E 01
14	9.40	0.	0.	8.32E-02	0.	0.	0.	5.78E 00	1.93E 00	2.92E 01	8.66E 00	4.56E 01
15	9.30	0.	0.	8.50E-02	0.	0.	0.	5.80E 00	1.99E 00	2.92E 01	8.61E 00	4.57E 01
16	9.20	0.	0.	7.35E-02	0.	0.	0.	5.82E 00	2.04E 00	2.93E 01	8.57E 00	4.59E 01
17	9.10	0.	0.	7.50E-02	0.	0.	0.	5.84E 00	2.13E 00	1.24E 01	8.53E 00	2.98E 01
18	9.00	0.	0.	7.84E-02	0.	0.	0.	5.86E 00	2.20E 00	1.25E 01	8.49E 00	2.91E 01
19	8.99	0.	0.	6.65E-02	0.	0.	0.	5.88E 00	2.28E 00	1.25E 01	8.45E 00	2.92E 01
20	8.80	0.	0.	6.60E-02	0.	0.	0.	5.90E 00	2.36E 00	1.25E 01	8.41E 00	2.92E 01
21	8.70	0.	0.	5.89E-02	0.	0.	0.	5.92E 00	2.44E 00	1.25E 01	8.37E 00	2.93E 01
22	8.60	0.	0.	4.12E-02	0.	0.	0.	5.94E 00	2.53E 00	1.26E 01	8.34E 00	2.95E 01
23	8.50	0.	0.	5.51E-02	0.	0.	0.	5.96E 00	2.62E 00	1.26E 01	8.30E 00	2.96E 01
24	8.40	0.	0.	5.54E-02	0.	0.	0.	6.00E 00	2.71E 00	1.27E 01	8.26E 00	2.97E 01
25	8.30	0.	0.	4.83E-02	0.	0.	0.	6.03E 00	2.82E 00	1.28E 01	8.24E 00	2.99E 01
26	8.20	0.	0.	4.93E-02	0.	0.	0.	6.06E 00	2.92E 00	1.28E 01	8.24E 00	3.01E 01
27	8.10	0.	0.	4.37E-02	0.	0.	0.	6.09E 00	3.03E 00	1.29E 01	8.24E 00	3.03E 01
28	8.09	0.	0.	4.45E-02	0.	0.	0.	6.12E 00	3.15E 00	1.30E 01	8.24E 00	3.06E 01
29	7.90	0.	0.	3.92E-02	0.	0.	0.	6.15E 00	3.27E 00	1.31E 01	8.24E 00	3.08E 01
30	7.80	0.	0.	4.12E-02	0.	0.	0.	6.18E 00	3.40E 00	1.32E 01	8.24E 00	3.11E 01
31	7.79	0.	0.	3.78E-02	0.	0.	0.	6.21E 00	3.53E 00	1.33E 01	8.24E 00	3.14E 01
32	7.60	0.	0.	3.57E-02	0.	1.55E-06	0.	6.25E 00	3.68E 00	1.35E 01	8.24E 00	3.17E 01
33	7.50	0.	0.	3.38E-02	0.	4.76E-06	0.	6.28E 00	3.83E 00	1.36E 01	8.24E 00	3.19E 01
34	7.40	0.	0.	3.89E-02	0.	4.56E-05	0.	6.31E 00	3.99E 00	1.37E 01	8.24E 00	3.22E 01
35	7.30	0.	0.	2.99E-02	0.	1.67E-04	0.	6.35E 00	4.15E 00	1.38E 01	8.24E 00	3.26E 01
36	7.20	0.	0.	2.75E-02	0.	4.75E-04	0.	6.38E 00	4.33E 00	1.39E 01	8.24E 00	3.29E 01
37	7.10	0.	0.	2.69E-02	0.	1.51E-03	0.	6.43E 00	4.52E 00	1.40E 01	8.24E 00	3.32E 01
38	7.00	5.45E-06	0.	2.52E-02	0.	2.77E-03	0.	6.49E 00	4.72E 00	1.41E 01	8.24E 00	3.36E 01
39	6.90	1.80E-05	0.	2.36E-02	0.	4.24E-03	0.	6.54E 00	4.93E 00	1.42E 01	8.24E 00	3.40E 01
40	6.80	9.40E-06	0.	2.32E-02	0.	6.81E-03	0.	6.59E 00	5.15E 00	1.44E 01	8.24E 00	3.44E 01
41	6.70	6.95E-06	0.	2.07E-02	0.	8.49E-03	0.	6.64E 00	5.39E 00	1.45E 01	8.26E 00	3.48E 01
42	6.60	4.20E-06	0.	1.90E-02	0.	5.80E-03	0.	6.70E 00	5.64E 00	1.46E 01	8.27E 00	3.53E 01
43	6.50	2.51E-06	0.	1.55E-02	0.	7.94E-03	0.	6.75E 00	5.91E 00	1.48E 01	8.29E 00	3.58E 01
44	6.40	1.46E-06	0.	1.11E-02	2.28E-05	7.13E-03	0.	6.80E 00	6.19E 00	1.50E 01	8.30E 00	3.63E 01
45	6.30	8.66E-07	0.	7.23E-03	1.10E-04	5.64E-03	0.	6.85E 00	6.50E 00	1.52E 01	8.33E 00	3.69E 01
46	6.20	3.98E-07	0.	4.14E-03	1.60E-04	7.41E-03	0.	6.91E 00	6.82E 00	1.54E 01	8.34E 00	3.75E 01
47	6.10	1.86E-07	0.	2.81E-03	4.63E-04	8.74E-03	0.	6.96E 00	7.17E 00	1.56E 01	8.43E 00	3.81E 01
48	6.00	7.90E-08	0.	5.22E-04	4.61E-04	4.59E-03	0.	7.01E 00	7.54E 00	1.57E 01	8.49E 00	3.88E 01
49	5.90	1.97E-08	0.	3.75E-05	6.85E-04	4.39E-03	0.	7.01E 00	7.93E 00	1.60E 01	8.54E 00	3.95E 01
50	5.80	2.52E-09	0.	9.51E-07	9.71E-04	4.67E-03	0.	6.91E 00	8.36E 00	1.62E 01	8.59E 00	4.01E 01
51	5.78	1.86E-10	0.	0.	1.17E-03	5.22E-03	0.	6.49E 00	8.81E 00	1.65E 01	8.64E 00	4.06E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.2936-02 (1.0E 01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)		H P.E.		O P.E.		TOTAL AIR
52	5.6E 00	8.44E-12	0.	0.	0.	1.03E-03	6.64E-03	0.	0.	6.03E 00	9.30E 00	1.68E 01	8.78E 00	4.08E 01			
53	5.5E 00	0.	0.	0.	0.	1.26E-03	6.14E-03	0.	0.	6.06E 00	9.87E 00	1.72E 01	8.74E 00	4.18E 01			
54	5.4E 00	0.	0.	0.	0.	1.20E-03	5.22E-03	0.	0.	6.09E 00	1.04E 01	1.76E 01	8.88E 00	4.30E 01			
55	5.3E 00	0.	0.	0.	0.	1.22E-03	6.30E-03	0.	0.	6.13E 00	1.10E 01	1.81E 01	8.99E 00	4.43E 01			
56	5.2E 00	0.	0.	0.	0.	1.34E-03	9.19E-03	0.	0.	6.17E 00	1.16E 01	1.86E 01	9.13E 00	4.56E 01			
57	5.1E 00	0.	0.	0.	0.	1.34E-03	6.57E-03	0.	0.	6.23E 00	1.23E 01	1.92E 01	9.26E 00	4.70E 01			
58	5.0E 00	1.21E-04	0.	0.	0.	1.24E-03	6.39E-03	0.	0.	6.28E 00	1.31E 01	1.98E 01	9.44E 00	4.86E 01			
59	4.9E 00	3.00E-04	0.	0.	0.	1.40E-03	7.07E-03	0.	0.	6.33E 00	1.39E 01	2.05E 01	9.57E 00	5.04E 01			
60	4.8E 00	5.77E-04	0.	0.	0.	1.51E-03	6.71E-03	0.	0.	6.38E 00	1.48E 01	2.13E 01	9.78E 00	5.23E 01			
61	4.7E 00	7.97E-04	0.	0.	0.	1.54E-03	6.15E-03	0.	0.	6.43E 00	1.58E 01	2.22E 01	1.00E 01	5.45E 01			
62	4.6E 00	1.12E-03	0.	0.	0.	1.60E-03	5.56E-03	0.	0.	6.49E 00	1.69E 01	2.31E 01	1.03E 01	5.68E 01			
63	4.5E 00	1.20E-03	0.	2.72E-03	0.	1.49E-03	4.21E-03	0.	0.	6.54E 00	1.80E 01	2.44E 01	1.06E 01	5.96E 01			
64	4.4E 00	1.31E-03	0.	7.73E-03	0.	1.91E-03	2.89E-03	0.	0.	6.59E 00	1.93E 01	2.57E 01	1.09E 01	6.25E 01			
65	4.3E 00	1.26E-03	0.	2.76E-02	0.	1.47E-03	1.83E-03	0.	0.	6.64E 00	2.07E 01	2.71E 01	1.12E 01	6.57E 01			
66	4.2E 00	1.19E-03	0.	8.24E-02	0.	1.56E-03	1.24E-03	0.	0.	6.70E 00	2.22E 01	2.86E 01	1.15E 01	6.91E 01			
67	4.1E 00	1.14E-03	0.	3.99E-02	0.	1.55E-03	3.54E-04	0.	0.	6.72E 00	2.40E 01	3.00E 01	1.14E 01	7.22E 01			
68	4.0E 00	1.06E-03	0.	1.20E-01	0.	1.52E-03	2.63E-04	0.	0.	6.75E 00	2.59E 01	3.15E 01	6.22E 00	7.94E 01			
69	3.9E 00	9.24E-04	0.	5.81E-02	7.56E-03	1.44E-03	9.99E-05	0.	0.	6.72E 00	2.79E 01	3.16E 01	6.42E 00	7.27E 01			
70	3.8E 00	1.02E-03	0.	9.44E-02	2.80E-02	1.56E-03	0.	0.	0.	6.78E 00	3.02E 01	3.17E 01	6.71E 00	7.55E 01			
71	3.7E 00	9.33E-04	0.	9.39E-02	1.44E-02	1.37E-03	0.	0.	0.	6.59E 00	3.28E 01	2.71E 01	7.29E 00	7.39E 01			
72	3.6E 00	8.59E-04	0.	7.16E-02	7.69E-02	1.48E-03	0.	0.	0.	6.17E 00	3.57E 01	2.92E 01	7.94E 00	7.91E 01			
73	3.5E 00	8.13E-04	0.	9.18E-02	1.18E-01	1.21E-03	0.	0.	0.	5.65E 00	3.89E 01	3.12E 01	8.68E 00	8.46E 01			
74	3.4E 00	7.63E-04	0.	6.20E-02	2.10E-02	1.37E-03	0.	0.	0.	3.26E 00	4.24E 01	3.48E 01	9.53E 00	8.99E 01			
75	3.3E 00	8.18E-04	0.	6.33E-02	7.61E-02	1.12E-03	0.	0.	0.	3.26E 00	4.65E 01	3.80E 01	1.04E 01	9.83E 01			
76	3.2E 00	5.50E-04	0.	4.29E-02	1.12E-01	1.19E-03	0.	0.	0.	3.27E 00	5.11E 01	4.15E 01	1.13E 01	1.07E 02			
77	3.1E 00	5.38E-04	0.	3.39E-02	3.68E-02	1.19E-03	0.	0.	0.	3.28E 00	5.67E 01	4.51E 01	1.22E 01	1.17E 02			
78	3.0E 00	4.92E-04	0.	2.12E-02	7.19E-02	1.11E-03	0.	0.	0.	3.29E 00	6.22E 01	4.87E 01	1.31E 01	1.27E 02			
79	2.9E 00	4.24E-04	0.	1.36E-02	3.83E-02	8.78E-04	0.	0.	0.	3.29E 00	6.80E 01	5.27E 01	1.41E 01	1.39E 02			
80	2.8E 00	4.49E-04	0.	6.54E-03	2.05E-02	6.38E-04	0.	0.	0.	3.30E 00	7.48E 01	5.73E 01	1.53E 01	1.53E 02			
81	2.7E 00	2.99E-04	0.	3.10E-03	3.34E-02	3.64E-04	0.	0.	0.	3.38E 00	8.59E 01	6.24E 01	1.66E 01	1.68E 02			
82	2.6E 00	1.47E-04	0.	1.47E-03	3.65E-03	1.67E-04	0.	0.	0.	3.38E 00	9.64E 01	6.77E 01	1.80E 01	1.85E 02			
83	2.5E 00	1.05E-05	0.	1.49E-04	3.61E-03	4.47E-05	0.	0.	0.	3.38E 00	1.09E 02	7.74E 01	1.22E 01	2.02E 02			
84	2.4E 00	0.	6.34E-03	0.	2.60E-03	4.42E-06	0.	0.	0.	3.36E 00	1.23E 02	9.00E 01	1.40E 01	2.30E 02			
85	2.3E 00	0.	1.74E-02	0.	0.	0.	0.	0.	0.	3.27E 00	1.40E 02	8.27E 01	1.67E 01	2.43E 02			
86	2.2E 00	0.	4.87E-02	0.	0.	0.	0.	0.	0.	3.26E 00	1.60E 02	9.77E 01	1.99E 01	2.81E 02			
87	2.1E 00	0.	4.78E-02	0.	0.	0.	0.	0.	0.	3.24E 00	1.85E 02	1.14E 02	2.30E 01	3.29E 02			
88	2.0E 00	0.	9.79E-02	0.	0.	0.	0.	0.	0.	3.14E 00	2.15E 02	1.35E 02	2.62E 01	3.74E 02			
89	1.9E 00	0.	1.89E-01	0.	0.	0.	0.	0.	0.	3.02E 00	2.52E 02	1.59E 02	3.00E 01	4.36E 02			
90	1.8E 00	0.	9.53E-02	0.	0.	0.	0.	0.	0.	2.89E 00	2.94E 02	1.90E 02	3.74E 01	5.19E 02			
91	1.7E 00	0.	1.86E-01	0.	0.	0.	0.	0.	0.	2.72E 00	3.55E 02	2.10E 02	4.50E 01	6.29E 02			
92	1.6E 00	0.	8.14E-02	0.	0.	0.	0.	0.	0.	2.38E 00	4.20E 02	2.54E 02	5.40E 01	7.38E 02			
93	1.5E 00	0.	8.14E-02	0.	0.	0.	0.	0.	0.	1.95E 00	5.21E 02	3.32E 02	6.54E 01	9.19E 02			
94	1.4E 00	0.	8.95E-02	0.	0.	0.	0.	0.	0.	0.	6.43E 02	4.17E 02	7.82E 01	1.14E 03			
95	1.3E 00	0.	6.85E-02	0.	0.	0.	0.	0.	0.	0.	8.97E 02	5.45E 02	1.03E 02	1.48E 03			
96	1.2E 00	0.	6.53E-02	0.	0.	0.	0.	0.	0.	0.	1.03E 03	6.43E 02	1.03E 02	1.78E 03			
97	1.1E 00	0.	6.43E-02	0.	0.	0.	0.	6.21E-03	0.	0.	1.35E 03	7.92E 02	1.29E 02	2.27E 03			
98	1.0E 00	0.	5.93E-02	0.	0.	0.	0.	1.08E-06	0.	0.	1.87E 03	9.62E 02	1.48E 02	2.93E 03			
99	0.9E 00	0.	4.85E-02	0.	0.	0.	0.	1.20E-06	0.	0.	2.57E 03	1.15E 03	1.73E 02	3.80E 03			
100	0.8E 00	0.	2.27E-02	0.	0.	0.	0.	2.46E-05	0.	0.	3.61E 03	1.28E 03	1.95E 02	5.11E 03			
101	0.7E 00	0.	5.17E-03	0.	0.	0.	0.	2.46E-05	0.	0.	5.90E 03	1.37E 03	1.95E 02	7.57E 03			
102	0.6E 00	0.	1.31E-03	0.	0.	0.	0.	4.69E-05	0.	0.	8.89E 03	1.54E 03	2.10E 02	1.16E 04			

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.29[illegible]E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R RATES	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (10#5)	N P.E.	O P.E.	TOTAL AIR
1	10.7[illegible]	9.	0.	6.18E-04	0.	0.	0.	1.07E-01	8.70E-02	1.75E 01	6.75E-01	1.83E 01
2	10.6[illegible]	0.	0.	5.72E-04	0.	0.	0.	1.07E-01	8.95E-02	1.90E 00	6.72E-01	2.77E 00
3	10.5[illegible]	0.	0.	5.85E-04	0.	0.	0.	1.07E-01	9.21E-02	1.90E 00	6.69E-01	2.77E 00
4	10.4[illegible]	0.	0.	5.65E-04	0.	0.	0.	1.07E-01	9.48E-02	1.91E 00	6.65E-01	2.78E 00
5	10.3[illegible]	0.	0.	5.83E-04	0.	0.	0.	1.08E-01	9.76E-02	1.92E 00	6.62E-01	2.78E 00
6	10.2[illegible]	0.	0.	5.27E-04	0.	0.	0.	1.08E-01	1.01E-01	1.92E 00	6.59E-01	2.79E 00
7	10.1[illegible]	0.	0.	5.82E-04	0.	0.	0.	1.08E-01	1.04E-01	1.91E 00	6.56E-01	2.78E 00
8	10.0[illegible]	0.	0.	4.92E-04	0.	0.	0.	1.08E-01	1.07E-01	1.90E 00	6.53E-01	2.77E 00
9	9.9[illegible]	0.	0.	4.67E-04	0.	0.	0.	1.08E-01	1.10E-01	1.91E 00	6.49E-01	2.78E 00
10	9.8[illegible]	0.	0.	4.47E-04	0.	0.	0.	1.08E-01	1.14E-01	1.91E 00	6.46E-01	2.76E 00
11	9.7[illegible]	0.	0.	3.96E-04	0.	0.	0.	1.09E-01	1.17E-01	1.92E 00	6.43E-01	2.79E 00
12	9.6[illegible]	0.	0.	4.38E-04	0.	0.	0.	1.09E-01	1.21E-01	1.92E 00	6.40E-01	2.79E 00
13	9.5[illegible]	0.	0.	3.77E-04	0.	0.	0.	1.09E-01	1.25E-01	1.93E 00	6.34E-01	2.80E 00
14	9.4[illegible]	0.	0.	3.64E-04	0.	0.	0.	1.09E-01	1.29E-01	1.93E 00	6.33E-01	2.81E 00
15	9.3[illegible]	0.	0.	3.75E-04	0.	0.	0.	1.10E-01	1.33E-01	1.94E 00	6.30E-01	2.81E 00
16	9.2[illegible]	0.	0.	3.21E-04	0.	0.	0.	1.10E-01	1.38E-01	1.95E 00	6.27E-01	2.82E 00
17	9.1[illegible]	0.	0.	3.32E-04	0.	0.	0.	1.11E-01	1.42E-01	8.27E-01	6.24E-01	1.70E 00
18	9.0[illegible]	0.	0.	3.08E-04	0.	0.	0.	1.11E-01	1.47E-01	8.20E-01	6.21E-01	1.71E 00
19	8.9[illegible]	0.	0.	2.91E-04	0.	0.	0.	1.11E-01	1.52E-01	8.30E-01	6.18E-01	1.71E 00
20	8.8[illegible]	0.	0.	2.80E-04	0.	0.	0.	1.12E-01	1.57E-01	8.32E-01	6.16E-01	1.72E 00
21	8.7[illegible]	0.	0.	2.58E-04	0.	0.	0.	1.12E-01	1.63E-01	8.35E-01	6.13E-01	1.72E 00
22	8.6[illegible]	0.	0.	2.68E-04	0.	0.	0.	1.13E-01	1.69E-01	8.37E-01	6.10E-01	1.73E 00
23	8.5[illegible]	0.	0.	2.41E-04	0.	0.	0.	1.13E-01	1.75E-01	8.41E-01	6.07E-01	1.74E 00
24	8.4[illegible]	0.	0.	2.42E-04	0.	0.	0.	1.14E-01	1.81E-01	8.45E-01	6.05E-01	1.74E 00
25	8.3[illegible]	0.	0.	2.11E-04	0.	0.	0.	1.14E-01	1.88E-01	8.50E-01	6.03E-01	1.76E 00
26	8.2[illegible]	0.	0.	2.16E-04	0.	0.	0.	1.15E-01	1.95E-01	8.55E-01	6.03E-01	1.77E 00
27	8.1[illegible]	0.	0.	1.91E-04	0.	0.	0.	1.15E-01	2.02E-01	8.59E-01	6.03E-01	1.78E 00
28	8.0[illegible]	0.	0.	1.95E-04	0.	0.	0.	1.16E-01	2.10E-01	8.66E-01	6.03E-01	1.80E 00
29	7.9[illegible]	0.	0.	1.71E-04	0.	0.	0.	1.17E-01	2.18E-01	8.73E-01	6.03E-01	1.81E 00
30	7.8[illegible]	0.	0.	1.80E-04	0.	0.	0.	1.17E-01	2.27E-01	8.81E-01	6.03E-01	1.83E 00
31	7.7[illegible]	0.	0.	1.62E-04	0.	0.	0.	1.18E-01	2.36E-01	8.88E-01	6.03E-01	1.85E 00
32	7.6[illegible]	0.	0.	1.56E-04	0.	7.52E-09	0.	1.18E-01	2.45E-01	8.96E-01	6.03E-01	1.86E 00
33	7.5[illegible]	0.	0.	1.48E-04	0.	2.27E-08	0.	1.19E-01	2.55E-01	9.01E-01	6.03E-01	1.88E 00
34	7.4[illegible]	0.	0.	1.35E-04	0.	2.21E-07	0.	1.20E-01	2.66E-01	9.09E-01	6.03E-01	1.90E 00
35	7.3[illegible]	0.	0.	1.31E-04	0.	8.54E-07	0.	1.20E-01	2.77E-01	9.17E-01	6.03E-01	1.92E 00
36	7.2[illegible]	0.	0.	1.20E-04	0.	2.38E-06	0.	1.21E-01	2.89E-01	9.25E-01	6.03E-01	1.94E 00
37	7.1[illegible]	0.	0.	1.18E-04	0.	7.29E-06	0.	1.22E-01	3.04E-01	9.32E-01	6.03E-01	1.96E 00
38	7.0[illegible]	2.92E-08	0.	1.10E-04	0.	1.34E-05	0.	1.23E-01	3.15E-01	9.40E-01	6.03E-01	1.98E 00
39	6.9[illegible]	9.77E-08	0.	1.03E-04	0.	2.85E-05	0.	1.24E-01	3.29E-01	9.48E-01	6.03E-01	2.00E 00
40	6.8[illegible]	5.03E-08	0.	1.01E-04	0.	3.30E-05	0.	1.25E-01	3.44E-01	9.56E-01	6.03E-01	2.03E 00
41	6.7[illegible]	3.72E-08	0.	9.87E-05	0.	3.12E-05	0.	1.26E-01	3.60E-01	9.64E-01	6.04E-01	2.05E 00
42	6.6[illegible]	2.29E-08	0.	8.31E-05	0.	2.81E-05	0.	1.27E-01	3.76E-01	9.75E-01	6.05E-01	2.08E 00
43	6.5[illegible]	1.34E-08	0.	6.80E-05	0.	3.84E-05	0.	1.28E-01	3.94E-01	9.86E-01	6.06E-01	2.11E 00
44	6.4[illegible]	7.84E-09	0.	4.87E-05	1.10E-07	3.45E-05	0.	1.29E-01	4.13E-01	9.98E-01	6.07E-01	2.15E 00
45	6.3[illegible]	4.64E-09	0.	3.16E-05	5.31E-07	2.73E-05	0.	1.30E-01	4.34E-01	1.01E 00	6.10E-01	2.19E 00
46	6.2[illegible]	2.13E-09	0.	1.81E-05	7.73E-07	3.50E-05	0.	1.31E-01	4.55E-01	1.02E 00	6.13E-01	2.22E 00
47	6.1[illegible]	9.97E-10	0.	8.80E-06	2.24E-06	4.23E-05	0.	1.32E-01	4.78E-01	1.04E 00	6.17E-01	2.26E 00
48	6.0[illegible]	4.23E-10	0.	2.78E-06	2.23E-06	2.22E-05	0.	1.33E-01	5.03E-01	1.05E 00	6.21E-01	2.31E 00
49	5.9[illegible]	1.05E-10	0.	1.64E-07	3.31E-06	2.13E-05	0.	1.33E-01	5.29E-01	1.07E 00	6.25E-01	2.35E 00
50	5.8[illegible]	1.35E-11	0.	4.16E-09	4.70E-06	2.26E-05	0.	1.31E-01	5.58E-01	1.08E 00	6.29E-01	2.40E 00
51	5.7[illegible]	9.94E-13	0.	0.	5.65E-06	2.53E-05	0.	1.23E-01	5.80E-01	1.10E 00	6.33E-01	2.44E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (ION)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.52E-14	0.	0.	0.	5.00E-06	3.21E-05	0.	0.	1.14E-01	6.20E-01	1.12E 00	6.37E-01	2.49E 00
53	5.50	0.	0.	0.	0.	6.12E-06	2.97E-05	0.	0.	1.15E-01	6.55E-01	1.14E 00	6.43E-01	2.50E 00
54	5.40	0.	0.	0.	0.	5.70E-06	2.53E-05	0.	0.	1.15E-01	6.93E-01	1.18E 00	6.50E-01	2.63E 00
55	5.30	0.	0.	0.	0.	5.92E-06	3.09E-05	0.	0.	1.16E-01	7.33E-01	1.21E 00	6.56E-01	2.72E 00
56	5.20	0.	0.	0.	0.	6.46E-06	2.51E-05	0.	0.	1.17E-01	7.77E-01	1.23E 00	6.68E-01	2.80E 00
57	5.10	0.	0.	0.	0.	6.49E-06	3.19E-05	0.	0.	1.18E-01	8.24E-01	1.27E 00	6.78E-01	2.89E 00
58	5.00	6.46E-07	0.	0.	0.	6.88E-06	3.07E-05	0.	0.	1.19E-01	8.75E-01	1.31E 00	6.88E-01	3.00E 00
59	4.90	1.61E-06	0.	0.	0.	6.76E-06	3.42E-05	0.	0.	1.20E-01	9.30E-01	1.36E 00	7.03E-01	3.11E 00
60	4.80	3.09E-06	0.	0.	0.	7.33E-06	3.29E-05	0.	0.	1.21E-01	9.90E-01	1.41E 00	7.16E-01	3.24E 00
61	4.70	4.27E-06	0.	0.	0.	7.45E-06	2.97E-05	0.	0.	1.22E-01	1.05E 00	1.47E 00	7.35E-01	3.38E 00
62	4.60	6.01E-06	0.	0.	0.	7.74E-06	2.69E-05	0.	0.	1.23E-01	1.11E 00	1.53E 00	7.56E-01	3.54E 00
63	4.50	6.43E-06	0.	1.19E-05	0.	7.23E-06	2.74E-05	0.	0.	1.24E-01	1.20E 00	1.62E 00	7.77E-01	3.72E 00
64	4.40	7.00E-06	0.	3.38E-05	0.	7.33E-06	1.38E-05	0.	0.	1.25E-01	1.29E 00	1.70E 00	7.99E-01	3.91E 00
65	4.30	6.75E-06	0.	1.21E-04	0.	7.12E-06	8.85E-06	0.	0.	1.26E-01	1.38E 00	1.80E 00	8.21E-01	4.13E 00
66	4.20	6.39E-06	0.	3.60E-04	0.	7.53E-06	9.99E-06	0.	0.	1.27E-01	1.48E 00	1.90E 00	8.45E-01	4.35E 00
67	4.10	6.09E-06	0.	1.75E-04	0.	7.50E-06	1.71E-05	0.	0.	1.27E-01	1.60E 00	1.99E 00	8.38E-01	4.56E 00
68	4.00	5.70E-06	0.	5.25E-04	0.	7.35E-06	1.27E-05	0.	0.	1.28E-01	1.72E 00	2.09E 00	4.55E-01	4.43E 00
69	3.90	4.95E-06	0.	2.54E-04	1.29E-04	6.95E-06	6.66E-07	0.	0.	1.27E-01	1.84E 00	2.19E 00	4.70E-01	4.56E 00
70	3.80	5.47E-06	0.	4.13E-04	4.72E-04	7.54E-06	0.	0.	0.	1.27E-01	2.02E 00	2.11E 00	4.91E-01	4.74E 00
71	3.70	5.00E-06	0.	4.11E-04	2.44E-04	6.65E-06	0.	0.	0.	1.25E-01	2.19E 00	1.90E 00	5.34E-01	4.65E 00
72	3.60	4.58E-06	0.	3.13E-04	1.20E-03	7.18E-06	0.	0.	0.	1.17E-01	2.38E 00	1.94E 00	5.81E-01	5.12E 00
73	3.50	4.35E-06	0.	4.02E-04	1.99E-03	5.85E-06	0.	0.	0.	1.27E-01	2.59E 00	2.27E 00	6.35E-01	5.41E 00
74	3.40	4.08E-06	0.	2.71E-04	3.68E-04	6.61E-06	0.	0.	0.	6.17E-02	2.83E 00	2.30E 00	6.97E-01	5.80E 00
75	3.30	3.31E-06	0.	2.77E-04	1.29E-03	5.42E-06	0.	0.	0.	6.18E-02	3.11E 00	2.52E 00	7.63E-01	6.45E 00
76	3.20	2.95E-06	0.	1.08E-04	1.89E-03	5.76E-06	0.	0.	0.	6.19E 02	3.41E 00	2.76E 00	8.24E-01	7.09E 00
77	3.10	2.88E-06	0.	1.48E-04	5.87E-04	5.56E-06	0.	0.	0.	6.21E-02	3.75E 00	2.99E 00	8.92E-01	7.73E 00
78	3.00	2.64E-06	0.	9.27E-05	1.21E-03	5.38E-06	0.	0.	0.	6.22E-02	4.15E 00	3.23E 00	9.58E-01	8.49E 00
79	2.90	2.27E-06	0.	5.93E-05	8.47E-04	4.25E-06	0.	0.	0.	6.23E-02	4.60E 00	3.50E 00	1.04E 00	9.27E 00
80	2.80	2.40E-06	0.	2.86E-05	4.81E-04	3.09E-06	0.	0.	0.	6.24E-02	5.13E 00	3.81E 00	1.12E 00	1.01E 01
81	2.70	1.60E-06	0.	1.35E-05	5.65E-04	1.76E-06	0.	0.	0.	6.24E-02	5.73E 00	4.14E 00	1.22E 00	1.12E 01
82	2.60	7.89E-07	0.	6.42E-06	6.17E-05	8.06E-07	0.	0.	0.	6.24E-02	6.43E 00	4.49E 00	1.31E 00	1.23E 01
83	2.50	5.63E-08	0.	6.52E-07	6.09E-05	1.97E-07	0.	0.	0.	6.24E-02	7.25E 00	5.13E 00	8.93E-01	1.33E 01
84	2.40	0.	2.77E-05	0.	4.40E-05	2.14E-08	0.	0.	0.	6.24E-02	8.21E 00	5.96E 00	1.03E 01	1.53E 01
85	2.30	0.	7.71E-05	0.	0.	0.	0.	0.	0.	6.19E-02	9.35E 00	5.40E 00	1.22E 01	1.61E 01
86	2.20	0.	2.13E-04	0.	0.	0.	0.	0.	0.	6.17E-02	1.07E 01	6.47E 00	1.45E 01	1.87E 01
87	2.10	0.	2.09E-04	0.	0.	0.	0.	0.	0.	4.15E-02	1.23E 01	7.53E 00	1.69E 01	2.10E 01
88	2.00	0.	4.27E-04	0.	0.	0.	0.	0.	0.	5.95E-02	1.44E 01	8.82E 00	1.91E 01	2.49E 01
89	1.90	0.	4.79E-04	0.	0.	0.	0.	0.	0.	5.72E-02	1.64E 01	9.95E 00	2.25E 01	2.93E 01
90	1.80	0.	4.17E-04	0.	0.	0.	0.	0.	0.	5.47E-02	1.89E 01	1.19E 01	2.79E 01	3.46E 01
91	1.70	0.	4.65E-04	0.	0.	0.	0.	0.	0.	5.15E-02	2.17E 01	1.43E 01	3.35E 01	4.14E 01
92	1.60	0.	3.56E-04	0.	0.	0.	0.	0.	0.	4.96E-02	2.85E 01	1.68E 01	3.95E 01	4.93E 01
93	1.50	0.	4.00E-04	0.	0.	0.	0.	0.	0.	1.98E-02	3.49E 01	2.02E 01	4.79E 01	6.15E 01
94	1.40	0.	3.92E-04	0.	0.	0.	0.	0.	0.	0.	4.29E 01	2.76E 01	5.72E 01	7.92E 01
95	1.30	0.	3.80E-04	0.	0.	0.	0.	0.	0.	0.	5.37E 01	3.74E 01	7.51E 01	9.49E 01
96	1.20	0.	2.86E-04	0.	0.	0.	0.	0.	0.	0.	8.93E 01	4.65E 01	7.56E 01	1.19E 02
97	1.10	0.	2.82E-04	0.	0.	0.	0.	3.08E-10	0.	0.	9.93E 01	5.24E 01	9.45E 01	1.52E 02
98	1.00	0.	2.59E-04	0.	0.	0.	0.	5.25E-09	0.	0.	1.91E 02	6.57E 01	1.38E 02	1.98E 02
99	0.90	0.	2.12E-04	0.	0.	0.	0.	8.21E-08	0.	0.	1.64E 02	7.35E 01	1.26E 02	2.54E 02
100	0.80	0.	9.94E-05	0.	0.	0.	0.	1.39E-07	0.	0.	2.42E 02	8.40E 01	1.45E 02	3.41E 02
101	0.70	0.	2.26E-05	0.	0.	0.	0.	1.38E-07	0.	0.	3.47E 02	9.09E 01	1.43E 02	4.72E 02
102	0.60	0.	5.71E-06	0.	0.	0.	0.	4.28E-07	0.	0.	5.93E 02	1.02E 02	1.02E 02	7.11E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (ICMS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.56E-07	0.	0.	0.	7.38E-04	2.92E-03	5.72E-01	2.55E-02	6.01E-01
2	10.60	0.	0.	6.88E-07	0.	0.	0.	7.39E-04	3.00E-03	6.41E-02	2.94E-02	9.32E-02
3	10.50	0.	0.	6.22E-07	0.	0.	0.	7.40E-04	3.09E-03	6.44E-02	2.52E-02	9.35E-02
4	10.40	0.	0.	6.81E-07	0.	0.	0.	7.41E-04	3.18E-03	6.46E-02	2.91E-02	9.37E-02
5	10.30	0.	0.	5.35E-07	0.	0.	0.	7.42E-04	3.28E-03	6.48E-02	2.50E-02	9.38E-02
6	10.20	0.	0.	5.86E-07	0.	0.	0.	7.43E-04	3.38E-03	6.50E-02	2.49E-02	9.40E-02
7	10.10	0.	0.	5.34E-07	0.	0.	0.	7.44E-04	3.48E-03	6.48E-02	2.47E-02	9.37E-02
8	10.00	0.	0.	4.61E-07	0.	0.	0.	7.45E-04	3.58E-03	6.29E-02	2.44E-02	9.18E-02
9	9.90	0.	0.	4.96E-07	0.	0.	0.	7.47E-04	3.70E-03	6.39E-02	2.45E-02	9.28E-02
10	9.80	0.	0.	4.75E-07	0.	0.	0.	7.48E-04	3.81E-03	6.32E-02	2.44E-02	9.21E-02
11	9.70	0.	0.	4.21E-07	0.	0.	0.	7.49E-04	3.93E-03	6.33E-02	2.43E-02	9.23E-02
12	9.60	0.	0.	4.57E-07	0.	0.	0.	7.51E-04	4.06E-03	6.35E-02	2.41E-02	9.25E-02
13	9.50	0.	0.	4.81E-07	0.	0.	0.	7.52E-04	4.19E-03	6.37E-02	2.40E-02	9.27E-02
14	9.40	0.	0.	3.67E-07	0.	0.	0.	7.55E-04	4.33E-03	6.39E-02	2.39E-02	9.29E-02
15	9.30	0.	0.	3.90E-07	0.	0.	0.	7.58E-04	4.47E-03	6.41E-02	2.33E-02	9.31E-02
16	9.20	0.	0.	3.42E-07	0.	0.	0.	7.60E-04	4.62E-03	6.43E-02	2.37E-02	9.34E-02
17	9.10	0.	0.	3.53E-07	0.	0.	0.	7.63E-04	4.77E-03	2.79E-02	2.36E-02	5.70E-02
18	9.00	0.	0.	3.27E-07	0.	0.	0.	7.66E-04	4.94E-03	2.79E-02	2.35E-02	5.71E-02
19	8.90	0.	0.	3.09E-07	0.	0.	0.	7.69E-04	5.11E-03	2.80E-02	2.33E-02	5.72E-02
20	8.80	0.	0.	3.07E-07	0.	0.	0.	7.71E-04	5.28E-03	2.81E-02	2.32E-02	5.74E-02
21	8.70	0.	0.	2.74E-07	0.	0.	0.	7.74E-04	5.47E-03	2.82E-02	2.31E-02	5.76E-02
22	8.60	0.	0.	2.85E-07	0.	0.	0.	7.77E-04	5.66E-03	2.83E-02	2.30E-02	5.78E-02
23	8.50	0.	0.	2.56E-07	0.	0.	0.	7.79E-04	5.87E-03	2.84E-02	2.29E-02	5.80E-02
24	8.40	0.	0.	2.50E-07	0.	0.	0.	7.84E-04	6.08E-03	2.86E-02	2.28E-02	5.83E-02
25	8.30	0.	0.	2.24E-07	0.	0.	0.	7.88E-04	6.31E-03	2.88E-02	2.28E-02	5.86E-02
26	8.20	0.	0.	2.29E-07	0.	0.	0.	7.92E-04	6.54E-03	2.90E-02	2.28E-02	5.91E-02
27	8.10	0.	0.	2.03E-07	0.	0.	0.	7.96E-04	6.79E-03	2.91E-02	2.28E-02	5.95E-02
28	8.00	0.	0.	2.07E-07	0.	0.	0.	8.00E-04	7.05E-03	2.94E-02	2.28E-02	6.00E-02
29	7.90	0.	0.	1.82E-07	0.	0.	0.	8.04E-04	7.33E-03	2.96E-02	2.28E-02	6.05E-02
30	7.80	0.	0.	1.92E-07	0.	0.	0.	8.08E-04	7.61E-03	2.99E-02	2.28E-02	6.11E-02
31	7.70	0.	0.	1.72E-07	0.	0.	0.	8.12E-04	7.92E-03	3.02E-02	2.28E-02	6.17E-02
32	7.60	0.	0.	1.66E-07	0.	9.24E-12	0.	8.18E-04	8.24E-03	3.05E-02	2.28E-02	6.23E-02
33	7.50	0.	0.	1.57E-07	0.	2.79E-11	0.	8.23E-04	8.58E-03	3.08E-02	2.28E-02	6.28E-02
34	7.40	0.	0.	1.46E-07	0.	2.71E-10	0.	8.25E-04	8.93E-03	3.08E-02	2.28E-02	6.31E-02
35	7.30	0.	0.	1.39E-07	0.	9.90E-10	0.	8.38E-04	9.31E-03	3.09E-02	2.28E-02	6.38E-02
36	7.20	0.	0.	1.28E-07	0.	2.82E-09	0.	8.34E-04	9.70E-03	3.12E-02	2.28E-02	6.45E-02
37	7.10	0.	0.	1.25E-07	0.	8.95E-09	0.	8.41E-04	1.01E-02	3.15E-02	2.29E-02	6.52E-02
38	7.00	6.14E-12	0.	1.17E-07	0.	1.44E-08	0.	8.48E-04	1.06E-02	3.18E-02	2.28E-02	6.60E-02
39	6.90	8.19E-11	0.	1.10E-07	0.	2.52E-08	0.	8.55E-04	1.10E-02	3.21E-02	2.28E-02	6.67E-02
40	6.80	7.14E-11	0.	1.08E-07	0.	4.05E-08	0.	8.62E-04	1.15E-02	3.24E-02	2.28E-02	6.75E-02
41	6.70	5.20E-11	0.	9.64E-08	0.	3.83E-08	0.	8.68E-04	1.21E-02	3.27E-02	2.28E-02	6.84E-02
42	6.60	3.26E-11	0.	8.83E-08	0.	3.49E-08	0.	8.75E-04	1.26E-02	3.31E-02	2.29E-02	6.95E-02
43	6.50	1.91E-11	0.	7.93E-08	0.	4.72E-08	0.	8.82E-04	1.32E-02	3.33E-02	2.29E-02	7.03E-02
44	6.40	1.11E-11	0.	5.18E-08	1.35E-10	4.24E-08	0.	8.89E-04	1.39E-02	3.37E-02	2.30E-02	7.14E-02
45	6.30	6.58E-12	0.	3.36E-08	6.53E-10	3.35E-08	0.	8.96E-04	1.46E-02	3.42E-02	2.30E-02	7.27E-02
46	6.20	3.82E-12	0.	1.93E-08	9.49E-10	4.41E-08	0.	9.03E-04	1.53E-02	3.46E-02	2.32E-02	7.40E-02
47	6.10	1.42E-12	0.	9.35E-09	2.75E-09	5.20E-08	0.	9.09E-04	1.61E-02	3.51E-02	2.33E-02	7.54E-02
48	6.00	8.81E-13	0.	2.43E-09	2.74E-09	2.72E-08	0.	9.16E-04	1.69E-02	3.56E-02	2.35E-02	7.69E-02
49	5.90	1.49E-13	0.	1.74E-10	4.07E-09	2.01E-08	0.	9.16E-04	1.78E-02	3.62E-02	2.36E-02	7.85E-02
50	5.80	1.91E-14	0.	4.42E-12	5.77E-09	2.78E-08	0.	9.03E-04	1.87E-02	3.68E-02	2.38E-02	8.02E-02
51	5.70	1.41E-15	0.	0.	6.94E-09	3.11E-08	0.	8.48E-04	1.97E-02	3.74E-02	2.39E-02	8.19E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-04 = 1.0E-01 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.41E-17	0.	0.	0.	6.14E-09	3.95E-08	0.	0.	7.88E-04	2.08E-02	3.81E-02	2.41E-02	8.58E-02
53	5.50	0.	0.	0.	0.	7.52E-09	3.65E-08	0.	0.	7.92E-04	2.20E-02	3.90E-02	2.43E-02	8.61E-02
54	5.40	0.	0.	0.	0.	7.11E-09	3.10E-08	0.	0.	7.97E-04	2.33E-02	4.01E-02	2.46E-02	8.87E-02
55	5.30	0.	0.	0.	0.	7.28E-09	3.80E-08	0.	0.	8.02E-04	2.46E-02	4.12E-02	2.49E-02	9.15E-02
56	5.20	0.	0.	0.	0.	7.94E-09	3.99E-08	0.	0.	8.07E-04	2.61E-02	4.09E-02	2.53E-02	9.31E-02
57	5.10	0.	0.	0.	0.	7.98E-09	3.91E-08	0.	0.	8.14E-04	2.77E-02	4.22E-02	2.56E-02	9.63E-02
58	5.00	9.18E-10	0.	0.	0.	7.37E-09	3.78E-08	0.	0.	8.20E-04	2.94E-02	4.36E-02	2.60E-02	9.97E-02
59	4.90	2.20E-09	0.	0.	0.	8.31E-09	4.21E-08	0.	0.	8.27E-04	3.12E-02	4.52E-02	2.64E-02	1.04E-01
60	4.80	4.38E-09	0.	0.	0.	9.00E-09	3.99E-08	0.	0.	8.34E-04	3.32E-02	4.69E-02	2.70E-02	1.08E-01
61	4.70	6.06E-09	0.	0.	0.	9.16E-09	3.65E-08	0.	0.	8.41E-04	3.54E-02	4.88E-02	2.78E-02	1.13E-01
62	4.60	8.53E-09	0.	0.	0.	9.51E-09	3.31E-08	0.	0.	8.48E-04	3.78E-02	5.10E-02	2.85E-02	1.18E-01
63	4.50	9.12E-09	0.	1.27E-08	0.	8.88E-09	2.59E-08	0.	0.	8.55E-04	4.04E-02	5.37E-02	2.93E-02	1.24E-01
64	4.40	9.94E-09	0.	3.66E-08	0.	9.00E-09	1.70E-08	0.	0.	8.62E-04	4.32E-02	5.66E-02	3.01E-02	1.31E-01
65	4.30	9.58E-09	0.	1.78E-07	0.	8.75E-09	1.09E-08	0.	0.	8.68E-04	4.64E-02	5.98E-02	3.10E-02	1.38E-01
66	4.20	9.07E-09	0.	3.83E-07	0.	9.29E-09	7.36E-09	0.	0.	8.75E-04	4.98E-02	6.30E-02	3.19E-02	1.46E-01
67	4.10	8.64E-09	0.	1.86E-07	0.	9.22E-09	2.10E-09	0.	0.	8.79E-04	5.37E-02	6.63E-02	3.26E-02	1.52E-01
68	4.00	8.09E-09	0.	5.58E-07	0.	9.03E-09	1.56E-09	0.	0.	8.82E-04	5.79E-02	6.95E-02	3.32E-02	1.58E-01
69	3.90	7.02E-09	0.	2.70E-07	7.42E-07	8.54E-09	5.70E-10	0.	0.	8.79E-04	6.26E-02	6.97E-02	3.28E-02	1.51E-01
70	3.80	7.76E-09	0.	4.39E-07	2.74E-06	9.26E-09	0.	0.	0.	8.75E-04	6.77E-02	7.02E-02	1.86E-02	1.57E-01
71	3.70	7.09E-09	0.	4.37E-07	1.42E-06	8.17E-09	0.	0.	0.	8.61E-04	7.35E-02	6.04E-02	2.02E-02	1.55E-01
72	3.60	6.49E-09	0.	3.33E-07	6.96E-06	8.82E-09	0.	0.	0.	8.07E-04	7.99E-02	6.50E-02	2.22E-02	1.68E-01
73	3.50	6.18E-09	0.	4.27E-07	1.16E-05	7.19E-09	0.	0.	0.	7.38E-04	8.70E-02	6.94E-02	2.40E-02	1.81E-01
74	3.40	5.80E-09	0.	2.88E-07	2.14E-06	8.13E-09	0.	0.	0.	4.26E-04	9.51E-02	7.63E-02	2.64E-02	1.99E-01
75	3.30	4.69E-09	0.	2.94E-07	7.46E-06	6.66E-09	0.	0.	0.	4.27E-04	1.04E-01	8.43E-02	2.87E-02	2.18E-01
76	3.20	4.10E-09	0.	2.00E-07	1.10E-05	7.08E-09	0.	0.	0.	4.27E-04	1.14E-01	9.20E-02	3.12E-02	2.38E-01
77	3.10	4.09E-09	0.	1.98E-07	3.41E-06	6.84E-09	0.	0.	0.	4.28E-04	1.26E-01	9.99E-02	3.37E-02	2.60E-01
78	3.00	3.74E-09	0.	9.89E-08	7.02E-06	6.61E-09	0.	0.	0.	4.29E-04	1.39E-01	1.08E-01	3.62E-02	2.84E-01
79	2.90	3.22E-09	0.	6.30E-08	3.76E-06	5.22E-09	0.	0.	0.	4.30E-04	1.53E-01	1.17E-01	3.91E-02	3.11E-01
80	2.80	3.41E-09	0.	3.04E-08	2.79E-06	3.79E-09	0.	0.	0.	4.31E-04	1.72E-01	1.27E-01	4.24E-02	3.42E-01
81	2.70	2.27E-09	0.	1.44E-08	3.23E-06	2.16E-09	0.	0.	0.	4.31E-04	1.92E-01	1.38E-01	4.60E-02	3.77E-01
82	2.60	1.12E-09	0.	6.83E-09	3.58E-07	9.90E-10	0.	0.	0.	4.31E-04	2.16E-01	1.48E-01	4.97E-02	4.14E-01
83	2.50	7.99E-11	0.	6.93E-10	3.54E-07	2.42E-10	0.	0.	0.	4.31E-04	2.43E-01	1.69E-01	3.38E-02	4.46E-01
84	2.40	0.	2.95E-08	0.	2.55E-07	3.63E-11	0.	0.	0.	4.31E-04	2.76E-01	1.98E-01	3.84E-02	5.11E-01
85	2.30	0.	8.19E-08	0.	0.	0.	0.	0.	0.	4.27E-04	3.14E-01	1.83E-01	4.62E-02	5.41E-01
86	2.20	0.	2.26E-07	0.	0.	0.	0.	0.	0.	4.26E-04	3.59E-01	2.13E-01	5.48E-02	6.28E-01
87	2.10	0.	2.22E-07	0.	0.	0.	0.	0.	0.	4.24E-04	4.15E-01	2.48E-01	6.35E-02	7.26E-01
88	2.00	0.	4.94E-07	0.	0.	0.	0.	0.	0.	4.10E-04	4.82E-01	2.83E-01	7.23E-02	8.37E-01
89	1.90	0.	5.09E-07	0.	0.	0.	0.	0.	0.	3.95E-04	5.65E-01	3.25E-01	8.50E-02	9.76E-01
90	1.80	0.	4.43E-07	0.	0.	0.	0.	0.	0.	3.77E-04	6.67E-01	3.91E-01	1.04E-01	1.16E 00
91	1.70	0.	4.94E-07	0.	0.	0.	0.	0.	0.	3.56E-04	7.96E-01	4.70E-01	1.27E-01	1.39E 00
92	1.60	0.	3.78E-07	0.	0.	0.	0.	0.	0.	3.01E-04	9.58E-01	5.51E-01	1.49E-01	1.66E 00
93	1.50	0.	4.25E-07	0.	0.	0.	0.	0.	0.	1.77E-04	1.17E 00	7.19E-01	1.80E-01	2.07E 00
94	1.40	0.	4.14E-07	0.	0.	0.	0.	0.	0.	0.	1.44E 00	9.02E-01	2.16E-01	2.56E 00
95	1.30	0.	3.18E-07	0.	0.	0.	0.	0.	0.	0.	1.81E 00	1.22E 00	2.83E-01	3.31E 00
96	1.20	0.	3.04E-07	0.	0.	0.	0.	0.	0.	0.	2.32E 00	1.39E 00	2.85E-01	3.99E 00
97	1.10	0.	2.99E-07	0.	0.	0.	0.	3.69E-13	0.	0.	3.03E 00	1.71E 00	3.56E-01	5.10E 00
98	1.00	0.	2.76E-07	0.	0.	0.	0.	6.45E-12	0.	0.	4.07E 00	2.08E 00	4.07E-01	6.56E 00
99	0.90	0.	2.26E-07	0.	0.	0.	0.	7.63E-12	0.	0.	5.64E 00	2.40E 00	4.77E-01	8.51E 00
100	0.80	0.	1.06E-07	0.	0.	0.	0.	1.70E-10	0.	0.	8.13E 00	2.76E 00	5.46E-01	1.14E 01
101	0.70	0.	2.48E-08	0.	0.	0.	0.	1.70E-10	0.	0.	1.23E 01	2.97E 00	5.37E-01	1.58E 01
102	0.60	0.	6.07E-09	0.	0.	0.	0.	5.16E-10	0.	0.	1.99E 01	3.32E 00	6.01E-01	2.38E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2*000. DENSITY (GM/CC) 1.293E-03 (10.0E-03 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.7*	0.	0.	1.31E-10	0.	0.	0.	1.36E-06	4.33E-05	8.37E-03	3.95E-04	8.80E-03
2	10.6*	0.	0.	1.22E-10	0.	0.	0.	1.36E-06	4.45E-05	1.19E-03	3.91E-04	1.63E-03
3	10.5*	0.	0.	1.24E-10	0.	0.	0.	1.36E-06	4.58E-05	1.20E-03	3.86E-04	1.63E-03
4	10.4*	0.	0.	1.20E-10	0.	0.	0.	1.36E-06	4.72E-05	1.21E-03	3.86E-04	1.64E-03
5	10.3*	0.	0.	1.07E-10	0.	0.	0.	1.36E-06	4.86E-05	1.21E-03	3.85E-04	1.65E-03
6	10.2*	0.	0.	1.12E-10	0.	0.	0.	1.37E-06	5.01E-05	1.22E-03	3.83E-04	1.66E-03
7	10.1*	0.	0.	1.07E-10	0.	0.	0.	1.37E-06	5.16E-05	1.22E-03	3.81E-04	1.66E-03
8	10.0*	0.	0.	9.61E-11	0.	0.	0.	1.37E-06	5.32E-05	9.89E-04	3.79E-04	1.42E-03
9	9.9*	0.	0.	9.92E-11	0.	0.	0.	1.37E-06	5.48E-05	9.93E-04	3.78E-04	1.43E-03
10	9.8*	0.	0.	9.59E-11	0.	0.	0.	1.37E-06	5.65E-05	9.97E-04	3.76E-04	1.43E-03
11	9.7*	0.	0.	8.41E-11	0.	0.	0.	1.38E-06	5.83E-05	1.00E-03	3.74E-04	1.43E-03
12	9.6*	0.	0.	9.13E-11	0.	0.	0.	1.38E-06	6.02E-05	1.01E-03	3.72E-04	1.44E-03
13	9.5*	0.	0.	8.81E-11	0.	0.	0.	1.38E-06	6.21E-05	1.01E-03	3.70E-04	1.44E-03
14	9.4*	0.	0.	7.73E-11	0.	0.	0.	1.39E-06	6.41E-05	1.01E-03	3.69E-04	1.45E-03
15	9.3*	0.	0.	7.97E-11	0.	0.	0.	1.39E-06	6.62E-05	1.02E-03	3.67E-04	1.45E-03
16	9.2*	0.	0.	6.83E-11	0.	0.	0.	1.40E-06	6.85E-05	1.02E-03	3.65E-04	1.46E-03
17	9.1*	0.	0.	7.85E-11	0.	0.	0.	1.40E-06	7.08E-05	5.11E-04	3.64E-04	9.47E-04
18	9.0*	0.	0.	6.54E-11	0.	0.	0.	1.41E-06	7.32E-05	5.13E-04	3.62E-04	9.50E-04
19	8.9*	0.	0.	6.19E-11	0.	0.	0.	1.41E-06	7.57E-05	5.16E-04	3.61E-04	9.54E-04
20	8.8*	0.	0.	6.14E-11	0.	0.	0.	1.42E-06	7.83E-05	5.19E-04	3.59E-04	9.58E-04
21	8.7*	0.	0.	5.47E-11	0.	0.	0.	1.42E-06	8.11E-05	5.22E-04	3.58E-04	9.62E-04
22	8.6*	0.	0.	5.49E-11	0.	0.	0.	1.43E-06	8.40E-05	5.25E-04	3.56E-04	9.67E-04
23	8.5*	0.	0.	5.12E-11	0.	0.	0.	1.43E-06	8.70E-05	5.29E-04	3.55E-04	9.73E-04
24	8.4*	0.	0.	5.15E-11	0.	0.	0.	1.44E-06	9.02E-05	5.34E-04	3.53E-04	9.78E-04
25	8.3*	0.	0.	4.49E-11	0.	0.	0.	1.45E-06	9.35E-05	5.39E-04	3.52E-04	9.86E-04
26	8.2*	0.	0.	4.50E-11	0.	0.	0.	1.46E-06	9.70E-05	5.44E-04	3.53E-04	9.95E-04
27	8.1*	0.	0.	4.86E-11	0.	0.	0.	1.46E-06	1.01E-04	5.50E-04	3.53E-04	1.00E-03
28	8.0*	0.	0.	4.13E-11	0.	0.	0.	1.47E-06	1.05E-04	5.56E-04	3.51E-04	1.01E-03
29	7.9*	0.	0.	3.64E-11	0.	0.	0.	1.48E-06	1.09E-04	5.63E-04	3.51E-04	1.02E-03
30	7.8*	0.	0.	3.83E-11	0.	0.	0.	1.49E-06	1.13E-04	5.70E-04	3.51E-04	1.04E-03
31	7.7*	0.	0.	3.44E-11	0.	0.	0.	1.49E-06	1.17E-04	5.78E-04	3.51E-04	1.05E-03
32	7.6*	0.	0.	3.32E-11	0.	1.99E-15	0.	1.50E-06	1.22E-04	5.86E-04	3.52E-04	1.06E-03
33	7.5*	0.	0.	3.15E-11	0.	6.01E-15	0.	1.51E-06	1.27E-04	5.39E-04	3.52E-04	1.02E-03
34	7.4*	0.	0.	2.88E-11	0.	5.84E-14	0.	1.52E-06	1.32E-04	5.48E-04	3.52E-04	1.03E-03
35	7.3*	0.	0.	2.78E-11	0.	2.13E-13	0.	1.53E-06	1.38E-04	5.57E-04	3.52E-04	1.05E-03
36	7.2*	0.	0.	2.56E-11	0.	6.08E-13	0.	1.53E-06	1.44E-04	5.67E-04	3.53E-04	1.07E-03
37	7.1*	0.	0.	2.58E-11	0.	1.93E-12	0.	1.55E-06	1.50E-04	5.78E-04	3.53E-04	1.08E-03
38	7.0*	9.68E-15	0.	2.34E-11	0.	3.54E-12	0.	1.56E-06	1.57E-04	5.88E-04	3.53E-04	1.10E-03
39	6.9*	1.90E-14	0.	2.19E-11	0.	5.43E-12	0.	1.57E-06	1.64E-04	5.98E-04	3.54E-04	1.12E-03
40	6.8*	1.66E-14	0.	2.15E-11	0.	8.72E-12	0.	1.58E-06	1.71E-04	6.09E-04	3.54E-04	1.14E-03
41	6.7*	1.22E-14	0.	1.93E-11	0.	8.25E-12	0.	1.60E-06	1.79E-04	6.19E-04	3.55E-04	1.15E-03
42	6.6*	7.55E-15	0.	1.77E-11	0.	7.43E-12	0.	1.61E-06	1.87E-04	6.31E-04	3.56E-04	1.18E-03
43	6.5*	4.42E-15	0.	1.44E-11	0.	1.82E-11	0.	1.62E-06	1.96E-04	6.16E-04	3.57E-04	1.17E-03
44	6.4*	2.50E-15	0.	1.03E-11	2.91E-14	9.12E-12	0.	1.63E-06	2.06E-04	6.27E-04	3.58E-04	1.19E-03
45	6.3*	1.53E-15	0.	6.72E-12	1.41E-13	7.21E-12	0.	1.65E-06	2.16E-04	6.39E-04	3.59E-04	1.22E-03
46	6.2*	7.98E-16	0.	3.05E-12	2.84E-13	9.49E-12	0.	1.66E-06	2.27E-04	6.52E-04	3.62E-04	1.24E-03
47	6.1*	3.20E-16	0.	1.07E-12	5.92E-13	1.17E-11	0.	1.67E-06	2.38E-04	6.65E-04	3.65E-04	1.27E-03
48	6.0*	1.39E-16	0.	4.95E-13	5.89E-13	5.86E-12	0.	1.68E-06	2.50E-04	6.78E-04	3.67E-04	1.30E-03
49	5.9*	3.46E-17	0.	3.48E-14	8.77E-13	5.62E-12	0.	1.68E-06	2.63E-04	6.92E-04	3.70E-04	1.33E-03
50	5.8*	4.44E-18	0.	8.84E-16	1.24E-12	5.97E-12	0.	1.66E-06	2.77E-04	7.07E-04	3.72E-04	1.36E-03
51	5.7*	3.27E-19	0.	0.	1.49E-12	6.68E-12	0.	1.56E-06	2.92E-04	7.23E-04	3.75E-04	1.39E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-05 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.40	1.49E-20	0.	0.	0.	1.32E-12	8.50E-12	0.	0.	1.45E-06	3.09E-04	7.41E-04	3.78E-04	1.43E-03
93	5.50	0.	0.	0.	0.	1.62E-12	7.85E-12	0.	0.	1.46E-06	3.26E-04	7.62E-04	3.82E-04	1.47E-03
94	5.40	0.	0.	0.	0.	1.53E-12	6.68E-12	0.	0.	1.46E-06	3.45E-04	7.86E-04	3.86E-04	1.52E-03
95	5.30	0.	0.	0.	0.	1.57E-12	8.10E-12	0.	0.	1.47E-06	3.65E-04	8.11E-04	3.92E-04	1.57E-03
96	5.20	0.	0.	0.	0.	1.71E-12	6.64E-12	0.	0.	1.48E-06	3.87E-04	6.64E-04	3.97E-04	1.45E-03
97	5.10	0.	0.	0.	0.	1.72E-12	8.41E-12	0.	0.	1.50E-06	4.10E-04	8.86E-04	3.94E-04	1.49E-03
98	5.00	2.13E-13	0.	0.	0.	1.59E-12	8.13E-12	0.	0.	1.51E-06	4.35E-04	7.10E-04	4.00E-04	1.55E-03
99	4.90	5.29E-13	0.	0.	0.	1.70E-12	9.09E-12	0.	0.	1.52E-06	4.63E-04	7.37E-04	4.08E-04	1.61E-03
100	4.80	1.07E-12	0.	0.	0.	1.94E-12	8.58E-12	0.	0.	1.53E-06	4.93E-04	7.66E-04	4.17E-04	1.68E-03
101	4.70	1.40E-12	0.	0.	0.	1.97E-12	7.87E-12	0.	0.	1.55E-06	5.25E-04	7.99E-04	4.28E-04	1.75E-03
102	4.60	1.98E-12	0.	0.	0.	2.05E-12	7.12E-12	0.	0.	1.56E-06	5.60E-04	8.38E-04	4.40E-04	1.84E-03
103	4.50	2.11E-12	0.	2.53E-12	0.	1.91E-12	5.39E-12	0.	0.	1.57E-06	5.99E-04	8.85E-04	4.53E-04	1.94E-03
104	4.40	2.30E-12	0.	7.19E-12	0.	1.94E-12	3.69E-12	0.	0.	1.58E-06	6.41E-04	9.34E-04	4.66E-04	2.04E-03
105	4.30	2.22E-12	0.	2.56E-11	0.	1.88E-12	2.34E-12	0.	0.	1.60E-06	6.87E-04	9.87E-04	4.78E-04	2.15E-03
106	4.20	2.10E-12	0.	7.66E-11	0.	1.99E-12	1.58E-12	0.	0.	1.61E-06	7.39E-04	1.04E-03	4.92E-04	2.28E-03
107	4.10	2.08E-12	0.	3.71E-11	0.	1.98E-12	4.52E-13	0.	0.	1.62E-06	7.95E-04	1.10E-03	4.88E-04	2.38E-03
108	4.00	1.88E-12	0.	1.12E-10	0.	1.94E-12	3.34E-13	0.	0.	1.62E-06	8.58E-04	1.16E-03	2.69E-04	2.28E-03
109	3.90	1.63E-12	0.	5.40E-11	1.23E-09	1.84E-12	1.23E-13	0.	0.	1.62E-06	9.27E-04	1.17E-03	2.78E-04	2.38E-03
110	3.80	1.60E-12	0.	8.78E-11	4.54E-09	1.99E-12	0.	0.	0.	1.61E-06	1.00E-03	1.19E-03	2.91E-04	2.48E-03
111	3.70	1.64E-12	0.	8.73E-11	2.34E-09	1.76E-12	0.	0.	0.	1.58E-06	1.09E-03	1.06E-03	3.16E-04	2.46E-03
112	3.60	1.51E-12	0.	4.66E-11	1.15E-08	1.90E-12	0.	0.	0.	1.48E-06	1.18E-03	1.13E-03	3.44E-04	2.66E-03
113	3.50	1.43E-12	0.	8.53E-11	1.92E-08	1.53E-12	0.	0.	0.	1.36E-06	1.29E-03	1.21E-03	3.78E-04	2.87E-03
114	3.40	1.34E-12	0.	9.76E-11	3.54E-09	1.75E-12	0.	0.	0.	7.83E-07	1.41E-03	1.32E-03	4.11E-04	3.14E-03
115	3.30	1.09E-12	0.	5.89E-11	1.24E-08	1.43E-12	0.	0.	0.	7.84E-07	1.54E-03	1.44E-03	4.48E-04	3.43E-03
116	3.20	9.69E-13	0.	3.99E-11	1.82E-08	1.52E-12	0.	0.	0.	7.86E-07	1.70E-03	1.57E-03	4.87E-04	3.75E-03
117	3.10	9.47E-13	0.	3.15E-11	5.64E-09	1.47E-12	0.	0.	0.	7.88E-07	1.87E-03	1.70E-03	5.26E-04	4.09E-03
118	3.00	8.67E-13	0.	1.97E-11	1.16E-08	1.42E-12	0.	0.	0.	7.90E-07	2.06E-03	1.83E-03	5.65E-04	4.46E-03
119	2.90	7.47E-13	0.	1.26E-11	6.22E-09	1.12E-12	0.	0.	0.	7.91E-07	2.29E-03	1.97E-03	6.10E-04	4.88E-03
120	2.80	7.91E-13	0.	6.08E-12	4.62E-09	8.16E-13	0.	0.	0.	7.92E-07	2.55E-03	2.14E-03	6.62E-04	5.35E-03
121	2.70	5.27E-13	0.	2.88E-12	5.43E-09	4.66E-13	0.	0.	0.	7.92E-07	2.85E-03	2.31E-03	7.18E-04	5.88E-03
122	2.60	2.59E-13	0.	1.36E-12	5.93E-10	2.13E-13	0.	0.	0.	7.92E-07	3.20E-03	2.26E-03	7.72E-04	6.24E-03
123	2.50	1.85E-14	0.	1.39E-13	5.85E-10	5.20E-14	0.	0.	0.	7.92E-07	3.61E-03	2.56E-03	5.32E-04	6.70E-03
124	2.40	0.	5.89E-12	0.	4.22E-10	5.66E-15	0.	0.	0.	7.92E-07	4.08E-03	2.97E-03	6.06E-04	7.66E-03
125	2.30	0.	1.64E-11	0.	0.	0.	0.	0.	0.	7.86E-07	4.65E-03	2.78E-03	7.16E-04	8.14E-03
126	2.20	0.	4.52E-11	0.	0.	0.	0.	0.	0.	7.83E-07	5.32E-03	3.26E-03	8.49E-04	9.44E-03
127	2.10	0.	4.45E-11	0.	0.	0.	0.	0.	0.	7.79E-07	6.14E-03	3.78E-03	9.82E-04	1.09E-02
128	2.00	0.	9.07E-11	0.	0.	0.	0.	0.	0.	7.54E-07	7.14E-03	4.30E-03	1.12E-03	1.26E-02
129	1.90	0.	1.02E-10	0.	0.	0.	0.	0.	0.	7.20E-07	8.37E-03	4.92E-03	1.31E-03	1.46E-02
130	1.80	0.	8.86E-11	0.	0.	0.	0.	0.	0.	6.94E-07	9.89E-03	5.87E-03	1.60E-03	1.76E-02
131	1.70	0.	9.88E-11	0.	0.	0.	0.	0.	0.	6.54E-07	1.18E-02	7.02E-03	1.95E-03	2.08E-02
132	1.60	0.	7.57E-11	0.	0.	0.	0.	0.	0.	5.53E-07	1.42E-02	8.18E-03	2.29E-03	2.47E-02
133	1.50	0.	8.50E-11	0.	0.	0.	0.	0.	0.	2.51E-07	1.73E-02	1.06E-02	2.77E-03	3.07E-02
134	1.40	0.	8.32E-11	0.	0.	0.	0.	0.	0.	0.	2.13E-02	1.32E-02	3.31E-03	3.79E-02
135	1.30	0.	6.37E-11	0.	0.	0.	0.	0.	0.	0.	2.68E-02	1.78E-02	4.34E-03	4.89E-02
136	1.20	0.	6.07E-11	0.	0.	0.	0.	0.	0.	0.	3.43E-02	2.02E-02	4.37E-03	5.80E-02
137	1.10	0.	5.99E-11	0.	0.	0.	0.	7.95E-17	0.	0.	4.49E-02	2.44E-02	5.44E-03	7.48E-02
138	1.00	0.	5.51E-11	0.	0.	0.	0.	1.30E-15	0.	0.	6.03E-02	2.97E-02	6.21E-03	9.61E-02
139	0.90	0.	4.51E-11	0.	0.	0.	0.	1.64E-15	0.	0.	8.35E-02	3.42E-02	7.27E-03	1.29E-01
140	0.80	0.	2.11E-11	0.	0.	0.	0.	3.66E-14	0.	0.	1.20E-01	3.94E-02	8.33E-03	1.68E-01
141	0.70	0.	4.86E-12	0.	0.	0.	0.	3.66E-14	0.	0.	1.82E-01	4.23E-02	8.20E-03	2.33E-01
142	0.60	0.	1.21E-12	0.	0.	0.	0.	1.11E-13	0.	0.	2.95E-01	4.73E-02	9.17E-03	3.51E-01

ABSORPTION COEFFICIE OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.2938-04 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.30E-14	0.	0.	0.	1.68E-09	5.84E-07	3.88E-05	4.89E-06	4.46E-05
2	10.60	0.	0.	1.20E-14	0.	0.	0.	1.66E-09	6.81E-07	3.91E-05	4.77E-06	4.45E-05
3	10.50	0.	0.	1.31E-14	0.	0.	0.	1.66E-09	6.19E-07	3.96E-05	4.76E-06	4.50E-05
4	10.40	0.	0.	1.27E-14	0.	0.	0.	1.66E-09	6.37E-07	4.01E-05	4.74E-06	4.55E-05
5	10.30	0.	0.	1.13E-14	0.	0.	0.	1.67E-09	6.56E-07	4.06E-05	4.72E-06	4.60E-05
6	10.20	0.	0.	1.18E-14	0.	0.	0.	1.67E-09	6.75E-07	4.12E-05	4.78E-06	4.66E-05
7	10.10	0.	0.	1.13E-14	0.	0.	0.	1.67E-09	6.96E-07	4.17E-05	4.69E-06	4.71E-05
8	10.00	0.	0.	1.01E-14	0.	0.	0.	1.67E-09	7.17E-07	1.97E-05	4.68E-06	2.51E-05
9	9.90	0.	0.	1.05E-14	0.	0.	0.	1.68E-09	7.39E-07	1.99E-05	4.67E-06	2.53E-05
10	9.80	0.	0.	1.40E-14	0.	0.	0.	1.68E-09	7.62E-07	2.01E-05	4.65E-06	2.55E-05
11	9.70	0.	0.	8.88E-15	0.	0.	0.	1.68E-09	7.86E-07	2.03E-05	4.64E-06	2.57E-05
12	9.60	0.	0.	9.64E-15	0.	0.	0.	1.68E-09	8.11E-07	2.05E-05	4.63E-06	2.59E-05
13	9.50	0.	0.	8.49E-15	0.	0.	0.	1.69E-09	8.38E-07	2.07E-05	4.61E-06	2.62E-05
14	9.40	0.	0.	8.17E-15	0.	0.	0.	1.69E-09	8.65E-07	2.09E-05	4.60E-06	2.64E-05
15	9.30	0.	0.	8.42E-15	0.	0.	0.	1.70E-09	8.93E-07	2.12E-05	4.59E-06	2.66E-05
16	9.20	0.	0.	7.21E-15	0.	0.	0.	1.71E-09	9.23E-07	2.14E-05	4.58E-06	2.69E-05
17	9.10	0.	0.	7.44E-15	0.	0.	0.	1.71E-09	9.54E-07	1.83E-05	4.57E-06	2.38E-05
18	9.00	0.	0.	6.91E-15	0.	0.	0.	1.72E-09	9.87E-07	1.65E-05	4.56E-06	2.20E-05
19	8.90	0.	0.	6.53E-15	0.	0.	0.	1.72E-09	1.02E-06	1.67E-05	4.55E-06	2.22E-05
20	8.80	0.	0.	6.40E-15	0.	0.	0.	1.73E-09	1.06E-06	1.69E-05	4.54E-06	2.25E-05
21	8.70	0.	0.	5.78E-15	0.	0.	0.	1.74E-09	1.09E-06	1.71E-05	4.53E-06	2.27E-05
22	8.60	0.	0.	6.81E-15	0.	0.	0.	1.74E-09	1.13E-06	1.73E-05	4.53E-06	2.29E-05
23	8.50	0.	0.	5.41E-15	0.	0.	0.	1.75E-09	1.17E-06	1.75E-05	4.52E-06	2.32E-05
24	8.40	0.	0.	5.43E-15	0.	0.	0.	1.76E-09	1.22E-06	1.77E-05	4.51E-06	2.35E-05
25	8.30	0.	0.	4.74E-15	0.	0.	0.	1.77E-09	1.26E-06	1.80E-05	4.51E-06	2.38E-05
26	8.20	0.	0.	4.84E-15	0.	0.	0.	1.78E-09	1.31E-06	1.84E-05	4.52E-06	2.42E-05
27	8.10	0.	0.	4.99E-15	0.	0.	0.	1.79E-09	1.36E-06	1.88E-05	4.36E-06	2.45E-05
28	8.00	0.	0.	4.37E-15	0.	0.	0.	1.79E-09	1.41E-06	1.91E-05	4.35E-06	2.49E-05
29	7.90	0.	0.	3.85E-15	0.	0.	0.	1.80E-09	1.46E-06	1.95E-05	4.37E-06	2.53E-05
30	7.80	0.	0.	4.84E-15	0.	0.	0.	1.81E-09	1.52E-06	1.99E-05	4.38E-06	2.58E-05
31	7.70	0.	0.	3.63E-15	0.	0.	0.	1.82E-09	1.58E-06	2.03E-05	4.40E-06	2.63E-05
32	7.60	0.	0.	3.51E-15	0.	2.27E-19	0.	1.83E-09	1.65E-06	1.56E-05	4.42E-06	2.17E-05
33	7.50	0.	0.	3.32E-15	0.	6.88E-19	0.	1.84E-09	1.71E-06	1.61E-05	4.44E-06	2.23E-05
34	7.40	0.	0.	3.84E-15	0.	5.67E-18	0.	1.85E-09	1.78E-06	1.66E-05	4.47E-06	2.28E-05
35	7.30	0.	0.	2.93E-15	0.	2.44E-17	0.	1.86E-09	1.86E-06	1.72E-05	4.49E-06	2.35E-05
36	7.20	0.	0.	2.70E-15	0.	6.98E-17	0.	1.87E-09	1.94E-06	1.78E-05	4.53E-06	2.43E-05
37	7.10	0.	0.	2.64E-15	0.	2.28E-16	0.	1.89E-09	2.02E-06	1.85E-05	4.56E-06	2.51E-05
38	7.00	1.19E-18	0.	2.47E-15	0.	4.85E-16	0.	1.90E-09	2.11E-06	1.92E-05	4.60E-06	2.59E-05
39	6.90	2.35E-18	0.	2.31E-15	0.	6.20E-16	0.	1.92E-09	2.20E-06	1.99E-05	4.64E-06	2.67E-05
40	6.80	2.85E-18	0.	2.27E-15	0.	9.97E-16	0.	1.93E-09	2.30E-06	2.06E-05	4.67E-06	2.75E-05
41	6.70	1.51E-18	0.	2.03E-15	0.	9.43E-16	0.	1.95E-09	2.41E-06	2.12E-05	4.72E-06	2.84E-05
42	6.60	5.35E-19	0.	1.86E-15	0.	8.49E-16	0.	1.96E-09	2.52E-06	2.18E-05	4.76E-06	2.91E-05
43	6.50	5.47E-19	0.	1.53E-15	0.	1.16E-15	0.	1.98E-09	2.64E-06	2.01E-05	4.80E-06	2.75E-05
44	6.40	3.19E-19	0.	1.09E-15	3.35E-18	1.04E-15	0.	1.99E-09	2.77E-06	2.07E-05	4.84E-06	2.83E-05
45	6.30	1.09E-19	0.	7.89E-16	1.41E-17	8.29E-16	0.	2.01E-09	2.91E-06	2.14E-05	4.90E-06	2.92E-05
46	6.20	8.67E-20	0.	4.67E-16	2.34E-17	1.00E-15	0.	2.03E-09	3.05E-06	2.21E-05	4.96E-06	3.01E-05
47	6.10	4.06E-20	0.	1.97E-16	6.77E-17	1.20E-15	0.	2.04E-09	3.20E-06	2.28E-05	5.03E-06	3.10E-05
48	6.00	1.72E-20	0.	5.12E-17	6.74E-17	6.70E-16	0.	2.06E-09	3.37E-06	2.35E-05	5.10E-06	3.20E-05
49	5.90	4.29E-21	0.	3.46E-18	1.00E-16	6.43E-16	0.	2.06E-09	3.55E-06	2.43E-05	5.17E-06	3.30E-05
50	5.80	5.49E-22	0.	9.34E-20	1.42E-16	6.83E-16	0.	2.03E-09	3.73E-06	2.50E-05	5.23E-06	3.40E-05
51	5.70	4.85E-23	0.	0.	1.71E-16	7.64E-16	0.	1.98E-09	3.94E-06	2.58E-05	5.30E-06	3.51E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO ?	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	1.84E-24	0.	0.	0.	1.51E-16	9.71E-16	0.	0.	1.77E-09	4.15E-06	2.68E-05	5.57E-06	3.63E-05
93	5.50	0.	0.	0.	0.	1.65E-16	8.98E-16	0.	0.	1.78E-09	4.39E-06	2.78E-05	5.46E-06	3.76E-05
94	5.40	0.	0.	0.	0.	1.79E-16	7.64E-16	0.	0.	1.79E-09	4.64E-06	2.89E-05	5.55E-06	3.91E-05
95	5.30	0.	0.	0.	0.	1.79E-16	9.35E-16	0.	0.	1.80E-09	4.91E-06	1.42E-05	5.66E-06	2.48E-05
96	5.20	0.	0.	0.	0.	1.95E-16	7.59E-16	0.	0.	1.81E-09	5.20E-06	1.49E-05	4.79E-06	2.49E-05
97	5.10	0.	0.	0.	0.	1.96E-16	9.61E-16	0.	0.	1.83E-09	5.52E-06	1.55E-05	4.89E-06	2.59E-05
98	5.00	2.63E-17	0.	0.	0.	1.81E-16	9.29E-16	0.	0.	1.84E-09	5.86E-06	1.62E-05	4.98E-06	2.70E-05
99	4.90	6.55E-17	0.	0.	0.	2.05E-16	1.03E-15	0.	0.	1.86E-09	6.23E-06	1.69E-05	5.09E-06	2.82E-05
66	4.80	1.26E-16	0.	0.	0.	2.22E-16	9.81E-16	0.	0.	1.87E-09	6.63E-06	1.76E-05	5.21E-06	2.94E-05
61	4.70	1.74E-16	0.	0.	0.	2.25E-16	9.00E-16	0.	0.	1.89E-09	7.06E-06	1.85E-05	5.37E-06	3.10E-05
62	4.60	2.45E-16	0.	0.	0.	2.34E-16	8.14E-16	0.	0.	1.90E-09	7.54E-06	1.97E-05	5.53E-06	3.28E-05
63	4.50	2.62E-16	0.	2.67E-16	0.	2.19E-16	6.16E-16	0.	0.	1.92E-09	8.06E-06	2.10E-05	5.70E-06	3.48E-05
64	4.40	2.69E-16	0.	7.59E-16	0.	2.22E-16	4.17E-16	0.	0.	1.93E-09	8.62E-06	2.23E-05	5.72E-06	3.66E-05
65	4.30	2.79E-16	0.	2.71E-15	0.	2.19E-16	2.68E-16	0.	0.	1.95E-09	9.25E-06	2.36E-05	5.91E-06	3.88E-05
66	4.20	2.68E-16	0.	8.88E-15	0.	2.28E-16	1.81E-16	0.	0.	1.96E-09	9.94E-06	2.51E-05	6.12E-06	4.12E-05
67	4.10	2.48E-16	0.	3.92E-15	0.	2.27E-16	5.17E-17	0.	0.	1.97E-09	1.07E-05	2.67E-05	6.14E-06	4.35E-05
68	4.00	2.32E-16	0.	1.10E-14	0.	2.22E-16	3.89E-17	0.	0.	1.98E-09	1.15E-05	2.83E-05	3.75E-06	4.35E-05
69	3.90	2.01E-16	0.	5.71E-15	1.18E-12	2.10E-16	1.40E-17	0.	0.	1.97E-09	1.25E-05	2.92E-05	3.91E-06	4.56E-05
70	3.80	2.23E-16	0.	9.87E-15	4.37E-12	2.28E-16	0.	0.	0.	1.96E-09	1.35E-05	2.87E-05	4.10E-06	4.63E-05
71	3.70	2.04E-16	0.	9.22E-15	2.26E-12	2.01E-16	0.	0.	0.	1.93E-09	1.46E-05	3.02E-05	4.43E-06	4.92E-05
72	3.60	1.86E-16	0.	7.03E-15	1.11E-11	2.17E-16	0.	0.	0.	1.81E-09	1.55E-05	3.19E-05	4.79E-06	5.26E-05
73	3.50	1.77E-16	0.	9.81E-15	1.84E-11	1.77E-16	0.	0.	0.	1.66E-09	1.73E-05	3.37E-05	5.20E-06	5.63E-05
74	3.40	1.66E-16	0.	6.08E-15	3.41E-12	2.00E-16	0.	0.	0.	9.58E-10	1.89E-05	3.61E-05	5.63E-06	6.07E-05
75	3.30	1.35E-16	0.	6.21E-15	1.19E-11	1.64E-16	0.	0.	0.	9.58E-10	2.07E-05	3.85E-05	6.10E-06	6.54E-05
76	3.20	1.20E-16	0.	4.21E-15	1.75E-11	1.74E-16	0.	0.	0.	9.59E-10	2.29E-05	4.15E-05	6.64E-06	7.09E-05
77	3.10	1.17E-16	0.	3.33E-15	5.43E-12	1.68E-16	0.	0.	0.	9.61E-10	2.51E-05	4.47E-05	7.17E-06	7.69E-05
78	3.00	1.07E-16	0.	2.08E-15	1.12E-11	1.63E-16	0.	0.	0.	9.64E-10	2.77E-05	4.78E-05	7.71E-06	8.33E-05
79	2.90	9.29E-17	0.	1.33E-15	5.98E-12	1.28E-16	0.	0.	0.	9.65E-10	3.08E-05	5.11E-05	8.32E-06	9.02E-05
80	2.80	9.80E-17	0.	6.42E-16	4.45E-12	9.33E-17	0.	0.	0.	9.67E-10	3.42E-05	5.47E-05	9.00E-06	9.79E-05
81	2.70	6.53E-17	0.	3.84E-16	5.23E-12	5.32E-17	0.	0.	0.	9.67E-10	3.83E-05	5.88E-05	9.51E-06	8.46E-05
82	2.60	3.21E-17	0.	1.44E-16	5.70E-13	2.44E-17	0.	0.	0.	9.67E-10	4.29E-05	3.83E-05	1.02E-05	9.15E-05
83	2.50	2.29E-18	0.	1.46E-17	5.63E-13	5.99E-18	0.	0.	0.	9.67E-10	4.84E-05	4.28E-05	7.39E-06	9.86E-05
84	2.40	0.	6.22E-16	0.	4.86E-13	6.47E-19	0.	0.	0.	9.67E-10	5.48E-05	4.28E-05	8.27E-06	1.06E-04
85	2.30	0.	1.73E-15	0.	0.	0.	0.	0.	0.	9.59E-10	6.24E-05	4.99E-05	9.31E-06	1.22E-04
86	2.20	0.	4.70E-15	0.	0.	0.	0.	0.	0.	9.55E-10	7.14E-05	5.72E-05	1.09E-05	1.40E-04
87	2.10	0.	4.69E-15	0.	0.	0.	0.	0.	0.	9.51E-10	8.24E-05	6.48E-05	1.26E-05	1.60E-04
88	2.00	0.	9.57E-15	0.	0.	0.	0.	0.	0.	9.21E-10	9.58E-05	7.24E-05	1.47E-05	1.82E-04
89	1.90	0.	1.87E-14	0.	0.	0.	0.	0.	0.	8.86E-10	1.12E-04	8.12E-05	1.65E-05	2.10E-04
90	1.80	0.	9.39E-15	0.	0.	0.	0.	0.	0.	8.47E-10	1.32E-04	9.32E-05	1.99E-05	2.46E-04
91	1.70	0.	1.84E-14	0.	0.	0.	0.	0.	0.	7.98E-10	1.58E-04	1.07E-04	2.39E-05	2.89E-04
92	1.60	0.	7.99E-15	0.	0.	0.	0.	0.	0.	6.75E-10	1.90E-04	1.22E-04	2.79E-05	3.40E-04
93	1.50	0.	8.97E-15	0.	0.	0.	0.	0.	0.	3.87E-10	2.32E-04	1.40E-04	3.33E-05	4.14E-04
94	1.40	0.	8.78E-15	0.	0.	0.	0.	0.	0.	0.	2.86E-04	1.73E-04	3.95E-05	4.98E-04
95	1.30	0.	6.72E-15	0.	0.	0.	0.	0.	0.	0.	3.59E-04	2.27E-04	4.74E-05	6.33E-04
96	1.20	0.	6.41E-15	0.	0.	0.	0.	0.	0.	0.	4.59E-04	2.27E-04	4.99E-05	7.36E-04
97	1.10	0.	6.31E-15	0.	0.	0.	0.	9.09E-21	0.	0.	6.80E-04	2.75E-04	6.20E-05	9.38E-04
98	1.00	0.	5.81E-15	0.	0.	0.	0.	1.59E-19	0.	0.	8.86E-04	3.30E-04	7.08E-05	1.21E-03
99	0.90	0.	4.76E-15	0.	0.	0.	0.	1.88E-19	0.	0.	1.11E-03	3.78E-04	8.26E-05	1.50E-03
100	0.80	0.	2.23E-15	0.	0.	0.	0.	4.19E-18	0.	0.	1.41E-03	4.33E-04	9.45E-05	2.18E-03
101	0.70	0.	5.87E-16	0.	0.	0.	0.	4.18E-18	0.	0.	2.43E-03	4.64E-04	9.31E-05	2.99E-03
102	0.60	0.	1.20E-16	0.	0.	0.	0.	1.27E-17	0.	0.	3.93E-03	4.75E-04	1.04E-04	4.51E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	8.53E-19	0.	0.	0.	2.41E-12	1.29E-08	1.80E-06	9.15E-08	1.99E-06
2	10.60	0.	0.	7.91E-19	0.	0.	0.	2.42E-12	1.33E-08	1.91E-06	9.14E-08	2.02E-06
3	10.50	0.	0.	8.08E-19	0.	0.	0.	2.42E-12	1.37E-08	6.77E-07	9.13E-08	7.83E-07
4	10.40	0.	0.	7.81E-19	0.	0.	0.	2.42E-12	1.41E-08	6.83E-07	9.11E-08	7.88E-07
5	10.30	0.	0.	6.95E-19	0.	0.	0.	2.43E-12	1.45E-08	6.90E-07	9.11E-08	7.96E-07
6	10.20	0.	0.	7.20E-19	0.	0.	0.	2.43E-12	1.49E-08	7.01E-07	9.14E-08	8.08E-07
7	10.10	0.	0.	6.94E-19	0.	0.	0.	2.43E-12	1.54E-08	7.13E-07	9.19E-08	8.23E-07
8	10.00	0.	0.	6.25E-19	0.	0.	0.	2.43E-12	1.58E-08	7.24E-07	9.25E-08	8.32E-07
9	9.90	0.	0.	6.45E-19	0.	0.	0.	2.44E-12	1.63E-08	7.35E-07	9.28E-08	8.44E-07
10	9.80	0.	0.	6.18E-19	0.	0.	0.	2.44E-12	1.68E-08	7.47E-07	9.32E-08	8.57E-07
11	9.70	0.	0.	5.47E-19	0.	0.	0.	2.45E-12	1.73E-08	7.58E-07	9.37E-08	8.69E-07
12	9.60	0.	0.	5.93E-19	0.	0.	0.	2.45E-12	1.79E-08	7.69E-07	9.41E-08	8.81E-07
13	9.50	0.	0.	5.21E-19	0.	0.	0.	2.46E-12	1.85E-08	7.81E-07	9.46E-08	8.94E-07
14	9.40	0.	0.	5.03E-19	0.	0.	0.	2.47E-12	1.91E-08	7.93E-07	9.51E-08	9.07E-07
15	9.30	0.	0.	5.18E-19	0.	0.	0.	2.48E-12	1.97E-08	7.63E-07	9.57E-08	8.79E-07
16	9.20	0.	0.	4.44E-19	0.	0.	0.	2.48E-12	2.04E-08	7.75E-07	9.63E-08	8.92E-07
17	9.10	0.	0.	4.50E-19	0.	0.	0.	2.49E-12	2.10E-08	7.87E-07	9.68E-08	9.05E-07
18	9.00	0.	0.	4.25E-19	0.	0.	0.	2.50E-12	2.18E-08	7.99E-07	9.74E-08	9.18E-07
19	8.90	0.	0.	3.82E-19	0.	0.	0.	2.51E-12	2.25E-08	8.11E-07	9.80E-08	9.31E-07
20	8.80	0.	0.	3.99E-19	0.	0.	0.	2.52E-12	2.33E-08	8.22E-07	9.84E-08	9.44E-07
21	8.70	0.	0.	3.56E-19	0.	0.	0.	2.53E-12	2.41E-08	8.34E-07	9.90E-08	9.57E-07
22	8.60	0.	0.	3.70E-19	0.	0.	0.	2.54E-12	2.49E-08	8.46E-07	9.38E-08	9.54E-07
23	8.50	0.	0.	3.33E-19	0.	0.	0.	2.55E-12	2.58E-08	8.59E-07	8.08E-08	9.66E-07
24	8.40	0.	0.	3.35E-19	0.	0.	0.	2.56E-12	2.68E-08	8.72E-07	8.16E-08	9.81E-07
25	8.30	0.	0.	2.92E-19	0.	0.	0.	2.57E-12	2.78E-08	8.86E-07	8.25E-08	9.96E-07
26	8.20	0.	0.	2.98E-19	0.	0.	0.	2.59E-12	2.88E-08	9.10E-07	8.41E-08	1.02E-06
27	8.10	0.	0.	2.64E-19	0.	0.	0.	2.60E-12	2.99E-08	9.31E-07	8.58E-08	1.05E-06
28	8.00	0.	0.	2.69E-19	0.	0.	0.	2.61E-12	3.18E-08	6.35E-07	8.74E-08	7.54E-07
29	7.90	0.	0.	2.37E-19	0.	0.	0.	2.63E-12	3.22E-08	6.57E-07	8.91E-08	7.78E-07
30	7.80	0.	0.	2.49E-19	0.	0.	0.	2.64E-12	3.35E-08	6.79E-07	9.07E-08	8.03E-07
31	7.70	0.	0.	2.24E-19	0.	0.	0.	2.65E-12	3.48E-08	7.03E-07	9.24E-08	8.30E-07
32	7.60	0.	0.	2.16E-19	0.	2.02E-23	0.	2.67E-12	3.62E-08	7.31E-07	9.42E-08	8.61E-07
33	7.50	0.	0.	2.05E-19	0.	6.11E-23	0.	2.68E-12	3.77E-08	7.58E-07	9.60E-08	8.92E-07
34	7.40	0.	0.	1.87E-19	0.	5.93E-22	0.	2.70E-12	3.93E-08	7.85E-07	9.79E-08	9.23E-07
35	7.30	0.	0.	1.81E-19	0.	2.17E-21	0.	2.71E-12	4.09E-08	8.18E-07	1.00E-07	9.59E-07
36	7.20	0.	0.	1.66E-19	0.	4.17E-21	0.	2.73E-12	4.26E-08	8.58E-07	1.03E-07	1.00E-06
37	7.10	0.	0.	1.63E-19	0.	1.96E-20	0.	2.75E-12	4.45E-08	8.97E-07	1.06E-07	1.05E-06
38	7.00	1.53E-22	0.	1.52E-19	0.	3.68E-20	0.	2.77E-12	4.64E-08	7.96E-07	1.10E-07	9.53E-07
39	6.90	3.61E-22	0.	1.42E-19	0.	5.51E-20	0.	2.79E-12	4.85E-08	8.33E-07	1.13E-07	9.94E-07
40	6.80	2.63E-22	0.	1.40E-19	0.	8.86E-20	0.	2.81E-12	5.07E-08	8.69E-07	1.16E-07	1.04E-06
41	6.70	1.94E-22	0.	1.25E-19	0.	8.38E-20	0.	2.84E-12	5.30E-08	9.06E-07	1.19E-07	1.08E-06
42	6.60	1.20E-22	0.	1.15E-19	0.	7.55E-20	0.	2.86E-12	5.55E-08	9.43E-07	1.23E-07	1.12E-06
43	6.50	7.82E-23	0.	9.30E-20	0.	1.03E-19	0.	2.88E-12	5.81E-08	9.79E-07	1.26E-07	1.16E-06
44	6.40	4.10E-23	0.	6.73E-20	2.96E-22	9.27E-20	0.	2.90E-12	6.09E-08	1.02E-06	1.29E-07	1.21E-06
45	6.30	2.42E-23	0.	4.37E-20	1.43E-21	7.33E-20	0.	2.93E-12	6.39E-08	1.05E-06	1.33E-07	1.25E-06
46	6.20	1.31E-23	0.	2.50E-20	2.88E-21	9.64E-20	0.	2.95E-12	6.71E-08	1.09E-06	1.37E-07	1.30E-06
47	6.10	5.21E-24	0.	1.22E-20	6.81E-21	1.14E-19	0.	2.97E-12	7.05E-08	1.13E-06	1.41E-07	1.34E-06
48	6.00	2.21E-24	0.	3.15E-21	5.99E-21	5.99E-20	0.	2.99E-12	7.41E-08	1.17E-06	1.45E-07	1.39E-06
49	5.90	5.30E-25	0.	2.27E-22	8.91E-21	5.71E-20	0.	2.99E-12	7.79E-08	1.22E-06	1.49E-07	1.44E-06
50	5.80	7.05E-26	0.	5.75E-24	1.26E-20	6.87E-20	0.	2.95E-12	8.21E-08	1.26E-06	1.53E-07	1.49E-06
51	5.70	9.19E-27	0.	0.	1.52E-20	6.79E-20	0.	2.77E-12	8.65E-08	4.53E-07	8.35E-08	6.23E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.30E-28	0.	0.	0.	1.34E-20	8.63E-20	0.	0.	2.58E-12	9.13E-08	4.79E-07	8.37E-08	6.54E-07
53	5.50	0.	0.	0.	0.	1.65E-20	7.90E-20	0.	0.	2.59E-12	9.64E-08	5.07E-07	8.58E-08	6.89E-07
54	5.40	0.	0.	0.	0.	1.95E-20	6.79E-20	0.	0.	2.60E-12	1.02E-07	5.37E-07	8.86E-08	7.27E-07
55	5.30	0	0.	0.	0.	1.99E-20	8.31E-20	0.	0.	2.62E-12	1.08E-07	5.67E-07	9.17E-08	7.66E-07
56	5.20	0.	0.	0.	0.	1.74E-20	6.74E-20	0.	0.	2.64E-12	1.14E-07	5.97E-07	9.50E-08	8.06E-07
57	5.10	0.	0.	0.	0.	1.75E-20	8.54E-20	0.	0.	2.66E-12	1.21E-07	6.27E-07	9.82E-08	8.47E-07
58	5.00	3.30E-21	0.	0.	0.	1.61E-20	8.26E-20	0.	0.	2.68E-12	1.29E-07	6.58E-07	1.01E-07	8.88E-07
59	4.90	8.41E-21	0.	0.	0.	1.82E-20	9.20E-20	0.	0.	2.70E-12	1.37E-07	6.88E-07	1.05E-07	9.30E-07
60	4.80	1.61E-20	0.	0.	0.	1.97E-20	8.72E-20	0.	0.	2.73E-12	1.45E-07	7.19E-07	9.57E-08	9.60E-07
61	4.70	2.23E-20	0.	0.	0.	2.00E-20	7.99E-20	0.	0.	2.75E-12	1.55E-07	7.63E-07	9.96E-08	1.02E-06
62	4.60	3.14E-20	0.	0.	0.	2.08E-20	7.24E-20	0.	0.	2.77E-12	1.65E-07	8.19E-07	1.04E-07	1.09E-06
63	4.50	3.36E-20	0.	1.65E-23	0.	1.94E-20	5.48E-20	0.	0.	2.79E-12	1.77E-07	8.77E-07	1.08E-07	1.16E-06
64	4.40	3.36E-20	0.	4.47E-20	0.	1.97E-20	3.71E-20	0.	0.	2.81E-12	1.89E-07	9.34E-07	1.13E-07	1.24E-06
65	4.30	3.53E-20	0.	1.67E-19	0.	1.91E-20	2.38E-20	0.	0.	2.84E-12	2.03E-07	9.92E-07	1.16E-07	1.31E-06
66	4.20	3.30E-20	0.	4.98E-19	0.	2.02E-20	1.61E-20	0.	0.	2.86E-12	2.18E-07	1.06E-06	1.14E-07	1.39E-06
67	4.10	3.10E-20	0.	2.41E-19	0.	2.02E-20	4.60E-21	0.	0.	2.87E-12	2.35E-07	1.13E-06	1.01E-07	1.47E-06
68	4.05	2.98E-20	0.	7.25E-19	0.	1.97E-20	3.42E-21	0.	0.	2.88E-12	2.93E-07	1.20E-06	1.08E-07	1.56E-06
69	3.90	2.58E-20	0.	3.91E-19	5.66E-16	1.87E-20	1.25E-21	0.	0.	2.87E-12	2.73E-07	1.25E-06	1.10E-07	1.63E-06
70	3.80	2.08E-20	0.	9.71E-19	2.09E-15	2.03E-20	0.	0.	0.	2.86E-12	2.90E-07	1.32E-06	1.17E-07	1.73E-06
71	3.70	2.61E-20	0.	9.68E-19	1.08E-15	1.70E-20	0.	0.	0.	2.81E-12	3.21E-07	1.39E-06	1.25E-07	1.84E-06
72	3.60	2.39E-20	0.	4.33E-19	5.31E-15	1.93E-20	0.	0.	0.	2.64E-12	3.48E-07	1.46E-06	1.34E-07	1.94E-06
73	3.50	2.28E-20	0.	5.95E-19	8.84E-15	1.57E-20	0.	0.	0.	2.41E-12	3.80E-07	1.54E-06	1.43E-07	2.08E-06
74	3.40	2.13E-20	0.	3.79E-19	1.63E-15	1.70E-20	0.	0.	0.	1.39E-12	4.15E-07	1.63E-06	1.54E-07	2.28E-06
75	3.30	1.73E-20	0.	3.02E-19	5.70E-15	1.46E-20	0.	0.	0.	1.39E-12	4.54E-07	1.72E-06	1.65E-07	2.54E-06
76	3.20	1.54E-20	0.	2.40E-19	8.38E-15	1.55E-20	0.	0.	0.	1.40E-12	4.98E-07	1.84E-06	1.65E-07	2.51E-06
77	3.10	1.50E-20	0.	2.05E-19	2.60E-15	1.98E-20	0.	0.	0.	1.40E-12	5.49E-07	7.51E-07	1.79E-07	1.45E-06
78	3.00	1.38E-20	0.	1.28E-19	9.36E-15	1.45E-20	0.	0.	0.	1.40E-12	6.06E-07	8.41E-07	1.93E-07	1.64E-06
79	2.90	1.19E-20	0.	8.19E-20	2.57E-15	1.14E-20	0.	0.	0.	1.40E-12	6.72E-07	9.31E-07	1.73E-07	1.78E-06
80	2.80	1.24E-20	0.	5.96E-20	2.13E-15	8.29E-21	0.	0.	0.	1.41E-12	7.48E-07	1.02E-06	1.61E-07	1.93E-06
81	2.70	8.38E-21	0.	1.07E-20	2.58E-15	4.73E-21	0.	0.	0.	1.41E-12	8.36E-07	1.12E-06	1.61E-07	2.11E-06
82	2.60	4.12E-21	0.	8.07E-21	2.73E-16	2.17E-21	0.	0.	0.	1.41E-12	9.38E-07	1.21E-06	1.47E-07	2.29E-06
83	2.50	2.94E-22	0.	9.01E-22	2.70E-16	5.29E-22	0.	0.	0.	1.41E-12	1.06E-06	1.29E-06	1.66E-07	2.51E-06
84	2.40	0.	3.83E-22	0.	1.95E-16	5.75E-23	0.	0.	0.	1.41E-12	1.20E-06	1.47E-06	1.93E-07	2.86E-06
85	2.30	0.	1.07E-19	0.	0.	0.	0.	0.	0.	1.40E-12	1.36E-06	1.47E-06	2.21E-07	3.25E-06
86	2.20	0.	2.94E-19	0.	0.	0.	0.	0.	0.	1.39E-12	1.56E-06	1.86E-06	2.52E-07	3.67E-06
87	2.10	0.	2.89E-19	0.	0.	0.	0.	0.	0.	1.38E-12	1.80E-06	2.06E-06	2.83E-07	4.14E-06
88	2.00	0.	5.96E-19	0.	0.	0.	0.	0.	0.	1.36E-12	2.09E-06	2.26E-06	3.14E-07	4.66E-06
89	1.90	0.	6.61E-19	0.	0.	0.	0.	0.	0.	1.29E-12	2.44E-06	2.46E-06	3.52E-07	5.26E-06
90	1.80	0.	5.74E-19	0.	0.	0.	0.	0.	0.	1.23E-12	2.89E-06	2.78E-06	4.03E-07	5.99E-06
91	1.70	0.	6.42E-19	0.	0.	0.	0.	0.	0.	1.10E-12	3.44E-06	2.95E-06	3.41E-07	6.73E-06
92	1.60	0.	4.02E-19	0.	0.	0.	0.	0.	0.	9.83E-13	4.14E-06	1.80E-06	3.84E-07	6.32E-06
93	1.50	0.	5.53E-19	0.	0.	0.	0.	0.	0.	4.47E-13	5.04E-06	2.85E-06	4.52E-07	7.54E-06
94	1.40	0.	5.41E-19	0.	0.	0.	0.	0.	0.	0.	6.22E-06	2.35E-06	5.88E-07	9.87E-06
95	1.30	0.	4.14E-19	0.	0.	0.	0.	0.	0.	0.	7.79E-06	2.62E-06	5.44E-07	1.19E-05
96	1.20	0.	3.99E-19	0.	0.	0.	0.	0.	0.	0.	9.87E-06	3.09E-06	6.88E-07	1.37E-05
97	1.10	0.	3.89E-19	0.	0.	0.	0.	8.08E-25	0.	0.	1.30E-05	3.68E-06	7.97E-07	1.74E-05
98	1.00	0.	3.58E-19	0.	0.	0.	0.	1.41E-23	0.	0.	1.74E-05	4.86E-06	9.48E-07	2.25E-05
99	0.90	0.	2.93E-19	0.	0.	0.	0.	1.67E-23	0.	0.	2.41E-05	2.73E-06	9.14E-07	2.70E-05
100	0.80	0.	1.37E-19	0.	0.	0.	0.	3.72E-22	0.	0.	3.67E-05	2.98E-06	9.87E-07	3.66E-05
101	0.70	0.	3.12E-20	0.	0.	0.	0.	3.72E-22	0.	0.	5.25E-05	2.05E-06	7.97E-07	5.61E-05
102	0.60	0.	7.09E-21	0.	0.	0.	0.	1.13E-21	0.	0.	8.44E-05	3.21E-06	9.82E-07	8.87E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-04 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 O-N NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.78	0.	0.	8.07E-24	0.	0.	0.	2.18E-15	2.62E-10	1.51E-08	2.53E-09	1.79E-08
2	10.68	0.	0.	8.31E-24	0.	0.	0.	2.10E-15	2.79E-10	1.53E-08	2.54E-09	1.81E-08
3	10.58	0.	0.	8.56E-24	0.	0.	0.	2.11E-15	2.79E-10	1.54E-08	2.54E-09	1.82E-08
4	10.48	0.	0.	8.21E-24	0.	0.	0.	2.11E-15	2.86E-10	1.55E-08	2.55E-09	1.84E-08
5	10.38	0.	0.	7.31E-24	0.	0.	0.	2.11E-15	2.94E-10	1.57E-08	2.55E-09	1.86E-08
6	10.28	0.	0.	7.69E-24	0.	0.	0.	2.12E-15	3.03E-10	1.60E-08	2.58E-09	1.89E-08
7	10.18	0.	0.	7.29E-24	0.	0.	0.	2.12E-15	3.12E-10	1.63E-08	2.62E-09	1.92E-08
8	10.08	0.	0.	6.57E-24	0.	0.	0.	2.12E-15	3.21E-10	1.66E-08	2.65E-09	1.95E-08
9	9.98	0.	0.	6.70E-24	0.	0.	0.	2.13E-15	3.31E-10	1.68E-08	2.68E-09	1.98E-08
10	9.88	0.	0.	6.49E-24	0.	0.	0.	2.13E-15	3.42E-10	1.71E-08	2.72E-09	2.02E-08
11	9.78	0.	0.	5.75E-24	0.	0.	0.	2.13E-15	3.53E-10	1.74E-08	2.75E-09	2.05E-08
12	9.68	0.	0.	6.24E-24	0.	0.	0.	2.14E-15	3.64E-10	1.77E-08	2.78E-09	2.08E-08
13	9.58	0.	0.	5.47E-24	0.	0.	0.	2.14E-15	3.75E-10	1.80E-08	2.82E-09	2.11E-08
14	9.48	0.	0.	5.29E-24	0.	0.	0.	2.15E-15	3.88E-10	1.82E-08	2.86E-09	2.15E-08
15	9.38	0.	0.	5.49E-24	0.	0.	0.	2.15E-15	4.00E-10	1.84E-08	2.90E-09	2.17E-08
16	9.28	0.	0.	4.67E-24	0.	0.	0.	2.16E-15	4.13E-10	1.87E-08	2.94E-09	2.21E-08
17	9.18	0.	0.	4.82E-24	0.	0.	0.	2.17E-15	4.27E-10	1.90E-08	2.97E-09	2.24E-08
18	9.08	0.	0.	4.47E-24	0.	0.	0.	2.18E-15	4.42E-10	1.93E-08	3.01E-09	2.27E-08
19	8.98	0.	0.	4.23E-24	0.	0.	0.	2.19E-15	4.57E-10	1.96E-08	3.04E-09	2.31E-08
20	8.88	0.	0.	4.29E-24	0.	0.	0.	2.19E-15	4.73E-10	1.99E-08	3.07E-09	2.34E-08
21	8.78	0.	0.	3.74E-24	0.	0.	0.	2.20E-15	4.89E-10	2.02E-08	3.11E-09	2.38E-08
22	8.68	0.	0.	3.89E-24	0.	0.	0.	2.21E-15	5.07E-10	2.05E-08	3.15E-09	2.41E-08
23	8.58	0.	0.	3.96E-24	0.	0.	0.	2.22E-15	5.25E-10	2.08E-08	3.20E-09	2.45E-08
24	8.48	0.	0.	3.92E-24	0.	0.	0.	2.23E-15	5.44E-10	2.11E-08	3.25E-09	2.49E-08
25	8.38	0.	0.	3.87E-24	0.	0.	0.	2.24E-15	5.64E-10	2.36E-08	3.30E-09	2.45E-08
26	8.28	0.	0.	3.13E-24	0.	0.	0.	2.25E-15	5.85E-10	1.41E-08	2.39E-09	1.71E-08
27	8.18	0.	0.	2.78E-24	0.	0.	0.	2.26E-15	6.07E-10	1.47E-08	2.47E-09	1.77E-08
28	8.08	0.	0.	2.83E-24	0.	0.	0.	2.28E-15	6.30E-10	1.52E-08	2.56E-09	1.84E-08
29	7.98	0.	0.	2.49E-24	0.	0.	0.	2.29E-15	6.54E-10	1.57E-08	2.64E-09	1.90E-08
30	7.88	0.	0.	2.42E-24	0.	0.	0.	2.30E-15	6.80E-10	1.63E-08	2.73E-09	1.97E-08
31	7.78	0.	0.	2.35E-24	0.	0.	0.	2.31E-15	7.07E-10	1.69E-08	2.82E-09	2.04E-08
32	7.68	0.	0.	2.27E-24	0.	4.48E-28	0.	2.32E-15	7.35E-10	1.75E-08	2.91E-09	2.12E-08
33	7.58	0.	0.	2.15E-24	0.	1.33E-27	0.	2.33E-15	7.65E-10	1.82E-08	3.00E-09	2.19E-08
34	7.48	0.	0.	1.97E-24	0.	1.29E-26	0.	2.35E-15	7.97E-10	1.89E-08	3.10E-09	2.28E-08
35	7.38	0.	0.	1.90E-24	0.	4.71E-26	0.	2.36E-15	8.30E-10	1.96E-08	3.21E-09	2.35E-08
36	7.28	0.	0.	1.75E-24	0.	1.34E-25	0.	2.37E-15	8.65E-10	1.73E-08	3.38E-09	2.18E-08
37	7.18	0.	0.	1.71E-24	0.	4.24E-25	0.	2.39E-15	9.03E-10	1.82E-08	3.54E-09	2.27E-08
38	7.08	4.84E-27	0.	1.68E-24	0.	7.82E-25	0.	2.41E-15	9.42E-10	1.91E-08	3.71E-09	2.38E-08
39	6.98	1.36E-26	0.	1.58E-24	0.	1.20E-24	0.	2.43E-15	9.84E-10	2.00E-08	3.87E-09	2.49E-08
40	6.88	1.18E-26	0.	1.47E-24	0.	1.93E-24	0.	2.45E-15	1.03E-09	2.09E-08	4.04E-09	2.60E-08
41	6.78	8.75E-27	0.	1.32E-24	0.	1.82E-24	0.	2.47E-15	1.07E-09	2.18E-08	4.20E-09	2.71E-08
42	6.68	5.48E-27	0.	1.21E-24	0.	1.64E-24	0.	2.49E-15	1.13E-09	2.27E-08	4.37E-09	2.82E-08
43	6.58	3.18E-27	0.	9.87E-25	0.	2.29E-24	0.	2.51E-15	1.18E-09	2.37E-08	4.53E-09	2.94E-08
44	6.48	1.84E-27	0.	7.87E-25	6.44E-27	2.82E-24	0.	2.53E-15	1.23E-09	2.46E-08	4.71E-09	3.05E-08
45	6.38	1.09E-27	0.	4.59E-25	3.11E-26	1.59E-24	0.	2.55E-15	1.30E-09	2.55E-08	4.88E-09	3.18E-08
46	6.28	9.91E-28	0.	2.63E-25	4.52E-26	2.18E-24	0.	2.57E-15	1.36E-09	2.65E-08	5.08E-09	3.29E-08
47	6.18	2.35E-28	0.	1.20E-25	1.31E-25	2.47E-24	0.	2.59E-15	1.43E-09	2.75E-08	5.27E-09	3.42E-08
48	6.08	9.95E-29	0.	3.31E-26	1.30E-25	1.30E-24	0.	2.61E-15	1.50E-09	9.26E-09	5.47E-09	1.62E-08
49	5.98	2.48E-29	0.	2.30E-27	1.94E-25	1.24E-24	0.	2.61E-15	1.58E-09	9.68E-09	2.83E-09	1.32E-08
50	5.58	3.17E-30	0.	6.84E-29	2.75E-25	1.32E-24	0.	2.57E-15	1.66E-09	9.94E-09	2.18E-09	1.37E-08
51	5.78	2.34E-31	0.	0.	3.30E-25	1.40E-24	0.	2.41E-15	1.75E-09	1.04E-08	2.14E-09	1.44E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-08 (1.00E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	O2	O- PHOTODET	FREE-FREE (TOTAL)	N PHOTOION	O PHOTOION	TOTAL AIR
92	5.60	1.06E-32	0.	0.	0.	2.92E-25	1.88E-24	0.	0.	2.24E+15	1.85E-09	1.11E-08	2.25E-09	1.52E-08
93	5.50	0.	0.	0.	0.	3.58E-25	1.74E-24	0.	0.	2.28E+15	1.95E-09	1.17E-08	2.35E-09	1.63E-08
94	5.40	0.	0.	0.	0.	3.38E-25	1.49E-24	0.	0.	2.27E+15	2.07E-09	1.25E-08	2.47E-09	1.73E-08
95	5.30	0.	0.	0.	0.	3.46E-25	1.81E-24	0.	0.	2.28E+15	2.19E-09	1.32E-08	2.60E-09	1.83E-08
96	5.20	0.	0.	0.	0.	3.78E-25	1.47E-24	0.	0.	2.30E+15	2.31E-09	1.39E-08	2.74E-09	1.93E-08
97	5.10	0.	0.	0.	0.	3.80E-25	1.84E-24	0.	0.	2.32E+15	2.46E-09	1.46E-08	2.24E-09	1.94E-08
98	5.00	1.52E-25	0.	0.	0.	3.51E-25	1.88E-24	0.	0.	2.33E+15	2.61E-09	1.54E-08	2.34E-09	2.04E-08
99	4.90	3.70E-25	0.	0.	0.	3.95E-25	2.00E-24	0.	0.	2.35E+15	2.77E-09	1.61E-08	2.50E-09	2.14E-08
100	4.80	7.20E-25	0.	0.	0.	4.20E-25	1.90E-24	0.	0.	2.37E+15	2.95E-09	1.68E-08	2.62E-09	2.24E-08
101	4.70	1.00E-24	0.	0.	0.	4.36E-25	1.74E-24	0.	0.	2.39E+15	3.14E-09	1.78E-08	2.75E-09	2.35E-08
102	4.60	1.41E-24	0.	0.	0.	4.53E-25	1.59E-24	0.	0.	2.41E+15	3.35E-09	1.92E-08	2.89E-09	2.55E-08
103	4.50	1.51E-24	0.	1.73E-25	0.	4.23E-25	1.19E-24	0.	0.	2.43E+15	3.58E-09	2.06E-08	3.04E-09	2.72E-08
104	4.40	1.69E-24	0.	4.91E-25	0.	4.26E-25	8.17E-25	0.	0.	2.45E+15	3.83E-09	2.25E-08	3.23E-09	2.90E-08
105	4.30	1.59E-24	0.	1.75E-24	0.	4.16E-25	5.17E-25	0.	0.	2.47E+15	4.11E-09	2.33E-08	3.44E-09	3.09E-08
106	4.20	1.50E-24	0.	5.23E-24	0.	4.40E-25	3.54E-25	0.	0.	2.49E+15	4.41E-09	2.49E-08	3.35E-09	3.27E-08
107	4.10	1.43E-24	0.	2.54E-24	0.	4.38E-25	1.00E-25	0.	0.	2.50E+15	4.75E-09	2.66E-08	3.82E-09	3.53E-08
108	4.00	1.34E-24	0.	7.62E-24	0.	4.29E-25	7.44E-26	0.	0.	2.51E+15	5.12E-09	2.83E-08	3.93E-09	3.73E-08
109	3.90	1.16E-24	0.	3.69E-24	4.52E-20	4.06E-25	2.71E-26	0.	0.	2.50E+15	5.53E-09	2.99E-08	4.17E-09	3.96E-08
110	3.80	1.29E-24	0.	6.00E-24	1.69E-19	4.41E-25	0.	0.	0.	2.49E+15	5.94E-09	3.15E-08	4.44E-09	4.20E-08
111	3.70	1.17E-24	0.	5.97E-24	8.75E-20	3.89E-25	0.	0.	0.	2.45E+15	6.49E-09	3.33E-08	4.73E-09	4.45E-08
112	3.60	1.08E-24	0.	4.55E-24	4.36E-19	4.20E-25	0.	0.	0.	2.30E+15	7.15E-09	3.50E-08	5.02E-09	4.72E-08
113	3.50	1.02E-24	0.	5.83E-24	7.15E-19	3.42E-25	0.	0.	0.	2.10E+15	7.69E-09	3.68E-08	5.34E-09	4.98E-08
114	3.40	9.40E-25	0.	3.94E-24	1.32E-19	3.47E-25	0.	0.	0.	1.21E+15	8.39E-09	3.34E-08	4.91E-09	3.47E-08
115	3.30	7.78E-25	0.	4.82E-24	4.81E-19	3.17E-25	0.	0.	0.	1.21E+15	9.19E-09	1.26E-08	5.24E-09	2.72E-08
116	3.20	6.93E-25	0.	2.73E-24	6.79E-19	3.37E-25	0.	0.	0.	1.22E+15	1.01E-08	1.43E-08	4.20E-09	2.86E-08
117	3.10	8.77E-25	0.	2.15E-24	2.11E-19	3.25E-25	0.	0.	0.	1.22E+15	1.11E-08	1.64E-08	4.66E-09	3.21E-08
118	3.00	4.20E-25	0.	1.35E-24	4.34E-19	3.14E-25	0.	0.	0.	1.22E+15	1.21E-08	1.84E-08	5.15E-09	3.49E-08
119	2.90	5.34E-25	0.	8.41E-25	2.32E-19	2.40E-25	0.	0.	0.	1.22E+15	1.35E-08	2.04E-08	4.29E-09	3.48E-08
120	2.80	5.46E-25	0.	4.16E-25	1.73E-19	1.80E-25	0.	0.	0.	1.23E+15	1.51E-08	2.25E-08	4.69E-09	4.23E-08
121	2.70	3.77E-25	0.	1.07E-25	2.03E-19	1.43E-25	0.	0.	0.	1.23E+15	1.69E-08	2.45E-08	4.84E-09	4.43E-08
122	2.60	1.85E-25	0.	9.33E-26	2.21E-20	4.71E-26	0.	0.	0.	1.23E+15	1.87E-08	2.66E-08	5.24E-09	4.78E-08
123	2.50	1.32E-26	0.	9.47E-27	2.19E-20	1.15E-26	0.	0.	0.	1.23E+15	2.11E-08	2.91E-08	5.87E-09	5.43E-08
124	2.40	0.	4.03E-25	0.	1.58E-25	1.95E-27	0.	0.	0.	1.23E+15	2.42E-08	3.32E-08	6.84E-09	6.40E-08
125	2.30	0.	1.12E-24	0.	0.	0.	0.	0.	0.	1.22E+15	2.75E-08	3.72E-08	7.46E-09	7.42E-08
126	2.20	0.	3.09E-24	0.	0.	0.	0.	0.	0.	1.21E+15	3.14E-08	4.13E-08	8.31E-09	8.33E-08
127	2.10	0.	3.04E-24	0.	0.	0.	0.	0.	0.	1.21E+15	3.63E-08	4.54E-08	9.15E-09	9.08E-08
128	2.00	0.	6.20E-24	0.	0.	0.	0.	0.	0.	1.17E+15	4.21E-08	4.94E-08	9.99E-09	1.02E-07
129	1.90	0.	6.95E-24	0.	0.	0.	0.	0.	0.	1.12E+15	4.94E-08	2.34E-08	5.29E-09	7.83E-08
130	1.80	0.	6.05E-24	0.	0.	0.	0.	0.	0.	1.07E+15	5.83E-08	2.40E-08	5.98E-09	9.03E-08
131	1.70	0.	6.75E-24	0.	0.	0.	0.	0.	0.	1.01E+15	6.94E-08	2.47E-08	6.71E-09	1.05E-07
132	1.60	0.	5.17E-24	0.	0.	0.	0.	0.	0.	8.56E+16	8.35E-08	3.13E-08	7.39E-09	1.22E-07
133	1.50	0.	5.81E-24	0.	0.	0.	0.	0.	0.	3.89E+16	1.02E-07	3.42E-08	8.23E-09	1.44E-07
134	1.40	0.	5.69E-24	0.	0.	0.	0.	0.	0.	0.	1.25E-07	3.66E-08	8.37E-09	1.70E-07
135	1.30	0.	4.35E-24	0.	0.	0.	0.	0.	0.	0.	1.57E-07	4.01E-08	9.62E-09	2.07E-07
136	1.20	0.	4.15E-24	0.	0.	0.	0.	0.	0.	0.	2.01E-07	4.36E-08	3.45E-09	2.69E-07
137	1.10	0.	4.89E-24	0.	0.	0.	0.	1.76E-29	0.	0.	2.62E-07	4.16E-08	4.34E-09	2.73E-07
138	1.00	0.	3.70E-24	0.	0.	0.	0.	3.07E-28	0.	0.	3.51E-07	7.51E-09	5.24E-09	3.44E-07
139	0.90	0.	3.88E-24	0.	0.	0.	0.	3.63E-28	0.	0.	4.85E-07	9.37E-09	5.26E-09	4.98E-07
140	0.80	0.	1.44E-24	0.	0.	0.	0.	8.10E-27	0.	0.	6.97E-07	9.45E-09	6.88E-09	7.13E-07
141	0.70	0.	3.28E-25	0.	0.	0.	0.	8.09E-27	0.	0.	1.05E-06	9.24E-09	5.35E-09	1.07E-06
142	0.60	0.	8.36E-26	0.	0.	0.	0.	2.46E-26	0.	0.	1.72E-06	1.04E-08	6.05E-09	1.71E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.203E-03 (1.00E-00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 B-H NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.68E 29	0.	0.	0.	4.59E-19	3.30E-12	1.88E-10	4.84E-11	2.32E-10
2	10.60	0.	0.	1.55E-29	0.	0.	0.	4.60E-19	3.39E-12	1.89E-10	4.89E-11	2.38E-10
3	10.50	0.	0.	1.50E-29	0.	0.	0.	4.60E-19	3.49E-12	1.91E-10	4.12E-11	2.34E-10
4	10.40	0.	0.	1.54E-29	0.	0.	0.	4.61E-19	3.59E-12	1.73E-10	4.11E-11	2.38E-10
5	10.30	0.	0.	1.37E-29	0.	0.	0.	4.61E-19	3.70E-12	1.95E-10	4.12E-11	2.40E-10
6	10.20	0.	0.	1.43E-29	0.	0.	0.	4.62E-19	3.81E-12	1.99E-10	4.18E-11	2.49E-10
7	10.10	0.	0.	1.36E-29	0.	0.	0.	4.63E-19	3.93E-12	2.02E-10	4.24E-11	2.40E-10
8	10.00	0.	0.	1.23E-29	0.	0.	0.	4.63E-19	4.04E-12	2.06E-10	4.31E-11	2.93E-10
9	9.90	0.	0.	1.27E-29	0.	0.	0.	4.64E-19	4.17E-12	2.09E-10	4.37E-11	2.57E-10
10	9.80	0.	0.	1.21E-29	0.	0.	0.	4.65E-19	4.30E-12	2.13E-10	4.43E-11	2.62E-10
11	9.70	0.	0.	1.08E-29	0.	0.	0.	4.66E-19	4.43E-12	2.16E-10	4.50E-11	2.64E-10
12	9.60	0.	0.	1.17E-29	0.	0.	0.	4.67E-19	4.57E-12	2.20E-10	4.56E-11	2.7?E-10
13	9.50	0.	0.	1.02E-29	0.	0.	0.	4.67E-19	4.72E-12	2.24E-10	4.62E-11	2.75E-10
14	9.40	0.	0.	9.89E-30	0.	0.	0.	4.69E-19	4.88E-12	2.27E-10	4.70E-11	2.79E-10
15	9.30	0.	0.	1.02E-29	0.	0.	0.	4.71E-19	5.03E-12	2.31E-10	4.77E-11	2.84E-10
16	9.20	0.	0.	8.73E-30	0.	0.	0.	4.73E-19	5.20E-12	2.35E-10	4.83E-11	2.88E-10
17	9.10	0.	0.	9.81E-30	0.	0.	0.	4.74E-19	5.38E-12	2.38E-10	4.90E-11	2.93E-10
18	9.00	0.	0.	8.36E-30	0.	0.	0.	4.76E-19	5.56E-12	2.42E-10	5.38E-11	2.81E-10
19	8.90	0.	0.	7.91E-30	0.	0.	0.	4.78E-19	5.75E-12	2.46E-10	5.17E-11	2.83E-10
20	8.80	0.	0.	7.85E-30	0.	0.	0.	4.79E-19	5.95E-12	2.50E-10	5.26E-11	2.88E-10
21	8.70	0.	0.	7.88E-30	0.	0.	0.	4.81E-19	6.15E-12	2.53E-10	5.35E-11	2.93E-10
22	8.60	0.	0.	7.28E-30	0.	0.	0.	4.83E-19	6.37E-12	2.57E-10	5.44E-11	2.98E-10
23	8.50	0.	0.	6.55E-30	0.	0.	0.	4.84E-19	6.60E-12	2.61E-10	5.53E-11	3.03E-10
24	8.40	0.	0.	6.58E-30	0.	0.	0.	4.87E-19	6.84E-12	1.65E-10	3.62E-11	2.88E-10
25	8.30	0.	0.	5.74E-30	0.	0.	0.	4.89E-19	7.09E-12	1.71E-10	3.71E-11	2.15E-10
26	8.20	0.	0.	5.86E-30	0.	0.	0.	4.92E-19	7.35E-12	1.78E-10	3.87E-11	2.24E-10
27	8.10	0.	0.	5.19E-30	0.	0.	0.	4.95E-19	7.63E-12	1.84E-10	4.02E-11	2.32E-10
28	8.30	0.	0.	5.29E-30	0.	0.	0.	4.97E-19	7.92E-12	1.91E-10	4.18E-11	2.41E-10
29	7.90	0.	0.	4.66E-30	0.	0.	0.	5.00E-19	8.23E-12	1.98E-10	4.32E-11	2.49E-10
30	7.80	0.	0.	4.89E-30	0.	0.	0.	5.02E-19	8.55E-12	2.05E-10	4.48E-11	2.58E-10
31	7.70	0.	0.	4.40E-30	0.	0.	0.	5.05E-19	8.89E-12	2.12E-10	4.64E-11	2.67E-10
32	7.60	0.	0.	4.25E-30	0.	1.20E-33	0.	5.07E-19	9.24E-12	2.20E-10	4.80E-11	2.77E-10
33	7.50	0.	0.	4.02E-30	0.	3.62E-33	0.	5.10E-19	9.62E-12	2.29E-10	4.97E-11	2.88E-10
34	7.40	0.	0.	3.68E-30	0.	3.91E-33	0.	5.13E-19	1.00E-11	1.95E-10	5.15E-11	2.77E-10
35	7.30	0.	0.	3.55E-30	0.	1.28E-33	0.	5.16E-19	1.04E-11	2.04E-10	5.36E-11	2.88E-10
36	7.20	0.	0.	3.27E-30	0.	3.66E-33	0.	5.18E-19	1.09E-11	2.15E-10	5.66E-11	2.93E-10
37	7.10	0.	0.	3.20E-30	0.	1.16E-30	0.	5.23E-19	1.13E-11	2.27E-10	5.96E-11	2.98E-10
38	7.00	2.72E-32	0.	2.99E-30	0.	2.19E-30	0.	5.27E-19	1.19E-11	2.38E-10	6.26E-11	3.12E-10
39	6.90	5.38E-32	0.	2.80E-30	0.	3.26E-30	0.	5.31E-19	1.24E-11	2.49E-10	6.56E-11	3.27E-10
40	6.80	4.69E-32	0.	2.75E-30	0.	5.25E-30	0.	5.35E-19	1.29E-11	2.61E-10	6.86E-11	3.42E-10
41	6.70	3.47E-32	0.	2.46E-30	0.	4.98E-30	0.	5.40E-19	1.35E-11	2.72E-10	7.16E-11	3.57E-10
42	6.60	2.14E-32	0.	2.26E-30	0.	4.47E-30	0.	5.44E-19	1.41E-11	2.83E-10	7.46E-11	3.72E-10
43	6.50	1.25E-32	0.	1.85E-30	0.	4.12E-30	0.	5.48E-19	1.48E-11	2.95E-10	7.76E-11	3.87E-10
44	6.40	7.31E-33	0.	1.32E-30	1.75E-32	5.44E-30	0.	5.52E-19	1.55E-11	3.06E-10	8.07E-11	4.02E-10
45	6.30	4.32E-33	0.	8.59E-31	8.46E-32	4.34E-30	0.	5.57E-19	1.63E-11	3.17E-10	8.38E-11	4.17E-10
46	6.20	1.98E-33	0.	4.92E-31	1.23E-31	5.71E-30	0.	5.61E-19	1.71E-11	3.30E-10	8.74E-11	4.34E-10
47	6.10	9.30E-34	0.	2.39E-31	3.56E-31	6.73E-30	0.	5.65E-19	1.80E-11	1.11E-10	3.05E-11	1.60E-10
48	6.00	3.94E-34	0.	6.20E-32	3.55E-31	3.53E-30	0.	5.69E-19	1.89E-11	1.15E-10	3.07E-11	1.65E-10
49	5.90	9.82E-35	0.	4.45E-33	5.28E-31	3.38E-30	0.	5.69E-19	1.99E-11	1.20E-10	3.19E-11	1.71E-10
50	5.80	1.26E-35	0.	1.13E-34	7.48E-31	3.60E-30	0.	5.41E-19	2.09E-11	1.24E-10	3.32E-11	1.79E-10
51	5.70	9.28E-37	0.	0.	8.99E-31	4.02E-30	0.	5.27E-19	2.20E-11	1.30E-10	3.46E-11	1.87E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-09 (1.0E-06 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	4.21E-30	0.	0.	0.	7.96E-31	5.11E-30	0.	0.	4.90E-19	2.33E-11	1.38E-10	3.60E-11	1.97E-10
93	5.50	0.	0.	0.	0.	9.74E-31	4.72E-30	0.	0.	4.92E-19	2.44E-11	1.46E-10	3.74E-11	2.09E-10
94	5.40	0.	0.	0.	0.	9.20E-31	4.02E-30	0.	0.	4.95E-19	2.60E-11	1.55E-10	3.97E-11	2.21E-10
95	5.30	0.	0.	0.	0.	9.43E-31	4.92E-30	0.	0.	4.98E-19	2.75E-11	1.64E-10	4.21E-11	2.34E-10
96	5.20	0.	0.	0.	0.	1.03E-30	3.99E-30	0.	0.	5.01E-19	2.91E-11	1.74E-10	3.38E-11	2.36E-10
97	5.10	0.	0.	0.	0.	1.03E-30	5.06E-30	0.	0.	5.06E-19	3.09E-11	1.83E-10	3.58E-11	2.49E-10
98	5.00	6.03E-31	0.	0.	0.	9.55E-31	4.09E-30	0.	0.	5.10E-19	3.28E-11	1.92E-10	3.79E-11	2.62E-10
99	4.90	1.50E-30	0.	0.	0.	1.00E-30	5.45E-30	0.	0.	5.14E-19	3.48E-11	2.01E-10	3.99E-11	2.76E-10
60	4.80	2.88E-30	0.	0.	0.	1.17E-30	5.17E-30	0.	0.	5.18E-19	3.71E-11	2.10E-10	4.20E-11	2.89E-10
61	4.70	3.90E-30	0.	0.	0.	1.19E-30	4.73E-30	0.	0.	5.23E-19	3.95E-11	2.23E-10	4.43E-11	3.07E-10
62	4.60	5.40E-30	0.	0.	0.	1.23E-30	4.29E-30	0.	0.	5.27E-19	4.21E-11	2.40E-10	4.66E-11	3.28E-10
63	4.50	5.99E-30	0.	3.24E-31	0.	1.19E-30	3.24E-30	0.	0.	5.31E-19	4.50E-11	2.55E-10	4.92E-11	3.49E-10
64	4.40	6.53E-30	0.	9.19E-31	0.	1.17E-30	2.20E-30	0.	0.	5.35E-19	4.82E-11	2.72E-10	5.23E-11	3.73E-10
65	4.30	6.29E-30	0.	3.20E-30	0.	1.13E-30	1.41E-30	0.	0.	5.48E-19	5.17E-11	2.89E-10	5.29E-11	3.96E-10
66	4.20	5.95E-30	0.	9.79E-30	0.	1.20E-30	9.53E-31	0.	0.	5.44E-19	5.55E-11	3.09E-10	5.75E-11	4.22E-10
67	4.10	5.68E-30	0.	4.74E-30	0.	1.19E-30	2.72E-31	0.	0.	5.46E-19	5.97E-11	3.30E-10	6.23E-11	4.52E-10
68	4.00	5.31E-30	0.	1.43E-29	0.	1.17E-30	2.02E-31	0.	0.	5.48E-19	6.44E-11	3.51E-10	6.72E-11	4.83E-10
69	3.90	4.81E-30	0.	6.91E-30	7.02E-25	1.11E-30	7.39E-32	0.	0.	5.48E-19	6.95E-11	3.72E-10	7.20E-11	5.14E-10
70	3.80	5.10E-30	0.	1.12E-29	2.09E-24	1.20E-30	0.	0.	0.	5.44E-19	7.52E-11	3.93E-10	7.66E-11	5.45E-10
71	3.70	4.66E-30	0.	1.12E-29	1.49E-24	1.06E-30	0.	0.	0.	5.35E-19	8.15E-11	4.14E-10	8.17E-11	5.77E-10
72	3.60	4.20E-30	0.	8.52E-30	7.33E-24	1.14E-30	0.	0.	0.	5.01E-19	8.86E-11	4.35E-10	7.43E-11	5.99E-10
73	3.50	4.64E-30	0.	1.09E-29	1.22E-23	9.31E-31	0.	0.	0.	4.59E-19	9.65E-11	1.32E-10	7.86E-11	3.07E-10
74	3.40	3.81E-30	0.	7.37E-30	2.25E-24	1.05E-30	0.	0.	0.	2.65E-19	1.05E-10	1.43E-10	8.41E-11	3.33E-10
75	3.30	3.68E-30	0.	7.53E-30	7.86E-24	8.63E-31	0.	0.	0.	2.65E-19	1.15E-10	1.55E-10	8.19E-11	3.32E-10
76	3.20	2.79E-30	0.	5.10E-30	1.10E-23	9.17E-31	0.	0.	0.	2.60E-19	1.27E-10	1.77E-10	4.93E-11	3.53E-10
77	3.10	2.68E-30	0.	6.83E-30	3.59E-24	8.86E-31	0.	0.	0.	2.66E-19	1.39E-10	2.02E-10	5.61E-11	3.97E-10
78	3.00	2.46E-30	0.	2.52E-30	7.39E-24	8.96E-31	0.	0.	0.	2.67E-19	1.54E-10	2.25E-10	6.24E-11	4.43E-10
79	2.90	2.12E-30	0.	1.41E-30	3.96E-24	6.76E-31	0.	0.	0.	2.67E-19	1.71E-10	2.50E-10	6.93E-11	4.91E-10
80	2.80	2.24E-30	0.	7.78E-31	2.94E-24	4.91E-31	0.	0.	0.	2.68E-19	1.90E-10	2.75E-10	7.62E-11	5.42E-10
81	2.70	1.49E-30	0.	3.68E-31	3.44E-24	2.88E-31	0.	0.	0.	2.68E-19	2.12E-10	3.00E-10	8.27E-11	5.95E-10
82	2.60	7.35E-31	0.	1.75E-31	3.77E-25	1.28E-31	0.	0.	0.	2.66E-19	2.38E-10	3.25E-10	8.94E-11	6.53E-10
83	2.50	9.25E-32	0.	1.77E-32	3.72E-25	3.13E-32	0.	0.	0.	2.60E-19	2.68E-10	3.50E-10	9.96E-11	7.25E-10
84	2.48	0.	7.53E-31	0.	2.69E-25	3.41E-38	0.	0.	0.	2.60E-19	3.04E-10	4.08E-10	1.12E-10	8.24E-10
85	2.38	0.	2.09E-30	0.	0.	0.	0.	0.	0.	2.66E-19	3.45E-10	4.57E-10	1.26E-10	9.28E-10
86	2.28	0.	5.70E-30	0.	0.	0.	0.	0.	0.	2.64E-19	3.95E-10	5.06E-10	1.39E-10	1.04E-09
87	2.18	0.	5.60E-30	0.	0.	0.	0.	0.	0.	2.63E-19	4.56E-10	2.18E-10	6.16E-11	7.36E-10
88	2.08	0.	1.10E-29	0.	0.	0.	0.	0.	0.	2.55E-19	5.29E-10	2.48E-10	6.99E-11	8.48E-10
89	1.98	0.	1.30E-29	0.	0.	0.	0.	0.	0.	2.45E-19	6.20E-10	2.78E-10	7.83E-11	9.76E-10
90	1.88	0.	1.13E-29	0.	0.	0.	0.	0.	0.	2.35E-19	7.32E-10	3.08E-10	8.69E-11	1.13E-09
91	1.78	0.	1.20E-29	0.	0.	0.	0.	0.	0.	2.21E-19	8.72E-10	3.38E-10	9.54E-11	1.31E-09
92	1.68	0.	9.67E-30	0.	0.	0.	0.	0.	0.	1.87E-19	1.05E-09	3.68E-10	1.04E-10	1.52E-09
93	1.58	0.	1.69E-29	0.	0.	0.	0.	0.	0.	8.58E-20	1.28E-09	3.98E-10	1.12E-10	1.79E-09
94	1.48	0.	1.80E-29	0.	0.	0.	0.	0.	0.	0.	1.57E-09	4.28E-10	1.20E-10	2.12E-09
95	1.38	0.	8.14E-30	0.	0.	0.	0.	0.	0.	0.	1.97E-09	4.93E-12	5.48E-12	1.98E-09
96	1.28	0.	7.77E-30	0.	0.	0.	0.	0.	0.	0.	2.52E-09	6.78E-12	6.86E-12	2.53E-09
97	1.18	0.	7.65E-30	0.	0.	0.	0.	4.78E-35	0.	0.	3.29E-09	8.43E-12	8.64E-12	3.31E-09
98	1.08	0.	7.84E-30	0.	0.	0.	0.	8.35E-34	0.	0.	4.41E-09	1.85E-11	1.64E-11	4.43E-09
99	0.98	0.	5.77E-30	0.	0.	0.	0.	9.89E-34	0.	0.	6.08E-09	1.14E-11	1.85E-11	6.11E-09
100	0.88	0.	2.70E-30	0.	0.	0.	0.	2.20E-32	0.	0.	8.75E-09	1.18E-11	9.25E-12	8.77E-09
101	0.78	0.	6.14E-31	0.	0.	0.	0.	2.20E-32	0.	0.	1.32E-08	1.20E-11	1.08E-11	1.32E-08
102	0.68	0.	1.95E-31	0.	0.	0.	0.	6.69E-32	0.	0.	2.13E-08	1.41E-11	1.29E-11	2.13E-08

2. Mean Absorption Coefficients

a) Total and Cut-off Planck Mean Absorption Coefficients

The "emission" or "Planck" mean absorption coefficient is defined by (see also Section 3.2, Eq. 46)

$$\bar{\mu}_p(T) \equiv \frac{\int_0^\infty \mu'(\nu)\, B_\nu(T)\, d\nu}{\int_0^\infty B_\nu(T)\, d\nu} = \frac{\pi}{\sigma T^4} \int_0^\infty \mu'(\nu)\, B_\nu(T)\, d\nu$$

where $\mu' = \mu(\nu)\left(1 - e^{\frac{-hc\nu}{kT}}\right)$ has a term to account for re-emission, $B_\nu(T)$ is the usual Planck blackbody function, and ν is the frequency or equivalent photon energy expressed in units cm^{-1}. Upon substitution for $B_\nu(T)$ and $\mu'(\nu)$ in the integral and with change of variable $x = hc\nu/kT$ the above expression becomes

$$\bar{\mu}_p(T) = \frac{\pi^4}{15} \int_0^\infty \mu(x)\, x^3\, e^{-x}\, dx$$

For digital computer use this is approximated:

$$\bar{\mu}_p(T) = \frac{\pi^4}{15} \sum_j \mu_j(x_j)\, x_j^3\, e^{-x_j}\, \Delta x_j$$

where j is summed over all spectral intervals to be included.

