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ABSORPTION COEFFICIENTS OF HEATED AIR: A COMPILATION TO 24,000°K

Volume II

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Research and Technology Division
Air Force Systems Command
Kirtland Air Force Base
New Mexico

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ABSORPTION COEFFICIENTS OF HEATED AIR: A COMPILATION TO 24,000°K

Final Report

Volume II

Contract AF 29(601)-6320

TECHNICAL REPORT NO. AFWL-TR-65-132, Vol. II

FOREWORD

This report was prepared by members of the Physical Sciences Laboratory of Lockheed Missiles and Space Company, Palo Alto, California, under Contract AF 29(601)-6320. The work was performed under Program Element 7.60.06.01.D, Project 5710, Subtask 07.003, and was funded by the Defense Atomic Support Agency (DASA). This effort was carried out at the Palo Alto Research Laboratories during the period from 1 April 1964 to 30 July 1965. The report was submitted on 20 September 1965 by the AFWL Project Officer, Lt Fred J. Reule (WLRTH).

Volume I of this report presents a discussion of absorption processes and an equilibrium code. Volume II is the compilation of the absorption coefficients of heated air.

A list of major contributors to this effort follows:

B. H. Armstrong — Organized and served as consultant on the atomic photoionization calculations and co-authored the report.

D. R. Churchill — Coordinated the various contributions, compiled the tables, calculated the molecular contributions, and co-authored the report.

D. J. Colvin — Programmed portions of the computer code multiplet and obtained the occupation numbers for the multiplet components of the energy levels of atomic nitrogen and oxygen.

S. A. Hagstrom — Served as consultant on molecular radiative processes.

R. R Johnston — Developed the PIC code which computes the photoionization absorption in atomic nitrogen and oxygen. Developed or adapted the requisite theory.

H. R. McChesney — Carried out the extensive species concentration calculations and obtained the molecular Boltzmann fractions. This work was based in part on that of F. R. Gilmore at Rand (see text).

K G. Mueller — Provided the absorption coefficients for NO_2, O^- photodetachment, and free-free processes. (Z. Taulbee carried out the necessary machine computations.) Authored the sections on those contributions.

R. W. Nicholls — Provided the molecular band intensities and served as consultant.

O. R. Platas — Carried out the extensive photoionization calculations with the aid of the PIC program.

This report has been reviewed and is approved.

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ABSTRACT

An extensive tabulation of absorption coefficients of heated air has been carried out with the aid of several large digital computer programs. These tables supersede the previous ones computed at Lockheed by Meyerott, Sokoloff, and Nicholls in 1959. Tables are presented for temperatures at every 1000°K between 1000°K and 24,000°K and for eight densities between ten times normal atmospheric to 10^{-6} times normal. Absorption coefficients are individually listed for each of 14 contributing absorbers. The photon energy range is 0.6 − 10.7 eV with a partition interval of 0.1 eV.

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TABLES OF ABSORPTION COEFFICIENTS OF HEATED AIR

The absorption coefficients listed have been averaged over energy intervals of 0.1eV, 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 $1,000^{\circ}$ to $24,000^{\circ}$K at $1,000^{\circ}$ 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 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 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.	1.08E-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-16	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	3.29E-02	0.	1.69E-31	1.76E-04	1.22E-03	0.	0.	0.	0.	0.	3.43E-02
45	6.30	7.32E-03	0.	1.14E-32	2.32E-04	2.36E-03	0.	0.	0.	0.	0.	9.91E-03
46	6.20	1.18E-03	0.	2.46E-34	2.13E-04	1.71E-05	0.	0.	0.	0.	0.	1.41E-03
47	6.10	1.36E 04	0.	3.03E-36	2.02E-04	5.08E-03	0.	0.	0.	0.	0.	5.41E-03
48	6.00	1.46E-05	0.	1.51E-38	5.72E-05	1.14E-03	0.	0.	0.	0.	0.	1.21E-03
49	5.90	8.17E-17	0.	0.	4.82E-05	3.35E-05	0.	0.	0.	0.	0.	8.26E-05
50	5.80	5.32E-18	0.	0.	2.94E-05	8.79E-04	0.	0.	0.	0.	0.	9.08E-04
51	5.70	2.44E-09	0.	0.	1.22E-05	7.69E-07	0.	0.	0.	0.	0.	1.30E-05

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	5.81E-11	0.	0.	0.	8.48E-07	9.83E-05	0.	0.	0.	0.	0.	0.	9.91E-05
53	5.50	0.	0.	0.	0.	4.75E-06	3.76E-03	0.	0.	0.	0.	0.	0.	3.77E-03
54	5.40	0.	0.	0.	0.	2.69E-06	1.51E-06	0.	0.	0.	0.	0.	0.	4.19E-06
55	5.30	0.	0.	0.	0.	7.51E-07	2.61E-04	0.	0.	0.	0.	0.	0.	2.62E-04
56	5.20	0.	0.	0.	0.	4.36E-07	1.77E-04	0.	0.	0.	0.	0.	0.	1.77E-04
57	5.10	0.	0.	0.	0.	1.16E-07	4.60E-06	0.	4.33E-04	0.	0.	0.	0.	4.38E-04
58	5.00	4.55E-05	0.	0.	0.	3.85E-08	2.78E-05	0.	4.50E-04	0.	0.	0.	0.	5.23E-04
59	4.90	3.87E-05	0.	0.	0.	2.38E-08	1.79E-07	0.	4.67E-04	0.	0.	0.	0.	5.06E-04
60	4.80	2.11E-05	0.	0.	0.	3.37E-08	1.88E-06	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	5.36E-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.	1.00E-03	0.	0.	0.	0.	1.00E-03
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-17	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 (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.	1.08E-09	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.	3.92E-10
3	10.50	0.	0.	9.09E-11	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.	4.66E-11
5	10.30	0.	0.	1.20E-11	0.	0.	0.	0.	0.	0.	0.	1.20E-11
6	10.20	0.	0.	4.03E-12	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.	2.33E-12
8	10.00	0.	0.	2.91E-13	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.	2.04E-13
10	9.80	0.	0.	7.44E-14	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.	9.89E-15
12	9.60	0.	0.	1.13E-14	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.	3.72E 00
14	9.40	0.	1.38E 01	6.32E-16	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.	2.38E 01
16	9.20	0.	3.38E 01	1.67E-17	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.	4.64E 01
18	9.00	0.	5.95E 01	3.63E-18	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.	7.26E 01
20	8.80	0.	7.78E 01	6.95E-19	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.	7.69E 01
22	8.60	0.	7.60E 01	1.21E-19	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.	7.35E 01
24	8.40	0.	6.91E 01	1.06E-20	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.	6.40E 01
26	8.20	0.	5.82E 01	6.51E-22	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.	5.21E 01
28	8.00	0.	4.60E 01	4.83E-23	0.	0.	0.	0.	0.	0.	0.	4.60E 01
29	7.90	0.	3.94E 01	1.20E-23	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.	3.27E 01
31	7.70	0.	2.68E 01	1.39E-24	0.	0.	0.	0.	0.	0.	0.	2.68E 01
32	7.60	0.	2.17E 01	3.41E-25	0.	3.94E-13	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.	1.66E 01
34	7.40	0.	1.26E 01	2.47E-26	0.	4.83E-07	0.	0.	0.	0.	0.	1.26E 01
35	7.30	0.	8.95E 00	7.11E-27	0.	4.24E-05	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.	6.79E 00
37	7.10	0	4.74E 00	4.85E-28	0.	6.42E-07	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.	4.06E-01
39	6.90	4.40E-01	0.	3.30E-29	0.	3.07E-05	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.	2.11E-01
41	6.70	8.49E-02	0.	2.16E-30	0.	2.21E-05	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.	3.69E-02
43	6.50	1.12E-02	0.	1.21E-31	0.	5.39E-07	0.	0.	0.	0.	0.	1.12E-02
44	6.40	3.29E-03	0.	1.69E-32	1.76E-05	1.22E-04	0.	0.	0.	0.	0.	3.43E-03
45	6.30	7.32E-04	0.	1.14E-33	2.32E-05	2.36E-04	0.	0.	0.	0.	0.	9.41E-04
46	6.20	1.18E-04	0.	2.46E-35	2.13E-05	1.71E-06	0.	0.	0.	0.	0.	1.41E-04
47	6.10	1.36E-05	0.	3.03E-37	2.02E-05	5.08E-04	0.	0.	0.	0.	0.	5.41E-04
48	6.00	1.46E-06	0.	1.31E-39	5.72E-06	1.14E-04	0.	0.	0.	0.	0.	1.21E-04
49	5.90	8.17E-08	0.	0.	4.82E-06	3.35E-06	0.	0.	0.	0.	0.	8.26E-06
50	5.80	5.32E-09	0.	0.	2.94E-06	8.79E-05	0.	0.	0.	0.	0.	9.08E-05
51	5.70	2.44E-10	0.	0.	1.22E-06	7.69E-09	0.	0.	0.	0.	0.	1.30E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. 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	5.81E-12	0.	0.	0.	8.48E-08	9.83E-06	0.	0.	0.	0.	0.	0.	9.91E-06
53	5.50	0.	0.	0.	0.	4.75E-07	3.76E-04	0.	0.	0.	0.	0.	0.	3.77E-04
54	5.40	0.	0.	0.	0.	2.69E-07	1.51E-07	0.	0.	0.	0.	0.	0.	4.19E-07
55	5.30	0.	0.	0.	0.	7.51E-08	2.61E-05	0.	0.	0.	0.	0.	0.	2.62E-05
56	5.20	0.	0.	0.	0.	4.36E-08	1.77E-05	0.	0.	0.	0.	0.	0.	1.77E-05
57	5.10	0.	0.	0.	0.	1.16E-08	4.60E-07	0.	1.37E-05	0.	0.	0.	0.	1.42E-05
58	5.00	4.55E-06	0.	0.	0.	3.85E-09	2.78E-06	0.	1.42E-05	0.	0.	0.	0.	2.16E-05
59	4.90	3.87E-06	0.	0.	0.	2.38E-09	1.79E-06	0.	1.48E-05	0.	0.	0.	0.	1.87E-05
60	4.80	2.11E-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	1.46E-10	0.	2.00E-05	0.	0.	0.	0.	2.00E-05
66	4.20	6.09E-09	0.	0.	0.	0.83E-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	8.95E-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) 1.203E-04 (1.3E-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-10	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.	3.92E-11
3	10.50	0.	0.	9.09E-12	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.	4.66E-12
5	10.30	0.	0.	1.20E-12	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.	4.03E-13
7	10.10	0.	0.	2.33E-13	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.	2.91E-14
9	9.90	0.	0.	2.04E-14	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.	7.44E-15
11	9.70	0.	0.	9.89E-16	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.	1.13E-15
13	9.50	0.	3.72E-01	1.21E-16	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.	1.38E 00
15	9.30	0.	2.38E 00	3.07E-17	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.	3.38E 00
17	9.10	0.	4.64E 00	4.77E-18	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.	5.95E 00
19	8.90	0.	7.26E 00	2.57E-19	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.	7.78E 00
21	8.70	0.	7.69E 00	1.05E-20	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.	7.60E 00
23	8.50	0.	7.35E 00	8.34E-22	0.	0.	0.	0.	0.	0.	0.	7.35E 00
24	8.40	0.	6.91E 00	1.04E-21	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.	6.40E 00
26	8.20	0.	5.82E 00	6.51E-23	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.	5.21E 00
28	8.00	0.	4.60E 00	4.83E-24	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.	3.94E 00
30	7.80	0.	3.27E 00	4.74E-25	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.	2.68E 00
32	7.60	0.	2.17E 00	3.41E-26	0.	3.54E-14	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.	1.66E 00
34	7.40	0.	1.26E 00	2.47E-27	0.	4.83E-08	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.	8.95E-01
36	7.20	0.	6.79E-01	1.74E-28	0.	4.99E-07	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.	4.74E-01
38	7.00	4.06E-02	0.	1.21E-29	0.	1.58E-07	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.	4.40E-02
40	6.80	2.11E-02	0.	8.40E-31	0.	6.84E-09	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.	8.50E-03
42	6.60	3.68E-03	0.	5.43E-32	0.	1.04E-05	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.	1.12E-03
44	6.40	3.29E-04	0.	1.69E-33	1.76E-06	1.22E-05	0.	0.	0.	0.	0.	3.43E-04
45	6.30	7.32E-05	0.	1.14E-34	2.32E-06	2.36E-05	0.	0.	0.	0.	0.	8.91E-05
46	6.20	1.18E-05	0.	2.46E-36	2.13E-06	1.71E-07	0.	0.	0.	0.	0.	1.41E-05
47	6.10	1.36E-06	0.	3.03E-38	2.02E-06	5.08E-05	0.	0.	0.	0.	0.	5.41E-05
48	6.00	1.46E-07	0.	0.	5.72E-07	1.14E-05	0.	0.	0.	0.	0.	1.21E-05
49	5.90	8.17E-09	0.	0.	4.82E-07	3.35E-07	0.	0.	0.	0.	0.	8.26E-07
50	5.80	5.32E-10	0.	0.	2.94E-07	8.79E-06	0.	0.	0.	0.	0.	9.08E-06
51	5.70	2.46E-11	0.	0.	1.22E-07	7.69E-09	0.	0.	0.	0.	0.	1.30E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. 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	5.81E-13	0.	0.	0.	8.48E-09	9.83E-07	0.	0.	0.	0.	0.	0.	9.91E-07
53	5.50	0.	0.	0.	0.	4.75E-08	3.76E-05	0.	0.	0.	0.	0.	0.	3.77E-05
54	5.40	0.	0.	0.	0.	2.69E-08	1.51E-08	0.	0.	0.	0.	0.	0.	4.19E-08
55	5.30	0.	0.	0.	0.	7.51E-09	2.61E-06	0.	0.	0.	0.	0.	0.	2.62E-06
56	5.20	0.	0.	0.	0.	4.36E-09	1.77E-06	0.	0.	0.	0.	0.	0.	1.77E-06
57	5.10	0.	0.	0.	0.	1.16E-09	4.60E-08	0.	4.33E-07	0.	0.	0.	0.	4.80E-07
58	5.00	4.55E-07	0.	0.	0.	3.85E-10	2.78E-07	0.	4.50E-07	0.	0.	0.	0.	1.18E-06
59	4.90	3.87E-07	0.	0.	0.	2.38E-10	1.79E-09	0.	4.67E-07	0.	0.	0.	0.	8.57E-07
60	4.80	2.11E-07	0.	0.	0.	3.37E-10	1.88E-08	0.	4.90E-07	0.	0.	0.	0.	7.21E-07
61	4.70	9.60E-08	0.	0.	0.	1.43E-10	8.38E-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.	9.19E-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.	1.00E-06
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.	1.96E-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-03 (18.0E-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.	1.08E-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.	1.30E-01	6.32E-18	0.	0.	0.	0.	0.	0.	0.	1.30E-01
15	9.30	0.	2.30E-01	3.07E-18	0.	0.	0.	0.	0.	0.	0.	2.30E-01
16	9.20	0.	3.30E-01	1.67E-19	0.	0.	0.	0.	0.	0.	0.	3.30E-01
17	9.10	0.	4.64E-01	4.77E-19	0.	0.	0.	0.	0.	0.	0.	4.64E-01
18	9.00	0.	5.95E-01	3.43E-20	0.	0.	0.	0.	0.	0.	0.	5.95E-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	1.20E-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.	2.60E-01	1.39E-26	0.	0.	0.	0.	0.	0.	0.	2.60E-01
32	7.60	0.	2.17E-01	3.41E-27	0.	3.54E-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.	1.58E-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	3.29E-05	0.	1.69E-34	1.76E-07	1.22E-06	0.	0.	0.	0.	0.	3.43E-05
45	6.30	7.32E-06	0.	1.14E-35	2.32E-07	2.36E-06	0.	0.	0.	0.	0.	9.91E-06
46	6.20	1.18E-06	0.	2.46E-37	2.13E-07	1.71E-08	0.	0.	0.	0.	0.	1.41E-06
47	6.10	1.36E-07	0.	3.03E-39	2.02E-07	5.08E-06	0.	0.	0.	0.	0.	5.41E-06
48	6.00	1.46E-08	0.	0.	5.72E-08	1.14E-06	0.	0.	0.	0.	0.	1.21E-06
49	5.90	8.17E-10	0.	0.	4.82E-08	3.35E-08	0.	0.	0.	0.	0.	8.26E-08
50	5.80	5.32E-11	0.	0.	2.94E-08	8.79E-07	0.	0.	0.	0.	0.	9.08E-07
51	5.70	2.44E-12	0.	0.	1.22E-08	7.69E-10	0.	0.	0.	0.	0.	1.30E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.293E-09 (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	5.81E-14	0.	0.	0.	8.48E-10	9.83E-08	0.	0.	0.	0.	0.	0.	9.91E-08
53	5.50	0.	0.	0.	0.	4.75E-09	3.76E-06	0.	0.	0.	0.	0.	0.	3.77E-06
54	5.40	0.	0.	0.	0.	2.69E-09	1.51E-09	0.	0.	0.	0.	0.	0.	4.19E-09
55	5.30	0.	0.	0.	0.	7.51E-10	2.61E-07	0.	0.	0.	0.	0.	0.	2.62E-07
56	5.20	0.	0.	0.	0.	4.36E-10	1.77E-07	0.	0.	0.	0.	0.	0.	1.77E-07
57	5.10	0.	0.	0.	0.	1.16E-10	4.60E-09	0.	1.37E-08	0.	0.	0.	0.	1.84E-08
58	5.00	4.55E-08	0.	0.	0.	3.85E-11	2.78E-08	0.	1.42E-08	0.	0.	0.	0.	8.77E-08
59	4.90	3.87E-08	0.	0.	0.	2.38E-11	1.79E-10	0.	1.48E-08	0.	0.	0.	0.	5.37E-08
60	4.80	2.11E-08	0.	0.	0.	3.37E-11	1.88E-09	0.	1.55E-08	0.	0.	0.	0.	3.86E-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.	1.96E-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 (19.0E-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.	1.08E-12	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.	3.92E-13
3	10.50	0.	0.	9.09E-14	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.	4.66E-14
5	10.30	0.	0.	1.20E-14	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.	4.03E-15
7	10.10	0.	0.	2.33E-15	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.	2.91E-16
9	9.90	0.	0.	2.04E-16	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.	7.44E-17
11	9.70	0.	0.	9.89E-18	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.	1.13E-17
13	9.50	0.	3.72E-03	1.21E-18	0.	0.	0.	0.	0.	0.	0.	3.72E-03
14	9.40	0.	1.30E-02	6.32E-19	0.	0.	0.	0.	0.	0.	0.	1.30E-02
15	9.30	0.	2.38E-02	3.07E-19	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.	3.38E-02
17	9.10	0.	4.64E-02	4.77E-20	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.	5.95E-02
19	8.90	0.	7.26E-02	2.57E-21	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.	7.78E-02
21	8.70	0.	7.69E-02	1.05E-22	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.	7.60E-02
23	8.50	0.	7.35E-02	8.34E-24	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.	6.91E-02
25	8.30	0.	6.40E-02	9.85E-25	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.	5.82E-02
27	8.10	0.	5.21E-02	1.16E-25	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.	4.60E-02
29	7.90	0.	3.94E-02	1.20E-26	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.	3.27E-02
31	7.70	0.	2.68E-02	1.39E-27	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.	2.17E-02
33	7.50	0.	1.66E-02	1.11E-28	0.	2.49E-11	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.	1.26E-02
35	7.30	0.	8.95E-03	7.11E-30	0.	4.24E-12	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.	6.79E-03
37	7.10	0.	4.74E-03	4.85E-31	0.	6.42E-10	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.	4.06E-04
39	6.90	4.40E-04	0.	3.30E-32	0.	3.07E-08	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.	2.11E-04
41	6.70	8.49E-05	0.	2.16E-33	0.	2.21E-08	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.	3.69E-05
43	6.50	1.12E-05	0.	1.21E-34	0.	5.39E-10	0.	0.	0.	0.	0.	1.12E-05
44	6.40	3.29E-06	0.	1.69E-35	1.76E-08	1.22E-07	0.	0.	0.	0.	0.	3.43E-06
45	6.30	7.32E-07	0.	1.14E-36	2.32E-08	2.36E-07	0.	0.	0.	0.	0.	9.91E-07
46	6.20	1.18E-07	0.	2.46E-38	2.13E-08	1.71E-09	0.	0.	0.	0.	0.	1.41E-07
47	6.10	1.36E-08	0.	0.	2.02E-08	5.08E-07	0.	0.	0.	0.	0.	5.41E-07
48	6.00	1.46E-09	0.	0.	5.72E-09	1.14E-07	0.	0.	0.	0.	0.	1.21E-07
49	5.90	8.17E-11	0.	0.	4.82E-09	3.35E-09	0.	0.	0.	0.	0.	8.26E-09
50	5.80	5.32E-12	0.	0.	2.94E-09	8.79E-08	0.	0.	0.	0.	0.	9.08E-08
51	5.70	2.44E-13	0.	0.	1.22E-09	7.69E-11	0.	0.	0.	0.	0.	1.30E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. 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	5.81E-15	0.	0.	0.	8.48E-11	9.83E-09	0.	0.	0.	0.	0.	0.	9.91E-09
53	5.50	0.	0.	0.	0.	4.75E-10	3.76E-07	0.	0.	0.	0.	0.	0.	3.77E-07
54	5.40	0.	0.	0.	0.	2.69E-10	1.51E-10	0.	0.	0.	0.	0.	0.	4.19E-10
55	5.30	0.	0.	0.	0.	7.51E-11	2.61E-08	0.	0.	0.	0.	0.	0.	2.62E-08
56	5.20	0.	0.	0.	0.	4.36E-11	1.77E-08	0.	0.	0.	0.	0.	0.	1.77E-08
57	5.10	0.	0.	0.	0.	1.16E-11	4.60E-10	0.	4.33E-10	0.	0.	0.	0.	9.05E-10
58	5.00	4.55E-09	0.	0.	0.	1.85E-12	2.78E-09	0.	4.50E-10	0.	0.	0.	0.	7.79E-09
59	4.90	3.87E-09	0.	0.	0.	2.38E-12	1.79E-11	0.	4.67E-10	0.	0.	0.	0.	4.36E-09
60	4.80	2.11E-09	0.	0.	0.	3.37E-12	1.88E-10	0.	4.90E-10	0.	0.	0.	0.	2.79E-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	4.28E-14	0.	5.67E-10	0.	0.	0.	0.	7.18E-10
64	4.40	5.17E-11	0.	0.	0.	6.29E-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	1.53E-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.	1.00E-09
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.	1.64E-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.	1.00E-13	0.	0.	0.	0.	0.	0.	0.	1.00E-13
2	10.60	0.	0.	3.92E-14	0.	0.	0.	0.	0.	0.	0.	3.92E-14
3	10.50	0.	0.	9.09E-15	0.	0.	0.	0.	0.	0.	0.	9.09E-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	1.16E-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.	4.60E-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-12	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	3.29E-07	0.	1.60E-36	1.76E-09	1.22E-08	0.	0.	0.	0.	0.	3.43E-07
45	6.30	7.32E-08	0.	1.14E-37	2.32E-09	2.36E-09	0.	0.	0.	0.	0.	9.91E-08
46	6.20	1.18E-08	0.	2.46E-39	2.13E-09	1.71E-10	0.	0.	0.	0.	0.	1.41E-08
47	6.10	1.36E-09	0.	0.	2.02E-09	5.08E-08	0.	0.	0.	0.	0.	5.41E-08
48	6.00	1.46E-10	0.	0.	5.72E-10	1.14E-08	0.	0.	0.	0.	0.	1.21E-08
49	5.90	8.17E-12	0.	0.	4.82E-10	3.35E-10	0.	0.	0.	0.	0.	8.26E-10
50	5.80	5.32E-13	0.	0.	2.94E-10	8.79E-09	0.	0.	0.	0.	0.	9.08E-09
51	5.70	2.44E-14	0.	0.	1.22E-10	7.69E-12	0.	0.	0.	0.	0.	1.30E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. DENSITY (GM/CC) 1.29JE-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.	9.09E-15	0.	0.	0.	0.	0.	0.	0.	9.09E-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	1.16E-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.	4.60E-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.	2.60E-03	1.39E-28	0.	0.	0.	0.	0.	0.	0.	2.60E-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-12	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-16	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	3.29E-07	0.	1.60E-36	1.76E-09	1.22E-08	0.	0.	0.	0.	0.	3.43E-07
45	6.30	7.32E-08	0.	1.14E-37	2.32E-09	2.36E-09	0.	0.	0.	0.	0.	9.91E-08
46	6.20	1.18E-08	0.	2.46E-39	2.13E-09	1.71E-10	0.	0.	0.	0.	0.	1.41E-08
47	6.10	1.36E-09	0.	0.	2.02E-09	5.08E-08	0.	0.	0.	0.	0.	5.41E-08
48	6.00	1.46E-10	0.	0.	5.72E-10	1.14E-08	0.	0.	0.	0.	0.	1.21E-08
49	5.90	8.17E-12	0.	0.	4.82E-10	3.35E-10	0.	0.	0.	0.	0.	8.26E-10
50	5.80	5.32E-13	0.	0.	2.94E-10	8.79E-09	0.	0.	0.	0.	0.	9.08E-09
51	5.70	2.44E-14	0.	0.	1.22E-10	7.69E-12	0.	0.	0.	0.	0.	1.30E-10

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.E.	TOTAL AIR
92	5.60	5.81E-16	0.	0.	0.	8.48E-12	9.83E-10	0.	0.	0.	0.	0.	0.	9.91E-10
93	5.50	0.	0.	0.	0.	4.75E-11	3.76E-08	0.	0.	0.	0.	0.	0.	3.77E-08
94	5.40	0.	0.	0.	0.	2.69E-11	1.51E-11	0.	0.	0.	0.	0.	0.	4.19E-11
95	5.30	0.	0.	0.	0.	7.51E-12	2.61E-09	0.	0.	0.	0.	0.	0.	2.62E-09
96	5.20	0.	0.	0.	0.	4.36E-12	1.77E-09	0.	0.	0.	0.	0.	0.	1.77E-09
97	5.10	0.	0.	0.	0.	1.16E-12	4.60E-11	0.	1.37E-11	0.	0.	0.	0.	6.09E-11
98	5.00	4.55E-10	0.	0.	0.	3.85E-13	2.78E-10	0.	1.42E-11	0.	0.	0.	0.	7.49E-10
99	4.90	3.87E-10	0.	0.	0.	2.38E-13	1.79E-12	0.	1.48E-11	0.	0.	0.	0.	4.04E-10
100	4.80	2.11E-10	0.	0.	0.	3.37E-13	1.88E-11	0.	1.55E-11	0.	0.	0.	0.	2.46E-10
101	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
102	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
103	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
104	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
105	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
106	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
107	4.10	3.34E-13	0.	0.	0.	3.46E-16	2.27E-15	0.	2.28E-11	0.	0.	0.	0.	2.32E-11
108	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
109	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
110	3.80	1.27E-14	0.	0.	0.	1.91E-17	0.	0.	2.90E-11	0.	0.	0.	0.	2.91E-11
111	3.70	2.03E-15	0.	0.	0.	2.51E-18	0.	0.	3.17E-11	0.	0.	0.	0.	3.17E-11
112	3.60	7.18E-16	0.	0.	0.	2.19E-18	0.	0.	3.48E-11	0.	0.	0.	0.	3.48E-11
113	3.50	2.87E-16	0.	0.	0.	2.06E-19	0.	0.	3.84E-11	0.	0.	0.	0.	3.84E-11
114	3.40	5.45E-17	0.	0.	0.	1.96E-19	0.	0.	4.24E-11	0.	0.	0.	0.	4.24E-11
115	3.30	1.93E-17	0.	0.	0.	1.80E-20	0.	0.	4.40E-11	0.	0.	0.	0.	4.40E-11
116	3.20	4.90E-18	0.	0.	0.	1.38E-20	0.	0.	4.48E-11	0.	0.	0.	0.	4.49E-11
117	3.10	1.12E-18	0.	0.	0.	1.60E-21	0.	0.	4.51E-11	0.	0.	0.	0.	4.51E-11
118	3.00	3.06E-19	0.	0.	0.	7.92E-22	0.	0.	4.37E-11	0.	0.	0.	0.	4.37E-11
119	2.90	6.95E-20	0.	0.	0.	8.02E-23	0.	0.	4.24E-11	0.	0.	0.	0.	4.24E-11
120	2.80	2.05E-20	0.	0.	0.	1.51E-23	0.	0.	3.92E-11	0.	0.	0.	0.	3.92E-11
121	2.70	2.50E-21	0.	0.	0.	1.56E-25	0.	0.	3.57E-11	0.	0.	0.	0.	3.57E-11
122	2.60	4.84E-23	0.	0.	0.	1.45E-27	0.	0.	3.21E-11	0.	0.	0.	0.	3.21E-11
123	2.50	4.94E-25	0.	0.	0.	1.72E-29	0.	0.	2.77E-11	0.	0.	0.	0.	2.77E-11
124	2.40	0.	0.	0.	0.	1.64E-31	0.	0.	2.39E-11	0.	0.	0.	0.	2.39E-11
125	2.30	0.	0.	0.	0.	0.	0.	0.	1.87E-11	0.	0.	0.	0.	1.87E-11
126	2.20	0.	0.	0.	0.	0.	0.	0.	1.42E-11	0.	0.	0.	0.	1.42E-11
127	2.10	0.	0.	0.	0.	0.	0.	0.	1.04E-11	0.	0.	0.	0.	1.04E-11
128	2.00	0.	0.	0.	0.	0.	0.	0.	6.85E-12	0.	0.	0.	0.	6.85E-12
129	1.90	0.	0.	0.	0.	0.	0.	0.	4.52E-12	0.	0.	0.	0.	4.52E-12
130	1.80	0.	0.	0.	0.	0.	0.	0.	2.63E-12	0.	0.	0.	0.	2.63E-12
131	1.70	0.	0.	0.	0.	0.	0.	0.	1.47E-12	0.	0.	0.	0.	1.47E-12
132	1.60	0.	0.	0.	0.	0.	0.	0.	7.73E-13	0.	0.	0.	0.	7.73E-13
133	1.50	0.	0.	0.	0.	0.	0.	0.	3.15E-13	0.	0.	0.	0.	3.15E-13
134	1.40	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
135	1.30	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
136	1.20	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
137	1.10	0.	0.	0.	0.	0.	0.	1.46E-14	0.	0.	0.	0.	0.	1.46E-14
138	1.00	0.	0.	0.	0.	0.	0.	2.21E-17	0.	0.	0.	0.	0.	2.21E-17
139	0.90	0.	0.	0.	0.	0.	0.	1.38E-13	0.	0.	0.	0.	0.	1.38E-13
140	0.80	0.	0.	0.	0.	0.	0.	3.24E-16	0.	0.	0.	0.	0.	3.24E-16
141	0.70	0.	0.	0.	0.	0.	0.	9.34E-13	0.	0.	0.	0.	0.	9.34E-13
142	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) 1.293E-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	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	3.67E-21	0.	0.	0.	0.	0.	0.	0.	2.38E-04
16	9.20	0.	3.30E-04	1.67E-22	0.	0.	0.	0.	0.	0.	0.	3.30E-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	1.00E-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.	1.84E-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	3.29E-08	0.	1.69E-37	1.76E-10	1.22E-09	0.	0.	0.	0.	0.	3.43E-08
45	6.30	7.32E-09	0.	1.14E-38	2.32E-10	2.36E-09	0.	0.	0.	0.	0.	9.91E-09
46	6.20	1.18E-09	0.	0.	2.13E-10	1.71E-11	0.	0.	0.	0.	0.	1.41E-09
47	6.10	1.36E-10	0.	0.	2.02E-10	5.08E-09	0.	0.	0.	0.	0.	5.41E-09
48	6.00	1.46E-11	0.	0.	5.72E-11	1.14E-09	0.	0.	0.	0.	0.	1.21E-09
49	5.90	8.17E-13	0.	0.	4.82E-11	3.35E-11	0.	0.	0.	0.	0.	8.26E-11
50	5.80	5.32E-14	0.	0.	2.94E-11	9.79E-10	0.	0.	0.	0.	0.	9.08E-10
51	5.70	2.44E-15	0.	0.	1.22E-11	7.69E-13	0.	0.	0.	0.	0.	1.30E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. 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	5.81E-17	0.	0.	0.	8.48E-13	9.83E-11	0.	0.	0.	0.	0.	0.	9.91E-11
53	5.50	0.	0.	0.	0.	4.75E-12	3.76E-09	0.	0.	0.	0.	0.	0.	3.77E-09
54	5.40	0	0.	0.	0.	2.69E-12	1.51E-12	0.	0.	0.	0.	0.	0.	4.19E-12
55	5.30	0.	0.	0.	0.	7.51E-13	2.61E-10	0.	0.	0.	0.	0.	0.	2.62E-10
56	5.20	0.	0.	0.	0.	4.36E-13	1.77E-10	0.	0.	0.	0.	0.	0.	1.77E-10
57	5.10	0.	0.	0.	0.	1.16E-13	4.60E-12	0.	4.33E-13	0.	0.	0.	0.	5.15E-12
58	5.00	4.55E-11	0.	0.	0.	3.85E-14	2.78E-11	0.	4.50E-13	0.	0.	0.	0.	7.39E-11
59	4.90	3.97E-11	0.	0.	0.	2.38E-14	1.79E-13	0.	4.67E-13	0.	0.	0.	0.	3.94E-11
60	4.80	2.11E-11	0.	0.	0.	3.37E-14	1.88E-12	0.	4.90E-13	0.	0.	0.	0.	2.35E-11
61	4.70	9.60E-12	0.	0.	0.	1.53E-14	8.38E-13	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-14	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.	6.31E-13	0.	0.	0.	0.	8.34E-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	3.11E-15	0.	0.	0.	1.33E-17	5.36E-18	0.	7.79E-13	0.	0.	0.	0.	7.89E-13
69	3.90	1.82E-15	0.	0.	0.	3.07E-18	1.53E-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.	1.00E-12
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	3.06E-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	2.50E-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 (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.	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	6.32E-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.	7.80E-05	1.21E-25	0.	0.	0.	0.	0.	0.	0.	7.80E-05
23	8.50	0.	7.35E-05	9.34E-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	1.20E-29	0.	0.	0.	0.	0.	0.	0.	3.94E-05
30	7.80	0.	3.27E-05	4.74E-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.	8.93E-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.	4.04E-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.	8.30E-36	0.	6.84E-14	0.	0.	0.	0.	0.	2.11E-07
41	6.70	8.49E-08	0.	2.16E-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	3.29E-09	0.	1.69E-38	1.76E-11	1.22E-10	0.	0.	0.	0.	0.	3.43E-09
45	6.30	7.32E-10	0.	0.	2.32E-11	2.36E-10	0.	0.	0.	0.	0.	9.91E-10
46	6.20	1.18E-10	0.	0.	2.13E-11	1.71E-12	0.	0.	0.	0.	0.	1.41E-10
47	6.10	1.36E-11	0.	0.	2.02E-11	5.08E-10	0.	0.	0.	0.	0.	5.41E-10
48	6.00	1.46E-12	0.	0.	5.72E-12	1.14E-10	0.	0.	0.	0.	0.	1.21E-10
49	5.90	8.17E-14	0.	0.	4.82E-12	3.35E-12	0.	0.	0.	0.	0.	8.26E-12
50	5.80	5.32E-15	0.	0.	2.94E-12	8.79E-11	0.	0.	0.	0.	0.	9.09E-11
51	5.70	2.44E-16	0.	0.	1.22E-12	7.69E-14	0.	0.	0.	0.	0.	1.30E-12

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000. 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	9.81E-18	0.	0.	0.	8.48E-14	9.83E-12	0.	0.	0.	0.	0.	0.	9.91E-12
53	5.50	0.	0.	0.	0.	4.75E-13	3.76E-10	0.	0.	0.	0.	0.	0.	3.77E-10
54	5.40	0.	0.	0.	0.	2.69E-13	1.51E-13	0.	0.	0.	0.	0.	0.	4.19E-13
55	5.30	0.	0.	0.	0.	7.51E-14	2.61E-11	0.	0.	0.	0.	0.	0.	2.62E-11
56	5.20	0.	0.	0.	0.	4.36E-14	1.77E-11	0.	0.	0.	0.	0.	0.	1.77E-11
57	5.10	0.	0.	0.	0.	1.16E-14	4.60E-13	0.	1.37E-14	0.	0.	0.	0.	4.85E-13
58	5.00	4.55E-12	0.	0.	0.	3.85E-15	2.78E-12	0.	1.42E-14	0.	0.	0.	0.	7.36E-12
59	4.90	3.87E-12	0.	0.	0.	2.38E-15	1.79E-14	0.	1.48E-14	0.	0.	0.	0.	3.91E-12
60	4.80	2.11E-12	0.	0.	0.	3.37E-15	1.88E-13	0.	1.55E-14	0.	0.	0.	0.	2.32E-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.	4.63E-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.	6.29E-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	5.36E-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.	1.56E-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.	8.60E-04	0.	0.	0.	0.	0.	0.	0.	8.60E-04
5	10.30	0.	0.	4.08E-04	0.	0.	0.	0.	0.	0.	0.	4.08E-04
6	10.20	0.	0.	2.78E-04	0.	0.	0.	0.	0.	0.	0.	2.78E-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.	4.36E-02	0.	0.	0.	0.	0.	1.96E-01
44	6.40	5.37E-02	0.	9.52E-15	1.81E-02	5.38E-01	0.	0.	0.	0.	0.	6.10E-01
45	6.30	1.81E-02	0.	1.54E-15	4.33E-02	3.09E-01	0.	0.	0.	0.	0.	3.70E-01
46	6.20	4.82E-03	0.	2.00E-16	4.05E-02	6.65E-02	0.	0.	0.	0.	0.	1.12E-01
47	6.10	1.14E-03	0.	2.65E-17	7.01E-02	1.10E 00	0.	0.	0.	0.	0.	1.17E 00
48	6.00	2.84E-04	0.	2.88E-18	2.53E-02	1.37E-01	0.	0.	0.	0.	0.	1.63E-01
49	5.90	4.35E-05	0.	1.60E-19	3.37E-02	7.13E-02	0.	0.	0.	0.	0.	1.05E-01
50	5.80	4.69E-06	0.	2.98E-21	3.30E-02	2.22E-01	0.	0.	0.	0.	0.	2.55E-01
51	5.70	3.12E-07	0.	0.	2.10E-02	1.30E-02	0.	0.	0.	0.	0.	3.40E-02

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	1.11E-08	0.	0.	0.	5.30E-03	1.51E-01	0.	0.	0.	0.	0.	0.	1.57E-01
53	5.50	0.	0.	0.	0.	1.20E-02	6.74E-01	0.	0.	0.	0.	0.	0.	6.86E-01
54	5.40	0.	0.	0.	0.	7.75E-03	1.88E-02	0.	0.	0.	0.	0.	0.	2.66E-02
55	5.30	0.	0.	0.	0.	6.08E-03	2.22E-01	0.	0.	0.	0.	0.	0.	2.28E-01
56	5.20	0.	0.	0.	0.	4.53E-03	7.99E-02	0.	0.	0.	0.	0.	0.	8.45E-02
57	5.10	0.	0.	0.	0.	2.70E-03	3.31E-02	0.	5.79E-03	0.	0.	0.	0.	4.16E-02
58	5.00	3.92E-02	0.	0.	0.	1.43E-03	5.70E-02	0.	5.99E-03	0.	0.	0.	0.	1.04E-01
59	4.90	5.25E-02	0.	0.	0.	1.18E-03	7.15E-03	0.	6.19E-03	0.	0.	0.	0.	6.70E-02
60	4.80	5.18E-02	0.	0.	0.	1.31E-03	1.62E-02	0.	6.35E-03	0.	0.	0.	0.	7.57E-02
61	4.70	3.85E-02	0.	0.	0.	8.36E-04	1.62E-03	0.	6.50E-03	0.	0.	0.	0.	4.75E-02
62	4.60	3.01E-02	0.	0.	0.	8.11E-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	1.16E-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.	5.75E-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.	1.00E-02	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.	2.13E-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.	1.84E-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.	9.60E-07	0.	0.	0.	0.	0.	8.60E-07
98	1.00	0.	5.11E-13	0.	0.	0.	0.	1.87E-07	0.	0.	0.	0.	0.	1.87E-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) 2000. 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.	4.06E-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	6.08E-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	4.78E-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	3.46E-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	2.19E-12	0.	7.66E-05	0.	0.	0.	0.	0.	1.69E 01
35	7.30	0	1.41E 01	1.10E-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	2.98E-13	0.	1.22E-04	0.	0.	0.	0.	0.	9.53E 00
38	7.00	1.53E-01	0.	1.49E-13	0.	3.89E-03	0.	0.	0.	0.	0.	1.87E-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.	2.09E-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	5.37E-03	0.	9.52E-16	1.81E-03	5.38E-02	0.	0.	0.	0.	0.	6.10E-02
45	6.30	1.81E-03	0.	1.54E-16	4.33E-03	3.09E-02	0.	0.	0.	0.	0.	3.70E-02
46	6.20	4.82E-04	0.	2.00E-17	4.05E-03	6.65E-03	0.	0.	0.	0.	0.	1.12E-02
47	6.10	1.14E-04	0.	2.65E-18	7.01E-03	1.10E-01	0.	0.	0.	0.	0.	1.17E-01
48	6.00	2.84E-05	0.	2.88E-19	2.53E-03	1.37E-02	0.	0.	0.	0.	0.	1.63E-02
49	5.90	4.35E-06	0.	1.60E-20	3.37E-03	7.13E-03	0.	0.	0.	0.	0.	1.05E-02
50	5.80	4.69E-07	0.	2.98E-22	3.30E-03	2.22E-02	0.	0.	0.	0.	0.	2.55E-02
51	5.70	3.12E-08	0.	0.	2.10E-03	1.30E-03	0.	0.	0.	0.	0.	3.40E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. 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	1.11E-09	0.	0.	0.	5.38E-04	1.51E-02	0.	0.	0.	0.	0.	0.	1.57E-02
53	5.50	0.	0.	0.	0.	1.28E-03	6.74E-02	0.	0.	0.	0.	0.	0.	6.86E-02
54	5.40	0.	0.	0.	0.	7.75E-04	1.88E-03	0.	0.	0.	0.	0.	0.	2.66E-03
55	5.30	0.	0.	0.	0.	6.08E-04	2.22E-02	0.	0.	0.	0.	0.	0.	2.28E-02
56	5.20	0.	0.	0.	0.	4.53E-04	7.99E-03	0.	0.	0.	0.	0.	0.	8.45E-03
57	5.10	0.	0.	0.	0.	2.70E-04	3.31E-03	0.	1.83E-04	0.	0.	0.	0.	3.77E-03
58	5.00	3.92E-03	0.	0.	0.	1.43E-04	5.70E-03	0.	1.89E-04	0.	0.	0.	0.	9.96E-03
59	4.90	5.25E-03	0.	0.	0.	1.18E-04	7.15E-04	0.	1.96E-04	0.	0.	0.	0.	6.28E-03
60	4.80	5.18E-03	0.	0.	0.	1.31E-04	1.62E-03	0.	2.01E-04	0.	0.	0.	0.	7.13E-03
61	4.70	3.85E-03	0.	0.	0.	8.36E-05	1.62E-04	0.	2.06E-04	0.	0.	0.	0.	4.30E-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-16	0.	3.45E-05	3.93E-05	0.	2.16E-04	0.	0.	0.	0.	2.16E-03
64	4.40	1.16E-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-16	0.	9.09E-06	1.78E-05	0.	2.33E-04	0.	0.	0.	0.	6.60E-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.	2.90E-20	0.	6.10E-11	0.	0.	2.91E-04	0.	0.	0.	0.	2.91E-04
82	2.60	2.06E-09	0.	3.83E-21	0.	5.65E-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.	1.46E-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	1.50	0.	3.47E-14	0.	0.	0.	0.	0.	8.90E-06	0.	0.	0.	0.	8.90E-06
94	1.40	0.	1.66E-13	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-13
95	1.30	0.	2.43E-14	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-14
96	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.	8.60E-08	0.	0.	0.	0.	0.	8.60E-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 (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-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.	4.08E-06	0.	0.	0.	0.	0.	0.	0.	4.08E-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.	6.20E-07	0.	0.	0.	0.	0.	0.	0.	6.20E-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.	2.20E 00	2.49E-08	0.	0.	0.	0.	0.	0.	0.	2.20E 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.	6.10E 00	1.92E-09	0.	0.	0.	0.	0.	0.	0.	6.10E 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	2.10E-13	0.	7.66E-06	0.	0.	0.	0.	0.	1.69E 00
35	7.30	0.	1.41E 00	1.10E-13	0.	4.59E-06	0.	0.	0.	0.	0.	1.41E 00
36	7.20	0.	1.18E 00	5.52E-14	0.	1.66E-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	1.93E-02	0.	1.49E-14	0.	3.89E-06	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.	2.69E-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	5.37E-04	0.	9.52E-17	1.81E-04	5.38E-03	0.	0.	0.	0.	0.	6.10E-03
45	6.30	1.81E-04	0.	1.54E-17	4.33E-04	3.09E-03	0.	0.	0.	0.	0.	3.70E-03
46	6.20	4.82E-05	0.	2.00E-18	4.05E-04	6.65E-04	0.	0.	0.	0.	0.	1.12E-03
47	6.10	1.14E-05	0.	2.65E-19	7.00E-04	1.10E-02	0.	0.	0.	0.	0.	1.17E-02
48	6.00	2.84E-06	0.	2.88E-20	2.52E-04	1.37E-03	0.	0.	0.	0.	0.	1.63E-03
49	5.90	4.35E-07	0.	1.60E-21	3.37E-04	7.13E-04	0.	0.	0.	0.	0.	1.05E-03
50	5.80	4.68E-08	0.	2.98E-23	3.30E-04	2.22E-03	0.	0.	0.	0.	0.	2.55E-03
51	5.70	3.12E-09	0.	0.	2.10E-04	1.30E-04	0.	0.	0.	0.	0.	3.40E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. 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	1.11E-19	0.	0.	0.	5.38E-05	1.51E-03	0.	0.	0.	0.	0.	0.	1.56E-03
53	5.50	0.	0.	0.	0.	1.28E-04	6.73E-03	0.	0.	0.	0.	0.	0.	6.86E-03
54	5.40	0.	0.	0.	0.	7.75E-05	1.88E-04	0.	0.	0.	0.	0.	0.	2.66E-04
55	5.30	0.	0.	0.	0.	6.08E-05	2.22E-03	0.	0.	0.	0.	0.	0.	2.28E-03
56	5.20	0.	0.	0.	0.	4.53E-05	7.99E-04	0.	0.	0.	0.	0.	0.	8.44E-04
57	5.10	0.	0.	0.	0.	2.70E-05	3.31E-04	0.	5.78E-06	0.	0.	0.	0.	3.64E-04
58	5.00	3.92E-04	0.	0.	0.	1.43E-05	5.70E-04	0.	5.98E-06	0.	0.	0.	0.	9.82E-04
59	4.90	5.24E-04	0.	0.	0.	1.18E-05	7.15E-05	0.	6.19E-06	0.	0.	0.	0.	6.14E-04
60	4.80	5.18E-04	0.	0.	0.	1.31E-05	1.61E-04	0.	6.35E-06	0.	0.	0.	0.	6.99E-04
61	4.70	3.85E-04	0.	0.	0.	8.36E-06	1.62E-05	0.	6.50E-06	0.	0.	0.	0.	4.16E-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	1.07E-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	6.76E-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	6.55E-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.	3.57E-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.	1.83E-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.	9.58E-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.	1.40E-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.	2.90E-21	0.	6.09E-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	7.44E-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-15	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) 2900. 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.	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.	5.38E-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.	4.60E-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	4.28E-13	0.	0.	0.	0.	0.	0.	0.	3.48E-01
30	7.80	0.	3.09E-01	3.03E-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.	1.67E-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	1.10E-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.	3.69E-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.	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	5.36E-05	0.	9.53E-18	1.61E-05	5.38E-04	0.	0.	0.	0.	0.	6.09E-04
45	6.30	1.80E-05	0.	1.54E-18	4.33E-05	3.09E-04	0.	0.	0.	0.	0.	3.70E-04
46	6.20	4.81E-06	0.	2.00E-19	4.05E-05	6.65E-05	0.	0.	0.	0.	0.	1.12E-04
47	6.10	1.14E-06	0.	2.68E-20	7.00E-05	1.10E-03	0.	0.	0.	0.	0.	1.17E-03
48	6.00	2.86E-07	0.	2.68E-21	2.52E-05	1.37E-04	0.	0.	0.	0.	0.	1.63E-04
49	5.90	4.34E-08	0.	1.61E-22	3.37E-05	7.13E-05	0.	0.	0.	0.	0.	1.05E-04
50	5.80	4.68E-09	0.	2.98E-24	3.30E-05	2.22E-04	0.	0.	0.	0.	0.	2.55E-04
51	5.70	3.12E-10	0.	0.	2.10E-05	1.30E-05	0.	0.	0.	0.	0.	3.40E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. 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	1.11E-11	0.	0.	0.	5.30E-06	1.51E-04	0.	0.	0.	0.	0.	0.	1.56E-04
53	5.50	0.	0.	0.	0.	1.20E-05	6.73E-04	0	0.	0.	0.	0.	0.	6.86E-04
54	5.40	0.	0.	0.	0.	7.74E-06	1.88E-05	0.	0.	0.	0.	0.	0.	2.66E-05
55	5.30	0.	0.	0.	0.	6.08E-06	2.22E-04	0.	0.	0.	0.	0.	0.	2.28E-04
56	5.20	0.	0.	0.	0.	4.53E-06	7.99E-05	0.	0.	0.	0.	0.	0.	8.44E-05
57	5.10	0.	0.	0.	0.	2.70E-06	3.31E-05	0.	1.82E-07	0.	0.	0.	0.	3.60E-05
58	5.00	3.91E-05	0.	0.	0.	1.43E-06	5.70E-05	0.	1.89E-07	0.	0.	0.	0.	9.78E-05
59	4.90	5.24E-05	0.	0.	0.	1.10E-06	7.15E-06	0.	1.95E-07	0.	0.	0.	0.	6.09E-05
60	4.80	5.17E-05	0.	0.	0.	1.31E-06	1.61E-05	0.	2.00E-07	0.	0.	0.	0.	6.94E-05
61	4.70	3.84E-05	0.	0.	0.	8.36E-07	1.62E-06	0.	2.05E-07	0.	0.	0.	0.	4.11E-05
62	4.60	3.01E-05	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.	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.	2.27E-07	9.76E-07	0.	2.21E-07	0.	0.	0.	0.	1.30E-05
65	4.30	6.75E-06	0.	4.43E-20	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.	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.	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.	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.	1.53E-08	1.57E-08	0.	2.55E-07	0.	0.	0.	0.	9.42E-07
70	3.80	5.72E-07	0.	3.58E-19	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-18	0.	4.38E-09	0.	0.	2.77E-07	0.	0.	0.	0.	5.10E-07
72	3.60	1.34E-07	0.	1.03E-19	0.	4.99E-09	0.	0.	2.89E-07	0.	0.	0.	0.	4.27E-07
73	3.50	7.99E-08	0.	1.46E-18	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.	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.	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.	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.	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.	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.	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.	6.09E-12	0.	0.	3.07E-07	0.	0.	0.	0.	3.08E-07
81	2.70	1.68E-10	0.	2.90E-22	0.	6.09E-13	0.	0.	2.99 -07	0.	0.	0.	0.	2.90E-07
82	2.60	2.06E-11	0.	3.83E-23	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.	4.73E-15	0.	0.	2.49E-07	0.	0.	0.	0.	2.49E-07
84	2.40	0.	2.27E-20	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.	1.99E-07	0.	0.	0.	0.	1.90E-07
86	2.20	0.	3.41E-18	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.	1.43E-07	0.	0.	0.	0.	1.43E-07
88	2.00	0.	3.95E-17	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.	8.20E-08	0.	0.	0.	0.	8.20E-08
90	1.80	0.	1.46E-15	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.	3.50E-08	0.	0.	0.	0.	3.50E-08
92	1.60	0.	9.31E-16	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.	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.	1.86E-15
95	1.30	0.	2.43E-16	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.	1.55E-15
97	1.10	0.	1.92E-16	0.	0.	0.	0.	8.60E-10	0.	0.	0.	0.	0.	8.60E-10
98	1.09	0.	5.11E-16	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.	6.88E-09	0.	0.	0.	0.	0.	6.88E-09
100	0.80	0.	6.33E-17	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.	3.91E-08	0.	0.	0.	0.	0.	3.91E-08
102	0.60	0.	1.19E-22	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 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.	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.	4.06E-08	0.	0.	0.	0.	0.	0.	0.	4.06E-08
6	10.20	0.	0.	2.70E-08	0.	0.	0.	0.	0.	0.	0.	2.70E-08
7	10.10	0.	0.	1.68E-08	0.	0.	0.	0.	0.	0.	0.	1.68E-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	3.48E-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.	3.06E-02	3.03E-14	0.	0.	0.	0.	0.	0.	0.	3.06E-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	2.10E-15	0.	7.63E-08	0.	0.	0.	0.	0.	1.67E-02
35	7.30	0.	1.40E-02	1.10E-15	0.	4.57E-07	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.	4.00E-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.	3.32E-18	0.	4.36E-06	0.	0.	0.	0.	0.	1.94E-05
44	6.40	5.33E-06	0.	9.52E-19	1.81E-06	5.36E-05	0.	0.	0.	0.	0.	6.07E-05
45	6.30	1.79E-06	0.	1.54E-19	4.31E-06	3.08E-05	0.	0.	0.	0.	0.	3.69E-05
46	6.20	4.78E-07	0.	2.00E-20	4.04E-06	6.63E-06	0.	0.	0.	0.	0.	1.11E-05
47	6.10	1.13E-07	0.	2.66E-21	6.98E-06	1.10E-04	0.	0.	0.	0.	0.	1.17E-04
48	6.00	2.82E-08	0.	2.88E-22	2.52E-06	1.37E-05	0.	0.	0.	0.	0.	1.62E-05
49	5.90	4.32E-09	0.	1.60E-23	3.36E-06	7.11E-06	0.	0.	0.	0.	0.	1.05E-05
50	5.80	4.65E-10	0.	2.98E-25	3.29E-06	2.21E-05	0.	0.	0.	0.	0.	2.54E-05
51	5.70	3.10E-11	0.	0.	2.09E-06	1.30E-04	0.	0.	0.	0.	0.	3.39E-06

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.	2.78E-08	0.	0.	0.	0.	0.	0.	0.	2.78E-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	3.48E-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.	3.06E-02	3.03E-14	0.	0.	0.	0.	0.	0.	0.	3.06E-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	2.10E-15	0.	7.63E-08	0.	0.	0.	0.	0.	1.67E-02
35	7.30	0.	1.40E-02	1.10E-15	0.	4.57E-07	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.	4.00E-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.	3.32E-18	0.	4.36E-06	0.	0.	0.	0.	0.	1.94E-05
44	6.40	5.33E-06	0.	9.52E-19	1.81E-06	5.36E-05	0.	0.	0.	0.	0.	6.07E-05
45	6.30	1.79E-06	0.	1.54E-19	4.31E-06	3.08E-05	0.	0.	0.	0.	0.	3.69E-05
46	6.20	4.78E-07	0.	2.00E-20	4.04E-06	6.63E-06	0.	0.	0.	0.	0.	1.11E-05
47	6.10	1.13E-07	0.	2.66E-21	6.98E-06	1.10E-04	0.	0.	0.	0.	0.	1.17E-04
48	6.00	2.82E-08	0.	2.88E-22	2.52E-06	1.37E-05	0.	0.	0.	0.	0.	1.62E-05
49	5.90	4.32E-09	0.	1.60E-23	3.36E-06	7.11E-06	0.	0.	0.	0.	0.	1.05E-05
50	5.80	4.65E-10	0.	2.98E-25	3.29E-06	2.21E-05	0.	0.	0.	0.	0.	2.54E-05
51	5.70	3.10E-11	0.	0.	2.09E-06	1.30E-06	0.	0.	0.	0.	0.	3.39E-06

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
92	5.60	1.10E-12	0.	0.	0.	5.36E-07	1.51E-05	0.	0.	0.	0.	0.	0.	1.56E-05
93	5.50	0.	0.	0.	0.	1.27E-06	6.71E-05	0.	0.	0.	0.	0.	0.	6.84E-05
94	5.40	0.	0.	0.	0.	7.72E-07	1.88E-06	0.	0.	0.	0.	0.	0.	2.65E-06
95	5.30	0.	0.	0.	0.	6.06E-07	2.21E-05	0.	0.	0.	0.	0.	0.	2.28E-05
96	5.20	0.	0.	0.	0.	4.52E-07	7.96E-06	0.	0.	0.	0.	0.	0.	8.42E-06
97	5.10	0.	0.	0.	0.	2.69E-07	3.30E-06	0.	5.74E-09	0.	0.	0.	0.	3.58E-06
98	5.00	3.89E-06	0.	0.	0.	1.42E-07	5.68E-06	0.	5.94E-09	0.	0.	0.	0.	9.72E-06
99	4.90	5.21E-06	0.	0.	0.	1.18E-07	7.12E-07	0.	6.14E-09	0.	0.	0.	0.	6.04E-06
100	4.80	5.14E-06	0.	0.	0.	1.31E-07	1.61E-06	0.	6.30E-09	0.	0.	0.	0.	6.89E-06
101	4.70	3.82E-06	0.	0.	0.	8.33E-08	1.62E-07	0.	6.45E-09	0.	0.	0.	0.	4.07E-06
102	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
103	4.50	1.80E-06	0.	1.17E-21	0.	3.44E-08	3.92E-08	0.	6.78E-09	0.	0.	0.	0.	1.94E-06
104	4.40	1.15E-06	0.	3.13E-20	0.	2.26E-08	9.73E-08	0.	6.96E-09	0.	0.	0.	0.	1.29E-06
105	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
106	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
107	4.10	2.67E-07	0.	2.34E-21	0.	5.19E-09	6.53E-09	0.	7.50E-09	0.	0.	0.	0.	2.86E-07
108	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
109	3.90	6.52E-08	0.	3.41E-19	0.	1.52E-09	1.57E-09	0.	8.03E-09	0.	0.	0.	0.	7.63E-08
110	3.80	5.69E-08	0.	3.58E-20	0.	1.41E-09	0.	0.	4.35E-09	0.	0.	0.	0.	6.66E-08
111	3.70	2.27E-08	0.	5.75E-19	0.	4.37E-10	0.	0.	8.70E-09	0.	0.	0.	0.	3.18E-08
112	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
113	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
114	3.40	3.63E-09	0.	3.30E-21	0.	1.48E-10	0.	0.	9.95E-09	0.	0.	0.	0.	1.37E-08
115	3.30	2.01E-09	0.	2.33E-20	0.	4.08E-11	0.	0.	1.03E-08	0.	0.	0.	0.	1.23E-08
116	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
117	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
118	3.00	2.43E-10	0.	1.63E-22	0.	8.82E-12	0.	0.	1.04E-08	0.	0.	0.	0.	1.06E-08
119	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
120	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
121	2.70	1.67E-11	0.	2.90E-23	0.	6.07E-14	0.	0.	9.13E-09	0.	0.	0.	0.	9.14E-09
122	2.60	2.04E-12	0.	3.83E-24	0.	5.63E-15	0.	0.	8.56E-09	0.	0.	0.	0.	8.56E-09
123	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
124	2.40	0.	2.27E-21	0.	0.	2.19E-17	0.	0.	7.16E-09	0.	0.	0.	0.	7.16E-09
125	2.30	0.	3.12E-19	0.	0.	0.	0.	0.	6.26E-09	0.	0.	0.	0.	6.26E-09
126	2.20	0.	3.41E-19	0.	0.	0.	0.	0.	5.39E-09	0.	0.	0.	0.	5.39E-09
127	2.10	0.	3.14E-18	0.	0.	0.	0.	0.	4.49E-09	0.	0.	0.	0.	4.49E-09
128	2.00	0.	3.95E-18	0.	0.	0.	0.	0.	3.40E-09	0.	0.	0.	0.	3.40E-09
129	1.90	0.	3.46E-17	0.	0.	0.	0.	0.	2.58E-09	0.	0.	0.	0.	2.58E-09
130	1.80	0.	1.46E-16	0.	0.	0.	0.	0.	1.72E-09	0.	0.	0.	0.	1.72E-09
131	1.70	0.	4.14E-17	0.	0.	0.	0.	0.	1.10E-09	0.	0.	0.	0.	1.10E-09
132	1.60	0.	9.31E-17	0.	0.	0.	0.	0.	6.79E-10	0.	0.	0.	0.	6.79E-10
133	1.50	0.	3.47E-17	0.	0.	0.	0.	0.	2.79E-10	0.	0.	0.	0.	2.79E-10
134	1.40	0.	1.86E-16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.86E-16
135	1.30	0.	2.43E-17	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	2.43E-17
136	1.20	0.	1.55E-16	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-16
137	1.10	0.	1.82E-17	0.	0.	0.	0.	8.57E-11	0.	0.	0.	0.	0.	8.57E-11
138	1.00	0.	5.11E-17	0.	0.	0.	0.	1.86E-11	0.	0.	0.	0.	0.	1.86E-11
139	0.90	0.	1.15E-17	0.	0.	0.	0.	6.86E-10	0.	0.	0.	0.	0.	6.86E-10
140	0.80	0.	6.32E-18	0.	0.	0.	0.	1.98E-10	0.	0.	0.	0.	0.	1.98E-10
141	0.70	0.	1.04E-18	0.	0.	0.	0.	3.93E-09	0.	0.	0.	0.	0.	3.90E-09
142	0.60	0.	1.19E-23	0.	0.	0.	0.	1.07E-09	0.	0.	0.	0.	0.	1.07E-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	O& 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.	2.78E-09	0.	0.	0.	0.	0.	0.	0.	2.78E-09
7	10.10	0.	0.	1.88E-09	0.	0.	0.	0.	0.	0.	0.	1.88E-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	2.49E-11	0.	0.	0.	0.	0.	0.	0.	2.16E-03
16	9.20	0.	3.07E-03	6.09E-12	0.	0.	0.	0.	0.	0.	0.	3.07E-03
17	9.10	0.	4.06E-03	9.15E-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	1.25E-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	1.71E-13	0.	0.	0.	0.	0.	0.	0.	5.87E-03
23	8.50	0.	5.60E-03	7E-13	0.	0.	0.	0.	0.	0.	0.	5.60E-03
24	8.40	0.	5.26E-03	4E-13	0.	0.	0.	0.	0.	0.	0.	5.26E-03
25	8.30	0.	4.88E-03	8E-14	0.	0.	0.	0.	0.	0.	0.	4.88E-03
26	8.20	0.	4.51E-03	3.40E-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.	0.	1.95E-03
34	7.40	0.	1.66E-03	2.10E-16	0.	7.57E-09	0.	0.	0.	0.	0.	1.66E-03
35	7.30	0.	1.39E-03	1.10E-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- 4
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	1.58E-05	0.	4.00E-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-08	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	5.24E-07	0.	9.53E-20	1.79E-07	5.31E-06	0.	0.	0.	0.	0.	6.02E-06
45	6.30	1.76E-07	0.	1.54E-20	4.27E-07	3.05E-06	0.	0.	0.	0.	0.	3.65E-06
46	6.20	4.70E-08	0.	2.00E-21	4.00E-07	6.57E-07	0.	0.	0.	0.	0.	1.10E-06
47	6.10	1.11E-08	0.	2.66E-22	6.92E-07	1.09E-05	0.	0.	0.	0.	0.	1.18E-05
48	6.00	2.77E-09	0.	2.88E-23	2.49E-07	1.35E-06	0.	0.	0.	0.	0.	1.61E-06
49	5.90	4.24E-10	0.	1.61E-24	3.33E-07	7.04E-07	0.	0.	0.	0.	0.	1.04E-06
50	5.80	4.57E-11	0.	2.98E-26	3.26E-07	2.19E-06	0.	0.	0.	0.	0.	2.52E-06
51	5.70	3.04E-12	0.	0.	2.08E-07	1.28E-07	0.	0.	0.	0.	0.	3.36E-07