Listed in Table C.2.a) are the total and continuum Planck mean absorption coefficients in units cm^{-1} for heated air for various temperatures

and densities. The input of required absorption coefficients is discussed under the partial Planck mean absorption coefficient table construction, since the actual computation of the total, cut-off, and partial Planck means (as well as the Rosseland mean free paths) was carried out with the aid of a single integrated computer program.

"Cut-off" Planck mean absorption coefficients are included in the same table as the total and continuum values and may be identified by their "key" integer. The cut-off key and recipe for calculation are summarized below:

Integer Appearing in Tables	Computational Meaning as Applied to Sum in Last Expression:
1	If $\mu_j(x_j) \geq 1 \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$
2	If $\mu_j(x_j) \geq 10^{-1} \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$
3	If $\mu_j(x_j) \geq 10^{-2} \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$
4	If $\mu_j(x_j) \geq 10^{-3} \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$
5	If $\mu_j(x_j) \geq 10^{-4} \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$
6	If $\mu_j(x_j) \geq 10^{-5} \text{ cm}^{-1}$ set $\mu_j = 0$ in $\sum_j$

It is frequently desirable to obtain a rough estimate of the amount of radiative energy flow and deposition in gas samples that are not optically thin at all frequencies. In order to obtain such an estimate with a minimum of effort the spectral detail of the absorptive coefficient sometimes is ignored and the total Planck mean absorption coefficient is employed in the calculation. A semi-quantitative estimate of the error involved in this procedure may be obtained through inspection of the "cut-off" Planck values. Since these are listed for cut-offs which decrease sequentially by one order of magnitude, significant change in the "cut-off" absorption coefficient between two cut-off

values indicates that the spectral absorption coefficient has an effective value in between the two "cut-off" values over an appreciable frequency region in the vicinity of the Planckian maximum. The product of this "effective" absorption coefficient value and the path length of the gas then gives an indication of the extent of violation of the applicability of the procedure.

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS

TEMPERATURE (DEG. K)		DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	TOTAL	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	CONT.	9.42E-10	2.98E-11	9.42E-13	2.98E-14	9.42E-16	2.98E-17	9.42E-19	2.98E-20
	1	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	2	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	3	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	4	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	5	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	6	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
2000.	TOTAL	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	CONT.	4.04E-05	1.28E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.79E-16
	1	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	2	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	3	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	4	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	5	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	6	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
3000.	TOTAL	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	CONT.	1.11E-03	3.43E-05	1.91E-06	2.53E-08	4.13E-10	3.24E-12	2.85E-14	1.89E-16
	1	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	2	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	3	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	4	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	5	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	6	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
4000.	TOTAL	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	CONT.	4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.38E-10	7.86E-12	1.18E-13	1.86E-15
	1	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	2	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	3	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	4	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	5	1.28E-02	7.94E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	6	9.26E-03	7.84E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
5000.	TOTAL	5.98E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	CONT.	1.61E-02	4.40E-04	8.07E-06	1.25E-07	1.95E-09	3.08E-11	5.04E-13	1.09E-14
	1	5.98E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	2	5.98E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	3	5.98E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	4	5.89E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	5	5.45E-02	2.69E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	6	2.50E-02	2.47E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
6000.	TOTAL	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	CONT.	3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.05E-10	3.47E-11	3.26E-12
	1	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	2	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	3	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	4	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	5	1.38E-01	5.78E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	6	5.72E-02	5.75E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
7000.	TOTAL	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	CONT.	8.60E-02	2.02E-03	4.12E-05	1.52E-06	1.28E-07	1.11E-08	1.07E-09	1.01E-10
	1	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	2	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	3	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	4	2.65E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	5	2.65E-01	1.09E-02	4.77E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	6	1.20E-01	1.08E-02	4.74E-04	2.08E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
8000.	TOTAL	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	CONT.	1.58E-01	4.02E-03	1.78E-04	1.68E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
	1	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	2	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	3	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	4	4.62E-01	1.92E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	5	4.58E-01	1.90E-02	8.31E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	6	2.37E-01	1.86E-02	7.85E-04	2.96E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
9000.	TOTAL	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	CONT.	2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.96E-07	7.90E-08	3.73E-09
	1	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	2	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	3	7.20E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	4	7.11E-01	3.28E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	5	6.84E-01	2.95E-02	1.54E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	6	3.77E-01	2.79E-02	1.06E-03	8.70E-05	1.13E-05	1.00E-06	7.91E-08	3.74E-09
10000.	TOTAL	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	CONT.	6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.83E-09
	1	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	2	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	3	1.15E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	4	1.05E 00	6.33E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	5	9.67E-01	4.50E-02	4.12E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
	6	2.32E-01	3.85E-02	2.11E-03	3.35E-04	4.81E-05	3.83E-06	2.12E-07	4.83E-09
11000.	TOTAL	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	CONT.	1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	1	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	2	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	3	1.96E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	4	1.53E 00	1.35E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	5	1.31E 00	7.70E-02	1.17E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	6	1.58E-01	5.60E-02	5.19E-03	1.02E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
12000.	TOTAL	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	CONT.	4.34E 00	5.08E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	1	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	2	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	3	3.58E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	4	2.28E 00	2.77E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	5	1.88E 00	9.40E-02	2.53E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
	6	3.73E-02	9.22E-02	6.30E-03	2.57E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
13000.	TOTAL	3.17E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	CONT.	2.41E 00	1.84E-01	1.55E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	1	3.17E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	2	3.17E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	3	3.17E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	4	2.93E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	5	2.58E 00	1.70E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	6	0.	1.41E-01	1.31E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
14000.	TOTAL	2.19E 01	2.23E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	CONT.	2.12E 01	2.22E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	1	2.19E 01	2.23E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	2	2.19E 01	2.23E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	3	1.10E 01	2.23E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	4	4.44E 00	1.04E 00	2.09E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	5	3.40E 00	3.01E-01	9.31E-02	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	6	0.	2.09E-01	2.42E-02	8.10E-03	7.20E-04	1.34E-05	1.47E-07	1.45E-09
15000.	TOTAL	7.46E 00	5.75E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	CONT.	6.95E 00	5.69E-01	4.66E-02	3.07E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	1	7.46E 00	5.75E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	2	7.46E 00	5.75E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	3	7.46E 00	5.75E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	4	6.30E 00	5.75E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	5	4.39E 00	4.58E-01	4.67E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	6	0.	2.88E-01	3.78E-02	3.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
16000.	TOTAL	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	CONT.	6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	1	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	2	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	3	2.80E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	4	8.47E 00	2.57E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	5	5.12E 00	6.33E-01	2.08E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	6	0.	3.72E-01	5.05E-02	1.52E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
17000.	TOTAL	1.57E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	CONT.	1.54E 01	1.27E 00	9.36E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	1	1.57E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	2	1.57E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	3	1.57E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	4	1.09E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	5	3.54E 00	8.51E-01	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	6	0.	4.58E-01	6.42E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
18000.	TOTAL	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	CONT.	1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	1	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	2	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	3	4.20E 01	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	4	1.39E 01	4.61E 00	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	5	0.	1.08E 00	3.69E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09
	6	0.	3.31E-01	7.52E-02	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.28E-09

b) Individual Contributions to the Planck Mean Absorption Coefficients for Air

The Tables labelled No. 1, No. 2, etc., list for the cited temperatures and densities the contribution to the total Planck mean absorption coefficient for heated air arising from individual absorbing systems. For example, the first table lists the contribution arising from the O_2 Schumann-Runge continuum. Corresponding system numbers and the system names for which they stand are given below.

System No.	Contributor
1	O_2 Schumann-Runge Continuum
2	NO_2
3	O^- Photodetachment
4	Free-Free in presence of ions
5	N Photoionization
6	O Photoionization
7	O_2 Schumann-Runge Bands
8	N_2 Birge-Hopfield Bands
9	N_2 First Positive Bands
10	N_2 Second Positive Bands
11	NO Beta Bands
12	NO Gamma Bands
13	NO Vibration-Rotation Bands
14	N_2^+ First Negative Bands

Use of the appropriate individual absorption coefficient in the expressions given in the discussion of Table C.2.a) yields the Planck mean absorption coefficient for the corresponding air constituent. Since the Planck mean is applicable to optically thin gas samples only, the sum of the Planck means for all the listed contributors should be equal to the Planck mean for air.

NO. 1

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	1.40E-29	1.40E-30	1.40E-31	1.40E-32	1.40E-33	1.40E-34	1.40E-35	1.40E-36
2000.	2.52E-12	2.52E-13	2.52E-14	2.52E-15	2.50E-16	2.40E-17	2.33E-18	1.94E-19
3000.	7.79E-07	7.62E-08	7.03E-09	5.49E-10	2.65E-11	5.38E-13	6.28E-15	6.45E-17
4000.	2.56E-04	1.95E-05	8.66E-07	1.75E-08	2.07E-10	2.15E-12	2.17E-14	2.18E-16
5000.	4.53E-03	1.74E-04	3.13E-06	3.66E-08	3.82E-10	3.86E-12	3.88E-14	3.88E-16
6000.	1.67E-02	3.59E-04	4.59E-06	4.92E-08	5.02E-10	5.05E-12	5.04E-14	4.98E-16
7000.	2.82E-02	4.30E-04	5.17E-06	5.42E-08	5.46E-10	5.46E-12	5.38E-14	4.88E-16
8000.	3.63E-02	4.94E-04	5.42E-06	5.54E-08	5.53E-10	5.36E-12	4.81E-14	3.41E-16
9000.	3.89E-02	4.91E-04	5.26E-06	5.20E-08	5.12E-10	4.59E-12	3.21E-14	1.61E-16
10000.	3.94E-02	4.84E-04	4.98E-06	4.91E-08	4.48E-10	3.39E-12	1.31E-14	9.79E-18
11000.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	0.	0.	0.	0.	0.	0.	0.	0.
13000.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	0.	0.	0.	0.	0.	0.	0.	0.
15000.	0.	0.	0.	0.	0.	0.	0.	0.
16000.	0.	0.	0.	0.	0.	0.	0.	0.
17000.	0.	0.	0.	0.	0.	0.	0.	0.
18000.	0.	0.	0.	0.	0.	0.	0.	0.

NO. 2

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	9.42E-10	2.98E-11	9.42E-13	2.98E-14	9.42E-16	2.98E-17	9.42E-19	2.98E-20
2000.	4.04E-05	1.28E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.79E-16
3000.	1.11E-03	3.42E-05	9.98E-07	2.46E-08	3.77E-10	2.44E-12	9.03E-15	2.92E-17
4000.	4.20E-03	1.31E-04	1.46E-06	9.20E-08	3.46E-11	1.13E-13	3.51E-16	1.02E-18
5000.	9.02E-03	1.12E-04	4.32E-07	2.32E-09	7.32E-12	2.03E-14	4.19E-17	5.53E-20
6000.	3.96E-03	2.71E-05	1.07E-07	3.38E-10	7.96E-13	1.24E-15	1.36E-18	1.35E-21
7000.	1.60E-03	7.80E-06	2.54E-08	5.89E-11	8.47E-14	8.93E-17	8.68E-20	7.66E-23
8000.	6.41E-04	2.53E-06	6.47E-09	9.98E-12	1.07E-14	1.02E-17	8.55E-21	4.85E-24
9000.	0.	0.	0.	0.	0.	0.	0.	0.
10000.	0.	0.	0.	0.	0.	0.	0.	0.
11000.	0.	0.	0.	0.	0.	0.	0.	0.
12000.	0.	0.	0.	0.	0.	0.	0.	0.
13000.	0.	0.	0.	0.	0.	0.	0.	0.
14000.	0.	0.	0.	0.	0.	0.	0.	0.
15000.	0.	0.	0.	0.	0.	0.	0.	0.
16000.	0.	0.	0.	0.	0.	0.	0.	0.
17000.	0.	0.	0.	0.	0.	0.	0.	0.
18000.	0.	0.	0.	0.	0.	0.	0.	0.

NO. 3

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	0.	0.	0.	0.	0.	0.	0.	0.
3000.	1.39E-07	1.78E-08	1.77E-09	1.49E-10	8.67E-12	2.63E-13	5.25E-15	9.53E-17
4000.	8.39E-05	8.27E-06	4.89E-07	1.46E-08	2.90E-10	5.40E-12	9.55E-14	1.64E-15
5000.	2.59E-03	1.51E-04	4.31E-06	5.63E-08	1.56E-09	2.60E-11	4.63E-13	1.04E-14
6000.	1.79E-02	6.28E-04	1.36E-05	2.91E-07	4.60E-09	1.06E-10	3.13E-12	9.71E-14
7000.	5.57E-02	1.52E-03	3.03E-05	6.21E-07	1.66E-08	5.10E-10	1.58E-11	4.68E-13
8000.	1.16E-01	2.82E-03	6.23E-05	1.76E-06	5.45E-08	1.67E-09	4.84E-11	1.16E-12
9000.	2.00E-01	5.02E-03	1.41E-04	4.36E-06	1.34E-07	3.87E-09	9.16E-11	1.17E-12
10000.	3.20E-01	9.14E-03	2.85E-04	8.82E-06	2.59E-07	6.45E-09	9.52E-11	4.87E-13
11000.	5.02E-01	1.59E-02	5.01E-04	1.51E-05	4.04E-07	7.46E-09	4.94E-11	8.60E-14
12000.	7.70E-01	2.52E-02	7.80E-04	2.23E-05	5.07E-07	5.68E-09	1.61E-11	1.94E-14
13000.	1.12E 00	3.65E-02	1.10E-03	2.98E-05	5.06E-07	2.95E-09	4.78E-12	5.08E-15
14000.	1.54E 00	4.91E-02	1.42E-03	3.31E-05	3.97E-07	1.23E-09	1.52E-12	1.56E-15
15000.	1.99E 00	6.20E-02	1.70E-03	3.33E-05	2.52E-07	4.87E-10	5.36E-13	5.50E-16
16000.	2.45E 00	7.43E-02	1.89E-03	2.96E-05	1.38E-07	1.99E-10	2.10E-13	2.25E-16
17000.	2.89E 00	8.49E-02	1.97E-03	2.33E-05	7.05E-08	8.66E-11	9.89E-14	1.10E-16
18000.	3.30E 00	9.31E-02	1.92E-03	1.65E-05	3.56E-08	4.63E-11	4.41E-14	6.28E-17

NO. 4

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	0.	0.	0.	0.	0.	0.	0.	0.
3000.	3.04E-13	3.00E-14	2.89E-15	2.56E-16	1.73E-17	8.86E-19	2.79E-20	8.86E-22
4000.	4.63E-09	4.05E-10	2.75E-11	1.23E-12	4.24E-14	1.36E-15	4.22E-17	1.24E-18
5000.	1.09E-06	6.90E-08	2.93E-09	9.97E-11	3.11E-12	9.87E-14	2.78E-15	1.37E-16
6000.	3.11E-05	1.45E-06	5.13E-08	1.62E-09	5.31E-11	2.82E-12	2.46E-13	2.39E-14
7000.	2.95E-04	1.17E-05	3.98E-07	1.59E-08	1.13E-09	1.07E-10	1.05E-11	1.03E-12
8000.	1.42E-03	5.43E-05	2.42E-06	1.05E-07	1.78E-08	1.74E-09	1.63E-10	1.32E-11
9000.	4.02E-03	2.21E-04	1.40E-05	1.54E-06	1.50E-07	1.40E-08	1.12E-09	5.72E-11
10000.	1.42E-02	9.09E-04	8.44E-05	8.25E-06	7.75E-07	6.39E-08	3.57E-09	8.73E-11
11000.	4.04E-02	3.35E-03	3.27E-04	3.17E-05	2.72E-06	1.77E-07	5.66E-09	7.91E-11
12000.	1.09E-01	1.01E-02	9.81E-04	8.9 E-05	6.83E-06	3.98E-07	5.74E-09	6.48E-11
13000.	2.65E-01	2.54E-02	2.42E-03	2 08E-04	1.28E-05	3.71E-07	4.92E-09	5.10E-11
14000.	5.71E-01	5.50E-02	5.0 E-03	3.90E-04	1.84E-05	3.59E-07	4.05E-09	4.13E-11
15000.	1.10E 00	1.05E-01	9.24E-03	6.23E-04	2.14E-05	3.15E-07	3.33E-09	3.46E-11
16000.	1.94E 00	1.82E-01	1.51E-02	8.57E-04	2.16E-05	2.68E-07	2.79E-09	3.18E-11
17000.	3.15E 00	2.88E-01	2.22E-02	1.04E-03	2.00E-05	2.27E-07	2.42E-09	3.43E-11
18000.	4.88E 00	4.26E-01	3.00E-02	1.13E-03	1.78E-05	1.94E-07	2.28E-09	4.32E-11

NO. 5

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	0.	0.	0.	0.	0.	0.	0.	0.
3000.	0.	0.	0.	0.	0.	0.	0.	0.
4000.	0.	0.	0.	0.	0.	0.	0.	0.
5000.	0.	0.	0.	0.	0.	0.	0.	0.
6000.	2.96E-07	8.01E-08	2.48E-08	7.12E-09	1.47E-09	2.27E-10	2.48E-11	2.50E-12
7000.	4.09E-05	1.18E-05	2.91E-06	6.47E-07	9.20E-08	8.71E-09	8.66E-10	8.31E-11
8000.	1.43E-03	3.90E-04	8.08E-05	1.21E-05	1.30E-06	1.28E-07	1.09E-08	8.80E-10
9000.	2.10E-02	5.37E-03	8.87E-04	9.26E-05	9.19E-06	8.52E-07	6.73E-08	3.09E-09
10000.	1.57E-01	3.55E-02	4.74E-03	4.66E-04	4.03E-05	3.28E-06	1.79E-07	3.92E-09
11000.	8.32E-01	1.43E-01	1.62E-02	1.52E-03	1.31E-04	7.75E-06	2.39E-07	3.05E-09
12000.	2.90E 00	4.13E-01	4.28E-02	3.93E-03	2.84E-04	1.16E-05	2.10E-07	2.17E-09
13000.	8.42E-01	1.04E-01	1.02E-02	8.65E-04	5.78E-05	1.02E-06	1.33E-08	1.32E-10
14000.	1.66E 01	1.86E 00	1.74E-01	1.32E-02	5.88E-04	1.06E-05	1.18E-07	1.15E-09
15000.	3.23E 00	3.39E-01	2.99E-02	1.98E-03	5.09E-05	7.00E-07	7.38E-09	7.91E-11
16000.	5.06E 01	5.04E 00	4.83E-01	2.55E-02	5.92E-04	6.92E-06	7.36E-08	9.89E-10
17000.	7.80E 00	7.44E-01	5.67E-02	2.57E-03	3.92E-05	4.28E-07	5.03E-09	1.08E-10
18000.	1.06E 02	9.68E 00	4.95E-01	1.81E-02	2.75E-04	3.05E-06	5.34E-08	2.00E-09

NO. 6

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	0.	0.	0.	0.	0.	0.	0.	0.
3000.	0.	0.	0.	0.	0.	0.	0.	0.
4000.	0.	0.	0.	0.	0.	0.	0.	0.
5000.	0.	0.	0.	0.	0.	0.	0.	0.
6000.	5.41E-04	7.86E-07	6.24E-08	6.42E-09	6.45E-10	6.43E-11	6.42E-12	6.38E-13
7000.	1.79E-04	2.22E-05	2.35E-06	1.80E-07	1.80E-08	1.80E-09	1.76E-10	1.69E-11
8000.	2.19E-03	2.56E-04	2.64E-05	2.65E-06	2.07E-07	2.03E-08	1.92E-09	1.60E-10
9000.	1.45E-02	1.64E-03	1.67E-04	1.66E-05	1.63E-06	1.25E-07	1.05E-08	5.85E-10
10000.	6.42E-02	7.03E-03	7.17E-04	7.02E-35	6.67E-06	4.82E-07	3.01E-08	8.20E-10
11000.	2.11E-01	2.27E-02	2.28E-03	2.22E-04	1.98E-05	1.42E-06	4.51E-08	6.70E-10
12000.	5.61E-01	5.91E-02	5.87E-03	5.84E-04	4.52E-05	2.35E-06	4.27E-08	4.88E-10
13000.	1.75E-01	1.85E-02	1.80E-03	1.62E-04	1.11E-05	3.69E-07	5.01E-09	5.18E-11
14000.	2.51E 00	2.56E-01	2.44E-02	2.05E-03	1.13E-04	2.45E-06	2.55E-08	2.60E-10
15000.	6.30E-01	6.31E-02	5.83E-03	4.40E-04	1.78E-05	2.73E-07	2.8*E-09	2.86E-11
16000.	7.38E 00	7.26E-01	6.42E-02	4.26E-03	1.23E-04	1.57E-06	1.50E-08	1.59E-10
17000.	1.58E 00	1.53E-01	1.28E-02	6.97E-04	1.52E-05	1.69E-07	1.71E-09	1.98E-11
18000.	1.62E 01	1.53E 00	1.19E-01	5.26E-03	9.04E-05	9.68E-07	9.95E-09	1.61E-10

NO. 7

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	1.43E-23	1.43E-24	1.43E-25	1.43E-26	1.43E-27	1.43E-28	1.43E-29	1.43E-30
2000.	2.37E-09	2.37E-10	2.37E-11	2.36E-12	2.35E-13	2.31E-14	2.18E-15	1.82E-16
3000.	5.12E-05	5.00E-06	4.62E-07	3.60E-08	1.73E-09	3.52E-11	4.11E-13	4.22E-15
4000.	3.75E-03	2.84E-04	1.29E-05	2.54E-07	3.01E-09	3.13E-11	3.14E-13	3.17E-15
5000.	2.41E-02	9.39E-04	1.66E-05	1.94E-07	2.02E-09	2.05E-11	2.06E-13	2.06E-15
6000.	4.28E-02	9.13E-04	1.17E-05	1.25E-07	1.28E-09	1.28E-11	1.28E-13	1.26E-15
7000.	4.12E-02	6.48E-04	7.45E-06	7.75E-08	7.83E-10	7.78E-12	7.59E-14	6.99E-16
8000.	3.21E-02	4.38E-04	4.82E-06	4.93E-08	4.90E-10	4.74E-12	4.24E-14	2.97E-16
9000.	2.33E-02	2.95E-04	3.15E-06	3.16E-08	3.06E-10	2.75E-12	1.92E-14	6.08E-17
10000.	1.60E-02	1.93E-04	2.00E-06	1.96E-08	1.80E-10	1.33E-12	5.28E-15	3.95E-18
11000.	1.14E-02	1.32E-04	1.34E-06	1.26E-08	1.04E-10	5.47E-13	7.49E-16	1.66E-19
12000.	8.24E-03	9.15E-05	9.00E-07	8.04E-09	5.47E-11	1.52E-13	6.58E-17	8.54E-21
13000.	5.37E-03	5.81E-05	5.44E-07	2.79E-09	1.38E-11	1.61E-14	3.19E-18	3.48E-22
14000.	3.44E-03	2.53E-05	2.30E-07	1.62E-09	4.95E-12	2.43E-15	3.28E-19	3.40E-23
15000.	1.79E-03	1.79E-05	1.53E-07	8.71E-10	1.45E-12	3.68E-16	4.21E-20	4.34E-24
16000.	1.33E-03	1.27E-05	9.97E-08	4.28E-10	3.69E-13	6.22E-17	6.97E-21	7.14E-25
17000.	9.79E-04	9.10E-06	6.36E-08	1.90E-10	9.01E-14	1.21E-17	1.28E-21	1.53E-25
18000.	7.33E-04	6.50E-06	3.94E-08	7.71E-11	2.27E-14	2.70E-18	2.95E-22	4.05E-26

NO. 8

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	3.06E-24	3.06E-25	3.06E-26	3.06E-27	3.06E-28	3.06E-29	3.06E-30	3.06E-31
3000.	3.62E-14	3.62E-15	3.63E-16	3.64E-17	3.67E-18	3.70E-19	3.72E-20	3.72E-21
4000.	2.57E-09	2.59E-10	2.64E-11	2.69E-12	2.70E-13	2.66E-14	2.52E-15	2.11E-16
5000.	1.62E-06	1.67E-07	1.70E-08	1.17E-09	1.53E-10	1.14E-11	4.86E-13	8.42E-15
6000.	1.01E-04	1.03E-05	9.87E-07	8.20E-08	4.56E-09	1.09E-10	1.31E-12	1.33E-14
7000.	1.66E-03	1.60E-04	1.28E-05	6.35E-07	1.29E-08	1.46E-10	1.44E-12	1.33E-14
8000.	1.18E-02	9.88E-04	5.33E-05	1.20E-06	1.40E-08	1.37E-10	1.20E-12	7.87E-15
9000.	4.69E-02	3.03E-03	9.15E-05	1.21E-06	1.20E-08	1.04E-10	6.51E-13	1.84E-15
10000.	1.17E-01	5.29E-03	9.44E-05	9.57E-07	8.85E-09	5.91E-11	1.76E-13	9.94E-17
11000.	2.09E-01	6.17E-03	7.94E-05	7.49E-07	5.60E-09	2.28E-11	2.19E-14	4.14E-18
12000.	2.81E-01	5.69E-03	6.12E-05	5.16E-07	2.89E-09	5.94E-12	1.82E-15	2.22E-19
13000.	3.06E-01	4.67E-03	4.46E-05	3.24E-07	1.18E-09	9.32E-13	1.59E-16	1.70E-20
14000.	2.88E-01	3.62E-03	3.14E-05	1.83E-07	3.81E-10	1.37E-13	1.72E-17	1.76E-21
15000.	2.47E-01	2.71E-03	2.11E-05	9.24E-08	1.02E-10	2.11E-14	2.34E-18	2.35E-22
16000.	2.01E-01	1.99E-03	1.36E-05	4.18E-08	2.49E-11	3.71E-15	3.89E-19	3.84E-23
17000.	1.58E-01	1.44E-03	8.35E-06	1.71E-08	6.04E-12	7.54E-16	7.68E-20	7.09E-24
18000.	1.22E-01	1.02E-03	4.91E-06	6.54E-09	1.55E-12	1.79E-16	1.74E-20	1.29E-24

NO.9

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	1.41E-13	1.41E-14	1.41E-15	1.41E-16	1.41E-17	1.41E-18	1.41E-19	1.41E-20
3000.	5.48E-08	5.49E-09	5.50E-10	5.51E-11	5.55E-12	5.60E-13	5.63E-14	5.63E-15
4000.	2.50E-05	2.52E-06	2.56E-07	2.61E-08	2.63E-09	2.59E-10	2.45E-11	2.05E-12
5000.	8.16E-04	8.37E-05	8.54E-06	8.41E-07	7.69E-08	5.73E-09	2.44E-10	4.23E-12
6000.	7.33E-03	7.47E-04	7.18E-05	5.97E-06	3.32E-07	7.95E-09	9.55E-11	9.66E-13
7000.	3.13E-02	3.00E-03	2.41E-04	1.19E-05	2.43E-07	2.74E-09	2.71E-11	2.49E-13
8000.	8.15E-02	6.83E-03	3.68E-04	8.31E-06	9.68E-08	9.46E-10	8.28E-12	5.64E-14
9000.	1.49E-01	9.72E-03	2.94E-04	3.89E-06	3.86E-08	3.33E-10	2.09E-12	5.27E-15
10000.	2.06E-01	9.27E-03	1.65E-04	1.75E-06	1.55E-08	1.04E-10	3.09E-13	1.74E-16
11000.	2.25E-01	6.63E-03	8.53E-05	8.04E-07	6.01E-09	2.45E-11	2.35E-14	4.44E-18
12000.	2.01E-01	4.08E-03	4.39E-05	3.70E-07	2.07E-09	3.97E-12	1.30E-15	1.59E-19
13000.	1.56E-01	2.38E-03	2.29E-05	1.65E-07	6.03E-10	4.76E-13	8.09E-17	8.65E-21
14000.	1.10E-01	1.38E-03	1.20E-05	6.98E-08	1.45E-10	5.22E-14	6.55E-18	6.72E-22
15000.	7.35E-02	8.07E-04	6.26E-06	2.75E-08	3.03E-11	6.28E-15	6.95E-19	7.30E-23
16000.	4.81E-02	4.77E-04	3.25E-06	10.04E-09	5.95E-12	8.89E-16	9.30E-20	9.20E-24
17000.	3.13E-02	2.84E-04	1.65E-06	3.38E-09	1.20E-12	1.49E-16	1.52E-20	1.40E-24
18000.	2.04E-02	1.71E-04	8.21E-07	1.09E-09	2.59E-13	2.93E-17	2.91E-21	2.13E-25

NO. 10

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	6.26E-21	6.26E-22	6.26E-23	6.26E-24	6.24E-25	6.26E-26	6.26E-27	6.26E-28
3000.	2.52E-12	2.52E-13	2.52E-14	2.53E-15	2.55E-16	2.57E-17	2.59E-18	2.59E-19
4000.	3.44E-08	3.47E-09	3.52E-10	3.59E-11	3.61E-12	3.56E-13	3.37E-14	2.82E-15
5000.	8.26E-06	8.49E-07	8.66E-08	8.32E-09	7.80E-10	5.82E-11	2.48E-12	4.29E-14
6000.	2.74E-04	2.79E-05	2.68E-06	2.23E-07	1.24E-08	2.97E-10	3.57E-12	3.61E-14
7000.	2.92E-03	2.80E-04	2.25E-05	1.11E-06	2.27E-08	2.56E-10	2.93E-12	2.33E-14
8000.	1.50E-02	1.25E-03	6.79E-05	1.32E-06	1.77E-08	1.73E-10	1.52E-12	9.97E-15
9000.	4.59E-02	2.99E-03	9.04E-05	1.20E-06	1.19E-08	1.02E-10	6.43E-13	1.62E-15
10000.	9.52E-02	4.28E-03	7.64E-05	8.88E-07	7.17E-09	4.79E-11	1.43E-13	8.05E-17
11000.	1.44E-01	4.24E-03	5.48E-05	5.17E-07	3.87E-09	1.58E-11	1.91E-14	2.86E-18
12000.	1.78E-01	3.44E-03	3.71E-05	3.12E-07	1.75E-09	3.35E-12	1.10E-15	1.35E-19
13000.	1.86E-01	2.52E-03	2.43E-05	1.75E-07	6.40E-10	5.04E-13	8.58E-17	9.18E-21
14000.	1.42E-01	1.78E-03	1.55E-05	9.00E-08	1.88E-10	6.73E-14	6.45E-18	8.66E-22
15000.	1.12E-01	1.23E-03	9.57E-06	4.18E-08	4.62E-11	9.57E-15	1.06E-18	1.37E-22
16000.	8.47E-02	8.39E-04	5.73E-06	1.76E-08	1.05E-11	1.57E-15	1.64E-19	1.62E-23
17000.	6.26E-02	5.68E-04	3.31E-06	6.78E-09	2.39E-12	2.90E-16	3.04E-20	2.81E-24
18000.	4.58E-02	3.82E-04	1.84E-06	2.49E-09	5.80E-13	6.57E-17	6.51E-21	4.82E-25

NO. 11

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	.0E-03	10.0E-04	[illegible].0E-05	10.0E-06	10.0E-07
1000.	2.17E-26	2.17E-27	2.17E-28	[illegible]7E-29	2.17E-30	2. [illegible]-31	2.17E-32	2.17E-33
2000.	5.22E-11	5.22E-12	5.22E-13	5.[illegible]2E-14	5.20E-15	5.15E-16	5.01E-17	4.58E-18
3000.	3.05E-06	3.02E-07	2.90E-08	[illegible]E-09	1.79E-10	8.11E-12	2.77E-13	8.89E-15
4000.	4.30E-04	3.76E-05	[illegible]E-06	[illegible]-07	3.95E-09	1.27E-10	3.91E-12	1.13E-13
5000.	5.21E-03	3.38E-04	[illegible]0E-05	4.75E-07	1.47E-08	4.03E-10	8.34E-12	1.10E-13
6000.	1.82E-02	8.49E-04	3.98E-05	6.88E-07	2.12E-08	3.28E-10	3.60E-12	3.60E-14
7000.	3.29E-02	1.28E-03	3.88E-05	8.83E-07	1.27E-08	1.34E-10	1.32E-12	1.21E-14
8000.	4.32E-02	1.46E-03	3.56E-05	5.41E-07	5.82E-09	5.65E-11	5.01E-13	3.40E-15
9000.	4.65E-02	1.33E-03	2.40E-05	2.77E-07	2.71E-09	2.38E-11	1.58E-13	4.47E-16
10000.	4.32E-02	1.00E-03	1.37E-05	1.39E-07	1.26E-09	8.89E-12	3.03E-14	1.97E-17
11000.	3.62E-02	6.68E-04	7.63E-06	7.29E-08	5.66E-10	2.61E-12	3.80E-15	3.13E-19
12000.	2.79E-02	4.18E-04	4.30E-06	3.73E-08	2.30E-10	5.31E-13	2.00E-16	2.52E-20
13000.	2.01E-02	2.57E-04	2.46E-06	1.88E-08	7.99E-11	7.66E-14	1.41E-17	1.52E-21
14000.	1.40E-02	1.59E-04	1.41E-06	9.85E-09	2.28E-11	9.58E-15	1.25E-18	1.29E-22
15000.	9.58E-03	9.96E-05	8.12E-07	4.86E-09	5.49E-12	1.26E-15	1.42E-19	1.44E-23
16000.	6.44E-03	6.31E-05	4.61E-07	1.67E-09	1.20E-12	1.90E-16	2.02E-20	2.07E-24
17000.	4.38E-03	4.02E-05	2.56E-07	6.34E-10	2.60E-13	3.36E-17	3.49E-21	3.66E-25
18000.	2.99E-03	2.57E-05	1.39E-07	2.24E-10	5.93E-14	6.88E-18	7.16E-22	7.23E-26

NO. 12

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	2.60E-25	2.60E-26	2.60E-27	2.60E-28	2.60E-29	2.60E-30	2.60E-31	2.60E-32
2000.	2.06E-10	2.06E-11	2.06E-12	2.06E-13	2.05E-14	2.04E-15	1.98E-16	1.81E-17
3000.	8.73E-06	8.66E-07	8.30E-08	7.35E-09	5.12E-10	2.32E-11	7.92E-13	2.54E-14
4000.	1.11E-03	9.70E-05	6.59E-06	2.96E-07	1.02E-08	3.26E-10	1.01E-11	2.93E-13
5000.	1.33E-03	8.38E-04	3.56E-05	1.21E-06	3.73E-08	1.02E-09	2.12E-11	2.79E-13
6000.	4.74E-02	2.21E-03	7.75E-05	2.31E-06	5.51E-08	8.59E-10	9.36E-12	9.36E-14
7500.	8.91E-02	3.47E-03	1.05E-04	2.80E-06	5.43E-08	3.63E-10	3.57E-12	3.20E-14
8000.	1.22E-01	4.14E-03	1.01E-04	1.53E-06	1.65E-08	1.80E-10	1.42E-12	9.64E-15
9000.	1.38E-01	3.97E-03	7.13E-05	8.22E-07	8.05E-09	7.09E-11	4.70E-13	1.33E-15
10000.	1.34E-01	3.15E-03	4.25E-05	4.33E-07	3.90E-09	2.78E-11	9.43E-14	6.12E-17
11000.	1.17E-01	2.17E-03	2.47E-05	2.34E-07	1.83E-09	8.48E-12	9.72E-15	1.99E-18
12000.	9.40E-02	1.41E-03	1.45E-05	1.26E-07	7.77E-10	1.79E-12	6.75E-16	5.51E-20
13000.	7.04E-02	8.99E-04	8.50E-06	6.58E-08	2.79E-10	2.68E-13	3.92E-17	9.32E-21
14000.	5.05E-02	5.75E-04	5.11E-06	3.27E-08	8.25E-11	3.46E-14	4.51E-18	4.65E-22
15000.	3.54E-02	3.71E-04	3.03E-06	1.51E-08	2.85E-11	4.69E-15	5.29E-19	5.38E-23
16000.	2.47E-02	2.42E-04	1.77E-06	6.41E-09	4.60E-12	7.28E-16	7.72E-20	7.94E-24
17000.	1.72E-02	1.58E-04	1.01E-06	2.49E-09	1.02E-12	1.32E-16	1.37E-20	1.44E-24
18000.	1.21E-02	1.04E-04	5.60E-07	9.04E-10	2.39E-13	2.77E-17	2.88E-21	2.91E-25

NO. 13

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
2000.	1.15E-03	1.15E-04	1.15E-05	1.15E-06	1.15E-07	1.14E-08	1.11E-09	1.81E-10
3000.	2.69E-03	2.65E-04	2.55E-05	2.20E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
4000.	2.90E-03	2.54E-04	1.72E-05	7.73E-07	2.87E-08	8.54E-10	2.44E-11	.65E-13
5000.	2.20E-03	1.44E-05	6.12E-07	2.07E-08	6.41E-10	1.70E-11	3.64E-13	4.79E-15
6000.	1.92E-04	8.98E-06	3.14E-07	9.38E-09	2.24E-10	3.46E-12	3.80E-14	3.28E-16
7000.	1.30E-04	5.05E-06	1.73E-07	3.48E-09	9.05E-11	5.38E-13	5.20E-15	4.79E-17
8000.	8.30E-05	2.80E-06	8.83E-08	1.04E-09	1.12E-11	1.09E-13	9.61E-16	8.52E-18
9000.	5.14E-05	1.48E-06	2.65E-08	3.04E-10	3.00E-12	2.64E-14	1.75E-16	4.94E-19
10000.	3.08E-05	7.17E-07	9.78E-09	9.95E-11	8.98E-13	6.36E-15	2.17E-17	1.47E-20
11000.	1.82E-05	3.36E-07	3.83E-09	3.62E-11	2.84E-13	1.31E-15	1.50E-18	5.08E-22
12000.	1.05E-05	1.57E-07	1.61E-09	1.40E-11	8.64E-14	1.99E-16	7.51E-20	9.46E-24
13000.	5.90E-06	7.54E-08	7.21E-10	5.52E-12	2.34E-14	2.35E-17	4.13E-21	4.46E-25
14000.	3.32E-06	3.79E-08	3.36E-10	2.15E-12	5.44E-15	2.26E-18	2.90E-22	3.06E-26
15000.	1.89E-06	1.98E-08	1.61E-10	8.06E-13	1.09E-15	2.50E-19	2.82E-23	2.87E-27
16000.	1.09E-06	1.07E-08	7.82E-11	2.84E-13	2.04E-16	3.23E-20	3.42E-24	3.52E-28
17000.	6.47E-07	5.94E-09	3.79E-11	9.37E-14	3.84E-17	4.06E-21	5.14E-25	5.42E-29
18000.	3.92E-07	3.37E-09	1.82E-11	2.94E-14	7.76E-18	9.00E-22	9.36E-26	9.44E-30

NO. 14

TEMP (DEG. K)	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	0.	0.	0.	0.	0.	0.	0.	0.
2000.	0.	0.	0.	0.	0.	0.	0.	0.
3000.	4.68E-17	1.14E-17	3.49E-18	1.16E-18	4.43E-19	2.10E-19	1.14E-19	6.36E-20
4000.	9.71E-12	2.74E-12	1.01E-12	4.01E-13	2.60E-13	1.43E-13	7.69E-14	3.76E-14
5000.	1.3.E-08	4.73E-09	2.20E-09	1.20E-09	6.19E-10	2.71E-10	6.68E-11	5.14E-12
6000.	1.63E-06	6.80E-07	3.40E-07	1.59E-07	4.87E-08	5.87E-09	2.06E-10	6.69E-12
7000.	9.83E-05	2.23E-05	9.57E-06	2.36E-06	1.81E-07	6.63E-09	2.10E-10	6.24E-12
8000.	5.89E-04	2.36E-04	5.97E-05	4.88E-06	1.83E-07	5.73E-09	1.64E-10	3.77E-12
9000.	3.41E-03	9.94E-04	1.11E-04	4.75E-06	1.51E-07	4.27E-09	9.48E-11	1.85E-12
10000.	1.13E-02	1.94E-03	1.13E-04	3.85E-06	1.11E-8	2.58E-09	3.25E-11	1.17E-13
11000.	2.31E-02	2.32E-03	9.53E-05	2.90E-06	7.36E-08	1.17E-09	6.29E-12	1.81E-14
12000.	3.31E-02	2.18E-03	7.44E-05	2.07E-06	4.22E-08	3.89E-10	9.13E-13	1.88E-15
13000.	3.71E-02	1.80E-03	5.60E-05	1.38E-06	2.03E-08	9.30E-11	1.39E-13	1.48E-16
14000.	3.57E-02	1.43E-03	4.09E-05	8.56E-07	8.22E-09	2.11E-11	2.49E-14	2.54E-17
15000.	3.14E-02	1.11E-03	2.95E-05	4.89E-07	2.91E-09	4.87E-12	5.34E-15	5.33E-18
16000.	2.62E-02	8.43E-04	1.99E-05	2.64E-07	9.64E-10	1.20E-12	1.33E-15	1.27E-18
17000.	2.13E-02	6.35E-04	1.33E-05	1.24E-07	3.21E-10	3.77E-13	3.76E-16	3.14E-19
18000.	1.71E-02	4.74E-04	8.68E-06	5.93E-08	1.11E-10	1.21E-13	1.15E-16	7.10E-20

c) Total and Cut-off Rosseland Mean Free Paths

The Rosseland mean free path is the reciprocal of the Rosseland mean absorption coefficient and is defined by (see also Section 3.2, Eq. 63)

$$\Lambda_R = \frac{1}{\bar{\mu}_R} = \frac{\int_0^\infty \frac{1}{\mu'(\nu)} \frac{dB_\nu}{dT}\, d\nu}{\int_0^\infty \frac{dB_\nu}{dT}\, d\nu}$$

with the notation and units the same as before. With the same substitutions the approximating sum for digital computer use becomes

$$\Lambda_R = \frac{15}{4\Pi^4} \sum_j \frac{1}{\bar{\mu}_j(x_j)} x_j^4 \left(e^{x_j} - 1\right)^{-1} \left(1 - e^{-x_j}\right)^{-2} \quad .$$

Table C.2.c) gives values of the Rosseland mean free paths in centimeters for heated air. "Cut-off" means have been constructed in a fashion similar to those for the Planck means as described previously. A guide to this table is given below.

Integer Appearing in Table	Computational Meaning	
1	If $1/\mu_{j(x_j)} \geq 10^5$ cm,	do not include in sum for Rosseland mean free path
2	If $1/\mu_{j(x_j)} \geq 10^4$ cm,	do not include in sum for Rosseland mean free path
3	If $1/\mu_{j(x_j)} \geq 10^3$ cm,	do not include in sum for Rosseland mean free path
4	If $1/\mu_{j(x_j)} \geq 10^2$ cm,	do not include in sum for Rosseland mean free path
5	If $1/\mu_{j(x_j)} \geq 10^1$ cm,	do not include in sum for Rosseland mean free path
6	If $1/\mu_{j(x_j)} \geq 1$ cm,	do not include in sum for Rosseland mean free path

This table provides values which complement those of the Planckian table with regard to application on practical problems. Error estimates may be obtained in a fashion analogous to that given in the discussion of the Planck cut-off means.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	TOTAL	4.87E 09	4.87E 10	4.87E 11	4.87E 12	4.87E 13	4.87E 14	4.87E 15	4.87E 16
	CONT.	1.37E 01	4.34E 02	1.37E 04	4.33E 05	1.37E 07	4.34E 08	1.37E 10	4.34E 11
	1	5.35E-29	9.57E-31	3.47E-31	0.	0.	0.	0.	0.
	2	9.57E-32	2.47E-32	0.	0.	0.	0.	0.	0.
	3	2.47E-33	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
2000.	TOTAL	2.06E 11	2.06E 12	2.06E 13	2.06E 14	2.06E 15	2.06E 16	2.06E 17	2.05E 18
	CONT.	1.17E 02	3.70E 03	1.17E 05	3.71E 06	1.18E 08	3.80E 09	1.27E 11	4.85E 12
	1	4.61E-10	1.69E-14	8.23E-14	0.	0.	0.	0.	0.
	2	1.69E-15	8.23E-15	0.	0.	0.	0.	0.	0.
	3	8.23E-16	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
3000.	TOTAL	3.70E 05	3.69E 06	3.73E 07	3.87E 08	4.77E 09	1.26E 11	3.41E 12	9.45E 13
	CONT.	1.44E 12	1.46E 13	1.52E 14	1.72E 15	2.47E 16	5.44E 17	1.59E 19	4.96E 20
	1	1.58E-05	2.52E-09	1.71E-08	0.	0.	0.	0.	0.
	2	2.47E-13	2.52E-09	0.	0.	0.	0.	0.	0.
	3	2.47E-10	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
4000.	TOTAL	5.81E 02	1.45E 04	4.41E 05	1.16E 07	2.75E 08	7.34E 09	2.12E 11	3.43E 12
	CONT.	6.91E 06	7.90E 07	1.16E 09	2.62E 10	8.20E 11	4.00E 13	3.29E 15	2.48E 17
	1	2.47E-03	1.20E-06	6.69E-08	0.	0.	0.	0.	0.
	2	1.66E-05	3.21E-07	0.	0.	0.	0.	0.	0.
	3	4.65E-08	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
5000.	TOTAL	5.87E 01	2.17E 03	6.02E 04	1.56E 06	4.53E 07	9.79E 08	1.33E 10	5.36E 11
	CONT.	7.61E 01	4.09E 03	5.00E 05	1.10E 08	2.20E 10	2.89E 12	3.26E 13	1.68E 15
	1	1.43E-02	1.06E-04	0.	0.	0.	0.	0.	0.
	2	2.78E-05	0.	0.	0.	0.	0.	0.	0.
	3	3.22E-07	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS

TEMPERATURE (DEG. K)		DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
6000.	TOTAL	2.90E 01	6.41E 02	1.63E 04	4.73E 05	1.03E 07	2.54E 08	1.07E 10	5.00E 11
	CONT.	7.31E 01	6.98E 03	8.85E 05	4.03E 07	6.12E 08	8.77E 09	1.09E 11	2.39E 12
	1	3.10E-02	1.05E-04	1.51E-06	1.66E-08	0.	0.	0.	0.
	2	7.69E-05	2.88E-09	2.98E-11	0.	0.	0.	0.	0.
	3	4.28E-10	6.66E-14	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
7000.	TOTAL	9.79E 00	2.32E 02	6.47E 03	1.52E 05	4.29E 06	1.70E 08	4.94E 09	8.37E 10
	CONT.	6.63E 01	3.73E 03	1.02E 05	1.79E 06	3.45E 07	6.27E 08	9.49E 09	9.19E 11
	1	7.18E-02	7.81E-05	4.86E-07	2.39E-07	0.	0.	0.	0.
	2	3.99E-04	5.39E-08	4.36E-08	0.	0.	0.	0.	0.
	3	7.23E-09	2.43E-10	0.	0.	0.	0.	0.	0.
	4	1.30E-14	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
8000.	TOTAL	4.01E 00	1.05E 02	2.67E 03	7.69E 04	2.03E 06	5.63E 07	8.46E 08	1.23E 10
	CONT.	2.40E 01	5.61E 02	1.36E 04	2.98E 05	5.33E 06	7.94E 07	1.01E 09	1.33E 10
	1	1.14E-01	4.44E-04	6.34E-05	2.12E-06	0.	0.	0.	0.
	2	6.54E-05	4.13E-07	2.98E-07	0.	0.	0.	0.	0.
	3	5.61E-08	5.54E-08	0.	0.	0.	0.	0.	0.
	4	1.95E-10	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
9000.	TOTAL	2.10E 00	5.41E 01	1.47E 03	4.44E 04	9.07E 05	1.33E 07	1.93E 08	3.98E 09
	CONT.	6.63E 00	1.68E 02	3.94E 03	7.42E 04	1.12E 06	1.45E 07	1.93E 08	4.01E 09
	1	2.01E-01	1.73E-03	1.90E-04	1.29E-05	0.	0.	0.	0.
	2	2.29E-04	3.24E-05	1.45E-06	0.	0.	0.	0.	0.
	3	2.43E-07	2.28E-07	0.	0.	0.	0.	0.	0.
	4	4.48E-08	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
10000.	TOTAL	1.26E 00	3.24E 01	8.85E 02	1.91E 04	2.93E 05	4.08E 06	7.64E 07	3.13E 09
	CONT.	2.78E 00	6.94E 01	1.38E 03	2.26E 04	3.09E 05	4.14E 06	7.67E 07	3.13E 09
	1	4.58E-01	2.04E-03	3.89E-04	1.68E-04	0.	0.	0.	0.
	2	6.47E-04	5.13E-05	1.71E-05	0.	0.	0.	0.	0.
	3	1.06E-05	7.18E-07	0.	0.	0.	0.	0.	0.
	4	1.30E-07	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
11000.	TOTAL	8.26E-01	2.68E 01	4.75E 02	7.89E 03	1.09E 05	1.79E 06	5.59E 07	4.02E 09
	CONT.	1.52E 00	3.26E 01	5.69E 02	8.30E 03	1.10E 05	1.79E 06	5.60E 07	4.02E 09
	1	5.17E-01	8.94E-04	7.26E-04	4.60E-04	0.	0.	0.	0.
	2	1.11E-03	8.18E-05	4.47E-05	0.	0.	0.	0.	0.
	3	1.37E-05	4.90E-06	0.	0.	0.	0.	0.	0.
	4	3.03E-07	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
12000.	TOTAL	5.50E-01	1.49E 01	2.44E 02	3.51E 03	5.14E 04	1.16E 06	6.20E 07	5.63E 09
	CONT.	8.49E-01	1.83E 01	2.61E 02	3.56E 03	5.16E 04	1.16E 06	6.20E 07	5.63E 09
	1	5.19E-01	3.59E-03	1.10E-02	1.08E-03	0.	0.	0.	0.
	2	1.87E-03	1.17E-03	2.01E-04	0.	0.	0.	0.	0.
	3	4.36E-05	2.06E-05	0.	0.	0.	0.	0.	0.
	4	1.34E-06	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
13000.	TOTAL	3.71E-01	7.66E 00	1.29E 02	1.79E 03	3.08E 04	1.05E 06	7.92E 07	7.70E 09
	CONT.	4.95E-01	7.80E 00	1.32E 02	1.80E 03	3.06E 04	1.05E 06	7.92E 07	7.70E 09
	1	3.71E-01	1.41E-02	2.67E-03	0.	0.	0.	0.	0.
	2	2.70E-03	2.50E-04	0.	0.	0.	0.	0.	0.
	3	2.[illegible]E-05	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
14000.	TOTAL	2.63E-01	4.82E 00	7.21E 01	1.04E 03	2.26E 04	1.16E 06	1.03E 08	9.89E 09
	CONT.	3.04E-01	5.08E 00	7.27E 01	1.04E 03	2.26E 04	1.16E 06	1.03E 08	9.89E 09
	1	2.63E-01	2.06E-02	1.82E-02	4.59E-03	0.	0.	0.	0.
	2	3.59E-03	1.79E-03	6.36E-04	0.	0.	0.	0.	0.
	3	1.88E-04	5.97E-05	0.	0.	0.	0.	0.	0.
	4	6.52E-06	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
15000	TOTAL	1.75E-01	3.02E 00	4.33E 01	6.87E 02	2.00E 04	1.37E 06	1.28E 08	1.12E 10
	CONT.	1.95E-01	3.10E 00	4.35E 01	6.87E 02	2.00E 04	1.37E 06	1.28E 08	1.12E 10
	1	1.75E-01	3.23E-02	6.59E-03	0.	0.	0.	0.	0.
	2	4.47E-03	8.13E-04	0.	0.	0.	0.	0.	0.
	3	8.14E-05	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
16000.	TOTAL	1.23E-01	1.96E 00	2.81E 01	5.12E 02	2.02E 04	1.64E 06	1.50E 08	9.98E 09
	CONT.	1.31E-01	1.98E 00	2.81E 01	5.12E 02	2.02E 04	1.64E 06	1.50E 08	9.98E 09
	1	1.23E-01	5.43E-02	3.56E-02	9.25E-03	0.	0.	0.	0.
	2	1.10E-02	3.21E-03	1.46E-03	0.	0.	0.	0.	0.
	3	3.16E-04	1.35E-04	0.	0.	0.	0.	0.	0.
	4	1.34E-05	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
17000.	TOTAL	8.72E-02	1.32E 00	1.95E 01	4.24E 02	2.18E 04	1.92E 06	1.55E 08	6.80E 09
	CONT.	9.04E-02	1.33E 00	1.95E 01	4.25E 02	2.18E 04	1.92E 06	1.55E 08	6.80E 09
	1	8.72E-02	6.85E-02	1.37E-02	0.	0.	0.	0.	0.
	2	2.96E-02	1.32E-03	0.	0.	0.	0.	0.	0.
	3	1.59E-04	0.	0.	0.	0.	0.	0.	0.
	4	0.	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.
18000.	TOTAL	6.34E-02	9.31E-01	1.45E 01	3.87E 02	2.44E 04	2.14E 06	1.34E 08	4.32E 09
	CONT.	6.48E-02	9.33E-01	1.45E 01	3.87E 02	2.44E 04	2.14E 06	1.34E 08	4.32E 09
	1	6.34E-02	2.61E-01	5.57E-02	1.09E-04	0.	0.	0.	0.
	2	6.34E-02	4.07E-03	3.85E-03	0.	0.	0.	0.	0.
	3	4.05E-04	2.74E-04	0.	0.	0.	0.	0.	0.
	4	4.45E-05	0.	0.	0.	0.	0.	0.	0.
	5	0.	0.	0.	0.	0.	0.	0.	0.
	6	0.	0.	0.	0.	0.	0.	0.	0.

d) Partial Planck Mean Absorption Coefficients for Heated Air

The quantities listed in Table C.2.d) are partial Planck mean absorption coefficients. Two coefficients are given for each photon energy with the first one listed containing contributions from both continuum and molecular band transitions and the second containing only continuum contributions. Atomic photoionization is included in the continuum.

The partial Planck mean absorption coefficient is defined by

$$\bar{\mu}_{pp}(\nu_c) \equiv \frac{\int_0^{\nu_c} \mu'(\nu)\, B_\nu(T)\, d\nu}{\int_0^{\infty} B_\nu(T)\, d\nu} = \frac{\pi}{\sigma T^4} \int_0^{\nu_c} \mu'(\nu)\, B_\nu(T)\, d\nu$$

where ν_c is the fixed upper frequency limit of the integral expressed in cm^{-1} and $\mu'(\nu) = \mu(\nu)\left(1 - e^{-\frac{hc\nu}{kT}}\right)$ includes the re-emission term. $B_\nu(T)$ is the Planck function which is given by

$$B_\nu(T) = \frac{2hc^2\nu^3}{\left(e^{\frac{hc\nu}{kT}} - 1\right)}$$

when ν is expressed in cm^{-1}. Upon substitution for μ_ν' and $B_\nu(T)$ in Eq. 1 and after the change of variable

$$x = \frac{hc\nu}{kT} \quad ,$$

$$\bar{\mu}_{pp}(\nu_c) = \frac{15}{\pi^4} \int_0^{\frac{hc\nu_c}{kT}} \mu(x)\, x^3\, e^{-x}\, dx \quad .$$

The latter expression is adapted for digital computer programming through the approximation

$$\bar{\mu}_{pp}(\nu_c) \approx \frac{15}{\pi^4} \sum_j \mu_j(x_j)\, x_j^3\, e^{-x_j}\, \Delta x_j$$

where j labels the finite spectral interval for which μ_j is the average absorption coefficient.

Construction of the tables of the partial Planck mean was accomplished by a computer program which used as its input

(1) the tables of average absorption coefficients of air for temperatures from 1,000°K - 18,000°K, densities from 10^{-6} to 10 times normal atmospheric, and for 102 spectral intervals between 0.6 eV and 10.7 eV. (These are also listed herein, see Table C.1.)

(2) values of the absorption coefficient for the vibration-rotation bands of NO for temperatures 1,000°K - 4,000°K, the same eight densities, and spectral intervals centered on 0.2, 0.3, 0.4, and 0.5 eV. These values were obtained from special runs of one of the SACHA programs.

(3) values of the absorption coefficients of atomic oxygen and atomic nitrogen for temperatures 6,000°K - 18,000°K, densities to correspond to the desired ones for the air tables, and spectral intervals centered at every 0.25 eV from 11.0 eV through 46.5 eV. These absorption coefficients were obtained through use of the P.I.C. computer programs.

To keep the listing of these tables as brief as possible without detracting from their utility, the tabulation of energy (frequency) points has been truncated whenever the partial Planck mean has become nearly constant.

An important feature of these tables is that the spectral contribution to the Planck mean absorption coefficient may be obtained at any listed point by simple subtraction. In addition they may be used together with the tables of spectral absorption coefficients of the individual constituents of air to determine the important emitters for various temperature-density cases.

Tables corresponding to temperatures of 13,000°K and 15,000°K are presented although they were not carried out to completion. Since the results given in these tables may be of value to some users they have been retained even though coefficients are not available at present for photon energies greater than 10.7 eV for these two temperatures.

BLANK

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED Alk: 1000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1613.20	0.2	1.81E-05	1.81E-06	1.81E-07	1.81E-08	1.81E-09	1.81E-10	1.81E-11	1.81E-12
		0.	0.	0.	0.	0.	0.	0.	0.
2419.80	0.3	1.81E-05	1.81E-06	1.81E-07	1.81E-08	1.81E-09	1.81E-10	1.81E-11	1.81E-12
		0.	0.	0.	0.	0.	0.	0.	0.
3226.40	0.4	1.82E-05	1.82E-06	1.82E-07	1.82E-08	1.82E-09	1.82E-10	1.82E-11	1.82E-12
		0.	0.	0.	0.	0.	0.	0.	0.
4033.00	0.5	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
4839.60	0.6	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
5646.20	0.7	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
6452.80	0.8	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
7259.40	0.9	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
8066.00	1.0	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
8872.60	1.1	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
9679.20	1.2	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
10485.80	1.3	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
11292.40	1.4	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		0.	0.	0.	0.	0.	0.	0.	0.
12099.00	1.5	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		2.59E-10	8.18E-12	2.59E-13	8.20E-15	2.59E-16	8.19E-18	2.59E-19	8.18E-21
12905.60	1.6	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		5.00E-10	1.58E-11	5.00E-13	1.58E-14	5.00E-16	1.58E-17	5.00E-19	1.58E-20
13712.20	1.7	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		6.72E-10	2.13E-11	6.72E-13	2.13E-14	6.72E-16	2.13E-17	6.72E-19	2.13E-20
14518.80	1.8	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		7.87E-10	2.49E-11	7.87E-13	2.49E-14	7.87E-16	2.49E-17	7.87E-19	2.49E-20
15325.40	1.9	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		8.60E-10	2.72E-11	8.60E-13	2.72E-14	8.60E-16	2.72E-17	8.60E-19	2.72E-20
16132.00	2.0	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		9.00E-10	2.85E-11	9.00E-13	2.85E-14	9.00E-16	2.85E-17	9.00E-19	2.85E-20
16938.60	2.1	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		9.22E-10	2.92E-11	9.22E-13	2.92E-14	9.22E-16	2.92E-17	9.22E-19	2.92E-20
17745.20	2.2	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		9.33E-10	2.95E-11	9.33E-13	2.95E-14	9.33E-16	2.95E-17	9.33E-19	2.95E-20
18551.80	2.3	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		9.38E-10	2.97E-11	9.38E-13	2.97E-14	9.38E-16	2.97E-17	9.38E-19	2.97E-20
19358.40	2.4	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
		9.41E-10	2.98E-11	9.41E-13	2.98E-14	9.41E-16	2.98E-17	9.41E-19	2.98E-20

20165.60	2.50	1.84E-05 9.42E-10	1.84E-06 2.98E-11	1.84E-07 9.42E-13	1.84E-08 2.98E-14	1.84E-09 9.42E-16	1.84E-10 2.98E-17	1.84E-11 9.42E-19	1.84E-12 2.98E-20
20971.60	2.60	1.84E-05 9.42E-10	1.84E-06 2.98E-11	1.84E-07 9.42E-13	1.84E-08 2.98E-14	1.84E-09 9.42E-16	1.84E-10 2.98E-17	1.84E-11 9.42E-19	1.84E-12 2.98E-20
21776.20	2.70	1.84E-05 9.42E-10	1.84E-06 2.98E-11	1.84E-07 9.42E-13	1.84E-08 2.98E-14	1.84E-09 9.42E-16	1.84E-10 2.98E-17	1.84E-11 9.42E-19	1.84E-12 2.98E-20

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 2000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1613.20	0.20	1.05E-03 0.	1.05E-04 0.	1.05E-05 0.	1.05E-06 0.	1.05E-07 0.	1.04E-08 0.	1.01E-09 0.	9.10E-11 0.
2419.80	0.30	1.05E-03 0.	1.05E-04 0.	1.05E-05 0.	1.05E-06 0.	1.05E-07 0.	1.04E-08 0.	1.01E-09 0.	9.20E-11 0.
3226.40	0.40	1.10E-03 0.	1.10E-04 0.	1.10E-05 0.	1.10E-06 0.	1.09E-07 0.	1.08E-08 0.	1.05E-09 0.	9.61E-11 0.
4033.00	0.50	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.14E-07 0.	1.13E-08 0.	1.10E-09 0.	1.01E-10 0.
4839.60	0.60	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.10E-09 0.	1.01E-10 0.
5646.20	0.70	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
6452.80	0.80	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
7259.40	0.90	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
8066.00	1.00	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
8872.60	1.10	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
9679.20	1.20	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
10485.80	1.30	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
11292.40	1.40	1.15E-03 0.	1.15E-04 0.	1.15E-05 0.	1.15E-06 0.	1.15E-07 0.	1.14E-08 0.	1.11E-09 0.	1.01E-10 0.
12098.00	1.50	1.16E-03 2.75E-06	1.16E-04 8.70E-08	1.15E-05 2.75E-09	1.15E-06 8.67E-11	1.15E-07 2.73E-12	1.14E-08 8.48E-14	1.11E-09 2.53E-15	1.01E-10 6.67E-17
12905.60	1.60	1.16E-03 7.30E-06	1.16E-04 2.30E-07	1.16E-05 7.29E-09	1.15E-06 2.30E-10	1.15E-07 7.24E-12	1.14E-08 2.25E-13	1.11E-09 6.72E-15	1.01E-10 1.77E-16
13712.20	1.70	1.17E-03 1.22E-05	1.16E-04 3.87E-07	1.16E-05 1.22E-08	1.15E-06 3.86E-10	1.15E-07 1.21E-11	1.14E-08 3.77E-13	1.11E-09 1.13E-14	1.01E-10 2.97E-16
14518.80	1.80	1.17E-03 1.74E-05	1.16E-04 5.50E-07	1.16E-05 1.74E-08	1.15E-06 5.49E-10	1.15E-07 1.72E-11	1.14E-08 5.35E-13	1.11E-09 1.58E-14	1.01E-10 4.22E-16

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 2000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
15325.40	1.90	1.18E-03	1.16E-04	1.16E-05	1.15E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		2.25E-05	7.10E-07	2.24E-08	7.09E-10	2.23E-11	6.92E-13	2.07E-14	5.45E-16
16132.00	2.00	1.18E-03	1.16E-04	1.16E-05	1.15E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		2.68E-05	8.48E-07	2.68E-08	8.46E-10	2.66E-11	8.27E-13	2.47E-14	6.51E-16
16938.60	2.10	1.19E-03	1.16E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.08E-05	9.66E-07	3.05E-08	9.64E-10	3.03E-11	9.42E-13	2.81E-14	7.41E-16
17745.20	2.20	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.35E-05	1.06E-06	3.34E-08	1.06E-09	3.32E-11	1.03E-12	3.08E-14	8.11E-16
18551.80	2.30	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.56E-05	1.12E-06	3.56E-08	1.12E-09	3.53E-11	1.10E-12	3.27E-14	8.63E-16
19358.40	2.40	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.72E-05	1.17E-06	3.71E-08	1.17E-09	3.68E-11	1.14E-12	3.42E-14	9.01E-16
20165.00	2.50	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.83E-05	1.21E-06	3.82E-08	1.21E-09	3.79E-11	1.18E-12	3.52E-14	9.27E-16
20971.60	2.60	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.90E-05	1.23E-06	3.89E-08	1.23E-09	3.87E-11	1.20E-12	3.58E-14	9.45E-16
21778.20	2.70	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.95E-05	1.25E-06	3.94E-08	1.25E-09	3.91E-11	1.22E-12	3.63E-14	9.57E-16
22584.80	2.80	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		3.98E-05	1.26E-06	3.98E-08	1.26E-09	3.95E-11	1.23E-12	3.66E-14	9.65E-16
23391.40	2.90	1.19E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.00E-05	1.26E-06	4.00E-08	1.26E-09	3.97E-11	1.23E-12	3.68E-14	9.71E-16
24195.00	3.00	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.13E-07	1.14E-08	1.11E-09	1.01E-10
		4.02E-05	1.27E-06	4.01E-08	1.27E-09	3.98E-11	1.24E-12	3.69E-14	9.74E-16
25004.60	3.10	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.03E-05	1.27E-06	4.02E-08	1.27E-09	3.99E-11	1.24E-12	3.70E-14	9.76E-16
25811.20	3.20	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.03E-05	1.27E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.70E-14	9.77E-16
26617.80	3.30	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.03E-05	1.27E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.78E-16
27424.40	3.40	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.04E-05	1.27E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.78E-16
28231.00	3.50	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
		4.04E-05	1.28E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.79E-16

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 3000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1613.20	0.20	2.19E-03	2.16E-04	2.08E-05	1.84E-06	1.28E-07	5.80E-09	1.98E-10	6.36E-12
		0.	0.	0.	0.	0.	0.	0.	0.
2419.80	0.30	2.29E-03	2.16E-04	2.09E-05	1.85E-06	1.28E-07	5.84E-09	2.00E-10	6.40E-12
		0.	0.	0.	0.	0.	0.	0.	0.
3226.40	0.40	2.46E-03	2.43E-04	2.34E-05	2.06E-06	1.44E-07	6.51E-09	2.23E-10	7.17E-12
		0.	0.	0.	0.	0.	0.	0.	0.
4033.00	0.50	2.62E-03	2.59E-04	2.49E-05	2.20E-06	1.53E-07	6.95E-09	2.38E-10	7.62E-12
		0.	0.	0.	0.	0.	0.	0.	0.
4839.60	0.60	2.65E-03	2.61E-04	2.51E-05	2.22E-06	1.55E-07	7.01E-09	2.40E-10	7.69E-12
		9.80E-14	9.65E-15	9.29E-16	8.26E-17	5.73E-18	2.60E-19	8.89E-21	2.85E-22
5646.20	0.70	2.67E-03	2.64E-04	2.54E-05	2.24E-06	1.56E-07	7.08E-09	2.42E-10	7.77E-12
		1.64E-13	1.62E-14	1.56E-15	1.38E-16	9.62E-18	4.35E-19	1.49E-20	4.76E-22
6452.80	0.80	2.68E-03	2.65E-04	2.55E-05	2.25E-06	1.57E-07	7.10E-09	2.43E-10	7.79E-12
		2.09E-13	2.07E-14	1.99E-15	1.76E-16	1.23E-17	5.55E-19	1.89E-20	6.10E-22
7259.40	0.90	2.68E-03	2.65E-04	2.55E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		2.40E-13	2.37E-14	2.28E-15	2.02E-16	1.40E-17	6.35E-19	2.17E-20	6.98E-22
8066.00	1.00	2.68E-03	2.65E-04	2.55E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		2.60E-13	2.57E-14	2.47E-15	2.19E-16	1.52E-17	6.90E-19	2.36E-20	7.59E-22
8872.60	1.10	2.69E-03	2.65E-04	2.55E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		2.74E-13	2.71E-14	2.61E-15	2.31E-16	1.61E-17	7.27E-19	2.48E-20	7.99E-22
9679.20	1.20	2.69E-03	2.65E-04	2.55E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		2.84E-13	2.80E-14	2.70E-15	2.39E-16	1.66E-17	7.52E-19	2.57E-20	8.27E-22
10485.80	1.30	2.70E-03	2.66E-04	2.55E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		1.54E-05	4.74E-07	1.38E-08	3.42E-10	9.21E-12	3.38E-14	1.25E-16	4.06E-19
11292.40	1.40	2.73E-03	2.67E-04	2.56E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.81E-12
		4.81E-05	1.48E-06	4.33E-08	1.07E-09	1.64E-11	1.06E-13	3.90E-16	1.27E-18
12099.00	1.50	2.76E-03	2.68E-04	2.56E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		9.94E-05	3.07E-06	8.95E-08	2.22E-09	3.45E-11	2.40E-13	1.24E-15	1.05E-17
12905.60	1.60	2.86E-03	2.71E-04	2.57E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		1.73E-04	5.33E-06	1.56E-07	3.88E-09	6.09E-11	4.41E-13	2.63E-15	2.68E-17
13712.20	1.70	2.99E-03	2.73E-04	2.58E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		2.61E-04	8.07E-06	2.36E-07	5.87E-09	9.23E-11	6.79E-13	4.11E-15	4.30E-17
14518.80	1.80	3.05E-03	2.77E-04	2.59E-05	2.26E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		3.64E-04	1.13E-05	3.29E-07	8.17E-09	1.28E-10	9.35E-13	5.60E-15	5.73E-17
15325.40	1.90	3.16E-03	2.80E-04	2.60E-05	2.27E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		4.77E-04	1.47E-05	4.31E-07	1.07E-08	1.68E-10	1.21E-12	7.06E-15	7.34E-17
16132.00	2.00	3.27E-03	2.83E-04	2.60E-05	2.27E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		5.83E-04	1.80E-05	5.27E-07	1.31E-08	2.05E-10	1.46E-12	8.37E-15	8.14E-17
16938.60	2.10	3.37E-03	2.86E-04	2.61E-05	2.27E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		6.83E-04	2.11E-05	6.16E-07	1.53E-08	2.39E-10	1.70E-12	9.54E-15	9.06E-17
17745.20	2.20	3.45E-03	2.89E-04	2.62E-05	2.27E-06	1.57E-07	7.12E-09	2.44E-10	7.82E-12
		7.69E-04	2.37E-05	6.93E-07	1.72E-08	2.69E-10	1.90E-12	1.05E-14	9.80E-17
18551.80	2.30	3.53E-03	2.91E-04	2.63E-05	2.23E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		8.40E-04	2.59E-05	7.58E-07	1.88E-08	2.93E-10	2.07E-12	1.13E-14	1.04E-16

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 3000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
19358.40	2.40	3.58E-03	2.93E-04	2.63E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		9.00E-04	2.78E-05	8.12E-07	2.01E-08	3.14E-10	2.21E-12	1.20E-14	1.09E-16
20165.00	2.50	3.63E-03	2.95E-04	2.64E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		9.47E-04	2.92E-05	8.55E-07	2.12E-08	3.30E-10	2.32E-12	1.25E-14	1.12E-16
20971.60	2.60	3.67E-03	2.96E-04	2.64E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		9.85E-04	3.04E-05	8.89E-07	2.20E-08	3.44E-10	2.41E-12	1.29E-14	1.15E-16
21778.20	2.70	3.70E-03	2.97E-04	2.64E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		1.01E-03	3.13E-05	9.15E-07	2.27E-08	3.54E-10	2.48E-12	1.32E-14	1.17E-16
22584.80	2.80	3.72E-03	2.97E-04	2.65E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		1.04E-03	3.20E-05	9.36E-07	2.32E-08	3.62E-10	2.53E-12	1.35E-14	1.19E-16
23391.40	2.90	3.74E-03	2.98E-04	2.65E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		1.06E-03	3.26E-05	9.52E-07	2.36E-08	3.68E-10	2.58E-12	1.37E-14	1.20E-16
24198.00	3.00	3.76E-03	2.99E-04	2.65E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		1.07E-03	3.30E-05	9.64E-07	2.39E-08	3.72E-10	2.61E-12	1.38E-14	1.21E-16
25004.60	3.10	3.77E-03	2.99E-04	2.65E-05	2.28E-06	1.58E-07	7.12E-09	2.44E-10	7.82E-12
		1.08E-03	3.33E-05	9.74E-07	2.41E-08	3.76E-10	2.63E-12	1.39E-14	1.22E-16
25811.20	3.20	3.78E-03	2.99E-04	2.65E-05	2.28E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.09E-03	3.35E-05	9.81E-07	2.43E-08	3.79E-10	2.65E-12	1.40E-14	1.23E-16
26617.80	3.30	3.78E-03	3.00E-04	2.66E-05	2.28E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.09E-03	3.37E-05	9.86E-07	2.44E-08	3.81E-10	2.66E-12	1.41E-14	1.23E-16
27424.40	3.40	3.79E-03	3.00E-04	2.66E-05	2.29E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.10E-03	3.39E-05	9.90E-07	2.45E-08	3.82E-10	2.67E-12	1.41E-14	1.23E-16
28231.00	3.50	3.79E-03	3.00E-04	2.66E-05	2.29E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.10E-03	3.39E-05	9.92E-07	2.46E-08	3.83E-10	2.68E-12	1.41E-14	1.24E-16
29037.60	3.60	3.80E-03	3.00E-04	2.66E-05	2.29E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.10E-03	3.40E-05	9.94E-07	2.47E-08	3.84E-10	2.68E-12	1.42E-14	1.24E-16
29844.20	3.70	3.80E-03	3.01E-04	2.66E-05	2.29E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.10E-03	3.41E-05	9.96E-07	2.47E-08	3.85E-10	2.69E-12	1.42E-14	1.24E-16
30650.80	3.80	3.81E-03	3.01E-04	2.67E-05	2.29E-06	1.58E-07	7.13E-09	2.44E-10	7.82E-12
		1.11E-03	3.41E-05	9.97E-07	2.47E-08	3.85E-10	2.69E-12	1.42E-14	1.24E-16
31457.40	3.90	3.81E-03	3.01E-04	2.67E-05	2.29E-06	1.58E-07	7.14E-09	2.44E-10	7.82E-12
		1.11E-03	3.41E-05	9.98E-07	2.47E-08	3.85E-10	2.69E-12	1.42E-14	1.24E-16
32264.00	4.00	3.81E-03	3.01E-04	2.67E-05	2.30E-06	1.58E-07	7.14E-09	2.44E-10	7.82E-12
		1.11E-03	3.42E-05	9.98E-07	2.48E-08	3.85E-10	2.69E-12	1.42E-14	1.24E-16
33070.60	4.10	3.81E-03	3.02E-04	2.67E-05	2.30E-06	1.58E-07	7.14E-09	2.44E-10	7.82E-12
		1.11E-03	3.42E-05	9.99E-07	2.48E-08	3.86E-10	2.70E-12	1.42E-14	1.24E-16
33877.20	4.20	3.82E-03	3.02E-04	2.68E-05	2.30E-06	1.59E-07	7.14E-09	2.44E-10	7.82E-12
		1.11E-03	3.42E-05	9.99E-07	2.48E-08	3.86E-10	2.70E-12	1.42E-14	1.24E-16
34684.80	4.30	3.82E-03	3.02E-04	2.68E-05	2.30E-06	1.59E-07	7.15E-09	2.44E-10	7.83E-12
		1.11E-03	3.42E-05	9.99E-07	2.48E-08	3.86E-10	2.70E-12	1.42E-14	1.24E-16
35492.40	4.40	3.83E-03	3.03E-04	2.68E-05	2.30E-06	1.59E-07	7.15E-09	2.44E-10	7.83E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.42E-14	1.24E-16
36297.00	4.50	3.83E-03	3.03E-04	2.68E-05	2.31E-06	1.59E-07	7.15E-09	2.44E-10	7.83E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.42E-14	1.24E-16

37103.60	4.60	3.83E-03	3.03E-04	2.69E-05	2.31E-06	1.59E-07	7.15E-09	2.44E-10	7.83E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
37910.20	4.70	3.83E-03	3.04E-04	2.69E-05	2.31E-06	1.59E-07	7.16E-09	2.44E-10	7.83E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
38716.80	4.80	3.84E-03	3.04E-04	2.69E-05	2.31E-06	1.59E-07	7.16E-09	2.45E-10	7.84E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
39523.40	4.90	3.84E-03	3.04E-04	2.69E-05	2.31E-06	1.59E-07	7.17E-09	2.45E-10	7.84E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
40330.00	5.00	3.84E-03	3.04E-04	2.70E-05	2.32E-06	1.59E-07	7.17E-09	2.45E-10	7.84E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
41136.60	5.10	3.84E-03	3.04E-04	2.70E-05	2.32E-06	1.59E-07	7.17E-09	2.45E-10	7.84E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
41943.20	5.20	3.84E-03	3.05E-04	2.70E-05	2.32E-06	1.60E-07	7.17E-09	2.45E-10	7.84E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
42749.80	5.30	3.85E-03	3.05E-04	2.70E-05	2.32E-06	1.60E-07	7.18E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
43556.40	5.40	3.85E-03	3.05E-04	2.70E-05	2.32E-06	1.60E-07	7.18E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
44363.00	5.50	3.85E-03	3.05E-04	2.71E-05	2.32E-06	1.60E-07	7.18E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
45169.60	5.60	3.85E-03	3.05E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
45976.20	5.70	3.85E-03	3.05E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
46782.80	5.80	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
47589.40	5.90	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
48396.00	6.00	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
49202.60	6.10	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
50009.20	6.20	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
50815.80	6.30	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.85E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
51622.40	6.40	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
52429.00	6.50	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
53235.60	6.60	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
54042.20	6.70	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
54848.80	6.80	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
55655.40	6.90	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	10.00E-07	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 3000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
56462.00	7.00	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	1.00E-06	2.48E-08	3.86E-10	2.70E-12	1.43E-14	1.25E-16
57258.60	7.10	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	1.00E-06	2.49E-08	3.91E-10	2.81E-12	1.55E-14	1.38E-16
58075.20	7.20	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	1.00E-06	2.50E-08	3.96E-10	2.90E-12	1.66E-14	1.49E-16
58851.80	7.30	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.42E-05	1.00E-06	2.51E-08	4.00E-10	2.97E-12	1.75E-14	1.57E-16
59688.40	7.40	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.00E-06	2.51E-08	4.02E-10	3.03E-12	1.81E-14	1.64E-16
60435.00	7.50	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.00E-06	2.52E-08	4.03E-10	3.08E-12	1.87E-14	1.70E-16
61301.60	7.60	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.52E-08	4.07E-10	3.12E-12	1.91E-14	1.75E-16
62168.20	7.70	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.08E-10	3.15E-12	1.95E-14	1.78E-16
62914.80	7.80	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.09E-10	3.17E-12	1.97E-14	1.81E-16
63721.40	7.90	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.10E-10	3.19E-12	1.99E-14	1.83E-16
64528.00	8.00	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.11E-10	3.20E-12	2.01E-14	1.84E-16
65334.60	8.10	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.11E-10	3.21E-12	2.02E-14	1.86E-16
66141.20	8.20	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.22E-12	2.03E-14	1.87E-16
66948.00	8.30	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.22E-12	2.04E-14	1.87E-16
67754.40	8.40	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.23E-12	2.04E-14	1.88E-16
68561.00	8.50	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.23E-12	2.04E-14	1.88E-16
69367.60	8.60	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.23E-12	2.05E-14	1.88E-16
70174.20	8.70	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.23E-12	2.05E-14	1.89E-16
70981.80	8.80	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.24E-12	2.05E-14	1.89E-16
71787.40	8.90	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.12E-10	3.24E-12	2.05E-14	1.89E-16
72594.00	9.00	3.86E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
		1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.13E-10	3.24E-12	2.05E-14	1.89E-16

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 4000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal						
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1613.20	0.20	2.09E-03	1.83E-04	1.24E-05	5.57E-07	1.92E-08	6.15E-10	1.90E-11	5.52E-13
		0.	0.	0.	0.	0.	0.	0.	0.
2419.80	0.30	2.12E-03	1.85E-04	1.26E-05	5.65E-07	1.95E-08	6.24E-10	1.93E-11	5.59E-13
		0.	0.	0.	0.	0.	0.	0.	0.
3226.40	0.40	2.55E-03	2.23E-04	1.52E-05	6.80E-07	2.35E-08	7.51E-10	2.32E-11	6.73E-13
		0.	0.	0.	0.	0.	0.	0.	0.
4033.00	0.50	2.73E-03	2.39E-04	1.62E-05	7.27E-07	2.51E-08	8.03E-10	2.48E-11	7.20E-13
		0.	0.	0.	0.	0.	0.	0.	0.
4839.60	0.60	2.84E-03	2.45E-04	1.67E-05	7.48E-07	2.58E-08	8.26E-10	2.56E-11	7.41E-13
		1.17E-09	1.03E-10	6.99E-12	3.12E-13	1.08E-14	3.46E-16	1.07E-17	3.09E-19
5646.20	0.70	2.83E-03	2.49E-04	1.69E-05	7.60E-07	2.62E-08	8.40E-10	2.61E-11	7.62E-13
		2.05E-09	1.80E-10	1.22E-11	5.45E-13	1.88E-14	6.03E-16	1.87E-17	5.49E-19
6452.80	0.80	2.89E-03	2.52E-04	1.72E-05	7.70E-07	2.66E-08	8.53E-10	2.65E-11	8.08E-13
		2.70E-09	2.37E-10	1.61E-11	7.19E-13	2.48E-14	7.95E-16	2.48E-17	7.23E-19
7259.40	0.90	2.91E-03	2.54E-04	1.72E-05	7.74E-07	2.68E-08	8.70E-10	2.68E-11	9.03E-13
		1.10E-09	2.88E-07	3.87E-09	2.51E-11	1.20E-13	1.23E-15	3.08E-17	8.56E-19
8066.00	1.00	2.94E-03	2.55E-04	1.73E-05	7.77E-07	2.71E-08	8.91E-10	3.00E-11	1.07E-12
		3.38E-05	8.14E-07	1.18E-08	7.51E-11	3.11E-13	1.45E-15	3.52E-17	9.59E-19
8872.60	1.10	2.99E-03	2.56E-04	1.73E-05	7.79E-07	2.72E-08	9.08E-10	3.16E-11	1.20E-12
		7.93E-05	1.91E-06	2.77E-08	1.75E-10	6.89E-13	3.26E-15	4.14E-17	1.04E-18
9679.20	1.20	3.07E-03	2.58E-04	1.74E-05	7.83E-07	2.78E-08	9.45E-10	3.51E-11	1.49E-12
		1.53E-04	3.65E-06	5.33E-08	3.36E-10	1.30E-12	5.30E-15	4.94E-17	1.11E-18
10485.80	1.30	3.18E-03	2.61E-04	1.74E-05	7.85E-07	2.78E-08	9.66E-10	3.70E-11	1.65E-12
		2.63E-04	6.32E-06	9.15E-08	5.77E-10	2.21E-12	8.29E-15	6.00E-17	1.18E-18
11292.40	1.40	3.34E-03	2.65E-04	1.75E-05	7.90E-07	2.82E-08	1.01E-09	4.09E-11	1.98E-12
		4.17E-04	1.00E-05	1.45E-07	9.15E-10	3.47E-12	1.25E-14	7.39E-17	1.25E-18
12099.00	1.50	3.53E-03	2.70E-04	1.77E-05	7.93E-07	2.85E-08	1.03E-09	4.30E-11	2.16E-12
		6.12E-04	1.52E-05	2.35E-07	1.03E-09	1.93E-11	2.78E-13	4.70E-15	8.05E-17
12905.60	1.60	3.77E-03	2.77E-04	1.78E-05	7.97E-07	2.87E-08	1.05E-09	4.49E-11	2.32E-12
		8.48E-04	2.13E-05	3.62E-07	3.94E-09	4.37E-11	8.05E-13	1.39E-14	2.39E-16
13712.20	1.70	4.04E-03	2.84E-04	1.80E-05	8.01E-07	2.90E-08	1.07E-09	4.69E-11	2.48E-12
		1.11E-03	2.84E-05	5.01E-07	6.00E-09	8.21E-11	1.37E-12	2.37E-14	4.07E-16
14518.80	1.80	4.33E-03	2.92E-04	1.81E-05	8.05E-07	2.92E-08	1.09E-09	4.90E-11	2.65E-12
		1.40E-03	3.60E-05	6.46E-07	8.02E-09	1.13E-10	1.89E-12	3.30E-14	5.65E-16
15325.40	1.90	4.64E-03	3.00E-04	1.83E-05	8.09E-07	2.94E-08	1.11E-09	5.05E-11	2.78E-12
		1.71E-03	4.39E-05	7.93E-07	9.98E-09	1.42E-10	2.38E-12	4.14E-14	7.10E-16
16132.00	2.00	4.94E-03	3.08E-04	1.84E-05	8.11E-07	2.94E-08	1.11E-09	5.07E-11	2.80E-12
		2.01E-03	5.16E-05	9.34E-07	1.18E-08	1.68E-10	2.82E-12	4.92E-14	8.42E-16
16938.60	2.10	5.23E-03	3.15E-04	1.86E-05	8.13E-07	2.95E-08	1.12E-09	5.09E-11	2.81E-12
		2.35E-03	5.90E-05	1.07E-06	1.35E-08	1.92E-10	3.22E-12	5.61E-14	9.60E-16
17745.20	2.20	5.50E-03	3.22E-04	1.87E-05	8.14E-07	2.95E-08	1.12E-09	5.09E-11	2.82E-12
		2.57E-03	6.59E-05	1.19E-06	1.50E-08	2.12E-10	3.56E-12	6.20E-14	1.06E-15

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 4000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-02	10.0E-04	10.0E-05	10.0E-06	10.0E-07
18551.80	2.30	5.75E-03	3.28E-04	1.88E-05	8.16E-07	2.99E-08	1.12E-09	5.10E-11	2.82E-12
		2.82E-03	7.22E-05	1.30E-06	1.63E-08	2.30E-10	3.86E-12	6.72E-14	1.15E-15
19358.40	2.40	5.97E-03	3.34E-04	1.89E-05	8.17E-07	2.96E-08	1.12E-09	5.10E-11	2.82E-12
		3.04E-03	7.79E-05	1.40E-06	1.74E-08	2.45E-10	4.11E-12	7.15E-14	1.22E-15
20165.00	2.50	6.17E-03	3.39E-04	1.90E-05	8.18E-07	2.96E-08	1.12E-09	5.10E-11	2.82E-12
		3.24E-03	8.29E-05	1.49E-06	1.84E-08	2.58E-10	4.32E-12	7.53E-14	1.29E-15
20971.60	2.60	6.35E-03	3.44E-04	1.91E-05	8.19E-07	2.96E-08	1.12E-09	5.10E-11	2.82E-12
		3.41E-03	8.73E-05	1.56E-06	1.93E-08	2.69E-10	4.50E-12	7.84E-14	1.34E-15
21778.20	2.70	6.52E-03	3.49E-04	1.92E-05	8.21E-07	2.96E-08	1.12E-09	5.10E-11	2.82E-12
		3.56E-03	9.11E-05	1.63E-06	2.00E-08	2.79E-10	4.65E-12	8.10E-14	1.39E-15
22584.80	2.80	6.68E-03	3.55E-04	1.94E-05	8.25E-07	2.97E-08	1.12E-09	5.10E-11	2.82E-12
		3.69E-03	9.43E-05	1.68E-06	2.06E-08	2.86E-10	4.78E-12	8.32E-14	1.42E-15
23391.40	2.90	6.83E-03	3.61E-04	1.96E-05	8.29E-07	2.98E-08	1.12E-09	5.11E-11	2.83E-12
		3.80E-03	9.70E-05	1.73E-06	2.11E-08	2.93E-10	4.89E-12	8.50E-14	1.45E-15
24198.00	3.00	6.97E-03	3.68E-04	1.99E-05	8.35E-07	2.99E-08	1.12E-09	5.12E-11	2.84E-12
		3.89E-03	9.92E-05	1.77E-06	2.15E-08	2.98E-10	4.97E-12	8.65E-14	1.48E-15
25004.60	3.10	7.11E-03	3.75E-04	2.01E-05	8.42E-07	3.00E-08	1.13E-09	5.13E-11	2.84E-12
		3.96E-03	1.01E-04	1.80E-06	2.19E-08	3.03E-10	5.04E-12	8.77E-14	1.50E-15
25811.20	3.20	7.25E-03	3.82E-04	2.04E-05	8.49E-07	3.02E-08	1.13E-09	5.15E-11	2.86E-12
		4.03E-03	1.03E-04	1.82E-06	2.22E-08	3.06E-10	5.10E-12	8.87E-14	1.52E-15
26617.80	3.30	7.39E-03	3.90E-04	2.08E-05	8.58E-07	3.03E-08	1.14E-09	5.16E-11	2.86E-12
		4.08E-03	1.04E-04	1.85E-06	2.24E-08	3.09E-10	5.15E-12	8.96E-14	1.53E-15
27424.40	3.40	7.53E-03	3.99E-04	2.12E-05	8.68E-07	3.06E-08	1.14E-09	5.17E-11	2.87E-12
		4.12E-03	1.05E-04	1.86E-06	2.26E-08	3.12E-10	5.19E-12	9.02E-14	1.54E-15
28231.00	3.50	7.68E-03	4.09E-04	2.17E-05	8.79E-07	3.08E-08	1.15E-09	5.19E-11	2.88E-12
		4.15E-03	1.06E-04	1.88E-06	2.28E-08	3.15E-10	5.24E-12	9.12E-14	1.56E-15
29037.80	3.60	7.85E-03	4.20E-04	2.22E-05	8.92E-07	3.10E-08	1.15E-09	5.20E-11	2.88E-12
		4.18E-03	1.07E-04	1.89E-06	2.30E-08	3.18E-10	5.29E-12	9.21E-14	1.57E-15
29844.20	3.70	8.01E-03	4.31E-04	2.27E-05	9.04E-07	3.13E-08	1.16E-09	5.22E-11	2.89E-12
		4.20E-03	1.07E-04	1.90E-06	2.31E-08	3.20E-10	5.34E-12	9.28E-14	1.59E-15
30650.80	3.80	8.21E-03	4.46E-04	2.34E-05	9.21E-07	3.16E-08	1.17E-09	5.24E-11	2.90E-12
		4.22E-03	1.08E-04	1.91E-06	2.33E-08	3.22E-10	5.37E-12	9.34E-14	1.60E-15
31457.40	3.90	8.37E-03	4.58E-04	2.40E-05	9.36E-07	3.19E-08	1.17E-09	5.26E-11	2.90E-12
		4.23E-03	1.08E-04	1.92E-06	2.34E-08	3.24E-10	5.40E-12	9.39E-14	1.61E-15
32264.00	4.00	8.57E-03	4.73E-04	2.47E-05	9.54E-07	3.23E-08	1.18E-09	5.29E-11	2.91E-12
		4.24E-03	1.08E-04	1.93E-06	2.35E-08	3.25E-10	5.42E-12	9.43E-14	1.61E-15
33070.60	4.10	8.79E-03	4.89E-04	2.55E-05	9.74E-07	3.27E-08	1.19E-09	5.32E-11	2.92E-12
		4.25E-03	1.08E-04	1.93E-06	2.35E-08	3.26E-10	5.44E-12	9.46E-14	1.62E-15
33877.20	4.20	9.03E-03	5.07E-04	2.64E-05	1.00E-06	3.33E-08	1.21E-09	5.37E-11	2.93E-12
		4.26E-03	1.09E-04	1.93E-06	2.36E-08	3.27E-10	5.45E-12	9.49E-14	1.62E-15
34685.80	4.30	9.26E-03	5.25E-04	2.73E-05	1.02E-06	3.39E-08	1.22E-09	5.40E-11	2.94E-12
		4.26E-03	1.09E-04	1.94E-06	2.36E-08	3.28E-10	5.47E-12	9.51E-14	1.63E-15
35493.40	4.40	9.53E-03	5.46E-04	2.84E-05	1.06E-06	3.47E-08	1.25E-09	5.47E-11	2.96E-12
		4.27E-03	1.09E-04	1.94E-06	2.37E-08	3.28E-10	5.48E-12	9.52E-14	1.63E-15

36297.00	4.50	9.78E-03	5.66E-04	2.94E-05	1.08E-06	3.54E-08	1.26E-09	5.53E-11	2.98E-12
		4.27E-03	1.09E-04	1.94E-06	2.37E-08	3.29E-10	5.48E-12	9.54E-14	1.63E-15
37103.60	4.60	1.01E-02	5.88E-04	3.06E-05	1.12E-06	3.64E-08	1.29E-09	5.62E-11	3.00E-12
		4.27E-03	1.09E-04	1.94E-06	2.37E-08	3.29E-10	5.49E-12	9.55E-14	1.63E-15
37910.20	4.70	1.03E-02	6.05E-04	3.15E-05	1.15E-06	3.71E-08	1.32E-09	5.68E-11	3.02E-12
		4.27E-03	1.09E-04	1.94E-06	2.37E-08	3.29E-10	5.49E-12	9.56E-14	1.63E-15
38716.80	4.80	1.05E-02	6.23E-04	3.25E-05	1.19E-06	3.82E-08	1.35E-09	5.78E-11	3.05E-12
		4.28E-03	1.09E-04	1.95E-06	2.37E-08	3.30E-10	5.50E-12	9.56E-14	1.64E-15
39523.40	4.90	1.07E-02	6.37E-04	3.33E-05	1.21E-06	3.90E-08	1.37E-09	5.85E-11	3.07E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.50E-12	9.57E-14	1.64E-15
40330.00	5.00	1.09E-02	6.53E-04	3.42E-05	1.25E-06	4.00E-08	1.40E-09	5.94E-11	3.10E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.50E-12	9.57E-14	1.64E-15
41136.60	5.10	1.11E-02	6.69E-04	3.51E-05	1.28E-06	4.09E-08	1.43E-09	6.02E-11	3.12E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.50E-12	9.57E-14	1.64E-15
41943.20	5.20	1.12E-02	6.82E-04	3.58E-05	1.30E-06	4.16E-08	1.45E-09	6.08E-11	3.14E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
42749.80	5.30	1.15E-02	7.04E-04	3.71E-05	1.34E-06	4.28E-08	1.49E-09	6.19E-11	3.17E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
43556.40	5.40	1.17E-02	7.19E-04	3.78E-05	1.36E-06	4.33E-08	1.50E-09	6.23E-11	3.19E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
44363.00	5.50	1.19E-02	7.38E-04	3.89E-05	1.40E-06	4.44E-08	1.53E-09	6.33E-11	3.21E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
45169.60	5.60	1.21E-02	7.51E-04	3.96E-05	1.43E-06	4.50E-08	1.55E-09	6.38E-11	3.22E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
45976.20	5.70	1.22E-02	7.59E-04	4.00E-05	1.44E-06	4.53E-08	1.56E-09	6.40E-11	3.23E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
46782.80	5.80	1.23E-02	7.67E-04	4.04E-05	1.45E-06	4.56E-08	1.57E-09	6.43E-11	3.24E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
47589.40	5.90	1.24E-02	7.72E-04	4.07E-05	1.46E-06	4.58E-08	1.57E-09	6.45E-11	3.24E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.58E-14	1.64E-15
48396.00	6.00	1.24E-02	7.75E-04	4.09E-05	1.46E-06	4.59E-08	1.57E-09	6.46E-11	3.24E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
49202.60	6.10	1.24E-02	7.80E-04	4.12E-05	1.47E-06	4.64E-08	1.59E-09	6.50E-11	3.26E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
50009.20	6.20	1.25E-02	7.81E-04	4.13E-05	1.48E-06	4.65E-08	1.59E-09	6.51E-11	3.26E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
50815.80	6.30	1.25E-02	7.82E-04	4.13E-05	1.48E-06	4.65E-08	1.59E-09	6.52E-11	3.26E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
51622.40	6.40	1.25E-02	7.83E-04	4.14E-05	1.48E-06	4.67E-08	1.60E-09	6.53E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
52429.00	6.50	1.25E-02	7.83E-04	4.14E-05	1.49E-06	4.67E-08	1.60E-09	6.54E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
53235.60	6.60	1.25E-02	7.84E-04	4.14E-05	1.49E-06	4.68E-08	1.60E-09	6.54E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
54042.20	6.70	1.25E-02	7.84E-04	4.15E-05	1.49E-06	4.68E-08	1.60E-09	6.54E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
54848.80	6.80	1.25E-02	7.84E-04	4.15E-05	1.49E-06	4.68E-08	1.60E-09	6.54E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
55655.40	6.90	1.25E-02	7.84E-04	4.15E-05	1.49E-06	4.68E-08	1.60E-09	6.54E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 4000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
56462.00	7.00	1.25E-02	7.84E-04	4.15E-05	1.49E-06	4.68E-08	1.60E-09	6.55E-11	3.27E-12
		4.28E-03	1.09E-04	1.95E-06	2.38E-08	3.30E-10	5.51E-12	9.59E-14	1.64E-15
57268.60	7.10	1.25E-02	7.87E-04	4.16E-05	1.49E-06	4.68E-08	1.60E-09	6.55E-11	3.27E-12
		4.32E-03	1.12E-04	2.08E-06	2.64E-08	3.61E-10	5.83E-12	9.91E-14	1.67E-15
58075.20	7.20	1.26E-02	7.90E-04	4.17E-05	1.49E-06	4.69E-08	1.60E-09	6.55E-11	3.27E-12
		4.35E-03	1.15E-04	2.20E-06	2.87E-08	3.89E-10	6.12E-12	1.02E-13	1.70E-15
58881.80	7.30	1.26E-02	7.92E-04	4.18E-05	1.49E-06	4.69E-08	1.60E-09	6.55E-11	3.27E-12
		4.38E-03	1.17E-04	2.30E-06	3.07E-08	4.13E-10	6.37E-12	1.05E-13	1.73E-15
59688.40	7.40	1.26E-02	7.94E-04	4.19E-05	1.50E-06	4.69E-08	1.60E-09	6.55E-11	3.27E-12
		4.41E-03	1.19E-04	2.39E-06	3.25E-08	4.34E-10	6.58E-12	1.07E-13	1.75E-15
60495.00	7.50	1.26E-02	7.96E-04	4.20E-05	1.50E-06	4.69E-08	1.60E-09	6.55E-11	3.27E-12
		4.43E-03	1.21E-04	2.47E-06	3.40E-08	4.52E-10	6.77E-12	1.09E-13	1.77E-15
61301.60	7.60	1.27E-02	7.97E-04	4.21E-05	1.50E-06	4.[illegible]E-08	1.60E-09	6.55E-11	3.27E-12
		4.45E-03	1.22E-04	2.53E-06	3.53E-08	4.67E-10	6.93E-12	1.10E-13	1.78E-15
62108.20	7.70	1.27E-02	7.98E-04	4.21E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.47E-03	1.23E-04	2.59E-06	3.64E-08	4.80E-10	7.06E-12	1.12E-13	1.80E-15
62914.80	7.80	1.27E-02	7.99E-04	4.22E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.48E-03	1.24E-04	2.63E-06	3.73E-08	4.91E-10	7.18E-12	1.13E-13	1.81E-15
63721.40	7.90	1.27E-02	8.00E-04	4.22E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.49E-03	1.25E-04	2.67E-06	3.81E-08	5.00E-10	7.27E-12	1.14E-13	1.82E-15
64528.00	8.00	1.27E-02	8.01E-04	4.22E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.50E-03	1.26E-04	2.70E-06	3.87E-08	5.07E-10	7.35E-12	1.14E-13	1.83E-15
65334.60	8.10	1.27E-02	8.01E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.51E-03	1.26E-04	2.73E-06	3.92E-08	5.13E-10	7.41E-12	1.15E-13	1.83E-15
66141.20	8.20	1.27E-02	8.02E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.51E-03	1.27E-04	2.75E-06	3.96E-08	5.19E-10	7.47E-12	1.16E-13	1.84E-15
66947.80	8.30	1.27E-02	8.02E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.52E-03	1.27E-04	2.77E-06	4.00E-08	5.23E-10	7.51E-12	1.16E-13	1.84E-15
67754.40	8.40	1.27E-02	8.03E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.52E-03	1.28E-04	2.78E-06	4.03E-08	5.26E-10	7.55E-12	1.16E-13	1.85E-15
68561.00	8.50	1.27E-02	8.03E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.28E-04	2.80E-06	4.05E-08	5.29E-10	7.57E-12	1.17E-13	1.85E-15
69367.60	8.60	1.27E-02	8.03E-04	4.23E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.28E-04	2.81E-06	4.07E-08	5.31E-10	7.60E-12	1.17E-13	1.85E-15
70174.20	8.70	1.27E-02	8.03E-04	4.24E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.28E-04	2.81E-06	4.09E-08	5.33E-10	7.62E-12	1.17E-13	1.85E-15
70980.80	8.80	1.28E-02	8.03E-04	4.24E-05	1.50E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.28E-04	2.82E-06	4.10E-08	5.35E-10	7.63E-12	1.17E-13	1.86E-15
71787.40	8.90	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.29E-04	2.83E-06	4.11E-08	5.36E-10	7.64E-12	1.17E-13	1.86E-15
72594.00	9.00	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.60E-09	6.55E-11	3.27E-12
		4.53E-03	1.29E-04	2.83E-06	4.11E-08	5.36E-10	7.65E-12	1.17E-13	1.86E-15

73409.00	9.10	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
		4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.37E-10	7.66E-12	1.18E-13	1.86E-15
74207.20	9.20	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
		4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.37E-10	7.66E-12	1.18E-13	1.86E-15
75005.40	9.30	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
		4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.37E-10	7.66E-12	1.18E-13	1.86E-15
75803.60	9.40	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
		4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.37E-10	7.66E-12	1.18E-13	1.86E-15
76601.80	9.50	1.28E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
		4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.38E-10	7.66E-12	1.18E-13	1.86E-15

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 5000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	3.54E-04	9.69E-06	3.13E-07	1.01E-08	3.12E-10	8.61E-12	1.81E-13	2.43E-15
		2.45E-04	3.06E-06	1.78E-06	8.37E-11	6.51E-13	1.96E-14	5.67E-16	2.85E-17
5646.20	0.70	7.07E-04	1.67E-05	4.74E-07	1.69E-08	7.04E-10	3.24E-11	1.12E-12	1.95E-14
		5.53E-04	6.91E-06	3.98E-08	1.79E-10	1.61E-12	3.33E-14	1.02E-15	5.12E-17
6452.80	0.80	1.14E-03	2.63E-05	7.87E-07	3.46E-08	1.98E-09	1.19E-10	4.73E-12	8.05E-14
		9.18E-04	1.15E-05	6.56E-08	2.86E-10	2.32E-12	4.79E-14	1.37E-15	6.90E-17
7259.40	0.90	1.80E-03	3.52E-05	1.16E-06	6.68E-08	4.86E-09	3.33E-10	1.38E-11	2.38E-13
		1.33E-03	1.66E-05	9.49E-08	4.02E-10	2.97E-12	5.82E-14	1.65E-15	8.31E-17
8066.00	1.00	2.12E-03	4.61E-05	1.71E-06	1.17E-07	9.43E-09	6.74E-10	2.83E-11	4.90E-13
		1.78E-03	2.22E-05	1.27E-07	5.25E-10	3.59E-12	6.66E-14	1.87E-15	9.42E-17
8872.60	1.10	2.62E-03	5.69E-05	2.25E-06	1.67E-07	1.39E-08	1.01E-09	4.26E-11	7.36E-13
		2.25E-03	2.80E-05	1.60E-07	6.53E-10	4.17E-12	7.35E-14	2.05E-15	1.03E-16
9679.20	1.20	3.19E-03	7.20E-05	3.20E-06	2.58E-07	2.23E-08	1.63E-09	6.90E-11	1.19E-12
		2.74E-03	3.41E-05	1.94E-07	7.83E-10	4.73E-12	7.92E-14	2.19E-15	1.10E-16
10485.80	1.30	3.75E-03	8.47E-05	5.91E-06	5.24E-07	2.63E-08	2.08E-09	8.82E-11	1.53E-12
		3.23E-03	4.02E-05	2.28E-07	9.13E-10	5.25E-12	8.40E-14	2.30E-15	1.16E-16
11292.40	1.40	4.34E-03	1.02E-04	5.12E-06	4.40E-07	3.89E-08	2.87E-09	1.22E-10	2.11E-12
		3.71E-03	4.62E-05	2.63E-07	1.04E-09	5.74E-12	8.80E-14	2.59E-15	1.20E-16
12099.00	1.50	4.97E-03	1.21E-04	6.10E-06	5.24E-07	4.63E-08	3.42E-09	1.49E-10	2.52E-12
		4.26E-03	5.66E-05	4.24E-07	1.73E-09	9.25E-11	8.85E-13	1.62E-14	4.33E-16
12905.60	1.60	5.66E-03	1.43E-04	7.09E-06	5.96E-07	5.26E-08	3.98E-09	1.65E-10	2.86E-12
		4.88E-03	7.18E-05	7.26E-07	9.29E-09	1.51E-10	2.57E-12	4.53E-14	1.09E-15
13712.20	1.70	6.36E-03	1.67E-04	8.30E-06	6.89E-07	6.06E-08	4.47E-09	1.90E-10	3.30E-12
		5.49E-03	8.79E-05	1.06E-06	1.55E-08	2.61E-10	4.47E-12	7.80E-14	1.83E-15
14518.80	1.80	7.02E-03	1.91E-04	9.43E-06	7.73E-07	6.78E-08	5.01E-09	2.13E-10	3.69E-12
		6.09E-03	1.04E-04	1.39E-06	2.17E-08	3.72E-10	6.36E-12	1.11E-13	2.57E-15
15325.40	1.90	7.65E-03	2.13E-04	1.09E-05	8.52E-07	7.43E-08	5.51E-09	2.34E-10	4.06E-12
		6.64E-03	1.19E-04	1.72E-06	2.77E-08	4.79E-10	8.20E-12	1.43E-13	3.28E-15
16132.00	2.00	8.19E-03	2.29E-04	1.10E-05	8.74E-07	7.61E-08	5.62E-09	2.39E-10	4.14E-12
		7.17E-03	1.33E-04	2.03E-06	3.35E-08	5.82E-10	9.98E-12	1.73E-13	3.97E-15

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 5000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
16938.60	2.10	8.69E-03	2.44E-04	1.14E-05	8.93E-07	7.75E-0	5.71E-09	2.43E-10	4.21E-12
		7.65E-03	1.47E-04	2.30E-06	3.90E-08	6.80E-10	1.17E-11	2.02E-13	4.63E-15
17745.20	2.20	9.13E-03	2.57E-04	1.17E-05	9.03E-07	7.80E-08	5.74E-09	2.44E-10	4.23E-12
		8.39E-03	1.58E-04	2.59E-06	4.41E-08	7.70E-10	1.32E-11	2.29E-13	5.23E-15
18551.80	2.30	9.34E-03	2.68E-04	1.20E-05	9.10E-07	7.83E-08	5.76E-09	2.45E-10	4.24E-12
		8.50E-03	1.70E-04	2.83E-06	4.86E-08	8.52E-10	1.46E-11	2.53E-13	5.77E-15
19358.40	2.40	9.90E-03	2.79E-04	1.22E-05	9.14E-07	7.84E-08	5.77E-09	2.45E-10	4.28E-12
		8.66E-03	1.80E-04	3.05E-06	5.28E-08	9.26E-10	1.59E-11	2.75E-13	6.27E-15
20165.00	2.50	1.02E-02	2.88E-04	1.24E-05	9.18E-07	7.85E-08	5.77E-09	2.46E-10	4.30E-12
		9.18E-03	1.90E-04	3.25E-06	5.65E-08	9.92E-10	1.70E-11	2.95E-13	6.71E-15
20971.60	2.60	1.06E-02	2.98E-04	1.26E-05	9.22E-07	7.86E-08	5.78E-09	2.46E-10	4.34E-12
		9.47E-03	1.98E-04	3.43E-06	5.98E-08	1.05E-09	1.80E-11	3.12E-13	7.11E-15
21778.20	2.70	1.10E-02	3.11E-04	1.29E-05	9.26E-07	7.87E-08	5.80E-09	2.51E-10	4.67E-12
		9.73E-03	2.05E-04	3.58E-06	6.28E-08	1.10E-09	1.89E-11	3.28E-13	7.46E-15
22584.80	2.80	1.14E-02	3.28E-04	1.33E-05	9.35E-07	7.89E-08	5.80E-09	2.51E-10	4.73E-12
		9.96E-03	2.11E-04	3.72E-06	6.54E-08	1.15E-09	1.97E-11	3.42E-13	7.77E-15
23391.40	2.90	1.19E-02	3.46E-04	1.37E-05	9.45E-07	7.92E-08	5.84E-09	2.59E-10	5.33E-12
		1.02E-02	2.17E-04	3.84E-06	6.77E-08	1.19E-09	2.04E-11	3.54E-13	8.04E-15
24198.00	3.00	1.25E-02	3.69E-04	1.43E-05	9.59E-07	7.96E-08	5.87E-09	2.65E-10	5.78E-12
		1.03E-02	2.22E-04	3.95E-06	6.97E-08	1.23E-09	2.10E-11	3.64E-13	8.28E-15
25004.60	3.10	1.31E-02	3.93E-04	1.50E-05	9.75E-07	8.00E-08	5.89E-09	2.66E-10	5.83E-12
		1.05E-02	2.26E-04	4.04E-06	7.15E-08	1.26E-09	2.16E-11	3.74E-13	8.49E-15
25811.20	3.20	1.37E-02	4.20E-04	1.57E-05	9.92E-07	8.08E-08	6.01E-09	2.92E-10	7.83E-12
		1.06E-02	2.30E-04	4.13E-06	7.30E-08	1.29E-09	2.20E-11	3.82E-13	8.67E-15
26617.80	3.30	1.44E-02	4.49E-04	1.64E-05	1.01E-06	8.13E-08	6.04E-09	2.97E-10	8.11E-12
		1.07E-02	2.33E-04	4.20E-06	7.43E-08	1.31E-09	2.24E-11	3.89E-13	8.83E-15
27424.40	3.40	1.53E-02	4.84E-04	1.73E-05	1.03E-06	8.19E-08	6.03E-09	2.97E-10	8.14E-12
		1.08E-02	2.36E-04	4.26E-06	7.55E-08	1.33E-09	2.28E-11	3.95E-13	8.96E-15
28231.00	3.50	1.61E-02	5.22E-04	1.82E-05	1.05E-06	8.26E-08	6.13E-09	3.11E-10	9.16E-12
		1.09E-02	2.40E-04	4.35E-06	7.72E-08	1.36E-09	2.33E-11	4.04E-13	9.17E-15
29037.60	3.60	1.71E-02	5.66E-04	1.94E-05	1.08E-06	8.34E-08	6.16E-09	3.13E-10	9.27E-12
		1.10E-02	2.43E-04	4.43E-06	7.88E-08	1.39E-09	2.39E-11	4.12E-13	9.36E-15
29844.20	3.70	1.82E-02	6.09E-04	2.04E-05	1.10E-06	8.41E-08	6.15E-09	3.14E-10	9.31E-12
		1.11E-02	2.46E-04	4.51E-06	8.03E-08	1.42E-09	2.43E-11	4.20E-13	9.54E-15
30650.80	3.80	1.94E-02	6.63E-04	2.18E-05	1.14E-06	8.49E-08	6.21E-09	3.16E-10	9.45E-12
		1.12E-02	2.49E-04	4.57E-06	8.16E-08	1.44E-09	2.47E-11	4.27E-13	9.69E-15
31457.40	3.90	2.05E-02	7.12E-04	2.30E-05	1.17E-06	8.57E-08	6.24E-09	3.17E-10	9.46E-12
		1.13E-02	2.51E-04	4.63E-06	8.27E-08	1.46E-09	2.50E-11	4.33E-13	9.83E-15
32264.00	4.00	2.19E-02	7.71E-04	2.46E-05	1.20E-06	8.68E-08	6.27E-09	3.18E-10	9.47E-12
		1.13E-02	2.53E-04	4.68E-06	8.36E-08	1.48E-09	2.53E-11	4.38E-13	9.94E-15
33070.60	4.10	2.33E-02	8.34E-04	2.62E-05	1.24E-06	8.78E-08	6.29E-09	3.18E-10	9.48E-12
		1.14E-02	2.55E-04	4.72E-06	8.44E-08	1.49E-09	2.56E-11	4.42E-13	1.00E-14
33877.20	4.20	2.50E-02	9.13E-04	2.85E-05	1.30E-06	8.95E-08	6.34E-09	3.19E-10	9.49E-12
		1.14E-02	2.56E-04	4.74E-06	8.51E-08	1.50E-09	2.58E-11	4.46E-13	1.01E-14

34683.80	4.30	2.66E-02	9.89E-04	3.06E-05	1.36E-06	9.10E-08	6.38E-09	3.28E-10	9.51E-12
		1.15E-02	2.58E-04	4.79E-06	8.57E-08	1.51E-09	2.60E-11	4.69E-13	1.02E-14
35100.40	4.40	2.86E-02	1.09E-03	3.35E-05	1.44E-06	9.33E-08	6.44E-09	3.21E-10	9.52E-12
		1.15E-02	2.59E-04	4.81E-06	8.62E-08	1.52E-09	2.61E-11	4.52E-13	1.02E-14
35297.00	4.50	3.05E-02	1.18E-03	3.63E-05	1.51E-06	9.34E-08	6.50E-09	3.22E-10	9.54E-12
		1.15E-02	2.59E-04	4.83E-06	8.66E-08	1.53E-09	2.62E-11	4.54E-13	1.03E-14
37103.60	4.60	3.27E-02	1.29E-03	3.99E-05	1.62E-06	9.85E-08	6.58E-09	3.24E-10	9.56E-12
		1.15E-02	2.60E-04	4.85E-06	8.69E-08	1.54E-09	2.63E-11	4.56E-13	1.03E-14
37910.20	4.70	3.45E-02	1.38E-03	4.28E-05	1.70E-06	1.01E-07	6.65E-09	3.26E-10	9.58E-12
		1.15E-02	2.61E-04	4.87E-06	8.72E-08	1.54E-09	2.64E-11	4.57E-13	1.04E-14
38716.80	4.80	3.63E-02	1.48E-03	4.63E-05	1.81E-06	1.04E-07	6.74E-09	3.27E-10	9.60E-12
		1.16E-02	2.61E-04	4.88E-06	8.75E-08	1.55E-09	2.65E-11	4.59E-13	1.04E-14
39523.40	4.90	3.79E-02	1.56E-03	4.93E-05	1.90E-06	1.07E-07	6.81E-09	3.29E-10	9.62E-12
		1.16E-02	2.62E-04	4.89E-06	8.77E-08	1.55E-09	2.66E-11	4.60E-13	1.04E-14
40330.00	5.00	3.96E-02	1.65E-03	5.26E-05	2.01E-06	1.10E-07	6.89E-09	3.31E-10	9.64E-12
		1.16E-02	2.62E-04	4.90E-06	8.79E-08	1.55E-09	2.66E-11	4.61E-13	1.04E-14
41136.60	5.10	4.15E-02	1.73E-03	5.60E-05	2.11E-06	1.13E-07	6.98E-09	3.32E-10	9.67E-12
		1.16E-02	2.62E-04	4.90E-06	8.80E-08	1.56E-09	2.67E-11	4.61E-13	1.05E-14
41943.20	5.20	4.30E-02	1.83E-03	5.84E-05	2.18E-06	1.15E-07	7.03E-09	3.33E-10	9.68E-12
		1.16E-02	2.63E-04	4.91E-06	8.81E-08	1.56E-09	2.67E-11	4.62E-13	1.05E-14
42749.80	5.30	4.54E-02	1.95E-03	6.27E-05	2.31E-06	1.19E-07	7.13E-09	3.36E-10	9.71E-12
		1.16E-02	2.63E-04	4.92E-06	8.82E-08	1.56E-09	2.67E-11	4.63E-13	1.05E-14
43556.40	5.40	4.69E-02	2.03E-03	6.49E-05	2.37E-06	1.20E-07	7.18E-09	3.36E-10	9.72E-12
		1.16E-02	2.63E-04	4.92E-06	8.83E-08	1.56E-09	2.68E-11	4.63E-13	1.05E-14
44363.00	5.50	4.90E-02	2.14E-03	6.86E-05	2.48E-06	1.24E-07	7.27E-09	3.39E-10	9.75E-12
		1.16E-02	2.63E-04	4.92E-06	8.84E-08	1.56E-09	2.68E-11	4.63E-13	1.05E-14
45169.60	5.50	5.06E-02	2.22E-03	7.13E-05	2.56E-06	1.26E-07	7.33E-09	3.40E-10	9.76E-12
		1.16E-02	2.63E-04	4.93E-06	8.84E-08	1.56E-09	2.68E-11	4.64E-13	1.05E-14
45976.20	5.70	5.16E-02	2.26E-03	7.26E-05	2.59E-06	1.27E-07	7.36E-09	3.40E-10	9.77E-12
		1.16E-02	2.63E-04	4.93E-06	8.85E-08	1.56E-09	2.68E-11	4.64E-13	1.05E-14
46782.80	5.80	5.25E-02	2.31E-03	7.40E-05	2.63E-06	1.28E-07	7.39E-09	3.41E-10	9.78E-12
		1.16E-02	2.63E-04	4.93E-06	8.85E-08	1.56E-09	2.68E-11	4.64E-13	1.05E-14
47589.40	5.90	5.31E-02	2.34E-03	7.51E-05	2.66E-06	1.29E-07	7.41E-09	3.41E-10	9.78E-12
		1.16E-02	2.63E-04	4.93E-06	8.86E-08	1.57E-09	2.68E-11	4.64E-13	1.05E-14
48396.00	6.00	5.35E-02	2.36E-03	7.57E-05	2.68E-06	1.30E-07	7.42E-09	3.42E-10	9.79E-12
		1.16E-02	2.63E-04	4.93E-06	8.86E-08	1.57E-09	2.68E-11	4.65E-13	1.05E-14
49202.60	6.10	5.42E-02	2.41E-03	7.77E-05	2.75E-06	1.32E-07	7.48E-09	3.43E-10	9.80E-12
		1.16E-02	2.63E-04	4.94E-06	8.86E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
50009.20	6.20	5.45E-02	2.42E-03	7.83E-05	2.77E-06	1.32E-07	7.50E-09	3.43E-10	9.81E-12
		1.16E-02	2.63E-04	4.94E-06	8.86E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
50815.80	6.30	5.46E-02	2.43E-03	7.86E-05	2.78E-06	1.33E-07	7.51E-09	3.43E-10	9.81E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
51622.40	6.40	5.49E-02	2.45E-03	7.90E-05	2.80E-06	1.33E-07	7.53E-09	3.43E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
52429.00	6.50	5.50E-02	2.45E-03	7.97E-05	2.81E-06	1.34E-07	7.54E-09	3.44E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
53235.60	6.60	5.51E-02	2.46E-03	7.98E-05	2.82E-06	1.34E-07	7.54E-09	3.44E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
54042.20	6.70	5.52E-02	2.46E-03	8.01E-05	2.83E-06	1.34E-07	7.55E-09	3.44E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14
54848.80	6.80	5.52E-02	2.47E-03	8.02E-05	2.83E-06	1.34E-07	7.55E-09	3.44E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.05E-14

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 5000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
55655.40	6.90	5.53E-02	2.47E-03	8.03E-05	2.83E-06	1.34E-07	7.55E-09	3.44E-10	9.82E-12
		1.14E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.06E-14
56462.00	7.00	5.53E-02	2.47E-03	8.03E-05	2.84E-06	1.34E-07	7.56E-09	3.44E-10	9.82E-12
		1.16E-02	2.64E-04	4.94E-06	8.87E-08	1.57E-09	2.69E-11	4.65E-13	1.06E-14
57268.60	7.10	5.58E-02	2.49E-03	8.07E-05	2.84E-06	1.34E-07	7.56E-09	3.44E-10	9.82E-12
		1.21E-02	2.85E-04	5.31E-06	9.31E-08	1.61E-09	2.73E-11	4.70E-13	1.06E-14
58075.20	7.20	5.63E-02	2.51E-03	8.11E-05	2.84E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.26E-02	3.04E-04	5.66E-06	9.71E-08	1.66E-09	2.78E-11	4.74E-13	1.06E-14
58881.80	7.30	5.68E-02	2.53E-03	8.14E-05	2.85E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-1
		1.31E-02	3.21E-04	5.97E-06	1.01E-07	1.69E-09	2.82E-11	4.78E-13	1.07E-14
59688.40	7.40	5.72E-02	2.54E-03	8.17E-05	2.85E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.35E-02	3.37E-04	6.25E-06	1.04E-07	1.73E-09	2.85E-11	4.82E-13	1.07E-14
60495.00	7.50	5.75E-02	2.56E-03	8.19E-05	2.85E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.39E-02	3.52E-04	6.51E-06	1.07E-07	1.76E-09	2.88E-11	4.85E-13	1.07E-14
61301.60	7.60	5.79E-02	2.57E-03	8.21E-05	2.86E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.42E-02	3.64E-04	6.73E-06	1.10E-07	1.79E-09	2.91E-11	4.88E-13	1.08E-14
62108.20	7.70	5.82E-02	2.58E-03	8.23E-05	2.86E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.45E-02	3.76E-04	6.93E-06	1.12E-07	1.81E-09	2.93E-11	4.90E-13	1.08E-14
62914.80	7.80	5.84E-02	2.59E-03	8.25E-05	2.86E-06	1.35E-07	7.56E-09	3.44E-10	9.82E-12
		1.47E-02	3.85E-04	7.11E-06	1.14E-07	1.83E-09	2.96E-11	4.92E-13	1.08E-14
63721.40	7.90	5.86E-02	2.60E-03	8.27E-05	2.86E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.50E-02	3.94E-04	7.26E-06	1.16E-07	1.85E-09	2.98E-11	4.94E-13	1.08E-14
64528.00	8.00	5.88E-02	2.61E-03	8.28E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.52E-02	4.02E-04	7.40E-06	1.17E-07	1.87E-09	2.99E-11	4.96E-13	1.09E-14
65334.60	8.10	5.90E-02	2.61E-03	8.29E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.53E-02	4.08E-04	7.51E-06	1.19E-07	1.88E-09	3.01E-11	4.97E-13	1.09E-14
66141.2	8.20	5.91E-02	2.62E-03	8.30E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.55E-02	4.14E-04	7.61E-06	1.20E-07	1.89E-09	3.02E-11	4.98E-13	1.09E-14
66947.8	8.30	5.93E-02	2.62E-03	8.31E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.56E-02	4.19E-04	7.70E-06	1.21E-07	1.90E-09	3.03E-11	5.00E-13	1.09E-14
67754.40	8.40	5.94E-02	2.63E-03	8.32E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.57E-02	4.23E-04	7.77E-06	1.22E-07	1.91E-09	3.04E-11	5.01E-13	1.09E-14
68561.00	8.50	5.95E-02	2.63E-03	8.33E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.58E-02	4.26E-04	7.84E-06	1.23E-07	1.92E-09	3.05E-11	5.01E-13	1.09E-14
69367.20	8.60	5.95E-02	2.64E-03	8.33E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.59E-02	4.29E-04	7.89E-06	1.23E-07	1.93E-09	3.05E-11	5.02E-13	1.09E-14
70174.2	8.70	5.96E-02	2.64E-03	8.34E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.59E-02	4.32E-04	7.94E-06	1.24E-07	1.93E-09	3.06E-11	5.02E-13	1.09E-14
70980.80	8.80	5.97E-02	2.64E-03	8.34E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.60E-02	4.34E-04	7.98E-06	1.24E-07	1.94E-09	3.06E-11	5.03E-13	1.09E-14
71787.40	8.90	5.97E-02	2.64E-03	8.34E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.60E-02	4.36E-04	8.01E-06	1.25E-07	1.94E-09	3.07E-11	5.03E-13	1.09E-14
72594.00	9.00	5.98E-02	2.64E-03	8.35E-05	2.87E-06	1.35E-07	7.56E-09	3.44E-10	9.83E-12
		1.61E-02	4.37E-04	8.03E-06	1.25E-07	1.95E-09	3.07E-11	5.04E-13	1.09E-14

73400.60	9.10	5.98E-02	2.64E-03	8.35E-05	2.87E-06	1.35E-07	7.56E-09	3.45E-10	9.83E-12
		1.61E-02	4.38E-04	8.05E-06	1.25E-07	1.95E-09	3.07E-11	5.04E-13	1.09E-14
74297.20	9.20	5.98E-02	2.64E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
		1.61E-02	4.39E-04	8.06E-06	1.25E-07	1.95E-09	3.07E-11	5.04E-13	1.09E-14
75013.80	9.30	5.98E-02	2.64E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
		1.61E-02	4.39E-04	8.06E-06	1.25E-07	1.95E-09	3.07E-11	5.04E-13	1.09E-14
75820.40	9.40	5.98E-02	2.65E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
		1.61E-02	4.40E-04	8.07E-06	1.25E-07	1.95E-09	3.07E-11	5.04E-13	1.09E-14
76627.00	9.50	5.98E-02	2.65E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
		1.61E-02	4.40E-04	8.07E-06	1.25E-07	1.95E-09	3.08E-11	5.04E-13	1.09E-14

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 6000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4339.60	0.60	1.64E-04	5.08E-06	1.65E-07	5.08E-09	1.37E-10	3.47E-12	1.74E-13	1.54E-14
		7.03E-05	7.04E-07	1.12E-08	3.40E-10	1.70E-11	1.92E-12	1.53E-13	1.52E-14
5646.20	0.70	3.04E-04	9.38E-06	4.26E-07	2.35E-08	1.11E-09	2.78E-11	6.08E-13	3.43E-14
		1.60E-04	1.50E-06	2.14E-08	6.38E-10	3.34E-11	3.11E-12	3.19E-13	3.14E-14
6422.80	0.80	5.55E-04	2.18E-05	1.38E-06	9.72E-08	5.14E-09	1.25E-10	1.92E-12	4.24E-14
		2.68E-04	2.39E-06	3.10E-07	9.03E-10	4.92E-11	4.72E-12	4.81E-13	4.79E-14
7259.40	0.90	9.16E-04	4.63E-05	3.64E-06	2.84E-07	1.55E-08	5.75E-10	5.12E-12	1.15E-13
		3.93E-04	3.37E-06	3.99E-08	1.16E-09	6.85E-11	6.90E-12	7.09E-13	7.07E-14
8036.00	1.00	1.41E-03	8.34E-05	7.11E-06	5.70E-07	3.15E-08	7.57E-10	9.92E-12	1.84E-13
		5.34E-04	4.44E-06	4.84E-08	1.39E-09	8.66E-11	8.99E-12	9.20E-13	9.26E-14
8872.50	1.10	1.95E-03	1.24E-04	1.09E-05	8.83E-07	4.89E-08	1.18E-09	1.51E-11	2.54E-13
		6.88E-04	5.57E-06	5.65E-08	1.59E-09	1.03E-10	1.09E-11	1.13E-12	1.12E-13
9879.20	1.20	2.75E-03	1.89E-04	1.71E-05	1.40E-06	7.77E-08	1.87E-09	2.36E-11	3.54E-13
		8.52E-04	6.76E-06	6.41E-08	1.76E-09	1.17E-10	1.25E-11	1.29E-12	1.29E-13
10485.80	1.30	3.47E-03	2.47E-04	2.25E-05	1.85E-06	1.03E-07	2.46E-09	3.09E-11	4.42E-13
		1.02E-03	7.99E-06	7.15E-08	1.91E-09	1.29E-10	1.39E-11	1.44E-12	1.44E-13
11292.40	1.40	4.53E-03	3.39E-04	3.12E-05	2.57E-06	1.43E-07	3.43E-09	4.26E-11	5.70E-13
		1.20E-03	9.25E-06	7.85E-08	2.03E-09	1.38E-10	1.50E-11	1.56E-12	1.56E-13
12099.00	1.50	5.77E-03	4.24E-04	3.86E-05	3.17E-06	1.76E-07	4.22E-09	5.22E-11	6.76E-13
		1.71E-03	2.24E-05	3.44E-07	6.94E-09	2.33E-10	1.78E-11	1.71E-12	1.66E-13
12905.80	1.60	7.27E-03	5.14E-04	4.49E-05	3.66E-06	2.03E-07	4.87E-09	6.02E-11	7.75E-13
		2.62E-03	4.99E-05	9.18E-07	1.75E-08	4.37E-10	2.38E-11	2.00E-12	1.86E-13
13712.20	1.70	9.14E-03	6.31E-04	5.38E-05	4.36E-06	2.41E-07	5.79E-09	7.14E-11	9.06E-13
		3.63E-03	8.17E-05	1.59E-06	2.99E-08	6.73E-10	3.04E-11	2.31E-12	2.07E-13
14518.80	1.80	1.09E-02	7.37E-04	6.16E-05	4.96E-06	2.74E-07	6.57E-09	8.11E-11	1.02E-12
		4.71E-03	1.15E-04	2.28E-06	4.27E-08	9.15E-10	3.71E-11	2.60E-12	2.25E-13
15325.40	1.90	1.28E-02	8.50E-04	6.99E-05	5.60E-06	3.09E-07	7.42E-09	9.15E-11	1.14E-12
		5.78E-03	1.48E-04	2.98E-06	5.57E-08	1.18E-09	4.36E-11	2.87E-12	2.42E-13
16132.00	2.00	1.41E-02	9.06E-04	7.28E-05	5.80E-06	3.20E-07	7.67E-09	9.47E-11	1.18E-12
		6.84E-03	1.81E-04	3.69E-06	6.86E-08	1.40E-09	4.99E-11	3.13E-12	2.56E-13

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 6000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
16938.60	2.10	1.53E-02	9.57E-04	7.53E-05	5.96E-06	3.28E-07	7.87E-09	9.72E-11	1.22E-12
		7.88E-03	2.14E-04	4.38E-06	8.14E-08	1.64E-09	5.61E-11	3.37E-12	2.69E-13
17745.20	2.20	1.63E-02	9.96E-04	7.67E-05	6.03E-06	3.32E-07	7.96E-09	9.84E-11	1.24E-12
		8.87E-03	2.45E-04	5.04E-06	9.35E-08	1.87E-09	6.18E-11	3.59E-12	2.80E-13
18551.80	2.30	1.73E-02	1.03E-03	7.77E-05	6.08E-06	3.34E-07	8.01E-09	9.92E-11	1.26E-12
		9.80E-03	2.75E-04	5.66E-06	1.05E-07	2.08E-09	6.71E-11	3.78E-12	2.90E-13
19358.40	2.40	1.82E-02	1.06E-03	7.84E-05	6.09E-06	3.35E-07	8.05E-09	1.01E-10	1.31E-12
		1.07E-02	3.03E-04	6.25E-06	1.16E-07	2.28E-09	7.20E-11	3.96E-12	2.98E-13
20165.00	2.50	1.90E-02	1.08E-03	7.89E-05	6.10E-06	3.35E-07	8.07E-09	1.02E-10	1.33E-12
		1.15E-02	3.28E-04	6.80E-06	1.26E-07	2.47E-09	7.66E-11	4.11E-12	3.05E-13
20971.60	2.60	1.99E-02	1.11E-03	7.95E-05	6.12E-06	3.36E-07	8.12E-09	1.03E-10	1.39E-12
		1.23E-02	3.52E-04	7.31E-06	1.35E-07	2.64E-09	8.07E-11	4.25E-12	3.11E-13
21778.20	2.70	2.09E-02	1.14E-03	8.01E-05	6.14E-06	3.39E-07	8.43E-09	1.16E-10	1.81E-12
		1.30E-02	3.75E-04	7.78E-06	1.44E-07	2.80E-09	8.50E-11	4.42E-12	3.21E-13
22584.80	2.80	2.20E-02	1.17E-03	8.09E-05	6.16E-06	3.40E-07	8.52E-09	1.20E-10	1.93E-12
		1.36E-02	3.95E-04	8.21E-06	1.52E-07	2.95E-09	8.91E-11	4.60E-12	3.32E-13
23391.40	2.90	2.32E-02	1.21E-03	8.18E-05	6.20E-06	3.45E-07	9.03E-09	1.40E-10	2.60E-12
		1.42E-02	4.14E-04	8.61E-06	1.59E-07	3.09E-09	9.28E-11	4.76E-12	3.42E-13
24196.00	3.00	2.46E-02	1.26E-03	8.30E-05	6.24E-06	3.51E-07	9.53E-09	1.60E-10	3.25E-12
		1.47E-02	4.31E-04	8.97E-06	1.66E-07	3.21E-09	9.61E-11	4.90E-12	3.50E-13
25004.60	3.10	2.61E-02	1.30E-03	8.42E-05	6.28E-06	3.52E-07	9.62E-09	1.63E-10	3.35E-12
		1.52E-02	4.46E-04	9.29E-06	1.72E-07	3.32E-09	9.91E-11	5.02E-12	3.57E-13
25811.20	3.20	2.76E-02	1.35E-03	8.56E-05	6.37E-06	3.70E-07	1.14E-08	2.35E-10	5.67E-12
		1.57E-02	4.60E-04	9.59E-06	1.77E-07	3.43E-09	1.02E-10	5.13E-12	3.63E-13
26617.80	3.30	2.92E-02	1.40E-03	8.70E-05	6.42E-06	3.75E-07	1.18E-08	2.49E-10	6.13E-12
		1.61E-02	4.73E-04	9.85E-06	1.82E-07	3.52E-09	1.04E-10	5.22E-12	3.68E-13
27424.40	3.40	3.11E-02	1.46E-03	8.86E-05	6.47E-06	3.77E-07	1.18E-08	2.51E-10	6.18E-12
		1.64E-02	4.84E-04	1.01E-05	1.86E-07	3.60E-09	1.06E-10	5.30E-12	3.72E-13
28231.00	3.50	3.32E-02	1.53E-03	9.05E-05	6.57E-06	3.90E-07	1.29E-08	2.95E-10	7.58E-12
		1.69E-02	5.01E-04	1.05E-05	1.93E-07	3.73E-09	1.09E-10	5.41E-12	3.77E-13
29037.60	3.60	3.56E-02	1.61E-03	9.25E-05	6.63E-06	3.93E-07	1.31E-08	3.02E-10	7.81E-12
		1.75E-02	5.18E-04	1.08E-05	2.00E-07	3.85E-09	1.12E-10	5.50E-12	3.81E-13
29844.20	3.70	3.80E-02	1.68E-03	9.46E-05	6.71E-06	3.96E-07	1.32E-08	3.04E-10	7.85E-12
		1.79E-02	5.35E-04	1.12E-05	2.06E-07	3.97E-09	1.15E-10	5.60E-12	3.85E-13
30650.80	3.80	4.08E-02	1.77E-03	9.69E-05	6.78E-06	4.00E-07	1.34E-08	3.10E-10	8.07E-12
		1.84E-02	5.49E-04	1.15E-05	2.12E-07	4.07E-09	1.18E-10	5.68E-12	3.88E-13
31457.40	3.90	4.34E-02	1.85E-03	9.90E-05	6.85E-06	4.02E-07	1.35E-08	3.11E-10	8.09E-12
		1.88E-02	5.62E-04	1.18E-05	2.17E-07	4.17E-09	1.20E-10	5.76E-12	3.92E-13
32264.00	4.00	4.64E-02	1.95E-03	1.02E-04	6.93E-06	4.05E-07	1.35E-08	3.12E-10	8.10E-12
		1.91E-02	5.74E-04	1.20E-05	2.22E-07	4.26E-09	1.22E-10	5.83E-12	3.95E-13
33070.60	4.10	4.95E-02	2.04E-03	1.04E-04	7.00E-06	4.06E-07	1.34E-08	3.12E-10	8.10E-12
		1.94E-02	5.85E-04	1.22E-05	2.26E-07	4.33E-09	1.24E-10	5.89E-12	3.97E-13
33877.20	4.20	5.34E-02	2.18E-03	1.08E-04	7.11E-06	4.09E-07	1.36E-08	3.13E-10	8.11E-12
		1.97E-02	5.94E-04	1.24E-05	2.30E-07	4.40E-09	1.25E-10	5.95E-12	4.00E-13

34683.80	4.30	5.72E-02	2.30E-03	1.11E-04	7.20E-06	4.12E-07	1.37E-08	3.14E-10	8.12E-12
		1.99E-02	6.02E-04	1.26E-05	2.33E-07	4.46E-09	1.27E-10	6.01E-12	4.03E-13
35490.40	4.40	5.20E-02	2.47E-03	1.18E-04	7.33E-06	4.15E-07	1.37E-08	3.14E-10	8.13E-12
		2.01E-02	6.09E-04	1.28E-05	2.36E-07	4.52E-09	1.29E-10	6.09E-12	4.09E-13
36297.00	4.50	6.67E-02	2.64E-03	1.21E-04	7.47E-06	4.18E-07	1.37E-08	3.15E-10	8.14E-12
		2.03E-02	6.15E-04	1.29E-05	2.38E-07	4.57E-09	1.30E-10	6.17E-12	4.14E-13
37103.60	4.60	7.23E-02	2.85E-03	1.27E-04	7.64E-06	4.22E-07	1.38E-08	3.15E-10	8.15E-12
		2.05E-02	6.20E-04	1.30E-05	2.40E-07	4.61E-09	1.31E-10	6.23E-12	4.18E-13
37910.20	4.70	7.70E-02	3.03E-03	1.33E-04	7.80E-06	4.25E-07	1.39E-08	3.16E-10	8.16E-12
		2.06E-02	6.25E-04	1.31E-05	2.42E-07	4.64E-09	1.32E-10	6.29E-12	4.22E-13
38716.80	4.80	8.21E-02	3.23E-03	1.39E-04	7.98E-06	4.30E-07	1.39E-08	3.17E-10	8.17E-12
		2.08E-02	6.29E-04	1.32E-05	2.44E-07	4.68E-09	1.33E-10	6.33E-12	4.26E-13
39523.40	4.90	8.67E-02	3.42E-03	1.45E-04	8.15E-06	4.34E-07	1.40E-08	3.18E-10	8.18E-12
		2.09E-02	6.33E-04	1.33E-05	2.45E-07	4.70E-09	1.34E-10	6.37E-12	4.29E-13
40330.00	5.00	9.12E-02	3.61E-03	1.51E-04	8.33E-06	4.38E-07	1.41E-08	3.18E-10	8.19E-12
		2.10E-02	6.36E-04	1.33E-05	2.46E-07	4.73E-09	1.35E-10	6.41E-12	4.31E-13
41136.80	5.10	9.66E-02	3.81E-03	1.58E-04	8.51E-06	4.42E-07	1.41E-08	3.19E-10	8.20E-12
		2.10E-02	6.38E-04	1.34E-05	2.47E-07	4.75E-09	1.36E-10	6.44E-12	4.33E-13
41943.20	5.20	1.31E-01	3.96E-03	1.62E-04	8.63E-06	4.45E-07	1.42E-08	3.20E-10	8.21E-12
		2.11E-02	6.41E-04	1.35E-05	2.48E-07	4.77E-09	1.36E-10	6.47E-12	4.35E-13
42749.80	5.30	1.07E-01	4.20E-03	1.70E-04	8.85E-06	4.50E-07	1.43E-08	3.20E-10	8.22E-12
		2.12E-02	6.43E-04	1.35E-05	2.49E-07	4.78E-09	1.37E-10	6.49E-12	4.37E-13
43558.40	5.40	1.11E-01	4.34E-03	1.74E-04	8.96E-06	4.53E-07	1.43E-08	3.21E-10	8.22E-12
		2.12E-02	8.44E-04	1.35E-05	2.50E-07	4.80E-09	1.37E-10	6.51E-12	4.38E-13
44363.00	5.50	1.17E-01	4.56E-03	1.80E-04	9.15E-06	4.57E-07	1.44E-08	3.22E-10	8.23E-12
		2.12E-02	6.46E-04	1.35E-05	2.51E-07	4.81E-09	1.37E-10	6.52E-12	4.39E-13
45169.60	5.60	1.21E-01	4.73E-03	1.85E-04	9.29E-06	4.61E-07	1.44E-08	3.22E-10	8.24E-12
		2.13E-02	6.47E-04	1.36E-05	2.51E-07	4.82E-09	1.38E-10	6.54E-12	4.40E-13
45976.20	5.70	1.24E-01	4.82E-03	1.88E-04	9.37E-06	4.62E-07	1.44E-08	3.23E-10	8.24E-12
		2.13E-02	6.48E-04	1.36E-05	2.52E-07	4.83E-09	1.38E-10	6.55E-12	4.41E-13
46782.80	5.80	1.26E-01	4.92E-03	1.91E-04	9.44E-06	4.64E-07	1.45E-08	3.23E-10	8.24E-12
		2.13E-02	6.50E-04	1.36E-05	2.52E-07	4.84E-09	1.38E-10	6.56E-12	4.42E-13
47589.40	5.90	1.28E-01	4.99E-03	1.93E-04	9.51E-06	4.66E-07	1.45E-08	3.23E-10	8.25E-12
		2.14E-02	6.51E-04	1.37E-05	2.52E-07	4.84E-09	1.38E-10	6.57E-12	4.42E-13
48396.00	6.00	1.29E-01	5.04E-03	1.95E-04	9.55E-06	4.67E-07	1.45E-08	3.23E-10	8.25E-12
		2.14E-02	6.51E-04	1.37E-05	2.53E-07	4.85E-09	1.38E-10	6.58E-12	4.43E-13
49202.60	6.10	1.32E-01	5.17E-03	1.99E-04	9.69E-06	4.70E-07	1.46E-08	3.24E-10	8.26E-12
		2.14E-02	6.52E-04	1.37E-05	2.53E-07	4.86E-09	1.39E-10	6.59E-12	4.43E-13
50009.20	6.20	1.34E-01	5.22E-03	2.01E-04	9.74E-06	4.71E-07	1.46E-08	3.24E-10	8.26E-12
		2.14E-02	6.53E-04	1.37E-05	2.53E-07	4.86E-09	1.39E-10	6.59E-12	4.44E-13
50815.80	6.30	1.34E-01	5.25E-03	2.02E-04	9.77E-06	4.72E-07	1.46E-08	3.24E-10	8.26E-12
		2.14E-02	6.53E-04	1.37E-05	2.53E-07	4.87E-09	1.39E-10	6.60E-12	4.44E-13
51622.40	6.40	1.35E-01	5.31E-03	2.04E-04	9.84E-06	4.73E-07	1.46E-08	3.25E-10	8.26E-12
		2.15E-02	6.54E-04	1.37E-05	2.54E-07	4.87E-09	1.39E-10	6.60E-12	4.44E-13
52429.00	6.50	1.36E-01	5.35E-03	2.05E-04	9.87E-06	4.74E-07	1.46E-08	3.25E-10	8.26E-12
		2.15E-02	6.54E-04	1.37E-05	2.54E-07	4.87E-09	1.39E-10	6.61E-12	4.45E-13
53235.60	6.60	1.36E-01	5.36E-03	2.06E-04	9.88E-06	4.75E-07	1.46E-08	3.25E-10	8.27E-12
		2.15E-02	6.54E-04	1.38E-05	2.54E-07	4.87E-09	1.39E-10	6.61E-12	4.45E-13
54042.20	6.70	1.37E-01	5.39E-03	2.07E-04	9.91E-06	4.75E-07	1.46E-08	3.25E-10	8.27E-12
		2.15E-02	6.55E-04	1.38E-05	2.54E-07	4.88E-09	1.39E-10	6.61E-12	4.45E-13

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 6000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
54848.80	6.80	1.37E-01	5.40E-03	2.07E-04	9.93E-06	4.78E-07	1.46E-08	3.25E-10	8.27E-12
		2.15E-02	6.55E-04	1.38E-05	2.54E-07	4.88E-09	1.39E-10	6.62E-12	4.45E-13
55655.40	6.90	1.37E-01	5.41E-03	2.08E-04	9.93E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.15E-02	6.55E-04	1.38E-05	2.54E-07	4.88E-09	1.39E-10	6.62E-12	4.45E-13
56462.00	7.00	1.38E-01	5.41E-03	2.08E-04	9.94E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.15E-02	6.55E-04	1.38E-05	2.54E-07	4.88E-09	1.39E-10	6.62E-12	4.45E-13
57268.60	7.10	1.39E-01	5.45E-03	2.08E-04	9.95E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.32E-02	6.92E-04	1.42E-05	2.59E-07	4.93E-09	1.40E-10	6.63E-12	4.46E-13
58075.20	7.20	1.41E-01	5.48E-03	2.09E-04	9.95E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.48E-02	7.26E-04	1.47E-05	2.64E-07	4.98E-09	1.40E-10	6.63E-12	4.46E-13
58881.80	7.30	1.42E-01	5.52E-03	2.09E-04	9.96E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.62E-02	7.57E-04	1.51E-05	2.68E-07	5.03E-09	1.41E-10	6.64E-12	4.46E-13
59688.40	7.40	1.44E-01	5.55E-03	2.10E-04	9.97E-06	4.76E-07	1.47E-08	3.25E-10	8.27E-12
		2.76E-02	7.86E-04	1.54E-05	2.72E-07	5.07E-09	1.41E-10	6.64E-12	4.46E-13
60495.00	7.50	1.45E-01	5.57E-03	2.10E-04	9.97E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		2.88E-02	8.13E-04	1.58E-05	2.76E-07	5.11E-09	1.42E-10	6.65E-12	4.46E-13
61301.60	7.60	1.46E-01	5.60E-03	2.10E-04	9.97E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.00E-02	8.38E-04	1.61E-05	2.79E-07	5.14E-09	1.42E-10	6.65E-12	4.46E-13
62108.20	7.70	1.47E-01	5.62E-03	2.11E-04	9.98E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.10E-02	8.60E-04	1.64E-05	2.83E-07	5.17E-09	1.42E-10	6.66E-12	4.46E-13
62914.80	7.80	1.48E-01	5.64E-03	2.11E-04	9.98E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.20E-02	8.81E-04	1.67E-05	2.85E-07	5.20E-09	1.43E-10	6.66E-12	4.46E-13
63721.40	7.90	1.49E-01	5.66E-03	2.11E-04	9.99E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.28E-02	8.99E-04	1.69E-05	2.88E-07	5.23E-09	1.43E-10	6.66E-12	4.46E-13
64528.00	8.00	1.50E-01	5.68E-03	2.11E-04	9.99E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.36E-02	9.16E-04	1.71E-05	2.90E-07	5.25E-09	1.43E-10	6.66E-12	4.46E-13
65334.60	8.10	1.50E-01	5.69E-03	2.12E-04	9.99E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.43E-02	9.31E-04	1.73E-05	2.92E-07	5.27E-09	1.43E-10	6.67E-12	4.46E-13
66141.20	8.20	1.51E-01	5.70E-03	2.12E-04	10.00E-06	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.49E-02	9.44E-04	1.75E-05	2.94E-07	5.29E-09	1.44E-10	6.67E-12	4.46E-13
66947.80	8.30	1.52E-01	5.72E-03	2.12E-04	1.00E-05	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.55E-02	9.56E-04	1.76E-05	2.96E-07	5.31E-09	1.44E-10	6.67E-12	4.46E-13
67754.40	8.40	1.52E-01	5.73E-03	2.12E-04	1.00E-05	4.77E-07	1.47E-08	3.25E-10	8.27E-12
		3.60E-02	9.66E-04	1.77E-05	2.97E-07	5.32E-09	1.44E-10	6.67E-12	4.46E-13
68561.00	8.50	1.53E-01	5.74E-03	2.12E-04	1.00E-05	4.78E-07	1.47E-08	3.25E-10	8.27E-12
		3.64E-02	9.76E-04	1.79E-05	2.98E-07	5.34E-09	1.44E-10	6.67E-12	4.46E-13
69367.60	8.60	1.53E-01	5.75E-03	2.12E-04	1.00E-05	4.78E-07	1.47E-08	3.25E-10	8.27E-12
		3.68E-02	9.84E-04	1.80E-05	3.00E-07	5.35E-09	1.44E-10	6.68E-12	4.46E-13
70174.20	8.70	1.53E-01	5.75E-03	2.12E-04	1.00E-05	4.78E-07	1.47E-08	3.25E-10	8.27E-12
		3.71E-02	9.91E-04	1.81E-05	3.01E-07	5.36E-09	1.44E-10	6.68E-12	4.46E-13
70980.80	8.80	1.54E-01	5.76E-03	2.13E-04	1.00E-05	4.78E-07	1.47E-08	3.25E-10	8.27E-12
		3.74E-02	9.98E-04	1.82E-05	3.02E-07	5.37E-09	1.44E-10	6.68E-12	4.46E-13
71787.40	8.90	1.54E-01	5.77E-03	2.13E-04	1.00E-05	4.78E-07	1.47E-08	3.26E-10	8.27E-12
		3.77E-02	1.00E-03	1.82E-05	3.02E-07	5.37E-09	1.44E-10	6.68E-12	4.46E-13

72594.00	9.00	1.54E-01	5.77E-03	2.13E-04	1.00E-05	4.78E-07	1.47E-09	3.26E-10	8.27E-12
		3.79E-02	1.01E-03	1.83E-05	3.03E-07	5.38E-09	1.45E-10	6.68E-12	4.47E-13
73400.60	9.10	1.54E-01	5.77E-03	2.13E-04	1.00E-05	4.78E-07	1.47E-09	3.26E-10	8.28E-12
		3.80E-02	1.01E-03	1.83E-05	3.03E-07	5.38E-09	1.45E-10	6.68E-12	4.47E-13
74207.20	9.20	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.78E-07	1.47E-09	3.26E-10	8.28E-12
		3.81E-02	1.01E-03	1.83E-05	3.03E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
75013.80	9.30	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.01E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
75820.40	9.40	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.01E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
76627.00	9.50	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
77433.60	9.60	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
78240.20	9.70	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
79046.80	9.80	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
79853.40	9.90	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.79E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
80660.00	10.00	1.54E-01	5.78E-03	2.13E-04	1.00E-05	4.80E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
81466.60	10.10	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.80E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
82273.20	10.20	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.80E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
83079.80	10.30	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.80E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
83886.40	10.40	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.80E-07	1.47E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
84693.00	10.50	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.80E-07	1.48E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
85499.60	10.60	1.54E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
86306.20	10.70	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.26E-10	8.28E-12
		3.82E-02	1.02E-03	1.84E-05	3.04E-07	5.39E-09	1.45E-10	6.68E-12	4.47E-13
88726.00	11.00	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.29E-10	8.52E-12
		3.83E-02	1.02E-03	1.84E-05	3.05E-07	5.53E-09	1.66E-10	9.03E-12	6.83E-13
90742.50	11.25	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.30E-10	8.66E-12
		3.83E-02	1.02E-03	1.84E-05	3.05E-07	5.61E-09	1.79E-10	1.04E-11	8.25E-13
92759.00	11.50	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.31E-10	8.75E-12
		3.83E-02	1.02E-03	1.84E-05	3.05E-07	5.67E-09	1.87E-10	1.14E-11	9.18E-13
94775.50	11.75	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.32E-10	8.81E-12
		3.83E-02	1.02E-03	1.84E-05	3.05E-07	5.70E-09	1.93E-10	1.20E-11	9.79E-13
96792.00	12.00	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.32E-10	8.85E-12
		3.83E-02	1.02E-03	1.84E-05	3.05E-07	5.73E-09	1.98E-10	1.24E-11	1.02E-12
98808.50	12.25	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.81E-07	1.48E-09	3.35E-10	9.21E-12
		3.83E-02	1.02E-03	1.84E-05	3.06E-07	5.93E-09	2.28E-10	1.59E-11	1.37E-12
100825.00	12.50	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.42E-07	1.49E-09	3.38E-10	9.44E-12
		3.83E-02	1.02E-03	1.84E-05	3.07E-07	6.07E-09	2.49E-10	1.82E-11	1.60E-12

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 6000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
102841.50	12.75	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.39E-10	9.59E-12
		3.83E-02	1.02E-03	1.84E-05	3.07E-07	6.16E-09	2.63E-10	1.97E-11	1.75E-12
104858.00	13.00	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.40E-10	9.69E-12
		3.83E-02	1.02E-03	1.84E-05	3.07E-07	6.22E-09	2.72E-10	2.07E-11	1.85E-12
106874.50	13.25	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.41E-10	9.76E-12
		3.83E-02	1.02E-03	1.84E-05	3.08E-07	6.26E-09	2.78E-10	2.13E-11	1.92E-12
108891.00	13.50	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.41E-10	9.80E-12
		3.83E-02	1.02E-03	1.84E-05	3.08E-07	6.28E-09	2.82E-10	2.18E-11	1.96E-12
110907.50	13.75	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.43E-10	1.00E-11
		3.83E-02	1.02E-03	1.84E-05	3.10E-07	6.48E-09	3.03E-10	2.38E-11	2.17E-12
112924.00	14.00	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.45E-10	1.01E-11
		3.83E-02	1.02E-03	1.84E-05	3.11E-07	6.61E-09	3.16E-10	2.52E-11	2.31E-12
114940.50	14.25	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.49E-08	3.46E-10	1.02E-11
		3.83E-02	1.02E-03	1.84E-05	3.12E-07	6.70E-09	3.26E-10	2.62E-11	2.41E-12
116957.00	14.50	1.55E-01	5.78E-03	2.13E-04	1.01E-05	4.82E-07	1.50E-08	3.46E-10	1.03E-11
		3.83E-02	1.02E-03	1.84E-05	3.13E-07	6.76E-09	3.33E-10	2.69E-11	2.47E-12
118973.50	14.75	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.82E-07	1.50E-08	3.49E-10	1.06E-11
		3.83E-02	1.02E-03	1.84E-05	3.14E-07	6.93E-09	3.57E-10	2.96E-11	2.74E-12
120990.00	15.00	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.51E-10	1.08E-11
		3.83E-02	1.02E-03	1.84E-05	3.15E-07	7.05E-09	3.74E-10	3.13E-11	2.92E-12
123006.50	15.25	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.52E-10	1.09E-11
		3.83E-02	1.02E-03	1.84E-05	3.15E-07	7.12E-09	3.85E-10	3.25E-11	3.04E-12
125023.00	15.50	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.53E-10	1.10E-11
		3.83E-02	1.02E-03	1.84E-05	3.15E-07	7.17E-09	3.92E-10	3.33E-11	3.12E-12
127039.50	15.75	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.53E-10	1.10E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.20E-09	3.96E-10	3.38E-11	3.17E-12
129056.00	16.00	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.10E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.23E-09	3.99E-10	3.41E-11	3.20E-12
131072.50	16.25	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.24E-09	4.01E-10	3.43E-11	3.22E-12
133089.00	16.50	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.25E-09	4.03E-10	3.44E-11	3.23E-12
135105.50	16.75	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.25E-09	4.03E-10	3.45E-11	3.24E-12
137122.00	17.00	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.04E-10	3.46E-11	3.25E-12
139138.50	17.25	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.04E-10	3.46E-11	3.25E-12
141155.00	17.50	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.04E-10	3.46E-11	3.25E-12
143171.50	17.75	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.05E-10	3.47E-11	3.25E-12
145188.00	18.00	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
		3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.05E-10	3.47E-11	3.26E-12

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 7000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	1.28E-04	4.55E-06	1.60E-07	6.99E-09	5.12E-10	4.86E-11	4.77E-12	4.58E-13
		6.37E-05	1.99E-06	7.58E-08	4.78E-09	4.77E-10	4.82E-11	4.77E-12	4.58E-13
5646.20	0.70	2.80E-04	1.38E-05	7.92E-07	3.91E-08	1.57E-09	1.07E-10	9.95E-12	9.49E-13
		1.26E-04	3.78E-06	1.44E-07	9.59E-09	9.85E-10	1.00E-10	9.89E-12	9.48E-13
6452.80	0.80	6.97E-04	4.73E-05	3.34E-06	1.67E-07	4.56E-09	1.08E-10	1.55E-11	1.46E-12
		1.88E-04	5.37E-06	2.14E-07	1.56E-08	1.51E-09	1.54E-10	1.52E-11	1.46E-12
7259.40	0.90	1.60E-03	1.29E-04	9.86E-06	4.93E-07	1.18E-08	3.33E-10	2.34E-11	2.15E-12
		2.51E-04	6.79E-06	2.79E-07	2.16E-08	2.20E-09	2.25E-10	2.23E-11	2.14E-12
8066.00	1.00	2.94E-03	2.52E-04	1.97E-05	9.82E-07	2.23E-08	5.15E-10	3.14E-11	2.83E-12
		3.16E-04	8.08E-06	3.38E-07	2.73E-08	2.88E-09	2.96E-10	2.93E-11	2.81E-12
8872.80	1.10	4.48E-03	3.96E-04	3.11E-05	1.55E-06	3.44E-08	7.10E-10	3.91E-11	3.46E-12
		3.82E-04	9.23E-06	3.90E-07	3.26E-08	3.50E-09	3.60E-10	3.57E-11	3.42E-12
9679.20	1.20	6.82E-03	6.15E-04	4.87E-05	2.43E-06	5.26E-08	9.69E-10	4.78E-11	4.01E-12
		4.46E-04	1.03E-05	4.38E-07	3.74E-08	4.08E-09	4.20E-10	4.16E-11	3.98E-12
10485.80	1.30	9.08E-03	8.26E-04	6.56E-05	3.27E-06	7.01E-08	1.21E-09	5.39E-11	4.51E-12
		5.18E-04	1.12E-05	4.78E-07	4.15E-08	4.56E-09	4.70E-10	4.66E-11	4.44E-12
11292.40	1.40	1.26E-02	1.15E-03	9.10E-05	4.57E-06	9.69E-08	1.55E-09	6.07E-11	4.90E-12
		5.88E-04	1.22E-05	5.10E-07	4.47E-08	4.94E-09	5.09E-10	5.04E-11	4.81E-12
12099.00	1.50	1.64E-02	1.47E-03	1.16E-04	5.75E-06	1.22E-07	1.86E-09	6.66E-11	5.22E-12
		1.36E-03	3.20E-05	9.28E-07	5.71E-08	5.72E-09	5.52E-10	5.36E-11	5.10E-12
12905.60	1.60	2.06E-02	1.76E-03	1.36E-04	6.74E-06	1.42E-07	2.15E-09	7.43E-11	5.74E-12
		3.01E-03	7.38E-05	1.82E-06	7.90E-08	6.67E-09	6.17E-10	5.91E-11	5.60E-12
13712.20	1.70	2.63E-02	2.17E-03	1.66E-04	8.20E-06	1.72E-07	2.54E-09	8.29E-11	6.25E-12
		4.98E-03	1.28E-04	2.89E-06	1.04E-07	7.72E-09	6.84E-10	6.45E-11	6.08E-12
14518.80	1.80	3.16E-02	2.53E-03	1.92E-04	9.43E-06	1.98E-07	2.88E-09	9.05E-11	6.79E-12
		7.07E-03	1.84E-04	4.02E-06	1.30E-07	8.74E-09	7.45E-10	6.94E-11	6.51E-12
15325.40	1.90	3.75E-02	2.94E-03	2.22E-04	1.09E-05	2.28E-07	3.27E-09	9.85E-11	7.10E-12
		9.25E-03	2.42E-04	5.19E-06	1.56E-07	9.72E-09	8.02E-10	7.36E-11	6.89E-12
16132.00	2.00	4.11E-02	3.13E-03	2.33E-04	1.14E-05	2.39E-07	3.44E-09	1.03E-10	7.44E-12
		1.15E-02	3.02E-04	6.39E-06	1.83E-07	1.07E-08	8.54E-10	7.75E-11	7.20E-12
16938.60	2.10	4.43E-02	3.29E-03	2.42E-04	1.18E-05	2.48E-07	3.57E-09	1.07E-10	7.73E-12
		1.38E-02	3.62E-04	7.60E-06	2.10E-07	1.16E-08	9.02E-10	8.08E-11	7.49E-12
17745.20	2.20	4.70E-02	3.40E-03	2.47E-04	1.20E-05	2.53E-07	3.66E-09	1.11E-10	7.97E-12
		1.60E-02	4.21E-04	8.79E-06	2.35E-07	1.25E-08	9.45E-10	8.38E-11	7.73E-12
18551.80	2.30	4.95E-02	3.48E-03	2.50E-04	1.22E-05	2.56E-07	3.72E-09	1.13E-10	8.17E-12
		1.81E-02	4.78E-04	9.94E-06	2.60E-07	1.33E-08	9.83E-10	8.62E-11	7.92E-12
19358.40	2.40	5.16E-02	3.54E-03	2.52E-04	1.22E-05	2.58E-07	3.88E-09	1.17E-10	8.37E-12
		2.02E-02	5.34E-04	1.11E-05	2.84E-07	1.48E-08	1.02E-09	8.83E-11	8.09E-12
20165.00	2.50	5.36E-02	3.59E-03	2.53E-04	1.23E-05	2.59E-07	3.85E-09	1.19E-10	8.52E-12
		2.22E-02	5.87E-04	1.21E-05	3.06E-07	1.47E-08	1.05E-09	9.00E-11	8.21E-12
20971.60	2.60	5.56E-02	3.65E-03	2.54E-04	1.23E-05	2.61E-07	3.92E-09	1.22E-10	8.66E-12
		2.41E-02	6.38E-04	1.31E-05	3.29E-07	1.54E-08	1.07E-09	9.15E-11	8.32E-12
21778.28	2.70	5.78E-02	3.71E-03	2.56E-04	1.25E-05	2.72E-07	4.35E-09	1.37E-10	9.29E-12
		2.59E-02	6.86E-04	1.41E-05	3.50E-07	1.61E-08	1.11E-09	9.41E-11	8.54E-12

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 7000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
22584.80	2.80	6.01E-02	3.77E-03	2.57E-04	1.25E-05	2.77E-07	4.52E-09	1.44E-10	9.62E-12
		2.76E-02	7.31E-04	1.50E-05	3.70E-07	1.68E-08	1.15E-09	9.78E-11	8.78E-12
23391.40	2.90	6.25E-02	3.84E-03	2.60E-04	1.28E-05	2.94E-07	5.14E-09	1.69E-10	1.04E-11
		2.92E-02	7.74E-04	1.59E-05	3.89E-07	1.75E-08	1.19E-09	9.96E-11	9.00E-12
24198.00	3.00	6.51E-02	3.92E-03	2.63E-04	1.31E-05	3.13E-07	5.84E-09	1.88E-10	1.12E-11
		3.07E-02	8.14E-04	1.67E-05	4.07E-07	1.81E-08	1.22E-09	1.02E-10	9.19E-12
25004.60	3.10	6.79E-02	4.00E-03	2.65E-04	1.32E-05	3.18E-07	6.00E-09	1.94E-10	1.15E-11
		3.21E-02	8.51E-04	1.74E-05	4.23E-07	1.87E-08	1.25E-09	1.04E-10	9.35E-12
25811.20	3.20	7.07E-02	4.09E-03	2.71E-04	1.40E-05	3.76E-07	8.10E-09	2.61E-10	1.34E-11
		3.34E-02	8.86E-04	1.81E-05	4.38E-07	1.92E-08	1.27E-09	1.05E-10	9.49E-12
26617.80	3.30	7.35E-02	4.18E-03	2.75E-04	1.43E-05	3.92E-07	8.46E-09	2.70E-10	1.42E-11
		3.46E-02	9.18E-04	1.88E-05	4.52E-07	1.96E-08	1.29E-09	1.07E-10	9.61E-12
27424.40	3.40	7.67E-02	4.28E-03	2.78E-04	1.44E-05	3.96E-07	8.76E-09	2.82E-10	1.43E-11
		3.57E-02	9.48E-04	1.94E-05	4.65E-07	2.00E-08	1.31E-09	1.08E-10	9.71E-12
28231.00	3.50	8.07E-02	4.42E-03	2.85E-04	1.51E-05	4.38E-07	1.02E-08	3.29E-10	1.57E-11
		3.75E-02	9.95E-04	2.03E-05	4.85E-07	2.06E-08	1.34E-09	1.09E-10	9.80E-12
29037.60	3.60	8.50E-02	4.55E-03	2.90E-04	1.54E-05	4.49E-07	1.06E-08	3.39E-10	1.61E-11
		3.93E-02	1.04E-03	2.13E-05	5.05E-07	2.12E-08	1.36E-09	1.11E-10	9.87E-12
29844.20	3.70	8.94E-02	4.70E-03	2.96E-04	1.56E-05	4.54E-07	1.07E-08	3.42E-10	1.62E-11
		4.10E-02	1.09E-03	2.22E-05	5.25E-07	2.18E-08	1.38E-09	1.12E-10	9.93E-12
30650.80	3.80	9.41E-02	4.84E-03	3.01E-04	1.58E-05	4.64E-07	1.10E-08	3.51E-10	1.65E-11
		4.27E-02	1.13E-03	2.31E-05	5.43E-07	2.23E-08	1.40E-09	1.12E-10	9.99E-12
31457.40	3.90	9.84E-02	4.98E-03	3.05E-04	1.60E-05	4.67E-07	1.10E-08	3.52E-10	1.66E-11
		4.42E-02	1.17E-03	2.39E-05	5.60E-07	2.28E-08	1.42E-09	1.13E-10	1.00E-11
32264.00	4.00	1.03E-01	5.14E-03	3.11E-04	1.62E-05	4.71E-07	1.11E-08	3.54E-10	1.66E-11
		4.55E-02	1.21E-03	2.47E-05	5.76E-07	2.32E-08	1.43E-09	1.14E-10	1.01E-11
33070.60	4.10	1.08E-01	5.28E-03	3.15E-04	1.63E-05	4.73E-07	1.11E-08	3.55E-10	1.67E-11
		4.68E-02	1.24E-03	2.53E-05	5.90E-07	2.36E-08	1.45E-09	1.15E-10	1.02E-11
33877.20	4.20	1.14E-01	5.47E-03	3.21E-04	1.65E-05	4.76E-07	1.12E-08	3.56E-10	1.68E-11
		4.79E-02	1.28E-03	2.59E-05	6.03E-07	2.40E-08	1.47E-09	1.16E-10	1.02E-11
34683.80	4.30	1.20E-01	5.65E-03	3.26E-04	1.66E-05	4.78E-07	1.12E-08	3.57E-10	1.68E-11
		4.89E-02	1.30E-03	2.65E-05	6.15E-07	2.45E-08	1.49E-09	1.17E-10	1.03E-11
35490.40	4.40	1.27E-01	5.87E-03	3.32E-04	1.67E-05	4.80E-07	1.12E-08	3.58E-10	1.70E-11
		4.98E-02	1.33E-03	2.70E-05	6.26E-07	2.49E-08	1.51E-09	1.19E-10	1.04E-11
36297.00	4.50	1.34E-01	6.10E-03	3.38E-04	1.69E-05	4.83E-07	1.13E-08	3.60E-10	1.71E-11
		5.07E-02	1.35E-03	2.75E-05	6.37E-07	2.53E-08	1.53E-09	1.20E-10	1.06E-11
37105.60	4.60	1.43E-01	6.39E-03	3.46E-04	1.70E-05	4.85E-07	1.13E-08	3.62E-10	1.72E-11
		5.14E-02	1.37E-03	2.79E-05	6.46E-07	2.56E-08	1.55E-09	1.21E-10	1.07E-11
37910.20	4.70	1.51E-01	6.65E-03	3.53E-04	1.72E-05	4.88E-07	1.14E-08	3.63E-10	1.73E-11
		5.21E-02	1.39E-03	2.82E-05	6.54E-07	2.59E-08	1.57E-09	1.22E-10	1.08E-11
38716.80	4.80	1.59E-01	6.93E-03	3.61E-04	1.74E-05	4.91E-07	1.14E-08	3.65E-10	1.74E-11
		5.27E-02	1.40E-03	2.86E-05	6.61E-07	2.61E-08	1.58E-09	1.23E-10	1.09E-11
39523.40	4.90	1.67E-01	7.20E-03	3.69E-04	1.76E-05	4.93E-07	1.14E-08	3.66E-10	1.75E-11
		5.32E-02	1.42E-03	2.88E-05	6.68E-07	2.64E-08	1.59E-09	1.24E-10	1.09E-11

40330.00	5.00	1.75E-01	7.47E-03	3.77E-04	1.77E-05	4.96E-07	1.15E-08	3.67E-10	1.79E-11
		5.37E-02	1.43E-03	2.91E-05	6.74E-07	2.66E-08	1.60E-09	1.25E-10	1.10E-11
41136.60	5.10	1.83E-01	7.76E-03	3.85E-04	1.79E-05	4.98E-07	1.15E-08	3.68E-10	1.76E-11
		5.41E-02	1.44E-03	2.93E-05	6.79E-07	2.68E-08	1.61E-09	1.26E-10	1.11E-11
41943.20	5.20	1.89E-01	7.97E-03	3.91E-04	1.80E-05	5.00E-07	1.15E-08	3.68E-10	1.76E-11
		5.45E-02	1.45E-03	2.95E-05	6.83E-07	2.69E-08	1.62E-09	1.26E-10	1.11E-11
42749.80	5.30	1.99E-01	8.20E-03	4.00E-04	1.82E-05	5.03E-07	1.16E-08	3.69E-10	1.77E-11
		5.48E-02	1.46E-03	2.97E-05	6.87E-07	2.71E-08	1.63E-09	1.27E-10	1.11E-11
43556.40	5.40	2.06E-01	8.49E-03	4.05E-04	1.84E-05	5.05E-07	1.16E-08	3.70E-10	1.77E-11
		5.51E-02	1.47E-03	2.99E-05	6.91E-07	2.72E-08	1.64E-09	1.27E-10	1.12E-11
44363.00	5.50	2.14E-01	8.78E-03	4.13E-04	1.85E-05	5.08E-07	1.16E-08	3.71E-10	1.78E-11
		5.54E-02	1.48E-03	3.00E-05	6.94E-07	2.73E-08	1.64E-09	1.28E-10	1.12E-11
45169.60	5.60	2.21E-01	9.03E-03	4.20E-04	1.87E-05	5.10E-07	1.17E-08	3.71E-10	1.78E-11
		5.56E-02	1.48E-03	3.02E-05	6.97E-07	2.74E-08	1.65E-09	1.28E-10	1.13E-11
45976.20	5.70	2.28E-01	9.17E-03	4.24E-04	1.88E-05	5.11E-07	1.17E-08	3.72E-10	1.78E-11
		5.58E-02	1.49E-03	3.03E-05	7.00E-07	2.75E-08	1.65E-09	1.28E-10	1.13E-11
46782.80	5.80	2.30E-01	9.31E-03	4.28E-04	1.89E-05	5.13E-07	1.17E-08	3.72E-10	1.79E-11
		5.60E-02	1.50E-03	3.04E-05	7.03E-07	2.76E-08	1.66E-09	1.29E-10	1.13E-11
47589.40	5.90	2.33E-01	9.43E-03	4.31E-04	1.89E-05	5.14E-07	1.17E-08	3.72E-10	1.79E-11
		5.62E-02	1.50E-03	3.05E-05	7.05E-07	2.77E-08	1.66E-09	1.29E-10	1.13E-11
48396.00	6.00	2.36E-01	9.51E-03	4.34E-04	1.90E-05	5.14E-07	1.17E-08	3.73E-10	1.79E-11
		5.64E-02	1.51E-03	3.06E-05	7.07E-07	2.77E-08	1.66E-09	1.29E-10	1.13E-11
49202.60	6.10	2.42E-01	9.73E-03	4.40E-04	1.91E-05	5.17E-07	1.17E-08	3.73E-10	1.79E-11
		5.66E-02	1.51E-03	3.07E-05	7.09E-07	2.78E-08	1.67E-09	1.29E-10	1.14E-11
50009.20	6.20	2.44E-01	9.83E-03	4.43E-04	1.92E-05	5.18E-07	1.18E-08	3.73E-10	1.79E-11
		5.67E-02	1.51E-03	3.08E-05	7.10E-07	2.78E-08	1.67E-09	1.30E-10	1.14E-11
50815.80	6.30	2.46E-01	9.89E-03	4.45E-04	1.92E-05	5.18E-07	1.18E-08	3.74E-10	1.79E-11
		5.68E-02	1.52E-03	3.08E-05	7.12E-07	2.79E-08	1.67E-09	1.30E-10	1.14E-11
51622.40	6.40	2.49E-01	1.00E-02	4.49E-04	1.93E-05	5.19E-07	1.19E-08	3.74E-10	1.80E-11
		5.69E-02	1.52E-03	3.09E-05	7.13E-07	2.79E-08	1.67E-09	1.30E-10	1.14E-11
52429.00	6.50	2.51E-01	1.01E-02	4.51E-04	1.94E-05	5.20E-07	1.18E-08	3.74E-10	1.80E-11
		5.70E-02	1.52E-03	3.09E-05	7.14E-07	2.80E-08	1.67E-09	1.30E-10	1.14E-11
53235.60	6.60	2.52E-01	1.01E-02	4.52E-04	1.94E-05	5.21E-07	1.18E-08	3.74E-10	1.80E-11
		5.71E-02	1.52E-03	3.10E-05	7.15E-07	2.80E-08	1.68E-09	1.30E-10	1.14E-11
54042.20	6.70	2.53E-01	1.02E-02	4.54E-04	1.95E-05	5.21E-07	1.18E-08	3.74E-10	1.80E-11
		5.72E-02	1.53E-03	3.10E-05	7.16E-07	2.80E-08	1.68E-09	1.30E-10	1.14E-11
54848.80	6.80	2.54E-01	1.02E-02	4.55E-04	1.95E-05	5.22E-07	1.18E-08	3.74E-10	1.80E-11
		5.72E-02	1.53E-03	3.11E-05	7.17E-07	2.81E-08	1.68E-09	1.30E-10	1.14E-11
55655.40	6.90	2.54E-01	1.02E-02	4.55E-04	1.95E-05	5.22E-07	1.18E-08	3.75E-10	1.80E-11
		5.73E-02	1.53E-03	3.11E-05	7.17E-07	2.81E-08	1.68E-09	1.30E-10	1.14E-11
56462.00	7.00	2.55E-01	1.02E-02	4.56E-04	1.95E-05	5.22E-07	1.18E-08	3.75E-10	1.80E-11
		5.73E-02	1.53E-03	3.11E-05	7.18E-07	2.81E-08	1.68E-09	1.30E-10	1.14E-11
57268.60	7.10	2.57E-01	1.03E-02	4.57E-04	1.95E-05	5.23E-07	1.18E-08	3.75E-10	1.80E-11
		5.98E-02	1.57E-03	3.16E-05	7.23E-07	2.82E-08	1.68E-09	1.30E-10	1.14E-11
58075.20	7.20	2.60E-01	1.03E-02	4.57E-04	1.95E-05	5.23E-07	1.18E-08	3.75E-10	1.80E-11
		6.22E-02	1.61E-03	3.20E-05	7.28E-07	2.82E-08	1.68E-09	1.31E-10	1.14E-11
58881.80	7.30	2.62E-01	1.04E-02	4.58E-04	1.96E-05	5.23E-07	1.18E-08	3.75E-10	1.80E-11
		6.44E-02	1.65E-03	3.25E-05	7.33E-07	2.83E-08	1.68E-09	1.31E-10	1.15E-11
59680.40	7.40	2.64E-01	1.04E-02	4.58E-04	1.96E-05	5.23E-07	1.18E-08	3.75E-10	1.80E-11
		6.65E-02	1.68E-03	3.29E-05	7.37E-07	2.83E-08	1.68E-09	1.31E-10	1.15E-11

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 7000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
60495.00	7.50	2.66E-01	1.04E-02	4.59E-04	1.96E-05	5.24E-07	1.18E-08	3.75E-10	1.80E-11
		6.84E-02	1.71E-03	3.32E-05	7.41E-07	2.84E-08	1.69E-09	1.31E-10	1.15E-11
61301.60	7.60	2.68E-01	1.05E-02	4.60E-04	1.96E-05	5.24E-07	1.18E-08	3.75E-10	1.80E-11
		7.03E-02	1.74E-03	3.36E-05	7.45E-07	2.84E-08	1.69E-09	1.31E-10	1.15E-11
62108.20	7.70	2.70E-01	1.05E-02	4.60E-04	1.96E-05	5.24E-07	1.18E-08	3.75E-10	1.80E-11
		7.20E-02	1.77E-03	3.39E-05	7.48E-07	2.85E-08	1.69E-09	1.31E-10	1.15E-11
62914.80	7.80	2.72E-01	1.05E-02	4.61E-04	1.96E-05	5.24E-07	1.18E-08	3.75E-10	1.80E-11
		7.36E-02	1.79E-03	3.42E-05	7.52E-07	2.85E-08	1.69E-09	1.31E-10	1.15E-11
63721.40	7.90	2.73E-01	1.05E-02	4.61E-04	1.96E-05	5.24E-07	1.18E-08	3.75E-10	1.80E-11
		7.51E-02	1.82E-03	3.45E-05	7.55E-07	2.85E-08	1.69E-09	1.31E-10	1.15E-11
64528.00	8.00	2.74E-01	1.06E-02	4.62E-04	1.97E-05	5.25E-07	1.18E-08	3.75E-10	1.80E-11
		7.65E-02	1.84E-03	3.47E-05	7.58E-07	2.86E-08	1.69E-09	1.31E-10	1.15E-11
65334.60	8.10	2.76E-01	1.06E-02	4.62E-04	1.97E-05	5.25E-07	1.19E-08	3.75E-10	1.80E-11
		7.78E-02	1.86E-03	3.50E-05	7.60E-07	2.86E-08	1.69E-09	1.31E-10	1.15E-11
66141.20	8.20	2.77E-01	1.06E-02	4.63E-04	1.97E-05	5.25E-07	1.19E-08	3.75E-10	1.80E-11
		7.89E-02	1.88E-03	3.52E-05	7.62E-07	2.86E-08	1.69E-09	1.31E-10	1.15E-11
66947.80	8.30	2.78E-01	1.06E-02	4.63E-04	1.97E-05	5.26E-07	1.19E-08	3.75E-10	1.80E-11
		8.00E-02	1.90E-03	3.54E-05	7.64E-07	2.86E-08	1.69E-09	1.31E-10	1.15E-11
67754.40	8.40	2.79E-01	1.07E-02	4.63E-04	1.97E-05	5.26E-07	1.19E-08	3.75E-10	1.80E-11
		8.09E-02	1.91E-03	3.56E-05	7.66E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
68561.00	8.50	2.80E-01	1.07E-02	4.64E-04	1.97E-05	5.26E-07	1.19E-08	3.75E-10	1.80E-11
		8.18E-02	1.93E-03	3.57E-05	7.68E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
69367.60	8.60	2.81E-01	1.07E-02	4.64E-04	1.97E-05	5.27E-07	1.19E-08	3.76E-10	1.80E-11
		8.26E-02	1.94E-03	3.59E-05	7.70E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
70174.20	8.70	2.81E-01	1.07E-02	4.65E-04	1.98E-05	5.27E-07	1.19E-08	3.76E-10	1.80E-11
		8.33E-02	1.95E-03	3.60E-05	7.71E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
70980.80	8.80	2.82E-01	1.07E-02	4.65E-04	1.98E-05	5.27E-07	1.19E-08	3.76E-10	1.80E-11
		8.39E-02	1.96E-03	3.61E-05	7.72E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
71787.40	8.90	2.83E-01	1.07E-02	4.66E-04	1.98E-05	5.27E-07	1.19E-08	3.76E-10	1.80E-11
		8.45E-02	1.97E-03	3.62E-05	7.73E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
72594.00	9.00	2.83E-01	1.07E-02	4.66E-04	1.98E-05	5.28E-07	1.19E-08	3.76E-10	1.80E-11
		8.49E-02	1.98E-03	3.63E-05	7.74E-07	2.87E-08	1.69E-09	1.31E-10	1.15E-11
73400.60	9.10	2.84E-01	1.08E-02	4.66E-04	1.98E-05	5.28E-07	1.19E-08	3.76E-10	1.80E-11
		8.52E-02	1.98E-03	3.64E-05	7.75E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
74207.20	9.20	2.84E-01	1.08E-02	4.67E-04	1.98E-05	5.29E-07	1.19E-08	3.76E-10	1.80E-11
		8.54E-02	1.99E-03	3.64E-05	7.75E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
75013.80	9.30	2.84E-01	1.08E-02	4.67E-04	1.99E-05	5.29E-07	1.19E-08	3.76E-10	1.80E-11
		8.56E-02	1.99E-03	3.64E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
75820.40	9.40	2.84E-01	1.08E-02	4.68E-04	1.99E-05	5.29E-07	1.19E-08	3.76E-10	1.80E-11
		8.57E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
76627.00	9.50	2.84E-01	1.08E-02	4.68E-04	1.99E-05	5.30E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
77433.60	9.60	2.84E-01	1.08E-02	4.68E-04	1.99E-05	5.30E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11

78240.20	9.70	2.84E-01	1.08E-02	4.69E-04	1.99E-05	5.30E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
79046.80	9.80	2.85E-01	1.08E-02	4.69E-04	2.00E-05	5.31E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
79853.40	9.90	2.85E-01	1.08E-02	4.70E-04	2.00E-05	5.31E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
80660.00	10.00	2.85E-01	1.08E-02	4.70E-04	2.00E-05	5.32E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
81466.60	10.10	2.85E-01	1.08E-02	4.70E-04	2.00E-05	5.32E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
82273.20	10.20	2.85E-01	1.08E-02	4.71E-04	2.00E-05	5.33E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
83079.80	10.30	2.85E-01	1.08E-02	4.71E-04	2.01E-05	5.33E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
83886.40	10.40	2.85E-01	1.08E-02	4.72E-04	2.01E-05	5.33E-07	1.19E-08	3.76E-10	1.80E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
84693.00	10.50	2.85E-01	1.08E-02	4.72E-04	2.01E-05	5.34E-07	1.20E-08	3.76E-10	1.81E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
85499.60	10.60	2.85E-01	1.08E-02	4.73E-04	2.01E-05	5.34E-07	1.20E-08	3.76E-10	1.81E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
86306.20	10.70	2.85E-01	1.09E-02	4.74E-04	2.02E-05	5.35E-07	1.20E-08	3.77E-10	1.81E-11
		8.58E-02	1.99E-03	3.65E-05	7.76E-07	2.88E-08	1.69E-09	1.31E-10	1.15E-11
88726.00	11.00	2.85E-01	1.09E-02	4.74E-04	2.02E-05	5.42E-07	1.27E-08	4.46E-10	2.47E-11
		8.58E-02	1.99E-03	3.67E-05	8.22E-07	3.53E-08	2.39E-09	2.00E-10	1.81E-11
90742.50	11.25	2.85E-01	1.09E-02	4.74E-04	2.03E-05	5.46E-07	1.31E-08	4.98E-10	2.89E-11
		8.58E-02	1.99E-03	3.68E-05	8.52E-07	3.95E-08	2.83E-09	2.44E-10	2.24E-11
92759.00	11.50	2.85E-01	1.09E-02	4.74E-04	2.03E-05	5.49E-07	1.34E-08	5.21E-10	3.19E-11
		8.58E-02	1.99E-03	3.69E-05	8.72E-07	4.25E-08	3.15E-09	2.79E-10	2.53E-11
94775.50	11.75	2.85E-01	1.09E-02	4.74E-04	2.03E-05	5.51E-07	1.36E-08	5.43E-10	3.40E-11
		8.58E-02	1.99E-03	3.70E-05	8.87E-07	4.45E-08	3.37E-09	2.97E-10	2.74E-11
96792.00	12.00	2.85E-01	1.09E-02	4.74E-04	2.03E-05	5.52E-07	1.38E-08	5.58E-10	3.55E-11
		8.58E-02	1.99E-03	3.70E-05	8.97E-07	4.60E-08	3.52E-09	3.13E-10	2.89E-11
98808.50	12.25	2.85E-01	1.09E-02	4.74E-04	2.04E-05	5.63E-07	1.49E-08	6.66E-10	4.5AE-11
		8.59E-02	1.99E-03	3.73E-05	9.68E-07	5.61E-08	4.60E-09	4.20E-10	3.92E-11
100825.00	12.50	2.85E-01	1.09E-02	4.75E-04	2.04E-05	5.70E-07	1.56E-08	7.01E-10	5.30E-11
		8.59E-02	2.00E-03	3.76E-05	1.02E-06	6.33E-08	5.36E-09	4.96E-10	4.65E-11
102841.50	12.75	2.85E-01	1.09E-02	4.75E-04	2.05E-05	5.75E-07	1.62E-08	7.95E-10	5.82E-11
		8.59E-02	2.00E-03	3.77E-05	1.05E-06	6.83E-08	5.90E-09	5.49E-10	5.16E-11
104858.00	13.00	2.85E-01	1.09E-02	4.75E-04	2.05E-05	5.78E-07	1.66E-08	8.33E-10	6.19E-11
		8.59E-02	2.00E-03	3.78E-05	1.08E-06	7.20E-08	6.29E-09	5.88E-10	5.53E-11
106874.50	13.25	2.85E-01	1.09E-02	4.75E-04	2.05E-05	5.81E-07	1.68E-08	8.60E-10	6.45E-11
		8.59E-02	2.00E-03	3.79E-05	1.10E-06	7.45E-08	6.56E-09	6.15E-10	5.79E-11
108891.00	13.50	2.85E-01	1.09E-02	4.76E-04	2.05E-05	5.83E-07	1.70E-08	8.79E-10	6.62E-11
		8.59E-02	2.00E-03	3.86E-05	1.11E-06	7.63E-08	6.75E-09	6.33E-10	5.97E-11
110907.50	13.75	2.85E-01	1.09E-02	4.76E-04	2.06E-05	5.88E-07	1.75E-08	9.34E-10	7.15E-11
		8.59E-02	2.01E-03	3.90E-05	1.16E-06	8.18E-08	7.33E-09	6.98E-10	6.50E-11
112924.00	14.00	2.85E-01	1.09E-02	4.76E-04	2.06E-05	5.93E-07	1.80E-08	9.73E-10	7.53E-11
		8.60E-02	2.01E-03	3.94E-05	1.20E-06	8.62E-08	7.70E-09	7.28E-10	6.87E-11
114940.50	14.25	2.85E-01	1.09E-02	4.77E-04	2.06E-05	5.96E-07	1.83E-08	1.00E-09	7.83E-11
		8.60E-02	2.01E-03	3.96E-05	1.23E-06	8.94E-08	8.02E-09	7.59E-10	7.18E-11

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 7000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
116957.00	14.50	2.85E-01	1.09E-02	4.77E-04	2.07E-05	6.07E-07	1.85E-08	1.03E-09	8.05E-11
		8.60E-02	2.01E-03	4.01E-05	1.31E-06	1.01E-07	8.25E-09	7.82E-10	7.39E-11
118973.50	14.75	2.85E-01	1.09E-02	4.77E-04	2.08E-05	6.16E-07	1.94E-08	1.11E-09	8.87E-11
		8.60E-02	2.02E-03	4.04E-05	1.38E-06	1.09E-07	9.11E-09	8.67E-10	8.21E-11
120990.00	15.00	2.85E-01	1.09E-02	4.78E-04	2.08E-05	6.21E-07	2.00E-08	1.17E-09	9.45E-11
		8.60E-02	2.02E-03	4.06E-05	1.42E-06	1.15E-07	9.72E-09	9.27E-10	8.79E-11
123006.50	15.25	2.85E-01	1.09E-02	4.78E-04	2.08E-05	6.25E-07	2.04E-08	1.22E-09	9.86E-11
		8.60E-02	2.02E-03	4.08E-05	1.45E-06	1.19E-07	1.01E-08	9.70E-10	9.20E-11
125023.00	15.50	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.28E-07	2.07E-08	1.25E-09	1.01E-10
		8.60E-02	2.02E-03	4.09E-05	1.47E-06	1.22E-07	1.04E-08	1.00E-09	9.49E-11
127039.50	15.75	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.30E-07	2.09E-08	1.27E-09	1.03E-10
		8.60E-02	2.02E-03	4.10E-05	1.48E-06	1.24E-07	1.07E-08	1.02E-09	9.69E-11
129056.00	16.00	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.32E-07	2.11E-08	1.28E-09	1.05E-10
		8.60E-02	2.02E-03	4.11E-05	1.49E-06	1.25E-07	1.08E-08	1.04E-09	9.83E-11
131072.50	16.25	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.33E-07	2.12E-08	1.29E-09	1.06E-10
		8.60E-02	2.02E-03	4.11E-05	1.50E-06	1.26E-07	1.09E-08	1.05E-09	9.92E-11
133089.00	16.50	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.33E-07	2.12E-08	1.30E-09	1.06E-10
		8.60E-02	2.02E-03	4.11E-05	1.51E-06	1.27E-07	1.10E-08	1.05E-09	9.99E-11
135105.50	16.75	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.34E-07	2.13E-08	1.30E-09	1.07E-10
		8.60E-02	2.02E-03	4.11E-05	1.51E-06	1.27E-07	1.10E-08	1.06E-09	1.00E-10
137122.00	17.00	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.34E-07	2.13E-08	1.31E-09	1.07E-10
		8.60E-02	2.02E-03	4.12E-05	1.51E-06	1.28E-07	1.11E-08	1.06E-09	1.01E-10
139138.50	17.25	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.34E-07	2.14E-08	1.31E-09	1.07E-10
		8.60E-02	2.02E-03	4.12E-05	1.51E-06	1.28E-07	1.11E-08	1.06E-09	1.01E-10
141155.00	17.50	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.34E-07	2.14E-08	1.31E-09	1.08E-10
		8.60E-02	2.02E-03	4.12E-05	1.52E-06	1.28E-07	1.11E-08	1.06E-09	1.01E-10
143171.50	17.75	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
		8.60E-02	2.02E-03	4.12E-05	1.52E-06	1.28E-07	1.11E-08	1.07E-09	1.01E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 8000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	2.56E-04	1.06E-05	6.37E-07	6.09E-08	6.13E-09	6.01E-10	5.63E-11	4.59E-12
		2.12E-04	8.93E-06	5.85E-07	5.99E-08	6.12E-09	6.01E-10	5.63E-11	4.59E-12
5646.20	0.70	6.08E-04	3.26E-05	1.95E-06	1.40E-07	1.29E-08	1.25E-09	1.17E-10	9.51E-12
		3.99E-04	1.77E-05	1.21E-06	1.24E-07	1.27E-08	1.25E-09	1.17E-10	9.51E-12
6452.80	0.80	1.52E-03	1.02E-04	5.93E-06	2.97E-07	2.24E-08	1.99E-09	1.80E-10	1.44E-11
		5.67E-04	2.60E-05	1.92E-06	2.07E-07	2.13E-08	1.98E-09	1.80E-10	1.44E-11
7259.40	0.90	3.60E-03	2.70E-04	1.53E-05	5.79E-07	3.36E-08	2.89E-09	2.62E-10	2.14E-11
		7.18E-04	3.37E-05	2.65E-06	2.93E-07	3.03E-08	2.86E-09	2.62E-10	2.14E-11
8066.00	1.00	6.63E-03	5.18E-04	2.91E-05	9.58E-07	4.59E-08	3.90E-09	3.45E-10	2.81E-11
		8.53E-04	4.08E-05	3.34E-06	3.78E-07	3.92E-08	3.74E-09	3.44E-10	2.81E-11
8872.60	1.10	1.03E-02	8.20E-04	4.56E-05	1.40E-06	5.85E-08	4.67E-09	4.23E-10	3.44E-11
		9.77E-04	4.74E-05	4.01E-06	4.58E-07	4.75E-08	4.56E-09	4.22E-10	3.44E-11
9679.20	1.20	1.55E-02	1.26E-03	6.96E-05	2.00E-06	7.24E-08	5.49E-09	4.95E-10	4.02E-11
		1.09E-03	5.33E-05	4.63E-06	5.34E-07	5.53E-08	5.32E-09	4.93E-10	4.02E-11
10485.80	1.30	2.10E-02	1.71E-03	9.42E-05	2.60E-06	8.53E-08	6.20E-09	5.56E-10	4.52E-11
		1.19E-03	5.95E-05	5.14E-06	5.97E-07	6.19E-08	5.97E-09	5.54E-10	4.52E-11
11292.40	1.40	2.92E-02	2.39E-03	1.31E-04	3.48E-06	1.00E-07	6.80E-09	6.04E-10	4.90E-11
		1.29E-03	6.49E-05	5.77E-06	6.46E-07	6.70E-08	6.48E-09	6.02E-10	4.90E-11
12099.00	1.50	3.81E-02	3.08E-03	1.68E-04	4.36E-06	1.17E-07	7.63E-09	6.50E-10	5.21E-11
		2.37E-03	9.40E-05	6.85E-06	7.31E-07	7.49E-08	7.22E-09	6.46E-10	5.21E-11
12905.60	1.60	4.71E-02	3.69E-03	1.99E-04	5.13E-06	1.33E-07	8.36E-09	7.09E-10	5.69E-11
		4.75E-03	1.54E-04	8.61E-06	8.31E-07	8.28E-08	7.87E-09	7.05E-10	5.69E-11
13712.20	1.70	5.99E-02	4.59E-03	2.46E-04	6.25E-06	1.52E-07	9.14E-09	7.69E-10	6.16E-11
		7.64E-03	2.27E-04	1.06E-05	9.33E-07	9.04E-08	8.53E-09	7.63E-10	6.15E-11
14518.80	1.80	7.15E-02	5.38E-03	2.86E-04	7.20E-06	1.69E-07	9.81E-09	8.21E-10	6.57E-11
		1.08E-02	3.04E-04	1.27E-05	1.03E-06	9.73E-08	9.11E-09	8.15E-10	6.57E-11
15325.40	1.90	8.52E-02	6.33E-03	3.35E-04	8.36E-06	1.88E-07	1.04E-08	8.67E-10	6.93E-11
		1.41E-02	3.87E-04	1.48E-05	1.13E-06	1.04E-07	9.63E-09	8.60E-10	6.93E-11
16132.00	2.00	9.32E-02	6.80E-03	3.58E-04	8.91E-06	1.99E-07	1.10E-08	9.08E-10	7.25E-11
		1.76E-02	4.72E-04	1.70E-05	1.22E-06	1.09E-07	1.01E-08	9.00E-10	7.25E-11
16938.60	2.10	9.98E-02	7.14E-03	3.74E-04	9.31E-06	2.08E-07	1.14E-08	9.44E-10	7.54E-11
		2.12E-02	5.61E-04	1.91E-05	1.31E-06	1.15E-07	1.05E-08	9.36E-10	7.53E-11
17745.20	2.20	1.05E-01	7.38E-03	3.85E-04	9.59E-06	2.15E-07	1.18E-08	9.75E-10	7.78E-11
		2.47E-02	6.49E-04	2.13E-05	1.39E-06	1.20E-07	1.09E-08	9.67E-10	7.77E-11
18551.80	2.30	1.10E-01	7.55E-03	3.91E-04	9.76E-06	2.20E-07	1.21E-08	1.00E-09	7.98E-11
		2.83E-02	7.36E-04	2.34E-05	1.47E-06	1.24E-07	1.12E-08	9.93E-10	7.98E-11
19358.40	2.40	1.13E-01	7.63E-03	3.94E-04	9.87E-06	2.25E-07	1.24E-08	1.02E-09	8.15E-11
		3.18E-02	8.21E-04	2.54E-05	1.54E-06	1.28E-07	1.14E-08	1.01E-09	8.14E-11
20165.00	2.50	1.17E-01	7.74E-03	3.98E-04	9.96E-06	2.29E-07	1.27E-08	1.04E-09	8.28E-11
		3.52E-02	9.06E-04	2.74E-05	1.61E-06	1.31E-07	1.17E-08	1.03E-09	8.28E-11
20971.50	2.60	1.20E-01	7.83E-03	3.99E-04	1.01E-05	2.35E-07	1.29E-08	1.06E-09	8.40E-11
		3.86E-02	9.88E-04	2.94E-05	1.69E-06	1.36E-07	1.19E-08	1.05E-09	8.39E-11
21778.20	2.70	1.24E-01	7.93E-03	4.04E-04	1.04E-05	2.50E-07	1.35E-08	1.09E-09	8.63E-11
		4.18E-02	1.07E-03	3.14E-05	1.77E-06	1.40E-07	1.22E-08	1.07E-09	8.60E-11

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 8000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
22984.80	2.80	1.28E-01	8.03E-03	4.08E-04	1.06E-05	2.58E-07	1.40E-08	1.13E-09	8.87E-11
		4.50E-02	1.14E-03	3.33E-05	1.85E-06	1.44E-07	1.25E-08	1.10E-09	8.83E-11
23391.40	2.90	1.32E-01	8.16E-03	4.16E-04	1.11E-05	2.77E-07	1.48E-08	1.17E-09	9.11E-11
		4.80E-02	1.22E-03	3.51E-05	1.92E-06	1.49E-07	1.28E-08	1.13E-09	9.04E-11
24198.00	3.00	1.36E-01	8.31E-03	4.26E-04	1.17E-05	3.00E-07	1.56E-08	1.21E-09	9.34E-11
		5.09E-02	1.29E-03	3.68E-05	1.98E-06	1.52E-07	1.31E-08	1.15E-09	9.23E-11
25004.60	3.10	1.41E-01	8.45E-03	4.31E-04	1.19E-05	3.08E-07	1.60E-08	1.23E-09	9.51E-11
		5.36E-02	1.35E-03	3.84E-05	2.04E-06	1.56E-07	1.34E-08	1.17E-09	9.30E-11
25811.20	3.20	1.45E-01	8.67E-03	4.53E-04	1.35E-05	3.64E-07	1.79E-08	1.30E-09	9.76E-11
		5.62E-02	1.42E-03	4.00E-05	2.10E-06	1.59E-07	1.36E-08	1.19E-09	9.53E-11
26617.80	3.30	1.50E-01	8.87E-03	4.65E-04	1.40E-05	3.84E-07	1.86E-08	1.32E-09	9.91E-11
		5.86E-02	1.48E-03	4.14E-05	2.15E-06	1.61E-07	1.38E-08	1.21E-09	9.65E-11
27424.40	3.40	1.56E-01	9.06E-03	4.72E-04	1.43E-05	3.90E-07	1.88E-08	1.34E-09	1.00E-10
		6.09E-02	1.53E-03	4.27E-05	2.20E-06	1.64E-07	1.39E-08	1.22E-09	9.75E-11
28231.00	3.50	1.63E-01	9.40E-03	4.97E-04	1.56E-05	4.35E-07	2.02E-08	1.39E-09	1.02E-10
		6.47E-02	1.63E-03	4.48E-05	2.27E-06	1.67E-07	1.41E-08	1.23E-09	9.84E-11
29037.60	3.60	1.70E-01	9.66E-03	5.08E-04	1.60E-05	4.49E-07	2.07E-08	1.41E-09	1.03E-10
		6.86E-02	1.72E-03	4.70E-05	2.33E-06	1.69E-07	1.42E-08	1.24E-09	9.92E-11
29844.20	3.70	1.79E-01	9.99E-03	5.22E-04	1.64E-05	4.56E-07	2.09E-08	1.42E-09	1.03E-10
		7.25E-02	1.82E-03	4.92E-05	2.40E-06	1.72E-07	1.44E-08	1.25E-09	9.98E-11
30650.80	3.80	1.87E-01	1.03E-02	5.34E-04	1.68E-05	4.67E-07	2.13E-08	1.43E-09	1.04E-10
		7.62E-02	1.90E-03	5.12E-05	2.46E-06	1.75E-07	1.45E-08	1.26E-09	1.00E-10
31457.40	3.90	1.94E-01	1.05E-02	5.42E-04	1.70E-05	4.72E-07	2.14E-08	1.44E-09	1.05E-10
		7.97E-02	1.99E-03	5.32E-05	2.52E-06	1.77E-07	1.46E-08	1.27E-09	1.01E-10
32264.00	4.00	2.02E-01	1.09E-02	5.55E-04	1.73E-05	4.77E-07	2.16E-08	1.45E-09	1.05E-10
		8.29E-02	2.07E-03	5.50E-05	2.58E-06	1.79E-07	1.47E-08	1.28E-09	1.02E-10
33070.60	4.10	2.09E-01	1.11E-02	5.61E-04	1.74E-05	4.80E-07	2.17E-08	1.46E-09	1.06E-10
		8.59E-02	2.14E-03	5.67E-05	2.63E-06	1.82E-07	1.49E-08	1.28E-09	1.02E-10
33877.20	4.20	2.18E-01	1.14E-02	5.72E-04	1.76E-05	4.84E-07	2.19E-08	1.47E-09	1.07E-10
		8.87E-02	2.21E-03	5.83E-05	2.68E-06	1.84E-07	1.50E-08	1.29E-09	1.03E-10
34683.80	4.30	2.26E-01	1.16E-02	5.78E-04	1.78E-05	4.88E-07	2.21E-08	1.49E-09	1.07E-10
		9.13E-02	2.28E-03	5.99E-05	2.74E-06	1.87E-07	1.52E-08	1.31E-09	1.04E-10
35490.40	4.40	2.36E-01	1.19E-02	5.84E-04	1.79E-05	4.92E-07	2.23E-08	1.50E-09	1.09E-10
		9.37E-02	2.33E-03	6.13E-05	2.79E-06	1.90E-07	1.54E-08	1.33E-09	1.05E-10
36297.00	4.50	2.46E-01	1.22E-02	5.91E-04	1.80E-05	4.95E-07	2.25E-08	1.52E-09	1.10E-10
		9.59E-02	2.39E-03	6.26E-05	2.84E-06	1.92E-07	1.56E-08	1.34E-09	1.06E-10
37103.60	4.60	2.57E-01	1.25E-02	5.99E-04	1.82E-05	4.99E-07	2.26E-08	1.53E-09	1.11E-10
		9.79E-02	2.44E-03	6.38E-05	2.88E-06	1.94E-07	1.57E-08	1.36E-09	1.07E-10
37910.20	4.70	2.67E-01	1.28E-02	6.06E-04	1.83E-05	5.01E-07	2.28E-08	1.54E-09	1.12E-10
		9.97E-02	2.48E-03	6.49E-05	2.92E-06	1.97E-07	1.59E-08	1.37E-09	1.08E-10
38716.80	4.80	2.78E-01	1.31E-02	6.14E-04	1.85E-05	5.04E-07	2.29E-08	1.55E-09	1.13E-10
		1.01E-01	2.52E-03	6.59E-05	2.96E-06	1.98E-07	1.60E-08	1.38E-09	1.09E-10
39523.40	4.90	2.89E-01	1.35E-02	6.22E-04	1.86E-05	5.07E-07	2.31E-08	1.56E-09	1.13E-10
		1.03E-01	2.56E-03	6.68E-05	2.99E-06	2.00E-07	1.61E-08	1.39E-09	1.10E-10

40530.00	5.00	2.99E-01	1.38E-02	6.29E-04	1.87E-05	5.10E-07	2.32E-05	1.57E-09	1.14E-10
		1.04E-01	2.59E-03	6.76E-05	3.02E-06	2.02E-07	1.62E-08	1.40E-09	1.10E-10
41136.60	5.10	3.10E-01	1.41E-02	6.37E-04	1.89E-05	5.12E-07	2.33E-05	1.58E-09	1.15E-10
		1.06E-01	2.63E-03	6.83E-05	3.05E-06	2.03E-07	1.63E-08	1.40E-09	1.11E-10
41943.20	5.20	3.18E-01	1.44E-02	6.43E-04	1.90E-05	5.14E-07	2.34E-05	1.59E-09	1.15E-10
		1.07E-01	2.65E-03	6.90E-05	3.07E-06	2.04E-07	1.64E-08	1.41E-09	1.11E-10
42749.80	5.30	3.30E-01	1.47E-02	6.52E-04	1.91E-05	5.17E-07	2.35E-05	1.59E-09	1.16E-10
		1.08E-01	2.68E-03	6.96E-05	3.09E-06	2.05E-07	1.65E-08	1.42E-09	1.12E-10
43556.40	5.40	3.39E-01	1.50E-02	6.57E-04	1.92E-05	5.19E-07	2.36E-05	1.60E-09	1.16E-10
		1.09E-01	2.70E-03	7.02E-05	3.11E-06	2.06E-07	1.66E-08	1.42E-09	1.12E-10
44363.00	5.50	3.49E-01	1.53E-02	6.65E-04	1.93E-05	5.21E-07	2.36E-05	1.60E-09	1.17E-10
		1.10E-01	2.72E-03	7.07E-05	3.13E-06	2.07E-07	1.66E-08	1.43E-09	1.13E-10
45169.60	5.60	3.59E-01	1.56E-02	6.72E-04	1.94E-05	5.22E-07	2.37E-05	1.61E-09	1.17E-10
		1.10E-01	2.74E-03	7.11E-05	3.15E-06	2.08E-07	1.67E-08	1.43E-09	1.13E-10
45976.20	5.70	3.65E-01	1.58E-02	6.76E-04	1.95E-05	5.24E-07	2.38E-05	1.61E-09	1.17E-10
		1.11E-01	2.76E-03	7.16E-05	3.16E-06	2.09E-07	1.67E-08	1.44E-09	1.13E-10
46782.80	5.80	3.71E-01	1.59E-02	6.80E-04	1.96E-05	5.25E-07	2.38E-05	1.62E-09	1.18E-10
		1.12E-01	2.78E-03	7.20E-05	3.18E-06	2.10E-07	1.68E-08	1.44E-09	1.14E-10
47589.40	5.90	3.76E-01	1.61E-02	6.84E-04	1.96E-05	5.26E-07	2.39E-05	1.62E-09	1.18E-10
		1.12E-01	2.80E-03	7.24E-05	3.19E-06	2.10E-07	1.68E-08	1.44E-09	1.14E-10
48396.00	6.00	3.80E-01	1.62E-02	6.86E-04	1.97E-05	5.27E-07	2.39E-05	1.62E-09	1.18E-10
		1.13E-01	2.81E-03	7.28E-05	3.20E-06	2.11E-07	1.69E-08	1.45E-09	1.14E-10
49202.60	6.10	3.88E-01	1.65E-02	6.93E-04	1.98E-05	5.29E-07	2.39E-05	1.63E-09	1.18E-10
		1.14E-01	2.83E-03	7.31E-05	3.21E-06	2.11E-07	1.69E-08	1.45E-09	1.14E-10
50009.20	6.20	3.92E-01	1.66E-02	6.97E-04	1.99E-05	5.30E-07	2.40E-05	1.63E-09	1.18E-10
		1.14E-01	2.84E-03	7.34E-05	3.22E-06	2.12E-07	1.69E-08	1.45E-09	1.15E-10
50815.80	6.30	3.95E-01	1.67E-02	6.99E-04	1.99E-05	5.31E-07	2.40E-05	1.63E-09	1.19E-10
		1.15E-01	2.85E-03	7.37E-05	3.23E-06	2.12E-07	1.70E-08	1.45E-09	1.15E-10
51622.40	6.40	4.00E-01	1.69E-02	7.03E-04	2.00E-05	5.32E-07	2.40E-05	1.63E-09	1.19E-10
		1.15E-01	2.86E-03	7.39E-05	3.24E-06	2.13E-07	1.70E-08	1.46E-09	1.15E-10
52429.00	6.50	4.03E-01	1.70E-02	7.06E-04	2.00E-05	5.33E-07	2.41E-05	1.63E-09	1.19E-10
		1.15E-01	2.87E-03	7.41E-05	3.25E-06	2.13E-07	1.70E-08	1.46E-09	1.15E-10
53235.60	6.60	4.05E-01	1.71E-02	7.08E-04	2.00E-05	5.33E-07	2.41E-05	1.64E-09	1.19E-10
		1.16E-01	2.88E-03	7.43E-05	3.25E-06	2.13E-07	1.70E-08	1.46E-09	1.15E-10
54042.20	6.70	4.08E-01	1.72E-02	7.10E-04	2.01E-05	5.34E-07	2.41E-05	1.64E-09	1.19E-10
		1.16E-01	2.88E-03	7.45E-05	3.26E-06	2.14E-07	1.70E-08	1.46E-09	1.15E-10
54848.80	6.80	4.10E-01	1.72E-02	7.12E-04	2.01E-05	5.34E-07	2.41E-05	1.64E-09	1.19E-10
		1.16E-01	2.89E-03	7.47E-05	3.27E-06	2.14E-07	1.71E-08	1.46E-09	1.15E-10
55655.40	6.90	4.11E-01	1.73E-02	7.13E-04	2.02E-05	5.35E-07	2.41E-05	1.64E-09	1.19E-10
		1.17E-01	2.90E-03	7.48E-05	3.27E-06	2.14E-07	1.71E-08	1.46E-09	1.16E-10
56462.00	7.00	4.12E-01	1.73E-02	7.15E-04	2.02E-05	5.35E-07	2.42E-05	1.64E-09	1.19E-10
		1.17E-01	2.90E-03	7.49E-05	3.27E-06	2.14E-07	1.71E-08	1.47E-09	1.16E-10
57268.60	7.10	4.13E-01	1.74E-02	7.16E-04	2.02E-05	5.36E-07	2.42E-05	1.64E-09	1.20E-10
		1.20E-01	2.94E-03	7.54E-05	3.28E-06	2.14E-07	1.71E-08	1.47E-09	1.16E-10
58075.20	7.20	4.18E-01	1.74E-02	7.17E-04	2.02E-05	5.36E-07	2.42E-05	1.64E-09	1.20E-10
		1.23E-01	2.99E-03	7.59E-05	3.29E-06	2.15E-07	1.71E-08	1.47E-09	1.16E-10
58881.80	7.30	4.21E-01	1.75E-02	7.18E-04	2.02E-05	5.36E-07	2.42E-05	1.64E-09	1.20E-10
		1.25E-01	3.02E-03	7.64E-05	3.30E-06	2.15E-07	1.71E-08	1.47E-09	1.16E-10
59688.40	7.40	4.24E-01	1.75E-02	7.19E-04	2.03E-05	5.37E-07	2.42E-05	1.64E-09	1.20E-10
		1.28E-01	3.06E-03	7.69E-05	3.30E-06	2.15E-07	1.71E-08	1.47E-09	1.14E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 8000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
60495.00	7.50	4.27E-01	1.74E-02	7.21E-04	2.03E-05	5.37E-07	2.42E-08	1.64E-09	1.20E-10
		1.31E-01	3.10E-03	7.73E-05	3.31E-06	2.15E-07	1.71E-08	1.47E-09	1.16E-10
61301.60	7.60	4.29E-01	1.76E-02	7.22E-04	2.03E-05	5.38E-07	2.42E-08	1.65E-09	1.20E-10
		1.33E-01	3.13E-03	7.77E-05	3.32E-06	2.15E-07	1.71E-08	1.47E-09	1.16E-10
62108.20	7.70	4.32E-01	1.77E-02	7.23E-04	2.03E-05	5.38E-07	2.42E-08	1.65E-09	1.20E-10
		1.35E-01	3.16E-03	7.81E-05	3.32E-06	2.15E-07	1.72E-08	1.47E-09	1.16E-10
62914.80	7.80	4.34E-01	1.77E-02	7.24E-04	2.04E-05	5.38E-07	2.42E-08	1.65E-09	1.20E-10
		1.37E-01	3.19E-03	7.84E-05	3.33E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
63721.40	7.90	4.36E-01	1.78E-02	7.25E-04	2.04E-05	5.39E-07	2.43E-08	1.65E-09	1.20E-10
		1.39E-01	3.22E-03	7.88E-05	3.33E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
64528.00	8.00	4.38E-01	1.78E-02	7.27E-04	2.04E-05	5.39E-07	2.43E-08	1.65E-09	1.20E-10
		1.41E-01	3.25E-03	7.91E-05	3.33E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
65334.60	8.10	4.40E-01	1.79E-02	7.28E-04	2.04E-05	5.39E-07	2.43E-08	1.65E-09	1.20E-10
		1.43E-01	3.27E-03	7.94E-05	3.34E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
66141.20	8.20	4.42E-01	1.79E-02	7.29E-04	2.05E-05	5.40E-07	2.43E-08	1.65E-09	1.20E-10
		1.44E-01	3.29E-03	7.96E-05	3.34E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
66947.80	8.30	4.44E-01	1.79E-02	7.31E-04	2.03E-05	5.40E-07	2.43E-08	1.65E-09	1.20E-10
		1.46E-01	3.31E-03	7.99E-05	3.35E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
67754.40	8.40	4.45E-01	1.80E-02	7.32E-04	2.05E-05	5.40E-07	2.43E-08	1.65E-09	1.20E-10
		1.47E-01	3.33E-03	8.01E-05	3.35E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
68561.00	8.50	4.47E-01	1.80E-02	7.33E-04	2.06E-05	5.41E-07	2.43E-08	1.65E-09	1.20E-10
		1.48E-01	3.35E-03	8.03E-05	3.35E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
69367.60	8.60	4.48E-01	1.80E-02	7.35E-04	2.06E-05	5.41E-07	2.43E-08	1.65E-09	1.20E-10
		1.50E-01	3.37E-03	8.05E-05	3.35E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
70174.20	8.70	4.50E-01	1.81E-02	7.36E-04	2.06E-05	5.41E-07	2.43E-08	1.65E-09	1.20E-10
		1.51E-01	3.38E-03	8.07E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
70980.80	8.80	4.51E-01	1.81E-02	7.38E-04	2.06E-05	5.42E-07	2.43E-08	1.65E-09	1.20E-10
		1.52E-01	3.39E-03	8.08E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
71787.40	8.90	4.52E-01	1.82E-02	7.39E-04	2.07E-05	5.42E-07	2.43E-08	1.65E-09	1.20E-10
		1.53E-01	3.41E-03	8.10E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
72594.00	9.00	4.53E-01	1.82E-02	7.41E-04	2.07E-05	5.43E-07	2.43E-08	1.65E-09	1.20E-10
		1.53E-01	3.42E-03	8.11E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
73400.60	9.10	4.54E-01	1.82E-02	7.42E-04	2.07E-05	5.43E-07	2.43E-08	1.65E-09	1.20E-10
		1.54E-01	3.42E-03	8.11E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
74207.20	9.20	4.55E-01	1.83E-02	7.44E-04	2.08E-05	5.43E-07	2.43E-08	1.65E-09	1.20E-10
		1.54E-01	3.43E-03	8.12E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
75013.80	9.30	4.55E-01	1.83E-02	7.45E-04	2.08E-05	5.44E-07	2.43E-08	1.65E-09	1.20E-10
		1.54E-01	3.43E-03	8.13E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
75820.40	9.40	4.56E-01	1.83E-02	7.47E-04	2.08E-05	5.44E-07	2.43E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.13E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
76627.00	9.50	4.56E-01	1.84E-02	7.48E-04	2.09E-05	5.45E-07	2.43E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.13E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
77433.60	9.60	4.57E-01	1.84E-02	7.50E-04	2.09E-05	5.45E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.13E-05	3.36E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10

78240.20	9.70	4.57E-01	1.84E-02	7.52E-04	2.10E-05	5.46E-07	2.44E-08	1.69E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.14E-07	1.72E-08	1.47E-09	1.16E-10
79046.80	9.80	4.58E-01	1.84E-02	7.53E-04	2.10E-05	5.46E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
79853.40	9.90	4.58E-01	1.85E-02	7.55E-04	2.10E-05	5.47E-07	2.44E-08	1.69E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.16E-07	1.72E-08	1.47E-09	1.16E-10
80660.00	10.00	4.58E-01	1.85E-02	7.57E-04	2.11E-05	5.47E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
81466.60	10.10	4.59E-01	1.85E-02	7.59E-04	2.11E-05	5.47E-07	2.44E-08	1.69E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
82273.20	10.20	4.59E-01	1.86E-02	7.60E-04	2.12E-05	5.48E-07	2.44E-08	1.69E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
83079.80	10.30	4.59E-01	1.86E-02	7.62E-04	2.12E-05	5.48E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
83886.40	10.40	4.60E-01	1.86E-02	7.64E-04	2.12E-05	5.49E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
84693.00	10.50	4.60E-01	1.87E-02	7.66E-04	2.13E-05	5.49E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
85499.60	10.60	4.61E-01	1.87E-02	7.68E-04	2.13E-05	5.50E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
86306.20	10.70	4.62E-01	1.88E-02	7.71E-04	2.14E-05	5.51E-07	2.44E-08	1.65E-09	1.20E-10
		1.55E-01	3.44E-03	8.14E-05	3.37E-06	2.17E-07	1.72E-08	1.47E-09	1.16E-10
88726.00	11.00	4.62E-01	1.88E-02	7.76E-04	2.21E-05	6.31E-07	3.24E-08	2.39E-09	1.80E-10
		1.55E-01	3.46E-03	8.63E-05	4.11E-06	2.97E-07	2.52E-08	2.22E-09	1.77E-10
90742.50	11.25	4.62E-01	1.88E-02	7.80E-04	2.27E-05	6.85E-07	3.77E-08	2.90E-09	2.21E-10
		1.55E-01	3.48E-03	8.97E-05	4.61E-06	3.51E-07	3.09E-08	2.72E-09	2.17E-10
92759.00	11.50	4.62E-01	1.88E-02	7.82E-04	2.30E-05	7.26E-07	4.17E-08	3.27E-09	2.51E-10
		1.55E-01	3.49E-03	9.22E-05	4.99E-06	3.91E-07	3.45E-08	3.09E-09	2.47E-10
94775.50	11.75	4.62E-01	1.88E-02	7.84E-04	2.33E-05	7.55E-07	4.46E-08	3.54E-09	2.73E-10
		1.55E-01	3.49E-03	9.40E-05	5.26E-06	4.21E-07	3.74E-08	3.37E-09	2.70E-10
96792.00	12.00	4.62E-01	1.89E-02	7.85E-04	2.35E-05	7.77E-07	4.68E-08	3.75E-09	2.90E-10
		1.55E-01	3.54E-03	9.54E-05	5.46E-06	4.43E-07	3.96E-08	3.57E-09	2.86E-10
98884.50	12.25	4.62E-01	1.89E-02	7.93E-04	2.47E-05	9.07E-07	5.96E-08	4.95E-09	3.87E-10
		1.55E-01	3.58E-03	1.03E-04	6.67E-06	5.73E-07	5.24E-08	4.77E-09	3.83E-10
100825.00	12.50	4.62E-01	1.89E-02	7.99E-04	2.56E-05	1.08E-06	6.91E-08	5.84E-09	4.59E-10
		1.55E-01	3.60E-03	1.09E-04	7.56E-06	6.69E-07	6.19E-08	5.66E-09	4.55E-10
102841.50	12.75	4.62E-01	1.90E-02	8.04E-04	2.63E-05	1.07E-06	7.62E-08	6.49E-09	5.13E-10
		1.56E-01	3.62E-03	1.14E-04	8.25E-06	7.40E-07	6.80E-08	6.32E-09	5.09E-10
104858.00	13.00	4.62E-01	1.90E-02	8.07E-04	2.68E-05	1.13E-06	8.16E-08	7.08E-09	5.54E-10
		1.56E-01	3.63E-03	1.17E-04	8.76E-06	7.95E-07	7.44E-08	6.83E-09	5.50E-10
106874.50	13.25	4.62E-01	1.90E-02	8.10E-04	2.72E-05	1.17E-06	8.56E-08	7.30E-09	5.84E-10
		1.56E-01	3.65E-03	1.20E-04	9.13E-06	8.36E-07	7.84E-08	7.20E-09	5.80E-10
108891.00	13.50	4.63E-01	1.90E-02	8.17E-04	2.80E-05	1.20E-06	8.85E-08	7.65E-09	6.06E-10
		1.56E-01	3.71E-03	1.27E-04	9.97E-06	8.69E-07	8.13E-08	7.47E-09	6.02E-10
110907.50	13.75	4.63E-01	1.91E-02	8.23E-04	2.86E-05	1.20E-06	9.48E-08	8.25E-09	6.56E-10
		1.56E-01	3.75E-03	1.33E-04	1.06E-05	9.29E-07	8.76E-08	8.07E-09	6.52E-10
112924.00	14.00	4.63E-01	1.91E-02	8.27E-04	2.92E-05	1.32E-06	1.00E-07	8.69E-09	6.93E-10
		1.57E-01	3.79E-03	1.37E-04	1.11E-05	9.86E-07	9.32E-08	8.51E-09	6.89E-10
114940.80	14.25	4.64E-01	1.92E-02	8.31E-04	2.96E-05	1.36E-06	1.05E-07	9.00E-09	7.25E-10
		1.57E-01	3.82E-03	1.41E-04	1.16E-05	1.03E-06	9.74E-08	8.91E-09	7.21E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 8000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
116867.00	14.50	4.64E-01	1.92E-02	8.41E-04	3.09E-05	1.51E-06	1.19E-07	9.37E-09	7.49E-10
		1.57E-01	3.87E-03	1.51E-04	1.29E-05	1.17E-06	1.12E-07	9.20E-09	7.45E-10
118978.50	14.75	4.64E-01	1.92E-02	8.48E-04	3.20E-05	1.61E-06	1.29E-07	1.04E-08	8.30E-10
		1.57E-01	3.91E-03	1.58E-04	1.39E-05	1.28E-06	1.22E-07	1.02E-08	8.26E-10
120890.00	15.00	4.64E-01	1.93E-02	8.53E-04	3.27E-05	1.69E-06	1.37E-07	1.11E-08	8.98E-10
		1.58E-01	3.94E-03	1.63E-04	1.47E-05	1.38E-06	1.30E-07	1.09E-08	8.84E-10
122006.50	15.25	4.64E-01	1.93E-02	8.57E-04	3.33E-05	1.75E-06	1.43E-07	1.17E-08	9.35E-10
		1.58E-01	3.96E-03	1.67E-04	1.52E-05	1.42E-06	1.36E-07	1.15E-08	9.31E-10
125022.00	15.50	4.65E-01	1.93E-02	8.60E-04	3.37E-05	1.80E-06	1.48E-07	1.21E-08	9.68E-10
		1.58E-01	3.97E-03	1.70E-04	1.56E-05	1.46E-06	1.40E-07	1.19E-08	9.64E-10
127039.50	15.75	4.65E-01	1.93E-02	8.62E-04	3.40E-05	1.83E-06	1.51E-07	1.24E-08	9.92E-10
		1.58E-01	3.98E-03	1.72E-04	1.59E-05	1.50E-06	1.44E-07	1.22E-08	9.88E-10
129056.00	16.00	4.65E-01	1.93E-02	8.64E-04	3.42E-05	1.85E-06	1.53E-07	1.26E-08	1.01E-09
		1.58E-01	3.99E-03	1.74E-04	1.62E-05	1.52E-06	1.46E-07	1.24E-08	1.01E-09
131072.50	16.25	4.65E-01	1.93E-02	8.65E-04	3.44E-05	1.87E-06	1.55E-07	1.27E-08	1.02E-09
		1.58E-01	4.00E-03	1.75E-04	1.63E-05	1.54E-06	1.48E-07	1.26E-08	1.02E-09
133089.00	16.50	4.65E-01	1.93E-02	8.66E-04	3.45E-05	1.88E-06	1.56E-07	1.29E-08	1.03E-09
		1.58E-01	4.00E-03	1.76E-04	1.64E-05	1.55E-06	1.49E-07	1.27E-08	1.03E-09
135105.50	16.75	4.65E-01	1.93E-02	8.66E-04	3.46E-05	1.89E-06	1.57E-07	1.29E-08	1.04E-09
		1.58E-01	4.01E-03	1.76E-04	1.65E-05	1.56E-06	1.50E-07	1.28E-08	1.04E-09
137122.00	17.00	4.65E-01	1.94E-02	8.67E-04	3.46E-05	1.90E-06	1.58E-07	1.30E-08	1.04E-09
		1.58E-01	4.01E-03	1.77E-04	1.66E-05	1.56E-06	1.50E-07	1.28E-08	1.04E-09
139138.50	17.25	4.65E-01	1.94E-02	8.67E-04	3.47E-05	1.90E-06	1.58E-07	1.31E-08	1.05E-09
		1.58E-01	4.01E-03	1.77E-04	1.66E-05	1.57E-06	1.51E-07	1.29E-08	1.04E-09
141155.00	17.50	4.65E-01	1.94E-02	8.67E-04	3.47E-05	1.91E-06	1.58E-07	1.31E-08	1.05E-09
		1.58E-01	4.01E-03	1.77E-04	1.67E-05	1.57E-06	1.51E-07	1.29E-08	1.05E-09
143171.50	17.75	4.65E-01	1.94E-02	8.68E-04	3.47E-05	1.91E-06	1.59E-07	1.31E-08	1.05E-09
		1.58E-01	4.01E-03	1.77E-04	1.67E-05	1.58E-06	1.51E-07	1.29E-08	1.05E-09
145188.00	18.00	4.65E-01	1.94E-02	8.68E-04	3.47E-05	1.91E-06	1.59E-07	1.31E-08	1.05E-09
		1.58E-01	4.01E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
147204.50	18.25	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.91E-06	1.59E-07	1.31E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
149221.00	18.50	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.91E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
151237.50	18.75	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
153254.00	19.00	4.65E-01	1.94E-02	8.69E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
155270.50	19.25	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
157287.00	19.50	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.67E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
159303.50	19.75	4.65E-01	1.94E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
		1.58E-01	4.02E-03	1.78E-04	1.68E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 9000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	7.26E-04	4.61E-05	4.07E-06	4.21E-07	4.14E-08	3.86E-09	3.89E-10	1.58E-11
		6.93E-04	4.48E-05	4.04E-06	4.21E-07	4.14E-08	3.86E-09	3.89E-10	1.58E-11
5646.20	0.70	1.61E-03	1.07E-04	9.62E-06	9.10E-07	8.66E-08	8.00E-09	6.48E-10	3.27E-11
		1.33E-03	9.04E-05	9.12E-06	9.03E-07	8.59E-08	8.00E-09	6.48E-10	3.27E-11
6452.80	0.80	3.38E-03	2.30E-04	1.74E-05	1.52E-06	1.44E-07	1.34E-08	1.01E-09	5.05E-11
		1.92E-03	1.37E-04	1.46E-05	1.48E-06	1.43E-07	1.34E-08	1.01E-09	5.05E-11
7259.40	0.90	7.04E-03	4.81E-04	2.92E-05	2.21E-06	2.05E-07	1.89E-08	1.46E-09	7.32E-11
		2.47E-03	1.83E-04	2.02E-05	2.09E-06	2.04E-07	1.89E-08	1.46E-09	7.32E-11
8066.00	1.00	1.23E-02	8.35E-04	4.41E-05	2.94E-06	2.66E-07	2.45E-08	1.90E-09	9.62E-11
		2.97E-03	2.28E-04	2.58E-05	2.70E-06	2.64E-07	2.43E-08	1.90E-09	9.62E-11
8872.60	1.10	1.87E-02	1.27E-03	6.13E-05	3.69E-06	3.25E-07	2.99E-08	2.33E-09	1.18E-10
		3.43E-03	2.71E-04	3.13E-05	3.30E-06	3.21E-07	2.98E-08	2.33E-09	1.18E-10
9679.20	1.20	2.75E-02	1.85E-03	8.30E-05	4.46E-06	3.81E-07	3.49E-08	2.73E-09	1.38E-10
		3.84E-03	3.11E-04	3.63E-05	3.85E-06	3.75E-07	3.48E-08	2.73E-09	1.38E-10
10485.80	1.30	3.71E-02	2.49E-03	1.05E-04	5.17E-06	4.29E-07	3.92E-08	3.07E-09	1.55E-10
		4.26E-03	3.55E-04	4.08E-05	4.31E-06	4.21E-07	3.91E-08	3.07E-09	1.55E-10
11292.40	1.40	5.12E-02	3.43E-03	1.37E-04	6.08E-06	4.69E-07	4.25E-08	3.34E-09	1.68E-10
		4.62E-03	3.95E-04	4.57E-05	4.87E-06	4.57E-07	4.24E-08	3.34E-09	1.68E-10
12099.00	1.50	6.66E-02	4.40E-03	1.70E-04	6.97E-06	5.22E-07	4.72E-08	3.70E-09	1.80E-10
		6.15E-03	4.61E-04	5.13E-05	5.39E-06	5.07E-07	4.70E-08	3.70E-09	1.80E-10
12905.60	1.60	8.18E-02	5.28E-03	2.00E-04	7.81E-06	5.73E-07	5.15E-08	4.02E-09	1.96E-10
		9.28E-03	5.63E-04	5.76E-05	5.92E-06	5.54E-07	5.14E-08	4.02E-09	1.96E-10
13712.20	1.70	1.04E-01	6.59E-03	2.42E-04	8.78E-06	6.22E-07	5.55E-08	4.33E-09	2.12E-10
		1.31E-02	6.80E-04	6.39E-05	6.42E-06	5.98E-07	5.53E-08	4.33E-09	2.12E-10
14518.80	1.80	1.24E-01	7.73E-03	2.80E-04	9.65E-06	6.66E-07	5.91E-08	4.61E-09	2.26E-10
		1.72E-02	8.03E-04	7.00E-05	6.88E-06	6.38E-07	5.89E-08	4.61E-09	2.26E-10
15325.40	1.90	1.48E-01	9.15E-03	3.25E-04	1.06E-05	7.06E-07	6.23E-08	4.86E-09	2.38E-10
		2.16E-02	9.32E-04	7.59E-05	7.30E-06	6.74E-07	6.20E-08	4.85E-09	2.38E-10
16132.00	2.00	1.62E-01	9.93E-03	3.50E-04	1.12E-05	7.41E-07	6.51E-08	5.08E-09	2.49E-10
		2.63E-02	1.06E-03	8.18E-05	7.69E-06	7.06E-07	6.48E-08	5.08E-09	2.49E-10
16938.60	2.10	1.74E-01	1.05E-02	3.68E-04	1.18E-05	7.72E-07	6.77E-08	5.27E-09	2.60E-10
		3.12E-02	1.20E-03	8.75E-05	8.06E-06	7.35E-07	6.74E-08	5.27E-09	2.60E-10
17745.20	2.20	1.83E-01	1.09E-02	3.82E-04	1.22E-05	7.99E-07	6.99E-08	5.45E-09	2.68E-10
		3.62E-02	1.34E-03	9.30E-05	8.40E-06	7.61E-07	6.96E-08	5.44E-09	2.68E-10
18551.80	2.30	1.90E-01	1.17E-02	3.92E-04	1.26E-05	8.22E-07	7.18E-08	5.59E-09	2.76E-10
		4.11E-02	1.47E-03	9.82E-05	8.70E-06	7.84E-07	7.15E-08	5.59E-09	2.76E-10
19358.40	2.40	1.96E-01	1.13E-02	3.98E-04	1.29E-05	8.43E-07	7.34E-08	5.71E-09	2.82E-10
		4.61E-02	1.61E-03	1.03E-04	8.97E-06	8.03E-07	7.31E-08	5.71E-09	2.82E-10
20165.00	2.50	2.00E-01	1.15E-02	4.04E-04	1.31E-05	8.59E-07	7.47E-08	5.81E-09	2.87E-10
		5.11E-02	1.75E-03	1.09E-04	9.20E-06	8.20E-07	7.44E-08	5.81E-09	2.87E-10
20971.60	2.60	2.06E-01	1.16E-02	4.10E-04	1.35E-05	8.85E-07	7.68E-08	5.98E-09	2.91E-10
		5.60E-02	1.88E-03	1.14E-04	9.52E-06	8.44E-07	7.64E-08	5.89E-09	2.91E-10
21778.20	2.70	2.11E-01	1.18E-02	4.22E-04	1.41E-05	9.19E-07	7.98E-08	6.05E-09	2.98E-10
		6.08E-02	2.02E-03	1.20E-04	9.86E-06	8.70E-07	7.83E-08	6.04E-09	2.98E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 9000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
22584.80	2.80	2.17E-01	1.20E-02	4.30E-04	1.45E-05	9.46E-07	8.11E-08	6.21E-09	3.84E-10
		6.56E-02	2.15E-03	1.25E-04	1.02E-05	8.94E-07	8.04E-08	6.20E-09	3.86E-10
23391.40	2.90	2.23E-01	1.23E-02	4.45E-04	1.52E-05	9.79E-07	8.33E-08	6.36E-09	3.14E-10
		7.02E-02	2.27E-03	1.30E-04	1.05E-05	9.19E-07	8.22E-08	6.34E-09	3.14E-10
24198.00	3.00	2.29E-01	1.26E-02	4.63E-04	1.59E-05	1.02E-06	8.54E-08	6.50E-09	3.21E-10
		7.47E-02	2.40E-03	1.34E-04	1.07E-05	9.36E-07	8.39E-08	6.47E-09	3.20E-10
25004.60	3.10	2.36E-01	1.28E-02	4.73E-04	1.63E-05	1.04E-06	8.70E-08	6.61E-09	3.26E-10
		7.90E-02	2.51E-03	1.39E-04	1.10E-05	9.54E-07	8.54E-08	6.58E-09	3.26E-10
25811.20	3.20	2.45E-01	1.33E-02	5.11E-04	1.79E-05	1.09E-06	8.94E-08	6.74E-09	3.32E-10
		8.31E-02	2.62E-03	1.43E-04	1.12E-05	9.78E-07	8.67E-08	6.68E-09	3.31E-10
26617.80	3.30	2.53E-01	1.38E-02	5.31E-04	1.86E-05	1.12E-06	9.10E-08	6.84E-09	3.36E-10
		8.71E-02	2.73E-03	1.47E-04	1.14E-05	9.84E-07	8.79E-08	6.77E-09	3.36E-10
27424.40	3.40	2.62E-01	1.41E-02	5.43E-04	1.89E-05	1.14E-06	9.21E-08	6.92E-09	3.40E-10
		9.10E-02	2.83E-03	1.50E-04	1.16E-05	9.98E-07	8.89E-08	6.85E-09	3.49E-10
28231.00	3.50	2.76E-01	1.49E-02	5.83E-04	2.03E-05	1.19E-06	9.39E-08	7.08E-09	3.44E-10
		9.73E-02	2.99E-03	1.55E-04	1.18E-05	1.01E-06	8.98E-08	6.92E-09	3.43E-10
29037.60	3.60	2.88E-01	1.54E-02	6.03E-04	2.09E-05	1.21E-06	9.58E-08	7.07E-09	3.47E-10
		1.04E-01	3.17E-03	1.61E-04	1.20E-05	1.02E-06	9.06E-08	6.97E-09	3.46E-10
29844.20	3.70	3.03E-01	1.60E-02	6.22E-04	2.14E-05	1.22E-06	9.58E-08	7.12E-09	3.49E-10
		1.11E-01	3.34E-03	1.66E-04	1.22E-05	1.03E-06	9.13E-08	7.02E-09	3.48E-10
30650.80	3.80	3.17E-01	1.66E-02	6.41E-04	2.19E-05	1.24E-06	9.67E-08	7.17E-09	3.52E-10
		1.17E-01	3.51E-03	1.71E-04	1.24E-05	1.04E-06	9.20E-08	7.07E-09	3.51E-10
31457.40	3.90	3.28E-01	1.70E-02	6.54E-04	2.22E-05	1.25E-06	9.74E-08	7.21E-09	3.54E-10
		1.23E-01	3.67E-03	1.76E-04	1.26E-05	1.05E-06	9.27E-08	7.12E-09	3.53E-10
32264.00	4.00	3.44E-01	1.76E-02	6.73E-04	2.26E-05	1.26E-06	9.82E-08	7.26E-09	3.56E-10
		1.29E-01	3.82E-03	1.81E-04	1.28E-05	1.06E-06	9.35E-08	7.18E-09	3.55E-10
33070.60	4.10	3.54E-01	1.79E-02	6.81E-04	2.28E-05	1.27E-06	9.89E-08	7.31E-09	3.59E-10
		1.35E-01	3.97E-03	1.86E-04	1.30E-05	1.07E-06	9.42E-08	7.21E-09	3.58E-10
33877.20	4.20	3.68E-01	1.85E-02	6.97E-04	2.32E-05	1.29E-06	9.97E-08	7.37E-09	3.61E-10
		1.40E-01	4.11E-03	1.91E-04	1.33E-05	1.08E-06	9.50E-08	7.27E-09	3.60E-10
34683.80	4.30	3.79E-01	1.88E-02	7.05E-04	2.35E-05	1.30E-06	1.01E-07	7.46E-09	3.63E-10
		1.45E-01	4.24E-03	1.95E-04	1.35E-05	1.10E-06	9.62E-08	7.36E-09	3.62E-10
35490.40	4.40	3.91E-01	1.91E-02	7.13E-04	2.38E-05	1.32E-06	1.02E-07	7.55E-09	3.64E-10
		1.50E-01	4.36E-03	2.00E-04	1.37E-05	1.11E-06	9.73E-08	7.45E-09	3.67E-10
36297.00	4.50	4.03E-01	1.94E-02	7.21E-04	2.40E-05	1.33E-06	1.03E-07	7.63E-09	3.72E-10
		1.54E-01	4.48E-03	2.04E-04	1.39E-05	1.13E-06	9.84E-08	7.53E-09	3.71E-10
37103.60	4.60	4.16E-01	1.98E-02	7.29E-04	2.42E-05	1.34E-06	1.04E-07	7.70E-09	3.76E-10
		1.58E-01	4.59E-03	2.07E-04	1.41E-05	1.14E-06	9.93E-08	7.60E-09	3.75E-10
37910.20	4.70	4.29E-01	2.01E-02	7.37E-04	2.44E-05	1.35E-06	1.05E-07	7.76E-09	3.79E-10
		1.62E-01	4.68E-03	2.11E-04	1.43E-05	1.15E-06	1.00E-07	7.67E-09	3.78E-10
38716.80	4.80	4.42E-01	2.05E-02	7.45E-04	2.46E-05	1.36E-06	1.06E-07	7.82E-09	3.82E-10
		1.65E-01	4.78E-03	2.14E-04	1.44E-05	1.16E-06	1.01E-07	7.73E-09	3.81E-10
39523.40	4.90	4.55E-01	2.09E-02	7.52E-04	2.48E-05	1.37E-06	1.06E-07	7.88E-09	3.85E-10
		1.69E-01	4.86E-03	2.17E-04	1.45E-05	1.17E-06	1.02E-07	7.78E-09	3.84E-10