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	1.08E-13	0.	0.	0.	5.31E-08	1.49E-06	0.	0.	0.	0.	0.	0.	1.55E-06
53	5.50	0.	0.	0.	0.	1.26E-07	4.65E-06	0.	0.	0.	0.	0.	0.	4.78E-06
54	5.40	0.	0.	0.	0.	7.65E-08	1.86E-07	0.	0.	0.	0.	0.	0.	2.62E-07
55	5.30	0.	0.	0.	0.	6.01E-08	2.20E-06	0.	0.	0.	0.	0.	0.	2.26E-06
56	5.20	0.	0.	0.	0.	4.48E-08	7.89E-07	0.	0.	0.	0.	0.	0.	8.34E-07
57	5.10	0.	0.	0.	0.	2.67E-08	3.27E-07	0.	1.78E-10	0.	0.	0.	0.	3.54E-07
58	5.00	3.82E-07	0.	0.	0.	1.41E-08	5.63E-07	0.	1.84E-10	0.	0.	0.	0.	9.60E-07
59	4.90	5.11E-07	0.	0.	0.	1.17E-08	7.86E-08	0.	1.91E-10	0.	0.	0.	0.	5.94E-07
60	4.80	5.05E-07	0.	0.	0.	1.29E-08	1.60E-07	0.	1.96E-10	0.	0.	0.	0.	6.78E-07
61	4.70	3.75E-07	0.	0.	0.	8.26E-09	1.60E-08	0.	2.00E-10	0.	0.	0.	0.	4.00E-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	1.83E-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.	2.53E-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.	5.76E-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.	3.76E-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.	2.53E-24	0.	6.02E-14	0.	0.	3.08E-10	0.	0.	0.	0.	3.06E-10
81	2.70	1.64E-12	0.	2.90E-24	0.	6.03E-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	7.26E-15	0.	1.74E-25	0.	4.60E-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.	1.82E-18	0.	0.	0.	0.	8.50E-12	0.	0.	0.	0.	0.	8.50E-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.	3.87E-10	0.	0.	0.	0.	0.	3.87E-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) 2000. 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.	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.	4.08E-10	0.	0.	0.	0.	0.	0.	0.	4.08E-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	3.03E-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	4.09E-17	0.	1.60E-10	0.	0.	0.	0.	0.	1.83E-04
34	7.40	0.	1.56E-04	2.10E-17	0.	7.35E-10	0.	0.	0.	0.	0.	1.56E-04
35	7.30	0.	1.30E-04	1.10E-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	2.40E-06	0.	7.77E-19	0.	7.48E-08	0.	0.	0.	0.	0.	2.47E-06
40	6.80	1.49E-06	0.	4.00E-19	0.	1.36E-08	0.	0.	0.	0.	0.	1.50E-06
41	6.70	7.60E-07	0.	1.96E-19	0.	2.01E-07	0.	0.	0.	0.	0.	9.60E-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	4.94E-08	0.	9.53E-21	1.74E-08	5.16E-07	0.	0.	0.	0.	0.	5.83E-07
45	6.30	1.66E-08	0.	1.54E-21	4.15E-08	2.96E-07	0.	0.	0.	0.	0.	3.54E-07
46	6.20	4.43E-09	0.	2.00E-22	3.89E-08	6.38E-08	0.	0.	0.	0.	0.	1.07E-07
47	6.10	1.05E-09	0.	2.66E-23	6.72E-08	1.05E-06	0.	0.	0.	0.	0.	1.12E-06
48	6.00	2.61E-10	0.	2.88E-24	2.42E-08	1.32E-07	0.	0.	0.	0.	0.	1.56E-07
49	5.90	4.00E-11	0.	1.60E-25	3.24E-08	6.84E-08	0.	0.	0.	0.	0.	1.01E-07
50	5.80	4.31E-12	0.	2.98E-27	3.17E-08	2.13E-07	0.	0.	0.	0.	0.	2.45E-07
51	5.70	2.87E-13	0.	0.	2.02E-08	1.25E-08	0.	0.	0.	0.	0.	3.26E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. 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	1.02E-14	0.	0.	0.	5.16E-09	1.45E-07	0.	0.	0.	0.	0.	0.	1.50E-07
53	5.50	0.	0.	0.	0.	1.23E-08	6.46E-07	0.	0.	0.	0.	0.	0.	6.58E-07
54	5.40	0.	0.	0.	0.	7.43E-09	1.81E-08	0.	0.	0.	0.	0.	0.	2.55E-08
55	5.30	0.	0.	0.	0.	5.83E-09	2.13E-07	0.	0.	0.	0.	0.	0.	2.19E-07
56	5.20	0.	0.	0.	0.	4.35E-09	7.67E-08	0.	0.	0.	0.	0.	0.	8.10E-08
57	5.10	0.	0.	0.	0.	2.59E-09	3.18E-08	0.	5.32E-12	0.	0.	0.	0.	3.44E-08
58	5.00	3.60E-08	0.	0.	0.	1.37E-09	5.47E-08	0.	5.50E-12	0.	0.	0.	0.	9.21E-08
59	4.90	4.82E-08	0.	0.	0.	1.13E-09	6.86E-09	0.	5.69E-12	0.	0.	0.	0.	5.62E-08
60	4.80	4.77E-08	0.	0.	0.	1.26E-09	1.55E-08	0.	5.84E-12	0.	0.	0.	0.	6.44E-08
61	4.70	3.54E-08	0.	0.	0.	8.02E-10	1.56E-09	0.	5.98E-12	0.	0.	0.	0.	3.78E-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.	4.43E-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.	2.53E-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.	3.58E-22	0.	1.35E-11	0.	0.	7.74E-12	0.	0.	0.	0.	5.48E-10
71	3.70	2.10E-10	0.	5.75E-21	0.	4.21E-12	0.	0.	8.06E-12	0.	0.	0.	0.	2.23E-10
72	3.60	1.23E-10	0.	1.03E-22	0.	4.79E-12	0.	0.	8.41E-12	0.	0.	0.	0.	1.36E-10
73	3.50	7.36E-11	0.	1.40E-21	0.	1.25E-12	0.	0.	8.81E-12	0.	0.	0.	0.	8.36E-11
74	3.40	3.36E-11	0.	3.36E-23	0.	1.43E-12	0.	0.	9.23E-12	0.	0.	0.	0.	4.43E-11
75	3.30	1.86E-11	0.	2.33E-22	0.	3.92E-13	0.	0.	9.51E-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.	1.83E-24	0.	8.50E-14	0.	0.	9.63E-12	0.	0.	0.	0.	1.20E-11
79	2.90	9.81E-13	0.	3.22E-24	0.	2.20E-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.	3.46E-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.	1.55E-18	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	1.55E-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.	1.15E-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.	1.04E-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-09 (1.0E-06 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.	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.	2.78E-11	0.	0.	0.	0.	0.	0.	0.	2.78E-11
7	10.10	0.	0.	1.88E-11	0.	0.	0.	0.	0.	0.	0.	1.88E-11
8	10.00	0.	0.	7.00E-12	0.	0.	0.	0.	0.	0.	0.	7.00E-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	4.85E-13	0.	0.	0.	0.	0.	0.	0.	2.64E-06
14	9.40	0.	9.78E-06	3.14E-13	0.	0.	0.	0.	0.	0.	0.	9.78E-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	6.09E-14	0.	0.	0.	0.	0.	0.	0.	2.41E-05
17	9.10	0.	3.18E-05	9.15E-14	0.	0.	0.	0.	0.	0.	0.	3.18E-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	4.15E-15	0.	0.	0.	0.	0.	0.	0.	4.79E-05
22	8.60	0.	4.60E-05	.71E-15	0.	0.	0.	0.	0.	0.	0.	4.60E-05
23	8.50	0.	4.38E-05	..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.	3.25E-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.	4.30E-14	0.	0.	0.	0.	0.	1.81E-05
33	7.50	0.	1.53E-05	4.09E-18	0.	1.46E-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	1.10E-18	0.	4.02E-11	0.	0.	0.	0.	0.	1.09E-05
36	7.20	0.	9.08E-06	5.53E-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.	4.00E-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	4.12E-09	0.	9.53E-22	1.59E-09	4.71E-08	0.	0.	0.	0.	0.	5.20E-08
45	6.30	1.39E-09	0.	1.54E-22	3.79E-09	2.70E-08	0.	0.	0.	0.	0.	3.22E-08
46	6.20	3.69E-10	0.	2.00E-23	3.55E-09	5.83E-09	0.	0.	0.	0.	0.	9.75E-09
47	6.10	8.75E-11	0.	2.66E-24	6.14E-09	9.63E-08	0.	0.	0.	0.	0.	1.03E-07
48	6.00	2.18E-11	0.	2.88E-25	2.21E-09	1.20E-08	0.	0.	0.	0.	0.	1.42E-08
49	5.90	3.34E-12	0.	1.61E-26	2.96E-09	6.25E-09	0.	0.	0.	0.	0.	9.21E-09
50	5.80	3.59E-13	0.	2.98E-28	2.89E-09	1.95E-08	0.	0.	0.	0.	0.	2.24E-08
51	5.70	2.39E-14	0.	0.	1.84E-09	1.14E-09	0.	0.	0.	0.	0.	2.98E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2000. 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	8.49E-16	0.	0.	0.	4.71E-10	1.32E-08	0.	0.	0.	0.	0.	0.	1.37E-08
53	5.50	0.	0.	0.	0.	1.12E-09	5.90E-08	0.	0.	0.	0.	0.	0.	6.01E-08
54	5.40	0.	0.	0.	0.	6.79E-10	1.65E-09	0.	0.	0.	0.	0.	0.	2.33E-09
55	5.30	0.	0.	0.	0.	5.33E-10	1.95E-08	0.	0.	0.	0.	0.	0.	2.00E-08
56	5.20	0.	0.	0.	0.	3.97E-10	7.00E-09	0.	0.	0.	0.	0.	0.	7.40E-09
57	5.10	0.	0.	0.	0.	2.37E-10	2.90E-09	0.	1.40E-13	0.	0.	0.	0.	3.14E-09
58	5.00	3.01E-09	0.	0.	0.	1.25E-10	5.00E-09	0.	1.45E-13	0.	0.	0.	0.	8.13E-09
59	4.90	4.02E-09	0.	0.	0.	1.04E-10	6.26E-10	0.	1.50E-13	0.	0.	0.	0.	4.75E-09
60	4.80	3.97E-09	0.	0.	0.	1.15E-10	1.41E-09	0.	1.54E-13	0.	0.	0.	0.	5.50E-09
61	4.70	2.95E-09	0.	0.	0.	7.33E-11	1.42E-10	0.	1.58E-13	0.	0.	0.	0.	3.17E-09
62	4.60	2.31E-09	0.	0.	0.	5.35E-11	7.80E-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.	1.50E-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.	9.96E-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.	3.56E-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.	3.10E-12
75	3.30	1.55E-12	0.	2.33E-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.	2.88E-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.	3.42E-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.	1.46E-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.	8.82E-15	0.	0.	0.	0.	8.82E-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 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.	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.	4.64E-02	0.	0.	0.	1.79E-06	0.	0.	0.	4.64E-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.	6.47E-03	0.	0.	0.	1.80E-06	0.	0.	0.	6.47E-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	2.04E-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	5.04E-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	6.10E-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	2.05E-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.	1.66E 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	3.45E-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	3.96E-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.	4.05E-01	0.	2.05E-06	8.69E-16	0.	0.	1.83E 00
40	6.80	9.83E-01	0.	6.19E-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	1.04E-15	0.	0.	8.48E-01
44	6.40	5.31E-02	0.	4.04E-09	5.75E-02	3.30E 00	0.	2.14E-06	1.09E-15	0.	0.	3.41E 00
45	6.30	2.19E-02	0.	1.09E-09	1.74E-01	1.17E 00	0.	2.15E-06	1.14E-15	0.	0.	1.37E 00
46	6.20	7.12E-03	0.	2.67E-10	1.79E-01	8.57E-01	0.	2.17E-06	1.20E-15	0.	0.	1.04E 00
47	6.10	2.20E-03	0.	6.18E-11	3.81E-01	5.21E 00	0.	2.19E-06	1.26E-15	0.	0.	5.59E 00
48	6.00	6.70E-04	0.	9.87E-12	1.87E-01	6.26E-01	0.	2.20E-06	1.32E-15	0.	0.	8.14E-01
49	5.90	1.27E-04	0.	6.37E-13	2.48E-01	7.27E-01	0.	2.20E-06	1.39E-15	0.	0.	9.75E-01
50	5.80	1.48E-05	0.	1.36E-14	2.80E-01	1.12E 00	0.	2.17E-06	1.46E-15	0.	0.	1.40E 00
51	5.70	1.04E-06	0.	0.	2.18E-01	2.74E-01	0.	2.04E-06	1.54E-15	0.	0.	4.92E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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	4.08E-08	0.	0.	0.	6.88E-02	1.37E 00	0.	0.	1.89E-06	1.63E-15	0.	0.	1.45E 00
53	5.50	0.	0.	0.	0.	1.47E-01	2.88E 00	0.	0.	1.90E-06	1.72E-15	0.	0.	3.03E 00
54	5.40	0.	0.	0.	0.	9.65E-02	3.42E-01	0.	0.	1.91E-06	1.82E-15	0.	0.	4.39E-01
55	5.30	0.	0.	0.	0.	9.30E-02	1.61E 00	0.	0.	1.93E-06	1.92E-15	0.	0.	1.71E 00
56	5.20	0.	0.	0.	0.	7.99E-02	4.05E-01	0.	0.	1.94E-06	2.03E-15	0.	0.	5.74E-01
57	5.10	0.	0.	0.	0.	6.02E-02	4.88E-01	0.	1.47E-02	1.96E-06	2.16E-15	0.	0.	5.63E-01
58	5.00	2.39E-01	0.	0.	0.	3.91E-02	5.35E-01	0.	1.48E-02	1.97E-06	2.29E-15	0.	0.	8.20E-01
59	4.90	3.91E-01	0.	0.	0.	3.57E-02	1.87E-01	0.	1.48E-02	1.99E-06	2.43E-15	0.	0.	6.29E-01
60	4.80	4.85E-01	0.	0.	0.	3.70E-02	2.51E-01	0.	1.49E-02	2.00E-06	2.59E-15	0.	0.	7.87E-01
61	4.70	4.38E-01	0.	0.	0.	2.88E-02	7.20E-02	0.	1.49E-02	2.02E-06	2.76E-15	0.	0.	5.53E-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	3.16E-01	0.	4.30E-11	0.	1.57E-02	2.87E-02	0.	1.51E-02	2.06E-06	3.14E-15	0.	0.	3.76E-01
64	4.40	2.39E-01	0.	4.75E-10	0.	1.24E-02	3.90E-02	0.	1.52E-02	2.07E-06	3.36E-15	0.	0.	3.06E-01
65	4.30	1.64E-01	0.	2.31E-10	0.	8.89E-03	9.86E-03	0.	1.53E-02	2.09E-06	3.60E-15	0.	0.	1.99E-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.	1.74E-10	0.	5.01E-03	3.26E-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	3.40E-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	2.16E-06	5.21E-15	0.	0.	5.01E-02
71	3.70	1.74E-02	0.	7.05E-09	1.34E-15	9.81E-04	0.	0.	1.58E-02	2.07E-06	5.65E-15	0.	0.	3.42E-02
72	3.60	1.20E-02	0.	5.16E-10	1.13E-15	1.12E-03	0.	0.	1.59E-02	1.04E-06	6.13E-15	0.	0.	2.91E-02
73	3.50	8.35E-03	0.	2.85E-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.	1.61E-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	7.75E-04	0.	2.63E-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	4.30E-04	0.	2.35E-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.	1.46E-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.	3.10E-04
96	1.20	0.	1.96E-07	0.	0.	0.	0.	0.	0.	0.	1.66E-13	0.	0.	1.90E-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.	3.79E-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 (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.	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.	2.46E 01	8.20E-05	0.	0.	0.	2.34E-07	0.	0.	0.	2.46E 01
17	9.10	0.	3.16E 01	9.94E-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	3.50E-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.	4.06E 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.	3.63E 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	2.05E-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.	2.96E-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.	1.68E-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	5.19E-03	0.	4.04E-10	5.68E-03	3.26E-01	0.	2.73E-07	1.08E-16	0.	0.	3.37E-01
45	6.30	2.13E-03	0.	1.09E-10	1.72E-02	1.16E-01	0.	2.75E-07	1.13E-16	0.	0.	1.35E-01
46	6.20	6.95E-04	0.	2.67E-11	1.77E-02	8.46E-02	0.	2.77E-07	1.18E-16	0.	0.	1.03E-01
47	6.10	2.14E-04	0.	6.19E-12	3.76E-02	5.15E-01	0.	2.79E-07	1.24E-16	0.	0.	5.52E-01
48	6.00	6.54E-05	0.	9.87E-13	1.85E-02	6.19E-02	0.	2.82E-07	1.31E-16	0.	0.	8.04E-02
49	5.90	1.24E-05	0.	6.37E-14	2.45E-02	7.18E-02	0.	2.82E-07	1.38E-16	0.	0.	9.64E-02
50	5.80	1.44E-06	0.	1.36E-15	2.77E-02	1.11E-01	0.	2.77E-07	1.45E-16	0.	0.	1.38E-01
51	5.70	1.01E-07	0.	0.	2.15E-02	2.71E-02	0.	2.61E-07	1.53E-16	0.	0.	4.86E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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	3.98E-09	0.	0.	0.	8.69E-03	1.35E-01	0.	0.	2.42E-07	1.61E-16	0.	0.	1.44E-01
53	5.50	0.	0.	0.	0.	1.45E-02	2.85E-01	0.	0.	2.44E-07	1.70E-16	0.	0.	2.99E-01
54	5.40	0.	0.	0.	0.	9.53E-03	3.38E-02	0.	0.	2.45E-07	1.80E-16	0.	0.	4.34E-02
55	5.30	0.	0.	0.	0.	9.19E-03	1.60E-01	0.	0.	2.46E-07	1.90E-16	0.	0.	1.69E-01
56	5.20	0.	0.	0.	0.	7.89E-03	4.89E-02	0.	0.	2.48E-07	2.01E-16	0.	0.	5.68E-02
57	5.10	0.	0.	0.	0.	5.94E-03	4.83E-02	0.	4.54E-04	2.50E-07	2.13E-16	0.	0.	5.47E-02
58	5.00	2.34E-02	0.	0.	0.	3.86E-03	5.29E-02	0.	4.56E-04	2.52E-07	2.26E-16	0.	0.	8.06E-02
59	4.90	3.82E-02	0.	0.	0.	3.53E-03	1.84E-02	0.	4.57E-04	2.54E-07	2.41E-16	0.	0.	6.06E-02
60	4.80	4.73E-02	0.	0.	0.	3.66E-03	2.48E-02	0.	4.59E-04	2.56E-07	2.56E-16	0.	0.	7.62E-02
61	4.70	4.28E-02	0.	0.	0.	2.76E-03	7.11E-03	0.	4.61E-04	2.58E-07	2.72E-16	0.	0.	5.31E-02
62	4.60	4.08E-02	0.	0.	0.	2.36E-03	1.09E-02	0.	4.63E-04	2.61E-07	2.91E-16	0.	0.	5.45E-02
63	4.50	3.08E-02	0.	4.30E-12	0.	1.55E-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.	8.79E-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.	4.95E-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-10	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.	7.03E-10	3.28E-16	9.69E-05	0.	0.	4.89E-04	2.69E-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	7.85E-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.	7.22E-11	6.59E-16	2.09E-05	0.	0.	4.97E-04	1.31E-07	7.87E-16	0.	0.	8.32E-04
76	3.20	1.85E-04	0.	9.44E-12	1.24E-14	1.99E-05	0.	0.	4.96E-04	1.31E-07	8.63E-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.	5.30E-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	5.19E-16	5.17E-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.	4.13E-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.	1.28E-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.	5.50E-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.	8.36E-07	0.	0.	2.84E-14	0.	0.	8.45E-07
99	0.90	0.	3.61E-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.	10.00E-06
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) 3000. 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 (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.	1.70E-03	0.	0.	0.	2.27E-08	0.	0.	0.	1.70E-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.	6.00E-05	0.	0.	0.	2.30E-08	0.	0.	0.	6.00E-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.	9.25E-01
15	9.30	0.	1.60E 00	2.05E-05	0.	0.	0.	2.32E-08	0.	0.	0.	1.60E 00
16	9.20	0.	2.28E 00	8.22E-06	0.	0.	0.	2.33E-08	0.	0.	0.	2.28E 00
17	9.10	0.	2.92E 00	9.95E-06	0.	0.	0.	2.34E-08	0.	0.	0.	2.92E 00
18	9.00	0.	3.56E 00	5.06E-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	2.81E-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	6.55E-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	2.58E-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	5.08E-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	1.30E-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.	3.04E-05	0.	2.53E-08	6.69E-18	0.	0.	1.49E 00
35	7.30	0.	1.33E 00	5.51E-09	0.	6.45E-05	0.	2.54E-08	6.97E-18	0.	0.	1.33E 00
36	7.20	0.	1.15E 00	3.46E-09	0.	9.26E-04	0.	2.56E-08	7.27E-18	0.	0.	1.15E 00
37	7.10	0.	9.76E-01	2.34E-09	0.	2.23E-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.	3.75E-10	0.	1.61E-02	0.	2.66E-08	9.02E-18	0.	0.	2.13E-02
42	6.60	2.58E-03	0.	2.31E-10	0.	7.12E-03	0.	2.68E-08	9.44E-18	0.	0.	9.70E-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	4.79E-04	0.	4.04E-11	5.47E-04	3.14E-02	0.	2.73E-08	1.04E-17	0.	0.	3.24E-02
45	6.30	1.97E-04	0.	1.09E-11	1.65E-03	1.11E-02	0.	2.75E-08	1.00E-17	0.	0.	1.30E-02
46	6.20	6.42E-05	0.	2.67E-12	1.70E-03	8.14E-03	0.	2.77E-08	1.14E-17	0.	0.	9.91E-03
47	6.10	1.98E-05	0.	6.19E-13	3.62E-03	4.95E-02	0.	2.79E-08	1.20E-17	0.	0.	5.31E-02
48	6.00	6.05E-06	0.	9.89E-14	1.78E-03	5.95E-03	0.	2.81E-08	1.26E-17	0.	0.	7.74E-03
49	5.90	1.14E-06	0.	6.38E-15	2.36E-03	6.91E-03	0.	2.81E-08	1.32E-17	0.	0.	9.27E-03
50	5.80	1.33E-07	0.	1.36E-16	2.67E-03	1.07E-02	0.	2.77E-08	1.39E-17	0.	0.	1.33E-02
51	5.70	9.37E-09	0.	0.	2.07E-03	2.61E-03	0.	2.60E-08	1.47E-17	0.	0.	4.68E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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	3.67E-10	0.	0.	0.	8.36E-04	1.30E-02	0.	0.	2.42E-08	1.55E-17	0.	0.	1.38E-02
53	5.50	0.	0.	0.	0.	1.39E-03	2.74E-02	0.	0.	2.43E-08	1.63E-17	0.	0.	2.80E-02
54	5.40	0.	0.	0.	0.	9.17E-04	3.25E-03	0.	0.	2.44E-08	1.73E-17	0.	0.	4.17E-03
55	5.30	0.	0.	0.	0.	9.84E-04	1.53E-02	0.	0.	2.46E-08	1.83E-17	0.	0.	1.62E-02
56	5.20	0.	0.	0.	0.	7.59E-04	4.70E-03	0.	0.	2.47E-08	1.93E-17	0.	0.	5.46E-03
57	5.10	0.	0.	0.	0.	5.72E-04	4.64E-03	0.	1.33E-05	2.49E-08	2.05E-17	0.	0.	5.23E-03
58	5.00	2.16E-03	0.	0.	0.	3.72E-04	5.09E-03	0.	1.33E-05	2.52E-08	2.18E-17	0.	0.	7.63E-03
59	4.90	3.53E-03	0.	0.	0.	3.39E-04	1.77E-03	0.	1.33E-05	2.54E-08	2.31E-17	0.	0.	5.66E-03
60	4.80	4.37E-03	0.	0.	0.	3.32E-04	2.30E-03	0.	1.34E-05	2.56E-08	2.46E-17	0.	0.	7.12E-03
61	4.70	3.95E-03	0.	0.	0.	2.66E-04	6.84E-04	0.	1.35E-05	2.58E-08	2.62E-17	0.	0.	4.92E-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.	4.30E-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	1.44E-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	1.00E-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	1.57E-04	0.	7.06E-11	1.00E-16	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	8.39E-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.	2.85E-11	2.40E-15	4.21E-06	0.	0.	1.44E-05	2.26E-08	6.34E-17	0.	0.	9.40E-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	2.90E-05	0.	7.23E-12	2.01E-16	2.81E-06	0.	0.	1.45E-05	1.31E-08	7.57E-17	0.	0.	4.55E-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	6.75E-18	1.05E-06	0.	0.	1.44E-05	1.31E-08	9.13E-17	0.	0.	2.49E-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.	2.35E-13	5.27E-16	2.83E-07	0.	0.	1.42E-05	1.32E-08	1.11E-16	0.	0.	1.63E-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	1.95E-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.	1.26E-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.	1.10E-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	9.82E-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.	8.27E-08	0.	0.	2.05E-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.	3.75E-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.	8.00E-15	0.	0.	3.08E-06
102	0.60	0.	1.84E-14	0.	0.	0.	0.	3.25E-06	0.	0.	1.27E-14	0.	0.	3.25E-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	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	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.	3.50E-05	0.	0.	0.	1.92E-09	0.	0.	0.	3.50E-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.	6.50E-06	0.	0.	0.	1.94E-09	0.	0.	0.	6.50E-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	2.28E-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.	1.78E-01	8.24E-07	0.	0.	0.	1.96E-09	0.	0.	0.	1.78E-01
17	9.10	0.	2.28E-01	9.99E-07	0.	0.	0.	1.97E-09	0.	0.	0.	2.28E-01
18	9.00	0.	2.78E-01	5.06E-07	0.	0.	0.	1.98E-09	0.	0.	0.	2.78E-01
19	8.90	0.	3.28E-01	3.52E-07	0.	0.	0.	1.98E-09	0.	0.	0.	3.28E-01
20	8.80	0.	3.41E-01	2.82E-07	0.	0.	0.	1.99E-09	0.	0.	0.	3.41E-01
21	8.70	0.	3.25E-01	1.35E-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	2.98E-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.	2.28E-01	1.38E-08	0.	0.	0.	2.05E-09	4.51E-19	0.	0.	2.28E-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	6.15E-09	0.	0.	0.	2.07E-09	4.86E-19	0.	0.	1.95E-01
30	7.80	0.	1.79E-01	5.09E-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	5.25E-19	0.	0.	1.63E-01
32	7.60	0.	1.47E-01	2.06E-09	0.	1.86E-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.	9.00E-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	6.30E-04	0.	1.48E-10	0.	3.55E-04	0.	2.19E-09	7.00E-19	0.	0.	9.85E-04
39	6.90	1.00E-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	4.01E-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	9.05E-05	0.	1.16E-11	0.	6.04E-04	0.	2.28E-09	8.74E-19	0.	0.	6.95E-04
44	6.40	3.73E-05	0.	4.06E-12	4.83E-05	2.78E-03	0.	2.29E-09	9.16E-19	0.	0.	2.86E-03
45	6.30	1.54E-05	0.	1.09E-12	1.46E-04	9.83E-04	0.	2.31E-09	9.61E-19	0.	0.	1.14E-03
46	6.20	5.00E-06	0.	2.68E-13	1.50E-04	7.20E-04	0.	2.33E-09	1.01E-18	0.	0.	8.75E-04
47	6.10	1.54E-06	0.	6.21E-14	3.20E-04	4.38E-03	0.	2.35E-09	1.06E-18	0.	0.	4.70E-03
48	6.00	4.71E-07	0.	9.92E-15	1.57E-04	5.26E-04	0.	2.36E-09	1.11E-18	0.	0.	6.64E-04
49	5.90	8.91E-08	0.	6.40E-16	2.09E-04	6.11E-04	0.	2.36E-09	1.17E-18	0.	0.	8.20E-04
50	5.80	1.04E-08	0.	1.36E-17	2.36E-04	9.42E-04	0.	2.33E-09	1.23E-18	0.	0.	1.18E-03
51	5.70	7.30E-10	0.	0.	1.83E-04	2.30E-04	0.	2.19E-09	1.30E-18	0.	0.	4.13E-04

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	2.86E-11	0.	0.	0.	7.39E-05	1.15E-03	0.	0.	2.03E-09	1.37E-18	0.	0.	1.22E-03
53	5.50	0.	0.	0.	0.	1.23E-04	2.42E-03	0.	0.	2.04E-09	1.44E-18	0.	0.	2.54E-03
54	5.40	0.	0.	0.	0.	8.11E-05	2.88E-04	0.	0.	2.05E-09	1.53E-18	0.	0.	3.69E-04
55	5.30	0.	0.	0.	0.	7.82E-05	1.36E-03	0.	0.	2.07E-09	1.62E-18	0.	0.	1.43E-03
56	5.20	0.	0.	0.	0.	6.71E-05	4.16E-04	0.	0.	2.08E-09	1.71E-18	0.	0.	4.83E-04
57	5.10	0.	0.	0.	0.	5.06E-05	4.11E-04	0.	3.28E-07	2.10E-09	1.81E-18	0.	0.	4.61E-04
58	5.00	1.68E-04	0.	0.	0.	3.29E-05	4.50E-04	0.	3.29E-07	2.12E-09	1.92E-18	0.	0.	6.51E-04
59	4.90	2.75E-04	0.	0.	0.	3.00E-05	1.57E-04	0.	3.30E-07	2.13E-09	2.04E-18	0.	0.	4.62E-04
60	4.80	3.41E-04	0.	0.	0.	3.11E-05	2.11E-04	0.	3.31E-07	2.15E-09	2.17E-18	0.	0.	5.83E-04
61	4.70	3.08E-04	0.	0.	0.	2.35E-05	6.85E-05	0.	3.33E-07	2.17E-09	2.32E-18	0.	0.	3.92E-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.	7.48E-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.	3.22E-06	1.18E-06	0.	3.46E-07	2.28E-09	3.76E-18	0.	0.	4.58E-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	2.20E-05	0.	1.23E-12	1.47E-16	1.84E-06	0.	0.	3.50E-07	2.26E-09	4.38E-18	0.	0.	2.46E-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.	3.55E-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.	6.60E-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	1.75E-09	0.	0.	3.34E-07	1.11E-09	1.22E-17	0.	0.	4.19E-07
82	2.60	1.73E-08	0.	9.60E-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	8.40E-10	0.	2.64E-16	5.28E-19	4.40E-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	1.98E-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	7.74E-10	5.88E-17	0.	0.	5.73E-08
93	1.50	0.	9.73E-11	0.	0.	0.	0.	0.	3.25E-08	3.93E-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.	8.78E-17	0.	0.	1.76E-08
95	1.30	0.	7.36E-11	0.	0.	0.	0.	0.	6.89E-09	0.	1.10E-16	0.	0.	6.97E-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.	5.51E-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-03 (10.0E-04 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.	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.	4.70E-06	0.	0.	0.	1.11E-10	0.	0.	0.	4.70E-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.	6.07E-07	0.	0.	0.	1.12E-10	0.	0.	0.	6.07E-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	2.30E-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	8.30E-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.	1.50E-02	3.54E-08	0.	0.	0.	1.15E-10	0.	0.	0.	1.50E-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	6.18E-09	0.	0.	0.	1.17E-10	0.	0.	0.	1.33E-02
25	8.30	0.	1.26E-02	3.01E-09	0.	0.	0.	1.18E-10	0.	0.	0.	1.26E-02
26	8.20	0.	1.18E-02	2.59E-09	0.	0.	0.	1.19E-10	0.	0.	0.	1.18E-02
27	8.10	0.	1.10E-02	1.39E-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	2.98E-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.	5.31E-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	9.70E-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	1.80E-06	0.	4.09E-13	3.37E-06	1.93E-04	0.	1.33E-10	6.38E-20	0.	0.	1.99E-04
45	6.30	7.41E-07	0.	1.10E-13	1.02E-05	6.85E-05	0.	1.34E-10	6.69E-20	0.	0.	7.94E-05
46	6.20	2.81E-07	0.	2.70E-14	1.05E-05	5.01E-05	0.	1.35E-10	7.02E-20	0.	0.	6.09E-05
47	6.10	7.44E-08	0.	6.26E-15	2.23E-05	3.05E-04	0.	1.36E-10	7.37E-20	0.	0.	3.27E-04
48	6.00	2.07E-08	0.	9.99E-16	1.10E-05	3.67E-05	0.	1.37E-10	7.74E-20	0.	0.	4.78E-05
49	5.90	4.29E-09	0.	6.45E-17	1.45E-05	4.25E-05	0.	1.37E-10	8.15E-20	0.	0.	5.71E-05
50	5.80	5.90E-10	0.	1.37E-18	1.64E-05	6.56E-05	0.	1.35E-10	8.58E-20	0.	0.	8.20E-05
51	5.70	1.52E-11	0.	0.	1.28E-05	1.61E-05	0.	1.27E-10	9.04E-20	0.	0.	2.88E-03

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	C- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.38E-12	0.	0.	0.	5.15E-06	8.00E-05	0.	0.	1.18E-10	9.53E-20	0.	0.	8.52E-05
53	5.50	0.	0.	0.	0.	8.59E-06	1.69E-04	0.	0.	1.19E-10	1.01E-19	0.	0.	1.77E-04
54	5.40	0.	0.	0.	0.	5.65E-06	2.00E-05	0.	0.	1.19E-10	1.06E-19	0.	0.	2.57E-05
55	5.30	0.	0.	0.	0.	5.45E-06	9.45E-05	0.	0.	1.20E-10	1.12E-19	0.	0.	10.00E-05
56	5.20	0.	0.	0.	0.	4.68E-06	2.90E-05	0.	0.	1.21E-10	1.19E-19	0.	0.	3.36E-05
57	5.10	0.	0.	0.	0.	3.52E-06	2.86E-05	0.	5.02E-09	1.22E-10	1.26E-19	0.	0.	3.21E-05
58	5.00	8.10E-06	0.	0.	0.	2.29E-06	3.13E-05	0.	5.03E-09	1.23E-10	1.34E-19	0.	0.	4.17E-05
59	4.90	1.33E-05	0.	0.	0.	2.09E-06	1.09E-05	0.	5.04E-09	1.24E-10	1.42E-19	0.	0.	2.63E-05
60	4.80	1.64E-05	0.	0.	0.	2.17E-06	1.47E-05	0.	5.07E-09	1.25E-10	1.51E-19	0.	0.	3.33E-05
61	4.70	1.48E-05	0.	0.	0.	1.64E-06	4.21E-06	0.	5.09E-09	1.26E-10	1.61E-19	0.	0.	2.07E-05
62	4.60	1.41E-05	0.	0.	0.	1.40E-06	6.46E-06	0.	5.12E-09	1.27E-10	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-10	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-10	1.97E-19	0.	0.	1.12E-05
65	4.30	5.35E-06	0.	2.34E-14	0.	5.21E-07	5.77E-07	0.	5.20E-09	1.30E-10	2.11E-19	0.	0.	6.68E-06
66	4.20	3.97E-06	0.	4.01E-13	0.	4.29E-07	6.95E-07	0.	5.23E-09	1.31E-10	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-10	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-10	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-10	2.82E-19	0.	0.	1.35E-06
70	3.80	1.09E-06	0.	1.24E-13	5.61E-17	1.28E-07	0.	0.	5.36E-09	1.31E-10	3.05E-19	0.	0.	1.22E-06
71	3.70	9.89E-07	0.	7.13E-13	1.27E-17	5.74E-08	0.	0.	5.40E-09	1.29E-10	3.31E-19	0.	0.	6.52E-07
72	3.60	4.07E-07	0.	5.23E-14	1.06E-17	6.56E-08	0.	0.	5.43E-09	1.21E-10	3.59E-19	0.	0.	4.78E-07
73	3.50	2.63E-07	0.	2.88E-13	3.03E-16	2.60E-08	0.	0.	5.46E-09	1.11E-10	3.91E-19	0.	0.	3.14E-07
74	3.40	1.70E-07	0.	2.49E-14	4.30E-19	2.93E-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	1.18E-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	6.46E-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	6.84E-19	0.	0.	2.17E-08
80	2.80	1.12E-08	0.	5.00E-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	1.28E-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.	9.60E-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.	3.00E-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.	2.60E-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	5.38E-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	8.09E-11	4.97E-18	0.	0.	5.27E-10
94	1.40	0.	2.45E-11	0.	0.	0.	0.	0.	2.65E-10	0.	6.11E-18	0.	0.	2.89E-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.	1.99E-11	0.	0.	0.	0.	0.	0.	0.	9.71E-18	0.	0.	1.99E-11
97	1.10	0.	5.57E-12	0.	0.	0.	0.	5.09E-10	0.	0.	1.26E-17	0.	0.	9.15E-10
98	1.00	0.	8.90E-12	0.	0.	0.	0.	4.95E-10	0.	0.	1.68E-17	0.	0.	5.84E-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.	1.69E-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.	2.08E-08	0.	0.	7.84E-17	0.	0.	2.08E-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 (IONS)	N P.E.	O P.E.	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.	6.61E-08	0.	0.	0.	3.42E-12	0.	0.	0.	6.61E-08
13	9.50	0.	1.91E-05	3.24E-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	2.09E-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	1.02E-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.	3.36E-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	1.66E-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	1.33E-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.	8.02E-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.	6.22E-08	0.	3.83E-12	2.12E-21	0.	0.	7.49E-05
38	7.00	6.17E-07	0.	1.50E-12	0.	1.12E-06	0.	3.86E-12	2.21E-21	0.	0.	1.74E-06
39	6.90	9.82E-07	0.	9.69E-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	3.66E-08	0.	4.12E-14	1.52E-07	8.76E-06	0.	4.05E-12	2.89E-21	0.	0.	8.95E-06
45	6.30	1.51E-08	0.	1.11E-14	4.61E-07	3.10E-06	0.	4.08E-12	3.03E-21	0.	0.	3.58E-06
46	6.20	4.90E-09	0.	2.73E-15	4.75E-07	2.27E-06	0.	4.11E-12	3.18E-21	0.	0.	2.75E-06
47	6.10	1.51E-09	0.	6.32E-16	1.01E-06	1.38E-05	0.	4.14E-12	3.34E-21	0.	0.	1.48E-05
48	6.00	4.61E-10	0.	1.01E-16	4.96E-07	1.66E-06	0.	4.17E-12	3.51E-21	0.	0.	2.16E-06
49	5.90	8.72E-11	0.	6.51E-18	6.59E-07	1.93E-06	0.	4.17E-12	3.69E-21	0.	0.	2.59E-06
50	5.80	1.02E-11	0.	1.39E-19	7.43E-07	2.97E-06	0.	4.11E-12	3.89E-21	0.	0.	3.71E-06
51	5.70	7.15E-13	0.	0.	5.77E-07	7.27E-07	0.	3.86E-12	4.10E-21	0.	0.	1.30E-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	2.80E-14	0.	0.	0.	2.33E-07	3.62E-06	0.	0.	3.59E-12	4.32E-21	0.	0.	3.86E-06
53	5.50	0.	0.	0.	0.	3.89E-07	7.64E-06	0.	0.	3.61E-12	4.56E-21	0.	0.	8.02E-06
54	5.40	0.	0.	0.	0.	2.56E-07	9.08E-07	0.	0.	3.63E-12	4.82E-21	0.	0.	1.16E-06
55	5.30	0.	0.	0.	0.	2.47E-07	4.28E-06	0.	0.	3.65E-12	5.10E-21	0.	0.	4.53E-06
56	5.20	0.	0.	0.	0.	2.12E-07	1.31E-06	0.	0.	3.67E-12	5.40E-21	0.	0.	1.52E-06
57	5.10	0.	0.	0.	0.	1.60E-07	1.30E-06	0.	3.24E-11	3.70E-12	5.72E-21	0.	0.	1.45E-06
58	5.00	1.65E-07	0.	0.	0.	1.04E-07	1.42E-06	0.	3.25E-11	3.74E-12	6.07E-21	0.	0.	1.69E-06
59	4.90	2.69E-07	0.	0.	0.	9.46E-08	4.93E-07	0.	3.25E-11	3.77E-12	6.45E-21	0.	0.	8.59E-07
60	4.80	3.33E-07	0.	0.	0.	9.82E-08	6.65E-07	0.	3.27E-11	3.80E-12	6.86E-21	0.	0.	1.10E-06
61	4.70	3.02E-07	0.	0.	0.	7.42E-08	1.91E-07	0.	3.29E-11	3.83E-12	7.31E-21	0.	0.	5.67E-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.	4.39E-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	6.09E-08	0.	1.80E-15	0.	1.33E-08	8.50E-09	0.	3.40E-11	4.00E-12	1.10E-20	0.	0.	8.18E-08
68	4.00	4.02E-08	0.	4.82E-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.	3.65E-14	2.30E-19	5.87E-09	2.88E-09	0.	3.44E-11	4.00E-12	1.28E-20	0.	0.	3.22E-08
70	3.80	2.21E-08	0.	1.25E-14	2.66E-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	9.26E-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	1.93E-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.	2.81E-09
76	3.20	1.30E-09	0.	9.64E-16	2.28E-16	5.34E-10	0.	0.	3.53E-11	1.99E-12	2.32E-20	0.	0.	1.87E-09
77	3.10	8.69E-10	0.	1.53E-15	4.05E-19	2.94E-10	0.	0.	3.52E-11	1.99E-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.	2.40E-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.	5.05E-17	4.80E-19	2.66E-11	0.	0.	3.38E-11	1.94E-12	3.46E-20	0.	0.	2.91E-10
81	2.70	8.03E-11	0.	3.23E-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.	3.08E-11	1.96E-12	4.86E-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.	3.15E-11
85	2.30	0.	2.48E-14	0.	0.	0.	0.	0.	2.75E-11	1.99E-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.	1.12E-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.	1.16E-12	0.	0.	0.	0.	0.	8.25E-12	1.62E-12	1.54E-19	0.	0.	1.10E-11
92	1.60	0.	1.31E-12	0.	0.	0.	0.	0.	5.96E-12	1.57E-12	1.85E-19	0.	0.	8.25E-12
93	1.50	0.	9.89E-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.	7.49E-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.	4.40E-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.	8.88E-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.	4.53E-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.	3.55E-18	0.	0.	9.06E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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.	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	2.10E-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	1.02E-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.	3.18E-06
19	8.90	0.	3.75E-06	3.59E-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	1.30E-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.	3.16E-06	6.27E-11	0.	0.	0.	7.12E-14	0.	0.	0.	3.16E-06
25	8.30	0.	3.00E-06	3.05E-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	5.05E-23	0.	0.	2.42E-06
29	7.90	0.	2.23E-06	6.29E-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	8.60E-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.	8.84E-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.	3.67E-08	0.	7.77E-14	7.89E-23	0.	0.	4.82E-08
40	6.80	7.96E-09	0.	6.38E-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.	1.99E-07
42	6.60	2.30E-09	0.	2.36E-14	0.	6.80E-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	4.26E-10	0.	4.14E-15	5.22E-09	3.00E-07	0.	8.08E-14	9.88E-23	0.	0.	3.05E-07
45	6.30	1.75E-10	0.	1.12E-15	1.58E-08	1.06E-07	0.	8.14E-14	1.04E-22	0.	0.	1.22E-07
46	6.20	5.71E-11	0.	2.74E-16	1.62E-08	7.77E-08	0.	8.20E-14	1.09E-22	0.	0.	9.40E-08
47	6.10	1.76E-11	0.	6.35E-17	3.46E-08	4.73E-07	0.	8.26E-14	1.14E-22	0.	0.	5.07E-07
48	6.00	5.38E-12	0.	1.01E-17	1.70E-08	5.68E-08	0.	8.33E-14	1.20E-22	0.	0.	7.38E-08
49	5.90	1.02E-12	0.	6.54E-19	2.25E-08	6.59E-08	0.	8.33E-14	1.26E-22	0.	0.	8.85E-08
50	5.80	1.18E-13	0.	1.39E-20	2.54E-08	1.02E-07	0.	8.20E-14	1.33E-22	0.	0.	1.27E-07
51	5.70	8.33E-15	0.	0.	1.98E-08	2.49E-08	0.	7.70E-14	1.40E-22	0.	0.	4.46E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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	3.27E-16	0.	0.	0.	7.99E-09	1.24E-07	0.	0.	7.16E-14	1.48E-22	0.	0.	1.32E-07
53	5.50	0.	0.	0.	0.	1.33E-08	2.61E-07	0.	0.	7.20E-14	1.56E-22	0.	0.	2.75E-07
54	5.40	0.	0.	0.	0.	0.76E-09	3.11E-08	0.	0.	7.24E-14	1.65E-22	0.	0.	3.98E-08
55	5.30	0.	0.	0.	0.	8.44E-09	1.46E-07	0.	0.	7.28E-14	1.74E-22	0.	0.	1.55E-07
56	5.20	0.	0.	0.	0.	7.25E-09	4.49E-08	0.	0.	7.33E-14	1.85E-22	0.	0.	5.21E-08
57	5.10	0.	0.	0.	0.	5.46E-09	4.43E-08	0.	1.20E-13	7.39E-14	1.96E-22	0.	0.	4.98E-08
58	5.00	1.02E-09	0.	0.	0.	3.55E-09	4.86E-08	0.	1.20E-13	7.46E-14	2.08E-22	0.	0.	5.40E-08
59	4.90	3.14E-09	0.	0.	0.	3.24E-09	1.69E-08	0.	1.20E-13	7.52E-14	2.21E-22	0.	0.	2.33E-08
60	4.80	3.09E-09	0.	0.	0.	3.36E-09	2.28E-08	0.	1.21E-13	7.58E-14	2.35E-22	0.	0.	3.00E-08
61	4.70	3.52E-09	0.	0.	0.	2.54E-09	6.53E-09	0.	1.21E-13	7.64E-14	2.50E-22	0.	0.	1.26E-08
62	4.60	3.35E-09	0.	0.	0.	2.17E-09	1.00E-08	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	2.68E-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.	3.02E-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.	1.81E-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.	4.85E-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	2.98E-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	8.98E-11	0.	0.	1.29E-13	7.83E-14	5.12E-22	0.	0.	2.29E-10
72	3.60	9.63E-11	0.	5.30E-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	5.87E-14	6.60E-22	0.	0.	8.59E-11
75	3.30	2.58E-11	0.	7.41E-16	6.55E-18	1.92E-11	0.	0.	1.31E-13	5.88E-14	7.22E-22	0.	0.	4.51E-11
76	3.20	1.52E-11	0.	9.69E-17	1.24E-16	1.83E-11	0.	0.	1.31E-13	5.88E-14	7.92E-22	0.	0.	3.36E-11
77	3.10	1.01E-11	0.	1.54E-16	2.20E-19	1.01E-11	0.	0.	1.30E-13	5.89E-14	8.71E-22	0.	0.	2.03E-11
78	3.00	6.22E-12	0.	2.70E-17	7.15E-18	6.96E-12	0.	0.	1.29E-13	5.90E-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	5.91E-14	1.06E-21	0.	0.	6.31E-12
80	2.80	2.66E-12	0.	5.07E-18	2.61E-19	9.09E-13	0.	0.	1.25E-13	5.91E-14	1.18E-21	0.	0.	3.74E-12
81	2.70	9.35E-13	0.	3.25E-18	3.29E-18	1.89E-13	0.	0.	1.22E-13	5.91E-14	1.32E-21	0.	0.	1.29E-12
82	2.60	1.97E-13	0.	9.82E-19	7.40E-19	3.49E-14	0.	0.	1.18E-13	5.91E-14	1.48E-21	0.	0.	3.90E-13
83	2.50	9.59E-15	0.	2.70E-19	5.17E-20	4.75E-15	0.	0.	1.14E-13	5.91E-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	5.91E-14	1.88E-21	0.	0.	1.49E-13
85	2.30	0.	2.49E-15	0.	0.	0.	0.	0.	1.02E-13	5.88E-14	2.13E-21	0.	0.	1.43E-13
86	2.20	0.	2.36E-15	0.	0.	0.	0.	0.	9.41E-14	5.87E-14	2.44E-21	0.	0.	1.35E-13
87	2.10	0.	1.52E-14	0.	0.	0.	0.	0.	8.50E-14	5.85E-14	2.80E-21	0.	0.	1.39E-13
88	2.00	0.	1.13E-14	0.	0.	0.	0.	0.	7.16E-14	5.73E-14	3.25E-21	0.	0.	1.20E-13
89	1.90	0.	1.04E-13	0.	0.	0.	0.	0.	6.04E-14	5.90E-14	3.78E-21	0.	0.	2.00E-13
90	1.80	0.	1.92E-13	0.	0.	0.	0.	0.	4.39E-14	5.43E-14	4.45E-21	0.	0.	2.70E-13
91	1.70	0.	1.17E-13	0.	0.	0.	0.	0.	3.05E-14	5.23E-14	5.28E-21	0.	0.	1.80E-13
92	1.60	0.	1.32E-13	0.	0.	0.	0.	0.	2.06E-14	2.73E-14	6.34E-21	0.	0.	1.80E-13
93	1.50	0.	9.94E-14	0.	0.	0.	0.	0.	1.18E-14	1.24E-14	7.70E-21	0.	0.	1.24E-13
94	1.40	0.	2.48E-13	0.	0.	0.	0.	0.	6.31E-15	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.	9.18E-12	0.	0.	5.10E-20	0.	0.	9.20E-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 (1.0E-06 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R (2 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.	3.50E-09	0.	0.	0.	1.23E-15	0.	0.	0.	3.50E-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.	2.10E-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.	4.00E-08
21	8.70	0.	3.31E-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	8.60E-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	2.40E-14	0.	6.82E-11	0.	1.38E-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	4.37E-12	0.	4.15E-16	1.67E-10	9.61E-09	0.	1.46E-15	3.17E-24	0.	0.	9.78E-09
45	6.30	1.00E-12	0.	1.12E-16	5.06E-10	3.40E-09	0.	1.48E-15	3.32E-24	0.	0.	3.91E-09
46	6.20	5.06E-13	0.	2.74E-17	5.21E-10	2.49E-09	0.	1.49E-15	3.49E-24	0.	0.	3.01E-09
47	6.10	1.01E-13	0.	6.35E-18	1.11E-09	1.51E-08	0.	1.50E-15	3.66E-24	0.	0.	1.63E-08
48	6.00	5.52E-14	0.	1.01E-18	5.44E-10	1.82E-09	0.	1.51E-15	3.85E-24	0.	0.	2.37E-09
49	5.90	1.04E-14	0.	6.54E-20	7.23E-10	2.11E-09	0.	1.51E-15	4.05E-24	0.	0.	2.84E-09
50	5.80	1.21E-15	0.	1.39E-21	8.16E-10	3.26E-09	0.	1.49E-15	4.26E-24	0.	0.	4.08E-09
51	5.70	8.15E-17	0.	0.	6.34E-10	7.98E-10	0.	1.40E-15	4.49E-24	0.	0.	1.43E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 3000. 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	3.34E-18	0.	0.	0.	2.56E-10	3.98E-09	0.	0.	1.30E-15	4.74E-24	0.	0.	4.23E-09
53	5.50	0.	0.	0.	0.	4.27E-10	8.38E-09	0.	0.	1.31E-15	5.08E-24	0.	0.	8.80E-09
54	5.40	0.	0.	0.	0.	2.81E-10	9.96E-10	0.	0.	1.31E-15	5.28E-24	0.	0.	1.28E-09
55	5.30	0.	0.	0.	0.	2.71E-10	4.70E-09	0.	0.	1.32E-15	5.59E-24	0.	0.	4.97E-09
56	5.20	0.	0.	0.	0.	2.32E-10	1.44E-09	0.	0.	1.33E-15	5.92E-24	0.	0.	1.67E-09
57	5.10	0.	0.	0.	0.	1.75E-10	1.42E-09	0.	3.88E-16	1.34E-15	6.27E-24	0.	0.	1.60E-09
58	5.00	1.97E-11	0.	0.	0.	1.14E-10	1.56E-09	0.	3.89E-16	1.35E-15	6.66E-24	0.	0.	1.69E-09
59	4.90	3.22E-11	0.	0.	0.	1.04E-10	5.43E-10	0.	3.90E-16	1.36E-15	7.07E-24	0.	0.	6.79E-10
60	4.80	3.99E-11	0.	0.	0.	1.08E-10	7.30E-10	0.	3.92E-16	1.37E-15	7.52E-24	0.	0.	8.77E-10
61	4.70	3.61E-11	0.	0.	0.	8.14E-11	2.09E-10	0.	3.94E-16	1.39E-15	8.01E-24	0.	0.	3.27E-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.	1.55E-10
64	4.40	1.97E-11	0.	4.58E-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.	6.88E-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.	6.55E-11
67	4.10	7.18E-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	4.81E-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	2.85E-12	0.	0.	4.18E-16	1.42E-15	1.64E-23	0.	0.	4.29E-12
72	3.60	9.89E-13	0.	5.30E-17	1.53E-18	3.26E-12	0.	0.	4.20E-16	1.38E-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	7.06E-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	6.06E-15	0.	0.	3.96E-16	7.10E-16	4.22E-23	0.	0.	1.68E-14
82	2.60	2.03E-15	0.	9.82E-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	2.29E-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.	5.65E-15	0.	0.	0.	0.	2.53E-14	0.	0.	6.27E-22	0.	0.	3.10E-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.	1.63E-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.E.	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.	1.40E 00	0.	0.	0.	4.62E-04	5.00E-12	0.	0.	1.40E 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	5.78E-12	0.	0.	4.35E-01
8	10.00	0.	0.	2.68E-01	0.	0.	0.	4.65E-04	5.96E-12	0.	0.	2.68E-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.	1.90E-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.	1.26E-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.	1.66E 02
17	9.10	0.	2.05E 02	3.00E-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	1.39E-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	7.08E-03	0.	0.	0.	4.85E-04	9.39E-12	0.	0.	2.75E 02
23	8.50	0.	2.62E 02	4.08E-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.	2.50E 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	3.00E-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.	1.88E-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.	1.50E 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.	4.10E 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	3.65E-02	0.	2.50E-06	7.56E-02	6.34E 00	0.	5.55E-04	2.29E-11	0.	0.	6.46E 00
45	6.30	1.67E-02	0.	8.84E-07	2.60E-01	1.96E 00	0.	5.59E-04	2.40E-11	0.	0.	2.24E 00
46	6.20	5.99E-03	0.	2.88E-07	2.88E-01	2.41E 00	0.	5.63E-04	2.51E-11	0.	0.	2.71E 00
47	6.10	2.10E-03	0.	8.47E-08	6.73E-01	8.82E 00	0.	5.68E-04	2.64E-11	0.	0.	9.49E 00
48	6.00	7.04E-04	0.	1.58E-08	3.99E-01	1.35E 00	0.	5.72E-04	2.78E-11	0.	0.	1.75E 00
49	5.90	1.46E-04	0.	1.07E-09	5.31E-01	1.80E 00	0.	5.72E-04	2.92E-11	0.	0.	2.34E 00
50	5.80	1.75E-05	0.	2.42E-11	6.39E-01	2.04E 00	0.	5.63E-04	3.07E-11	0.	0.	2.68E 00
51	5.70	1.25E-06	0.	0.	5.55E-01	9.86E-01	0.	5.29E-04	3.24E-11	0.	0.	1.54E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