40330.00	5.00	4.67E-01	2.12E-02	7.59E-04	2.58E-05	1.38E-06	1.07E-07	7.93E-09	3.88E-10
		1.72E-01	4.94E-03	2.19E-04	1.47E-05	1.18E-06	1.02E-07	7.83E-09	3.87E-10
41136.60	5.10	4.80E-01	2.15E-02	7.67E-04	2.52E-05	1.39E-06	1.08E-07	7.97E-09	3.98E-10
		1.74E-01	5.01E-03	2.22E-04	1.48E-05	1.18E-06	1.03E-07	7.88E-09	3.89E-10
41943.20	5.20	4.90E-01	2.18E-02	7.72E-04	2.53E-05	1.40E-06	1.08E-07	8.02E-09	3.93E-10
		1.77E-01	5.08E-03	2.24E-04	1.49E-05	1.19E-06	1.03E-07	7.92E-09	3.91E-10
42749.80	5.30	5.03E-01	2.22E-02	7.80E-04	2.55E-05	1.41E-06	1.09E-07	8.05E-09	3.94E-10
		1.79E-01	5.14E-03	2.26E-04	1.50E-05	1.20E-06	1.04E-07	7.95E-09	3.93E-10
43556.40	5.40	5.13E-01	2.24E-02	7.85E-04	2.56E-05	1.41E-06	1.09E-07	8.09E-09	3.96E-10
		1.81E-01	5.20E-03	2.28E-04	1.51E-05	1.20E-06	1.04E-07	7.99E-09	3.95E-10
44363.00	5.50	5.25E-01	2.27E-02	7.92E-04	2.58E-05	1.42E-06	1.10E-07	8.12E-09	3.98E-10
		1.83E-01	5.25E-03	2.30E-04	1.52E-05	1.21E-06	1.05E-07	8.02E-09	3.97E-10
45169.80	5.60	5.36E-01	2.30E-02	7.98E-04	2.59E-05	1.42E-06	1.10E-07	8.15E-09	3.99E-10
		1.85E-01	5.30E-03	2.32E-04	1.53E-05	1.21E-06	1.05E-07	8.05E-09	3.98E-10
45976.20	5.70	5.44E-01	2.33E-02	8.02E-04	2.60E-05	1.43E-06	1.10E-07	8.17E-09	4.01E-10
		1.87E-01	5.35E-03	2.33E-04	1.53E-05	1.22E-06	1.06E-07	8.08E-09	4.00E-10
46782.80	5.80	5.52E-01	2.35E-02	8.06E-04	2.61E-05	1.43E-06	1.11E-07	8.20E-09	4.02E-10
		1.89E-01	5.40E-03	2.35E-04	1.54E-05	1.22E-06	1.06E-07	8.10E-09	4.01E-10
47589.40	5.90	5.58E-01	2.36E-02	8.10E-04	2.62E-05	1.44E-06	1.11E-07	8.22E-09	4.03E-10
		1.91E-01	5.44E-03	2.36E-04	1.55E-05	1.23E-06	1.06E-07	8.12E-09	4.02E-10
48396.00	6.00	5.63E-01	2.38E-02	8.13E-04	2.63E-05	1.44E-06	1.11E-07	8.24E-09	4.04E-10
		1.92E-01	5.48E-03	2.37E-04	1.55E-05	1.23E-06	1.06E-07	8.14E-09	4.03E-10
49202.60	6.10	5.74E-01	2.41E-02	8.19E-04	2.64E-05	1.44E-06	1.11E-07	8.26E-09	4.05E-10
		1.94E-01	5.52E-03	2.39E-04	1.56E-05	1.23E-06	1.07E-07	8.16E-09	4.04E-10
50009.20	6.20	5.80E-01	2.42E-02	8.23E-04	2.65E-05	1.45E-06	1.12E-07	8.28E-09	4.06E-10
		1.95E-01	5.56E-03	2.40E-04	1.56E-05	1.24E-06	1.07E-07	8.18E-09	4.05E-10
50815.80	6.30	5.84E-01	2.44E-02	8.26E-04	2.65E-05	1.45E-06	1.12E-07	8.29E-09	4.07E-10
		1.96E-01	5.59E-03	2.41E-04	1.57E-05	1.24E-06	1.07E-07	8.19E-09	4.06E-10
51622.40	6.40	5.91E-01	2.46E-02	8.30E-04	2.66E-05	1.45E-06	1.12E-07	8.31E-09	4.08E-10
		1.97E-01	5.62E-03	2.42E-04	1.57E-05	1.24E-06	1.07E-07	8.21E-09	4.07E-10
52429.00	6.50	5.96E-01	2.47E-02	8.33E-04	2.67E-05	1.46E-06	1.12E-07	8.32E-09	4.08E-10
		1.98E-01	5.64E-03	2.43E-04	1.58E-05	1.24E-06	1.07E-07	8.22E-09	4.07E-10
53235.60	6.60	5.99E-01	2.48E-02	8.36E-04	2.67E-05	1.46E-06	1.12E-07	8.33E-09	4.09E-10
		1.99E-01	5.67E-03	2.43E-04	1.58E-05	1.25E-06	1.08E-07	8.23E-09	4.08E-10
54042.20	6.70	6.04E-01	2.50E-02	8.39E-04	2.68E-05	1.46E-06	1.13E-07	8.34E-09	4.10E-10
		2.00E-01	5.69E-03	2.44E-04	1.58E-05	1.25E-06	1.08E-07	8.24E-09	4.08E-10
54848.80	6.80	6.07E-01	2.51E-02	8.41E-04	2.68E-05	1.46E-06	1.13E-07	8.35E-09	4.10E-10
		2.01E-01	5.71E-03	2.45E-04	1.58E-05	1.25E-06	1.08E-07	8.25E-09	4.09E-10
55655.40	6.90	6.09E-01	2.51E-02	8.43E-04	2.69E-05	1.46E-06	1.13E-07	8.36E-09	4.10E-10
		2.02E-01	5.73E-03	2.45E-04	1.59E-05	1.25E-06	1.08E-07	8.26E-09	4.09E-10
56462.00	7.00	6.11E-01	2.52E-02	8.45E-04	2.69E-05	1.47E-06	1.13E-07	8.37E-09	4.11E-10
		2.02E-01	5.74E-03	2.46E-04	1.59E-05	1.25E-06	1.08E-07	8.27E-09	4.10E-10
57268.60	7.10	6.15E-01	2.53E-02	8.48E-04	2.70E-05	1.47E-06	1.13E-07	8.38E-09	4.11E-10
		2.03E-01	5.76E-03	2.47E-04	1.59E-05	1.25E-06	1.08E-07	8.28E-09	4.10E-10
58075.20	7.20	6.19E-01	2.54E-02	8.49E-04	2.70E-05	1.47E-06	1.13E-07	8.30E-09	4.12E-10
		2.03E-01	5.84E-03	2.48E-04	1.59E-05	1.26E-06	1.08E-07	8.29E-09	4.11E-10
58881.80	7.30	6.23E-01	2.55E-02	8.51E-04	2.71E-05	1.47E-06	1.13E-07	8.39E-09	4.12E-10
		2.12E-01	5.89E-03	2.48E-04	1.60E-05	1.26E-06	1.08E-07	8.29E-09	4.11E-10
59688.40	7.40	6.26E-01	2.56E-02	8.53E-04	2.71E-05	1.47E-06	1.13E-07	8.40E-09	4.12E-10
		2.15E-01	5.93E-03	2.49E-04	1.60E-05	1.26E-06	1.08E-07	8.30E-09	4.11E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 9000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
60495.00	7.50	6.30E-01	2.56E-02	8.55E-04	2.71E-05	1.47E-06	1.13E-07	8.40E-09	4.13E-10
		2.17E-01	5.97E-03	2.50E-04	1.60E-05	1.20E-06	1.09E-07	8.30E-09	4.11E-10
61301.60	7.60	6.33E-01	2.57E-02	8.57E-04	2.72E-05	1.47E-06	1.13E-07	8.41E-09	4.13E-10
		2.20E-01	6.01E-03	2.50E-04	1.60E-05	1.20E-06	1.09E-07	8.31E-09	4.12E-10
62108.20	7.70	6.36E-01	2.58E-02	8.59E-04	2.72E-05	1.47E-06	1.13E-07	8.41E-09	4.13E-10
		2.23E-01	6.05E-03	2.51E-04	1.60E-05	1.20E-06	1.09E-07	8.31E-09	4.12E-10
62914.80	7.80	6.40E-01	2.59E-02	8.61E-04	2.72E-05	1.48E-06	1.14E-07	8.41E-09	4.13E-10
		2.25E-01	6.08E-03	2.52E-04	1.61E-05	1.20E-06	1.09E-07	8.32E-09	4.12E-10
63721.40	7.90	6.43E-01	2.60E-02	8.63E-04	2.73E-05	1.48E-06	1.14E-07	8.42E-09	4.13E-10
		2.28E-01	6.11E-03	2.52E-04	1.61E-05	1.20E-06	1.09E-07	8.32E-09	4.12E-10
64528.00	8.00	6.46E-01	2.61E-02	8.65E-04	2.73E-05	1.48E-06	1.14E-07	8.42E-09	4.14E-10
		2.30E-01	6.14E-03	2.53E-04	1.61E-05	1.20E-06	1.09E-07	8.32E-09	4.13E-10
65334.60	8.10	6.49E-01	2.62E-02	8.68E-04	2.73E-05	1.48E-06	1.14E-07	8.42E-09	4.14E-10
		2.32E-01	6.17E-03	2.53E-04	1.61E-05	1.20E-06	1.09E-07	8.33E-09	4.13E-10
66141.20	8.20	6.52E-01	2.62E-02	8.70E-04	2.74E-05	1.48E-06	1.14E-07	8.43E-09	4.14E-10
		2.34E-01	6.20E-03	2.53E-04	1.61E-05	1.20E-06	1.09E-07	8.33E-09	4.13E-10
66947.80	8.30	6.54E-01	2.63E-02	8.72E-04	2.74E-05	1.48E-06	1.14E-07	8.43E-09	4.14E-10
		2.35E-01	6.23E-03	2.54E-04	1.61E-05	1.20E-06	1.09E-07	8.33E-09	4.13E-10
67754.40	8.40	6.57E-01	2.64E-02	8.74E-04	2.74E-05	1.48E-06	1.14E-07	8.43E-09	4.14E-10
		2.37E-01	6.25E-03	2.54E-04	1.61E-05	1.20E-06	1.09E-07	8.33E-09	4.13E-10
68561.00	8.50	6.59E-01	2.65E-02	8.76E-04	2.75E-05	1.48E-06	1.14E-07	8.43E-09	4.14E-10
		2.39E-01	6.27E-03	2.54E-04	1.61E-05	1.27E-06	1.09E-07	8.33E-09	4.13E-10
69367.60	8.60	6.62E-01	2.66E-02	8.79E-04	2.75E-05	1.48E-06	1.14E-07	8.44E-09	4.14E-10
		2.40E-01	6.29E-03	2.55E-04	1.61E-05	1.27E-06	1.09E-07	8.34E-09	4.13E-10
70174.20	8.70	6.64E-01	2.67E-02	8.81E-04	2.75E-05	1.48E-06	1.14E-07	8.44E-09	4.14E-10
		2.41E-01	6.31E-03	2.55E-04	1.61E-05	1.27E-06	1.09E-07	8.34E-09	4.13E-10
70980.80	8.80	6.67E-01	2.68E-02	8.84E-04	2.76E-05	1.48E-06	1.14E-07	8.44E-09	4.14E-10
		2.43E-01	6.32E-03	2.55E-04	1.61E-05	1.27E-06	1.09E-07	8.34E-09	4.13E-10
71787.40	8.90	6.69E-01	2.69E-02	8.86E-04	2.76E-05	1.48E-06	1.14E-07	8.44E-09	4.15E-10
		2.44E-01	6.34E-03	2.55E-04	1.62E-05	1.27E-06	1.09E-07	8.34E-09	4.13E-10
72594.00	9.00	6.71E-01	2.69E-02	8.89E-04	2.76E-05	1.48E-06	1.14E-07	8.44E-09	4.15E-10
		2.45E-01	6.35E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.34E-09	4.14E-10
73400.60	9.10	6.73E-01	2.70E-02	8.92E-04	2.77E-05	1.48E-06	1.14E-07	8.44E-09	4.15E-10
		2.45E-01	6.36E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.34E-09	4.14E-10
74207.20	9.20	6.75E-01	2.71E-02	8.94E-04	2.77E-05	1.48E-06	1.14E-07	8.44E-09	4.15E-10
		2.46E-01	6.37E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.34E-09	4.14E-10
75013.80	9.30	6.77E-01	2.72E-02	8.97E-04	2.78E-05	1.49E-06	1.14E-07	8.44E-09	4.15E-10
		2.46E-01	6.38E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10
75820.40	9.40	6.78E-01	2.73E-02	9.00E-04	2.78E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.38E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10
76627.00	9.50	6.80E-01	2.74E-02	9.02E-04	2.78E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10
77433.60	9.60	6.81E-01	2.75E-02	9.05E-04	2.79E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10

78240.20	9.70	6.83E-01	2.76E-02	9.08E-04	2.79E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10
79046.80	9.80	6.84E-01	2.77E-02	9.11E-04	2.80E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.35E-09	4.14E-10
79853.40	9.90	6.86E-01	2.78E-02	9.14E-04	2.80E-05	1.49E-06	1.14E-07	8.45E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
80660.00	10.00	6.87E-01	2.79E-02	9.17E-04	2.80E-05	1.49E-06	1.14E-07	8.46E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
81466.60	10.10	6.89E-01	2.80E-02	9.20E-04	2.81E-05	1.49E-06	1.14E-07	8.46E-09	4.15E-10
		2.47E-01	6.39E-03	2.56E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
82273.20	10.20	6.91E-01	2.81E-02	9.23E-04	2.81E-05	1.49E-06	1.14E-07	8.46E-09	4.15E-10
		2.47E-01	6.39E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
83079.80	10.30	6.92E-01	2.82E-02	9.26E-04	2.82E-05	1.49E-06	1.14E-07	8.46E-09	4.15E-10
		2.47E-01	6.39E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
83886.40	10.40	6.94E-01	2.83E-02	9.29E-04	2.82E-05	1.49E-06	1.14E-07	8.46E-09	4.15E-10
		2.47E-01	6.40E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
84693.00	10.50	6.95E-01	2.84E-02	9.33E-04	2.83E-05	1.49E-06	1.14E-07	8.46E-09	4.16E-10
		2.47E-01	6.40E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
85499.80	10.60	6.97E-01	2.85E-02	9.36E-04	2.83E-05	1.49E-06	1.14E-07	8.46E-09	4.16E-10
		2.47E-01	6.40E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.14E-10
86306.20	10.70	7.01E-01	2.90E-02	9.42E-04	2.84E-05	1.49E-06	1.14E-07	8.46E-09	4.16E-10
		2.48E-01	6.64E-03	2.57E-04	1.62E-05	1.27E-06	1.09E-07	8.36E-09	4.15E-10
88726.00	11.00	7.02E-01	2.92E-02	9.86E-04	3.34E-05	1.99E-06	1.61E-07	1.21E-08	6.08E-10
		2.49E-01	5.89E-03	3.00E-04	2.12E-05	1.77E-06	1.56E-07	1.20E-08	5.99E-10
90742.50	11.25	7.03E-01	2.94E-02	1.02E-03	3.69E-05	2.34E-06	1.93E-07	1.47E-08	7.29E-10
		2.50E-01	7.07E-03	3.31E-04	2.47E-05	2.12E-06	1.88E-07	1.46E-08	7.28E-10
92759.00	11.50	7.03E-01	2.95E-02	1.04E-03	3.96E-05	2.61E-06	2.18E-07	1.67E-08	8.29E-10
		2.50E-01	7.21E-03	3.54E-04	2.74E-05	2.39E-06	2.13E-07	1.66E-08	8.28E-10
94775.50	11.75	7.04E-01	2.96E-02	1.06E-03	4.17E-05	2.82E-06	2.37E-07	1.82E-08	9.06E-10
		2.51E-01	7.31E-03	3.72E-04	2.95E-05	2.59E-06	2.33E-07	1.81E-08	9.04E-10
96792.00	12.00	7.06E-01	3.02E-02	1.15E-03	4.33E-05	2.98E-06	2.52E-07	1.94E-08	9.65E-10
		2.53E-01	7.85E-03	4.66E-04	3.11E-05	2.75E-06	2.47E-07	1.93E-08	9.64E-10
98808.50	12.25	7.08E-01	3.06E-02	1.22E-03	5.16E-05	3.81E-06	3.29E-07	2.55E-08	1.27E-09
		2.55E-01	8.27E-03	5.30E-04	3.95E-05	3.58E-06	3.25E-07	2.54E-08	1.27E-09
100825.00	12.50	7.09E-01	3.09E-02	1.28E-03	5.81E-05	4.45E-06	3.89E-07	3.02E-08	1.51E-09
		2.56E-01	8.59E-03	5.95E-04	4.59E-05	4.22E-06	3.84E-07	3.01E-08	1.51E-09
102841.50	12.75	7.10E-01	3.12E-02	1.33E-03	6.33E-05	4.97E-06	4.35E-07	3.39E-08	1.69E-09
		2.57E-01	8.85E-03	6.40E-04	5.11E-05	4.74E-06	4.30E-07	3.38E-08	1.69E-09
104858.00	13.00	7.11E-01	3.14E-02	1.36E-03	6.73E-05	5.37E-06	4.72E-07	3.68E-08	1.84E-09
		2.58E-01	9.05E-03	6.75E-04	5.51E-05	5.14E-06	4.67E-07	3.67E-08	1.84E-09
106874.50	13.25	7.11E-01	3.15E-02	1.39E-03	7.04E-05	5.67E-06	5.00E-07	3.91E-08	1.95E-09
		2.58E-01	9.20E-03	7.02E-04	5.82E-05	5.45E-06	4.96E-07	3.90E-08	1.95E-09
108891.00	13.50	7.14E-01	3.19E-02	1.44E-03	7.58E-05	6.21E-06	5.22E-07	4.08E-08	2.04E-09
		2.61E-01	9.42E-03	7.53E-04	6.36E-05	5.98E-06	5.17E-07	4.07E-08	2.04E-09
110907.50	13.75	7.17E-01	3.23E-02	1.48E-03	8.00E-05	6.62E-06	5.61E-07	4.39E-08	2.21E-09
		2.64E-01	9.94E-03	7.92E-04	6.78E-05	6.48E-06	5.56E-07	4.38E-08	2.21E-09
112934.00	14.00	7.19E-01	3.26E-02	1.51E-03	8.39E-05	7.01E-06	5.98E-07	4.69E-08	2.34E-09
		2.66E-01	1.02E-02	8.29E-04	7.17E-05	6.79E-06	5.93E-07	4.68E-08	2.34E-09
114940.50	14.25	7.20E-01	3.28E-02	1.54E-03	8.70E-05	7.32E-06	6.26E-07	4.93E-08	2.47E-09
		2.67E-01	1.04E-02	8.58E-04	7.48E-05	7.09E-06	6.21E-07	4.92E-08	2.46E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 9000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
116957.00	14.50	7.23E-01	3.33E-02	1.63E-03	9.63E-05	8.24E-06	7.12E-07	5.61E-08	2.56E-09
		2.70E-01	1.10E-02	9.40E-04	8.41E-05	8.02E-06	7.08E-07	5.60E-08	2.56E-09
118973.50	14.75	7.25E-01	3.37E-02	1.69E-03	1.04E-04	8.96E-06	7.79E-07	6.15E-08	2.83E-09
		2.72E-01	1.14E-02	1.00E-03	9.13E-05	8.73E-06	7.74E-07	6.14E-08	2.83E-09
120990.00	15.00	7.27E-01	3.40E-02	1.74E-03	1.09E-04	9.51E-06	8.31E-07	6.5[illegible]-08	3.04E-09
		2.74E-01	1.17E-02	1.05E-03	9.69E-05	9.29E-06	8.26E-07	6.55E-08	3.04E-09
123008.50	15.25	7.28E-01	3.43E-02	1.78E-03	1.13E-04	9.94E-06	8.71E-07	6.88E-08	3.21E-09
		2.75E-01	1.19E-02	1.09E-03	1.01E-04	9.72E-06	8.66E-07	6.87E-08	3.21E-09
125023.00	15.50	7.29E-01	3.45E-02	1.81E-03	1.17E-04	1.03E-05	9.02E-07	7.13E-08	3.33E-09
		2.76E-01	1.21E-02	1.12E-03	1.05E-04	1.01E-05	8.97E-07	7.12E-08	3.33E-09
127039.50	15.75	7.30E-01	3.46E-02	1.83E-03	1.19E-04	1.05E-05	9.26E-07	7.31E-08	3.43E-09
		2.77E-01	1.23E-02	1.14E-03	1.07E-04	1.03E-05	9.21E-07	7.30E-08	3.43E-09
129056.00	16.00	7.30E-01	3.47E-02	1.85E-03	1.21E-04	1.07E-05	9.43E-07	7.46E-08	3.50E-09
		2.77E-01	1.24E-02	1.16E-03	1.09E-04	1.05E-05	9.39E-07	7.45E-08	3.50E-09
131072.50	16.25	7.31E-01	3.48E-02	1.86E-03	1.23E-04	1.09E-05	9.57E-07	7.56E-08	3.56E-09
		2.77E-01	1.25E-02	1.17E-03	1.11E-04	1.06E-05	9.52E-07	7.55E-08	3.56E-09
133089.00	16.50	7.31E-01	3.49E-02	1.87E-03	1.24E-04	1.10E-05	9.67E-07	7.65E-08	3.60E-09
		2.78E-01	1.25E-02	1.18E-03	1.12E-04	1.08E-05	9.62E-07	7.64E-08	3.60E-09
135105.50	16.75	7.31E-01	3.49E-02	1.88E-03	1.25E-04	1.11E-05	9.75E-07	7.71E-08	3.63E-09
		2.78E-01	1.26E-02	1.19E-03	1.12E-04	1.08E-05	9.70E-07	7.70E-08	3.63E-09
137122.00	17.00	7.31E-01	3.49E-02	1.88E-03	1.25E-04	1.11E-05	9.81E-07	7.76E-08	3.66E-09
		2.78E-01	1.26E-02	1.20E-03	1.13E-04	1.09E-05	9.76E-07	7.75E-08	3.66E-09
139138.50	17.25	7.32E-01	3.50E-02	1.89E-03	1.26E-04	1.12E-05	9.86E-07	7.80E-08	3.68E-09
		2.78E-01	1.26E-02	1.20E-03	1.14E-04	1.10E-05	9.81E-07	7.79E-08	3.67E-09
141155.00	17.50	7.32E-01	3.50E-02	1.89E-03	1.26E-04	1.12E-05	9.90E-07	7.82E-08	3.69E-09
		2.79E-01	1.27E-02	1.21E-03	1.14E-04	1.10E-05	9.85E-07	7.81E-08	3.69E-09
143171.50	17.75	7.32E-01	3.50E-02	1.89E-03	1.26E-04	1.12E-05	9.92E-07	7.85E-08	3.70E-09
		2.79E-01	1.27E-02	1.21E-03	1.14E-04	1.10E-05	9.87E-07	7.84E-08	3.70E-09
145188.00	18.00	7.32E-01	3.50E-02	1.90E-03	1.27E-04	1.13E-05	9.94E-07	7.86E-08	3.71E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.10E-05	9.89E-07	7.85E-08	3.71E-09
147204.50	18.25	7.32E-01	3.50E-02	1.90E-03	1.27E-04	1.13E-05	9.96E-07	7.87E-08	3.72E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.11E-05	9.91E-07	7.86E-08	3.72E-09
149221.00	18.50	7.32E-01	3.50E-02	1.90E-03	1.27E-04	1.13E-05	9.97E-07	7.88E-08	3.72E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.11E-05	9.92E-07	7.87E-08	3.72E-09
151237.50	18.75	7.32E-01	3.50E-02	1.90E-03	1.27E-04	1.13E-05	9.98E-07	7.89E-08	3.72E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.11E-05	9.93E-07	7.88E-08	3.72E-09
153254.00	19.00	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	9.98E-07	7.90E-08	3.73E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.11E-05	9.93E-07	7.89E-08	3.73E-09
155270.50	19.25	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	9.99E-07	7.90E-08	3.73E-09
		2.79E-01	1.27E-02	1.21E-03	1.15E-04	1.11E-05	9.94E-07	7.89E-08	3.73E-09
157287.00	19.50	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	9.99E-07	7.90E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.94E-07	7.89E-08	3.73E-09
159303.50	19.75	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	10.00E-07	7.90E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.89E-08	3.73E-09
161320.00	20.00	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	10.00E-07	7.91E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09

163336.50	20.25	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	10.00E-07	7.91E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
165353.00	20.50	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
167369.50	20.75	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
169386.00	21.00	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.73E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
171402.50	21.25	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
173419.00	21.50	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
175435.50	21.75	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
177452.00	22.00	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
179468.50	22.25	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
181486.00	22.50	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
183501.50	22.75	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
185518.00	23.00	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.95E-07	7.90E-08	3.73E-09
187534.50	23.25	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
		2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.96E-07	7.90E-08	3.73E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	2.16E-03	1.97E-04	2.15E-05	1.88E-06	1.77E-07	1.46E-08	8.14E-10	1.98E-11
		2.13E-03	1.96E-04	2.15E-05	1.88E-06	1.77E-07	1.46E-08	8.14E-10	1.98E-11
5646.20	0.70	4.53E-03	4.20E-04	4.53E-05	4.25E-06	3.67E-07	3.02E-08	1.69E-09	4.11E-11
		4.21E-03	4.06E-04	4.50E-05	4.25E-06	3.67E-07	3.02E-08	1.69E-09	4.11E-11
6452.80	0.80	8.04E-03	7.08E-04	7.20E-05	6.84E-06	6.07E-07	5.00E-08	2.70E-09	6.34E-11
		6.26E-03	6.26E-04	7.06E-05	6.83E-06	6.06E-07	5.00E-08	2.70E-09	6.34E-11
7259.40	0.90	1.40E-02	1.11E-03	1.02E-04	9.56E-06	8.60E-07	7.09E-08	3.85E-09	9.15E-11
		8.23E-03	8.56E-04	9.72E-05	9.51E-06	8.60E-07	7.09E-08	3.85E-09	9.15E-11
8066.00	1.00	2.18E-02	1.61E-03	1.34E-04	1.23E-05	1.11E-06	9.19E-08	5.02E-09	1.20E-10
		1.01E-02	1.09E-03	1.25E-04	1.22E-05	1.11E-06	9.19E-08	5.02E-09	1.20E-10
8872.60	1.10	3.13E-02	2.18E-03	1.67E-04	1.50E-05	1.37E-06	1.12E-07	6.15E-09	1.47E-10
		1.20E-02	1.31E-03	1.51E-04	1.49E-05	1.37E-06	1.12E-07	6.15E-09	1.47E-10
9679.20	1.20	4.34E-02	2.86E-03	2.00E-04	1.76E-05	1.60E-06	1.31E-07	7.20E-09	1.73E-10
		1.36E-02	1.52E-03	1.78E-04	1.73E-05	1.60E-06	1.31E-07	7.20E-09	1.73E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-02	10.0E-04	10.0E-05	10.0E-06	10.0E-07
10485.80	1.30	5.71E-02	7.63E-03	2.38E-04	1.98E-05	1.80E-06	1.47E-07	8.12E-09	1.99E-10
		1.54E-02	1.75E-03	2.04E-04	1.95E-05	1.80E-06	1.47E-07	8.12E-09	1.99E-10
11292.40	1.40	7.64E-02	4.64E-03	2.77E-04	2.24E-05	1.97E-06	1.60E-07	8.85E-09	2.13E-10
		1.69E-02	1.96E-03	2.30E-04	2.19E-05	1.97E-06	1.60E-07	8.85E-09	2.13E-10
12099.00	1.50	9.78E-02	5.70E-03	3.17E-04	2.49E-05	2.18E-06	1.78E-07	9.80E-09	2.36E-10
		1.97E-02	2.19E-03	2.54E-04	2.43E-05	2.18E-06	1.77E-07	9.80E-09	2.36E-10
12905.60	1.60	1.19E-01	6.70E-03	3.53E-04	2.72E-05	2.38E-06	1.93E-07	1.06E-08	2.56E-10
		2.43E-02	2.45E-03	2.77E-04	2.64E-05	2.37E-06	1.93E-07	1.06E-08	2.56E-10
13712.20	1.70	1.49E-01	8.10E-03	3.95E-04	2.94E-05	2.56E-06	2.08E-07	1.14E-08	2.78E-10
		2.97E-02	2.73E-03	2.99E-04	2.84E-05	2.55E-06	2.08E-07	1.14E-08	2.78E-10
14518.80	1.80	1.77E-01	9.35E-03	4.33E-04	3.14E-05	2.72E-06	2.21E-07	1.22E-08	2.88E-10
		3.54E-02	3.00E-03	3.20E-04	3.02E-05	2.71E-06	2.21E-07	1.22E-08	2.88E-10
15325.40	1.90	2.11E-01	1.09E-02	4.75E-04	3.33E-05	2.87E-06	2.33E-07	1.28E-08	3.03E-10
		4.15E-02	3.27E-03	3.39E-04	3.19E-05	2.86E-06	2.33E-07	1.28E-08	3.03E-10
16132.00	2.00	2.33E-01	1.19E-02	5.06E-04	3.49E-05	3.01E-06	2.44E-07	1.34E-08	3.18E-10
		4.79E-02	3.54E-03	3.58E-04	3.34E-05	2.99E-06	2.44E-07	1.34E-08	3.18E-10
16938.60	2.10	2.49E-01	1.26E-02	5.31E-04	3.64E-05	3.13E-06	2.53E-07	1.39E-08	3.31E-10
		5.45E-02	3.81E-03	3.75E-04	3.48E-05	3.11E-06	2.53E-07	1.39E-08	3.31E-10
17745.20	2.20	2.63E-01	1.32E-02	5.53E-04	3.77E-05	3.23E-06	2.62E-07	1.44E-08	3.42E-10
		6.13E-02	4.07E-03	3.91E-04	3.60E-05	3.22E-06	2.62E-07	1.44E-08	3.42E-10
18551.80	2.30	2.73E-01	1.36E-02	5.71E-04	3.88E-05	3.33E-06	2.69E-07	1.48E-08	3.52E-10
		6.81E-02	4.32E-03	4.06E-04	3.71E-05	3.31E-06	2.69E-07	1.48E-08	3.52E-10
19358.40	2.40	2.81E-01	1.39E-02	5.90E-04	3.98E-05	3.41E-06	2.75E-07	1.52E-08	3.60E-10
		7.52E-02	4.61E-03	4.24E-04	3.81E-05	3.39E-06	2.75E-07	1.52E-08	3.60E-10
20165.00	2.50	2.88E-01	1.42E-02	6.07E-04	4.11E-05	3.47E-06	2.81E-07	1.54E-08	3.67E-10
		8.22E-02	4.88E-03	4.40E-04	3.93E-05	3.46E-06	2.80E-07	1.54E-08	3.67E-10
20971.60	2.60	2.96E-01	1.45E-02	6.24E-04	4.24E-05	3.57E-06	2.88E-07	1.57E-08	3.73E-10
		8.92E-02	5.15E-03	4.57E-04	4.06E-05	3.55E-06	2.88E-07	1.57E-08	3.73E-10
21778.20	2.70	3.04E-01	1.48E-02	6.46E-04	4.38E-05	3.68E-06	2.97E-07	1.61E-08	3.82E-10
		9.62E-02	5.42E-03	4.73E-04	4.18E-05	3.66E-06	2.96E-07	1.61E-08	3.82E-10
22584.80	2.80	3.12E-01	1.52E-02	6.65E-04	4.51E-05	3.78E-06	3.04E-07	1.65E-08	3.93E-10
		1.03E-01	5.68E-03	4.88E-04	4.30E-05	3.75E-06	3.04E-07	1.65E-08	3.93E-10
23391.40	2.90	3.21E-01	1.56E-02	6.87E-04	4.64E-05	3.87E-06	3.11E-07	1.69E-08	4.02E-10
		1.10E-01	5.93E-03	5.02E-04	4.40E-05	3.84E-06	3.11E-07	1.69E-08	4.02E-10
24198.00	3.00	3.31E-01	1.61E-02	7.14E-04	4.78E-05	3.96E-06	3.18E-07	1.72E-08	4.11E-10
		1.16E-01	6.17E-03	5.19E-04	4.50E-05	3.92E-06	3.17E-07	1.72E-08	4.11E-10
25004.80	3.10	3.42E-01	1.66E-02	7.32E-04	4.88E-05	4.04E-06	3.24E-07	1.75E-08	4.18E-10
		1.23E-01	6.40E-03	5.28E-04	4.58E-05	3.99E-06	3.23E-07	1.75E-08	4.18E-10
25811.20	3.20	3.56E-01	1.75E-02	7.75E-04	5.08E-05	4.13E-06	3.29E-07	1.78E-08	4.25E-10
		1.29E-01	6.68E-03	5.39E-04	4.66E-05	4.05E-06	3.28E-07	1.78E-08	4.25E-10
26617.80	3.30	3.70E-01	1.82E-02	8.02E-04	5.17E-05	4.20E-06	3.34E-07	1.81E-08	4.31E-10
		1.35E-01	6.83E-03	5.50E-04	4.74E-05	4.11E-06	3.32E-07	1.81E-08	4.31E-10
27424.40	3.40	3.83E-01	1.87E-02	8.19E-04	5.25E-05	4.25E-06	3.38E-07	1.83E-08	4.37E-10
		1.41E-01	7.03E-03	5.60E-04	4.80E-05	4.16E-06	3.36E-07	1.83E-08	4.37E-10

28231.00	3.50	4.08E-01	1.99E-02	8.65E-04	5.41E-05	4.33E-06	3.42E-07	1.85E-08	4.41E-10
		1.51E-01	7.34E-03	5.73E-04	4.87E-05	4.21E-06	3.40E-07	1.85E-08	4.41E-10
29037.60	3.60	4.27E-01	2.07E-02	8.92E-04	5.51E-05	4.38E-06	3.45E-07	1.87E-08	4.46E-10
		1.61E-01	7.65E-03	5.86E-04	4.94E-05	4.26E-06	3.43E-07	1.86E-08	4.45E-10
29844.20	3.70	4.52E-01	2.17E-02	9.16E-04	5.59E-05	4.42E-06	3.48E-07	1.88E-08	4.49E-10
		1.72E-01	7.98E-03	5.98E-04	5.00E-05	4.29E-06	3.46E-07	1.88E-08	4.49E-10
30650.80	3.80	4.74E-01	2.25E-02	9.42E-04	5.67E-05	4.46E-06	3.51E-07	1.90E-08	4.52E-10
		1.82E-01	8.30E-03	6.12E-04	5.06E-05	4.33E-06	3.48E-07	1.89E-08	4.52E-10
31457.40	3.90	4.93E-01	2.32E-02	9.61E-04	5.75E-05	4.50E-06	3.54E-07	1.91E-08	4.56E-10
		1.92E-01	8.61E-03	6.24E-04	5.13E-05	4.37E-06	3.51E-07	1.91E-08	4.55E-10
32264.00	4.00	5.18E-01	2.41E-02	9.85E-04	5.82E-05	4.55E-06	3.57E-07	1.92E-08	4.59E-10
		2.02E-01	8.92E-03	6.37E-04	5.19E-05	4.41E-06	3.54E-07	1.92E-08	4.59E-10
33070.60	4.10	5.33E-01	2.46E-02	1.00E-03	5.89E-05	4.59E-06	3.60E-07	1.94E-08	4.62E-10
		2.11E-01	9.23E-03	6.51E-04	5.26E-05	4.46E-06	3.57E-07	1.94E-08	4.62E-10
33877.20	4.20	5.55E-01	2.54E-02	1.02E-03	5.98E-05	4.65E-06	3.63E-07	1.96E-08	4.66E-10
		2.20E-01	9.52E-03	6.65E-04	5.34E-05	4.52E-06	3.60E-07	1.95E-08	4.66E-10
34683.80	4.30	5.70E-01	2.59E-02	1.04E-03	6.06E-05	4.71E-06	3.67E-07	1.98E-08	4.73E-10
		2.29E-01	9.80E-03	6.77E-04	5.42E-05	4.58E-06	3.65E-07	1.98E-08	4.72E-10
35490.40	4.40	5.85E-01	2.63E-02	1.05E-03	6.14E-05	4.77E-06	3.71E-07	2.01E-08	4.79E-10
		2.37E-01	1.01E-02	6.89E-04	5.49E-05	4.63E-06	3.69E-07	2.00E-08	4.78E-10
36297.00	4.50	6.00E-01	2.67E-02	1.07E-03	6.21E-05	4.82E-06	3.75E-07	2.03E-08	4.84E-10
		2.44E-01	1.03E-02	7.00E-04	5.55E-05	4.68E-06	3.73E-07	2.02E-08	4.84E-10
37103.60	4.60	6.15E-01	2.71E-02	1.08E-03	6.27E-05	4.86E-06	3.79E-07	2.05E-08	4.89E-10
		2.51E-01	1.05E-02	7.11E-04	5.62E-05	4.73E-06	3.76E-07	2.04E-08	4.89E-10
37910.20	4.70	6.30E-01	2.76E-02	1.09E-03	6.33E-05	4.91E-06	3.82E-07	2.07E-08	4.94E-10
		2.58E-01	1.08E-02	7.20E-04	5.67E-05	4.77E-06	3.79E-07	2.06E-08	4.94E-10
38716.80	4.80	6.45E-01	2.80E-02	1.10E-03	6.39E-05	4.95E-06	3.85E-07	2.08E-08	4.98E-10
		2.64E-01	1.10E-02	7.30E-04	5.73E-05	4.81E-06	3.82E-07	2.08E-08	4.98E-10
39523.40	4.90	6.60E-01	2.84E-02	1.12E-03	6.44E-05	4.99E-06	3.88E-07	2.10E-08	5.02E-10
		2.70E-01	1.12E-02	7.38E-04	5.78E-05	4.85E-06	3.85E-07	2.10E-08	5.02E-10
40330.00	5.00	6.74E-01	2.87E-02	1.13E-03	6.49E-05	5.02E-06	3.91E-07	2.11E-08	5.06E-10
		2.76E-01	1.13E-02	7.46E-04	5.82E-05	4.88E-06	3.88E-07	2.11E-08	5.06E-10
41136.60	5.10	6.88E-01	2.91E-02	1.14E-03	6.53E-05	5.05E-06	3.93E-07	2.13E-08	5.09E-10
		2.81E-01	1.15E-02	7.53E-04	5.87E-05	4.91E-06	3.90E-07	2.12E-08	5.09E-10
41943.20	5.20	7.00E-01	2.94E-02	1.15E-03	6.57E-05	5.08E-06	3.95E-07	2.14E-08	5.13E-10
		2.86E-01	1.17E-02	7.68E-04	5.91E-05	4.94E-06	3.92E-07	2.14E-08	5.12E-10
42749.80	5.30	7.15E-01	2.98E-02	1.15E-03	6.61E-05	5.11E-06	3.97E-07	2.15E-08	5.15E-10
		2.91E-01	1.18E-02	7.66E-04	5.94E-05	4.97E-06	3.94E-07	2.15E-08	5.15E-10
43556.40	5.40	7.26E-01	3.01E-02	1.16E-03	6.65E-05	5.13E-06	3.99E-07	2.16E-08	5.18E-10
		2.95E-01	1.20E-02	7.72E-04	5.98E-05	5.00E-06	3.96E-07	2.16E-08	5.18E-10
44363.00	5.50	7.39E-01	3.04E-02	1.17E-03	6.68E-05	5.16E-06	4.01E-07	2.17E-08	5.21E-10
		2.99E-01	1.21E-02	7.78E-04	6.01E-05	5.02E-06	3.98E-07	2.17E-08	5.21E-10
45169.60	5.60	7.52E-01	3.07E-02	1.18E-03	6.72E-05	5.18E-06	4.02E-07	2.18E-08	5.23E-10
		3.03E-01	1.22E-02	7.83E-04	6.04E-05	5.04E-06	4.00E-07	2.18E-08	5.23E-10
45976.20	5.70	7.61E-01	3.10E-02	1.19E-03	6.75E-05	5.20E-06	4.04E-07	2.19E-08	5.25E-10
		3.06E-01	1.23E-02	7.88E-04	6.07E-05	5.06E-06	4.01E-07	2.19E-08	5.25E-10
46782.80	5.80	7.70E-01	3.12E-02	1.19E-03	6.77E-05	5.22E-06	4.05E-07	2.20E-08	5.27E-10
		3.10E-01	1.24E-02	7.93E-04	6.09E-05	5.08E-06	4.03E-07	2.19E-08	5.27E-10
47589.40	5.90	7.78E-01	3.14E-02	1.20E-03	6.80E-05	5.23E-06	4.07E-07	2.20E-08	5.29E-10
		3.14E-01	1.26E-02	7.98E-04	6.12E-05	5.10E-06	4.04E-07	2.20E-08	5.29E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
48396.00	6.00	7.85E-01	3.16E-02	1.20E-03	6.83E-05	5.29E-06	4.08E-07	2.21E-08	5.31E-10
		3.17E-01	1.27E-02	8.02E-04	6.14E-05	5.11E-06	4.05E-07	2.21E-08	5.30E-10
49202.60	6.10	7.97E-01	3.19E-02	1.21E-03	6.85E-05	5.26E-06	4.09E-07	2.22E-08	5.32E-10
		3.20E-01	1.28E-02	8.06E-04	6.16E-05	5.13E-06	4.06E-07	2.21E-08	5.32E-10
50009.20	6.20	8.05E-01	3.21E-02	1.22E-03	6.87E-05	5.28E-06	4.10E-07	2.22E-08	5.34E-10
		3.23E-01	1.29E-02	8.10E-04	6.18E-05	5.14E-06	4.07E-07	2.22E-08	5.33E-10
50815.80	6.30	8.11E-01	3.23E-02	1.22E-03	6.89E-05	5.29E-06	4.11E-07	2.23E-08	5.35E-10
		3.26E-01	1.29E-02	8.13E-04	6.20E-05	5.15E-06	4.08E-07	2.22E-08	5.35E-10
51622.40	6.40	8.19E-01	3.25E-02	1.23E-03	6.91E-05	5.30E-06	4.12E-07	2.23E-08	5.36E-10
		3.28E-01	1.30E-02	8.16E-04	6.22E-05	5.17E-06	4.09E-07	2.23E-08	5.36E-10
52429.00	6.50	8.27E-01	3.27E-02	1.23E-03	6.93E-05	5.31E-06	4.13E-07	2.24E-08	5.37E-10
		3.30E-01	1.31E-02	8.19E-04	6.23E-05	5.18E-06	4.10E-07	2.23E-08	5.37E-10
53235.60	6.60	8.32E-01	3.29E-02	1.23E-03	6.94E-05	5.33E-06	4.13E-07	2.24E-08	5.38E-10
		3.32E-01	1.32E-02	8.22E-04	6.25E-05	5.19E-06	4.11E-07	2.24E-08	5.38E-10
54042.20	6.70	8.38E-01	3.31E-02	1.24E-03	6.96E-05	5.33E-06	4.14E-07	2.25E-08	5.39E-10
		3.34E-01	1.32E-02	8.24E-04	6.26E-05	5.20E-06	4.11E-07	2.24E-08	5.39E-10
54848.80	6.80	8.44E-01	3.32E-02	1.24E-03	6.97E-05	5.34E-06	4.15E-07	2.25E-08	5.40E-10
		3.36E-01	1.33E-02	8.27E-04	6.27E-05	5.20E-06	4.12E-07	2.25E-08	5.40E-10
55655.40	6.90	8.48E-01	3.34E-02	1.25E-03	6.99E-05	5.35E-06	4.15E-07	2.25E-08	5.41E-10
		3.38E-01	1.33E-02	8.29E-04	6.28E-05	5.21E-06	4.13E-07	2.25E-08	5.41E-10
56462.00	7.00	8.52E-01	3.35E-02	1.25E-03	7.00E-05	5.36E-06	4.16E-07	2.26E-08	5.42E-10
		3.39E-01	1.34E-02	8.31E-04	6.30E-05	5.22E-06	4.13E-07	2.25E-08	5.42E-10
57268.60	7.10	8.58E-01	3.36E-02	1.25E-03	7.01E-05	5.37E-06	4.16E-07	2.26E-08	5.43E-10
		3.43E-01	1.34E-02	8.33E-04	6.31E-05	5.23E-06	4.14E-07	2.26E-08	5.42E-10
58075.20	7.20	8.63E-01	3.38E-02	1.26E-03	7.02E-05	5.37E-06	4.17E-07	2.26E-08	5.43E-10
		3.47E-01	1.35E-02	8.35E-04	6.32E-05	5.23E-06	4.14E-07	2.26E-08	5.43E-10
58881.80	7.30	8.68E-01	3.39E-02	1.26E-03	7.03E-05	5.38E-06	4.17E-07	2.26E-08	5.44E-10
		3.51E-01	1.36E-02	8.37E-04	6.32E-05	5.24E-06	4.15E-07	2.26E-08	5.44E-10
59688.40	7.40	8.73E-01	3.40E-02	1.26E-03	7.04E-05	5.38E-06	4.18E-07	2.27E-08	5.44E-10
		3.54E-01	1.37E-02	8.39E-04	6.33E-05	5.24E-06	4.15E-07	2.26E-08	5.44E-10
60495.00	7.50	8.78E-01	3.42E-02	1.27E-03	7.05E-05	5.39E-06	4.18E-07	2.27E-08	5.45E-10
		3.58E-01	1.37E-02	8.40E-04	6.34E-05	5.25E-06	4.15E-07	2.26E-08	5.45E-10
61301.60	7.60	8.83E-01	3.43E-02	1.27E-03	7.06E-05	5.39E-06	4.18E-07	2.27E-08	5.45E-10
		3.61E-01	1.38E-02	8.42E-04	6.35E-05	5.25E-06	4.16E-07	2.27E-08	5.45E-10
62108.20	7.70	8.88E-01	3.44E-02	1.27E-03	7.07E-05	5.40E-06	4.19E-07	2.27E-08	5.46E-10
		3.64E-01	1.38E-02	8.43E-04	6.35E-05	5.26E-06	4.16E-07	2.27E-08	5.46E-10
62914.80	7.80	8.93E-01	3.46E-02	1.27E-03	7.07E-05	5.40E-06	4.19E-07	2.27E-08	5.46E-10
		3.67E-01	1.39E-02	8.44E-04	6.36E-05	5.26E-06	4.16E-07	2.27E-08	5.46E-10
63721.40	7.90	8.98E-01	3.47E-02	1.28E-03	7.08E-05	5.41E-06	4.19E-07	2.27E-08	5.47E-10
		3.70E-01	1.39E-02	8.46E-04	6.36E-05	5.27E-06	4.17E-07	2.27E-08	5.47E-10
64528.00	8.00	9.02E-01	3.49E-02	1.28E-03	7.09E-05	5.41E-06	4.20E-07	2.28E-08	5.47E-10
		3.73E-01	1.40E-02	8.47E-04	6.37E-05	5.27E-06	4.17E-07	2.27E-08	5.47E-10
65334.60	8.10	9.07E-01	3.50E-02	1.28E-03	7.09E-05	5.41E-06	4.20E-07	2.28E-08	5.47E-10
		3.75E-01	1.40E-02	8.48E-04	6.37E-05	5.27E-06	4.17E-07	2.27E-08	5.47E-10

66141.20	8.20	9.12E-01	3.51E-02	1.20E-03	7.10E-05	5.42E-06	4.20E-07	2.28E-08	5.48E-10
		3.77E-01	1.41E-02	8.49E-04	6.38E-05	5.28E-06	4.17E-07	2.28E-08	5.48E-10
66947.80	8.30	9.16E-01	3.53E-02	1.29E-03	7.11E-05	5.42E-06	4.20E-07	2.28E-08	5.48E-10
		3.80E-01	1.41E-02	8.50E-04	6.38E-05	5.28E-06	4.17E-07	2.28E-08	5.48E-10
67754.40	8.40	9.21E-01	3.54E-02	1.29E-03	7.11E-05	5.42E-06	4.20E-07	2.28E-08	5.48E-10
		3.82E-01	1.41E-02	8.51E-04	6.39E-05	5.28E-06	4.18E-07	2.28E-08	5.48E-10
68561.00	8.50	9.25E-01	3.56E-02	1.29E-03	7.12E-05	5.42E-06	4.21E-07	2.28E-08	5.48E-10
		3.83E-01	1.42E-02	8.51E-04	6.39E-05	5.28E-06	4.18E-07	2.28E-08	5.48E-10
69367.60	8.60	9.30E-01	3.57E-02	1.30E-03	7.12E-05	5.43E-06	4.21E-07	2.28E-08	5.49E-10
		3.85E-01	1.42E-02	8.52E-04	6.39E-05	5.29E-06	4.18E-07	2.28E-08	5.49E-10
70174.20	8.70	9.34E-01	3.59E-02	1.30E-03	7.13E-05	5.43E-06	4.21E-07	2.28E-08	5.49E-10
		3.87E-01	1.42E-02	8.53E-04	6.40E-05	5.29E-06	4.18E-07	2.28E-08	5.49E-10
70980.80	8.80	9.38E-01	3.60E-02	1.30E-03	7.13E-05	5.43E-06	4.21E-07	2.28E-08	5.49E-10
		3.88E-01	1.42E-02	8.53E-04	6.40E-05	5.29E-06	4.18E-07	2.28E-08	5.49E-10
71787.40	8.90	9.43E-01	3.62E-02	1.30E-03	7.14E-05	5.43E-06	4.21E-07	2.28E-08	5.49E-10
		3.90E-01	1.43E-02	8.54E-04	6.40E-05	5.29E-06	4.18E-07	2.28E-08	5.49E-10
72594.00	9.00	9.47E-01	3.63E-02	1.31E-03	7.14E-05	5.43E-06	4.21E-07	2.29E-08	5.49E-10
		3.91E-01	1.43E-02	8.54E-04	6.40E-05	5.29E-06	4.18E-07	2.28E-08	5.49E-10
73400.60	9.10	9.51E-01	3.65E-02	1.31E-03	7.15E-05	5.44E-06	4.21E-07	2.29E-08	5.49E-10
		3.92E-01	1.43E-02	8.55E-04	6.40E-05	5.29E-06	4.19E-07	2.28E-08	5.49E-10
74207.20	9.20	9.55E-01	3.67E-02	1.31E-03	7.15E-05	5.44E-06	4.21E-07	2.29E-08	5.50E-10
		3.93E-01	1.43E-02	8.55E-04	6.41E-05	5.29E-06	4.19E-07	2.28E-08	5.50E-10
75013.80	9.30	9.59E-01	3.68E-02	1.32E-03	7.16E-05	5.44E-06	4.22E-07	2.29E-08	5.50E-10
		3.94E-01	1.43E-02	8.56E-04	6.41E-05	5.30E-06	4.19E-07	2.28E-08	5.50E-10
75820.40	9.40	9.63E-01	3.70E-02	1.32E-03	7.16E-05	5.44E-06	4.22E-07	2.29E-08	5.50E-10
		3.94E-01	1.43E-02	8.56E-04	6.41E-05	5.30E-06	4.19E-07	2.28E-08	5.50E-10
76627.00	9.50	9.67E-01	3.71E-02	1.32E-03	7.17E-05	5.44E-06	4.22E-07	2.29E-08	5.50E-10
		3.94E-01	1.44E-02	8.57E-04	6.42E-05	5.30E-06	4.19E-07	2.29E-08	5.50E-10
77433.60	9.60	9.71E-01	3.73E-02	1.33E-03	7.18E-05	5.45E-06	4.22E-07	2.29E-08	5.50E-10
		3.95E-01	1.44E-02	8.57E-04	6.42E-05	5.30E-06	4.19E-07	2.29E-08	5.50E-10
78240.20	9.70	9.74E-01	3.75E-02	1.33E-03	7.18E-05	5.45E-06	4.22E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.57E-04	6.42E-05	5.30E-06	4.19E-07	2.29E-08	5.50E-10
79046.80	9.80	9.78E-01	3.77E-02	1.33E-03	7.19E-05	5.45E-06	4.22E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.58E-04	6.42E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
79853.40	9.90	9.82E-01	3.78E-02	1.34E-03	7.19E-05	5.45E-06	4.23E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.58E-04	6.42E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
80660.00	10.00	9.86E-01	3.80E-02	1.34E-03	7.20E-05	5.45E-06	4.23E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.58E-04	6.43E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
81466.60	10.10	9.90E-01	3.82E-02	1.34E-03	7.20E-05	5.46E-06	4.23E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.58E-04	6.43E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
82273.20	10.20	9.94E-01	3.84E-02	1.35E-03	7.21E-05	5.46E-06	4.23E-07	2.29E-08	5.51E-10
		3.95E-01	1.44E-02	8.59E-04	6.43E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
83079.80	10.30	9.98E-01	3.85E-02	1.35E-03	7.21E-05	5.46E-06	4.23E-07	2.29E-08	5.51E-10
		3.96E-01	1.44E-02	8.59E-04	6.43E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
83886.40	10.40	1.00E 00	3.87E-02	1.35E-03	7.21E-05	5.46E-06	4.23E-07	2.29E-08	5.52E-10
		3.96E-01	1.44E-02	8.59E-04	6.43E-05	5.31E-06	4.20E-07	2.29E-08	5.51E-10
84693.00	10.50	1.01E 00	3.89E-02	1.36E-03	7.22E-05	5.46E-06	4.23E-07	2.30E-08	5.52E-10
		3.96E-01	1.44E-02	8.59E-04	6.43E-05	5.32E-06	4.20E-07	2.29E-08	5.52E-10
85499.60	10.60	1.01E 00	3.91E-02	1.36E-03	7.22E-05	5.46E-06	4.23E-07	2.30E-08	5.52E-10
		3.96E-01	1.44E-02	8.59E-04	6.43E-05	5.32E-06	4.20E-07	2.29E-08	5.52E-10

PART 2: PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000°K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
86386.20	10.70	1.03E 00	4.09E-02	1.56E-03	7.23E-05	9.47E-06	4.23E-07	2.30E-08	5.52E-10
		4.03E-01	1.58E-02	1.05E-03	6.44E-05	5.32E-06	4.20E-07	2.29E-08	5.52E-10
88726.00	11.00	1.03E 00	4.24E-02	1.79E-03	9.20E-05	7.39E-06	5.81E-07	3.16E-08	7.54E-10
		4.10E-01	1.73E-02	1.25E-03	8.40E-05	7.24E-06	5.70E-07	3.15E-08	7.54E-10
90742.50	11.25	1.04E 00	4.35E-02	1.90E-03	1.08E-04	8.79E-06	6.95E-07	3.78E-08	9.04E-10
		4.15E-01	1.84E-02	1.39E-03	9.96E-05	8.64E-06	6.92E-07	3.78E-08	9.04E-10
92759.00	11.50	1.04E 00	4.43E-02	2.01E-03	1.19E-04	9.98E-06	7.86E-07	4.20E-08	1.02E-09
		4.19E-01	1.92E-02	1.51E-03	1.11E-04	9.76E-06	7.83E-07	4.27E-08	1.02E-09
94775.50	11.75	1.05E 00	4.50E-02	2.11E-03	1.29E-04	1.08E-05	8.58E-07	4.67E-08	1.12E-09
		4.22E-01	1.99E-02	1.60E-03	1.21E-04	1.06E-05	8.56E-07	4.67E-08	1.12E-09
96792.00	12.00	1.06E 00	4.82E-02	2.54E-03	1.73E-04	1.13E-05	9.16E-07	4.99E-08	1.19E-09
		4.37E-01	2.32E-02	2.03E-03	1.65E-04	1.13E-05	9.13E-07	4.98E-08	1.19E-09
98808.50	12.25	1.07E 00	5.08E-02	2.88E-03	2.08E-04	1.48E-05	1.19E-06	6.47E-08	1.54E-09
		4.49E-01	2.57E-02	2.37E-03	2.00E-04	1.47E-05	1.18E-06	6.47E-08	1.54E-09
100825.00	12.50	1.08E 00	5.29E-02	3.15E-03	2.37E-04	1.75E-05	1.40E-06	7.65E-08	1.82E-09
		4.59E-01	2.78E-02	2.65E-03	2.29E-04	1.73E-05	1.40E-06	7.65E-08	1.82E-09
102841.50	12.75	1.09E 00	5.46E-02	3.38E-03	2.60E-04	1.97E-05	1.58E-06	8.59E-08	2.05E-09
		4.67E-01	2.95E-02	2.88E-03	2.52E-04	1.96E-05	1.57E-06	8.59E-08	2.05E-09
104858.00	13.00	1.10E 00	5.60E-02	3.57E-03	2.79E-04	2.15E-05	1.72E-06	9.39E-08	2.24E-09
		4.74E-01	3.09E-02	3.06E-03	2.71E-04	2.13E-05	1.72E-06	9.38E-08	2.24E-09
106874.50	13.25	1.10E 00	5.70E-02	3.71E-03	2.94E-04	2.29E-05	1.84E-06	1.00E-07	2.38E-09
		4.79E-01	3.20E-02	3.20E-03	2.86E-04	2.27E-05	1.83E-06	1.00E-07	2.38E-09
108891.00	13.50	1.12E 00	5.90E-02	3.94E-03	3.17E-04	2.51E-05	1.93E-06	1.05E-07	2.50E-09
		4.93E-01	3.39E-02	3.43E-03	3.09E-04	2.49E-05	1.92E-06	1.05E-07	2.50E-09
110907.50	13.75	1.13E 00	6.06E-02	4.12E-03	3.39E-04	2.68E-05	2.07E-06	1.14E-07	2.72E-09
		5.04E-01	3.55E-02	3.61E-03	3.27E-04	2.66E-05	2.07E-06	1.14E-07	2.72E-09
112924.00	14.00	1.14E 00	6.21E-02	4.30E-03	3.53E-04	2.85E-05	2.22E-06	1.22E-07	2.90E-09
		5.15E-01	3.70E-02	3.79E-03	3.45E-04	2.84E-05	2.21E-06	1.22E-07	2.90E-09
114940.50	14.25	1.15E 00	6.33E-02	4.44E-03	3.68E-04	2.99E-05	2.33E-06	1.29E-07	3.07E-09
		5.23E-01	3.82E-02	3.94E-03	3.60E-04	2.98E-05	2.33E-06	1.29E-07	3.07E-09
116957.00	14.50	1.16E 00	6.63E-02	4.83E-03	4.08E-04	3.37E-05	2.64E-06	1.46E-07	3.21E-09
		5.39E-01	4.12E-02	4.32E-03	4.00E-04	3.35E-05	2.64E-06	1.46E-07	3.21E-09
118973.50	14.75	1.18E 00	6.88E-02	5.15E-03	4.39E-04	3.67E-05	2.89E-06	1.60E-07	3.54E-09
		5.53E-01	4.37E-02	4.64E-03	4.31E-04	3.65E-05	2.89E-06	1.60E-07	3.54E-09
120990.00	15.00	1.19E 00	7.07E-02	5.40E-03	4.65E-04	3.91E-05	3.09E-06	1.71E-07	3.81E-09
		5.63E-01	4.57E-02	4.89E-03	4.57E-04	3.89E-05	3.08E-06	1.71E-07	3.81E-09
123006.50	15.25	1.20E 00	7.23E-02	5.60E-03	4.85E-04	4.10E-05	3.25E-06	1.80E-07	4.02E-09
		5.72E-01	4.72E-02	5.09E-03	4.77E-04	4.08E-05	3.24E-06	1.80E-07	4.02E-09
125023.00	15.50	1.20E 00	7.35E-02	5.75E-03	5.02E-04	4.25E-05	3.37E-06	1.87E-07	4.19E-09
		5.79E-01	4.84E-02	5.25E-03	4.94E-04	4.24E-05	3.37E-06	1.87E-07	4.19E-09
127039.50	15.75	1.21E 00	7.45E-02	5.88E-03	5.14E-04	4.37E-05	3.47E-06	1.92E-07	4.33E-09
		5.84E-01	4.94E-02	5.37E-03	5.06E-04	4.36E-05	3.47E-06	1.92E-07	4.33E-09

129066.00	16.00	1.21E 00	7.93E-02	5.98E-03	5.24E-04	4.47E-05	3.55E-06	1.96E-07	4.43E-09
		5.88E-01	5.02E-02	5.47E-03	5.16E-04	4.45E-05	3.55E-06	1.96E-07	4.43E-09
131072.50	16.25	1.21E 00	7.99E-02	6.05E-03	5.32E-04	4.54E-05	3.61E-06	2.00E-07	4.52E-09
		5.91E-01	5.08E-02	5.54E-03	5.24E-04	4.53E-05	3.61E-06	2.00E-07	4.52E-09
133089.00	16.50	1.22E 00	7.63E-02	6.11E-03	5.38E-04	4.60E-05	3.66E-06	2.02E-07	4.58E-09
		5.94E-01	5.12E-02	5.60E-03	5.30E-04	4.58E-05	3.65E-06	2.02E-07	4.58E-09
135105.50	16.75	1.22E 00	7.67E-02	6.16E-03	5.43E-04	4.64E-05	3.69E-06	2.05E-07	4.63E-09
		5.96E-01	5.16E-02	5.65E-03	5.35E-04	4.63E-05	3.69E-06	2.05E-07	4.63E-09
137122.00	17.00	1.22E 00	7.70E-02	6.20E-03	5.47E-04	4.68E-05	3.72E-06	2.06E-07	4.67E-09
		5.98E-01	5.19E-02	5.69E-03	5.39E-04	4.67E-05	3.72E-06	2.06E-07	4.67E-09
139138.50	17.25	1.22E 00	7.73E-02	6.23E-03	5.50E-04	4.71E-05	3.75E-06	2.08E-07	4.71E-09
		5.99E-01	5.22E-02	5.72E-03	5.42E-04	4.70E-05	3.75E-06	2.08E-07	4.71E-09
141155.00	17.50	1.22E 00	7.75E-02	6.25E-03	5.53E-04	4.73E-05	3.77E-06	2.09E-07	4.73E-09
		6.01E-01	5.24E-02	5.75E-03	5.45E-04	4.72E-05	3.76E-06	2.09E-07	4.73E-09
143171.50	17.75	1.22E 00	7.76E-02	6.27E-03	5.55E-04	4.75E-05	3.78E-06	2.10E-07	4.75E-09
		6.01E-01	5.25E-02	5.76E-03	5.47E-04	4.74E-05	3.78E-06	2.09E-07	4.75E-09
145188.00	18.00	1.23E 00	7.77E-02	6.29E-03	5.56E-04	4.76E-05	3.79E-06	2.10E-07	4.77E-09
		6.02E-01	5.26E-02	5.78E-03	5.48E-04	4.75E-05	3.79E-06	2.10E-07	4.77E-09
147204.50	18.25	1.23E 00	7.78E-02	6.30E-03	5.57E-04	4.77E-05	3.80E-06	2.11E-07	4.78E-09
		6.03E-01	5.27E-02	5.79E-03	5.49E-04	4.76E-05	3.80E-06	2.11E-07	4.78E-09
149221.00	18.50	1.23E 00	7.79E-02	6.31E-03	5.58E-04	4.78E-05	3.81E-06	2.11E-07	4.79E-09
		6.03E-01	5.28E-02	5.80E-03	5.50E-04	4.77E-05	3.81E-06	2.11E-07	4.79E-09
151237.50	18.75	1.23E 00	7.79E-02	6.31E-03	5.59E-04	4.79E-05	3.81E-06	2.11E-07	4.80E-09
		6.03E-01	5.28E-02	5.81E-03	5.51E-04	4.78E-05	3.81E-06	2.11E-07	4.80E-09
153254.00	19.00	1.23E 00	7.80E-02	6.32E-03	5.59E-04	4.80E-05	3.82E-06	2.12E-07	4.80E-09
		6.04E-01	5.29E-02	5.81E-03	5.51E-04	4.78E-05	3.82E-06	2.12E-07	4.80E-09
155270.50	19.25	1.23E 00	7.80E-02	6.32E-03	5.60E-04	4.80E-05	3.82E-06	2.12E-07	4.81E-09
		6.04E-01	5.29E-02	5.82E-03	5.52E-04	4.78E-05	3.82E-06	2.12E-07	4.81E-09
157287.00	19.50	1.23E 00	7.80E-02	6.33E-03	5.60E-04	4.80E-05	3.82E-06	2.12E-07	4.81E-09
		6.04E-01	5.29E-02	5.82E-03	5.52E-04	4.79E-05	3.82E-06	2.12E-07	4.81E-09
159303.50	19.75	1.23E 00	7.81E-02	6.33E-03	5.60E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.82E-03	5.52E-04	4.79E-05	3.82E-06	2.12E-07	4.81E-09
161320.00	20.00	1.23E 00	7.81E-02	6.33E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.82E-03	5.53E-04	4.79E-05	3.83E-06	2.12E-07	4.82E-09
163336.50	20.25	1.23E 00	7.81E-02	6.33E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.82E-03	5.53E-04	4.79E-05	3.83E-06	2.12E-07	4.82E-09
165353.00	20.50	1.23E 00	7.81E-02	6.33E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.83E-03	5.53E-04	4.79E-05	3.83E-06	2.12E-07	4.82E-09
167369.50	20.75	1.23E 00	7.81E-02	6.33E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
169386.00	21.00	1.23E 00	7.81E-02	6.33E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.04E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
171402.50	21.25	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
173419.00	21.50	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
175435.50	21.75	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
177452.00	22.00	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
179468.50	22.25	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.03E-06	2.12E-07	4.82E-09
181486.00	22.50	6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
183501.60	22.75	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.03E-06	2.12E-07	4.82E-09
185518.00	23.00	6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
187534.50	23.25	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
189551.00	23.50	6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09
191567.50	23.75	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.81E-05	3.83E-06	2.12E-07	4.82E-09
		6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.80E-05	3.83E-06	2.12E-07	4.82E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 11000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	6.33E-03	6.80E-04	7.08E-05	6.04E-06	5.27E-07	3.43E-08	1.18E-09	1.53E-11
5646.20	0.70	6.31E-03	6.79E-04	7.08E-05	6.04E-06	5.27E-07	3.43E-08	1.18E-09	1.53E-11
6452.80	0.80	1.31E-02	1.42E-03	1.48E-04	1.35E-05	1.18E-06	7.09E-08	2.26E-09	3.16E-11
7259.40	0.90	1.28E-02	1.42E-03	1.48E-04	1.35E-05	1.18E-06	7.09E-08	2.26E-09	3.16E-11
8066.00	1.00	2.12E-02	2.26E-03	2.34E-04	2.17E-05	1.88E-06	1.16E-07	3.72E-09	4.87E-11
8872.60	1.10	1.94E-02	2.21E-03	2.33E-04	2.17E-05	1.88E-06	1.16E-07	3.72E-09	4.87E-11
9679.20	1.20	3.18E-02	3.20E-03	3.23E-04	3.02E-05	2.62E-06	1.65E-07	5.24E-09	6.99E-11
10485.80	1.30	2.60E-02	3.03E-03	3.21E-04	3.02E-05	2.62E-06	1.65E-07	5.24E-09	6.99E-11
11292.40	1.40	4.44E-02	4.22E-03	4.17E-04	3.91E-05	3.37E-06	2.14E-07	6.88E-09	9.17E-11
		3.27E-02	3.88E-03	4.12E-04	3.90E-05	3.37E-06	2.14E-07	6.88E-09	9.17E-11
		5.86E-02	5.28E-03	5.09E-04	4.77E-05	4.11E-06	2.61E-07	8.38E-09	1.13E-10
		3.91E-02	4.70E-03	5.01E-04	4.77E-05	4.11E-06	2.61E-07	8.38E-09	1.13E-10
		7.51E-02	6.36E-03	5.96E-04	5.58E-05	4.80E-06	3.06E-07	9.71E-09	1.32E-10
		4.50E-02	5.47E-03	5.85E-04	5.57E-05	4.80E-06	3.06E-07	9.71E-09	1.32E-10
		9.37E-02	7.58E-03	6.94E-04	6.49E-05	5.41E-06	3.44E-07	1.10E-08	1.50E-10
		5.14E-02	6.33E-03	6.78E-04	6.47E-05	5.41E-06	3.44E-07	1.10E-08	1.50E-10
		1.18E-01	8.89E-03	7.85E-04	7.27E-05	6.08E-06	3.76E-07	1.20E-08	1.64E-10
		5.71E-02	7.10E-03	7.62E-04	7.24E-05	6.08E-06	3.76E-07	1.20E-08	1.64E-10

12099.00	1.50	1.44E-01	1.02E-02	8.70E-04	8.02E-05	6.72E-06	4.15E-07	1.32E-08	1.77E-10
		6.39E-02	7.85E-03	8.40E-04	7.99E-05	6.72E-06	4.15E-07	1.32E-08	1.77E-10
12905.60	1.60	1.70E-01	1.15E-02	9.48E-04	8.88E-05	7.29E-06	4.52E-07	1.44E-08	1.92E-10
		7.25E-02	8.59E-03	9.11E-04	8.65E-05	7.29E-06	4.52E-07	1.44E-08	1.92E-10
13712.20	1.70	2.07E-01	1.30E-02	1.03E-03	9.31E-05	7.82E-06	4.86E-07	1.55E-08	2.07E-10
		8.17E-02	9.32E-03	9.78E-04	9.27E-05	7.82E-06	4.86E-07	1.55E-08	2.07E-10
14518.80	1.80	2.48E-01	1.44E-02	1.10E-03	9.87E-05	8.29E-06	5.17E-07	1.64E-08	2.21E-10
		9.13E-02	1.00E-02	1.04E-03	9.82E-05	8.29E-06	5.17E-07	1.64E-08	2.21E-10
15325.40	1.90	2.81E-01	1.60E-02	1.16E-03	1.04E-04	8.72E-06	5.44E-07	1.73E-08	2.33E-10
		1.01E-01	1.07E-02	1.09E-03	1.03E-04	8.71E-06	5.44E-07	1.73E-08	2.33E-10
16132.00	2.00	3.10E-01	1.72E-02	1.22E-03	1.09E-04	9.11E-06	5.69E-07	1.81E-08	2.44E-10
		1.11E-01	1.13E-02	1.15E-03	1.08E-04	9.11E-06	5.69E-07	1.81E-08	2.44E-10
16938.60	2.10	3.32E-01	1.81E-02	1.28E-03	1.13E-04	9.47E-06	5.93E-07	1.89E-08	2.55E-10
		1.21E-01	1.19E-02	1.20E-03	1.12E-04	9.46E-06	5.93E-07	1.89E-08	2.55E-10
17745.20	2.20	3.51E-01	1.90E-02	1.33E-03	1.17E-04	9.79E-06	6.13E-07	1.95E-08	2.64E-10
		1.32E-01	1.25E-02	1.24E-03	1.16E-04	9.78E-06	6.13E-07	1.95E-08	2.64E-10
18551.80	2.30	3.69E-01	1.97E-02	1.37E-03	1.20E-04	1.01E-05	6.31E-07	2.01E-08	2.72E-10
		1.42E-01	1.31E-02	1.28E-03	1.19E-04	1.01E-05	6.31E-07	2.01E-08	2.72E-10
19358.40	2.40	3.77E-01	2.03E-02	1.42E-03	1.23E-04	1.03E-05	6.46E-07	2.06E-08	2.78E-10
		1.53E-01	1.37E-02	1.33E-03	1.22E-04	1.03E-05	6.46E-07	2.06E-08	2.78E-10
20165.00	2.50	3.88E-01	2.10E-02	1.46E-03	1.27E-04	1.06E-05	6.59E-07	2.10E-08	2.84E-10
		1.63E-01	1.43E-02	1.38E-03	1.26E-04	1.06E-05	6.59E-07	2.10E-08	2.84E-10
20971.60	2.60	3.99E-01	2.16E-02	1.51E-03	1.31E-04	1.09E-05	6.77E-07	2.15E-08	2.89E-10
		1.74E-01	1.49E-02	1.42E-03	1.30E-04	1.09E-05	6.77E-07	2.15E-08	2.89E-10
21778.20	2.70	4.12E-01	2.23E-02	1.56E-03	1.34E-04	1.12E-05	6.96E-07	2.21E-08	2.96E-10
		1.85E-01	1.55E-02	1.47E-03	1.34E-04	1.12E-05	6.96E-07	2.21E-08	2.96E-10
22584.80	2.80	4.24E-01	2.29E-02	1.60E-03	1.38E-04	1.15E-05	7.14E-07	2.26E-08	3.04E-10
		1.96E-01	1.61E-02	1.51E-03	1.37E-04	1.15E-05	7.14E-07	2.26E-08	3.04E-10
23391.40	2.90	4.38E-01	2.37E-02	1.65E-03	1.41E-04	1.18E-05	7.31E-07	2.32E-08	3.12E-10
		2.06E-01	1.66E-02	1.54E-03	1.40E-04	1.17E-05	7.30E-07	2.32E-08	3.12E-10
24198.00	3.00	4.54E-01	2.45E-02	1.69E-03	1.44E-04	1.20E-05	7.46E-07	2.37E-08	3.18E-10
		2.17E-01	1.71E-02	1.58E-03	1.43E-04	1.20E-05	7.46E-07	2.37E-08	3.18E-10
25004.60	3.10	4.70E-01	2.52E-02	1.73E-03	1.47E-04	1.22E-05	7.60E-07	2.41E-08	3.25E-10
		2.27E-01	1.76E-02	1.61E-03	1.46E-04	1.22E-05	7.59E-07	2.41E-08	3.25E-10
25811.20	3.20	4.82E-01	2.64E-02	1.79E-03	1.50E-04	1.24E-05	7.73E-07	2.45E-08	3.30E-10
		2.36E-01	1.81E-02	1.64E-03	1.48E-04	1.24E-05	7.72E-07	2.45E-08	3.30E-10
26617.80	3.30	5.14E-01	2.74E-02	1.83E-03	1.53E-04	1.26E-05	7.86E-07	2.49E-08	3.35E-10
		2.46E-01	1.85E-02	1.67E-03	1.50E-04	1.26E-05	7.83E-07	2.49E-08	3.35E-10
27424.40	3.40	5.33E-01	2.81E-02	1.86E-03	1.55E-04	1.28E-05	7.94E-07	2.52E-08	3.40E-10
		2.55E-01	1.89E-02	1.70E-03	1.52E-04	1.27E-05	7.93E-07	2.52E-08	3.40E-10
28231.00	3.50	5.70E-01	2.97E-02	1.91E-03	1.57E-04	1.29E-05	8.03E-07	2.55E-08	3.44E-10
		2.70E-01	1.95E-02	1.73E-03	1.54E-04	1.29E-05	8.02E-07	2.55E-08	3.44E-10
29037.60	3.60	5.99E-01	3.08E-02	1.96E-03	1.60E-04	1.31E-05	8.11E-07	2.57E-08	3.47E-10
		2.86E-01	2.01E-02	1.76E-03	1.56E-04	1.30E-05	8.10E-07	2.57E-08	3.47E-10
29844.20	3.70	6.35E-01	3.20E-02	1.99E-03	1.61E-04	1.32E-05	8.18E-07	2.59E-08	3.50E-10
		3.02E-01	2.07E-02	1.79E-03	1.58E-04	1.31E-05	8.17E-07	2.59E-08	3.50E-10
30650.80	3.80	6.60E-01	3.32E-02	2.03E-03	1.63E-04	1.33E-05	8.25E-07	2.62E-08	3.53E-10
		3.18E-01	2.13E-02	1.82E-03	1.59E-04	1.32E-05	8.24E-07	2.62E-08	3.53E-10
31457.40	3.90	6.95E-01	3.41E-02	2.07E-03	1.65E-04	1.34E-05	8.32E-07	2.64E-08	3.56E-10
		3.34E-01	2.19E-02	1.85E-03	1.61E-04	1.34E-05	8.31E-07	2.64E-08	3.56E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 11000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
32264.00	4.00	7.33E-01	3.53E-02	2.11E-03	1.67E-04	1.36E-05	8.48E-07	2.66E-08	3.39E-10
		3.49E-01	2.25E-02	1.88E-03	1.63E-04	1.35E-05	8.20E-07	2.64E-08	3.39E-10
33070.60	4.10	7.59E-01	3.61E-02	2.14E-03	1.70E-04	1.37E-05	8.48E-07	2.68E-08	3.42E-10
		3.64E-01	2.32E-02	1.91E-03	1.65E-04	1.36E-05	8.47E-07	2.68E-08	3.42E-10
33877.20	4.20	7.87E-01	3.72E-02	2.18E-03	1.72E-04	1.39E-05	8.54E-07	2.70E-08	3.45E-10
		3.79E-01	2.38E-02	1.94E-03	1.68E-04	1.38E-05	8.54E-07	2.70E-08	3.45E-10
34683.80	4.30	8.08E-01	3.80E-02	2.22E-03	1.74E-04	1.41E-05	8.68E-07	2.74E-08	3.70E-10
		3.93E-01	2.44E-02	1.98E-03	1.70E-04	1.40E-05	8.65E-07	2.74E-08	3.70E-10
35490.40	4.40	8.28E-01	3.86E-02	2.25E-03	1.76E-04	1.42E-05	8.77E-07	2.77E-08	3.75E-10
		4.07E-01	2.49E-02	2.01E-03	1.72E-04	1.41E-05	8.75E-07	2.77E-08	3.75E-10
36297.00	4.50	8.46E-01	3.93E-02	2.28E-03	1.78E-04	1.44E-05	8.86E-07	2.80E-08	3.79E-10
		4.20E-01	2.54E-02	2.03E-03	1.74E-04	1.43E-05	8.85E-07	2.80E-08	3.79E-10
37103.60	4.60	8.64E-01	3.99E-02	2.30E-03	1.80E-04	1.45E-05	8.95E-07	2.83E-08	3.84E-10
		4.32E-01	2.59E-02	2.08E-03	1.76E-04	1.44E-05	8.94E-07	2.83E-08	3.84E-10
37910.20	4.70	8.84E-01	4.05E-02	2.33E-03	1.82E-04	1.46E-05	9.03E-07	2.86E-08	3.88E-10
		4.44E-01	2.64E-02	2.08E-03	1.77E-04	1.45E-05	9.02E-07	2.86E-08	3.88E-10
38716.80	4.80	9.03E-01	4.10E-02	2.35E-03	1.83E-04	1.48E-05	9.11E-07	2.89E-08	3.91E-10
		4.55E-01	2.69E-02	2.11E-03	1.79E-04	1.47E-05	9.10E-07	2.89E-08	3.91E-10
39523.40	4.90	9.21E-01	4.16E-02	2.38E-03	1.85E-04	1.49E-05	9.18E-07	2.91E-08	3.95E-10
		4.65E-01	2.73E-02	2.13E-03	1.80E-04	1.48E-05	9.17E-07	2.91E-08	3.95E-10
40330.00	5.00	9.38E-01	4.21E-02	2.40E-03	1.86E-04	1.50E-05	9.25E-07	2.93E-08	3.98E-10
		4.75E-01	2.77E-02	2.15E-03	1.82E-04	1.49E-05	9.23E-07	2.93E-08	3.98E-10
41136.40	5.10	9.55E-01	4.26E-02	2.42E-03	1.87E-04	1.51E-05	9.31E-07	2.95E-08	4.01E-10
		4.84E-01	2.80E-02	2.17E-03	1.83E-04	1.50E-05	9.30E-07	2.95E-08	4.01E-10
41943.20	5.20	9.69E-01	4.31E-02	2.44E-03	1.89E-04	1.52E-05	9.37E-07	2.97E-08	4.03E-10
		4.93E-01	2.84E-02	2.19E-03	1.84E-04	1.51E-05	9.35E-07	2.97E-08	4.03E-10
42749.80	5.30	9.86E-01	4.36E-02	2.46E-03	1.90E-04	1.52E-05	9.42E-07	2.99E-08	4.06E-10
		5.02E-01	2.87E-02	2.20E-03	1.85E-04	1.52E-05	9.41E-07	2.99E-08	4.06E-10
43556.40	5.40	10.00E-01	4.40E-02	2.47E-03	1.91E-04	1.53E-05	9.47E-07	3.01E-08	4.08E-10
		5.10E-01	2.90E-02	2.22E-03	1.86E-04	1.52E-05	9.46E-07	3.01E-08	4.08E-10
44363.00	5.50	1.01E 00	4.44E-02	2.49E-03	1.92E-04	1.54E-05	9.52E-07	3.02E-08	4.11E-10
		5.17E-01	2.93E-02	2.23E-03	1.87E-04	1.53E-05	9.51E-07	3.02E-08	4.10E-10
45169.60	5.60	1.03E 00	4.48E-02	2.51E-03	1.93E-04	1.55E-05	9.56E-07	3.04E-08	4.13E-10
		5.24E-01	2.96E-02	2.25E-03	1.88E-04	1.54E-05	9.55E-07	3.04E-08	4.13E-10
45976.20	5.70	1.04E 00	4.52E-02	2.52E-03	1.94E-04	1.55E-05	9.60E-07	3.05E-08	4.15E-10
		5.31E-01	2.99E-02	2.26E-03	1.89E-04	1.54E-05	9.59E-07	3.05E-08	4.15E-10
46782.80	5.80	1.05E 00	4.55E-02	2.53E-03	1.95E-04	1.56E-05	9.64E-07	3.06E-08	4.18E-10
		5.39E-01	3.02E-02	2.27E-03	1.90E-04	1.55E-05	9.63E-07	3.06E-08	4.18E-10
47589.40	5.90	1.06E 00	4.59E-02	2.55E-03	1.95E-04	1.56E-05	9.68E-07	3.07E-08	4.18E-10
		5.45E-01	3.04E-02	2.29E-03	1.91E-04	1.56E-05	9.67E-07	3.07E-08	4.18E-10
48396.00	6.00	1.07E 00	4.62E-02	2.56E-03	1.96E-04	1.57E-05	9.71E-07	3.09E-08	4.20E-10
		5.52E-01	3.07E-02	2.30E-03	1.92E-04	1.56E-05	9.70E-07	3.09E-08	4.20E-10
49202.60	6.10	1.09E 00	4.66E-02	2.57E-03	1.97E-04	1.57E-05	9.74E-07	3.10E-08	4.21E-10
		5.58E-01	3.09E-02	2.31E-03	1.92E-04	1.57E-05	9.73E-07	3.10E-08	4.21E-10

50009.20	6.20	1.10E 00	4.69E-02	2.58E-03	1.97E-04	1.58E-05	9.77E-07	3.11E-08	4.22E-10
		5.64E-01	3.11E-02	2.32E-03	1.93E-04	1.57E-05	9.76E-07	3.11E-08	4.22E-10
50815.80	6.30	1.11E 00	4.71E-02	2.60E-03	1.98E-04	1.58E-05	9.80E-07	3.11E-08	4.24E-10
		5.69E-01	3.13E-02	2.33E-03	1.94E-04	1.58E-05	9.79E-07	3.11E-08	4.24E-10
51622.40	6.40	1.12E 00	4.74E-02	2.61E-03	1.99E-04	1.59E-05	9.83E-07	3.12E-08	4.25E-10
		5.74E-01	3.15E-02	2.34E-03	1.94E-04	1.58E-05	9.81E-07	3.12E-08	4.25E-10
52429.00	6.50	1.13E 00	4.77E-02	2.62E-03	1.99E-04	1.59E-05	9.85E-07	3.13E-08	4.26E-10
		5.79E-01	3.17E-02	2.35E-03	1.95E-04	1.58E-05	9.84E-07	3.13E-08	4.26E-10
53235.60	6.60	1.14E 00	4.80E-02	2.62E-03	2.00E-04	1.60E-05	9.87E-07	3.14E-08	4.27E-10
		5.83E-01	3.18E-02	2.36E-03	1.95E-04	1.59E-05	9.86E-07	3.14E-08	4.27E-10
54042.20	6.70	1.15E 00	4.83E-02	2.63E-03	2.00E-04	1.60E-05	9.89E-07	3.15E-08	4.28E-10
		5.88E-01	3.20E-02	2.36E-03	1.96E-04	1.59E-05	9.88E-07	3.14E-08	4.28E-10
54848.80	6.80	1.15E 00	4.85E-02	2.64E-03	2.01E-04	1.60E-05	9.91E-07	3.15E-08	4.29E-10
		5.91E-01	3.21E-02	2.37E-03	1.96E-04	1.59E-05	9.90E-07	3.15E-08	4.29E-10
55655.40	6.90	1.16E 00	4.87E-02	2.65E-03	2.01E-04	1.60E-05	9.93E-07	3.16E-08	4.30E-10
		5.95E-01	3.23E-02	2.38E-03	1.96E-04	1.60E-05	9.92E-07	3.16E-08	4.30E-10
56462.00	7.00	1.17E 00	4.90E-02	2.66E-03	2.01E-04	1.61E-05	9.95E-07	3.16E-08	4.31E-10
		5.98E-01	3.24E-02	2.38E-03	1.97E-04	1.60E-05	9.94E-07	3.16E-08	4.31E-10
57268.60	7.10	1.17E 00	4.92E-02	2.66E-03	2.02E-04	1.61E-05	9.97E-07	3.17E-08	4.32E-10
		6.01E-01	3.25E-02	2.39E-03	1.97E-04	1.60E-05	9.95E-07	3.17E-08	4.32E-10
58075.20	7.20	1.18E 00	4.93E-02	2.67E-03	2.02E-04	1.61E-05	9.98E-07	3.17E-08	4.32E-10
		6.04E-01	3.26E-02	2.39E-03	1.97E-04	1.60E-05	9.97E-07	3.17E-08	4.32E-10
58881.80	7.30	1.18E 00	4.95E-02	2.67E-03	2.02E-04	1.61E-05	9.99E-07	3.18E-08	4.33E-10
		6.07E-01	3.27E-02	2.40E-03	1.98E-04	1.61E-05	9.98E-07	3.18E-08	4.33E-10
59688.40	7.40	1.19E 00	4.97E-02	2.68E-03	2.03E-04	1.62E-05	1.00E-06	3.18E-08	4.34E-10
		6.10E-01	3.28E-02	2.40E-03	1.98E-04	1.61E-05	10.00E-07	3.18E-08	4.34E-10
60495.00	7.50	1.20E 00	4.99E-02	2.69E-03	2.03E-04	1.62E-05	1.00E-06	3.19E-08	4.34E-10
		6.12E-01	3.29E-02	2.41E-03	1.98E-04	1.61E-05	1.00E-06	3.19E-08	4.34E-10
61301.60	7.60	1.20E 00	5.00E-02	2.69E-03	2.03E-04	1.62E-05	1.00E-06	3.19E-08	4.35E-10
		6.14E-01	3.30E-02	2.41E-03	1.99E-04	1.61E-05	1.00E-06	3.19E-08	4.35E-10
62108.20	7.70	1.21E 00	5.02E-02	2.70E-03	2.03E-04	1.62E-05	1.00E-06	3.19E-08	4.35E-10
		6.16E-01	3.31E-02	2.41E-03	1.99E-04	1.61E-05	1.00E-06	3.19E-08	4.35E-10
62914.80	7.80	1.21E 00	5.04E-02	2.70E-03	2.04E-04	1.62E-05	1.01E-06	3.20E-08	4.36E-10
		6.18E-01	3.32E-02	2.42E-03	1.99E-04	1.62E-05	1.00E-06	3.20E-08	4.36E-10
63721.40	7.90	1.22E 00	5.06E-02	2.71E-03	2.04E-04	1.63E-05	1.01E-06	3.20E-08	4.36E-10
		6.20E-01	3.32E-02	2.42E-03	1.99E-04	1.62E-05	1.00E-06	3.20E-08	4.36E-10
64528.00	8.00	1.22E 00	5.07E-02	2.71E-03	2.04E-04	1.63E-05	1.01E-06	3.20E-08	4.36E-10
		6.21E-01	3.33E-02	2.42E-03	1.99E-04	1.62E-05	1.01E-06	3.20E-08	4.36E-10
65334.60	8.10	1.23E 00	5.09E-02	2.71E-03	2.04E-04	1.63E-05	1.01E-06	3.21E-08	4.37E-10
		6.23E-01	3.33E-02	2.43E-03	2.00E-04	1.62E-05	1.01E-06	3.21E-08	4.37E-10
66141.20	8.20	1.23E 00	5.11E-02	2.72E-03	2.04E-04	1.63E-05	1.01E-06	3.21E-08	4.37E-10
		6.24E-01	3.34E-02	2.43E-03	2.00E-04	1.62E-05	1.01E-06	3.21E-08	4.37E-10
66947.80	8.30	1.24E 00	5.12E-02	2.72E-03	2.05E-04	1.63E-05	1.01E-06	3.21E-08	4.37E-10
		6.26E-01	3.34E-02	2.43E-03	2.00E-04	1.62E-05	1.01E-06	3.21E-08	4.37E-10
67754.40	8.40	1.24E 00	5.14E-02	2.73E-03	2.05E-04	1.63E-05	1.01E-06	3.21E-08	4.38E-10
		6.27E-01	3.35E-02	2.43E-03	2.00E-04	1.62E-05	1.01E-06	3.21E-08	4.38E-10
68561.00	8.50	1.25E 00	5.16E-02	2.73E-03	2.05E-04	1.63E-05	1.01E-06	3.22E-08	4.38E-10
		6.28E-01	3.35E-02	2.44E-03	2.00E-04	1.62E-05	1.01E-06	3.21E-08	4.38E-10
69367.60	8.60	1.26E 00	5.18E-02	2.73E-03	2.05E-04	1.63E-05	1.01E-06	3.22E-08	4.38E-10
		6.29E-01	3.36E-02	2.44E-03	2.00E-04	1.62E-05	1.01E-06	3.22E-08	4.38E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 11000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
70174.20	8.70	1.26E 00	5.20E-02	2.74E-03	2.05E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
		6.30E-01	3.36E-02	2.44E-03	2.00E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
70980.80	8.80	1.27E 00	5.21E-02	2.74E-03	2.05E-04	1.64E-05	1.01E-06	3.22E-08	4.39E-10
		6.31E-01	3.37E-02	2.44E-03	2.01E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
71787.40	8.90	1.27E 00	5.23E-02	2.74E-03	2.05E-04	1.64E-05	1.01E-06	3.22E-08	4.39E-10
		6.32E-01	3.37E-02	2.44E-03	2.01E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
72594.00	9.00	1.28E 00	5.25E-02	2.75E-03	2.06E-04	1.64E-05	1.01E-06	3.22E-08	4.39E-10
		6.33E-01	3.37E-02	2.44E-03	2.01E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
73400.60	9.10	1.29E 00	5.27E-02	2.75E-03	2.06E-04	1.64E-05	1.01E-06	3.22E-08	4.39E-10
		6.33E-01	3.37E-02	2.45E-03	2.01E-04	1.63E-05	1.01E-06	3.22E-08	4.39E-10
74207.20	9.20	1.29E 00	5.29E-02	2.76E-03	2.06E-04	1.64E-05	1.01E-06	3.23E-08	4.40E-10
		6.34E-01	3.38E-02	2.45E-03	2.01E-04	1.63E-05	1.01E-06	3.23E-08	4.40E-10
75013.80	9.30	1.30E 00	5.31E-02	2.76E-03	2.06E-04	1.64E-05	1.01E-06	3.23E-08	4.40E-10
		6.35E-01	3.38E-02	2.45E-03	2.01E-04	1.63E-05	1.01E-06	3.23E-08	4.40E-10
75820.40	9.40	1.30E 00	5.33E-02	2.76E-03	2.06E-04	1.64E-05	1.01E-06	3.23E-08	4.40E-10
		6.35E-01	3.38E-02	2.45E-03	2.01E-04	1.63E-05	1.01E-06	3.23E-08	4.40E-10
76627.00	9.50	1.31E 00	5.35E-02	2.77E-03	2.06E-04	1.64E-05	1.02E-06	3.23E-08	4.40E-10
		6.36E-01	3.39E-02	2.45E-03	2.01E-04	1.63E-05	1.01E-06	3.23E-08	4.40E-10
77433.60	9.60	1.32E 00	5.36E-02	2.77E-03	2.06E-04	1.64E-05	1.02E-06	3.23E-08	4.41E-10
		6.36E-01	3.39E-02	2.46E-03	2.01E-04	1.63E-05	1.02E-06	3.23E-08	4.40E-10
78240.20	9.70	1.32E 00	5.39E-02	2.78E-03	2.07E-04	1.64E-05	1.02E-06	3.24E-08	4.41E-10
		6.37E-01	3.39E-02	2.46E-03	2.02E-04	1.63E-05	1.02E-06	3.24E-08	4.41E-10
79046.80	9.80	1.33E 00	5.42E-02	2.78E-03	2.07E-04	1.64E-05	1.02E-06	3.24E-08	4.41E-10
		6.37E-01	3.39E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.41E-10
79853.40	9.90	1.34E 00	5.44E-02	2.78E-03	2.07E-04	1.65E-05	1.02E-06	3.24E-08	4.41E-10
		6.38E-01	3.40E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.41E-10
80660.00	10.00	1.35E 00	5.46E-02	2.79E-03	2.07E-04	1.65E-05	1.02E-06	3.24E-08	4.41E-10
		6.38E-01	3.40E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.41E-10
81466.60	10.10	1.35E 00	5.48E-02	2.79E-03	2.07E-04	1.65E-05	1.02E-06	3.24E-08	4.42E-10
		6.38E-01	3.40E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.42E-10
82273.20	10.20	1.36E 00	5.51E-02	2.80E-03	2.07E-04	1.65E-05	1.02E-06	3.24E-08	4.42E-10
		6.39E-01	3.40E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.42E-10
83080.80	10.30	1.37E 00	5.53E-02	2.80E-03	2.07E-04	1.65E-05	1.02E-06	3.24E-08	4.42E-10
		6.39E-01	3.40E-02	2.46E-03	2.02E-04	1.64E-05	1.02E-06	3.24E-08	4.42E-10
83886.40	10.40	1.38E 00	5.55E-02	2.80E-03	2.07E-04	1.65E-05	1.02E-06	3.25E-08	4.42E-10
		6.39E-01	3.40E-02	2.47E-03	2.02E-04	1.64E-05	1.02E-06	3.25E-08	4.42E-10
84693.00	10.50	1.38E 00	5.57E-02	2.81E-03	2.07E-04	1.65E-05	1.02E-06	3.25E-08	4.42E-10
		6.40E-01	3.40E-02	2.47E-03	2.02E-04	1.64E-05	1.02E-06	3.25E-08	4.42E-10
85499.60	10.60	1.39E 00	5.60E-02	2.81E-03	2.08E-04	1.65E-05	1.02E-06	3.25E-08	4.42E-10
		6.40E-01	3.41E-02	2.47E-03	2.02E-04	1.64E-05	1.02E-06	3.25E-08	4.42E-10
86306.20	10.70	1.44E 00	6.14E-02	3.39E-03	2.08E-04	1.65E-05	1.02E-06	3.25E-08	4.43E-10
		6.70E-01	3.91E-02	3.04E-03	2.02E-04	1.64E-05	1.02E-06	3.25E-08	4.43E-10
88726.00	11.00	1.47E 00	6.69E-02	4.01E-03	2.68E-04	2.17E-05	1.35E-06	4.28E-08	5.84E-10
		7.01E-01	4.46E-02	3.66E-03	2.63E-04	2.16E-05	1.35E-06	4.28E-08	5.84E-10

90742.50	11.25	1.49E 00	7.10E-02	4.47E-03	3.13E-04	2.56E-05	1.60E-06	5.04E-08	6.89E-10
		7.25E-01	4.86E-02	4.12E-03	3.07E-04	2.55E-05	1.60E-06	5.04E-08	6.89E-10
92759.00	11.50	1.51E 00	7.43E-02	4.84E-03	3.49E-04	2.87E-05	1.80E-06	5.67E-08	7.76E-10
		7.44E-01	5.20E-02	4.50E-03	3.44E-04	2.87E-05	1.80E-06	5.67E-08	7.76E-10
94775.50	11.75	1.53E 00	7.70E-02	5.15E-03	3.79E-04	3.13E-05	1.97E-06	6.18E-08	8.46E-10
		7.60E-01	5.47E-02	4.80E-03	3.74E-04	3.12E-05	1.97E-06	6.18E-08	8.46E-10
96792.00	12.00	1.59E 00	8.88E-02	6.49E-03	5.09E-04	4.26E-05	2.10E-06	6.60E-08	9.03E-10
		6.29E-01	6.65E-02	6.14E-03	5.04E-04	4.25E-05	2.10E-06	6.60E-08	9.03E-10
98808.50	12.25	1.65E 00	9.85E-02	7.59E-03	6.16E-04	5.18E-05	2.69E-06	8.42E-08	1.15E-09
		8.85E-01	7.61E-02	7.24E-03	6.10E-04	5.17E-05	2.69E-06	8.42E-08	1.15E-09
100825.00	12.50	1.70E 00	1.06E-01	8.48E-03	7.02E-04	5.93E-05	3.17E-06	9.90E-08	1.36E-09
		9.31E-01	8.40E-02	8.13E-03	6.97E-04	5.92E-05	3.17E-06	9.90E-08	1.36E-09
102841.50	12.75	1.74E 00	1.13E-01	9.26E-03	7.78E-04	6.58E-05	3.59E-06	1.11E-07	1.52E-09
		9.71E-01	9.09E-02	8.91E-03	7.73E-04	6.57E-05	3.59E-06	1.11E-07	1.52E-09
104858.00	13.00	1.77E 00	1.19E-01	9.89E-03	8.40E-04	7.12E-05	3.93E-06	1.22E-07	1.67E-09
		1.00E 00	9.65E-02	9.55E-03	8.35E-04	7.11E-05	3.93E-06	1.22E-07	1.67E-09
106874.50	13.25	1.80E 00	1.23E-01	1.04E-02	8.90E-04	7.55E-05	4.20E-06	1.30E-07	1.79E-09
		1.03E 00	1.01E-01	1.01E-02	8.85E-04	7.54E-05	4.20E-06	1.30E-07	1.79E-09
108891.00	13.50	1.85E 00	1.30E-01	1.11E-02	9.61E-04	8.18E-05	4.63E-06	1.37E-07	1.88E-09
		1.08E 00	1.08E-01	1.08E-02	9.55E-04	8.17E-05	4.63E-06	1.37E-07	1.88E-09
110907.50	13.75	1.89E 00	1.36E-01	1.17E-02	1.02E-03	8.69E-05	4.98E-06	1.49E-07	2.05E-09
		1.12E 00	1.13E-01	1.14E-02	1.01E-03	8.68E-05	4.97E-06	1.49E-07	2.05E-09
112924.00	14.00	1.93E 00	1.41E-01	1.24E-02	1.08E-03	9.22E-05	5.33E-06	1.61E-07	2.19E-09
		1.16E 00	1.19E-01	1.20E-02	1.07E-03	9.21E-05	5.33E-06	1.61E-07	2.19E-09
114940.50	14.25	1.96E 00	1.46E-01	1.29E-02	1.13E-03	9.66E-05	5.63E-06	1.71E-07	2.33E-09
		1.20E 00	1.24E-01	1.25E-02	1.12E-03	9.65E-05	5.62E-06	1.71E-07	2.33E-09
116957.00	14.50	2.03E 00	1.57E-01	1.41E-02	1.25E-03	1.07E-04	6.32E-06	1.93E-07	2.44E-09
		1.27E 00	1.35E-01	1.38E-02	1.25E-03	1.07E-04	6.31E-06	1.93E-07	2.44E-09
118973.50	14.75	2.09E 00	1.67E-01	1.52E-02	1.35E-03	1.16E-04	6.88E-06	2.11E-07	2.69E-09
		1.33E 00	1.44E-01	1.48E-02	1.35E-03	1.16E-04	6.88E-06	2.11E-07	2.69E-09
120990.00	15.00	2.14E 00	1.75E-01	1.60E-02	1.44E-03	1.23E-04	7.35E-06	2.26E-07	2.90E-09
		1.38E 00	1.52E-01	1.57E-02	1.43E-03	1.23E-04	7.35E-06	2.26E-07	2.90E-09
123006.50	15.25	2.18E 00	1.81E-01	1.67E-02	1.50E-03	1.29E-04	7.74E-06	2.38E-07	3.07E-09
		1.42E 00	1.58E-01	1.64E-02	1.50E-03	1.29E-04	7.73E-06	2.38E-07	3.07E-09
125023.00	15.50	2.21E 00	1.86E-01	1.73E-02	1.56E-03	1.34E-04	8.05E-06	2.48E-07	3.21E-09
		1.45E 00	1.64E-01	1.69E-02	1.55E-03	1.34E-04	8.05E-06	2.48E-07	3.21E-09
127039.50	15.75	2.24E 00	1.90E-01	1.78E-02	1.60E-03	1.38E-04	8.30E-06	2.56E-07	3.33E-09
		1.47E 00	1.68E-01	1.74E-02	1.60E-03	1.38E-04	8.30E-06	2.56E-07	3.33E-09
129056.00	16.00	2.26E 00	1.93E-01	1.81E-02	1.64E-03	1.41E-04	8.50E-06	2.62E-07	3.42E-09
		1.49E 00	1.71E-01	1.78E-02	1.63E-03	1.41E-04	8.50E-06	2.62E-07	3.42E-09
131072.50	16.25	2.28E 00	1.96E-01	1.84E-02	1.67E-03	1.43E-04	8.67E-06	2.68E-07	3.49E-09
		1.51E 00	1.74E-01	1.81E-02	1.66E-03	1.43E-04	8.67E-06	2.68E-07	3.49E-09
133089.00	16.50	2.29E 00	1.98E-01	1.87E-02	1.69E-03	1.45E-04	8.80E-06	2.72E-07	3.55E-09
		1.53E 00	1.76E-01	1.83E-02	1.69E-03	1.45E-04	8.80E-06	2.72E-07	3.55E-09
135105.50	16.75	2.30E 00	2.00E-01	1.89E-02	1.71E-03	1.47E-04	8.90E-06	2.75E-07	3.60E-09
		1.54E 00	1.78E-01	1.85E-02	1.71E-03	1.47E-04	8.90E-06	2.75E-07	3.60E-09
137122.00	17.00	2.31E 00	2.01E-01	1.90E-02	1.73E-03	1.48E-04	9.00E-06	2.78E-07	3.64E-09
		1.55E 00	1.79E-01	1.87E-02	1.72E-03	1.48E-04	8.99E-06	2.78E-07	3.64E-09
139138.50	17.25	2.32E 00	2.03E-01	1.92E-02	1.74E-03	1.50E-04	9.07E-06	2.80E-07	3.67E-09
		1.55E 00	1.80E-01	1.88E-02	1.73E-03	1.49E-04	9.07E-06	2.80E-07	3.67E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 11000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
141155.00	17.50	2.33E 00	2.04E-01	1.93E-02	1.75E-03	1.50E-04	9.13E-06	2.82E-07	3.70E-09
		1.56E 00	1.81E-01	1.89E-02	1.74E-03	1.50E-04	9.12E-06	2.82E-07	3.70E-09
143171.50	17.75	2.33E 00	2.04E-01	1.93E-02	1.76E-03	1.51E-04	9.17E-06	2.84E-07	3.72E-09
		1.57E 00	1.82E-01	1.90E-02	1.75E-03	1.51E-04	9.17E-06	2.84E-07	3.72E-09
145188.00	18.00	2.34E 00	2.05E-01	1.94E-02	1.76E-03	1.52E-04	9.21E-06	2.85E-07	3.73E-09
		1.57E 00	1.83E-01	1.91E-02	1.76E-03	1.52E-04	9.21E-06	2.85E-07	3.73E-09
147204.50	18.25	2.34E 00	2.05E-01	1.95E-02	1.77E-03	1.52E-04	9.24E-06	2.86E-07	3.75E-09
		1.57E 00	1.83E-01	1.91E-02	1.76E-03	1.52E-04	9.24E-06	2.86E-07	3.75E-09
149221.00	18.50	2.34E 00	2.06E-01	1.95E-02	1.77E-03	1.52E-04	9.26E-06	2.87E-07	3.76E-09
		1.58E 00	1.83E-01	1.92E-02	1.77E-03	1.52E-04	9.26E-06	2.87E-07	3.76E-09
151237.50	18.75	2.34E 00	2.06E-01	1.95E-02	1.78E-03	1.53E-04	9.28E-06	2.87E-07	3.77E-09
		1.58E 00	1.84E-01	1.92E-02	1.77E-03	1.53E-04	9.28E-06	2.87E-07	3.77E-09
153254.00	19.00	2.35E 00	2.06E-01	1.96E-02	1.78E-03	1.53E-04	9.30E-06	2.88E-07	3.77E-09
		1.58E 00	1.84E-01	1.92E-02	1.77E-03	1.53E-04	9.30E-06	2.88E-07	3.77E-09
155270.50	19.25	2.35E 00	2.07E-01	1.96E-02	1.78E-03	1.53E-04	9.31E-06	2.88E-07	3.78E-09
		1.58E 00	1.84E-01	1.92E-02	1.78E-03	1.53E-04	9.31E-06	2.88E-07	3.78E-09
157287.00	19.50	2.35E 00	2.07E-01	1.96E-02	1.78E-03	1.53E-04	9.32E-06	2.89E-07	3.78E-09
		1.58E 00	1.84E-01	1.93E-02	1.78E-03	1.53E-04	9.32E-06	2.89E-07	3.78E-09
159303.50	19.75	2.35E 00	2.07E-01	1.96E-02	1.78E-03	1.53E-04	9.33E-06	2.89E-07	3.79E-09
		1.58E 00	1.84E-01	1.93E-02	1.78E-03	1.53E-04	9.32E-06	2.89E-07	3.79E-09
161320.00	20.00	2.35E 00	2.07E-01	1.96E-02	1.79E-03	1.54E-04	9.33E-06	2.89E-07	3.79E-09
		1.58E 00	1.85E-01	1.93E-02	1.78E-03	1.53E-04	9.33E-06	2.89E-07	3.79E-09
163336.50	20.25	2.35E 00	2.07E-01	1.96E-02	1.79E-03	1.54E-04	9.34E-06	2.89E-07	3.79E-09
		1.58E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.34E-06	2.89E-07	3.79E-09
165353.00	20.50	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.34E-06	2.89E-07	3.79E-09
		1.58E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.34E-06	2.89E-07	3.79E-09
167369.50	20.75	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.89E-07	3.80E-09
		1.58E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.34E-06	2.89E-07	3.80E-09
169386.00	21.00	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
171402.50	21.25	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
173419.00	21.50	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
175435.50	21.75	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
177452.00	22.00	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
179468.50	22.25	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
181485.00	22.50	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.35E-06	2.90E-07	3.80E-09
183501.50	22.75	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
		1.59E 00	1.85E-01	1.93E-02	1.78E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 12000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	1.68E-02	1.83E-03	1.83E-04	1.68E-05	1.15E-06	5.18E-08	9.62E-10	1.07E-11
		1.68E-02	1.83E-03	1.83E-04	1.68E-05	1.15E-06	5.18E-08	9.62E-10	1.07E-11
5646.20	0.70	3.47E-02	3.83E-03	3.83E-04	3.52E-05	2.54E-06	1.07E-07	1.98E-09	2.21E-11
		3.44E-02	3.82E-03	3.83E-04	3.52E-05	2.54E-06	1.07E-07	1.98E-09	2.21E-11
6452.80	0.80	5.45E-02	6.01E-03	6.01E-04	5.52E-05	4.06E-06	1.74E-07	3.24E-09	3.40E-11
		5.30E-02	5.98E-03	6.01E-04	5.52E-05	4.06E-06	1.74E-07	3.24E-09	3.40E-11
7259.40	0.90	7.69E-02	8.33E-03	8.30E-04	7.62E-05	5.65E-06	2.46E-07	4.54E-09	4.86E-11
		7.21E-02	8.24E-03	8.29E-04	7.61E-05	5.65E-06	2.46E-07	4.54E-09	4.86E-11
8066.00	1.00	1.01E-01	1.08E-02	1.07E-03	9.78E-05	7.26E-06	3.19E-07	5.89E-09	6.36E-11
		9.14E-02	1.06E-02	1.06E-03	9.78E-05	7.26E-06	3.19E-07	5.89E-09	6.36E-11
8872.60	1.10	1.27E-01	1.32E-02	1.30E-03	1.19E-04	8.88E-06	3.91E-07	7.20E-09	7.82E-11
		1.10E-01	1.28E-02	1.29E-03	1.19E-04	8.88E-06	3.91E-07	7.20E-09	7.82E-11
9679.20	1.20	1.53E-01	1.55E-02	1.52E-03	1.39E-04	1.04E-05	4.59E-07	8.43E-09	9.20E-11
		1.28E-01	1.50E-02	1.51E-03	1.39E-04	1.04E-05	4.59E-07	8.43E-09	9.20E-11
10485.80	1.30	1.82E-01	1.80E-02	1.76E-03	1.61E-04	1.17E-05	5.18E-07	9.52E-09	1.04E-10
		1.47E-01	1.73E-02	1.75E-03	1.61E-04	1.17E-05	5.18E-07	9.52E-09	1.04E-10
11292.40	1.40	2.15E-01	2.05E-02	1.98E-03	1.81E-04	1.31E-05	5.66E-07	1.04E-08	1.14E-10
		1.64E-01	1.94E-02	1.97E-03	1.81E-04	1.31E-05	5.66E-07	1.04E-08	1.14E-10
12099.00	1.50	2.50E-01	2.28E-02	2.18E-03	1.99E-04	1.45E-05	6.25E-07	1.15E-08	1.23E-10
		1.81E-01	2.14E-02	2.17E-03	1.99E-04	1.45E-05	6.25E-07	1.15E-08	1.23E-10
12905.60	1.60	2.84E-01	2.50E-02	2.36E-03	2.15E-04	1.57E-05	6.79E-07	1.25E-08	1.34E-10
		1.99E-01	2.33E-02	2.34E-03	2.15E-04	1.57E-05	6.79E-07	1.25E-08	1.34E-10
13712.20	1.70	3.26E-01	2.72E-02	2.53E-03	2.30E-04	1.68E-05	7.30E-07	1.35E-08	1.44E-10
		2.18E-01	2.51E-02	2.51E-03	2.30E-04	1.68E-05	7.30E-07	1.35E-08	1.44E-10
14518.80	1.80	3.66E-01	2.93E-02	2.69E-03	2.44E-04	1.79E-05	7.76E-07	1.43E-08	1.54E-10
		2.37E-01	2.67E-02	2.66E-03	2.44E-04	1.79E-05	7.76E-07	1.43E-08	1.54E-10
15325.40	1.90	4.12E-01	3.14E-02	2.84E-03	2.56E-04	1.88E-05	8.18E-07	1.51E-08	1.62E-10
		2.55E-01	2.82E-02	2.80E-03	2.56E-04	1.88E-05	8.17E-07	1.51E-08	1.62E-10
16132.00	2.00	4.49E-01	3.33E-02	2.97E-03	2.68E-04	1.96E-05	8.56E-07	1.58E-08	1.70E-10
		2.73E-01	2.97E-02	2.93E-03	2.67E-04	1.96E-05	8.56E-07	1.58E-08	1.70E-10
16938.60	2.10	4.78E-01	3.49E-02	3.09E-03	2.78E-04	2.04E-05	8.91E-07	1.65E-08	1.78E-10
		2.91E-01	3.11E-02	3.05E-03	2.78E-04	2.04E-05	8.91E-07	1.65E-08	1.78E-10
17745.20	2.20	5.05E-01	3.64E-02	3.21E-03	2.88E-04	2.11E-05	9.23E-07	1.70E-08	1.84E-10
		3.09E-01	3.24E-02	3.16E-03	2.88E-04	2.11E-05	9.23E-07	1.70E-08	1.84E-10
18551.80	2.30	5.26E-01	3.77E-02	3.31E-03	2.96E-04	2.18E-05	9.51E-07	1.76E-08	1.90E-10
		3.26E-01	3.36E-02	3.26E-03	2.96E-04	2.18E-05	9.51E-07	1.76E-08	1.90E-10
19358.40	2.40	5.46E-01	3.91E-02	3.43E-03	3.07E-04	2.23E-05	9.75E-07	1.80E-08	1.95E-10
		3.44E-01	3.50E-02	3.38E-03	3.06E-04	2.23E-05	9.75E-07	1.80E-08	1.95E-10
20165.00	2.50	5.64E-01	4.04E-02	3.54E-03	3.16E-04	2.30E-05	9.96E-07	1.84E-08	1.99E-10
		3.63E-01	3.63E-02	3.49E-03	3.16E-04	2.30E-05	9.96E-07	1.84E-08	1.99E-10
20971.60	2.60	5.83E-01	4.18E-02	3.64E-03	3.25E-04	2.37E-05	1.02E-06	1.89E-08	2.03E-10
		3.81E-01	3.76E-02	3.60E-03	3.25E-04	2.37E-05	1.02E-06	1.89E-08	2.03E-10
21778.20	2.70	6.04E-01	4.31E-02	3.75E-03	3.34E-04	2.43E-05	1.05E-06	1.94E-08	2.08E-10
		3.99E-01	3.89E-02	3.70E-03	3.34E-04	2.43E-05	1.05E-06	1.94E-08	2.08E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 12000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
22584.80	2.80	6.24E-01	4.44E-02	3.85E-03	3.42E-04	2.49E-05	1.88E-06	1.99E-08	2.14E-10
		4.17E-01	4.01E-02	3.80E-03	3.42E-04	2.49E-05	1.88E-06	1.99E-08	2.14E-10
23391.40	2.90	6.45E-01	4.57E-02	3.94E-03	3.50E-04	2.55E-05	1.10E-06	2.03E-08	2.19E-10
		4.35E-01	4.12E-02	3.89E-03	3.49E-04	2.55E-05	1.10E-06	2.03E-08	2.19E-10
24198.00	3.00	6.69E-01	4.71E-02	4.04E-03	3.57E-04	2.60E-05	1.13E-06	2.08E-08	2.24E-10
		4.52E-01	4.23E-02	3.97E-03	3.56E-04	2.60E-05	1.13E-06	2.08E-08	2.24E-10
25004.60	3.10	6.92E-01	4.83E-02	4.12E-03	3.64E-04	2.65E-05	1.15E-06	2.12E-08	2.28E-10
		4.68E-01	4.34E-02	4.05E-03	3.63E-04	2.65E-05	1.15E-06	2.12E-08	2.28E-10
25811.20	3.20	7.23E-01	4.99E-02	4.21E-03	3.70E-04	2.70E-05	1.17E-06	2.16E-08	2.33E-10
		4.84E-01	4.43E-02	4.13E-03	3.69E-04	2.69E-05	1.17E-06	2.16E-08	2.33E-10
26617.80	3.30	7.54E-01	5.13E-02	4.29E-03	3.76E-04	2.74E-05	1.19E-06	2.19E-08	2.36E-10
		5.00E-01	4.53E-02	4.19E-03	3.75E-04	2.73E-05	1.19E-06	2.19E-08	2.36E-10
27424.40	3.40	7.80E-01	5.24E-02	4.35E-03	3.81E-04	2.77E-05	1.20E-06	2.22E-08	2.40E-10
		5.15E-01	4.61E-02	4.25E-03	3.79E-04	2.77E-05	1.20E-06	2.22E-08	2.40E-10
28231.00	3.50	8.29E-01	5.43E-02	4.44E-03	3.86E-04	2.81E-05	1.22E-06	2.25E-08	2.43E-10
		5.30E-01	4.72E-02	4.32E-03	3.84E-04	2.80E-05	1.22E-06	2.25E-08	2.43E-10
29037.60	3.60	8.69E-01	5.58E-02	4.51E-03	3.91E-04	2.84E-05	1.23E-06	2.27E-08	2.45E-10
		5.62E-01	4.83E-02	4.38E-03	3.89E-04	2.83E-05	1.23E-06	2.27E-08	2.45E-10
29844.20	3.70	9.15E-01	5.74E-02	4.58E-03	3.95E-04	2.86E-05	1.24E-06	2.29E-08	2.48E-10
		5.86E-01	4.94E-02	4.44E-03	3.93E-04	2.86E-05	1.24E-06	2.29E-08	2.48E-10
30650.80	3.80	9.60E-01	5.90E-02	4.65E-03	4.00E-04	2.89E-05	1.25E-06	2.31E-08	2.50E-10
		6.11E-01	5.05E-02	4.51E-03	3.97E-04	2.89E-05	1.25E-06	2.31E-08	2.50E-10
31457.40	3.90	9.98E-01	6.03E-02	4.72E-03	4.05E-04	2.92E-05	1.27E-06	2.33E-08	2.52E-10
		6.36E-01	5.16E-02	4.57E-03	4.02E-04	2.92E-05	1.26E-06	2.33E-08	2.52E-10
32264.00	4.00	1.05E 00	6.20E-02	4.79E-03	4.09E-04	2.95E-05	1.28E-06	2.36E-08	2.54E-10
		6.60E-01	5.27E-02	4.64E-03	4.07E-04	2.95E-05	1.28E-06	2.36E-08	2.54E-10
33070.60	4.10	1.08E 00	6.34E-02	4.87E-03	4.15E-04	2.98E-05	1.29E-06	2.38E-08	2.57E-10
		6.86E-01	5.40E-02	4.71E-03	4.12E-04	2.98E-05	1.29E-06	2.38E-08	2.57E-10
33877.20	4.20	1.12E 00	6.49E-02	4.94E-03	4.21E-04	3.02E-05	1.31E-06	2.40E-08	2.59E-10
		7.10E-01	5.51E-02	4.79E-03	4.18E-04	3.02E-05	1.31E-06	2.40E-08	2.59E-10
34683.80	4.30	1.15E 00	6.62E-02	5.02E-03	4.26E-04	3.06E-05	1.33E-06	2.43E-08	2.63E-10
		7.33E-01	5.63E-02	4.86E-03	4.23E-04	3.05E-05	1.33E-06	2.43E-08	2.63E-10
35490.40	4.40	1.18E 00	6.73E-02	5.08E-03	4.31E-04	3.09E-05	1.34E-06	2.47E-08	2.66E-10
		7.55E-01	5.73E-02	4.92E-03	4.28E-04	3.09E-05	1.34E-06	2.46E-08	2.66E-10
36297.00	4.50	1.21E 00	6.84E-02	5.15E-03	4.36E-04	3.13E-05	1.36E-06	2.49E-08	2.69E-10
		7.77E-01	5.84E-02	4.99E-03	4.33E-04	3.12E-05	1.36E-06	2.49E-08	2.69E-10
37103.60	4.60	1.23E 00	6.95E-02	5.21E-03	4.40E-04	3.16E-05	1.37E-06	2.52E-08	2.73E-10
		7.97E-01	5.93E-02	5.05E-03	4.37E-04	3.15E-05	1.37E-06	2.52E-08	2.73E-10
37910.20	4.70	1.26E 00	7.05E-02	5.26E-03	4.44E-04	3.19E-05	1.38E-06	2.55E-08	2.75E-10
		8.17E-01	6.03E-02	5.10E-03	4.41E-04	3.18E-05	1.38E-06	2.55E-08	2.75E-10
38716.80	4.80	1.28E 00	7.14E-02	5.32E-03	4.48E-04	3.21E-05	1.40E-06	2.57E-08	2.78E-10
		8.36E-01	6.11E-02	5.15E-03	4.45E-04	3.21E-05	1.40E-06	2.57E-08	2.78E-10
39523.40	4.90	1.31E 00	7.23E-02	5.37E-03	4.51E-04	3.24E-05	1.41E-06	2.59E-08	2.81E-10
		8.54E-01	6.20E-02	5.20E-03	4.49E-04	3.23E-05	1.41E-06	2.59E-08	2.81E-10

40330.00	5.00	1.33E 00	7.32E-02	5.41E-03	4.55E-04	3.26E-05	1.42E-06	2.62E-08	2.83E-10
		8.71E-01	6.28E-02	5.25E-03	4.52E-04	3.26E-05	1.42E-06	2.61E-08	2.83E-10
41136.60	5.10	1.35E 00	7.41E-02	5.46E-03	4.58E-04	3.29E-05	1.43E-06	2.64E-08	2.85E-10
		8.87E-01	6.35E-02	5.29E-03	4.55E-04	3.28E-05	1.43E-06	2.63E-08	2.85E-10
41943.20	5.20	1.37E 00	7.48E-02	5.50E-03	4.61E-04	3.31E-05	1.44E-06	2.65E-08	2.87E-10
		9.03E-01	6.42E-02	5.34E-03	4.58E-04	3.30E-05	1.44E-06	2.65E-08	2.87E-10
42749.80	5.30	1.39E 00	7.56E-02	5.54E-03	4.64E-04	3.33E-05	1.45E-06	2.67E-08	2.89E-10
		9.18E-01	6.49E-02	5.38E-03	4.61E-04	3.32E-05	1.45E-06	2.67E-08	2.89E-10
43556.40	5.40	1.41E 00	7.63E-02	5.58E-03	4.67E-04	3.35E-05	1.46E-06	2.69E-08	2.91E-10
		9.32E-01	6.55E-02	5.41E-03	4.64E-04	3.34E-05	1.46E-06	2.69E-08	2.91E-10
44363.00	5.50	1.43E 00	7.70E-02	5.62E-03	4.69E-04	3.36E-05	1.47E-06	2.70E-08	2.93E-10
		9.45E-01	6.61E-02	5.45E-03	4.66E-04	3.36E-05	1.47E-06	2.70E-08	2.93E-10
45169.60	5.60	1.45E 00	7.77E-02	5.65E-03	4.72E-04	3.38E-05	1.47E-06	2.72E-08	2.95E-10
		9.58E-01	6.67E-02	5.48E-03	4.69E-04	3.38E-05	1.47E-06	2.72E-08	2.95E-10
45976.20	5.70	1.47E 00	7.83E-02	5.68E-03	4.74E-04	3.40E-05	1.48E-06	2.73E-08	2.96E-10
		9.71E-01	6.73E-02	5.51E-03	4.71E-04	3.39E-05	1.48E-06	2.73E-08	2.96E-10
46782.80	5.80	1.48E 00	7.89E-02	5.71E-03	4.76E-04	3.41E-05	1.49E-06	2.75E-08	2.98E-10
		9.84E-01	6.79E-02	5.54E-03	4.73E-04	3.41E-05	1.49E-06	2.75E-08	2.98E-10
47589.40	5.90	1.50E 00	7.95E-02	5.74E-03	4.78E-04	3.43E-05	1.49E-06	2.76E-08	2.99E-10
		9.97E-01	6.84E-02	5.57E-03	4.75E-04	3.42E-05	1.49E-06	2.76E-08	2.99E-10
48396.00	6.00	1.51E 00	8.01E-02	5.77E-03	4.80E-04	3.44E-05	1.50E-06	2.77E-08	3.00E-10
		1.01E 00	6.89E-02	5.60E-03	4.77E-04	3.43E-05	1.50E-06	2.77E-08	3.00E-10
49202.60	6.10	1.53E 00	8.07E-02	5.80E-03	4.82E-04	3.45E-05	1.51E-06	2.78E-08	3.02E-10
		1.02E 00	6.94E-02	5.63E-03	4.79E-04	3.45E-05	1.51E-06	2.78E-08	3.02E-10
50009.20	6.20	1.55E 00	8.12E-02	5.83E-03	4.84E-04	3.46E-05	1.51E-06	2.79E-08	3.03E-10
		1.03E 00	6.99E-02	5.65E-03	4.81E-04	3.46E-05	1.51E-06	2.79E-08	3.03E-10
50815.80	6.30	1.56E 00	8.17E-02	5.85E-03	4.85E-04	3.48E-05	1.52E-06	2.80E-08	3.04E-10
		1.04E 00	7.03E-02	5.68E-03	4.82E-04	3.47E-05	1.52E-06	2.80E-08	3.04E-10
51622.40	6.40	1.57E 00	8.22E-02	5.87E-03	4.87E-04	3.49E-05	1.52E-06	2.81E-08	3.05E-10
		1.05E 00	7.08E-02	5.70E-03	4.84E-04	3.48E-05	1.52E-06	2.81E-08	3.05E-10
52429.00	6.50	1.59E 00	8.27E-02	5.90E-03	4.88E-04	3.50E-05	1.53E-06	2.82E-08	3.06E-10
		1.06E 00	7.12E-02	5.72E-03	4.85E-04	3.49E-05	1.53E-06	2.82E-08	3.06E-10
53235.60	6.60	1.60E 00	8.31E-02	5.92E-03	4.89E-04	3.50E-05	1.53E-06	2.83E-08	3.07E-10
		1.07E 00	7.15E-02	5.74E-03	4.87E-04	3.50E-05	1.53E-06	2.83E-08	3.07E-10
54042.20	6.70	1.62E 00	8.36E-02	5.94E-03	4.91E-04	3.51E-05	1.53E-06	2.83E-08	3.08E-10
		1.08E 00	7.19E-02	5.76E-03	4.88E-04	3.51E-05	1.53E-06	2.83E-08	3.08E-10
54848.80	6.80	1.63E 00	8.40E-02	5.96E-03	4.92E-04	3.52E-05	1.54E-06	2.84E-08	3.08E-10
		1.08E 00	7.22E-02	5.78E-03	4.89E-04	3.52E-05	1.54E-06	2.84E-08	3.08E-10
55655.40	6.90	1.64E 00	8.44E-02	5.97E-03	4.93E-04	3.53E-05	1.54E-06	2.85E-08	3.09E-10
		1.09E 00	7.25E-02	5.80E-03	4.90E-04	3.53E-05	1.54E-06	2.85E-08	3.09E-10
56462.00	7.00	1.65E 00	8.47E-02	5.99E-03	4.94E-04	3.54E-05	1.55E-06	2.85E-08	3.10E-10
		1.10E 00	7.28E-02	5.81E-03	4.91E-04	3.53E-05	1.54E-06	2.85E-08	3.10E-10
57268.60	7.10	1.66E 00	8.51E-02	6.01E-03	4.95E-04	3.54E-05	1.55E-06	2.86E-08	3.11E-10
		1.10E 00	7.31E-02	5.83E-03	4.92E-04	3.54E-05	1.55E-06	2.86E-08	3.11E-10
58075.20	7.20	1.67E 00	8.54E-02	6.02E-03	4.96E-04	3.55E-05	1.55E-06	2.87E-08	3.11E-10
		1.11E 00	7.33E-02	5.84E-03	4.93E-04	3.55E-05	1.55E-06	2.87E-08	3.11E-10
58881.80	7.30	1.68E 00	8.57E-02	6.04E-03	4.97E-04	3.56E-05	1.55E-06	2.87E-08	3.12E-10
		1.12E 00	7.36E-02	5.85E-03	4.94E-04	3.55E-05	1.55E-06	2.87E-08	3.12E-10
59688.40	7.40	1.69E 00	8.60E-02	6.05E-03	4.98E-04	3.56E-05	1.56E-06	2.88E-08	3.12E-10
		1.12E 00	7.38E-02	5.87E-03	4.95E-04	3.56E-05	1.56E-06	2.88E-08	3.12E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 12000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
60495.00	7.50	1.70E 00	8.63E-02	6.[illegible]E-03	4.99E-04	3.[illegible]E-05	1.56E-06	2.88E-08	3.13E-10
		1.13E 00	7.40E-02	5.8[illegible]-03	4.96E-04	3.[illegible]-05	1.56E-06	2.88E-08	3.13E-10
61301.60	7.60	1.71E 00	8.66E-02	6.0[illegible]-03	5.00E-04	3.57E-05	1.56E-06	2.89E-08	3.13E-10
		1.13E 00	7.42E-02	5.89E-03	4.97E-04	3.57E-05	1.56E-06	2.89E-08	3.13E-10
62108.20	7.70	1.71E 00	8.69E-02	6.[illegible]E-03	5.00E-04	3.58E-05	1.56E-06	2.89E-08	3.14E-10
		1.14E 00	7.44E-02	5.9[illegible]13	4.97E-04	3.57E-05	1.56E-06	2.89E-08	3.14E-10
62914.80	7.80	1.72E 00	8.[illegible]02	6.0[illegible]3	5.01E-04	3.58E-05	1.57E-06	2.89E-08	3.14E-10
		1.14E 00	7.[illegible]02	5.91[illegible]-03	4.98E-04	3.58E-05	1.57E-06	2.89E-08	3.14E-10
63721.40	7.90	1.73E 00	8.7[illegible]02	6.11E-03	5.02E-04	3.59E-05	1.57E-06	2.90E-08	3.15E-10
		1.14E 00	7.48E-02	5.92E-03	4.99E-04	3.58E-05	1.57E-06	2.90E-08	3.15E-10
64528.00	8.00	1.74E 00	8.77E-02	6.11E-03	5.02E-04	3.59E-05	1.57E-06	2.90E-08	3.15E-10
		1.15E 00	7.49E-02	5.93E-03	4.99E-04	3.59E-05	1.57E-06	2.90E-08	3.15E-10
65334.60	8.10	1.75E 00	8.79E-02	6.12E-03	5.03E-04	3.60E-05	1.57E-06	2.91E-08	3.16E-10
		1.15E 00	7.51E-02	5.94E-03	5.00E-04	3.59E-05	1.57E-06	2.91E-08	3.16E-10
66141.20	8.20	1.76E 00	8.82E-02	6.13E-03	5.03E-04	3.60E-05	1.57E-06	2.91E-08	3.16E-10
		1.15E 00	7.52E-02	5.94E-03	5.00E-04	3.59E-05	1.57E-06	2.91E-08	3.16E-10
66947.80	8.30	1.77E 00	8.84E-02	6.14E-03	5.04E-04	3.60E-05	1.57E-06	2.91E-08	3.16E-10
		1.16E 00	7.53E-02	5.95E-03	5.01E-04	3.60E-05	1.57E-06	2.91E-08	3.16E-10
67754.40	8.40	1.77E 00	8.87E-02	6.15E-03	5.04E-04	3.61E-05	1.58E-06	2.91E-08	3.17E-10
		1.16E 00	7.54E-02	5.96E-03	5.01E-04	3.60E-05	1.58E-06	2.91E-08	3.17E-10
68561.00	8.50	1.78E 00	8.89E-02	6.16E-03	5.05E-04	3.61E-05	1.58E-06	2.92E-08	3.17E-10
		1.16E 00	7.56E-02	5.96E-03	5.02E-04	3.60E-05	1.58E-06	2.92E-08	3.17E-10
69367.60	8.60	1.79E 00	8.91E-02	6.16E-03	5.05E-04	3.61E-05	1.58E-06	2.92E-08	3.17E-10
		1.16E 00	7.57E-02	5.97E-03	5.02E-04	3.61E-05	1.58E-06	2.92E-08	3.17E-10
70174.20	8.70	1.80E 00	8.94E-02	6.17E-03	5.05E-04	3.61E-05	1.58E-06	2.92E-08	3.17E-10
		1.17E 00	7.58E-02	5.97E-03	5.02E-04	3.61E-05	1.58E-06	2.92E-08	3.17E-10
70980.80	8.80	1.81E 00	8.96E-02	6.18E-03	5.06E-04	3.62E-05	1.58E-06	2.92E-08	3.18E-10
		1.17E 00	7.59E-02	5.98E-03	5.03E-04	3.61E-05	1.58E-06	2.92E-08	3.18E-10
71787.40	8.90	1.82E 00	8.98E-02	6.18E-03	5.06E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
		1.17E 00	7.59E-02	5.98E-03	5.03E-04	3.61E-05	1.58E-06	2.93E-08	3.18E-10
72594.00	9.00	1.83E 00	9.01E-02	6.19E-03	5.07E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
		1.17E 00	7.60E-02	5.99E-03	5.03E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
73400.60	9.10	1.84E 00	9.03E-02	6.20E-03	5.07E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
		1.17E 00	7.61E-02	5.99E-03	5.04E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
74207.20	9.20	1.85E 00	9.05E-02	6.20E-03	5.07E-04	3.63E-05	1.59E-06	2.93E-08	3.18E-10
		1.18E 00	7.62E-02	6.00E-03	5.04E-04	3.62E-05	1.58E-06	2.93E-08	3.18E-10
75013.80	9.30	1.86E 00	9.08E-02	6.21E-03	5.08E-04	3.63E-05	1.59E-06	2.93E-08	3.19E-10
		1.18E 00	7.63E-02	6.01E-03	5.05E-04	3.62E-05	1.59E-06	2.93E-08	3.19E-10
75820.40	9.40	1.87E 00	9.11E-02	6.22E-03	5.09E-04	3.63E-05	1.59E-06	2.94E-08	3.19E-10
		1.18E 00	7.64E-02	6.01E-03	5.05E-04	3.63E-05	1.59E-06	2.94E-08	3.19E-10
76627.00	9.50	1.87E 00	9.13E-02	6.23E-03	5.09E-04	3.64E-05	1.59E-06	2.94E-08	3.19E-10
		1.18E 00	7.65E-02	6.02E-03	5.06E-04	3.63E-05	1.59E-06	2.94E-08	3.19E-10
77433.60	9.60	1.89E 00	9.16E-02	6.24E-03	5.10E-04	3.64E-05	1.59E-06	2.94E-08	3.19E-10
		1.18E 00	7.66E-02	6.03E-03	5.06E-04	3.64E-05	1.59E-06	2.94E-08	3.19E-10

78240.20	9.70	1.89E 00	9.18E-02	6.25E-03	5.10E-04	3.64E-05	1.59E-06	2.94E-08	3.20E-10
		1.18E 00	7.67E-02	6.03E-03	5.07E-04	3.64E-05	1.59E-06	2.94E-08	3.20E-10
79046.80	9.80	1.91E 00	9.21E-02	6.25E-03	5.11E-04	3.65E-05	1.59E-06	2.95E-08	3.20E-10
		1.19E 00	7.67E-02	6.04E-03	5.07E-04	3.64E-05	1.59E-06	2.95E-08	3.20E-10
79853.40	9.90	1.92E 00	9.23E-02	6.26E-03	5.11E-04	3.65E-05	1.59E-06	2.95E-08	3.20E-10
		1.19E 00	7.68E-02	6.04E-03	5.08E-04	3.64E-05	1.59E-06	2.95E-08	3.20E-10
80660.00	10.00	1.93E 00	9.26E-02	6.27E-03	5.11E-04	3.65E-05	1.60E-06	2.95E-08	3.21E-10
		1.19E 00	7.69E-02	6.05E-03	5.08E-04	3.65E-05	1.60E-06	2.95E-08	3.21E-10
81466.60	10.10	1.94E 00	9.28E-02	6.27E-03	5.12E-04	3.65E-05	1.60E-06	2.95E-08	3.21E-10
		1.19E 00	7.69E-02	6.05E-03	5.08E-04	3.63E-05	1.60E-06	2.95E-08	3.21E-10
82273.20	10.20	1.95E 00	9.31E-02	6.28E-03	5.12E-04	3.66E-05	1.60E-06	2.96E-08	3.21E-10
		1.19E 00	7.70E-02	6.06E-03	5.09E-04	3.65E-05	1.60E-06	2.96E-08	3.21E-10
83079.80	10.30	1.96E 00	9.33E-02	6.28E-03	5.12E-04	3.66E-05	1.60E-06	2.96E-08	3.21E-10
		1.19E 00	7.70E-02	6.06E-03	5.09E-04	3.65E-05	1.60E-06	2.96E-08	3.21E-10
83886.40	10.40	1.97E 00	9.36E-02	6.29E-03	5.13E-04	3.66E-05	1.60E-06	2.96E-08	3.21E-10
		1.19E 00	7.71E-02	6.06E-03	5.09E-04	3.66E-05	1.60E-06	2.96E-08	3.21E-10
84693.00	10.50	1.98E 00	9.38E-02	6.30E-03	5.13E-04	3.66E-05	1.60E-06	2.96E-08	3.22E-10
		1.19E 00	7.71E-02	6.07E-03	5.10E-04	3.66E-05	1.60E-06	2.96E-08	3.22E-10
85499.60	10.60	1.99E 00	9.40E-02	6.30E-03	5.13E-04	3.66E-05	1.60E-06	2.96E-08	3.22E-10
		1.19E 00	7.72E-02	6.07E-03	5.10E-04	3.66E-05	1.60E-06	2.96E-08	3.22E-10
86306.20	10.70	2.10E 00	1.07E-01	7.64E-03	6.36E-04	3.67E-05	1.60E-06	2.96E-08	3.22E-10
		1.28E 00	9.01E-02	7.40E-03	6.33E-04	3.66E-05	1.60E-06	2.96E-08	3.22E-10
88726.00	11.00	2.20E 00	1.22E-01	9.13E-03	7.73E-04	4.69E-05	2.05E-06	3.77E-08	4.12E-10
		1.39E 00	1.04E-01	8.89E-03	7.69E-04	4.69E-05	2.05E-06	3.77E-08	4.12E-10
90742.50	11.25	2.28E 00	1.33E-01	1.03E-02	8.77E-04	5.47E-05	2.39E-06	4.39E-08	4.80E-10
		1.46E 00	1.15E-01	1.00E-02	8.73E-04	5.46E-05	2.39E-06	4.39E-08	4.80E-10
92759.00	11.50	2.34E 00	1.42E-01	1.12E-02	9.63E-04	6.12E-05	2.68E-06	4.91E-08	5.37E-10
		1.53E 00	1.25E-01	1.10E-02	9.60E-04	6.12E-05	2.68E-06	4.91E-08	5.37E-10
94775.50	11.75	2.40E 00	1.49E-01	1.20E-02	1.04E-03	6.66E-05	2.91E-06	5.34E-08	5.85E-10
		1.58E 00	1.32E-01	1.18E-02	1.03E-03	6.66E-05	2.91E-06	5.34E-08	5.85E-10
96792.00	12.00	2.61E 00	1.81E-01	1.52E-02	1.33E-03	8.89E-05	3.11E-06	5.70E-08	6.25E-10
		1.80E 00	1.63E-01	1.50E-02	1.33E-03	8.88E-05	3.11E-06	5.70E-08	6.25E-10
98808.50	12.25	2.80E 00	2.07E-01	1.79E-02	1.58E-03	1.07E-04	3.93E-06	7.17E-08	7.87E-10
		1.98E 00	1.89E-01	1.77E-02	1.58E-03	1.07E-04	3.93E-06	7.17E-08	7.87E-10
100825.00	12.50	2.95E 00	2.28E-01	2.02E-02	1.79E-03	1.23E-04	4.60E-06	8.40E-08	9.23E-10
		2.13E 00	2.11E-01	1.99E-02	1.78E-03	1.23E-04	4.60E-06	8.40E-08	9.23E-10
102841.50	12.75	3.09E 00	2.48E-01	2.22E-02	1.97E-03	1.37E-04	5.21E-06	9.42E-08	1.04E-09
		2.27E 00	2.31E-01	2.20E-02	1.97E-03	1.37E-04	5.21E-06	9.42E-08	1.04E-09
104858.00	13.00	3.20E 00	2.64E-01	2.39E-02	2.13E-03	1.48E-04	5.72E-06	1.03E-07	1.14E-09
		2.39E 00	2.47E-01	2.36E-02	2.12E-03	1.48E-04	5.72E-06	1.03E-07	1.14E-09
106874.50	13.25	3.30E 00	2.77E-01	2.53E-02	2.26E-03	1.58E-04	6.14E-06	1.11E-07	1.22E-09
		2.48E 00	2.60E-01	2.50E-02	2.25E-03	1.58E-04	6.14E-06	1.11E-07	1.22E-09
108891.00	13.50	3.44E 00	2.96E-01	2.71E-02	2.43E-03	1.71E-04	6.77E-06	1.17E-07	1.29E-09
		2.63E 00	2.78E-01	2.69E-02	2.42E-03	1.71E-04	6.77E-06	1.17E-07	1.29E-09
110907.50	13.75	3.56E 00	3.11E-01	2.87E-02	2.57E-03	1.83E-04	7.31E-06	1.28E-07	1.41E-09
		2.75E 00	2.94E-01	2.84E-02	2.57E-03	1.83E-04	7.31E-06	1.28E-07	1.41E-09
112924.00	14.00	3.69E 00	3.27E-01	3.04E-02	2.73E-03	1.95E-04	7.87E-06	1.38E-07	1.50E-09
		2.88E 00	3.10E-01	3.01E-02	2.72E-03	1.95E-04	7.87E-06	1.38E-07	1.50E-09
114940.50	14.25	3.80E 00	3.41E-01	3.18E-02	2.86E-03	2.05E-04	8.34E-06	1.47E-07	1.60E-09
		2.98E 00	3.24E-01	3.15E-02	2.85E-03	2.05E-04	8.34E-06	1.47E-07	1.60E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 12000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
116867.00	14.50	4.02E 00	3.72E-01	3.49E-02	3.15E-03	2.27E-04	9.33E-06	1.66E-07	1.69E-09
		3.21E 00	3.54E-01	3.47E-02	3.14E-03	2.27E-04	9.33E-06	1.66E-07	1.69E-09
118973.50	14.75	4.22E 00	3.90E-01	3.76E-02	3.48E-03	2.45E-04	1.02E-05	1.81E-07	1.86E-09
		3.40E 00	3.81E-01	3.74E-02	3.39E-03	2.45E-04	1.02E-05	1.81E-07	1.86E-09
120990.00	15.00	4.38E 00	4.20E-01	3.99E-02	3.61E-03	2.61E-04	1.09E-05	1.94E-07	2.01E-09
		3.56E 00	4.03E-01	3.97E-02	3.60E-03	2.61E-04	1.09E-05	1.94E-07	2.01E-09
123006.50	15.25	4.51E 00	4.38E-01	4.18E-02	3.78E-03	2.74E-04	1.15E-05	2.03E-07	2.13E-09
		3.70E 00	4.21E-01	4.15E-02	3.78E-03	2.74E-04	1.15E-05	2.05E-07	2.13E-09
125023.00	15.50	4.62E 00	4.53E-01	4.33E-02	3.92E-03	2.85E-04	1.20E-05	2.15E-07	2.23E-09
		3.81E 00	4.36E-01	4.31E-02	3.92E-03	2.85E-04	1.20E-05	2.15E-07	2.23E-09
127039.50	15.75	4.72E 00	4.66E-01	4.46E-02	4.04E-03	2.94E-04	1.24E-05	2.22E-07	2.32E-09
		3.90E 00	4.49E-01	4.44E-02	4.04E-03	2.94E-04	1.24E-05	2.22E-07	2.32E-09
129056.00	16.00	4.79E 00	4.76E-01	4.57E-02	4.14E-03	3.02E-04	1.27E-05	2.28E-07	2.39E-09
		3.98E 00	4.59E-01	4.55E-02	4.14E-03	3.02E-04	1.27E-05	2.28E-07	2.39E-09
131073.50	16.25	4.85E 00	4.85E-01	4.66E-02	4.22E-03	3.08E-04	1.30E-05	2.33E-07	2.44E-09
		4.04E 00	4.67E-01	4.63E-02	4.22E-03	3.08E-04	1.30E-05	2.33E-07	2.44E-09
133089.00	16.50	4.91E 00	4.92E-01	4.73E-02	4.29E-03	3.13E-04	1.32E-05	2.38E-07	2.49E-09
		4.09E 00	4.74E-01	4.70E-02	4.28E-03	3.13E-04	1.32E-05	2.38E-07	2.49E-09
135105.50	16.75	4.95E 00	4.98E-01	4.79E-02	4.34E-03	3.17E-04	1.34E-05	2.41E-07	2.53E-09
		4.14E 00	4.80E-01	4.77E-02	4.34E-03	3.17E-04	1.34E-05	2.41E-07	2.53E-09
137122.00	17.00	4.99E 00	5.03E-01	4.84E-02	4.39E-03	3.21E-04	1.36E-05	2.44E-07	2.56E-09
		4.17E 00	4.85E-01	4.82E-02	4.39E-03	3.21E-04	1.36E-05	2.44E-07	2.56E-09
139138.50	17.25	5.02E 00	5.07E-01	4.88E-02	4.43E-03	3.24E-04	1.37E-05	2.47E-07	2.59E-09
		4.20E 00	4.89E-01	4.86E-02	4.43E-03	3.24E-04	1.37E-05	2.47E-07	2.59E-09
141155.00	17.50	5.04E 00	5.10E-01	4.92E-02	4.46E-03	3.26E-04	1.38E-05	2.49E-07	2.61E-09
		4.23E 00	4.93E-01	4.89E-02	4.46E-03	3.26E-04	1.38E-05	2.49E-07	2.61E-09
143171.50	17.75	5.06E 00	5.13E-01	4.94E-02	4.49E-03	3.28E-04	1.39E-05	2.51E-07	2.63E-09
		4.25E 00	4.95E-01	4.92E-02	4.48E-03	3.28E-04	1.39E-05	2.51E-07	2.63E-09
145186.00	18.00	5.08E 00	5.15E-01	4.97E-02	4.51E-03	3.30E-04	1.40E-05	2.52E-07	2.65E-09
		4.27E 00	4.98E-01	4.94E-02	4.50E-03	3.30E-04	1.40E-05	2.52E-07	2.65E-09
147204.50	18.25	5.09E 00	5.17E-01	4.99E-02	4.52E-03	3.31E-04	1.40E-05	2.53E-07	2.66E-09
		4.28E 00	4.99E-01	4.96E-02	4.52E-03	3.31E-04	1.40E-05	2.53E-07	2.66E-09
149221.00	18.50	5.11E 00	5.18E-01	5.00E-02	4.54E-03	3.32E-04	1.41E-05	2.54E-07	2.67E-09
		4.29E 00	5.01E-01	4.98E-02	4.53E-03	3.32E-04	1.41E-05	2.54E-07	2.67E-09
151237.50	18.75	5.12E 00	5.19E-01	5.01E-02	4.55E-03	3.33E-04	1.41E-05	2.55E-07	2.68E-09
		4.30E 00	5.02E-01	4.99E-02	4.55E-03	3.33E-04	1.41E-05	2.55E-07	2.68E-09
153254.00	19.00	5.12E 00	5.20E-01	5.02E-02	4.56E-03	3.34E-04	1.41E-05	2.55E-07	2.69E-09
		4.31E 00	5.03E-01	5.00E-02	4.56E-03	3.34E-04	1.41E-05	2.55E-07	2.69E-09
155270.50	19.25	5.13E 00	5.21E-01	5.03E-02	4.57E-03	3.34E-04	1.42E-05	2.56E-07	2.69E-09
		4.31E 00	5.04E-01	5.01E-02	4.56E-03	3.34E-04	1.42E-05	2.56E-07	2.69E-09
157287.00	19.50	5.13E 00	5.22E-01	5.04E-02	4.57E-03	3.35E-04	1.42E-05	2.56E-07	2.70E-09
		4.32E 00	5.05E-01	5.02E-02	4.57E-03	3.35E-04	1.42E-05	2.56E-07	2.70E-09
159303.50	19.75	5.14E 00	5.22E-01	5.04E-02	4.58E-03	3.35E-04	1.42E-05	2.57E-07	2.70E-09
		4.32E 00	5.05E-01	5.02E-02	4.57E-03	3.35E-04	1.42E-05	2.57E-07	2.70E-09

161320.00	20.00	5.14E 00	5.23E-01	5.05E-02	4.58E-03	3.35E-04	1.42E-05	2.57E-07	2.70E-09
		4.33E 00	5.05E-01	5.03E-02	4.58E-03	3.35E-04	1.42E-05	2.57E-07	2.70E-09
163336.50	20.25	5.14E 00	5.23E-01	5.05E-02	4.59E-03	3.36E-04	1.42E-05	2.57E-07	2.71E-09
		4.33E 00	5.06E-01	5.03E-02	4.58E-03	3.36E-04	1.42E-05	2.57E-07	2.71E-09
165353.00	20.50	5.15E 00	5.23E-01	5.06E-02	4.59E-03	3.36E-04	1.43E-05	2.57E-07	2.71E-09
		4.33E 00	5.06E-01	5.03E-02	4.59E-03	3.36E-04	1.43E-05	2.57E-07	2.71E-09
167369.50	20.75	5.15E 00	5.24E-01	5.06E-02	4.59E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
		4.33E 00	5.06E-01	5.03E-02	4.59E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
169386.00	21.00	5.15E 00	5.24E-01	5.06E-02	4.59E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
		4.34E 00	5.07E-01	5.04E-02	4.59E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
171402.50	21.25	5.15E 00	5.24E-01	5.06E-02	4.60E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
		4.34E 00	5.07E-01	5.04E-02	4.59E-03	3.36E-04	1.43E-05	2.58E-07	2.71E-09
173419.00	21.50	5.15E 00	5.24E-01	5.06E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.59E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
175435.50	21.75	5.15E 00	5.24E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.59E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
177452.00	22.00	5.15E 00	5.24E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
179468.50	22.25	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
181486.00	22.50	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
183501.50	22.75	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
185518.00	23.00	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.04E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
187534.50	23.25	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
189551.00	23.50	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
191567.50	23.75	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
193584.00	24.00	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.07E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
195600.50	24.25	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09
		4.34E 00	5.08E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.58E-07	2.72E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 14000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	7.74E-02	7.88E-03	7.29E-04	5.63E-05	2.43E-06	4.74E-08	5.34E-10	5.44E-12
		7.74E-02	7.88E-03	7.29E-04	5.63E-05	2.43E-06	4.74E-08	5.34E-10	5.44E-12
5646.20	0.70	1.60E-01	1.64E-02	1.52E-03	1.17E-04	5.28E-06	9.71E-08	1.10E-09	1.11E-11
		1.60E-01	1.63E-02	1.52E-03	1.17E-04	5.28E-06	9.71E-08	1.10E-09	1.11E-11
6452.80	0.80	2.49E-01	2.56E-02	2.37E-03	1.83E-04	8.30E-06	1.56E-07	1.70E-09	1.71E-11
		2.48E-01	2.55E-02	2.37E-03	1.83E-04	8.30E-06	1.56E-07	1.70E-09	1.71E-11
7259.40	0.90	3.42E-01	3.52E-02	3.27E-03	2.52E-04	1.16E-05	2.20E-07	2.40E-09	2.42E-11
		3.40E-01	3.52E-02	3.27E-03	2.52E-04	1.16E-05	2.20E-07	2.40E-09	2.42E-11
8066.00	1.00	4.39E-01	4.52E-02	4.19E-03	3.24E-04	1.50E-05	2.84E-07	3.19E-09	3.16E-11
		4.34E-01	4.51E-02	4.19E-03	3.24E-04	1.50E-05	2.84E-07	3.19E-09	3.16E-11
8872.80	1.10	5.35E-01	5.50E-02	5.11E-03	3.95E-04	1.83E-05	3.49E-07	3.98E-09	3.88E-11
		5.27E-01	5.49E-02	5.11E-03	3.95E-04	1.83E-05	3.49E-07	3.98E-09	3.88E-11
9679.20	1.20	6.28E-01	6.44E-02	5.98E-03	4.62E-04	2.15E-05	4.09E-07	4.58E-09	4.57E-11
		6.15E-01	6.43E-02	5.98E-03	4.62E-04	2.15E-05	4.09E-07	4.58E-09	4.57E-11
10485.80	1.30	7.26E-01	7.45E-02	6.91E-03	5.34E-04	2.48E-05	4.63E-07	5.18E-09	5.18E-11
		7.09E-01	7.43E-02	6.91E-03	5.34E-04	2.48E-05	4.63E-07	5.18E-09	5.18E-11
11292.40	1.40	8.18E-01	8.35E-02	7.75E-03	5.98E-04	2.78E-05	5.18E-07	5.68E-09	5.69E-11
		7.93E-01	8.32E-02	7.74E-03	5.98E-04	2.78E-05	5.18E-07	5.68E-09	5.69E-11
12099.00	1.50	9.07E-01	9.20E-02	8.52E-03	6.58E-04	3.06E-05	5.63E-07	6.26E-09	6.16E-11
		8.73E-01	9.15E-02	8.52E-03	6.58E-04	3.06E-05	5.63E-07	6.26E-09	6.16E-11
12905.60	1.60	9.90E-01	9.96E-02	9.21E-03	7.11E-04	3.31E-05	6.11E-07	6.81E-09	6.69E-11
		9.48E-01	9.91E-02	9.21E-03	7.11E-04	3.31E-05	6.11E-07	6.81E-09	6.69E-11
13712.20	1.70	1.08E 00	1.07E-01	9.86E-03	7.61E-04	3.54E-05	6.57E-07	7.33E-09	7.21E-11
		1.02E 00	1.06E-01	9.86E-03	7.61E-04	3.54E-05	6.57E-07	7.33E-09	7.21E-11
14518.80	1.80	1.16E 00	1.14E-01	1.05E-02	8.06E-04	3.75E-05	6.99E-07	7.80E-09	7.69E-11
		1.09E 00	1.13E-01	1.05E-02	8.06E-04	3.75E-05	6.99E-07	7.80E-09	7.69E-11
15325.40	1.90	1.23E 00	1.20E-01	1.10E-02	8.48E-04	3.95E-05	7.37E-07	8.23E-09	8.13E-11
		1.15E 00	1.19E-01	1.10E-02	8.48E-04	3.95E-05	7.37E-07	8.23E-09	8.13E-11
16132.00	2.00	1.31E 00	1.26E-01	1.15E-02	8.87E-04	4.13E-05	7.72E-07	8.63E-09	8.54E-11
		1.21E 00	1.25E-01	1.15E-02	8.87E-04	4.13E-05	7.72E-07	8.63E-09	8.54E-11
16938.60	2.10	1.37E 00	1.31E-01	1.20E-02	9.23E-04	4.30E-05	8.05E-07	9.00E-09	8.92E-11
		1.27E 00	1.30E-01	1.20E-02	9.23E-04	4.30E-05	8.05E-07	9.00E-09	8.92E-11
17745.20	2.20	1.44E 00	1.36E-01	1.24E-02	9.56E-04	4.46E-05	8.35E-07	9.34E-09	9.27E-11
		1.33E 00	1.35E-01	1.24E-02	9.56E-04	4.46E-05	8.35E-07	9.34E-09	9.27E-11
18551.80	2.30	1.49E 00	1.41E-01	1.28E-02	9.86E-04	4.60E-05	8.62E-07	9.65E-09	9.58E-11
		1.38E 00	1.40E-01	1.28E-02	9.86E-04	4.60E-05	8.62E-07	9.65E-09	9.58E-11
19358.40	2.40	1.55E 00	1.46E-01	1.33E-02	1.02E-03	4.72E-05	8.86E-07	9.91E-09	9.85E-11
		1.44E 00	1.45E-01	1.33E-02	1.02E-03	4.72E-05	8.86E-07	9.91E-09	9.85E-11
20165.00	2.50	1.61E 00	1.51E-01	1.37E-02	1.05E-03	4.86E-05	9.06E-07	1.01E-08	1.01E-10
		1.50E 00	1.50E-01	1.37E-02	1.05E-03	4.86E-05	9.06E-07	1.01E-08	1.01E-10
20971.60	2.60	1.66E 00	1.56E-01	1.41E-02	1.08E-03	5.01E-05	9.32E-07	1.04E-08	1.03E-10
		1.55E 00	1.54E-01	1.41E-02	1.08E-03	5.01E-05	9.32E-07	1.04E-08	1.03E-10
21778.20	2.70	1.72E 00	1.60E-01	1.45E-02	1.11E-03	5.14E-05	9.59E-07	1.07E-08	1.06E-10
		1.61E 00	1.59E-01	1.45E-02	1.11E-03	5.14E-05	9.59E-07	1.07E-08	1.06E-10

22584.80	2.80	1.77E 00	1.65E-01	1.49E-02	1.14E-03	5.28E-05	9.84E-07	1.10E-08	1.09E-10
		1.66E 00	1.63E-01	1.49E-02	1.14E-03	5.28E-05	9.84E-07	1.10E-08	1.09E-10
23391.40	2.90	1.83E 00	1.69E-01	1.52E-02	1.17E-03	5.40E-05	1.01E-06	1.13E-08	1.11E-10
		1.71E 00	1.67E-01	1.52E-02	1.17E-03	5.40E-05	1.01E-06	1.13E-08	1.11E-10
24198.00	3.00	1.88E 00	1.73E-01	1.56E-02	1.19E-03	5.51E-05	1.03E-06	1.15E-08	1.14E-10
		1.76E 00	1.71E-01	1.55E-02	1.19E-03	5.51E-05	1.03E-06	1.15E-08	1.14E-10
25004.60	3.10	1.93E 00	1.77E-01	1.59E-02	1.21E-03	5.62E-05	1.05E-06	1.18E-08	1.17E-10
		1.80E 00	1.75E-01	1.58E-02	1.21E-03	5.62E-05	1.05E-06	1.18E-08	1.17E-10
25811.20	3.20	1.99E 00	1.81E-01	1.62E-02	1.24E-03	5.72E-05	1.07E-06	1.20E-08	1.19E-10
		1.85E 00	1.78E-01	1.61E-02	1.24E-03	5.72E-05	1.07E-06	1.20E-08	1.19E-10
26617.80	3.30	2.05E 00	1.84E-01	1.64E-02	1.26E-03	5.82E-05	1.09E-06	1.22E-08	1.21E-10
		1.89E 00	1.82E-01	1.64E-02	1.26E-03	5.81E-05	1.09E-06	1.22E-08	1.21E-10
27424.40	3.40	2.10E 00	1.87E-01	1.67E-02	1.27E-03	5.90E-05	1.11E-06	1.24E-08	1.23E-10
		1.93E 00	1.85E-01	1.66E-02	1.27E-03	5.90E-05	1.11E-06	1.24E-08	1.23E-10
28231.00	3.50	2.17E 00	1.91E-01	1.69E-02	1.29E-03	5.98E-05	1.12E-06	1.25E-08	1.25E-10
		1.98E 00	1.88E-01	1.69E-02	1.29E-03	5.98E-05	1.12E-06	1.25E-08	1.25E-10
29037.60	3.60	2.24E 00	1.95E-01	1.72E-02	1.31E-03	6.05E-05	1.14E-06	1.27E-08	1.26E-10
		2.04E 00	1.91E-01	1.71E-02	1.31E-03	6.05E-05	1.13E-06	1.27E-08	1.26E-10
29844.20	3.70	2.31E 00	1.98E-01	1.74E-02	1.32E-03	6.11E-05	1.15E-06	1.28E-08	1.28E-10
		2.09E 00	1.94E-01	1.73E-02	1.32E-03	6.11E-05	1.15E-06	1.28E-08	1.28E-10
30650.80	3.80	2.39E 00	2.01E-01	1.76E-02	1.34E-03	6.18E-05	1.16E-06	1.30E-08	1.29E-10
		2.15E 00	1.98E-01	1.76E-02	1.34E-03	6.17E-05	1.16E-06	1.30E-08	1.29E-10
31457.40	3.90	2.45E 00	2.05E-01	1.79E-02	1.35E-03	6.25E-05	1.17E-06	1.31E-08	1.30E-10
		2.21E 00	2.01E-01	1.78E-02	1.35E-03	6.25E-05	1.17E-06	1.31E-08	1.30E-10
32264.00	4.00	2.53E 00	2.09E-01	1.81E-02	1.37E-03	6.32E-05	1.18E-06	1.32E-08	1.32E-10
		2.26E 00	2.04E-01	1.80E-02	1.37E-03	6.32E-05	1.18E-06	1.32E-08	1.32E-10
33070.60	4.10	2.60E 00	2.12E-01	1.84E-02	1.39E-03	6.41E-05	1.20E-06	1.34E-08	1.33E-10
		2.32E 00	2.08E-01	1.83E-02	1.39E-03	6.41E-05	1.20E-06	1.34E-08	1.33E-10
33877.20	4.20	2.67E 00	2.16E-01	1.86E-02	1.41E-03	6.50E-05	1.22E-06	1.35E-08	1.35E-10
		2.38E 00	2.12E-01	1.86E-02	1.41E-03	6.50E-05	1.22E-06	1.35E-08	1.35E-10
34683.80	4.30	2.74E 00	2.20E-01	1.89E-02	1.43E-03	6.59E-05	1.23E-06	1.37E-08	1.37E-10
		2.44E 00	2.15E-01	1.88E-02	1.43E-03	6.59E-05	1.23E-06	1.37E-08	1.37E-10
35490.40	4.40	2.79E 00	2.23E-01	1.91E-02	1.45E-03	6.67E-05	1.25E-06	1.39E-08	1.38E-10
		2.50E 00	2.18E-01	1.91E-02	1.44E-03	6.67E-05	1.25E-06	1.39E-08	1.38E-10
36297.00	4.50	2.85E 00	2.26E-01	1.94E-02	1.46E-03	6.75E-05	1.26E-06	1.41E-08	1.40E-10
		2.55E 00	2.22E-01	1.93E-02	1.46E-03	6.75E-05	1.26E-06	1.41E-08	1.40E-10
37103.60	4.60	2.90E 00	2.29E-01	1.96E-02	1.48E-03	6.82E-05	1.28E-06	1.42E-08	1.42E-10
		2.60E 00	2.25E-01	1.95E-02	1.48E-03	6.82E-05	1.28E-06	1.42E-08	1.42E-10
37910.20	4.70	2.96E 00	2.32E-01	1.98E-02	1.49E-03	6.89E-05	1.29E-06	1.44E-08	1.44E-10
		2.65E 00	2.28E-01	1.97E-02	1.49E-03	6.89E-05	1.29E-06	1.44E-08	1.44E-10
38716.80	4.80	3.01E 00	2.35E-01	2.00E-02	1.51E-03	6.95E-05	1.31E-06	1.45E-08	1.45E-10
		2.70E 00	2.30E-01	1.99E-02	1.50E-03	6.95E-05	1.31E-06	1.45E-08	1.43E-10
39523.40	4.90	3.06E 00	2.38E-01	2.02E-02	1.52E-03	7.02E-05	1.32E-06	1.47E-08	1.47E-10
		2.75E 00	2.33E-01	2.01E-02	1.52E-03	7.02E-05	1.32E-06	1.47E-08	1.47E-10
40330.00	5.00	3.10E 00	2.40E-01	2.04E-02	1.53E-03	7.08E-05	1.33E-06	1.48E-08	1.48E-10
		2.79E 00	2.36E-01	2.03E-02	1.53E-03	7.08E-05	1.33E-06	1.48E-08	1.48E-10
41136.60	5.10	3.15E 00	2.43E-01	2.05E-02	1.54E-03	7.13E-05	1.34E-06	1.49E-08	1.49E-10
		2.83E 00	2.38E-01	2.05E-02	1.54E-03	7.13E-05	1.34E-06	1.49E-08	1.49E-10
41943.20	5.20	3.19E 00	2.45E-01	2.07E-02	1.55E-03	7.19E-05	1.35E-06	1.51E-08	1.51E-10
		2.87E 00	2.40E-01	2.06E-02	1.55E-03	7.19E-05	1.35E-06	1.51E-08	1.51E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 14000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
42749.80	5.30	3.23E 00	2.48E-01	2.08E-02	1.57E-03	7.24E-05	1.36E-06	1.52E-08	1.52E-10
		2.91E 00	2.43E-01	2.08E-02	1.56E-03	7.24E-05	1.36E-06	1.52E-08	1.52E-10
43556.40	5.40	3.28E 00	2.50E-01	2.10E-02	1.58E-03	7.29E-05	1.37E-06	1.53E-08	1.53E-10
		2.95E 00	2.45E-01	2.09E-02	1.57E-03	7.29E-05	1.37E-06	1.53E-08	1.53E-10
44363.00	5.50	3.31E 00	2.52E-01	2.11E-02	1.59E-03	7.33E-05	1.38E-06	1.54E-08	1.54E-10
		2.99E 00	2.47E-01	2.11E-02	1.58E-03	7.33E-05	1.38E-06	1.54E-08	1.54E-10
45169.60	5.60	3.35E 00	2.54E-01	2.13E-02	1.59E-03	7.38E-05	1.39E-06	1.55E-08	1.55E-10
		3.02E 00	2.49E-01	2.12E-02	1.59E-03	7.38E-05	1.39E-06	1.55E-08	1.55E-10
45976.20	5.70	3.39E 00	2.56E-01	2.14E-02	1.60E-03	7.42E-05	1.40E-06	1.56E-08	1.56E-10
		3.06E 00	2.51E-01	2.13E-02	1.60E-03	7.42E-05	1.40E-06	1.56E-08	1.56E-10
46782.80	5.80	3.43E 00	2.58E-01	2.15E-02	1.61E-03	7.46E-05	1.41E-06	1.57E-08	1.57E-10
		3.09E 00	2.53E-01	2.14E-02	1.61E-03	7.46E-05	1.41E-06	1.57E-08	1.57E-10
47589.40	5.90	3.47E 00	2.60E-01	2.16E-02	1.62E-03	7.50E-05	1.41E-06	1.58E-08	1.58E-10
		3.13E 00	2.55E-01	2.16E-02	1.62E-03	7.50E-05	1.41E-06	1.58E-08	1.58E-10
48396.00	6.00	3.50E 00	2.61E-01	2.18E-02	1.63E-03	7.54E-05	1.42E-06	1.59E-08	1.59E-10
		3.16E 00	2.56E-01	2.17E-02	1.63E-03	7.53E-05	1.42E-06	1.59E-08	1.59E-10
49202.60	6.10	3.54E 00	2.63E-01	2.19E-02	1.64E-03	7.57E-05	1.43E-06	1.59E-08	1.60E-10
		3.20E 00	2.58E-01	2.18E-02	1.64E-03	7.57E-05	1.43E-06	1.59E-08	1.60E-10
50009.20	6.20	3.57E 00	2.65E-01	2.20E-02	1.64E-03	7.60E-05	1.44E-06	1.60E-08	1.60E-10
		3.23E 00	2.60E-01	2.19E-02	1.64E-03	7.60E-05	1.44E-06	1.60E-08	1.60E-10
50815.80	6.30	3.60E 00	2.66E-01	2.21E-02	1.65E-03	7.64E-05	1.44E-06	1.61E-08	1.61E-10
		3.26E 00	2.61E-01	2.20E-02	1.65E-03	7.64E-05	1.44E-06	1.61E-08	1.61E-10
51622.40	6.40	3.64E 00	2.68E-01	2.22E-02	1.66E-03	7.67E-05	1.45E-06	1.62E-08	1.62E-10
		3.29E 00	2.63E-01	2.21E-02	1.66E-03	7.67E-05	1.45E-06	1.62E-08	1.62E-10
52429.00	6.50	3.67E 00	2.69E-01	2.23E-02	1.66E-03	7.70E-05	1.45E-06	1.62E-08	1.63E-10
		3.31E 00	2.64E-01	2.22E-02	1.66E-03	7.70E-05	1.45E-06	1.62E-08	1.63E-10
53235.60	6.60	3.70E 00	2.71E-01	2.24E-02	1.67E-03	7.72E-05	1.46E-06	1.63E-08	1.63E-10
		3.34E 00	2.66E-01	2.23E-02	1.67E-03	7.72E-05	1.46E-06	1.63E-08	1.63E-10
54042.20	6.70	3.73E 00	2.72E-01	2.24E-02	1.68E-03	7.75E-05	1.46E-06	1.64E-08	1.64E-10
		3.36E 00	2.67E-01	2.24E-02	1.67E-03	7.75E-05	1.46E-06	1.64E-08	1.64E-10
54848.80	6.80	3.75E 00	2.74E-01	2.25E-02	1.69E-03	7.78E-05	1.47E-06	1.64E-08	1.65E-10
		3.39E 00	2.68E-01	2.24E-02	1.68E-03	7.78E-05	1.47E-06	1.64E-08	1.65E-10
55655.40	6.90	3.78E 00	2.75E-01	2.26E-02	1.69E-03	7.80E-05	1.47E-06	1.65E-08	1.65E-10
		3.41E 00	2.69E-01	2.25E-02	1.68E-03	7.80E-05	1.47E-06	1.65E-08	1.65E-10
56462.00	7.00	3.81E 00	2.76E-01	2.27E-02	1.69E-03	7.82E-05	1.48E-06	1.65E-08	1.66E-10
		3.43E 00	2.70E-01	2.26E-02	1.69E-03	7.82E-05	1.48E-06	1.65E-08	1.66E-10
57268.60	7.10	3.83E 00	2.77E-01	2.27E-02	1.70E-03	7.85E-05	1.48E-06	1.66E-08	1.66E-10
		3.45E 00	2.71E-01	2.27E-02	1.69E-03	7.85E-05	1.48E-06	1.66E-08	1.66E-10
58075.20	7.20	3.85E 00	2.78E-01	2.28E-02	1.70E-03	7.87E-05	1.49E-06	1.66E-08	1.67E-10
		3.47E 00	2.73E-01	2.27E-02	1.70E-03	7.87E-05	1.49E-06	1.66E-08	1.67E-10
58881.80	7.30	3.88E 00	2.79E-01	2.29E-02	1.70E-03	7.89E-05	1.49E-06	1.67E-08	1.67E-10
		3.49E 00	2.74E-01	2.28E-02	1.70E-03	7.89E-05	1.49E-06	1.67E-08	1.67E-10
59688.40	7.40	3.90E 00	2.80E-01	2.29E-02	1.71E-03	7.91E-05	1.50E-06	1.67E-08	1.68E-10
		3.51E 00	2.74E-01	2.29E-02	1.71E-03	7.91E-05	1.50E-06	1.67E-08	1.68E-10

60495.00	7.50	3.92E 00	2.81E-01	2.30E-02	1.71E-03	7.93E-05	1.50E-06	1.68E-08	1.68E-10
		3.53E 00	2.75E-01	2.29E-02	1.71E-03	7.93E-05	1.50E-06	1.68E-08	1.68E-10
61301.60	7.60	3.94E 00	2.82E-01	2.31E-02	1.72E-03	7.95E-05	1.50E-06	1.68E-08	1.69E-10
		3.54E 00	2.76E-01	2.30E-02	1.72E-03	7.94E-05	1.50E-06	1.68E-08	1.69E-10
62108.20	7.70	3.96E 00	2.83E-01	2.31E-02	1.72E-03	7.96E-05	1.51E-06	1.68E-08	1.69E-10
		3.56E 00	2.77E-01	2.30E-02	1.72E-03	7.96E-05	1.51E-06	1.68E-08	1.69E-10
62914.80	7.80	3.98E 00	2.84E-01	2.32E-02	1.72E-03	7.98E-05	1.51E-06	1.69E-08	1.69E-10
		3.57E 00	2.78E-01	2.31E-02	1.72E-03	7.98E-05	1.51E-06	1.69E-08	1.69E-10
63721.40	7.90	4.00E 00	2.85E-01	2.32E-02	1.73E-03	7.99E-05	1.51E-06	1.69E-08	1.70E-10
		3.59E 00	2.79E-01	2.31E-02	1.73E-03	7.99E-05	1.51E-06	1.69E-08	1.70E-10
64528.00	8.00	4.02E 00	2.85E-01	2.33E-02	1.73E-03	8.01E-05	1.52E-06	1.69E-08	1.70E-10
		3.60E 00	2.79E-01	2.32E-02	1.73E-03	8.01E-05	1.52E-06	1.69E-08	1.70E-10
65334.60	8.10	4.03E 00	2.86E-01	2.33E-02	1.73E-03	8.02E-05	1.52E-06	1.70E-08	1.71E-10
		3.61E 00	2.80E-01	2.32E-02	1.73E-03	8.02E-05	1.52E-06	1.70E-08	1.71E-10
66141.20	8.20	4.05E 00	2.87E-01	2.33E-02	1.74E-03	8.03E-05	1.52E-06	1.70E-08	1.71E-10
		3.63E 00	2.81E-01	2.33E-02	1.73E-03	8.03E-05	1.52E-06	1.70E-08	1.71E-10
66947.80	8.30	4.07E 00	2.87E-01	2.34E-02	1.74E-03	8.05E-05	1.52E-06	1.70E-08	1.71E-10
		3.64E 00	2.81E-01	2.33E-02	1.74E-03	8.05E-05	1.52E-06	1.70E-08	1.71E-10
67754.40	8.40	4.09E 00	2.88E-01	2.34E-02	1.74E-03	8.06E-05	1.53E-06	1.71E-08	1.71E-10
		3.65E 00	2.82E-01	2.33E-02	1.74E-03	8.06E-05	1.53E-06	1.71E-08	1.71E-10
68561.00	8.50	4.10E 00	2.89E-01	2.35E-02	1.74E-03	8.07E-05	1.53E-06	1.71E-08	1.72E-10
		3.66E 00	2.82E-01	2.34E-02	1.74E-03	8.07E-05	1.53E-06	1.71E-08	1.72E-10
69367.60	8.60	4.12E 00	2.89E-01	2.35E-02	1.75E-03	8.08E-05	1.53E-06	1.71E-08	1.72E-10
		3.67E 00	2.83E-01	2.34E-02	1.74E-03	8.08E-05	1.53E-06	1.71E-08	1.72E-10
70174.20	8.70	4.13E 00	2.90E-01	2.35E-02	1.75E-03	8.09E-05	1.53E-06	1.71E-08	1.72E-10
		3.68E 00	2.83E-01	2.34E-02	1.75E-03	8.09E-05	1.53E-06	1.71E-08	1.72E-10
70980.80	8.80	4.15E 00	2.90E-01	2.36E-02	1.75E-03	8.10E-05	1.54E-06	1.72E-08	1.72E-10
		3.69E 00	2.84E-01	2.35E-02	1.75E-03	8.10E-05	1.54E-06	1.72E-08	1.72E-10
71787.40	8.90	4.17E 00	2.91E-01	2.36E-02	1.75E-03	8.11E-05	1.54E-06	1.72E-08	1.73E-10
		3.70E 00	2.84E-01	2.35E-02	1.75E-03	8.11E-05	1.54E-06	1.72E-08	1.73E-10
72594.00	9.00	4.18E 00	2.92E-01	2.36E-02	1.75E-03	8.12E-05	1.54E-06	1.72E-08	1.73E-10
		3.70E 00	2.85E-01	2.35E-02	1.75E-03	8.12E-05	1.54E-06	1.72E-08	1.73E-10
73400.60	9.10	4.20E 00	2.92E-01	2.36E-02	1.76E-03	8.13E-05	1.54E-06	1.72E-08	1.73E-10
		3.71E 00	2.85E-01	2.36E-02	1.75E-03	8.13E-05	1.54E-06	1.72E-08	1.73E-10
74207.20	9.20	4.21E 00	2.93E-01	2.37E-02	1.76E-03	8.14E-05	1.54E-06	1.72E-08	1.73E-10
		3.72E 00	2.86E-01	2.36E-02	1.76E-03	8.14E-05	1.54E-06	1.72E-08	1.73E-10
75013.80	9.30	4.23E 00	2.94E-01	2.38E-02	1.76E-03	8.15E-05	1.54E-06	1.73E-08	1.74E-10
		3.73E 00	2.86E-01	2.37E-02	1.76E-03	8.15E-05	1.54E-06	1.73E-08	1.74E-10
75820.40	9.40	4.25E 00	2.94E-01	2.38E-02	1.77E-03	8.17E-05	1.55E-06	1.73E-08	1.74E-10
		3.74E 00	2.87E-01	2.37E-02	1.77E-03	8.17E-05	1.55E-06	1.73E-08	1.74E-10
76627.00	9.50	4.26E 00	2.95E-01	2.38E-02	1.77E-03	8.18E-05	1.55E-06	1.73E-08	1.74E-10
		3.75E 00	2.88E-01	2.38E-02	1.77E-03	8.18E-05	1.55E-06	1.73E-08	1.74E-10
77433.60	9.60	4.28E 00	2.96E-01	2.39E-02	1.77E-03	8.20E-05	1.55E-06	1.74E-08	1.74E-10
		3.76E 00	2.88E-01	2.38E-02	1.77E-03	8.20E-05	1.55E-06	1.74E-08	1.74E-10
78240.20	9.70	4.30E 00	2.96E-01	2.39E-02	1.78E-03	8.21E-05	1.56E-06	1.74E-08	1.75E-10
		3.76E 00	2.89E-01	2.38E-02	1.78E-03	8.21E-05	1.56E-06	1.74E-08	1.75E-10
79046.80	9.80	4.31E 00	2.97E-01	2.40E-02	1.78E-03	8.23E-05	1.56E-06	1.74E-08	1.75E-10
		3.77E 00	2.89E-01	2.39E-02	1.78E-03	8.22E-05	1.56E-06	1.74E-08	1.75E-10
79853.40	9.90	4.33E 00	2.97E-01	2.40E-02	1.78E-03	8.24E-05	1.56E-06	1.74E-08	1.75E-10
		3.78E 00	2.90E-01	2.39E-02	1.78E-03	8.24E-05	1.56E-06	1.74E-08	1.75E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 14000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
80660.00	10.00	4.35E 00	2.98E-01	2.40E-02	1.78E-03	8.25E-05	1.96E-06	1.75E-08	1.76E-10
		3.78E 00	2.90E-01	2.39E-02	1.78E-03	8.25E-05	1.96E-06	1.75E-08	1.76E-10
81466.60	10.10	4.36E 00	2.99E-01	2.41E-02	1.79E-03	8.26E-05	1.96E-06	1.75E-08	1.76E-10
		3.79E 00	2.90E-01	2.40E-02	1.79E-03	8.26E-05	1.96E-06	1.75E-08	1.76E-10
82273.20	10.20	4.38E 00	2.99E-01	2.41E-02	1.79E-03	8.27E-05	1.97E-06	1.75E-08	1.76E-10
		3.80E 00	2.91E-01	2.40E-02	1.79E-03	8.27E-05	1.97E-06	1.75E-08	1.76E-10
83079.80	10.30	4.39E 00	3.00E-01	2.41E-02	1.79E-03	8.28E-05	1.97E-06	1.75E-08	1.76E-10
		3.80E 00	2.91E-01	2.40E-02	1.79E-03	8.28E-05	1.97E-06	1.75E-08	1.76E-10
83886.40	10.40	4.41E 00	3.00E-01	2.42E-02	1.79E-03	8.29E-05	1.97E-06	1.76E-08	1.77E-10
		3.81E 00	2.92E-01	2.41E-02	1.79E-03	8.29E-05	1.97E-06	1.76E-08	1.77E-10
84693.00	10.50	4.42E 00	3.01E-01	2.42E-02	1.79E-03	8.30E-05	1.97E-06	1.76E-08	1.77E-10
		3.81E 00	2.92E-01	2.41E-02	1.79E-03	8.30E-05	1.97E-06	1.76E-08	1.77E-10
85499.60	.60	4.44E 00	3.01E-01	2.42E-02	1.80E-03	8.31E-05	1.97E-06	1.76E-08	1.77E-10
		3.82E 00	2.92E-01	2.41E-02	1.80E-03	8.31E-05	1.97E-06	1.76E-08	1.77E-10
86306.20	10.70	4.88E 00	3.48E-01	2.86E-02	2.13E-03	8.32E-05	1.98E-06	1.76E-08	1.77E-10
		4.24E 00	3.39E-01	2.85E-02	2.13E-03	8.32E-05	1.98E-06	1.76E-08	1.77E-10
88726.00	11.00	5.36E 00	4.02E-01	3.37E-02	2.52E-03	1.01E-04	1.91E-06	2.14E-08	2.15E-10
		4.72E 00	3.93E-01	3.35E-02	2.52E-03	1.01E-04	1.91E-06	2.14E-08	2.15E-10
90742.50	11.25	5.75E 00	4.45E-01	3.76E-02	2.82E-03	1.15E-04	2.17E-06	2.43E-08	2.45E-10
		5.20E 00	4.36E-01	3.75E-02	2.82E-03	1.15E-04	2.17E-06	2.43E-08	2.45E-10
92759.00	11.50	6.08E 00	4.82E-01	4.11E-02	3.08E-03	1.27E-04	2.40E-06	2.69E-08	2.71E-10
		5.43E 00	4.73E-01	4.10E-02	3.08E-03	1.27E-04	2.40E-06	2.69E-08	2.71E-10
94775.50	11.75	6.36E 00	5.14E-01	4.41E-02	3.31E-03	1.37E-04	2.60E-06	2.91E-08	2.94E-10
		5.72E 00	5.05E-01	4.40E-02	3.31E-03	1.37E-04	2.60E-06	2.91E-08	2.94E-10
96792.00	12.00	7.42E 00	6.33E-01	5.51E-02	4.16E-03	1.76E-04	2.77E-06	3.10E-08	3.13E-10
		6.73E 00	6.24E-01	5.50E-02	4.16E-03	1.76E-04	2.77E-06	3.10E-08	3.13E-10
98808.50	12.25	8.34E 00	7.35E-01	6.47E-02	4.89E-03	2.09E-04	3.40E-06	3.81E-08	3.85E-10
		7.69E 00	7.26E-01	6.46E-02	4.88E-03	2.09E-04	3.40E-06	3.81E-08	3.85E-10
100825.00	12.50	9.13E 00	8.24E-01	7.30E-02	5.52E-03	2.38E-04	3.95E-06	4.42E-08	4.47E-10
		8.48E 00	8.15E-01	7.29E-02	5.52E-03	2.38E-04	3.95E-06	4.42E-08	4.47E-10
102841.50	12.75	9.86E 00	9.07E-01	8.07E-02	6.11E-03	2.65E-04	4.46E-06	4.95E-08	5.00E-10
		9.22E 00	8.98E-01	8.06E-02	6.10E-03	2.65E-04	4.46E-06	4.95E-08	5.00E-10
104858.00	13.00	1.05E 01	9.78E-01	8.74E-02	6.61E-03	2.88E-04	4.89E-06	5.44E-08	5.50E-10
		9.86E 00	9.69E-01	8.73E-02	6.61E-03	2.88E-04	4.89E-06	5.44E-08	5.50E-10
106874.50	13.25	1.10E 01	1.04E 00	9.31E-02	7.05E-03	3.08E-04	5.27E-06	5.86E-08	5.93E-10
		1.04E 01	1.03E 00	9.30E-02	7.05E-03	3.08E-04	5.27E-06	5.86E-08	5.93E-10
108891.00	13.50	1.17E 01	1.11E 00	1.00E-01	7.61E-03	3.35E-04	5.83E-06	6.22E-08	6.29E-10
		1.11E 01	1.11E 00	1.00E-01	7.61E-03	3.35E-04	5.83E-06	6.22E-08	6.29E-10
110907.50	13.75	1.24E 01	1.18E 00	1.06E-01	8.10E-03	3.59E-04	6.31E-06	6.77E-08	6.85E-10
		1.17E 01	1.17E 00	1.06E-01	8.10E-03	3.59E-04	6.31E-06	6.77E-08	6.85E-10
112924.00	14.00	1.31E 01	1.26E 00	1.13E-01	8.64E-03	3.85E-04	6.84E-06	7.36E-08	7.33E-10
		1.24E 01	1.25E 00	1.13E-01	8.64E-03	3.85E-04	6.84E-06	7.36E-08	7.33E-10
114940.50	14.25	1.36E 01	1.32E 00	1.19E-01	9.11E-03	4.08E-04	7.29E-06	7.80E-08	7.85E-10
		1.30E 01	1.31E 00	1.19E-01	9.11E-03	4.08E-04	7.29E-06	7.80E-08	7.85E-10

118957.00	14.50	1.48E 01	1.45E 00	1.31E-01	1.00E-02	4.51E-04	8.13E-06	8.82E-08	8.30E-10
		1.41E 01	1.44E 00	1.31E-01	1.00E-02	4.51E-04	8.13E-06	8.82E-08	8.30E-10
118973.50	14.75	1.58E 01	1.56E 00	1.42E-01	1.08E-02	4.89E-04	8.85E-06	9.63E-08	9.13E-10
		1.51E 01	1.55E 00	1.42E-01	1.08E-02	4.89E-04	8.85E-06	9.63E-08	9.13E-10
120990.00	15.00	1.67E 01	1.66E 00	1.51E-01	1.16E-02	5.22E-04	9.49E-06	1.04E-07	9.87E-10
		1.60E 01	1.65E 00	1.51E-01	1.15E-02	5.22E-04	9.49E-06	1.04E-07	9.87E-10
123006.50	15.25	1.74E 01	1.74E 00	1.59E-01	1.22E-02	5.51E-04	1.01E-05	1.10E-07	1.05E-09
		1.68E 01	1.73E 00	1.59E-01	1.22E-02	5.51E-04	1.01E-05	1.10E-07	1.05E-09
125023.00	15.50	1.81E 01	1.81E 00	1.66E-01	1.27E-02	5.75E-04	1.05E-05	1.15E-07	1.11E-09
		1.74E 01	1.80E 00	1.65E-01	1.27E-02	5.75E-04	1.05E-05	1.15E-07	1.11E-09
127039.50	15.75	1.86E 01	1.87E 00	1.71E-01	1.31E-02	5.96E-04	1.09E-05	1.20E-07	1.15E-09
		1.80E 01	1.87E 00	1.71E-01	1.31E-02	5.96E-04	1.09E-05	1.20E-07	1.15E-09
129056.00	16.00	1.91E 01	1.93E 00	1.76E-01	1.35E-02	6.14E-04	1.13E-05	1.24E-07	1.19E-09
		1.85E 01	1.92E 00	1.76E-01	1.35E-02	6.14E-04	1.13E-05	1.24E-07	1.19E-09
131072.50	16.25	1.95E 01	1.97E 00	1.80E-01	1.38E-02	6.29E-04	1.16E-05	1.27E-07	1.23E-09
		1.89E 01	1.96E 00	1.80E-01	1.38E-02	6.29E-04	1.16E-05	1.27E-07	1.23E-09
133089.00	16.50	1.99E 01	2.01E 00	1.84E-01	1.41E-02	6.42E-04	1.18E-05	1.30E-07	1.25E-09
		1.92E 01	2.00E 00	1.84E-01	1.41E-02	6.42E-04	1.18E-05	1.30E-07	1.25E-09
135105.50	16.75	2.02E 01	2.04E 00	1.87E-01	1.43E-02	6.54E-04	1.21E-05	1.32E-07	1.28E-09
		1.95E 01	2.03E 00	1.87E-01	1.43E-02	6.54E-04	1.21E-05	1.32E-07	1.28E-09
137122.00	17.00	2.04E 01	2.07E 00	1.90E-01	1.46E-02	6.64E-04	1.22E-05	1.35E-07	1.30E-09
		1.98E 01	2.06E 00	1.90E-01	1.46E-02	6.64E-04	1.22E-05	1.35E-07	1.30E-09
139138.50	17.25	2.06E 01	2.10E 00	1.92E-01	1.47E-02	6.73E-04	1.24E-05	1.37E-07	1.32E-09
		2.00E 01	2.09E 00	1.92E-01	1.47E-02	6.73E-04	1.24E-05	1.37E-07	1.32E-09
141155.00	17.50	2.08E 01	2.12E 00	1.94E-01	1.49E-02	6.80E-04	1.26E-05	1.38E-07	1.34E-09
		2.02E 01	2.11E 00	1.94E-01	1.49E-02	6.80E-04	1.26E-05	1.38E-07	1.34E-09
143171.50	17.75	2.10E 01	2.13E 00	1.96E-01	1.50E-02	6.86E-04	1.27E-05	1.40E-07	1.35E-09
		2.04E 01	2.13E 00	1.95E-01	1.50E-02	6.86E-04	1.27E-05	1.40E-07	1.35E-09
145188.00	18.00	2.11E 01	2.15E 00	1.97E-01	1.51E-02	6.91E-04	1.28E-05	1.41E-07	1.36E-09
		2.05E 01	2.14E 00	1.97E-01	1.51E-02	6.91E-04	1.28E-05	1.41E-07	1.36E-09
147204.50	18.25	2.12E 01	2.16E 00	1.98E-01	1.52E-02	6.95E-04	1.29E-05	1.42E-07	1.37E-09
		2.06E 01	2.15E 00	1.98E-01	1.52E-02	6.95E-04	1.29E-05	1.42E-07	1.37E-09
149221.00	18.50	2.13E 01	2.17E 00	1.99E-01	1.53E-02	6.99E-04	1.29E-05	1.42E-07	1.38E-09
		2.07E 01	2.16E 00	1.99E-01	1.53E-02	6.99E-04	1.29E-05	1.42E-07	1.38E-09
151237.50	18.75	2.14E 01	2.18E 00	2.00E-01	1.54E-02	7.02E-04	1.30E-05	1.43E-07	1.39E-09
		2.08E 01	2.17E 00	2.00E-01	1.53E-02	7.02E-04	1.30E-05	1.43E-07	1.39E-09
153254.00	19.00	2.15E 01	2.19E 00	2.01E-01	1.54E-02	7.05E-04	1.31E-05	1.44E-07	1.39E-09
		2.08E 01	2.18E 00	2.01E-01	1.54E-02	7.05E-04	1.31E-05	1.44E-07	1.39E-09
155271.50	19.25	2.15E 01	2.20E 00	2.01E-01	1.55E-02	7.07E-04	1.31E-05	1.44E-07	1.40E-09
		2.09E 01	2.19E 00	2.01E-01	1.55E-02	7.07E-04	1.31E-05	1.44E-07	1.40E-09
157287.00	19.50	2.16E 01	2.20E 00	2.02E-01	1.55E-02	7.09E-04	1.31E-05	1.45E-07	1.40E-09
		2.10E 01	2.19E 00	2.02E-01	1.55E-02	7.09E-04	1.31E-05	1.45E-07	1.40E-09
159303.50	19.75	2.16E 01	2.21E 00	2.02E-01	1.55E-02	7.11E-04	1.32E-05	1.45E-07	1.41E-09
		2.10E 01	2.20E 00	2.02E-01	1.55E-02	7.11E-04	1.32E-05	1.45E-07	1.41E-09
161320.00	20.00	2.17E 01	2.21E 00	2.03E-01	1.56E-02	7.12E-04	1.32E-05	1.45E-07	1.41E-09
		2.10E 01	2.20E 00	2.02E-01	1.56E-02	7.12E-04	1.32E-05	1.45E-07	1.41E-09
163336.50	20.25	2.17E 01	2.21E 00	2.03E-01	1.56E-02	7.13E-04	1.32E-05	1.46E-07	1.41E-09
		2.11E 01	2.20E 00	2.03E-01	1.56E-02	7.13E-04	1.32E-05	1.46E-07	1.41E-09
165353.00	20.50	2.17E 01	2.22E 00	2.03E-01	1.56E-02	7.14E-04	1.32E-05	1.46E-07	1.42E-09
		2.11E 01	2.21E 00	2.03E-01	1.56E-02	7.14E-04	1.32E-05	1.46E-07	1.42E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 14000°K

Wave Number (cm^{-1})	Photon Energy (eV)	Density = Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
167369.50	20.75	2.18E 01	2.22E 00	2.03E-01	1.56E-02	7.15E-04	1.33E-05	1.46E-07	1.42E-09
		2.11E 01	2.21E 00	2.03E-01	1.56E-02	7.15E-04	1.33E-05	1.46E-07	1.42E-09
169386.00	21.00	2.18E 01	2.22E 00	2.04E-01	1.56E-02	7.16E-04	1.33E-05	1.46E-07	1.42E-09
		2.11E 01	2.21E 00	2.03E-01	1.56E-02	7.16E-04	1.33E-05	1.46E-07	1.42E-09
171402.50	21.25	2.18E 01	2.22E 00	2.04E-01	1.56E-02	7.17E-04	1.33E-05	1.46E-07	1.42E-09
		2.11E 01	2.21E 00	2.04E-01	1.56E-02	7.17E-04	1.33E-05	1.46E-07	1.42E-09
173419.00	21.50	2.18E 01	2.22E 00	2.04E-01	1.57E-02	7.17E-04	1.33E-05	1.47E-07	1.42E-09
		2.12E 01	2.21E 00	2.04E-01	1.57E-02	7.17E-04	1.33E-05	1.47E-07	1.42E-09
175435.50	21.75	2.18E 01	2.22E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.42E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.17E-04	1.33E-05	1.47E-07	1.42E-09
177452.00	22.00	2.18E 01	2.23E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.42E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.42E-09
179468.50	22.25	2.18E 01	2.23E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.43E-09
181485.00	22.50	2.18E 01	2.23E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.18E-04	1.33E-05	1.47E-07	1.43E-09
183501.50	22.75	2.18E 01	2.23E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
185518.00	23.00	2.18E 01	2.23E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
187534.50	23.25	2.19E 01	2.23E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
189551.00	23.50	2.19E 01	2.23E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
191567.50	23.75	2.19E 01	2.23E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
193584.00	24.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
195600.50	24.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.19E-04	1.33E-05	1.47E-07	1.43E-09
197617.00	24.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.33E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.33E-05	1.47E-07	1.43E-09
199633.50	24.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
201650.00	25.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
203666.50	25.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
205683.00	25.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
207699.50	25.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
209716.00	26.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09

211732.50	26.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.04E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
213749.00	26.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
215766.50	26.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
217782.00	27.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
219798.50	27.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
221815.00	27.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
223831.50	27.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
225848.00	28.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
227864.50	28.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
229881.00	28.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
231897.50	28.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.43E-09
233914.00	29.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
235930.50	29.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
237947.00	29.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
239963.50	29.75	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
241980.00	30.00	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
243996.50	30.25	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.44E-09
246013.00	30.50	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
		2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 15000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density x Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	2.21E-01	2.12E-02	1.76E-03	9.99E-05	2.44E-06	2.90E-08	3.01E-10	3.20E-12
		2.21E-01	2.12E-02	1.76E-03	9.99E-05	2.44E-06	2.90E-08	3.01E-10	3.20E-12
5646.20	0.70	4.54E-01	4.37E-02	3.63E-03	2.06E-04	5.12E-06	5.93E-08	6.13E-10	6.67E-12
		4.54E-01	4.37E-02	3.63E-03	2.06E-04	5.12E-06	5.93E-08	6.13E-10	6.67E-12
6492.80	0.80	7.06E-01	6.80E-02	5.65E-03	3.21E-04	8.01E-06	9.43E-08	9.74E-10	1.01E-11
		7.06E-01	6.80E-02	5.65E-03	3.21E-04	8.01E-06	9.43E-08	9.74E-10	1.01E-11
7259.40	0.90	9.68E-01	9.34E-02	7.76E-03	4.41E-04	1.10E-05	1.32E-07	1.35E-09	1.41E-11
		9.67E-01	9.33E-02	7.76E-03	4.41E-04	1.10E-05	1.32E-07	1.35E-09	1.41E-11
8066.00	1.00	1.24E 00	1.20E-01	9.94E-03	5.65E-04	1.41E-05	1.70E-07	1.74E-09	1.82E-11
		1.24E 00	1.20E-01	9.94E-03	5.65E-04	1.41E-05	1.70E-07	1.74E-09	1.82E-11
8872.60	1.10	1.51E 00	1.46E-01	1.21E-02	6.88E-04	1.72E-05	2.08E-07	2.13E-09	2.23E-11
		1.50E 00	1.46E-01	1.21E-02	6.88E-04	1.72E-05	2.08E-07	2.13E-09	2.23E-11
9679.20	1.20	1.77E 00	1.71E-01	1.42E-02	8.06E-04	2.02E-05	2.44E-07	2.50E-09	2.61E-11
		1.76E 00	1.71E-01	1.42E-02	8.06E-04	2.02E-05	2.44E-07	2.50E-09	2.61E-11
10485.80	1.30	2.04E 00	1.97E-01	1.64E-02	9.30E-04	2.33E-05	2.77E-07	2.83E-09	2.96E-11
		2.03E 00	1.97E-01	1.64E-02	9.30E-04	2.33E-05	2.77E-07	2.83E-09	2.96E-11
11292.40	1.40	2.28E 00	2.20E-01	1.83E-02	1.04E-03	2.60E-05	3.09E-07	3.11E-09	3.27E-11
		2.27E 00	2.20E-01	1.83E-02	1.04E-03	2.60E-05	3.09E-07	3.11E-09	3.27E-11
12099.00	1.50	2.51E 00	2.42E-01	2.01E-02	1.14E-03	2.86E-05	3.36E-07	3.43E-09	3.56E-11
		2.50E 00	2.42E-01	2.01E-02	1.14E-03	2.86E-05	3.36E-07	3.43E-09	3.56E-11
12905.60	1.60	2.72E 00	2.62E-01	2.18E-02	1.24E-03	3.10E-05	3.65E-07	3.73E-09	3.87E-11
		2.70E 00	2.62E-01	2.18E-02	1.24E-03	3.10E-05	3.65E-07	3.73E-09	3.87E-11
13712.20	1.70	2.92E 00	2.81E-01	2.33E-02	1.33E-03	3.32E-05	3.92E-07	4.01E-09	4.16E-11
		2.90E 00	2.81E-01	2.33E-02	1.33E-03	3.32E-05	3.92E-07	4.01E-09	4.16E-11
14518.80	1.80	3.11E 00	2.98E-01	2.47E-02	1.41E-03	3.52E-05	4.16E-07	4.27E-09	4.47E-11
		3.08E 00	2.98E-01	2.47E-02	1.41E-03	3.52E-05	4.16E-07	4.27E-09	4.47E-11
15325.40	1.90	3.29E 00	3.14E-01	2.60E-02	1.48E-03	3.71E-05	4.41E-07	4.51E-09	4.73E-11
		3.26E 00	3.14E-01	2.60E-02	1.49E-03	3.71E-05	4.41E-07	4.51E-09	4.73E-11
16132.00	2.00	3.46E 00	3.29E-01	2.73E-02	1.55E-03	3.89E-05	4.63E-07	4.74E-09	4.98E-11
		3.42E 00	3.29E-01	2.73E-02	1.55E-03	3.89E-05	4.63E-07	4.74E-09	4.98E-11
16938.60	2.10	3.62E 00	3.44E-01	2.84E-02	1.62E-03	4.05E-05	4.83E-07	4.96E-09	5.21E-11
		3.58E 00	3.43E-01	2.84E-02	1.62E-03	4.05E-05	4.83E-07	4.96E-09	5.21E-11
17745.20	2.20	3.77E 00	3.57E-01	2.95E-02	1.68E-03	4.21E-05	5.02E-07	5.16E-09	5.45E-11
		3.72E 00	3.56E-01	2.95E-02	1.68E-03	4.21E-05	5.02E-07	5.16E-09	5.45E-11
18551.80	2.30	3.90E 00	3.69E-01	3.05E-02	1.73E-03	4.34E-05	5.19E-07	5.34E-09	5.67E-11
		3.86E 00	3.69E-01	3.05E-02	1.73E-03	4.34E-05	5.19E-07	5.34E-09	5.67E-11
19358.40	2.40	4.06E 00	3.83E-01	3.16E-02	1.79E-03	4.47E-05	5.34E-07	5.50E-09	5.87E-11
		4.01E 00	3.82E-01	3.16E-02	1.79E-03	4.47E-05	5.34E-07	5.50E-09	5.87E-11
20165.00	2.50	4.19E 00	3.95E-01	3.26E-02	1.85E-03	4.61E-05	5.48E-07	5.64E-09	6.05E-11
		4.15E 00	3.94E-01	3.26E-02	1.85E-03	4.61E-05	5.48E-07	5.64E-09	6.05E-11
20971.60	2.60	4.33E 00	4.07E-01	3.36E-02	1.91E-03	4.75E-05	5.64E-07	5.80E-09	6.21E-11
		4.29E 00	4.07E-01	3.36E-02	1.91E-03	4.75E-05	5.64E-07	5.80E-09	6.21E-11
21778.20	2.70	4.47E 00	4.19E-01	3.45E-02	1.96E-03	4.88E-05	5.80E-07	5.96E-09	6.40E-11
		4.42E 00	4.19E-01	3.45E-02	1.96E-03	4.88E-05	5.80E-07	5.96E-09	6.40E-11

22584.80	2.80	4.60E 00	4.30E-01	3.54E-02	2.01E-03	5.01E-05	5.96E-07	6.13E-09	6.59E-11
		4.55E 00	4.30E-01	3.54E-02	2.01E-03	5.01E-05	5.96E-07	6.13E-09	6.59E-11
23391.40	2.90	4.73E 00	4.41E-01	3.63E-02	2.06E-03	5.13E-05	6.11E-07	6.29E-09	6.76E-11
		4.67E 00	4.40E-01	3.63E-02	2.06E-03	5.13E-05	6.11E-07	6.29E-09	6.76E-11
24198.00	3.00	4.85E 00	4.51E-01	3.71E-02	2.10E-03	5.25E-05	6.26E-07	6.44E-09	6.95E-11
		4.79E 00	4.51E-01	3.71E-02	2.10E-03	5.25E-05	6.26E-07	6.44E-09	6.95E-11
25004.60	3.10	4.97E 00	4.61E-01	3.79E-02	2.15E-03	5.36E-05	6.39E-07	6.58E-09	7.12E-11
		4.90E 00	4.60E-01	3.79E-02	2.15E-03	5.36E-05	6.39E-07	6.58E-09	7.12E-11
25811.20	3.20	5.08E 00	4.70E-01	3.86E-02	2.19E-03	5.46E-05	6.52E-07	6.71E-09	7.27E-11
		5.01E 00	4.69E-01	3.86E-02	2.19E-03	5.46E-05	6.52E-07	6.71E-09	7.27E-11
26617.80	3.30	5.19E 00	4.79E-01	3.93E-02	2.23E-03	5.56E-05	6.64E-07	6.84E-09	7.42E-11
		5.12E 00	4.78E-01	3.93E-02	2.23E-03	5.56E-05	6.64E-07	6.84E-09	7.42E-11
27424.40	3.40	5.30E 00	4.87E-01	3.99E-02	2.26E-03	5.65E-05	6.75E-07	6.95E-09	7.55E-11
		5.21E 00	4.86E-01	3.99E-02	2.26E-03	5.65E-05	6.75E-07	6.95E-09	7.55E-11
28231.00	3.50	5.42E 00	4.95E-01	4.05E-02	2.29E-03	5.73E-05	6.85E-07	7.06E-09	7.67E-11
		5.32E 00	4.94E-01	4.05E-02	2.29E-03	5.73E-05	6.85E-07	7.06E-09	7.67E-11
29037.60	3.60	5.54E 00	5.03E-01	4.10E-02	2.32E-03	5.80E-05	6.94E-07	7.16E-09	7.78E-11
		5.43E 00	5.01E-01	4.10E-02	2.32E-03	5.80E-05	6.94E-07	7.16E-09	7.78E-11
29844.20	3.70	5.66E 00	5.10E-01	4.16E-02	2.35E-03	5.87E-05	7.03E-07	7.25E-09	7.94E-11
		5.54E 00	5.09E-01	4.15E-02	2.35E-03	5.87E-05	7.03E-07	7.25E-09	7.94E-11
30650.80	3.80	5.78E 00	5.19E-01	4.22E-02	2.38E-03	5.94E-05	7.11E-07	7.35E-09	8.08E-11
		5.66E 00	5.17E-01	4.21E-02	2.38E-03	5.94E-05	7.11E-07	7.35E-09	8.06E-11
31457.40	3.90	5.91E 00	5.27E-01	4.27E-02	2.42E-03	6.02E-05	7.19E-07	7.44E-09	8.23E-11
		5.77E 00	5.25E-01	4.27E-02	2.41E-03	6.02E-05	7.19E-07	7.44E-09	8.23E-11
32264.00	4.00	6.04E 00	5.35E-01	4.33E-02	2.45E-03	6.10E-05	7.28E-07	7.52E-09	8.36E-11
		5.89E 00	5.33E-01	4.33E-02	2.45E-03	6.10E-05	7.28E-07	7.52E-09	8.34E-11
33070.60	4.10	6.17E 00	5.44E-01	4.40E-02	2.48E-03	6.19E-05	7.38E-07	7.61E-09	8.51E-11
		6.02E 00	5.42E-01	4.40E-02	2.48E-03	6.19E-05	7.38E-07	7.61E-09	8.51E-11
33877.20	4.20	6.30E 00	5.53E-01	4.46E-02	2.52E-03	6.28E-05	7.49E-07	7.71E-09	8.65E-11
		6.14E 00	5.51E-01	4.46E-02	2.52E-03	6.28E-05	7.49E-07	7.71E-09	8.65E-11
34683.80	4.30	6.42E 00	5.61E-01	4.52E-02	2.55E-03	6.37E-05	7.60E-07	7.83E-09	8.80E-11
		6.26E 00	5.59E-01	4.52E-02	2.55E-03	6.37E-05	7.60E-07	7.83E-09	8.80E-11
35490.40	4.40	6.54E 00	5.69E-01	4.58E-02	2.59E-03	6.46E-05	7.70E-07	7.94E-09	8.95E-11
		6.38E 00	5.67E-01	4.58E-02	2.59E-03	6.46E-05	7.70E-07	7.94E-09	8.95E-11
36297.00	4.50	6.66E 00	5.77E-01	4.64E-02	2.62E-03	6.54E-05	7.80E-07	8.03E-09	9.10E-11
		6.49E 00	5.75E-01	4.64E-02	2.62E-03	6.54E-05	7.80E-07	8.05E-09	9.10E-11
37103.60	4.60	6.77E 00	5.84E-01	4.69E-02	2.65E-03	6.61E-05	7.90E-07	8.15E-09	9.24E-11
		6.60E 00	5.82E-01	4.69E-02	2.65E-03	6.61E-05	7.90E-07	8.15E-09	9.24E-11
37910.20	4.70	6.87E 00	5.92E-01	4.74E-02	2.68E-03	6.69E-05	7.99E-07	8.25E-09	9.37E-11
		6.70E 00	5.89E-01	4.74E-02	2.68E-03	6.69E-05	7.99E-07	8.25E-09	9.37E-11
38716.80	4.80	6.98E 00	5.98E-01	4.79E-02	2.70E-03	6.76E-05	8.08E-07	8.34E-09	9.49E-11
		6.81E 00	5.96E-01	4.79E-02	2.70E-03	6.76E-05	8.08E-07	8.34E-09	9.49E-11
39523.40	4.90	7.08E 00	6.05E-01	4.84E-02	2.73E-03	6.82E-05	8.16E-07	8.43E-09	9.61E-11
		6.91E 00	6.03E-01	4.84E-02	2.73E-03	6.82E-05	8.16E-07	8.43E-09	9.61E-11
40330.00	5.00	7.17E 00	6.11E-01	4.89E-02	2.78E-03	6.89E-05	8.24E-07	8.51E-09	9.72E-11
		7.00E 00	6.09E-01	4.88E-02	2.75E-03	6.89E-05	8.24E-07	8.51E-09	9.72E-11
41136.60	5.10	7.27E 00	6.17E-01	4.93E-02	2.78E-03	6.95E-05	8.32E-07	8.60E-09	9.83E-11
		7.09E 00	6.15E-01	4.93E-02	2.78E-03	6.95E-05	8.32E-07	8.60E-09	9.83E-11
41943.20	5.20	7.36E 00	6.23E-01	4.97E-02	2.80E-03	7.01E-05	8.39E-07	8.68E-09	9.93E-11
		7.18E 00	6.21E-01	4.97E-02	2.80E-03	7.01E-05	8.39E-07	8.68E-09	9.93E-11

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 16000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
42749.80	5.30	7.44E 00	6.29E-01	5.01E-02	2.82E-03	7.87E-05	8.46E-07	8.79E-09	1.00E-10
		7.27E 00	6.27E-01	5.01E-02	2.82E-03	7.87E-05	8.46E-07	8.79E-09	1.00E-10
43556.40	5.40	7.53E 00	6.34E-01	5.05E-02	2.85E-03	7.12E-05	8.53E-07	8.82E-09	1.01E-10
		7.35E 00	6.32E-01	5.05E-02	2.85E-03	7.12E-05	8.53E-07	8.82E-09	1.01E-10
44363.00	5.50	7.61E 00	6.40E-01	5.09E-02	2.87E-03	7.17E-05	8.60E-07	8.89E-09	1.02E-10
		7.43E 00	6.37E-01	5.09E-02	2.87E-03	7.17E-05	8.60E-07	8.89E-09	1.02E-10
45169.60	5.60	7.69E 00	6.45E-01	5.12E-02	2.89E-03	7.22E-05	8.66E-07	8.96E-09	1.03E-10
		7.51E 00	6.42E-01	5.12E-02	2.89E-03	7.22E-05	8.66E-07	8.96E-09	1.03E-10
45976.20	5.70	7.77E 00	6.50E-01	5.16E-02	2.90E-03	7.27E-05	8.72E-07	9.03E-09	1.04E-10
		7.59E 00	6.47E-01	5.16E-02	2.90E-03	7.27E-05	8.72E-07	9.03E-09	1.04E-10
46782.80	5.80	7.85E 00	6.55E-01	5.19E-02	2.92E-03	7.32E-05	8.78E-07	9.09E-09	1.05E-10
		7.67E 00	6.52E-01	5.19E-02	2.92E-03	7.32E-05	8.78E-07	9.09E-09	1.05E-10
47589.40	5.90	7.93E 00	6.60E-01	5.23E-02	2.94E-03	7.37E-05	8.84E-07	9.15E-09	1.05E-10
		7.75E 00	6.57E-01	5.22E-02	2.94E-03	7.37E-05	8.84E-07	9.15E-09	1.05E-10
48396.00	6.00	8.01E 00	6.64E-01	5.26E-02	2.96E-03	7.41E-05	8.90E-07	9.21E-09	1.06E-10
		7.83E 00	6.62E-01	5.25E-02	2.96E-03	7.41E-05	8.90E-07	9.21E-09	1.06E-10
49202.60	6.10	8.08E 00	6.69E-01	5.29E-02	2.97E-03	7.45E-05	8.95E-07	9.27E-09	1.07E-10
		7.90E 00	6.66E-01	5.28E-02	2.97E-03	7.45E-05	8.95E-07	9.27E-09	1.07E-10
50009.20	6.20	8.16E 00	6.73E-01	5.32E-02	2.99E-03	7.49E-05	9.00E-07	9.33E-09	1.08E-10
		7.97E 00	6.71E-01	5.31E-02	2.99E-03	7.49E-05	9.00E-07	9.33E-09	1.08E-10
50815.80	6.30	8.23E 00	6.77E-01	5.34E-02	3.01E-03	7.53E-05	9.05E-07	9.39E-09	1.09E-10
		8.04E 00	6.75E-01	5.34E-02	3.01E-03	7.53E-05	9.05E-07	9.39E-09	1.09E-10
51622.40	6.40	8.29E 00	6.81E-01	5.37E-02	3.02E-03	7.57E-05	9.10E-07	9.44E-09	1.10E-10
		8.11E 00	6.79E-01	5.37E-02	3.02E-03	7.57E-05	9.10E-07	9.44E-09	1.10E-10
52429.00	6.50	8.36E 00	6.85E-01	5.40E-02	3.04E-03	7.61E-05	9.15E-07	9.49E-09	1.11E-10
		8.17E 00	6.83E-01	5.39E-02	3.03E-03	7.61E-05	9.15E-07	9.49E-09	1.11E-10
53235.60	6.60	8.43E 00	6.89E-01	5.42E-02	3.05E-03	7.64E-05	9.19E-07	9.54E-09	1.12E-10
		8.23E 00	6.86E-01	5.42E-02	3.05E-03	7.64E-05	9.19E-07	9.54E-09	1.12E-10
54042.20	6.70	8.49E 00	6.92E-01	5.45E-02	3.06E-03	7.68E-05	9.23E-07	9.59E-09	1.13E-10
		8.29E 00	6.90E-01	5.44E-02	3.06E-03	7.68E-05	9.23E-07	9.59E-09	1.13E-10
54848.80	6.80	8.55E 00	6.96E-01	5.47E-02	3.08E-03	7.71E-05	9.27E-07	9.64E-09	1.14E-10
		8.35E 00	6.93E-01	5.47E-02	3.07E-03	7.71E-05	9.27E-07	9.64E-09	1.14E-10
55655.40	6.90	8.61E 00	6.99E-01	5.49E-02	3.09E-03	7.74E-05	9.31E-07	9.69E-09	1.15E-10
		8.40E 00	6.97E-01	5.49E-02	3.09E-03	7.74E-05	9.31E-07	9.69E-09	1.15E-10
56462.00	7.00	8.66E 00	7.03E-01	5.52E-02	3.10E-03	7.77E-05	9.35E-07	9.73E-09	1.16E-10
		8.46E 00	7.00E-01	5.51E-02	3.10E-03	7.77E-05	9.35E-07	9.73E-09	1.16E-10
57268.60	7.10	8.72E 00	7.06E-01	5.54E-02	3.11E-03	7.80E-05	9.39E-07	9.77E-09	1.17E-10
		8.51E 00	7.03E-01	5.53E-02	3.11E-03	7.80E-05	9.39E-07	9.77E-09	1.17E-10
58075.20	7.20	8.77E 00	7.09E-01	5.56E-02	3.12E-03	7.83E-05	9.43E-07	9.81E-09	1.17E-10
		8.56E 00	7.06E-01	5.55E-02	3.12E-03	7.83E-05	9.43E-07	9.81E-09	1.17E-10
58881.80	7.30	8.82E 00	7.12E-01	5.58E-02	3.13E-03	7.86E-05	9.46E-07	9.85E-09	1.18E-10
		8.61E 00	7.09E-01	5.57E-02	3.13E-03	7.86E-05	9.46E-07	9.85E-09	1.18E-10
59688.40	7.40	8.87E 00	7.14E-01	5.60E-02	3.14E-03	7.88E-05	9.50E-07	9.89E-09	1.19E-10
		8.65E 00	7.12E-01	5.59E-02	3.14E-03	7.88E-05	9.50E-07	9.89E-09	1.19E-10

60495.00	7.50	8.91E 00	7.17E-01	5.62E-02	3.15E-03	7.91E-05	9.93E-07	9.92E	1.19E-10
		8.70E 00	7.14E-01	5.61E-02	3.15E-03	7.91E-05	9.93E-07	9.92E-09	1.19E-10
61301.60	7.60	8.96E 00	7.20E-01	5.63E-02	3.16E-03	7.93E-05	9.96E-07	9.96E-09	1.20E-10
		8.74E 00	7.17E-01	5.63E-02	3.16E-03	7.93E-05	9.96E-07	9.96E-09	1.20E-10
62108.20	7.70	9.00E 00	7.22E-01	5.65E-02	3.17E-03	7.96E-05	9.99E-07	9.99E-09	1.20E-10
		8.78E 00	7.20E-01	5.65E-02	3.17E-03	7.96E-05	9.99E-07	9.99E-09	1.20E-10
62914.80	7.80	9.05E 00	7.25E-01	5.67E-02	3.18E-03	7.98E-05	9.62E-07	1.00E-08	1.21E-10
		8.82E 00	7.22E-01	5.66E-02	3.18E-03	7.98E-05	9.62E-07	1.00E-08	1.21E-10
63721.40	7.90	9.09E 00	7.27E-01	5.68E-02	3.19E-03	8.00E-05	9.64E-07	1.01E-08	1.21E-10
		8.86E 00	7.24E-01	5.68E-02	3.19E-03	8.00E-05	9.64E-07	1.01E-08	1.21E-10
64528.00	8.00	9.13E 00	7.29E-01	5.70E-02	3.20E-03	8.02E-05	9.67E-07	1.01E-08	1.22E-10
		8.90E 00	7.26E-01	5.69E-02	3.20E-03	8.02E-05	9.67E-07	1.01E-08	1.22E-10
65334.60	8.10	9.17E 00	7.31E-01	5.71E-02	3.21E-03	8.04E-05	9.70E-07	1.01E-08	1.22E-10
		8.93E 00	7.29E-01	5.71E-02	3.20E-03	8.04E-05	9.70E-07	1.01E-08	1.22E-10
66141.20	8.20	9.20E 00	7.34E-01	5.72E-02	3.21E-03	8.06E-05	9.72E-07	1.01E-08	1.23E-10
		8.96E 00	7.31E-01	5.72E-02	3.21E-03	8.06E-05	9.72E-07	1.01E-08	1.23E-10
66947.80	8.30	9.24E 00	7.36E-01	5.74E-02	3.22E-03	8.08E-05	9.74E-07	1.02E-08	1.23E-10
		9.00E 00	7.33E-01	5.73E-02	3.22E-03	8.08E-05	9.74E-07	1.02E-08	1.23E-10
67754.40	8.40	9.28E 00	7.37E-01	5.75E-02	3.23E-03	8.10E-05	9.77E-07	1.02E-08	1.23E-10
		9.03E 00	7.34E-01	5.75E-02	3.23E-03	8.10E-05	9.77E-07	1.02E-08	1.23E-10
68561.00	8.50	9.31E 00	7.39E-01	5.76E-02	3.23E-03	8.12E-05	9.79E-07	1.02E-08	1.24E-10
		9.06E 00	7.36E-01	5.76E-02	3.23E-03	8.12E-05	9.79E-07	1.02E-08	1.24E-10
69367.60	8.60	9.34E 00	7.41E-01	5.78E-02	3.24E-03	8.13E-05	9.81E-07	1.02E-08	1.24E-10
		9.09E 00	7.38E-01	5.77E-02	3.24E-03	8.13E-05	9.81E-07	1.02E-08	1.24E-10
70174.20	8.70	9.38E 00	7.43E-01	5.79E-02	3.25E-03	8.15E-05	9.83E-07	1.03E-08	1.25E-10
		9.11E 00	7.40E-01	5.78E-02	3.25E-03	8.15E-05	9.83E-07	1.03E-08	1.25E-10
70980.80	8.80	9.41E 00	7.44E-01	5.80E-02	3.25E-03	8.17E-05	9.85E-07	1.03E-08	1.25E-10
		9.14E 00	7.41E-01	5.79E-02	3.25E-03	8.16E-05	9.85E-07	1.03E-08	1.25E-10
71787.40	8.90	9.44E 00	7.46E-01	5.81E-02	3.26E-03	8.18E-05	9.87E-07	1.03E-08	1.26E-10
		9.16E 00	7.43E-01	5.80E-02	3.26E-03	8.18E-05	9.87E-07	1.03E-08	1.26E-10
72594.00	9.00	9.47E 00	7.48E-01	5.82E-02	3.26E-03	8.19E-05	9.89E-07	1.03E-08	1.26E-10
		9.19E 00	7.44E-01	5.81E-02	3.26E-03	8.19E-05	9.89E-07	1.03E-08	1.26E-10
73400.60	9.10	9.50E 00	7.49E-01	5.83E-02	3.27E-03	8.21E-05	9.90E-07	1.03E-08	1.27E-10
		9.21E 00	7.46E-01	5.82E-02	3.27E-03	8.21E-05	9.90E-07	1.03E-08	1.27E-10
74207.20	9.20	9.53E 00	7.52E-01	5.85E-02	3.28E-03	8.23E-05	9.92E-07	1.04E-08	1.27E-10
		9.25E 00	7.48E-01	5.84E-02	3.28E-03	8.23E-05	9.92E-07	1.04E-08	1.27E-10
75013.80	9.30	9.57E 00	7.54E-01	5.87E-02	3.29E-03	8.20E-05	9.94E-07	1.04E-08	1.28E-10
		9.28E 00	7.51E-01	5.86E-02	3.29E-03	8.26E-05	9.94E-07	1.04E-08	1.28E-10
75820.40	9.40	9.61E 00	7.57E-01	5.88E-02	3.30E-03	8.28E-05	9.97E-07	1.04E-08	1.28E-10
		9.31E 00	7.53E-01	5.88E-02	3.30E-03	8.28E-05	9.97E-07	1.04E-08	1.28E-10
76627.00	9.50	9.65E 00	7.59E-01	5.90E-02	3.31E-03	8.31E-05	10.00E-07	1.05E-08	1.29E-10
		9.34E 00	7.55E-01	5.90E-02	3.31E-03	8.31E-05	10.00E-07	1.05E-08	1.29E-10
77433.60	9.60	9.68E 00	7.61E-01	5.92E-02	3.32E-03	8.33E-05	1.00E-06	1.05E-08	1.29E-10
		9.37E 00	7.57E-01	5.91E-02	3.32E-03	8.33E-05	1.00E-06	1.05E-08	1.29E-10
78240.20	9.70	9.72E 00	7.63E-01	5.93E-02	3.33E-03	8.35E-05	1.01E-06	1.05E-08	1.29E-10
		9.40E 00	7.60E-01	5.93E-02	3.33E-03	8.35E-05	1.01E-06	1.05E-08	1.29E-10
79046.80	9.80	9.75E 00	7.65E-01	5.95E-02	3.33E-03	8.37E-05	1.01E-06	1.05E-08	1.30E-10
		9.43E 00	7.62E-01	5.94E-02	3.33E-03	8.37E-05	1.01E-06	1.05E-08	1.30E-10
79853.40	9.90	9.78E 00	7.67E-01	5.96E-02	3.34E-03	8.39E-05	1.01E-06	1.06E-08	1.30E-10
		9.45E 00	7.63E-01	5.96E-02	3.34E-03	8.39E-05	1.01E-06	1.06E-08	1.30E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 10000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
80660.00	10.00	9.81E 00	7.69E-01	5.98E-02	3.35E-03	8.41E-05	1.01E-06	1.06E-08	1.31E-10
		9.47E 00	7.65E-01	5.97E-02	3.35E-03	8.41E-05	1.01E-06	1.06E-08	1.31E-10
81466.60	10.10	9.64E 00	7.71E-01	5.99E-02	3.36E-03	8.43E-05	1.01E-06	1.06E-08	1.31E-10
		9.50E 00	7.67E-01	5.98E-02	3.36E-03	8.43E-05	1.01E-06	1.06E-08	1.31E-10
82273.20	10.20	9.87E 00	7.73E-01	6.00E-02	3.36E-03	8.45E-05	1.02E-06	1.06E-08	1.32E-10
		9.52E 00	7.69E-01	6.00E-02	3.36E-03	8.45E-05	1.02E-06	1.06E-08	1.32E-10
83079.80	10.30	9.90E 00	7.74E-01	6.01E-02	3.37E-03	8.46E-05	1.02E-06	1.07E-08	1.32E-10
		9.54E 00	7.70E-01	6.01E-02	3.37E-03	8.46E-05	1.02E-06	1.07E-08	1.32E-10
83886.40	10.40	9.93E 00	7.76E-01	6.02E-02	3.38E-03	8.48E-05	1.02E-06	1.07E-08	1.32E-10
		9.56E 00	7.72E-01	6.02E-02	3.38E-03	8.48E-05	1.02E-06	1.07E-08	1.32E-10
84693.00	10.50	9.95E 00	7.77E-01	6.04E-02	3.38E-03	8.49E-05	1.02E-06	1.07E-08	1.33E-10
		9.58E 00	7.73E-01	6.03E-02	3.38E-03	8.49E-05	1.02E-06	1.07E-08	1.33E-10
85499.60	10.60	9.98E 00	7.79E-01	6.05E-02	3.39E-03	8.51E-05	1.02E-06	1.07E-08	1.33E-10
		9.60E 00	7.75E-01	6.04E-02	3.39E-03	8.51E-05	1.02E-06	1.07E-08	1.33E-10
86306.20	10.70	1.11E 01	8.84E-01	6.91E-02	3.87E-03	8.54E-05	1.03E-06	1.08E-08	1.33E-10
		1.07E 01	8.80E-01	6.91E-02	3.87E-03	8.54E-05	1.03E-06	1.08E-08	1.33E-10
88726.00	11.00	1.23E 01	1.01E 00	7.95E-02	4.45E-03	9.94E-05	1.20E-06	1.25E-08	1.53E-10
		1.19E 01	1.01E 00	7.95E-02	4.45E-03	9.94E-05	1.20E-06	1.23E-08	1.53E-10
90742.50	11.25	1.33E 01	1.11E 00	8.79E-02	4.92E-03	1.11E-04	1.34E-06	1.40E-08	1.68E-10
		1.30E 01	1.11E 00	8.79E-02	4.91E-03	1.11E-04	1.34E-06	1.40E-08	1.68E-10
92759.00	11.50	1.43E 01	1.20E 00	9.54E-02	5.33E-03	1.21E-04	1.46E-06	1.53E-08	1.82E-10
		1.39E 01	1.20E 00	9.53E-02	5.33E-03	1.21E-04	1.46E-06	1.53E-08	1.82E-10
94775.50	11.75	1.51E 01	1.28E 00	1.02E-01	5.70E-03	1.30E-04	1.57E-06	1.64E-08	1.94E-10
		1.47E 01	1.28E 00	1.02E-01	5.70E-03	1.30E-04	1.57E-06	1.64E-08	1.94E-10
96792.00	12.00	1.78E 01	1.56E 00	1.25E-01	6.96E-03	1.61E-04	1.67E-06	1.74E-08	2.04E-10
		1.74E 01	1.55E 00	1.25E-01	6.95E-03	1.61E-04	1.67E-06	1.74E-08	2.04E-10
98808.50	12.25	2.03E 01	1.80E 00	1.45E-01	8.07E-03	1.88E-04	2.00E-06	2.08E-08	2.39E-10
		1.99E 01	1.80E 00	1.45E-01	8.07E-03	1.88E-04	2.00E-06	2.08E-08	2.39E-10
100825.00	12.50	2.24E 01	2.02E 00	1.63E-01	9.06E-03	2.12E-04	2.30E-06	2.38E-08	2.69E-10
		2.20E 01	2.01E 00	1.63E-01	9.06E-03	2.12E-04	2.30E-06	2.38E-08	2.69E-10
102841.50	12.75	2.45E 01	2.22E 00	1.80E-01	1.00E-02	2.35E-04	2.58E-06	2.65E-08	2.97E-10
		2.41E 01	2.22E 00	1.80E-01	1.00E-02	2.35E-04	2.58E-06	2.65E-08	2.97E-10
104858.00	13.00	2.64E 01	2.41E 00	1.95E-01	1.09E-02	2.56E-04	2.83E-06	2.91E-08	3.23E-10
		2.60E 01	2.40E 00	1.95E-01	1.09E-02	2.56E-04	2.83E-06	2.91E-08	3.23E-10
106874.50	13.25	2.80E 01	2.57E 00	2.08E-01	1.16E-02	2.74E-04	3.06E-06	3.14E-08	3.45E-10
		2.76E 01	2.57E 00	2.08E-01	1.16E-02	2.74E-04	3.06E-06	3.14E-08	3.45E-10
108891.00	13.50	3.00E 01	2.77E 00	2.25E-01	1.26E-02	2.99E-04	3.37E-06	3.33E-08	3.65E-10
		2.96E 01	2.76E 00	2.25E-01	1.26E-02	2.99E-04	3.37E-06	3.33E-08	3.65E-10
110907.50	13.75	3.17E 01	2.94E 00	2.39E-01	1.34E-02	3.21E-04	3.64E-06	3.62E-08	3.94E-10
		3.13E 01	2.93E 00	2.39E-01	1.34E-02	3.21E-04	3.64E-06	3.62E-08	3.94E-10
112924.00	14.00	3.37E 01	3.14E 00	2.56E-01	1.44E-02	3.46E-04	3.96E-06	3.94E-08	4.28E-10
		3.33E 01	3.13E 00	2.56E-01	1.44E-02	3.46E-04	3.96E-06	3.94E-08	4.28E-10
114940.50	14.25	3.55E 01	3.32E 00	2.71E-01	1.52E-02	3.68E-04	4.23E-06	4.22E-08	4.49E-10
		3.51E 01	3.31E 00	2.71E-01	1.52E-02	3.68E-04	4.23E-06	4.22E-08	4.49E-10

116957.00	14.50	3.87E 01	3.64E 00	3.06E-01	1.71E-02	4.11E-04	4.75E-06	4.76E-08	4.74E-10
		3.83E 01	3.63E 00	3.06E-01	1.71E-02	4.11E-04	4.76E-06	4.76E-08	4.74E-10
118973.50	14.75	4.17E 01	3.93E 00	3.38E-01	1.87E-02	4.50E-04	5.22E-06	5.23E-08	5.21E-10
		4.13E 01	3.93E 00	3.38E-01	1.87E-02	4.50E-04	5.22E-06	5.23E-08	5.21E-10
120990.00	15.00	4.43E 01	4.19E 00	3.66E-01	2.02E-02	4.85E-04	5.65E-06	5.67E-08	5.64E-10
		4.39E 01	4.18E 00	3.66E-01	2.02E-02	4.85E-04	5.65E-06	5.67E-08	5.64E-10
123006.50	15.25	4.66E 01	4.42E 00	3.91E-01	2.15E-02	5.16E-04	6.02E-06	6.05E-08	6.02E-10
		4.62E 01	4.41E 00	3.91E-01	2.15E-02	5.16E-04	6.02E-06	6.05E-08	6.02E-10
125023.00	15.50	4.86E 01	4.62E 00	4.13E-01	2.26E-02	5.43E-04	6.36E-06	6.39E-08	6.35E-10
		4.82E 01	4.61E 00	4.13E-01	2.26E-02	5.43E-04	6.36E-06	6.39E-08	6.35E-10
127039.50	15.75	5.04E 01	4.80E 00	4.32E-01	2.36E-02	5.67E-04	6.65E-06	6.69E-08	6.64E-10
		5.00E 01	4.79E 00	4.32E-01	2.36E-02	5.67E-04	6.65E-06	6.69E-08	6.64E-10
129056.00	16.00	5.19E 01	4.95E 00	4.49E-01	2.45E-02	5.88E-04	6.90E-06	6.95E-08	6.90E-10
		5.15E 01	4.95E 00	4.49E-01	2.45E-02	5.88E-04	6.90E-06	6.95E-08	6.90E-10
131072.50	16.25	5.33E 01	5.08E 00	4.63E-01	2.53E-02	6.06E-04	7.13E-06	7.18E-08	7.12E-10
		5.29E 01	5.08E 00	4.63E-01	2.53E-02	6.06E-04	7.13E-06	7.18E-08	7.12E-10
133089.00	16.50	5.45E 01	5.20E 00	4.76E-01	2.59E-02	6.22E-04	7.32E-06	7.38E-08	7.32E-10
		5.41E 01	5.20E 00	4.76E-01	2.59E-02	6.22E-04	7.32E-06	7.38E-08	7.32E-10
135105.50	16.75	5.56E 01	5.31E 00	4.88E-01	2.65E-02	6.37E-04	7.49E-06	7.55E-08	7.49E-10
		5.52E 01	5.31E 00	4.88E-01	2.65E-02	6.37E-04	7.49E-06	7.55E-08	7.49E-10
137122.00	17.00	5.65E 01	5.40E 00	4.98E-01	2.71E-02	6.50E-04	7.65E-06	7.71E-08	7.65E-10
		5.61E 01	5.40E 00	4.98E-01	2.71E-02	6.50E-04	7.65E-06	7.71E-08	7.65E-10
139138.50	17.25	5.73E 01	5.48E 00	5.07E-01	2.75E-02	6.61E-04	7.79E-06	7.86E-08	7.79E-10
		5.69E 01	5.48E 00	5.07E-01	2.75E-02	6.61E-04	7.79E-06	7.86E-08	7.79E-10
141155.00	17.50	5.80E 01	5.55E 00	5.14E-01	2.79E-02	6.71E-04	7.91E-06	7.98E-08	7.91E-10
		5.76E 01	5.55E 00	5.14E-01	2.79E-02	6.71E-04	7.91E-06	7.98E-08	7.91E-10
143171.50	17.75	5.86E 01	5.62E 00	5.21E-01	2.83E-02	6.80E-04	8.01E-06	8.08E-08	8.01E-10
		5.83E 01	5.61E 00	5.21E-01	2.83E-02	6.80E-04	8.01E-06	8.08E-08	8.01E-10
145188.00	18.00	5.92E 01	5.67E 00	5.27E-01	2.86E-02	6.87E-04	8.10E-06	8.18E-08	8.11E-10
		5.88E 01	5.66E 00	5.26E-01	2.86E-02	6.87E-04	8.10E-06	8.18E-08	8.11E-10
147204.50	18.25	5.96E 01	5.71E 00	5.31E-01	2.89E-02	6.93E-04	8.18E-06	8.26E-08	8.19E-10
		5.92E 01	5.71E 00	5.31E-01	2.89E-02	6.93E-04	8.18E-06	8.26E-08	8.19E-10
149221.00	18.50	6.00E 01	5.76E 00	5.36E-01	2.91E-02	6.99E-04	8.25E-06	8.33E-08	8.25E-10
		5.97E 01	5.75E 00	5.36E-01	2.91E-02	6.99E-04	8.25E-06	8.33E-08	8.25E-10
151237.50	18.75	6.04E 01	5.79E 00	5.40E-01	2.93E-02	7.04E-04	8.31E-06	8.39E-08	8.32E-10
		6.00E 01	5.79E 00	5.40E-01	2.93E-02	7.04E-04	8.31E-06	8.39E-08	8.32E-10
153254.00	19.00	6.07E 01	5.82E 00	5.43E-01	2.95E-02	7.08E-04	8.36E-06	8.44E-08	8.37E-10
		6.03E 01	5.82E 00	5.43E-01	2.95E-02	7.08E-04	8.36E-06	8.44E-08	8.37E-10
155270.50	19.25	6.10E 01	5.85E 00	5.46E-01	2.96E-02	7.12E-04	8.41E-06	8.49E-08	8.42E-10
		6.06E 01	5.84E 00	5.46E-01	2.96E-02	7.12E-04	8.41E-06	8.49E-08	8.42E-10
157287.00	19.50	6.12E 01	5.87E 00	5.48E-01	2.97E-02	7.15E-04	8.45E-06	8.53E-08	8.46E-10
		6.08E 01	5.87E 00	5.48E-01	2.97E-02	7.15E-04	8.45E-06	8.53E-08	8.46E-10
159303.50	19.75	6.14E 01	5.89E 00	5.50E-01	2.99E-02	7.18E-04	8.48E-06	8.57E-08	8.49E-10
		6.10E 01	5.89E 00	5.50E-01	2.98E-02	7.18E-04	8.48E-06	8.57E-08	8.49E-10
161320.00	20.00	6.16E 01	5.91E 00	5.52E-01	2.99E-02	7.20E-04	8.51E-06	8.60E-08	8.52E-10
		6.12E 01	5.90E 00	5.52E-01	2.99E-02	7.20E-04	8.51E-06	8.60E-08	8.52E-10
163336.50	20.25	6.17E 01	5.92E 00	5.54E-01	3.00E-02	7.23E-04	8.54E-06	8.62E-08	8.55E-10
		6.13E 01	5.92E 00	5.54E-01	3.00E-02	7.23E-04	8.54E-06	8.62E-08	8.55E-10
165353.00	20.50	6.19E 01	5.94E 00	5.55E-01	3.01E-02	7.24E-04	8.56E-06	8.65E-08	8.57E-10
		6.15E 01	5.93E 00	5.55E-01	3.01E-02	7.24E-04	8.56E-06	8.65E-08	8.57E-10

PARTIAL PLANCK MEAN ABSOAPTION COEFFICIENTS FOR HEATED AIR: 16000°K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 02	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
167369.50	20.75	6.20E 01	5.95E 00	5.56E-01	3.02E-02	7.26E-04	8.58E-06	8.67E-08	8.59E-10
		6.16E 01	5.94E 00	5.56E-01	3.02E-02	7.26E-04	8.58E-06	8.67E-08	8.59E-10
169188.00	21.00	6.21E 01	5.96E 00	5.57E-01	3.02E-02	7.28E-04	8.60E-06	8.69E-08	8.61E-10
		6.17E 01	5.95E 00	5.57E-01	3.02E-02	7.28E-04	8.60E-06	8.69E-08	8.61E-10
171402.50	21.25	6.22E 01	5.97E 00	5.58E-01	3.03E-02	7.29E-04	8.62E-06	8.70E-08	8.63E-10
		6.18E 01	5.96E 00	5.58E-01	3.03E-02	7.29E-04	8.62E-06	8.70E-08	8.63E-10
173419.00	21.50	6.23E 01	5.97E 00	5.59E-01	3.03E-02	7.30E-04	8.63E-06	8.71E-08	8.64E-10
		6.19E 01	5.97E 00	5.59E-01	3.03E-02	7.30E-04	8.63E-06	8.71E-08	8.64E-10
175435.50	21.75	6.23E 01	5.98E 00	5.60E-01	3.04E-02	7.31E-04	8.64E-06	8.73E-08	8.65E-10
		6.19E 01	5.98E 00	5.60E-01	3.04E-02	7.31E-04	8.64E-06	8.73E-08	8.65E-10
177452.00	22.00	6.24E 01	5.99E 00	5.61E-01	3.04E-02	7.32E-04	8.65E-06	8.74E-08	8.66E-10
		6.20E 01	5.98E 00	5.60E-01	3.04E-02	7.32E-04	8.65E-06	8.74E-08	8.66E-10
179468.50	22.25	6.24E 01	5.99E 00	5.61E-01	3.04E-02	7.32E-04	8.66E-06	8.75E-08	8.67E-10
		6.20E 01	5.99E 00	5.61E-01	3.04E-02	7.32E-04	8.66E-06	8.75E-08	8.67E-10
181485.00	22.50	6.25E 01	6.00E 00	5.62E-01	3.05E-02	7.33E-04	8.67E-06	8.75E-08	8.68E-10
		6.21E 01	5.99E 00	5.61E-01	3.05E-02	7.33E-04	8.67E-06	8.75E-08	8.68E-10
183501.50	22.75	6.25E 01	6.00E 00	5.62E-01	3.05E-02	7.33E-04	8.67E-06	8.76E-08	8.68E-10
		6.21E 01	5.99E 00	5.62E-01	3.05E-02	7.33E-04	8.67E-06	8.76E-08	8.68E-10
185518.00	23.00	6.25E 01	6.00E 00	5.62E-01	3.05E-02	7.34E-04	8.68E-06	8.77E-08	8.69E-10
		6.21E 01	6.00E 00	5.62E-01	3.05E-02	7.34E-04	8.68E-06	8.77E-08	8.69E-10
187534.50	23.25	6.26E 01	6.01E 00	5.63E-01	3.05E-02	7.34E-04	8.68E-06	8.77E-08	8.70E-10
		6.22E 01	6.00E 00	5.63E-01	3.05E-02	7.34E-04	8.68E-06	8.77E-08	8.70E-10
189551.00	23.50	6.26E 01	6.01E 00	5.63E-01	3.05E-02	7.35E-04	8.69E-06	8.77E-08	8.70E-10
		6.22E 01	6.00E 00	5.63E-01	3.05E-02	7.35E-04	8.69E-06	8.77E-08	8.70E-10
191567.50	23.75	6.26E 01	6.01E 00	5.63E-01	3.05E-02	7.35E-04	8.69E-06	8.78E-08	8.70E-10
		6.22E 01	6.01E 00	5.63E-01	3.05E-02	7.35E-04	8.69E-06	8.78E-08	8.70E-10
193584.00	24.00	6.26E 01	6.01E 00	5.63E-01	3.06E-02	7.35E-04	8.69E-06	8.78E-08	8.71E-10
		6.22E 01	6.01E 00	5.63E-01	3.06E-02	7.35E-04	8.69E-06	8.78E-08	8.71E-10
195600.50	24.25	6.26E 01	6.01E 00	5.63E-01	3.06E-02	7.35E-04	8.70E-06	8.78E-08	8.71E-10
		6.23E 01	6.01E 00	5.63E-01	3.06E-02	7.35E-04	8.70E-06	8.78E-08	8.71E-10
197617.00	24.50	6.27E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.71E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.71E-10
199633.50	24.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.72E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.72E-10
201650.00	25.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.72E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.70E-06	8.79E-08	8.72E-10
203666.50	25.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.79E-08	8.72E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.79E-08	8.72E-10
205683.00	25.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.80E-08	8.76E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.80E-08	8.76E-10
207699.50	25.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.80E-08	8.79E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.80E-08	8.79E-10
209716.00	26.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.81E-10
		6.23E 01	6.01E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.81E-10