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

	PHOTON ENERGY	C2 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	5.14E-08	0.	0.	0.	2.81E-01	3.19E 00	0.	0.	4.92E-04	5.41E-11	0.	0.	3.47E 00
53	5.50	0.	0.	0.	0.	4.03E-01	4.71E 00	0.	0.	4.95E-04	5.60E-11	0.	0.	5.11E 00
54	5.40	0.	0.	0.	0.	2.83E-01	1.13E 00	0.	0.	4.97E-04	5.81E-11	0.	0.	1.42E 00
55	5.30	0.	0.	0.	0.	2.88E-01	3.39E 00	0.	0.	5.01E-04	4.03E-11	0.	0.	3.67E 00
56	5.20	0.	0.	0.	0.	2.66E-01	1.11E 00	0.	0.	5.04E-04	4.27E-11	0.	0.	1.38E 00
57	5.10	0.	0.	0.	0.	2.23E-01	1.46E 00	0.	1.53E-02	9.08E-04	4.52E-11	0.	0.	1.70E 00
58	5.00	3.69E-01	0.	0.	0.	1.62E-01	1.33E 00	0.	1.55E-02	5.12E-04	4.80E-11	0.	0.	1.90E 00
59	4.90	7.12E-01	0.	0.	0.	1.56E-01	7.44E-01	0.	1.56E-02	5.17E-04	5.10E-11	0.	0.	1.63E 00
60	4.80	9.92E-01	0.	0.	0.	1.60E-01	8.04E-01	0.	1.57E-02	5.21E-04	5.43E-11	0.	0.	1.97E 00
61	4.70	1.00E 00	0.	0.	0.	1.31E-01	3.75E-01	0.	1.58E-02	5.25E-04	5.78E-11	0.	0.	1.52E 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	7.40E-01	0.	5.18E-07	0.	7.47E-02	1.98E-01	0.	1.61E-02	5.38E-04	7.05E-11	0.	0.	1.03E 00
65	4.30	5.56E-01	0.	4.60E-07	0.	5.71E-02	8.64E-02	0.	1.63E-02	5.42E-04	7.55E-11	0.	0.	6.97E-01
66	4.20	4.33E-01	0.	4.93E-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.	5.75E-06	0.	3.22E-02	1.06E-02	0.	1.68E-02	5.51E-04	9.38E-11	0.	0.	3.15E-01
69	3.95	1.67E-01	0.	3.47E-06	4.42E-12	2.14E-02	8.68E-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	1.18E-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	1.29E-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.	5.87E-07	5.82E-12	7.29E-03	0.	0.	1.81E-02	2.66E-04	1.53E-10	0.	0.	6.58E-02
75	3.30	2.78E-02	0.	1.13E-06	1.37E-10	3.61E-03	0.	0.	1.82E-02	2.66E-04	1.67E-10	0.	0.	4.99E-02
76	3.20	1.83E-02	0.	2.68E-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	2.01E-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.	8.78E-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	3.08E-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	1.82E-04	0.	0.	1.73E-02	2.69E-04	3.05E-10	0.	0.	1.97E-02
82	2.60	5.74E-04	0.	4.06E-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	3.38E-07	0.	0.	1.55E-02	2.69E-04	4.35E-10	0.	0.	1.57E-02
85	2.30	0.	2.00E-06	0.	0.	0.	0.	0.	1.45E-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.	9.38E-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	2.96E-04	7.53E-10	0.	0.	1.14E-02
89	1.90	0.	4.95E-05	0.	0.	0.	0.	0.	9.92E-03	2.66E-04	8.78E-10	0.	0.	1.02E-02
90	1.80	0.	6.06E-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.	2.20E-09	0.	0.	3.07E-03
95	1.30	0.	3.53E-05	0.	0.	0.	0.	0.	1.99E-03	0.	2.75E-09	0.	0.	2.02E-03
96	1.20	0.	6.19E-05	0.	0.	0.	0.	0.	1.27E-03	0.	3.50E-09	0.	0.	1.33E-03
97	1.10	0.	2.69E-05	0.	0.	0.	0.	2.34E-05	7.62E-04	0.	4.35E-09	0.	0.	8.13E-04
98	1.00	0.	3.29E-05	0.	0.	0.	0.	4.88E-05	3.80E-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.	8.35E-09	0.	0.	3.85E-04
100	0.80	0.	8.24E-06	0.	0.	0.	0.	6.77E-04	0.	0.	1.19E-08	0.	0.	6.85E-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.	6.20E-09	0.	0.	0.	0.	1.04E-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 (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.	2.00E-01	0.	0.	0.	4.55E-05	4.24E-13 0.	0.		2.00E-01
2	10.60	0.	0.	1.41E-01	0.	0.	0.	4.55E-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.		5.49E-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.	4.60E-05	5.37E-13 0.	0.		2.61E-02
10	9.80	0.	0.	1.91E-02	0.	0.	0.	4.61E-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.	4.65E-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.	1.88E 01	1.90E-03	0.	0.	0.	4.72E-05	7.16E-13 0.	0.		1.88E 01
19	8.90	0.	2.21E 01	1.40E-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	7.00E-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.		1.90E 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	1.53E-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.	1.00E-02	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	5.28E-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.	1.50E-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	2.76E-03	0.	2.52E-07	6.61E-03	5.54E-01	0.	5.47E-05	2.00E-12 0.	0.		5.64E-01
45	6.30	1.26E-03	0.	8.91E-08	2.27E-02	1.71E-01	0.	5.52E-05	2.09E-12 0.	0.		1.95E-01
46	6.20	4.54E-04	0.	2.90E-08	2.51E-02	2.11E-01	0.	5.56E-05	2.20E-12 0.	0.		2.37E-01
47	6.10	1.59E-04	0.	8.54E-09	5.88E-02	7.71E-01	0.	5.60E-05	2.31E-12 0.	0.		8.30E-01
48	6.00	5.33E-05	0.	1.60E-09	3.48E-02	1.18E-01	0.	5.64E-05	2.43E-12 0.	0.		1.53E-01
49	5.90	1.10E-05	0.	1.08E-10	4.64E-02	1.58E-01	0.	5.64E-05	2.55E-12 0.	0.		2.04E-01
50	5.80	1.32E-06	0.	2.44E-12	5.58E-02	1.79E-01	0.	5.96E-05	2.69E-12 0.	0.		2.34E-01
51	5.70	9.49E-08	0.	0.	4.85E-02	8.62E-02	0.	5.22E-05	2.83E-12 0.	0.		1.35E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. 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	3.90E-09	0.	0.	0.	2.46E-02	2.79E-01	0.	0.	4.86E-05	2.98E-12	0.	0.	3.03E-01
53	5.50	0.	0.	0.	0.	3.52E-02	4.11E-01	0.	0.	4.88E-05	3.15E-12	0.	0.	4.47E-01
54	5.40	0.	0.	0.	0.	2.48E-02	9.90E-02	0.	0.	4.91E-05	3.33E-12	0.	0.	1.24E-01
55	5.30	0.	0.	0.	0.	2.52E-02	2.96E-01	0.	0.	4.94E-05	3.52E-12	0.	0.	3.21E-01
56	5.20	0.	0.	0.	0.	2.32E-02	9.71E-02	0.	0.	4.97E-05	3.73E-12	0.	0.	1.20E-01
57	5.10	0.	0.	0.	0.	1.95E-02	1.27E-01	0.	3.69E-04	5.01E-05	3.95E-12	0.	0.	1.47E-01
58	5.00	2.95E-02	0.	0.	0.	1.42E-02	1.16E-01	0.	3.72E-04	5.05E-05	4.19E-12	0.	0.	1.60E-01
59	4.90	5.39E-02	0.	0.	0.	1.37E-02	6.50E-02	0.	3.75E-04	5.10E-05	4.46E-12	0.	0.	1.33E-01
60	4.80	7.51E-02	0.	0.	0.	1.40E-02	7.03E-02	0.	3.77E-04	5.14E-05	4.74E-12	0.	0.	1.60E-01
61	4.70	7.59E-02	0.	0.	0.	1.15E-02	3.27E-02	0.	3.80E-04	5.18E-05	5.05E-12	0.	0.	1.20E-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	5.81E-03	0.	3.93E-04	5.35E-05	6.60E-12	0.	0.	5.34E-02
66	4.20	3.28E-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.	3.45E-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	1.26E-02	0.	3.50E-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.	3.00E-08	2.85E-12	2.14E-04	0.	0.	4.42E-04	2.64E-05	1.76E-11	0.	0.	1.72E-03
78	3.00	7.11E-04	0.	8.77E-09	4.17E-11	1.59E-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.	9.80E-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.	8.60E-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.	8.59E-11	5.40E-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.	2.40E-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.	7.98E-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.	3.06E-10	0.	0.	3.68E-05
97	1.10	0.	2.70E-06	0.	0.	0.	0.	2.04E-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.	1.67E-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.	6.00E-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.	6.25E-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 (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.	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.	1.28E-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.	1.88E-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.	3.09E-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.	1.53E-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	1.26E-04	0.	2.57E-08	4.49E-04	3.77E-02	0.	3.21E-06	1.36E-13	0.	0.	3.83E-02
45	6.30	5.73E-05	0.	9.06E-09	1.54E-03	1.17E-02	0.	3.23E-06	1.42E-13	0.	0.	1.33E-02
46	6.20	2.06E-05	0.	2.95E-09	1.71E-03	1.43E-02	0.	3.26E-06	1.49E-13	0.	0.	1.61E-02
47	6.10	7.21E-06	0.	8.69E-10	4.00E-03	5.24E-02	0.	3.28E-06	1.57E-13	0.	0.	5.64E-02
48	6.00	2.42E-06	0.	1.62E-10	2.37E-03	7.99E-03	0.	3.31E-06	1.65E-13	0.	0.	1.04E-02
49	5.90	5.00E-07	0.	1.10E-11	3.15E-03	1.07E-02	0.	3.31E-06	1.73E-13	0.	0.	1.39E-02
50	5.80	6.01E-08	0.	2.48E-13	3.47E-03	1.21E-02	0.	3.26E-06	1.82E-13	0.	0.	1.59E-02
51	5.70	4.31E-09	0.	0.	3.29E-03	5.85E-03	0.	3.06E-06	1.92E-13	0.	0.	9.15E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. 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	1.77E-10	0.	0.	0.	1.67E-03	1.89E-02	0.	0.	2.85E-06	2.03E-13	0.	0.	2.06E-02
53	5.50	0.	0.	0.	0.	2.39E-03	2.80E-02	0.	0.	2.86E-06	2.14E-13	0.	0.	3.04E-02
54	5.40	0.	0.	0.	0.	1.68E-03	6.73E-03	0.	0.	2.88E-06	2.26E-13	0.	0.	8.41E-03
55	5.30	0.	0.	0.	0.	1.71E-03	2.01E-02	0.	0.	2.90E-06	2.39E-13	0.	0.	2.18E-02
56	5.20	0.	0.	0.	0.	1.58E-03	6.60E-03	0.	0.	2.91E-06	2.53E-13	0.	0.	8.18E-03
57	5.10	0.	0.	0.	0.	1.32E-03	8.66E-03	0.	5.35E-06	2.94E-06	2.68E-13	0.	0.	9.99E-03
58	5.00	1.34E-03	0.	0.	0.	9.63E-04	7.90E-03	0.	5.39E-06	2.96E-06	2.85E-13	0.	0.	1.02E-02
59	4.90	2.45E-03	0.	0.	0.	9.28E-04	4.42E-03	0.	5.43E-06	2.99E-06	3.03E-13	0.	0.	7.80E-03
60	4.80	3.41E-03	0.	0.	0.	9.49E-04	4.78E-03	0.	5.47E-06	3.01E-06	3.22E-13	0.	0.	9.14E-03
61	4.70	3.44E-03	0.	0.	0.	7.79E-04	2.22E-03	0.	5.51E-06	3.04E-06	3.43E-13	0.	0.	6.46E-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	3.95E-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.	1.05E-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	1.94E-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	1.94E-06	9.93E-13	0.	0.	1.25E-04
76	3.20	6.29E-05	0.	2.75E-09	1.35E-10	2.18E-05	0.	0.	6.40E-06	1.94E-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	1.95E-06	1.20E-12	0.	0.	6.95E-05
78	3.00	3.23E-05	0.	8.92E-10	1.54E-11	1.08E-05	0.	0.	6.33E-06	1.95E-06	1.32E-12	0.	0.	5.09E-05
79	2.90	2.03E-05	0.	6.12E-10	2.36E-11	5.15E-06	0.	0.	6.25E-06	1.95E-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	1.96E-06	1.63E-12	0.	0.	2.70E-05
81	2.70	7.25E-06	0.	1.00E-10	7.44E-12	6.04E-07	0.	0.	6.02E-06	1.96E-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	1.96E-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	1.96E-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	1.96E-06	2.58E-12	0.	0.	6.95E-06
85	2.30	0.	2.05E-08	0.	0.	0.	0.	0.	5.05E-06	1.94E-06	2.93E-12	0.	0.	6.62E-06
86	2.20	0.	2.44E-08	0.	0.	0.	0.	0.	4.70E-06	1.94E-06	3.35E-12	0.	0.	6.26E-06
87	2.10	0.	9.53E-08	0.	0.	0.	0.	0.	4.32E-06	1.93E-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	6.59E-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-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	10.70	0.	0.	2.07E-03	0.	0.	0.	8.02E-08	1.29E-15	0.	0.	2.07E-03
2	10.60	0.	0.	1.46E-03	0.	0.	0.	8.03E-08	1.33E-15	0.	0.	1.46E-03
3	10.50	0.	0.	1.25E-03	0.	0.	0.	8.04E-08	1.37E-15	0.	0.	1.25E-03
4	10.40	0.	0.	9.67E-04	0.	0.	0.	8.05E-08	1.41E-15	0.	0.	9.67E-04
5	10.30	0.	0.	6.49E-04	0.	0.	0.	8.06E-08	1.45E-15	0.	0.	6.49E-04
6	10.20	0.	0.	5.69E-04	0.	0.	0.	8.07E-08	1.49E-15	0.	0.	5.69E-04
7	10.10	0.	0.	4.55E-04	0.	0.	0.	8.08E-08	1.54E-15	0.	0.	4.55E-04
8	10.00	0.	0.	2.80E-04	0.	0.	0.	8.09E-08	1.58E-15	0.	0.	2.80E-04
9	9.90	0.	0.	2.70E-04	0.	0.	0.	8.11E-08	1.63E-15	0.	0.	2.70E-04
10	9.80	0.	0.	1.90E-04	0.	0.	0.	8.12E-08	1.68E-15	0.	0.	1.90E-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	5.88E-05	0.	0.	0.	8.20E-08	1.91E-15	0.	0.	9.31E-03
15	9.30	0.	1.03E-02	5.55E-05	0.	0.	0.	8.23E-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	1.25E-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	7.04E-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.	2.58E-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.	6.06E-04	0.	9.58E-08	5.80E-15	0.	0.	6.12E-04
44	6.40	2.48E-06	0.	2.62E-09	2.01E-05	1.69E-03	0.	9.65E-08	6.08E-15	0.	0.	1.71E-03
45	6.30	1.13E-06	0.	9.24E-10	6.91E-05	5.23E-04	0.	9.73E-08	6.37E-15	0.	0.	5.93E-04
46	6.20	4.07E-07	0.	3.01E-10	7.66E-05	6.43E-04	0.	9.80E-08	6.69E-15	0.	0.	7.20E-04
47	6.10	1.42E-07	0.	8.86E-11	1.79E-04	2.35E-03	0.	9.88E-08	7.02E-15	0.	0.	2.53E-03
48	6.00	4.78E-08	0.	1.66E-11	1.06E-04	3.58E-04	0.	9.95E-08	7.38E-15	0.	0.	4.65E-04
49	5.90	9.87E-09	0.	1.12E-12	1.41E-04	4.80E-04	0.	9.95E-08	7.76E-15	0.	0.	6.22E-04
50	5.80	1.19E-09	0.	2.53E-14	1.70E-04	5.44E-04	0.	9.80E-08	8.17E-15	0.	0.	7.14E-04
51	5.70	8.50E-11	0.	0.	1.48E-04	2.63E-04	0.	9.21E-08	8.61E-15	0.	0.	4.10E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.293E-09 (10.0E-03 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMMA	NO SIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.49E-12	0.	0.	0.	7.50E-05	8.49E-04	0.	0.	8.96E-08	9.08E-15	0.	0.	9.24E-04
53	5.50	0.	0.	0.	0.	1.07E-04	1.25E-03	0.	0.	8.61E-08	9.58E-15	0.	0.	1.36E-03
54	5.40	0.	0.	0.	0.	7.55E-05	3.02E-04	0.	0.	8.65E-08	1.01E-14	0.	0.	3.77E-04
55	5.30	0.	0.	0.	0.	7.67E-05	9.02E-04	0.	0.	8.71E-08	1.07E-14	0.	0.	9.78E-04
56	5.20	0.	0.	0.	0.	7.08E-05	2.96E-04	0.	0.	8.76E-08	1.13E-14	0.	0.	3.67E-04
57	5.10	0.	0.	0.	0.	5.93E-05	3.88E-04	0.	3.37E-08	8.84E-08	1.20E-14	0.	0.	4.48E-04
58	5.00	2.64E-05	0.	0.	0.	4.32E-05	3.54E-04	0.	3.39E-08	8.91E-08	1.28E-14	0.	0.	4.24E-04
59	4.90	4.83E-05	0.	0.	0.	4.16E-05	1.98E-04	0.	3.42E-08	8.99E-08	1.36E-14	0.	0.	2.88E-04
60	4.80	6.73E-05	0.	0.	0.	4.25E-05	2.14E-04	0.	3.44E-08	9.06E-08	1.44E-14	0.	0.	3.24E-04
61	4.70	6.79E-05	0.	0.	0.	3.49E-05	9.98E-05	0.	3.47E-08	9.13E-08	1.54E-14	0.	0.	2.03E-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	6.00E-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	5.02E-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.	8.59E-06	2.82E-06	0.	3.70E-08	9.98E-08	2.49E-14	0.	0.	2.88E-05
69	3.90	1.13E-05	0.	3.63E-09	2.19E-13	5.71E-06	1.78E-06	0.	3.73E-08	9.94E-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	9.91E-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	3.55E-06	0.	0.	3.87E-08	8.76E-08	3.42E-14	0.	0.	8.94E-06
73	3.50	3.98E-06	0.	3.65E-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.	2.30E-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	4.68E-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	4.64E-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.	8.30E-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.	9.30E-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.	3.59E-08
98	1.00	0.	3.44E-08	0.	0.	0.	0.	1.30E-08	8.33E-10	0.	1.61E-12	0.	0.	4.72E-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.	2.53E-09	0.	0.	0.	0.	2.30E-07	0.	0.	4.74E-12	0.	0.	2.32E-07
102	0.60	0.	6.48E-12	0.	0.	0.	0.	5.16E-07	0.	0.	7.56E-12	0.	0.	5.16E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. DENSITY (GM/CC) 1.29[illegible]E-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.	2.08E-04	0.	0.	0.	1.62E-09	4.49E-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	5.46E-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.	1.66E-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	3.98E-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	3.15E-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	1.60E-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.	7.96E-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.	3.50E-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	2.93E-08	0.	2.63E-10	6.95E-07	5.83E-05	0.	1.96E-09	2.10E-16	0.	0.	5.90E-05
45	6.30	1.34E-08	0.	9.28E-11	2.39E-06	1.80E-05	0.	1.97E-09	2.20E-16	0.	0.	2.04E-05
46	6.20	4.82E-09	0.	3.03E-11	2.64E-06	2.22E-05	0.	1.99E-09	2.31E-16	0.	0.	2.48E-05
47	6.10	1.69E-09	0.	8.90E-12	6.19E-06	8.11E-05	0.	2.00E-09	2.42E-16	0.	0.	8.72E-05
48	6.00	5.66E-10	0.	1.66E-12	3.66E-06	1.24E-05	0.	2.02E-09	2.55E-16	0.	0.	1.60E-05
49	5.90	1.17E-10	0.	1.13E-13	4.88E-06	1.66E-05	0.	2.02E-09	2.68E-16	0.	0.	2.15E-05
50	5.80	1.40E-11	0.	2.54E-15	5.87E-06	1.88E-05	0.	1.99E-09	2.82E-16	0.	0.	2.47E-05
51	5.70	1.01E-12	0.	0.	5.10E-06	9.06E-06	0.	1.87E-09	2.97E-16	0.	0.	1.42E-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	4.14E-14	0.	0.	0.	2.59E-06	2.93E-05	0.	0.	1.73E-09	3.13E-16	0.	0.	3.19E-05
53	5.50	0.	0.	0.	0.	3.71E-06	4.33E-05	0.	0.	1.74E-09	3.31E-16	0.	0.	4.70E-05
54	5.40	0.	0.	0.	0.	2.60E-06	1.04E-05	0.	0.	1.75E-09	3.49E-16	0.	0.	1.30E-05
55	5.30	0.	0.	0.	0.	2.65E-06	3.11E-05	0.	0.	1.76E-09	3.69E-16	0.	0.	3.38E-05
56	5.20	0.	0.	0.	0.	2.44E-06	1.02E-05	0.	0.	1.78E-09	3.91E-16	0.	0.	1.27E-05
57	5.10	0.	0.	0.	0.	2.05E-06	1.34E-05	0.	1.26E-10	1.79E-09	4.15E-16	0.	0.	1.54E-05
58	5.00	3.13E-07	0.	0.	0.	1.49E-06	1.22E-05	0.	1.27E-10	1.81E-09	4.40E-16	0.	0.	1.40E-05
59	4.90	5.72E-07	0.	0.	0.	1.44E-06	6.84E-06	0.	1.28E-10	1.82E-09	4.68E-16	0.	0.	8.85E-06
60	4.80	7.98E-07	0.	0.	0.	1.47E-06	7.39E-06	0.	1.29E-10	1.84E-09	4.98E-16	0.	0.	9.66E-06
61	4.70	8.05E-07	0.	0.	0.	1.21E-06	3.44E-06	0.	1.30E-10	1.85E-09	5.30E-16	0.	0.	5.46E-06
62	4.60	8.51E-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	3.48E-07	0.	4.76E-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	2.76E-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	1.18E-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.	1.10E-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.	1.19E-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.	4.96E-08
77	3.10	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	5E-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	9.48E-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.	8.38E-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.	4.66E-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	5.01E-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.	6.51E-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.	8.18E-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 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.	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.	4.50E-06	0.	0.	0.	2.99E-11	1.70E-18 0.	0.		4.50E-06
8	10.00		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.		1.68E-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.	8.28E-07	8.13E-10	0.	5.53E-08	0.	3.35E-11	4.72E-18 0.	0.		8.84E-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	6.74E-10	0.	6.07E-11	0.	6.70E-07	0.	3.54E-11	6.42E-18 0.	0.		6.70E-07
44	6.40	3.05E-10	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	1.39E-10	0.	9.15E-12	7.64E-08	5.77E-07	0.	3.60E-11	7.05E-18 0.	0.		6.54E-07
46	6.20	5.00E-11	0.	2.98E-12	8.46E-08	7.10E-07	0.	3.62E-11	7.39E-18 0.	0.		7.94E-07
47	6.10	1.75E-11	0.	8.77E-13	1.98E-07	2.59E-06	0.	3.65E-11	7.76E-18 0.	0.		2.79E-06
48	6.00	5.88E-12	0.	1.64E-13	1.17E-07	3.96E-07	0.	3.68E-11	8.16E-18 0.	0.		5.13E-07
49	5.90	1.21E-12	0.	1.11E-14	1.56E-07	5.30E-07	0.	3.68E-11	8.58E-18 0.	0.		6.87E-07
50	5.80	1.46E-13	0.	2.50E-16	1.88E-07	6.01E-07	0.	3.62E-11	9.03E-18 0.	0.		7.49E-07
51	5.70	1.05E-14	0.	0.	1.63E-07	2.90E-07	0.	3.40E-11	9.52E-18 0.	0.		4.53E-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	4.30E-16	0.	0.	0.	8.28E-08	9.37E-07	0.	0.	3.17E-11	1.00E-17	0.	0.	1.02E-06
53	5.50	0.	0.	0.	0.	1.19E-07	1.38E-06	0.	0.	3.18E-11	1.06E-17	0.	0.	1.50E-06
54	5.40	0.	0.	0.	0.	8.33E-08	3.33E-07	0.	0.	3.20E-11	1.12E-17	0.	0.	4.16E-07
55	5.30	0.	0.	0.	0.	8.47E-08	9.96E-07	0.	0.	3.22E-11	1.18E-17	0.	0.	1.08E-06
56	5.20	0.	0.	0.	0.	7.82E-08	3.27E-07	0.	0.	3.24E-11	1.25E-17	0.	0.	4.05E-07
57	5.10	0.	0.	0.	0.	6.55E-08	4.29E-07	0.	4.13E-13	3.27E-11	1.33E-17	0.	0.	4.94E-07
58	5.00	3.25E-09	0.	0.	0.	4.77E-08	3.91E-07	0.	4.16E-13	3.29E-11	1.41E-17	0.	0.	4.42E-07
59	4.90	5.94E-09	0.	0.	0.	4.59E-08	2.19E-07	0.	4.19E-13	3.32E-11	1.50E-17	0.	0.	2.71E-07
60	4.80	8.28E-09	0.	0.	0.	4.70E-08	2.36E-07	0.	4.22E-13	3.35E-11	1.59E-17	0.	0.	2.92E-07
61	4.70	8.36E-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	8.84E-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-08	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	3.91E-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	3.93E-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	3.94E-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	3.93E-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	3.91E-11	3.22E-17	0.	0.	7.81E-09
71	3.70	8.65E-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	2.30E-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	8.98E-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.	8.82E-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	1.98E-11	2.58E-16	0.	0.	5.29E-10
90	1.80	0.	6.27E-10	0.	0.	0.	0.	0.	2.21E-13	1.92E-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	9.49E-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-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.	1.94E-06	0.	0.	0.	5.85E-13	4.43E-20 0.	0.		1.94E-06
2	10.60	0.	0.	1.37E-06	0.	0.	0.	5.86E-13	4.55E-20 0.	0.		1.37E-06
3	10.50	0.	0.	1.17E-06	0.	0.	0.	5.86E-13	4.69E-20 0.	0.		1.17E-06
4	10.40	0.	0.	9.07E-07	0.	0.	0.	5.27E-13	4.82E-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.		1.96E-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-08	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	4.00E-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	5.86E-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.	1.00E-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	3.08E-12	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	1.41E-12	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	5.06E-13	0.	2.82E-13	2.62E-09	2.20E-08	0.	6.42E-13	2.29E-19 0.	0.		2.46E-08
47	6.10	1.77E-13	0.	8.31E-14	6.12E-09	8.02E-08	0.	6.46E-13	2.41E-19 0.	0.		8.63E-08
48	6.00	5.94E-14	0.	1.55E-14	3.63E-09	1.22E-08	0.	6.91E-13	2.53E-19 0.	0.		1.59E-08
49	5.90	1.23E-14	0.	1.05E-15	4.83E-09	1.64E-08	0.	6.91E-13	2.66E-19 0.	0.		2.12E-08
50	5.80	1.47E-15	0.	2.37E-17	5.81E-09	1.86E-08	0.	6.42E-13	2.80E-19 0.	0.		2.44E-08
51	5.70	1.06E-16	0.	0.	5.05E-09	8.97E-09	0.	6.03E-13	2.95E-19 0.	0.		1.40E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. 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	4.34E-18	0.	0.	0.	2.56E-09	2.90E-08	0.	0.	5.60E-13	3.11E-19	0.	0.	3.16E-08
53	5.50	0.	0.	0.	0.	3.67E-09	4.28E-08	0.	0.	5.63E-13	3.28E-19	0.	0.	4.65E-08
54	5.40	0.	0.	0.	0.	2.58E-09	1.03E-08	0.	0.	5.66E-13	3.47E-19	0.	0.	1.29E-08
55	5.30	0.	0.	0.	0.	2.62E-09	3.08E-08	0.	0.	5.70E-13	3.67E-19	0.	0.	3.34E-08
56	5.20	0.	0.	0.	0.	2.42E-09	1.01E-08	0.	0.	5.74E-13	3.89E-19	0.	0.	1.25E-08
57	5.10	0.	0.	0.	0.	2.03E-09	1.33E-08	0.	1.28E-15	5.78E-13	4.12E-19	0.	0.	1.53E-08
58	5.00	3.28E-11	0.	0.	0.	1.48E-09	1.21E-08	0.	1.29E-15	5.83E-13	4.37E-19	0.	0.	1.36E-08
59	4.90	6.00E-11	0.	0.	0.	1.42E-09	6.77E-09	0.	1.30E-15	5.88E-13	4.65E-19	0.	0.	8.25E-09
60	4.80	8.37E-11	0.	0.	0.	1.45E-09	7.31E-09	0.	1.31E-15	5.93E-13	4.94E-19	0.	0.	8.85E-09
61	4.70	8.45E-11	0.	0.	0.	1.19E-09	3.41E-09	0.	1.32E-15	5.98E-13	5.27E-19	0.	0.	4.69E-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	1.63E-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	6.25E-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	1.28E-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	2.93E-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.	2.50E-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 (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.	1.63E-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.	1.03E-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.	9.21E-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	1.55E-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.	2.46E-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.	1.70E-10
32	7.60	0.	1.27E-10	2.47E-11	0.	3.13E-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.	1.00E-14	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	3.95E-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.	4.96E-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.	3.45E-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.	3.26E-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	3.09E-14	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	1.41E-14	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-15	0.	2.36E-14	7.59E-11	6.36E-10	0.	1.10E-14	6.73E-21	0.	0.	7.12E-10
47	6.10	1.77E-15	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	5.96E-16	0.	1.30E-15	1.05E-10	3.55E-10	0.	1.12E-14	7.42E-21	0.	0.	4.60E-10
49	5.90	1.23E-16	0.	8.80E-17	1.40E-10	4.75E-10	0.	1.12E-14	7.81E-21	0.	0.	6.15E-10
50	5.80	1.48E-17	0.	1.99E-18	1.68E-10	5.39E-10	0.	1.10E-14	8.22E-21	0.	0.	7.07E-10
51	5.70	1.06E-18	0.	0.	1.46E-10	2.60E-10	0.	1.03E-14	8.66E-21	0.	0.	4.06E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 4000. 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	4.35E-20	0.	0.	0.	7.42E-11	8.40E-10	0.	0.	9.61E-15	9.13E-21	0.	0.	9.15E-10
53	5.50	0.	0.	0.	0.	1.06E-10	1.24E-09	0.	0.	9.66E-15	9.64E-21	0.	0.	1.35E-09
54	5.40	0.	0.	0.	0.	7.47E-11	2.99E-10	0.	0.	9.71E-15	1.02E-20	0.	0.	3.73E-10
55	5.30	0.	0.	0.	0.	7.59E-11	8.93E-10	0.	0.	9.78E-15	1.08E-20	0.	0.	9.69E-10
56	5.20	0.	0.	0.	0.	7.01E-11	2.93E-10	0.	0.	9.84E-15	1.14E-20	0.	0.	3.63E-10
57	5.10	0.	0.	0.	0.	5.68E-11	3.84E-10	0.	3.72E-18	9.92E-15	1.21E-20	0.	0.	4.43E-10
58	5.00	3.29E-13	0.	0.	0.	4.28E-11	3.51E-10	0.	3.75E-18	1.00E-14	1.28E-20	0.	0.	3.94E-10
59	4.90	6.02E-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	8.39E-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	8.47E-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.	1.51E-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	5.65E-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	5.72E-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	3.11E-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	1.55E-14	0.	2.20E-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.	2.45E-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.	1.55E-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.	7.00E-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.	1.69E-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.	4.06E-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) 5000. 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	1.66E-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.	1.60E 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.	3.75E-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	1.73E-02	0.	1.13E-04	6.49E-02	6.98E 00	0.	1.08E-02	7.61E-09	0.	0.	7.07E 00
45	6.30	8.42E-03	0.	4.67E-05	2.41E-01	2.24E 00	0.	1.08E-02	7.98E-09	0.	0.	2.50E 00
46	6.20	3.21E-03	0.	1.78E-05	2.82E-01	3.36E 00	0.	1.09E-02	8.37E-09	0.	0.	3.66E 00
47	6.10	1.21E-03	0.	5.96E-06	6.96E-01	9.07E 00	0.	1.10E-02	8.79E-09	0.	0.	9.78E 00
48	6.00	4.29E-04	0.	1.22E-06	4.64E-01	1.79E 00	0.	1.11E-02	9.24E-09	0.	0.	2.26E 00
49	5.90	9.31E-05	0.	8.40E-08	6.25E-01	2.33E 00	0.	1.11E-02	9.72E-09	0.	0.	2.97E 00
50	5.80	1.14E-05	0.	1.96E-09	7.79E-01	2.31E 00	0.	1.09E-02	1.02E-08	0.	0.	3.10E 00
51	5.70	8.23E-07	0.	0.	7.27E-01	1.59E 00	0.	1.03E-02	1.08E-08	0.	0.	2.32E 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	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	3.47E-08	0.	0.	0.	4.23E-01	3.97E 00	0.	0.	9.55E-03	1.14E-08	0.	0.	4.40E 00
53	5.50	0.	0.	0.	0.	5.63E-01	4.85E 00	0.	0.	9.60E-03	1.20E-08	0.	0.	5.43E 00
54	5.40	0.	0.	0.	0.	4.17E-01	1.74E 00	0.	0.	9.65E-03	1.27E-08	0.	0.	2.16E 00
55	5.30	0.	0.	0.	0.	4.29E-01	3.98E 00	0.	0.	9.71E-03	1.34E-08	0.	0.	4.42E 00
56	5.20	0.	0.	0.	0.	4.13E-01	1.49E 00	0.	0.	9.77E-03	1.42E-08	0.	0.	1.91E 00
57	5.10	0.	0.	0.	0.	3.67E-01	2.12E 00	0.	1.02E-02	9.86E-03	1.51E-08	0.	0.	2.50E 00
58	5.00	3.06E-01	0.	0.	0.	2.86E-01	1.80E 00	0.	1.02E-02	9.94E-03	1.60E-08	0.	0.	2.41E 00
59	4.90	5.99E-01	0.	0.	0.	2.85E-01	1.29E 00	0.	1.02E-02	1.00E-02	1.70E-08	0.	0.	2.19E 00
60	4.80	8.99E-01	0.	0.	0.	2.92E-01	1.27E 00	0.	1.02E-02	1.01E-02	1.81E-08	0.	0.	2.48E 00
61	4.70	9.73E-01	0.	0.	0.	2.52E-01	7.60E-01	0.	1.02E-02	1.02E-02	1.92E-08	0.	0.	2.01E 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.	5.65E-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.	3.82E-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	2.60E-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.	6.10E-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.	6.45E-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	7.10E-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.	1.04E-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.	1.65E-02
92	1.60	0.	1.46E-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) 1.208E-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.	6.42E-01	0.	0.	0.	5.23E-04	1.02E-10 0.	0.		6.43E-01
2	10.60	0.	0.	4.84E-01	0.	0.	0.	5.24E-04	1.05E-10 0.	0.		4.85E-01
3	10.50	0.	0.	4.34E-01	0.	0.	0.	5.24E-04	1.08E-10 0.	0.		4.35E-01
4	10.40	0.	0.	3.92E-01	0.	0.	0.	5.25E-04	1.11E-10 0.	0.		3.92E-01
5	10.30	0.	0.	2.53E-01	0.	0.	0.	5.26E-04	1.14E-10 0.	0.		2.53E-01
6	10.20	0.	0.	2.31E-01	0.	0.	0.	5.26E-04	1.18E-10 0.	0.		2.32E-01
7	10.10	0.	0.	1.93E-01	0.	0.	0.	5.27E-04	1.21E-10 0.	0.		1.93E-01
8	10.00	0.	0.	1.30E-01	0.	0.	0.	5.28E-04	1.25E-10 0.	0.		1.31E-01
9	9.90	0.	0.	1.28E-01	0.	0.	0.	5.29E-04	1.29E-10 0.	0.		1.28E-01
10	9.80	0.	0.	9.98E-02	0.	0.	0.	5.30E-04	1.33E-10 0.	0.		1.00E-01
11	9.70	0.	0.	6.75E-02	0.	0.	0.	5.31E-04	1.37E-10 0.	0.		6.80E-02
12	9.60	0.	0.	7.21E-02	0.	0.	0.	5.32E-04	1.42E-10 0.	0.		7.26E-02
13	9.50	0.	2.32E 00	4.70E-02	0.	0.	0.	5.33E-04	1.46E-10 0.	0.		2.37E 00
14	9.40	0.	2.55E 00	3.76E-02	0.	0.	0.	5.35E-04	1.51E-10 0.	0.		2.59E 00
15	9.30	0.	2.78E 00	3.64E-02	0.	0.	0.	5.37E-04	1.56E-10 0.	0.		2.81E 00
16	9.20	0.	3.00E 00	2.13E-02	0.	0.	0.	5.39E-04	1.61E-10 0.	0.		3.02E 00
17	9.10	0.	3.70E 00	2.27E-02	0.	0.	0.	5.40E-04	1.66E-10 0.	0.		3.73E 00
18	9.00	0.	4.50E 00	1.60E-02	0.	0.	0.	5.42E-04	1.72E-10 0.	0.		4.51E 00
19	8.90	0.	5.29E 00	1.23E-02	0.	0.	0.	5.44E-04	1.78E-10 0.	0.		5.30E 00
20	8.80	0.	5.50E 00	1.11E-02	0.	0.	0.	5.46E-04	1.84E-10 0.	0.		5.52E 00
21	8.70	0.	5.26E 00	7.17E-03	0.	0.	0.	5.48E-04	1.91E-10 0.	0.		5.27E 00
22	8.60	0.	5.01E 00	7.23E-03	0.	0.	0.	5.50E-04	1.97E-10 0.	0.		5.02E 00
23	8.50	0.	4.79E 00	4.70E-03	0.	0.	0.	5.52E-04	2.04E-10 0.	0.		4.80E 00
24	8.40	0.	4.59E 00	4.39E-03	0.	0.	0.	5.55E-04	2.12E-10 0.	0.		4.60E 00
25	8.30	0.	4.40E 00	2.84E-03	0.	0.	0.	5.58E-04	2.20E-10 0.	0.		4.40E 00
26	8.20	0.	4.21E 00	2.64E-03	0.	0.	0.	5.61E-04	2.28E-10 0.	0.		4.21E 00
27	8.10	0.	4.02E 00	1.78E-03	0.	0.	0.	5.64E-04	2.36E-10 0.	0.		4.02E 00
28	8.00	0.	3.83E 00	1.61E-03	0.	0.	0.	5.67E-04	2.45E-10 0.	0.		3.83E 00
29	7.90	0.	3.61E 00	1.10E-03	0.	0.	0.	5.70E-04	2.55E-10 0.	0.		3.62E 00
30	7.80	0.	3.40E 00	1.01E-03	0.	0.	0.	5.72E-04	2.65E-10 0.	0.		3.40E 00
31	7.70	0.	3.19E 00	7.16E-04	0.	0.	0.	5.75E-04	2.75E-10 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-10 0.	0.		2.97E 00
33	7.50	0.	2.75E 00	4.40E-04	0.	2.15E-04	0.	5.81E-04	2.98E-10 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-10 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-10 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-10 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-10 0.	0.		1.90E 00
38	7.00	5.91E-03	0.	1.21E-04	0.	9.11E-02	0.	6.01E-04	3.67E-10 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-10 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-10 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-10 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-10 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-10 0.	0.		2.16E-01
44	6.40	6.73E-04	0.	1.16E-05	4.10E-03	4.41E-01	0.	6.30E-04	4.80E-10 0.	0.		4.47E-01
45	6.30	3.27E-04	0.	4.80E-06	1.52E-02	1.41E-01	0.	6.34E-04	5.03E-10 0.	0.		1.58E-01
46	6.20	1.25E-04	0.	1.83E-06	1.78E-02	2.13E-01	0.	6.39E-04	5.28E-10 0.	0.		2.31E-01
47	6.10	4.69E-05	0.	6.13E-07	4.40E-02	5.73E-01	0.	6.44E-04	5.55E-10 0.	0.		6.18E-01
48	6.00	1.67E-05	0.	1.25E-07	2.93E-02	1.13E-01	0.	6.49E-04	5.83E-10 0.	0.		1.43E-01
49	5.90	3.62E-06	0.	6.63E-09	3.95E-02	1.47E-01	0.	6.49E-04	6.13E-10 0.	0.		1.87E-01
50	5.80	4.42E-07	0.	2.01E-10	4.93E-02	1.46E-01	0.	6.39E-04	6.46E-10 0.	0.		1.96E-01
51	5.70	3.20E-08	0.	0.	4.60E-02	1.00E-01	0.	6.01E-04	6.80E-10 0.	0.		1.47E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. 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	1.35E-09	0.	0.	0.	2.67E-02	2.51E-01	0.	0.	5.58E-04	7.18E-10	0.	0.	2.78E-01
53	5.50	0.	0.	0.	0.	3.56E-02	3.07E-01	0.	0.	5.61E-04	7.58E-10	0.	0.	3.43E-01
54	5.40	0.	0.	0.	0.	2.64E-02	1.10E-01	0.	0.	5.64E-04	8.01E-10	0.	0.	1.37E-01
55	5.30	0.	0.	0.	0.	2.71E-02	2.52E-01	0.	0.	5.68E-04	8.47E-10	0.	0.	2.79E-01
56	5.20	0.	0.	0.	0.	2.61E-02	9.43E-02	0.	0.	5.71E-04	8.97E-10	0.	0.	1.21E-01
57	5.10	0.	0.	0.	0.	2.32E-02	1.34E-01	0.	1.27E-04	5.76E-04	9.51E-10	0.	0.	1.58E-01
58	5.00	1.19E-02	0.	0.	0.	1.81E-02	1.14E-01	0.	1.27E-04	5.81E-04	1.01E-09	0.	0.	1.45E-01
59	4.90	2.33E-02	0.	0.	0.	1.80E-02	8.16E-02	0.	1.27E-04	5.86E-04	1.07E-09	0.	0.	1.24E-01
60	4.80	3.50E-02	0.	0.	0.	1.85E-02	8.00E-02	0.	1.27E-04	5.91E-04	1.14E-09	0.	0.	1.34E-01
61	4.70	3.78E-02	0.	0.	0.	1.59E-02	4.81E-02	0.	1.27E-04	5.96E-04	1.21E-09	0.	0.	1.03E-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	3.79E-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.	3.28E-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	2.68E-02	0.	4.15E-06	0.	8.36E-03	1.01E-02	0.	1.27E-04	6.15E-04	1.59E-09	0.	0.	4.60E-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.	1.69E-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.	9.40E-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	4.01E-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	5.54E-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.	1.95E-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	2.92E-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-04	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-04	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.	2.03E-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	0.60	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 (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.	6.55E-02	0.	0.	0.	1.49E-05	4.33E-12	0.	0.	6.55E-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.	2.58E-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.	6.90E-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	1.26E-03	0.	0.	0.	1.55E-05	7.55E-12	0.	0.	9.53E-02
20	8.80	0.	9.78E-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	4.80E-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	2.90E-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.	6.54E-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.	3.35E-02	1.62E-05	0.	6.18E-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.	4.00E-03
39	6.90	1.83E-04	0.	9.40E-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	1.19E-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	5.79E-06	0.	4.90E-07	6.47E-04	6.00E-03	0.	1.80E-05	2.14E-11	0.	0.	6.68E-03
46	6.20	2.21E-06	0.	1.86E-07	7.56E-04	9.03E-03	0.	1.82E-05	2.24E-11	0.	0.	9.81E-03
47	6.10	8.30E-07	0.	6.25E-08	1.87E-03	2.44E-02	0.	1.83E-05	2.35E-11	0.	0.	2.62E-02
48	6.00	2.95E-07	0.	1.27E-08	1.25E-03	4.80E-03	0.	1.85E-05	2.47E-11	0.	0.	6.06E-03
49	5.90	6.40E-08	0.	8.80E-10	1.68E-03	6.26E-03	0.	1.85E-05	2.60E-11	0.	0.	7.95E-03
50	5.80	7.82E-09	0.	2.05E-11	2.09E-03	6.20E-03	0.	1.82E-05	2.74E-11	0.	0.	8.31E-03
51	5.70	5.66E-10	0.	0.	1.95E-03	4.26E-03	0.	1.71E-05	2.89E-11	0.	0.	6.23E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. 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	2.38E-01	0.	0.	0.	1.13E-03	1.07E-02	0.	0.	1.59E-05	3.04E-11	0.	0.	1.18E-02
53	5.50	0.	0.	0.	0.	1.51E-03	1.30E-02	0.	0.	1.60E-05	3.21E-11	0.	0.	1.46E-02
54	5.40	0.	0.	0.	0.	1.12E-03	4.66E-03	0.	0.	1.60E-05	3.40E-11	0.	0.	5.80E-03
55	5.30	0.	0.	0.	0.	1.15E-03	1.07E-02	0.	0.	1.62E-05	3.59E-11	0.	0.	1.19E-02
56	5.20	0.	0.	0.	0.	1.11E-03	4.00E-03	0.	0.	1.63E-05	3.80E-11	0.	0.	5.13E-03
57	5.10	0.	0.	0.	0.	9.86E-04	5.68E-03	0.	7.15E-07	1.64E-05	4.03E-11	0.	0.	6.68E-03
58	5.00	2.10E-04	0.	0.	0.	7.68E-04	4.84E-03	0.	7.15E-07	1.65E-05	4.28E-11	0.	0.	5.83E-03
59	4.90	4.12E-04	0.	0.	0.	7.66E-04	3.46E-03	0.	7.15E-07	1.67E-05	4.55E-11	0.	0.	4.66E-03
60	4.80	6.18E-04	0.	0.	0.	7.84E-04	3.40E-03	0.	7.15E-07	1.68E-05	4.84E-11	0.	0.	4.82E-03
61	4.70	6.69E-04	0.	0.	0.	6.76E-04	2.04E-03	0.	7.15E-07	1.69E-05	5.15E-11	0.	0.	3.40E-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.	2.76E-04	1.03E-04	0.	7.15E-07	1.77E-05	7.77E-11	0.	0.	7.17E-04
68	4.00	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.	4.10E-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	1.16E-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	1.01E-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.	5.82E-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	1.00E-08	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	5.05E-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.	2.86E-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.	2.86E-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.	2.55E-05
95	1.30	0.	1.39E-05	0.	0.	0.	0.	0.	7.15E-07	0.	2.46E-09	0.	0.	1.46E-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.	1.16E-05	0.	0.	0.	0.	2.90E-07	7.15E-07	0.	5.45E-09	0.	0.	1.26E-05
99	0.90	0.	7.85E-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-09 (10.0E-03 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.	6.45E-03	0.	0.	0.	2.98E-07	1.47E-13	0.	0.	6.45E-03
2	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.	1.00E-03	0.	0.	0.	3.02E-07	1.92E-13	0.	0.	1.00E-03
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	1.60E-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	7.25E-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	2.85E-05	0.	0.	0.	3.18E-07	3.17E-13	0.	0.	9.44E-04
26	8.20	0.	8.75E-04	2.65E-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	1.02E-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	5.83E-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.	5.78E-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.	9.03E-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	1.39E-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	6.77E-08	0.	4.82E-08	2.19E-05	2.04E-04	0.	3.62E-07	7.26E-13	0.	0.	2.26E-04
46	6.20	2.58E-08	0.	1.83E-08	2.57E-05	3.07E-04	0.	3.65E-07	7.62E-13	0.	0.	3.33E-04
47	6.10	9.71E-09	0.	6.15E-09	6.34E-05	8.26E-04	0.	3.67E-07	8.00E-13	0.	0.	8.90E-04
48	6.00	3.45E-09	0.	1.25E-09	4.23E-05	1.63E-04	0.	3.70E-07	8.41E-13	0.	0.	2.05E-04
49	5.90	7.49E-10	0.	8.66E-11	5.69E-05	2.12E-04	0.	3.70E-07	8.85E-13	0.	0.	2.70E-04
50	5.80	9.14E-11	0.	2.02E-12	7.10E-05	2.10E-04	0.	3.65E-07	9.31E-13	0.	0.	2.82E-04
51	5.70	6.62E-12	0.	0.	6.62E-05	1.45E-04	0.	3.43E-07	9.82E-13	0.	0.	2.11E-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	2.79E-13	0.	0.	0.	3.85E-05	3.61E-04	0.	0.	3.18E-07	1.03E-12	0.	0.	4.00E-04
53	5.50	0.	0.	0.	0.	5.13E-05	4.42E-04	0.	0.	3.20E-07	1.09E-12	0.	0.	4.94E-04
54	5.40	0.	0.	0.	0.	3.80E-05	1.58E-04	0.	0.	3.22E-07	1.15E-12	0.	0.	1.96E-04
55	5.30	0.	0.	0.	0.	3.91E-05	3.63E-04	0.	0.	3.24E-07	1.22E-12	0.	0.	4.02E-04
56	5.20	0.	0.	0.	0.	3.76E-05	1.36E-04	0.	0.	3.26E-07	1.29E-12	0.	0.	1.74E-04
57	5.10	0.	0.	0.	0.	3.34E-05	1.93E-04	0.	2.62E-09	3.29E-07	1.37E-12	0.	0.	2.26E-04
58	5.00	2.46E-06	0.	0.	0.	2.61E-05	1.64E-04	0.	2.62E-09	3.31E-07	1.45E-12	0.	0.	1.93E-04
59	4.90	4.82E-06	0.	0.	0.	2.60E-05	1.18E-04	0.	2.62E-09	3.34E-07	1.55E-12	0.	0.	1.49E-04
60	4.80	7.23E-06	0.	0.	0.	2.66E-05	1.15E-04	0.	2.62E-09	3.37E-07	1.64E-12	0.	0.	1.49E-04
61	4.70	7.83E-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.	6.36E-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	1.46E-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.	2.04E-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	2.09E-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-08	5.16E-09	4.04E-06	0.	0.	2.62E-09	3.26E-07	3.91E-12	0.	0.	5.60E-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.	7.80E-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.	1.10E-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	1.59E-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.	1.15E-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) 5000. 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.	5.89E-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.	5.52E-06	3.45E-05	0.	0.	0.	5.51E-09	6.80E-15	0.	0.	4.01E-05
15	9.30	0.	6.01E-06	3.34E-05	0.	0.	0.	5.53E-09	7.03E-15	0.	0.	3.94E-05
16	9.20	0.	6.50E-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.	1.40E-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	1.63E-06	0.	0.	0.	5.81E-09	1.07E-14	0.	0.	1.03E-05
28	8.00	0.	8.28E-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	9.32E-07	0.	0.	0.	5.90E-09	1.19E-14	0.	0.	8.30E-06
31	7.70	0.	6.90E-06	6.57E-07	0.	0.	0.	5.93E-09	1.24E-14	0.	0.	7.56E-06
32	7.60	0.	6.43E-06	5.33E-07	0.	6.85E-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	1.81E-07	0.	6.04E-07	0.	6.09E-09	1.52E-14	0.	0.	5.32E-06
37	7.10	0.	4.08E-06	1.46E-07	0.	6.48E-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	1.71E-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.	4.80E-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.	4.80E-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	1.45E-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	7.05E-10	0.	4.41E-09	6.77E-07	6.29E-06	0.	6.54E-09	2.27E-14	0.	0.	6.98E-06
46	6.20	2.69E-10	0.	1.66E-09	7.92E-07	9.46E-06	0.	6.59E-09	2.38E-14	0.	0.	1.03E-05
47	6.10	1.01E-10	0.	5.62E-10	1.96E-06	2.55E-05	0.	6.64E-09	2.50E-14	0.	0.	2.75E-05
48	6.00	3.60E-11	0.	1.15E-10	1.30E-06	5.03E-06	0.	6.69E-09	2.63E-14	0.	0.	6.34E-06
49	5.90	7.80E-12	0.	7.92E-12	1.76E-06	6.55E-06	0.	6.69E-09	2.76E-14	0.	0.	8.32E-06
50	5.80	9.53E-13	0.	1.84E-13	2.19E-06	6.49E-06	0.	6.59E-09	2.91E-14	0.	0.	8.69E-06
51	5.70	6.90E-14	0.	0.	2.04E-06	4.46E-06	0.	6.19E-09	3.07E-14	0.	0.	6.51E-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	5.60	2.91E-15	0.	0.	0.	1.19E-06	1.12E-05	0.	0.	5.75E-09	3.24E-14	0.	0.	1.24E-05
53	5.50	0.	0.	0.	0.	1.58E-06	1.37E-05	0.	0.	5.78E-09	3.42E-14	0.	0.	1.52E-05
54	5.40	0.	0.	0.	0.	1.17E-06	4.88E-06	0.	0.	5.81E-09	3.61E-14	0.	0.	6.06E-06
55	5.30	0.	0.	0.	0.	1.21E-06	1.12E-05	0.	0.	5.85E-09	3.82E-14	0.	0.	1.24E-05
56	5.20	0.	0.	0.	0.	1.16E-06	4.19E-06	0.	0.	5.89E-09	4.04E-14	0.	0.	5.36E-06
57	5.10	0.	0.	0.	0.	1.03E-06	5.95E-06	0.	8.28E-12	5.94E-09	4.28E-14	0.	0.	6.99E-06
58	5.00	2.56E-08	0.	0.	0.	8.04E-07	5.07E-06	0.	8.28E-12	5.99E-09	4.55E-14	0.	0.	5.90E-06
59	4.90	5.02E-08	0.	0.	0.	8.02E-07	3.63E-06	0.	8.28E-12	6.04E-09	4.83E-14	0.	0.	4.49E-06
60	4.80	7.54E-08	0.	0.	0.	8.21E-07	3.56E-06	0.	8.28E-12	6.09E-09	5.14E-14	0.	0.	4.46E-06
61	4.70	8.16E-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.	1.80E-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	1.08E-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	6.39E-09	1.04E-13	0.	0.	2.30E-07
71	3.70	1.50E-08	0.	3.69E-08	6.51E-10	1.12E-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	5.89E-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	1.26E-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.	4.26E-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 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.	4.40E-05	0.	0.	0.	9.25E-11	1.34E-16	0.	0.	4.40E-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.	9.60E-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.	1.00E-10	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	6.95E-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	2.30E-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.	1.64E-09	0.	2.62E-07	0.	1.11E-10	6.02E-16	0.	0.	2.63E-07
44	6.40	1.47E-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	7.14E-12	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	2.72E-12	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	1.02E-12	0.	4.20E-11	5.38E-08	7.01E-07	0.	1.14E-10	7.29E-16	0.	0.	7.55E-07
48	6.00	3.64E-13	0.	8.56E-12	3.59E-08	1.38E-07	0.	1.15E-10	7.66E-16	0.	0.	1.74E-07
49	5.90	7.90E-14	0.	5.91E-13	4.83E-08	1.80E-07	0.	1.15E-10	8.06E-16	0.	0.	2.29E-07
50	5.80	9.65E-15	0.	1.38E-14	6.03E-08	1.78E-07	0.	1.13E-10	8.48E-16	0.	0.	2.39E-07
51	5.70	6.98E-16	0.	0.	5.62E-08	1.23E-07	0.	1.06E-10	8.94E-16	0.	0.	1.79E-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	2.94E-17	0.	0.	0.	3.27E-08	3.07E-07	0.	0.	9.88E-11	9.43E-16	0.	0.	3.39E-07
53	5.50	0.	0.	0.	0.	4.35E-08	3.75E-07	0.	0.	9.93E-11	9.95E-16	0.	0.	4.19E-07
54	5.40	0.	0.	0.	0.	3.22E-08	1.34E-07	0.	0.	9.98E-11	1.05E-15	0.	0.	1.66E-07
55	5.30	0.	0.	0.	0.	3.32E-08	3.08E-07	0.	0.	1.00E-10	1.11E-15	0.	0.	3.41E-07
56	5.20	0.	0.	0.	0.	3.19E-08	1.15E-07	0.	0.	1.01E-10	1.18E-15	0.	0.	1.47E-07
57	5.10	0.	0.	0.	0.	2.84E-08	1.64E-07	0.	2.29E-14	1.02E-10	1.25E-15	0.	0.	1.92E-07
58	5.00	2.59E-10	0.	0.	0.	2.21E-08	1.39E-07	0.	2.29E-14	1.03E-10	1.32E-15	0.	0.	1.62E-07
59	4.90	5.08E-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	7.63E-10	0.	0.	0.	2.26E-08	9.78E-08	0.	2.29E-14	1.05E-10	1.50E-15	0.	0.	1.21E-07
61	4.70	8.26E-10	0.	0.	0.	1.95E-08	5.88E-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.	4.80E-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.	2.84E-10	0.	1.02E-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	2.98E-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	2.18E-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.	2.75E-09	2.85E-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.	1.84E-09	9.34E-09	1.92E-09	0.	0.	2.29E-14	9.25E-11	3.87E-15	0.	0.	1.31E-08
74	3.40	7.06E-11	0.	4.08E-10	1.39E-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.	3.39E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 R-M NO. 1	NO BETA	NO GAMMA	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	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.	1.03E-06	0.	0.	0.	1.60E-12	4.34E-18	0.	0.	1.03E-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.	1.65E-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	3.60E-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-18	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	8.30E-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.	1.25E-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.	1.50E-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	1.47E-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	7.17E-14	0.	1.40E-11	3.85E-10	3.58E-09	0.	1.94E-12	1.97E-17	0.	0.	3.98E-09
46	6.20	2.73E-14	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	1.03E-14	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	3.65E-15	0.	3.65E-13	7.42E-10	2.86E-09	0.	1.98E-12	2.28E-17	0.	0.	3.60E-09
49	5.90	7.93E-16	0.	2.52E-14	10.00E-10	3.73E-09	0.	1.98E-12	2.39E-17	0.	0.	4.73E-09
50	5.80	9.69E-17	0.	5.86E-16	1.25E-09	3.69E-09	0.	1.95E-12	2.52E-17	0.	0.	4.94E-09
51	5.70	7.01E-18	0.	0.	1.16E-09	2.54E-09	0.	1.84E-12	2.66E-17	0.	0.	3.70E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. 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	2.95E-19	0.	0.	0.	6.76E-10	6.35E-09	0.	0.	1.71E-12	2.80E-17	0.	0.	7.02E-09
53	5.50	0.	0.	0.	0.	9.01E-10	7.76E-09	0.	0.	1.72E-12	2.96E-17	0.	0.	8.67E-09
54	5.40	0.	0.	0.	0.	6.67E-10	2.78E-09	0.	0.	1.72E-12	3.13E-17	0.	0.	3.44E-09
55	5.30	0.	0.	0.	0.	6.87E-10	6.37E-09	0.	0.	1.74E-12	3.31E-17	0.	0.	7.05E-09
56	5.20	0.	0.	0.	0.	6.61E-10	2.38E-09	0.	0.	1.75E-12	3.50E-17	0.	0.	3.05E-09
57	5.10	0.	0.	0.	0.	5.87E-10	3.38E-09	0.	4.74E-17	1.76E-12	3.71E-17	0.	0.	3.97E-09
58	5.00	2.60E-12	0.	0.	0.	4.57E-10	2.88E-09	0.	4.74E-17	1.78E-12	3.94E-17	0.	0.	3.34E-09
59	4.90	5.10E-12	0.	0.	0.	4.56E-10	2.06E-09	0.	4.74E-17	1.79E-12	4.19E-17	0.	0.	2.53E-09
60	4.80	7.66E-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	8.29E-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	7.38E-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	6.36E-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	3.60E-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	5.66E-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	1.29E-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

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. 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.	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.	3.74E-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.	1.06E-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	1.69E-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.	3.67E-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	1.48E-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	7.18E-16	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	2.74E-16	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	1.03E-16	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	3.66E-17	0.	6.32E-15	9.77E-12	3.76E-11	0.	4.47E-14	1.15E-18	0.	0.	4.75E-11
49	5.90	7.94E-18	0.	4.36E-16	1.32E-11	4.90E-11	0.	4.47E-14	1.21E-18	0.	0.	6.23E-11
50	5.80	9.70E-19	0.	1.02E-17	1.64E-11	4.86E-11	0.	4.40E-14	1.28E-18	0.	0.	6.50E-11
51	5.70	7.01E-20	0.	0.	1.53E-11	3.34E-11	0.	4.13E-14	1.35E-18	0.	0.	4.88E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 5000. 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	2.96E-21	0.	0.	0.	8.90E-12	8.35E-11	0.	0.	3.85E-14	1.42E-18	0.	0.	9.25E-11
53	5.50	0.	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	0.	0.	0.	0.	8.78E-12	3.65E-11	0.	0.	3.88E-14	1.58E-18	0.	0.	4.54E-11
55	5.30	0.	0.	0.	0.	9.04E-12	8.38E-11	0.	0.	3.91E-14	1.68E-18	0.	0.	9.29E-11
56	5.20	0.	0.	0.	0.	8.70E-12	3.14E-11	0.	0.	3.94E-14	1.77E-18	0.	0.	4.01E-11
57	5.10	0.	0.	0.	0.	7.73E-12	4.45E-11	0.	6.25E-20	3.97E-14	1.88E-18	0.	0.	5.23E-11
58	5.00	2.61E-14	0.	0.	0.	6.02E-12	3.79E-11	0.	6.25E-20	4.00E-14	2.00E-18	0.	0.	4.40E-11
59	4.90	5.11E-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	7.66E-14	0.	0.	0.	6.15E-12	2.66E-11	0.	6.25E-20	4.07E-14	2.26E-18	0.	0.	3.29E-11
61	4.70	8.30E-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	9.81E-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	4.56E-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.	3.80E-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	4.55E-11	1.04E-13	0.	0.	6.25E-20	2.10E-14	1.03E-17	0.	0.	4.56E-11
80	2.80	1.29E-15	0.	1.28E-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.	1.60E-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.	7.56E-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.	3.86E-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	1.01E-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	6.78E-08	1.02E-07	2.93E-06	9.50E 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	7.38E-08	1.02E-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.	2.00E 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	6.10E-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	2.52E-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	1.09E 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.	1.58E 00	0.	5.33E-02	2.74E-07	2.33E-08	3.81E-06	1.66E 00
43	6.50	1.22E-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	6.14E-03	0.	1.38E-03	4.33E-02	5.58E 00	0.	5.41E-02	3.00E-07	2.31E-08	3.89E-06	5.68E 00
45	6.30	3.11E-03	0.	6.33E-04	1.70E-01	1.97E 00	0.	5.45E-02	3.15E-07	2.29E-08	3.95E-06	2.19E 00
46	6.20	1.23E-03	0.	2.65E-04	2.06E-01	3.16E 00	0.	5.49E-02	3.30E-07	2.28E-08	4.04E-06	3.42E 00
47	6.10	4.87E-04	0.	9.67E-05	5.28E-01	6.98E 00	0.	5.53E-02	3.47E-07	2.29E-08	4.12E-06	7.56E 00
48	6.00	1.81E-04	0.	2.08E-05	3.82E-01	1.69E 00	0.	5.58E-02	3.64E-07	2.30E-08	4.21E-06	2.13E 00
49	5.90	4.02E-05	0.	1.46E-06	5.21E-01	2.98E 00	0.	5.58E-02	3.83E-07	2.30E-08	4.30E-06	2.66E 00
50	5.80	4.90E-06	0.	3.46E-08	6.66E-01	1.96E 00	0.	5.49E-02	4.03E-07	2.31E-08	4.38E-06	2.68E 00
51	5.70	3.61E-07	0.	0.	6.53E-01	1.64E 00	0.	5.16E-02	4.25E-07	2.31E-08	4.47E-06	2.34E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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	1.55E-08	0.	0.	0.	4.15E-01	3.46E 00	0.	0.	4.80E-02	4.48E-07	2.32E-08	4.55E-06	3.93E 00
53	5.50	0.	0.	0.	0.	5.33E-01	3.81E 00	0.	0.	4.82E-02	4.73E-07	2.32E-08	4.64E-06	4.39E 00
54	5.40	0.	0.	0.	0.	4.11E-01	1.74E 00	0.	0.	4.85E-02	5.00E-07	2.33E-08	4.73E-06	2.19E 00
55	5.30	0.	0.	0.	0.	4.24E-01	3.37E 00	0.	0.	4.88E-02	5.29E-07	2.34E-08	4.83E-06	3.84E 00
56	5.20	0.	0.	0.	0.	4.19E-01	1.43E 00	0.	0.	4.91E-02	5.60E-07	2.36E-08	4.95E-06	1.90E 00
57	5.10	0.	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	2.50E 00
58	5.00	1.51E-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	2.24E 00
59	4.90	3.11E-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	2.10E 00
60	4.80	4.89E-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	2.21E 00
61	4.70	5.56E-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	1.83E 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	2.96E-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	5.00E-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-06	6.73E-02	0.	0.	4.44E-03	5.24E-02	1.56E-06	1.35E-08	3.13E-07	2.81E-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	2.76E-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	7.88E-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-06	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	9.30E-03	0.	2.81E-05	4.37E-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	2.03E-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.	1.48E-02	0.	0.	0.	0.	0.	4.44E-03	1.83E-02	1.95E-05	2.90E-08	6.67E-07	3.76E-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	1.59E-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	1.02E-06	1.12E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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.	1.32E 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.	9.64E-01	0.	0.	0.	1.61E-03	3.15E-09	3.25E-08	4.28E-07	9.66E-01
4	10.40	0.	0.	8.07E-01	0.	0.	0.	1.61E-03	3.25E-09	3.26E-08	4.29E-07	8.09E-01
5	10.30	0.	0.	6.07E-01	0.	0.	0.	1.62E-03	3.34E-09	3.27E-08	4.30E-07	6.09E-01
6	10.20	0.	0.	5.71E-01	0.	0.	0.	1.62E-03	3.44E-09	3.27E-08	4.31E-07	5.73E-01
7	10.10	0.	0.	4.89E-01	0.	0.	0.	1.62E-03	3.55E-09	3.28E-08	4.32E-07	4.91E-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	6.25E-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	6.47E-01
15	9.30	0.	5.66E-01	1.24E-01	0.	0.	0.	1.65E-03	4.55E-09	8.79E-09	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	8.75E-09	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	8.71E-09	4.40E-07	8.36E-01
18	9.00	0.	9.08E-01	6.22E-02	0.	0.	0.	1.67E-03	5.02E-09	8.67E-09	4.41E-07	9.72E-01
19	8.90	0.	1.06E 00	4.98E-02	0.	0.	0.	1.67E-03	5.19E-09	8.63E-09	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	8.59E-09	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	8.55E-09	4.44E-07	1.09E 00
22	8.60	0.	1.01E 00	3.21E-02	0.	0.	0.	1.69E-03	5.76E-09	8.51E-09	4.45E-07	1.04E 00
23	8.50	0.	9.72E-01	2.25E-02	0.	0.	0.	1.70E-03	5.96E-09	8.47E-09	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	8.42E-09	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	8.38E-09	4.49E-07	9.14E-01
26	8.20	0.	8.60E-01	1.39E-02	0.	0.	0.	1.72E-03	6.64E-09	8.34E-09	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	8.27E-09	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	8.21E-09	4.68E-07	8.02E-01
29	7.90	0.	7.51E-01	6.64E-03	0.	0.	0.	1.75E-03	7.43E-09	8.15E-09	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	8.09E-09	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	8.04E-09	4.87E-07	6.76E-01
32	7.60	0.	6.29E-01	3.94E-03	0.	1.37E-05	0.	1.78E-03	8.35E-09	7.98E-09	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	7.93E-09	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	7.87E-09	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	7.82E-09	5.12E-07	5.12E-01
36	7.20	0.	4.68E-01	1.59E-03	0.	8.48E-03	0.	1.82E-03	9.83E-09	7.76E-09	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	7.71E-09	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	7.65E-09	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	7.59E-09	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	7.54E-09	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	7.48E-09	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	7.44E-09	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	7.40E-09	5.63E-07	1.56E-01
44	6.40	1.31E-04	0.	1.41E-04	2.02E-03	2.60E-01	0.	1.94E-03	1.40E-08	7.37E-09	5.69E-07	2.65E-01
45	6.30	6.64E-05	0.	6.46E-05	7.92E-03	9.18E-02	0.	1.95E-03	1.47E-08	7.33E-09	5.78E-07	1.02E-01
46	6.20	2.63E-05	0.	2.70E-05	9.63E-03	1.47E-01	0.	1.97E-03	1.54E-08	7.30E-09	5.90E-07	1.59E-01
47	6.10	1.04E-05	0.	9.86E-06	2.46E-02	3.26E-01	0.	1.98E-03	1.62E-08	7.31E-09	6.03E-07	3.52E-01
48	6.00	3.83E-06	0.	2.12E-06	1.78E-02	7.89E-02	0.	1.99E-03	1.70E-08	7.34E-09	6.15E-07	9.88E-02
49	5.90	8.58E-07	0.	1.48E-07	2.43E-02	9.72E-02	0.	1.99E-03	1.79E-08	7.36E-09	6.28E-07	1.24E-01
50	5.80	1.06E-07	0.	3.52E-09	3.11E-02	9.14E-02	0.	1.97E-03	1.88E-08	7.38E-09	6.40E-07	1.24E-01
51	5.70	7.7 E-09	0.	0.	3.04E-02	7.64E-02	0.	1.85E-03	1.98E-08	7.39E-09	6.53E-07	1.09E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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	3.30E-10	0.	0.	0.	1.94E-02	1.62E-01	0.	0.	1.72E-03	2.09E-08	7.40E-09	6.66E-07	1.83E-01
53	5.50	0.	0.	0.	0.	2.49E-02	1.78E-01	0.	0.	1.73E-03	2.21E-08	7.43E-09	6.78E-07	2.05E-01
54	5.40	0.	0.	0.	0.	1.92E-02	8.10E-02	0.	0.	1.73E-03	2.33E-08	7.45E-09	6.91E-07	1.02E-01
55	5.30	0.	0.	0.	0.	1.98E-02	1.57E-01	0.	0.	1.75E-03	2.47E-08	7.48E-09	7.05E-07	1.79E-01
56	5.20	0.	0.	0.	0.	1.96E-02	6.70E-02	0.	0.	1.76E-03	2.62E-08	7.53E-09	7.24E-07	8.83E-02
57	5.10	0.	0.	0.	0.	1.80E-02	9.60E-02	0.	3.03E-05	1.77E-03	2.77E-08	7.70E-09	7.43E-07	1.16E-01
58	5.00	3.22E-03	0.	0.	0.	1.46E-02	8.02E-02	0.	3.03E-05	1.79E-03	2.94E-08	7.89E-09	7.61E-07	9.99E-02
59	4.90	6.62E-03	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	8.94E-02
60	4.80	1.05E-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	8.98E-02
61	4.70	1.19E-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	7.06E-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.	9.75E-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.	8.16E-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	1.60E-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	8.84E-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	1.62E-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-06	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	4.26E-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	2.68E-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.	1.46E-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	8.92E-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.	1.75E-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 (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.	1.27E-01	0.	0.	0.	3.49E-05	1.05E-10	9.97E-09	4.82E-08	1.27E-01
2	10.60	0.	0.	1.00E-01	0.	0.	0.	3.49E-05	1.08E-10	1.00E-08	4.83E-08	1.00E-01
3	10.50	0.	0.	9.27E-02	0.	0.	0.	3.50E-05	1.11E-10	1.01E-08	4.84E-08	9.27E-02
4	10.40	0.	0.	7.76E-02	0.	0.	0.	3.50E-05	1.15E-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	4.40E-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	2.62E-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	4.50E-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	3.00E-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.	6.36E-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	1.67E-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	8.40E-07	0.	6.21E-06	2.77E-04	3.22E-03	0.	4.23E-05	5.19E-10	2.27E-09	6.53E-08	3.54E-03
46	6.20	3.30E-07	0.	2.60E-06	3.38E-04	5.16E-03	0.	4.27E-05	5.45E-10	2.26E-09	6.67E-08	5.55E-03
47	6.10	1.35E-07	0.	9.48E-07	8.63E-04	1.14E-02	0.	4.30E-05	5.72E-10	2.27E-09	6.81E-08	1.23E-02
48	6.00	4.95E-08	0.	2.04E-07	6.25E-04	2.77E-03	0.	4.33E-05	6.01E-10	2.27E-09	6.95E-08	3.43E-03
49	5.90	1.11E-08	0.	1.43E-08	8.52E-04	3.41E-03	0.	4.33E-05	6.33E-10	2.28E-09	7.09E-08	4.30E-03
50	5.80	1.35E-09	0.	3.39E-10	1.09E-03	3.20E-03	0.	4.27E-05	6.66E-10	2.29E-09	7.24E-08	4.34E-03
51	5.70	9.85E-11	0.	0.	1.07E-03	2.68E-03	0.	4.01E-05	7.02E-10	2.29E-09	7.38E-08	3.78E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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	4.21E-12	0.	0.	0.	6.79E-04	5.66E-03	0.	0.	3.73E-05	7.40E-10	2.30E-09	7.52E-08	6.38E-03
53	5.50	0.	0.	0.	0.	8.71E-04	6.24E-03	0.	0.	3.75E-05	7.81E-10	2.30E-09	7.66E-08	7.14E-03
54	5.40	0.	0.	0.	0.	6.72E-04	2.84E-03	0.	0.	3.76E-05	8.26E-10	2.31E-09	7.81E-08	3.55E-03
55	5.30	0.	0.	0.	0.	6.94E-04	5.50E-03	0.	0.	3.79E-05	8.73E-10	2.32E-09	7.97E-08	6.24E-03
56	5.20	0.	0.	0.	0.	6.86E-04	2.35E-03	0.	0.	3.81E-05	9.25E-10	2.33E-09	8.18E-08	3.07E-03
57	5.10	0.	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	4.03E-03
58	5.00	4.11E-05	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	3.41E-03
59	4.90	8.46E-05	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	2.96E-03
60	4.80	1.33E-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	2.89E-03
61	4.70	1.52E-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	2.18E-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	1.48E-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	3.28E-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	5.45E-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	6.90E-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	1.16E-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.	2.75E-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	8.82E-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	1.89E-09	7.10E-09	2.23E-04
90	1.80	0.	1.82E-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.	2.08E-04	0.	0.	0.	0.	0.	1.20E-07	1.68E-05	2.68E-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	6.46E-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	1.40E-04
96	1.20	0.	1.70E-04	0.	0.	0.	0.	0.	1.20E-07	0.	7.67E-08	3.02E-09	1.00E-08	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	1.10E-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.	1.05E-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	1.06E-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.	7.12E-05	1.01E-03	0.	0.	0.	6.58E-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.	6.60E-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	2.30E-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	2.50E-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.	7.33E-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	3.6cE-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	1.79E-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	9.09E-09	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	3.61E-09	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	1.42E-09	0.	7.89E-08	2.58E-05	3.41E-04	0.	7.92E-07	1.81E-11	6.54E-10	7.05E-09	3.67E-04
48	6.00	5.25E-10	0.	1.70E-08	1.86E-05	8.26E-05	0.	7.98E-07	1.90E-11	6.55E-10	7.20E-09	1.02E-04
49	5.90	1.17E-10	0.	1.19E-09	2.54E-05	1.02E-04	0.	7.98E-07	2.00E-11	6.58E-10	7.35E-09	1.28E-04
50	5.80	1.45E-11	0.	2.82E-11	3.25E-05	9.56E-05	0.	7.87E-07	2.10E-11	6.59E-10	7.49E-09	1.29E-04
51	5.70	1.09E-12	0.	0.	3.18E-05	7.99E-05	0.	7.39E-07	2.22E-11	6.60E-10	7.64E-09	1.12E-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	4.52E-14	0.	0.	0.	2.03E-05	1.69E-04	0.	0.	6.87E-07	2.34E-11	6.62E-10	7.79E-09	1.90E-04
53	5.50	0.	0.	0.	0.	2.60E-05	1.86E-04	0.	0.	6.91E-07	2.47E-11	6.63E-10	7.93E-09	2.13E-04
54	5.40	0.	0.	0.	0.	2.01E-05	8.47E-05	0.	0.	6.94E-07	2.61E-11	6.66E-10	8.08E-09	1.05E-04
55	5.30	0.	0.	0.	0.	2.07E-05	1.64E-04	0.	0.	6.99E-07	2.76E-11	6.68E-10	8.25E-09	1.86E-04
56	5.20	0.	0.	0.	0.	2.05E-05	7.00E-05	0.	0.	7.03E-07	2.92E-11	6.73E-10	8.47E-09	9.12E-05
57	5.10	0.	0.	0.	0.	1.88E-05	1.00E-04	0.	3.70E-10	7.09E-07	3.10E-11	6.88E-10	8.69E-09	1.20E-04
58	5.00	4.41E-07	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	1.00E-04
59	4.90	9.07E-07	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	8.64E-05
60	4.80	1.43E-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	8.32E-05
61	4.70	1.63E-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	6.18E-05
62	4.60	1.92E-06	0.	0.	0.	1.37E-05	4.55E-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	1.00E-08	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.	4.88E-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.	2.33E-06	4.34E-08	4.79E-06	8.75E-07	0.	3.70E-10	7.66E-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	4.95E-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	7.51E-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	7.03E-07	8.83E-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	1.56E-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	1.88E-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	2.64E-10	2.03E-10	2.77E-10	4.06E-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	3.40E-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	4.26E-10	5.71E-10	4.55E-06
88	2.00	0.	5.12E-06	0.	0.	0.	0.	0.	3.70E-10	3.57E-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	7.29E-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.	1.48E-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.	1.16E-05	0.	0.	0.	0.	0.	3.70E-10	0.	1.90E-09	6.64E-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.	3.01E-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-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.	5.89E-04	0.	0.	0.	1.18E-08	1.09E-13	6.78E-10	5.04E-10	5.89E-04
2	10.60	0.	0.	4.64E-04	0.	0.	0.	1.18E-08	1.12E-13	6.82E-10	5.05E-10	4.64E-04
3	10.50	0.	0.	4.29E-04	0.	0.	0.	1.18E-08	1.15E-13	6.85E-10	5.06E-10	4.29E-04
4	10.40	0.	0.	3.59E-04	0.	0.	0.	1.18E-08	1.19E-13	6.87E-10	5.07E-10	3.59E-04
5	10.30	0.	0.	2.70E-04	0.	0.	0.	1.18E-08	1.22E-13	6.89E-10	5.08E-10	2.70E-04
6	10.20	0.	0.	2.54E-04	0.	0.	0.	1.19E-08	1.26E-13	6.90E-10	5.09E-10	2.54E-04
7	10.10	0.	0.	2.18E-04	0.	0.	0.	1.19E-08	1.30E-13	6.92E-10	5.10E-10	2.18E-04
8	10.00	0.	0.	1.57E-04	0.	0.	0.	1.19E-08	1.34E-13	6.94E-10	5.11E-10	1.57E-04
9	9.90	0.	0.	1.55E-04	0.	0.	0.	1.19E-08	1.38E-13	6.95E-10	5.12E-10	1.55E-04
10	9.80	0.	0.	1.27E-04	0.	0.	0.	1.19E-08	1.42E-13	6.97E-10	5.13E-10	1.27E-04
11	9.70	0.	0.	9.08E-05	0.	0.	0.	1.19E-08	1.47E-13	6.98E-10	5.14E-10	9.08E-05
12	9.60	0.	0.	9.69E-05	0.	0.	0.	1.20E-08	1.51E-13	7.00E-10	5.16E-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	5.17E-10	6.83E-05
14	9.40	0.	7.26E-07	5.60E-05	0.	0.	0.	1.20E-08	1.61E-13	1.86E-10	5.18E-10	5.68E-05
15	9.30	0.	7.92E-07	5.50E-05	0.	0.	0.	1.21E-08	1.66E-13	1.85E-10	5.19E-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	5.20E-10	3.60E-05
17	9.10	0.	1.05E-06	3.66E-05	0.	0.	0.	1.22E-08	1.78E-13	1.84E-10	5.21E-10	3.77E-05
18	9.00	0.	1.27E-06	2.76E-05	0.	0.	0.	1.22E-08	1.84E-13	1.83E-10	5.22E-10	2.89E-05
19	8.90	0.	1.49E-06	2.22E-05	0.	0.	0.	1.23E-08	1.90E-13	1.82E-10	5.23E-10	2.37E-05
20	8.80	0.	1.55E-06	2.03E-05	0.	0.	0.	1.23E-08	1.97E-13	1.81E-10	5.24E-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	5.25E-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	5.26E-10	1.57E-05
23	8.50	0.	1.36E-06	1.00E-05	0.	0.	0.	1.24E-08	2.18E-13	1.78E-10	5.27E-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	5.28E-10	1.08E-05
25	8.30	0.	1.26E-06	6.53E-06	0.	0.	0.	1.26E-08	2.34E-13	1.77E-10	5.31E-10	7.80E-06
26	8.20	0.	1.20E-06	6.18E-06	0.	0.	0.	1.26E-08	2.43E-13	1.76E-10	5.38E-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	5.46E-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	5.53E-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	5.61E-10	4.02E-06
30	7.80	0.	9.94E-07	2.80E-06	0.	0.	0.	1.29E-08	2.83E-13	1.71E-10	5.68E-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	5.75E-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	5.83E-10	2.64E-06
33	7.50	0.	8.22E-07	1.39E-06	0.	3.40E-09	0.	1.31E-08	3.18E-13	1.67E-10	5.90E-10	2.23E-06
34	7.40	0.	7.65E-07	1.10E-06	0.	9.61E-09	0.	1.32E-08	3.31E-13	1.66E-10	5.98E-10	1.89E-06
35	7.30	0.	7.08E-07	9.06E-07	0.	6.14E-08	0.	1.32E-08	3.45E-13	1.65E-10	6.05E-10	1.69E-06
36	7.20	0.	6.55E-07	7.08E-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.	3.76E-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	1.83E-10	0.	6.25E-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	9.28E-11	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	3.68E-11	0.	1.20E-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	1.45E-11	0.	4.39E-09	6.14E-07	8.12E-06	0.	1.45E-08	5.92E-13	1.54E-10	7.13E-10	8.75E-06
48	6.00	5.36E-12	0.	9.44E-10	4.44E-07	1.97E-06	0.	1.46E-08	6.23E-13	1.55E-10	7.27E-10	2.43E-06
49	5.90	1.21E-12	0.	6.60E-11	6.06E-07	2.42E-06	0.	1.46E-08	6.55E-13	1.55E-10	7.42E-10	3.05E-06
50	5.80	1.48E-13	0.	1.57E-12	7.75E-07	2.28E-06	0.	1.44E-08	6.89E-13	1.56E-10	7.57E-10	3.07E-06
51	5.70	1.08E-14	0.	0.	7.59E-07	1.90E-06	0.	1.35E-08	7.26E-13	1.56E-10	7.72E-10	2.68E-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	5.60	4.61E-16	0.	0.	0.	4.83E-07	4.03E-06	0.	0.	1.26E-08	7.66E-13	1.56E-10	7.87E-10	4.52E-06
53	5.50	0.	0.	0.	0.	6.20E-07	4.44E-06	0.	0.	1.26E-08	8.09E-13	1.57E-10	8.02E-10	5.07E-06
54	5.40	0.	0.	0.	0.	4.78E-07	2.02E-06	0.	0.	1.27E-08	8.55E-13	1.57E-10	8.17E-10	2.51E-06
55	5.30	0.	0.	0.	0.	4.94E-07	3.92E-06	0.	0.	1.28E-08	9.04E-13	1.58E-10	8.34E-10	4.42E-06
56	5.20	0.	0.	0.	0.	4.88E-07	1.67E-06	0.	0.	1.29E-08	9.57E-13	1.59E-10	8.56E-10	2.17E-06
57	5.10	0.	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	2.86E-06
58	5.00	4.5[illegible]E-09	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	2.38E-06
59	4.90	9.26E-09	0.	0.	0.	3.73E-07	1.65E-06	0.	8.92E-13	1.32E-08	1.14E-12	1.70E-10	9.22E-10	2.04E-06
60	4.80	1.46E-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	1.66E-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	4.12E-11	6.63E-07
67	4.10	9.92E-09	0.	3.77E-08	0.	1.70E-07	5.66E-08	0.	8.92E-13	1.40E-08	1.96E-12	1.08E-10	4.25E-11	2.89E-07
68	4.00	8.14E-09	0.	2.72E-07	0.	1.49E-07	4.08E-08	0.	8.92E-13	1.41E-08	2.11E-12	8.79E-11	4.38E-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	8.90E-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	1.40E-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	3.66E-09	0.	7.91E-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.	1.68E-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	1.16E-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	1.02E-07
78	3.00	8.28E-10	0.	1.10E-08	2.65E-07	2.36E-08	0.	0.	8.92E-13	6.85E-09	5.01E-12	1.19E-10	1.21E-10	3.07E-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.	2.75E-09	3.77E-08	6.98E-09	0.	0.	8.92E-13	6.87E-09	6.16E-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	2.28E-08
83	2.50	5.95E-12	0.	1.00E-10	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	6.03E-11	3.45E-11	2.61E-08
85	2.30	0.	6.52E-08	0.	0.	0.	0.	0.	8.92E-13	6.81E-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	4.95E-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	1.00E-10	5.77E-11	2.39E-07
88	2.00	0.	2.85E-07	0.	0.	0.	0.	0.	8.92E-13	6.54E-09	1.70E-11	1.15E-10	6.60E-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	9.67E-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.	1.38E-10	2.82E-10	1.58E-10	5.12E-07
99	0.90	0.	3.76E-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.	2.79E-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.	6.50E-10	3.36E-10	1.76E-10	9.36E-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	1.41E-05
2	10.60	0.	0.	1.11E-05	0.	0.	0.	2.72E-10	5.96E-15	1.05E-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.	6.64E-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	5.30E-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	1.69E-07
26	8.20	0.	1.21E-08	1.48E-07	0.	0.	0.	2.92E-10	1.29E-14	2.72E-11	5.40E-11	1.60E-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	1.18E-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	1.10E-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	2.57E-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	2.65E-08
40	6.80	1.92E-11	0.	7.44E-09	0.	3.86E-08	0.	3.17E-10	2.27E-14	2.46E-11	6.44E-11	4.64E-08
41	6.70	1.27E-11	0.	5.60E-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	1.84E-12	0.	1.50E-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	9.33E-13	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	3.70E-13	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	1.46E-13	0.	1.05E-10	9.52E-09	1.26E-07	0.	3.35E-10	3.15E-14	2.39E-11	7.14E-11	1.36E-07
48	6.00	5.36E-14	0.	2.26E-11	6.89E-09	3.05E-08	0.	3.38E-10	3.31E-14	2.39E-11	7.29E-11	3.78E-08
49	5.90	1.21E-14	0.	1.58E-12	9.39E-09	3.76E-08	0.	3.38E-10	3.48E-14	2.40E-11	7.44E-11	4.74E-08
50	5.80	1.49E-15	0.	3.75E-14	1.20E-08	3.53E-08	0.	3.33E-10	3.66E-14	2.41E-11	7.59E-11	4.78E-08
51	5.70	1.08E-16	0.	0.	1.18E-08	2.95E-08	0.	3.12E-10	3.86E-14	2.41E-11	7.74E-11	4.17E-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	4.64E-18	0.	0.	0.	7.48E-09	6.24E-08	0.	0.	2.90E-10	4.07E-14	2.41E-11	7.89E-11	7.03E-08
53	5.50	0.	0.	0.	0.	9.60E-09	6.87E-08	0.	0.	2.92E-10	4.29E-14	2.42E-11	8.04E-11	7.88E-08
54	5.40	0.	0.	0.	0.	7.41E-09	3.13E-08	0.	0.	2.93E-10	4.54E-14	2.43E-11	8.19E-11	3.91E-08
55	5.30	0.	0.	0.	0.	7.65E-09	6.07E-08	0.	0.	2.95E-10	4.80E-14	2.44E-11	8.36E-11	6.87E-08
56	5.20	0.	0.	0.	0.	7.56E-09	2.59E-08	0.	0.	2.97E-10	5.08E-14	2.45E-11	8.58E-11	3.38E-08
57	5.10	0.	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	4.45E-08
58	5.00	4.52E-11	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	3.71E-08
59	4.90	9.31E-11	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	3.18E-08
60	4.80	1.47E-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	1.67E-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	1.68E-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-08	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	1.04E-10	1.33E-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	8.36E-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	9.96E-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.	6.50E-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	6.01E-11	0.	3.10E-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	8.36E-12	5.42E-12	1.08E-08
72	3.60	3.66E-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	2.08E-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	2.87E-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	2.83E-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	2.66E-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	2.32E-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	1.67E-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	8.03E-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.	1.56E-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.	5.56E-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	2.03E-08
91	1.70	0.	2.30E-08	0.	0.	0.	0.	0.	1.39E-15	1.31E-10	1.47E-12	2.66E-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	1.62E-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-08
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	1.05E-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	3.64E-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	9.07E-09
100	0.80	0.	4.01E-09	0.	0.	0.	0.	4.32E-11	1.39E-15	0.	1.44E-11	4.05E-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	0.60	0.	1.86E-11	0.	0.	0.	0.	1.15E-10	1.39E-15	0.	3.45E-11	5.20E-11	1.76E-11	2.38E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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.	1.69E-07	0.	0.	0.	8.02E-12	5.05E-16	1.15E-11	5.05E-12	1.69E-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.	3.64E-08	0.	0.	0.	8.13E-12	6.59E-16	1.18E-11	5.14E-12	3.64E-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.	1.06E-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.	1.28E-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.	9.98E-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	5.00E-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	3.84E-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	1.84E-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	9.31E-15	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	3.69E-15	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	1.48E-15	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	5.37E-16	0.	2.71E-13	7.54E-11	3.34E-10	0.	9.96E-12	2.88E-15	2.62E-12	7.28E-12	4.30E-10
49	5.90	1.2 E-16	0.	1.90E-14	1.03E-10	4.12E-10	0.	9.96E-12	3.03E-15	2.63E-12	7.43E-12	5.35E-10
50	5.80	1.46E-17	0.	4.50E-16	1.32E-10	3.87E-10	0.	9.81E-12	3.19E-15	2.64E-12	7.58E-12	5.39E-10
51	5.70	1.08E-18	0.	0.	1.29E-10	3.23E-10	0.	9.21E-12	3.36E-15	2.64E-12	7.73E-12	4.72E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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	4.63E-20	0.	0.	0.	8.20E-11	6.84E-10	0.	0.	8.57E-12	3.55E-15	2.65E-12	7.88E-12	7.85E-10
53	5.50	0.	0.	0.	0.	1.05E-10	7.53E-10	0.	0.	8.61E-12	3.74E-15	2.65E-12	8.03E-12	8.78E-10
54	5.40	0.	0.	0.	0.	8.12E-11	3.43E-10	0.	0.	8.66E-12	3.96E-15	2.66E-12	8.18E-12	4.43E-10
55	5.30	0.	0.	0.	0.	8.38E-11	6.65E-10	0.	0.	8.71E-12	4.19E-15	2.67E-12	8.35E-12	7.68E-10
56	5.20	0.	0.	0.	0.	8.28E-11	2.83E-10	0.	0.	8.77E-12	4.43E-15	2.69E-12	8.57E-12	3.86E-10
57	5.10	0.	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	5.03E-10
58	5.00	4.52E-13	0.	0.	0.	6.20E-11	3.40E-10	0.	1.52E-18	8.92E-12	4.99E-15	2.82E-12	9.01E-12	4.23E-10
59	4.90	9.29E-13	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	3.65E-10
60	4.80	1.47E-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	1.67E-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	9.96E-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	3.67E-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	5.52E-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	6.00E-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.	2.89E-14	2.56E-11	2.97E-14	0.	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.	1.87E-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.	8.19E-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.	3.68E-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 (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.	1.71E-09	0.	0.	0.	2.49E-13	4.91E-17	1.16E-12	5.02E-13	1.71E-09
2	10.60	0.	0.	1.35E-09	0.	0.	0.	2.49E-13	5.05E-17	1.16E-12	5.03E-13	1.35E-09
3	10.50	0.	0.	1.25E-09	0.	0.	0.	2.50E-13	5.20E-17	1.17E-12	5.04E-13	1.25E-09
4	10.40	0.	0.	1.04E-09	0.	0.	0.	2.50E-13	5.35E-17	1.17E-12	5.05E-13	1.05E-09
5	10.30	0.	0.	7.85E-10	0.	0.	0.	2.50E-13	5.51E-17	1.17E-12	5.06E-13	7.87E-10
6	10.20	0.	0.	7.39E-10	0.	0.	0.	2.51E-13	5.68E-17	1.18E-12	5.07E-13	7.41E-10
7	10.10	0.	0.	6.33E-10	0.	0.	0.	2.51E-13	5.85E-17	1.18E-12	5.08E-13	6.35E-10
8	10.00	0.	0.	4.56E-10	0.	0.	0.	2.51E-13	6.03E-17	1.18E-12	5.09E-13	4.58E-10
9	9.90	0.	0.	4.52E-10	0.	0.	0.	2.52E-13	6.21E-17	1.19E-12	5.10E-13	4.54E-10
10	9.80	0.	0.	3.68E-10	0.	0.	0.	2.52E-13	6.41E-17	1.19E-12	5.11E-13	3.70E-10
11	9.70	0.	0.	2.64E-10	0.	0.	0.	2.53E-13	6.61E-17	1.19E-12	5.12E-13	2.66E-10
12	9.60	0.	0.	2.82E-10	0.	0.	0.	2.53E-13	6.82E-17	1.19E-12	5.13E-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	5.14E-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	5.15E-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	5.16E-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	5.17E-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	5.18E-13	1.09E-10
18	9.00	0.	1.26E-12	8.04E-11	0.	0.	0.	2.58E-13	8.28E-17	3.12E-13	5.19E-13	8.28E-11
19	8.90	0.	1.48E-12	6.45E-11	0.	0.	0.	2.59E-13	8.56E-17	3.10E-13	5.20E-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	5.22E-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	5.23E-13	4.38E-11
22	8.60	0.	1.40E-12	4.15E-11	0.	0.	0.	2.62E-13	9.49E-17	3.06E-13	5.24E-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	5.25E-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	5.26E-13	2.98E-11
25	8.30	0.	1.25E-12	1.90E-11	0.	0.	0.	2.65E-13	1.06E-16	3.02E-13	5.29E-13	2.13E-11
26	8.20	0.	1.19E-12	1.80E-11	0.	0.	0.	2.67E-13	1.10E-16	3.00E-13	5.36E-13	2.03E-11
27	8.10	0.	1.15E-12	1.29E-11	0.	0.	0.	2.68E-13	1.14E-16	2.98E-13	5.43E-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	5.51E-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	5.58E-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	5.66E-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	5.73E-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	5.80E-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	5.88E-13	6.01E-12
34	7.40	0.	7.59E-13	3.20E-12	0.	1.63E-14	0.	2.78E-13	1.49E-16	2.83E-13	5.95E-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	1.82E-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	9.20E-17	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	3.65E-17	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	1.44E-17	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	5.31E-18	0.	2.75E-15	7.55E-13	3.34E-12	0.	3.09E-13	2.80E-16	2.64E-13	7.24E-13	5.40E-12
49	5.90	1.19E-18	0.	1.92E-16	1.03E-12	4.12E-12	0.	3.09E-13	2.95E-16	2.65E-13	7.39E-13	6.46E-12
50	5.80	1.47E-19	0.	4.56E-18	1.32E-12	3.87E-12	0.	3.04E-13	3.11E-16	2.65E-13	7.54E-13	6.51E-12
51	5.70	1.07E-20	0.	0.	1.29E-12	3.23E-12	0.	2.86E-13	3.27E-16	2.66E-13	7.69E-13	5.84E-12