211732.50	26.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.83E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.83E-10
213749.00	26.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.85E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.85E-10
215765.50	26.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.71E-06	8.81E-08	8.86E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.36E-04	8.71E-06	8.81E-08	8.86E-10
217782.00	27.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.71E-06	8.81E-08	8.88E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.71E-06	8.81E-08	8.88E-10
219798.50	27.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.82E-08	8.89E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.82E-08	8.89E-10
221815.00	27.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.84E-08	8.90E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.84E-08	8.90E-10
223831.50	27.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.85E-08	9.05E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.85E-08	9.05E-10
225848.00	28.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.87E-08	9.19E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.87E-08	9.19E-10
227864.50	28.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.88E-08	9.30E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.88E-08	9.30E-10
229881.00	28.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.89E-08	9.39E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.89E-08	9.39E-10
231897.50	28.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.90E-08	9.47E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.72E-06	8.90E-08	9.47E-10
233914.00	29.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.90E-08	9.54E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.90E-08	9.54E-10
235930.50	29.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.91E-08	9.60E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.91E-08	9.60E-10
237947.00	29.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.94E-08	9.93E-10
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.73E-06	8.94E-08	9.93E-10
239963.50	29.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	8.97E-08	1.02E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	8.97E-08	1.02E-09
241980.00	30.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.00E-08	1.04E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.00E-08	1.04E-09
243996.50	30.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.02E-08	1.06E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.02E-08	1.06E-09
246013.00	30.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.04E-08	1.08E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.04E-08	1.08E-09
248029.50	30.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.05E-08	1.10E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.74E-06	9.05E-08	1.10E-09
250046.00	31.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.07E-08	1.11E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.07E-08	1.11E-09
252062.50	31.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.08E-08	1.12E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.08E-08	1.12E-09
254079.00	31.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.09E-08	1.13E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.09E-08	1.13E-09
256095.50	31.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.09E-08	1.14E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.09E-08	1.14E-09
258112.00	32.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.10E-08	1.14E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.10E-08	1.14E-09
260128.50	32.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.11E-08	1.15E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.11E-08	1.15E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 16000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
262145.00	32.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.11E-08	1.15E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.11E-08	1.15E-09
264191.50	32.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
266178.00	33.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
268196.50	33.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
270211.00	33.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.12E-08	1.16E-09
272237.50	33.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
274264.00	34.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
276289.50	34.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
278377.00	34.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
280238.50	34.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
282310.00	35.00	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
284396.50	35.25	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
286343.00	35.50	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.13E-08	1.17E-09
288359.50	35.75	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
		6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 18000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
4839.60	0.60	4.63E-01	4.15E-02	2.92E-03	1.10E-04	1.69E-06	1.77E-08	1.99E-10	3.29E-12
		4.63E-01	4.15E-02	2.92E-03	1.10E-04	1.69E-06	1.77E-08	1.99E-10	3.29E-12
5646.20	0.70	9.47E-01	8.51E-02	5.99E-03	2.26E-04	3.50E-06	3.59E-08	4.03E-10	6.51E-12
		9.47E-01	8.51E-02	5.99E-03	2.26E-04	3.50E-06	3.59E-08	4.03E-10	6.51E-12
6452.80	0.80	1.46E 00	1.32E-01	9.28E-03	3.50E-04	5.45E-06	5.64E-08	6.28E-10	9.66E-12
		1.46E 00	1.32E-01	9.28E-03	3.50E-04	5.45E-06	5.64E-08	6.28E-10	9.66E-12
7259.40	0.90	2.08E 00	1.80E-01	1.27E-02	4.78E-04	7.47E-06	7.81E-08	8.58E-10	1.30E-11
		2.00E 00	1.80E-01	1.27E-02	4.78E-04	7.47E-06	7.81E-08	8.58E-10	1.30E-11
8066.00	1.00	2.55E 00	2.30E-01	1.62E-02	6.10E-04	9.55E-06	1.00E-07	1.10E-09	1.62E-11
		2.55E 00	2.30E-01	1.62E-02	6.10E-04	9.55E-06	1.00E-07	1.10E-09	1.62E-11
8872.60	1.10	3.10E 00	2.80E-01	1.97E-02	7.42E-04	1.16E-05	1.22E-07	1.33E-09	1.94E-11
		3.10E 00	2.80E-01	1.97E-02	7.42E-04	1.16E-05	1.22E-07	1.33E-09	1.94E-11
9679.20	1.20	3.63E 00	3.28E-01	2.30E-02	8.69E-04	1.36E-05	1.44E-07	1.55E-09	2.24E-11
		3.63E 00	3.28E-01	2.30E-02	8.69E-04	1.36E-05	1.44E-07	1.55E-09	2.24E-11
10485.80	1.30	4.18E 00	3.77E-01	2.65E-02	1.00E-03	1.57E-05	1.63E-07	1.77E-09	2.52E-11
		4.17E 00	3.77E-01	2.65E-02	1.00E-03	1.57E-05	1.63E-07	1.77E-09	2.52E-11
11292.40	1.40	4.67E 00	4.22E-01	2.97E-02	1.12E-03	1.75E-05	1.80E-07	1.95E-09	2.83E-11
		4.67E 00	4.22E-01	2.97E-02	1.12E-03	1.75E-05	1.80E-07	1.95E-09	2.83E-11
12099.00	1.50	5.13E 00	4.63E-01	3.26E-02	1.23E-03	1.92E-05	1.98E-07	2.15E-09	3.12E-11
		5.13E 00	4.63E-01	3.26E-02	1.23E-03	1.92E-05	1.98E-07	2.15E-09	3.12E-11
12905.60	1.60	5.55E 00	5.01E-01	3.53E-02	1.33E-03	2.08E-05	2.15E-07	2.34E-09	3.42E-11
		5.55E 00	5.01E-01	3.53E-02	1.33E-03	2.08E-05	2.15E-07	2.34E-09	3.42E-11
13712.20	1.70	5.96E 00	5.37E-01	3.78E-02	1.43E-03	2.23E-05	2.32E-07	2.52E-09	3.72E-11
		5.95E 00	5.37E-01	3.78E-02	1.43E-03	2.23E-05	2.32E-07	2.52E-09	3.72E-11
14518.80	1.80	6.34E 00	5.71E-01	4.02E-02	1.51E-03	2.37E-05	2.47E-07	2.69E-09	4.00E-11
		6.33E 00	5.71E-01	4.02E-02	1.51E-03	2.37E-05	2.47E-07	2.69E-09	4.00E-11
15325.40	1.90	6.69E 00	6.02E-01	4.23E-02	1.60E-03	2.50E-05	2.61E-07	2.85E-09	4.27E-11
		6.68E 00	6.02E-01	4.23E-02	1.60E-03	2.50E-05	2.61E-07	2.85E-09	4.27E-11
16132.00	2.00	7.03E 00	6.31E-01	4.44E-02	1.67E-03	2.62E-05	2.74E-07	3.02E-09	4.52E-11
		7.01E 00	6.31E-01	4.44E-02	1.67E-03	2.62E-05	2.74E-07	3.02E-09	4.52E-11
16938.60	2.10	7.34E 00	6.59E-01	4.63E-02	1.75E-03	2.74E-05	2.87E-07	3.17E-09	4.76E-11
		7.33E 00	6.59E-01	4.63E-02	1.75E-03	2.74E-05	2.87E-07	3.17E-09	4.76E-11
17745.20	2.20	7.64E 00	6.85E-01	4.81E-02	1.81E-03	2.84E-05	2.99E-07	3.32E-09	5.10E-11
		7.62E 00	6.85E-01	4.81E-02	1.81E-03	2.84E-05	2.99E-07	3.32E-09	5.10E-11
18551.80	2.30	7.92E 00	7.09E-01	4.98E-02	1.88E-03	2.94E-05	3.09E-07	3.46E-09	5.42E-11
		7.90E 00	7.09E-01	4.98E-02	1.88E-03	2.94E-05	3.09E-07	3.46E-09	5.42E-11
19358.40	2.40	8.22E 00	7.35E-01	5.16E-02	1.94E-03	3.03E-05	3.19E-07	3.58E-09	5.72E-11
		8.20E 00	7.35E-01	5.16E-02	1.94E-03	3.03E-05	3.19E-07	3.58E-09	5.72E-11
20165.00	2.50	8.49E 00	7.59E-01	5.33E-02	2.01E-03	3.13E-05	3.28E-07	3.70E-09	6.00E-11
		8.47E 00	7.59E-01	5.33E-02	2.01E-03	3.13E-05	3.28E-07	3.70E-09	6.00E-11
20971.60	2.60	8.77E 00	7.83E-01	5.49E-02	2.07E-03	3.23E-05	3.38E-07	3.82E-09	6.26E-11
		8.75E 00	7.83E-01	5.49E-02	2.07E-03	3.23E-05	3.38E-07	3.82E-09	6.26E-11
21778.20	2.70	9.04E 00	8.06E-01	5.65E-02	2.13E-03	3.32E-05	3.48E-07	3.94E-09	6.52E-11
		9.01E 00	8.05E-01	5.69E-02	2.13E-03	3.32E-05	3.48E-07	3.94E-09	6.52E-11

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 18000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
22584.80	2.80	9.29E 00	8.28E-01	5.80E-02	2.19E-03	3.41E-05	3.58E-07	4.06E-09	6.78E-11
		9.27E 00	8.27E-01	5.80E-02	2.19E-03	3.41E-05	3.58E-07	4.06E-09	6.78E-11
23391.40	2.90	9.54E 00	8.48E-01	5.95E-02	2.24E-03	3.50E-05	3.67E-07	4.17E-09	7.03E-11
		9.52E 00	8.48E-01	5.95E-02	2.24E-03	3.50E-05	3.67E-07	4.17E-09	7.03E-11
24198.00	3.00	9.78E 00	8.68E-01	6.09E-02	2.29E-03	3.58E-05	3.76E-07	4.28E-09	7.27E-11
		9.75E 00	8.68E-01	6.09E-02	2.29E-03	3.58E-05	3.76E-07	4.28E-09	7.27E-11
25004.60	3.10	1.00E 01	8.88E-01	6.22E-02	2.34E-03	3.66E-05	3.85E-07	4.39E-09	7.49E-11
		9.98E 00	8.87E-01	6.22E-02	2.34E-03	3.66E-05	3.85E-07	4.39E-09	7.49E-11
25811.20	3.20	1.02E 01	9.06E-01	6.34E-02	2.39E-03	3.73E-05	3.93E-07	4.48E-09	7.69E-11
		1.02E 01	9.05E-01	6.34E-02	2.39E-03	3.73E-05	3.93E-07	4.48E-09	7.69E-11
26617.80	3.30	1.04E 01	9.23E-01	6.46E-02	2.43E-03	3.80E-05	4.01E-07	4.58E-09	7.88E-11
		1.04E 01	9.22E-01	6.46E-02	2.43E-03	3.80E-05	4.01E-07	4.58E-09	7.88E-11
27424.40	3.40	1.06E 01	9.39E-01	6.57E-02	2.47E-03	3.87E-05	4.08E-07	4.66E-09	8.06E-11
		1.06E 01	9.38E-01	6.57E-02	2.47E-03	3.87E-05	4.08E-07	4.66E-09	8.06E-11
28231.00	3.50	1.08E 01	9.54E-01	6.67E-02	2.51E-03	3.93E-05	4.15E-07	4.77E-09	8.23E-11
		1.08E 01	9.53E-01	6.67E-02	2.51E-03	3.93E-05	4.15E-07	4.77E-09	8.23E-11
29037.60	3.60	1.10E 01	9.69E-01	6.77E-02	2.55E-03	3.99E-05	4.22E-07	4.88E-09	8.42E-11
		1.10E 01	9.68E-01	6.77E-02	2.55E-03	3.99E-05	4.22E-07	4.88E-09	8.42E-11
29844.20	3.70	1.12E 01	9.83E-01	6.86E-02	2.58E-03	4.04E-05	4.28E-07	4.98E-09	9.01E-11
		1.12E 01	9.82E-01	6.86E-02	2.58E-03	4.04E-05	4.28E-07	4.98E-09	9.01E-11
30650.80	3.80	1.15E 01	9.99E-01	6.96E-02	2.62E-03	4.09E-05	4.33E-07	5.08E-09	9.37E-11
		1.14E 01	9.98E-01	6.96E-02	2.62E-03	4.09E-05	4.33E-07	5.08E-09	9.37E-11
31457.40	3.90	1.17E 01	1.01E 00	7.06E-02	2.66E-03	4.15E-05	4.39E-07	5.18E-09	9.72E-11
		1.16E 01	1.01E 00	7.06E-02	2.66E-03	4.15E-05	4.39E-07	5.18E-09	9.72E-11
32264.00	4.00	1.19E 01	1.03E 00	7.16E-02	2.69E-03	4.21E-05	4.45E-07	5.27E-09	1.01E-10
		1.18E 01	1.03E 00	7.16E-02	2.69E-03	4.21E-05	4.45E-07	5.27E-09	1.01E-10
33070.60	4.10	1.21E 01	1.05E 00	7.27E-02	2.74E-03	4.27E-05	4.52E-07	5.37E-09	1.04E-10
		1.20E 01	1.05E 00	7.27E-02	2.74E-03	4.27E-05	4.52E-07	5.37E-09	1.04E-10
33877.20	4.20	1.23E 01	1.06E 00	7.38E-02	2.78E-03	4.34E-05	4.59E-07	5.46E-09	1.07E-10
		1.23E 01	1.06E 00	7.38E-02	2.78E-03	4.34E-05	4.59E-07	5.46E-09	1.07E-10
34683.80	4.30	1.26E 01	1.08E 00	7.49E-02	2.82E-03	4.40E-05	4.66E-07	5.56E-09	1.10E-10
		1.25E 01	1.08E 00	7.49E-02	2.82E-03	4.40E-05	4.66E-07	5.56E-09	1.10E-10
35490.40	4.40	1.28E 01	1.09E 00	7.59E-02	2.86E-03	4.46E-05	4.73E-07	5.66E-09	1.13E-10
		1.27E 01	1.09E 00	7.59E-02	2.86E-03	4.46E-05	4.73E-07	5.66E-09	1.13E-10
36297.00	4.50	1.30E 01	1.11E 00	7.69E-02	2.89E-03	4.52E-05	4.79E-07	5.75E-09	1.16E-10
		1.29E 01	1.11E 00	7.69E-02	2.89E-03	4.52E-05	4.79E-07	5.75E-09	1.16E-10
37103.60	4.60	1.32E 01	1.12E 00	7.78E-02	2.93E-03	4.58E-05	4.86E-07	5.84E-09	1.18E-10
		1.31E 01	1.12E 00	7.78E-02	2.93E-03	4.58E-05	4.86E-07	5.84E-09	1.18E-10
37910.20	4.70	1.34E 01	1.14E 00	7.87E-02	2.96E-03	4.63E-05	4.92E-07	5.93E-09	1.21E-10
		1.33E 01	1.14E 00	7.87E-02	2.96E-03	4.63E-05	4.92E-07	5.93E-09	1.21E-10
38716.80	4.80	1.36E 01	1.15E 00	7.96E-02	2.99E-03	4.69E-05	4.97E-07	6.01E-09	1.23E-10
		1.35E 01	1.15E 00	7.96E-02	2.99E-03	4.69E-05	4.97E-07	6.01E-09	1.23E-10
39523.40	4.90	1.37E 01	1.16E 00	8.04E-02	3.03E-03	4.74E-05	5.03E-07	6.09E-09	1.25E-10
		1.36E 01	1.16E 00	8.04E-02	3.03E-03	4.74E-05	5.03E-07	6.09E-09	1.25E-10

40330.00	5.00	1.39E 01	1.18E 00	8.12E-02	3.06E-03	4.78E-05	5.08E-07	6.16E-09	1.27E-10
		1.38E 01	1.17E 00	8.12E-02	3.06E-03	4.78E-05	5.08E-07	6.16E-09	1.27E-10
41136.60	5.10	1.41E 01	1.19E 00	8.20E-02	3.08E-03	4.83E-05	5.14E-07	6.23E-09	1.29E-10
		1.40E 01	1.19E 00	8.20E-02	3.08E-03	4.83E-05	5.14E-07	6.23E-09	1.29E-10
41943.20	5.20	1.42E 01	1.20E 00	8.28E-02	3.11E-03	4.88E-05	5.19E-07	6.30E-09	1.31E-10
		1.42E 01	1.20E 00	8.27E-02	3.11E-03	4.88E-05	5.19E-07	6.30E-09	1.31E-10
42749.80	5.30	1.44E 01	1.21E 00	8.35E-02	3.14E-03	4.92E-05	5.23E-07	6.37E-09	1.33E-10
		1.43E 01	1.21E 00	8.35E-02	3.14E-03	4.92E-05	5.23E-07	6.37E-09	1.33E-10
43556.40	5.40	1.46E 01	1.22E 00	8.42E-02	3.17E-03	4.96E-05	5.28E-07	6.43E-09	1.35E-10
		1.45E 01	1.22E 00	8.42E-02	3.17E-03	4.96E-05	5.28E-07	6.43E-09	1.35E-10
44363.00	5.50	1.47E 01	1.23E 00	8.49E-02	3.19E-03	5.00E-05	5.33E-07	6.49E-09	1.37E-10
		1.46E 01	1.23E 00	8.48E-02	3.19E-03	5.00E-05	5.33E-07	6.49E-09	1.37E-10
45169.60	5.60	1.49E 01	1.24E 00	8.55E-02	3.22E-03	5.04E-05	5.37E-07	6.55E-09	1.38E-10
		1.48E 01	1.24E 00	8.55E-02	3.22E-03	5.04E-05	5.37E-07	6.55E-09	1.38E-10
45976.20	5.70	1.50E 01	1.25E 00	8.62E-02	3.24E-03	5.08E-05	5.41E-07	6.61E-09	1.40E-10
		1.49E 01	1.25E 00	8.61E-02	3.24E-03	5.08E-05	5.41E-07	6.61E-09	1.40E-10
46782.80	5.80	1.52E 01	1.26E 00	8.68E-02	3.27E-03	5.12E-05	5.46E-07	6.66E-09	1.41E-10
		1.51E 01	1.26E 00	8.68E-02	3.27E-03	5.12E-05	5.46E-07	6.66E-09	1.41E-10
47589.40	5.90	1.53E 01	1.27E 00	8.74E-02	3.29E-03	5.16E-05	5.50E-07	6.72E-09	1.42E-10
		1.52E 01	1.27E 00	8.74E-02	3.29E-03	5.16E-05	5.50E-07	6.72E-09	1.42E-10
48396.00	6.00	1.54E 01	1.28E 00	8.80E-02	3.31E-03	5.19E-05	5.55E-07	6.77E-09	1.44E-10
		1.53E 01	1.28E 00	8.80E-02	3.31E-03	5.19E-05	5.55E-07	6.77E-09	1.44E-10
49202.60	6.10	1.56E 01	1.29E 00	8.86E-02	3.33E-03	5.23E-05	5.59E-07	6.85E-09	1.45E-10
		1.55E 01	1.29E 00	8.85E-02	3.33E-03	5.23E-05	5.59E-07	6.85E-09	1.45E-10
50009.20	6.20	1.57E 01	1.30E 00	8.91E-02	3.35E-03	5.26E-05	5.63E-07	6.94E-09	1.49E-10
		1.56E 01	1.30E 00	8.91E-02	3.35E-03	5.26E-05	5.63E-07	6.94E-09	1.49E-10
50815.80	6.30	1.58E 01	1.31E 00	8.97E-02	3.37E-03	5.29E-05	5.67E-07	7.02E-09	1.52E-10
		1.58E 01	1.31E 00	8.96E-02	3.37E-03	5.29E-05	5.67E-07	7.02E-09	1.52E-10
51622.40	6.40	1.60E 01	1.32E 00	9.02E-02	3.39E-03	5.33E-05	5.71E-07	7.10E-09	1.56E-10
		1.59E 01	1.31E 00	9.02E-02	3.39E-03	5.33E-05	5.71E-07	7.10E-09	1.56E-10
52429.00	6.50	1.61E 01	1.32E 00	9.07E-02	3.41E-03	5.36E-05	5.74E-07	7.17E-09	1.59E-10
		1.60E 01	1.32E 00	9.07E-02	3.41E-03	5.36E-05	5.74E-07	7.17E-09	1.59E-10
53235.80	6.60	1.62E 01	1.33E 00	9.12E-02	3.43E-03	5.39E-05	5.78E-07	7.24E-09	1.62E-10
		1.61E 01	1.33E 00	9.12E-02	3.43E-03	5.39E-05	5.78E-07	7.24E-09	1.62E-10
54042.20	6.70	1.63E 01	1.34E 00	9.17E-02	3.45E-03	5.42E-05	5.81E-07	7.31E-09	1.65E-10
		1.62E 01	1.34E 00	9.17E-02	3.45E-03	5.42E-05	5.81E-07	7.31E-09	1.65E-10
54848.80	6.80	1.65E 01	1.35E 00	9.21E-02	3.47E-03	5.44E-05	5.85E-07	7.37E-09	1.67E-10
		1.64E 01	1.35E 00	9.21E-02	3.47E-03	5.44E-05	5.85E-07	7.37E-09	1.67E-10
55655.40	6.90	1.66E 01	1.35E 00	9.26E-02	3.48E-03	5.47E-05	5.88E-07	7.43E-09	1.70E-10
		1.65E 01	1.35E 00	9.26E-02	3.48E-03	5.47E-05	5.88E-07	7.43E-09	1.70E-10
56462.00	7.00	1.67E 01	1.36E 00	9.30E-02	3.50E-03	5.50E-05	5.91E-07	7.49E-09	1.72E-10
		1.66E 01	1.36E 00	9.30E-02	3.50E-03	5.50E-05	5.91E-07	7.49E-09	1.72E-10
57268.60	7.10	1.68E 01	1.37E 00	9.35E-02	3.52E-03	5.52E-05	5.94E-07	7.55E-09	1.75E-10
		1.67E 01	1.37E 00	9.34E-02	3.52E-03	5.52E-05	5.94E-07	7.55E-09	1.75E-10
58075.20	7.20	1.69E 01	1.37E 00	9.39E-02	3.53E-03	5.55E-05	5.97E-07	7.60E-09	1.77E-10
		1.68E 01	1.37E 00	9.39E-02	3.53E-03	5.55E-05	5.97E-07	7.60E-09	1.77E-10
58881.80	7.30	1.70E 01	1.38E 00	9.43E-02	3.55E-03	5.57E-05	6.00E-07	7.65E-09	1.79E-10
		1.69E 01	1.38E 00	9.43E-02	3.55E-03	5.57E-05	6.00E-07	7.65E-09	1.79E-10
59688.40	7.40	1.71E 01	1.39E 00	9.47E-02	3.56E-03	5.60E-05	6.03E-07	7.70E-09	1.80E-10
		1.70E 01	1.39E 00	9.47E-02	3.56E-03	5.60E-05	6.03E-07	7.70E-09	1.80E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 15000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
60495.00	7.50	1.72E 01	1.39E 00	9.51E-02	3.58E-03	5.62E-05	6.85E-07	7.75E-09	1.82E-10
		1.71E 01	1.39E 00	9.50E-02	3.58E-03	5.62E-05	6.85E-07	7.75E-09	1.82E-10
61301.60	7.60	1.73E 01	1.40E 00	9.54E-02	3.59E-03	5.64E-05	6.88E-07	7.79E-09	1.84E-10
		1.72E 01	1.40E 00	9.54E-02	3.59E-03	5.64E-05	6.88E-07	7.79E-09	1.84E-10
62108.20	7.70	1.74E 01	1.41E 00	9.58E-02	3.60E-03	5.66E-05	6.11E-07	7.84E-09	1.86E-10
		1.72E 01	1.40E 00	9.58E-02	3.60E-03	5.66E-05	6.11E-07	7.84E-09	1.86E-10
62914.80	7.80	1.74E 01	1.41E 00	9.61E-02	3.62E-03	5.69E-05	6.13E-07	7.88E-09	1.87E-10
		1.73E 01	1.41E 00	9.61E-02	3.62E-03	5.69E-05	6.13E-07	7.88E-09	1.87E-10
63721.40	7.90	1.75E 01	1.42E 00	9.65E-02	3.63E-03	5.71E-05	6.15E-07	7.92E-09	1.89E-10
		1.74E 01	1.41E 00	9.65E-02	3.63E-03	5.71E-05	6.15E-07	7.92E-09	1.89E-10
64528.00	8.00	1.76E 01	1.42E 00	9.68E-02	3.64E-03	5.73E-05	6.18E-07	7.95E-09	1.90E-10
		1.75E 01	1.42E 00	9.68E-02	3.64E-03	5.73E-05	6.18E-07	7.95E-09	1.90E-10
65334.60	8.10	1.77E 01	1.43E 00	9.71E-02	3.65E-03	5.74E-05	6.20E-07	7.99E-09	1.91E-10
		1.76E 01	1.42E 00	9.71E-02	3.65E-03	5.74E-05	6.20E-07	7.99E-09	1.91E-10
66141.20	8.20	1.78E 01	1.43E 00	9.74E-02	3.66E-03	5.76E-05	6.22E-07	8.02E-09	1.93E-10
		1.76E 01	1.43E 00	9.74E-02	3.66E-03	5.76E-05	6.22E-07	8.02E-09	1.93E-10
66947.80	8.30	1.78E 01	1.44E 00	9.77E-02	3.67E-03	5.78E-05	6.24E-07	8.06E-09	1.94E-10
		1.77E 01	1.43E 00	9.77E-02	3.67E-03	5.78E-05	6.24E-07	8.06E-09	1.94E-10
67754.40	8.40	1.79E 01	1.44E 00	9.80E-02	3.69E-03	5.80E-05	6.26E-07	8.10E-09	1.95E-10
		1.78E 01	1.44E 00	9.80E-02	3.69E-03	5.80E-05	6.26E-07	8.10E-09	1.95E-10
68561.00	8.50	1.80E 01	1.44E 00	9.83E-02	3.70E-03	5.81E-05	6.28E-07	8.14E-09	1.96E-10
		1.78E 01	1.44E 00	9.82E-02	3.70E-03	5.81E-05	6.28E-07	8.14E-09	1.96E-10
69367.60	8.60	1.80E 01	1.45E 00	9.85E-02	3.71E-03	5.83E-05	6.30E-07	8.19E-09	1.98E-10
		1.79E 01	1.45E 00	9.85E-02	3.71E-03	5.83E-05	6.30E-07	8.19E-09	1.98E-10
70174.20	8.70	1.81E 01	1.45E 00	9.88E-02	3.72E-03	5.85E-05	6.32E-07	8.23E-09	2.00E-10
		1.80E 01	1.45E 00	9.88E-02	3.72E-03	5.85E-05	6.32E-07	8.23E-09	2.00E-10
70980.80	8.80	1.82E 01	1.46E 00	9.90E-02	3.73E-03	5.86E-05	6.34E-07	8.27E-09	2.01E-10
		1.80E 01	1.46E 00	9.90E-02	3.73E-03	5.86E-05	6.34E-07	8.27E-09	2.01E-10
71787.40	8.90	1.82E 01	1.46E 00	9.93E-02	3.73E-03	5.88E-05	6.36E-07	8.30E-09	2.03E-10
		1.81E 01	1.46E 00	9.93E-02	3.73E-03	5.88E-05	6.36E-07	8.30E-09	2.03E-10
72594.00	9.00	1.83E 01	1.46E 00	9.95E-02	3.74E-03	5.89E-05	6.38E-07	8.34E-09	2.05E-10
		1.81E 01	1.46E 00	9.95E-02	3.74E-03	5.89E-05	6.38E-07	8.34E-09	2.05E-10
73400.60	9.10	1.84E 01	1.47E 00	9.98E-02	3.75E-03	5.91E-05	6.39E-07	8.37E-09	2.06E-10
		1.82E 01	1.47E 00	9.97E-02	3.75E-03	5.91E-05	6.39E-07	8.37E-09	2.06E-10
74207.20	9.20	1.84E 01	1.48E 00	1.00E-01	3.77E-03	5.93E-05	6.41E-07	8.41E-09	2.08E-10
		1.83E 01	1.47E 00	1.00E-01	3.77E-03	5.93E-05	6.41E-07	8.41E-09	2.08E-10
75013.80	9.30	1.85E 01	1.48E 00	1.01E-01	3.78E-03	5.96E-05	6.43E-07	8.44E-09	2.09E-10
		1.84E 01	1.48E 00	1.01E-01	3.78E-03	5.96E-05	6.43E-07	8.44E-09	2.09E-10
75820.40	9.40	1.86E 01	1.49E 00	1.01E-01	3.80E-03	5.98E-05	6.45E-07	8.48E-09	2.11E-10
		1.85E 01	1.49E 00	1.01E-01	3.80E-03	5.98E-05	6.45E-07	8.48E-09	2.11E-10
76627.00	9.50	1.87E 01	1.49E 00	1.01E-01	3.81E-03	6.00E-05	6.48E-07	8.53E-09	2.12E-10
		1.85E 01	1.49E 00	1.01E-01	3.81E-03	6.00E-05	6.48E-07	8.53E-09	2.12E-10
77433.60	9.60	1.88E 01	1.50E 00	1.02E-01	3.83E-03	6.03E-05	6.50E-07	8.57E-09	2.13E-10
		1.86E 01	1.50E 00	1.02E-01	3.83E-03	6.03E-05	6.50E-07	8.57E-09	2.13E-10

78240.20	9.70	1.89E 01	1.50E 00	1.02E-01	3.84E-03	6.05E-05	6.53E-07	8.60E-09	2.15E-10
		1.87E 01	1.50E 00	1.02E-01	3.84E-03	6.05E-05	6.53E-07	8.60E-09	2.15E-10
79046.80	9.80	1.89E 01	1.51E 00	1.03E-01	3.85E-03	6.07E-05	6.55E-07	8.64E-09	2.16E-10
		1.87E 01	1.51E 00	1.02E-01	3.85E-03	6.07E-05	6.55E-07	8.64E-09	2.16E-10
79853.40	9.90	1.90E 01	1.52E 00	1.03E-01	3.87E-03	6.09E-05	6.58E-07	8.68E-09	2.17E-10
		1.88E 01	1.51E 00	1.03E-01	3.87E-03	6.09E-05	6.58E-07	8.68E-09	2.17E-10
80660.00	10.00	1.91E 01	1.52E 00	1.03E-01	3.88E-03	6.11E-05	6.60E-07	8.71E-09	2.18E-10
		1.89E 01	1.52E 00	1.03E-01	3.88E-03	6.11E-05	6.60E-07	8.71E-09	2.18E-10
81466.60	10.10	1.91E 01	1.53E 00	1.03E-01	3.89E-03	6.13E-05	6.62E-07	8.74E-09	2.19E-10
		1.89E 01	1.52E 00	1.03E-01	3.89E-03	6.13E-05	6.62E-07	8.74E-09	2.19E-10
82273.20	10.20	1.92E 01	1.53E 00	1.04E-01	3.90E-03	6.14E-05	6.64E-07	8.78E-09	2.20E-10
		1.90E 01	1.53E 00	1.04E-01	3.90E-03	6.14E-05	6.64E-07	8.78E-09	2.20E-10
83079.80	10.30	1.93E 01	1.53E 00	1.04E-01	3.91E-03	6.16E-05	6.66E-07	8.81E-09	2.21E-10
		1.91E 01	1.53E 00	1.04E-01	3.91E-03	6.16E-05	6.66E-07	8.81E-09	2.21E-10
83886.40	10.40	1.93E 01	1.54E 00	1.04E-01	3.92E-03	6.18E-05	6.69E-07	8.83E-09	2.22E-10
		1.91E 01	1.54E 00	1.04E-01	3.92E-03	6.18E-05	6.68E-07	8.83E-09	2.22E-10
84693.00	10.50	1.94E 01	1.54E 00	1.05E-01	3.93E-03	6.20E-05	6.70E-07	8.86E-09	2.23E-10
		1.92E 01	1.54E 00	1.05E-01	3.93E-03	6.20E-05	6.70E-07	8.86E-09	2.23E-10
85499.60	10.60	1.94E 01	1.55E 00	1.05E-01	3.94E-03	6.21E-05	6.72E-07	8.89E-09	2.24E-10
		1.92E 01	1.54E 00	1.05E-01	3.94E-03	6.21E-05	6.72E-07	8.89E-09	2.24E-10
86306.20	10.70	2.14E 01	1.72E 00	1.17E-01	4.38E-03	6.24E-05	6.76E-07	8.94E-09	2.26E-10
		2.11E 01	1.72E 00	1.17E-01	4.38E-03	6.24E-05	6.76E-07	8.94E-09	2.26E-10
88726.00	11.00	2.37E 01	1.93E 00	1.32E-01	4.92E-03	7.07E-05	7.65E-07	9.93E-09	2.41E-10
		2.34E 01	1.93E 00	1.31E-01	4.92E-03	7.07E-05	7.65E-07	9.93E-09	2.41E-10
90742.50	11.25	2.56E 01	2.10E 00	1.44E-01	5.36E-03	7.75E-05	8.38E-07	1.07E-08	2.54E-10
		2.53E 01	2.10E 00	1.44E-01	5.36E-03	7.75E-05	8.38E-07	1.07E-08	2.54E-10
92759.00	11.50	2.73E 01	2.26E 00	1.55E-01	5.76E-03	8.37E-05	9.04E-07	1.15E-08	2.65E-10
		2.71E 01	2.26E 00	1.54E-01	5.76E-03	8.37E-05	9.04E-07	1.15E-08	2.65E-10
94775.50	11.75	2.89E 01	2.40E 00	1.64E-01	6.12E-03	8.92E-05	9.64E-07	1.21E-08	2.75E-10
		2.86E 01	2.40E 00	1.64E-01	6.12E-03	8.92E-05	9.64E-07	1.21E-08	2.75E-10
96792.00	12.00	3.39E 01	2.86E 00	1.96E-01	7.28E-03	1.07E-04	1.02E-06	1.27E-08	2.83E-10
		3.36E 01	2.86E 00	1.96E-01	7.28E-03	1.07E-04	1.02E-06	1.27E-08	2.83E-10
98808.50	12.25	3.84E 01	3.28E 00	2.25E-01	8.33E-03	1.23E-04	1.19E-06	1.45E-08	3.02E-10
		3.82E 01	3.27E 00	2.25E-01	8.33E-03	1.23E-04	1.19E-06	1.45E-08	3.02E-10
100825.00	12.50	4.25E 01	3.65E 00	2.51E-01	9.28E-03	1.38E-04	1.35E-06	1.61E-08	3.18E-10
		4.23E 01	3.65E 00	2.51E-01	9.28E-03	1.38E-04	1.35E-06	1.61E-08	3.18E-10
102841.50	12.75	4.66E 01	4.02E 00	2.77E-01	1.02E-02	1.52E-04	1.50E-06	1.75E-08	3.33E-10
		4.63E 01	4.02E 00	2.77E-01	1.02E-02	1.52E-04	1.50E-06	1.75E-08	3.33E-10
104858.00	13.00	5.02E 01	4.36E 00	3.00E-01	1.11E-02	1.65E-04	1.64E-06	1.89E-08	3.47E-10
		5.00E 01	4.35E 00	3.00E-01	1.11E-02	1.65E-04	1.64E-06	1.89E-08	3.47E-10
106874.50	13.25	5.35E 01	4.66E 00	3.21E-01	1.19E-02	1.77E-04	1.76E-06	2.02E-08	3.60E-10
		5.33E 01	4.65E 00	3.21E-01	1.18E-02	1.77E-04	1.76E-06	2.02E-08	3.60E-10
108891.00	13.50	5.74E 01	5.01E 00	3.46E-01	1.28E-02	1.93E-04	1.93E-06	2.13E-08	3.71E-10
		5.72E 01	5.01E 00	3.46E-01	1.28E-02	1.93E-04	1.93E-06	2.13E-08	3.71E-10
110907.50	13.75	6.09E 01	5.33E 00	3.69E-01	1.37E-02	2.07E-04	2.09E-06	2.29E-08	3.87E-10
		6.06E 01	5.33E 00	3.69E-01	1.37E-02	2.07E-04	2.09E-06	2.29E-08	3.87E-10
112924.00	14.00	6.50E 01	5.72E 00	3.96E-01	1.47E-02	2.23E-04	2.26E-06	2.47E-08	4.02E-10
		6.48E 01	5.71E 00	3.96E-01	1.47E-02	2.23E-04	2.26E-06	2.47E-08	4.02E-10
114940.50	14.25	6.88E 01	6.06E 00	4.21E-01	1.57E-02	2.38E-04	2.42E-06	2.63E-08	4.19E-10
		6.86E 01	6.06E 00	4.21E-01	1.57E-02	2.38E-04	2.42E-06	2.63E-08	4.19E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR, 18000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
116957.00	14.50	7.51E 01	6.64E 00	4.43E-01	1.65E-02	2.52E-04	2.56E-06	2.78E-08	4.34E-10
		7.49E 01	6.63E 00	4.43E-01	1.65E-02	2.52E-04	2.56E-06	2.78E-08	4.34E-10
118973.50	14.75	8.10E 01	7.19E 00	4.64E-01	1.73E-02	2.65E-04	2.69E-06	2.91E-08	4.47E-10
		8.07E 01	7.17E 00	4.64E-01	1.73E-02	2.65E-04	2.69E-06	2.91E-08	4.47E-10
120990.00	15.00	8.63E 01	7.66E 00	4.83E-01	1.81E-02	2.77E-04	2.82E-06	3.04E-08	4.60E-10
		8.60E 01	7.66E 00	4.83E-01	1.81E-02	2.77E-04	2.82E-06	3.04E-08	4.60E-10
123006.50	15.25	9.10E 01	8.10E 00	5.00E-01	1.87E-02	2.87E-04	2.93E-06	3.15E-08	4.72E-10
		9.08E 01	8.10E 00	5.00E-01	1.87E-02	2.87E-04	2.93E-06	3.15E-08	4.72E-10
125023.00	15.50	9.53E 01	8.50E 00	5.15E-01	1.93E-02	2.96E-04	3.03E-06	3.26E-08	4.82E-10
		9.51E 01	8.49E 00	5.15E-01	1.93E-02	2.96E-04	3.03E-06	3.26E-08	4.82E-10
127039.50	15.75	9.92E 01	8.85E 00	5.29E-01	1.98E-02	3.05E-04	3.12E-06	3.35E-08	4.92E-10
		9.90E 01	8.85E 00	5.29E-01	1.98E-02	3.05E-04	3.12E-06	3.35E-08	4.92E-10
129056.00	16.00	1.03E 02	9.16E 00	5.41E-01	2.03E-02	3.12E-04	3.20E-06	3.43E-08	5.00E-10
		1.02E 02	9.16E 00	5.41E-01	2.03E-02	3.12E-04	3.20E-06	3.43E-08	5.00E-10
131072.50	16.25	1.06E 02	9.44E 00	5.51E-01	2.07E-02	3.19E-04	3.27E-06	3.50E-08	5.07E-10
		1.05E 02	9.44E 00	5.51E-01	2.07E-02	3.19E-04	3.27E-06	3.50E-08	5.07E-10
133089.00	16.50	1.08E 02	9.69E 00	5.61E-01	2.11E-02	3.25E-04	3.34E-06	3.57E-08	5.14E-10
		1.08E 02	9.69E 00	5.61E-01	2.11E-02	3.25E-04	3.34E-06	3.57E-08	5.14E-10
135105.50	16.75	1.11E 02	9.92E 00	5.70E-01	2.15E-02	3.31E-04	3.39E-06	3.62E-08	5.20E-10
		1.11E 02	9.92E 00	5.70E-01	2.15E-02	3.31E-04	3.39E-06	3.62E-08	5.20E-10
137122.00	17.00	1.13E 02	1.01E 01	5.79E-01	2.18E-02	3.36E-04	3.45E-06	3.68E-08	5.26E-10
		1.13E 02	1.01E 01	5.79E-01	2.18E-02	3.36E-04	3.45E-06	3.68E-08	5.26E-10
139138.50	17.25	1.15E 02	1.03E 01	5.86E-01	2.21E-02	3.41E-04	3.50E-06	3.74E-08	5.32E-10
		1.15E 02	1.03E 01	5.86E-01	2.21E-02	3.41E-04	3.50E-06	3.74E-08	5.32E-10
141155.00	17.50	1.17E 02	1.05E 01	5.93E-01	2.24E-02	3.45E-04	3.55E-06	3.78E-08	5.37E-10
		1.17E 02	1.05E 01	5.93E-01	2.24E-02	3.45E-04	3.55E-06	3.78E-08	5.37E-10
143171.50	17.75	1.18E 02	1.06E 01	5.99E-01	2.26E-02	3.49E-04	3.59E-06	3.82E-08	5.41E-10
		1.18E 02	1.06E 01	5.99E-01	2.26E-02	3.49E-04	3.59E-06	3.82E-08	5.41E-10
145188.00	18.00	1.20E 02	1.07E 01	6.04E-01	2.28E-02	3.52E-04	3.63E-06	3.86E-08	5.45E-10
		1.20E 02	1.07E 01	6.04E-01	2.28E-02	3.52E-04	3.63E-06	3.86E-08	5.45E-10
147204.50	18.25	1.21E 02	1.09E 01	6.09E-01	2.30E-02	3.55E-04	3.66E-06	3.90E-08	5.49E-10
		1.21E 02	1.09E 01	6.09E-01	2.30E-02	3.55E-04	3.66E-06	3.90E-08	5.49E-10
149221.00	18.50	1.22E 02	1.10E 01	6.13E-01	2.32E-02	3.58E-04	3.69E-06	3.92E-08	5.52E-10
		1.22E 02	1.10E 01	6.13E-01	2.32E-02	3.58E-04	3.69E-06	3.92E-08	5.52E-10
151237.50	18.75	1.23E 02	1.10E 01	6.17E-01	2.33E-02	3.61E-04	3.72E-06	3.95E-08	5.55E-10
		1.23E 02	1.10E 01	6.17E-01	2.33E-02	3.61E-04	3.72E-06	3.95E-08	5.55E-10
153254.00	19.00	1.24E 02	1.11E 01	6.20E-01	2.34E-02	3.63E-04	3.74E-06	3.98E-08	5.57E-10
		1.24E 02	1.11E 01	6.20E-01	2.34E-02	3.63E-04	3.74E-06	3.98E-08	5.57E-10
155270.50	19.25	1.25E 02	1.12E 01	6.23E-01	2.36E-02	3.65E-04	3.76E-06	4.00E-08	5.60E-10
		1.24E 02	1.12E 01	6.23E-01	2.36E-02	3.65E-04	3.76E-06	4.00E-08	5.60E-10
157287.00	19.50	1.25E 02	1.13E 01	6.26E-01	2.37E-02	3.67E-04	3.78E-06	4.02E-08	5.62E-10
		1.25E 02	1.13E 01	6.26E-01	2.37E-02	3.67E-04	3.78E-06	4.02E-08	5.62E-10
159303.50	19.75	1.26E 02	1.13E 01	6.28E-01	2.38E-02	3.68E-04	3.80E-06	4.04E-08	5.63E-10
		1.26E 02	1.13E 01	6.28E-01	2.38E-02	3.68E-04	3.80E-06	4.04E-08	5.63E-10

161320.00	20.00	1.26E 02	1.14E 01	6.30E-01	2.39E-02	3.70E-04	3.81E-06	4.05E-08	5.65E-10
		1.26E 02	1.14E 01	6.30E-01	2.39E-02	3.70E-04	3.81E-06	4.05E-08	5.65E-10
163336.50	20.25	1.27E 02	1.14E 01	6.32E-01	2.39E-02	3.71E-04	3.82E-06	4.06E-08	5.67E-10
		1.27E 02	1.14E 01	6.32E-01	2.39E-02	3.71E-04	3.82E-06	4.06E-08	5.67E-10
165353.00	20.50	1.27E 02	1.14E 01	6.34E-01	2.40E-02	3.72E-04	3.84E-06	4.08E-08	5.68E-10
		1.27E 02	1.14E 01	6.34E-01	2.40E-02	3.72E-04	3.84E-06	4.08E-08	5.68E-10
167369.50	20.75	1.28E 02	1.15E 01	6.35E-01	2.40E-02	3.73E-04	3.85E-06	4.09E-08	5.69E-10
		1.28E 02	1.15E 01	6.35E-01	2.40E-02	3.73E-04	3.85E-06	4.09E-08	5.69E-10
169386.00	21.00	1.28E 02	1.15E 01	6.36E-01	2.41E-02	3.74E-04	3.86E-06	4.10E-08	5.70E-10
		1.28E 02	1.15E 01	6.36E-01	2.41E-02	3.74E-04	3.86E-06	4.10E-08	5.70E-10
171402.50	21.25	1.28E 02	1.15E 01	6.38E-01	2.41E-02	3.74E-04	3.86E-06	4.10E-08	5.71E-10
		1.28E 02	1.15E 01	6.38E-01	2.41E-02	3.74E-04	3.86E-06	4.10E-08	5.71E-10
173419.00	21.50	1.29E 02	1.16E 01	6.39E-01	2.42E-02	3.75E-04	3.87E-06	4.11E-08	5.72E-10
		1.28E 02	1.16E 01	6.39E-01	2.42E-02	3.75E-04	3.87E-06	4.11E-08	5.72E-10
175435.50	21.75	1.29E 02	1.16E 01	6.39E-01	2.42E-02	3.76E-04	3.88E-06	4.12E-08	5.72E-10
		1.29E 02	1.16E 01	6.39E-01	2.42E-02	3.76E-04	3.88E-06	4.12E-08	5.72E-10
177452.00	22.00	1.29E 02	1.16E 01	6.40E-01	2.43E-02	3.76E-04	3.88E-06	4.12E-08	5.73E-10
		1.29E 02	1.16E 01	6.40E-01	2.43E-02	3.76E-04	3.89E-06	4.12E-08	5.73E-10
179468.50	22.25	1.29E 02	1.16E 01	6.41E-01	2.43E-02	3.77E-04	3.89E-06	4.13E-08	5.73E-10
		1.29E 02	1.16E 01	6.41E-01	2.43E-02	3.77E-04	3.89E-06	4.13E-08	5.73E-10
181486.00	22.50	1.29E 02	1.16E 01	6.41E-01	2.43E-02	3.77E-04	3.89E-06	4.13E-08	5.74E-10
		1.29E 02	1.16E 01	6.41E-01	2.43E-02	3.77E-04	3.89E-06	4.13E-08	5.74E-10
183501.50	22.75	1.30E 02	1.16E 01	6.42E-01	2.43E-02	3.77E-04	3.90E-06	4.14E-08	5.74E-10
		1.29E 02	1.16E 01	6.42E-01	2.43E-02	3.77E-04	3.90E-06	4.14E-08	5.74E-10
185518.00	23.00	1.30E 02	1.17E 01	6.42E-01	2.43E-02	3.78E-04	3.90E-06	4.14E-08	5.75E-10
		1.29E 02	1.16E 01	6.42E-01	2.43E-02	3.78E-04	3.90E-06	4.14E-08	5.75E-10
187534.50	23.25	1.30E 02	1.17E 01	6.43E-01	2.44E-02	3.78E-04	3.90E-06	4.15E-08	5.76E-10
		1.30E 02	1.17E 01	6.43E-01	2.44E-02	3.78E-04	3.90E-06	4.15E-08	5.76E-10
189551.00	23.50	1.30E 02	1.17E 01	6.43E-01	2.44E-02	3.78E-04	3.90E-06	4.15E-08	5.76E-10
		1.30E 02	1.17E 01	6.43E-01	2.44E-02	3.78E-04	3.90E-06	4.15E-08	5.76E-10
191567.50	23.75	1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.78E-04	3.91E-06	4.15E-08	5.77E-10
		1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.78E-04	3.91E-06	4.15E-08	5.77E-10
193584.00	24.00	1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.15E-08	5.78E-10
		1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.15E-08	5.78E-10
195600.50	24.25	1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.78E-10
		1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.78E-10
197617.00	24.50	1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.79E-10
		1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.79E-10
199633.50	24.75	1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.79E-10
		1.30E 02	1.17E 01	6.44E-01	2.44E-02	3.79E-04	3.91E-06	4.16E-08	5.79E-10
201650.00	25.00	1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.16E-08	5.80E-10
		1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.16E-08	5.80E-10
203666.50	25.25	1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.17E-08	5.81E-10
		1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.17E-08	5.81E-10
205683.00	25.50	1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.19E-08	5.97E-10
		1.30E 02	1.17E 01	6.45E-01	2.44E-02	3.79E-04	3.92E-06	4.19E-08	5.97E-10
207899.50	25.75	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.21E-08	6.11E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.21E-08	6.11E-10
209716.00	26.00	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.23E-08	6.23E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.23E-08	6.23E-10

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 18000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
211732.50	26.25	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.24E-08	6.33E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.24E-08	6.33E-10
213749.00	26.50	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.26E-08	6.42E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.26E-08	6.42E-10
215765.50	26.75	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.27E-08	6.50E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.93E-06	4.27E-08	6.50E-10
217782.00	27.00	1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.94E-06	4.28E-08	6.57E-10
		1.30E 02	1.17E 01	6.45E-01	2.45E-02	3.80E-04	3.94E-06	4.28E-08	6.57E-10
219798.50	27.25	1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.80E-04	3.95E-06	4.29E-08	6.62E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.80E-04	3.95E-06	4.29E-08	6.62E-10
221815.00	27.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.80E-04	3.96E-06	4.41E-08	6.67E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.80E-04	3.96E-06	4.41E-08	6.67E-10
223831.50	27.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	3.97E-06	4.51E-08	7.40E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	3.97E-06	4.51E-08	7.40E-10
225848.00	28.00	1.31E 02	1.17E 01	6.45E-01	2.45E-02	3.81E-04	3.98E-06	4.60E-08	8.04E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	3.98E-06	4.60E-08	8.04E-10
227864.50	28.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	3.99E-06	4.68E-08	8.58E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	3.99E-06	4.68E-08	8.58E-10
229881.00	28.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	4.00E-06	4.74E-08	9.05E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	4.00E-06	4.74E-08	9.05E-10
231897.50	28.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	4.01E-06	4.80E-08	9.44E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.81E-04	4.01E-06	4.80E-08	9.44E-10
233914.00	29.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.01E-06	4.85E-08	9.81E-10
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.01E-06	4.85E-08	9.81E-10
235930.50	29.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.04E-06	4.89E-08	1.01E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.04E-06	4.89E-08	1.01E-09
237947.00	29.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.06E-06	5.11E-08	1.17E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.06E-06	5.11E-08	1.17E-09
239963.50	29.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.08E-06	5.30E-08	1.30E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.82E-04	4.08E-06	5.30E-08	1.30E-09
241980.00	30.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.10E-06	5.47E-08	1.42E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.10E-06	5.47E-08	1.42E-09
243996.50	30.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.11E-06	5.61E-08	1.52E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.11E-06	5.61E-08	1.52E-09
246013.00	30.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.13E-06	5.74E-08	1.61E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.13E-06	5.74E-08	1.61E-09
248029.50	30.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.14E-06	5.85E-08	1.68E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.14E-06	5.85E-08	1.68E-09
250046.00	31.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.15E-06	5.94E-08	1.75E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.15E-06	5.94E-08	1.75E-09
252062.50	31.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.16E-06	6.02E-08	1.81E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.16E-06	6.02E-08	1.81E-09
254079.00	31.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.16E-06	6.09E-08	1.86E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.15E-06	6.09E-08	1.86E-09

256095.50	31.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.17E-05	6.15E-08	1.90E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.17E-05	6.15E-08	1.90E-09
258112.00	32.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.18E-05	6.21E-08	1.94E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.18E-05	6.21E-08	1.94E-09
260128.50	32.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.18E-05	6.25E-08	1.97E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.18E-05	6.25E-08	1.97E-09
262145.00	32.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.29E-08	2.00E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.29E-08	2.00E-09
264161.50	32.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.33E-08	2.03E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.33E-08	2.03E-09
266178.00	33.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.38E-08	2.05E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.19E-05	6.38E-08	2.05E-09
268194.50	33.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.20E-05	6.38E-08	2.07E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.83E-04	4.20E-05	6.38E-08	2.07E-09
270211.00	33.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.40E-08	2.08E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.40E-08	2.08E-09
272227.50	33.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.42E-08	2.10E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.42E-08	2.10E-09
274244.00	34.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.44E-08	2.11E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.44E-08	2.11E-09
276260.50	34.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.45E-08	2.12E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.45E-08	2.12E-09
278277.00	34.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.46E-08	2.13E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.20E-05	6.46E-08	2.13E-09
280293.50	34.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.47E-08	2.14E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.47E-08	2.14E-09
282310.00	35.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.49E-08	2.14E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.49E-08	2.14E-09
284326.50	35.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.50E-08	2.15E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.50E-08	2.15E-09
286343.00	35.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.50E-08	2.16E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.50E-08	2.16E-09
288359.50	35.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.51E-08	2.16E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.51E-08	2.16E-09
290376.00	36.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.52E-08	2.17E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.52E-08	2.17E-09
292392.50	36.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.52E-08	2.17E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.52E-08	2.17E-09
294409.00	36.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.53E-08	2.18E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.53E-08	2.18E-09
296425.50	36.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.53E-08	2.18E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.53E-08	2.18E-09
298442.00	37.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.54E-08	2.18E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.54E-08	2.18E-09
300458.50	37.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.54E-08	2.18E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.54E-08	2.18E-09
302475.00	37.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.51E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.54E-08	2.19E-09
304491.50	37.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.55E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-05	6.55E-08	2.19E-09

PARTIAL PLANCK MEAN ABSORPTION COEFFICIENTS FOR HEATED AIR: 18000° K

Wave Number (cm^{-1})	Photon Energy (eV)	Density × Normal							
		1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
306498.50	38.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
308515.00	38.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
310531.50	38.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
312548.00	38.75	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.19E-09
314564.50	39.00	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.20E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.20E-09
316581.00	39.25	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.20E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.55E-08	2.20E-09
318597.00	39.50	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.20E-09
		1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.84E-04	4.21E-06	6.56E-08	2.20E-09

D. Absorption Coefficients (1 - 20 eV)

1. Photoelectric and Free-Free Absorption Coefficients of Oxygen and Nitrogen

The following figures are graphs of the photoelectric and free-free absorption coefficients defined as

$$\mu(\epsilon) = \sum_I N_I \sigma_I(\epsilon)$$

and expressed in units of cm^{-1}. N_I is the number per unit volume of atoms or ions in the I^{th} state, and $\sigma_I(\epsilon)$ is the total cross section for photoelectric or free-free absorption from that state at photon energy ϵ. The jagged curve in each figure, with its characteristic "edges" is the photo-ionization absorption coefficient, and the smooth, monotonically decreasing curve is the free-free coefficient. These absorption coefficients are plotted vs. photon energy ϵ. Graphs are given for six different density values (from approximately 10 normal to approximately 10^{-5} normal) at each of the temperatures 1, 2, 5, 10, 15, and 20 eV. The first 36 graphs are for oxygen, the remaining 36 are for nitrogen.

Photoelectric Absorption

These coefficients have been obtained from the computer code PIC of Armstrong, Johnston, and Kelly (1965). The theory upon which it is based is described in Part B of Armstrong and Nicholls (1966). The Burgess-Seaton (1960) generalization of the Coulomb Approximation has been employed at low photon energies (near the photoelectric edge), and a high-energy approximation due to Johnston (1964) has been used above the low-energy region, to obtain the cross sections $\sigma_I(\epsilon)$. The number densities, or occupation numbers, N_I, were obtained from the earlier work of Armstrong, Holland, and Meyerott (1958).

Free-Free Absorption

These results have been obtained from the work of Armstrong (1959), and are based upon a hydrogenic approximation.

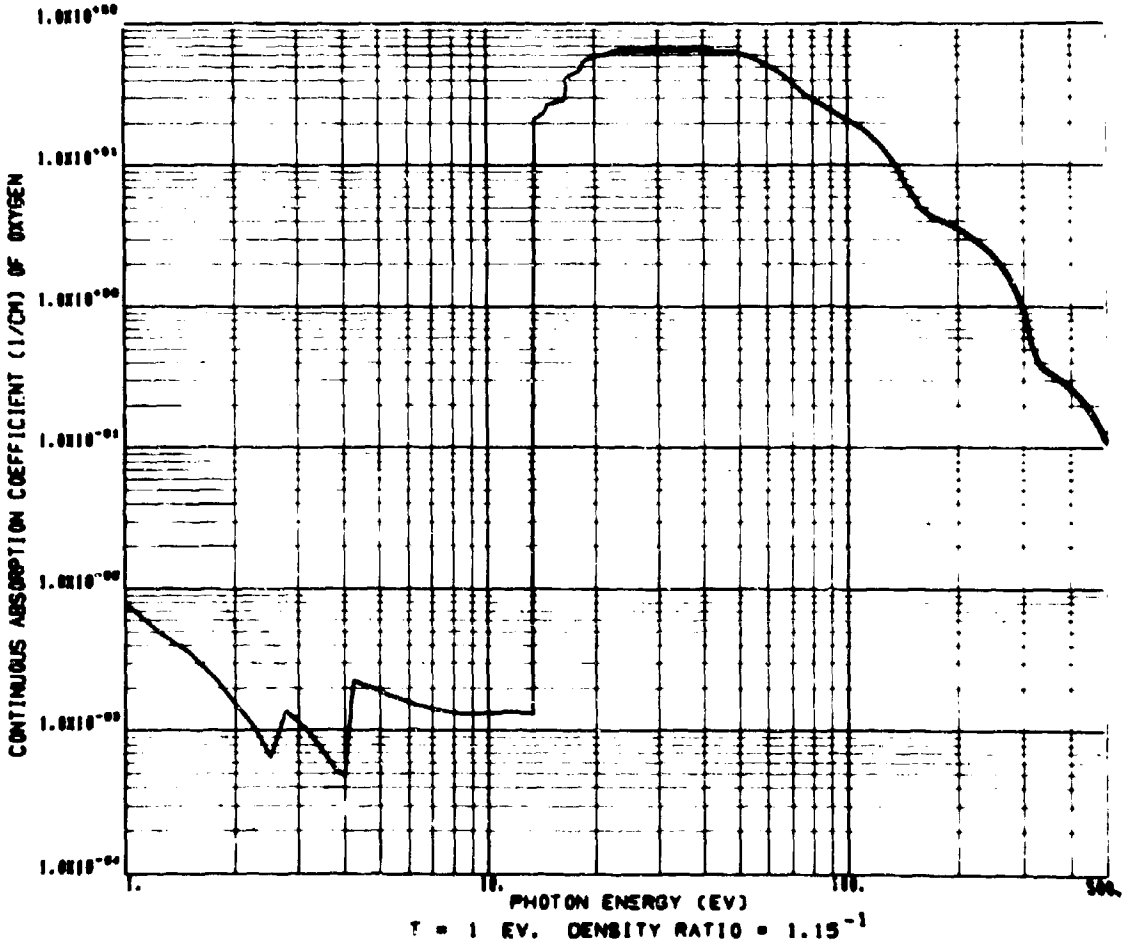
References

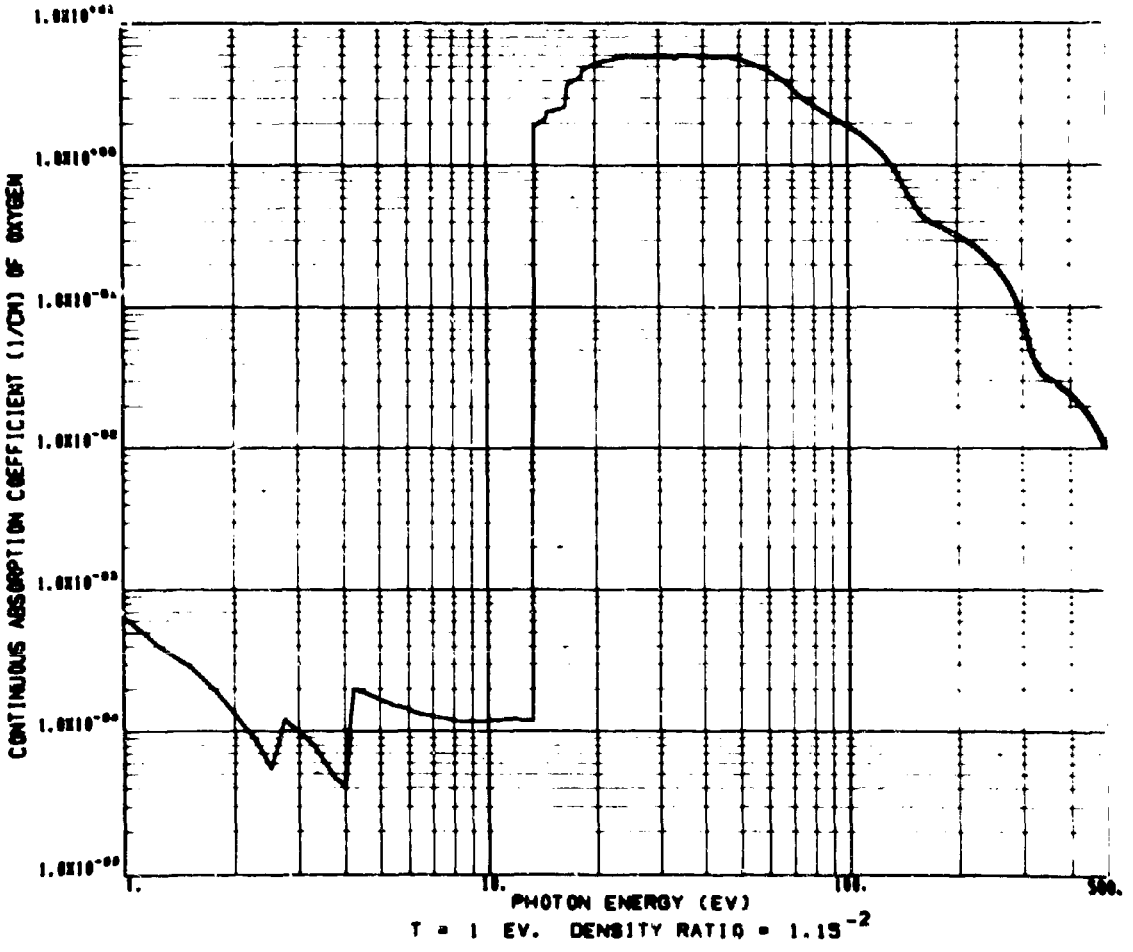
Armstrong, B.H., Mean Absorption Coefficients of Air, Nitrogen and Oxygen from 22,000° to 220,000°, Lockheed Missiles and Space Company Report LMSC 49759, 1959.

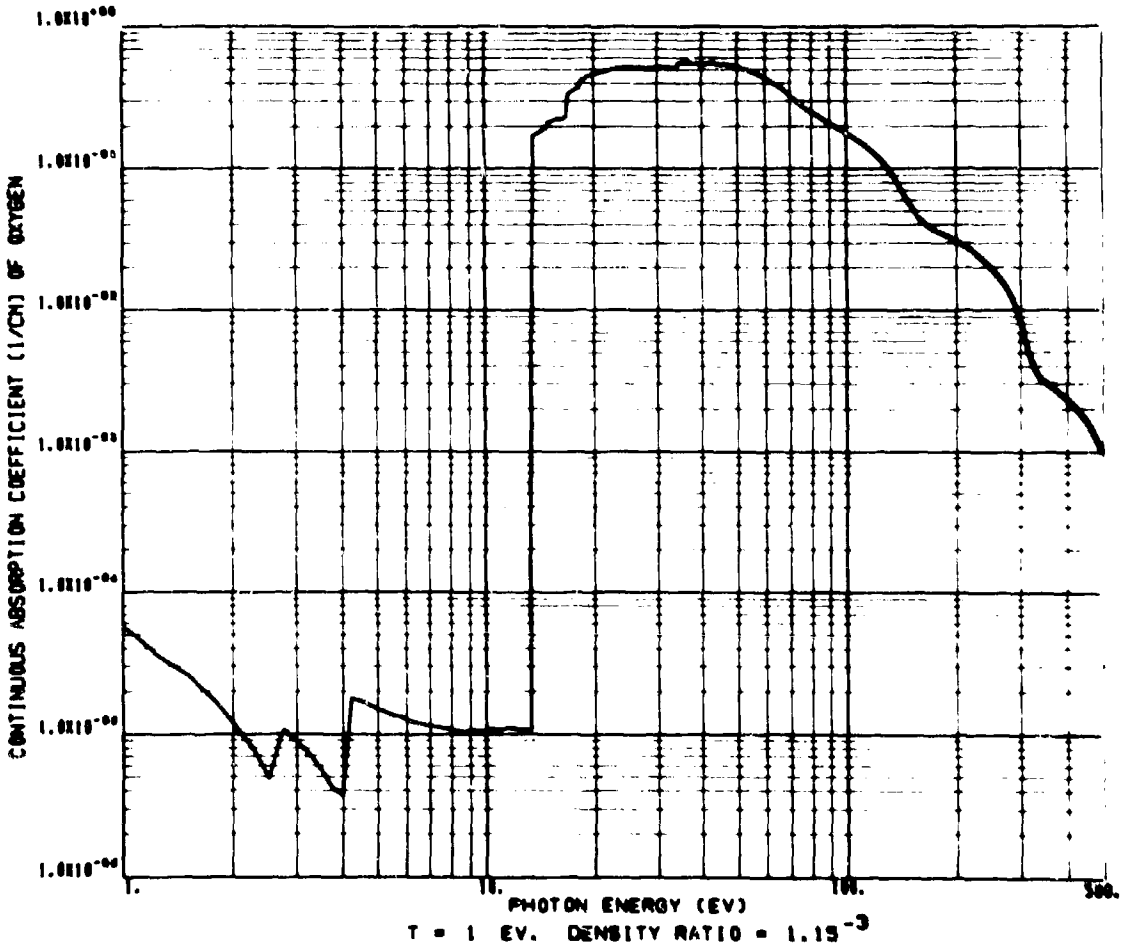
Armstrong, B.H., D. H. Holland and R. E. Meyerott, Absorption Coefficients of Air from 22,000° to 220,000°, Air Force Special Weapons Center Report, AFSWC-TR-58-36, 1958.

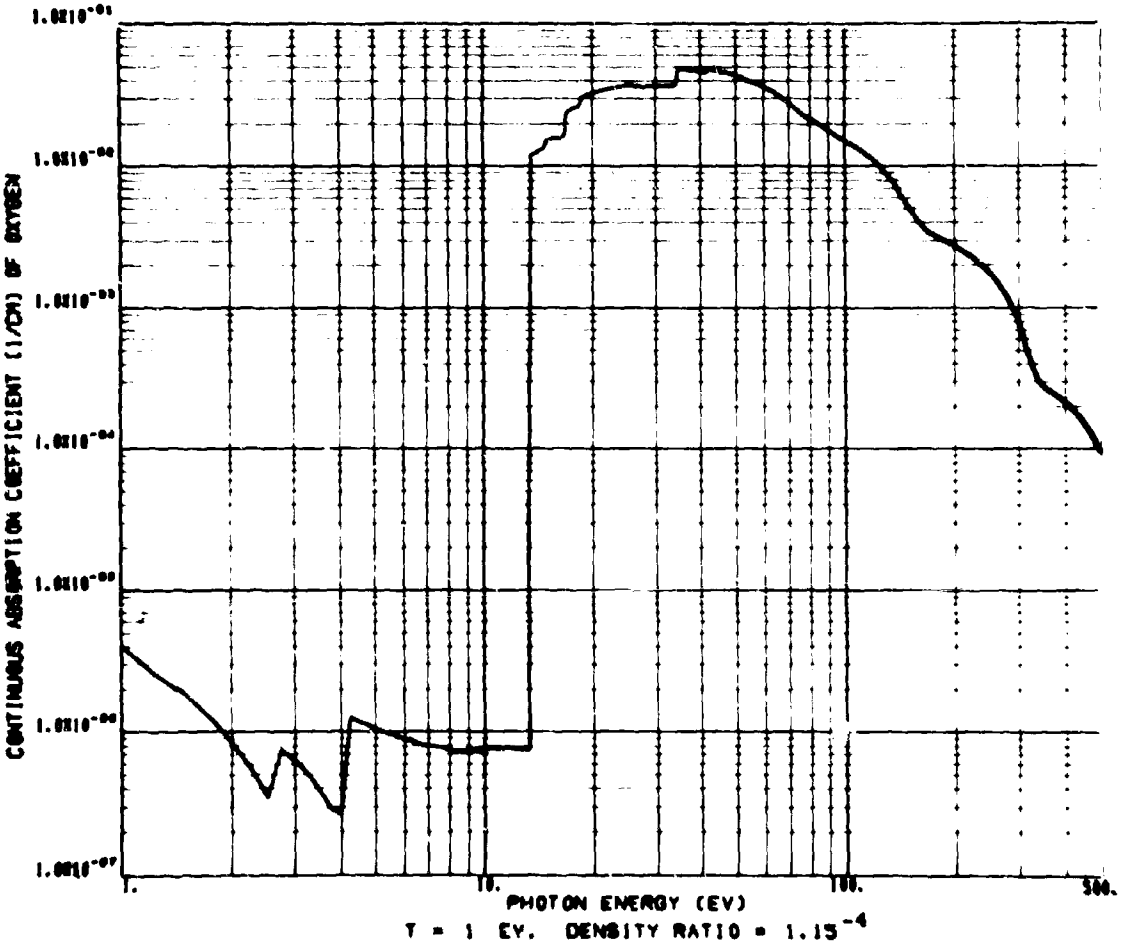
Armstrong, B.H. and R. Nicholls, The Radiative Properties of Heated Air, Thermal Radiation Phenomena, Lockheed, Palo Alto, 1966.

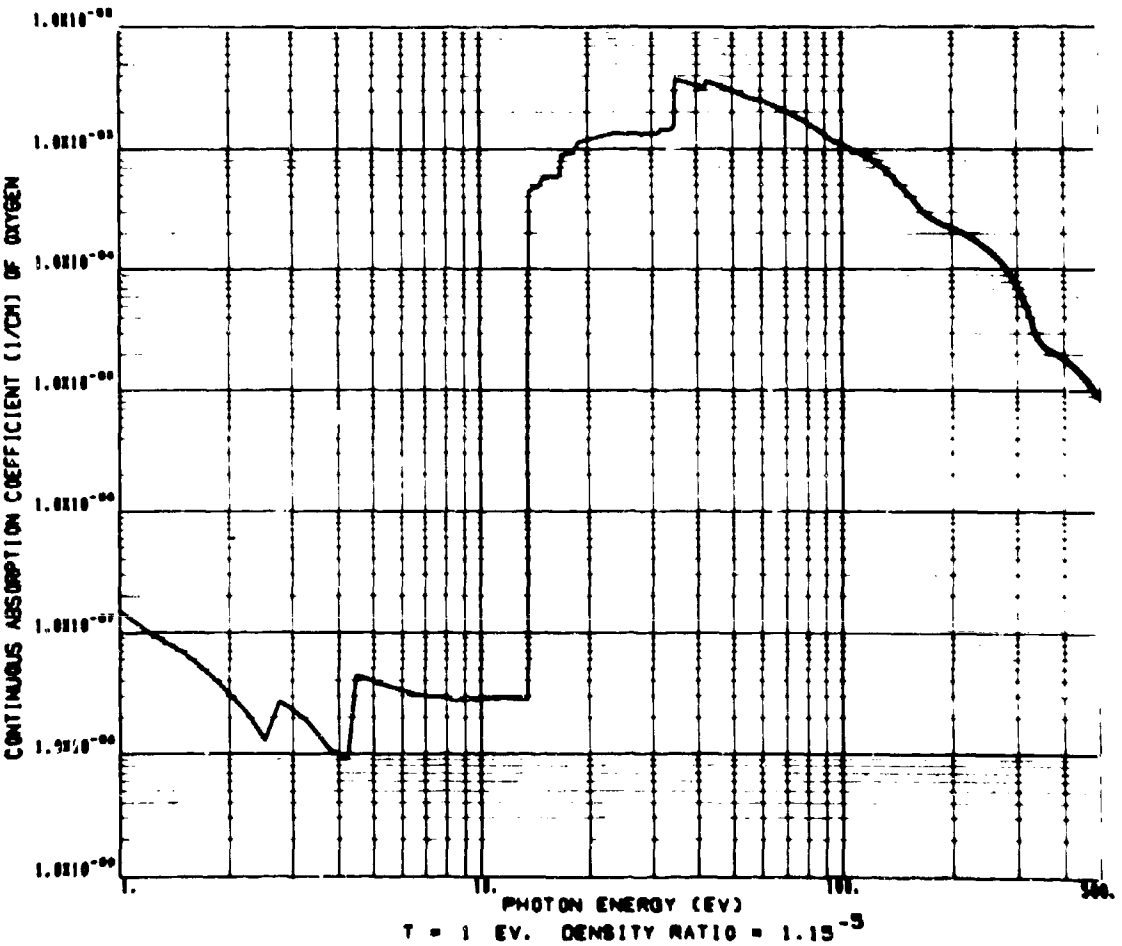
Burgess, A. and M. J. Seaton, MNRAS 120, 121, 1960.

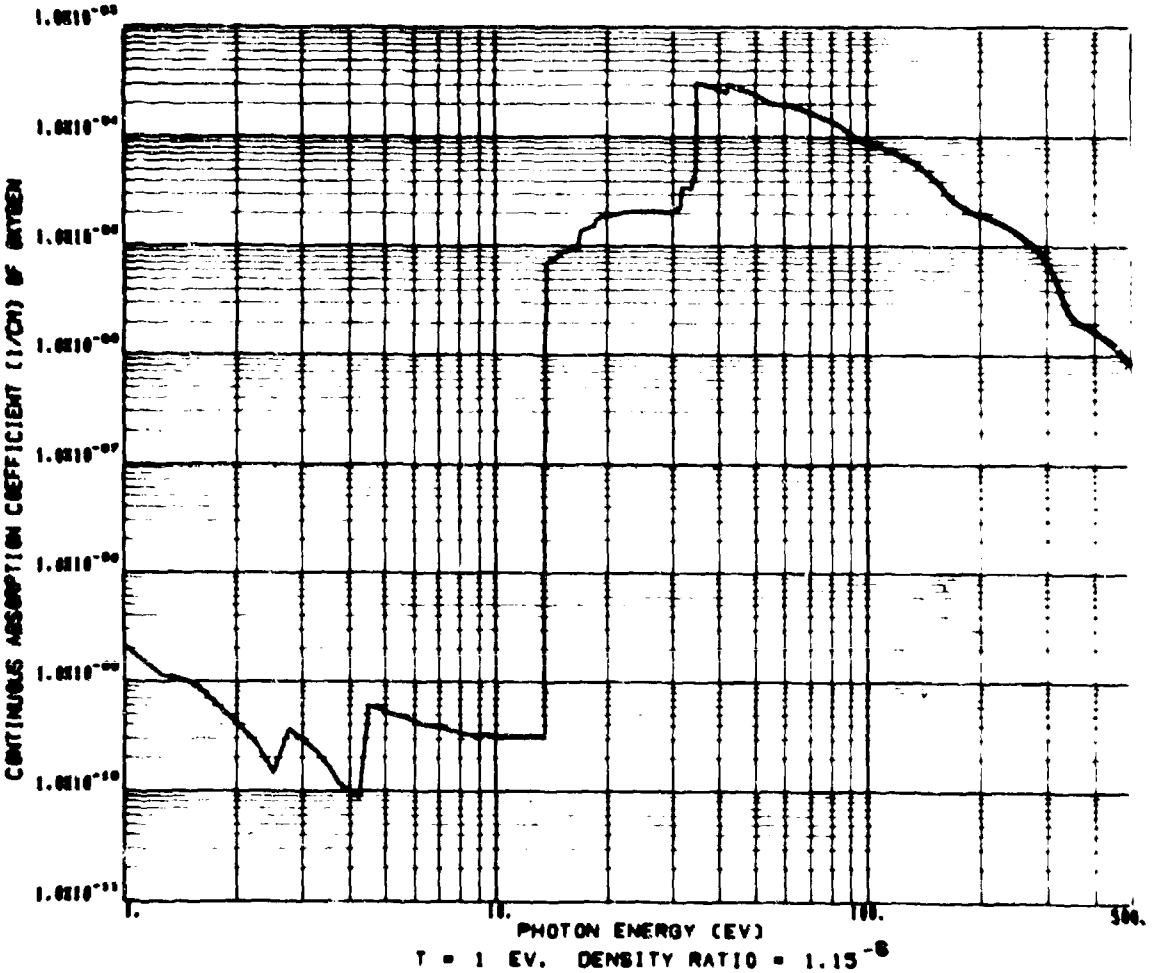

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.
10.
100.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-1

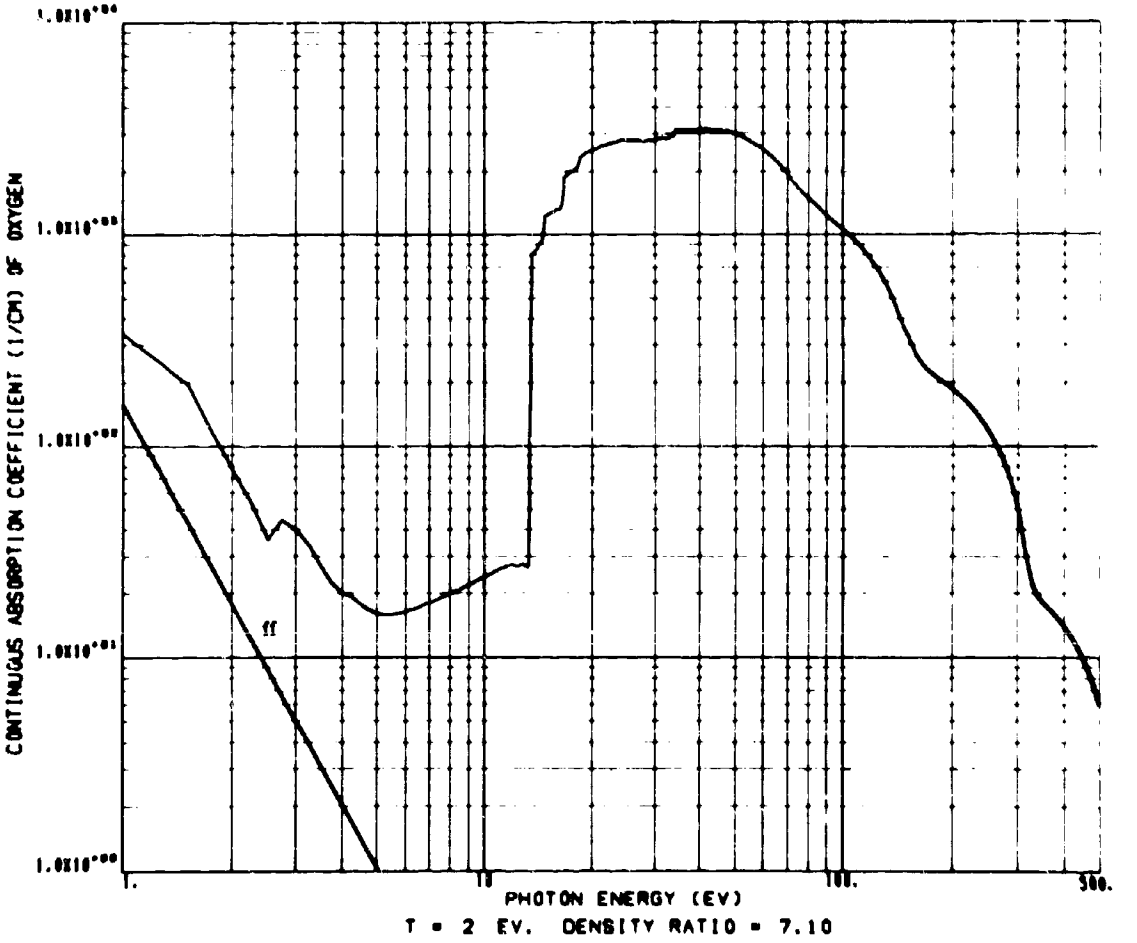

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^01
1.0X10^00
1.0X10^-01
1.0X10^-02
1.0X10^-03
1.0X10^-04
1.0X10^-05
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-2

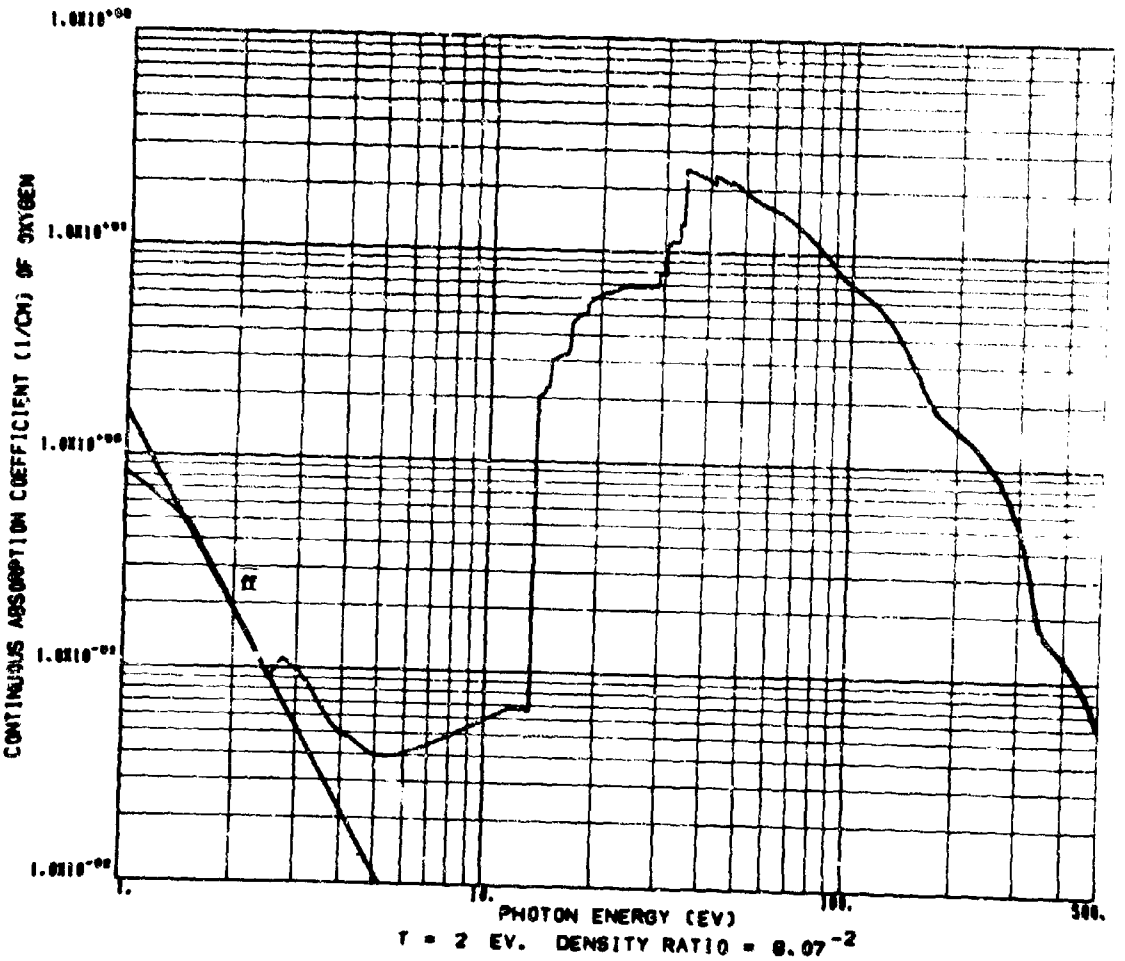

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E+00
1.0E-01
1.0E-02
1.0E-03
1.0E-04
1.0E-05
1.0E-06
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15-3

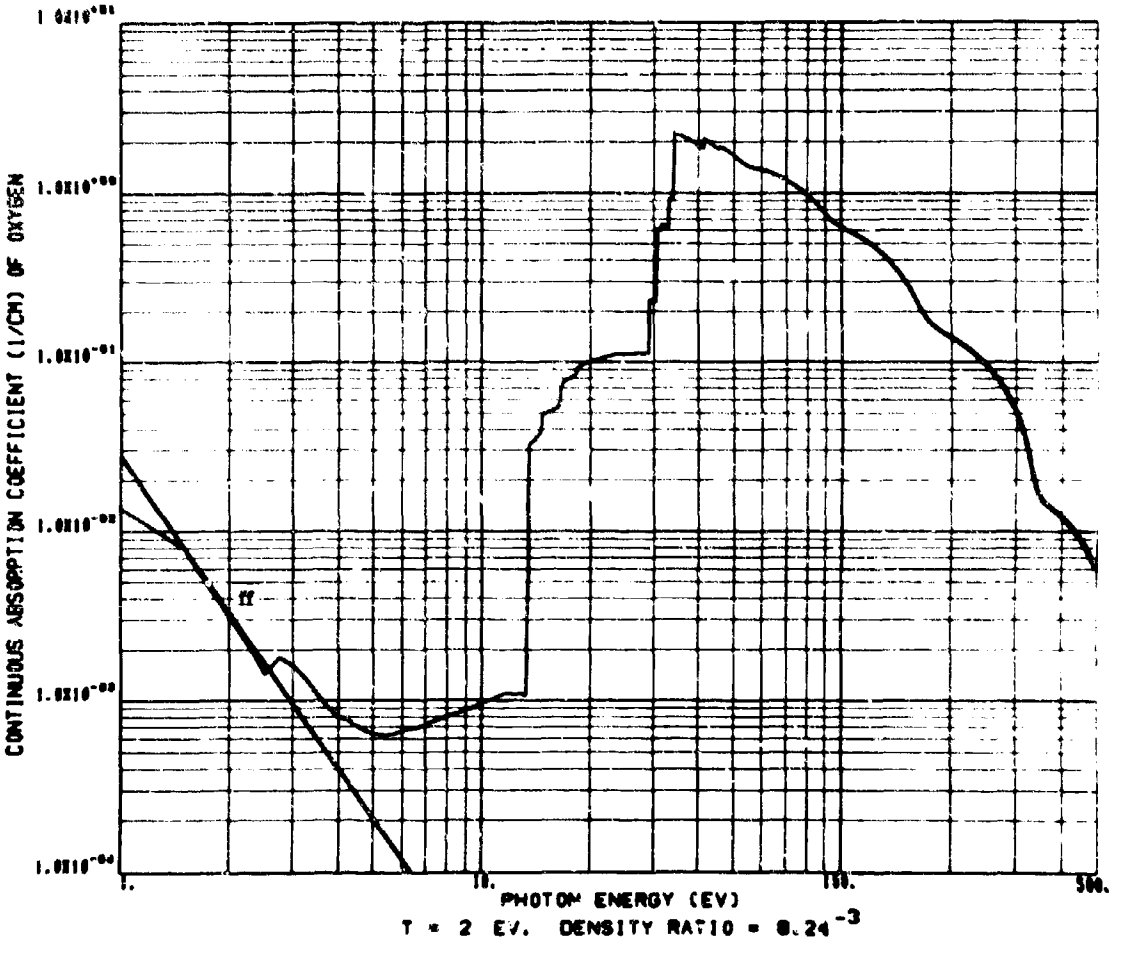

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-4

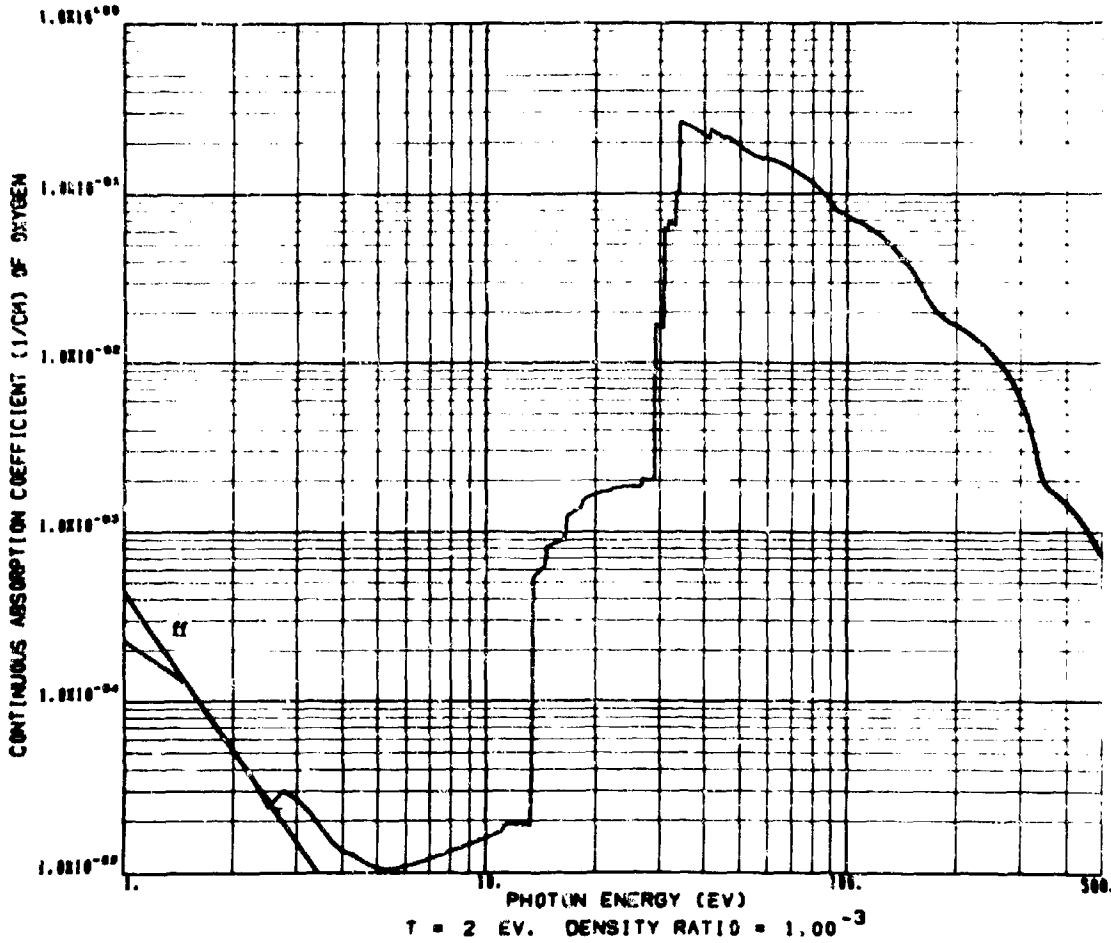

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^-04
1.0X10^-05
1.0X10^-06
1.0X10^-07
1.0X10^-08
1.0X10^-09
1.0X10^-10
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-5

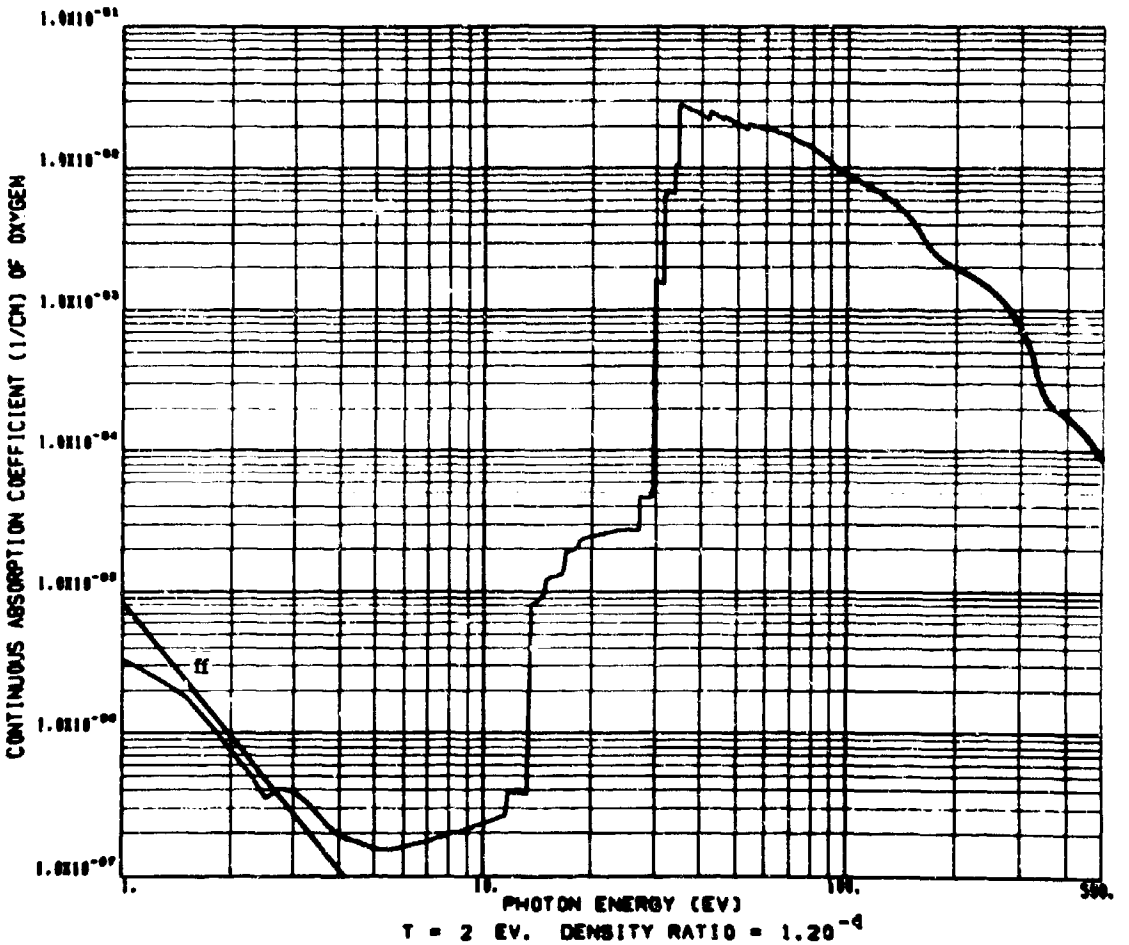

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-6

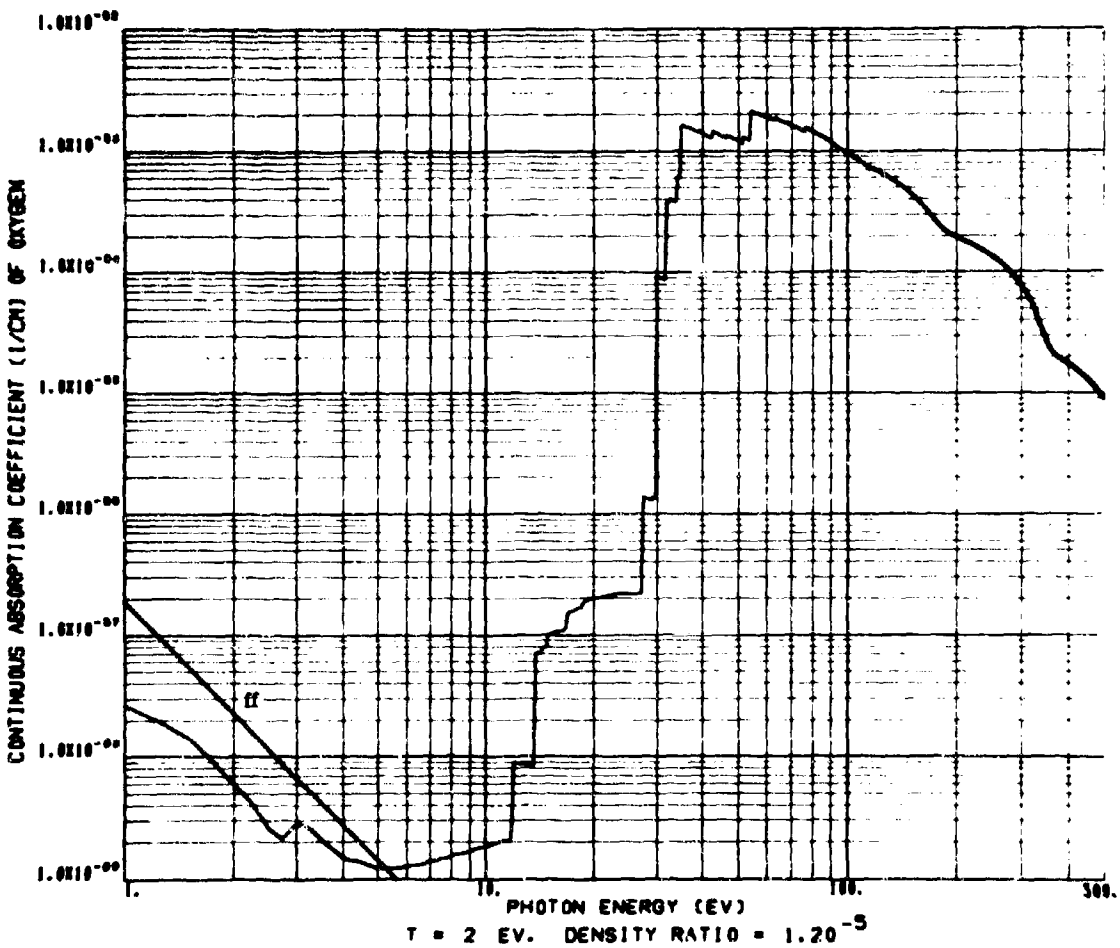

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10**04
1.0E10**03
1.0E10**02
1.0E10**01
1.0E10**00
ff
1.
10
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 7.10

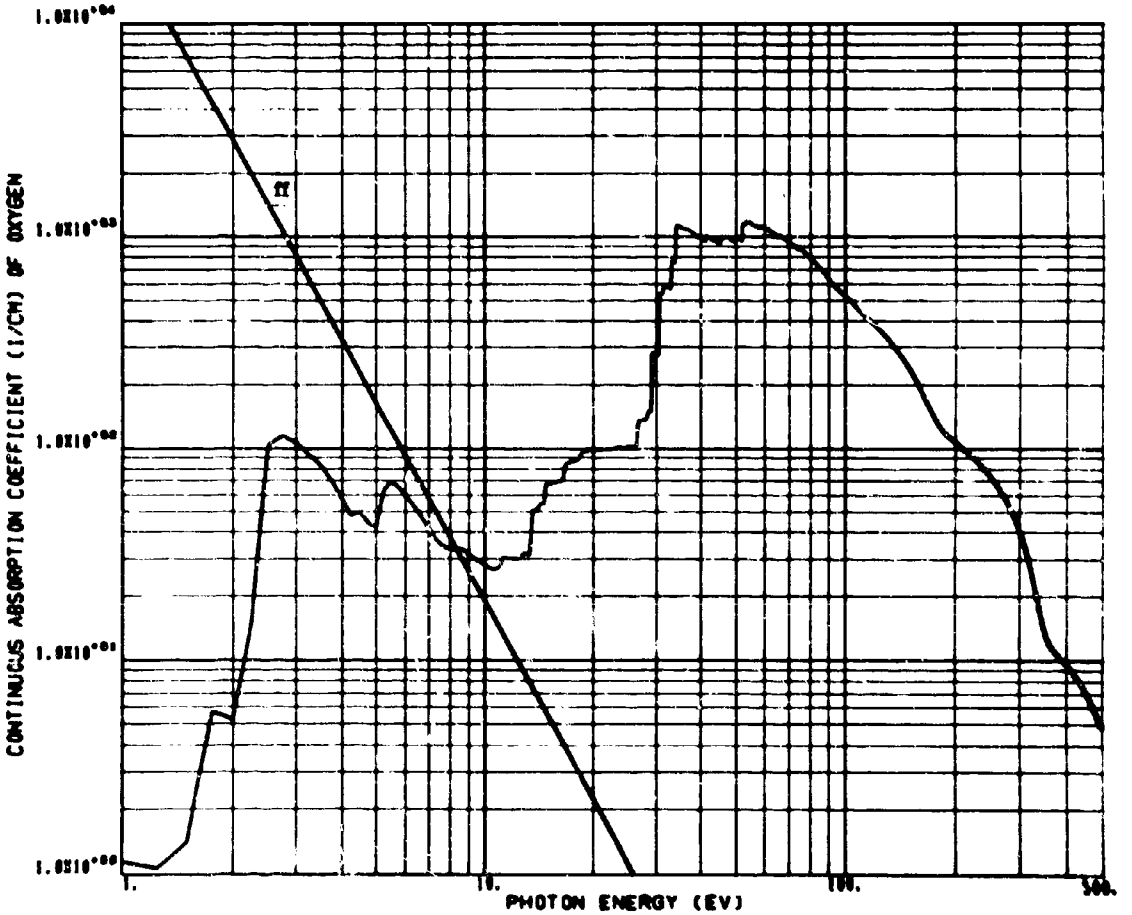

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 8.07 -2


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E+00
1.0E-01
1.0E-02
1.0E-03
1.0E-04
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 8.24 -3

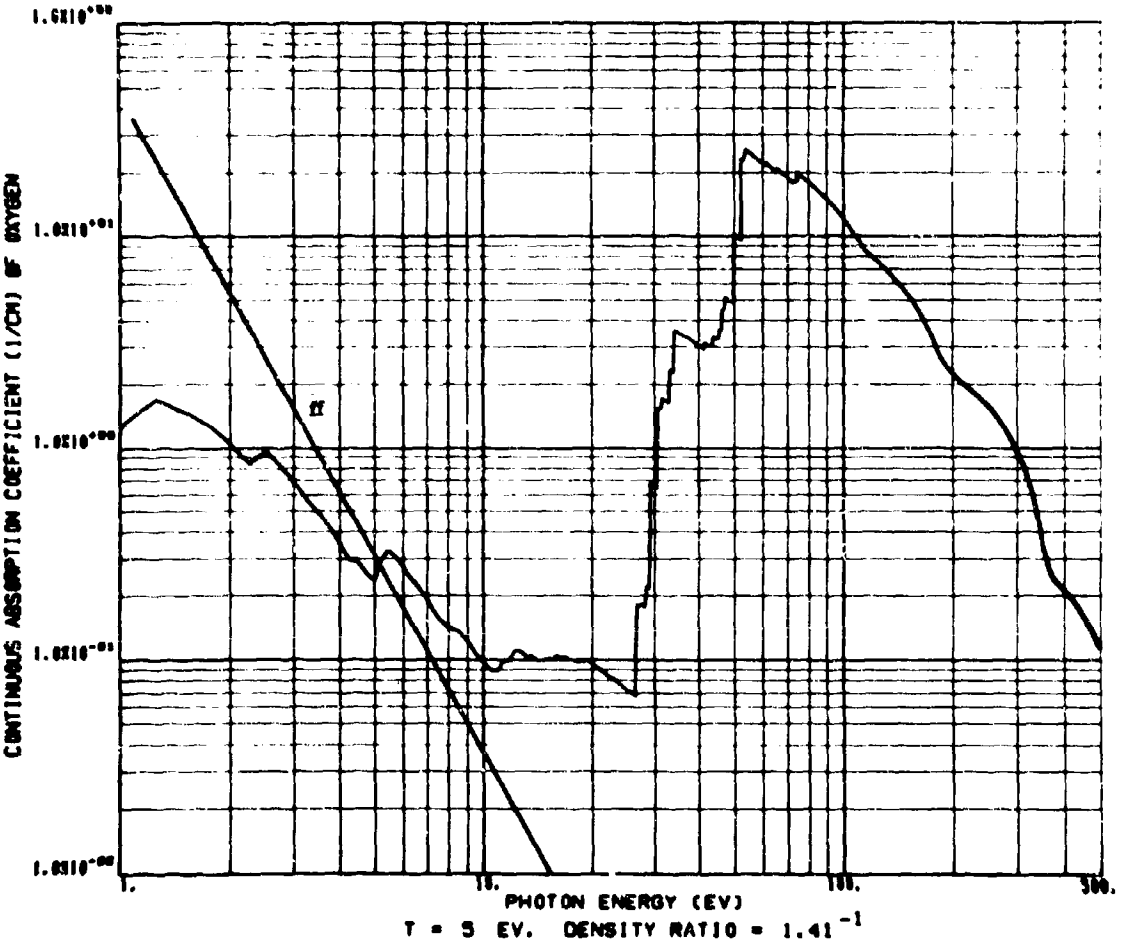

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 1.00^-3

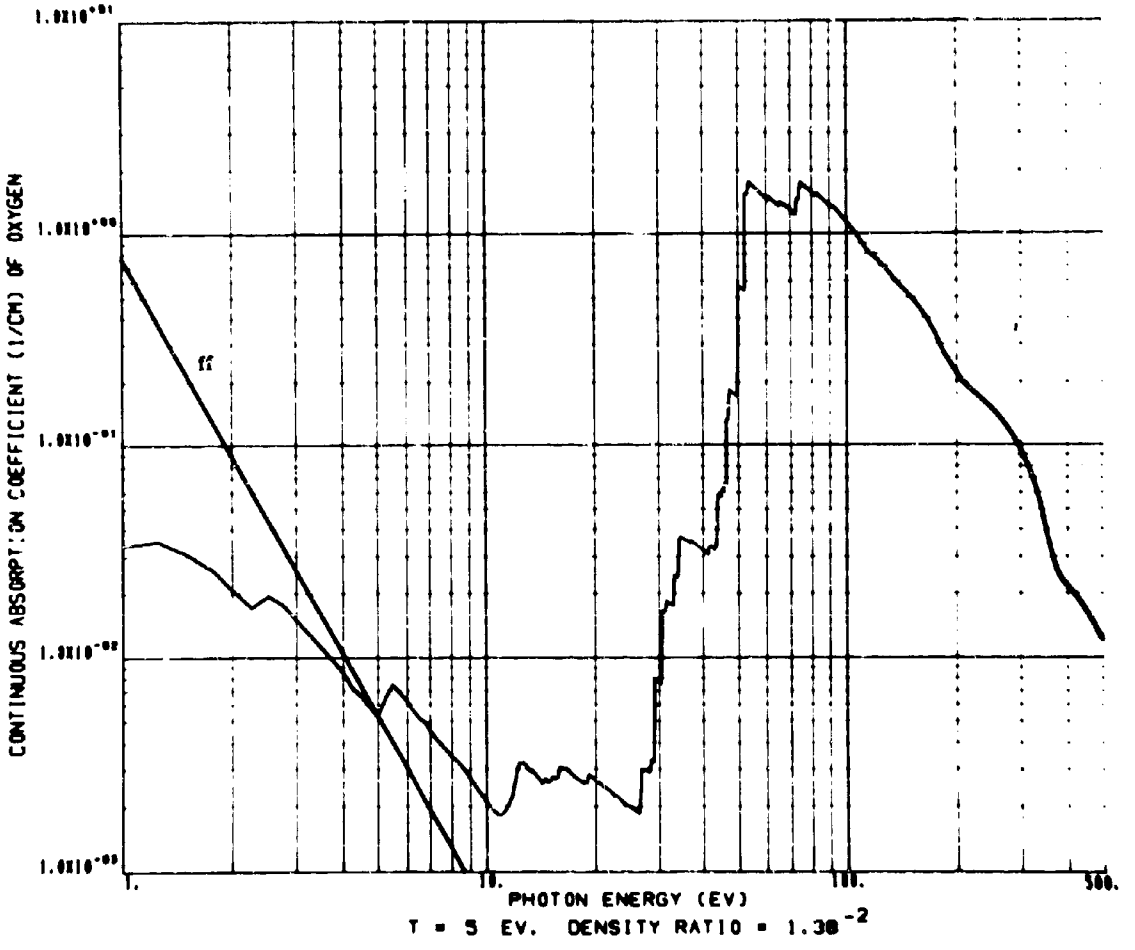

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 1.20^-4

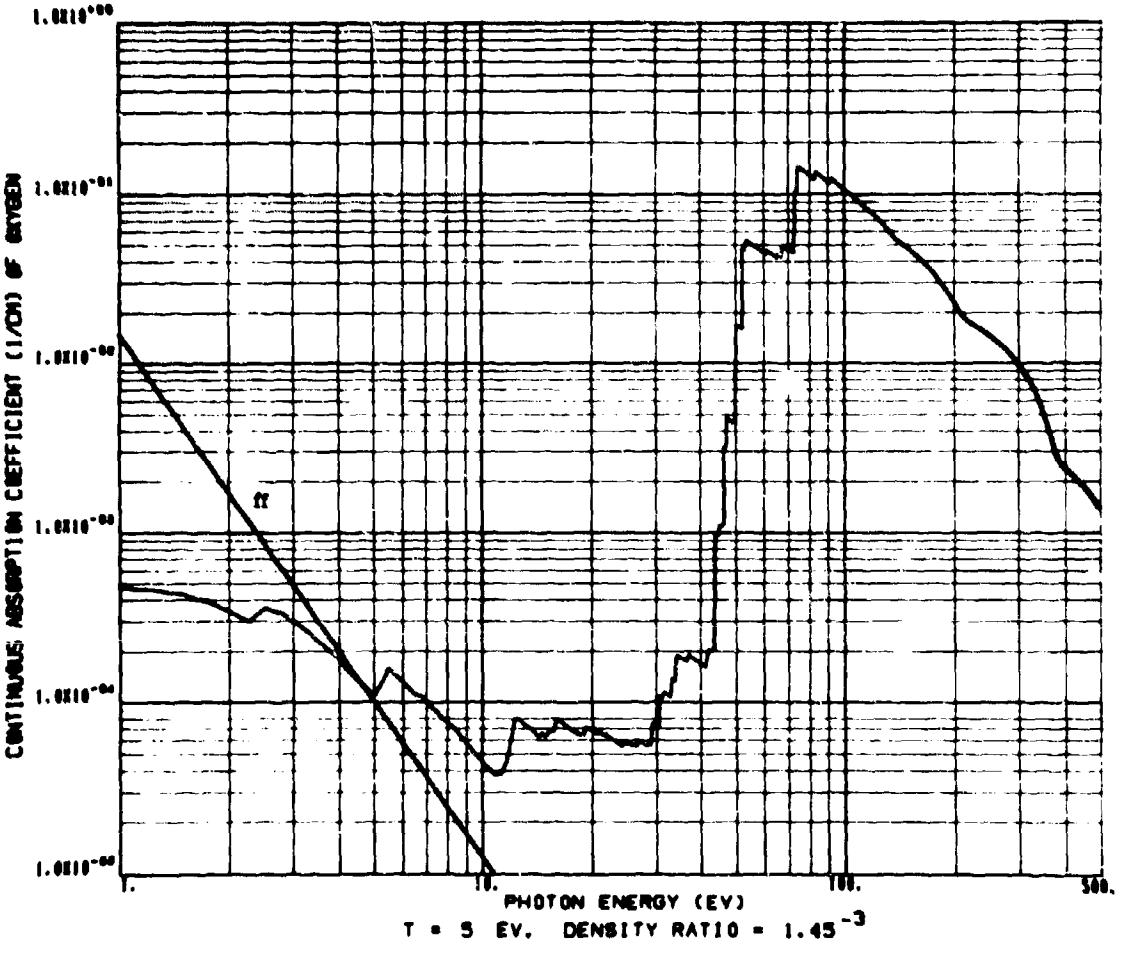

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^-00
1.0X10^-00
1.0X10^-00
1.0X10^-00
1.0X10^-00
1.0X10^-00
1.0X10^-00
1.0X10^-00
ff
1.
10.
100.
300.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 1.20^-5

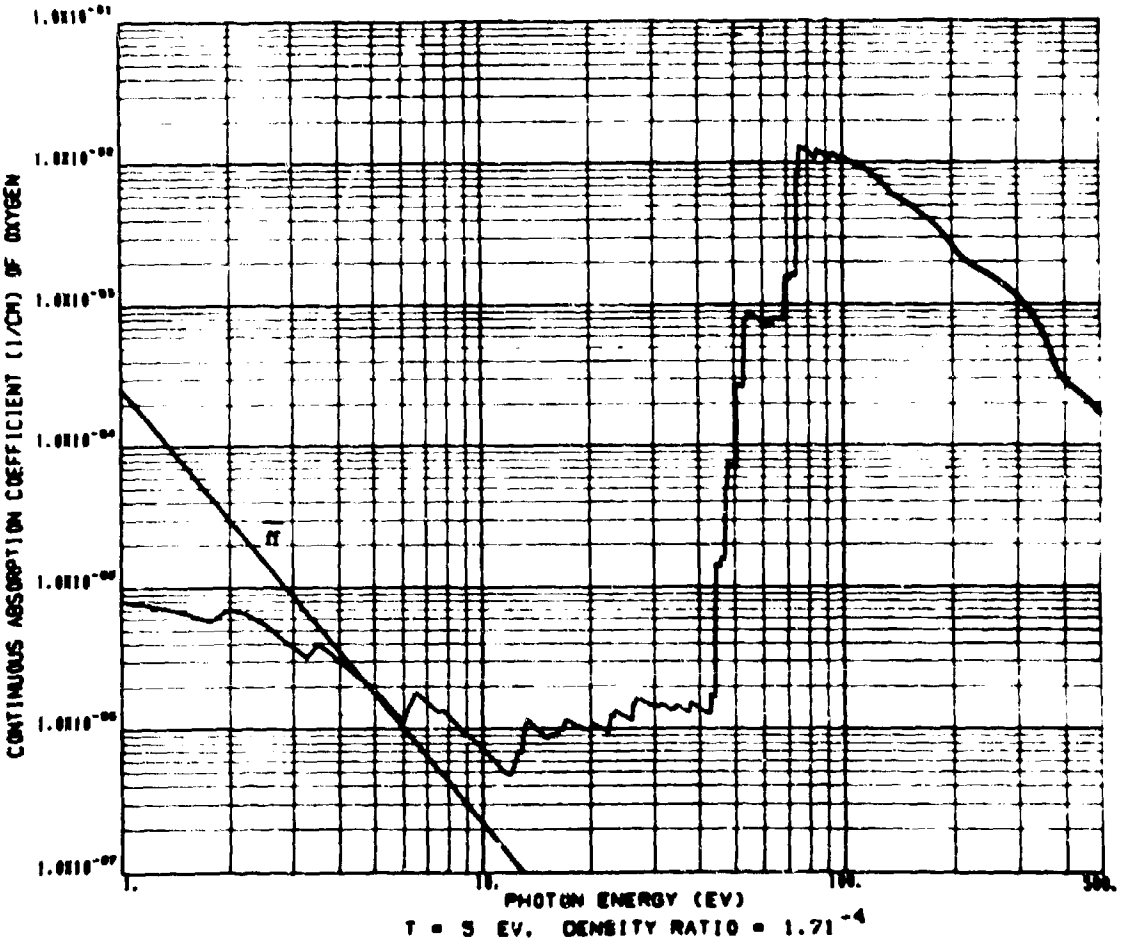


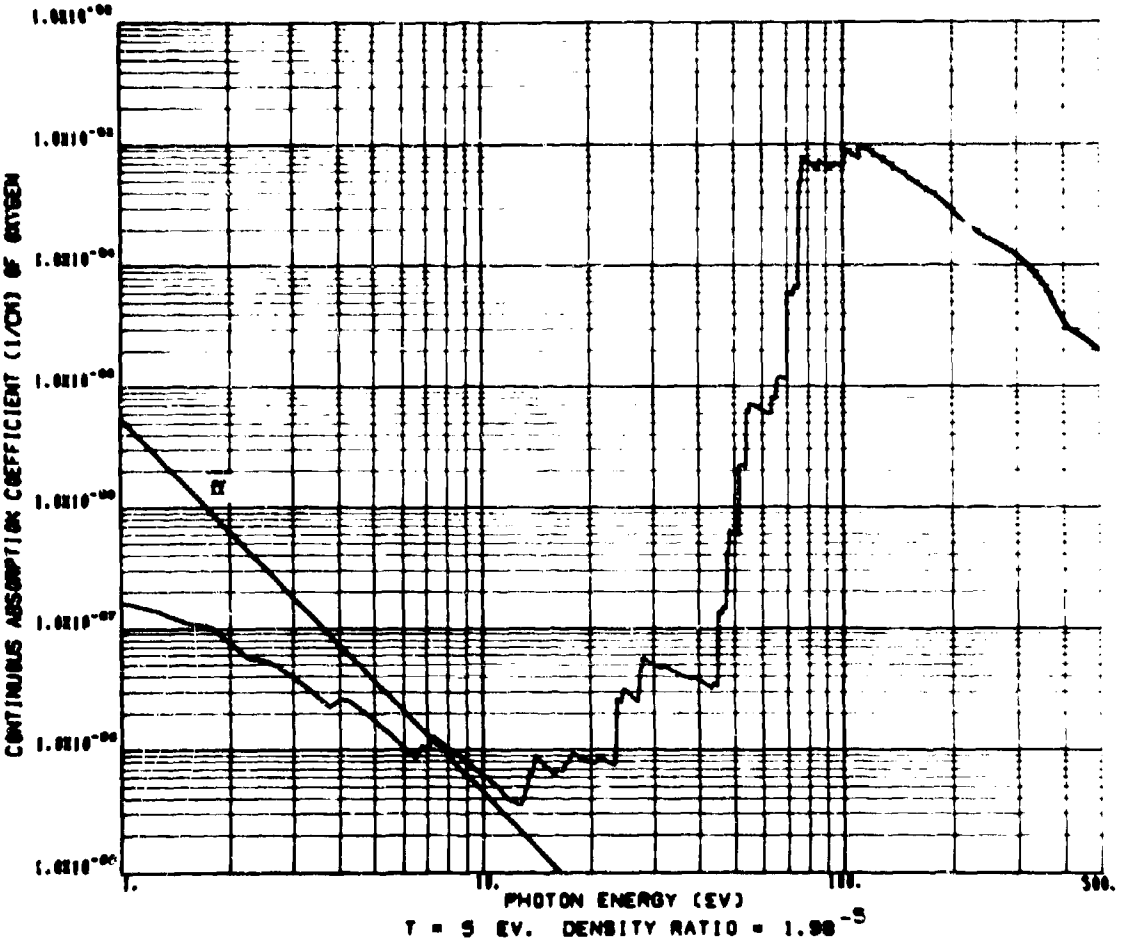
T = 5 EV. DENSITY RATIO = 6.46

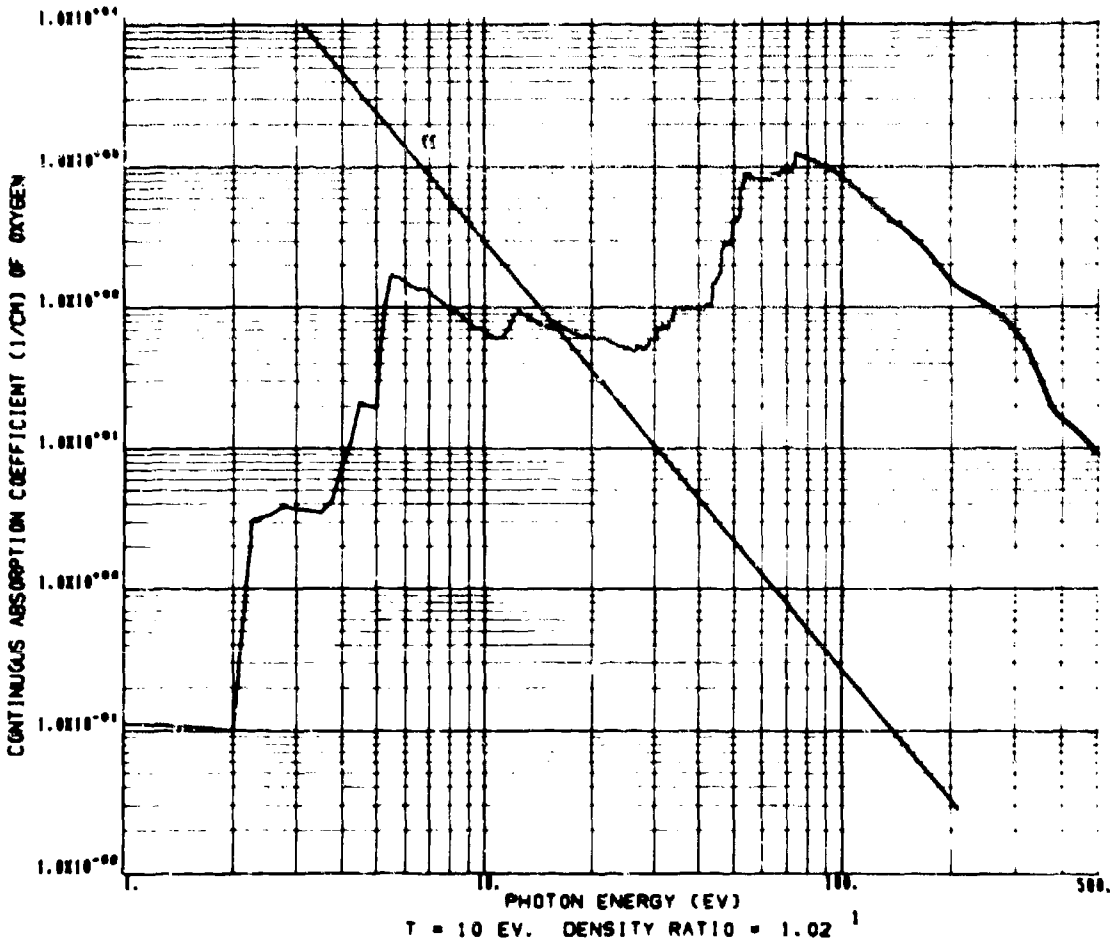

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.6E10+00
1.0E10+01
1.0E10+00
1.0E10-01
1.0E10-02
1.
10.
100.
500.
ff
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.41 -1

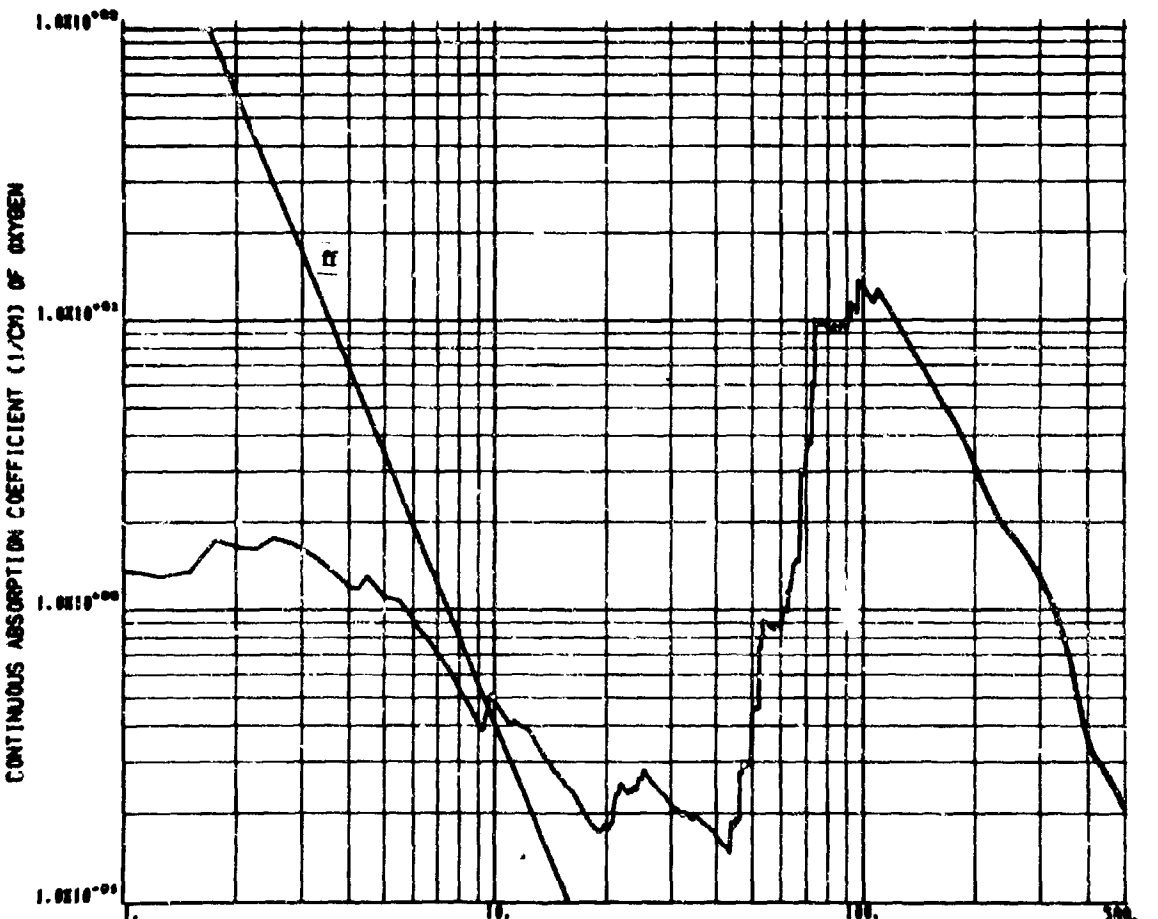

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.38 -2

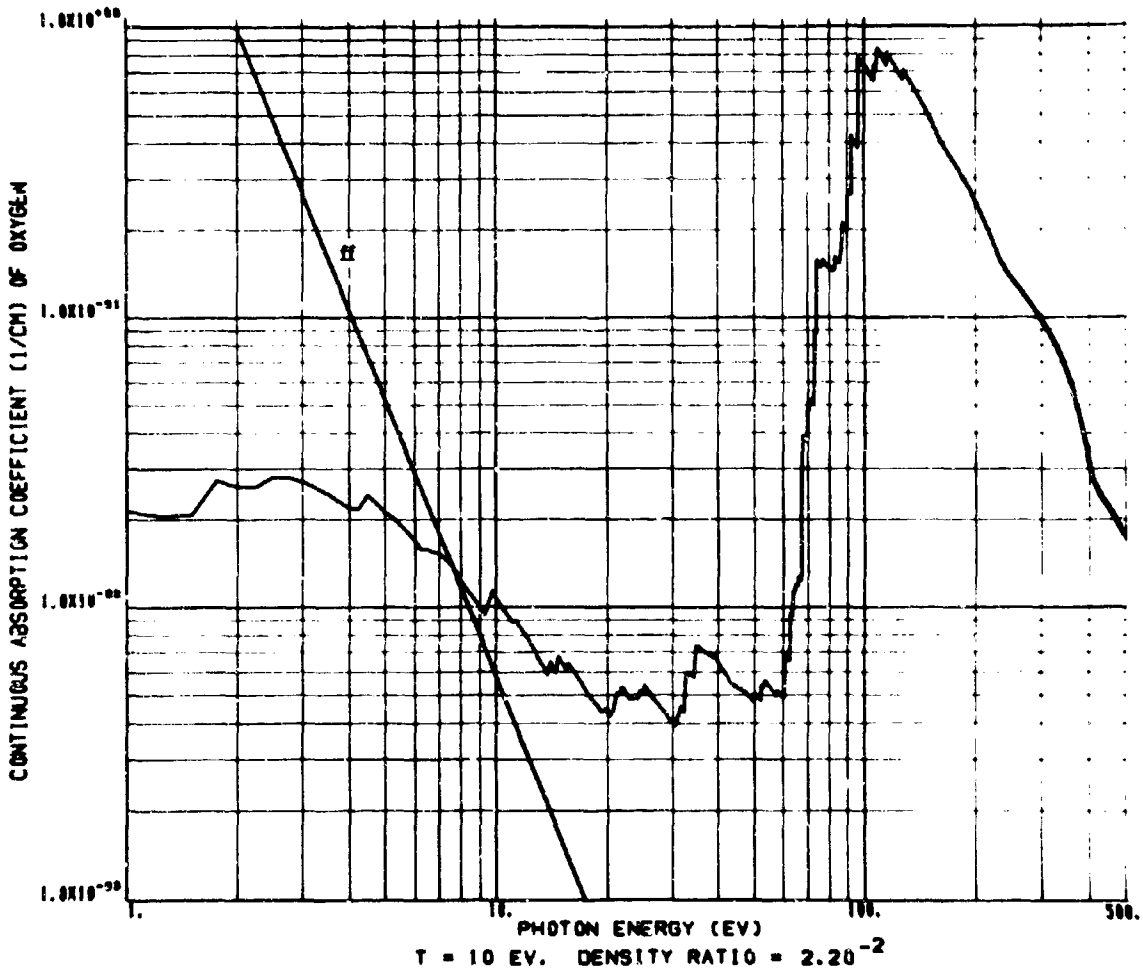

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10**00
1.0E10**-01
1.0E10**-02
1.0E10**-03
1.0E10**-04
1.0E10**-05
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.45**-3

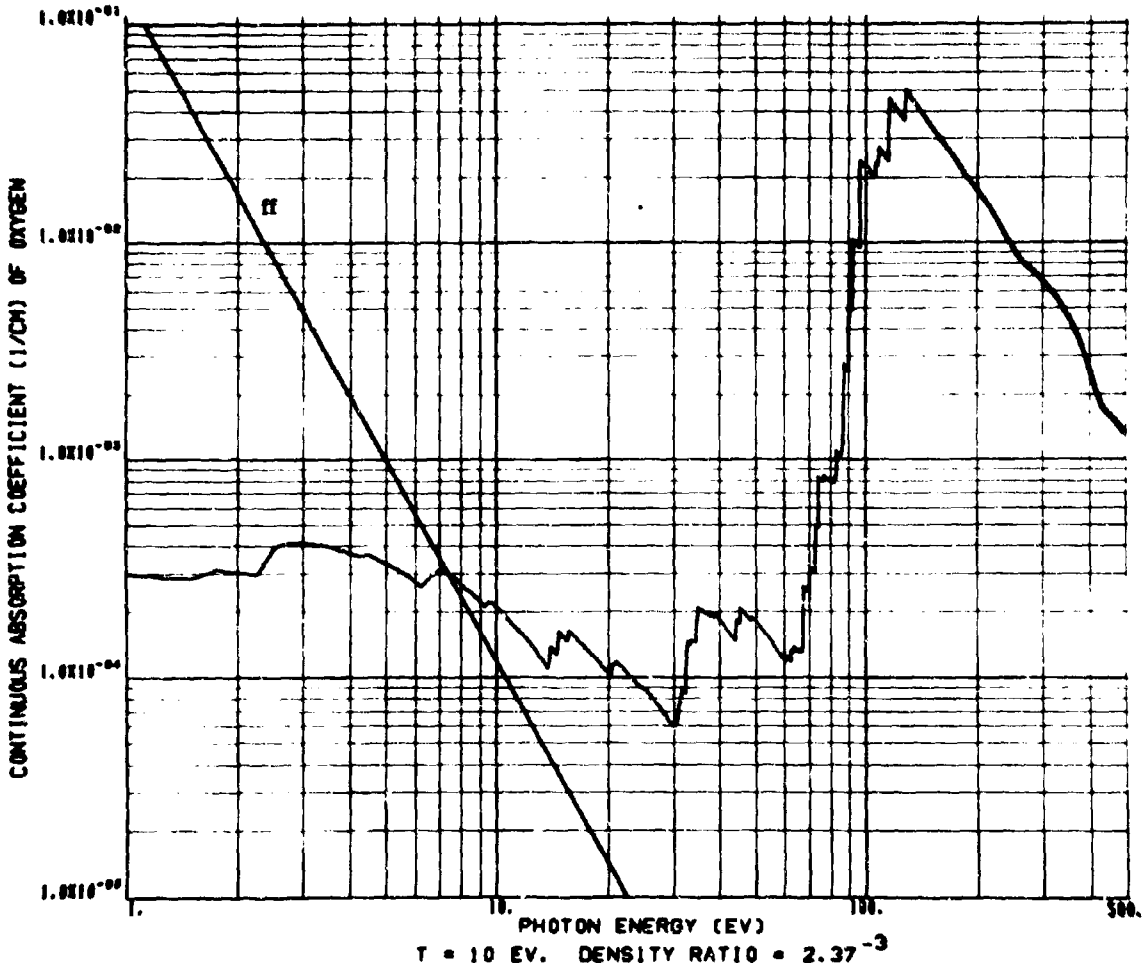

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10^-01
1.0E10^-02
1.0E10^-03
1.0E10^-04
1.0E10^-05
1.0E10^-06
1.0E10^-07
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.71^-4

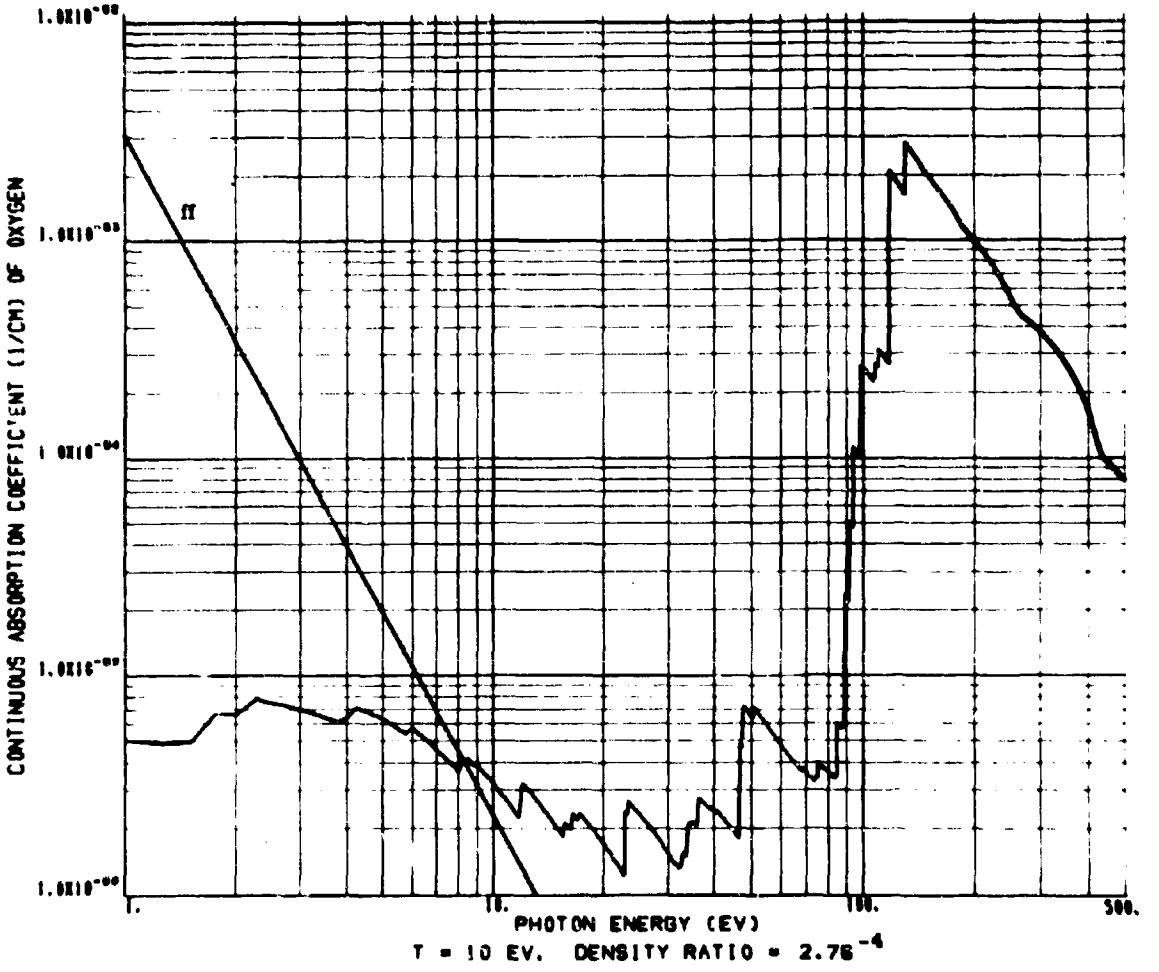

CONTINUUM ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.98

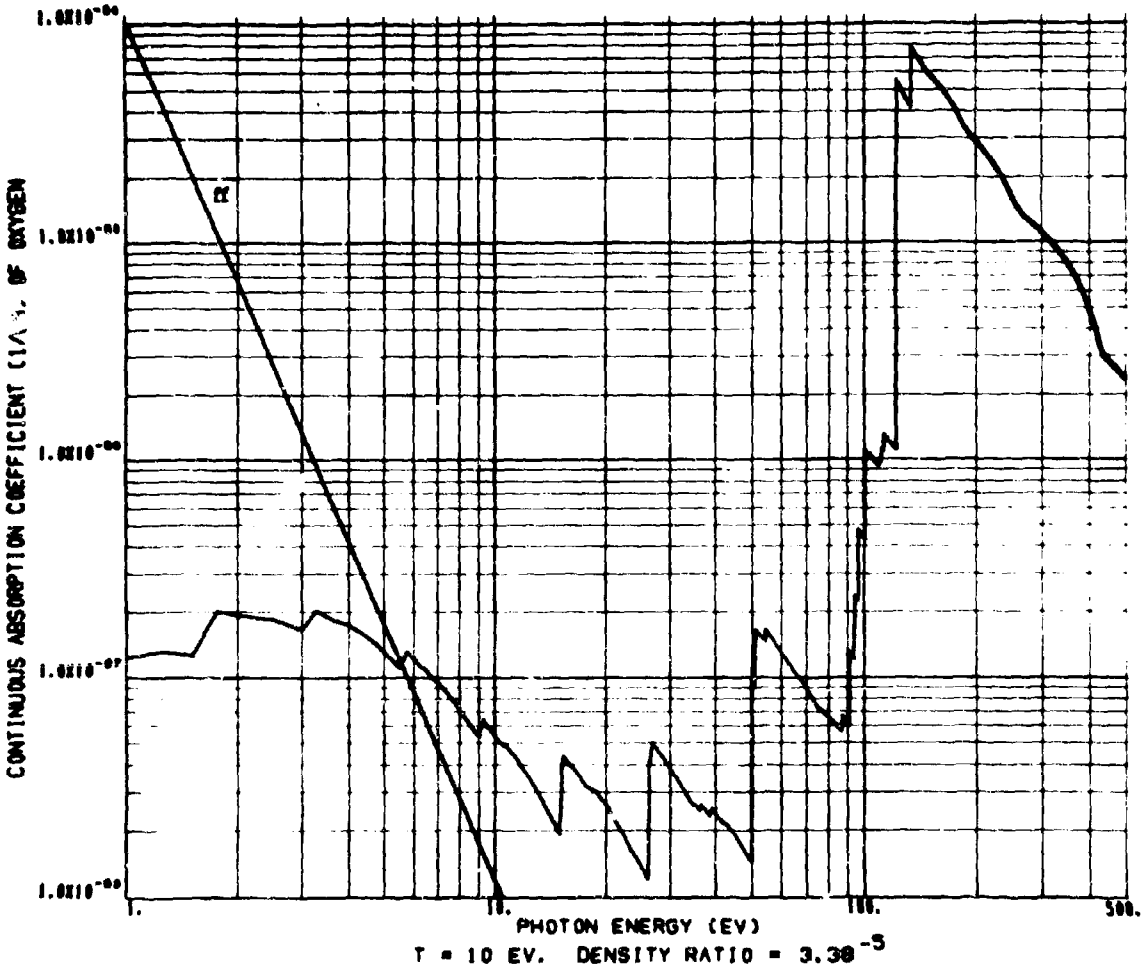

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10**01
1.0X10**00
1.0X10**-01
1.0X10**-02
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 1.02

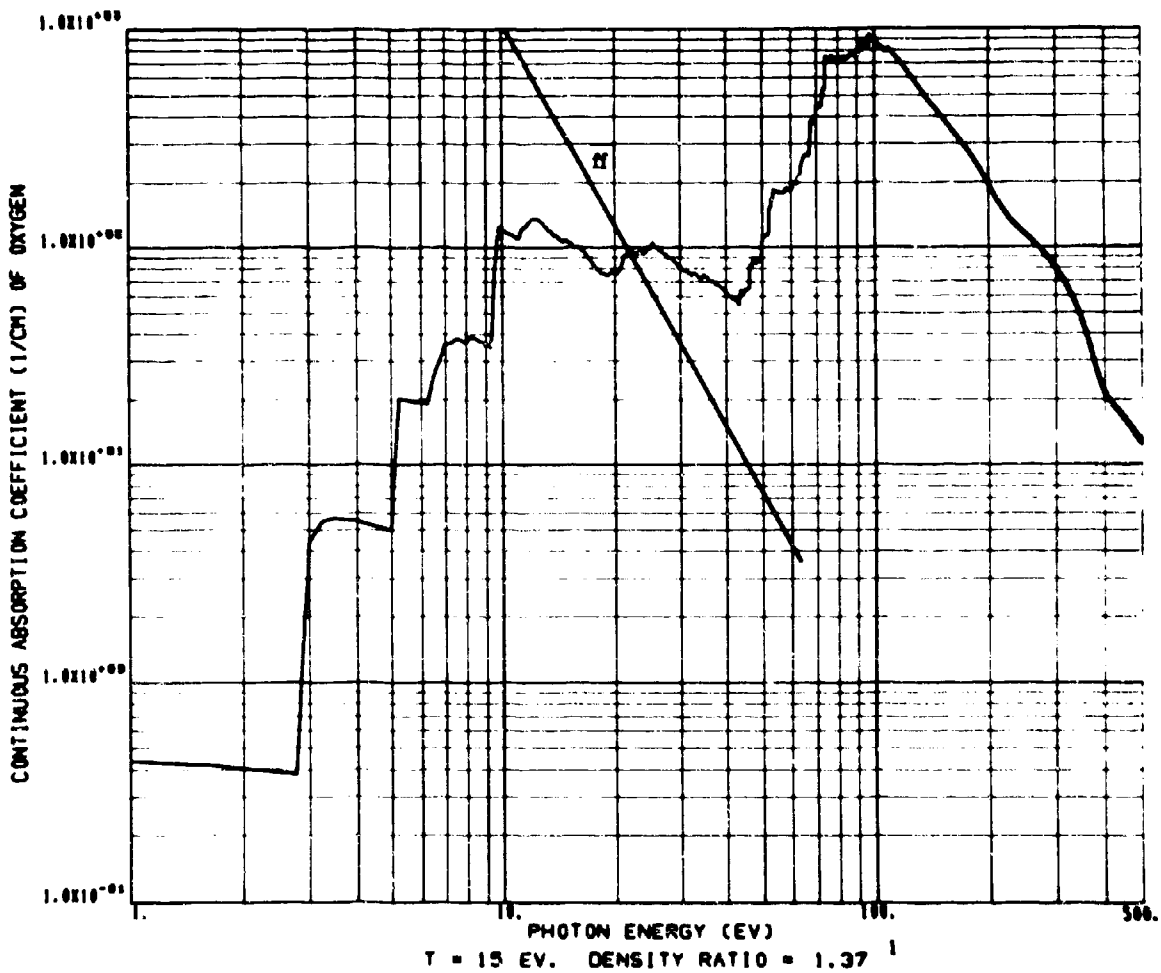

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10+00
1.0E10+01
1.0E10+00
1.0E10-01
1.
10.
100.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 2.22-1

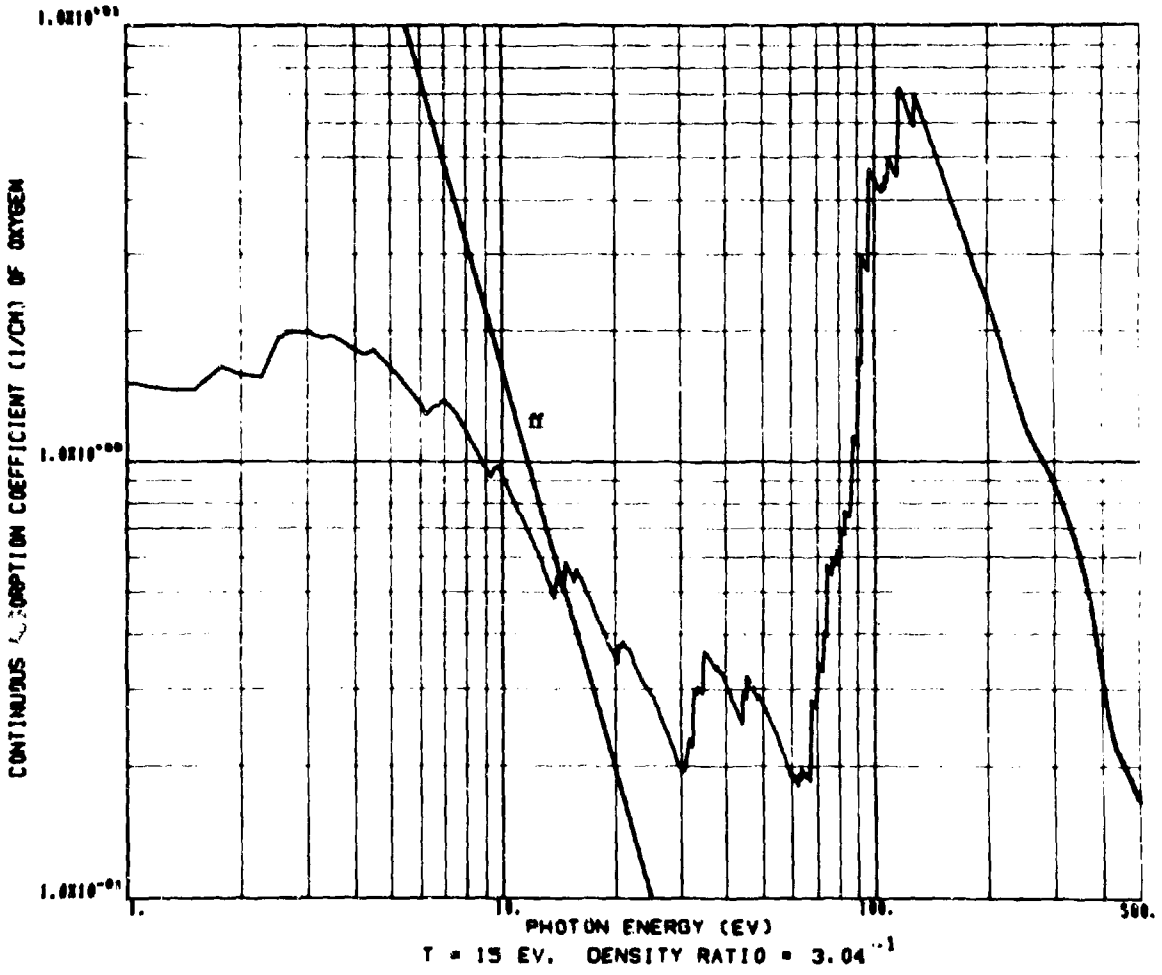

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^00
1.0X10^-01
1.0X10^-02
1.0X10^-03
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 2.20^-2

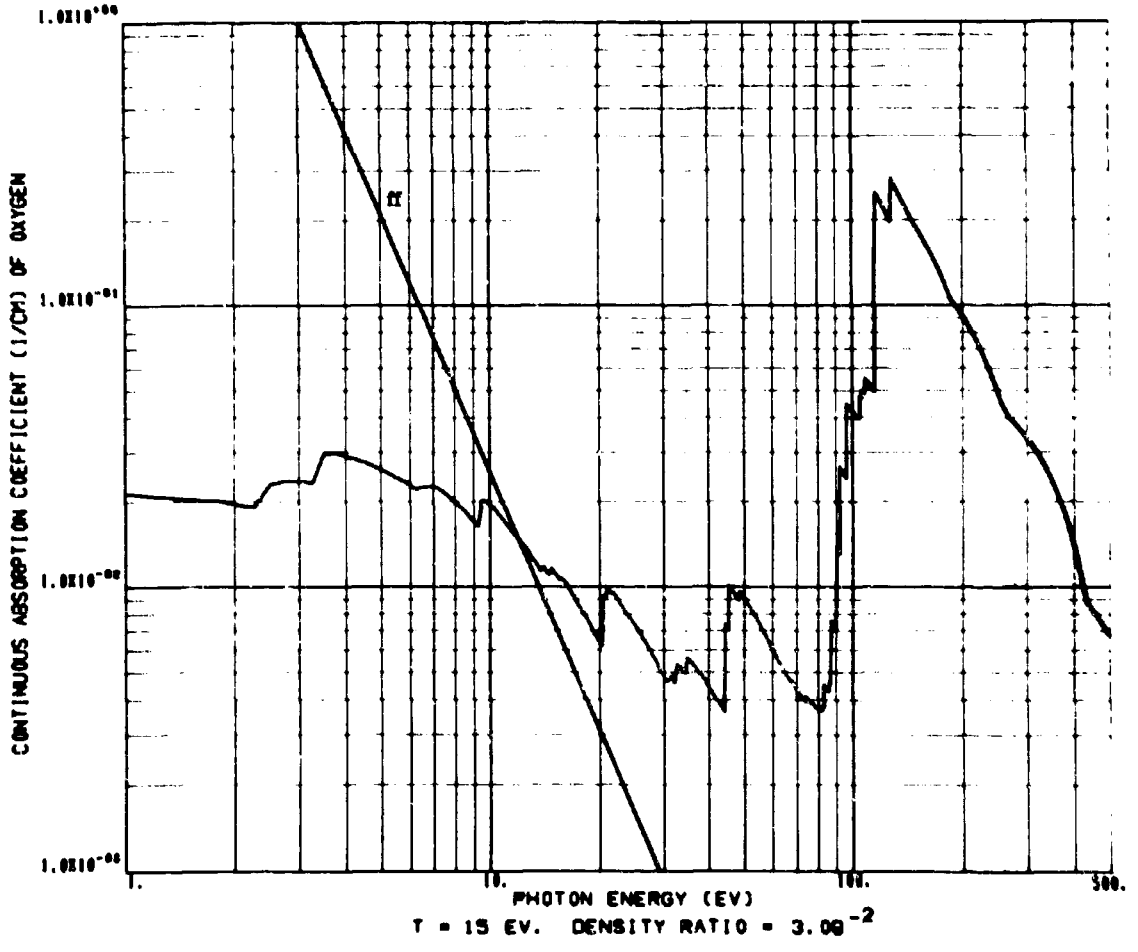

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 2.37 -3

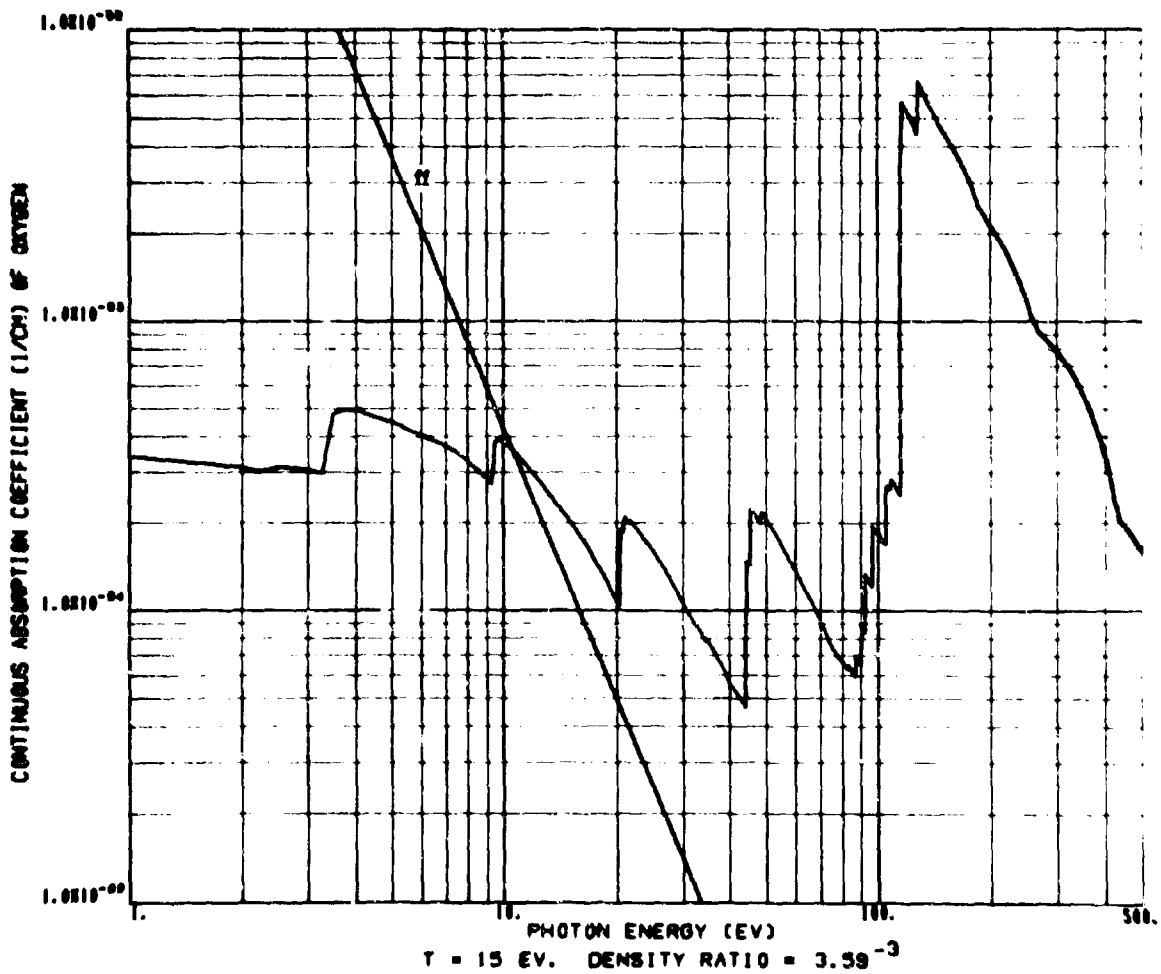

CONTINUOUS ABSORPTION COEFFIC'ENT (1/CM) OF OXYGEN
1.0X10^-00
1.0X10^-03
1.0X10^-04
1.0X10^-05
1.0X10^-06
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 2.76^-4

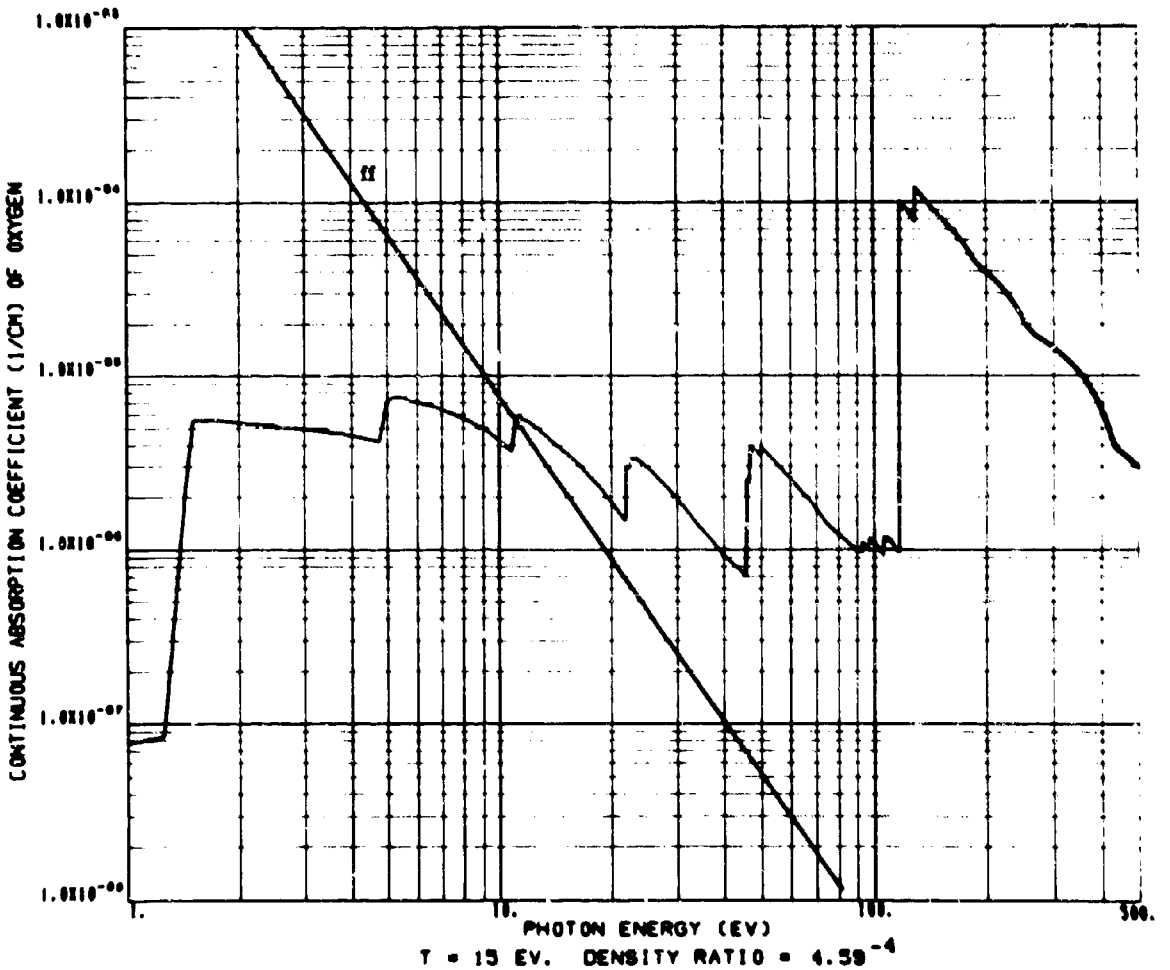

CONTINUOUS ABSORPTION COEFFICIENT (1/CM. OF OXYGEN)
1.0X10^-06
1.0X10^-08
1.0X10^-08
1.0X10^-07
1.0X10^-09
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 3.38^-5

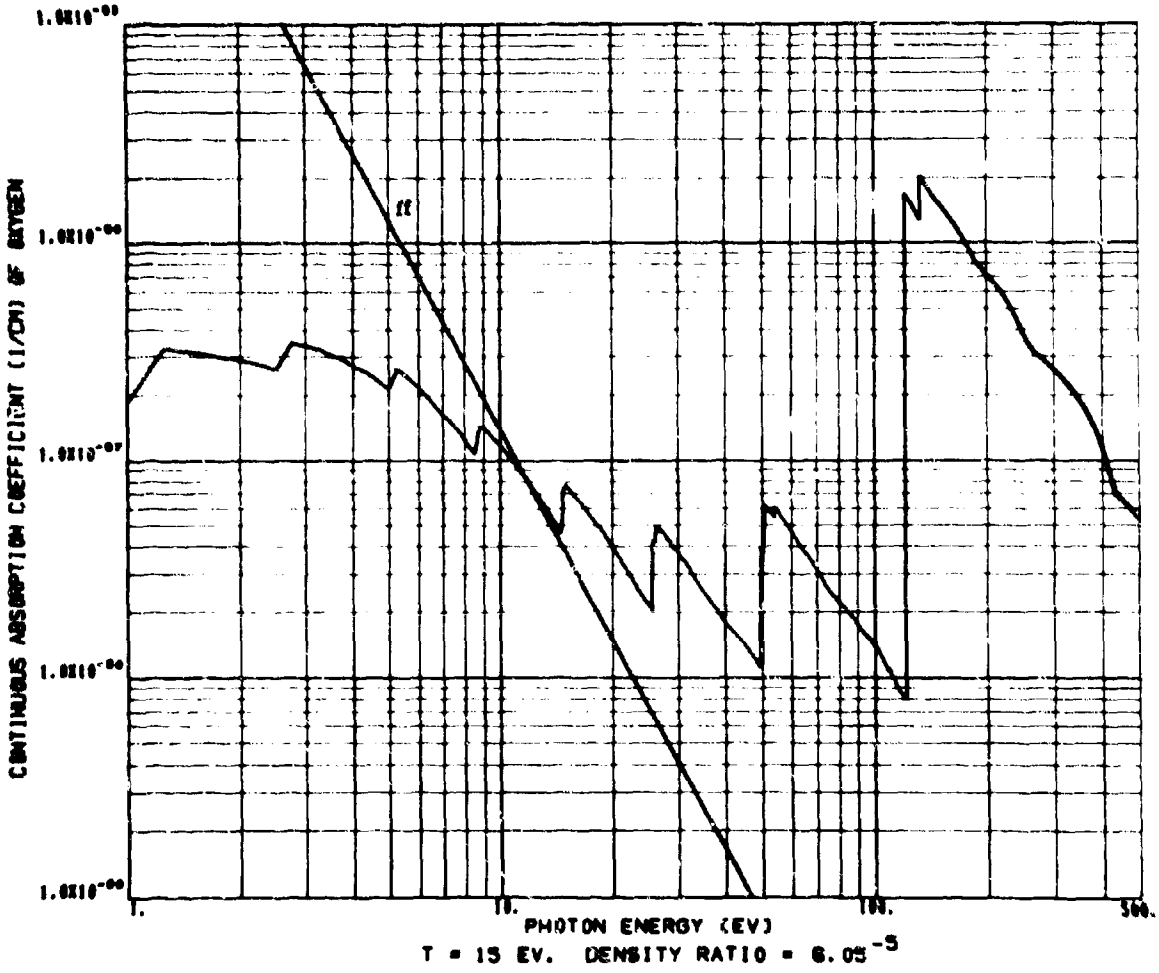

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10+03
1.0X10+02
1.0X10+01
1.0X10+00
1.0X10-01
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 1.37

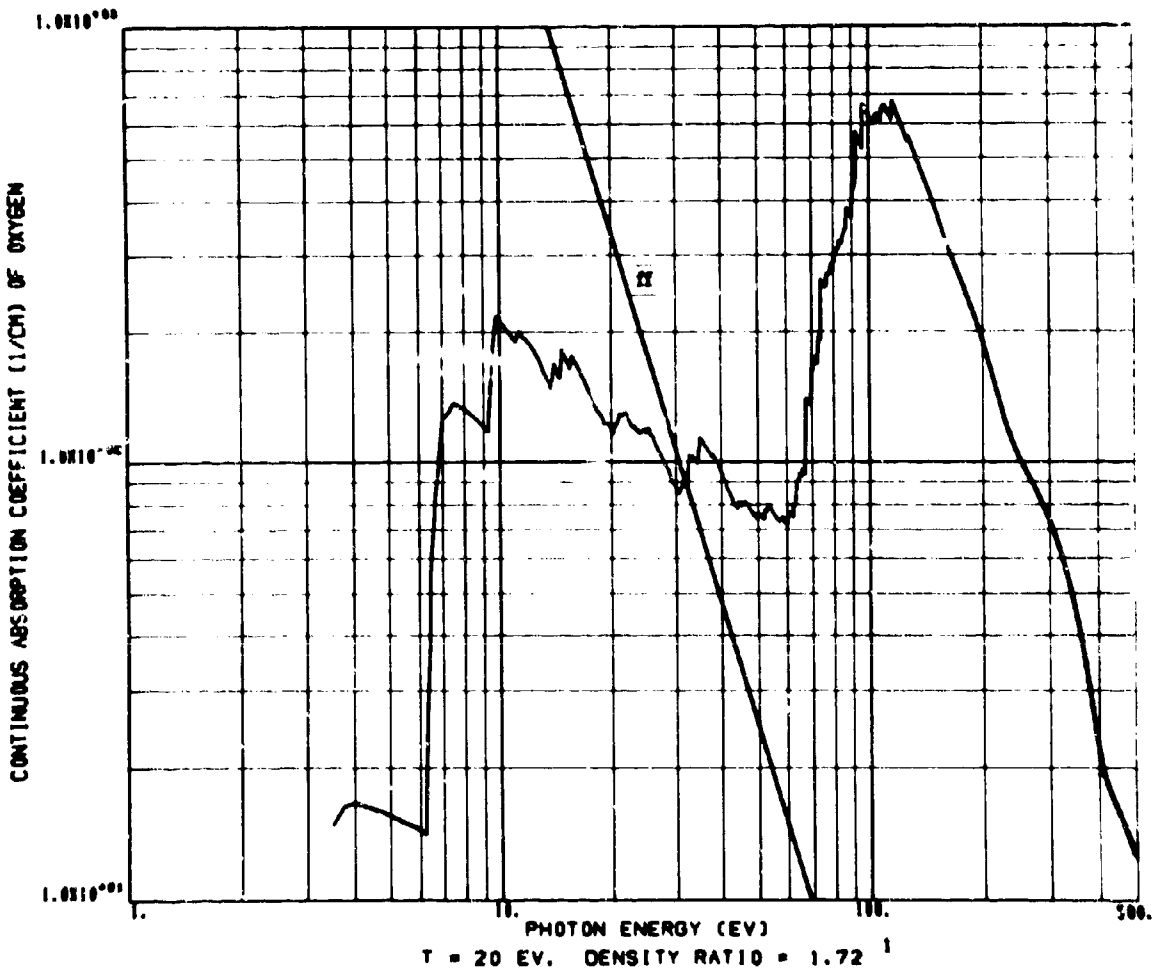

CONTINUUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10^01
1.0E10^00
1.0E10^-01
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 3.04^-1

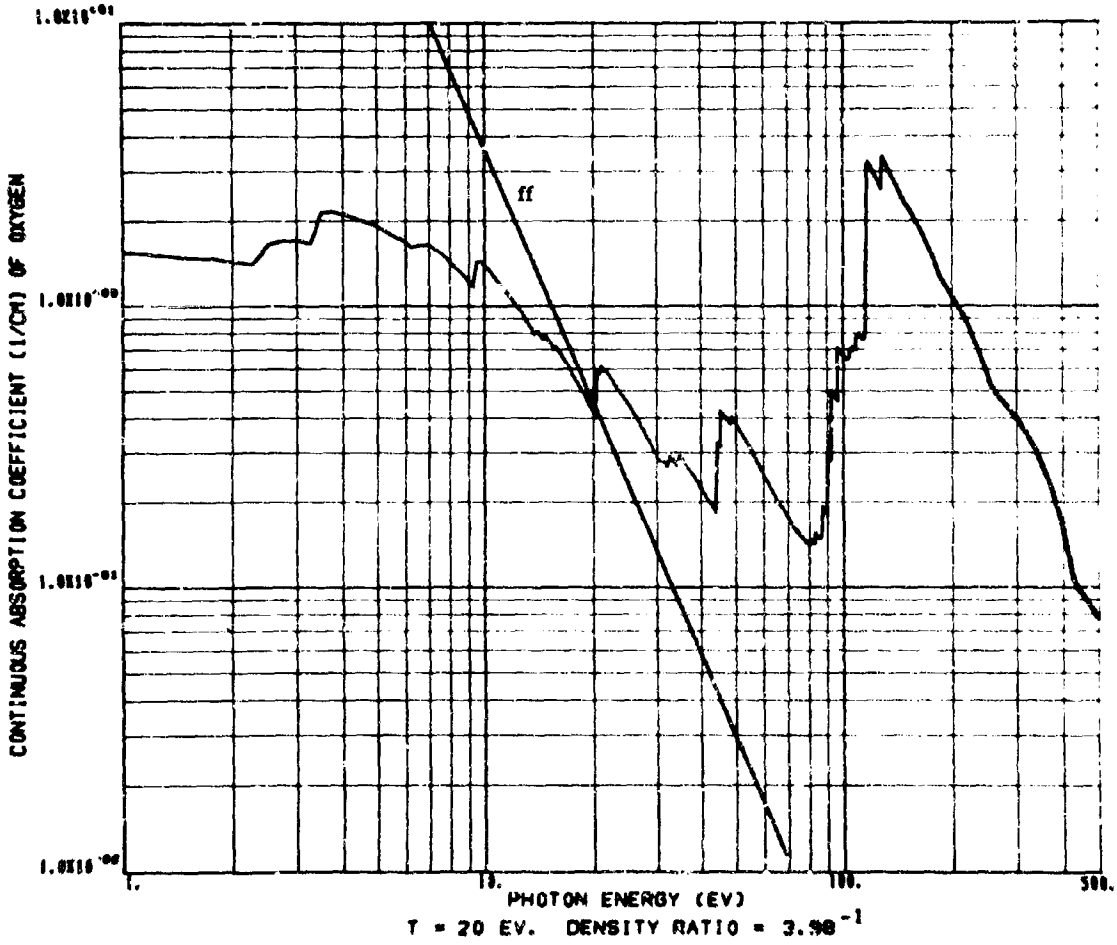

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^00
1.0X10^-01
1.0X10^-02
1.0X10^-03
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 3.00^-2

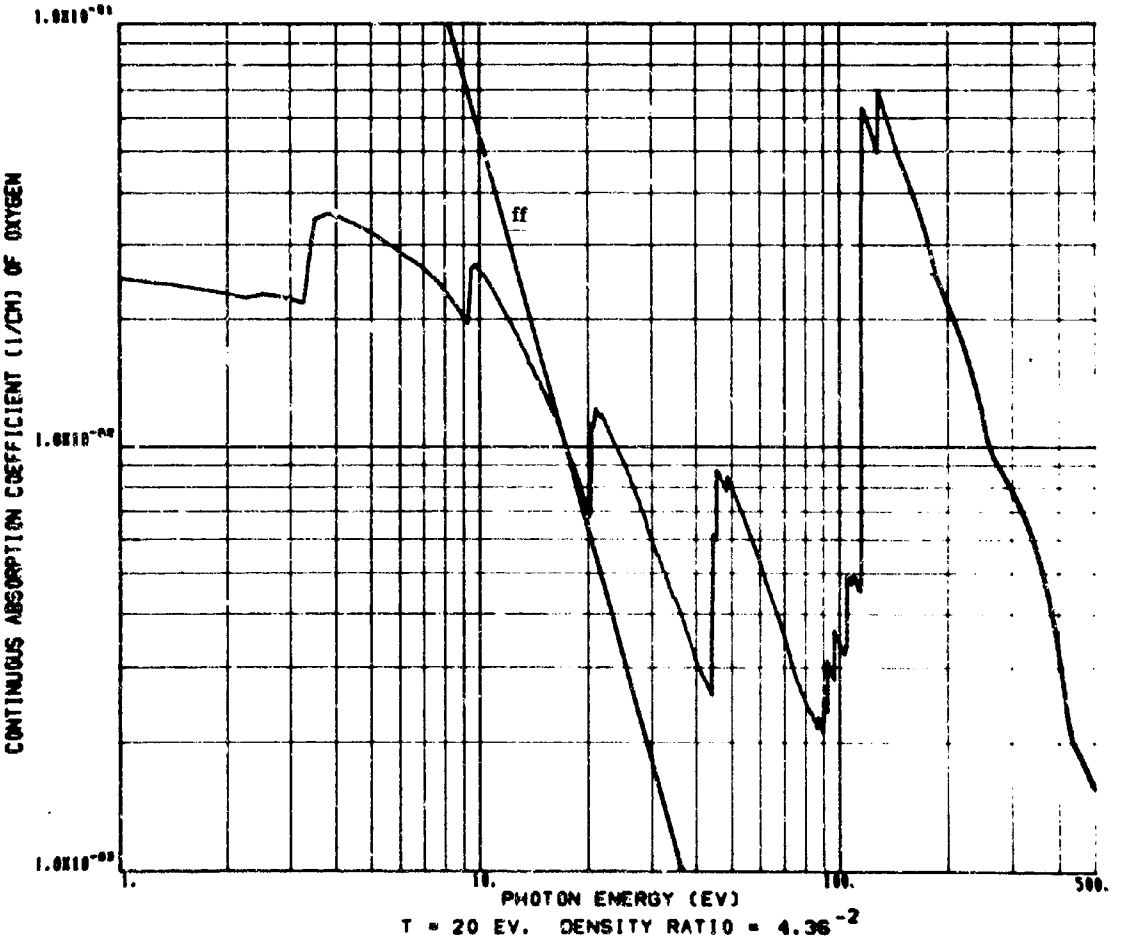

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E10^-00
1.0E10^-02
1.0E10^-04
1.0E10^-06
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 3.59^-3

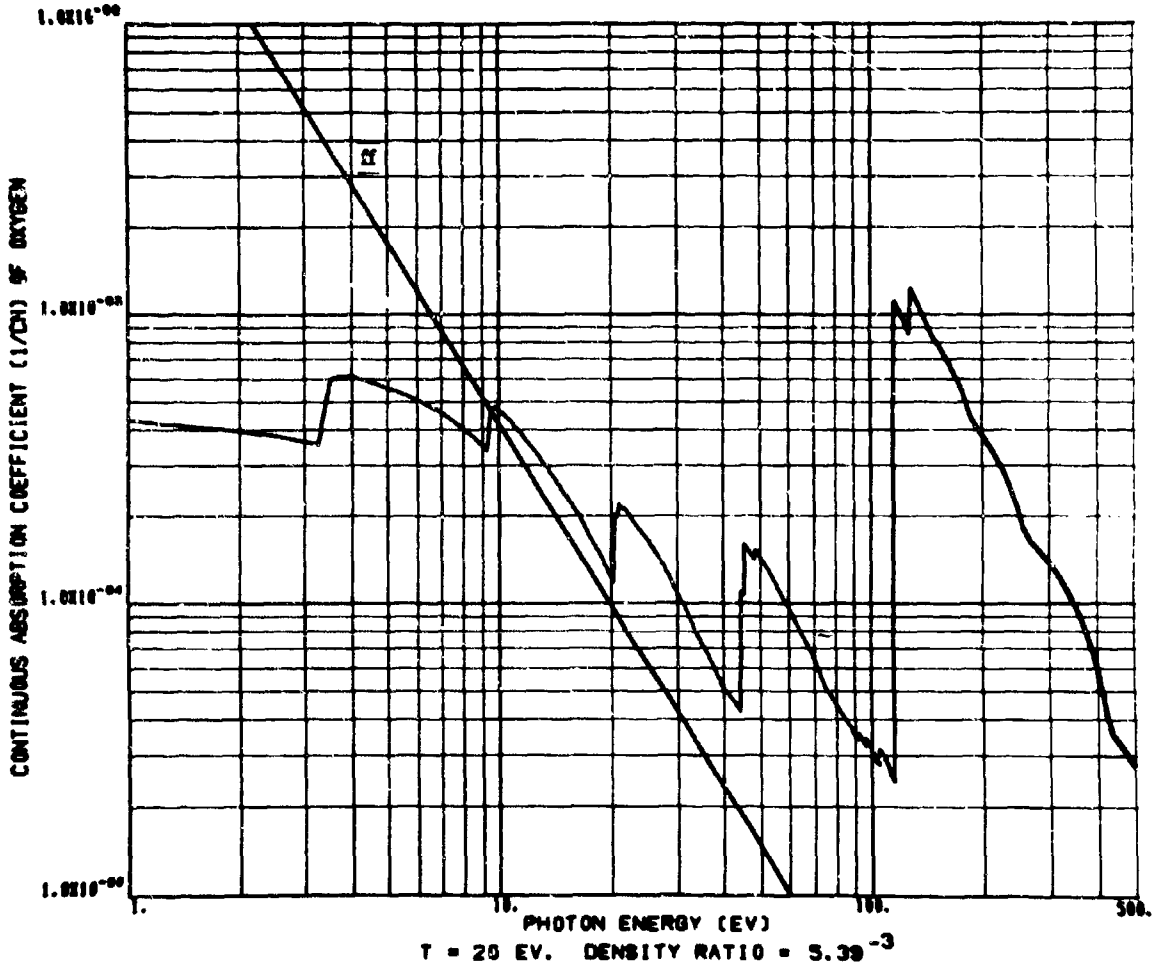

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^-03
1.0X10^-04
1.0X10^-05
1.0X10^-06
1.0X10^-07
1.0X10^-08
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 4.59^-4

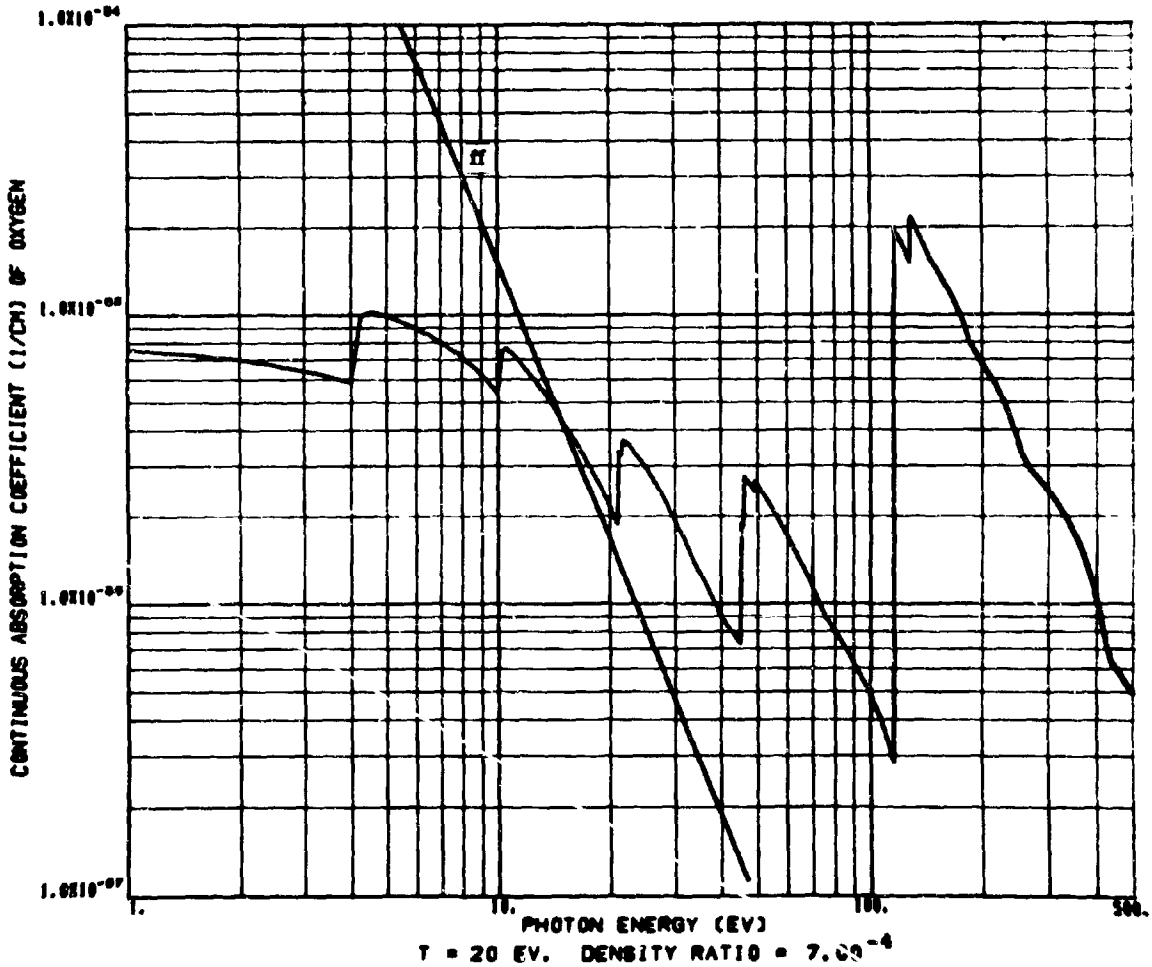

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 6.05 -5

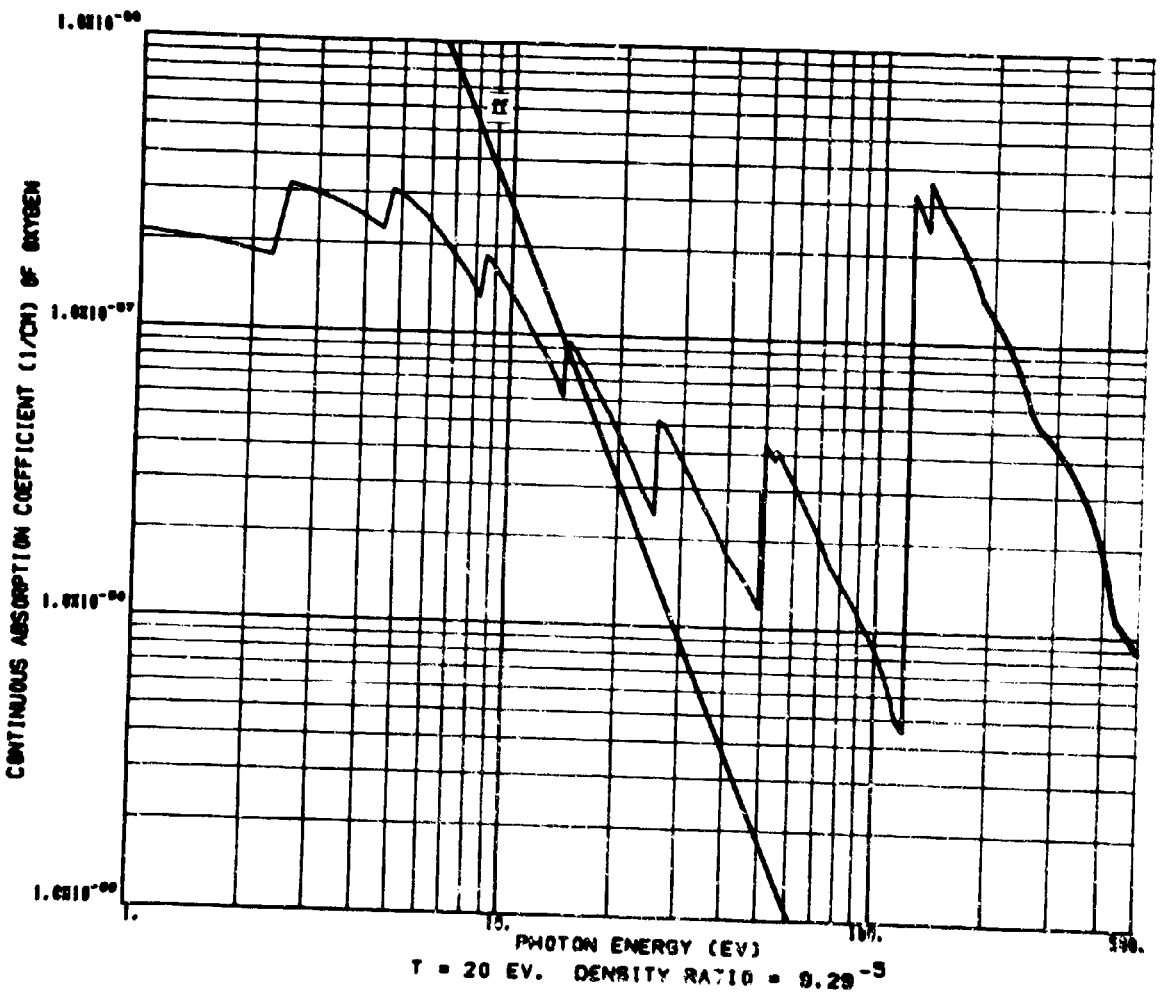

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E+00
1.0E-06
1.0E-01
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 1.72

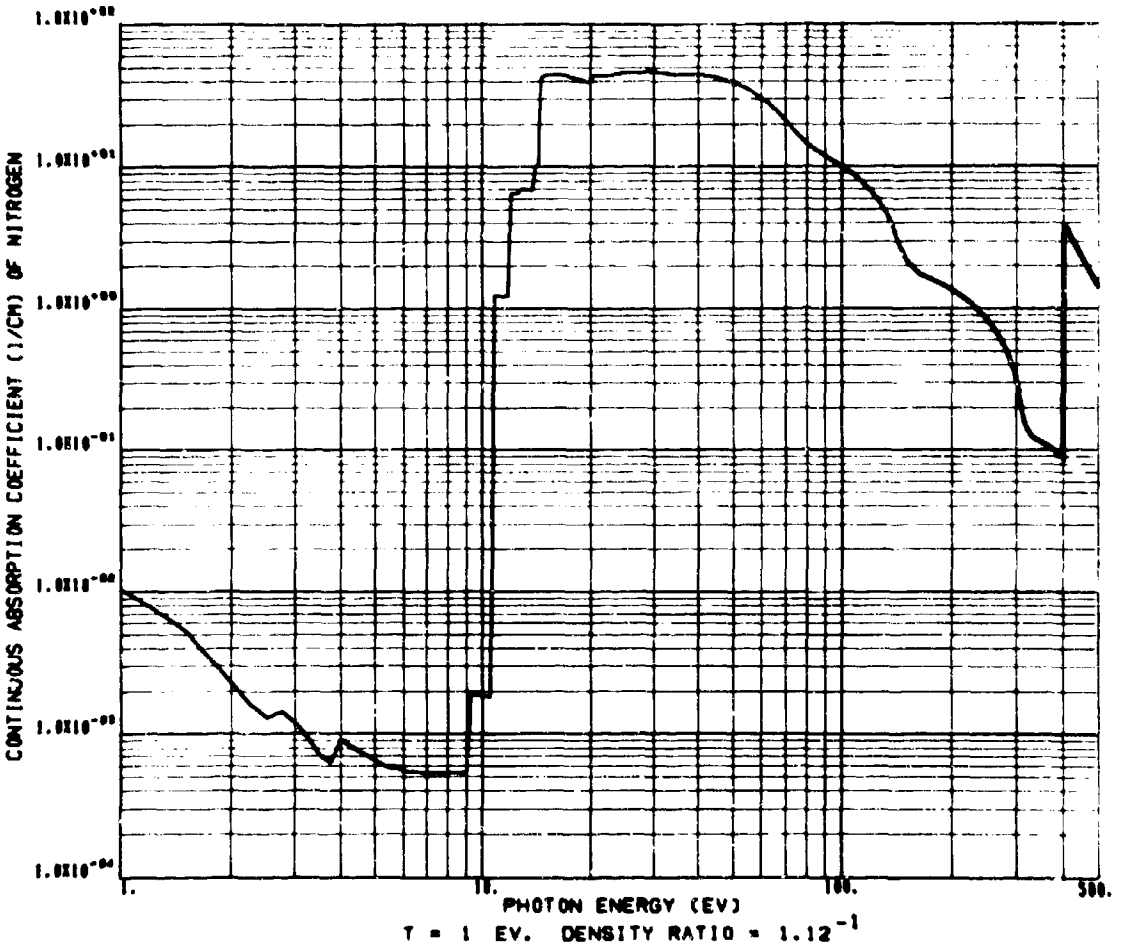

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 3.98^-1

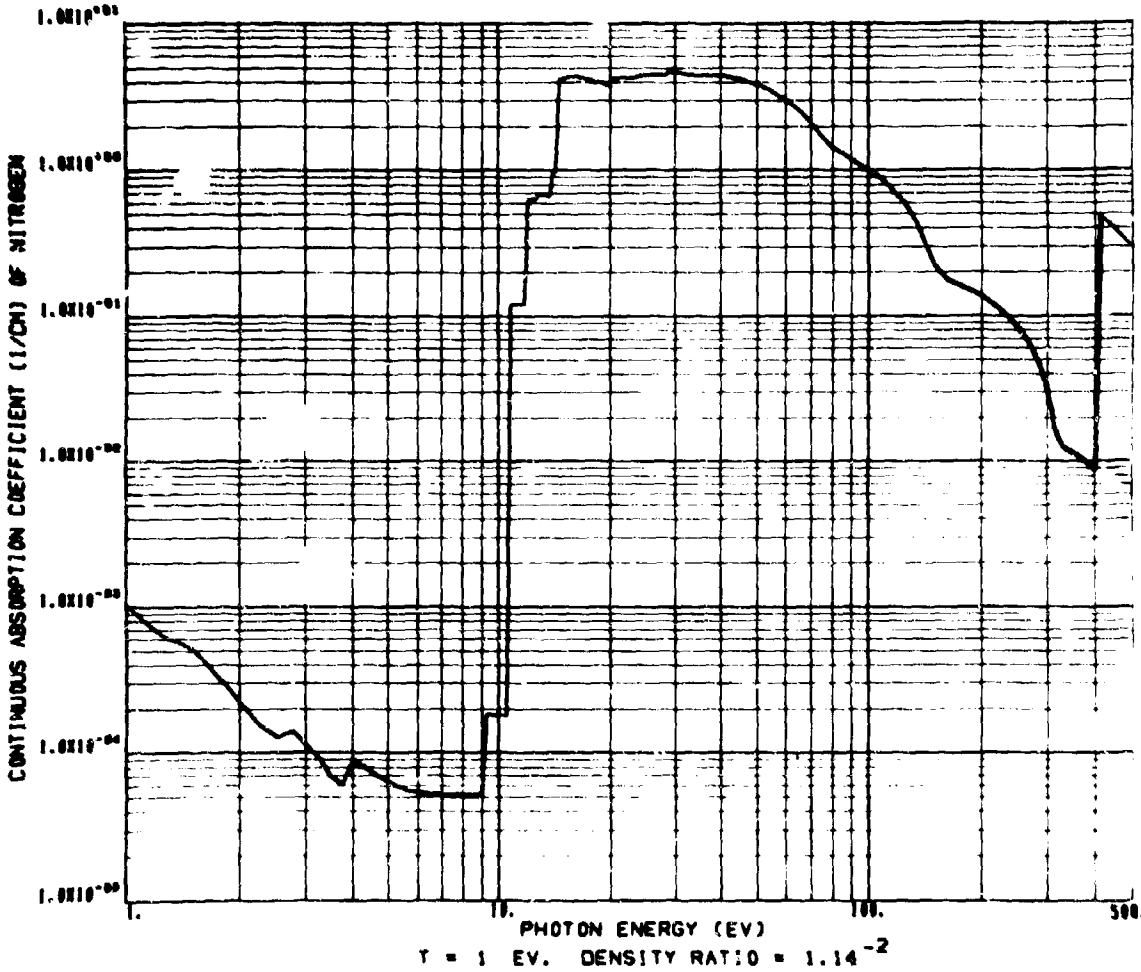

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 4.36 -2

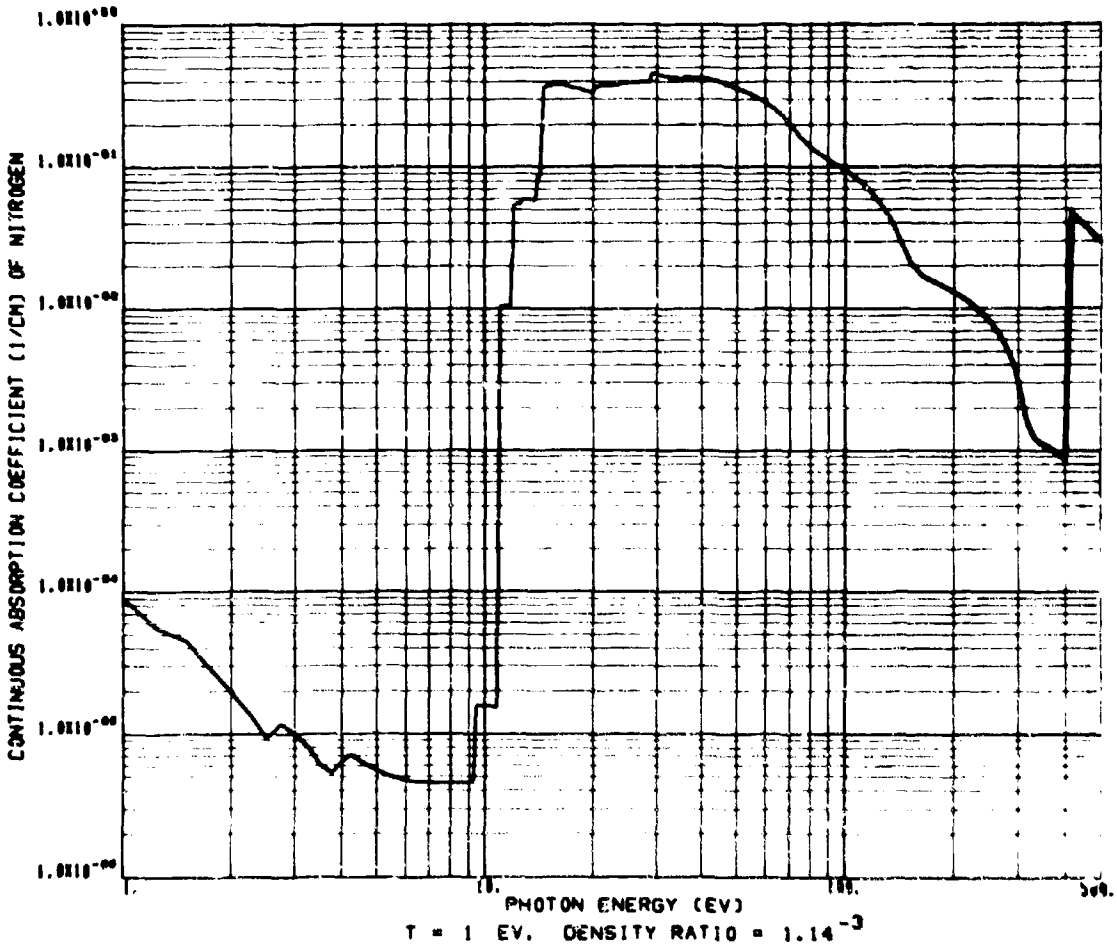

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0E16
1.0E15
1.0E14
1.0E13
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 5.39 -3

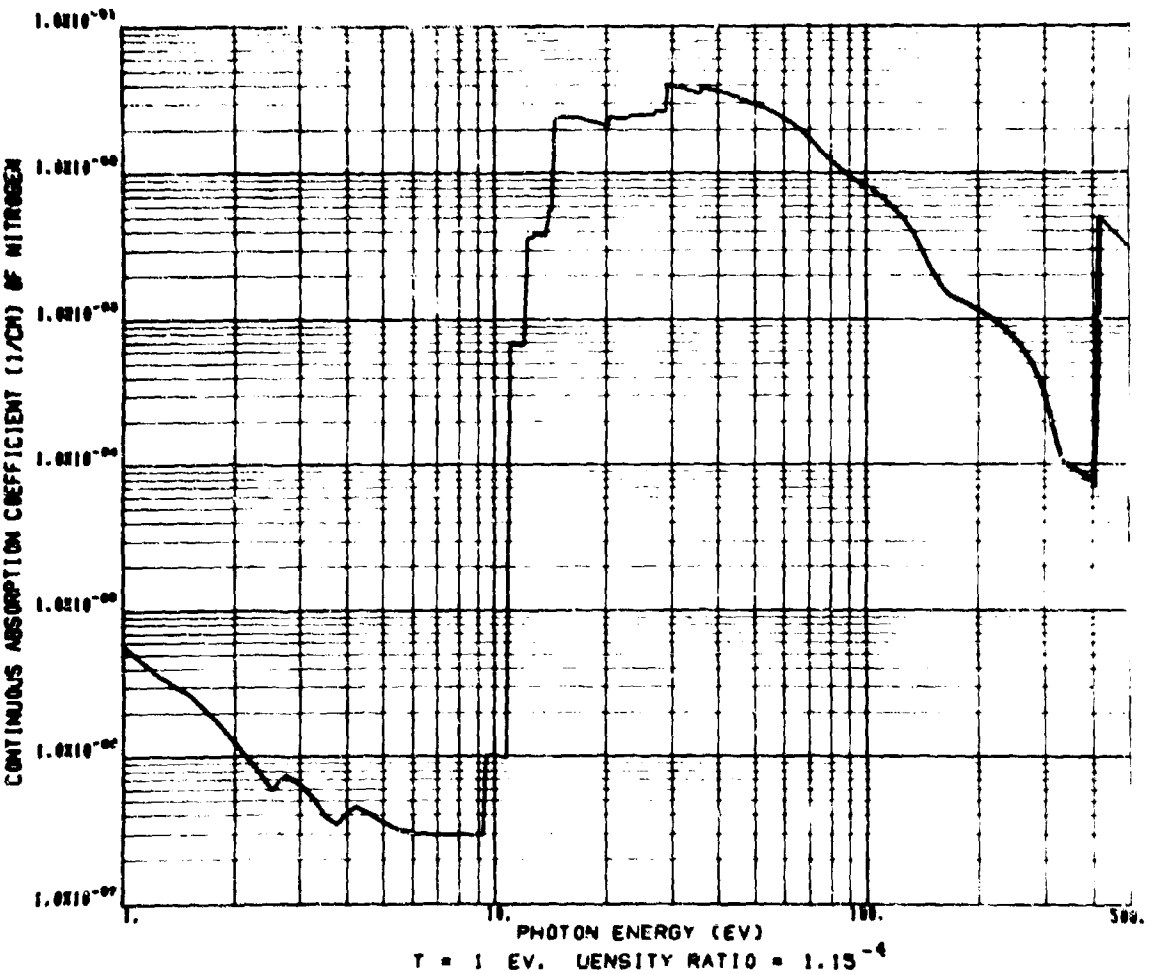

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
1.0X10^-06
1.0X10^-08
1.0X10^-09
1.0X10^-07
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 7.09^-4

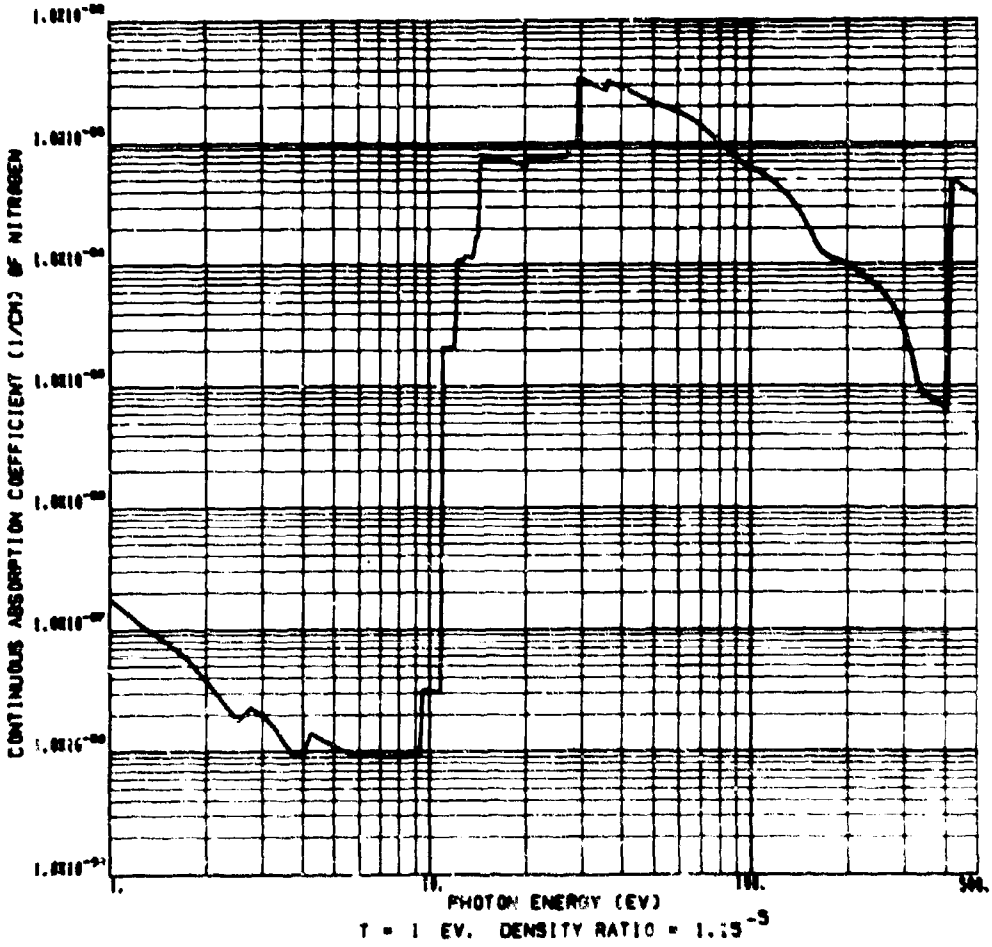

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF OXYGEN
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 9.29 -5

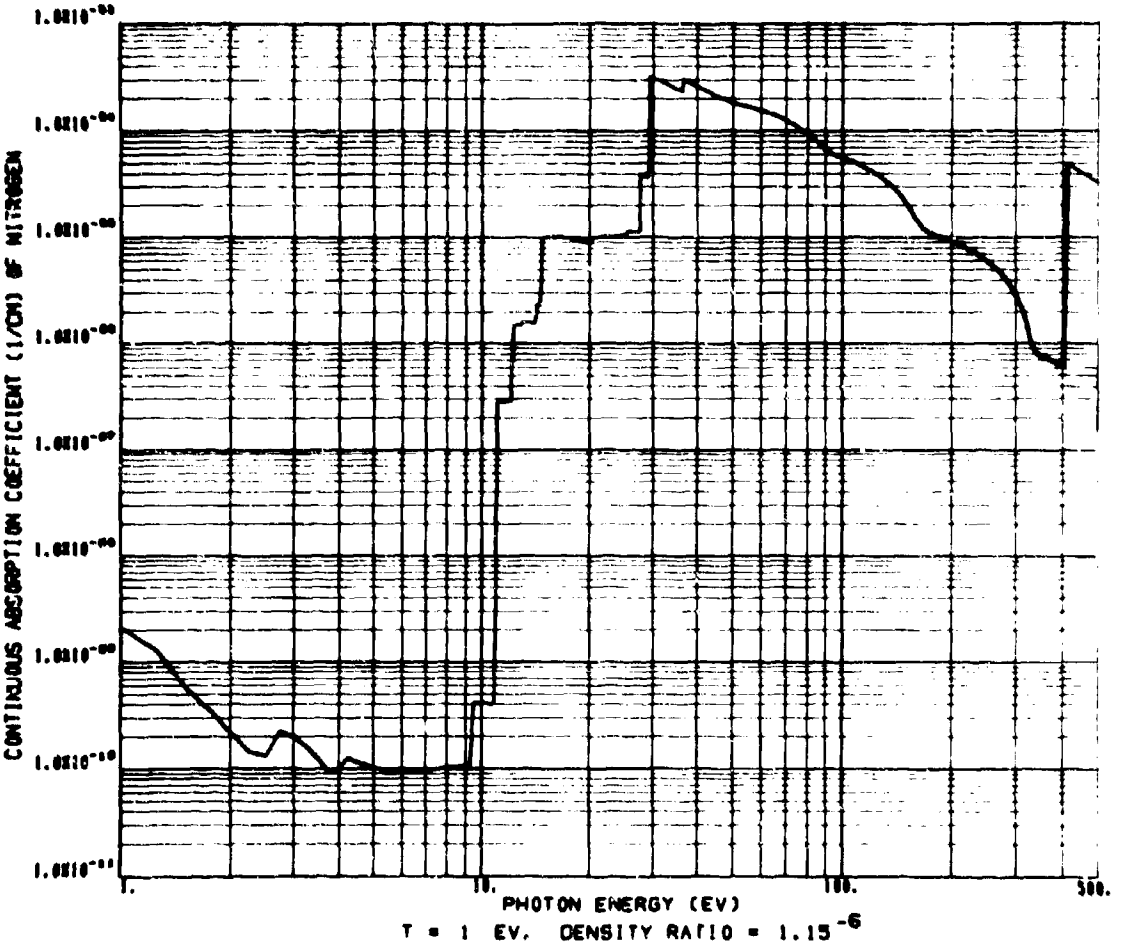

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^02
1.0X10^01
1.0X10^00
1.0X10^-01
1.0X10^-02
1.0X10^-03
1.0X10^-04
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.12^-1

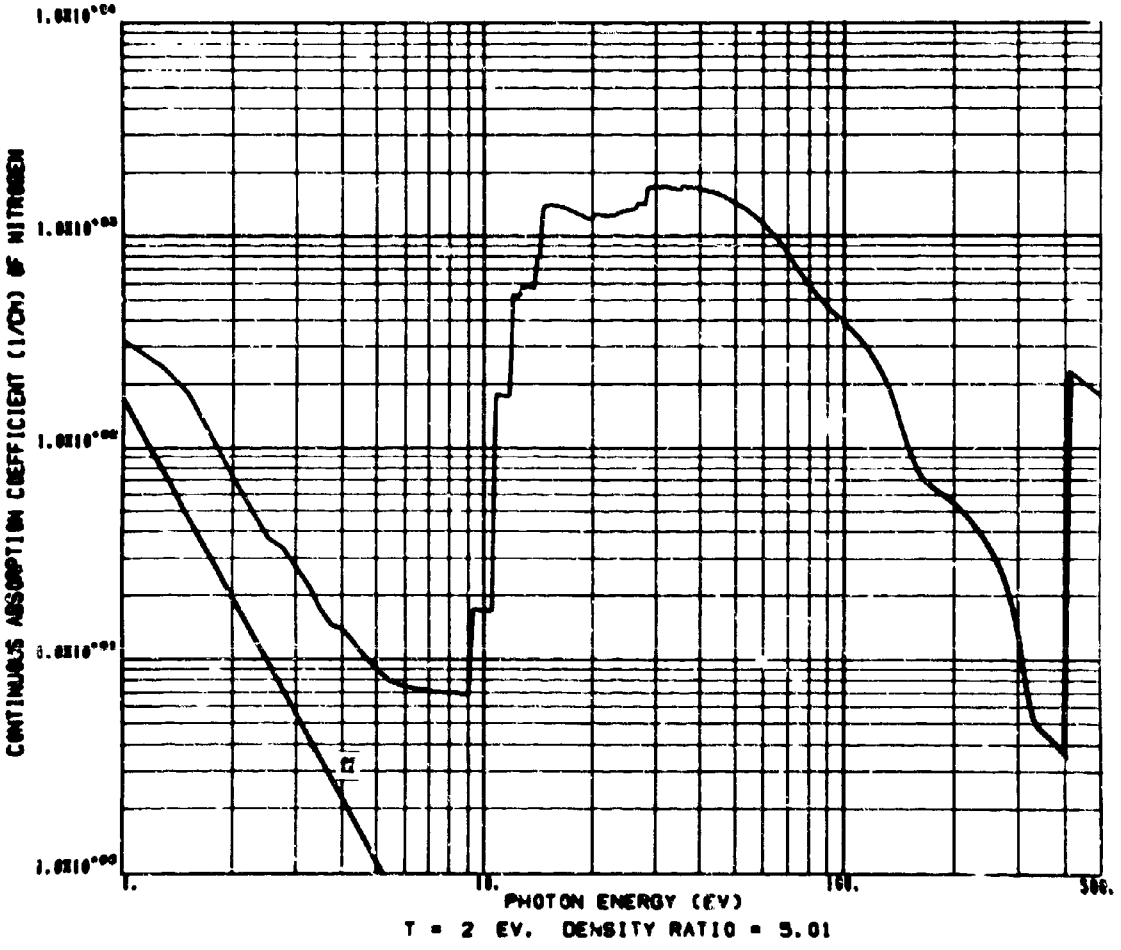

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E+01
1.0E+00
1.0E-01
1.0E-02
1.0E-03
1.0E-04
1.0E-05
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.14 -2


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E10
1.0E-01
1.0E-02
1.0E-03
1.0E-04
1.0E-05
1.0E-06
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.14 -3

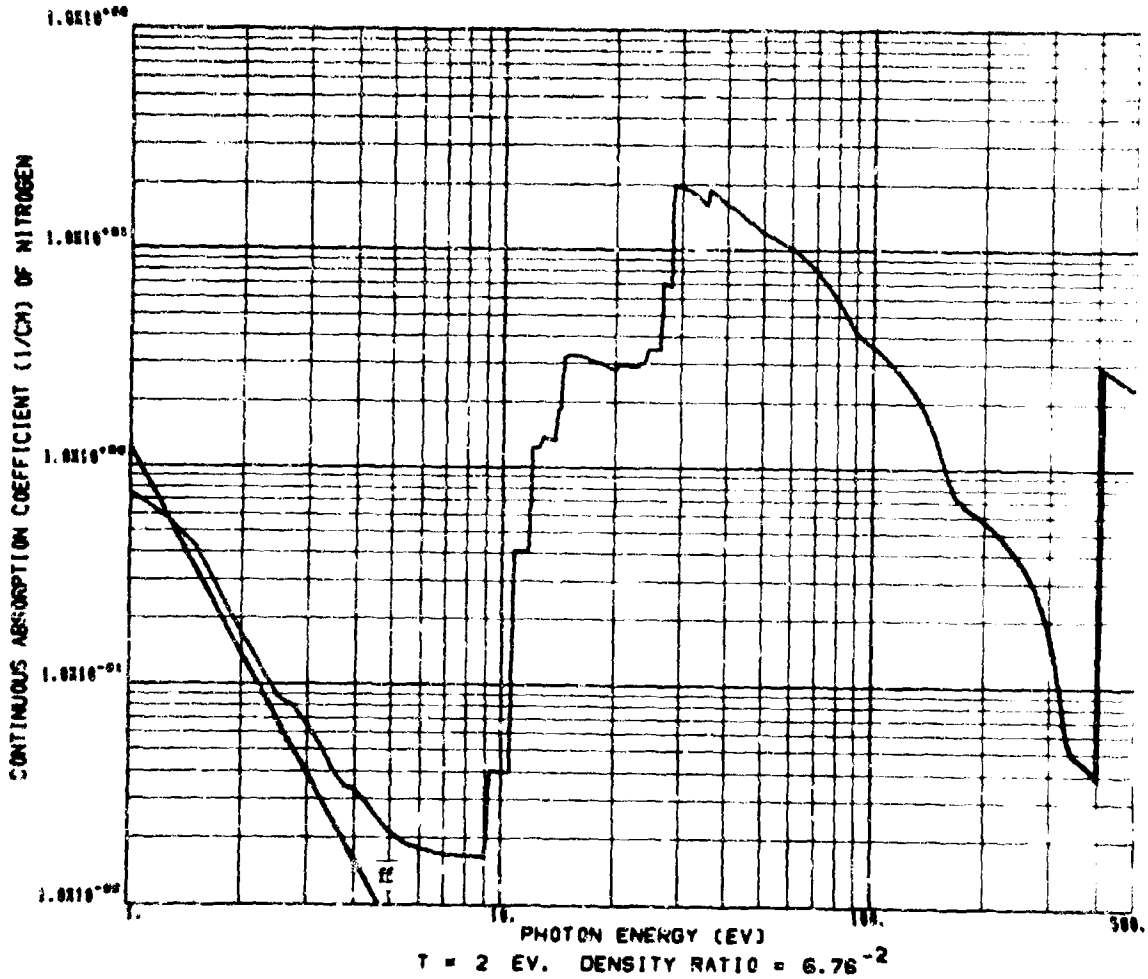

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15^-4

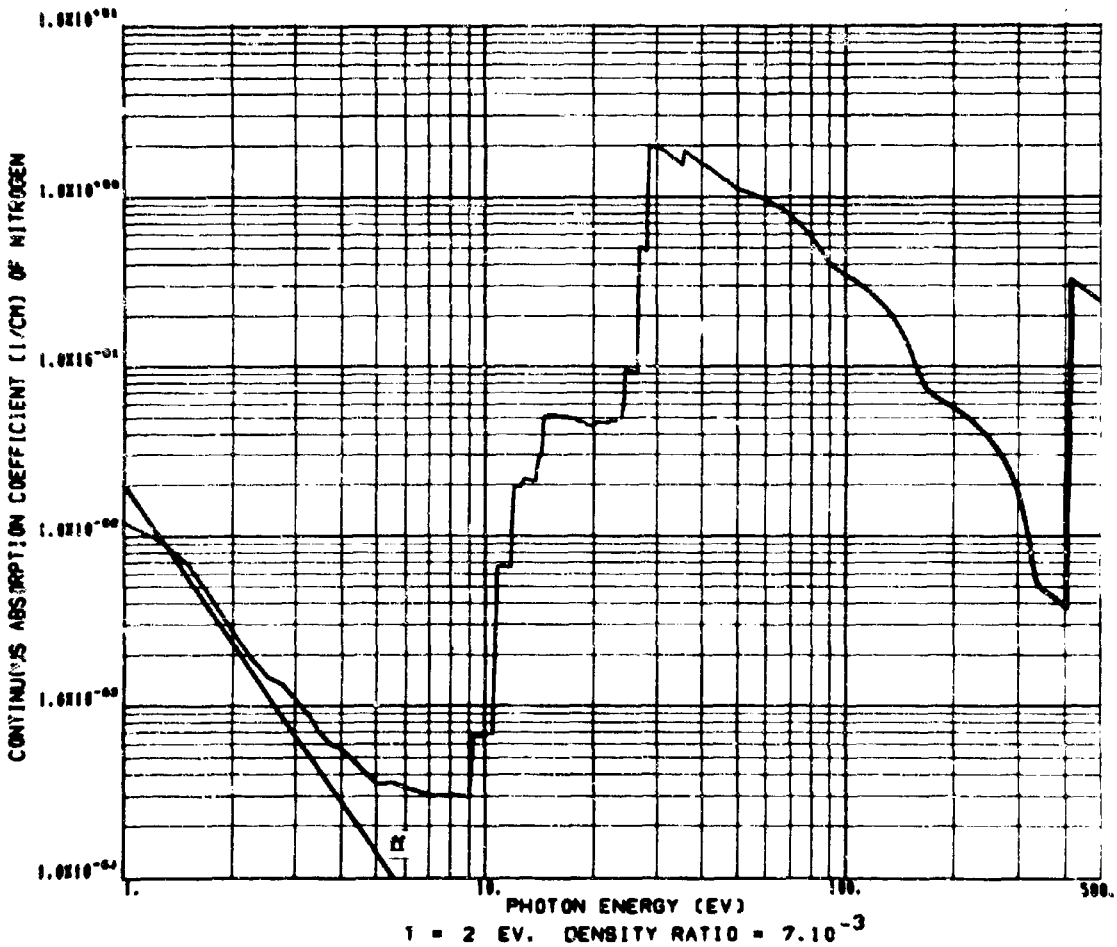

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15-5

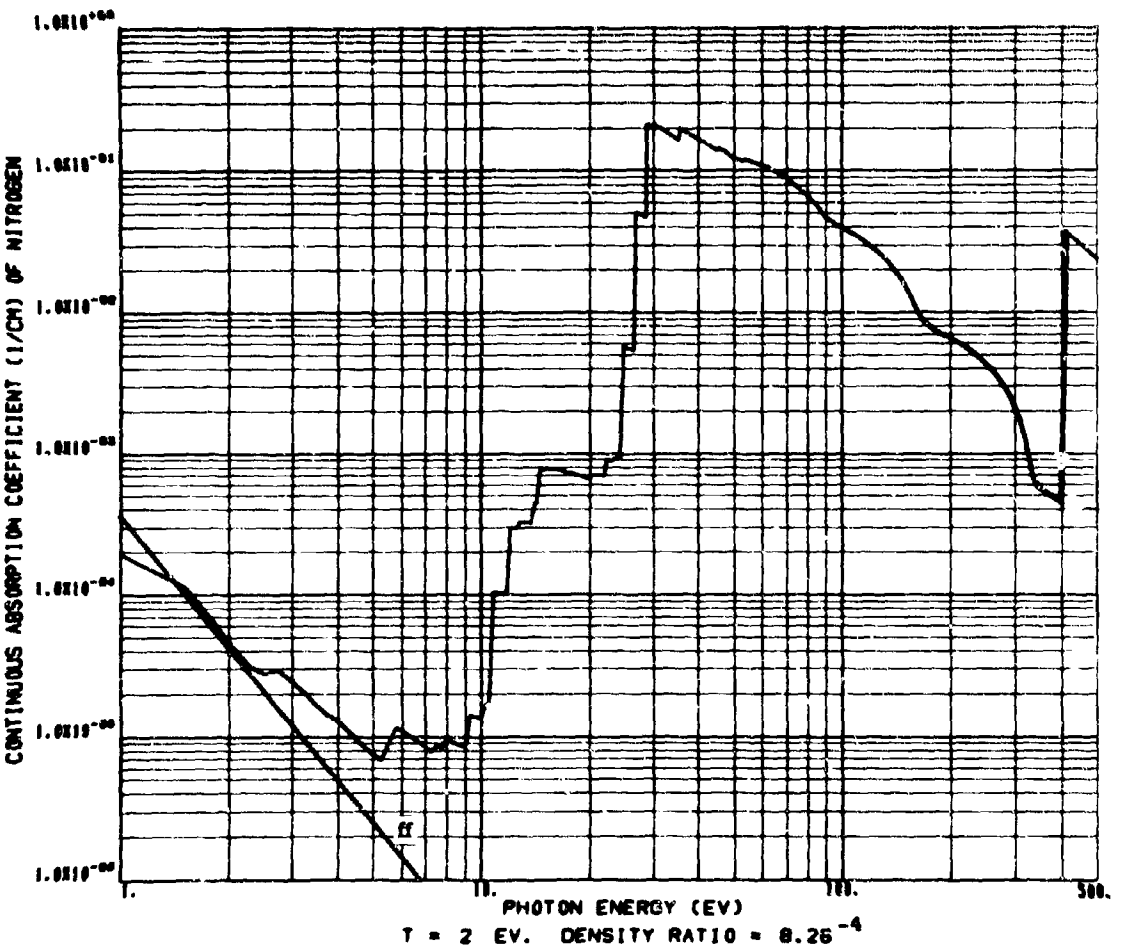

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 1 EV. DENSITY RATIO = 1.15 -6



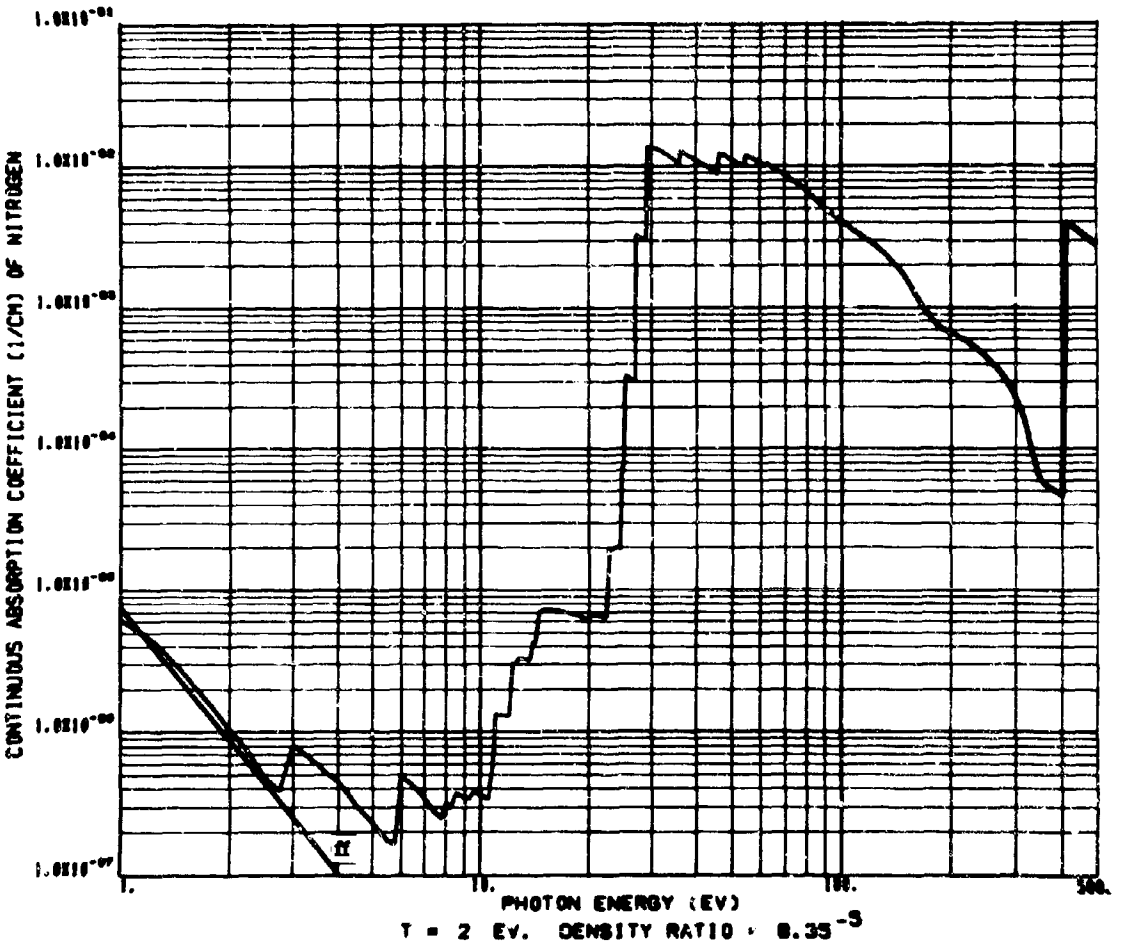
T = 2 EV. DENSITY RATIO = 5.01

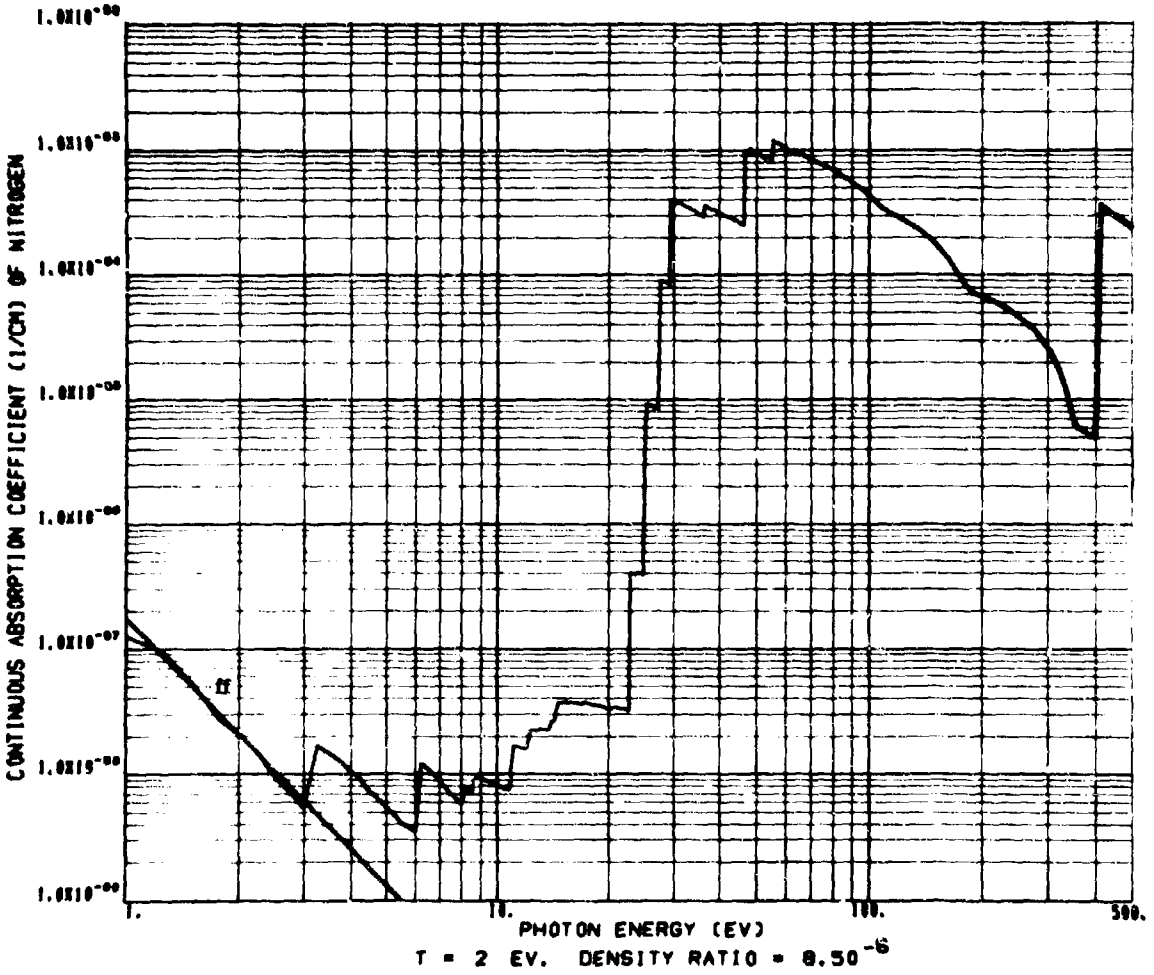

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 6.76^-2

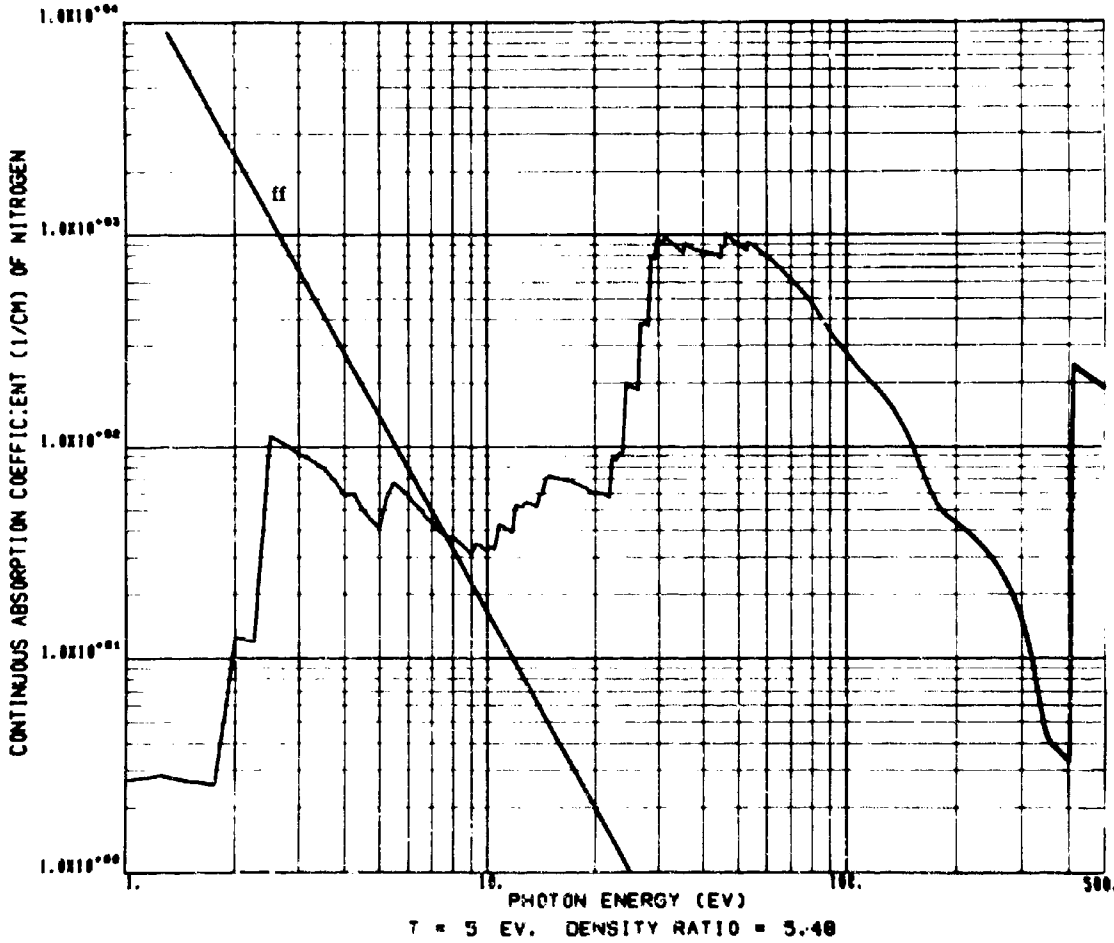

CONTINUUM ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E+01
1.0E+00
1.0E-01
1.0E-02
1.0E-03
1.0E-04
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 7.10-3

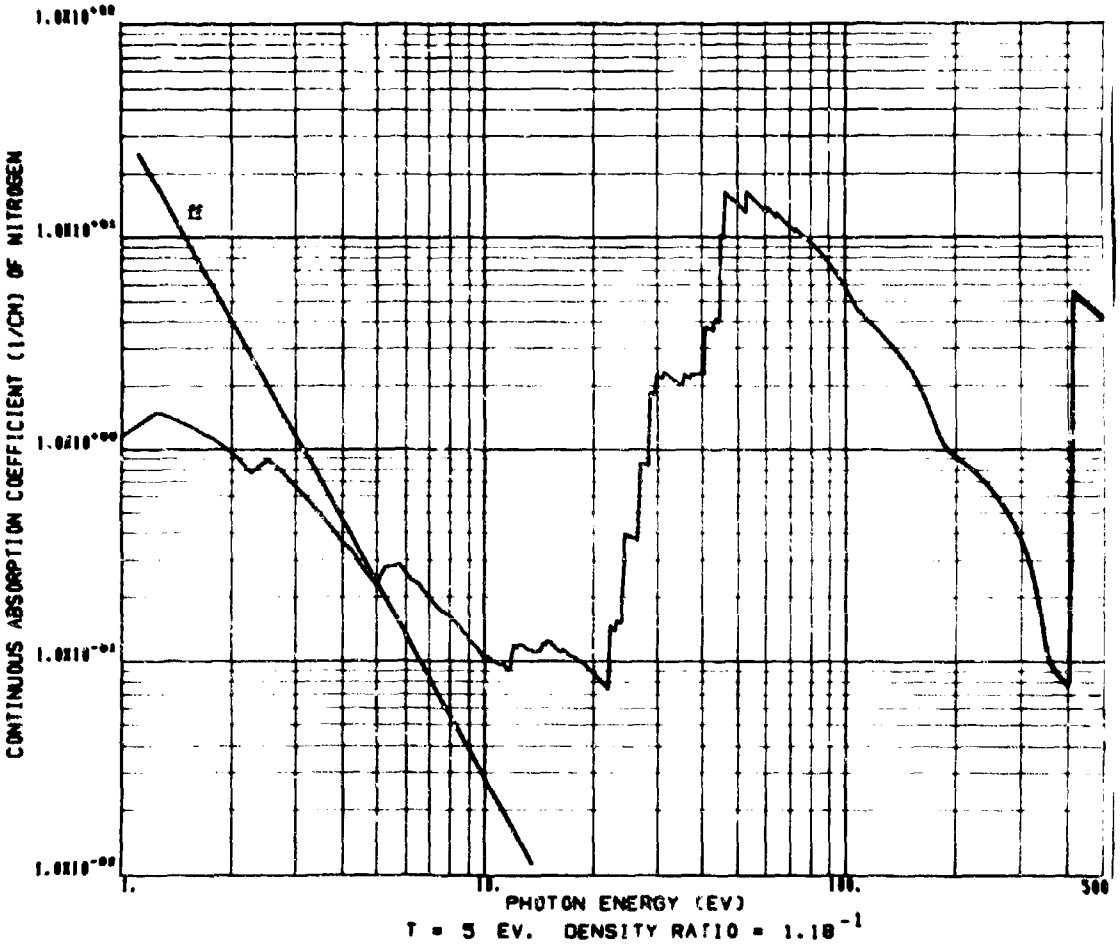


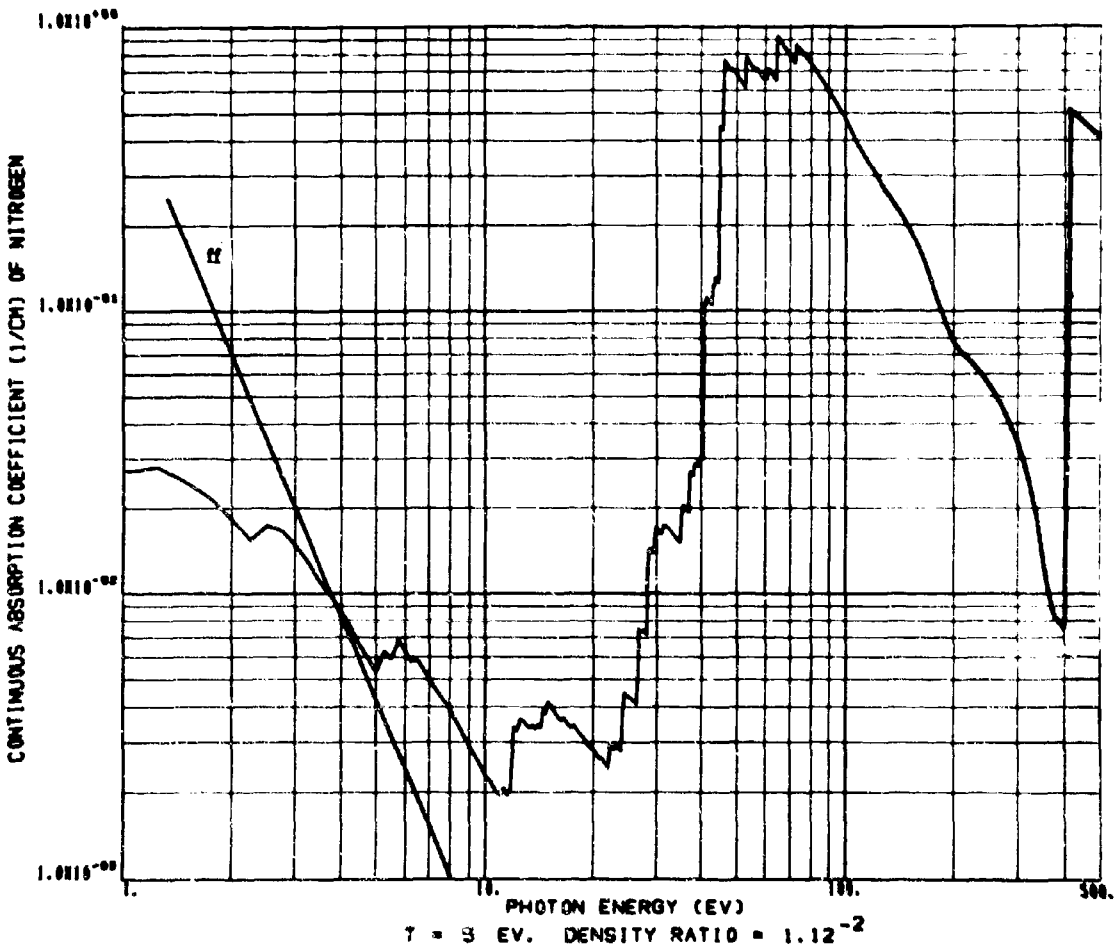
T = 2 EV. DENSITY RATIO = 8.26^{-4}

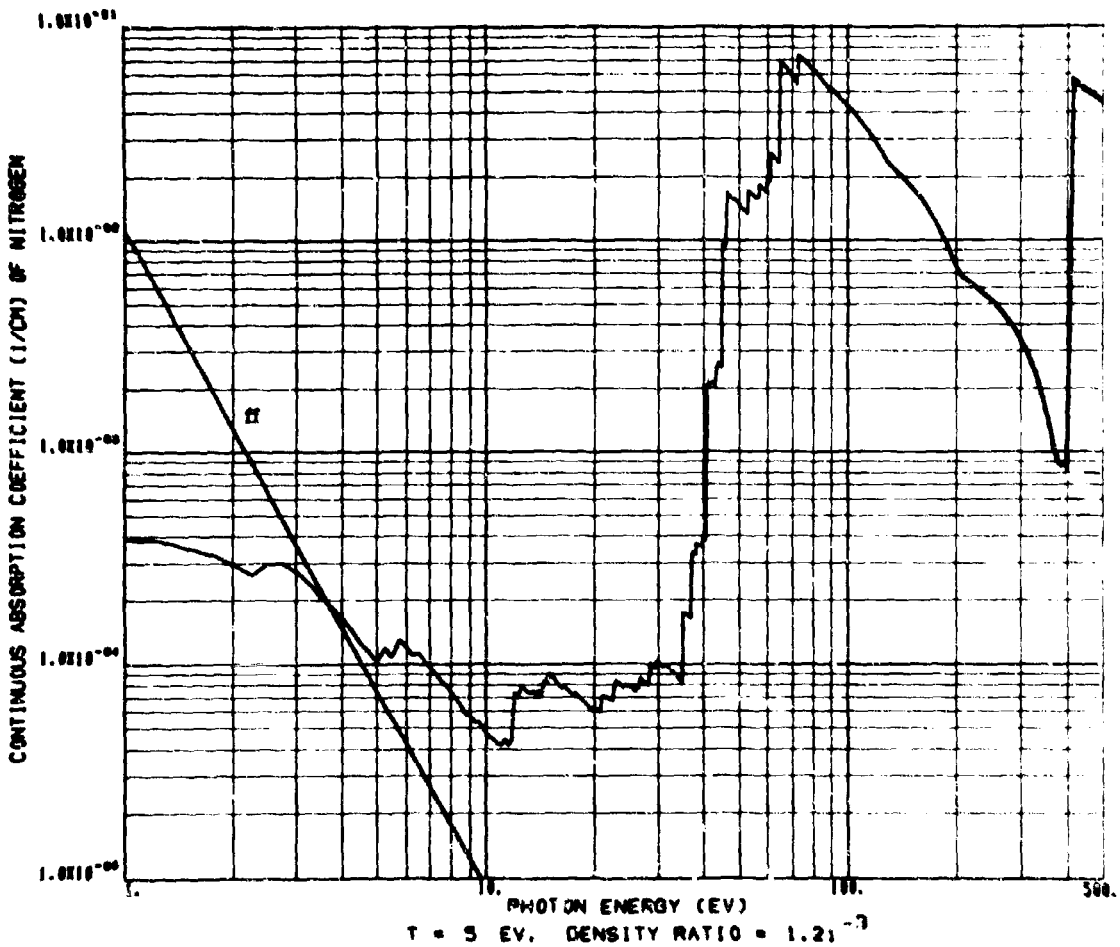

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E10^-01
1.0E10^-02
1.0E10^-03
1.0E10^-04
1.0E10^-05
1.0E10^-06
1.0E10^-07
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 8.35^-5

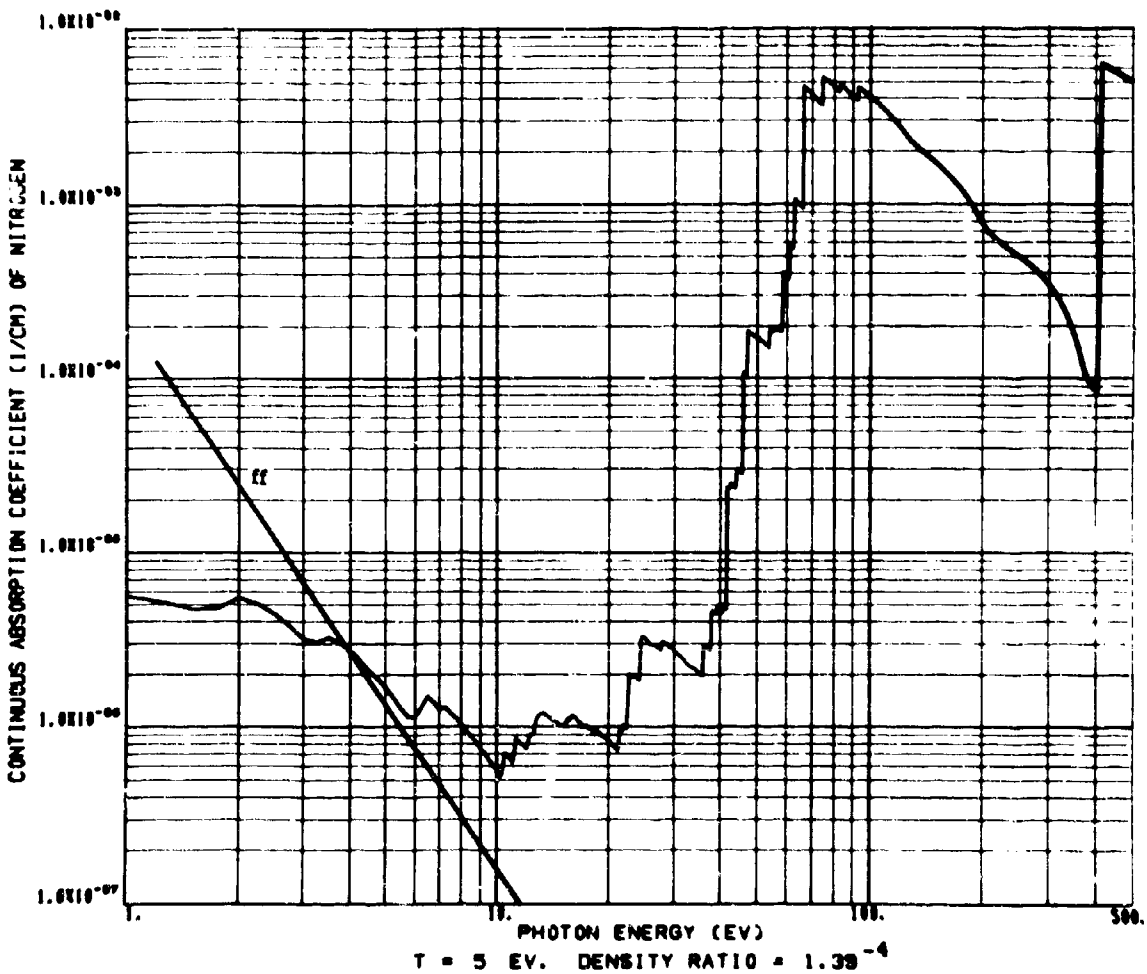

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^-06
1.0X10^-05
1.0X10^-04
1.0X10^-03
1.0X10^-02
1.0X10^-01
1.0X10^00
1.0X10^01
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 2 EV. DENSITY RATIO = 8.50^-6

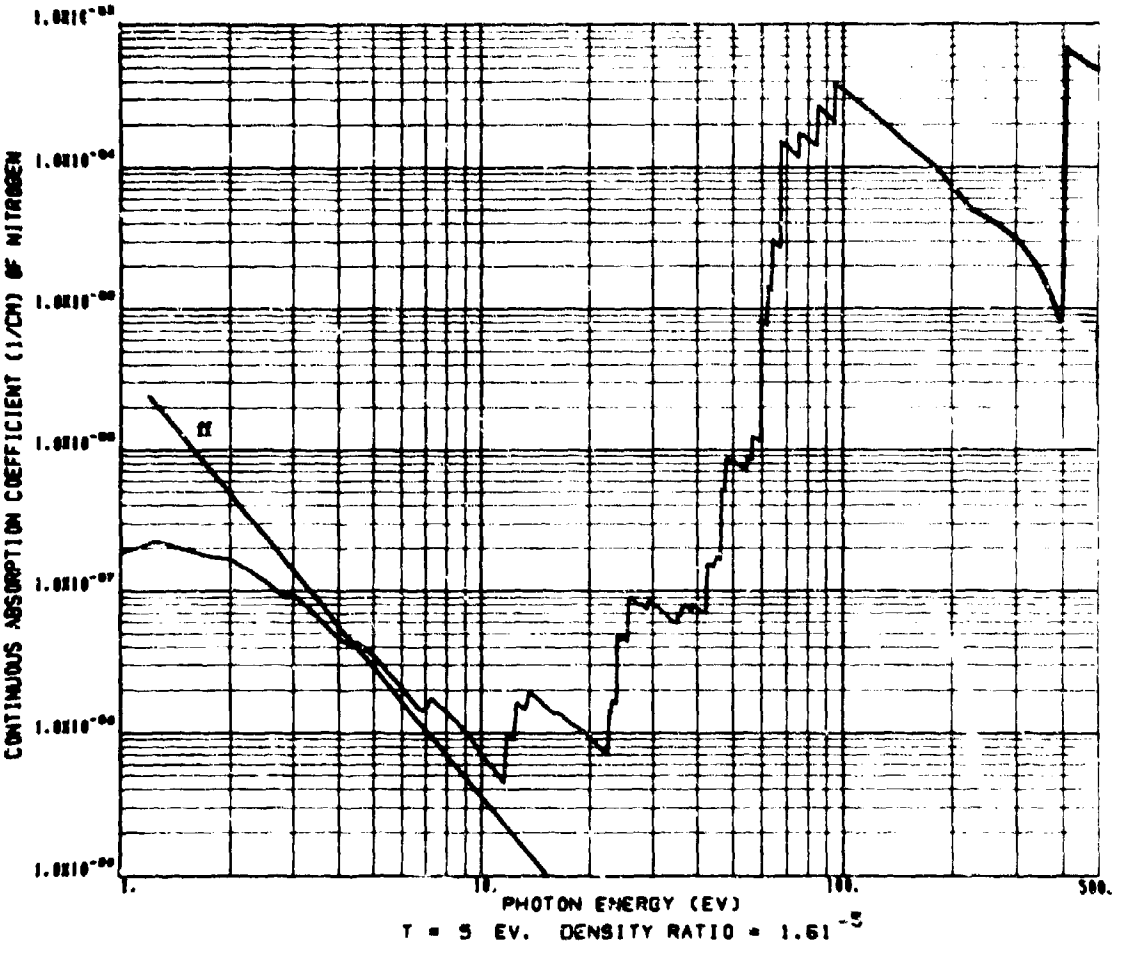

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 5.40

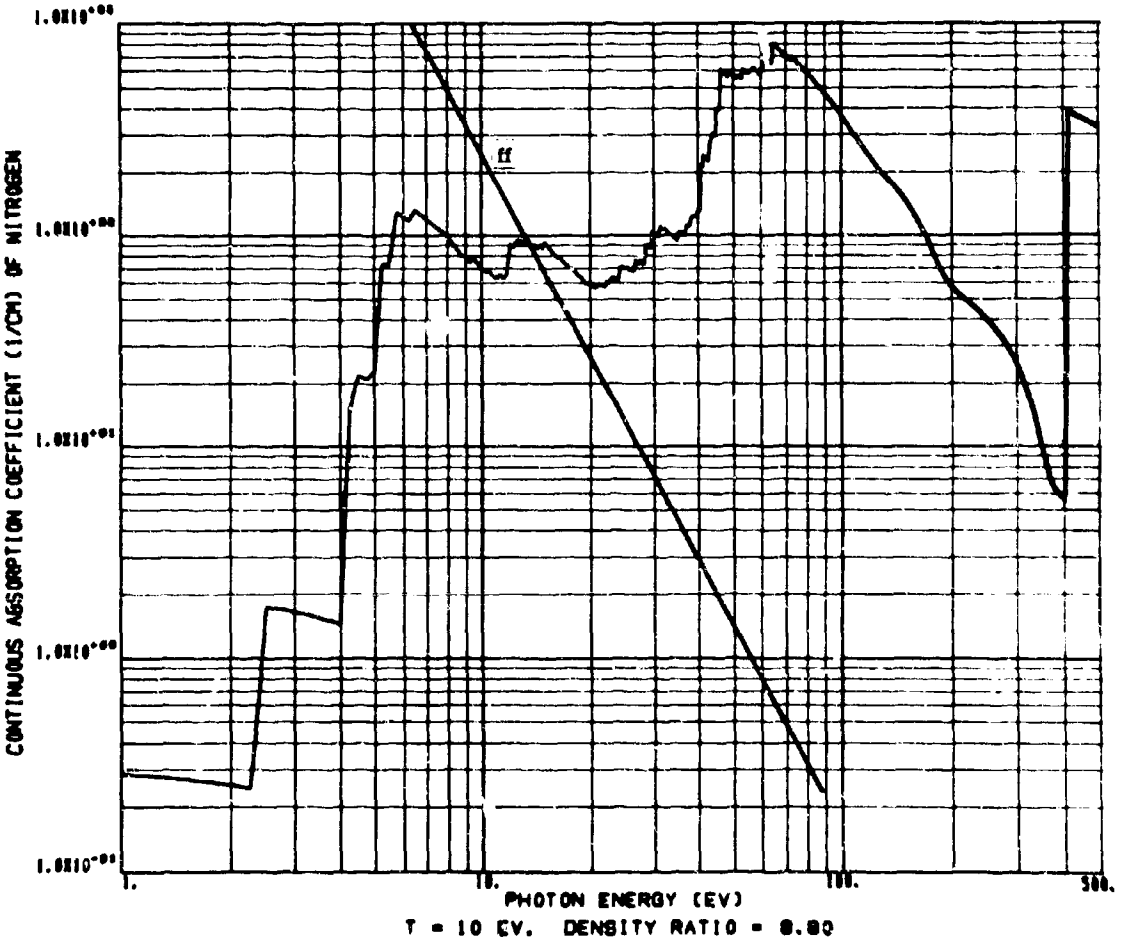

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.18^-1

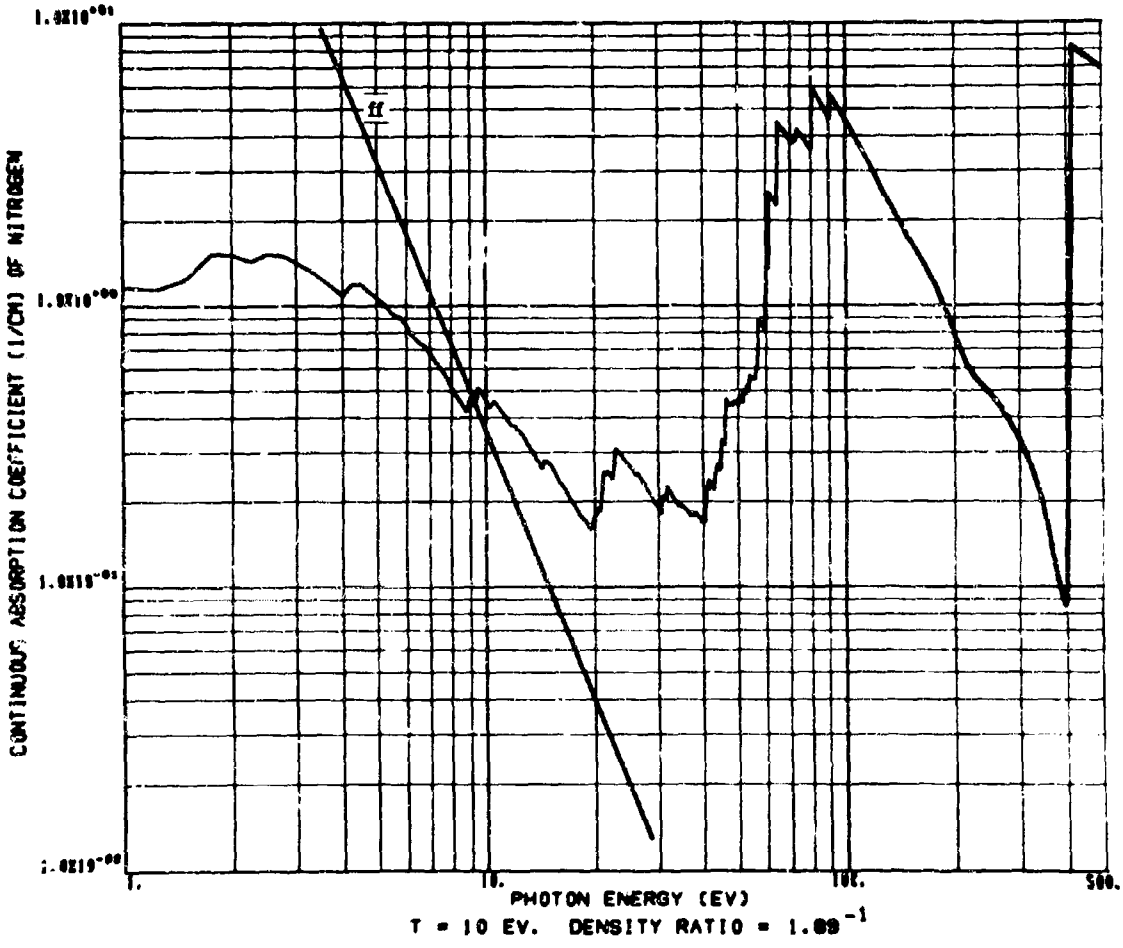

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 3 EV. DENSITY RATIO = 1.12^-2