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 6000. 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	4.57E-22	0.	0.	0.	8.20E-13	6.84E-12	0.	0.	2.66E-13	3.45E-16	2.66E-13	7.83E-13	8.98E-12
53	5.50	0.	0.	0.	0.	1.05E-12	7.53E-12	0.	0.	2.67E-13	3.64E-16	2.67E-13	7.98E-13	9.92E-12
54	5.40	0.	0.	0.	0.	8.12E-13	3.43E-12	0.	0.	2.68E-13	3.85E-16	2.68E-13	8.13E-13	5.59E-12
55	5.30	0.	0.	0.	0.	8.38E-13	6.65E-12	0.	0.	2.70E-13	4.07E-16	2.69E-13	8.30E-13	8.86E-12
56	5.20	0.	0.	0.	0.	8.28E-13	2.84E-12	0.	0.	2.72E-13	4.31E-16	2.71E-13	8.52E-13	5.06E-12
57	5.10	0.	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	6.25E-12
58	5.00	4.46E-15	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	5.48E-12
59	4.90	9.18E-15	0.	0.	0.	6.34E-13	2.80E-12	0.	1.51E-21	2.79E-13	5.16E-16	2.91E-13	9.18E-13	4.93E-12
60	4.80	1.45E-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	1.65E-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.	1.00E-13	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	3.54E-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	4.15E-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.	1.56E-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	1.26E-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	1.60E-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	6.06E-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	2.66E-12
94	1.40	0.	2.97E-12	0.	0.	0.	0.	0.	1.51E-21	0.	2.25E-14	1.90E-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	5.58E-13	1.84E-13	1.92E-12
100	0.80	0.	4.88E-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.	2.26E-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	4.60E-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.	1.60E 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	6.86E 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.	1.76E 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.	1.42E 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.	1.06E 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	5.75E-02	0.	2.56E-01	0.	1.32E-01	2.83E-06	1.86E-06	6.06E-05	7.96E 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	7.57E-03	0.	2.06E-02	0.	1.28E 00	0.	1.37E-01	3.53E-06	1.82E-06	6.41E-05	1.45E 00
43	6.50	4.06E-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	2.06E-03	0.	7.85E-03	2.61E-02	3.86E 00	0.	1.39E-01	3.87E-06	1.81E-06	6.55E-05	4.03E 00
45	6.30	1.07E-03	0.	3.87E-03	1.06E-01	1.51E 00	0.	1.40E-01	4.06E-06	1.80E-06	6.64E-05	1.77E 00
46	6.20	4.38E-04	0.	1.73E-03	1.33E-01	2.45E 00	0.	1.41E-01	4.26E-06	1.80E-06	6.78E-05	2.73E 00
47	6.10	1.79E-04	0.	6.68E-04	3.49E-01	4.72E 00	0.	1.42E-01	4.47E-06	1.81E-06	6.91E-05	5.22E 00
48	6.00	6.77E-05	0.	1.49E-04	2.68E-01	1.34E 00	0.	1.43E-01	4.70E-06	1.82E-06	7.05E-05	1.75E 00
49	5.90	1.55E-05	0.	1.05E-05	3.70E-01	1.57E 00	0.	1.43E-01	4.95E-06	1.83E-06	7.19E-05	2.08E 00
50	5.80	1.92E-06	0.	2.53E-07	4.81E-01	1.45E 00	0.	1.41E-01	5.21E-06	1.83E-06	7.33E-05	2.08E 00
51	5.70	1.41E-07	0.	0.	4.89E-01	1.36E 00	0.	1.33E-01	5.49E-06	1.84E-06	7.46E-05	1.98E 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	6.08E-09	0.	0.	0.	3.32E-01	2.56E 00	0.	0.	1.23E-01	5.79E-06	1.85E-06	7.60E-05	3.02E 00
53	5.50	0.	0.	0.	0.	4.17E-01	2.65E 00	0.	0.	1.24E-01	6.11E-06	1.86E-06	7.74E-05	3.19E 00
54	5.40	0.	0.	0.	0.	3.32E-01	1.41E 00	0.	0.	1.25E-01	6.46E-06	1.88E-06	7.88E-05	1.87E 00
55	5.30	0.	0.	0.	0.	3.43E-01	2.45E 00	0.	0.	1.25E-01	6.83E-06	1.89E-06	8.04E-05	2.92E 00
56	5.20	0.	0.	0.	0.	3.45E-01	1.16E 00	0.	0.	1.26E-01	7.24E-06	1.91E-06	8.25E-05	1.64E 00
57	5.10	0.	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	2.11E 00
58	5.00	6.39E-02	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	1.85E 00
59	4.90	1.36E-01	0.	0.	0.	2.83E-01	1.24E 00	0.	1.81E-03	1.29E-01	8.65E-06	2.05E-06	8.87E-05	1.79E 00
60	4.80	2.23E-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	1.79E 00
61	4.70	2.62E-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	1.53E 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	1.56E 00
63	4.50	3.03E-01	0.	7.20E-04	0.	2.13E-01	5.45E-01	0.	1.81E-03	1.34E-01	1.12E-05	2.26E-06	9.75E-05	1.20E 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.	5.83E-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.	2.98E-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	7.05E-06	5.07E-01
69	3.90	1.18E-01	0.	1.86E-02	1.35E-05	1.09E-01	1.68E-02	0.	1.81E-03	1.37E-01	1.72E-05	1.64E-06	7.25E-06	4.02E-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-05	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	7.80E-02	0.	1.36E-02	1.56E-04	8.76E-02	0.	0.	1.81E-03	1.26E-01	2.19E-05	1.41E-06	9.90E-06	3.07E-01
73	3.50	6.60E-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.	1.28E-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	2.68E-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	5.84E-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	8.60E-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	1.03E-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	1.21E-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	3.18E-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	1.25E-01
93	1.50	0.	9.39E-02	0.	0.	0.	0.	0.	1.81E-03	2.14E-02	3.07E-04	5.10E-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	6.02E-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	6.85E-06	4.00E-05	7.62E-02
96	1.20	0.	8.27E-02	0.	0.	0.	0.	0.	1.81E-03	0.	6.03E-04	5.38E-06	3.20E-05	8.52E-02
97	1.10	0.	5.91E-02	0.	0.	0.	0.	2.31E-05	1.81E-03	0.	7.85E-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.	1.05E-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.	2.53E-03	1.81E-03	0.	2.06E-03	1.00E-05	5.57E-05	2.64E-02
101	0.70	0.	5.60E-03	0.	0.	0.	0.	1.60E-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 (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.	2.00E 00	0.	0.	0.	3.14E-03	3.26E-08	2.38E-06	6.37E-06	2.01E 00
2	10.60	0.	0.	1.63E 00	0.	0.	0.	3.15E-03	3.36E-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	9.87E-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	4.38E-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.	1.46E-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.	1.60E-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.	2.82E-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	5.90E-02	0.	0.	0.	3.34E-03	6.77E-08	6.18E-07	6.56E-06	3.07E-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.	2.27E-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	6.09E-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	6.05E-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	6.02E-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	2.16E-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	4.69E-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	3.80E-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	2.06E-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	3.23E-05	0.	7.54E-04	1.01E-03	1.50E-01	0.	3.79E-03	1.53E-07	5.60E-07	8.20E-06	1.56E-01
45	6.30	1.69E-05	0.	3.72E-04	4.13E-03	5.88E-02	0.	3.81E-03	1.61E-07	5.59E-07	8.32E-06	6.72E-02
46	6.20	6.88E-06	0.	1.66E-04	5.18E-03	9.53E-02	0.	3.84E-03	1.69E-07	5.58E-07	8.49E-06	1.05E-01
47	6.10	2.81E-06	0.	6.42E-05	1.36E-02	1.84E-01	0.	3.87E-03	1.77E-07	5.60E-07	8.66E-06	2.01E-01
48	6.00	1.06E-06	0.	1.44E-05	1.04E-02	5.21E-02	0.	3.90E-03	1.86E-07	5.63E-07	8.84E-06	6.65E-02
49	5.90	2.43E-07	0.	1.01E-06	1.44E-02	6.10E-02	0.	3.90E-03	1.96E-07	5.66E-07	9.01E-06	7.93E-02
50	5.80	3.02E-08	0.	2.43E-08	1.87E-02	5.65E-02	0.	3.84E-03	2.06E-07	5.69E-07	9.18E-06	7.91E-02
51	5.70	2.21E-09	0.	0.	1.90E-02	5.27E-02	0.	3.61E-03	2.17E-07	5.71E-07	9.35E-06	7.54E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. 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	9.56E-11	0.	0.	0.	1.29E-02	9.95E-02	0.	0.	3.36E-03	2.29E-07	5.74E-07	9.53E-06	1.16E-01
53	5.50	0.	0.	0.	0.	1.62E-02	1.03E-01	0.	0.	3.37E-03	2.42E-07	5.77E-07	9.70E-06	1.23E-01
54	5.40	0.	0.	0.	0.	1.29E-02	5.48E-02	0.	0.	3.39E-03	2.56E-07	5.82E-07	9.88E-06	7.12E-02
55	5.30	0.	0.	0.	0.	1.33E-02	9.51E-02	0.	0.	3.41E-03	2.71E-07	5.86E-07	1.01E-05	1.12E-01
56	5.20	0.	0.	0.	0.	1.34E-02	4.52E-02	0.	0.	3.44E-03	2.87E-07	5.92E-07	1.03E-05	6.21E-02
57	5.10	0.	0.	0.	0.	1.26E-02	6.42E-02	0.	8.82E-06	3.46E-03	3.04E-07	6.06E-07	1.06E-05	8.03E-02
58	5.00	1.00E-03	0.	0.	0.	1.06E-02	5.38E-02	0.	8.82E-06	3.49E-03	3.23E-07	6.21E-07	1.09E-05	6.89E-02
59	4.90	2.14E-03	0.	0.	0.	1.10E-02	4.81E-02	0.	8.82E-06	3.52E-03	3.43E-07	6.36E-07	1.11E-05	6.48E-02
60	4.80	3.50E-03	0.	0.	0.	1.14E-02	4.45E-02	0.	8.82E-06	3.55E-03	3.65E-07	6.50E-07	1.14E-05	6.29E-02
61	4.70	4.12E-03	0.	0.	0.	1.04E-02	3.37E-02	0.	8.82E-06	3.58E-03	3.88E-07	6.64E-07	1.17E-05	5.18E-02
62	4.60	5.02E-03	0.	0.	0.	1.01E-02	3.28E-02	0.	8.82E-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.	8.82E-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.	8.82E-06	3.67E-03	4.74E-07	7.19E-07	1.25E-05	3.33E-02
65	4.30	3.88E-03	0.	5.60E-04	0.	6.76E-03	8.45E-03	0.	8.82E-06	3.70E-03	5.07E-07	7.38E-07	1.28E-05	2.34E-02
66	4.20	3.35E-03	0.	2.86E-03	0.	6.81E-03	7.42E-03	0.	8.82E-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.	8.82E-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.	8.82E-06	3.76E-03	6.31E-07	4.98E-07	8.84E-07	1.68E-02
69	3.90	1.85E-03	0.	1.78E-03	5.96E-06	4.24E-03	6.53E-04	0.	8.82E-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.	8.82E-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	3.10E-03	0.	0.	8.82E-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.	8.82E-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.	8.82E-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.	8.82E-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.	8.82E-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	3.67E-04	1.63E-03	0.	0.	8.82E-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.	8.82E-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	1.02E-04	1.13E-03	0.	0.	8.82E-06	1.83E-03	1.50E-06	6.12E-07	2.33E-06	3.61E-03
79	2.90	2.45E-04	0.	1.23E-04	8.42E-05	7.03E-04	0.	0.	8.82E-06	1.83E-03	1.66E-06	6.62E-07	2.51E-06	3.00E-03
80	2.80	2.33E-04	0.	5.45E-05	1.77E-05	3.79E-04	0.	0.	8.82E-06	1.83E-03	1.85E-06	7.16E-07	2.71E-06	2.53E-03
81	2.70	1.25E-04	0.	2.49E-05	5.04E-05	1.60E-04	0.	0.	8.82E-06	1.83E-03	2.06E-06	7.71E-07	2.91E-06	2.21E-03
82	2.60	4.64E-05	0.	1.27E-05	5.05E-06	5.60E-05	0.	0.	8.82E-06	1.83E-03	2.31E-06	8.30E-07	3.07E-06	1.97E-03
83	2.50	2.95E-06	0.	1.85E-06	2.74E-06	1.15E-05	0.	0.	8.82E-06	1.83E-03	2.60E-06	9.17E-07	7.31E-07	1.87E-03
84	2.40	0.	1.38E-04	0.	4.02E-06	1.10E-06	0.	0.	8.82E-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.	8.82E-06	1.82E-03	3.34E-06	4.80E-07	1.08E-06	2.68E-03
86	2.20	0.	1.54E-03	0.	0.	0.	0.	0.	8.82E-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.	8.82E-06	1.81E-03	4.40E-06	6.60E-07	1.52E-06	4.64E-03
88	2.00	0.	3.88E-03	0.	0.	0.	0.	0.	8.82E-06	1.75E-03	5.09E-06	7.53E-07	1.74E-06	5.64E-03
89	1.90	0.	1.05E-02	0.	0.	0.	0.	0.	8.82E-06	1.68E-03	5.95E-06	8.48E-07	1.96E-06	1.22E-02
90	1.80	0.	8.86E-03	0.	0.	0.	0.	0.	8.82E-06	1.61E-03	7.01E-06	9.85E-07	2.29E-06	1.05E-02
91	1.70	0.	1.05E-02	0.	0.	0.	0.	0.	8.82E-06	1.51E-03	8.33E-06	1.15E-06	2.70E-06	1.21E-02
92	1.60	0.	7.26E-03	0.	0.	0.	0.	0.	8.82E-06	1.28E-03	1.00E-05	1.31E-06	3.11E-06	8.56E-03
93	1.50	0.	9.03E-03	0.	0.	0.	0.	0.	8.82E-06	5.82E-04	1.22E-05	1.58E-06	3.37E-06	9.63E-03
94	1.40	0.	1.04E-02	0.	0.	0.	0.	0.	8.82E-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.	8.82E-06	0.	1.87E-05	1.27E-06	3.07E-06	7.13E-03
96	1.20	0.	7.95E-03	0.	0.	0.	0.	0.	8.82E-06	0.	2.39E-05	1.65E-06	4.01E-06	7.99E-03
97	1.10	0.	5.68E-03	0.	0.	0.	0.	8.97E-07	8.82E-06	0.	3.11E-05	2.05E-06	4.30E-06	5.72E-03
98	1.00	0.	5.49E-03	0.	0.	0.	0.	5.31E-06	8.82E-06	0.	4.15E-05	2.32E-06	5.20E-06	5.56E-03
99	0.90	0.	4.22E-03	0.	0.	0.	0.	8.05E-06	8.82E-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	8.82E-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	8.82E-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	8.82E-06	0.	1.96E-04	2.86E-06	6.01E-06	4.90E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. 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 (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	1.61E-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.	8.22E-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	6.86E-07	6.88E-07	7.89E-02
7	10.10	0.	0.	6.90E-02	0.	0.	0.	6.34E-05	1.32E-09	6.88E-07	6.89E-07	6.90E-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.	6.36E-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	4.36E-02
11	9.70	0.	0.	3.26E-02	0.	0.	0.	6.38E-05	1.49E-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	1.50E-02	0.	0.	0.	6.50E-05	1.81E-09	1.80E-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	7.60E-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	2.45E-03	0.	0.	0.	6.78E-05	2.56E-09	1.72E-07	7.25E-07	5.03E-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	1.29E-03	0.	0.	0.	6.92E-05	2.99E-09	1.69E-07	7.61E-07	3.44E-03
32	7.60	0.	1.95E-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.	7.16E-05	3.81E-09	1.63E-07	8.15E-07	2.20E-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	1.30E-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	2.45E-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	3.60E-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	3.72E-07	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	1.94E-07	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	7.91E-08	0.	1.33E-05	1.57E-04	2.89E-03	0.	7.69E-05	5.73E-09	1.58E-07	9.11E-07	3.14E-03
47	6.10	3.23E-08	0.	5.15E-06	4.12E-04	5.57E-03	0.	7.74E-05	6.02E-09	1.59E-07	9.29E-07	6.07E-03
48	6.00	1.22E-08	0.	1.15E-06	3.17E-04	1.58E-03	0.	7.80E-05	6.33E-09	1.59E-07	9.48E-07	1.98E-03
49	5.90	2.81E-09	0.	8.10E-08	4.37E-04	1.85E-03	0.	7.80E-05	6.66E-09	1.60E-07	9.66E-07	2.37E-03
50	5.80	3.40E-10	0.	1.95E-09	5.68E-04	1.72E-03	0.	7.69E-05	7.01E-09	1.61E-07	9.85E-07	2.36E-03
51	5.70	2.54E-11	0.	0.	5.77E-04	1.60E-03	0.	7.22E-05	7.39E-09	1.62E-07	1.00E-06	2.25E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 7000. 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	1.16E-12	0.	0.	0.	3.92E-04	3.02E-03	0.	0.	6.71E-05	7.79E-09	1.62E-07	1.02E-06	3.48E-03
53	5.50	0.	0.	0.	0.	4.92E-04	3.13E-03	0.	0.	6.75E-05	8.22E-09	1.63E-07	1.04E-06	3.69E-03
54	5.40	0.	0.	0.	0.	3.92E-04	1.67E-03	0.	0.	6.78E-05	8.69E-09	1.65E-07	1.06E-06	2.13E-03
55	5.30	0.	0.	0.	0.	4.05E-04	2.89E-03	0.	0.	6.83E-05	9.19E-09	1.66E-07	1.08E-06	3.36E-03
56	5.20	0.	0.	0.	0.	4.07E-04	1.37E-03	0.	0.	6.87E-05	9.74E-09	1.67E-07	1.11E-06	1.85E-03
57	5.10	0.	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	2.40E-03
58	5.00	1.15E-05	0.	0.	0.	3.21E-04	1.63E-03	0.	2.87E-08	6.99E-05	1.10E-08	1.76E-07	1.16E-06	2.04E-03
59	4.90	2.46E-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	1.89E-03
60	4.80	4.02E-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	1.81E-03
61	4.70	4.74E-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	2.56E-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.	1.68E-04	2.85E-05	1.34E-04	0.	0.	2.87E-08	7.45E-05	2.50E-08	1.13E-07	1.00E-07	4.28E-04
71	3.70	1.76E-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	4.66E-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	2.00E-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	4.80E-06	0.	3.40E-05	8.33E-06	4.11E-05	0.	0.	2.87E-08	3.65E-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	2.82E-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	1.07E-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.	2.00E-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.	1.02E-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	9.66E-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	1.60E-04
87	2.10	0.	2.26E-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	3.46E-04
89	1.90	0.	8.39E-04	0.	0.	0.	0.	0.	2.87E-08	3.36E-05	2.02E-07	2.40E-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	3.40E-07	3.72E-07	3.05E-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	4.00E-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	5.70E-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	6.57E-07	5.57E-07	4.43E-04
99	0.90	0.	3.38E-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.	1.54E-04	0.	0.	0.	0.	2.98E-06	2.87E-08	0.	2.78E-06	8.71E-07	7.46E-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	7.20E-07	5.71E-07	5.05E-05
102	0.60	0.	1.17E-06	0.	0.	0.	0.	7.94E-06	2.87E-08	0.	6.67E-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-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.	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	4.58E-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	2.58E-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	6.18E-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	5.20E-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	9.56E-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.	1.80E-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.	9.82E-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	3.87E-09	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	2.02E-09	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	8.24E-10	0.	6.61E-07	3.58E-06	6.58E-05	0.	1.57E-06	2.30E-10	3.52E-08	9.29E-08	7.18E-05
47	6.10	3.36E-10	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	1.27E-10	0.	5.71E-08	7.20E-06	3.60E-05	0.	1.60E-06	2.54E-10	3.55E-08	9.67E-08	4.50E-05
49	5.90	2.91E-11	0.	4.02E-09	9.92E-06	4.21E-05	0.	1.60E-06	2.67E-10	3.57E-08	9.86E-08	5.38E-05
50	5.80	3.62E-12	0.	9.67E-11	1.29E-05	3.90E-05	0.	1.57E-06	2.81E-10	3.59E-08	1.00E-07	5.37E-05
51	5.70	2.64E-13	0.	0.	1.31E-05	3.64E-05	0.	1.48E-06	2.96E-10	3.60E-08	1.02E-07	5.12E-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	1.19E-14	0.	0.	0.	8.90E-06	6.87E-05	0.	0.	1.37E-06	3.13E-10	3.62E-08	1.04E-07	7.91E-05
53	5.50	0.	0.	0.	0.	1.12E-05	7.12E-05	0.	0.	1.38E-06	3.30E-10	3.64E-08	1.06E-07	8.39E-05
54	5.40	0.	0.	0.	0.	8.92E-06	3.79E-05	0.	0.	1.39E-06	3.49E-10	3.67E-08	1.08E-07	4.83E-05
55	5.30	0.	0.	0.	0.	9.20E-06	6.57E-05	0.	0.	1.40E-06	3.69E-10	3.69E-08	1.10E-07	7.64E-05
56	5.20	0.	0.	0.	0.	9.26E-06	3.12E-05	0.	0.	1.41E-06	3.91E-10	3.73E-08	1.13E-07	4.21E-05
57	5.10	0.	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	5.46E-05
58	5.00	1.2.E-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	4.61E-05
59	4.90	2.56E-07	0.	0.	0.	7.60E-06	3.32E-05	0.	6.66E-11	1.44E-06	4.67E-10	4.01E-08	1.22E-07	4.27E-05
60	4.80	4.19E-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	4.06E-05
61	4.70	4.93E-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	2.26E-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.	2.75E-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	9.86E-06
68	4.00	2.92E-07	0.	1.55E-05	0.	3.67E-06	9.38E-07	0.	6.66E-11	1.54E-06	8.59E-10	3.13E-08	9.67E-09	2.20E-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	2.02E-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	1.65E-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	4.64E-05
74	3.40	1.0.E-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.	4.51E-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	5.8.E-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	5.0.E-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.	8.30E-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	8.95E-06	4.86E-07	0.	0.	6.66E-11	7.50E-07	2.26E-09	4.17E-08	2.75E-08	1.08E-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.	9.90E-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	1.77E-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	1.18E-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	6.91E-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	9.55E-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	4.26E-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	5.61E-08	2.43E-08	4.16E-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	2.83E-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	2.28E-05
98	1.00	0.	2.18E-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.	1.68E-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.	1.62E-04	0.	0.	0.	3.45E-08	3.16E-12	2.14E-08	7.00E-09	1.62E-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	2.56E-05	0.	0.	0.	3.51E-08	4.52E-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	2.20E-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.	2.86E-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.	2.66E-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.	2.56E-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.	2.06E-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	9.87E-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.	1.46E-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	3.91E-11	0.	6.10E-08	1.00E-08	1.48E-06	0.	4.15E-08	1.49E-11	5.04E-09	9.02E-09	1.61E-06
45	6.30	2.04E-11	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	8.32E-12	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	3.39E-12	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	1.29E-12	0.	1.16E-09	1.03E-07	5.15E-07	0.	4.28E-08	1.80E-11	5.06E-09	9.71E-09	6.77E-07
49	5.90	2.94E-13	0.	8.17E-11	1.42E-07	6.03E-07	0.	4.28E-08	1.90E-11	5.09E-09	9.90E-09	8.03E-07
50	5.80	3.66E-14	0.	1.97E-12	1.85E-07	5.59E-07	0.	4.21E-08	2.00E-11	5.11E-09	1.01E-08	8.01E-07
51	5.70	2.67E-15	0.	0.	1.88E-07	5.22E-07	0.	3.96E-08	2.11E-11	5.13E-09	1.03E-08	7.65E-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	1.16E-16	0.	0.	0.	1.27E-07	9.84E-07	0.	0.	3.68E-08	2.22E-11	5.16E-09	1.05E-08	1.16E-06
53	5.50	0.	0.	0.	0.	1.60E-07	1.02E-06	0.	0.	3.70E-08	2.34E-11	5.19E-09	1.07E-08	1.23E-06
54	5.40	0.	0.	0.	0.	1.28E-07	5.42E-07	0.	0.	3.72E-08	2.48E-11	5.23E-09	1.09E-08	7.23E-07
55	5.30	0.	0.	0.	0.	1.32E-07	9.40E-07	0.	0.	3.74E-08	2.62E-11	5.27E-09	1.11E-08	1.13E-06
56	5.20	0.	0.	0.	0.	1.33E-07	4.47E-07	0.	0.	3.77E-08	2.78E-11	5.32E-09	1.14E-08	6.34E-07
57	5.10	0.	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	8.15E-07
58	5.00	1.21E-09	0.	0.	0.	1.05E-07	5.32E-07	0.	9.58E-14	3.83E-08	3.12E-11	5.58E-09	1.19E-08	6.94E-07
59	4.90	2.59E-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	6.44E-07
60	4.80	4.23E-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	6.14E-07
61	4.70	4.96E-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	3.55E-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	5.38E-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	1.18E-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	2.83E-06
74	3.40	1.01E-09	0.	7.50E-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	2.33E-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	2.56E-09	8.84E-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.	4.40E-09	1.44E-07	3.75E-09	0.	0.	9.58E-14	2.01E-08	1.79E-10	6.44E-09	2.96E-09	1.82E-07
81	2.70	1.51E-10	0.	2.01E-09	4.08E-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-08	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	2.84E-09	8.04E-10	4.64E-08
84	2.40	0.	1.12E-08	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.	6.86E-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	6.38E-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.	1.45E-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	2.00E-08	5.10E-09	1.89E-07
101	0.70	0.	4.35E-08	0.	0.	0.	0.	6.16E-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	2.57E-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.	1.06E-09	2.99E-13	2.27E-09	6.98E-10	1.84E-06
2	10.60	0.	0.	1.49E-06	0.	0.	0.	1.06E-09	3.08E-13	2.29E-09	6.99E-10	1.49E-06
3	10.50	0.	0.	1.40E-06	0.	0.	0.	1.06E-09	3.17E-13	2.30E-09	7.00E-10	1.41E-06
4	10.40	0.	0.	1.21E-06	0.	0.	0.	1.06E-09	3.26E-13	2.31E-09	7.01E-10	1.21E-06
5	10.30	0.	0.	9.37E-07	0.	0.	0.	1.06E-09	3.36E-13	2.31E-09	7.02E-10	9.41E-07
6	10.20	0.	0.	8.99E-07	0.	0.	0.	1.06E-09	3.46E-13	2.32E-09	7.03E-10	9.03E-07
7	10.10	0.	0.	7.86E-07	0.	0.	0.	1.07E-09	3.56E-13	2.32E-09	7.04E-10	7.90E-07
8	10.00	0.	0.	5.92E-07	0.	0.	0.	1.07E-09	3.67E-13	2.33E-09	7.05E-10	5.96E-07
9	9.90	0.	0.	5.91E-07	0.	0.	0.	1.07E-09	3.78E-13	2.33E-09	7.06E-10	5.95E-07
10	9.80	0.	0.	4.97E-07	0.	0.	0.	1.07E-09	3.90E-13	2.34E-09	7.07E-10	5.01E-07
11	9.70	0.	0.	3.71E-07	0.	0.	0.	1.07E-09	4.02E-13	2.35E-09	7.08E-10	3.75E-07
12	9.60	0.	0.	3.97E-07	0.	0.	0.	1.08E-09	4.15E-13	2.35E-09	7.09E-10	4.01E-07
13	9.50	0.	1.42E-09	2.90E-07	0.	0.	0.	1.08E-09	4.28E-13	2.36E-09	7.09E-10	2.96E-07
14	9.40	0.	1.60E-09	2.47E-07	0.	0.	0.	1.08E-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.	1.09E-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.	1.09E-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.	1.09E-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.	2.75E-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.	2.66E-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.	2.06E-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	9.20E-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	7.56E-13	0.	1.23E-09	0.	1.07E-08	0.	1.26E-09	1.34E-12	5.37E-10	8.90E-10	1.46E-08
44	6.40	3.89E-13	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	2.03E-13	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	8.27E-14	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	3.37E-14	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	1.28E-14	0.	1.31E-11	1.09E-09	5.47E-09	0.	1.31E-09	1.71E-12	5.38E-10	9.69E-10	9.39E-09
49	5.90	2.92E-15	0.	9.24E-13	1.51E-09	6.39E-09	0.	1.31E-09	1.80E-12	5.41E-10	9.88E-10	1.07E-08
50	5.80	3.64E-16	0.	2.22E-14	1.96E-09	5.93E-09	0.	1.29E-09	1.89E-12	5.44E-10	1.01E-09	1.07E-08
51	5.70	2.65E-17	0.	0.	1.99E-09	5.53E-09	0.	1.21E-09	1.99E-12	5.46E-10	1.03E-09	1.03E-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	1.15E-18	0.	0.	0.	1.35E-09	1.04E-08	0.	0.	1.13E-09	2.10E-12	5.48E-10	1.04E-09	1.45E-08
53	5.50	0.	0.	0.	0.	1.70E-09	1.08E-08	0.	0.	1.14E-09	2.22E-12	5.52E-10	1.06E-09	1.53E-08
54	5.40	0.	0.	0.	0.	1.35E-09	5.75E-09	0.	0.	1.14E-09	2.35E-12	5.56E-10	1.08E-09	9.89E-09
55	5.30	0.	0.	0.	0.	1.40E-09	9.97E-09	0.	0.	1.15E-09	2.48E-12	5.60E-10	1.11E-09	1.42E-08
56	5.20	0.	0.	0.	0.	1.41E-09	4.75E-09	0.	0.	1.16E-09	2.63E-12	5.65E-10	1.13E-09	9.01E-09
57	5.10	0.	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	1.10E-08
58	5.00	1.21E-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	9.72E-09
59	4.90	2.57E-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	9.24E-09
60	4.80	4.21E-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	8.97E-09
61	4.70	4.95E-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.	5.12E-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	3.48E-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.	3.57E-09	0.	5.57E-10	1.43E-10	0.	1.01E-16	1.26E-09	5.78E-12	3.67E-10	9.69E-11	6.03E-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	1.98E-08	4.63E-10	0.	0.	1.01E-16	1.25E-09	6.75E-12	2.61E-10	1.03E-10	2.38E-08
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	8.45E-09
72	3.60	1.47E-11	0.	1.19E-09	2.06E-08	3.57E-10	0.	0.	1.01E-16	1.16E-09	7.95E-12	3.02E-10	1.36E-10	2.38E-08
73	3.50	1.25E-11	0.	2.23E-09	9.45E-08	2.31E-10	0.	0.	1.01E-16	1.06E-09	8.65E-12	3.45E-10	1.55E-10	9.86E-08
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-08	1.72E-10	0.	0.	1.01E-16	6.11E-10	1.03E-11	4.40E-10	1.94E-10	3.19E-08
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	5.85E-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	2.68E-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	1.56E-12	0.	2.28E-11	1.50E-08	1.68E-11	0.	0.	1.01E-16	6.17E-10	1.89E-11	7.37E-10	6.48E-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	2.38E-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	2.70E-11	3.79E-10	9.88E-11	2.44E-09
85	2.30	0.	7.76E-10	0.	0.	0.	0.	0.	1.01E-16	6.12E-10	3.06E-11	4.59E-10	1.18E-10	2.00E-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	5.88E-10	4.67E-11	7.20E-10	1.90E-10	5.09E-09
89	1.90	0.	9.57E-09	0.	0.	0.	0.	0.	1.01E-16	5.65E-10	5.46E-11	8.10E-10	2.15E-10	1.12E-08
90	1.80	0.	8.10E-09	0.	0.	0.	0.	0.	1.01E-16	5.41E-10	6.43E-11	9.41E-10	2.51E-10	9.90E-09
91	1.70	0.	9.63E-09	0.	0.	0.	0.	0.	1.01E-16	5.09E-10	7.64E-11	1.10E-09	2.68E-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.	1.01E-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	8.50E-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	1.58E-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.	2.85E-10	1.84E-09	4.72E-10	7.79E-09
98	1.00	0.	5.02E-09	0.	0.	0.	0.	5.56E-13	1.01E-16	0.	3.81E-10	2.22E-09	5.70E-10	8.19E-09
99	0.90	0.	3.86E-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.	4.92E-10	0.	0.	0.	0.	6.54E-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.	1.80E-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-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.	1.81E-08	0.	0.	0.	3.27E-11	2.93E-14	2.26E-10	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	3.10E-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	6.11E-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.	3.37E-11	4.62E-14	6.06E-11	7.03E-11	1.82E-09
17	9.10	0.	2.29E-11	1.69E-09	0.	0.	0.	3.38E-11	4.78E-14	6.04E-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	6.01E-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	5.89E-11	7.10E-11	7.56E-10
24	8.40	0.	2.88E-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	7.90E-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	2.56E-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	2.78E-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	3.79E-15	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	1.98E-15	0.	3.36E-12	4.25E-12	6.05E-11	0.	3.97E-11	1.44E-13	5.31E-11	9.01E-11	2.51E-10
46	6.20	8.07E-16	0.	1.50E-12	5.33E-12	9.81E-11	0.	4.00E-11	1.52E-13	5.30E-11	9.19E-11	2.90E-10
47	6.10	3.29E-16	0.	5.80E-13	1.40E-11	1.89E-10	0.	4.03E-11	1.59E-13	5.32E-11	9.38E-11	3.91E-10
48	6.00	1.25E-16	0.	1.30E-13	1.07E-11	5.36E-11	0.	4.06E-11	1.67E-13	5.35E-11	9.57E-11	2.54E-10
49	5.90	2.85E-17	0.	9.13E-15	1.48E-11	6.27E-11	0.	4.06E-11	1.76E-13	5.38E-11	9.75E-11	2.70E-10
50	5.80	3.59E-18	0.	2.20E-16	1.92E-11	5.82E-11	0.	4.00E-11	1.85E-13	5.40E-11	9.94E-11	2.71E-10
51	5.70	2.59E-19	0.	0.	1.96E-11	5.43E-11	0.	3.75E-11	1.95E-13	5.43E-11	1.01E-10	2.67E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 700C. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST PUS.	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-20	0.	0.	0.	1.33E-11	1.02E-10	0.	0.	3.49E-11	2.06E-13	5.45E-11	1.03E-10	3.08E-10
53	5.50	0.	0.	0.	0.	1.67E-11	1.06E-10	0.	0.	3.51E-11	2.17E-13	5.48E-11	1.05E-10	3.18E-10
54	5.40	0.	0.	0.	0.	1.33E-11	5.64E-11	0.	0.	3.53E-11	2.30E-13	5.53E-11	1.07E-10	2.67E-10
55	5.30	0.	0.	0.	0.	1.37E-11	9.78E-11	0.	0.	3.55E-11	2.43E-13	5.57E-11	1.09E-10	3.12E-10
56	5.20	0.	0.	0.	0.	1.38E-11	4.66E-11	0.	0.	3.57E-11	2.57E-13	5.62E-11	1.12E-10	2.64E-10
57	5.10	0.	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	2.88E-10
58	5.00	1.18E-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	2.51E-13	0.	0.	0.	1.13E-11	4.95E-11	0.	9.82E-20	3.66E-11	3.08E-13	6.04E-11	1.20E-10	2.79E-10
60	4.80	4.10E-13	0.	0.	0.	1.17E-11	4.57E-11	0.	9.82E-20	3.69E-11	3.28E-13	6.18E-11	1.23E-10	2.80E-10
61	4.70	4.85E-13	0.	0.	0.	1.07E-11	3.47E-11	0.	9.82E-20	3.72E-11	3.49E-13	6.30E-11	1.26E-10	2.73E-10
62	4.60	5.88E-13	0.	0.	0.	1.04E-11	3.38E-11	0.	9.82E-20	3.75E-11	3.72E-13	6.46E-11	1.29E-10	2.77E-10
63	4.50	5.59E-13	0.	6.25E-13	0.	8.52E-12	2.18E-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.	8.08E-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.	2.58E-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	3.40E-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.	3.53E-11	0.	5.47E-12	1.40E-12	0.	9.82E-20	3.90E-11	5.66E-13	3.64E-11	9.57E-12	1.28E-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	4.54E-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	1.05E-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	3.57E-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	3.09E-09
74	3.40	9.83E-14	0.	8.38E-12	1.16E-10	2.50E-12	0.	0.	9.82E-20	1.89E-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	3.55E-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	7.92E-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.	2.25E-13	4.74E-10	1.65E-13	0.	0.	9.82E-20	1.91E-11	1.85E-12	7.32E-11	6.40E-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	1.19E-14	0.	0.	9.82E-20	1.91E-11	2.33E-12	3.00E-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	7.16E-11	1.88E-11	1.48E-10
89	1.90	0.	9.46E-11	0.	0.	0.	0.	0.	9.82E-20	1.75E-11	5.34E-12	8.06E-11	2.12E-11	2.19E-10
90	1.80	0.	8.00E-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	1.57E-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	1.10E-10	3.08E-11	2.28E-10
93	1.50	0.	8.15E-11	0.	0.	0.	0.	0.	9.82E-20	6.05E-12	1.09E-11	6.40E-11	1.85E-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.	7.18E-11	0.	0.	0.	0.	0.	9.82E-20	0.	2.14E-11	1.57E-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	1.83E-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	5.62E-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	2.55E-10	6.56E-11	4.10E-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	5.02E-11	3.53E-10
101	0.70	0.	4.86E-12	0.	0.	0.	0.	6.41E-14	9.82E-20	0.	1.10E-10	2.42E-10	5.76E-11	4.14E-10
102	0.60	0.	1.32E-13	0.	0.	0.	0.	2.69E-13	9.82E-20	0.	1.76E-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-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.	1.67E-10	0.	0.	0.	9.70E-13	2.80E-15	2.17E-11	6.62E-12	1.96E-10
2	10.60	0.	0.	1.35E-10	0.	0.	0.	9.71E-13	2.88E-15	2.18E-11	6.62E-12	1.65E-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	3.05E-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	3.65E-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	5.86E-12	6.73E-12	3.62E-11
15	9.30	0.	1.58E-13	2.22E-11	0.	0.	0.	9.95E-13	4.28E-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	2.88E-11
17	9.10	0.	2.11E-13	1.56E-11	0.	0.	0.	1.00E-12	4.57E-15	5.79E-12	6.76E-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.	2.18E-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.	2.08E-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.	1.00E-16	0.	1.07E-12	7.86E-15	5.40E-12	7.46E-12	1.53E-11
33	7.50	0.	1.72E-13	9.50E-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.	2.66E-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	4.59E-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.	2.05E-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	3.49E-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	1.82E-17	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	7.43E-18	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	3.03E-18	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	1.15E-18	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	2.62E-19	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	3.20E-20	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	2.38E-21	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 (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	5.50	1.03E-22	0.	0.	0.	1.22E-13	9.43E-13	0.	0.	1.04E-12	1.97E-14	5.23E-12	9.90E-12	1.72E-11
53	5.50	0.	0.	0.	0.	1.54E-13	9.77E-13	0.	0.	1.04E-12	2.08E-14	5.26E-12	1.01E-11	1.75E-11
54	5.40	0.	0.	0.	0.	1.22E-13	5.20E-13	0.	0.	1.05E-12	2.20E-14	5.30E-12	1.03E-11	1.73E-11
55	5.30	0.	0.	0.	0.	1.26E-13	9.01E-13	0.	0.	1.05E-12	2.32E-14	5.34E-12	1.05E-11	1.79E-11
56	5.20	0.	0.	0.	0.	1.27E-13	4.29E-13	0.	0.	1.06E-12	2.46E-14	5.39E-12	1.07E-11	1.78E-11
57	5.10	0.	0.	0.	0.	1.19E-13	6.08E-13	0.	8.67E-23	1.07E-12	2.61E-14	5.52E-12	1.10E-11	1.84E-11
58	5.00	1.08E-15	0.	0.	0.	1.00E-13	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	2.31E-15	0.	0.	0.	1.04E-13	4.56E-13	0.	8.67E-23	1.09E-12	2.94E-14	5.79E-12	1.15E-11	1.90E-11
60	4.80	3.76E-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	4.45E-15	0.	0.	0.	9.85E-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	3.11E-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.	5.75E-15	0.	7.85E-14	2.01E-13	0.	8.67E-23	1.12E-12	3.80E-14	6.38E-12	1.27E-11	2.05E-11
64	4.40	4.92E-15	0.	2.49E-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	8.65E-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	6.66E-12
68	4.00	2.63E-15	0.	3.25E-13	0.	5.04E-14	1.29E-14	0.	8.67E-23	1.16E-12	5.42E-14	3.50E-12	9.18E-13	6.02E-12
69	3.90	2.06E-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	4.18E-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	9.70E-13	8.10E-14	3.29E-12	1.47E-12	9.49E-11
74	3.40	9.09E-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	5.60E-13	9.67E-14	4.20E-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	5.61E-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	1.28E-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	3.30E-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	2.78E-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	6.14E-13	2.25E-11
82	2.60	5.01E-17	0.	1.05E-15	1.41E-12	5.31E-16	0.	0.	8.67E-23	5.66E-13	1.98E-13	2.41E-12	6.62E-13	5.25E-12
83	2.50	3.16E-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	3.61E-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	4.38E-12	1.12E-12	6.42E-12
86	2.20	0.	1.28E-13	0.	0.	0.	0.	0.	8.67E-23	5.59E-13	3.28E-13	5.17E-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	6.02E-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	2.03E-12	1.17E-11
90	1.80	0.	7.36E-13	0.	0.	0.	0.	0.	8.67E-23	4.96E-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	8.59E-13	1.05E-11	2.95E-12	1.53E-11
93	1.50	0.	7.50E-13	0.	0.	0.	0.	0.	8.67E-23	1.80E-13	1.04E-12	6.14E-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	3.18E-12	1.68E-11
96	1.20	0.	6.61E-13	0.	0.	0.	0.	0.	8.67E-23	0.	2.05E-12	1.40E-11	3.54E-12	2.02E-11
97	1.10	0.	4.72E-13	0.	0.	0.	0.	8.50E-18	8.67E-23	0.	2.67E-12	1.76E-11	4.47E-12	2.52E-11
98	1.00	0.	4.57E-13	0.	0.	0.	0.	5.03E-17	8.67E-23	0.	3.57E-12	2.12E-11	5.40E-12	3.06E-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	6.30E-12	3.60E-11
100	0.80	0.	1.59E-13	0.	0.	0.	0.	9.30E-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) 1.293E-02 (1.CE 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.	2.77E 01	0.	0.	0.	2.06E-01	5.23E-06	2.52E 00	4.19E-04	3.04E 01
2	10.60	0.	0.	2.30E 01	0.	0.	0.	2.06E-01	5.38E-06	1.95E-04	4.19E-04	2.32E 01
3	10.50	0.	0.	2.21E 01	0.	0.	0.	2.06E-01	5.53E-06	1.96E-04	4.20E-04	2.23E 01
4	10.40	0.	0.	1.93E 01	0.	0.	0.	2.06E-01	5.70E-06	1.97E-04	4.20E-04	1.95E 01
5	10.30	0.	0.	1.54E 01	0.	0.	0.	2.07E-01	5.86E-06	1.97E-04	4.20E-04	1.56E 01
6	10.20	0.	0.	1.50E 01	0.	0.	0.	2.07E-01	6.04E-06	1.98E-04	4.20E-04	1.52E 01
7	10.10	0.	0.	1.33E 01	0.	0.	0.	2.07E-01	6.22E-06	1.98E-04	4.20E-04	1.35E 01
8	10.00	0.	0.	1.03E 01	0.	0.	0.	2.07E-01	6.41E-06	1.99E-04	4.21E-04	1.05E 01
9	9.90	0.	0.	1.04E 01	0.	0.	0.	2.08E-01	6.61E-06	1.99E-04	4.21E-04	1.06E 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	8.60E 00
14	9.40	0.	3.28E 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.	4.18E 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	9.59E 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	1.35E 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	1.29E 00	0.	0.	0.	2.18E-01	1.08E-05	5.12E-05	4.25E-04	7.86E 00
25	8.30	0.	6.21E 00	9.65E-01	0.	0.	0.	2.19E-01	1.12E-05	5.10E-05	4.26E-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	5.51E 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.	4.38E 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	2.28E 00
44	6.40	7.77E-04	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	4.15E-04	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	1.73E-04	0.	6.54E-03	8.63E-02	1.83E 00	0.	2.51E-01	2.71E-05	4.81E-05	5.36E-04	2.18E 00
47	6.10	7.23E-05	0.	2.63E-03	2.30E-01	3.20E 00	0.	2.53E-01	2.84E-05	4.83E-05	5.46E-04	3.69E 00
48	6.00	2.79E-05	0.	6.05E-04	1.85E-01	1.02E 00	0.	2.55E-01	2.99E-05	4.87E-05	5.57E-04	1.46E 00
49	5.90	6.49E-06	0.	4.28E-05	2.58E-01	1.15E 00	0.	2.55E-01	3.14E-05	4.90E-05	5.67E-04	1.66E 00
50	5.80	8.11E-07	0.	1.04E-06	3.40E-01	1.07E 00	0.	2.51E-01	3.31E-05	4.94E-05	5.77E-04	1.66E 00
51	5.70	5.93E-08	0.	0.	3.55E-01	1.06E 00	0.	2.36E-01	3.49E-05	4.96E-05	5.87E-04	1.66E 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	2.59E-09	0.	0.	0.	2.53E-01	1.85E 00	0.	0.	2.19E-01	3.68E-05	5.00E-05	5.98E-04	2.32E 00
53	5.50	0.	0.	0.	0.	3.14E-01	1.85E 00	0.	0.	2.21E-01	3.88E-05	5.05E-05	6.08E-04	2.38E 00
54	5.40	0.	0.	0.	0.	2.57E-01	1.09E 00	0.	0.	2.22E-01	4.10E-05	5.10E-05	6.19E-04	1.57E 00
55	5.30	0.	0.	0.	0.	2.65E-01	1.75E 00	0.	0.	2.23E-01	4.34E-05	5.16E-05	6.31E-04	2.24E 00
56	5.20	0.	0.	0.	0.	2.70E-01	9.12E-01	0.	0.	2.25E-01	4.59E-05	5.22E-05	6.47E-04	1.41E 00
57	5.10	0.	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	1.76E 00
58	5.00	2.86E-02	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	1.56E 00
59	4.90	6.29E-02	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	1.55E 00
60	4.80	1.06E-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	1.52E 00
61	4.70	1.26E-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	1.34E 00
62	4.60	1.60E-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.	2.95E-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.	1.18E-02	0.	1.78E-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.	1.15E-01	0.	1.60E-01	1.65E-01	0.	7.45E-04	2.44E-01	8.74E-05	6.83E-05	8.16E-04	8.01E-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	6.54E-01
69	3.90	6.79E-02	0.	7.09E-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	5.06E-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	1.65E-04	4.53E-05	1.43E-04	2.64E-01
75	3.30	2.60E-02	0.	5.00E-02	2.47E-03	4.68E-02	0.	0.	7.45E-04	1.19E-01	1.81E-04	5.06E-05	1.59E-04	2.45E-01
76	3.20	2.06E-02	0.	2.54E-02	7.78E-03	4.69E-02	0.	0.	7.45E-04	1.19E-01	1.98E-04	5.60E-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	6.70E-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	7.25E-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	1.48E-01
81	2.70	6.04E-03	0.	1.28E-03	1.24E-03	5.67E-03	0.	0.	7.45E-04	1.20E-01	3.31E-04	8.46E-05	2.59E-04	1.36E-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.	9.00E-05	7.57E-05	4.44E-04	0.	0.	7.45E-04	1.20E-01	4.17E-04	1.01E-04	8.11E-05	1.22E-01
84	2.40	0.	6.03E-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	1.83E-01
87	2.10	0.	1.01E-01	0.	0.	0.	0.	0.	7.45E-04	1.18E-01	7.07E-04	8.60E-05	1.68E-04	2.21E-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	3.96E-01
91	1.70	0.	3.49E-01	0.	0.	0.	0.	0.	7.45E-04	9.90E-02	1.34E-03	1.52E-04	3.05E-04	4.50E-01
92	1.60	0.	2.40E-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	2.54E-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	5.08E-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.	1.22E-04	7.45E-04	0.	6.69E-03	3.75E-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	4.18E-04	7.94E-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) 800C. 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.	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.	1.85E 00	0.	0.	0.	5.01E-03	2.13E-07	5.67E-05	4.90E-05	1.85E 00
4	10.40	0.	0.	1.62E 00	0.	0.	0.	5.02E-03	2.19E-07	5.69E-05	4.91E-05	1.62E 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.	8.65E-01	0.	0.	0.	5.04E-03	2.46E-07	5.74E-05	4.92E-05	8.70E-01
9	9.90	0.	0.	8.68E-01	0.	0.	0.	5.05E-03	2.54E-07	5.76E-05	4.92E-05	8.73E-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	4.54E-01
15	9.30	0.	5.08E-02	4.04E-01	0.	0.	0.	5.13E-03	3.07E-07	5.85E-05	4.94E-05	4.60E-01
16	9.20	0.	5.69E-02	2.86E-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	3.68E-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	2.03E-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	1.45E-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.	8.86E-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.	8.45E-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	5.76E-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-06	0.	5.52E-03	5.63E-07	1.43E-05	5.37E-05	9.90E-02
33	7.50	0.	5.97E-02	2.56E-02	0.	5.14E-05	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.	4.95E-02	1.53E-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	1.35E-02	0.	7.38E-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.	8.35E-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	8.03E-02
42	6.60	3.74E-05	0.	5.43E-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	7.70E-02
44	6.40	1.06E-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	5.66E-06	0.	1.17E-03	2.27E-03	3.87E-02	0.	6.06E-03	9.91E-07	1.39E-05	6.14E-05	4.83E-02
46	6.20	2.36E-06	0.	5.47E-04	2.92E-03	6.20E-02	0.	6.11E-03	1.04E-06	1.39E-05	6.26E-05	7.17E-02
47	6.10	9.87E-07	0.	2.20E-04	7.78E-03	1.08E-01	0.	6.15E-03	1.09E-06	1.40E-05	6.38E-05	1.22E-01
48	6.00	3.81E-07	0.	5.07E-05	6.25E-03	3.46E-02	0.	6.20E-03	1.15E-06	1.41E-05	6.50E-05	4.72E-02
49	5.90	8.86E-08	0.	3.58E-06	8.71E-03	3.88E-02	0.	6.20E-03	1.21E-06	1.42E-05	6.62E-05	5.38E-02
50	5.80	1.11E-08	0.	8.71E-08	1.15E-02	3.61E-02	0.	6.11E-03	1.27E-06	1.43E-05	6.74E-05	5.38E-02
51	5.70	8.10E-10	0.	0.	1.20E-02	3.60E-02	0.	5.74E-03	1.34E-06	1.44E-05	6.86E-05	5.38E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. 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	3.54E-11	0.	0.	0.	8.54E-03	6.26E-02	0.	0.	5.33E-03	1.41E-06	1.45E-05	6.99E-05	7.65E-02
53	5.50	0.	0.	0.	0.	1.06E-02	6.24E-02	0.	0.	5.36E-03	1.49E-06	1.46E-05	7.11E-05	7.85E-02
54	5.40	0.	0.	0.	0.	8.68E-03	3.70E-02	0.	0.	5.39E-03	1.58E-06	1.48E-05	7.23E-05	5.11E-02
55	5.30	0.	0.	0.	0.	8.95E-03	5.92E-02	0.	0.	5.42E-03	1.67E-06	1.49E-05	7.38E-05	7.37E-02
56	5.20	0.	0.	0.	0.	9.13E-03	3.08E-02	0.	0.	5.46E-03	1.76E-06	1.51E-05	7.56E-05	4.55E-02
57	5.10	0.	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	5.74E-02
58	5.00	3.93E-04	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	5.00E-02
59	4.90	8.59E-04	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	4.89E-02
60	4.80	1.44E-03	0.	0.	0.	8.20E-03	3.16E-02	0.	2.94E-06	5.64E-03	2.24E-06	1.67E-05	8.29E-05	4.70E-02
61	4.70	1.75E-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	4.05E-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	3.09E-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	2.76E-02
65	4.30	1.83E-03	0.	2.08E-03	0.	5.30E-03	6.66E-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	2.82E-02
67	4.10	1.39E-03	0.	2.50E-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	1.50E-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	1.16E-05	1.01E-05	1.89E-02
71	3.70	7.71E-04	0.	1.13E-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	1.00E-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.	1.67E-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.	8.75E-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.	1.07E-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.	7.53E-06	3.04E-05	1.50E-05	0.	0.	2.94E-06	2.91E-03	1.60E-05	2.93E-05	9.45E-06	3.03E-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	1.16E-05	3.51E-03
85	2.30	0.	2.68E-03	0.	0.	0.	0.	0.	2.94E-06	2.89E-03	2.06E-05	1.81E-05	1.40E-05	5.63E-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.	8.46E-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	6.18E-05	5.04E-05	4.13E-05	2.23E-02
93	1.50	0.	2.51E-02	0.	0.	0.	0.	0.	2.94E-06	9.25E-04	7.51E-05	6.16E-05	4.89E-05	2.62E-02
94	1.40	0.	2.77E-02	0.	0.	0.	0.	0.	2.94E-06	0.	9.25E-05	6.72E-05	5.50E-05	2.79E-02
95	1.30	0.	1.96E-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	9.04E-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	1.08E-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	1.07E-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.	6.04E-05	0.	0.	0.	0.	2.16E-04	2.94E-06	0.	1.22E-03	1.30E-04	9.41E-05	1.73E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 P-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.	1.25E-01	0.	0.	0.	1.11E-04	8.95E-09	1.30E-05	5.13E-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	9.75E-09	1.32E-05	5.14E-06	8.73E-02
5	10.30	0.	0.	6.94E-02	0.	0.	0.	1.12E-04	1.00E-08	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.	4.67E-02	0.	0.	0.	1.12E-04	1.10E-08	1.33E-05	5.16E-06	4.68E-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.	6.26E-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.	1.00E-03	7.90E-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	5.80E-03	0.	0.	0.	1.18E-04	1.86E-08	3.44E-06	5.20E-06	6.88E-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	2.40E-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.	5.06E-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	1.17E-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	6.23E-08	0.	6.29E-05	5.53E-05	9.44E-04	0.	1.35E-04	4.41E-08	3.23E-06	6.44E-06	1.21E-03
46	6.20	2.59E-08	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	1.09E-08	0.	1.19E-05	1.90E-04	2.63E-03	0.	1.37E-04	4.87E-08	3.25E-06	6.70E-06	2.98E-03
48	6.00	4.19E-09	0.	2.73E-06	1.52E-04	8.43E-04	0.	1.38E-04	5.11E-08	3.27E-06	6.82E-06	1.15E-03
49	5.90	9.74E-10	0.	1.93E-07	2.12E-04	9.46E-04	0.	1.38E-04	5.38E-08	3.29E-06	6.95E-06	1.31E-03
50	5.80	1.24E-10	0.	4.70E-09	2.80E-04	8.80E-04	0.	1.36E-04	5.66E-08	3.32E-06	7.07E-06	1.31E-03
51	5.70	8.90E-12	0.	0.	2.93E-04	8.77E-04	0.	1.28E-04	5.97E-08	3.33E-06	7.20E-06	1.31E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. 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	3.89E-13	0.	0.	0.	2.08E-04	1.52E-03	0.	0.	1.19E-04	6.29E-08	3.36E-06	7.33E-06	1.86E-03
53	5.50	0.	0.	0.	0.	2.58E-04	1.52E-03	0.	0.	1.20E-04	6.64E-08	3.39E-06	7.45E-06	1.91E-03
54	5.40	0.	0.	0.	0.	2.11E-04	9.00E-04	0.	0.	1.20E-04	7.02E-08	3.43E-06	7.58E-06	1.24E-03
55	5.30	0.	0.	0.	0.	2.18E-04	1.44E-03	0.	0.	1.21E-04	7.43E-08	3.47E-06	7.73E-06	1.79E-03
56	5.20	0.	0.	0.	0.	2.22E-04	7.51E-04	0.	0.	1.22E-04	7.86E-08	3.51E-06	7.93E-06	1.11E-03
57	5.10	0.	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	1.40E-03
58	5.00	4.32E-06	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	1.21E-03
59	4.90	9.44E-06	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	1.18E-03
60	4.80	1.59E-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	1.92E-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	9.62E-04
62	4.60	2.45E-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.	5.33E-05	0.	1.47E-04	3.06E-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.	1.35E-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	2.58E-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	1.87E-07	2.64E-06	1.03E-06	5.83E-04
70	3.80	1.01E-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	8.46E-04
72	3.60	7.16E-06	0.	2.65E-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-05	2.83E-07	3.04E-06	1.75E-06	3.62E-04
75	3.30	3.91E-06	0.	2.26E-04	2.52E-04	3.85E-05	0.	0.	7.52E-09	6.44E-05	3.09E-07	3.40E-06	1.94E-06	5.90E-04
76	3.20	3.09E-06	0.	1.15E-04	7.94E-04	3.87E-05	0.	0.	7.52E-09	6.45E-05	3.39E-07	3.76E-06	2.14E-06	1.02E-03
77	3.10	2.72E-06	0.	9.00E-05	5.77E-05	3.31E-05	0.	0.	7.52E-09	6.46E-05	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-05	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	1.84E-05	0.	0.	7.52E-09	6.49E-05	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-05	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-05	5.66E-07	5.68E-06	3.17E-06	2.12E-04
82	2.60	3.55E-07	0.	2.96E-06	1.21E-05	1.72E-06	0.	0.	7.52E-09	6.50E-05	6.34E-07	6.12E-06	8.63E-07	8.98E-05
83	2.50	2.31E-08	0.	4.06E-07	7.73E-06	3.65E-07	0.	0.	7.52E-09	6.50E-05	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-05	8.08E-07	3.47E-06	1.22E-06	1.08E-04
85	2.30	0.	1.45E-04	0.	0.	0.	0.	0.	7.52E-09	6.45E-05	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-05	1.05E-06	4.96E-06	1.76E-06	3.54E-04
87	2.10	0.	4.56E-04	0.	0.	0.	0.	0.	7.52E-09	6.40E-05	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-05	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-05	1.64E-06	7.43E-06	2.67E-06	1.65E-03
90	1.80	0.	1.30E-03	0.	0.	0.	0.	0.	7.52E-09	5.70E-05	1.93E-06	8.68E-06	3.14E-06	1.37E-03
91	1.70	0.	1.58E-03	0.	0.	0.	0.	0.	7.52E-09	5.37E-05	2.29E-06	1.02E-05	3.74E-06	1.65E-03
92	1.60	0.	1.09E-03	0.	0.	0.	0.	0.	7.52E-09	4.54E-05	2.75E-06	1.17E-05	4.33E-06	1.15E-03
93	1.50	0.	1.35E-03	0.	0.	0.	0.	0.	7.52E-09	2.06E-05	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.	1.06E-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	2.10E-05	6.84E-06	8.99E-04
98	1.00	0.	8.16E-04	0.	0.	0.	0.	1.00E-07	7.52E-09	0.	1.14E-05	2.40E-05	8.29E-06	8.60E-04
99	0.90	0.	6.44E-04	0.	0.	0.	0.	1.37E-07	7.52E-09	0.	1.58E-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	3.18E-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	3.07E-05	8.74E-06	1.55E-04
102	0.60	0.	3.26E-06	0.	0.	0.	0.	5.27E-06	7.52E-09	0.	5.46E-05	3.03E-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 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-03	0.	0.	0.	3.12E-06	6.84E-10	1.96E-06	5.20E-07	2.83E-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.	9.10E-04	0.	0.	0.	3.16E-06	8.91E-10	2.01E-06	5.22E-07	9.15E-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	3.70E-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	3.06E-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	6.68E-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	5.40E-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	5.88E-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	7.09E-09	0.	1.38E-05	0.	9.12E-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.	8.11E-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	1.11E-09	0.	2.74E-06	2.01E-07	3.31E-05	0.	3.75E-06	3.22E-09	4.85E-07	6.44E-07	4.09E-05
45	6.30	6.36E-10	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	2.66E-10	0.	6.66E-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	1.11E-10	0.	2.69E-07	2.88E-06	4.00E-05	0.	3.84E-06	3.72E-09	4.88E-07	6.77E-07	4.82E-05
48	6.00	4.29E-11	0.	9.17E-08	2.32E-06	1.28E-05	0.	3.87E-06	3.91E-09	4.91E-07	6.90E-07	2.02E-05
49	5.90	9.97E-12	0.	4.36E-09	3.23E-06	1.44E-05	0.	3.87E-06	4.11E-09	4.95E-07	7.03E-07	2.27E-05
50	5.80	1.25E-12	0.	1.06E-10	4.26E-06	1.34E-05	0.	3.81E-06	4.33E-09	4.98E-07	7.16E-07	2.27E-05
51	5.70	9.11E-14	0.	0.	4.45E-06	1.33E-05	0.	3.58E-06	4.56E-09	5.01E-07	7.28E-07	2.26E-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-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-15	0.	0.	0.	3.16E-06	2.32E-05	0.	0.	3.33E-06	4.81E-09	5.05E-07	7.41E-07	3.09E-05
53	5.50	0.	0.	0.	0.	3.93E-06	2.31E-05	0.	0.	3.35E-06	5.07E-09	5.09E-07	7.54E-07	3.17E-05
54	5.40	0.	0.	0.	0.	3.21E-06	1.37E-05	0.	0.	3.36E-06	5.36E-09	5.15E-07	7.67E-07	2.16E-05
55	5.30	0.	0.	0.	0.	3.31E-06	2.19E-05	0.	0.	3.38E-06	5.67E-09	5.21E-07	7.83E-07	2.99E-05
56	5.20	0.	0.	0.	0.	3.38E-06	1.14E-05	0.	0.	3.41E-06	6.01E-09	5.27E-07	8.02E-07	1.95E-05
57	5.10	0.	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	2.40E-05
58	5.00	4.42E-08	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	2.12E-05
59	4.90	9.67E-08	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	2.07E-05
60	4.80	1.63E-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	1.97E-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	6.05E-06	0.	1.16E-11	3.61E-06	9.27E-09	6.30E-07	9.46E-07	1.41E-05
64	4.40	2.33E-07	0.	1.20E-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	2.07E-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.	7.23E-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	1.15E-07	0.	9.27E-06	1.23E-05	1.40E-06	0.	0.	1.16E-11	3.70E-06	1.54E-08	4.06E-07	1.07E-07	2.74E-05
71	3.70	8.66E-08	0.	1.37E-05	2.34E-06	1.02E-06	0.	0.	1.16E-11	3.64E-06	1.67E-08	3.20E-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	6.34E-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	5.20E-08	0.	4.41E-06	3.00E-06	8.35E-07	0.	0.	1.16E-11	1.80E-06	2.16E-08	4.57E-07	1.77E-07	1.08E-05
75	3.30	3.99E-08	0.	5.10E-06	2.06E-05	5.85E-07	0.	0.	1.16E-11	1.80E-06	2.36E-08	5.11E-07	1.97E-07	2.88E-05
76	3.20	3.15E-08	0.	2.59E-06	6.48E-05	5.88E-07	0.	0.	1.16E-11	1.80E-06	2.59E-08	5.65E-07	2.17E-07	7.07E-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	1.56E-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.	2.86E-07	4.21E-06	1.59E-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	2.61E-08	0.	0.	1.16E-11	1.82E-06	4.85E-08	9.20E-07	8.73E-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	1.00E-07	3.04E-06
84	2.40	0.	6.15E-07	0.	8.23E-07	5.42E-10	0.	0.	1.16E-11	1.82E-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	2.70E-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	4.04E-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.	3.37E-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	2.99E-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	2.10E-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	4.05E-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) 8000. 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.	9.65E-08	6.58E-11	2.11E-07	5.18E-08	3.32E-05
2	10.60	0.	0.	2.73E-05	0.	0.	0.	9.66E-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	2.65E-05
4	10.40	0.	0.	2.29E-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	1.86E-05
6	10.20	0.	0.	1.78E-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.	1.23E-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	9.10E-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-10	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.	1.00E-07	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.	1.00E-07	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	1.15E-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	1.16E-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.	8.42E-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	1.19E-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	6.34E-12	0.	1.65E-08	9.05E-09	1.54E-07	0.	1.17E-07	3.25E-10	5.23E-08	6.50E-08	4.15E-07
46	6.20	2.64E-12	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	1.16E-12	0.	3.13E-09	3.10E-08	4.31E-07	0.	1.19E-07	3.58E-10	5.27E-08	6.75E-08	7.04E-07
48	6.00	4.27E-13	0.	7.19E-10	2.49E-08	1.38E-07	0.	1.20E-07	3.76E-10	5.30E-08	6.88E-08	4.05E-07
49	5.90	9.91E-14	0.	5.08E-11	3.47E-08	1.55E-07	0.	1.20E-07	3.96E-10	5.34E-08	7.01E-08	4.33E-07
50	5.80	1.24E-14	0.	1.23E-12	4.58E-08	1.44E-07	0.	1.18E-07	4.16E-10	5.38E-08	7.14E-08	4.33E-07
51	5.70	9.06E-16	0.	0.	4.79E-08	1.43E-07	0.	1.11E-07	4.39E-10	5.41E-08	7.26E-08	4.29E-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	3.96E-17	0.	0.	0.	3.40E-08	2.49E-07	0.	0.	1.03E-07	4.63E-10	5.45E-08	7.39E-08	5.15E-07
53	5.50	0.	0.	0.	0.	4.23E-08	2.49E-07	0.	0.	1.04E-07	4.89E-10	5.50E-08	7.52E-08	5.25E-07
54	5.40	0.	0.	0.	0.	3.46E-08	1.47E-07	0.	0.	1.04E-07	5.16E-10	5.56E-08	7.65E-08	4.18E-07
55	5.30	0.	0.	0.	0.	3.56E-08	2.36E-07	0.	0.	1.05E-07	5.46E-10	5.62E-08	7.80E-08	5.11E-07
56	5.20	0.	0.	0.	0.	3.64E-08	1.23E-07	0.	0.	1.05E-07	5.78E-10	5.69E-08	8.00E-08	4.02E-07
57	5.10	0.	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	4.53E-07
58	5.00	4.39E-10	0.	0.	0.	2.97E-08	1.45E-07	0.	1.24E-14	1.07E-07	6.51E-10	5.97E-08	8.39E-08	4.27E-07
59	4.90	9.61E-10	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	4.25E-07
60	4.80	1.62E-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	1.96E-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	3.98E-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	3.98E-07
63	4.50	2.37E-09	0.	3.51E-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	2.36E-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	3.65E-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	1.56E-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.	1.88E-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-08	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	8.08E-07
73	3.50	6.31E-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	5.57E-08	2.08E-09	4.93E-08	1.77E-08	2.98E-07
75	3.30	3.97E-10	0.	5.93E-08	7.71E-07	6.30E-09	0.	0.	1.24E-14	5.57E-08	2.27E-09	5.51E-08	1.96E-08	9.70E-07
76	3.20	3.14E-10	0.	3.02E-08	2.43E-06	6.32E-09	0.	0.	1.24E-14	5.58E-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	3.38E-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	8.07E-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	2.07E-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	5.25E-09	4.49E-08	10.00E-09	1.40E-07
84	2.40	0.	7.16E-09	0.	3.08E-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	4.03E-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	2.10E-07	4.87E-08	6.55E-07
94	1.40	0.	3.92E-07	0.	0.	0.	0.	0.	1.24E-14	0.	3.03E-08	1.45E-07	3.40E-08	6.01E-07
95	1.30	0.	2.78E-07	0.	0.	0.	0.	0.	1.24E-14	0.	3.80E-08	2.05E-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-10	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.	8.56E-10	0.	0.	0.	0.	8.62E-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-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.	3.21E-07	0.	0.	0.	2.96E-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	6.61E-12	2.10E-08	5.10E-09	2.96E-07
3	10.50	0.	0.	2.56E-07	0.	0.	0.	2.97E-09	6.80E-12	2.11E-08	5.10E-09	2.85E-07
4	10.40	0.	0.	2.24E-07	0.	0.	0.	2.97E-09	7.00E-12	2.12E-08	5.10E-09	2.53E-07
5	10.30	0.	0.	1.78E-07	0.	0.	0.	2.98E-09	7.20E-12	2.12E-08	5.11E-09	2.08E-07
6	10.20	0.	0.	1.74E-07	0.	0.	0.	2.98E-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.	1.03E-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	5.60E-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	7.04E-08
16	9.20	0.	6.18E-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	3.33E-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	2.01E-08	0.	0.	0.	3.11E-09	1.20E-11	5.56E-09	5.15E-09	3.50E-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	1.56E-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	8.34E-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.	6.48E-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	1.70E-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	1.81E-08
44	6.40	1.15E-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	6.15E-14	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	2.55E-14	0.	7.58E-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	1.07E-14	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	4.13E-15	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	9.54E-16	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	1.2.E-16	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	8.78E-18	0.	0.	4.65E-10	1.39E-09	0.	3.40E-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	3.83E-19	0.	0.	0.	3.31E-10	2.42E-09	0.	0.	3.16E-09	4.51E-11	5.38E-09	7.27E-09	1.86E-08
53	5.50	0.	0.	0.	0.	4.11E-10	2.42E-09	0.	0.	3.18E-09	4.77E-11	5.43E-09	7.39E-09	1.89E-08
54	5.40	0.	0.	0.	0.	3.36E-10	1.43E-09	0.	0.	3.20E-09	5.04E-11	5.49E-09	7.52E-09	1.80E-08
55	5.30	0.	0.	0.	0.	3.47E-10	2.29E-09	0.	0.	3.22E-09	5.33E-11	5.55E-09	7.67E-09	1.91E-08
56	5.20	0.	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	0.	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	4.25E-12	0.	0.	0.	2.89E-10	1.41E-09	0.	1.19E-17	3.29E-09	6.35E-11	5.90E-09	8.24E-09	1.92E-08
59	4.90	9.30E-12	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	1.56E-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	1.89E-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	9.35E-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	1.56E-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	1.06E-11	0.	8.22E-10	1.60E-09	1.40E-10	1.88E-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	6.07E-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.	5.80E-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	2.69E-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	1.61E-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	8.93E-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	8.56E-10	7.93E-09
83	2.50	2.27E-14	0.	1.04E-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	9.28E-09	2.05E-09	1.50E-08
88	2.00	0.	1.76E-09	0.	0.	0.	0.	0.	1.19E-17	1.65E-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	1.58E-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.	2.96E-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	4.70E-08
98	1.00	0.	2.10E-09	0.	0.	0.	0.	1.59E-13	1.19E-17	0.	8.22E-09	3.84E-08	8.22E-09	5.70E-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.	1.62E-08	4.33E-08	7.54E-09	6.78E-08
101	0.70	0.	2.08E-10	0.	0.	0.	0.	2.00E-12	1.19E-17	0.	2.43E-08	4.31E-08	8.67E-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	4.85E-08	9.79E-09	9.75E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. 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.	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	6.18E-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.	8.61E-11	6.54E-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.	1.35E-09	0.	0.	0.	8.64E-11	7.15E-13	2.00E-09	4.84E-10	3.92E-09
8	10.00	0.	0.	1.05E-09	0.	0.	0.	8.65E-11	7.37E-13	2.00E-09	4.84E-10	3.62E-09
9	9.90	0.	0.	1.05E-09	0.	0.	0.	8.67E-11	7.59E-13	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	5.33E-10	4.86E-10	1.60E-09
15	9.30	0.	4.95E-12	4.90E-10	0.	0.	0.	8.80E-11	9.17E-13	5.31E-10	4.86E-10	1.60E-09
16	9.20	0.	5.55E-12	3.47E-10	0.	0.	0.	8.83E-11	9.47E-13	5.29E-10	4.86E-10	1.46E-09
17	9.10	0.	6.70E-12	3.56E-10	0.	0.	0.	8.86E-11	9.79E-13	5.27E-10	4.87E-10	1.47E-09
18	9.00	0.	7.97E-12	2.91E-10	0.	0.	0.	8.89E-11	1.01E-12	5.26E-10	4.87E-10	1.40E-09
19	8.90	0.	9.23E-12	2.46E-10	0.	0.	0.	8.92E-11	1.05E-12	5.24E-10	4.87E-10	1.36E-09
20	8.80	0.	9.59E-12	2.31E-10	0.	0.	0.	8.95E-11	1.08E-12	5.22E-10	4.87E-10	1.34E-09
21	8.70	0.	9.25E-12	1.76E-10	0.	0.	0.	8.99E-11	1.12E-12	5.20E-10	4.88E-10	1.28E-09
22	8.60	0.	8.91E-12	1.78E-10	0.	0.	0.	9.02E-11	1.16E-12	5.19E-10	4.88E-10	1.28E-09
23	8.50	0.	8.64E-12	1.37E-10	0.	0.	0.	9.05E-11	1.20E-12	5.17E-10	4.88E-10	1.24E-09
24	8.40	0.	8.44E-12	1.31E-10	0.	0.	0.	9.10E-11	1.25E-12	5.15E-10	4.89E-10	1.24E-09
25	8.30	0.	8.24E-12	9.80E-11	0.	0.	0.	9.14E-11	1.29E-12	5.14E-10	4.91E-10	1.20E-09
26	8.20	0.	7.99E-12	9.50E-11	0.	0.	0.	9.19E-11	1.34E-12	5.12E-10	4.96E-10	1.20E-09
27	8.10	0.	7.71E-12	7.30E-11	0.	0.	0.	9.24E-11	1.39E-12	5.09E-10	5.02E-10	1.19E-09
28	8.00	0.	7.43E-12	6.99E-11	0.	0.	0.	9.29E-11	1.44E-12	5.07E-10	5.07E-10	1.19E-09
29	7.90	0.	7.11E-12	5.39E-11	0.	0.	0.	9.34E-11	1.50E-12	5.05E-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	5.03E-10	5.18E-10	1.18E-09
31	7.70	0.	6.46E-12	4.18E-11	0.	0.	0.	9.43E-11	1.62E-12	5.01E-10	5.24E-10	1.17E-09
32	7.60	0.	6.14E-12	3.69E-11	0.	2.68E-15	0.	9.48E-11	1.68E-12	5.00E-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	6.07E-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.	1.00E-10	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	5.79E-10	1.20E-09
42	6.60	3.67E-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	1.03E-15	0.	2.73E-12	1.86E-13	3.06E-11	0.	1.03E-10	2.82E-12	4.84E-10	5.97E-10	1.22E-09
45	6.30	5.49E-16	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	2.29E-16	0.	6.64E-13	10.00E-13	2.13E-11	0.	1.05E-10	3.11E-12	4.85E-10	6.17E-10	1.23E-09
47	6.10	9.56E-17	0.	2.67E-13	2.67E-12	3.71E-11	0.	1.06E-10	3.26E-12	4.87E-10	6.29E-10	1.26E-09
48	6.00	3.69E-17	0.	6.15E-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	8.53E-18	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	1.07E-18	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	7.84E-20	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-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	3.45E-21	0.	0.	0.	2.93E-12	2.15E-11	0.	0.	9.15E-11	4.22E-12	5.04E-10	6.88E-10	1.31E-09
53	5.50	0.	0.	0.	0.	3.64E-12	2.14E-11	0.	0.	9.20E-11	4.46E-12	5.08E-10	7.00E-10	1.33E-09
54	5.40	0.	0.	0.	0.	2.98E-12	1.27E-11	0.	0.	9.25E-11	4.71E-12	5.14E-10	7.12E-10	1.34E-09
55	5.30	0.	0.	0.	0.	3.07E-12	2.03E-11	0.	0.	9.31E-11	4.98E-12	5.20E-10	7.26E-10	1.37E-09
56	5.20	0.	0.	0.	0.	3.13E-12	1.06E-11	0.	0.	9.37E-11	5.28E-12	5.26E-10	7.44E-10	1.38E-09
57	5.10	0.	0.	0.	0.	2.99E-12	1.48E-11	0.	9.94E-21	9.45E-11	5.59E-12	5.39E-10	7.62E-10	1.42E-09
58	5.00	3.81E-14	0.	0.	0.	2.56E-12	1.25E-11	0.	9.94E-21	9.53E-11	5.94E-12	5.53E-10	7.80E-10	1.45E-09
59	4.90	8.32E-14	0.	0.	0.	2.70E-12	1.18E-11	0.	9.94E-21	9.61E-11	6.31E-12	5.67E-10	7.98E-10	1.48E-09
60	4.80	1.40E-13	0.	0.	0.	2.81E-12	1.08E-11	0.	9.94E-21	9.68E-11	6.71E-12	5.80E-10	8.17E-10	1.51E-09
61	4.70	1.69E-13	0.	0.	0.	2.61E-12	8.68E-12	0.	9.94E-21	9.76E-11	7.15E-12	5.94E-10	8.37E-10	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-10	8.57E-10	1.58E-09
63	4.50	2.05E-13	0.	3.00E-13	0.	2.15E-12	5.60E-12	0.	9.94E-21	9.92E-11	8.15E-12	6.29E-10	8.78E-10	1.62E-09
64	4.40	2.01E-13	0.	1.20E-12	0.	2.07E-12	4.30E-12	0.	9.94E-21	1.00E-10	8.72E-12	6.48E-10	8.97E-10	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-10	9.02E-10	1.69E-09
66	4.20	1.55E-13	0.	1.16E-11	0.	1.85E-12	1.92E-12	0.	9.94E-21	1.02E-10	1.00E-11	6.88E-10	8.86E-11	9.04E-10
67	4.10	1.30E-13	0.	3.03E-12	0.	1.66E-12	4.80E-13	0.	9.94E-21	1.02E-10	1.08E-11	4.97E-10	9.13E-11	7.06E-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-10	9.40E-11	6.12E-10
69	3.90	8.98E-14	0.	7.20E-12	4.58E-11	1.24E-12	1.66E-13	0.	9.94E-21	1.02E-10	1.25E-11	3.95E-10	9.67E-11	6.61E-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	3.07E-10	9.95E-11	9.47E-10
71	3.70	7.47E-14	0.	1.37E-11	7.85E-11	9.46E-13	0.	0.	9.94E-21	1.00E-10	1.47E-11	3.19E-10	1.13E-10	6.40E-10
72	3.60	6.31E-14	0.	5.97E-12	5.08E-10	1.04E-12	0.	0.	9.94E-21	9.37E-11	1.60E-11	3.54E-10	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	8.57E-11	1.74E-11	4.02E-10	1.46E-10	2.62E-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-10	1.64E-10	7.95E-10
75	3.30	3.43E-14	0.	5.07E-12	6.91E-10	5.42E-13	0.	0.	9.94E-21	4.95E-11	2.08E-11	5.10E-10	1.83E-10	1.46E-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	2.28E-11	5.64E-10	2.01E-10	3.07E-09
77	3.10	2.40E-14	0.	2.02E-12	1.58E-10	4.66E-13	0.	0.	9.94E-21	4.97E-11	2.51E-11	6.20E-10	2.20E-10	1.08E-09
78	3.00	1.95E-14	0.	1.06E-12	7.03E-10	3.98E-13	0.	0.	9.94E-21	4.99E-11	2.77E-11	6.75E-10	2.39E-10	1.70E-09
79	2.90	1.48E-14	0.	6.25E-13	5.25E-10	2.59E-13	0.	0.	9.94E-21	4.99E-11	3.06E-11	7.31E-10	2.58E-10	1.59E-09
80	2.80	1.44E-14	0.	2.85E-13	1.41E-10	1.47E-13	0.	0.	9.94E-21	5.00E-11	3.41E-11	7.90E-10	2.71E-10	1.29E-09
81	2.70	7.99E-15	0.	1.30E-13	3.46E-10	6.57E-14	0.	0.	9.94E-21	5.00E-11	3.80E-11	8.52E-10	7.49E-11	1.36E-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-10	8.10E-11	5.56E-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	4.16E-10	9.30E-11	6.28E-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-10	1.15E-10	7.67E-10
85	2.30	0.	3.25E-12	0.	0.	0.	0.	0.	9.94E-21	4.96E-11	6.16E-11	6.30E-10	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-10	1.65E-10	1.04E-09
87	2.10	0.	1.03E-11	0.	0.	0.	0.	0.	9.94E-21	4.92E-11	8.12E-11	8.67E-10	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-10	2.22E-10	1.37E-09
89	1.90	0.	3.56E-11	0.	0.	0.	0.	0.	9.94E-21	4.58E-11	1.10E-10	1.11E-09	2.50E-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	3.49E-11	1.85E-10	1.56E-09	3.74E-10	2.18E-09
93	1.50	0.	3.04E-11	0.	0.	0.	0.	0.	9.94E-21	1.59E-11	2.25E-10	1.01E-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	1.96E-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	5.07E-10	3.50E-09
97	1.10	0.	1.94E-11	0.	0.	0.	0.	1.98E-16	9.94E-21	0.	5.76E-10	2.98E-09	6.42E-10	4.22E-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.	6.66E-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.	3.66E-09	4.54E-09	9.26E-10	9.13E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 8000. 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.	1.85E-11	0.	0.	0.	2.05E-12	4.89E-14	1.58E-10	4.03E-11	2.19E-10
2	10.60	0.	0.	1.54E-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.	5.95E-12	0.	0.	0.	2.07E-12	6.38E-14	1.63E-10	4.06E-11	2.12E-10
11	9.70	0.	0.	4.59E-12	0.	0.	0.	2.08E-12	6.58E-14	1.63E-10	4.06E-11	2.11E-10
12	9.60	0.	0.	4.91E-12	0.	0.	0.	2.08E-12	6.78E-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	7.00E-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	9.46E-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.	5.66E-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	4.80E-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.	4.35E-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.	4.12E-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.	7.60E-14	0.	4.92E-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.	5.30E-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.	7.93E-14	0.	2.43E-12	2.10E-13	3.92E-11	4.90E-11	9.09E-11
43	6.50	1.37E-17	0.	3.06E-14	0.	1.56E-13	0.	2.45E-12	2.20E-13	3.92E-11	4.95E-11	9.15E-11
44	6.40	7.21E-18	0.	1.79E-14	1.26E-15	2.08E-13	0.	2.47E-12	2.30E-13	3.92E-11	5.00E-11	9.21E-11
45	6.30	3.85E-18	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	1.66E-18	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	6.70E-19	0.	1.76E-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	2.59E-19	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	4.01E-20	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	7.57E-21	0.	6.94E-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	5.50E-22	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 (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	2.4[illegible]E-23	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	0.	0.	0.	0.	2.47E-14	1.45E-13	0.	0.	2.20E-12	3.63E-13	4.12E-11	5.86E-11	1.02E-10
54	5.40	0.	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	0.	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	0.	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	0.	0.	0.	0.	2.03E-14	1.00E-13	0.	5.64E-24	2.26E-12	4.56E-13	4.37E-11	6.38E-11	1.10E-10
58	5.00	2.66E-16	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	[illegible]90	5.8[illegible]E-16	0.	0.	0.	1.83E-14	8.[illegible]2E-14	0.	5.64E-24	2.29E-12	5.14E-13	4.59E-11	6.68E-11	1.16E-10
60	0	9.8[illegible]E-16	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	1.18E-10
61	4.[illegible]0	1.1[illegible]E-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	1.4[illegible]E-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.	1.97E-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	1.4[illegible]E-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	1.0[illegible]E-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	9.44E-16	0.	1.99E-14	0.	1.12E-14	3.26E-15	0.	5.64E-24	2.44E-12	8.79E-13	4.02E-11	7.64E-12	5.12E-11
68	4.00	8.1[illegible]E-16	0.	1.06E-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	6.29E-16	0.	4.73E-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	7.03E-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	4.49E-11	4.76E-15	0.	0.	5.64E-24	2.05E-12	1.41E-12	3.26E-11	1.22E-11	9.33E-11
74	3.40	3.1[illegible]E-16	0.	2.88E-14	2.32E-12	5.25E-15	0.	0.	5.64E-24	1.18E-12	1.54E-12	3.69E-11	1.38E-11	5.58E-11
75	3.30	2.41E-16	0.	3.33E-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.	1.69E-14	5.01E-11	3.69E-15	0.	0.	5.64E-24	1.19E-12	1.85E-12	4.57E-11	1.68E-11	1.16E-10
77	3.10	1.6[illegible]E-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	7.55E-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.	4.10E-15	1.21E-11	1.76E-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	5.6[illegible]E-17	0.	8.54E-16	7.96E-12	4.46E-16	0.	0.	5.64E-24	1.19E-12	3.09E-12	6.90E-11	6.27E-12	8.75E-11
82	2.60	2.1[illegible]E-17	0.	4.37E-16	7.64E-13	1.64E-16	0.	0.	5.64E-24	1.19E-12	3.47E-12	2.82E-11	6.78E-12	4.05E-11
83	2.50	1.42E-18	0.	2.00E-17	4.87E-13	3.49E-17	0.	0.	5.64E-24	1.19E-12	3.90E-12	3.37E-11	7.79E-12	4.70E-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.	1.60E-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.	3.60E-11	2.04E-10	4.24E-11	2.83E-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.	9.56E-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	7.59E-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	5.97E-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	4.07E 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.	9.76E 00	0.	0.	0.	3.20E-01	3.21E-05	2.39E-03	2.18E-03	1.01E 01
13	9.50	0.	1.18E 00	7.58E 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.	2.38E 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.	3.33E 00	3.44E 00	0.	0.	0.	3.28E-01	4.17E-05	6.35E-04	2.17E-03	7.10E 00
21	8.70	0.	3.21E 00	2.70E 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.	3.40E-01	5.56E-05	6.22E-04	2.24E-03	4.19E 00
29	7.90	0.	2.57E 00	9.39E-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.	3.46E-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	1.86E-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-0	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	1.96E 00
42	6.60	1.16E-03	0.	1.44E-01	0.	7.79E-01	0.	3.72E-01	9.92E-05	6.[illegible]04	2.55E-03	1.30E 00
43	6.50	6.37E-04	0.	1.05E-01	0.	1.47E 00	0.	3.75E-01	1.04E-0[illegible]-04	2.57E-03	1.95E 00
44	6.40	3.41E-04	0.	6.34E-02	4.00E-02	1.82E 00	0.	3.78E-01	1.09E-04	[illegible]E-04	2.60E-03	2.27E 00
45	6.30	1.85E-04	0.	3.42E-02	4.31E-[illegible]	8.59E-01	0.	3.81E-01	1.14E-04	6.11E-04	2.63E-03	1.32E 00
46	6.20	7.82E-05	0.	1.66E-02	5.65E-02	1.35E 00	0.	3.84E-01	1.20E-04	6.12E-04	2.68E-03	1.81E 00
47	6.10	3.33E-05	0.	6.92E-03	1.53E-01	2.18E 00	0.	3.87E-01	1.26E-04	6.16E-04	2.72E-03	2.73E 00
48	6.00	1.31E-05	0.	1.62E-03	1.27E-01	7.65E-01	0.	3.90E-01	1.32E-04	6.22E-04	2.77E-03	1.29E 00
49	5.90	3.06E-06	0.	1.15E-04	1.79E-01	8.33E-01	0.	3.90E-01	1.39E-04	6.27E-04	2.82E-03	1.41E 00
50	5.80	3.86E-07	0.	2.82E-06	2.38E-01	7.82E-01	0.	3.84E-01	1.46E-04	6.32E-04	2.87E-03	1.41E 00
51	5.70	2.83E-08	0.	0.	2.55E-01	8.12E-01	0.	3.61E-01	1.54E-04	6.37E-04	2.91E-03	1.43E 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	1.2[illegible]E-09	0.	0.	0.	1.88E-01	1.33E 00	0.	0.	3.36E-01	1.63E-04	6.43E-04	2.96E-03	1.85E 00
53	5.50	0.	0.	0.	0.	2.32E-01	1.29E 00	0.	0.	3.37E-01	1.72E-04	6.51E-04	3.01E-03	1.87E 00
54	5.40	0.	0.	0.	0.	1.94E-01	8.26E-01	0.	0.	3.39E-01	1.81E-04	6.60E-04	3.06E-03	1.36E 00
55	5.30	0.	0.	0.	0.	1.99E-01	1.25E 00	0.	0.	3.41E-01	1.92E-04	6.69E-04	3.12E-03	1.80E 00
56	5.20	0.	0.	0.	0.	2.06E-01	7.00E-01	0.	0.	3.43E-01	2.03E-04	6.79E-04	3.20E-03	1.25E 00
57	5.10	0.	0.	0.	0.	1.98E-01	9.64E-01	0.	0.	3.46E-01	2.15E-04	6.96E-04	3.27E-03	1.51E 00
58	5.00	1.44E-02	0.	0.	0.	1.73E-01	8.27E-01	0.	0.	3.49E-01	2.29E-04	7.15E-04	3.35E-03	1.37E 00
59	4.90	3.2[illegible]E-02	0.	0.	0.	1.84E-01	8.11E-01	0.	0.	3.52E-01	2.43E-04	7.34E-04	3.42E-03	1.38E 00
60	4.80	5.5[illegible]E-02	0.	0.	0.	1.93E-01	7.44E-01	0.	0.	3.55E-01	2.59E-04	7.53E-04	3.50E-03	1.35E 00
61	4.70	6.84E-02	0.	0.	0.	1.82E-01	6.18E-01	0.	0.	3.58E-01	2.76E-04	7.71E-04	3.58E-03	1.23E 00
62	4.60	8.7[illegible]E-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	8.5[illegible]E-02	0.	8.01E-03	0.	1.54E-01	4.06E-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.	1.49E-01	3.03E-01	0.	0.	3.67E-01	3.36E-04	8.49E-04	3.85E-03	9.40E-01
65	4.30	7.5[illegible]E-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	6.7[illegible]E-02	0.	2.97E-01	0.	1.37E-01	1.36E-01	0.	0.	3.72E-01	3.87E-04	9.06E-04	4.03E-03	1.01E 00
67	4.10	5.9[illegible]E-02	0.	8.61E-02	0.	1.25E-01	3.46E-02	0.	0.	3.74E-01	4.16E-04	9.34E-04	[illegible]	6.85E-01
68	4.00	5.2[illegible]E-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-[illegible]	9.85E-01
69	3.90	4.1[illegible]E-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	5.63E-04	7.10E-01
70	3.80	4.3[illegible]E-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	3.5[illegible]E-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	3.04E-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	2.2[illegible]E-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	1.4[illegible]E-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	1.2[illegible]E-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	3.60E-02	0.	0.	0.	1.83E-01	1.07E-03	1.01E-03	1.35E-03	2.79E-01
79	2.90	8.[illegible]E-03	0.	1.90E-02	1.01E-02	2.42E-02	0.	0.	0.	1.83E-01	1.18E-03	1.10E-03	1.45E-03	2.48E-01
80	2.80	7.9[illegible]E-03	0.	8.83E-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	4.5[illegible]E-03	0.	4.04E-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	2.55E-03	0.	0.	0.	1.83E-01	1.64E-03	1.38E-03	1.81E-03	1.95E-01
83	2.50	1.2[illegible]E-04	0.	2.70E-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-02	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	3.50E-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	5.65E-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.	1.51E-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	6.83E-01
93	1.50	0.	6.69E-01	0.	0.	0.	0.	0.	0.	5.82E-02	8.68E-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.	5.22E-01	0.	0.	0.	0.	0.	0.	0.	1.34E-02	5.43E-03	4.79E-03	5.46E-01
96	1.20	0.	5.37E-01	0.	0.	0.	0.	0.	0.	0.	1.71E-02	4.90E-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	4.86E-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.	1.50E-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	1.49E-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) 9000. 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.	2.04E 00	0.	0.	0.	7.89E-03	1.06E-06	2.33E 00	2.45E-04	4.37E 00
2	10.60	0.	0.	1.73E 00	0.	0.	0.	7.90E-03	1.09E-06	5.92E-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.	8.58E-01	0.	0.	0.	7.98E-03	1.34E-06	6.05E-04	2.45E-04	8.67E-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.	6.36E-01	0.	0.	0.	8.02E-03	1.47E-06	6.09E-04	2.45E-04	6.45E-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.	3.52E-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	1.35E-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	5.70E-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.	9.40E-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	4.31E-06	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	2.34E-06	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	9.93E-07	0.	1.08E-03	1.62E-03	3.87E-02	0.	9.65E-03	5.48E-06	1.56E-04	3.01E-04	5.16E-02
47	6.10	4.22E-07	0.	4.51E-04	4.39E-03	6.27E-02	0.	9.72E-03	5.76E-06	1.57E-04	3.06E-04	7.77E-02
48	6.00	1.66E-07	0.	1.06E-04	3.65E-03	2.20E-02	0.	9.79E-03	6.05E-06	1.59E-04	3.12E-04	3.60E-02
49	5.90	3.89E-08	0.	7.51E-06	5.13E-03	2.39E-02	0.	9.79E-03	6.36E-06	1.60E-04	3.17E-04	3.93E-02
50	5.80	4.89E-09	0.	1.84E-07	6.84E-03	2.25E-02	0.	9.65E-03	6.70E-06	1.61E-04	3.22E-04	3.94E-02
51	5.70	3.58E-10	0.	0.	7.31E-03	2.33E-02	0.	9.06E-03	7.06E-06	1.63E-04	3.28E-04	4.02E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. 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	1.5?E-11	0.	0.	0.	5.40E-03	3.81E-02	0.	0.	8.43E-03	7.44E-06	1.64E-04	3.33E-04	5.24E-02
53	5.50	0.	0.	0.	0.	6.65E-03	3.71E-02	0.	0.	8.47E-03	7.86E-06	1.66E-04	3.39E-04	5.28E-02
54	5.40	0.	0.	0.	0.	5.56E-03	2.37E-02	0.	0.	8.51E-03	8.30E-06	1.68E-04	3.45E-04	3.83E-02
55	5.30	0.	0.	0.	0.	5.73E-03	3.59E-02	0.	0.	8.57E-03	8.78E-06	1.71E-04	3.51E-04	5.07E-02
56	5.20	0.	0.	0.	0.	5.90E-03	2.01E-02	0.	0.	8.62E-03	9.30E-06	1.73E-04	3.60E-04	3.52E-02
57	5.10	0.	0.	0.	0.	5.70E-03	2.77E-02	0.	0.	8.70E-03	9.86E-06	1.78E-04	3.68E-04	4.26E-02
58	5.00	1.8?E-04	0.	0.	0.	4.96E-03	2.38E-02	0.	0.	8.77E-03	1.05E-05	1.82E-04	3.76E-04	3.82E-02
59	4.90	4.07E-04	0.	0.	0.	5.29E-03	2.33E-02	0.	0.	8.84E-03	1.11E-05	1.87E-04	3.85E-04	3.84E-02
60	4.80	7.0?E-04	0.	0.	0.	5.53E-03	2.14E-02	0.	0.	8.91E-03	1.18E-05	1.92E-04	3.94E-04	3.71E-02
61	4.70	8.6?E-04	0.	0.	0.	5.22E-03	1.77E-02	0.	0.	8.99E-03	1.26E-05	1.97E-04	4.03E-04	3.34E-02
62	4.60	1.1?E-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	1.0?E-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	1.0?E-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	2.59E-02
65	4.30	9.5?E-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	8.5?E-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.		9.39E-03	1.90E-05	2.38E-04	4.62E-04	2.11E-02
68	4.00	6.6?E-04	0.	2.70E-02	0.	3.29E-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	5.5?E-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	2.8?E-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	1.7?E-04	0.	4.95E-03	1.17E-02	1.35E-03	0.	0.	0.	4.57E-03	4.02E-05	2.17E-04	1.28E-04	2.32E-02
77	3.10	1.5?E-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	9.60E-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	1.92E-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.	1.35E-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	1.5?E-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.	1.67E-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.	1.06E-02	0.	0.	0.	0.	0.	0.	4.55E-03	1.25E-04	3.24E-04	1.23E-04	1.58E-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	1.66E-04	4.31E-04	1.66E-04	3.02E-02
89	1.90	0.	5.13E-02	0.	0.	0.	0.	0.	0.	4.22E-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	5.70E-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.	3.52E-02	0.	0.	0.	0.	0.	0.	3.21E-03	3.27E-04	7.76E-04	3.08E-04	3.98E-02
93	1.50	0.	4.36E-02	0.	0.	0.	0.	0.	0.	1.46E-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	3.66E-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.	2.32E-02	0.	0.	0.	0.	3.58E-07	0.	0.	1.02E-03	1.54E-03	6.01E-04	3.13E-02
98	1.00	0.	2.63E-02	0.	0.	0.	0.	2.94E-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.	3.75E-06	0.	0.	1.88E-03	2.08E-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.	4.00E-05	0.	0.	4.06E-03	2.65E-03	9.86E-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	1.09E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. 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 (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	3.63E-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	1.00E-07	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	1.96E-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.	1.96E-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	9.92E-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	7.86E-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	4.94E-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	1.83E-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	2.10E-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.	2.60E-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.	3.73E-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	3.81E-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	1.00E-03
43	6.50	8.62E-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	4.62E-08	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	2.52E-08	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	1.06E-08	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	4.51E-09	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	1.77E-09	0.	3.20E-06	6.56E-05	3.95E-04	0.	2.74E-04	4.40E-07	2.76E-05	3.22E-05	7.98E-04
49	5.90	4.16E-10	0.	2.27E-07	9.21E-05	4.30E-04	0.	2.74E-04	4.62E-07	2.78E-05	3.28E-05	8.57E-04
50	5.80	5.22E-11	0.	5.56E-09	1.23E-04	4.03E-04	0.	2.70E-04	4.87E-07	2.81E-05	3.33E-05	8.58E-04
51	5.70	3.82E-12	0.	0.	1.31E-04	4.19E-04	0.	2.54E-04	5.13E-07	2.83E-05	3.39E-05	8.67E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. 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	1.66E-13	0.	0.	0.	9.70E-05	6.85E-04	0.	0.	2.36E-04	5.41E-07	2.85E-05	3.45E-05	1.08E-03
53	5.50	0.	0.	0.	0.	1.20E-04	6.67E-04	0.	0.	2.37E-04	5.71E-07	2.89E-05	3.50E-05	1.09E-03
54	5.40	0.	0.	0.	0.	9.99E-05	4.26E-04	0.	0.	2.38E-04	6.03E-07	2.93E-05	3.56E-05	8.30E-04
55	5.30	0.	0.	0.	0.	1.03E-04	6.45E-04	0.	0.	2.40E-04	6.38E-07	2.97E-05	3.63E-05	1.05E-03
56	5.20	0.	0.	0.	0.	1.06E-04	3.61E-04	0.	0.	2.41E-04	6.76E-07	3.01E-05	3.72E-05	7.77E-04
57	5.10	0.	0.	0.	0.	1.02E-04	4.97E-04	0.	0.	2.43E-04	7.16E-07	3.09E-05	3.80E-05	9.13E-04
58	5.00	1.95E-06	0.	0.	0.	8.90E-05	4.27E-04	0.	0.	2.46E-04	7.61E-07	3.17E-05	3.89E-05	8.35E-04
59	4.90	4.35E-06	0.	0.	0.	9.50E-05	4.18E-04	0.	0.	2.48E-04	8.08E-07	3.26E-05	3.98E-05	8.38E-04
60	4.80	7.47E-06	0.	0.	0.	9.94E-05	3.84E-04	0.	0.	2.50E-04	8.61E-07	3.34E-05	4.07E-05	8.15E-04
61	4.70	9.24E-06	0.	0.	0.	9.37E-05	3.19E-04	0.	0.	2.52E-04	9.17E-07	3.42E-05	4.17E-05	7.50E-04
62	4.60	1.11E-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	2.09E-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.	7.68E-05	1.56E-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	9.01E-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.	1.70E-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	1.36E-05	0.	0.	2.64E-04	1.49E-06	4.27E-05	6.36E-06	1.21E-03
69	3.90	5.52E-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	4.15E-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.	5.27E-04	1.21E-03	3.02E-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.	1.28E-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.	1.28E-04	2.92E-06	3.77E-05	1.33E-05	1.67E-03
77	3.10	1.71E-06	0.	1.16E-04	1.22E-04	2.13E-05	0.	0.	0.	1.28E-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.	1.28E-04	3.55E-06	4.50E-05	1.57E-05	7.51E-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	1.05E-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.	1.28E-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.	4.75E-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	1.59E-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.	1.06E-03	0.	0.	0.	0.	0.	0.	0.	5.69E-05	2.14E-04	4.98E-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.	6.38E-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.	2.96E-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.	7.88E-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	7.60E-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	3.28E-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	1.1 -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	1.1 -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	8.7 -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	7.33E-05
24	8.40	0.	4.03E-06	5.41E-05	0.	0.	0.	7.28E-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	3.10E-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	1.76E-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.	6.40E-09	0.	7.62E-06	2.16E-08	3.14E-06	2.74E-06	3.15E-05
34	7.40	0.	2.76E-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.	2.93E-06	0.	7.94E-06	2.77E-08	3.11E-06	2.89E-06	2.31E-05
40	6.80	3.90E-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	1.54E-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	2.58E-05
44	6.40	4.62E-10	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	2.51E-10	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	1.06E-10	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	4.53E-11	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	1.78E-11	0.	4.24E-08	7.57E-07	4.56E-06	0.	8.51E-06	4.22E-08	3.17E-06	3.23E-06	2.03E-05
49	5.90	4.16E-12	0.	3.00E-09	1.06E-06	4.96E-06	0.	8.51E-06	4.44E-08	3.20E-06	3.28E-06	2.11E-05
50	5.80	5.24E-13	0.	7.36E-11	1.42E-06	4.65E-06	0.	8.39E-06	4.67E-08	3.23E-06	3.34E-06	2.11E-05
51	5.70	3.84E-14	0.	0.	1.52E-06	4.83E-06	0.	7.88E-06	4.92E-08	3.25E-06	3.40E-06	2.09E-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	1.69E-15	0.	0.	0.	1.12E-06	7.90E-06	0.	0.	7.32E-06	5.19E-08	3.28E-06	3.45E-06	2.31E-05
53	5.50	0.	0.	0.	0.	1.38E-06	7.69E-06	0.	0.	7.36E-06	5.48E-08	3.32E-06	3.51E-06	2.33E-05
54	5.40	0.	0.	0.	0.	1.15E-06	4.92E-06	0.	0.	7.40E-06	5.79E-08	3.37E-06	3.57E-06	2.05E-05
55	5.30	0.	0.	0.	0.	1.19E-06	7.44E-06	0.	0.	7.45E-06	6.13E-08	3.42E-06	3.64E-06	2.32E-05
56	5.20	0.	0.	0.	0.	1.22E-06	4.17E-06	0.	0.	7.50E-06	6.49E-08	3.47E-06	3.72E-06	2.01E-05
57	5.10	0.	0.	0.	0.	1.18E-06	5.74E-06	0.	0.	7.56E-06	6.88E-08	3.55E-06	3.81E-06	2.19E-05
58	5.00	1.96E-08	0.	0.	0.	1.03E-06	4.92E-06	0.	0.	7.62E-06	7.30E-08	3.65E-06	3.90E-06	2.12E-05
59	4.90	4.37E-08	0.	0.	0.	1.10E-06	4.83E-06	0.	0.	7.69E-06	7.76E-08	3.75E-06	3.99E-06	2.15E-05
60	4.80	7.51E-08	0.	0.	0.	1.15E-06	4.43E-06	0.	0.	7.75E-06	8.26E-08	3.84E-06	4.07E-06	2.14E-05
61	4.70	9.20E-08	0.	0.	0.	1.08E-06	3.68E-06	0.	0.	7.81E-06	8.80E-08	3.94E-06	4.17E-06	2.09E-05
62	4.60	1.16E-07	0.	0.	0.	1.07E-06	3.45E-06	0.	0.	7.88E-06	9.39E-08	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	1.00E-07	4.19E-06	4.38E-06	2.03E-05
64	4.40	1.16E-07	0.	7.86E-07	0.	8.86E-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	4.48E-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	2.69E-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	1.70E-05
68	4.00	7.08E-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	5.63E-08	0.	4.79E-06	1.44E-06	5.75E-07	6.94E-08	0.	0.	8.16E-06	1.54E-07	2.68E-06	6.55E-07	1.88E-05
70	3.80	5.96E-08	0.	6.53E-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	5.16E-05	3.48E-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.	3.96E-06	2.56E-07	3.93E-06	1.21E-06	3.35E-05
76	3.20	1.96E-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	1.73E-08	0.	1.53E-06	5.21E-06	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	1.11E-08	0.	4.95E-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	1.04E-08	0.	2.30E-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	2.30E-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.	4.34E-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.	2.06E-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	1.28E-06	1.68E-05
87	2.10	0.	6.28E-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.	1.68E-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.	3.30E-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.	1.36E-05	0.	0.	0.	0.	0.	0.	0.	4.28E-06	1.87E-05	3.75E-06	4.04E-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.	9.51E-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	4.70E-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	7.20E-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.	2.98E-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	1.30E-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	2.60E-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	9.50E-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	4.47E-12	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	2.43E-12	0.	8.84E-09	2.51E-09	5.01E-08	0.	2.56E-07	3.55E-09	3.10E-07	3.01E-07	9.32E-07
46	6.20	1.04E-12	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	4.36E-13	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	1.72E-13	0.	4.19E-10	7.41E-09	4.46E-08	0.	2.62E-07	4.11E-09	3.16E-07	3.18E-07	9.52E-07
49	5.90	4.05E-14	0.	2.98E-11	1.04E-08	4.85E-08	0.	2.62E-07	4.33E-09	3.19E-07	3.23E-07	9.67E-07
50	5.80	5.06E-15	0.	7.29E-13	1.39E-08	4.56E-08	0.	2.58E-07	4.55E-09	3.21E-07	3.29E-07	9.72E-07
51	5.70	3.72E-16	0.	0.	1.48E-08	4.73E-08	0.	2.42E-07	4.80E-09	3.24E-07	3.34E-07	9.67E-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	1.64E-17	0.	0.	0.	1.10E-08	7.74E-08	0.	0.	2.25E-07	5.06E-09	3.27E-07	3.40E-07	9.85E-07
53	5.50	0.	0.	0.	0.	1.35E-08	7.54E-08	0.	0.	2.26E-07	5.34E-09	3.31E-07	3.45E-07	9.96E-07
54	5.40	0.	0.	0.	0.	1.13E-08	4.81E-08	0.	0.	2.27E-07	5.64E-09	3.35E-07	3.51E-07	9.79E-07
55	5.30	0.	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	0.	0.	0.	0.	1.20E-08	4.08E-08	0.	0.	2.30E-07	6.32E-09	3.45E-07	3.67E-07	1.03E-06
57	5.10	0.	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	1.89E-10	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	4.23E-10	0.	0.	0.	1.07E-08	4.73E-08	0.	0.	2.36E-07	7.56E-09	3.73E-07	3.92E-07	1.07E-06
60	4.80	7.27E-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	8.99E-10	0.	0.	0.	1.06E-08	3.60E-08	0.	0.	2.40E-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.	2.07E-09	0.	8.96E-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.	1.80E-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.	7.67E-09	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	2.02E-09	0.	0.	2.51E-07	1.29E-08	3.62E-07	6.09E-08	7.19E-07
68	4.00	6.86E-10	0.	1.07E-07	0.	6.68E-09	1.54E-09	0.	0.	2.52E-07	1.39E-08	3.71E-07	6.27E-08	8.15E-07
69	3.90	5.43E-10	0.	4.75E-08	4.56E-08	5.63E-09	6.80E-10	0.	0.	2.51E-07	1.50E-08	2.86E-07	6.45E-08	7.17E-07
70	3.80	5.77E-10	0.	6.47E-08	3.52E-07	5.92E-09	0.	0.	0.	2.50E-07	1.63E-08	2.95E-07	6.65E-08	1.05E-06
71	3.70	4.66E-10	0.	8.83E-08	7.54E-08	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.	2.30E-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	3.50E-07	1.07E-07	7.44E-07
75	3.30	2.28E-10	0.	3.62E-08	5.40E-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.	1.52E-08	1.65E-07	2.41E-09	0.	0.	0.	1.22E-07	3.01E-08	4.74E-07	1.43E-07	9.51E-07
78	3.00	1.37E-10	0.	8.29E-09	6.44E-07	2.10E-09	0.	0.	0.	1.23E-07	3.32E-08	5.15E-07	1.55E-07	1.48E-06
79	2.90	1.06E-10	0.	4.91E-09	4.46E-07	1.41E-09	0.	0.	0.	1.23E-07	3.68E-08	5.58E-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	6.04E-07	1.79E-07	1.10E-06
81	2.70	5.99E-11	0.	1.04E-09	3.15E-07	3.89E-10	0.	0.	0.	1.23E-07	4.56E-08	6.52E-07	1.87E-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	5.11E-08	7.03E-07	6.14E-08	9.69E-07
83	2.50	1.61E-12	0.	6.96E-11	2.12E-08	3.24E-11	0.	0.	0.	1.23E-07	5.76E-08	3.61E-07	7.07E-08	6.34E-07
84	2.40	0.	4.30E-09	0.	2.52E-08	3.23E-12	0.	0.	0.	1.23E-07	6.51E-08	4.51E-07	8.70E-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	1.04E-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.	2.03E-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.	1.66E-07	0.	0.	0.	0.	0.	0.	1.08E-07	1.56E-07	1.14E-06	2.26E-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	2.70E-07	2.10E-06
92	1.60	0.	1.40E-07	0.	0.	0.	0.	0.	0.	8.59E-08	2.22E-07	1.54E-06	2.92E-07	2.28E-06
93	1.50	0.	1.73E-07	0.	0.	0.	0.	0.	0.	3.90E-08	2.70E-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	1.28E-06	2.61E-07	2.06E-06
95	1.30	0.	1.35E-07	0.	0.	0.	0.	0.	0.	0.	4.17E-07	1.83E-06	3.69E-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	4.28E-06
98	1.00	0.	1.04E-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.	1.28E-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.	1.03E-08	0.	0.	0.	0.	8.11E-11	0.	0.	2.76E-06	4.04E-06	7.14E-07	7.52E-06
102	0.60	0.	5.66E-10	0.	0.	0.	0.	3.32E-10	0.	0.	4.42E-06	4.54E-06	8.07E-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 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.	6.99E-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	6.89E-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	1.82E-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.	2.04E-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	1.69E-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	1.50E-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	1.10E-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	7.00E-08
19	8.90	0.	3.79E-10	8.09E-09	0.	0.	0.	6.34E-09	1.17E-10	3.01E-08	2.36E-08	6.86E-08
20	8.80	0.	3.92E-10	7.69E-09	0.	0.	0.	6.36E-09	1.21E-10	3.00E-08	2.36E-08	6.82E-08
21	8.70	0.	3.78E-10	6.02E-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	6.40E-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	2.10E-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	1.50E-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	7.30E-10	0.	9.08E-11	0.	6.94E-09	2.30E-10	2.88E-08	2.65E-08	6.35E-08
38	7.00	2.26E-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	4.11E-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	2.39E-13	0.	3.88E-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	4.01E-14	0.	1.42E-10	5.16E-12	9.31E-10	0.	7.33E-09	3.15E-10	2.88E-08	2.82E-08	6.57E-08
45	6.30	2.16E-14	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	9.22E-15	0.	3.71E-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	3.93E-15	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	1.54E-15	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	3.63E-16	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	4.55E-17	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	3.33E-18	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)

	PHOTO-I 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	1.47E-19	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	0.	0.	0.	0.	1.19E-10	6.63E-10	0.	0.	6.54E-09	4.97E-10	3.07E-08	3.27E-08	7.13E-08
54	5.40	0.	0.	0.	0.	9.94E-11	4.24E-10	0.	0.	6.57E-09	5.25E-10	3.12E-08	3.33E-08	7.20E-08
55	5.30	0.	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	0.	0.	0.	0.	1.05E-10	3.59E-10	0.	0.	6.65E-09	5.88E-10	3.21E-08	3.47E-08	7.45E-08
57	5.10	0.	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	1.7.E-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	3.79E-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	6.52E-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	8.06E-12	0.	0.	0.	9.32E-11	3.17E-10	0.	0.	6.94E-09	7.98E-10	3.64E-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	2.08E-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.	6.73E-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.	1.55E-10	0.	6.83E-11	8.60E-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	6.98E-11	0.	0.	7.22E-09	1.12E-09	4.28E-08	5.60E-09	5.75E-08
67	4.10	7.0(E-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.	0.	7.22E-09	1.51E-09	2.74E-08	6.30E-09	5.30E-08
71	3.70	4.1(E-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	3.56E-12	0.	3.71E-10	1.39E-08	4.29E-11	0.	0.	0.	6.65E-09	1.78E-09	2.54E-08	8.06E-09	5.62E-08
73	3.50	3.14E-12	0.	5.98E-10	4.64E-08	3.00E-11	0.	0.	0.	6.09E-09	1.94E-09	2.88E-08	9.06E-09	9.30E-08
74	3.40	2.66E-12	0.	2.81E-10	2.99E-09	3.32E-11	0.	0.	0.	3.51E-09	2.12E-09	3.26E-08	1.01E-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-08	7.19E-08
76	3.20	1.65E-12	0.	1.70E-10	5.03E-08	2.42E-11	0.	0.	0.	3.52E-09	2.54E-09	4.02E-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	2.80E-09	4.40E-08	1.35E-08	6.87E-08
78	3.00	1.23E-12	0.	7.17E-11	1.83E-08	1.85E-11	0.	0.	0.	3.54E-09	3.09E-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	5.36E-13	0.	9.01E-12	8.94E-09	3.43E-12	0.	0.	0.	3.55E-09	4.24E-09	6.06E-08	5.40E-09	8.27E-08
82	2.60	2.1(E-13	0.	4.61E-12	8.40E-10	1.31E-12	0.	0.	0.	3.55E-09	4.75E-09	6.54E-08	5.82E-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	4.98E-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	6.05E-08
85	2.30	0.	1.76E-10	0.	0.	0.	0.	0.	0.	3.52E-09	6.89E-09	5.08E-08	9.88E-09	7.13E-08
86	2.20	0.	3.65E-10	0.	0.	0.	0.	0.	0.	3.51E-09	7.88E-09	6.00E-08	1.19E-08	8.37E-08
87	2.10	0.	5.38E-10	0.	0.	0.	0.	0.	0.	3.50E-09	9.08E-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	7.97E-08	1.60E-08	1.10E-07
89	1.90	0.	1.76E-09	0.	0.	0.	0.	0.	0.	3.25E-09	1.23E-08	9.00E-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.	2.48E-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.	1.13E-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	1.77E-07
95	1.30	0.	1.17E-09	0.	0.	0.	0.	0.	0.	0.	3.88E-08	1.70E-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.	6.40E-15	0.	0.	6.45E-08	2.72E-07	5.20E-08	3.89E-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.	1.08E-12	0.	0.	1.70E-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	7.00E-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	9.10E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. 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.	4.38E-10	0.	0.	0.	1.44E-10	5.35E-12	8.64E-09	1.98E-09	1.12E-08
2	10.60	0.	0.	3.72E-10	0.	0.	0.	1.44E-10	5.51E-12	8.68E-09	1.98E-09	1.12E-08
3	10.50	0.	0.	3.60E-10	0.	0.	0.	1.44E-10	5.67E-12	8.73E-09	1.98E-09	1.12E-08
4	10.40	0.	0.	3.29E-10	0.	0.	0.	1.45E-10	5.83E-12	8.76E-09	1.98E-09	1.12E-08
5	10.30	0.	0.	2.59E-10	0.	0.	0.	1.45E-10	6.01E-12	8.78E-09	1.98E-09	1.12E-08
6	10.20	0.	0.	2.56E-10	0.	0.	0.	1.45E-10	6.19E-12	8.80E-09	1.98E-09	1.12E-08
7	10.10	0.	0.	2.30E-10	0.	0.	0.	1.45E-10	6.37E-12	8.83E-09	1.98E-09	1.12E-08
8	10.00	0.	0.	1.83E-10	0.	0.	0.	1.45E-10	6.57E-12	8.85E-09	1.98E-09	1.12E-08
9	9.90	0.	0.	1.85E-10	0.	0.	0.	1.46E-10	6.77E-12	8.87E-09	1.98E-09	1.12E-08
10	9.80	0.	0.	1.62E-10	0.	0.	0.	1.46E-10	6.98E-12	8.89E-09	1.98E-09	1.12E-08
11	9.70	0.	0.	1.28E-10	0.	0.	0.	1.46E-10	7.20E-12	8.92E-09	1.98E-09	1.12E-08
12	9.60	0.	0.	1.37E-10	0.	0.	0.	1.46E-10	7.43E-12	8.94E-09	1.98E-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	1.98E-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	1.98E-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	1.98E-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	1.98E-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	1.98E-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	1.98E-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	2.88E-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	2.81E-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	1.52E-16	0.	4.79E-13	1.47E-13	2.92E-12	0.	1.75E-10	2.64E-11	2.29E-09	2.39E-09	4.88E-09
46	6.20	6.45E-17	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	2.75E-17	0.	9.69E-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	1.01E-17	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	2.54E-18	0.	1.61E-15	6.07E-13	2.83E-12	0.	1.79E-10	3.22E-11	2.35E-09	2.56E-09	5.12E-09
50	5.80	3.19E-19	0.	3.95E-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	2.35E-20	0.	0.	8.66E-13	2.76E-12	0.	1.65E-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 (1.0E-05 NORMAL)

	PHOTON ENERGY	O2 S-R BANDS	N2 1ST POS.	N2 2ND POS.	N2+ 1ST NEG.	NO BETA	NO GAMM/	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.03E-21	0.	0.	0.	6.39E-13	4.51E-12	0.	0.	1.54E-10	3.76E-11	2.41E-09	2.69E-09	5.29E-09
53	5.50	0.	0.	0.	0.	7.88E-13	4.40E-12	0.	0.	1.55E-10	3.97E-11	2.43E-09	2.74E-09	5.37E-09
54	5.40	0.	0.	0.	0.	6.59E-13	2.81E-12	0.	0.	1.55E-10	4.20E-11	2.47E-09	2.78E-09	5.45E-09
55	5.30	0.	0.	0.	0.	6.78E-13	4.25E-12	0.	0.	1.56E-10	4.44E-11	2.50E-09	2.84E-09	5.55E-09
56	5.20	0.	0.	0.	0.	6.99E-13	2.38E-12	0.	0.	1.57E-10	4.70E-11	2.54E-09	2.90E-09	5.65E-09
57	5.10	0.	0.	0.	0.	6.75E-13	3.28E-12	0.	0.	1.59E-10	4.98E-11	2.60E-09	2.97E-09	5.79E-09
58	5.00	1.17E-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	2.65E-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	4.56E-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	5.64E-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	1.18E-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.	1.71E-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.	1.71E-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	3.08E-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.	3.75E-12	1.03E-09	1.99E-13	0.	0.	0.	1.44E-10	1.55E-10	2.28E-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.	8.31E-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.	8.32E-11	1.85E-10	2.88E-09	9.40E-10	4.49E-09
76	3.20	1.15E-14	0.	1.06E-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.	4.50E-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	8.23E-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.	5.65E-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	1.86E-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	1.89E-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	1.88E-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	5.48E-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.	5.38E-12	0.	0.	0.	0.	0.	0.	8.00E-11	8.41E-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	1.28E-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	1.40E-08
95	1.30	0.	7.32E-12	0.	0.	0.	0.	0.	0.	0.	3.10E-09	1.35E-08	2.93E-09	1.95E-08
96	1.20	0.	7.52E-12	0.	0.	0.	0.	0.	0.	0.	3.96E-09	1.80E-08	3.42E-09	2.54E-08
97	1.10	0.	6.06E-12	0.	0.	0.	0.	4.24E-17	0.	0.	5.15E-09	2.15E-08	4.35E-09	3.10E-08
98	1.00	0.	5.66E-12	0.	0.	0.	0.	3.48E-16	0.	0.	6.89E-09	2.60E-08	5.28E-09	3.82E-08
99	0.90	0.	4.54E-12	0.	0.	0.	0.	4.44E-16	0.	0.	9.49E-09	3.00E-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	3.35E-08	6.39E-09	7.27E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 9000. 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.	1.11E-12	0.	0.	0.	1.83E-12	2.74E-13	4.34E-10	1.11E-10	5.48E-10
2	10.60	0.	0.	9.37E-13	0.	0.	0.	1.84E-12	2.82E-13	4.36E-10	1.11E-10	5.51E-10
3	10.50	0.	0.	9.07E-13	0.	0.	0.	1.84E-12	2.91E-13	4.38E-10	1.11E-10	5.53E-10
4	10.40	0.	0.	8.07E-13	0.	0.	0.	1.84E-12	2.99E-13	4.40E-10	1.11E-10	5.54E-10
5	10.30	0.	0.	6.54E-13	0.	0.	0.	1.84E-12	3.08E-13	4.41E-10	1.11E-10	5.55E-10
6	10.20	0.	0.	6.45E-13	0.	0.	0.	1.85E-12	3.17E-13	4.42E-10	1.11E-10	5.56E-10
7	10.10	0.	0.	5.79E-13	0.	0.	0.	1.85E-12	3.27E-13	4.43E-10	1.11E-10	5.57E-10
8	10.00	0.	0.	4.62E-13	0.	0.	0.	1.85E-12	3.37E-13	4.44E-10	1.11E-10	5.58E-10
9	9.90	0.	0.	4.66E-13	0.	0.	0.	1.86E-12	3.47E-13	4.46E-10	1.11E-10	5.60E-10
10	9.80	0.	0.	4.08E-13	0.	0.	0.	1.86E-12	3.58E-13	4.47E-10	1.11E-10	5.61E-10
11	9.70	0.	0.	3.22E-13	0.	0.	0.	1.86E-12	3.69E-13	4.48E-10	1.11E-10	5.62E-10
12	9.60	0.	0.	3.45E-13	0.	0.	0.	1.87E-12	3.81E-13	4.49E-10	1.11E-10	5.63E-10
13	9.50	0.	3.07E-15	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.	4.49E-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.	6.22E-15	1.78E-13	0.	0.	0.	1.90E-12	4.47E-13	1.20E-10	1.11E-10	2.34E-10
18	9.00	0.	7.30E-15	1.49E-13	0.	0.	0.	1.90E-12	4.62E-13	1.20E-10	1.11E-10	2.34E-10
19	8.90	0.	8.38E-15	1.28E-13	0.	0.	0.	1.91E-12	4.78E-13	1.20E-10	1.11E-10	2.33E-10
20	8.80	0.	8.68E-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.	8.38E-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.	7.86E-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.	7.74E-15	7.33E-14	0.	0.	0.	1.95E-12	5.69E-13	1.18E-10	1.11E-10	2.32E-10
25	8.30	0.	7.61E-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	4.35E-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.	6.70E-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	3.29E-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.	1.80E-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	4.87E-18	0.	9.87E-15	0.	5.08E-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	9.89E-19	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	4.83E-19	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	2.04E-19	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	8.71E-20	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	3.42E-20	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	8.04E-21	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	1.61E-21	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	7.39E-23	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 (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	3.25E-24	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	0.	0.	0.	0.	2.23E-15	1.24E-14	0.	0.	1.97E-12	2.04E-12	1.22E-10	1.54E-10	2.80E-10
54	5.40	0.	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	0.	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	0.	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	0.	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	3.76E-17	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	8.41E-17	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	1.44E-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	1.79E-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	1.50E-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.	1.10E-15	2.54E-16	0.	0.	2.19E-12	5.31E-12	1.03E-10	2.80E-11	1.38E-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	9.75E-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	5.28E-13	7.36E-16	0.	0.	0.	2.14E-12	6.72E-12	9.17E-11	3.35E-11	1.35E-10
72	3.60	7.94E-17	0.	5.88E-15	3.43E-12	8.04E-16	0.	0.	0.	2.00E-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	4.78E-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	1.60E-10	5.82E-11	2.42E-10
77	3.10	3.26E-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.	1.07E-12	1.40E-11	2.06E-10	7.43E-11	2.99E-10
80	2.80	2.08E-17	0.	3.12E-16	1.02E-12	1.38E-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	4.85E-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	1.60E-10
83	2.50	3.20E-19	0.	6.52E-18	1.49E-13	5.35E-18	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	2.02E-10	4.65E-11	2.78E-10
86	2.20	0.	5.78E-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	8.50E-11	4.95E-10
90	1.80	0.	2.27E-14	0.	0.	0.	0.	0.	0.	9.38E-13	5.93E-11	4.20E-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	4.62E-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	1.40E-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.	4.86E-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) 10000. 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.	3.05E 01	0.	0.	0.	4.59E-01	8.68E-05	2.41E 01	8.27E-03	5.51E 01
2	10.60	0.	0.	2.67E 01	0.	0.	0.	4.60E-01	8.93E-05	1.60E-02	8.27E-03	2.67E 01
3	10.50	0.	0.	2.56E 01	0.	0.	0.	4.60E-01	9.19E-05	1.61E-02	8.26E-03	2.61E 01
4	10.40	0.	0.	2.31E 01	0.	0.	0.	4.61E-01	9.46E-05	1.62E-02	8.25E-03	2.35E 01
5	10.30	0.	0.	1.90E 01	0.	0.	0.	4.61E-01	9.74E-05	1.62E-02	8.25E-03	1.95E 01
6	10.20	0.	0.	1.89E 01	0.	0.	0.	4.62E-01	1.00E-04	1.63E-02	8.24E-03	1.94E 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.	1.39E 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	1.46E 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	8.88E 00
15	9.30	0.	9.09E-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	7.40E 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	7.08E 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	6.64E 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	2.68E 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	3.60E 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	3.20E 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.	7.46E-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	1.30E 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	3.01E-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	1.63E-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	8.98E-05	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	3.85E-05	0.	3.09E-02	3.67E-02	9.66E-01	0.	5.61E-01	4.49E-04	4.55E-03	9.75E-03	1.61E 00
47	6.10	1.67E-05	0.	1.32E-02	1.00E-01	1.48E 00	0.	5.65E-01	4.71E-04	4.58E-03	9.91E-03	2.17E 00
48	6.00	6.63E-06	0.	3.15E-03	8.59E-02	5.57E-01	0.	5.70E-01	4.95E-04	4.63E-03	1.01E-02	1.23E 00
49	5.90	1.57E-06	0.	2.24E-04	1.22E-01	5.90E-01	0.	5.70E-01	5.21E-04	4.67E-03	1.02E-02	1.30E 00
50	5.80	1.98E-07	0.	5.52E-06	1.64E-01	5.61E-01	0.	5.61E-01	5.49E-04	4.72E-03	1.04E-02	1.30E 00
51	5.70	1.45E-08	0.	0.	1.78E-01	5.97E-01	0.	5.27E-01	5.78E-04	4.76E-03	1.06E-02	1.32E 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	6.43E-10	0.	0.	0.	1.35E-01	9.33E-01	0.	0.	4.90E-01	6.10E-04	4.81E-03	1.07E-02	1.57E 00
53	5.50	0.	0.	0.	0.	1.66E-01	8.94E-01	0.	0.	4.93E-01	6.44E-04	4.88E-03	1.09E-02	1.57E 00
54	5.40	0.	0.	0.	0.	1.42E-01	6.05E-01	0.	0.	4.95E-01	6.81E-04	4.96E-03	1.11E-02	1.26E 00
55	5.30	0.	0.	0.	0.	1.46E-01	8.77E-01	0.	0.	4.98E-01	7.20E-04	5.04E-03	1.13E-02	1.54E 00
56	5.20	0.	0.	0.	0.	1.51E-01	5.21E-01	0.	0.	5.02E-01	7.63E-04	5.13E-03	1.15E-02	1.19E 00
57	5.10	0.	0.	0.	0.	1.47E-01	7.08E-01	0.	0.	5.06E-01	8.09E-04	5.26E-03	1.18E-02	1.38E 00
58	5.00	7.69E-03	0.	0.	0.	1.30E-01	6.16E-01	0.	0.	5.10E-01	8.59E-04	5.41E-03	1.21E-02	1.28E 00
59	4.90	1.75E-02	0.	0.	0.	1.39E-01	6.20E-01	0.	0.	5.14E-01	9.12E-04	5.56E-03	1.23E-02	1.31E 00
60	4.80	3.06E-02	0.	0.	0.	1.47E-01	5.70E-01	0.	0.	5.19E-01	9.71E-04	5.71E-03	1.26E-02	1.28E 00
61	4.70	3.84E-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.	1.40E-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.	5.62E-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	4.51E-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.	5.60E-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	9.00E-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.	5.36E-01	2.13E-03	4.90E-03	3.00E-03	1.28E 00
72	3.60	1.97E-02	0.	3.37E-01	3.95E-02	7.26E-02	0.	0.	0.	5.02E-01	2.31E-03	5.31E-03	3.37E-03	9.81E-01
73	3.50	1.75E-02	0.	5.17E-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.	2.60E-01	9.09E-03	5.76E-02	0.	0.	0.	2.65E-01	2.75E-03	5.86E-03	4.22E-03	6.20E-01
75	3.30	1.16E-02	0.	2.83E-01	5.01E-02	4.25E-02	0.	0.	0.	2.65E-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	7.20E-03	5.12E-03	6.20E-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	1.00E-02	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	3.15E-03	2.94E-01
84	2.40	0.	3.31E-02	0.	1.94E-03	6.15E-05	0.	0.	0.	2.68E-01	7.87E-03	1.52E-02	3.85E-03	3.30E-01
85	2.30	0.	1.44E-01	0.	0.	0.	0.	0.	0.	2.66E-01	8.95E-03	1.00E-02	4.61E-03	4.33E-01
86	2.20	0.	3.11E-01	0.	0.	0.	0.	0.	0.	2.65E-01	1.02E-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	1.18E-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.	2.45E-01	1.60E-02	1.78E-02	8.46E-03	1.62E 00
90	1.80	0.	1.08E 00	0.	0.	0.	0.	0.	0.	2.35E-01	1.88E-02	2.09E-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.	8.50E-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	1.28E 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.	8.85E-06	0.	0.	8.40E-02	6.15E-02	2.93E-02	9.09E-01
98	1.00	0.	6.91E-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.	6.70E-02	0.	0.	0.	0.	1.20E-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 (1.0E 00 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-K 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.	1.37E 00	0.	0.	0.	1.31E-02	5.56E-06	5.11E 00	9.07E-04	6.50E 00
2	10.60	0.	0.	1.18E 00	0.	0.	0.	1.31E-02	5.72E-06	3.40E-03	9.06E-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	6.06E-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.	8.50E-01	0.	0.	0.	1.32E-02	6.42E-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	7.89E-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.	6.58E-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.	8.87E-03	3.45E-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	8.96E-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	2.28E-01
21	8.70	0.	2.12E-02	1.52E-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	1.54E-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	1.60E-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	9.50E-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	9.07E-04	1.10E-01
28	8.00	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	2.50E-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	1.00E-03	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	1.96E-06	0.	5.00E-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	1.02E-06	0.	2.79E-03	6.41E-04	1.46E-02	0.	1.59E-02	2.74E-05	9.61E-04	1.05E-03	3.60E-02
46	6.20	4.63E-07	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	2.02E-07	0.	5.94E-04	2.33E-03	3.43E-02	0.	1.62E-02	3.02E-05	9.72E-04	1.09E-03	5.55E-02
48	6.00	7.97E-08	0.	1.42E-04	2.00E-03	1.29E-02	0.	1.63E-02	3.17E-05	9.81E-04	1.10E-03	3.35E-02
49	5.90	1.89E-08	0.	1.01E-05	2.83E-03	1.37E-02	0.	1.63E-02	3.34E-05	9.91E-04	1.12E-03	3.50E-02
50	5.80	2.36E-09	0.	2.48E-07	3.81E-03	1.30E-02	0.	1.60E-02	3.51E-05	1.00E-03	1.14E-03	3.51E-02
51	5.70	1.75E-10	0.	0.	4.14E-03	1.39E-02	0.	1.51E-02	3.70E-05	1.01E-03	1.16E-03	3.53E-02

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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.72E-12	0.	0.	0.	3.15E-03	2.17E-02	0.	0.	1.40E-02	3.91E-05	1.02E-03	1.18E-03	4.11E-02
53	5.50	0.	0.	0.	0.	3.87E-03	2.08E-02	0.	0.	1.41E-02	4.12E-05	1.03E-03	1.19E-03	4.10E-02
54	5.40	0.	0.	0.	0.	3.29E-03	1.41E-02	0.	0.	1.42E-02	4.36E-05	1.05E-03	1.21E-03	3.38E-02
55	5.30	0.	0.	0.	0.	3.39E-03	2.04E-02	0.	0.	1.43E-02	4.61E-05	1.07E-03	1.24E-03	4.04E-02
56	5.20	0.	0.	0.	0.	3.52E-03	1.21E-02	0.	0.	1.43E-02	4.89E-05	1.09E-03	1.26E-03	3.24E-02
57	5.10	0.	0.	0.	0.	3.42E-03	1.65E-02	0.	0.	1.45E-02	5.18E-05	1.12E-03	1.29E-03	3.68E-02
58	5.00	9.24E-05	0.	0.	0.	3.01E-03	1.43E-02	0.	0.	1.46E-02	5.50E-05	1.15E-03	1.32E-03	3.45E-02
59	4.90	2.10E-04	0.	0.	0.	3.24E-03	1.44E-02	0.	0.	1.47E-02	5.84E-05	1.18E-03	1.35E-03	3.52E-02
60	4.80	3.67E-04	0.	0.	0.	3.41E-03	1.32E-02	0.	0.	1.48E-02	6.22E-05	1.21E-03	1.38E-03	3.45E-02
61	4.70	4.62E-04	0.	0.	0.	3.25E-03	1.13E-02	0.	0.	1.50E-02	6.63E-05	1.24E-03	1.41E-03	3.27E-02
62	4.60	5.96E-04	0.	0.	0.	3.24E-03	1.05E-02	0.	0.	1.51E-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.	2.53E-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	4.95E-02
67	4.10	4.37E-04	0.	7.96E-03	0.	2.38E-03	6.38E-04	0.	0.	1.56E-02	1.00E-04	1.53E-03	1.62E-03	3.03E-02
68	4.00	3.85E-04	0.	3.54E-02	0.	2.21E-03	4.80E-04	0.	0.	1.57E-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.	1.56E-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	3.28E-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	3.70E-04	3.99E-02
73	3.50	2.10E-04	0.	2.33E-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	1.40E-04	0.	1.27E-02	8.63E-03	9.88E-04	0.	0.	0.	7.59E-03	1.92E-04	1.38E-03	5.11E-04	3.22E-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	8.90E-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.	6.47E-03	0.	0.	0.	0.	0.	0.	7.60E-03	5.74E-04	2.12E-03	5.06E-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.	7.30E-03	8.75E-04	3.33E-03	8.18E-04	4.45E-02
89	1.90	0.	5.98E-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.	4.87E-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	1.43E-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	6.07E-03	1.55E-03	5.59E-02
93	1.50	0.	5.06E-02	0.	0.	0.	0.	0.	0.	2.43E-03	2.09E-03	7.57E-03	1.86E-03	6.45E-02
94	1.40	0.	5.30E-02	0.	0.	0.	0.	0.	0.	0.	2.58E-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	1.06E-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.	3.06E-02	0.	0.	0.	0.	1.90E-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.	9.90E-03	1.77E-02	4.15E-03	5.66E-02
100	0.80	0.	1.16E-02	0.	0.	0.	0.	4.05E-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) 1000.0 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	10.70	0.	0.	2.45E-02	0.	0.	0.	4.09E-04	5.16E-07	6.83E-01	9.24E-05	7.08E-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	5.46E-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.	1.52E-02	0.	0.	0.	4.11E-04	5.79E-07	4.60E-04	9.21E-05	1.62E-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.	1.17E-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.	8.10E-03	0.	0.	0.	4.15E-04	6.93E-07	4.67E-04	9.16E-05	9.07E-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.	9.16E-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	1.30E-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	1.30E-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	1.30E-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	5.23E-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	1.00E-04	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	1.15E-07	0.	2.30E-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	2.04E-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	1.12E-08	0.	4.97E-05	8.73E-06	1.99E-04	0.	4.96E-04	2.54E-06	1.28E-04	1.07E-04	9.92E-04
46	6.20	4.81E-09	0.	2.48E-05	1.16E-05	3.06E-04	0.	5.00E-04	2.67E-06	1.29E-04	1.09E-04	1.08E-03
47	6.10	2.08E-09	0.	1.06E-05	3.18E-05	4.67E-04	0.	5.04E-04	2.80E-06	1.30E-04	1.11E-04	1.26E-03
48	6.00	8.27E-10	0.	2.53E-06	2.72E-05	1.76E-04	0.	5.08E-04	2.94E-06	1.31E-04	1.13E-04	9.60E-04
49	5.90	1.95E-10	0.	1.80E-07	3.85E-05	1.87E-04	0.	5.08E-04	3.10E-06	1.32E-04	1.14E-04	9.83E-04
50	5.80	2.47E-11	0.	4.43E-09	5.19E-05	1.78E-04	0.	5.00E-04	3.26E-06	1.34E-04	1.16E-04	9.83E-04
51	5.70	1.81E-12	0.	0.	5.64E-05	1.89E-04	0.	4.70E-04	3.44E-06	1.35E-04	1.18E-04	9.72E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 10000. 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	8.02E-14	0.	0.	0.	4.29E-05	2.95E-04	0.	0.	4.37E-04	3.62E-06	1.36E-04	1.20E-04	1.03E-03
53	5.50	0.	0.	0.	0.	5.26E-05	2.83E-04	0.	0.	4.39E-04	3.83E-06	1.38E-04	1.22E-04	1.04E-03
54	5.40	0.	0.	0.	0.	4.48E-05	1.91E-04	0.	0.	4.41E-04	4.05E-06	1.41E-04	1.24E-04	9.46E-04
55	5.30	0.	0.	0.	0.	4.61E-05	2.78E-04	0.	0.	4.44E-04	4.28E-06	1.43E-04	1.26E-04	1.04E-03
56	5.20	0.	0.	0.	0.	4.79E-05	1.65E-04	0.	0.	4.47E-04	4.53E-06	1.45E-04	1.29E-04	9.39E-04
57	5.10	0.	0.	0.	0.	4.66E-05	2.24E-04	0.	0.	4.51E-04	4.81E-06	1.49E-04	1.32E-04	1.01E-03
58	5.00	9.60E-07	0.	0.	0.	4.10E-05	1.95E-04	0.	0.	4.55E-04	5.10E-06	1.53E-04	1.35E-04	9.85E-04
59	4.90	2.18E-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
60	4.80	3.81E-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
61	4.70	4.81E-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
62	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
63	4.50	6.21E-06	0.	1.26E-05	0.	3.83E-05	1.02E-04	0.	0.	4.74E-04	7.01E-06	1.78E-04	1.51E-04	9.69E-04
64	4.40	6.26E-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
65	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
66	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
67	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
68	4.00	4.01E-06	0.	6.32E-04	0.	3.00E-05	6.65E-06	0.	0.	4.89E-04	1.00E-05	2.11E-04	2.81E-05	1.41E-03
69	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	2.89E-05	1.05E-03
70	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
71	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	1.26E-03
72	3.60	2.45E-06	0.	2.71E-04	3.97E-04	2.30E-05	0.	0.	0.	4.47E-04	1.37E-05	1.50E-04	3.77E-05	1.34E-03
73	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
74	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	7.86E-04
75	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
76	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
77	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	8.00E-04
78	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
79	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	9.70E-04
80	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
81	2.70	4.22E-07	0.	7.17E-06	2.45E-04	2.20E-06	0.	0.	0.	2.39E-04	3.27E-05	3.08E-04	8.45E-05	9.18E-04
82	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
83	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
84	2.40	0.	2.66E-05	0.	1.95E-05	1.95E-08	0.	0.	0.	2.39E-04	4.68E-05	4.30E-04	4.30E-05	8.05E-04
85	2.30	0.	1.15E-04	0.	0.	0.	0.	0.	0.	2.37E-04	5.32E-05	2.83E-04	5.15E-05	7.40E-04
86	2.20	0.	2.50E-04	0.	0.	0.	0.	0.	0.	2.36E-04	6.09E-05	3.35E-04	6.22E-05	9.44E-04
87	2.10	0.	3.43E-04	0.	0.	0.	0.	0.	0.	2.35E-04	7.01E-05	3.90E-04	7.28E-05	1.11E-03
88	2.00	0.	5.74E-04	0.	0.	0.	0.	0.	0.	2.27E-04	8.12E-05	4.45E-04	8.34E-05	1.41E-03
89	1.90	0.	1.07E-03	0.	0.	0.	0.	0.	0.	2.19E-04	9.49E-05	5.03E-04	9.46E-05	1.98E-03
90	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
91	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
92	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
93	1.50	0.	9.02E-04	0.	0.	0.	0.	0.	0.	7.58E-05	1.94E-04	1.01E-03	1.89E-04	2.37E-03
94	1.40	0.	9.46E-04	0.	0.	0.	0.	0.	0.	0.	2.40E-04	1.23E-03	2.19E-04	2.63E-03
95	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
96	1.20	0.	7.05E-04	0.	0.	0.	0.	0.	0.	0.	3.83E-04	1.41E-03	2.62E-04	2.76E-03
97	1.10	0.	5.90E-04	0.	0.	0.	0.	2.80E-09	0.	0.	4.99E-04	1.74E-03	3.27E-04	3.16E-03
98	1.00	0.	5.47E-04	0.	0.	0.	0.	2.59E-08	0.	0.	6.67E-04	2.10E-03	3.60E-04	3.67E-03
99	0.90	0.	4.43E-04	0.	0.	0.	0.	3.16E-08	0.	0.	9.18E-04	2.37E-03	4.23E-04	4.15E-03
100	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
101	0.70	0.	5.38E-05	0.	0.	0.	0.	3.80E-07	0.	0.	1.99E-03	3.01E-03	5.41E-04	5.60E-03
102	0.60	0.	3.77E-06	0.	0.	0.	0.	1.51E-06	0.	0.	3.18E-03	3.35E-03	6.04E-04	7.15E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1000C. 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	4.65E-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	2.86E-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	8.98E-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	4.92E-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	1.36E-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	6.16E-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	4.35E-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.	3.25E-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	2.01E-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	1.11E-10	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	4.72E-11	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	2.04E-11	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	8.12E-12	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	1.93E-12	0.	1.90E-09	3.92E-07	1.90E-06	0.	1.57E-05	3.03E-07	1.36E-05	1.13E-05	4.33E-05
50	5.80	2.43E-13	0.	4.69E-11	5.28E-07	1.81E-06	0.	1.55E-05	3.19E-07	1.37E-05	1.15E-05	4.34E-05
51	5.70	1.78E-14	0.	0.	5.75E-07	1.93E-06	0.	1.45E-05	3.36E-07	1.39E-05	1.17E-05	4.29E-05