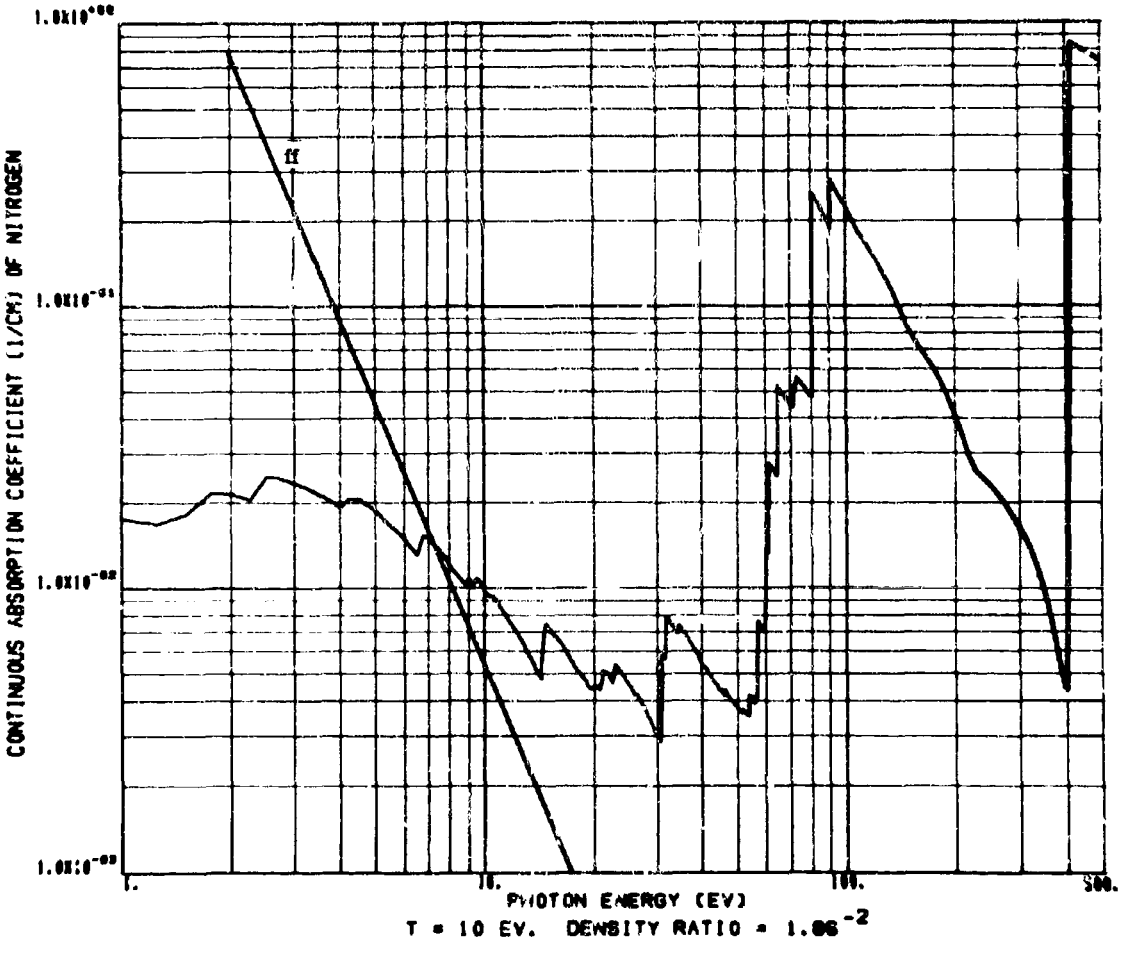

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10**01
1.0X10**00
1.0X10**-02
1.0X10**-04
1.0X10**-06
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.2

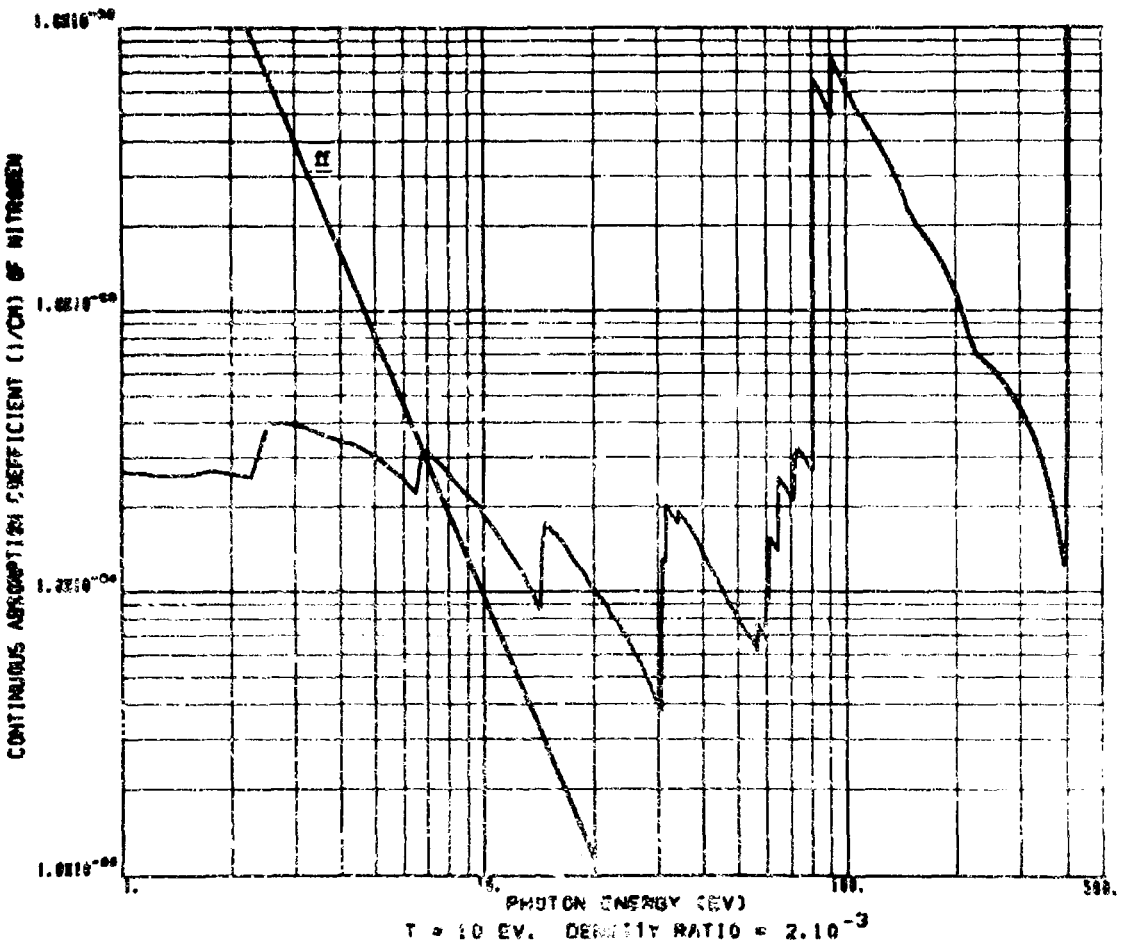

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^-06
1.0X10^-07
1.0X10^-08
1.0X10^-09
1.0X10^-10
1.0X10^-11
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.39^-4

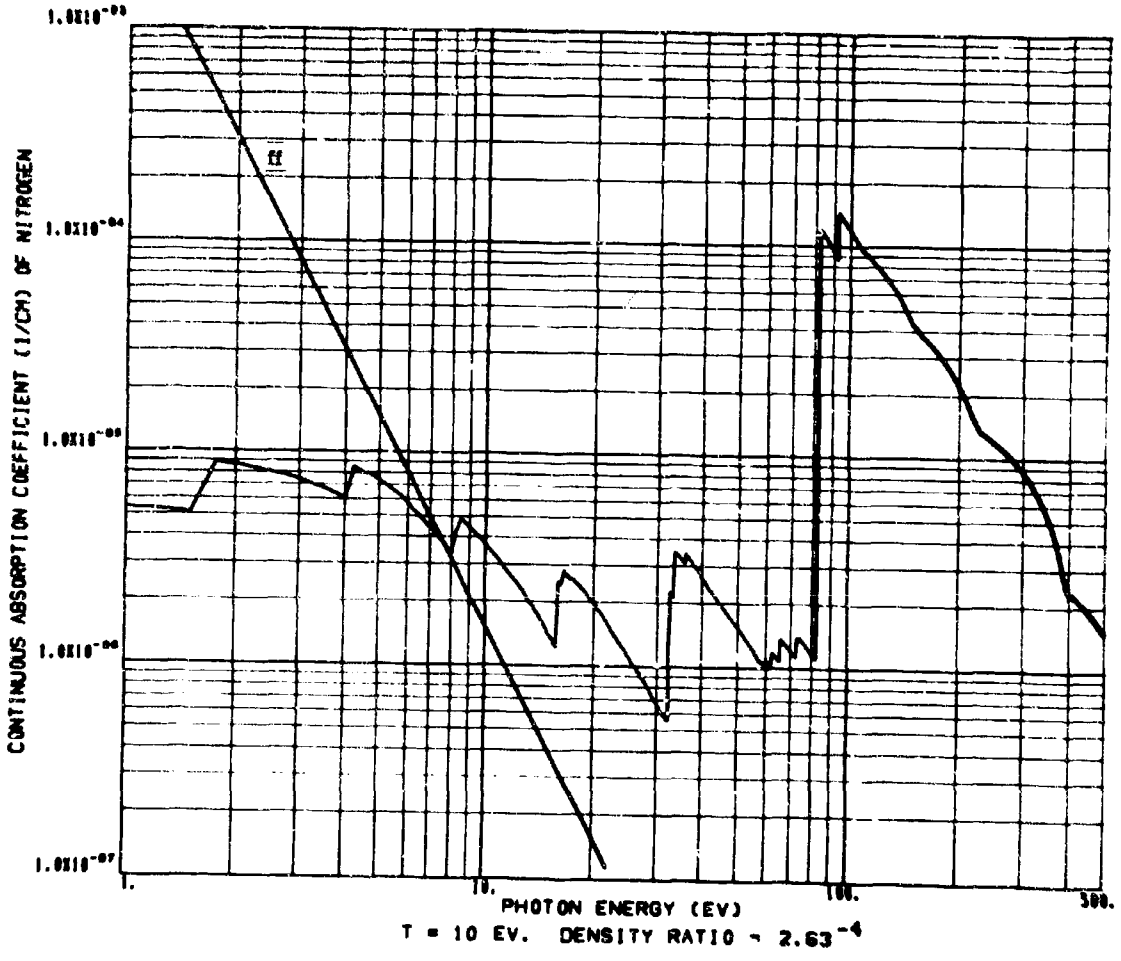

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E10-04
1.0E10-05
1.0E10-06
1.0E10-07
1.0E10-08
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 5 EV. DENSITY RATIO = 1.61 -5


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E+03
1.0E+02
1.0E+01
1.0E+00
1.0E-01
1.
10.
100.
500.
ff
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 0.80

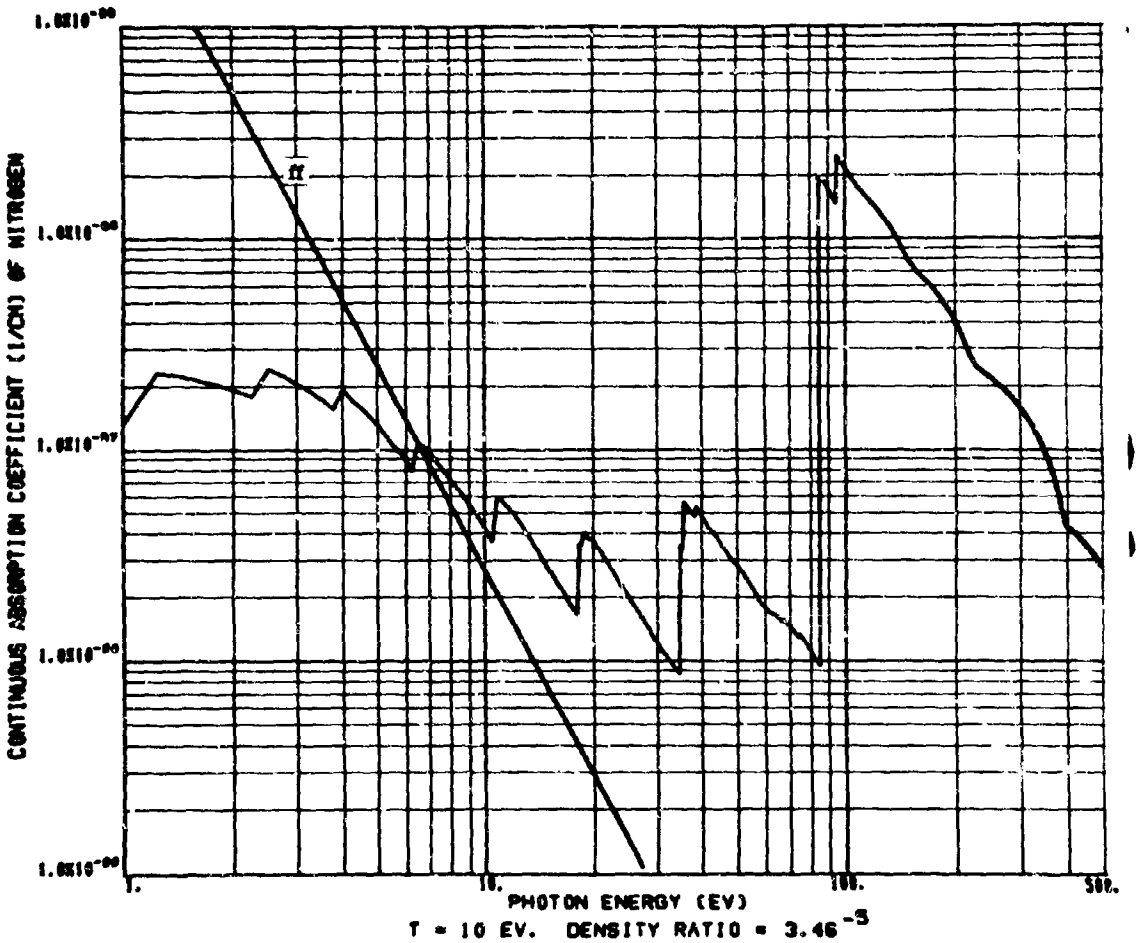

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 1.00

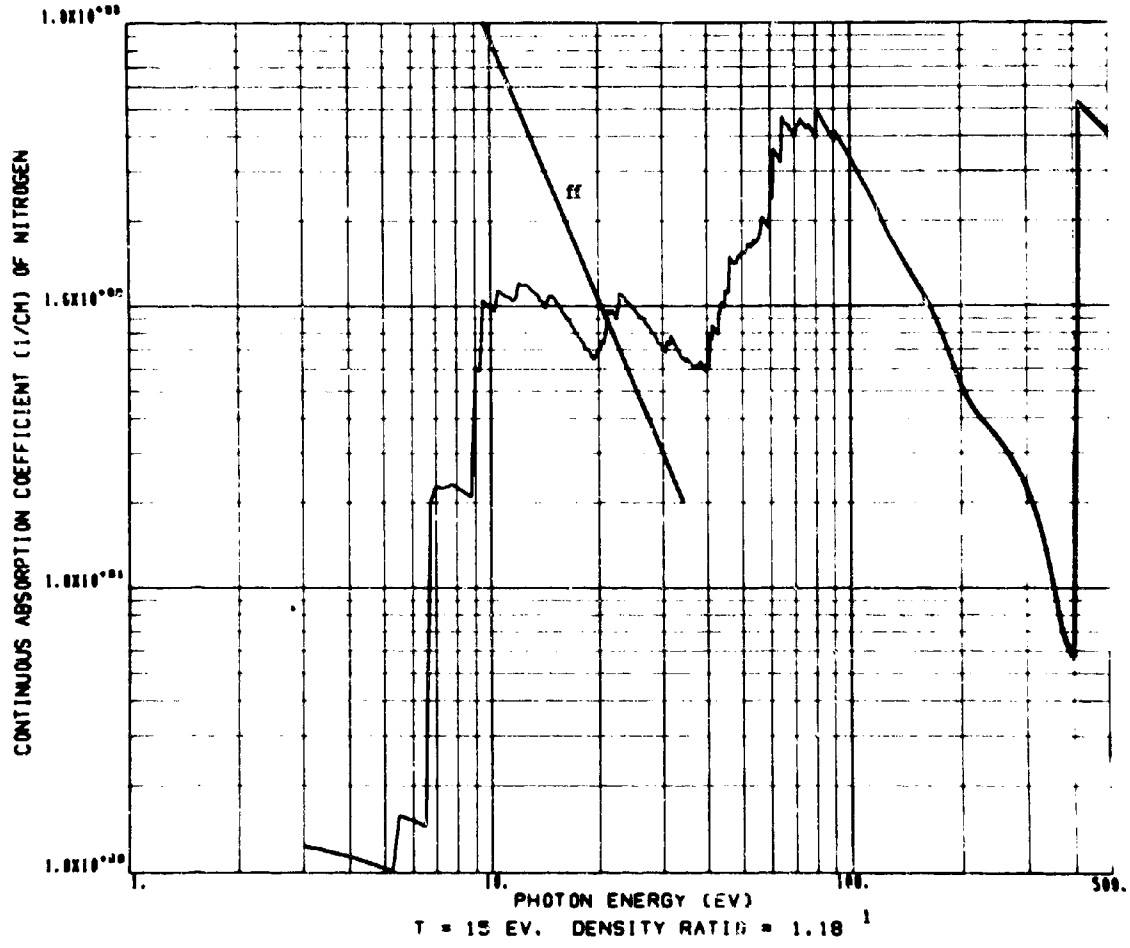

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 1.0E-2

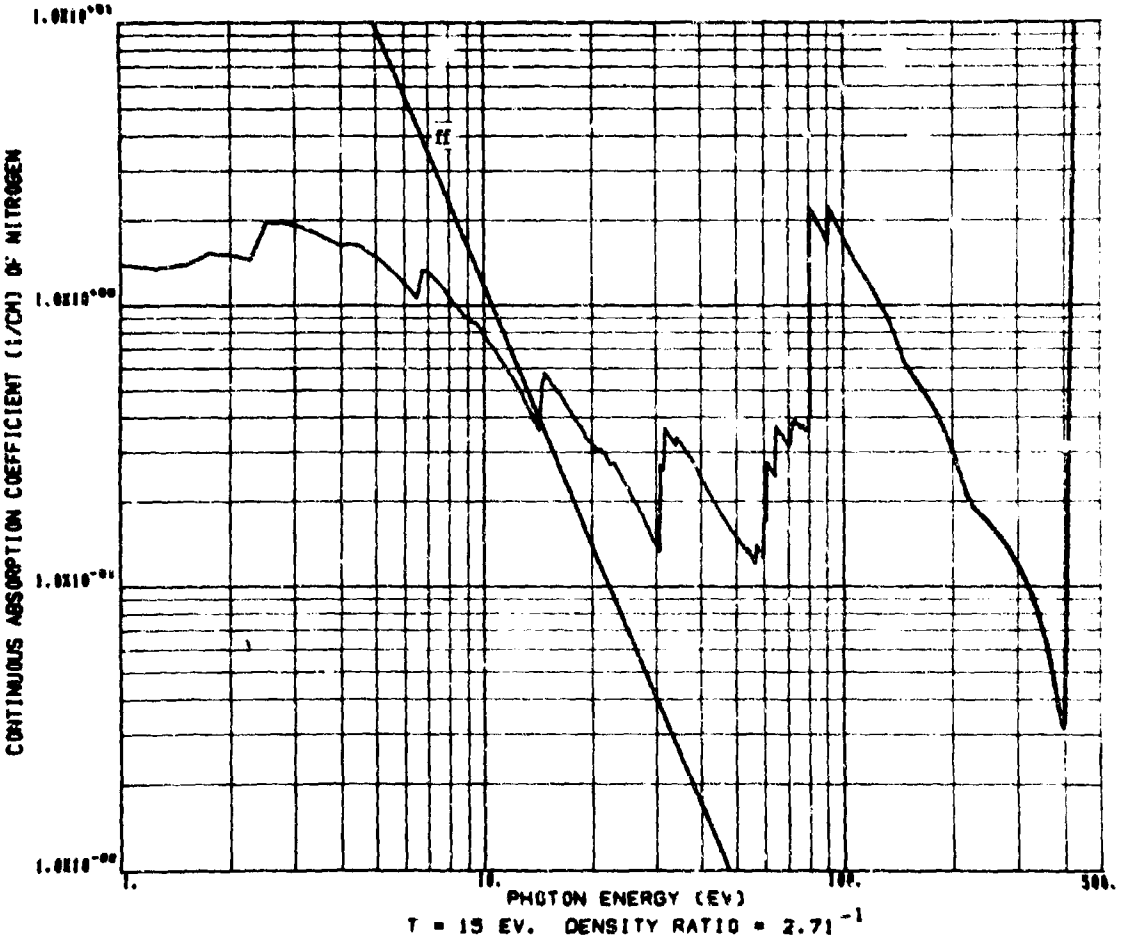

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV.

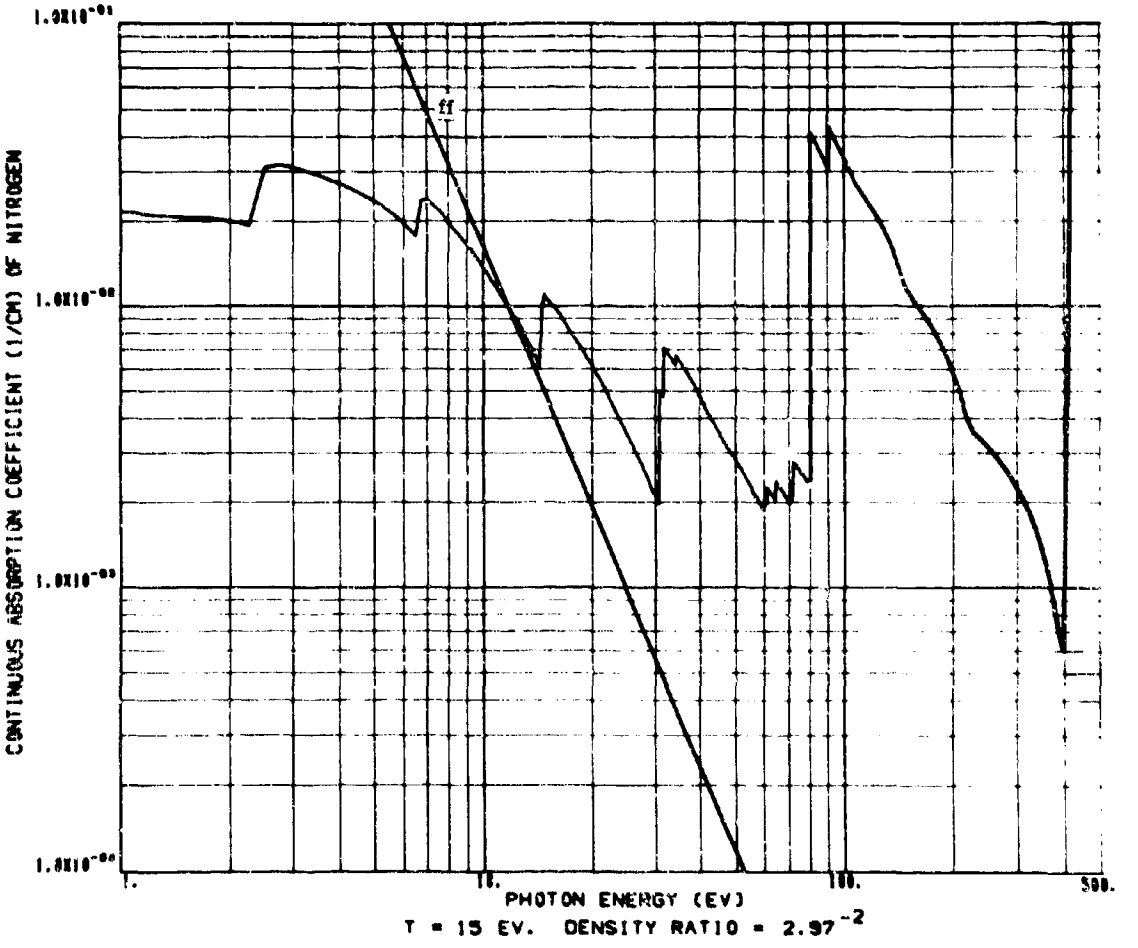


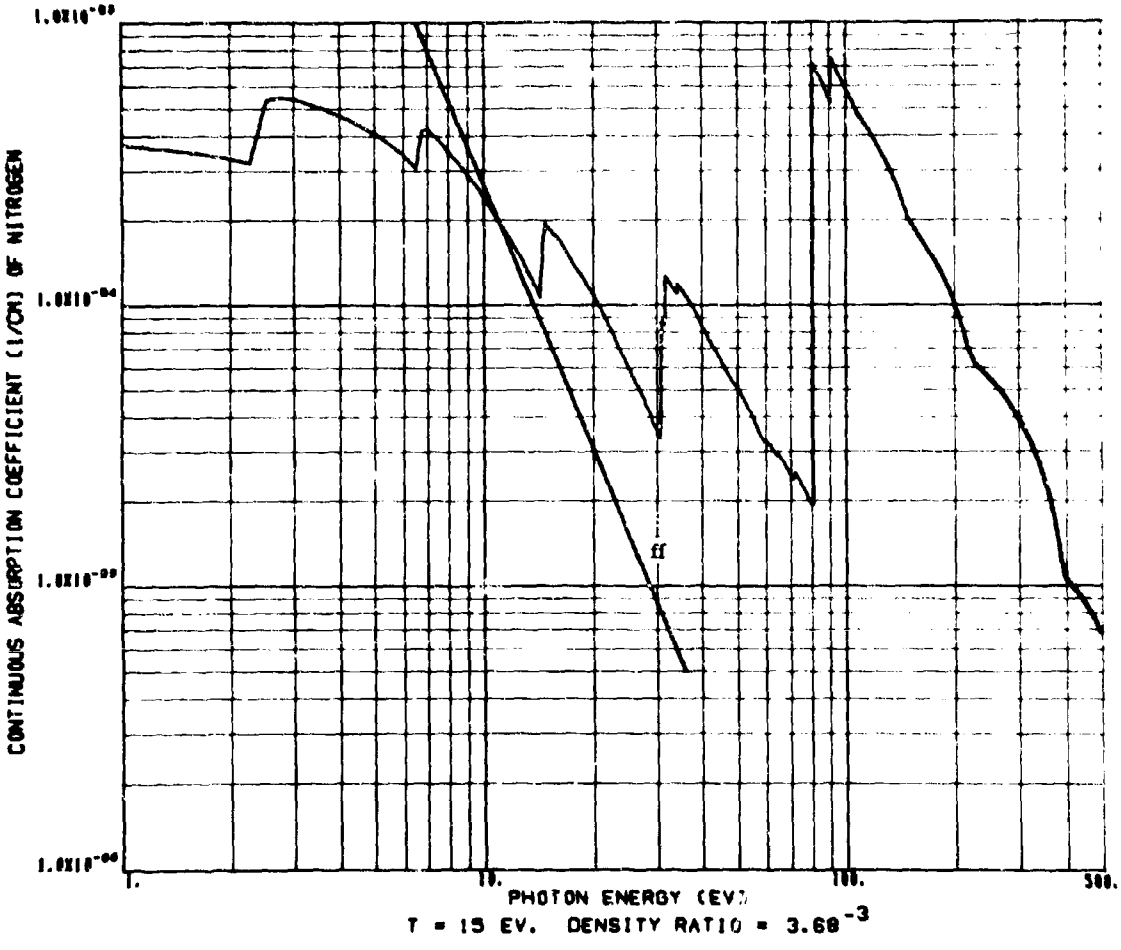
T = 10 EV. DENSITY RATIO ~ 2.63^{-4}


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E10^-06
1.0E10^-06
1.0E10^-07
1.0E10^-08
1.0E10^-09
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 10 EV. DENSITY RATIO = 3.46^-5

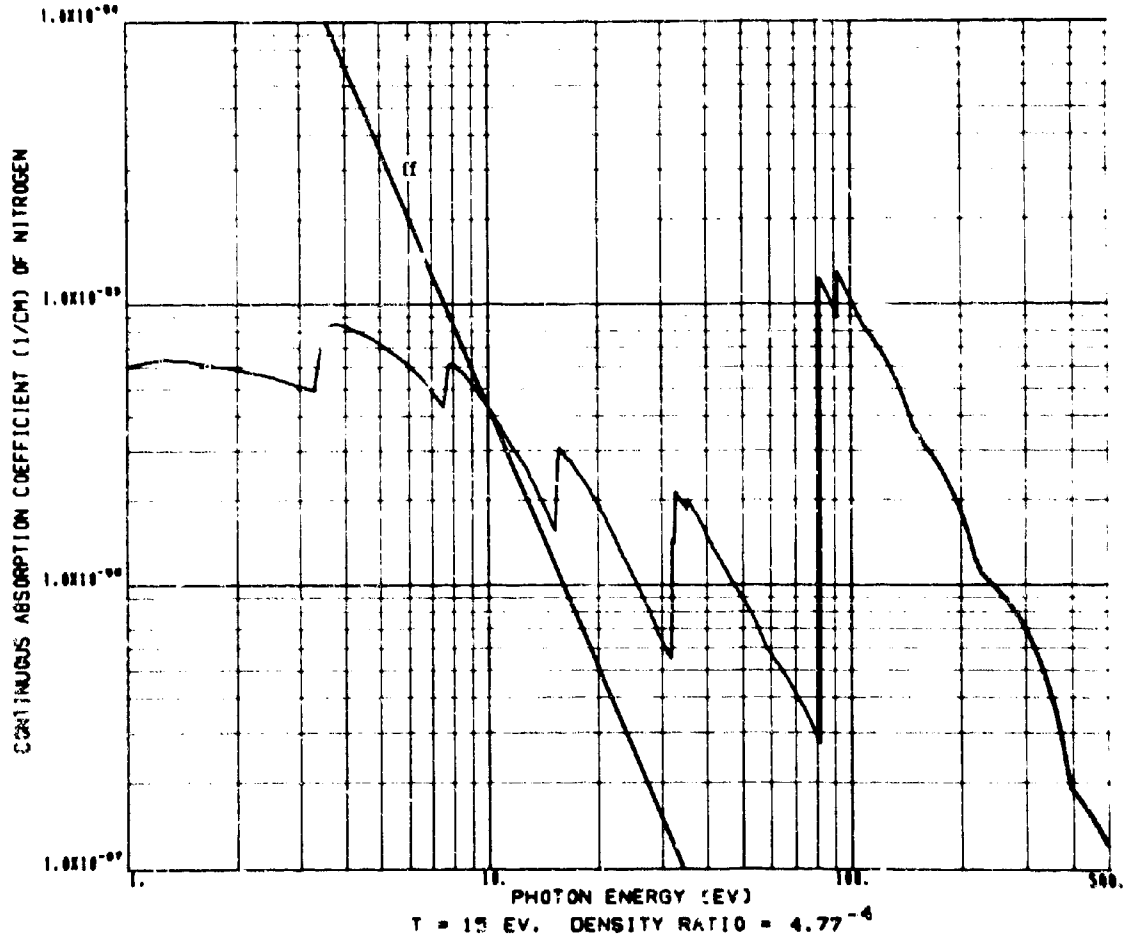

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10**00
1.0X10**-01
1.0X10**-02
1.
10.
100.
500.
ff
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 1.18 1

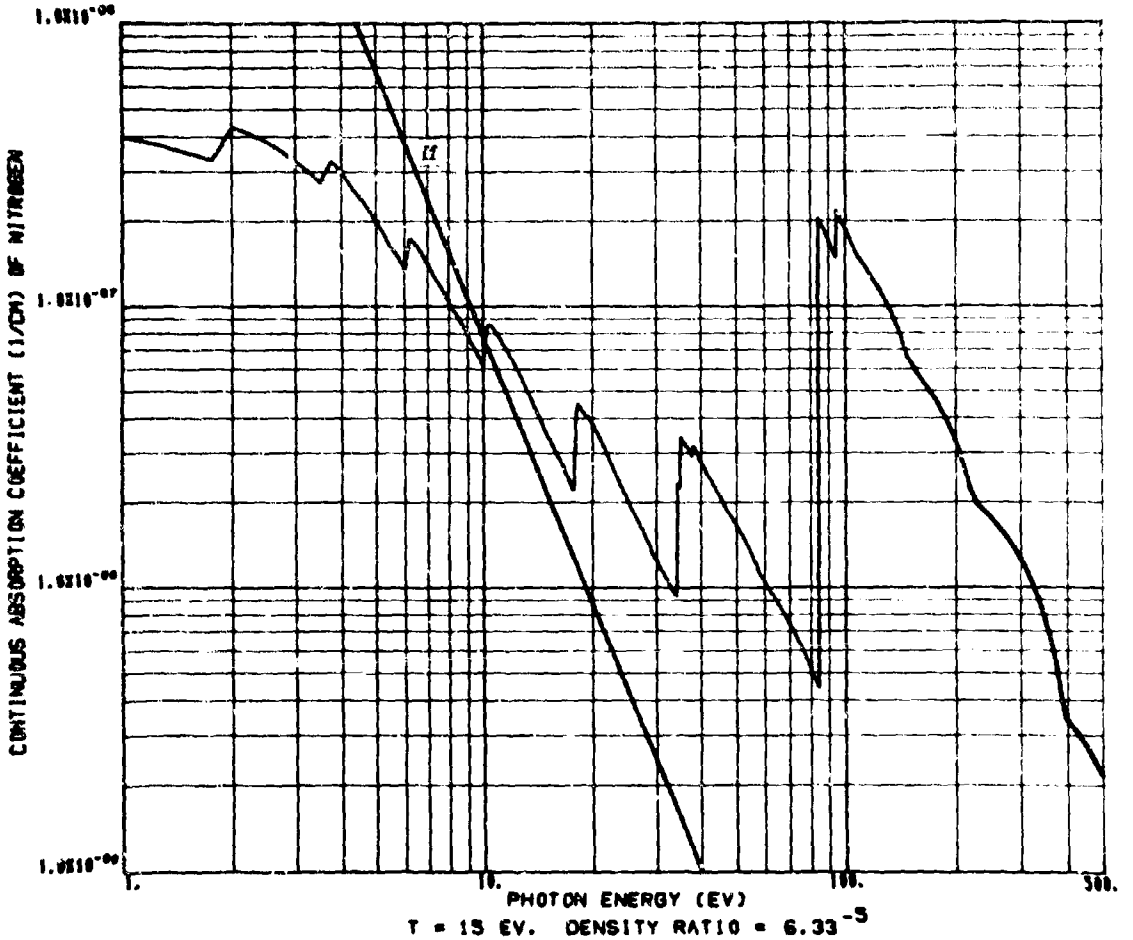

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0E+01
1.0E+00
1.0E-01
1.0E-02
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 2.71^-1

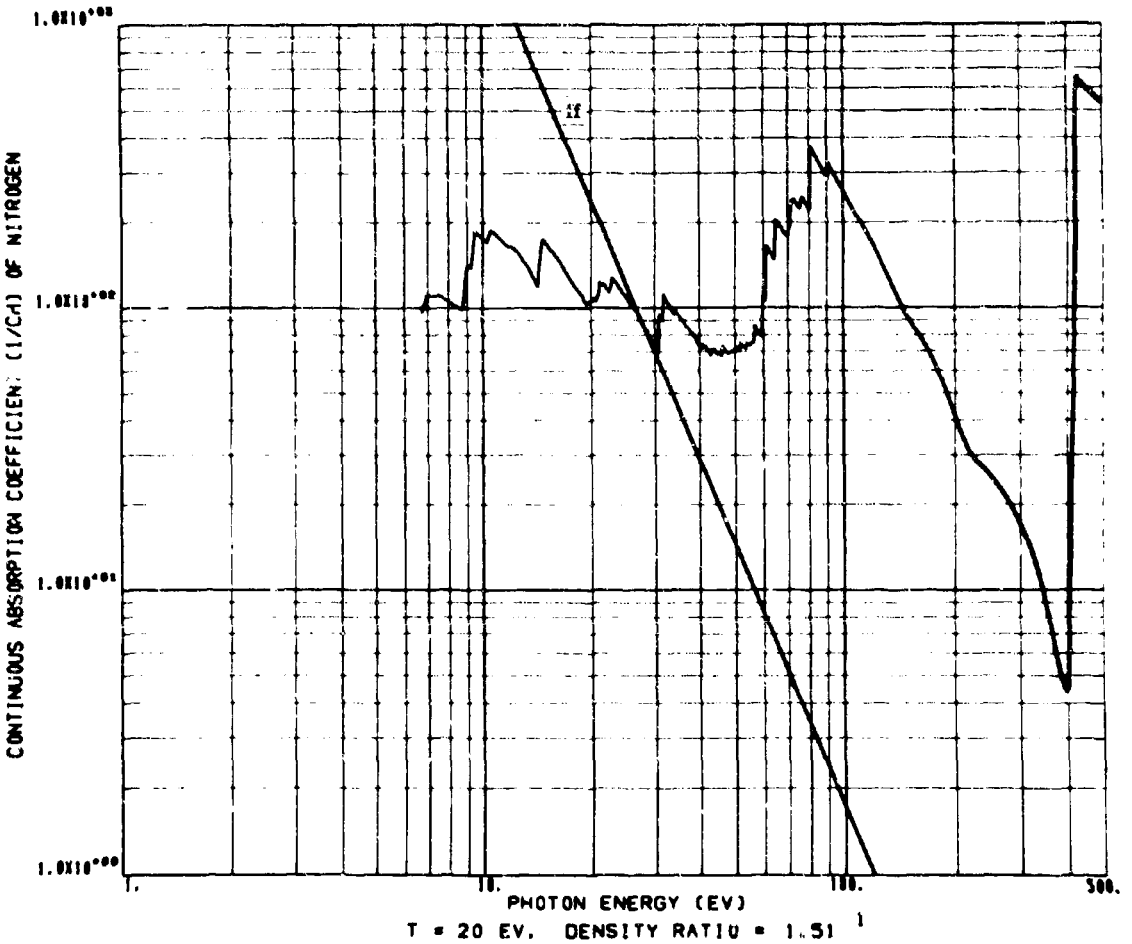

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 2.97^-2

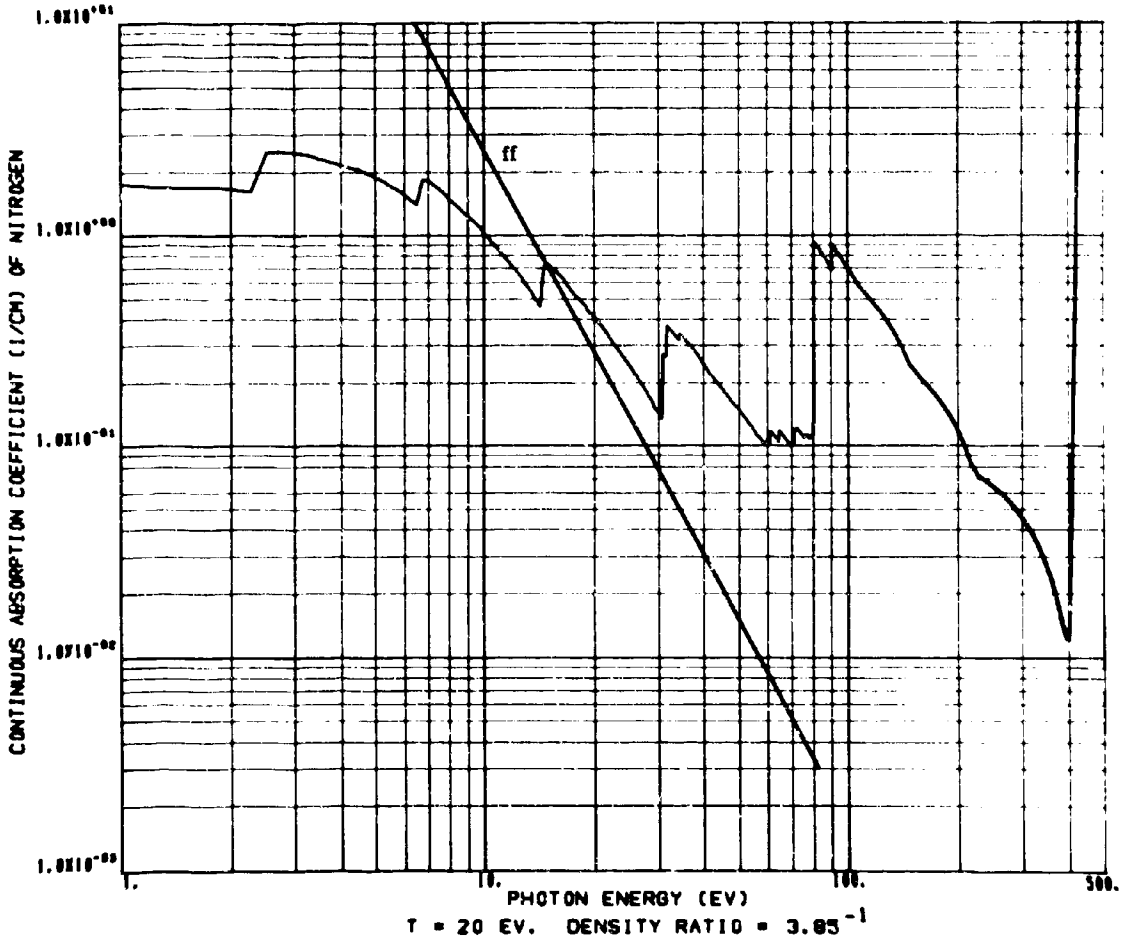


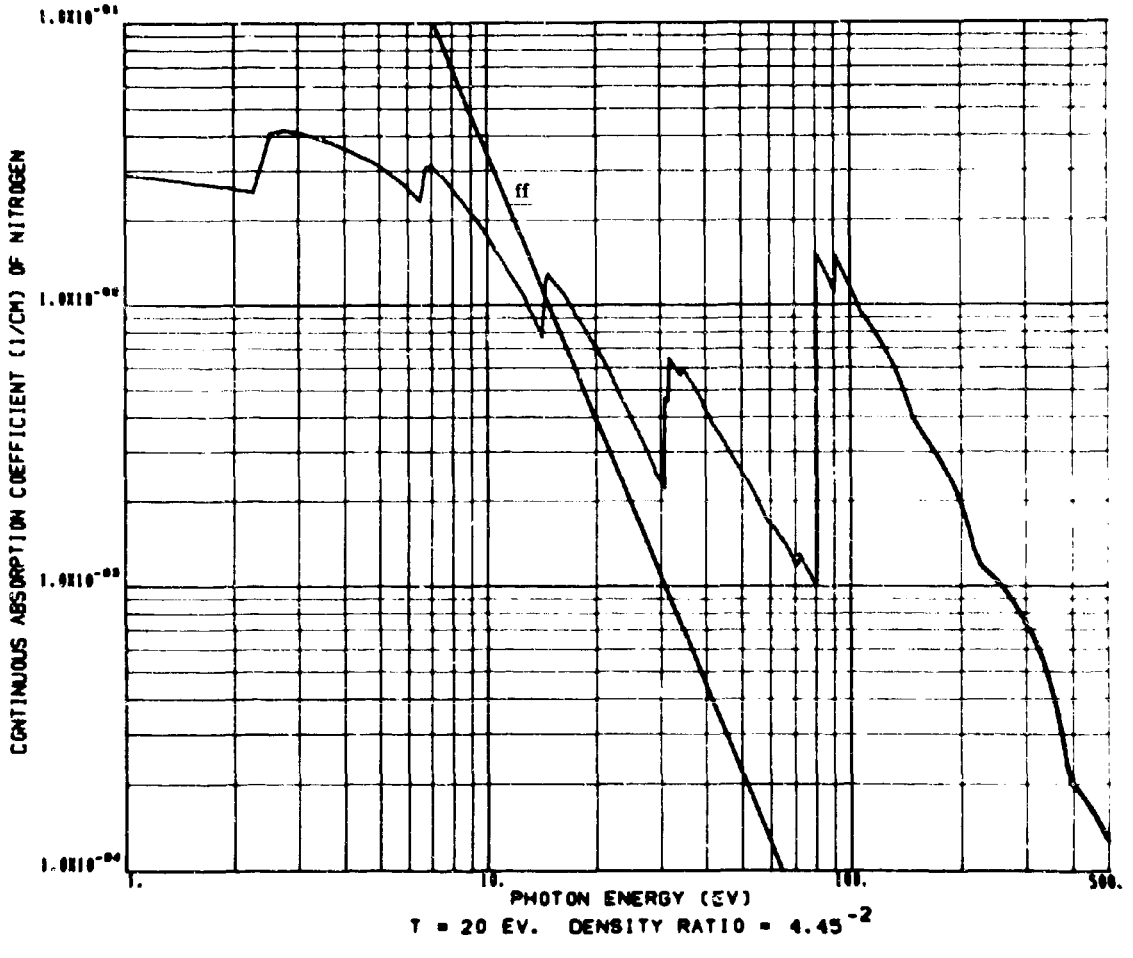
T = 15 EV. DENSITY RATIO = 3.68^{-3}

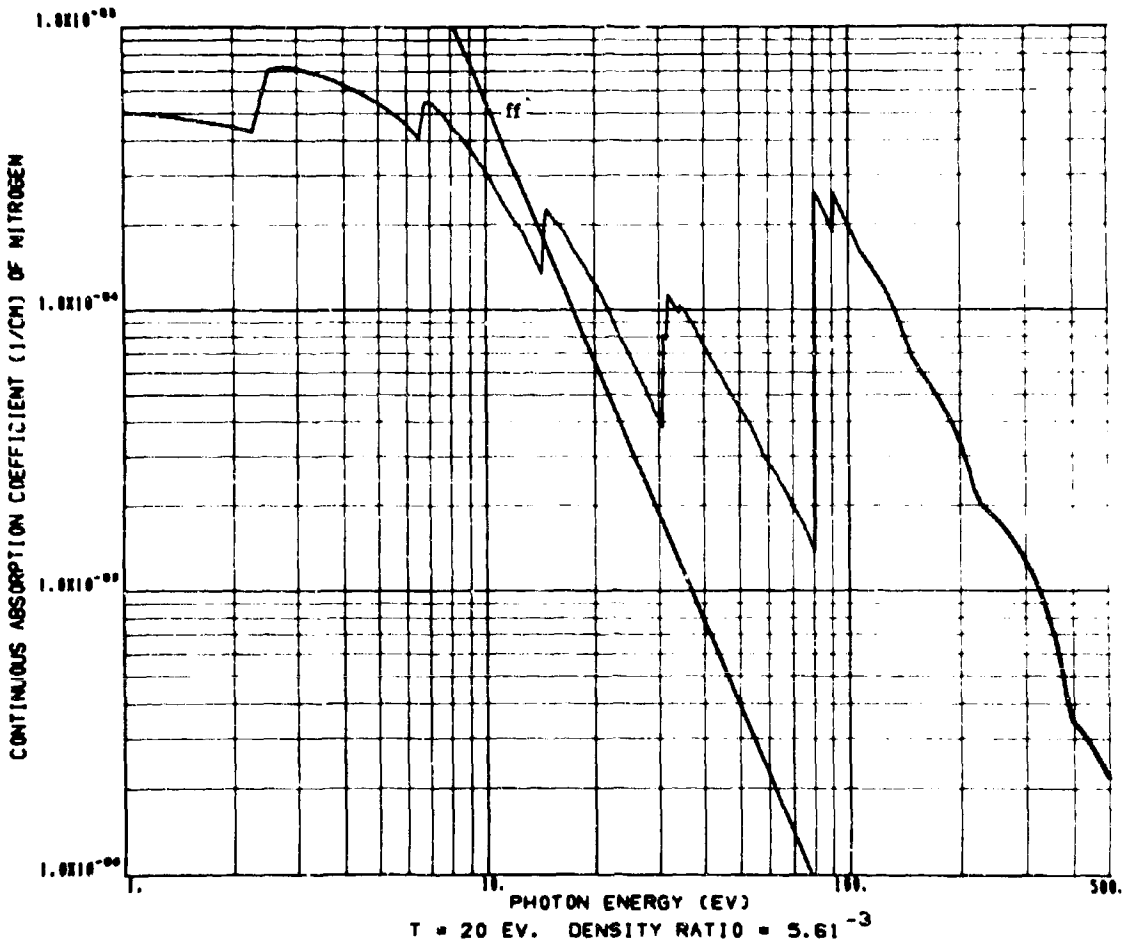

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^-06
1.0X10^-07
1.0X10^-08
1.0X10^-09
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 4.77^-4

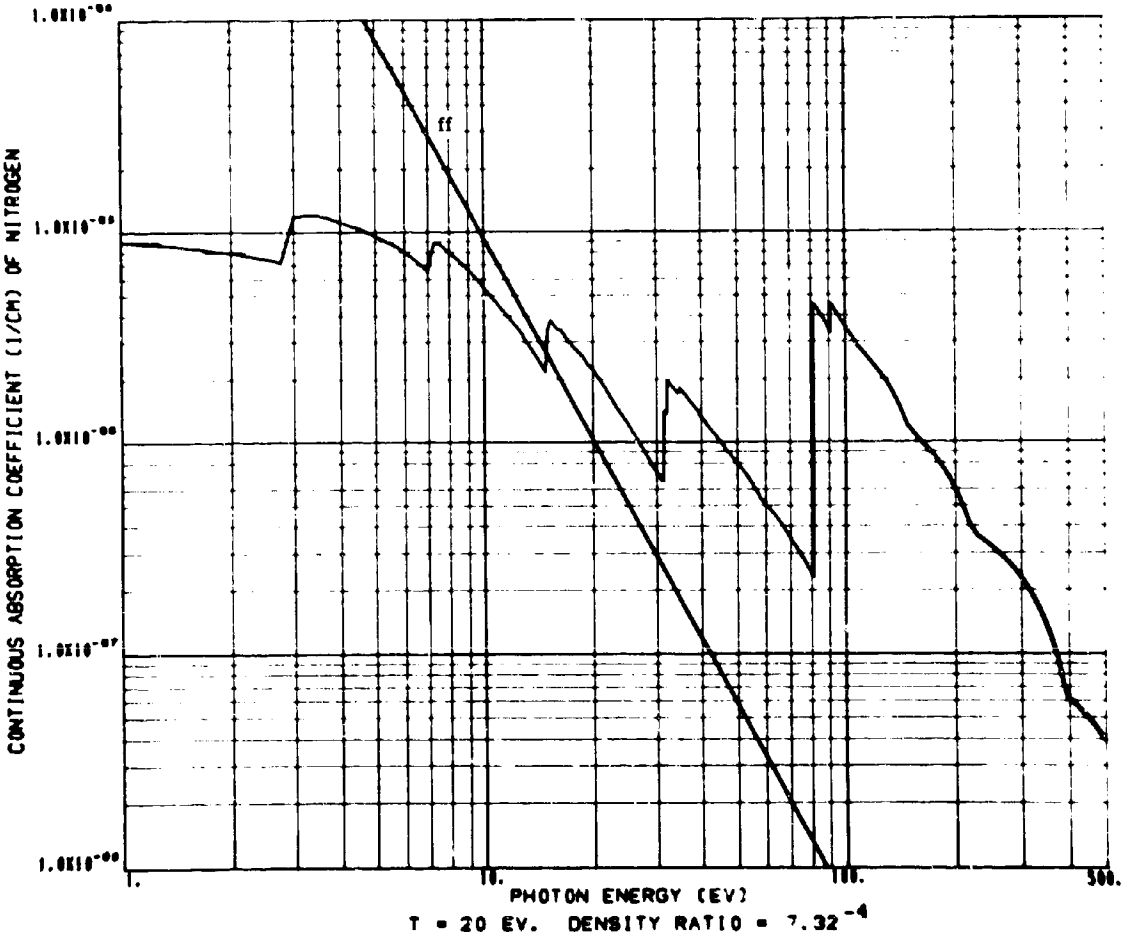

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 15 EV. DENSITY RATIO = 6.33-5

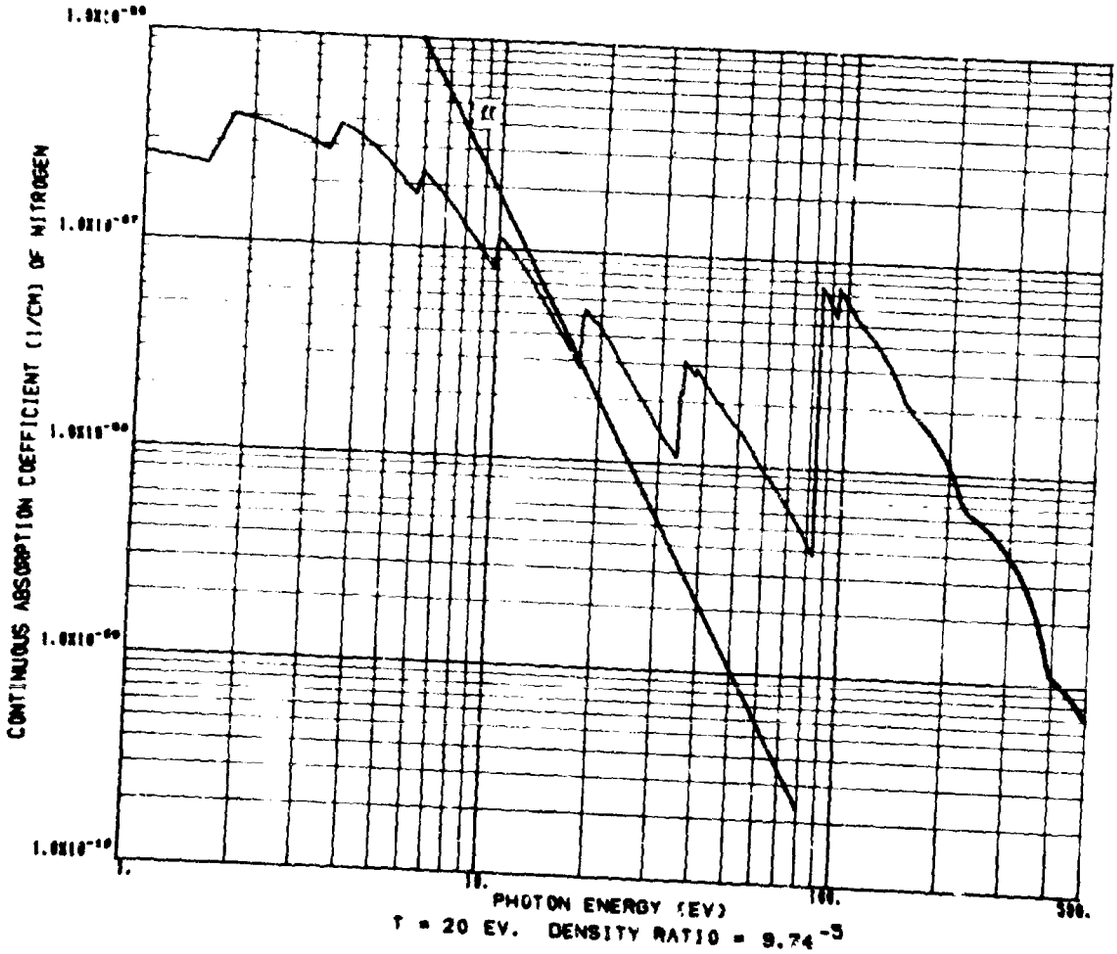

CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10**02
1.0X10**00
1.0X10**-01
1.0X10**-02
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 1.51


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 3.85^-1


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 4.45 -2


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^-03
1.0X10^-04
1.0X10^-05
1.0X10^-06
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 5.61^-3


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
ff
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 7.32^-4


CONTINUOUS ABSORPTION COEFFICIENT (1/CM) OF NITROGEN
1.0X10^-07
1.0X10^-08
1.0X10^-09
1.0X10^-10
1.
10.
100.
500.
PHOTON ENERGY (EV)
T = 20 EV. DENSITY RATIO = 9.74^-5

2. Mean Absorption Coefficients of Air

If conditions of local thermodynamic equilibrium prevail, the source function J_ν in the transfer equation

$$-\frac{1}{\mu_\nu}\frac{dI_\nu}{ds} = I_\nu - J_\nu$$

becomes the well-known Planck function

$$B_c(T) = \frac{2h\nu^3}{c^2}\left(e^{h\nu/kT} - 1\right)^{-1}$$

plus a term that accounts for induced emission. There are then two limiting cases for which simple solutions to the transfer equation exist. If the optical depth $\mu'_\nu x$ of the radiating sample of gas is small ($\mu_\nu x << 1$), where x is the sample dimension in the direction of radiation, the radiant energy emitted by the sample is given in terms of the Planck mean absorption coefficient:

$$\bar{\mu}_P = \frac{\int \mu'_\nu B_\nu(T)\, d\nu}{\int B_\nu(T)\, d\nu}$$

where $\mu'_\nu = [1 - \exp(h\nu/kT)]\,\mu_\nu$. If the optical depth is large ($\mu_\nu x >> 1$), one passes to the diffusion limit, and the emission of radiant energy is governed by the Rosseland mean absorption coefficient:

$$\frac{1}{\bar{\mu}_R} = \frac{\int \frac{1}{\mu'_\nu}\frac{\partial B_\nu(T)}{\partial T}\, d\nu}{\int \frac{\partial B_\nu(T)}{\partial T}\, d\nu}$$

Table 1 lists values of $\bar{\mu}_p$ as obtained from the work of Armstrong, Johnston, and Kelly (1965), for nitrogen and oxygen. The continuum (i.e., photoelectric and free-free) contributions and line (bound-bound) contributions are displayed separately, and given for six density values (from, roughly, 10 normal to 10^{-5} normal) at each of the six temperatures 1, 2, 5, 10, 15, and 20 eV . Non-hydrogenic matrix elements were employed in this calculation for all but the free-free contributions.

Table 2 presents a comparison of the non-hydrogenic continuum Planck mean coefficients of Armstrong, Johnston, and Kelly (1965) with the earlier hydrogenic calculations of Armstrong (1959), and of Stewart and Pyatt (1961). The listed coefficients are for nitrogen and oxygen. The six density points for each temperature are the same as those in Table 1, and a comparison is given for temperatures $kT = 2, 5, 10, 15$, and 20 eV .

Table 3 presents Rosseland mean absorption coefficients of nitrogen, oxygen, and air as obtained from the work of Armstrong, Johnston, and Kelly (1965), along with some hydrogenic Rosseland mean results of Stewart and Pyatt (1961) for comparison. The temperature-density grid is identical to that of Table A.

The foregoing definitions and results are discussed in detail by Armstrong and Nicholls (1966), Parts A and B.

References

Armstrong, B.H., Mean Absorption Coefficients of Air, Nitrogen and Oxygen from 22,000° to 220,000°, Lockheed Missiles and Space Company Report LMSC 49759, 1959.

Armstrong, B.H., R.R. Johnston and P.S. Kelly, Opacity of High-Temperature Air, Air Force Weapons Laboratory Report, TR 65-17, 1965.

Armstrong, B.H. and R. Nicholls, The Radiative Properties of Heated Air, Thermal Radiation Phenomena, Lockheed, Palo Alto, 1966.

Stewart, J.C. and K.D. Pyatt, Jr., Theoretical Studies of Optical Properties, Air Force Special Weapons Center Report, AFSWC-TR-61-71, 1961.

Table 1

PLANCK MEAN ABSORPTION COEFFICIENTS FOR NITROGEN AND OXYGEN

Temperature (eV)	J	Nitrogen Ion Density (nuclei cm^{-3})	Mean Absorption Coefficients (cm^{-1})			Oxygen Ion Density (nuclei cm^{-3})	Mean Absorption Coefficients (cm^{-1})		
			Lines	Continuum	Total		Lines	Continuum	Total
1	1	5.26^{18}	1.70	3.46^{2}	1.74	5.38^{18}	5.20^{1}	2.04^{-2}	5.40^{-1}
	2	5.36^{17}	1.68^{-1}	3.40^{-3}	1.71^{-1}	5.39^{17}	4.67^{-2}	1.82^{-3}	4.85^{-2}
	3	5.37^{16}	1.51^{-2}	2.84^{-4}	1.54^{-2}	5.37^{16}	4.22^{-3}	1.80^{-4}	4.38^{-3}
	4	5.38^{15}	1.10^{-3}	1.71^{-5}	1.12^{-3}	5.38^{15}	3.09^{-4}	1.13^{-5}	3.20^{-4}
	5	5.38^{14}	5.89^{-5}	5.27^{-7}	5.94^{-5}	5.38^{14}	1.37^{-5}	3.53^{-7}	1.41^{-5}
	6	5.38^{13}	3.90^{-6}	6.61^{-9}	3.91^{-6}	5.38^{13}	5.41^{-7}	5.51^{-9}	5.47^{-7}
2	1	2.34^{20}	9.04^{2}	1.61^{2}	9.65^{2}	3.32^{20}	5.16^{2}	1.61^{2}	6.77^{2}
	2	3.16^{18}	6.61	4.01^{1}	7.01	3.77^{18}	3.21	4.19^{-1}	3.63
	3	3.32^{17}	6.06^{-1}	7.20^{-3}	6.13^{-1}	3.88^{17}	2.67^{-1}	6.97^{-3}	2.74^{-1}
	4	3.86^{16}	6.75^{-2}	1.92^{-4}	6.77^{-2}	4.68^{16}	3.09^{-2}	1.31^{-4}	3.10^{-2}
	5	3.90^{15}	6.16^{-3}	6.21^{-6}	6.19^{-3}	5.59^{15}	3.57^{-3}	3.23^{-6}	3.57^{-3}
	6	3.97^{14}	5.41^{-4}	1.43^{-7}	5.41^{-4}	5.59^{14}	3.26^{-4}	9.71^{-8}	3.20^{-4}
5	1	2.56^{20}	1.20^{3}	2.32^{2}	1.43^{3}	3.02^{20}	1.05^{3}	2.01^{2}	1.25^{3}
	2	5.50^{18}	1.99^{1}	7.97^{-1}	2.07^{1}	6.57^{18}	1.83^{1}	6.73^{-1}	1.90^{1}
	3	5.24^{17}	1.50	2.11^{-2}	1.52	6.45^{17}	1.61	1.98^{-2}	1.63
	4	5.66^{16}	1.28^{-1}	4.75^{-4}	1.29^{-1}	6.76^{16}	1.50^{-1}	5.16^{-4}	1.51^{-1}
	5	6.49^{15}	1.09^{-2}	8.99^{-6}	1.09^{-2}	7.97^{15}	1.67^{-2}	9.64^{-6}	1.67^{-2}
	6	7.50^{14}	7.02^{-4}	1.64^{-7}	7.02^{-4}	9.25^{14}	1.80^{-3}	1.96^{-7}	1.80^{-3}
10	1	4.11^{20}	9.14^{2}	2.87^{2}	12.01^{2}	4.76^{20}	1.15^{3}	3.11^{2}	1.47^{3}
	2	8.81^{18}	0.99^{1}	8.15^{-1}	1.07^{1}	1.04^{19}	1.63^{1}	1.07	1.74^{1}
	3	8.71^{17}	4.31^{-1}	1.72^{-2}	4.48^{-1}	1.03^{18}	9.78^{-1}	2.50^{-2}	1.00
	4	9.79^{16}	1.16^{-2}	3.40^{-4}	1.19^{-2}	1.11^{17}	5.08^{-2}	5.81^{-4}	5.14^{-2}
	5	1.23^{16}	2.25^{-4}	5.36^{-6}	2.30^{-4}	1.29^{16}	2.36^{-3}	1.08^{-5}	2.37^{-3}
	6	1.62^{15}	4.09^{-6}	8.02^{-8}	4.17^{-6}	1.58^{15}	6.63^{-5}	1.65^{-7}	6.65^{-5}
15	1	5.53^{20}	6.05^{2}	2.42^{2}	8.47^{2}	6.49^{20}	9.62^{2}	3.33^{2}	1.30^{3}
	2	1.27^{19}	3.72	5.54^{1}	4.27	1.42^{19}	1.07^{1}	9.61^{1}	1.17^{1}
	3	1.39^{18}	7.51^{2}	9.38^{3}	8.45^{2}	1.44^{18}	4.20^{1}	1.95^{2}	4.40^{1}
	4	1.72^{17}	1.34^{-3}	1.60^{-4}	1.50^{-3}	1.68^{17}	9.95^{-3}	3.65^{-4}	1.03^{-2}
	5	2.23^{16}	2.42^{-5}	2.68^{-6}	2.69^{-5}	2.14^{16}	1.87^{-4}	5.98^{-6}	1.93^{-4}
	6	2.98^{15}	4.39^{-7}	4.32^{-8}	4.82^{-7}	2.83^{15}	3.41^{-6}	8.89^{-8}	3.50^{-6}
20	1	7.07^{20}	3.42^{2}	1.87^{2}	5.29^{2}	8.01^{20}	7.02^{2}	3.04^{2}	1.01^{3}
	2	1.80^{19}	1.21	3.58^{-1}	1.57	1.96^{19}	5.45	7.10^{1}	6.16
	3	2.08^{18}	2.12^{2}	5.72^{-3}	2.69^{-2}	2.04^{18}	1.21^{1}	1.23^{-2}	1.33^{1}
	4	2.62^{17}	3.71^{-4}	9.78^{-5}	4.69^{-4}	2.52^{17}	2.16^{-3}	2.11^{-4}	2.37^{-3}
	5	3.42^{16}	6.62^{-6}	1.70^{-6}	8.32^{-6}	3.27^{16}	3.86^{-5}	3.62^{-6}	4.22^{-5}
	6	4.55^{15}	1.23^{-7}	2.82^{-8}	1.51^{-7}	4.34^{15}	6.96^{-7}	5.64^{-8}	7.52^{-7}

Table 2

CONTINUUM PLANCK MEAN ABSORPTION COEFFICIENTS FOR NITROGEN AND OXYGEN

Temperature (eV)	J	Mean Absorption Coefficients (cm^{-1})				
		Nitrogen			Oxygen	
		Present Calculation	Ref. 1	Ref. 2	Present Calculation	Ref. 1
2	1	1.61^{2}	1.28^{2}		1.61^{2}	1.08^{2}
	2	4.01^{1}	3.00^{1}		1.19^{1}	2.81^{1}
	3	7.20^{3}	4.99^{3}		6.97^{3}	4.60^{3}
	4	1.92^{4}	1.05^{4}		1.31^{4}	8.11^{5}
	5	6.21^{6}	2.98^{6}		3.23^{6}	1.82^{6}
	6	1.43^{7}	7.08^{8}		9.71^{8}	5.82^{8}
5	1	2.32^{2}	1.70^{2}	1.1^{2}	2.01^{2}	1.52^{2}
	2	7.97^{1}	3.87^{1}	3.5^{1}	6.73^{1}	5.03^{1}
	3	2.11^{2}	8.58^{3}	8.4^{3}	1.98^{2}	7.61^{3}
	4	4.75^{4}	1.69^{4}	1.9^{4}	5.16^{4}	1.68^{4}
	5	8.99^{6}	3.85^{6}	4.1^{6}	9.64^{6}	3.50^{6}
	6	1.64^{7}	8.99^{8}	9.1^{8}	1.96^{7}	8.12^{8}
10	1	2.87^{2}	2.12^{2}	1.3^{2}	3.11^{2}	2.11^{2}
	2	8.15^{1}	4.63^{1}	3.8^{1}	1.07	1.66^{1}
	3	1.72^{2}	9.13^{3}	9.0^{3}	2.50^{2}	9.77^{3}
	4	3.40^{4}	1.79^{4}	1.9^{4}	5.81^{4}	2.02^{4}
	5	5.36^{6}	3.25^{6}	3.4^{6}	1.08^{5}	3.78^{6}
	6	8.02^{8}	5.81^{8}	6.0^{8}	1.65^{7}	7.11^{8}
15	1	2.42^{2}	2.11^{2}	1.2^{2}	3.33^{2}	2.28^{2}
	2	5.54^{-1}	3.84^{1}	3.2^{1}	9.61^{1}	4.68^{1}
	3	9.38^{3}	6.50^{-3}	6.2^{3}	1.95^{2}	8.59^{3}
	4	1.60^{-4}	1.03^{-4}	1.1^{-4}	3.65^{4}	1.35^{4}
	5	2.68^{-6}	1.79^{-6}	1.9^{-6}	5.98^{6}	2.34^{6}
	6	4.32^{-8}	3.16^{-8}	3.4^{-8}	8.89^{8}	4.19^{8}
20	1	1.87^{2}	1.61^{2}	1.2^{2}	3.04^{2}	2.15^{2}
	2	3.58^{-1}	2.30^{-1}	3.0^{-1}	7.10^{1}	3.66^{1}
	3	5.72^{-3}	3.48^{-3}	5.9^{-3}	1.23^{-2}	5.96^{3}
	4	9.78^{-5}	5.66^{-5}	1.1^{-4}	2.11^{4}	9.26^{-5}
	5	1.70^{-6}	9.90^{-7}	2.0^{-6}	3.62^{6}	1.60^{-6}
	6	2.82^{-8}	1.75^{-8}	3.6^{-8}	5.61^{8}	2.81^{8}

Table 3

ROSSELAND MEAN ABSORPTION COEFFICIENTS FOR NITROGEN, OXYGEN, AND AIR

Temperature (eV)	Nitrogen Ion Density (nuclei cm^{-3})	Mean Absorption Coefficients (cm^{-1})		Oxygen Ion Density (nuclei cm^{-3})	LMSC Mean Absorption Coefficients (cm^{-1})	Air Ion Density (nuclei cm^{-3})	LMSC Mean Absorption Coefficients (cm^{-1})
		LMSC	Ref. 2				
1	5.25^{18}	1.22^{3}		5.38^{18}	2.48^{3}	5.28^{18}	
	5.36^{17}	1.10^{4}		5.39^{17}	1.78^{4}	5.37^{17}	
	5.37^{16}	9.13^{6}		5.37^{16}	1.47^{5}	5.37^{16}	
	5.38^{15}	5.40^{7}		5.38^{15}	9.36^{7}	5.38^{15}	
	5.38^{14}	1.56^{8}		5.38^{14}	2.93^{8}	5.38^{14}	
	5.38^{13}	2.06^{10}		5.38^{13}	3.74^{10}	5.38^{13}	
2	2.34^{20}	6.68^{1}		3.32^{20}	1.18^{2}	2.55^{20}	9.78^{1}
	3.16^{18}	1.16^{1}		3.77^{18}	2.27^{1}	3.29^{18}	1.52^{1}
	3.32^{17}	1.07^{3}		3.85^{17}	1.47^{3}	3.43^{17}	1.24^{3}
	3.86^{16}	1.97^{5}		4.68^{16}	2.35^{5}	4.03^{16}	2.09^{5}
	3.90^{15}	5.58^{7}		5.59^{15}	3.26^{7}	4.26^{15}	5.19^{7}
	3.97^{14}	1.19^{8}		5.59^{14}	4.10^{9}	4.31^{14}	1.06^{8}
5	4.56^{20}	2.81^{2}	1.5^{2}	3.02^{20}	2.62^{2}	2.66^{20}	3.35^{2}
	5.50^{18}	5.15^{1}	3.2^{1}	6.57^{18}	4.10^{1}	5.73^{18}	6.05^{1}
	5.24^{17}	6.35^{3}	6.3^{3}	6.45^{17}	5.96^{3}	5.50^{17}	6.92^{3}
	5.65^{16}	1.06^{4}	1.0^{4}	6.76^{16}	9.61^{5}	5.88^{16}	1.12^{4}
	6.49^{15}	1.67^{6}	1.8^{6}	7.97^{15}	1.45^{6}	6.80^{15}	1.76^{6}
	7.50^{14}	2.41^{8}	3.6^{8}	9.25^{14}	1.99^{8}	7.87^{14}	2.51^{8}
10	4.11^{20}	6.92^{2}	3.4^{2}	4.76^{20}	3.20^{2}	4.25^{20}	7.78^{2}
	6.81^{18}	1.01	7.3^{1}	1.04^{19}	7.97^{1}	9.14^{18}	1.09
	8.71^{17}	1.04^{-2}	9.6^{3}	1.03^{18}	1.02^{2}	9.04^{17}	1.16^{2}
	9.79^{16}	1.27^{4}	1.2^{4}	1.11^{17}	1.69^{4}	1.01^{17}	1.17^{4}
	1.23^{16}	1.67^{6}	1.5^{6}	1.29^{16}	2.96^{6}	1.25^{16}	2.15^{6}
	1.62^{15}	2.95^{8}	2.8^{8}	1.58^{15}	4.36^{8}	1.61^{15}	3.81^{8}
15	5.53^{20}	4.19^{2}	2.5^{2}	6.40^{20}	7.73^{2}	5.72^{20}	5.50^{2}
	1.27^{19}	6.55^{1}	6.3^{1}	1.42^{19}	1.08	1.30^{19}	8.16^{1}
	1.39^{18}	5.48^{3}	5.8^{3}	1.44^{18}	1.12^{2}	1.40^{18}	8.61^{3}
	1.72^{17}	7.01^{5}	5.9^{5}	1.68^{17}	1.34^{4}	1.71^{17}	1.01^{4}
	2.23^{16}	1.16^{6}	9.8^{7}	2.14^{16}	1.85^{6}	2.22^{16}	1.66^{6}
	2.98^{15}	3.17^{8}	3.2^{8}	2.83^{15}	3.78^{8}	2.94^{15}	3.88^{8}
20	7.07^{20}	1.87^{2}	1.6^{2}	8.01^{20}	5.42^{2}	7.27^{20}	2.81^{2}
	1.80^{19}	3.15^{1}	5.0^{1}	1.86^{19}	7.44^{1}	1.81^{19}	5.11^{1}
	2.08^{18}	3.67^{-3}	6.1^{-3}	2.04^{18}	6.30^{3}	2.07^{18}	5.80^{-3}
	2.62^{17}	5.74^{5}	6.9^{5}	2.52^{17}	8.01^{5}	2.59^{17}	8.91^{5}
	3.12^{16}	1.11^{6}	1.2^{6}	3.27^{16}	1.35^{6}	3.39^{16}	1.39^{6}
	4.55^{15}	3.58^{8}	4.2^{8}	4.34^{15}	4.04^{8}	4.51^{15}	4.35^{8}

E. Mean Air Absorption Coefficients (above 20 eV)

The tables which follow list values for air of the Planck and Rosseland opacities, or mean mass absorption coefficients (in cm^2/gm),

$$\bar{K}_P = \bar{\mu}_P / \rho$$

$$\bar{K}_R = \bar{\mu}_R / \rho \quad ,$$

where $\bar{\mu}_P$ and $\bar{\mu}_R$ are the Planck and Rosseland mean absorption coefficients, respectively, defined in Sections D.1 and D.2 (see also Armstrong and Nicholls, 1966, Parts A and B). Also included in the tables are the Planck and Rosseland mean free paths defined, respectively, by

$$\Lambda_P \equiv 1/\bar{\mu}_P$$

$$\Lambda_R \equiv 1/\bar{\mu}_R$$

and given in units of cm.

These quantities are tabulated as functions of density ρ (in gm/cm^3), or log density, for selected temperatures from 22.5 eV to 2,250 eV, and have been obtained from the work of Freeman (1963). The Stewart-Pyatt (1961) DIAPHANOUS code was used in the computation. The results, therefore, include line, or bound-bound transitions, and make use of hydrogenic approximations to the matrix elements with Gaunt factors set equal to unity. Approximations to the election-impact line broadening theory of Baranger (see Stewart and Pyatt, 1961) were employed to obtain line shapes and widths.

It should be noted that the Rosseland means include scattering, which may lead to errors if these are used for calculating absorption. The Planck

means, on the other hand, do not include a scattering contribution.

References

Armstrong, B.H. and R. Nicholls, The Radiative Properties of Heated Air, Thermal Radiation Phenomena, Lockheed, Palo Alto, 1966.

Freeman, B.E., Opacity and Absorption Coefficients for Ionic Air, General Atomic Report, GAMD-4566, 1963.

Stewart, J.C. and K.D. Pyatt, Jr., Theoretical Studies of Optical Properties, Air Force Special Weapons Center Report, AFSWC-TR-61-71, 1961.

kT (eV) = 22.5

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
2.300-01	-1.470+00	1.034+04	5.788+04	4.206-04	7.513-05
4.020-02	-3.214+00	8.090+03	3.693+04	3.075-03	6.736-04
7.047-03	-4.955+00	4.973+03	2.042+04	2.854-02	6.948-03
1.281-03	-6.660+00	1.747+03	8.160+03	4.470-01	9.568-02
2.457-04	-8.311+00	3.683+02	2.366+03	1.105+01	1.720+00
4.828-05	-9.938+00	6.700+01	5.634+02	3.091+02	3.676+01
8.811-06	-1.164+01	1.121+01	1.126+02	1.012+04	1.008+03
1.496-06	-1.341+01	1.972+00	2.034+01	3.391+05	3.288+04
2.300-07	-1.529+01	4.951-01	3.850+00	8.781+06	1.129+06
2.989-08	-1.733+01	2.433-01	1.210+00	1.375+08	2.766+07

kT (eV) = 34

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
3.618-01	-1.017+00	3.092+03	2.720+04	8.937-04	1.016-04
6.493-02	-2.734+00	1.722+03	1.353+04	8.943-03	1.138-03
1.201-02	-4.422+00	6.948+02	5.145+03	1.199-01	1.619-02
2.300-03	-6.075+00	1.966+02	1.540+03	2.211+00	2.823-01
4.503-04	-7.706+00	4.614+01	4.493+02	4.813+01	4.942+00
8.930-05	-9.323+00	1.016+01	1.784+02	1.102+03	6.277+01
1.622-05	-1.103+01	2.313+00	1.147+02	2.666+04	5.377+02
2.672-06	-1.283+01	7.007-01	8.377+01	5.342+05	4.468+03
3.858-07	-1.477+01	3.123-01	4.108+01	8.298+06	6.309+04
4.772-08	-1.686+01	2.198-01	1.620+01	9.533+07	1.293+06
4.420-09	-1.924+01	2.024-01	5.813+00	1.118+09	3.892+07

kT (eV) = 50

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
5.858-01	-5.348-01	1.525+03	1.221+04	1.120-03	1.398-04
1.092-01	-2.215+00	6.087+02	5.464+03	1.505-02	1.677-03
2.060-02	-3.883+00	1.937+02	2.616+03	2.506-01	1.856-02
3.990-03	-5.524+00	5.126+01	1.607+03	4.890+00	1.560-01
7.649-04	-7.176+00	1.399+01	1.147+03	9.348+01	1.140+00
1.436-04	-8.849+00	4.155+00	6.887+02	1.676+03	1.011+01
2.474-05	-1.061+01	1.346+00	3.618+02	3.004+04	1.117+02
3.910-06	-1.245+01	5.291-01	1.513+02	4.834+05	1.691+03
5.728-07	-1.437+01	2.715-01	3.827+01	6.431+06	4.562+04
7.268-08	-1.644+01	2.119-01	7.807+00	6.494+07	1.762+06
7.179-09	-1.875+01	2.011-01	9.932-01	6.927+08	1.402+08

kT (eV) = 70

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
9.224-01	-8.073-02	1.544+03	9.421+03	7.022-04	1.151-04
1.724-01	-1.758+00	5.191+02	5.864+03	1.117-02	9.892-04
3.219-02	-3.436+00	1.550+02	4.120+03	2.004-01	7.538-03
5.940-03	-5.126+00	4.560+01	2.701+03	3.692+00	6.233-02
1.098-03	-6.814+00	1.245+01	1.493+03	7.313+01	6.096-01
2.044-04	-8.495+00	3.408+00	6.230+02	1.435+03	7.852+00
3.595-05	-1.023+01	9.530-01	1.834+02	2.919+04	1.517+02
5.980-06	-1.203+01	3.669-01	4.176+01	4.558+05	4.005+03
9.140-07	-1.391+01	2.353-01	7.058+00	4.649+06	1.550+05
1.187-07	-1.595+01	2.097-01	9.350-01	4.018+07	9.013+06
1.186-08	-1.825+01	2.026-01	9.380-02	4.159+08	8.985+08

kT (eV) = 100

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
1.470+00	3.855-01	2.242+03	9.735+03	3.033-04	6.986-05
2.672-01	-1.320+00	7.415+02	6.559+03	5.047-03	5.705-04
4.821-02	-3.032+00	2.115+02	3.960+03	9.808-02	5.237-03
8.844-03	-4.728+00	5.044+01	1.859+03	2.241+00	6.082-02
1.678-03	-6.390+00	1.017+01	6.111+02	5.861+01	9.755-01
3.279-04	-8.023+00	2.063+00	1.564+02	1.478+03	1.950+01
5.979-05	-9.725+00	5.871-01	3.139+01	2.849+04	5.328+02
1.014-05	-1.150+01	3.157-01	5.503+00	3.125+05	1.793+04
1.559-06	-1.337+01	2.432-01	8.535-01	2.638+06	7.518+05
2.026-07	-1.541+01	2.118-01	1.112-01	2.330+07	4.438+07
2.026-08	-1.771+01	2.010-01	1.113-02	2.456+08	4.434+09

kT (eV) = 150

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
2.393+00	8.725-01	2.319+03	7.079+03	1.802-04	5.903-05
4.307-01	-8.424-01	9.122+02	3.876+03	2.545-03	5.990-04
7.930-02	-2.535+00	2.289+02	1.563+03	5.509-02	8.068-03
1.524-02	-4.184+00	4.086+01	4.467+02	1.606+00	1.469-01
3.002-03	-5.809+00	6.856+00	1.038+02	4.859+01	3.209+00
5.977-04	-7.422+00	1.531+00	2.192+01	1.093+03	7.634+01
1.097-04	-9.118+00	5.651-01	4.123+00	1.613+04	2.211+03
1.862-05	-1.089+01	3.122-01	7.118-01	1.721+05	7.548+04
2.863-06	-1.276+01	2.234-01	1.100-01	1.563+06	3.175+06
3.722-07	-1.480+01	2.028-01	1.432-02	1.325+07	1.876+08
3.722-08	-1.711+01	1.997-01	1.433-03	1.345+08	1.875+10

kT (eV) = 225

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
3.975+00	1.380+00	6.672+02	3.255+03	3.771-04	7.729-05
7.323-01	-3.115-01	2.632+02	1.231+03	5.187-03	1.109-03
1.406-01	-1.962+00	7.290+01	3.632+02	9.758-02	1.959-02
2.763-02	-3.589+00	1.591+01	8.623+01	2.275+00	4.198-01
5.499-03	-5.203+00	3.468+00	1.847+01	5.244+01	9.847+00
1.097-03	-6.815+00	9.305-01	3.816+00	9.794+02	2.388+02
2.015-04	-8.510+00	3.714-01	7.115-01	1.337+04	6.976+03
3.420-05	-1.028+01	2.350-01	1.223-01	1.244+05	2.391+05
5.260-06	-1.216+01	2.052-01	1.889-02	9.265+05	1.007+07
6.837-07	-1.420+01	2.001-01	2.458-03	7.308+06	5.950+08
6.837-08	-1.650+01	1.995-01	2.459-04	7.333+07	5.947+10

kT (eV) = 340

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
6.892+00	1.930+00	1.089+02	1.014+03	1.332-03	1.431-04
1.312+00	2.719-01	3.784+01	3.363+02	2.014-02	2.266-03
2.576-01	-1.357+00	9.975+00	8.344+01	3.893-01	4.653-02
5.117-02	-2.973+00	2.617+00	1.857+01	7.468+00	1.053+00
1.020-02	-4.586+00	8.341-01	3.871+00	1.176+02	2.533+01
2.037-03	-6.196+00	3.786-01	7.907-01	1.296+03	6.209+02
3.741-04	-7.891+00	2.439-01	1.471-01	1.096+04	1.817+04
6.352-05	-9.664+00	2.081-01	2.520-02	7.565+04	6.247+05
9.770-06	-1.154+01	2.008-01	3.888-03	5.098+05	2.633+07
1.270-06	-1.358+01	1.996-01	5.059-04	3.945+06	1.556+09
1.270-07	-1.588+01	1.994-01	5.060-05	3.949+07	1.556+11

kT (eV) = 500

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
1.180+01	2.468+00	2.583+01	3.656+02	3.281-03	2.318-04
2.313+00	8.388-01	7.891+00	1.021+02	5.476-02	4.234-03
4.575-01	-7.821-01	2.208+00	2.343+01	9.899-01	9.329-02
9.119-02	-2.395+00	7.611-01	4.966+00	1.441+01	2.208+00
1.818-02	-4.008+00	3.746-01	1.032+00	1.469+02	5.328+01
3.631-03	-5.618+00	2.535-01	2.101-01	1.087+03	1.311+03
6.670-04	-7.313+00	2.128-01	3.896-02	7.045+03	3.848+04
1.133-04	-9.086+00	2.018-01	6.662-03	4.373+04	1.325+06
1.742-05	-1.096+01	1.998-01	1.027-03	2.873+05	5.587+07
2.265-06	-1.300+01	1.994-01	1.336-04	2.214+06	3.304+09
2.265-07	-1.530+01	1.994-01	1.337-05	2.214+07	3.303+11

kT (eV) = 700

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
1.925+01	2.958+00	8.576+00	1.478+02	6.057-03	3.515-04
3.819+00	1.340+00	2.563+00	3.712+01	1.022-01	7.054-03
7.570-01	-2.784-01	8.764-01	8.253+00	1.507+00	1.601-01
1.507-01	-1.892+00	4.103-01	1.733+00	1.617+01	3.830+00

kT (eV) = 1000

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
3.270+01	3.487+00	3.083+00	5.662+01	9.919-03	5.401-04
6.508+00	1.873+00	1.056+00	1.348+01	1.455-01	1.140-02
1.292+00	2.560-01	4.654-01	2.891+00	1.663+00	2.677-01
2.572-01	-1.358+00	2.872-01	6.097-01	1.354+01	6.378+00

kT (eV) = 2250

RHO (GM/CM3)	LOG RHO (GM/CM3)	KROS (CM2/GM)	KPLK (CM2/GM)	LMDAROS (CM)	LMDAPLK (CM)
1.098+02	4.699+00	6.583-01	7.478+00	1.384-02	1.218-03
2.174+01	3.079+00	3.494-01	1.603+00	1.316-01	2.869-02
4.337+00	1.467+00	2.492-01	3.417-01	9.252-01	6.748-01
8.677-01	-1.419-01	2.144-01	7.009-02	5.376+00	1.644+01

AD-654 773

18 Jun 1968

Two of the tables in the report NASA 1917-3 Thermal Radiation Phenomena, Vol. 3, Tables of Radiative Properties of Air were incorrect and should be replaced by the enclosed tables. One table goes from page 425 to 427 and the other one from page 446 to 449. Another correction should be made on page 422 where the factor $\frac{\pi^4}{15}$ in the two equations should really be $\frac{15}{\pi^4}$.

R. Landshoff

LOCKHEED MISSILES & SPACE COMPANY

DDC
RECEIVED
JUL 8 1968
B

Reproduced by the
CLEARINGHOUSE
for Federal Scientific & Technical
Information Springfield Va. 22151

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS (cm^{-1})

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	TOTAL	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	CONT.	9.42E-10	2.98E-11	9.42E-13	2.98E-14	9.42E-16	2.98E-17	9.42E-19	2.98E-20
	1	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	2	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	3	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	4	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	5	1.84E-05	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
	6	2.68E-07	1.84E-06	1.84E-07	1.84E-08	1.84E-09	1.84E-10	1.84E-11	1.84E-12
2000.	TOTAL	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	CONT.	4.04E-05	1.28E-06	4.03E-08	1.27E-09	4.00E-11	1.24E-12	3.71E-14	9.79E-16
	1	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	2	1.20E-03	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	3	1.46E-04	1.17E-04	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	4	1.13E-04	1.19E-05	1.16E-05	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	5	7.62E-06	1.13E-05	1.10E-06	1.16E-06	1.15E-07	1.14E-08	1.11E-09	1.01E-10
	6	6.87E-07	8.49E-07	1.10E-06	1.07E-07	1.15E-07	1.14E-08	1.11E-09	1.01E-10
3000.	TOTAL	3.36E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	CONT.	1.11E-03	3.43E-05	1.01E-06	2.53E-08	4.13E-10	3.24E-12	2.05E-14	1.39E-16
	1	3.34E-03	3.06E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	2	1.63E-03	3.04E-04	2.71E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	3	1.08E-03	8.57E-05	2.69E-05	2.33E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	4	1.29E-04	8.36E-05	5.95E-06	2.32E-06	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	5	5.27E-06	1.33E-05	5.81E-06	4.63E-07	1.60E-07	7.19E-09	2.45E-10	7.86E-12
	6	1.23E-06	1.89E-06	1.38E-06	4.52E-07	3.05E-08	7.18E-09	2.45E-10	7.86E-12
4000.	TOTAL	1.29E-02	8.04E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	CONT.	4.54E-03	1.29E-04	2.83E-06	4.12E-08	5.38E-10	7.66E-12	1.18E-13	1.86E-15
	1	9.26E-03	7.84E-04	4.24E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	2	5.59E-03	5.66E-04	4.15E-05	1.51E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	3	1.81E-03	2.48E-04	3.33E-05	1.50E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	4	1.79E-04	1.40E-04	1.16E-05	1.35E-06	4.70E-08	1.61E-09	6.55E-11	3.27E-12
	5	0.	1.98E-05	5.45E-06	4.66E-07	4.69E-08	1.61E-09	6.55E-11	3.27E-12
	6	0.	0.	2.40E-06	3.35E-07	3.90E-08	1.61E-09	6.55E-11	3.27E-12
5000.	TOTAL	5.93E-02	2.65E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	CONT.	1.61E-02	4.40E-04	8.07E-06	1.25E-07	1.95E-09	3.08E-11	5.04E-13	1.09E-14
	1	2.50E-02	2.47E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	2	1.44E-02	1.18E-03	8.35E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	3	0.	5.66E-04	6.42E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	4	0.	3.11E-04	2.62E-05	2.87E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	5	0.	0.	1.64E-05	1.51E-06	1.35E-07	7.57E-09	3.45E-10	9.83E-12
	6	0.	0.	1.27E-06	1.17E-06	1.22E-07	7.57E-09	3.45E-10	9.83E-12
6000.	TOTAL	1.55E-01	5.79E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	CONT.	3.83E-02	1.02E-03	1.85E-05	3.16E-07	7.26E-09	4.05E-10	3.47E-11	3.26E-12
	1	5.72E-02	5.75E-03	2.13E-04	1.01E-05	4.83E-07	1.50E-08	3.54E-10	1.11E-11
	2	2.61E-02	3.44E-03	2.13E-04	1.01E-05	4.82E-07	1.50E-08	3.54E-10	1.11E-11
	3	1.40E-04	1.68E-03	2.06E-04	1.01E-05	4.82E-07	1.50E-08	3.54E-10	1.11E-11
	4	0.	1.01E-04	1.11E-04	1.00E-05	4.81E-07	1.49E-08	3.46E-10	1.11E-11
	5	0.	0.	1.94E-05	3.33E-06	4.79E-07	1.48E-08	3.41E-10	1.03E-11
	6	0.	0.	0.	2.13E-06	4.77E-07	1.47E-08	3.32E-10	9.30E-12

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS (cm^{-1})

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
7000.	TOTAL	2.85E-01	1.09E-02	4.78E-04	2.09E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	CONT.	8.60E-02	2.02E-03	4.12E-05	1.52E-06	1.28E-07	1.11E-08	1.07E-09	1.01E-10
	1	1.23E-01	1.08E-02	4.75E-04	2.06E-05	6.35E-07	2.14E-08	1.31E-09	1.08E-10
	2	2.81E-02	8.81E-03	4.72E-04	2.05E-05	5.96E-07	2.14E-08	1.31E-09	1.08E-10
	3	0.	3.04E-03	4.65E-04	2.03E-05	5.52E-07	1.95E-08	1.31E-09	1.08E-10
	4	0.	1.38E-05	3.32E-04	1.98E-05	5.35E-07	1.38E-08	1.03E-09	1.08E-10
	5	0.	0.	7.89E-06	1.94E-05	5.33E-07	1.20E-08	5.58E-10	8.05E-11
	6	0.	0.	0.	1.21E-06	5.27E-07	1.20E-08	3.77E-10	3.55E-11
8000.	TOTAL	4.65E-01	1.54E-02	8.68E-04	3.48E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	CONT.	1.58E-01	4.02E-03	1.78E-04	1.68E-05	1.58E-06	1.52E-07	1.30E-08	1.05E-09
	1	2.37E-01	1.86E-02	7.85E-04	2.96E-05	1.92E-06	1.59E-07	1.32E-08	1.06E-09
	2	1.52E-03	1.73E-02	7.66E-04	2.35E-05	1.36E-06	1.59E-07	1.32E-08	1.06E-09
	3	0.	1.60E-03	7.36E-04	2.14E-05	7.77E-07	1.05E-07	1.32E-08	1.06E-09
	4	0.	0.	2.70E-04	2.10E-05	5.51E-07	4.68E-08	9.37E-09	1.06E-09
	5	0.	0.	4.69E-06	2.04E-05	5.51E-07	2.44E-08	3.75E-09	7.49E-10
	6	0.	0.	0.	1.44E-06	5.46E-07	2.44E-08	1.65E-09	2.90E-10
9000.	TOTAL	7.32E-01	3.51E-02	1.90E-03	1.27E-04	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	CONT.	2.79E-01	1.27E-02	1.22E-03	1.15E-04	1.11E-05	9.96E-07	7.90E-08	3.73E-09
	1	3.77E-01	2.79E-02	1.06E-03	8.70E-05	1.13E-05	1.00E-06	7.91E-08	3.74E-09
	2	0.	2.58E-02	9.42E-04	4.33E-05	7.32E-06	1.00E-06	7.91E-08	3.74E-09
	3	0.	8.44E-04	8.89E-04	2.94E-05	2.99E-06	6.26E-07	7.91E-08	3.74E-09
	4	0.	0.	3.19E-04	2.84E-05	1.49E-06	2.52E-07	4.93E-09	3.74E-09
	5	0.	0.	0.	2.75E-05	1.49E-06	1.14E-07	1.94E-08	2.56E-09
	6	0.	0.	0.	2.55E-07	1.49E-06	1.14E-07	8.46E-09	9.65E-10
10000.	TOTAL	1.23E 00	7.81E-02	6.34E-03	5.61E-04	4.31E-05	3.83E-06	2.12E-07	4.93E-09
	CONT.	6.05E-01	5.30E-02	5.83E-03	5.53E-04	4.30E-05	3.83E-06	2.12E-07	4.83E-09
	1	2.32E-01	3.85E-02	2.11E-03	3.35E-04	4.81E-05	3.83E-06	2.12E-07	4.93E-09
	2	0.	3.47E-02	1.36E-03	1.29E-04	2.68E-05	3.83E-06	2.12E-07	4.83E-09
	3	0.	0.	1.33E-03	7.23E-05	1.15E-05	2.38E-06	2.12E-07	4.83E-09
	4	0.	0.	3.01E-04	7.23E-05	5.47E-06	9.16E-07	1.29E-07	4.83E-09
	5	0.	0.	0.	4.21E-05	5.47E-06	4.23E-07	4.99E-08	4.83E-09
	6	0.	0.	0.	0.	3.09E-06	4.23E-07	2.30E-08	2.50E-09
11000.	TOTAL	2.35E 00	2.07E-01	1.97E-02	1.79E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	CONT.	1.59E 00	1.95E-01	1.93E-02	1.78E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	1	1.58E-01	5.60E-02	5.15E-03	1.02E-03	1.54E-04	9.36E-06	2.90E-07	3.80E-09
	2	0.	4.10E-02	2.81E-03	3.79E-04	8.69E-05	9.36E-06	2.90E-07	3.80E-09
	3	0.	0.	2.29E-03	2.08E-04	3.13E-05	5.63E-06	2.90E-07	3.80E-09
	4	0.	0.	0.	1.60E-04	1.65E-05	2.10E-06	2.90E-07	3.80E-09
	5	0.	0.	0.	1.39E-05	1.31E-05	1.02E-06	1.37E-07	3.80E-09
	6	0.	0.	0.	0.	3.66E-06	9.05E-07	3.25E-08	3.60E-09
12000.	TOTAL	5.16E 00	5.25E-01	5.07E-02	4.60E-03	3.37E-04	1.43E-05	2.53E-07	2.72E-09
	CONT.	4.34E 00	5.08E-01	5.05E-02	4.60E-03	3.37E-04	1.43E-05	2.53E-07	2.72E-09
	1	8.13E-02	9.22E-02	6.30E-03	2.57E-03	3.37E-04	1.43E-05	2.53E-07	2.72E-09
	2	0.	5.51E-02	6.12E-03	5.13E-04	2.05E-04	1.43E-05	2.53E-07	2.72E-09
	3	0.	0.	3.61E-03	4.96E-04	6.66E-05	9.34E-06	2.58E-07	2.72E-09
	4	0.	0.	0.	2.83E-04	3.67E-05	3.11E-06	2.58E-07	2.72E-09
	5	0.	0.	0.	0.	2.10E-05	1.60E-06	1.47E-07	2.72E-09
	6	0.	0.	0.	0.	0.	1.21E-06	5.70E-08	2.72E-09

420

TOTAL AND CUT-OFF PLANCK MEAN ABSORPTION COEFFICIENTS (cm^{-1})

TEMPERATURE (DEG. K)		DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
13000.	TOTAL	3.17E 00	1.97E-01	1.57E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	CONT.	2.41E 00	1.84E-01	1.55E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	1	0.	1.41E-01	1.31E-02	1.26E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	2	0.	1.16E-03	1.03E-02	1.04E-03	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	3	0.	0.	4.34E-03	8.50E-04	6.22E-05	1.77E-06	2.32E-08	2.35E-10
	4	0.	0.	0.	3.78E-04	5.56E-05	1.77E-06	2.32E-08	2.35E-10
	5	0.	0.	0.	0.	3.01E-05	1.77E-06	2.32E-08	2.35E-10
	6	0.	0.	0.	0.	0.	1.28E-06	2.32E-08	2.35E-10
14000.	TOTAL	2.19E 01	2.23E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	CONT.	2.12E 01	2.22E 00	2.05E-01	1.57E-02	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	1	0.	2.09E-01	2.42E-02	8.10E-03	7.20E-04	1.34E-05	1.47E-07	1.45E-09
	2	0.	0.	1.57E-02	1.80E-03	4.03E-04	1.34E-05	1.47E-07	1.45E-09
	3	0.	0.	1.20E-03	1.20E-03	1.37E-04	1.34E-05	1.47E-07	1.45E-09
	4	0.	0.	0.	3.91E-04	6.82E-05	6.31E-06	1.47E-07	1.45E-09
	5	0.	0.	0.	0.	3.58E-05	1.54E-06	1.47E-07	1.44E-09
	6	0.	0.	0.	0.	0.	1.17E-06	6.22E-08	1.43E-09
15000.	TOTAL	7.46E 00	5.75E-01	4.67E-02	3.09E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	CONT.	6.95E 00	5.69E-01	4.66E-02	3.07E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	1	0.	2.86E-01	3.78E-02	1.08E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	2	0.	0.	2.24E-02	2.56E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	3	0.	0.	0.	1.64E-03	9.04E-05	1.29E-06	1.36E-08	1.42E-10
	4	0.	0.	0.	1.22E-04	7.14E-05	1.29E-06	1.36E-08	1.42E-10
	5	0.	0.	0.	0.	3.53E-05	1.29E-06	1.36E-08	1.42E-10
	6	0.	0.	0.	0.	0.	9.69E-07	1.36E-08	1.42E-10
16000.	TOTAL	6.27E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.19E-09
	CONT.	6.23E 01	6.02E 00	5.64E-01	3.06E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	1	0.	3.72E-01	5.05E-02	1.52E-02	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	2	0.	0.	2.98E-02	3.18E-03	7.37E-04	8.75E-06	9.14E-08	1.18E-09
	3	0.	0.	0.	1.91E-03	1.30E-04	8.73E-06	9.14E-08	1.18E-09
	4	0.	0.	0.	0.	6.81E-05	8.71E-06	8.91E-08	1.18E-09
	5	0.	0.	0.	0.	3.52E-05	1.67E-06	8.82E-08	9.60E-10
	6	0.	0.	0.	0.	0.	7.84E-07	8.79E-08	9.90E-10
17000.	TOTAL	1.57E 01	1.27E 00	9.37E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	CONT.	1.54E 01	1.27E 00	9.36E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	1	0.	6.59E-01	6.42E-02	4.33E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	2	0.	0.	3.46E-02	3.97E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	3	0.	0.	0.	2.15E-03	7.44E-05	8.24E-07	9.17E-09	1.62E-10
	4	0.	0.	0.	0.	6.00E-05	8.24E-07	9.17E-09	1.62E-10
	5	0.	0.	0.	0.	3.23E-05	8.24E-07	9.17E-09	1.62E-10
	6	0.	0.	0.	0.	0.	6.38E-07	9.17E-09	1.62E-10
18000.	TOTAL	1.31E 02	1.17E 01	6.46E-01	2.45E-02	3.34E-04	4.21E-06	6.56E-08	2.20E-09
	CONT.	1.30E 02	1.17E 01	6.46E-01	2.45E-02	3.34E-04	4.21E-06	6.56E-08	2.20E-09
	1	0.	3.31E-01	7.52E-02	2.45E-02	3.34E-04	4.21E-06	6.56E-08	2.20E-09
	2	0.	0.	4.03E-02	5.64E-03	3.31E-04	4.21E-06	6.56E-08	2.20E-09
	3	0.	0.	0.	2.20E-03	3.55E-04	4.21E-06	6.56E-08	2.20E-09
	4	0.	0.	0.	0.	5.03E-05	3.96E-06	6.39E-08	2.20E-09
	5	0.	0.	0.	0.	2.92E-05	3.39E-06	6.29E-08	1.81E-09
	6	0.	0.	0.	0.	0.	5.53E-07	6.17E-08	6.67E-10

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS (cm)

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
1000.	TOTAL	4.87E 09	4.87E 10	4.87E 11	4.87E 12	4.87E 13	4.87E 14	4.87E 15	4.87E 16
	CONT.	1.37E 01	4.34E 02	1.37E 04	4.33E 05	1.37E 07	4.34E 08	1.37E 10	4.34E 11
	1	2.11E 03	5.48E-02	1.43E-16	1.53E-19	4.79E-20	5.35E-24	9.57E-25	2.47E-26
	2	2.63E-02	1.43E-17	1.53E-20	4.79E-21	5.35E-25	9.57E-27	2.47E-27	0.
	3	4.30E-06	1.53E-21	4.79E-22	5.35E-26	9.57E-28	2.47E-28	0.	0.
	4	1.53E-22	4.79E-23	5.35E-27	9.57E-29	2.47E-29	0.	0.	0.
	5	4.79E-24	5.35E-28	9.57E-30	2.47E-30	0.	0.	0.	0.
	6	5.35E-29	9.57E-31	2.47E-31	0.	0.	0.	0.	0.
2000.	TOTAL	2.06E 11	2.06E 12	2.06E 13	2.06E 14	2.06E 15	2.06E 16	2.06E 17	2.06E 18
	CONT.	1.17E 02	3.70E 03	1.17E 05	3.71E 06	1.19E 08	3.80E 09	1.27E 11	4.93E 12
	1	1.63E 04	5.76E 03	1.97E 02	1.64E 03	5.56E-04	4.71E-05	1.33E-09	5.31E-09
	2	5.62E 02	9.21E 01	1.64E 02	5.54E-05	4.64E-06	1.72E-10	8.92E-10	0.
	3	2.05E 01	1.64E 01	5.52E-06	4.62E-07	1.70E-11	9.37E-11	0.	0.
	4	1.66E 00	5.47E-07	4.62E-08	1.69E-12	8.30E-12	0.	0.	0.
	5	5.34E-08	4.61E-09	1.69E-13	8.23E-13	0.	0.	0.	0.
	6	4.61E-10	1.69E-14	8.23E-14	0.	0.	0.	0.	0.
3000.	TOTAL	3.73E 05	3.69E 06	3.73E 07	3.87E 08	4.77E 09	1.26E 11	3.41E 12	9.45E 13
	CONT.	1.44E 12	1.46E 13	1.52E 14	1.72E 15	2.47E 16	5.44E 17	1.53E 19	4.96E 20
	1	2.64E 03	9.60E 03	8.34E 03	1.64E 02	1.59E 03	1.77E-01	0.	0.
	2	1.51E 03	1.23E 03	1.76E 01	1.10E 02	5.71E-02	1.42E-04	0.	0.
	3	1.09E 02	2.88E 00	9.80E 00	1.19E-02	7.25E-06	0.	0.	0.
	4	7.40E 00	9.42E-01	1.72E-03	3.50E-07	1.46E-07	0.	0.	0.
	5	9.41E-02	1.62E-04	2.74E-08	1.39E-07	0.	0.	0.	0.
	6	1.58E-05	2.52E-09	1.71E-09	0.	0.	0.	0.	0.
4000.	TOTAL	5.81E 02	1.45E 04	4.41E 05	1.16E 07	2.75E 08	7.34E 09	2.12E 11	3.43E 12
	CONT.	6.91E 06	7.90E 07	1.16E 09	2.62E 10	8.20E 11	4.00E 13	3.29E 15	2.68E 17
	1	5.81E 02	1.45E 04	7.30E 03	9.20E 02	6.38E 01	1.09E-04	0.	0.
	2	5.81E 02	2.41E 03	2.99E 02	9.36E 01	3.02E-02	0.	0.	0.
	3	1.72E 02	3.42E 01	7.47E 00	2.61E-01	0.	0.	0.	0.
	4	2.26E 01	7.55E-01	5.98E-02	2.61E-04	0.	0.	0.	0.
	5	1.19E-01	1.57E-02	2.63E-05	0.	0.	0.	0.	0.
	6	2.67E-03	1.20E-06	6.69E-09	0.	0.	0.	0.	0.
5000.	TOTAL	5.87E 01	2.17E 03	6.02E 04	1.56E 06	4.53E 07	9.79E 08	1.35E 10	5.56E 11
	CONT.	7.61E 01	4.09E 03	5.00E 05	1.10E 08	2.20E 10	2.00E 12	8.26E 13	1.68E 15
	1	5.87E 01	2.17E 03	4.25E 04	1.25E 03	2.10E 02	4.12E-02	0.	0.
	2	5.87E 01	2.17E 03	3.14E 02	1.10E 02	7.11E-03	0.	0.	0.
	3	5.87E 01	7.09E 01	1.35E 01	1.39E-02	0.	0.	0.	0.
	4	5.87E 01	2.74E 00	2.46E-01	0.	0.	0.	0.	0.
	5	3.43E-01	1.10E-01	0.	0.	0.	0.	0.	0.
	6	1.43E-02	1.06E-04	0.	0.	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS (cm)

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
6000.	TOTAL	2.90E 01	6.41E 02	1.64E 04	4.73E 05	1.03E 07	2.54E 08	1.07E 10	5.32E 11
	CONT.	7.31E 01	6.98E 03	8.85E 05	4.03E 07	6.12E 09	8.77E 09	1.49E 11	2.39E 12
	1	2.90E 01	6.41E 02	1.64E 04	2.13E 04	1.61E 01	6.62E-01	1.20E-02	1.19E-03
	2	2.90E 01	6.41E 02	2.69E 03	2.16E 02	1.79E-01	1.31E-03	1.18E-04	3.76E-05
	3	2.90E 01	4.05E 02	2.73E 01	4.98E-02	2.03E-04	1.20E-05	3.75E-06	0.
	4	2.69E 01	5.07E 00	1.37E-01	3.13E-04	1.23E-06	4.26E-07	0.	0.
	5	8.33E-01	2.13E-01	3.85E-05	1.31E-07	5.82E-08	0.	0.	0.
	6	3.10E-02	1.05E-04	1.51E-08	1.66E-08	0.	0.	0.	0.
7000.	TOTAL	9.79E 00	2.32E 02	6.47E 03	1.52E 05	4.29E 06	1.70E 08	4.96E 09	9.37E 10
	CONT.	6.63E 01	3.73E 03	1.02E 05	1.79E 06	3.45E 07	6.27E 08	9.41E 09	1.19E 11
	1	9.79E 00	2.32E 02	6.47E 03	3.07E 04	4.55E 01	4.78E-01	4.81E 00	9.94E-01
	2	9.79E 00	2.32E 02	2.63E 03	5.59E 01	6.14E-01	4.78E-01	9.54E-02	1.23E-03
	3	9.79E 00	1.98E 02	6.57E 01	3.09E-01	5.09E-02	9.48E-03	1.18E-04	0.
	4	9.79E 00	2.01E 01	5.35E-02	1.42E-04	1.00E-03	1.17E-05	0.	0.
	5	3.12E 00	2.39E-01	5.97E-04	2.33E-06	1.78E-06	0.	0.	0.
	6	7.18E-02	7.81E-05	4.46E-07	2.39E-07	0.	0.	0.	0.
8000.	TOTAL	4.01E 00	1.05E 02	2.67E 03	7.69E 04	2.55E 06	5.43E 07	8.46E 08	1.23E 10
	CONT.	2.40E 01	5.81E 02	1.36E 04	2.99E 05	5.33E 06	7.96E 07	1.01E 09	1.33E 10
	1	4.01E 00	1.05E 02	2.67E 03	3.56E 04	6.41E 01	1.31E 00	1.40E 01	5.63E 00
	2	4.01E 00	1.05E 02	2.00E 03	3.49E 01	1.29E-01	1.31E 00	4.56E-01	1.93E-02
	3	4.01E 00	1.05E 02	2.77E 02	6.09E-01	1.29E-01	4.25E-02	1.57E-03	0.
	4	4.01E 00	3.20E 01	1.90E-01	1.39E-02	4.20E-03	2.01E-04	0.	0.
	5	3.53E 00	1.09E-01	3.66E-03	4.23E-04	1.99E-05	0.	0.	0.
	6	1.14E-01	4.44E-04	6.34E-05	2.12E-06	0.	0.	0.	0.
9000.	TOTAL	2.10E 00	5.41E 01	1.47E 03	4.44E 04	9.07E 05	1.33E 07	1.93E 08	3.99E 09
	CONT.	6.63E 00	1.53E 02	3.94E 03	7.42E 04	1.12E 06	1.45E 07	1.93E 08	4.01E 09
	1	2.10E 00	5.41E 01	1.47E 03	4.19E 04	2.70E-01	2.91E 00	3.57E 01	3.51E 01
	2	2.10E 00	5.41E 01	1.47E 03	5.21E 01	2.70E-01	2.91E 00	1.75E 00	2.61E-01
	3	2.10E 00	5.41E 01	3.21E 02	2.69E-02	2.70E-01	1.39E-01	1.74E-02	0.
	4	2.10E 00	3.50E 01	4.04E-01	2.69E-02	1.23E-02	1.39E-03	0.	0.
	5	2.10E 00	1.37E-01	2.80E-03	1.22E-03	1.30E-04	0.	0.	0.
	6	2.01E-01	1.73E-03	1.90E-04	1.29E-05	0.	0.	0.	0.
10000.	TOTAL	1.26E 00	3.24E 01	8.85E 02	1.91E 04	2.93E 05	4.08E 06	7.56E 07	3.13E 09
	CONT.	2.78E 00	6.94E 01	1.39E 03	2.26E 04	3.09E 05	4.14E 06	7.57E 07	3.13E 09
	1	1.26E 00	3.24E 01	8.85E 02	1.91E 04	5.70E 03	6.04E 00	1.11E 02	2.65E 01
	2	1.26E 00	3.24E 01	8.85E 02	6.72E 02	4.92E-01	6.04E 00	7.12E 00	3.39E-07
	3	1.26E 00	3.24E 01	4.56E 02	4.19E-02	4.92E-01	3.91E-01	1.27E-01	0.
	4	1.26E 00	3.24E 01	4.03E-01	4.19E-02	3.04E-02	7.08E-03	0.	0.
	5	1.26E 00	1.96E-01	5.52E-03	3.79E-03	1.77E-03	0.	0.	0.
	6	4.58E-01	2.04E-03	3.39E-06	1.68E-04	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS (cm)

TEMPERATURE (DEG. K)	C	DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
11000.	TOTAL	8.26E-01	2.08E 01	4.75E 02	7.89E 03	1.09E 05	1.79E 06	5.59E 07	4.02E 09
	CONT.	1.52E 00	3.26E 01	5.69E 02	9.30E 03	1.10E 05	1.79E 06	5.60E 07	4.02E 09
	1	8.26E-01	2.08E 01	4.75E 02	7.89E 03	2.52E 04	1.31E 03	4.25E 02	8.36E 00
	2	8.26E-01	2.08E 01	4.75E 02	5.63E 03	1.59E 02	1.31E 01	3.61E 00	5.70E-06
	3	8.26E-01	2.08E 01	4.75E 02	2.02E 01	7.56E-01	1.04E 09	7.35E-06	0.
	4	8.26E-01	2.08E 01	2.19E 00	6.52E-02	8.62E-02	3.18E-02	0.	0.
	5	8.26E-01	7.45E-01	8.01E-03	7.48E-03	5.26E-03	0.	0.	0.
	6	5.17E-01	5.94E-04	7.26E-04	4.60E-04	0.	0.	0.	0.
12000.	TOTAL	5.50E-01	1.29E 01	2.44E 02	3.51E 03	5.16E 04	1.16E 06	6.20E 07	5.63E 09
	CONT.	5.49E-01	1.63E 01	2.61E 02	3.56E 03	5.16E 04	1.16E 06	6.20E 07	5.63E 09
	1	5.50E-01	1.29E 01	2.44E 02	3.51E 03	5.14E 04	1.53E 03	1.33E 02	1.59E-03
	2	5.50E-01	1.29E 01	2.44E 02	3.51E 03	3.57E 02	3.25E 01	7.63E 00	5.52E-05
	3	5.50E-01	1.29E 01	2.44E 02	3.46E 01	1.28E 00	3.17E 00	5.19E-06	0.
	4	5.50E-01	1.29E 01	4.03E 00	3.39E-01	1.77E-01	1.42E-01	0.	0.
	5	5.50E-01	9.25E-01	3.56E-02	1.20E-01	6.39E-03	0.	0.	0.
	6	5.19E-01	3.59E-03	1.10E-02	1.09E-03	0.	0.	0.	0.
13000.	TOTAL	3.71E-01	7.36E 00	1.29E 02	1.79E 03	3.06E 04	1.05E 06	7.92E 07	7.70E 09
	CONT.	4.95E-01	8.90E 00	1.32E 02	1.80E 03	3.06E 04	1.05E 06	7.92E 07	7.70E 09
	1	3.71E-01	7.36E 00	1.29E 02	1.79E 03	3.06E 04	1.41E 03	0.	0.
	2	3.71E-01	7.36E 00	1.29E 02	1.79E 03	4.28E 02	0.	0.	0.
	3	3.71E-01	7.36E 00	1.29E 02	3.36E 01	7.03E 00	0.	0.	0.
	4	3.71E-01	7.36E 00	1.62E 01	1.15E 00	0.	0.	0.	0.
	5	3.71E-01	7.71E 00	1.46E-01	3.15E-02	0.	0.	0.	0.
	6	3.71E-01	1.41E-02	2.67E-03	0.	0.	0.	0.	0.
14000.	TOTAL	2.53E-01	4.62E 00	7.21E 01	1.04E 03	2.25E 04	1.14E 06	1.03E 08	9.39E 09
	CONT.	3.04E-01	5.09E 00	7.27E 01	1.04E 03	2.25E 04	1.15E 06	1.03E 08	9.89E 09
	1	2.53E-01	4.82E 00	7.21E 01	1.04E 03	2.26E 04	1.36E 03	5.79E 02	3.31E-02
	2	2.53E-01	4.82E 00	7.21E 01	1.04E 03	5.37E 02	2.51E 02	3.75E-03	1.79E-03
	3	2.53E-01	4.82E 00	7.21E 01	2.23E 02	1.39E 01	4.39E 00	1.77E-06	0.
	4	2.53E-01	4.82E 00	5.11E 01	2.16E 00	4.31E-01	1.95E-35	0.	0.
	5	2.53E-01	4.82E 00	2.23E-01	2.33E-01	5.39E-02	0.	0.	0.
	6	2.53E-01	2.06E-02	1.42E-02	4.59E-03	0.	0.	0.	0.
15000.	TOTAL	1.75E-01	3.02E 00	4.33E 01	6.97E 02	2.00E 04	1.37E 06	1.28E 08	1.12E 10
	CONT.	1.95E-01	3.10E 00	4.35E 01	6.97E 02	2.00E 04	1.37E 06	1.28E 08	1.12E 10
	1	1.75E-01	3.02E 00	4.33E 01	6.97E 02	2.00E 04	9.73E 02	0.	0.
	2	1.75E-01	3.02E 00	4.33E 01	6.97E 02	7.77E 02	0.	0.	0.
	3	1.75E-01	3.02E 00	4.33E 01	4.31E 02	9.57E 00	0.	0.	0.
	4	1.75E-01	3.02E 00	4.33E 01	1.86E 00	0.	0.	0.	0.
	5	1.75E-01	3.02E 00	2.49E-01	7.25E-02	0.	0.	0.	0.
	6	1.75E-01	3.73E-02	6.59E-03	0.	0.	0.	0.	0.

TOTAL AND CUT-OFF ROSSELAND MEAN FREE PATHS (cm)

TEMPERATURE (DEG. K)		DENSITY (TIMES NORMAL) 1.0E 01	1.0E 00	1.0E-01	10.0E-03	10.0E-04	10.0E-05	10.0E-06	10.0E-07
14000.	TOTAL	1.23E-01	1.96E 00	2.81E 01	5.12E 02	2.02E 04	1.64E 06	1.50E 08	9.98E 09
	CONT.	1.31E-01	1.98E 00	2.91E 01	5.12E 02	2.02E 04	1.64E 06	1.50E 08	9.98E 09
	1	1.23E-01	1.96E 00	2.91E 01	5.12E 02	2.02E 04	2.48E 03	1.39E 00	2.98E-01
	2	1.23E-01	1.96E 00	2.81E 01	5.12E 02	5.52E 02	2.77E 02	3.34E-02	2.36E-02
	3	1.23E-01	1.96E 00	2.81E 01	5.12E 02	2.44E 01	3.29E-03	2.25E-03	0.
	4	1.23E-01	1.96E 00	2.81E 01	2.99E 00	4.06E 00	2.53E-04	0.	0.
	5	1.23E-01	1.96E 00	3.99E-01	5.23E-01	1.26E-04	0.	0.	0.
	6	1.23E-01	5.43E-02	3.59E-02	9.25E-03	0.	0.	0.	0.
17000.	TOTAL	9.72E-02	1.32E 00	1.95E 01	4.24E 02	2.18E 04	1.92E 06	1.55E 08	6.80E 09
	CONT.	9.04E-02	1.33E 00	1.95E 01	4.25E 02	2.18E 04	1.92E 06	1.55E 08	6.30E 09
	1	9.72E-02	1.32E 00	1.95E 01	4.24E 02	2.13E 04	9.53E 02	0.	0.
	2	9.72E-02	1.32E 00	1.95E 01	4.24E 02	5.67E 02	0.	0.	0.
	3	9.72E-02	1.32E 00	1.95E 01	4.24E 02	5.36E 00	0.	0.	0.
	4	9.72E-02	1.32E 00	1.95E 01	2.23E 00	0.	0.	0.	0.
	5	9.72E-02	1.32E 00	5.89E-01	2.95E-02	0.	0.	0.	0.
	6	9.72E-02	6.35E-02	1.37E-02	0.	0.	0.	0.	0.
19000.	TOTAL	6.34E-02	9.31E-01	1.45E 01	3.97E 02	2.44E 04	2.14E 06	1.34E 08	4.32E 09
	CONT.	6.43E-02	9.33E-01	1.45E 01	3.97E 02	2.44E 04	2.14E 06	1.34E 08	4.32E 09
	1	6.34E-02	9.31E-01	1.45E 01	3.97E 02	2.44E 04	7.60E 03	5.46E 00	2.05E 00
	2	6.34E-02	9.31E-01	1.45E 01	3.97E 02	5.22E 02	1.33E 02	1.73E-01	2.27E-01
	3	6.34E-02	9.31E-01	1.45E 01	3.97E 02	7.44E 01	1.83E-02	1.62E-02	0.
	4	6.34E-02	9.31E-01	1.45E 01	3.93E 00	7.40E-01	1.73E-03	0.	0.
	5	6.34E-02	9.31E-01	7.03E-01	3.67E-01	2.15E-04	0.	0.	0.
	6	6.34E-02	7.61E-01	5.57E-02	1.09E-04	0.	0.	0.	0.