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	7.87E-16	0.	0.	0.	4.37E-07	3.01E-06	0.	0.	1.35E-05	3.54E-07	1.40E-05	1.19E-05	4.32E-05
53	5.50	0.	0.	0.	0.	5.36E-07	2.88E-06	0.	0.	1.36E-05	3.74E-07	1.42E-05	1.21E-05	4.37E-05
54	5.40	0.	0.	0.	0.	4.57E-07	1.95E-06	0.	0.	1.37E-05	3.96E-07	1.45E-05	1.22E-05	4.32E-05
55	5.30	0.	0.	0.	0.	4.70E-07	2.83E-06	0.	0.	1.38E-05	4.19E-07	1.47E-05	1.25E-05	4.46E-05
56	5.20	0.	0.	0.	0.	4.88E-07	1.68E-06	0.	0.	1.38E-05	4.43E-07	1.49E-05	1.28E-05	4.42E-05
57	5.10	0.	0.	0.	0.	4.75E-07	2.28E-06	0.	0.	1.40E-05	4.70E-07	1.53E-05	1.31E-05	4.56E-05
58	5.00	9.42E-09	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
59	4.90	2.14E-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	3.74E-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	4.71E-08	0.	0.	0.	4.51E-07	1.56E-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	1.46E-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	4.95E-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	4.89E-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	1.60E-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	1.90E-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	2.30E-05	6.18E-06	4.46E-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	5.90E-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	1.16E-10	0.	4.85E-09	6.01E-07	1.96E-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	2.40E-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	5.65E-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	9.28E-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	9.86E-05
91	1.70	0.	1.11E-05	0.	0.	0.	0.	0.	0.	6.10E-06	1.30E-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.	7.46E-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	3.80E-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.	3.98E-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.	2.30E-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	7.64E-06
3	10.50	0.	0.	1.93E-06	0.	0.	0.	3.73E-07	5.02E-09	4.43E-06	8.76E-07	7.61E-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.	1.43E-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.	1.29E-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.	3.76E-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.	7.60E-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	3.33E-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	3.31E-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	1.83E-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	1.01E-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	4.33E-13	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	1.87E-13	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	7.45E-14	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	1.77E-14	0.	1.69E-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	2.23E-15	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	1.63E-16	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	7.22E-10	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	0.	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	0.	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	0.	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	0.	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	0.	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	8.64E-11	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	1.96E-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	3.43E-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	4.32E-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.	1.33E-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	2.51E-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	1.61E-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	1.22E-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	2.39E-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	4.50E-06
82	2.60	1.59E-11	0.	3.43E-10	2.24E-08	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-08	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.	2.50E-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.	1.08E-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.	1.00E-07	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.	9.86E-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.	8.88E-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	4.46E-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.	1.53E-08	0.	0.	0.	9.27E-09	3.91E-10	3.58E-07	7.60E-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	7.56E-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	1.40E-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.	1.00E-08	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-	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.	9.86E-11	3.65E-10	0.	7.84E-13	0.	1.03E-08	1.19E-09	1.00E-07	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-07	8.11E-08	1.94E-07
36	7.20	0.	8.86E-11	2.80E-10	0.	1.08E-11	0.	1.05E-08	1.29E-09	1.00E-07	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-07	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-07	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-07	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-07	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-07	8.50E-08	1.98E-07
42	6.60	4.6?E-14	0.	1.21E-10	0.	1.20E-10	0.	1.10E-08	1.67E-09	1.00E-07	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	1.38E-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	7.59E-15	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	3.26E-15	0.	1.56E-11	7.57E-12	1.99E-10	0.	1.13E-08	2.02E-09	1.02E-07	8.96E-08	2.05E-07
47	6.10	1.41E-15	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	5.6?E-16	0.	1.59E-12	1.77E-11	1.15E-10	0.	1.15E-08	2.23E-09	1.04E-07	9.26E-08	2.10E-07
49	5.90	1.35E-16	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	1.67E-17	0.	2.78E-15	3.38E-11	1.16E-10	0.	1.13E-08	2.47E-09	1.06E-07	9.56E-08	2.15E-07
51	5.70	1.23E-18	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	5.43E-20	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	0.	0.	0.	0.	3.43E-11	1.84E-10	0.	0.	9.94E-09	2.90E-09	1.09E-07	1.00E-07	2.23E-07
54	5.40	0.	0.	0.	0.	2.92E-11	1.25E-10	0.	0.	10.00E-09	3.06E-09	1.11E-07	1.02E-07	2.26E-07
55	5.30	0.	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	0.	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	0.	0.	0.	0.	3.04E-11	1.46E-10	0.	0.	1.02E-08	3.64E-09	1.18E-07	1.08E-07	2.40E-07
58	5.00	6.5[illegible]E-13	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	1.48E-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	2.56E-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	3.25E-12	0.	0.	0.	2.88E-11	1.00E-10	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	3.81E-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	4.33E-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	1.86E-12	0.	0.	1.10E-08	8.17E-09	1.03E-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.	1.70E-10	9.04E-09	1.50E-11	0.	0.	0.	1.01E-08	1.04E-08	1.03E-07	3.10E-08	1.64E-07
73	3.50	1.46E-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	2.87E-08	8.93E-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	6.21E-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	4.86E-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	8.66E-07
95	1.30	0.	4.40E-10	0.	0.	0.	0.	0.	0.	0.	2.27E-07	8.15E-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.	1.83E-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.	2.78E-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.	2.36E-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) 1000C. DENSITY (GM/CC) 1.293E-08 (1.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 P-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.	4.57E-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	2.38E-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.	2.17E-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	1.16E-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.	5.75E-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	1.96E-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.	6.88E-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	5.38E-17	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	2.96E-17	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	1.27E-17	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	5.49E-18	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	2.18E-18	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	5.18E-19	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	6.53E-20	0.	8.28E-18	1.15E-13	3.94E-13	0.	1.67E-10	1.38E-10	5.78E-09	5.97E-09	1.21E-08
51	5.70	4.78E-21	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 (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	2.12E-22	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	0.	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	0.	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	0.	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	0.	0.	0.	0.	1.06E-13	3.66E-13	0.	0.	1.49E-10	1.92E-10	6.28E-09	6.62E-09	1.32E-08
57	5.10	0.	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	2.5_E-15	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	5.7_E-15	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	1.01E-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	1.27E-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	1.36E-09	1.04E-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	7.08E-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	7.45E-11	6.05E-14	0.	0.	0.	1.62E-10	4.94E-10	5.82E-09	1.53E-09	8.08E-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	4.96E-15	0.	3.91E-13	2.63E-11	4.05E-14	0.	0.	0.	7.89E-11	6.91E-10	7.17E-09	2.42E-09	1.04E-08
75	3.30	3.84E-15	0.	4.24E-13	2.45E-10	2.99E-14	0.	0.	0.	7.90E-11	7.56E-10	7.99E-09	2.67E-09	1.16E-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	1.39E-08
78	3.00	2.42E-15	0.	1.04E-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	1.90E-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	1.00E-08
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	1.01E-08	2.21E-09	1.44E-08
85	2.30	0.	2.16E-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.	7.60E-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	3.62E-08
91	1.70	0.	1.96E-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	4.02E-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	7.06E-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.	1.62E-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.	1.02E-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	1.00E-07	2.13E-08	1.60E-07
100	0.80	0.	3.86E-13	0.	0.	0.	0.	1.22E-15	0.	0.	5.59E-08	9.96E-08	2.45E-08	1.80E-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.	7.04E-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 (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.	2.58E-14	0.	0.	0.	5.85E-13	5.33E-13	4.64E-10	1.30E-10	5.95E-10
2	10.60	0.	0.	2.22E-14	0.	0.	0.	5.85E-13	5.49E-13	4.67E-10	1.30E-10	5.98E-10
3	10.50	0.	0.	2.17E-14	0.	0.	0.	5.86E-13	5.65E-13	4.69E-10	1.30E-10	6.00E-10
4	10.40	0.	0.	1.95E-14	0.	0.	0.	5.87E-13	5.81E-13	4.71E-10	1.29E-10	6.02E-10
5	10.30	0.	0.	1.61E-14	0.	0.	0.	5.88E-13	5.98E-13	4.72E-10	1.29E-10	6.03E-10
6	10.20	0.	0.	1.60E-14	0.	0.	0.	5.88E-13	6.16E-13	4.73E-10	1.29E-10	6.04E-10
7	10.10	0.	0.	1.45E-14	0.	0.	0.	5.89E-13	6.35E-13	4.75E-10	1.29E-10	6.05E-10
8	10.00	0.	0.	1.18E-14	0.	0.	0.	5.90E-13	6.54E-13	4.76E-10	1.29E-10	6.06E-10
9	9.90	0.	0.	1.19E-14	0.	0.	0.	5.91E-13	6.74E-13	4.77E-10	1.29E-10	6.07E-10
10	9.80	0.	0.	1.06E-14	0.	0.	0.	5.92E-13	6.95E-13	4.78E-10	1.29E-10	6.08E-10
11	9.70	0.	0.	8.53E-15	0.	0.	0.	5.93E-13	7.17E-13	4.79E-10	1.29E-10	6.09E-10
12	9.60	0.	0.	9.15E-15	0.	0.	0.	5.94E-13	7.39E-13	4.81E-10	1.29E-10	6.11E-10
13	9.50	0.	1.33E-16	7.25E-15	0.	0.	0.	5.95E-13	7.63E-13	4.82E-10	1.28E-10	6.12E-10
14	9.40	0.	1.80E-16	6.48E-15	0.	0.	0.	5.98E-13	7.88E-13	1.35E-10	1.28E-10	2.64E-10
15	9.30	0.	2.26E-16	6.54E-15	0.	0.	0.	6.00E-13	8.14E-13	1.34E-10	1.28E-10	2.64E-10
16	9.20	0.	2.72E-16	4.92E-15	0.	0.	0.	6.02E-13	8.41E-13	1.34E-10	1.28E-10	2.64E-10
17	9.10	0.	3.24E-16	5.03E-15	0.	0.	0.	6.04E-13	8.69E-13	1.34E-10	1.28E-10	2.63E-10
18	9.00	0.	3.77E-16	4.29E-15	0.	0.	0.	6.06E-13	8.98E-13	1.33E-10	1.28E-10	2.63E-10
19	8.90	0.	4.30E-16	3.74E-15	0.	0.	0.	6.08E-13	9.29E-13	1.33E-10	1.28E-10	2.62E-10
20	8.80	0.	4.45E-16	3.58E-15	0.	0.	0.	6.11E-13	9.61E-13	1.33E-10	1.28E-10	2.62E-10
21	8.70	0.	4.28E-16	2.87E-15	0.	0.	0.	6.13E-13	9.95E-13	1.33E-10	1.28E-10	2.62E-10
22	8.60	0.	4.12E-16	2.90E-15	0.	0.	0.	6.15E-13	1.03E-12	1.32E-10	1.28E-10	2.61E-10
23	8.50	0.	4.02E-16	2.35E-15	0.	0.	0.	6.17E-13	1.07E-12	1.32E-10	1.27E-10	2.61E-10
24	8.40	0.	3.99E-16	2.27E-15	0.	0.	0.	6.20E-13	1.11E-12	1.32E-10	1.27E-10	2.61E-10
25	8.30	0.	3.95E-16	1.79E-15	0.	0.	0.	6.23E-13	1.15E-12	1.32E-10	1.28E-10	2.61E-10
26	8.20	0.	3.86E-16	1.76E-15	0.	0.	0.	6.27E-13	1.19E-12	1.31E-10	1.29E-10	2.62E-10
27	8.10	0.	3.75E-16	1.41E-15	0.	0.	0.	6.30E-13	1.23E-12	1.31E-10	1.30E-10	2.63E-10
28	8.00	0.	3.64E-16	1.38E-15	0.	0.	0.	6.33E-13	1.28E-12	1.31E-10	1.31E-10	2.64E-10
29	7.90	0.	3.54E-16	1.11E-15	0.	0.	0.	6.36E-13	1.33E-12	1.31E-10	1.32E-10	2.65E-10
30	7.80	0.	3.43E-16	1.11E-15	0.	0.	0.	6.40E-13	1.38E-12	1.31E-10	1.33E-10	2.66E-10
31	7.70	0.	3.30E-16	9.10E-16	0.	0.	0.	6.43E-13	1.44E-12	1.31E-10	1.34E-10	2.67E-10
32	7.60	0.	3.14E-16	8.24E-16	0.	6.59E-20	0.	6.46E-13	1.49E-12	1.30E-10	1.35E-10	2.68E-10
33	7.50	0.	2.99E-16	7.18E-16	0.	3.40E-19	0.	6.49E-13	1.56E-12	1.30E-10	1.36E-10	2.69E-10
34	7.40	0.	2.84E-16	6.14E-16	0.	1.74E-18	0.	6.53E-13	1.62E-12	1.30E-10	1.37E-10	2.70E-10
35	7.30	0.	2.71E-16	5.51E-16	0.	8.86E-18	0.	6.57E-13	1.69E-12	1.30E-10	1.38E-10	2.71E-10
36	7.20	0.	2.56E-16	4.70E-16	0.	2.38E-17	0.	6.60E-13	1.76E-12	1.30E-10	1.40E-10	2.72E-10
37	7.10	0.	2.40E-16	4.30E-16	0.	6.24E-17	0.	6.66E-13	1.83E-12	1.30E-10	1.41E-10	2.73E-10
38	7.00	2.07E-19	0.	3.72E-16	0.	1.71E-16	0.	6.71E-13	1.91E-12	1.30E-10	1.42E-10	2.74E-10
39	6.90	3.91E-19	0.	3.24E-16	0.	1.71E-16	0.	6.77E-13	2.00E-12	1.30E-10	1.43E-10	2.75E-10
40	6.80	3.25E-19	0.	2.93E-16	0.	3.64E-16	0.	6.82E-13	2.09E-12	1.30E-10	1.44E-10	2.77E-10
41	6.70	2.26E-19	0.	2.42E-16	0.	4.47E-16	0.	6.87E-13	2.18E-12	1.30E-10	1.45E-10	2.78E-10
42	6.60	1.34E-19	0.	2.04E-16	0.	2.66E-16	0.	6.93E-13	2.29E-12	1.30E-10	1.46E-10	2.80E-10
43	6.50	7.42E-20	0.	1.51E-16	0.	4.82E-16	0.	6.98E-13	2.39E-12	1.31E-10	1.48E-10	2.81E-10
44	6.40	4.02E-20	0.	9.40E-17	2.88E-18	5.62E-16	0.	7.04E-13	2.51E-12	1.31E-10	1.49E-10	2.83E-10
45	6.30	2.24E-20	0.	5.24E-17	1.26E-17	2.87E-16	0.	7.09E-13	2.63E-12	1.32E-10	1.50E-10	2.86E-10
46	6.20	9.49E-21	0.	2.62E-17	1.67E-17	4.41E-16	0.	7.14E-13	2.76E-12	1.32E-10	1.53E-10	2.89E-10
47	6.10	4.11E-21	0.	1.12E-17	4.58E-17	6.73E-16	0.	7.20E-13	2.90E-12	1.33E-10	1.56E-10	2.92E-10
48	6.00	1.63E-21	0.	2.67E-18	3.92E-17	2.54E-16	0.	7.25E-13	3.04E-12	1.35E-10	1.58E-10	2.96E-10
49	5.90	3.87E-22	0.	1.90E-19	5.55E-17	2.69E-16	0.	7.25E-13	3.20E-12	1.36E-10	1.61E-10	3.01E-10
50	5.80	4.88E-23	0.	4.67E-21	7.48E-17	2.56E-16	0.	7.14E-13	3.37E-12	1.37E-10	1.63E-10	3.05E-10
51	5.70	3.58E-24	0.	0.	8.14E-17	2.73E-16	0.	6.71E-13	3.55E-12	1.38E-10	1.66E-10	3.08E-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	5.60	1.58E-25	0.	0.	0.	6.18E-17	4.26E-16	0.	0.	6.24E-13	3.75E-12	1.40E-10	1.68E-10	3.13E-10
53	5.50	0.	0.	0.	0.	7.59E-17	4.08E-16	0.	0.	6.27E-13	3.95E-12	1.42E-10	1.71E-10	3.18E-10
54	5.40	0.	0.	0.	0.	6.46E-17	2.76E-16	0.	0.	6.31E-13	4.18E-12	1.44E-10	1.74E-10	3.23E-10
55	5.30	0.	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	0.	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	0.	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	1.89E-18	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	4.31E-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	7.53E-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	9.47E-18	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	6.15E-17	0.	0.	6.87E-13	8.31E-12	1.96E-10	2.13E-10	4.18E-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	9.60E-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	1.30E-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	4.06E-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	4.19E-11	1.72E-10
71	3.70	5.59E-18	0.	5.40E-16	6.46E-14	3.04E-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.	2.85E-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.	4.38E-16	1.23E-12	2.38E-17	0.	0.	0.	5.85E-13	1.55E-11	1.51E-10	5.93E-11	2.28E-10
74	3.40	3.71E-18	0.	2.20E-16	9.48E-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.	1.04E-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.	5.88E-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	6.58E-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	4.26E-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.	2.80E-17	0.	2.03E-14	2.81E-20	0.	0.	0.	3.41E-13	4.84E-11	2.40E-10	6.04E-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	4.00E-10	1.02E-10	5.75E-10
88	2.00	0.	6.05E-16	0.	0.	0.	0.	0.	0.	3.25E-13	8.40E-11	4.57E-10	1.17E-10	6.58E-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	7.48E-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.	2.38E-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.	1.08E-13	2.01E-10	5.58E-10	2.45E-10	1.00E-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.	3.10E-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.	4.04E-21	0.	0.	5.16E-10	1.71E-09	4.16E-10	2.64E-09
98	1.00	0.	5.76E-16	0.	0.	0.	0.	3.73E-20	0.	0.	6.89E-10	2.07E-09	5.05E-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.	2.18E-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-19	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.	2.58E 01	0.	0.	0.	6.74E-01	3.10E-04	5.00E 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	2.28E 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.	1.53E 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.	5.88E 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.	4.49E 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.	3.58E 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	3.70E 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.	1.00E 00	0.	5.11E-04	0.	7.48E-01	9.03E-04	2.16E-02	2.57E-02	1.80E 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.	7.98E-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.	2.62E-01	0.	7.73E-01	1.11E-03	2.17E-02	2.66E-02	1.64E 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.	4.26E-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	8.99E-05	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	5.00E-05	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	2.17E-05	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	9.51E-06	0.	1.93E-02	6.58E-02	9.93E-01	0.	8.30E-01	1.68E-03	2.25E-02	2.89E-02	1.96E 00
48	6.00	3.82E-06	0.	4.67E-03	5.76E-02	3.97E-01	0.	8.36E-01	1.77E-03	2.27E-02	2.93E-02	1.35E 00
49	5.90	9.13E-07	0.	3.33E-04	8.22E-02	4.12E-01	0.	8.36E-01	1.86E-03	2.29E-02	2.98E-02	1.39E 00
50	5.80	1.15E-07	0.	8.24E-06	1.11E-01	3.97E-01	0.	8.23E-01	1.96E-03	2.32E-02	3.02E-02	1.39E 00
51	5.70	8.46E-09	0.	0.	1.23E-01	4.30E-01	0.	7.73E-01	2.06E-03	2.34E-02	3.07E-02	1.38E 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	3.74E-10	0.	0.	0.	9.58E-02	6.47E-01	0.	0.	7.19E-01	2.18E-03	2.37E-02	3.11E-02	1.52E 00
53	5.50	0.	0.	0.	0.	1.17E-01	6.15E-01	0.	0.	7.23E-01	2.30E-03	2.41E-02	3.16E-02	1.51E 00
54	5.40	0.	0.	0.	0.	1.01E-01	4.34E-01	0.	0.	7.27E-01	2.43E-03	2.45E-02	3.21E-02	1.32E 00
55	5.30	0.	0.	0.	0.	1.04E-01	6.09E-01	0.	0.	7.31E-01	2.57E-03	2.50E-02	3.26E-02	1.50E 00
56	5.20	0.	0.	0.	0.	1.09E-01	3.80E-01	0.	0.	7.36E-01	2.72E-03	2.55E-02	3.34E-02	1.29E 00
57	5.10	0.	0.	0.	0.	1.07E-01	5.10E-01	0.	0.	7.42E-01	2.89E-03	2.62E-02	3.41E-02	1.42E 00
58	5.00	4.63E-03	0.	0.	0.	9.48E-02	4.50E-01	0.	0.	7.48E-01	3.06E-03	2.69E-02	3.48E-02	1.36E 00
59	4.90	1.07E-02	0.	0.	0.	1.03E-01	4.62E-01	0.	0.	7.55E-01	3.26E-03	2.77E-02	3.56E-02	1.40E 00
60	4.80	1.89E-02	0.	0.	0.	1.09E-01	4.25E-01	0.	0.	7.61E-01	3.46E-03	2.85E-02	3.63E-02	1.38E 00
61	4.70	2.41E-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.	2.13E-01	0.	8.26E-02	1.04E-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	8.02E-02	0.	0.	7.98E-01	5.19E-03	3.52E-02	4.19E-02	1.89E 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	6.56E-02	6.73E-03	0.	0.	8.01E-01	6.48E-03	3.28E-02	9.06E-03	1.46E 00
70	3.80	1.89E-02	0.	7.51E-01	5.38E-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	1.84E 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	8.46E-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.	2.56E-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	6.84E-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	2.66E-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.	9.10E-04	4.09E-03	6.05E-04	0.	0.	0.	3.93E-01	2.49E-02	7.17E-02	1.20E-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.	2.03E-01	0.	0.	0.	0.	0.	0.	3.90E-01	3.20E-02	5.81E-02	1.74E-02	7.00E-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	7.99E-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.	3.60E-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	1.22E-01	3.83E-02	2.01E 00
91	1.70	0.	1.73E 00	0.	0.	0.	0.	0.	0.	3.24E-01	8.00E-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.	1.48E 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	2.01E 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	3.12E-01	9.37E-02	1.77E 00
97	1.10	0.	9.80E-01	0.	0.	0.	0.	6.18E-06	0.	0.	3.01E-01	3.85E-01	1.18E-01	1.78E 00
98	1.00	0.	9.04E-01	0.	0.	0.	0.	6.28E-05	0.	0.	4.02E-01	4.64E-01	1.30E-01	1.90E 00
99	0.90	0.	7.37E-01	0.	0.	0.	0.	7.47E-05	0.	0.	5.56E-01	5.26E-01	1.53E-01	1.97E 00
100	0.80	0.	3.45E-01	0.	0.	0.	0.	1.38E-03	0.	0.	8.02E-01	6.04E-01	1.73E-01	1.93E 00
101	0.70	0.	8.81E-02	0.	0.	0.	0.	9.96E-04	0.	0.	1.20E 00	6.67E-01	1.95E-01	2.15E 00
102	0.60	0.	7.55E-03	0.	0.	0.	0.	3.84E-03	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 (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.	7.61E-01	0.	0.	0.	2.13E-02	2.56E-05	8.60E 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	2.68E-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	6.30E-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.	1.79E-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	8.40E-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.	2.58E-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	8.11E-06	0.	1.31E-02	0.	1.06E-02	0.	2.49E-02	1.00E-04	3.73E-03	2.89E-03	5.53E-02
41	6.70	5.71E-06	0.	1.10E-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	4.93E-02
43	6.50	1.89E-06	0.	7.05E-03	0.	1.38E-02	0.	2.55E-02	1.15E-04	3.76E-03	2.96E-03	5.31E-02
44	6.40	1.04E-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	5.77E-07	0.	2.56E-03	3.26E-04	8.32E-03	0.	2.59E-02	1.26E-04	3.80E-03	3.01E-03	4.40E-02
46	6.20	2.50E-07	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	1.10E-07	0.	5.71E-04	1.21E-03	1.83E-02	0.	2.63E-02	1.39E-04	3.86E-03	3.10E-03	5.35E-02
48	6.00	4.40E-08	0.	1.38E-04	1.06E-03	7.32E-03	0.	2.65E-02	1.46E-04	3.90E-03	3.15E-03	4.22E-02
49	5.90	1.05E-08	0.	9.83E-06	1.52E-03	7.61E-03	0.	2.65E-02	1.54E-04	3.94E-03	3.20E-03	4.29E-02
50	5.80	1.33E-09	0.	2.43E-07	2.06E-03	7.33E-03	0.	2.61E-02	1.62E-04	3.99E-03	3.25E-03	4.28E-02
51	5.70	9.74E-11	0.	0.	2.27E-03	7.94E-03	0.	2.45E-02	1.71E-04	4.03E-03	3.29E-03	4.22E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. 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	4.34E-12	0.	0.	0.	1.77E-03	1.19E-02	0.	0.	2.28E-02	1.80E-04	4.07E-03	3.34E-03	4.41E-02
53	5.50	0.	0.	0.	0.	2.16E-03	1.13E-02	0.	0.	2.29E-02	1.90E-04	4.14E-03	3.39E-03	4.41E-02
54	5.40	0.	0.	0.	0.	1.87E-03	8.00E-03	0.	0.	2.30E-02	2.01E-04	4.22E-03	3.44E-03	4.07E-02
55	5.30	0.	0.	0.	0.	1.92E-03	1.12E-02	0.	0.	2.31E-02	2.13E-04	4.30E-03	3.51E-03	4.43E-02
56	5.20	0.	0.	0.	0.	2.01E-03	7.01E-03	0.	0.	2.33E-02	2.25E-04	4.38E-03	3.58E-03	4.05E-02
57	5.10	0.	0.	0.	0.	1.97E-03	9.41E-03	0.	0.	2.35E-02	2.39E-04	4.49E-03	3.66E-03	4.33E-02
58	5.00	5.34E-05	0.	0.	0.	1.75E-03	8.30E-03	0.	0.	2.37E-02	2.54E-04	4.62E-03	3.74E-03	4.24E-02
59	4.90	1.23E-04	0.	0.	0.	1.90E-03	8.52E-03	0.	0.	2.39E-02	2.70E-04	4.76E-03	3.82E-03	4.33E-02
60	4.80	2.18E-04	0.	0.	0.	2.00E-03	7.85E-03	0.	0.	2.41E-02	2.87E-04	4.89E-03	3.90E-03	4.32E-02
61	4.70	2.76E-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.	1.52E-03	1.92E-03	0.	0.	2.51E-02	4.00E-04	5.83E-03	4.40E-03	4.58E-02
66	4.20	3.09E-04	0.	2.40E-02	0.	1.58E-03	1.48E-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	2.51E-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	2.16E-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.	1.28E-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	1.99E-03	5.57E-02
77	3.10	7.46E-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	6.36E-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.	2.00E-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.	9.50E-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	2.90E-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	2.86E-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	1.10E-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.	3.36E-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	9.03E-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	1.04E-01	1.90E-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	2.09E-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	3.10E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. 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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.80E-03	0.	0.	0.	6.72E-04	2.50E-06	9.75E-01	2.70E-04	9.86E-01
2	10.60	0.	0.	8.53E-03	0.	0.	0.	6.73E-04	2.57E-06	1.43E-03	2.70E-04	1.09E-02
3	10.50	0.	0.	8.39E-03	0.	0.	0.	6.74E-04	2.65E-06	1.43E-03	2.70E-04	1.08E-02
4	10.40	0.	0.	7.63E-03	0.	0.	0.	6.74E-04	2.73E-06	1.44E-03	2.69E-04	1.00E-02
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.	5.83E-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.	4.40E-03	0.	0.	0.	6.80E-04	3.26E-06	1.46E-03	2.67E-04	6.81E-03
11	9.70	0.	0.	3.59E-03	0.	0.	0.	6.82E-04	3.36E-06	1.47E-03	2.67E-04	6.01E-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	5.25E-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	4.25E-04	2.64E-04	3.62E-03
18	9.00	0.	0.	1.93E-03	0.	0.	0.	6.97E-04	4.21E-06	4.24E-04	2.64E-04	3.32E-03
19	8.90	0.	0.	1.71E-03	0.	0.	0.	6.99E-04	4.36E-06	4.23E-04	2.64E-04	3.10E-03
20	8.80	0.	0.	1.64E-03	0.	0.	0.	7.02E-04	4.51E-06	4.23E-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	2.00E-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	9.38E-06	4.22E-04	2.89E-04	1.74E-03
40	6.80	8.26E-08	0.	1.69E-04	0.	1.21E-04	0.	7.84E-04	9.80E-06	4.23E-04	2.91E-04	1.80E-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	1.80E-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	1.74E-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	1.05E-08	0.	5.78E-05	8.39E-07	1.75E-04	0.	8.09E-04	1.18E-05	4.29E-04	3.00E-04	1.78E-03
45	6.30	5.84E-09	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	2.53E-09	0.	1.68E-05	5.02E-06	1.43E-04	0.	8.21E-04	1.29E-05	4.34E-04	3.08E-04	1.74E-03
47	6.10	1.11E-09	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	4.44E-10	0.	1.78E-06	1.21E-05	8.36E-05	0.	8.34E-04	1.43E-05	4.42E-04	3.17E-04	1.70E-03
49	5.90	1.07E-10	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	1.35E-11	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	9.88E-13	0.	0.	2.59E-05	9.06E-05	0.	7.71E-04	1.67E-05	4.57E-04	3.31E-04	1.69E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. 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	4.3?E-14	0.	0.	0.	2.02E-05	1.36E-04	0.	0.	7.17E-04	1.76E-05	4.62E-04	3.36E-04	1.69E-03
53	5.50	0.	0.	0.	0.	2.47E-05	1.29E-04	0.	0.	7.21E-04	1.86E-05	4.69E-04	3.41E-04	1.70E-03
54	5.40	0.	0.	0.	0.	2.14E-05	9.13E-05	0.	0.	7.25E-04	1.96E-05	4.78E-04	3.47E-04	1.68E-03
55	5.30	0.	0.	0.	0.	2.19E-05	1.28E-04	0.	0.	7.29E-04	2.08E-05	4.87E-04	3.53E-04	1.74E-03
56	5.20	0.	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	0.	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	5.4?E-07	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	1.24E-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	2.21E-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	2.82E-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.	8.90E-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	3.81E-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	1.46E-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	1.50E-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	6.90E-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.	4.30E-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.	5.62E-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.	2.85E-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.	3.46E-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	7.58E-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.	4.32E-04	0.	0.	0.	0.	0.	0.	0.	1.87E-03	6.08E-03	1.01E-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	1.02E-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	1.30E-02	2.10E-03	2.48E-02
102	0.60	0.	2.87E-06	0.	0.	0.	0.	8.08E-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) 1100. 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.	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.	8.04E-05	0.	0.	0.	2.02E-05	2.46E-07	1.39E-04	2.63E-05	2.66E-04
3	10.50	0.	0.	7.91E-05	0.	0.	0.	2.03E-05	2.53E-07	1.39E-04	2.62E-05	2.65E-04
4	10.40	0.	0.	7.20E-05	0.	0.	0.	2.03E-05	2.61E-07	1.40E-04	2.62E-05	2.59E-04
5	10.30	0.	0.	6.00E-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.	4.55E-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.	4.15E-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.	2.65E-05	0.	0.	0.	2.07E-05	3.53E-07	1.43E-04	2.58E-05	2.17E-04
15	9.30	0.	0.	2.68E-05	0.	0.	0.	2.07E-05	3.65E-07	1.44E-04	2.58E-05	2.18E-04
16	9.20	0.	0.	2.06E-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.	1.55E-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.	1.28E-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	9.86E-05
25	8.30	0.	0.	8.20E-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.	6.50E-06	0.	0.	0.	2.19E-05	5.75E-07	4.07E-05	2.61E-05	9.58E-05
29	7.90	0.	0.	5.30E-06	0.	0.	0.	2.20E-05	5.97E-07	4.07E-05	2.62E-05	9.49E-05
30	7.80	0.	0.	5.35E-06	0.	0.	0.	2.21E-05	6.20E-07	4.08E-05	2.64E-05	9.53E-05
31	7.70	0.	0.	4.45E-06	0.	0.	0.	2.22E-05	6.45E-07	4.08E-05	2.66E-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-05	9.47E-05
33	7.50	0.	0.	3.60E-06	0.	1.02E-09	0.	2.25E-05	6.98E-07	4.08E-05	2.70E-05	9.46E-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	9.46E-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	9.46E-05
37	7.10	0.	0.	2.25E-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	9.26E-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.	1.59E-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.	8.48E-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	9.93E-11	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	5.53E-11	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	2.41E-11	0.	1.59E-07	4.74E-08	1.35E-06	0.	2.47E-05	1.24E-06	4.21E-05	2.99E-05	9.96E-05
47	6.10	1.05E-11	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	4.27E-12	0.	1.67E-08	1.15E-07	7.89E-07	0.	2.51E-05	1.37E-06	4.30E-05	3.08E-05	1.01E-04
49	5.90	1.01E-12	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	1.27E-13	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	9.34E-15	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	4.15E-16	0.	0.	0.	1.91E-07	1.29E-06	0.	0.	2.16E-05	1.68E-06	4.49E-05	3.27E-05	1.02E-04
53	5.50	0.	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	0.	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	0.	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	0.	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	0.	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	5.11E-09	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	1.18E-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	2.09E-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	2.67E-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	3.44E-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.	8.39E-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	3.66E-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	4.18E-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	7.16E-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	1.75E-08	0.	3.30E-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	1.28E-04
74	3.40	1.21E-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.	1.56E-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.	7.01E-07	4.24E-06	6.71E-08	0.	0.	0.	1.17E-05	1.00E-05	8.08E-05	2.02E-05	1.28E-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	3.65E-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.	5.30E-08	6.65E-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	1.20E-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	9.07E-05	1.53E-05	1.40E-04
85	2.30	0.	7.26E-07	0.	0.	0.	0.	0.	0.	1.17E-05	2.47E-05	1.10E-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	1.30E-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	1.51E-04	2.59E-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	5.20E-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	4.85E-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	9.05E-05	4.00E-04	6.83E-05	5.68E-04
94	1.40	0.	5.49E-06	0.	0.	0.	0.	0.	0.	0.	1.11E-04	4.55E-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.	4.07E-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	7.28E-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.	1.49E-10	0.	0.	4.30E-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) 1100C. 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.	6.91E-07	0.	0.	0.	5.41E-07	2.08E-08	1.19E-05	2.39E-06	1.56E-05
2	10.60	0.	0.	6.01E-07	0.	0.	0.	5.42E-07	2.14E-08	1.20E-05	2.39E-06	1.55E-05
3	10.50	0.	0.	5.91E-07	0.	0.	0.	5.43E-07	2.20E-08	1.20E-05	2.38E-06	1.56E-05
4	10.40	0.	0.	5.38E-07	0.	0.	0.	5.44E-07	2.27E-08	1.21E-05	2.38E-06	1.56E-05
5	10.30	0.	0.	4.49E-07	0.	0.	0.	5.44E-07	2.33E-08	1.21E-05	2.38E-06	1.55E-05
6	10.20	0.	0.	4.50E-07	0.	0.	0.	5.45E-07	2.40E-08	1.22E-05	2.37E-06	1.55E-05
7	10.10	0.	0.	4.11E-07	0.	0.	0.	5.46E-07	2.48E-08	1.22E-05	2.37E-06	1.55E-05
8	10.00	0.	0.	3.40E-07	0.	0.	0.	5.46E-07	2.55E-08	1.22E-05	2.36E-06	1.55E-05
9	9.90	0.	0.	3.45E-07	0.	0.	0.	5.47E-07	2.63E-08	1.22E-05	2.36E-06	1.55E-05
10	9.80	0.	0.	3.10E-07	0.	0.	0.	5.48E-07	2.71E-08	1.23E-05	2.36E-06	1.55E-05
11	9.70	0.	0.	2.53E-07	0.	0.	0.	5.49E-07	2.80E-08	1.23E-05	2.35E-06	1.55E-05
12	9.60	0.	0.	2.72E-07	0.	0.	0.	5.50E-07	2.88E-08	1.23E-05	2.35E-06	1.55E-05
13	9.50	0.	0.	2.19E-07	0.	0.	0.	5.51E-07	2.98E-08	1.24E-05	2.35E-06	1.55E-05
14	9.40	0.	0.	1.98E-07	0.	0.	0.	5.53E-07	3.07E-08	1.24E-05	2.34E-06	1.55E-05
15	9.30	0.	0.	2.01E-07	0.	0.	0.	5.55E-07	3.17E-08	1.24E-05	2.34E-06	1.56E-05
16	9.20	0.	0.	1.54E-07	0.	0.	0.	5.57E-07	3.28E-08	3.57E-06	2.34E-06	6.66E-06
17	9.10	0.	0.	1.58E-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.	7.89E-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	4.32E-08	3.54E-06	2.31E-06	6.54E-06
25	8.30	0.	0.	6.14E-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.	4.95E-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.	5.86E-07	5.00E-08	3.52E-06	2.37E-06	6.57E-06
29	7.90	0.	0.	3.96E-08	0.	0.	0.	5.89E-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.	1.68E-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.	1.30E-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.	6.66E-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	8.20E-13	0.	4.07E-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	4.56E-13	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	1.98E-13	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	8.67E-14	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	3.40E-14	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	8.32E-15	0.	8.92E-12	1.28E-09	6.44E-09	0.	6.72E-07	1.25E-07	3.76E-06	2.84E-06	7.40E-06
50	5.80	1.05E-15	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	7.71E-17	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-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	3.43E-18	0.	0.	0.	1.50E-09	1.01E-08	0.	0.	5.78E-07	1.46E-07	3.88E-06	2.97E-06	7.59E-06
53	5.50	0.	0.	0.	0.	1.83E-09	9.60E-09	0.	0.	5.81E-07	1.54E-07	3.94E-06	3.01E-06	7.70E-06
54	5.40	0.	0.	0.	0.	1.58E-09	6.78E-09	0.	0.	5.84E-07	1.63E-07	4.02E-06	3.06E-06	7.83E-06
55	5.30	0.	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	0.	0.	0.	0.	1.70E-09	5.94E-09	0.	0.	5.92E-07	1.83E-07	4.17E-06	3.18E-06	8.14E-06
57	5.10	0.	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	4.24E-11	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	9.77E-11	0.	0.	0.	1.61E-09	7.22E-09	0.	0.	6.07E-07	2.19E-07	4.53E-06	3.39E-06	8.76E-06
60	4.80	1.72E-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	2.20E-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	2.81E-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.	5.69E-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	1.49E-10	0.	2.46E-08	4.57E-08	8.58E-10	0.	0.	0.	6.32E-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	6.69E-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	6.89E-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	5.90E-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	7.60E-06	1.98E-06	1.12E-05
79	2.90	4.02E-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.	8.62E-10	9.26E-08	2.09E-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	1.04E-10	0.	0.	0.	3.16E-07	1.32E-06	9.63E-06	2.48E-06	1.39E-05
82	2.60	1.04E-11	0.	2.01E-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	9.45E-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.	1.22E-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.	1.58E-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	2.00E-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.	1.00E-07	7.87E-06	3.46E-05	5.88E-06	4.84E-05
94	1.40	0.	4.10E-08	0.	0.	0.	0.	0.	0.	0.	9.70E-06	3.94E-05	7.04E-06	5.61E-05
95	1.30	0.	3.08E-08	0.	0.	0.	0.	0.	0.	0.	1.22E-05	3.80E-05	6.67E-06	5.68E-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	6.30E-05	1.02E-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	0.90	0.	1.97E-08	0.	0.	0.	0.	1.17E-12	0.	0.	3.74E-05	8.60E-05	1.46E-05	1.38E-04
100	0.80	0.	9.24E-09	0.	0.	0.	0.	2.16E-11	0.	0.	5.39E-05	9.55E-05	1.64E-05	1.67E-04
101	0.70	0.	2.36E-09	0.	0.	0.	0.	1.56E-11	0.	0.	8.08E-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.	1.00E-08	1.35E-09	7.61E-07	1.73E-07	9.49E-07
2	10.60	0.	0.	2.45E-09	0.	0.	0.	1.00E-08	1.39E-09	7.65E-07	1.73E-07	9.52E-07
3	10.50	0.	0.	2.41E-09	0.	0.	0.	1.00E-08	1.43E-09	7.69E-07	1.73E-07	9.56E-07
4	10.40	0.	0.	2.19E-09	0.	0.	0.	1.00E-08	1.48E-09	7.72E-07	1.72E-07	9.58E-07
5	10.30	0.	0.	1.83E-09	0.	0.	0.	1.01E-08	1.52E-09	7.74E-07	1.72E-07	9.59E-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	9.66E-07
10	9.80	0.	0.	1.26E-09	0.	0.	0.	1.01E-08	1.77E-09	7.84E-07	1.71E-07	9.68E-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.	8.08E-10	0.	0.	0.	1.02E-08	2.00E-09	7.92E-07	1.70E-07	9.75E-07
15	9.30	0.	0.	8.18E-10	0.	0.	0.	1.03E-08	2.07E-09	2.29E-07	1.69E-07	4.11E-07
16	9.20	0.	0.	6.28E-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.	4.90E-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.	3.85E-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.	3.13E-10	0.	0.	0.	1.06E-08	2.81E-09	2.26E-07	1.67E-07	4.07E-07
25	8.30	0.	0.	2.50E-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.	2.02E-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	2.11E-14	0.	6.02E-11	0.	1.89E-11	0.	1.15E-08	4.87E-09	2.26E-07	1.84E-07	4.26E-07
39	6.90	4.09E-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	1.45E-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	7.85E-15	0.	2.61E-11	0.	5.38E-11	0.	1.19E-08	6.08E-09	2.29E-07	1.90E-07	4.37E-07
44	6.40	4.29E-15	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	2.39E-15	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	1.04E-15	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	4.54E-16	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	1.82E-16	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	4.36E-17	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	5.5cE-18	0.	9.00E-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	4.04E-19	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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.85E-20	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	0.	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	0.	0.	0.	0.	7.32E-12	3.13E-11	0.	0.	1.08E-08	1.06E-08	2.56E-07	2.22E-07	5.00E-07
55	5.30	0.	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	0.	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	0.	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	2.21E-13	0.	0.	0.	6.85E-12	3.25E-11	0.	0.	1.11E-08	1.34E-08	2.81E-07	2.41E-07	5.46E-07
59	4.90	5.09E-13	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	9.03E-13	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	1.15E-12	0.	0.	0.	7.54E-12	2.66E-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	2.66E-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	6.50E-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	6.70E-07
66	4.20	1.28E-12	0.	8.89E-11	0.	6.20E-12	5.79E-12	0.	0.	1.19E-08	2.27E-08	3.68E-07	5.79E-08	4.60E-07
67	4.10	1.16E-12	0.	3.01E-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	1.16E-12	0.	0.	1.19E-08	2.63E-08	3.28E-07	6.09E-08	4.27E-07
69	3.90	8.40E-13	0.	5.59E-11	4.43E-10	4.73E-12	4.86E-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	5.02E-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.	1.00E-10	7.29E-10	3.96E-12	0.	0.	0.	1.17E-08	3.33E-08	2.40E-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.	1.00E-08	3.93E-08	2.96E-07	9.03E-08	4.48E-07
74	3.40	5.18E-13	0.	4.45E-11	1.10E-09	3.50E-12	0.	0.	0.	5.77E-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.	5.78E-09	4.70E-08	3.70E-07	1.11E-07	5.40E-07
76	3.20	3.36E-13	0.	2.80E-11	1.29E-08	2.70E-12	0.	0.	0.	5.79E-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.	5.80E-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.	5.82E-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.	5.83E-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.	5.84E-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	4.80E-13	0.	0.	0.	5.84E-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.	5.84E-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.	5.84E-09	1.09E-07	4.03E-07	8.17E-08	6.00E-07
84	2.40	0.	5.47E-12	0.	2.15E-10	4.46E-15	0.	0.	0.	5.84E-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.	5.79E-09	1.40E-07	6.07E-07	1.21E-07	8.73E-07
86	2.20	0.	4.98E-11	0.	0.	0.	0.	0.	0.	5.77E-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.	5.74E-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.	5.56E-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.	5.35E-09	2.50E-07	1.08E-06	2.21E-07	1.56E-06
90	1.80	0.	1.57E-10	0.	0.	0.	0.	0.	0.	5.11E-09	2.94E-07	1.28E-06	2.65E-07	1.84E-06
91	1.70	0.	1.89E-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.	4.08E-09	4.21E-07	1.76E-06	3.50E-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	2.98E-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.	1.26E-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.	1.07E-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.	8.04E-11	0.	0.	0.	0.	5.39E-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.	8.40E-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-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 (ICNS)	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	4.46E-11	2.37E-08	6.39E-09	3.02E-08
3	10.50	0.	0.	2.31E-12	0.	0.	0.	6.64E-11	4.59E-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.	1.76E-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.	1.22E-12	0.	0.	0.	6.71E-11	5.65E-11	2.43E-08	6.32E-09	3.07E-08
11	9.70	0.	0.	9.90E-13	0.	0.	0.	6.72E-11	5.83E-11	2.43E-08	6.31E-09	3.08E-08
12	9.60	0.	0.	1.06E-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	7.08E-09	6.27E-09	1.35E-08
16	9.20	0.	0.	6.02E-13	0.	0.	0.	6.82E-11	6.83E-11	7.07E-09	6.26E-09	1.35E-08
17	9.10	0.	0.	6.16E-13	0.	0.	0.	6.84E-11	7.06E-11	7.05E-09	6.25E-09	1.34E-08
18	9.00	0.	0.	5.33E-13	0.	0.	0.	6.87E-11	7.30E-11	7.04E-09	6.25E-09	1.34E-08
19	8.90	0.	0.	4.70E-13	0.	0.	0.	6.89E-11	7.55E-11	7.03E-09	6.24E-09	1.34E-08
20	8.80	0.	0.	4.52E-13	0.	0.	0.	6.92E-11	7.81E-11	7.02E-09	6.23E-09	1.34E-08
21	8.70	0.	0.	3.69E-13	0.	0.	0.	6.94E-11	8.09E-11	7.01E-09	6.22E-09	1.34E-08
22	8.60	0.	0.	3.75E-13	0.	0.	0.	6.96E-11	8.38E-11	7.00E-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.	3.00E-13	0.	0.	0.	7.03E-11	8.99E-11	6.99E-09	6.20E-09	1.33E-08
25	8.30	0.	0.	2.40E-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	2.84E-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	5.43E-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	1.86E-10	7.05E-09	6.99E-09	1.43E-08
43	6.50	1.07E-17	0.	2.50E-14	0.	6.17E-14	0.	7.91E-11	1.94E-10	7.09E-09	7.04E-09	1.44E-08
44	6.40	5.88E-18	0.	1.59E-14	3.30E-16	6.86E-14	0.	7.97E-11	2.04E-10	7.13E-09	7.10E-09	1.45E-08
45	6.30	3.27E-18	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	1.42E-18	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	6.24E-19	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	2.51E-19	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	5.97E-20	0.	3.49E-17	6.80E-15	3.41E-14	0.	8.22E-11	2.60E-10	7.43E-09	7.62E-09	1.54E-08
50	5.80	7.54E-21	0.	8.63E-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	5.53E-22	0.	0.	1.02E-14	3.56E-14	0.	7.60E-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 (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	2.48E-23	0.	0.	0.	7.93E-15	5.36E-14	0.	0.	7.07E-11	3.05E-10	7.67E-09	7.96E-09	1.60E-08
53	5.50	0.	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	0.	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	0.	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	0.	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	0.	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	3.03E-16	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	6.97E-16	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	1.24E-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	1.58E-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.	2.45E-15	0.	7.61E-15	2.05E-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	9.89E-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	7.89E-09	2.32E-09	1.12E-08
70	3.80	1.24E-15	0.	7.86E-14	1.47E-11	5.75E-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	3.00E-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	7.10E-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.	4.55E-14	3.01E-11	3.02E-15	0.	0.	0.	3.83E-11	1.50E-09	1.15E-08	4.11E-09	1.71E-08
76	3.20	4.60E-16	0.	2.68E-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.	1.18E-14	2.97E-11	2.50E-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.	1.55E-15	1.44E-11	5.50E-16	0.	0.	0.	3.86E-11	2.76E-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	3.02E-09	1.90E-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	4.48E-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	5.38E-09	3.27E-08
87	2.10	0.	6.18E-14	0.	0.	0.	0.	0.	0.	3.80E-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.	3.68E-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.	3.54E-11	7.99E-09	3.34E-08	8.19E-09	4.96E-08
90	1.80	0.	1.50E-13	0.	0.	0.	0.	0.	0.	3.38E-11	9.41E-09	3.95E-08	9.79E-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	1.18E-08	7.00E-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	8.09E-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.	1.60E-13	0.	0.	0.	0.	0.	0.	0.	2.02E-08	5.11E-08	1.25E-08	8.38E-08
95	1.30	0.	1.20E-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.	9.23E-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.	7.90E-16	0.	0.	0.	0.	3.18E-16	0.	0.	2.69E-07	1.91E-07	4.11E-08	5.00E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 11000. 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.	5.10E-16	0.	0.	0.	1.16E-13	6.06E-13	3.24E-10	9.53E-11	4.20E-10
2	10.60	0.	0.	4.44E-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	3.30E-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	3.36E-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.	8.56E-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.	5.67E-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	9.30E-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.	1.56E-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	1.00E-10	1.99E-10
38	7.00	6.38E-21	0.	1.09E-17	0.	4.43E-18	0.	1.34E-13	2.18E-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	0.	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	1.31E-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	7.25E-22	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	3.14E-22	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	1.38E-22	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	5.54E-23	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	1.32E-23	0.	6.59E-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	1.67E-24	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	1.27E-25	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 (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	5.44E-27	0.	0.	0.	1.62E-18	1.10E-17	0.	0.	1.24E-13	4.26E-12	1.06E-10	1.18E-10	2.28E-10
53	5.50	0.	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	0.	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	0.	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	0.	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	0.	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	6.70E-20	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	1.54E-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	2.74E-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	3.49E-19	0.	0.	0.	1.77E-18	6.25E-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	5.77E-18	0.	0.	1.34E-13	7.71E-12	1.35E-10	1.45E-10	2.88E-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	4.26E-19	0.	4.21E-18	0.	1.40E-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	3.52E-19	0.	5.45E-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	1.50E-10
69	3.90	2.55E-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	1.18E-18	0.	0.	0.	1.38E-13	1.37E-11	9.80E-11	3.57E-11	1.48E-10
71	3.70	2.30E-19	0.	1.82E-17	6.25E-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.	1.52E-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	8.01E-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.	6.37E-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	3.59E-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.	1.80E-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	3.05E-10	8.00E-11	4.57E-10
87	2.10	0.	1.17E-17	0.	0.	0.	0.	0.	0.	6.68E-14	8.25E-11	3.56E-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	4.06E-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	4.60E-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	6.46E-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.	3.03E-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	2.66E-10	1.63E-09
96	1.20	0.	2.25E-17	0.	0.	0.	0.	0.	0.	0.	4.52E-10	1.36E-09	3.20E-10	2.13E-09
97	1.10	0.	1.94E-17	0.	0.	0.	0.	1.05E-22	0.	0.	5.89E-10	1.84E-09	4.08E-10	2.64E-09
98	1.00	0.	1.79E-17	0.	0.	0.	0.	1.06E-21	0.	0.	7.86E-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.	1.57E-09	2.04E-09	4.71E-10	4.08E-09
101	0.70	0.	1.74E-18	0.	0.	0.	0.	1.69E-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	NO 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	8.55E 01	6.38E-02	1.06E 02
2	10.60	0.	0.	1.69E 01	0.	0.	0.	9.82E-01	1.06E-03	2.42E-01	6.37E-02	1.82E 01
3	10.50	0.	0.	1.67E 01	0.	0.	0.	9.84E-01	1.09E-03	2.44E-01	6.36E-02	1.80E 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	1.42E 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	1.33E 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	9.58E 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	6.22E-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.	5.00E 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.	3.18E 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	6.60E-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	9.70E-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	5.37E-05	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	3.02E-05	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	1.32E-05	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	5.84E-06	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	2.37E-06	0.	5.56E-03	3.79E-02	2.75E-01	0.	1.22E 00	5.88E-03	8.04E-02	7.22E-02	1.69E 00
49	5.90	5.64E-07	0.	3.97E-04	5.43E-02	2.81E-01	0.	1.22E 00	6.19E-03	8.13E-02	7.32E-02	1.71E 00
50	5.80	7.21E-08	0.	9.86E-06	7.42E-02	2.74E-01	0.	1.20E 00	6.51E-03	8.23E-02	7.43E-02	1.71E 00
51	5.70	5.29E-09	0.	0.	8.30E-02	3.00E-01	0.	1.13E 00	6.86E-03	8.32E-02	7.53E-02	1.67E 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	2.3(E-1(	0.	0.	0.	6.59E-02	4.39E-01	0.	0.	1.05E 00	7.24E-03	8.43E-02	7.63E-02	1.72E 00
53	5.50	0.	0.	0.	0.	8.05E-02	4.14E-01	0.	0.	1.05E 00	7.64E-03	8.57E-02	7.74E-02	1.72E 00
54	5.40	0.	0.	0.	0.	7.05E-02	3.02E-01	0.	0.	1.06E 00	8.08E-03	8.75E-02	7.86E-02	1.60E 00
55	5.30	0.	0.	0.	0.	7.24E-02	4.13E-01	0.	0.	1.06E 00	8.55E-03	8.93E-02	7.99E-02	1.73E 00
56	5.20	0.	0.	0.	0.	7.62E-02	2.69E-01	0.	0.	1.07E 00	9.06E-03	9.11E-02	8.16E-02	1.60E 00
57	5.10	0.	0.	0.	0.	7.50E-02	3.57E-01	0.	0.	1.08E 00	9.60E-03	9.36E-02	8.33E-02	1.70E 00
58	5.00	2.97E-03	0.	0.	0.	6.71E-02	3.19E-01	0.	0.	1.09E 00	1.02E-02	9.63E-02	8.51E-02	1.67E 00
59	4.90	6.93E-03	0.	0.	0.	7.31E-02	3.32E-01	0.	0.	1.10E 00	1.08E-02	9.92E-02	8.68E-02	1.71E 00
60	4.80	1.24E-02	0.	0.	0.	7.75E-02	3.07E-01	0.	0.	1.11E 00	1.15E-02	1.02E-01	8.86E-02	1.71E 00
61	4.70	1.61E-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.	2.80E-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	1.30E-01	0.	0.	1.14E 00	1.50E-02	1.18E-01	9.77E-02	1.69E 00
65	4.30	2.0(E-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	1.81E 00
66	4.20	1.87E-02	0.	9.52E-01	0.	6.38E-02	5.82E-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	9.88E-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	9.2(E-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	1.80E-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	7.90E-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	5.30E-02	1.19E 00
86	2.20	0.	5.38E-01	0.	0.	0.	0.	0.	0.	5.65E-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	2.35E 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.	4.00E-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	3.90E-01	8.67E-01	2.00E-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.	7.70E-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.	1.00E 00	1.65E 00	3.73E-01	4.10E 00
98	1.00	0.	9.84E-01	0.	0.	0.	0.	4.63E-05	0.	0.	1.35E 00	2.00E 00	4.16E-01	4.74E 00
99	0.90	0.	8.05E-01	0.	0.	0.	0.	5.42E-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.	2.68E 00	2.61E 00	5.64E-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	6.18E-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 (GM/CC) 1.293E-03 (1.0E 00 NORMAL)

	PHOTO. 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.	3.89E-01	0.	0.	0.	3.21E-02	9.56E-05	1.22E 01	6.73E-03	1.26E 01
2	10.60	0.	0.	3.42E-01	0.	0.	0.	3.21E-02	9.83E-05	3.45E-02	6.71E-03	4.16E-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	3.85E-01
5	10.30	0.	0.	2.62E-01	0.	0.	0.	3.23E-02	1.07E-04	3.49E-02	6.67E-03	3.36E-01
6	10.20	0.	0.	2.64E-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	6.65E-03	3.17E-01
8	10.00	0.	0.	2.04E-01	0.	0.	0.	3.24E-02	1.17E-04	3.51E-02	6.64E-03	2.78E-01
9	9.90	0.	0.	2.07E-01	0.	0.	0.	3.24E-02	1.21E-04	3.52E-02	6.62E-03	2.82E-01
10	9.80	0.	0.	1.88E-01	0.	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	1.28E-04	3.54E-02	6.59E-03	2.30E-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.	1.25E-01	0.	0.	0.	3.28E-02	1.41E-04	3.57E-02	6.55E-03	2.00E-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.	9.90E-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	8.16E-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	2.8 E-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	7.09E-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	6.80E-02
43	6.50	1.08E-06	0.	5.28E-03	0.	7.66E-03	0.	3.83E-02	4.29E-04	1.10E-02	7.18E-03	6.99E-02
44	6.40	5.96E-07	0.	3.42E-03	3.73E-05	8.21E-03	0.	3.86E-02	4.50E-04	1.11E-02	7.23E-03	6.90E-02
45	6.30	3.35E-07	0.	1.99E-03	1.68E-04	4.73E-03	0.	3.89E-02	4.72E-04	1.11E-02	7.30E-03	6.47E-02
46	6.20	1.46E-07	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	6.49E-08	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	2.63E-08	0.	1.13E-04	5.68E-04	4.12E-03	0.	3.98E-02	5.46E-04	1.14E-02	7.61E-03	6.42E-02
49	5.90	6.32E-09	0.	8.03E-06	8.14E-04	4.22E-03	0.	3.98E-02	5.75E-04	1.16E-02	7.72E-03	6.47E-02
50	5.80	8.01E-10	0.	2.00E-07	1.11E-03	4.11E-03	0.	3.92E-02	6.05E-04	1.17E-02	7.83E-03	6.46E-02
51	5.70	5.87E-11	0.	0.	1.24E-03	4.50E-03	0.	3.68E-02	6.38E-04	1.18E-02	7.93E-03	6.30E-02

ABSORPTIO' COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. 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	PHOTO-DET	FREE-FREE (ICNS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	2.62E-12	0.	0.	0.	9.88E-04	6.58E-03	0.	0.	3.43E-02	6.73E-04	1.20E-02	8.04E-03	6.25E-02
93	5.50	0.	0.	0.	0.	1.21E-03	6.20E-03	0.	0.	3.44E-02	7.10E-04	1.22E-02	8.16E-03	6.29E-02
94	5.40	0.	0.	0.	0.	1.06E-03	4.53E-03	0.	0.	3.46E-02	7.50E-04	1.24E-02	8.28E-03	6.17E-02
95	5.30	0.	0.	0.	0.	1.09E-03	6.20E-03	0.	0.	3.48E-02	7.94E-04	1.27E-02	8.42E-03	6.40E-02
96	5.20	0.	0.	0.	0.	1.14E-03	4.03E-03	0.	0.	3.51E-02	8.41E-04	1.30E-02	8.60E-03	6.26E-02
97	5.10	0.	0.	0.	0.	1.12E-03	5.36E-03	0.	0.	3.54E-02	8.92E-04	1.33E-02	8.78E-03	6.48E-02
98	5.00	3.3 E-05	0.	0.	0.	1.01E-03	4.78E-03	0.	0.	3.57E-02	9.47E-04	1.37E-02	8.96E-03	6.51E-02
99	4.90	7.69E-05	0.	0.	0.	1.10E-03	4.98E-03	0.	0.	3.59E-02	1.01E-03	1.41E-02	9.15E-03	6.64E-02
100	4.80	1.38E-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
101	4.70	1.78E-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
102	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
103	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
104	4.40	2.46E-04	0.	1.90E-03	0.	9.93E-04	1.95E-03	0.	0.	3.74E-02	1.39E-03	1.68E-02	1.03E-02	7.10E-02
105	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
106	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	9.00E-02
107	4.10	1.9 E-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	7.80E-02
108	4.00	1.7 E-04	0.	2.74E-02	0.	8.53E-04	1.77E-04	0.	0.	3.83E-02	1.86E-03	1.96E-02	2.66E-03	9.10E-02
109	3.90	1.4 E-04	0.	1.22E-02	9.22E-04	7.53E-04	7.25E-05	0.	0.	3.82E-02	2.00E-03	1.75E-02	2.74E-03	7.46E-02
110	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
111	3.70	1.26E-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	8.10E-02
112	3.60	1.13E-04	0.	1.29E-02	9.30E-03	6.99E-04	0.	0.	0.	3.51E-02	2.55E-03	1.52E-02	3.52E-03	7.94E-02
113	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
114	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
115	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
116	3.20	5.93E-05	0.	6.56E-03	2.41E-02	4.54E-04	0.	0.	0.	1.86E-02	3.64E-03	2.13E-02	5.26E-03	7.99E-02
117	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	6.08E-02
118	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
119	2.90	3.85E-05	0.	1.79E-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
120	2.80	3.9 E-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
121	2.70	2.38E-05	0.	3.91E-04	5.34E-03	8.80E-05	0.	0.	0.	1.87E-02	6.10E-03	3.20E-02	7.74E-03	7.04E-02
122	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
123	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	3.85E-03	6.99E-02
124	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	4.66E-03	7.92E-02
125	2.30	0.	4.68E-03	0.	0.	0.	0.	0.	0.	1.86E-02	9.90E-03	3.34E-02	5.59E-03	7.22E-02
126	2.20	0.	1.09E-02	0.	0.	0.	0.	0.	0.	1.85E-02	1.13E-02	3.95E-02	6.73E-03	8.70E-02
127	2.10	0.	1.34E-02	0.	0.	0.	0.	0.	0.	1.84E-02	1.30E-02	4.60E-02	7.88E-03	9.88E-02
128	2.00	0.	2.41E-02	0.	0.	0.	0.	0.	0.	1.78E-02	1.51E-02	5.25E-02	9.03E-03	1.19E-01
129	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
130	1.80	0.	3.16E-02	0.	0.	0.	0.	0.	0.	1.64E-02	2.08E-02	7.06E-02	1.23E-02	1.52E-01
131	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
132	1.60	0.	2.70E-02	0.	0.	0.	0.	0.	0.	1.31E-02	2.98E-02	9.76E-02	1.75E-02	1.85E-01
133	1.50	0.	3.25E-02	0.	0.	0.	0.	0.	0.	5.94E-03	3.63E-02	1.23E-01	2.11E-02	2.19E-01
134	1.40	0.	3.32E-02	0.	0.	0.	0.	0.	0.	0.	4.48E-02	1.51E-01	2.48E-02	2.54E-01
135	1.30	0.	2.51E-02	0.	0.	0.	0.	0.	0.	0.	5.61E-02	1.91E-01	3.25E-02	3.05E-01
136	1.20	0.	2.46E-02	0.	0.	0.	0.	0.	0.	0.	7.16E-02	1.91E-01	3.13E-02	3.18E-01
137	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
138	1.00	0.	1.99E-02	0.	0.	0.	0.	6.95E-07	0.	0.	1.25E-01	2.84E-01	4.39E-02	4.73E-01
139	0.90	0.	1.63E-02	0.	0.	0.	0.	8.13E-07	0.	0.	1.73E-01	3.23E-01	5.17E-02	5.64E-01
140	0.80	0.	7.65E-03	0.	0.	0.	0.	1.57E-05	0.	0.	2.49E-01	3.71E-01	5.94E-02	6.87E-01
141	0.70	0.	1.92E-03	0.	0.	0.	0.	1.18E-05	0.	0.	3.73E-01	4.09E-01	6.51E-02	8.48E-01
142	0.60	0.	1.95E-04	0.	0.	0.	0.	4.40E-05	0.	0.	5.97E-01	4.56E-01	7.28E-02	1.13E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. 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 IONS	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.19E-03	0.	0.	0.	9.93E-04	9.28E-06	1.26E 00	6.67E-04	1.27E 00
2	10.60	0.	0.	3.68E-03	0.	0.	0.	9.95E-04	9.55E-06	3.58E-03	6.66E-04	8.93E-03
3	10.50	0.	0.	3.64E-03	0.	0.	0.	9.96E-04	9.82E-06	3.60E-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.	10.00E-04	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	6.58E-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	7.56E-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.	1.80E-03	0.	0.	0.	1.01E-03	1.29E-05	3.68E-03	6.53E-04	7.16E-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.	1.09E-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.	8.51E-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	1.86E-08	0.	7.46E-05	0.	4.66E-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	5.87E-09	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	3.30E-09	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	1.44E-09	0.	1.12E-05	2.35E-06	7.20E-05	0.	1.21E-03	4.80E-05	1.16E-03	7.34E-04	3.24E-03
47	6.10	6.36E-10	0.	4.96E-06	6.54E-06	1.01E-04	0.	1.22E-03	5.04E-05	1.17E-03	7.45E-04	3.30E-03
48	6.00	2.57E-10	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	6.22E-11	0.	8.65E-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	7.87E-12	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	5.76E-13	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.)

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 12000. 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	2.58E-14	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	0.	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	0.	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	0.	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	0.	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	0.	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	3.25E-07	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	7.57E-07	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	1.36E-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	1.76E-06	0.	0.	0.	1.16E-05	4.16E-05	0.	0.	1.13E-03	1.11E-04	1.55E-03	9.50E-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	3.18E-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	2.82E-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.	2.00E-04	8.14E-04	5.36E-06	0.	0.	0.	9.93E-04	2.70E-04	1.61E-03	3.88E-04	4.28E-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	1.80E-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	2.00E-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	4.66E-07	0.	3.17E-05	3.81E-04	3.87E-06	0.	0.	0.	5.78E-04	4.30E-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	9.05E-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	5.79E-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	6.63E-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.	4.16E-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.	1.84E-04	3.52E-03	1.28E-02	2.09E-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	2.28E-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	3.01E-02
97	1.10	0.	2.33E-04	0.	0.	0.	0.	6.48E-10	0.	0.	9.04E-03	2.44E-02	3.90E-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.	1.68E-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	6.30E-05	1.16E-01
2	10.60	0.	0.	3.10E-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.	2.39E-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.	1.13E-05	0.	0.	0.	2.90E-05	1.26E-06	3.40E-04	6.14E-05	4.43E-04
15	9.30	0.	0.	1.15E-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	1.02E-04	6.11E-05	2.03E-04
18	9.00	0.	0.	8.03E-06	0.	0.	0.	2.95E-05	1.43E-06	1.02E-04	6.09E-05	2.01E-04
19	8.90	0.	0.	7.16E-06	0.	0.	0.	2.96E-05	1.48E-06	1.01E-04	6.08E-05	2.01E-04
20	8.80	0.	0.	6.93E-06	0.	0.	0.	2.97E-05	1.53E-06	1.01E-04	6.07E-05	2.00E-04
21	8.70	0.	0.	5.73E-06	0.	0.	0.	2.98E-05	1.59E-06	1.01E-04	6.06E-05	1.99E-04
22	8.60	0.	0.	5.83E-06	0.	0.	0.	2.99E-05	1.64E-06	1.01E-04	6.05E-05	1.99E-04
23	8.50	0.	0.	4.87E-06	0.	0.	0.	3.00E-05	1.70E-06	1.01E-04	6.04E-05	1.98E-04
24	8.40	0.	0.	4.76E-06	0.	0.	0.	3.01E-05	1.76E-06	1.01E-04	6.03E-05	1.98E-04
25	8.30	0.	0.	3.86E-06	0.	0.	0.	3.03E-05	1.83E-06	1.01E-04	6.03E-05	1.97E-04
26	8.20	0.	0.	3.84E-06	0.	0.	0.	3.05E-05	1.89E-06	1.01E-04	6.07E-05	1.98E-04
27	8.10	0.	0.	3.17E-06	0.	0.	0.	3.06E-05	1.97E-06	1.01E-04	6.11E-05	1.98E-04
28	8.00	0.	0.	3.13E-06	0.	0.	0.	3.08E-05	2.04E-06	1.01E-04	6.14E-05	1.99E-04
29	7.90	0.	0.	2.58E-06	0.	0.	0.	3.09E-05	2.12E-06	1.01E-04	6.18E-05	1.99E-04
30	7.80	0.	0.	2.62E-06	0.	0.	0.	3.11E-05	2.20E-06	1.01E-04	6.22E-05	2.00E-04
31	7.70	0.	0.	2.21E-06	0.	0.	0.	3.13E-05	2.29E-06	1.02E-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	1.02E-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	1.02E-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	1.02E-04	6.37E-05	2.02E-04
35	7.30	0.	0.	1.45E-06	0.	1.30E-08	0.	3.19E-05	2.69E-06	1.02E-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	1.03E-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	1.03E-04	6.48E-05	2.04E-04
38	7.00	2.46E-10	0.	1.05E-06	0.	2.39E-07	0.	3.26E-05	3.05E-06	1.03E-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	1.03E-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	1.03E-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	1.03E-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	1.04E-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	1.05E-04	6.73E-05	2.11E-04
44	6.40	5.24E-11	0.	3.10E-07	3.33E-09	7.33E-07	0.	3.42E-05	4.00E-06	1.05E-04	6.77E-05	2.12E-04
45	6.30	2.94E-11	0.	1.81E-07	1.50E-08	4.22E-07	0.	3.45E-05	4.19E-06	1.06E-04	6.84E-05	2.14E-04
46	6.20	1.29E-11	0.	9.41E-08	2.04E-08	6.24E-07	0.	3.47E-05	4.40E-06	1.07E-04	6.94E-05	2.16E-04
47	6.10	5.73E-12	0.	4.17E-08	5.67E-08	8.78E-07	0.	3.50E-05	4.62E-06	1.08E-04	7.04E-05	2.19E-04
48	6.00	2.31E-12	0.	1.02E-08	5.07E-08	3.68E-07	0.	3.53E-05	4.86E-06	1.09E-04	7.13E-05	2.21E-04
49	5.90	5.55E-13	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	7.03E-14	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	5.16E-15	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	2.30E-16	0.	0.	0.	8.81E-08	5.87E-07	0.	0.	3.03E-05	5.98E-06	1.14E-04	7.53E-05	2.27E-04
53	5.50	0.	0.	0.	0.	1.08E-07	5.54E-07	0.	0.	3.05E-05	6.31E-06	1.16E-04	7.64E-05	2.30E-04
54	5.40	0.	0.	0.	0.	9.43E-08	4.04E-07	0.	0.	3.06E-05	6.67E-06	1.18E-04	7.76E-05	2.34E-04
55	5.30	0.	0.	0.	0.	9.69E-08	5.53E-07	0.	0.	3.08E-05	7.06E-06	1.21E-04	7.89E-05	2.38E-04
56	5.20	0.	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	0.	0.	0.	0.	1.00E-07	4.78E-07	0.	0.	3.13E-05	7.93E-06	1.27E-04	8.23E-05	2.49E-04
58	5.00	2.90E-09	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	6.76E-09	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	1.21E-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	1.57E-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	2.16E-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-06	5.74E-08	0.	0.	0.	3.31E-05	2.09E-05	1.34E-04	2.96E-05	2.21E-04
72	3.60	9.96E-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	2.87E-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	3.31E-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	2.40E-04	5.79E-05	3.65E-04
79	2.90	3.36E-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	3.18E-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.	2.18E-06	0.	0.	0.	0.	0.	0.	1.58E-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	9.90E-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	9.29E-04	1.64E-04	1.37E-03
93	1.50	0.	2.95E-06	0.	0.	0.	0.	0.	0.	5.26E-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.	5.62E-12	0.	0.	0.	8.28E-04	2.24E-03	3.69E-04	3.44E-03
98	1.00	0.	1.81E-06	0.	0.	0.	6.20E-11	0.	0.	0.	1.11E-03	2.71E-03	4.11E-04	4.23E-03
99	0.90	0.	1.48E-06	0.	0.	0.	7.25E-11	0.	0.	0.	1.54E-03	3.07E-03	4.84E-04	5.10E-03
100	0.80	0.	6.93E-07	0.	0.	0.	1.40E-09	0.	0.	0.	2.21E-03	3.53E-03	5.57E-04	6.30E-03
101	0.70	0.	1.74E-07	0.	0.	0.	1.05E-09	0.	0.	0.	3.31E-03	3.89E-03	6.10E-04	7.81E-03
102	0.60	0.	1.76E-08	0.	0.	0.	3.93E-09	0.	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 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.	1.98E-07	0.	0.	0.	6.46E-07	6.45E-08	2.45E-05	5.20E-06	3.06E-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.	6.48E-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	2.53E-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.	5.03E-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.	2.15E-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.	8.89E-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.	6.63E-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.	1.48E-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	3.56E-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	2.00E-13	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	8.75E-14	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	3.88E-14	0.	2.34E-10	3.50E-10	5.43E-09	0.	7.95E-07	3.51E-07	8.06E-06	5.80E-06	1.50E-05
48	6.00	1.57E-14	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	3.76E-15	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	4.78E-16	0.	1.02E-13	6.13E-10	2.27E-09	0.	7.89E-07	4.08E-07	8.35E-06	6.05E-06	1.56E-05
51	5.70	3.51E-17	0.	0.	6.86E-10	2.48E-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	1.57E-10	0.	0.	0.	5.44E-10	3.63E-09	0.	0.	6.89E-07	4.54E-07	8.55E-06	6.21E-06	1.59E-05
53	5.50	0.	0.	0.	0.	6.65E-10	3.42E-09	0.	0.	6.93E-07	4.79E-07	8.70E-06	6.30E-06	1.62E-05
54	5.40	0.	0.	0.	0.	5.83E-10	2.50E-09	0.	0.	6.97E-07	5.07E-07	8.88E-06	6.40E-06	1.65E-05
55	5.30	0.	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	0.	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	0.	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	1.97E-11	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	4.60E-11	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	8.25E-11	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	1.07E-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	2.05E-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	1.50E-09	0.	0.	7.47E-07	8.79E-07	1.15E-05	7.77E-06	2.09E-05
64	4.40	1.46E-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.	5.28E-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	9.68E-06	2.19E-06	1.42E-05
71	3.70	7.65E-11	0.	1.10E-08	3.00E-08	3.55E-10	0.	0.	0.	7.53E-07	1.59E-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.	7.06E-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	4.58E-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-08	2.29E-10	0.	0.	0.	3.75E-07	2.71E-06	1.66E-05	4.42E-06	2.42E-05
78	3.00	2.84E-11	0.	1.50E-09	2.16E-07	2.07E-10	0.	0.	0.	3.75E-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.	1.00E-10	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	6.09E-06	4.81E-05
88	2.00	0.	1.22E-08	0.	0.	0.	0.	0.	0.	3.59E-07	1.02E-05	3.75E-05	6.98E-06	5.50E-05
89	1.90	0.	1.97E-08	0.	0.	0.	0.	0.	0.	3.45E-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	8.80E-05	1.55E-05	1.28E-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.	1.28E-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	2.05E-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	2.30E-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	2.60E-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 (IONS)	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.	2.55E-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.	9.64E-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.	7.70E-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.	7.75E-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.	2.19E-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	1.00E-08	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	8.89E-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	9.89E-16	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	5.55E-16	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	2.43E-16	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	1.08E-16	0.	4.48E-13	8.08E-13	1.25E-11	0.	8.90E-09	1.58E-08	3.53E-07	3.06E-07	6.83E-07
48	6.00	4.36E-17	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	1.05E-17	0.	7.82E-15	1.03E-12	5.36E-12	0.	8.97E-09	1.75E-08	3.61E-07	3.14E-07	7.02E-07
50	5.80	1.33E-18	0.	1.94E-16	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	9.74E-20	0.	0.	1.58E-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	4.35E-21	0.	0.	0.	1.25E-12	8.36E-12	0.	0.	7.72E-09	2.05E-08	3.74E-07	3.27E-07	7.30E-07
53	5.50	0.	0.	0.	0.	1.53E-12	7.88E-12	0.	0.	7.76E-09	2.16E-08	3.81E-07	3.32E-07	7.42E-07
54	5.40	0.	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	0.	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	0.	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	0.	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	5.47E-14	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	1.28E-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	2.29E-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	2.96E-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	1.05E-07	7.56E-07
68	4.00	2.82E-13	0.	2.66E-1	0.	1.03E-12	2.25E-13	0.	0.	8.63E-09	5.66E-08	5.21E-07	1.08E-07	6.95E-07
69	3.90	2.32E-13	0.	1.19E-11	1.62E-10	9.57E-13	9.21E-14	0.	0.	8.60E-09	6.11E-08	4.08E-07	1.12E-07	5.89E-07
70	3.80	2.5E-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	1.28E-07	6.03E-07
72	3.60	1.87E-13	0.	1.26E-11	1.64E-09	8.88E-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.	1.00E-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.	4.18E-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	10.00E-07	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.	4.56E-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.	3.08E-11	0.	0.	0.	0.	0.	0.	3.69E-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.	3.48E-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	8.17E-07	5.50E-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.	1.03E-15	0.	0.	5.29E-06	1.01E-05	2.10E-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 (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.	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	5.58E-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.	6.51E-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.	7.18E-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.	5.58E-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.	1.86E-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	1.36E-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	4.29E-19	0.	1.09E-15	1.79E-17	3.93E-15	0.	2.47E-11	2.55E-10	6.25E-09	6.13E-09	1.27E-08
45	6.30	2.41E-19	0.	6.37E-16	8.03E-17	2.26E-15	0.	2.49E-11	2.67E-10	6.29E-09	6.18E-09	1.28E-08
46	6.20	1.05E-19	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	4.66E-20	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	1.89E-20	0.	3.60E-17	2.72E-16	1.97E-15	0.	2.55E-11	3.10E-10	6.46E-09	6.45E-09	1.33E-08
49	5.90	4.54E-21	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	5.75E-22	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	4.22E-23	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 (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	1.8·E-24	0.	0.	0.	4.73E-16	3.15E-15	0.	0.	2.19E-11	3.81E-10	6.78E-09	6.82E-09	1.40E-08
53	5.50	0.	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	0.	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	0.	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	0.	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	0.	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	2.37E-17	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	5.53E-17	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	9.93E-17	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	1.28E-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	1.7·E-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.	2.20E-15	0.	4.34E-16	1.11E-16	0.	0.	2.44E-11	9.78E-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	1.0·E-16	0.	3.91E-15	3.90E-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	8.1·E-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.	3.46E-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.	2.10E-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.	1.60E-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	1.80E-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	2.8·E-17	0.	2.71E-16	1.33E-12	8.31E-17	0.	0.	0.	1.20E-11	3.10E-09	1.67E-08	6.08E-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	7.5·E-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	1.56E-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	1.89E-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	2.23E-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	6.68E-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	1.00E-08	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.	9.88E-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	8.60E-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	2.40E-08	1.70E-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-19	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	4.07E-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 (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.	1.52E-17	0.	0.	0.	2.47E-14	6.04E-13	2.15E-10	6.50E-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	6.58E-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	6.98E-13	2.19E-10	6.44E-11	2.84E-10
7	10.10	0.	0.	9.50E-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.	7.35E-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	6.55E-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	5.06E-22	0.	4.00E-19	0.	1.82E-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	3.06E-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	5.57E-23	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	3.13E-23	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	1.37E-23	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	6.06E-24	0.	1.80E-20	3.84E-20	5.94E-19	0.	3.04E-14	3.28E-12	7.07E-11	7.25E-11	1.47E-10
48	6.00	2.49E-24	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	5.97E-25	0.	3.14E-22	4.92E-20	2.55E-19	0.	3.06E-14	3.63E-12	7.24E-11	7.46E-11	1.51E-10
50	5.80	7.47E-26	0.	7.80E-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	5.49E-27	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 (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	2.45E-28	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	0.	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	0.	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	0.	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	0.	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	0.	0.	0.	0.	6.79E-20	3.24E-19	0.	0.	2.72E-14	5.63E-12	8.31E-11	8.49E-11	1.74E-10
58	5.00	3.08E-21	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	7.18E-21	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	1.29E-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	1.67E-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	1.65E-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	9.88E-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.	7.53E-19	0.	5.78E-20	5.27E-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.	2.70E-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.	2.95E-14	1.17E-11	7.87E-11	2.57E-11	1.16E-10
69	3.90	1.36E-20	0.	4.79E-19	4.53E-16	4.55E-20	4.38E-21	0.	0.	2.94E-14	1.27E-11	8.18E-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	4.57E-15	4.22E-20	0.	0.	0.	2.70E-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.	1.96E-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	2.66E-10
80	2.80	3.64E-21	0.	3.31E-20	1.54E-15	1.05E-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.	1.53E-20	2.62E-15	5.31E-21	0.	0.	0.	1.44E-14	3.85E-11	2.00E-10	2.92E-11	2.68E-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	3.18E-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	5.40E-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	3.28E-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	5.58E-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	6.00E-10	1.57E-10	1.04E-09
95	1.30	0.	9.81E-19	0.	0.	0.	0.	0.	0.	0.	3.55E-10	8.60E-10	2.25E-10	1.44E-09
96	1.20	0.	9.60E-19	0.	0.	0.	0.	0.	0.	0.	4.52E-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	4.03E-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.	7.60E-21	0.	0.	0.	0.	2.66E-21	0.	0.	3.77E-09	2.28E-09	5.24E-10	6.57E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. 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.	1.38E 00	3.05E-03	1.26E 02	1.42E-01	1.40E 02
2	10.60	0.	0.	1.16E 01	0.	0.	0.	1.38E 00	3.13E-03	6.27E-01	1.42E-01	1.37E 01
3	10.50	0.	0.	1.15E 01	0.	0.	0.	1.38E 00	3.22E-03	6.31E-01	1.41E-01	1.37E 01
4	10.40	0.	0.	1.06E 01	0.	0.	0.	1.38E 00	3.32E-03	6.33E-01	1.41E-01	1.28E 01
5	10.30	0.	0.	9.04E 00	0.	0.	0.	1.38E 00	3.42E-03	6.34E-01	1.41E-01	1.12E 01
6	10.20	0.	0.	9.17E 00	0.	0.	0.	1.38E 00	3.52E-03	6.36E-01	1.40E-01	1.13E 01
7	10.10	0.	0.	8.48E 00	0.	0.	0.	1.39E 00	3.63E-03	6.37E-01	1.40E-01	1.06E 01
8	10.00	0.	0.	7.19E 00	0.	0.	0.	1.39E 00	3.74E-03	6.39E-01	1.40E-01	9.36E 00
9	9.90	0.	0.	7.33E 00	0.	0.	0.	1.39E 00	3.85E-03	6.40E-01	1.39E-01	9.50E 00
10	9.80	0.	0.	6.71E 00	0.	0.	0.	1.39E 00	3.97E-03	6.42E-01	1.39E-01	8.89E 00
11	9.70	0.	0.	5.61E 00	0.	0.	0.	1.40E 00	4.10E-03	6.44E-01	1.39E-01	7.79E 00
12	9.60	0.	0.	6.04E 00	0.	0.	0.	1.40E 00	4.23E-03	6.45E-01	1.38E-01	8.22E 00
13	9.50	0.	0.	4.99E 00	0.	0.	0.	1.40E 00	4.36E-03	6.47E-01	1.38E-01	7.18E 00
14	9.40	0.	0.	4.59E 00	0.	0.	0.	1.41E 00	4.50E-03	6.49E-01	1.37E-01	6.79E 00
15	9.30	0.	0.	4.67E 00	0.	0.	0.	1.41E 00	4.65E-03	6.51E-01	1.37E-01	6.88E 00
16	9.20	0.	0.	3.71E 00	0.	0.	0.	1.42E 00	4.80E-03	6.53E-01	1.37E-01	5.92E 00
17	9.10	0.	0.	3.79E 00	0.	0.	0.	1.42E 00	4.96E-03	2.02E-01	1.36E-01	5.56E 00
18	9.00	0.	0.	3.35E 00	0.	0.	0.	1.43E 00	5.13E-03	2.02E-01	1.36E-01	5.12E 00
19	8.90	0.	0.	3.02E 00	0.	0.	0.	1.43E 00	5.31E-03	2.02E-01	1.36E-01	4.79E 00
20	8.80	0.	0.	2.93E 00	0.	0.	0.	1.44E 00	5.49E-03	2.01E-01	1.35E-01	4.71E 00
21	8.70	0.	0.	2.45E 00	0.	0.	0.	1.44E 00	5.68E-03	2.01E-01	1.35E-01	4.23E 00
22	8.60	0.	0.	2.50E 00	0.	0.	0.	1.45E 00	5.88E-03	2.01E-01	1.35E-01	4.29E 00
23	8.50	0.	0.	2.11E 00	0.	0.	0.	1.45E 00	6.09E-03	2.01E-01	1.35E-01	3.91E 00
24	8.40	0.	0.	2.07E 00	0.	0.	0.	1.46E 00	6.32E-03	2.01E-01	1.34E-01	3.87E 00
25	8.30	0.	0.	1.70E 00	0.	0.	0.	1.47E 00	6.55E-03	2.02E-01	1.34E-01	3.51E 00
26	8.20	0.	0.	1.70E 00	0.	0.	0.	1.47E 00	6.79E-03	2.02E-01	1.35E-01	3.52E 00
27	8.10	0.	0.	1.42E 00	0.	0.	0.	1.48E 00	7.04E-03	2.02E-01	1.36E-01	3.24E 00
28	8.00	0.	0.	1.41E 00	0.	0.	0.	1.49E 00	7.31E-03	2.02E-01	1.36E-01	3.24E 00
29	7.90	0.	0.	1.17E 00	0.	0.	0.	1.50E 00	7.59E-03	2.03E-01	1.37E-01	3.02E 00
30	7.80	0.	0.	1.20E 00	0.	0.	0.	1.50E 00	7.89E-03	2.03E-01	1.38E-01	3.05E 00
31	7.70	0.	0.	1.02E 00	0.	0.	0.	1.51E 00	8.20E-03	2.04E-01	1.39E-01	2.88E 00
32	7.60	0.	0.	9.46E-01	0.	5.42E-05	0.	1.52E 00	8.53E-03	2.04E-01	1.39E-01	2.82E 00
33	7.50	0.	0.	8.52E-01	0.	2.26E-04	0.	1.53E 00	8.88E-03	2.05E-01	1.40E-01	2.73E 00
34	7.40	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	7.30	0.	0.	6.91E-01	0.	6.64E-03	0.	1.54E 00	9.63E-03	2.06E-01	1.41E-01	2.60E 00
36	7.20	0.	0.	6.08E-01	0.	1.77E-02	0.	1.55E 00	1.00E-02	2.06E-01	1.42E-01	2.54E 00
37	7.10	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	7.00	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	6.90	2.96E-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	6.80	2.52E-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	6.70	1.80E-04	0.	3.64E-01	0.	2.98E-01	0.	1.62E 00	1.25E-02	2.09E-01	1.46E-01	2.[illegible]E 00
42	6.60	1.00E-04	0.	3.17E-01	0.	2.09E-01	0.	1.63E 00	1.31E-02	2.11E-01	1.47E-01	[illegible]3E 00
43	6.50	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	6.40	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	6.30	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	6.20	8.51E-06	0.	5.04E-02	9.65E-03	3.14E-01	0.	1.68E 00	1.58E-02	2.17E-01	1.52E-01	2.44E 00
47	6.10	3.8[illegible]E-06	0.	2.27E-02	2.70E-02	4.28E-01	0.	1.69E 00	1.66E-02	2.19E-01	1.54E-01	2.56E 00
48	6.00	1.5[illegible]E-06	0.	5.60E-03	2.45E-02	1.86E-01	0.	1.71E 00	1.74E-02	2.22E-01	1.56E-01	2.32E 00
49	5.90	3.7[illegible]E-07	0.	4.00E-04	3.53E-02	1.88E-01	0.	1.71E 00	1.83E-02	2.24E-01	1.58E-01	2.33E 00
50	5.80	4.7[illegible]E-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	5.70	3.5[illegible]E-09	0.	0.	5.4[illegible]E-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
52	5.60	1.56E-10	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
53	5.50	0.	0.	0.	0.	5.41E-02	2.74E-01	0.	0.	1.48E 00	2.26E-02	2.37E-01	1.66E-01	2.23E 00
54	5.40	0.	0.	0.	0.	4.79E-02	2.06E-01	0.	0.	1.48E 00	2.39E-02	2.43E-01	1.68E-01	2.17E 00
55	5.30	0.	0.	0.	0.	4.92E-02	2.76E-01	0.	0.	1.49E 00	2.53E-02	2.48E-01	1.71E-01	2.26E 00
56	5.20	0.	0.	0.	0.	5.21E-02	1.86E-01	0.	0.	1.50E 00	2.68E-02	2.53E-01	1.75E-01	2.20E 00
57	5.10	0.	0.	0.	0.	5.14E-02	2.45E-01	0.	0.	1.52E 00	2.84E-02	2.60E-01	1.78E-01	2.28E 00
58	5.00	2.01E-03	0.	0.	0.	4.62E-02	2.21E-01	0.	0.	1.53E 00	3.02E-02	2.68E-01	1.82E-01	2.28E 00
59	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	8.58E-03	0.	0.	0.	5.39E-02	2.16E-01	0.	0.	1.55E 00	3.42E-02	2.85E-01	1.89E-01	2.34E 00
61	4.70	1.12E-02	0.	0.	0.	5.27E-02	1.92E-01	0.	0.	1.57E 00	3.64E-02	2.94E-01	1.94E-01	2.35E 00
62	4.60	1.50E-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.	2.84E-02	0.	4.76E-02	1.30E-01	0.	0.	1.59E 00	4.15E-02	3.18E-01	2.04E-01	2.38E 00
64	4.40	1.60E-02	0.	9.25E-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	1.47E-02	0.	2.66E-01	0.	4.39E-02	5.53E-02	0.	0.	1.62E 00	4.76E-02	3.46E-01	2.14E-01	2.60E 00
66	4.20	1.35E-02	0.	9.45E-01	0.	4.59E-02	4.10E-02	0.	0.	1.63E 00	5.11E-02	3.60E-01	2.19E-01	3.31E 00
67	4.10	1.24E-02	0.	3.55E-01	0.	4.38E-02	1.10E-02	0.	0.	1.64E 00	5.49E-02	3.75E-01	2.23E-01	2.71E 00
68	4.00	1.12E-02	0.	1.35E 00	0.	4.15E-02	8.39E-03	0.	0.	1.64E 00	5.92E-02	3.89E-01	6.19E-02	3.56E 00
69	3.90	9.31E-03	0.	6.07E-01	1.80E-02	3.70E-02	3.38E-03	0.	0.	1.64E 00	6.39E-02	3.56E-01	6.38E-02	2.80E 00
70	3.80	1.01E-02	0.	9.28E-01	9.57E-02	3.95E-02	0.	0.	0.	1.63E 00	6.91E-02	3.65E-01	6.61E-02	3.20E 00
71	3.70	8.66E-03	0.	1.06E 00	3.04E-02	3.22E-02	0.	0.	0.	1.60E 00	7.49E-02	2.88E-01	7.32E-02	3.17E 00
72	3.60	7.67E-03	0.	6.58E-01	1.80E-01	3.49E-02	0.	0.	0.	1.50E 00	8.14E-02	3.12E-01	8.14E-02	2.86E 00
73	3.50	7.00E-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	3.40	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	1.00E-01	1.96E 00
75	3.30	4.91E-03	0.	5.55E-01	2.13E-01	2.27E-02	0.	0.	0.	7.95E-01	1.06E-01	3.99E-01	1.10E-01	2.21E 00
76	3.20	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	3.10	3.90E-03	0.	2.63E-01	7.34E-02	2.16E-02	0.	0.	0.	7.98E-01	1.28E-01	4.79E-01	1.31E-01	1.90E 00
78	3.00	3.40E-03	0.	1.56E-01	2.08E-01	1.98E-02	0.	0.	0.	8.00E-01	1.41E-01	5.20E-01	1.42E-01	1.99E 00
79	2.90	2.77E-03	0.	9.52E-02	1.23E-01	1.44E-02	0.	0.	0.	8.01E-01	1.57E-01	5.62E-01	1.53E-01	1.91E 00
80	2.80	2.83E-03	0.	4.55E-02	6.22E-02	9.44E-03	0.	0.	0.	8.02E-01	1.74E-01	6.10E-01	1.65E-01	1.87E 00
81	2.70	1.75E-03	0.	2.10E-02	1.00E-01	4.88E-03	0.	0.	0.	8.02E-01	1.95E-01	6.60E-01	1.78E-01	1.96E 00
82	2.60	7.82E-04	0.	1.05E-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	2.50	5.37E-05	0.	1.22E-03	8.51E-03	4.72E-04	0.	0.	0.	8.02E-01	2.46E-01	8.10E-01	9.43E-02	1.96E 00
84	2.40	0.	6.21E-02	0.	7.95E-03	4.91E-05	0.	0.	0.	8.02E-01	2.78E-01	9.41E-01	1.14E-01	2.21E 00
85	2.30	0.	2.25E-01	0.	0.	0.	0.	0.	0.	7.96E-01	3.16E-01	7.19E-01	1.36E-01	2.19E 00
86	2.20	0.	5.37E-01	0.	0.	0.	0.	0.	0.	7.93E-01	3.62E-01	8.50E-01	1.64E-01	2.71E 00
87	2.10	0.	6.38E-01	0.	0.	0.	0.	0.	0.	7.90E-01	4.17E-01	9.89E-01	1.92E-01	3.03E 00
88	2.00	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	1.90	0.	1.78E 00	0.	0.	0.	0.	0.	0.	7.35E-01	5.65E-01	1.28E 00	2.51E-01	4.61E 00
90	1.80	0.	1.46E 00	0.	0.	0.	0.	0.	0.	7.03E-01	6.66E-01	1.52E 00	3.02E-01	4.66E 00
91	1.70	0.	1.74E 00	0.	0.	0.	0.	0.	0.	6.62E-01	7.92E-01	1.82E 00	3.65E-01	5.37E 00
92	1.60	0.	1.25E 00	0.	0.	0.	0.	0.	0.	5.60E-01	9.53E-01	2.12E 00	4.29E-01	5.31E 00
93	1.50	0.	1.49E 00	0.	0.	0.	0.	0.	0.	2.55E-01	1.16E 00	2.69E 00	5.19E-01	6.12E 00
94	1.40	0.	1.51E 00	0.	0.	0.	0.	0.	0.	0.	1.43E 00	3.31E 00	6.12E-01	6.86E 00
95	1.30	0.	1.15E 00	0.	0.	0.	0.	0.	0.	0.	1.79E 00	4.22E 00	8.06E-01	7.97E 00
96	1.20	0.	1.11E 00	0.	0.	0.	0.	0.	0.	0.	2.29E 00	4.32E 00	7.89E-01	8.51E 00
97	1.10	0.	1.00E 00	0.	0.	0.	0.	2.80E-06	0.	0.	2.99E 00	5.33E 00	9.91E-01	1.03E 01
98	1.00	0.	9.20E-01	0.	0.	0.	0.	3.31E-05	0.	0.	4.02E 00	6.44E 00	1.11E 00	1.25E 01
99	0.90	0.	7.54E-01	0.	0.	0.	0.	3.84E-05	0.	0.	5.56E 00	7.34E 00	1.31E 00	1.50E 01
100	0.80	0.	3.55E-01	0.	0.	0.	0.	7.67E-04	0.	0.	7.94E 00	8.44E 00	1.50E 00	1.82E 01
101	0.70	0.	8.78E-02	0.	0.	0.	0.	5.97E-04	0.	0.	1.19E 01	9.27E 00	1.63E 00	2.29E 01
102	0.60	0.	1.02E-02	0.	0.	0.	0.	2.17E-03	0.	0.	1.92E 01	1.03E 01	1.83E 00	3.13E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. 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.	1.99E-01	0.	0.	0.	4.48E-02	2.93E-04	1.55E 01	1.47E-02	1.58E 01
2	10.60	0.	0.	1.76E-01	0.	0.	0.	4.48E-02	3.01E-04	7.75E-02	1.47E-02	3.14E-01
3	10.50	0.	0.	1.75E-01	0.	0.	0.	4.49E-02	3.10E-04	7.79E-02	1.46E-02	3.13E-01
4	10.40	0.	0.	1.62E-01	0.	0.	0.	4.50E-02	3.19E-04	7.82E-02	1.46E-02	3.00E-01
5	10.30	0.	0.	1.38E-01	0.	0.	0.	4.50E-02	3.28E-04	7.84E-02	1.45E-02	2.76E-01
6	10.20	0.	0.	1.40E-01	0.	0.	0.	4.51E-02	3.38E-04	7.86E-02	1.45E-02	2.78E-01
7	10.10	0.	0.	1.29E-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.	8.56E-02	0.	0.	0.	4.55E-02	3.94E-04	7.95E-02	1.43E-02	2.25E-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.	7.01E-02	0.	0.	0.	4.58E-02	4.33E-04	8.02E-02	1.42E-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.	5.65E-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	2.49E-02	1.41E-02	1.44E-01
18	9.00	0.	0.	5.11E-02	0.	0.	0.	4.64E-02	4.93E-04	2.49E-02	1.41E-02	1.37E-01
19	8.90	0.	0.	4.60E-02	0.	0.	0.	4.66E-02	5.10E-04	2.49E-02	1.41E-02	1.32E-01
20	8.80	0.	0.	4.46E-02	0.	0.	0.	4.68E-02	5.28E-04	2.49E-02	1.40E-02	1.31E-01
21	8.70	0.	0.	3.74E-02	0.	0.	0.	4.69E-02	5.46E-04	2.49E-02	1.40E-02	1.24E-01
22	8.60	0.	0.	3.82E-02	0.	0.	0.	4.71E-02	5.65E-04	2.49E-02	1.40E-02	1.25E-01
23	8.50	0.	0.	3.23E-02	0.	0.	0.	4.73E-02	5.86E-04	2.49E-02	1.39E-02	1.19E-01
24	8.40	0.	0.	3.16E-02	0.	0.	0.	4.75E-02	6.07E-04	2.49E-02	1.39E-02	1.19E-01
25	8.30	0.	0.	2.59E-02	0.	0.	0.	4.78E-02	6.29E-04	2.49E-02	1.39E-02	1.13E-01
26	8.20	0.	0.	2.59E-02	0.	0.	0.	4.80E-02	6.52E-04	2.49E-02	1.40E-02	1.13E-01
27	8.10	0.	0.	2.16E-02	0.	0.	0.	4.83E-02	6.77E-04	2.49E-02	1.40E-02	1.10E-01
28	8.00	0.	0.	2.14E-02	0.	0.	0.	4.85E-02	7.03E-04	2.50E-02	1.41E-02	1.10E-01
29	7.90	0.	0.	1.79E-02	0.	0.	0.	4.88E-02	7.30E-04	2.50E-02	1.42E-02	1.07E-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	7.70	0.	0.	1.55E-02	0.	0.	0.	4.93E-02	7.88E-04	2.52E-02	1.43E-02	1.05E-01
32	7.60	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	7.50	0.	0.	1.30E-02	0.	2.88E-06	0.	4.98E-02	8.53E-04	2.53E-02	1.45E-02	1.03E-01
34	7.40	0.	0.	1.14E-02	0.	1.88E-05	0.	5.00E-02	8.88E-04	2.54E-02	1.46E-02	1.02E-01
35	7.30	0.	0.	1.05E-02	0.	8.49E-05	0.	5.03E-02	9.25E-04	2.54E-02	1.46E-02	1.02E-01
36	7.20	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	7.10	0.	0.	8.71E-03	0.	6.61E-04	0.	5.10E-02	1.01E-03	2.56E-02	1.48E-02	1.02E-01
38	7.00	1.66E-06	0.	7.78E-03	0.	1.53E-03	0.	5.14E-02	1.05E-03	2.56E-02	1.48E-02	1.02E-01
39	6.90	3.19E-06	0.	6.96E-03	0.	1.80E-03	0.	5.18E-02	1.10E-03	2.57E-02	1.49E-02	1.02E-01
40	6.80	2.71E-06	0.	6.52E-03	0.	3.48E-03	0.	5.23E-02	1.15E-03	2.58E-02	1.50E-02	1.04E-01
41	6.70	1.93E-06	0.	5.55E-03	0.	3.81E-03	0.	5.27E-02	1.20E-03	2.58E-02	1.51E-02	1.04E-01
42	6.60	1.16E-06	0.	4.84E-03	0.	2.67E-03	0.	5.31E-02	1.25E-03	2.60E-02	1.52E-02	1.03E-01
43	6.50	6.55E-07	0.	3.72E-03	0.	4.39E-03	0.	5.35E-02	1.31E-03	2.62E-02	1.53E-02	1.04E-01
44	6.40	3.66E-07	0.	2.45E-03	1.97E-05	4.56E-03	0.	5.39E-02	1.38E-03	2.64E-02	1.54E-02	1.04E-01
45	6.30	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	6.20	9.12E-08	0.	7.69E-04	1.23E-04	4.01E-03	0.	5.47E-02	1.51E-03	2.68E-02	1.57E-02	1.04E-01
47	6.10	4.07E-08	0.	3.46E-04	3.45E-04	5.47E-03	0.	5.52E-02	1.59E-03	2.70E-02	1.59E-02	1.06E-01
48	6.00	1.66E-08	0.	8.54E-05	3.13E-04	2.38E-03	0.	5.56E-02	1.67E-03	2.74E-02	1.61E-02	1.04E-01
49	5.90	4.02E-09	0.	6.10E-06	4.52E-04	2.41E-03	0.	5.56E-02	1.76E-03	2.77E-02	1.63E-02	1.04E-01
50	5.80	5.13E-10	0.	1.52E-07	6.20E-04	2.37E-03	0.	5.47E-02	1.85E-03	2.81E-02	1.65E-02	1.04E-01
51	5.70	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) 13000. 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 SIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.6[illegible]E-12	0.	0.	0.	5.66E-04	3.74E-03	0.	0.	4.78E-02	2.06E-03	2.88E-02	1.69E-02	9.99E-02
53	5.50	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
54	5.40	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
55	5.30	0.	0.	0.	0.	6.28E-04	3.52E-03	0.	0.	4.86E-02	2.43E-03	3.04E-02	1.77E-02	1.04E-01
56	5.20	0.	0.	0.	0.	6.65E-04	2.37E-03	0.	0.	4.89E-02	2.58E-03	3.13E-02	1.81E-02	1.04E-01
57	5.10	0.	0.	0.	0.	6.57E-04	3.13E-03	0.	0.	4.94E-02	2.73E-03	3.22E-02	1.85E-02	1.06E-01
58	5.00	2.15E-05	0.	0.	0.	5.91E-04	2.82E-03	0.	0.	4.98E-02	2.90E-03	3.31E-02	1.88E-02	1.08E-01
59	4.90	5.07E-05	0.	0.	0.	6.47E-04	2.98E-03	0.	0.	5.02E-02	3.08E-03	3.41E-02	1.92E-02	1.10E-01
60	4.80	9.19E-05	0.	0.	0.	6.88E-04	2.76E-03	0.	0.	5.06E-02	3.28E-03	3.52E-02	1.96E-02	1.12E-01
61	4.70	1.2[illegible]E-04	0.	0.	0.	6.73E-04	2.45E-03	0.	0.	5.10E-02	3.50E-03	3.63E-02	2.01E-02	1.14E-01
62	4.60	1.6[illegible]E-04	0.	0.	0.	6.82E-04	2.24E-03	0.	0.	5.14E-02	3.73E-03	3.76E-02	2.06E-02	1.16E-01
63	4.50	1.65E-04	0.	4.33E-04	0.	6.08E-04	1.66E-03	0.	0.	5.18E-02	3.99E-03	3.93E-02	2.11E-02	1.19E-01
64	4.40	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
65	4.30	1.56E-04	0.	4.05E-03	0.	5.61E-04	7.07E-04	0.	0.	5.27E-02	4.57E-03	4.27E-02	2.22E-02	1.28E-01
66	4.20	1.45E-04	0.	1.44E-02	0.	5.87E-04	5.24E-04	0.	0.	5.31E-02	4.91E-03	4.45E-02	2.27E-02	1.41E-01
67	4.10	1.33E-04	0.	5.41E-03	0.	5.60E-04	1.40E-04	0.	0.	5.33E-02	5.28E-03	4.63E-02	2.30E-02	1.34E-01
68	4.00	1.20E-04	0.	2.05E-02	0.	5.30E-04	1.07E-04	0.	0.	5.35E-02	5.69E-03	4.81E-02	6.40E-03	1.35E-01
69	3.90	9.97E-05	0.	9.26E-03	8.75E-04	4.73E-04	4.32E-05	0.	0.	5.33E-02	6.14E-03	4.40E-02	6.60E-03	1.21E-01
70	3.80	1.08E-04	0.	1.42E-02	4.64E-03	5.04E-04	0.	0.	0.	5.31E-02	6.64E-03	4.50E-02	6.84E-03	1.31E-01
71	3.70	9.28E-05	0.	1.62E-02	1.47E-03	4.11E-04	0.	0.	0.	5.23E-02	7.20E-03	3.56E-02	7.58E-03	1.21E-01
72	3.60	8.21E-05	0.	1.00E-02	8.72E-03	4.46E-04	0.	0.	0.	4.89E-02	7.82E-03	3.85E-02	8.42E-03	1.23E-01
73	3.50	7.50E-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
74	3.40	6.68E-05	0.	8.11E-03	2.27E-03	3.76E-04	0.	0.	0.	2.58E-02	9.30E-03	4.44E-02	1.04E-02	1.01E-01
75	3.30	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
76	3.20	4.46E-05	0.	5.24E-03	2.09E-02	3.00E-04	0.	0.	0.	2.59E-02	1.12E-02	5.42E-02	1.25E-02	1.30E-01
77	3.10	4.18E-05	0.	4.02E-03	3.56E-03	2.76E-04	0.	0.	0.	2.60E-02	1.23E-02	5.92E-02	1.36E-02	1.19E-01
78	3.00	3.64E-05	0.	2.38E-03	1.01E-02	2.53E-04	0.	0.	0.	2.60E-02	1.36E-02	6.42E-02	1.47E-02	1.31E-01
79	2.90	2.97E-05	0.	1.45E-03	5.95E-03	1.84E-04	0.	0.	0.	2.61E-02	1.51E-02	6.94E-02	1.58E-02	1.34E-01
80	2.80	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
81	2.70	1.87E-05	0.	3.21E-04	4.86E-03	6.23E-05	0.	0.	0.	2.61E-02	1.87E-02	8.16E-02	1.84E-02	1.50E-01
82	2.60	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
83	2.50	5.75E-07	0.	1.85E-05	4.12E-04	6.03E-06	0.	0.	0.	2.61E-02	2.36E-02	1.00E-01	9.76E-03	1.60E-01
84	2.40	0.	9.47E-04	0.	3.86E-04	6.27E-07	0.	0.	0.	2.61E-02	2.67E-02	1.16E-01	1.18E-02	1.82E-01
85	2.30	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
86	2.20	0.	8.19E-03	0.	0.	0.	0.	0.	0.	2.58E-02	3.48E-02	1.05E-01	1.70E-02	1.91E-01
87	2.10	0.	9.73E-03	0.	0.	0.	0.	0.	0.	2.57E-02	4.00E-02	1.22E-01	1.98E-02	2.18E-01
88	2.00	0.	1.78E-02	0.	0.	0.	0.	0.	0.	2.49E-02	4.64E-02	1.40E-01	2.27E-02	2.51E-01
89	1.90	0.	2.71E-02	0.	0.	0.	0.	0.	0.	2.39E-02	5.43E-02	1.58E-01	2.60E-02	2.90E-01
90	1.80	0.	2.23E-02	0.	0.	0.	0.	0.	0.	2.29E-02	6.40E-02	1.88E-01	3.12E-02	3.29E-01
91	1.70	0.	2.65E-02	0.	0.	0.	0.	0.	0.	2.16E-02	7.61E-02	2.25E-01	3.78E-02	3.87E-01
92	1.60	0.	1.91E-02	0.	0.	0.	0.	0.	0.	1.82E-02	9.15E-02	2.61E-01	4.44E-02	4.35E-01
93	1.50	0.	2.28E-02	0.	0.	0.	0.	0.	0.	8.29E-03	1.11E-01	3.32E-01	5.37E-02	5.29E-01
94	1.40	0.	2.30E-02	0.	0.	0.	0.	0.	0.	0.	1.38E-01	4.09E-01	6.34E-02	6.33E-01
95	1.30	0.	1.75E-02	0.	0.	0.	0.	0.	0.	0.	1.72E-01	5.22E-01	8.34E-02	7.95E-01
96	1.20	0.	1.70E-02	0.	0.	0.	0.	0.	0.	0.	2.20E-01	5.33E-01	8.16E-02	8.52E-01
97	1.10	0.	1.53E-02	0.	0.	0.	0.	3.58E-08	0.	0.	2.87E-01	6.58E-01	1.03E-01	1.06E 00
98	1.00	0.	1.40E-02	0.	0.	0.	0.	4.23E-07	0.	0.	3.86E-01	7.96E-01	1.15E-01	1.31E 00
99	0.90	0.	1.15E-02	0.	0.	0.	0.	4.90E-07	0.	0.	5.34E-01	9.07E-01	1.35E-01	1.59E 00
100	0.80	0.	5.41E-03	0.	0.	0.	0.	9.80E-06	0.	0.	7.63E-01	1.04E 00	1.56E-01	1.97E 00
101	0.70	0.	1.34E-03	0.	0.	0.	0.	7.62E-06	0.	0.	1.14E 00	1.14E 00	1.69E-01	2.46E 00
102	0.60	0.	1.56E-04	0.	0.	0.	0.	2.77E-05	0.	0.	1.84E 00	1.28E 00	1.89E-01	3.31E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. 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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.91E-03	0.	0.	0.	1.35E-03	2.78E-05	1.52E 00	1.43E-03	1.53E 00
2	10.60	0.	0.	1.69E-03	0.	0.	0.	1.35E-03	2.86E-05	7.60E-03	1.43E-03	1.21E-02
3	10.50	0.	0.	1.69E-03	0.	0.	0.	1.35E-03	2.94E-05	7.63E-03	1.43E-03	1.21E-02
4	10.40	0.	0.	1.56E-03	0.	0.	0.	1.35E-03	3.03E-05	7.66E-03	1.42E-03	1.20E-02
5	10.30	0.	0.	1.32E-03	0.	0.	0.	1.36E-03	3.12E-05	7.68E-03	1.42E-03	1.18E-02
6	10.20	0.	0.	1.34E-03	0.	0.	0.	1.36E-03	3.21E-05	7.70E-03	1.42E-03	1.18E-02
7	10.10	0.	0.	1.24E-03	0.	0.	0.	1.36E-03	3.31E-05	7.71E-03	1.41E-03	1.18E-02
8	10.00	0.	0.	1.05E-03	0.	0.	0.	1.36E-03	3.41E-05	7.73E-03	1.41E-03	1.16E-02
9	9.90	0.	0.	1.07E-03	0.	0.	0.	1.36E-03	3.52E-05	7.75E-03	1.41E-03	1.16E-02
10	9.80	0.	0.	9.83E-04	0.	0.	0.	1.37E-03	3.62E-05	7.77E-03	1.40E-03	1.16E-02
11	9.70	0.	0.	8.22E-04	0.	0.	0.	1.37E-03	3.74E-05	7.79E-03	1.40E-03	1.14E-02
12	9.60	0.	0.	8.85E-04	0.	0.	0.	1.37E-03	3.86E-05	7.81E-03	1.39E-03	1.15E-02
13	9.50	0.	0.	7.31E-04	0.	0.	0.	1.37E-03	3.98E-05	7.83E-03	1.39E-03	1.14E-02
14	9.40	0.	0.	6.73E-04	0.	0.	0.	1.38E-03	4.11E-05	7.86E-03	1.39E-03	1.13E-02
15	9.30	0.	0.	6.85E-04	0.	0.	0.	1.38E-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	5.75E-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	5.63E-03
22	8.60	0.	0.	3.67E-04	0.	0.	0.	1.42E-03	5.37E-05	2.44E-03	1.36E-03	5.64E-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	5.56E-03
27	8.10	0.	0.	2.08E-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	1.38E-03	5.56E-03
29	7.90	0.	0.	1.72E-04	0.	0.	0.	1.47E-03	6.93E-05	2.45E-03	1.38E-03	5.55E-03
30	7.80	0.	0.	1.75E-04	0.	0.	0.	1.48E-03	7.20E-05	2.46E-03	1.39E-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.	1.25E-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.	1.10E-04	0.	1.80E-07	0.	1.51E-03	8.44E-05	2.49E-03	1.42E-03	5.61E-03
35	7.30	0.	0.	1.01E-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	3.03E-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.	5.34E-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	3.48E-09	0.	2.36E-05	1.89E-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	3.86E-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.	8.20E-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.	5.86E-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	4.85E-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	3.56E-13	0.	0.	6.71E-06	2.51E-05	0.	1.55E-03	1.86E-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
52	5.60	1.57E-14	0.	0.	0.	5.42E-06	3.57E-05	0.	0.	1.44E-03	1.96E-04	2.82E-03	1.65E-03	6.15E-03
53	5.50	0.	0.	0.	0.	6.61E-06	3.35E-05	0.	0.	1.45E-03	2.07E-04	2.87E-03	1.68E-03	6.24E-03
54	5.40	0.	0.	0.	0.	5.86E-06	2.51E-05	0.	0.	1.45E-03	2.18E-04	2.94E-03	1.70E-03	6.34E-03
55	5.30	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
56	5.20	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
57	5.10	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
58	5.00	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
59	4.90	4.82E-07	0.	0.	0.	6.19E-06	2.85E-05	0.	0.	1.51E-03	2.93E-04	3.34E-03	1.87E-03	7.06E-03
60	4.80	8.74E-07	0.	0.	0.	6.58E-06	2.64E-05	0.	0.	1.52E-03	3.12E-04	3.45E-03	1.91E-03	7.23E-03
61	4.70	1.14E-06	0.	0.	0.	6.44E-06	2.34E-05	0.	0.	1.54E-03	3.32E-04	3.56E-03	1.96E-03	7.42E-03
62	4.60	1.52E-06	0.	0.	0.	6.52E-06	2.15E-05	0.	0.	1.55E-03	3.55E-04	3.69E-03	2.01E-03	7.63E-03
63	4.50	1.57E-06	0.	4.16E-06	0.	5.82E-06	1.59E-05	0.	0.	1.56E-03	3.79E-04	3.85E-03	2.06E-03	7.87E-03
64	4.40	1.63E-06	0.	1.36E-05	0.	5.76E-06	1.12E-05	0.	0.	1.57E-03	4.05E-04	4.01E-03	2.11E-03	8.13E-03
65	4.30	1.50E-06	0.	3.89E-05	0.	5.37E-06	6.76E-06	0.	0.	1.59E-03	4.34E-04	4.18E-03	2.16E-03	8.42E-03
66	4.20	1.38E-06	0.	1.39E-04	0.	5.61E-06	5.02E-06	0.	0.	1.60E-03	4.66E-04	4.36E-03	2.22E-03	8.79E-03
67	4.10	1.27E-06	0.	5.20E-05	0.	5.35E-06	1.34E-06	0.	0.	1.60E-03	5.02E-04	4.54E-03	2.25E-03	8.95E-03
68	4.00	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	6.25E-04	7.69E-03
69	3.90	9.48E-07	0.	8.90E-05	2.72E-05	4.53E-06	4.13E-07	0.	0.	1.60E-03	5.83E-04	4.31E-03	6.44E-04	7.27E-03
70	3.80	1.03E-06	0.	1.36E-04	1.45E-04	4.82E-06	0.	0.	0.	1.60E-03	6.31E-04	4.41E-03	6.67E-04	7.60E-03
71	3.70	8.83E-07	0.	1.56E-04	4.59E-05	3.93E-06	0.	0.	0.	1.57E-03	6.84E-04	3.49E-03	7.39E-04	6.69E-03
72	3.60	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	8.21E-04	7.18E-03
73	3.50	7.13E-07	0.	1.36E-04	6.45E-04	3.23E-06	0.	0.	0.	1.35E-03	8.09E-04	3.88E-03	9.11E-04	7.74E-03
74	3.40	6.35E-07	0.	7.79E-05	7.07E-05	3.59E-06	0.	0.	0.	7.78E-04	8.84E-04	4.35E-03	1.01E-03	7.18E-03
75	3.30	5.01E-07	0.	8.14E-05	3.22E-04	2.77E-06	0.	0.	0.	7.79E-04	9.67E-04	4.83E-03	1.11E-03	8.09E-03
76	3.20	4.25E-07	0.	5.03E-05	6.52E-04	2.87E-06	0.	0.	0.	7.80E-04	1.06E-03	5.31E-03	1.22E-03	9.07E-03
77	3.10	3.97E-07	0.	3.86E-05	1.11E-04	2.64E-06	0.	0.	0.	7.82E-04	1.17E-03	5.80E-03	1.32E-03	9.23E-03
78	3.00	3.[illegible]E-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
79	2.90	2.[illegible]E-07	0.	1.39E-05	1.85E-04	1.76E-06	0.	0.	0.	7.85E-04	1.43E-03	6.80E-03	1.54E-03	1.08E-02
80	2.80	2.88E-07	0.	6.67E-06	9.39E-05	1.15E-06	0.	0.	0.	7.87E-04	1.59E-03	7.38E-03	1.66E-03	1.15E-02
81	2.70	1.78E-07	0.	3.09E-06	1.51E-04	5.96E-07	0.	0.	0.	7.87E-04	1.78E-03	7.99E-03	1.79E-03	1.25E-02
82	2.60	7.97E-08	0.	1.54E-06	1.44E-05	2.50E-07	0.	0.	0.	7.87E-04	1.99E-03	8.66E-03	1.93E-03	1.34E-02
83	2.50	5.47E-09	0.	1.78E-07	1.28E-05	5.76E-08	0.	0.	0.	7.87E-04	2.24E-03	9.81E-03	9.52E-04	1.38E-02
84	2.40	0.	9.10E-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
85	2.30	0.	3.30E-05	0.	0.	0.	0.	0.	0.	7.80E-04	2.89E-03	8.70E-03	1.38E-03	1.38E-02
86	2.20	0.	7.87E-05	0.	0.	0.	0.	0.	0.	7.77E-04	3.30E-03	1.03E-02	1.66E-03	1.61E-02
87	2.10	0.	9.35E-05	0.	0.	0.	0.	0.	0.	7.74E-04	3.80E-03	1.20E-02	1.94E-03	1.86E-02
88	2.00	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
89	1.90	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
90	1.80	0.	2.14E-04	0.	0.	0.	0.	0.	0.	6.89E-04	6.08E-03	1.84E-02	3.04E-03	2.85E-02
91	1.70	0.	2.54E-04	0.	0.	0.	0.	0.	0.	6.49E-04	7.23E-03	2.20E-02	3.69E-03	3.38E-02
92	1.60	0.	1.83E-04	0.	0.	0.	0.	0.	0.	5.49E-04	8.70E-03	2.56E-02	4.33E-03	3.94E-02
93	1.50	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
94	1.40	0.	2.21E-04	0.	0.	0.	0.	0.	0.	0.	1.31E-02	4.00E-02	6.18E-03	5.95E-02
95	1.30	0.	1.68E-04	0.	0.	0.	0.	0.	0.	0.	1.64E-02	5.11E-02	8.13E-03	7.58E-02
96	1.20	0.	1.63E-04	0.	0.	0.	0.	0.	0.	0.	2.09E-02	5.23E-02	7.96E-03	8.13E-02
97	1.10	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
98	1.00	0.	1.35E-04	0.	0.	0.	0.	4.05E-09	0.	0.	3.67E-02	7.80E-02	1.12E-02	1.26E-01
99	0.90	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	0.80	0.	5.20E-05	0.	0.	0.	0.	9.37E-08	0.	0.	7.25E-02	1.02E-01	1.52E-02	1.90E-01
101	0.70	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	0.60	0.	1.50E-06	0.	0.	0.	0.	2.65E-07	0.	0.	1.75E-01	1.25E-01	1.84E-02	3.19E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-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.	1.38E-05	0.	0.	0.	3.55E-05	2.37E-06	1.29E-01	1.29E-04	1.30E-01
2	10.60	0.	0.	1.22E-05	0.	0.	0.	3.56E-05	2.44E-06	6.45E-04	1.29E-04	8.24E-04
3	10.50	0.	0.	1.22E-05	0.	0.	0.	3.56E-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.	9.55E-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.	7.60E-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.	6.38E-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.	4.01E-06	0.	0.	0.	3.67E-05	3.87E-06	2.08E-04	1.24E-04	3.76E-04
18	9.00	0.	0.	3.54E-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.	2.59E-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.	1.50E-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.	1.24E-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	5.06E-11	0.	2.58E-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	7.05E-12	0.	5.33E-08	9.03E-09	2.93E-07	0.	4.34E-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.	4.37E-05	1.29E-05	2.25E-04	1.40E-04	4.22E-04
48	6.00	1.20E-12	0.	5.92E-09	2.29E-08	1.74E-07	0.	4.41E-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.	4.41E-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.	4.34E-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.	4.08E-05	1.58E-05	2.36E-04	1.47E-04	4.40E-04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1300C. 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	1.29E-16	0.	0.	0.	4.15E-08	2.74E-07	0.	0.	3.79E-05	1.67E-05	2.40E-04	1.49E-04	4.44E-04
53	5.50	0.	0.	0.	0.	5.06E-08	2.56E-07	0.	0.	3.81E-05	1.76E-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.	3.83E-05	1.87E-05	2.49E-04	1.53E-04	4.60E-04
55	5.30	0.	0.	0.	0.	4.60E-08	2.58E-07	0.	0.	3.86E-05	1.97E-05	2.55E-04	1.56E-04	4.69E-04
56	5.20	0.	0.	0.	0.	4.87E-08	1.74E-07	0.	0.	3.88E-05	2.09E-05	2.60E-04	1.59E-04	4.79E-04
57	5.10	0.	0.	0.	0.	4.81E-08	2.29E-07	0.	0.	3.91E-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.	3.95E-05	2.35E-05	2.76E-04	1.65E-04	5.04E-04
59	4.90	3.92E-09	0.	0.	0.	4.74E-08	2.18E-07	0.	0.	3.98E-05	2.50E-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.	4.01E-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.	4.05E-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	1.64E-07	0.	0.	4.08E-05	3.03E-05	3.13E-04	1.81E-04	5.66E-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.	9.99E-07	0.	4.29E-08	3.84E-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	2.02E-04	6.73E-04
68	4.00	9.31E-09	0.	1.42E-06	0.	3.88E-08	7.85E-09	0.	0.	4.24E-05	4.61E-05	4.00E-04	5.63E-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.	4.23E-05	4.98E-05	3.66E-04	5.80E-05	5.1[illegible]-04
70	3.80	8.35E-09	0.	9.81E-07	3.57E-06	3.69E-08	0.	0.	0.	4.21E-05	5.39E-05	3.75E-04	6.01E-05	[illegible]04
71	3.70	7.17E-09	0.	1.12E-06	1.13E-06	3.01E-08	0.	0.	0.	4.14E-05	5.84E-05	2.96E-04	6.66E-05	4.65[illegible]04
72	3.60	6.35E-09	0.	6.96E-07	6.70E-06	3.27E-08	0.	0.	0.	3.88E-05	6.35E-05	3.20E-04	7.40E-05	5.04E-04
73	3.50	5.80E-09	0.	9.80E-07	1.59E-05	2.47E-08	0.	0.	0.	3.55E-05	6.91E-05	3.30E-04	8.21E-05	5.34E-04
74	3.40	5.16E-09	0.	5.62E-07	1.74E-06	2.75E-08	0.	0.	0.	2.05E-05	7.55E-05	3.70E-04	9.11E-05	5.59E-04
75	3.30	4.07E-09	0.	5.87E-07	7.95E-06	2.12E-08	0.	0.	0.	2.05E-05	8.26E-05	4.10E-04	1.00E-04	6.22E-04
76	3.20	3.45E-09	0.	3.63E-07	1.61E-05	2.19E-08	0.	0.	0.	2.06E-05	9.07E-05	4.51E-04	1.10E-04	6.88E-04
77	3.10	3.23E-09	0.	2.78E-07	2.74E-06	2.02E-08	0.	0.	0.	2.06E-05	9.98E-05	4.93E-04	1.19E-04	7.35E-04
78	3.00	2.81E-09	0.	1.65E-07	7.75E-06	1.85E-08	0.	0.	0.	2.07E-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	1.35E-08	0.	0.	0.	2.07E-05	1.22E-04	5.78E-04	1.39E-04	8.64E-04
80	2.80	2.24E-09	0.	4.81E-08	2.32E-06	8.83E-09	0.	0.	0.	2.07E-05	1.36E-04	6.27E-04	1.50E-04	9.35E-04
81	2.70	1.45E-09	0.	2.23E-08	3.73E-06	4.56E-09	0.	0.	0.	2.07E-05	1.52E-04	6.79E-04	1.62E-04	1.02E-03
82	2.60	6.47E-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.	1.29E-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.	6.56E-08	0.	2.96E-07	4.59E-11	0.	0.	0.	2.07E-05	2.17E-04	9.68E-04	1.03E-04	1.31E-03
85	2.30	0.	2.38E-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.	5.68E-07	0.	0.	0.	0.	0.	0.	2.05E-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	1.02E-03	1.74E-04	1.54E-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.	1.88E-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.	1.55E-06	0.	0.	0.	0.	0.	0.	1.82E-05	5.19E-04	1.57E-03	2.74E-04	2.38E-03
91	1.70	0.	1.83E-06	0.	0.	0.	0.	0.	0.	1.71E-05	6.18E-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	3.90E-04	3.32E-03
93	1.50	0.	1.58E-06	0.	0.	0.	0.	0.	0.	6.58E-06	9.04E-04	2.77E-03	4.72E-04	4.15E-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	5.48E-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	1.01E-03	1.08E-02
99	0.90	0.	7.97E-07	0.	0.	0.	0.	3.59E-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.	5.58E-10	0.	0.	9.28E-03	9.53E-03	1.49E-03	2.03E-02
102	0.60	0.	1.08E-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.	5.04E-08	0.	0.	0.	6.21E-07	1.47E-07	3.88E-05	9.07E-06	4.87E-05
2	10.60	0.	0.	4.47E-08	0.	0.	0.	6.21E-07	1.51E-07	3.90E-05	9.05E-06	4.89E-05
3	10.50	0.	0.	4.44E-08	0.	0.	0.	6.22E-07	1.55E-07	3.92E-05	9.03E-06	4.91E-05
4	10.40	0.	0.	4.11E-08	0.	0.	0.	6.23E-07	1.60E-07	3.93E-05	9.01E-06	4.92E-05
5	10.30	0.	0.	3.49E-08	0.	0.	0.	6.24E-07	1.65E-07	3.94E-05	8.99E-06	4.93E-05
6	10.20	0.	0.	3.54E-08	0.	0.	0.	6.25E-07	1.70E-07	3.95E-05	8.96E-06	4.93E-05
7	10.10	0.	0.	3.28E-08	0.	0.	0.	6.26E-07	1.75E-07	3.96E-05	8.94E-06	4.94E-05
8	10.00	0.	0.	2.78E-08	0.	0.	0.	6.26E-07	1.80E-07	3.97E-05	8.92E-06	4.95E-05
9	9.90	0.	0.	2.83E-08	0.	0.	0.	6.28E-07	1.86E-07	3.98E-05	8.90E-06	4.95E-05
10	9.80	0.	0.	2.59E-08	0.	0.	0.	6.29E-07	1.91E-07	3.99E-05	8.88E-06	4.96E-05
11	9.70	0.	0.	2.17E-08	0.	0.	0.	6.30E-07	1.97E-07	4.00E-05	8.85E-06	4.97E-05
12	9.60	0.	0.	2.33E-08	0.	0.	0.	6.31E-07	2.04E-07	4.01E-05	8.83E-06	4.98E-05
13	9.50	0.	0.	1.93E-08	0.	0.	0.	6.32E-07	2.10E-07	4.02E-05	8.81E-06	4.99E-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.	1.30E-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	2.56E-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	8.59E-06	2.21E-05
26	8.20	0.	0.	6.56E-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.	4.53E-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.	5.59E-10	0.	7.18E-07	5.51E-07	1.29E-05	9.21E-06	2.34E-05
40	6.80	1.05E-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	7.36E-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	1.55E-15	0.	1.54E-12	1.40E-10	7.48E-10	0.	7.70E-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) 13000. 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	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.	2.15E-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	8.2[illegible]E-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	1.9[illegible]E-11	0.	0.	0.	2.01E-10	9.25E-10	0.	0.	6.95E-07	1.55E-06	1.72E-05	1.19E-05	3.13E-05
60	4.80	3.5[illegible]E-11	0.	0.	0.	2.14E-10	8.58E-10	0.	0.	7.01E-07	1.65E-06	1.77E-05	1.21E-05	3.22E-05
61	4.70	4.57E-11	0.	0.	0.	2.09E-10	7.61E-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	1.98E-05	1.30E-05	3.55E-05
64	4.40	6.53E-11	0.	3.57E-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	6.02E-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	5.52E-11	0.	3.65E-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	5.08E-11	0.	1.37E-09	0.	1.74E-10	4.37E-11	0.	0.	7.38E-07	2.65E-06	2.33E-05	3.84E-06	3.05E-05
68	4.00	4.59E-11	0.	5.20E-09	0.	1.65E-10	3.33E-11	0.	0.	7.41E-07	2.85E-06	2.42E-05	3.96E-06	3.17E-05
69	3.90	3.80E-11	0.	2.35E-09	9.88E-09	1.47E-10	1.34E-11	0.	0.	7.38E-07	3.08E-06	2.18E-05	4.07E-06	2.98E-05
70	3.80	4.12E-11	0.	3.59E-09	5.24E-08	1.57E-10	0.	0.	0.	7.36E-07	3.33E-06	1.72E-05	4.22E-06	2.56E-05
71	3.70	3.54E-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.	2.54E-09	9.84E-08	1.39E-10	0.	0.	0.	6.78E-07	3.93E-06	1.79E-05	5.20E-06	2.78E-05
73	3.50	2.86E-11	0.	3.58E-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.	2.05E-09	2.56E-08	1.17E-10	0.	0.	0.	3.58E-07	4.67E-06	2.24E-05	6.40E-06	3.38E-05
75	3.30	2.01E-11	0.	2.15E-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	1.7[illegible]E-11	0.	1.33E-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	8.59E-11	0.	0.	0.	3.60E-07	6.18E-06	2.98E-05	8.39E-06	4.47E-05
78	3.00	1.39E-11	0.	6.04E-10	1.14E-07	7.86E-11	0.	0.	0.	3.61E-07	6.82E-06	3.23E-05	9.06E-06	4.87E-05
79	2.90	1.13E-11	0.	3.68E-10	6.72E-08	5.73E-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.	1.76E-10	3.41E-08	3.75E-11	0.	0.	0.	3.62E-07	8.40E-06	3.79E-05	1.05E-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	6.65E-05
83	2.50	2.19E-13	0.	4.70E-12	4.66E-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	1.34E-05	3.69E-05	7.27E-06	5.79E-05
85	2.30	0.	8.69E-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.	2.08E-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.	2.46E-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.	3.45E-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	7.98E-05	1.60E-05	1.23E-04
90	1.80	0.	5.65E-09	0.	0.	0.	0.	0.	0.	3.17E-07	3.21E-05	9.47E-05	1.93E-05	1.46E-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	1.75E-04
92	1.60	0.	4.83E-09	0.	0.	0.	0.	0.	0.	2.53E-07	4.59E-05	1.32E-04	2.74E-05	2.05E-04
93	1.50	0.	5.76E-09	0.	0.	0.	0.	0.	0.	1.15E-07	5.60E-05	1.67E-04	3.17E-05	2.55E-04
94	1.40	0.	5.83E-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.	4.30E-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.	1.32E-13	0.	0.	1.94E-04	4.01E-04	7.10E-05	6.65E-04
99	0.90	0.	2.91E-09	0.	0.	0.	0.	1.52E-13	0.	0.	2.68E-04	4.56E-04	8.36E-05	8.08E-04
100	0.80	0.	1.37E-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	0.60	0.	3.96E-11	0.	0.	0.	0.	8.62E-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 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.	3.98E-11	0.	0.	0.	3.62E-09	4.27E-09	1.09E-06	3.10E-07	1.41E-06
2	10.60	0.	0.	3.52E-11	0.	0.	0.	3.62E-09	4.40E-09	1.10E-06	3.09E-07	1.41E-06
3	10.50	0.	0.	3.50E-11	0.	0.	0.	3.62E-09	4.52E-09	1.10E-06	3.08E-07	1.42E-06
4	10.40	0.	0.	3.24E-11	0.	0.	0.	3.63E-09	4.66E-09	1.10E-06	3.08E-07	1.42E-06
5	10.30	0.	0.	2.75E-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.	2.58E-11	0.	0.	0.	3.64E-09	5.09E-09	1.11E-06	3.05E-07	1.43E-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.	1.84E-11	0.	0.	0.	3.68E-09	5.93E-09	1.13E-06	3.02E-07	1.44E-06
13	9.50	0.	0.	1.52E-11	0.	0.	0.	3.68E-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	6.62E-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	2.96E-07	6.62E-07
28	8.00	0.	0.	4.28E-12	0.	0.	0.	3.92E-09	1.03E-08	3.53E-07	2.98E-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	3.01E-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	6.73E-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	6.76E-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.	5.62E-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	1.26E-15	0.	1.30E-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	8.20E-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	1.67E-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 IONS	N P.E.	O P.E.	TOTAL AIR
52	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	7.98E-07
53	5.50	0.	0.	0.	0.	2.06E-13	1.04E-12	0.	0.	3.98E-09	3.18E-08	4.14E-07	3.62E-07	8.12E-07
54	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	8.28E-07
55	5.30	0.	0.	0.	0.	1.87E-13	1.05E-12	0.	0.	3.92E-09	3.55E-08	4.33E-07	3.74E-07	8.46E-07
56	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
57	5.10	0.	0.	0.	0.	1.96E-13	9.32E-13	0.	0.	3.98E-09	3.99E-08	4.54E-07	3.89E-07	8.87E-07
58	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
59	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	4.09E-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	4.24E-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	4.34E-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	4.45E-07	1.06E-06
64	4.40	7.62E-14	0.	2.82E-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	7.02E-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	6.44E-14	0.	2.88E-12	0.	1.75E-13	1.56E-13	0.	0.	4.28E-09	7.17E-08	6.29E-07	4.36E-07	1.14E-06
67	4.10	5.93E-14	0.	1.08E-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	5.36E-14	0.	4.10E-12	0.	1.58E-13	3.20E-14	0.	0.	4.32E-09	8.30E-08	5.91E-07	1.35E-07	8.13E-07
69	3.90	4.44E-14	0.	1.85E-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	7.30E-07
71	3.70	4.13E-14	0.	3.23E-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.	3.95E-09	1.14E-07	5.01E-07	1.78E-07	7.98E-07
73	3.50	3.34E-14	0.	2.82E-12	1.08E-09	1.01E-13	0.	0.	0.	3.62E-09	1.24E-07	5.60E-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.	2.09E-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	2.40E-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.	8.03E-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.	2.90E-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.	6.41E-14	2.54E-10	1.86E-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	7.79E-15	0.	0.	0.	2.11E-09	3.06E-07	1.25E-06	1.75E-07	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	2.07E-07	1.39E-06
84	2.40	0.	1.89E-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	4.43E-07	1.25E-06	2.97E-07	2.00E-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.	4.46E-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	8.86E-07	5.92E-06
93	1.50	0.	4.55E-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	7.08E-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.	3.05E-12	0.	0.	0.	0.	1.07E-17	0.	0.	4.20E-06	9.30E-06	1.99E-06	1.55E-05
98	1.00	0.	2.80E-12	0.	0.	0.	0.	1.26E-16	0.	0.	5.64E-06	1.09E-05	2.42E-06	1.90E-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.	1.08E-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.	2.69E-05	1.46E-05	2.99E-06	4.44E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 13000. DENSITY (GM/CC) 1.293E-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.	6.76E-15	0.	0.	0.	5.86E-12	5.66E-11	1.42E-08	4.36E-09	1.87E-08
2	10.60	0.	0.	5.99E-15	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-15	0.	0.	0.	5.88E-12	6.00E-11	1.44E-08	4.34E-09	1.88E-08
4	10.40	0.	0.	5.51E-15	0.	0.	0.	5.88E-12	6.17E-11	1.44E-08	4.33E-09	1.88E-08
5	10.30	0.	0.	4.68E-15	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-15	0.	0.	0.	5.90E-12	6.54E-11	1.45E-08	4.31E-09	1.89E-08
7	10.10	0.	0.	4.40E-15	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-15	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-15	0.	0.	0.	5.92E-12	7.16E-11	1.46E-08	4.28E-09	1.90E-08
10	9.80	0.	0.	3.48E-15	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-15	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-15	0.	0.	0.	5.96E-12	7.86E-11	1.47E-08	4.25E-09	1.90E-08
13	9.50	0.	0.	2.58E-15	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-15	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-15	0.	0.	0.	6.01E-12	8.64E-11	4.62E-09	4.22E-09	8.93E-09
16	9.20	0.	0.	1.92E-15	0.	0.	0.	6.03E-12	8.93E-11	4.62E-09	4.21E-09	8.92E-09
17	9.10	0.	0.	1.97E-15	0.	0.	0.	6.06E-12	9.23E-11	4.61E-09	4.20E-09	8.91E-09
18	9.00	0.	0.	1.74E-15	0.	0.	0.	6.08E-12	9.54E-11	4.61E-09	4.19E-09	8.90E-09
19	8.90	0.	0.	1.56E-15	0.	0.	0.	6.10E-12	9.87E-11	4.61E-09	4.18E-09	8.89E-09
20	8.80	0.	0.	1.52E-15	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-15	0.	0.	0.	6.14E-12	1.06E-10	4.60E-09	4.16E-09	8.87E-09
22	8.60	0.	0.	1.30E-15	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-15	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-15	0.	0.	0.	6.22E-12	1.17E-10	4.60E-09	4.13E-09	8.86E-09
25	8.30	0.	0.	8.81E-16	0.	0.	0.	6.25E-12	1.22E-10	4.60E-09	4.13E-09	8.85E-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.	6.08E-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	9.18E-09
35	7.30	0.	0.	3.58E-16	0.	4.65E-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.	2.96E-16	0.	3.62E-17	0.	6.67E-12	1.95E-10	4.72E-09	4.39E-09	9.31E-09
38	7.00	1.40E-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	2.81E-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	2.30E-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	1.02E-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	5.70E-20	0.	1.27E-16	0.	2.40E-16	0.	7.00E-12	2.54E-10	4.84E-09	4.53E-09	9.64E-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.	7.16E-12	2.93E-10	4.95E-09	4.66E-09	9.91E-09
47	6.10	3.59E-21	0.	1.19E-17	1.89E-17	3.00E-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.	2.07E-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.	7.16E-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-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	1.48E-25	0.	0.	0.	3.10E-17	2.05E-16	0.	0.	6.26E-12	3.99E-10	5.31E-09	5.04E-09	1.07E-08
53	5.50	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	5.40	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	1.30E-16	0.	0.	6.40E-12	4.99E-10	5.77E-09	5.37E-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	1.90E-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	5.70E-09	1.26E-08
60	4.80	8.10E-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	1.34E-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	9.08E-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	6.42E-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	1.28E-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	1.18E-17	0.	1.84E-16	0.	3.06E-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	5.87E-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	6.08E-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.	5.50E-16	1.14E-13	2.25E-17	0.	0.	0.	6.84E-12	1.39E-09	6.00E-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.	6.40E-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	2.06E-17	0.	0.	0.	3.38E-12	1.80E-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.	8.10E-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	1.01E-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	1.69E-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	5.07E-20	0.	6.30E-19	3.18E-14	3.30E-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	3.50E-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.	3.31E-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	2.92E-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	9.27E-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	1.12E-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	1.46E-08	9.32E-08
94	1.40	0.	7.83E-16	0.	0.	0.	0.	0.	0.	0.	2.66E-08	4.92E-08	1.25E-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.	4.25E-08	9.60E-08	2.21E-08	1.61E-07
97	1.10	0.	5.19E-16	0.	0.	0.	0.	1.96E-21	0.	0.	5.56E-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.	7.48E-08	1.42E-07	3.41E-08	2.51E-07
99	0.90	0.	3.91E-16	0.	0.	0.	0.	2.68E-20	0.	0.	1.03E-07	1.62E-07	3.84E-08	3.04E-07
100	0.80	0.	1.84E-16	0.	0.	0.	0.	5.36E-19	0.	0.	1.48E-07	1.86E-07	4.44E-08	3.78E-07
101	0.70	0.	4.55E-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.	3.56E-07	1.90E-07	4.22E-08	5.88E-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	1.48E-10	4.56E-11	1.95E-10
2	10.60	0.	0.	6.41E-19	0.	0.	0.	6.24E-15	6.04E-13	1.49E-10	4.55E-11	1.95E-10
3	10.50	0.	0.	6.37E-19	0.	0.	0.	6.25E-15	6.21E-13	1.50E-10	4.54E-11	1.96E-10
4	10.40	0.	0.	5.90E-19	0.	0.	0.	6.26E-15	6.39E-13	1.50E-10	4.53E-11	1.96E-10
5	10.30	0.	0.	5.01E-19	0.	0.	0.	6.27E-15	6.58E-13	1.51E-10	4.52E-11	1.97E-10
6	10.20	0.	0.	5.08E-19	0.	0.	0.	6.28E-15	6.78E-13	1.51E-10	4.51E-11	1.97E-10
7	10.10	0.	0.	4.70E-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	1.52E-10	4.48E-11	1.98E-10
9	9.90	0.	0.	4.06E-19	0.	0.	0.	6.30E-15	7.42E-13	1.52E-10	4.47E-11	1.98E-10
10	9.80	0.	0.	3.72E-19	0.	0.	0.	6.32E-15	7.65E-13	1.53E-10	4.46E-11	1.98E-10
11	9.70	0.	0.	3.11E-19	0.	0.	0.	6.33E-15	7.89E-13	1.53E-10	4.45E-11	1.98E-10
12	9.60	0.	0.	3.35E-19	0.	0.	0.	6.34E-15	8.14E-13	1.54E-10	4.44E-11	1.99E-10
13	9.50	0.	0.	2.76E-19	0.	0.	0.	6.35E-15	8.40E-13	1.54E-10	4.43E-11	1.99E-10
14	9.40	0.	0.	2.55E-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.	2.05E-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	8.90	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.	1.36E-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	4.80E-11	4.31E-11	9.24E-11
26	8.20	0.	0.	9.41E-20	0.	0.	0.	6.69E-15	1.31E-12	4.80E-11	4.34E-11	9.27E-11
27	8.10	0.	0.	7.86E-20	0.	0.	0.	6.72E-15	1.36E-12	4.80E-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	4.83E-11	4.40E-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.	5.64E-20	0.	0.	0.	6.86E-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	4.90E-11	4.52E-11	9.60E-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.	3.16E-20	0.	3.91E-21	0.	7.10E-15	2.02E-12	4.96E-11	4.58E-11	9.74E-11
38	7.00	1.63E-23	0.	2.83E-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.	2.06E-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	3.54E-24	0.	8.92E-21	1.17E-22	2.70E-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	1.61E-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	3.87E-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	1.61E-29	0.	0.	0.	3.35E-21	2.21E-20	0.	0.	6.66E-15	4.13E-12	5.51E-11	5.26E-11	1.12E-10
53	5.50	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	5.10	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	5.00	2.07E-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	4.81E-22	0.	0.	0.	3.83E-21	1.76E-20	0.	0.	6.99E-15	6.18E-12	6.53E-11	5.96E-11	1.31E-10
60	4.80	8.85E-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	7.20E-11	6.39E-11	1.43E-10
63	4.50	1.59E-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	1.69E-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	1.87E-11	1.14E-10
67	4.10	1.26E-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	6.08E-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.	5.88E-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	1.10E-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.	3.60E-15	1.86E-11	8.48E-11	3.22E-11	1.36E-10
75	3.30	5.07E-22	0.	3.08E-20	8.39E-16	1.72E-21	0.	0.	0.	3.60E-15	2.04E-11	9.40E-11	3.54E-11	1.50E-10
76	3.20	4.31E-22	0.	1.90E-20	1.70E-15	1.77E-21	0.	0.	0.	3.61E-15	2.24E-11	1.03E-10	3.88E-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	3.51E-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	2.86E-22	0.	5.27E-21	4.82E-16	1.09E-21	0.	0.	0.	3.63E-15	3.02E-11	1.32E-10	4.90E-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	8.07E-23	0.	5.84E-22	3.75E-17	1.55E-22	0.	0.	0.	3.64E-15	4.20E-11	9.56E-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	2.30	0.	1.25E-20	0.	0.	0.	0.	0.	0.	3.61E-15	6.09E-11	1.70E-10	4.38E-11	2.74E-10
86	2.20	0.	2.98E-20	0.	0.	0.	0.	0.	0.	3.59E-15	6.97E-11	2.00E-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.	6.48E-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.	9.62E-20	0.	0.	0.	0.	0.	0.	3.00E-15	1.53E-10	4.28E-10	1.10E-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	1.30E-10	7.72E-10
93	1.50	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	1.40	0.	8.37E-20	0.	0.	0.	0.	0.	0.	0.	2.76E-10	5.09E-10	1.31E-10	9.16E-10
95	1.30	0.	6.36E-20	0.	0.	0.	0.	0.	0.	0.	3.45E-10	7.30E-10	1.88E-10	1.26E-09
96	1.20	0.	6.17E-20	0.	0.	0.	0.	0.	0.	0.	4.40E-10	9.93E-10	2.30E-10	1.66E-09
97	1.10	0.	5.55E-20	0.	0.	0.	0.	2.12E-25	0.	0.	5.76E-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.	7.75E-10	1.47E-09	3.57E-10	2.60E-09
99	0.90	0.	4.18E-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.	1.96E-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	3.90E-10	4.43E-09
102	0.60	0.	5.67E-22	0.	0.	0.	0.	1.64E-22	0.	0.	3.69E-09	1.96E-09	4.40E-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-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.	8.36E 00	0.	0.	0.	1.84E 00	7.91E-03	1.66E 02	2.84E-01	1.77E 02
2	10.60	0.	0.	7.46E 00	0.	0.	0.	1.84E 00	8.14E-03	1.34E 00	2.83E-01	1.09E 01
3	10.50	0.	0.	7.45E 00	0.	0.	0.	1.84E 00	8.37E-03	1.35E 00	2.83E-01	1.09E 01
4	10.40	0.	0.	6.94E 00	0.	0.	0.	1.84E 00	8.62E-03	1.35E 00	2.82E-01	1.04E 01
5	10.30	0.	0.	5.94E 00	0.	0.	0.	1.85E 00	8.87E-03	1.36E 00	2.81E-01	9.43E 00
6	10.20	0.	0.	6.05E 00	0.	0.	0.	1.85E 00	9.14E-03	1.36E 00	2.80E-01	9.55E 00
7	10.10	0.	0.	5.63E 00	0.	0.	0.	1.85E 00	9.41E-03	1.36E 00	2.79E-01	9.13E 00
8	10.00	0.	0.	4.82E 00	0.	0.	0.	1.85E 00	9.70E-03	1.37E 00	2.79E-01	8.33E 00
9	9.90	0.	0.	4.92E 00	0.	0.	0.	1.86E 00	10.00E-03	1.37E 00	2.78E-01	8.43E 00
10	9.80	0.	0.	4.54E 00	0.	0.	0.	1.86E 00	1.03E-02	1.37E 00	2.77E-01	8.06E 00
11	9.70	0.	0.	3.83E 00	0.	0.	0.	1.86E 00	1.06E-02	1.38E 00	2.76E-01	7.35E 00
12	9.60	0.	0.	4.12E 00	0.	0.	0.	1.87E 00	1.10E-02	1.38E 00	2.75E-01	7.66E 00
13	9.50	0.	0.	3.44E 00	0.	0.	0.	1.87E 00	1.13E-02	1.38E 00	2.75E-01	6.98E 00
14	9.40	0.	0.	3.19E 00	0.	0.	0.	1.88E 00	1.17E-02	1.39E 00	2.74E-01	6.74E 00
15	9.30	0.	0.	3.25E 00	0.	0.	0.	1.88E 00	1.21E-02	1.39E 00	2.73E-01	6.81E 00
16	9.20	0.	0.	2.61E 00	0.	0.	0.	1.89E 00	1.25E-02	1.40E 00	2.72E-01	6.18E 00
17	9.10	0.	0.	2.67E 00	0.	0.	0.	1.90E 00	1.29E-02	4.49E-01	2.71E-01	5.31E 00
18	9.00	0.	0.	2.38E 00	0.	0.	0.	1.90E 00	1.33E-02	4.49E-01	2.71E-01	5.02E 00
19	8.90	0.	0.	2.16E 00	0.	0.	0.	1.91E 00	1.38E-02	4.49E-01	2.70E-01	4.80E 00
20	8.80	0.	0.	2.10E 00	0.	0.	0.	1.92E 00	1.42E-02	4.49E-01	2.69E-01	4.75E 00
21	8.70	0.	0.	1.78E 00	0.	0.	0.	1.92E 00	1.47E-02	4.49E-01	2.68E-01	4.44E 00
22	8.60	0.	0.	1.82E 00	0.	0.	0.	1.93E 00	1.53E-02	4.49E-01	2.68E-01	4.48E 00
23	8.50	0.	0.	1.55E 00	0.	0.	0.	1.94E 00	1.58E-02	4.49E-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	3.98E 00
27	8.10	0.	0.	1.07E 00	0.	0.	0.	1.98E 00	1.83E-02	4.51E-01	2.69E-01	3.79E 00
28	8.00	0.	0.	1.07E 00	0.	0.	0.	1.99E 00	1.90E-02	4.52E-01	2.70E-01	3.80E 00
29	7.90	0.	0.	8.96E-01	0.	0.	0.	2.00E 00	1.97E-02	4.54E-01	2.71E-01	3.64E 00
30	7.80	0.	0.	9.18E-01	0.	0.	0.	2.01E 00	2.05E-02	4.55E-01	2.72E-01	3.68E 00
31	7.70	0.	0.	7.88E-01	0.	0.	0.	2.02E 00	2.13E-02	4.57E-01	2.73E-01	3.56E 00
32	7.60	0.	0.	7.37E-01	0.	3.74E-05	0.	2.03E 00	2.21E-02	4.59E-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	4.60E-01	2.76E-01	3.47E 00
34	7.40	0.	0.	5.91E-01	0.	1.03E-03	0.	2.05E 00	2.40E-02	4.62E-01	2.77E-01	3.41E 00
35	7.30	0.	0.	5.50E-01	0.	4.48E-03	0.	2.06E 00	2.50E-02	4.64E-01	2.78E-01	3.38E 00
36	7.20	0.	0.	4.87E-01	0.	1.20E-02	0.	2.07E 00	2.61E-02	4.65E-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	2.80E-01	3.36E 00
38	7.00	1.01E-04	0.	4.14E-01	0.	7.93E-02	0.	2.11E 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	4.70E-01	2.83E-01	3.38E 00
40	6.80	1.65E-04	0.	3.52E-01	0.	1.84E-01	0.	2.14E 00	3.10E-02	4.72E-01	2.84E-01	3.47E 00
41	6.70	1.11E-04	0.	3.07E-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	4.05E-05	0.	2.06E-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	9.60E-04	2.32E-01	0.	2.21E 00	3.72E-02	4.85E-01	2.90E-01	3.39E 00
45	6.30	1.30E-05	0.	8.29E-02	4.40E-03	1.46E-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	2.59E-06	0.	2.02E-02	1.72E-02	2.79E-01	0.	2.26E 00	4.30E-02	4.98E-01	3.00E-01	3.42E 00
48	6.00	1.06E-06	0.	5.03E-03	1.58E-02	1.25E-01	0.	2.28E 00	4.52E-02	5.04E-01	3.03E-01	3.28E 00
49	5.90	2.59E-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	3.27E-08	0.	8.99E-06	3.16E-02	1.25E-01	0.	2.24E 00	5.01E-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	5.28E-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.CE 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	1.08E-10	0.	0.	0.	2.96E-02	1.94E-01	0.	0.	1.96E 00	5.57E-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	3.10E 00
55	5.30	0.	0.	0.	0.	3.31E-02	1.83E-01	0.	0.	1.99E 00	6.58E-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	3.16E 00
57	5.10	0.	0.	0.	0.	3.49E-02	1.66E-01	0.	0.	2.02E 00	7.39E-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	6.14E-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	8.08E-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.	2.56E-02	0.	3.32E-02	9.11E-02	0.	0.	2.13E 00	1.08E-01	7.32E-01	3.95E-01	3.52E 00
64	4.40	1.14E-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	1.09E-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	3.82E 00
66	4.20	1.01E-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	4.48E 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	4.30E-01	4.00E 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	7.07E-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	4.34E 00
71	3.70	6.67E-03	0.	9.42E-01	3.38E-02	2.36E-02	0.	0.	0.	2.14E 00	1.95E-01	6.86E-01	1.58E-01	4.19E 00
72	3.60	5.93E-03	0.	6.05E-01	1.95E-01	2.56E-02	0.	0.	0.	2.01E 00	2.12E-01	7.42E-01	1.75E-01	3.97E 00
73	3.50	5.45E-03	0.	8.37E-01	4.39E-01	1.96E-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.	1.06E 00	3.02E-01	1.05E 00	2.58E-01	3.45E 00
77	3.10	3.17E-03	0.	2.48E-01	8.20E-02	1.64E-02	0.	0.	0.	1.07E 00	3.33E-01	1.15E 00	2.80E-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	2.25E-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	3.38E 00
80	2.80	2.31E-03	0.	4.36E-02	6.91E-02	7.44E-03	0.	0.	0.	1.07E 00	4.53E-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	3.86E-04	0.	0.	0.	1.07E 00	6.39E-01	1.94E 00	2.13E-01	3.88E 00
84	2.40	0.	5.65E-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.	1.96E-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	2.46E 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	2.80E 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	7.70E 00
90	1.80	0.	1.24E 00	0.	0.	0.	0.	0.	0.	9.39E-01	1.73E 00	3.80E 00	6.78E-01	8.38E 00
91	1.70	0.	1.46E 00	0.	0.	0.	0.	0.	0.	8.84E-01	2.06E 00	4.54E 00	8.22E-01	9.77E 00
92	1.60	0.	1.06E 00	0.	0.	0.	0.	0.	0.	7.48E-01	2.48E 00	5.28E 00	9.66E-01	1.05E 01
93	1.50	0.	1.25E 00	0.	0.	0.	0.	0.	0.	3.40E-01	3.02E 00	6.75E 00	1.17E 00	1.25E 01
94	1.40	0.	1.26E 00	0.	0.	0.	0.	0.	0.	0.	3.73E 00	8.33E 00	1.39E 00	1.47E 01
95	1.30	0.	9.60E-01	0.	0.	0.	0.	0.	0.	0.	4.67E 00	1.07E 01	1.83E 00	1.82E 01
96	1.20	0.	9.27E-01	0.	0.	0.	0.	0.	0.	0.	5.97E 00	1.12E 01	1.81E 00	1.99E 01
97	1.10	0.	8.47E-01	0.	0.	0.	0.	1.85E-06	0.	0.	7.83E 00	1.38E 01	2.28E 00	2.47E 01
98	1.00	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	0.90	0.	6.38E-01	0.	0.	0.	0.	2.68E-05	0.	0.	1.45E 01	1.90E 01	3.02E 00	3.72E 01
100	0.80	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	0.70	0.	7.34E-02	0.	0.	0.	0.	4.43E-04	0.	0.	3.11E 01	2.40E 01	3.74E 00	5.89E 01
102	0.60	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 C.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.	5.87E-02	7.61E-04	1.86E 01	2.89E-02	1.88E 01
2	10.60	0.	0.	9.37E-02	0.	0.	0.	5.88E-02	7.83E-04	1.51E-01	2.88E-02	3.33E-01
3	10.50	0.	0.	9.36E-02	0.	0.	0.	5.89E-02	8.06E-04	1.51E-01	2.88E-02	3.33E-01
4	10.40	0.	0.	8.72E-02	0.	0.	0.	5.89E-02	8.30E-04	1.52E-01	2.87E-02	3.27E-01
5	10.30	0.	0.	7.46E-02	0.	0.	0.	5.90E-02	8.54E-04	1.52E-01	2.86E-02	3.15E-01
6	10.20	0.	0.	7.60E-02	0.	0.	0.	5.91E-02	8.80E-04	1.53E-01	2.85E-02	3.17E-01
7	10.10	0.	0.	7.07E-02	0.	0.	0.	5.92E-02	9.06E-04	1.53E-01	2.84E-02	3.12E-01
8	10.00	0.	0.	6.05E-02	0.	0.	0.	5.92E-02	9.34E-04	1.53E-01	2.84E-02	3.02E-01
9	9.90	0.	0.	6.18E-02	0.	0.	0.	5.94E-02	9.62E-04	1.54E-01	2.83E-02	3.04E-01
10	9.80	0.	0.	5.70E-02	0.	0.	0.	5.95E-02	9.92E-04	1.54E-01	2.82E-02	3.00E-01
11	9.70	0.	0.	4.81E-02	0.	0.	0.	5.96E-02	1.02E-03	1.54E-01	2.81E-02	2.91E-01
12	9.60	0.	0.	5.18E-02	0.	0.	0.	5.97E-02	1.06E-03	1.55E-01	2.80E-02	2.95E-01
13	9.50	0.	0.	4.32E-02	0.	0.	0.	5.98E-02	1.09E-03	1.55E-01	2.79E-02	2.87E-01
14	9.40	0.	0.	4.01E-02	0.	0.	0.	6.00E-02	1.12E-03	1.56E-01	2.79E-02	2.85E-01
15	9.30	0.	0.	4.08E-02	0.	0.	0.	6.02E-02	1.16E-03	1.56E-01	2.78E-02	2.86E-01
16	9.20	0.	0.	3.28E-02	0.	0.	0.	6.04E-02	1.20E-03	1.57E-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.	1.95E-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.	1.59E-02	0.	0.	0.	6.26E-02	1.63E-03	5.05E-02	2.71E-02	1.58E-01
26	8.20	0.	0.	1.59E-02	0.	0.	0.	6.29E-02	1.70E-03	5.05E-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	2.75E-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.	9.90E-03	0.	0.	0.	6.46E-02	2.05E-03	5.12E-02	2.78E-02	1.56E-01
32	7.60	0.	0.	9.25E-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	1.04E-06	0.	5.21E-03	0.	9.05E-04	0.	6.74E-02	2.73E-03	5.25E-02	2.86E-02	1.57E-01
39	6.90	2.0.E-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	1.7.E-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.	3.80E-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	4.19E-07	0.	2.59E-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	2.39E-03	0.	7.17E-02	3.94E-03	5.52E-02	3.01E-02	1.64E-01
47	6.10	2.6.E-08	0.	2.54E-04	1.96E-04	3.18E-03	0.	7.23E-02	4.14E-03	5.58E-02	3.05E-02	1.66E-01
48	6.00	1.1.E-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.	4.51E-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	3.4.E-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	2.5.E-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	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-12	0.	0.	0.	3.37E-04	2.21E-03	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	3.28E-02	1.65E-01
54	5.40	0.	0.	0.	0.	3.68E-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.	3.78E-04	2.09E-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	1.40E-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	8.36E-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	9.67E-05	0.	4.12E-03	0.	3.56E-04	8.79E-05	0.	0.	6.98E-02	1.37E-02	9.74E-02	4.38E-02	2.29E-01
68	4.00	8.76E-05	0.	1.51E-02	0.	3.39E-04	6.69E-05	0.	0.	7.01E-02	1.48E-02	1.01E-01	1.36E-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	7.96E-05	0.	1.06E-02	3.96E-03	3.26E-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	2.01E-01
73	3.50	5.65E-05	0.	1.05E-02	1.76E-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	9.66E-02	2.19E-02	1.85E-01
75	3.30	4.01E-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	3.43E-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	2.30E-01
78	3.00	2.84E-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	1.28E-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	4.45E-05	0.	0.	0.	3.42E-02	4.87E-02	1.77E-01	3.87E-02	3.03E-01
82	2.60	6.83E-06	0.	1.26E-04	4.09E-04	1.89E-05	0.	0.	0.	3.42E-02	5.46E-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	6.15E-02	2.18E-01	2.16E-02	3.35E-01
84	2.40	0.	7.10E-04	0.	3.36E-04	4.62E-07	0.	0.	0.	3.42E-02	6.96E-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.	3.26E-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.	1.55E-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	1.99E-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	2.39E-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.	2.12E-08	0.	0.	0.	7.53E-01	1.54E 00	2.32E-01	2.54E 00
98	1.00	0.	9.75E-03	0.	0.	0.	2.65E-07	0.	0.	0.	1.01E 00	1.87E 00	2.61E-01	3.15E 00
99	0.90	0.	8.01E-03	0.	0.	0.	3.06E-07	0.	0.	0.	1.39E 00	2.13E 00	3.07E-01	3.84E 00
100	0.80	0.	3.77E-03	0.	0.	0.	6.27E-06	0.	0.	0.	1.99E 00	2.45E 00	3.53E-01	4.80E 00
101	0.70	0.	9.21E-04	0.	0.	0.	5.05E-06	0.	0.	0.	3.00E 00	2.69E 00	3.81E-01	6.07E 00
102	0.60	0.	1.21E-04	0.	0.	0.	1.79E-05	0.	0.	0.	4.82E 00	3.00E 00	4.26E-01	8.25E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. 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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	9.13E-04	0.	0.	0.	1.70E-03	7.00E-05	1.74E 00	2.76E-03	1.74E 00
2	10.60	0.	0.	8.15E-04	0.	0.	0.	1.70E-03	7.20E-05	1.40E-02	2.75E-03	1.94E-02
3	10.50	0.	0.	8.14E-04	0.	0.	0.	1.70E-03	7.41E-05	1.41E-02	2.74E-03	1.94E-02
4	10.40	0.	0.	7.58E-04	0.	0.	0.	1.70E-03	7.63E-05	1.42E-02	2.73E-03	1.94E-02
5	10.30	0.	0.	6.49E-04	0.	0.	0.	1.71E-03	7.85E-05	1.42E-02	2.73E-03	1.94E-02
6	10.20	0.	0.	6.61E-04	0.	0.	0.	1.71E-03	8.09E-05	1.42E-02	2.72E-03	1.94E-02
7	10.10	0.	0.	6.15E-04	0.	0.	0.	1.71E-03	8.33E-05	1.43E-02	2.71E-03	1.94E-02
8	10.00	0.	0.	5.26E-04	0.	0.	0.	1.71E-03	8.59E-05	1.43E-02	2.70E-03	1.93E-02
9	9.90	0.	0.	5.37E-04	0.	0.	0.	1.72E-03	8.85E-05	1.43E-02	2.69E-03	1.94E-02
10	9.80	0.	0.	4.95E-04	0.	0.	0.	1.72E-03	9.12E-05	1.44E-02	2.69E-03	1.94E-02
11	9.70	0.	0.	4.18E-04	0.	0.	0.	1.72E-03	9.41E-05	1.44E-02	2.68E-03	1.93E-02
12	9.60	0.	0.	4.50E-04	0.	0.	0.	1.73E-03	9.71E-05	1.44E-02	2.67E-03	1.94E-02
13	9.50	0.	0.	3.75E-04	0.	0.	0.	1.73E-03	1.00E-04	1.45E-02	2.66E-03	1.93E-02
14	9.40	0.	0.	3.48E-04	0.	0.	0.	1.74E-03	1.03E-04	1.45E-02	2.66E-03	1.94E-02
15	9.30	0.	0.	3.55E-04	0.	0.	0.	1.74E-03	1.07E-04	1.46E-02	2.65E-03	1.94E-02
16	9.20	0.	0.	2.85E-04	0.	0.	0.	1.75E-03	1.10E-04	1.46E-02	2.64E-03	1.94E-02
17	9.10	0.	0.	2.92E-04	0.	0.	0.	1.75E-03	1.14E-04	4.69E-03	2.63E-03	9.49E-03
18	9.00	0.	0.	2.60E-04	0.	0.	0.	1.76E-03	1.18E-04	4.69E-03	2.63E-03	9.48E-03
19	8.90	0.	0.	2.36E-04	0.	0.	0.	1.77E-03	1.22E-04	4.69E-03	2.62E-03	9.43E-03
20	8.80	0.	0.	2.30E-04	0.	0.	0.	1.77E-03	1.26E-04	4.69E-03	2.61E-03	9.43E-03
21	8.70	0.	0.	1.94E-04	0.	0.	0.	1.78E-03	1.30E-04	4.69E-03	2.60E-03	9.40E-03
22	8.60	0.	0.	1.99E-04	0.	0.	0.	1.79E-03	1.35E-04	4.69E-03	2.60E-03	9.41E-03
23	8.50	0.	0.	1.70E-04	0.	0.	0.	1.79E-03	1.40E-04	4.69E-03	2.59E-03	9.39E-03
24	8.40	0.	0.	1.67E-04	0.	0.	0.	1.80E-03	1.45E-04	4.70E-03	2.58E-03	9.40E-03
25	8.30	0.	0.	1.38E-04	0.	0.	0.	1.81E-03	1.50E-04	4.71E-03	2.58E-03	9.39E-03
26	8.20	0.	0.	1.39E-04	0.	0.	0.	1.82E-03	1.56E-04	4.71E-03	2.59E-03	9.42E-03
27	8.10	0.	0.	1.17E-04	0.	0.	0.	1.83E-03	1.62E-04	4.71E-03	2.61E-03	9.43E-03
28	8.00	0.	0.	1.16E-04	0.	0.	0.	1.84E-03	1.68E-04	4.73E-03	2.62E-03	9.47E-03
29	7.90	0.	0.	9.78E-05	0.	0.	0.	1.85E-03	1.74E-04	4.74E-03	2.63E-03	9.49E-03
30	7.80	0.	0.	1.00E-04	0.	0.	0.	1.86E-03	1.81E-04	4.76E-03	2.64E-03	9.54E-03
31	7.70	0.	0.	8.61E-05	0.	0.	0.	1.87E-03	1.88E-04	4.78E-03	2.65E-03	9.57E-03
32	7.60	0.	0.	8.05E-05	0.	3.79E-09	0.	1.88E-03	1.96E-04	4.79E-03	2.66E-03	9.61E-03
33	7.50	0.	0.	7.30E-05	0.	1.50E-08	0.	1.89E-03	2.04E-04	4.81E-03	2.67E-03	9.65E-03
34	7.40	0.	0.	6.45E-05	0.	1.04E-07	0.	1.90E-03	2.13E-04	4.83E-03	2.69E-03	9.69E-03
35	7.30	0.	0.	6.01E-05	0.	4.54E-07	0.	1.91E-03	2.22E-04	4.84E-03	2.70E-03	9.73E-03
36	7.20	0.	0.	5.32E-05	0.	1.21E-06	0.	1.92E-03	2.31E-04	4.86E-03	2.71E-03	9.77E-03
37	7.10	0.	0.	5.03E-05	0.	3.62E-06	0.	1.93E-03	2.41E-04	4.88E-03	2.72E-03	9.83E-03
38	7.00	9.42E-09	0.	4.53E-05	0.	8.04E-06	0.	1.95E-03	2.51E-04	4.90E-03	2.73E-03	9.88E-03
39	6.90	1.82E-08	0.	4.08E-05	0.	9.88E-06	0.	1.97E-03	2.63E-04	4.91E-03	2.74E-03	9.93E-03
40	6.80	1.55E-08	0.	3.85E-05	0.	1.86E-05	0.	1.98E-03	2.74E-04	4.93E-03	2.75E-03	10.00E-03
41	6.70	1.11E-08	0.	3.30E-05	0.	1.99E-05	0.	2.00E-03	2.87E-04	4.95E-03	2.77E-03	1.01E-02
42	6.60	6.70E-09	0.	2.90E-05	0.	1.45E-05	0.	2.01E-03	3.00E-04	4.98E-03	2.78E-03	1.01E-02
43	6.50	3.81E-09	0.	2.25E-05	0.	2.32E-05	0.	2.03E-03	3.14E-04	5.02E-03	2.80E-03	1.02E-02
44	6.40	2.14E-09	0.	1.51E-05	9.72E-08	2.35E-05	0.	2.04E-03	3.29E-04	5.06E-03	2.81E-03	1.03E-02
45	6.30	1.22E-09	0.	9.05E-06	4.46E-07	1.48E-05	0.	2.06E-03	3.45E-04	5.11E-03	2.84E-03	1.04E-02
46	6.20	5.41E-10	0.	4.85E-06	6.19E-07	2.12E-05	0.	2.08E-03	3.63E-04	5.15E-03	2.87E-03	1.05E-02
47	6.10	2.44E-10	0.	2.21E-06	1.74E-06	2.82E-05	0.	2.09E-03	3.81E-04	5.20E-03	2.91E-03	1.06E-02
48	6.00	10.00E-11	0.	5.49E-07	1.60E-06	1.27E-05	0.	2.11E-03	4.00E-04	5.27E-03	2.94E-03	1.07E-02
49	5.90	2.43E-11	0.	3.92E-08	2.32E-06	1.27E-05	0.	2.11E-03	4.21E-04	5.34E-03	2.98E-03	1.09E-02
50	5.80	3.09E-12	0.	9.81E-10	3.20E-06	1.27E-05	0.	2.08E-03	4.44E-04	5.40E-03	3.01E-03	1.10E-02
51	5.70	2.27E-13	0.	0.	3.66E-06	1.40E-05	0.	1.95E-03	4.68E-04	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 (IONS)	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	1.10E-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.	3.57E-06	1.29E-05	0.	0.	1.86E-03	6.17E-04	6.06E-03	3.28E-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	1.52E-05	0.	0.	1.92E-03	7.85E-04	6.84E-03	3.55E-03	1.31E-02
61	4.70	7.66E-07	0.	0.	0.	3.69E-06	1.36E-05	0.	0.	1.93E-03	8.37E-04	7.06E-03	3.64E-03	1.35E-02
62	4.60	1.02E-06	0.	0.	0.	3.75E-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	6.48E-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.	9.16E-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	8.76E-07	0.	3.58E-05	0.	3.16E-06	7.81E-07	0.	0.	2.02E-03	1.26E-03	9.08E-03	4.17E-03	1.66E-02
68	4.00	7.96E-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	6.65E-07	0.	5.95E-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	2.90E-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	3.87E-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.	9.80E-04	2.23E-03	9.01E-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.	9.81E-04	2.44E-03	9.98E-03	2.29E-03	1.60E-02
76	3.20	3.11E-07	0.	3.52E-05	5.02E-04	1.79E-06	0.	0.	0.	9.83E-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.	9.85E-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.	9.88E-04	3.25E-03	1.30E-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	4.48E-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	2.90E-02
84	2.40	0.	6.17E-06	0.	9.62E-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	7.28E-03	1.86E-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	2.20E-02	3.56E-03	3.50E-02
87	2.10	0.	6.02E-05	0.	0.	0.	0.	0.	0.	9.75E-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	4.63E-02
89	1.90	0.	1.63E-04	0.	0.	0.	0.	0.	0.	9.08E-04	1.30E-02	3.33E-02	5.46E-03	5.29E-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.	1.59E-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.	3.15E-04	2.68E-02	7.05E-02	1.14E-02	1.09E-01
94	1.40	0.	1.37E-04	0.	0.	0.	0.	0.	0.	0.	3.30E-02	8.70E-02	1.35E-02	1.34E-01
95	1.30	0.	1.05E-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.	1.08E-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.	2.72E-09	0.	0.	1.28E-01	1.99E-01	2.93E-02	3.56E-01
100	0.80	0.	3.28E-05	0.	0.	0.	0.	5.57E-08	0.	0.	1.83E-01	2.29E-01	3.37E-02	4.45E-01
101	0.70	0.	8.01E-06	0.	0.	0.	0.	4.49E-08	0.	0.	2.76E-01	2.51E-01	3.63E-02	5.63E-01
102	0.60	0.	1.05E-06	0.	0.	0.	0.	1.59E-07	0.	0.	4.43E-01	2.80E-01	4.06E-02	7.64E-01

ABSORPTION COEFFICIENTS OF 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 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.	5.31E-06	0.	0.	0.	3.96E-05	5.41E-06	1.33E-01	2.31E-04	1.33E-01
2	10.60	0.	0.	4.74E-06	0.	0.	0.	3.96E-05	5.56E-06	1.07E-03	2.31E-04	1.35E-03
3	10.50	0.	0.	4.74E-06	0.	0.	0.	3.97E-05	5.72E-06	1.08E-03	2.30E-04	1.36E-03
4	10.40	0.	0.	4.41E-06	0.	0.	0.	3.98E-05	5.89E-06	1.08E-03	2.29E-04	1.36E-03
5	10.30	0.	0.	3.77E-06	0.	0.	0.	3.98E-05	6.06E-06	1.08E-03	2.29E-04	1.36E-03
6	10.20	0.	0.	3.85E-06	0.	0.	0.	3.99E-05	6.25E-06	1.09E-03	2.28E-04	1.36E-03
7	10.10	0.	0.	3.58E-06	0.	0.	0.	3.99E-05	6.43E-06	1.09E-03	2.27E-04	1.36E-03
8	10.00	0.	0.	3.06E-06	0.	0.	0.	4.00E-05	6.63E-06	1.09E-03	2.27E-04	1.37E-03
9	9.90	0.	0.	3.12E-06	0.	0.	0.	4.00E-05	6.83E-06	1.09E-03	2.26E-04	1.37E-03
10	9.80	0.	0.	2.88E-06	0.	0.	0.	4.01E-05	7.04E-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.	4.03E-05	7.50E-06	1.10E-03	2.24E-04	1.38E-03
13	9.50	0.	0.	2.18E-06	0.	0.	0.	4.03E-05	7.74E-06	1.10E-03	2.23E-04	1.38E-03
14	9.40	0.	0.	2.03E-06	0.	0.	0.	4.05E-05	7.99E-06	1.11E-03	2.23E-04	1.38E-03
15	9.30	0.	0.	2.07E-06	0.	0.	0.	4.06E-05	8.25E-06	1.11E-03	2.22E-04	1.38E-03
16	9.20	0.	0.	1.66E-06	0.	0.	0.	4.08E-05	8.52E-06	1.11E-03	2.21E-04	1.39E-03
17	9.10	0.	0.	1.70E-06	0.	0.	0.	4.09E-05	8.80E-06	3.58E-04	2.21E-04	6.30E-04
18	9.00	0.	0.	1.51E-06	0.	0.	0.	4.11E-05	9.10E-06	3.58E-04	2.20E-04	6.30E-04
19	8.90	0.	0.	1.37E-06	0.	0.	0.	4.12E-05	9.41E-06	3.58E-04	2.20E-04	6.29E-04
20	8.80	0.	0.	1.34E-06	0.	0.	0.	4.14E-05	9.74E-06	3.58E-04	2.19E-04	6.29E-04
21	8.70	0.	0.	1.13E-06	0.	0.	0.	4.15E-05	1.01E-05	3.58E-04	2.18E-04	6.29E-04
22	8.60	0.	0.	1.16E-06	0.	0.	0.	4.16E-05	1.04E-05	3.58E-04	2.18E-04	6.29E-04
23	8.50	0.	0.	9.88E-07	0.	0.	0.	4.18E-05	1.08E-05	3.58E-04	2.17E-04	6.29E-04
24	8.40	0.	0.	9.72E-07	0.	0.	0.	4.20E-05	1.12E-05	3.58E-04	2.17E-04	6.29E-04
25	8.30	0.	0.	8.05E-07	0.	0.	0.	4.22E-05	1.16E-05	3.59E-04	2.17E-04	6.30E-04
26	8.20	0.	0.	8.06E-07	0.	0.	0.	4.25E-05	1.20E-05	3.59E-04	2.18E-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.	2.42E-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.	6.66E-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.	3.10E-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	1.86E-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	1.26E-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	7.82E-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.	9.28E-08	0.	4.69E-05	2.32E-05	3.80E-04	2.33E-04	6.84E-04
43	6.50	2.68E-11	0.	1.31E-07	0.	1.48E-07	0.	4.73E-05	2.43E-05	3.83E-04	2.35E-04	6.90E-04
44	6.40	1.51E-11	0.	8.76E-08	6.22E-10	1.50E-07	0.	4.77E-05	2.54E-05	3.86E-04	2.36E-04	6.96E-04
45	6.30	8.59E-12	0.	5.27E-08	2.85E-09	9.46E-06	0.	4.80E-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	7.03E-13	0.	3.19E-09	1.03E-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	2.05E-08	8.10E-08	0.	4.84E-05	3.42E-05	4.12E-04	2.53E-04	7.48E-04
51	5.70	1.65E-15	0.	0.	2.34E-08	8.98E-08	0.	4.55E-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 (IONS)	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.	4.25E-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	6.06E-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.	1.54E-07	0.	2.01E-08	2.53E-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	6.18E-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.	3.46E-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	5.09E-09	0.	5.36E-07	2.38E-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	1.05E-05	1.27E-08	0.	0.	0.	3.96E-05	1.58E-04	6.14E-04	1.58E-04	9.80E-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	5.47E-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.	2.05E-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	7.25E-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.	6.40E-09	2.45E-07	1.08E-09	0.	0.	0.	2.31E-05	3.88E-04	1.36E-03	3.33E-04	2.11E-03
83	2.50	3.06E-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	2.18E-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	2.08E-04	2.53E-03
85	2.30	0.	1.25E-07	0.	0.	0.	0.	0.	0.	2.29E-05	5.62E-04	1.42E-03	2.48E-04	2.26E-03
86	2.20	0.	3.05E-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	5.52E-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.	8.00E-07	0.	0.	0.	0.	0.	0.	0.	2.55E-03	6.64E-03	1.13E-03	1.03E-02
95	1.30	0.	6.10E-07	0.	0.	0.	0.	0.	0.	0.	3.19E-03	8.56E-03	1.49E-03	1.32E-02
96	1.20	0.	5.89E-07	0.	0.	0.	0.	0.	0.	0.	4.08E-03	8.90E-03	1.47E-03	1.45E-02
97	1.10	0.	5.38E-07	0.	0.	0.	0.	1.20E-12	0.	0.	5.35E-03	1.10E-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	2.09E-03	2.26E-02
99	0.90	0.	4.05E-07	0.	0.	0.	0.	1.74E-11	0.	0.	9.89E-03	1.52E-02	2.45E-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-10	0.	0.	2.13E-02	1.91E-02	3.04E-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	3.40E-03	5.90E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1400C. DENSITY (GM/CC) 1.293E-06 (10.0E-04 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 H-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.	1.11E-08	0.	0.	0.	4.75E-07	2.54E-07	4.87E-05	1.28E-05	6.22E-05
2	10.60	0.	0.	9.87E-09	0.	0.	0.	4.76E-07	2.62E-07	4.89E-05	1.28E-05	6.24E-05
3	10.50	0.	0.	9.86E-09	0.	0.	0.	4.76E-07	2.69E-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	6.28E-05
5	10.30	0.	0.	7.86E-09	0.	0.	0.	4.78E-07	2.85E-07	4.94E-05	1.26E-05	6.29E-05
6	10.20	0.	0.	8.01E-09	0.	0.	0.	4.78E-07	2.94E-07	4.95E-05	1.26E-05	6.29E-05
7	10.10	0.	0.	7.45E-09	0.	0.	0.	4.79E-07	3.03E-07	4.96E-05	1.26E-05	6.30E-05
8	10.00	0.	0.	6.37E-09	0.	0.	0.	4.80E-07	3.12E-07	4.97E-05	1.25E-05	6.31E-05
9	9.90	0.	0.	6.50E-09	0.	0.	0.	4.80E-07	3.22E-07	4.99E-05	1.25E-05	6.32E-05
10	9.80	0.	0.	6.00E-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.	5.45E-09	0.	0.	0.	4.83E-07	3.53E-07	5.02E-05	1.24E-05	6.35E-05
13	9.50	0.	0.	4.55E-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.	4.30E-09	0.	0.	0.	4.88E-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	2.95E-05
17	9.10	0.	0.	3.54E-09	0.	0.	0.	4.91E-07	4.14E-07	1.63E-05	1.22E-05	2.95E-05
18	9.00	0.	0.	3.15E-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.	4.95E-07	4.43E-07	1.63E-05	1.21E-05	2.94E-05
20	8.80	0.	0.	2.78E-09	0.	0.	0.	4.96E-07	4.58E-07	1.63E-05	1.21E-05	2.94E-05
21	8.70	0.	0.	2.35E-09	0.	0.	0.	4.98E-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.	1.68E-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	2.96E-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.	1.96E-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.	5.85E-11	0.	5.41E-07	8.76E-07	1.70E-05	1.26E-05	3.10E-05
38	7.00	2.03E-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	3.91E-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.	4.66E-10	0.	3.01E-10	0.	5.54E-07	9.97E-07	1.72E-05	1.28E-05	3.15E-05
41	6.70	2.39E-13	0.	4.00E-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.	3.51E-10	0.	2.34E-10	0.	5.63E-07	1.09E-06	1.73E-05	1.29E-05	3.19E-05
43	6.50	8.20E-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	1.57E-12	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	10.00E-12	3.42E-10	0.	5.81E-07	1.32E-06	1.79E-05	1.33E-05	3.31E-05
47	6.10	5.24E-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	2.59E-11	2.05E-10	0.	5.90E-07	1.45E-06	1.83E-05	1.36E-05	3.40E-05
49	5.90	5.23E-16	0.	4.75E-13	3.75E-11	2.05E-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	2.04E-10	0.	5.81E-07	1.61E-06	1.88E-05	1.40E-05	3.50E-05
51	5.70	4.86E-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 VIB-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.	5.28E-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	2.20E-11	0.	0.	0.	6.05E-11	2.00E-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	1.05E-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	2.04E-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.	1.59E-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	1.56E-11	0.	1.19E-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	3.70	1.35E-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	3.60	1.20E-11	0.	8.00E-10	4.49E-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.	4.75E-07	7.42E-06	2.80E-05	8.72E-06	4.47E-05
74	3.40	9.91E-12	0.	6.53E-10	1.20E-08	3.57E-11	0.	0.	0.	2.74E-07	8.10E-06	3.14E-05	9.66E-06	4.94E-05
75	3.30	7.84E-12	0.	6.78E-10	5.25E-08	2.78E-11	0.	0.	0.	2.75E-07	8.86E-06	3.47E-05	1.06E-05	5.45E-05
76	3.20	6.76E-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	1.89E-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	2.48E-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	1.66E-05	9.74E-05
83	2.50	9.18E-14	0.	1.51E-12	2.15E-09	6.32E-13	0.	0.	0.	2.77E-07	2.05E-05	7.05E-05	9.36E-06	1.01E-04
84	2.40	0.	7.47E-11	0.	1.93E-09	6.63E-14	0.	0.	0.	2.77E-07	2.32E-05	5.35E-05	1.15E-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.	2.64E-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.	8.80E-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	3.90E-04	7.94E-05	6.20E-04
96	1.20	0.	1.23E-09	0.	0.	0.	0.	0.	0.	0.	1.92E-04	4.06E-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	5.01E-04	1.02E-04	8.56E-04
98	1.00	0.	1.03E-09	0.	0.	0.	0.	3.81E-14	0.	0.	3.38E-04	6.06E-04	1.15E-04	1.06E-03
99	0.90	0.	8.43E-10	0.	0.	0.	0.	4.39E-14	0.	0.	4.66E-04	6.92E-04	1.36E-04	1.29E-03
100	0.80	0.	3.97E-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.	1.28E-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) 1.293E-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.	3.97E-12	0.	0.	0.	1.47E-09	4.97E-09	9.26E-07	2.83E-07	1.22E-06
2	10.60	0.	0.	3.54E-12	0.	0.	0.	1.47E-09	5.11E-09	9.31E-07	2.83E-07	1.22E-06
3	10.50	0.	0.	3.54E-12	0.	0.	0.	1.47E-09	5.26E-09	9.31E-07	2.82E-07	1.22E-06
4	10.40	0.	0.	3.30E-12	0.	0.	0.	1.48E-09	5.41E-09	9.35E-07	2.81E-07	1.22E-06
5	10.30	0.	0.	2.82E-12	0.	0.	0.	1.48E-09	5.57E-09	9.36E-07	2.80E-07	1.22E-06
6	10.20	0.	0.	2.88E-12	0.	0.	0.	1.48E-09	5.74E-09	9.38E-07	2.79E-07	1.23E-06
7	10.10	0.	0.	2.67E-12	0.	0.	0.	1.48E-09	5.91E-09	9.41E-07	2.79E-07	1.23E-06
8	10.00	0.	0.	2.29E-12	0.	0.	0.	1.48E-09	6.09E-09	9.43E-07	2.78E-07	1.23E-06
9	9.90	0.	0.	2.34E-12	0.	0.	0.	1.49E-09	6.28E-09	9.45E-07	2.77E-07	1.23E-06
10	9.80	0.	0.	2.15E-12	0.	0.	0.	1.49E-09	6.47E-09	9.48E-07	2.76E-07	1.23E-06
11	9.70	0.	0.	1.82E-12	0.	0.	0.	1.49E-09	6.68E-09	9.50E-07	2.75E-07	1.23E-06
12	9.60	0.	0.	1.96E-12	0.	0.	0.	1.50E-09	6.89E-09	9.53E-07	2.75E-07	1.24E-06
13	9.50	0.	0.	1.63E-12	0.	0.	0.	1.50E-09	7.11E-09	9.55E-07	2.74E-07	1.24E-06
14	9.40	0.	0.	1.52E-12	0.	0.	0.	1.50E-09	7.34E-09	9.58E-07	2.73E-07	1.24E-06
15	9.30	0.	0.	1.54E-12	0.	0.	0.	1.51E-09	7.58E-09	3.11E-07	2.72E-07	5.92E-07
16	9.20	0.	0.	1.24E-12	0.	0.	0.	1.51E-09	7.83E-09	3.10E-07	2.71E-07	5.91E-07
17	9.10	0.	0.	1.27E-12	0.	0.	0.	1.52E-09	8.09E-09	3.10E-07	2.71E-07	5.91E-07
18	9.00	0.	0.	1.13E-12	0.	0.	0.	1.53E-09	8.36E-09	3.10E-07	2.70E-07	5.90E-07
19	8.90	0.	0.	1.03E-12	0.	0.	0.	1.53E-09	8.65E-09	3.10E-07	2.69E-07	5.89E-07
20	8.80	0.	0.	9.99E-13	0.	0.	0.	1.54E-09	8.95E-09	3.10E-07	2.68E-07	5.89E-07
21	8.70	0.	0.	8.45E-13	0.	0.	0.	1.54E-09	9.26E-09	3.10E-07	2.68E-07	5.89E-07
22	8.60	0.	0.	8.65E-13	0.	0.	0.	1.55E-09	9.59E-09	3.10E-07	2.67E-07	5.88E-07
23	8.50	0.	0.	7.38E-13	0.	0.	0.	1.55E-09	9.93E-09	3.10E-07	2.66E-07	5.88E-07
24	8.40	0.	0.	7.27E-13	0.	0.	0.	1.56E-09	1.03E-08	3.11E-07	2.66E-07	5.88E-07
25	8.30	0.	0.	6.02E-13	0.	0.	0.	1.57E-09	1.07E-08	3.11E-07	2.66E-07	5.89E-07
26	8.20	0.	0.	6.03E-13	0.	0.	0.	1.58E-09	1.11E-08	3.11E-07	2.67E-07	5.91E-07
27	8.10	0.	0.	5.08E-13	0.	0.	0.	1.58E-09	1.15E-08	3.12E-07	2.68E-07	5.93E-07
28	8.00	0.	0.	5.06E-13	0.	0.	0.	1.59E-09	1.19E-08	3.12E-07	2.69E-07	5.95E-07
29	7.90	0.	0.	4.26E-13	0.	0.	0.	1.60E-09	1.24E-08	3.13E-07	2.70E-07	5.97E-07
30	7.80	0.	0.	4.36E-13	0.	0.	0.	1.61E-09	1.29E-08	3.14E-07	2.71E-07	6.00E-07
31	7.70	0.	0.	3.75E-13	0.	0.	0.	1.62E-09	1.34E-08	3.15E-07	2.73E-07	6.03E-07
32	7.60	0.	0.	3.50E-13	0.	2.57E-17	0.	1.63E-09	1.39E-08	3.16E-07	2.74E-07	6.06E-07
33	7.50	0.	0.	3.18E-13	0.	1.02E-16	0.	1.63E-09	1.45E-08	3.18E-07	2.75E-07	6.09E-07
34	7.40	0.	0.	2.81E-13	0.	7.06E-16	0.	1.64E-09	1.51E-08	3.19E-07	2.76E-07	6.12E-07
35	7.30	0.	0.	2.61E-13	0.	3.08E-15	0.	1.65E-09	1.57E-08	3.20E-07	2.77E-07	6.14E-07
36	7.20	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	7.10	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	7.00	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	6.90	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	6.80	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	6.70	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	6.60	7.07E-17	0.	1.26E-13	0.	9.83E-14	0.	1.74E-09	2.13E-08	3.29E-07	2.86E-07	6.38E-07
43	6.50	4.03E-17	0.	9.80E-14	0.	1.57E-13	0.	1.76E-09	2.23E-08	3.32E-07	2.88E-07	6.44E-07
44	6.40	2.26E-17	0.	6.55E-14	6.59E-16	1.59E-13	0.	1.77E-09	2.34E-08	3.35E-07	2.89E-07	6.49E-07
45	6.30	1.29E-17	0.	3.94E-14	3.02E-15	1.00E-13	0.	1.78E-09	2.45E-08	3.37E-07	2.92E-07	6.55E-07
46	6.20	5.72E-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	6.10	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	6.00	1.06E-18	0.	2.39E-15	1.09E-14	8.60E-14	0.	1.82E-09	2.84E-08	3.48E-07	3.02E-07	6.81E-07
49	5.90	2.57E-19	0.	1.71E-16	1.58E-14	8.60E-14	0.	1.82E-09	2.99E-08	3.53E-07	3.06E-07	6.90E-07
50	5.80	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	5.70	2.40E-21	0.	0.	2.48E-14	9.52E-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) 1.293E-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	1.07E-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	9.53E-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.	2.38E-14	1.11E-13	0.	0.	1.65E-09	5.24E-08	4.37E-07	3.58E-07	8.48E-07
60	4.80	6.15E-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	8.03E-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	1.06E-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.	3.88E-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	1.00E-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	9.26E-15	0.	1.56E-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	5.55E-07	1.33E-07	7.86E-07
69	3.90	7.03E-15	0.	2.59E-13	1.17E-11	1.84E-14	1.60E-15	0.	0.	1.75E-09	1.04E-07	4.37E-07	1.37E-07	6.81E-07
70	3.80	7.64E-15	0.	4.01E-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	2.00E-11	1.62E-14	0.	0.	0.	1.72E-09	1.22E-07	4.38E-07	1.58E-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.	1.53E-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	3.10E-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.	7.06E-14	1.31E-10	1.04E-14	0.	0.	0.	8.55E-10	2.31E-07	8.56E-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	1.75E-06
82	2.60	6.52E-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	2.07E-07	1.43E-06
84	2.40	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	2.30	0.	9.32E-14	0.	0.	0.	0.	0.	0.	8.51E-10	5.17E-07	1.23E-06	3.05E-07	2.05E-06
86	2.20	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	4.28E-07	2.80E-06
88	2.00	0.	4.90E-13	0.	0.	0.	0.	0.	0.	8.17E-10	7.91E-07	1.93E-06	4.90E-07	3.22E-06
89	1.90	0.	7.10E-13	0.	0.	0.	0.	0.	0.	7.86E-10	9.24E-07	2.20E-06	5.61E-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	6.76E-07	4.38E-06
91	1.70	0.	6.92E-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	3.64E-06	9.15E-07	6.12E-06
93	1.50	0.	5.95E-13	0.	0.	0.	0.	0.	0.	2.72E-10	1.90E-06	4.35E-06	1.12E-06	7.37E-06
94	1.40	0.	5.98E-13	0.	0.	0.	0.	0.	0.	0.	2.34E-06	3.85E-06	1.32E-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	1.81E-06	1.31E-05
97	1.10	0.	4.02E-13	0.	0.	0.	0.	1.27E-18	0.	0.	4.92E-06	9.50E-06	2.10E-06	1.65E-05
98	1.00	0.	3.69E-13	0.	0.	0.	0.	1.60E-17	0.	0.	6.61E-06	1.12E-05	2.56E-06	2.03E-05
99	0.90	0.	3.03E-13	0.	0.	0.	0.	1.84E-17	0.	0.	9.09E-06	1.31E-05	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-15	0.	0.	0.	0.	1.08E-15	0.	0.	3.15E-05	1.50E-05	3.15E-06	4.96E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 14000. 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.	4.99E-16	0.	0.	0.	1.81E-12	5.61E-11	1.04E-08	3.29E-09	1.37E-08
2	10.60	0.	0.	4.45E-16	0.	0.	0.	1.82E-12	5.77E-11	1.04E-08	3.28E-09	1.38E-08
3	10.50	0.	0.	4.44E-16	0.	0.	0.	1.82E-12	5.94E-11	1.05E-08	3.27E-09	1.38E-08
4	10.40	0.	0.	4.14E-16	0.	0.	0.	1.82E-12	6.11E-11	1.05E-08	3.26E-09	1.38E-08
5	10.30	0.	0.	3.54E-16	0.	0.	0.	1.82E-12	6.29E-11	1.05E-08	3.25E-09	1.39E-08
6	10.20	0.	0.	3.61E-16	0.	0.	0.	1.83E-12	6.48E-11	1.06E-08	3.24E-09	1.39E-08
7	10.10	0.	0.	3.36E-16	0.	0.	0.	1.83E-12	6.67E-11	1.06E-08	3.23E-09	1.39E-08
8	10.00	0.	0.	2.87E-16	0.	0.	0.	1.83E-12	6.88E-11	1.06E-08	3.22E-09	1.39E-08
9	9.90	0.	0.	2.93E-16	0.	0.	0.	1.83E-12	7.09E-11	1.06E-08	3.21E-09	1.39E-08
10	9.80	0.	0.	2.70E-16	0.	0.	0.	1.84E-12	7.31E-11	1.07E-08	3.21E-09	1.40E-08
11	9.70	0.	0.	2.28E-16	0.	0.	0.	1.84E-12	7.54E-11	1.07E-08	3.20E-09	1.40E-08
12	9.60	0.	0.	2.46E-16	0.	0.	0.	1.84E-12	7.78E-11	1.07E-08	3.19E-09	1.40E-08
13	9.50	0.	0.	2.05E-16	0.	0.	0.	1.85E-12	8.03E-11	1.08E-08	3.18E-09	1.40E-08
14	9.40	0.	0.	1.90E-16	0.	0.	0.	1.85E-12	8.29E-11	1.08E-08	3.17E-09	1.40E-08
15	9.30	0.	0.	1.94E-16	0.	0.	0.	1.86E-12	8.56E-11	3.54E-09	3.16E-09	6.78E-09
16	9.20	0.	0.	1.56E-16	0.	0.	0.	1.87E-12	8.84E-11	3.53E-09	3.15E-09	6.77E-09
17	9.10	0.	0.	1.59E-16	0.	0.	0.	1.88E-12	9.13E-11	3.53E-09	3.14E-09	6.77E-09
18	9.00	0.	0.	1.42E-16	0.	0.	0.	1.88E-12	9.44E-11	3.53E-09	3.13E-09	6.76E-09
19	8.90	0.	0.	1.29E-16	0.	0.	0.	1.89E-12	9.77E-11	3.53E-09	3.12E-09	6.75E-09
20	8.80	0.	0.	1.25E-16	0.	0.	0.	1.89E-12	1.01E-10	3.53E-09	3.11E-09	6.75E-09
21	8.70	0.	0.	1.06E-16	0.	0.	0.	1.90E-12	1.05E-10	3.53E-09	3.11E-09	6.74E-09
22	8.60	0.	0.	1.06E-16	0.	0.	0.	1.91E-12	1.08E-10	3.53E-09	3.10E-09	6.74E-09
23	8.50	0.	0.	9.27E-17	0.	0.	0.	1.91E-12	1.12E-10	3.54E-09	3.09E-09	6.74E-09
24	8.40	0.	0.	9.12E-17	0.	0.	0.	1.92E-12	1.16E-10	3.54E-09	3.08E-09	6.74E-09
25	8.30	0.	0.	7.55E-17	0.	0.	0.	1.93E-12	1.20E-10	3.50E-09	3.08E-09	6.70E-09
26	8.20	0.	0.	7.57E-17	0.	0.	0.	1.94E-12	1.25E-10	3.50E-09	3.09E-09	6.73E-09
27	8.10	0.	0.	6.38E-17	0.	0.	0.	1.96E-12	1.30E-10	3.51E-09	3.11E-09	6.75E-09
28	8.00	0.	0.	6.35E-17	0.	0.	0.	1.97E-12	1.35E-10	3.52E-09	3.12E-09	6.78E-09
29	7.90	0.	0.	5.34E-17	0.	0.	0.	1.98E-12	1.40E-10	3.53E-09	3.14E-09	6.81E-09
30	7.80	0.	0.	5.48E-17	0.	0.	0.	1.99E-12	1.45E-10	3.54E-09	3.15E-09	6.84E-09
31	7.70	0.	0.	4.70E-17	0.	0.	0.	2.00E-12	1.51E-10	3.56E-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	3.57E-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	3.58E-09	3.19E-09	6.94E-09
34	7.40	0.	0.	3.52E-17	0.	9.18E-20	0.	2.03E-12	1.70E-10	3.60E-09	3.20E-09	6.97E-09
35	7.30	0.	0.	3.28E-17	0.	4.01E-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.	7.09E-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.	8.71E-18	0.	2.10E-12	2.10E-10	3.67E-09	3.27E-09	7.15E-09
40	6.80	2.20E-20	0.	2.10E-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.	1.80E-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.	1.58E-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	1.30E-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	7.57E-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	7.67E-09
48	6.00	1.42E-22	0.	3.00E-19	1.42E-18	1.12E-17	0.	2.25E-12	3.21E-10	3.90E-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	2.83E-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	3.95E-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.	2.88E-18	1.74E-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	1.44E-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	1.06E-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	1.56E-18	0.	4.86E-18	0.	2.95E-18	5.71E-18	0.	0.	2.12E-12	8.18E-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	1.25E-18	0.	1.96E-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-14	2.39E-18	2.08E-19	0.	0.	2.16E-12	1.18E-09	4.92E-09	1.60E-09	7.69E-09
70	3.80	1.03E-18	0.	5.03E-17	6.92E-14	2.55E-18	0.	0.	0.	2.15E-12	1.27E-09	5.12E-09	1.66E-09	8.05E-09
71	3.70	8.93E-19	0.	5.62E-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	7.30E-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.	2.95E-17	3.65E-14	1.95E-18	0.	0.	0.	1.05E-12	1.78E-09	6.66E-09	2.49E-09	1.09E-08
75	3.30	5.19E-19	0.	3.06E-17	1.59E-13	1.52E-18	0.	0.	0.	1.05E-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.	1.05E-12	2.14E-09	8.11E-09	2.99E-09	1.32E-08
77	3.10	4.18E-19	0.	1.48E-17	5.73E-14	1.47E-18	0.	0.	0.	1.05E-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.	1.05E-12	2.61E-09	9.60E-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	1.04E-08	3.77E-09	1.70E-08
80	2.80	3.10E-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	8.80E-20	0.	6.01E-19	7.14E-15	1.48E-19	0.	0.	0.	1.06E-12	4.02E-09	1.32E-08	2.08E-09	1.93E-08
83	2.50	6.06E-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	2.95E-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.	3.29E-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.	6.15E-17	0.	0.	0.	0.	0.	0.	1.01E-12	8.93E-09	2.17E-08	5.68E-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	1.46E-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	1.06E-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.	7.46E-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	5.60E-07

APSORPTION 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-K 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.	5.11E-20	0.	0.	0.	1.86E-15	5.72E-13	1.10E-10	3.36E-11	1.45E-10
2	10.60	0.	0.	4.56E-20	0.	0.	0.	1.87E-15	5.89E-13	1.11E-10	3.35E-11	1.45E-10
3	10.50	0.	0.	4.56E-20	0.	0.	0.	1.87E-15	6.06E-13	1.12E-10	3.34E-11	1.46E-10
4	10.40	0.	0.	4.25E-20	0.	0.	0.	1.87E-15	6.24E-13	1.12E-10	3.33E-11	1.46E-10
5	10.30	0.	0.	3.63E-20	0.	0.	0.	1.87E-15	6.42E-13	1.12E-10	3.32E-11	1.46E-10
6	10.20	0.	0.	3.70E-20	0.	0.	0.	1.88E-15	6.61E-13	1.12E-10	3.31E-11	1.46E-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	7.46E-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.	2.52E-20	0.	0.	0.	1.89E-15	7.94E-13	1.14E-10	3.25E-11	1.48E-10
13	9.50	0.	0.	2.10E-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.	5.62E-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.	4.51E-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.	8.98E-22	0.	2.16E-15	2.15E-12	4.09E-11	3.34E-11	7.64E-11
40	6.80	2.29E-24	0.	2.15E-21	0.	1.69E-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	9.89E-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	1.80E-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	8.20E-11
47	6.10	3.60E-26	0.	1.24E-22	1.58E-22	2.57E-21	0.	2.29E-15	3.11E-12	3.97E-11	3.53E-11	7.82E-11
48	6.00	1.48E-26	0.	3.07E-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

APSORPTION 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.	5.11E-20	0.	0.	0.	1.86E-15	5.72E-13	1.10E-10	3.36E-11	1.45E-10
2	10.60	0.	0.	4.56E-20	0.	0.	0.	1.87E-15	5.89E-13	1.11E-10	3.35E-11	1.45E-10
3	10.50	0.	0.	4.56E-20	0.	0.	0.	1.87E-15	6.06E-13	1.12E-10	3.34E-11	1.46E-10
4	10.40	0.	0.	4.25E-20	0.	0.	0.	1.87E-15	6.24E-13	1.12E-10	3.33E-11	1.46E-10
5	10.30	0.	0.	3.63E-20	0.	0.	0.	1.87E-15	6.42E-13	1.12E-10	3.32E-11	1.46E-10
6	10.20	0.	0.	3.70E-20	0.	0.	0.	1.88E-15	6.61E-13	1.12E-10	3.31E-11	1.46E-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	7.46E-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.	2.52E-20	0.	0.	0.	1.89E-15	7.94E-13	1.14E-10	3.25E-11	1.48E-10
13	9.50	0.	0.	2.10E-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.	5.62E-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.	4.51E-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.	8.98E-22	0.	2.16E-15	2.15E-12	4.09E-11	3.34E-11	7.64E-11
40	6.80	2.29E-24	0.	2.15E-21	0.	1.69E-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	9.89E-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	1.80E-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	8.20E-11
47	6.10	3.62E-26	0.	1.24E-22	1.58E-22	2.57E-21	0.	2.29E-15	3.11E-12	3.97E-11	3.53E-11	7.82E-11
48	6.00	1.48E-26	0.	3.07E-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	1.5cE-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	4.26E-12	4.34E-11	3.80E-11	8.57E-11
54	5.40	0.	0.	0.	0.	2.97E-22	1.28E-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	5.68E-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	8.52E-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.	2.99E-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	9.26E-23	0.	5.76E-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	2.78E-11	1.23E-10
76	3.20	4.60E-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	2.01E-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	7.76E-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	6.30E-25	0.	6.97E-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.	3.37E-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	1.06E-10	2.51E-10	6.64E-11	4.23E-10
90	1.80	0.	7.96E-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.	8.91E-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	1.08E-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.	2.70E-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.	3.90E-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.	4.49E-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 (1.0E 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.	5.25E 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	2.50E 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.	3.90E 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	9.07E 00
8	10.00	0.	0.	3.14E 00	0.	0.	0.	2.36E 00	2.23E-02	2.54E 00	5.07E-01	8.58E 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.	2.98E 00	0.	0.	0.	2.37E 00	2.37E-02	2.56E 00	5.04E-01	8.44E 00
11	9.70	0.	0.	2.53E 00	0.	0.	0.	2.38E 00	2.44E-02	2.56E 00	5.03E-01	8.00E 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.	2.30E 00	0.	0.	0.	2.38E 00	2.60E-02	2.58E 00	4.99E-01	7.78E 00
14	9.40	0.	0.	2.15E 00	0.	0.	0.	2.39E 00	2.69E-02	2.58E 00	4.98E-01	7.65E 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.	2.44E 00	3.28E-02	8.67E-01	4.88E-01	5.29E 00
21	8.70	0.	0.	1.24E 00	0.	0.	0.	2.45E 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.	1.10E 00	0.	0.	0.	2.47E 00	3.64E-02	8.69E-01	4.84E-01	4.96E 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.	9.05E-01	0.	0.	0.	2.50E 00	3.91E-02	8.72E-01	4.82E-01	4.80E 00
26	8.20	0.	0.	9.10E-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	4.86E-01	4.70E 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.	6.55E-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.	3.04E-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.	3.52E-01	0.	2.47E-02	0.	2.67E 00	6.26E-02	9.12E-01	5.03E-01	4.52E 00
38	7.00	6.76E-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	8.08E-05	0.	2.37E-01	0.	1.30E-01	0.	2.75E 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.	1.53E-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	4.04E-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	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.71E-11	0.	0.	0.	1.98E-02	1.29E-01	0.	0.	2.50E 00	1.28E-01	1.05E 00	5.65E-01	4.39E 00
53	5.50	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	5.40	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	8.71E-02	0.	0.	2.56E 00	1.60E-01	1.15E 00	6.00E-01	4.58E 00
57	5.10	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.	2.38E-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	6.00E-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	3.06E-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	2.61E-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	4.68E-03	0.	5.18E-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	4.16E-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	5.80E-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	1.96E 00	4.56E-01	5.08E 00
76	3.20	2.67E-03	0.	2.82E-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	1.86E-03	0.	8.09E-02	1.23E-01	8.54E-03	0.	0.	0.	1.36E 00	9.39E-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	1.21E-03	0.	1.81E-02	1.03E-01	3.06E-03	0.	0.	0.	1.36E 00	1.17E 00	3.24E 00	7.34E-01	6.63E 00
82	2.60	5.56E-04	0.	8.93E-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	2.50	3.86E-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	8.62E-01	1.03E 01
88	2.00	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	1.90	0.	1.19E 00	0.	0.	0.	0.	0.	0.	1.25E 00	3.39E 00	6.75E 00	1.13E 00	1.37E 01
90	1.80	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	1.70	0.	1.15E 00	0.	0.	0.	0.	0.	0.	1.13E 00	4.76E 00	9.63E 00	1.66E 00	1.83E 01
92	1.60	0.	8.45E-01	0.	0.	0.	0.	0.	0.	9.54E-01	5.73E 00	1.12E 01	1.95E 00	2.07E 01
93	1.50	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	1.40	0.	9.93E-01	0.	0.	0.	0.	0.	0.	0.	8.60E 00	1.78E 01	2.82E 00	3.02E 01
95	1.30	0.	7.59E-01	0.	0.	0.	0.	0.	0.	0.	1.08E 01	2.32E 01	3.72E 00	3.84E 01
96	1.20	0.	7.30E-01	0.	0.	0.	0.	0.	0.	0.	1.38E 01	2.45E 01	3.71E 00	4.28E 01
97	1.10	0.	6.75E-01	0.	0.	0.	0.	1.24E-06	0.	0.	1.82E 01	3.02E 01	4.66E 00	5.37E 01
98	1.00	0.	6.19E-01	0.	0.	0.	0.	1.63E-05	0.	0.	2.43E 01	3.66E 01	5.26E 00	6.67E 01
99	0.90	0.	5.09E-01	0.	0.	0.	0.	1.88E-05	0.	0.	3.34E 01	4.18E 01	6.19E 00	8.19E 01
100	0.80	0.	2.39E-01	0.	0.	0.	0.	3.93E-04	0.	0.	4.77E 01	4.81E 01	7.12E 00	1.03E 02
101	0.70	0.	5.79E-02	0.	0.	0.	0.	3.27E-04	0.	0.	7.21E 01	5.26E 01	7.61E 00	1.32E 02
102	0.60	0.	8.46E-03	0.	0.	0.	0.	1.13E-03	0.	0.	1.16E 02	5.87E 01	8.51E 00	1.83E 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 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-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	1.78E-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	5.16E-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.	4.18E-02	0.	0.	0.	7.35E-02	1.94E-03	2.65E-01	5.13E-02	4.33E-01
6	10.20	0.	0.	4.28E-02	0.	0.	0.	7.35E-02	2.00E-03	2.66E-01	5.11E-02	4.35E-01
7	10.10	0.	0.	3.99E-02	0.	0.	0.	7.36E-02	2.06E-03	2.66E-01	5.10E-02	4.33E-01
8	10.00	0.	0.	3.45E-02	0.	0.	0.	7.37E-02	2.12E-03	2.67E-01	5.08E-02	4.28E-01
9	9.90	0.	0.	3.52E-02	0.	0.	0.	7.39E-02	2.19E-03	2.67E-01	5.06E-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.	2.78E-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.	2.52E-02	0.	0.	0.	7.44E-02	2.48E-03	2.70E-01	5.00E-02	4.22E-01
14	9.40	0.	0.	2.36E-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.	2.00E-02	0.	0.	0.	7.55E-02	2.82E-03	9.08E-02	4.93E-02	2.38E-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.	1.60E-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	4.86E-02	2.32E-01
28	8.00	0.	0.	8.48E-03	0.	0.	0.	7.92E-02	4.16E-03	9.20E-02	4.88E-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	4.95E-02	2.35E-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.	7.50E-06	0.	8.16E-02	5.27E-03	9.44E-02	4.99E-02	2.36E-01
35	7.30	0.	0.	4.57E-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.	4.07E-03	0.	8.56E-05	0.	8.25E-02	5.72E-03	9.52E-02	5.02E-02	2.38E-01
37	7.10	0.	0.	3.87E-03	0.	2.59E-04	0.	8.32E-02	5.96E-03	9.56E-02	5.04E-02	2.39E-01
38	7.00	6.77E-07	0.	3.50E-03	0.	5.57E-04	0.	8.39E-02	6.23E-03	9.60E-02	5.06E-02	2.41E-01
39	6.90	1.31E-06	0.	3.18E-03	0.	7.09E-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	9.68E-02	5.09E-02	2.44E-01
41	6.70	8.09E-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	4.89E-07	0.	2.30E-03	0.	1.03E-03	0.	8.66E-02	7.44E-03	9.80E-02	5.14E-02	2.47E-01
43	6.50	2.80E-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	1.56E-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	9.06E-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	4.04E-08	0.	4.02E-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	1.83E-08	0.	1.85E-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	2.60E-01
49	5.90	1.84E-09	0.	3.32E-06	1.57E-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	9.85E-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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	7.75E-13	0.	0.	0.	2.08E-04	1.36E-03	0.	0.	7.80E-02	1.22E-02	1.10E-01	5.66E-02	2.58E-01
53	5.50	0.	0.	0.	0.	2.54E-04	1.26E-03	0.	0.	7.84E-02	1.29E-02	1.12E-01	5.73E-02	2.62E-01
54	5.40	0.	0.	0.	0.	2.29E-04	9.86E-04	0.	0.	7.88E-02	1.36E-02	1.15E-01	5.80E-02	2.66E-01
55	5.30	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	5.20	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	5.10	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	5.00	1.03E-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	4.90	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	4.80	4.53E-05	0.	0.	0.	2.67E-04	1.09E-03	0.	0.	8.25E-02	1.94E-02	1.36E-01	6.49E-02	3.04E-01
61	4.70	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	4.60	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	4.50	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	4.40	8.93E-05	0.	7.41E-04	0.	2.43E-04	4.67E-04	0.	0.	8.52E-02	2.53E-02	1.60E-01	7.18E-02	3.43E-01
65	4.30	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	4.20	7.72E-05	0.	7.66E-03	0.	2.40E-04	2.08E-04	0.	0.	8.66E-02	2.91E-02	1.75E-01	7.55E-02	3.74E-01
67	4.10	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	4.00	6.55E-05	0.	1.10E-02	0.	2.22E-04	4.30E-05	0.	0.	8.73E-02	3.38E-02	1.90E-01	2.61E-02	3.48E-01
69	3.90	5.50E-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	3.80	6.00E-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	3.49E-01
71	3.70	5.24E-05	0.	8.60E-03	1.21E-03	1.80E-04	0.	0.	0.	8.52E-02	4.28E-02	1.47E-01	3.08E-02	3.16E-01
72	3.60	4.69E-05	0.	5.69E-03	6.83E-03	1.95E-04	0.	0.	0.	7.98E-02	4.65E-02	1.59E-01	3.40E-02	3.32E-01
73	3.50	4.33E-05	0.	7.76E-03	1.46E-02	1.51E-04	0.	0.	0.	7.31E-02	5.06E-02	1.66E-01	3.76E-02	3.50E-01
74	3.40	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	3.30	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	3.20	2.68E-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	3.10	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	3.00	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	2.90	1.86E-05	0.	8.88E-04	4.32E-03	8.96E-05	0.	0.	0.	4.26E-02	8.94E-02	2.88E-01	6.29E-02	4.88E-01
80	2.80	1.92E-05	0.	4.26E-04	2.47E-03	6.04E-05	0.	0.	0.	4.26E-02	9.94E-02	3.13E-01	6.80E-02	5.26E-01
81	2.70	1.21E-05	0.	1.98E-04	3.63E-03	3.21E-05	0.	0.	0.	4.26E-02	1.11E-01	3.39E-01	7.35E-02	5.70E-01
82	2.60	5.57E-06	0.	9.80E-05	3.55E-04	1.38E-05	0.	0.	0.	4.26E-02	1.24E-01	3.68E-01	7.92E-02	6.15E-01
83	2.50	3.87E-07	0.	1.09E-05	3.30E-04	3.24E-06	0.	0.	0.	4.26E-02	1.40E-01	4.18E-01	4.31E-02	6.44E-01
84	2.40	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	2.30	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	2.20	0.	4.40E-03	0.	0.	0.	0.	0.	0.	4.21E-02	2.07E-01	4.67E-01	7.39E-02	7.94E-01
87	2.10	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	2.00	0.	9.36E-03	0.	0.	0.	0.	0.	0.	4.06E-02	2.76E-01	6.20E-01	9.87E-02	1.05E 00
89	1.90	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	1.80	0.	1.08E-02	0.	0.	0.	0.	0.	0.	3.73E-02	3.81E-01	8.42E-01	1.37E-01	1.41E 00
91	1.70	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	1.60	0.	9.28E-03	0.	0.	0.	0.	0.	0.	2.98E-02	5.46E-01	1.18E 00	1.96E-01	1.96E 00
93	1.50	0.	1.09E-02	0.	0.	0.	0.	0.	0.	1.35E-02	6.64E-01	1.51E 00	2.37E-01	2.43E 00
94	1.40	0.	1.09E-02	0.	0.	0.	0.	0.	0.	0.	8.19E-01	1.87E 00	2.82E-01	2.98E 00
95	1.30	0.	8.33E-03	0.	0.	0.	0.	0.	0.	0.	1.03E 00	2.43E 00	3.73E-01	3.84E 00
96	1.20	0.	8.01E-03	0.	0.	0.	0.	0.	0.	0.	1.32E 00	2.56E 00	3.71E-01	4.26E 00
97	1.10	0.	7.41E-03	0.	0.	0.	0.	1.30E-08	0.	0.	1.73E 00	3.16E 00	4.66E-01	5.37E 00
98	1.00	0.	6.80E-03	0.	0.	0.	0.	1.71E-07	0.	0.	2.31E 00	3.83E 00	5.27E-01	6.67E 00
99	0.90	0.	5.58E-03	0.	0.	0.	0.	1.97E-07	0.	0.	3.18E 00	4.38E 00	6.20E-01	8.18E 00
100	0.80	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	0.70	0.	6.35E-04	0.	0.	0.	0.	3.42E-06	0.	0.	6.87E 00	5.51E 00	7.61E-01	1.31E 01
102	0.60	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.	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-04	0.	0.	0.	2.00E-03	1.52E-04	1.88E 00	4.80E-03	1.89E 00
2	10.60	0.	0.	4.03E-04	0.	0.	0.	2.00E-03	1.57E-04	2.31E-02	4.78E-03	3.05E-02
3	10.50	0.	0.	4.04E-04	0.	0.	0.	2.01E-03	1.61E-04	2.32E-02	4.77E-03	3.06E-02
4	10.40	0.	0.	3.78E-04	0.	0.	0.	2.01E-03	1.66E-04	2.33E-02	4.75E-03	3.06E-02
5	10.30	0.	0.	3.25E-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	1.76E-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.	2.68E-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.	2.55E-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.	1.96E-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.	1.87E-04	0.	0.	0.	2.05E-03	2.32E-04	2.40E-02	4.59E-03	3.10E-02
16	9.20	0.	0.	1.57E-04	0.	0.	0.	2.06E-03	2.40E-04	2.40E-02	4.57E-03	3.11E-02
17	9.10	0.	0.	1.56E-04	0.	0.	0.	2.07E-03	2.48E-04	8.02E-03	4.56E-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.	1.28E-04	0.	0.	0.	2.08E-03	2.65E-04	8.01E-03	4.53E-03	1.50E-02
20	8.80	0.	0.	1.25E-04	0.	0.	0.	2.09E-03	2.74E-04	8.02E-03	4.51E-03	1.50E-02
21	8.70	0.	0.	1.06E-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	8.05E-03	4.46E-03	1.50E-02
25	8.30	0.	0.	7.73E-05	0.	0.	0.	2.14E-03	3.27E-04	8.06E-03	4.46E-03	1.51E-02
26	8.20	0.	0.	7.78E-05	0.	0.	0.	2.15E-03	3.39E-04	8.08E-03	4.48E-03	1.51E-02
27	8.10	0.	0.	6.61E-05	0.	0.	0.	2.16E-03	3.52E-04	8.09E-03	4.49E-03	1.52E-02
28	8.00	0.	0.	6.60E-05	0.	0.	0.	2.17E-03	3.66E-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.	5.76E-05	0.	0.	0.	2.19E-03	3.95E-04	8.19E-03	4.54E-03	1.54E-02
31	7.70	0.	0.	4.98E-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.	2.20E-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.	3.80E-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.	3.55E-05	0.	2.59E-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	5.77E-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.	5.77E-06	0.	2.32E-03	5.72E-04	8.51E-03	4.69E-03	1.61E-02
40	6.80	9.56E-09	0.	2.35E-05	0.	1.06E-05	0.	2.34E-03	5.97E-04	8.54E-03	4.70E-03	1.62E-02
41	6.70	6.98E-09	0.	2.03E-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.	1.79E-05	0.	8.39E-06	0.	2.37E-03	6.54E-04	8.65E-03	4.75E-03	1.64E-02
43	6.50	2.38E-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	5.17E-08	1.30E-05	0.	2.41E-03	7.18E-04	8.80E-03	4.80E-03	1.67E-02
45	6.30	7.73E-10	0.	5.78E-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	3.45E-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	1.57E-05	0.	2.47E-03	8.30E-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	1.57E-11	0.	2.58E-08	1.28E-06	7.17E-06	0.	2.48E-03	9.18E-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.	2.45E-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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.6[illegible]-15	0.	0.	0.	1.70E-06	1.10E-05	0.	0.	2.14E-03	1.07E-03	9.69E-03	5.22E-03	1.81E-02
53	5.50	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	5.40	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	5.30	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	5.20	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	5.10	0.	0.	0.	0.	2.03E-06	9.68E-06	0.	0.	2.21E-03	1.42E-03	1.09E-02	5.66E-03	2.02E-02
58	5.00	8.75E-08	0.	0.	0.	1.84E-06	8.91E-06	0.	0.	2.22E-03	1.51E-03	1.12E-02	5.76E-03	2.08E-02
59	4.90	2.09E-07	0.	0.	0.	2.03E-06	9.56E-06	0.	0.	2.24E-03	1.61E-03	1.16E-02	5.87E-03	2.13E-02
60	4.80	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	4.70	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	4.60	6.95E-07	0.	0.	0.	2.19E-06	7.30E-06	0.	0.	2.30E-03	1.94E-03	1.29E-02	6.30E-03	2.34E-02
63	4.50	7.22E-07	0.	1.84E-06	0.	1.98E-06	5.45E-06	0.	0.	2.32E-03	2.08E-03	1.35E-02	6.47E-03	2.43E-02
64	4.40	7.62E-07	0.	5.77E-06	0.	1.98E-06	3.80E-06	0.	0.	2.34E-03	2.22E-03	1.41E-02	6.63E-03	2.53E-02
65	4.30	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	4.20	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	4.10	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	4.00	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	2.46E-02
69	3.90	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	2.40E-02
70	3.80	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	3.70	4.47E-07	0.	6.70E-05	5.18E-05	1.47E-06	0.	0.	0.	2.34E-03	3.76E-03	1.30E-02	2.84E-03	2.20E-02
72	3.60	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	3.50	3.69E-07	0.	6.04E-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	3.40	3.34E-07	0.	3.65E-05	4.91E-05	1.37E-06	0.	0.	0.	1.15E-03	4.86E-03	1.64E-02	3.84E-03	2.63E-02
75	3.30	2.65E-07	0.	3.77E-05	2.06E-04	1.08E-06	0.	0.	0.	1.16E-03	5.32E-03	1.81E-02	4.22E-03	2.91E-02
76	3.20	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	3.10	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	5.00E-03	3.44E-02
78	3.00	1.91E-07	0.	1.12E-05	1.99E-04	9.77E-07	0.	0.	0.	1.16E-03	7.10E-03	2.35E-02	5.40E-03	3.7[illegible]-02
79	2.90	1.59E-07	0.	6.91E-06	1.13E-04	7.30E-07	0.	0.	0.	1.17E-03	7.86E-03	2.54E-02	5.81E-03	4.0[illegible]E-02
80	2.80	1.64E-07	0.	3.32E-06	6.48E-05	4.92E-07	0.	0.	0.	1.17E-03	8.74E-03	2.76E-02	6.28E-03	4.30E-02
81	2.70	1.03E-07	0.	1.55E-06	9.53E-05	2.62E-07	0.	0.	0.	1.17E-03	9.76E-03	2.99E-02	6.79E-03	4.78E-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-02	7.31E-03	5.19E-02
83	2.50	3.30E-09	0.	8.49E-08	8.67E-06	2.64E-08	0.	0.	0.	1.17E-03	1.23E-02	3.69E-02	3.98E-03	5.44E-02
84	2.40	0.	4.10E-06	0.	7.52E-06	2.79E-09	0.	0.	0.	1.17E-03	1.40E-02	4.30E-02	4.75E-03	6.29E-02
85	2.30	0.	1.37E-05	0.	0.	0.	0.	0.	0.	1.16E-03	1.59E-02	3.48E-02	5.68E-03	5.76E-02
86	2.20	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	2.10	0.	3.84E-05	0.	0.	0.	0.	0.	0.	1.15E-03	2.10E-02	4.80E-02	7.97E-03	7.81E-02
88	2.00	0.	7.29E-05	0.	0.	0.	0.	0.	0.	1.11E-03	2.43E-02	5.47E-02	9.11E-03	8.94E-02
89	1.90	0.	1.01E-04	0.	0.	0.	0.	0.	0.	1.07E-03	2.84E-02	6.24E-02	1.05E-02	1.02E-01
90	1.80	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	1.70	0.	9.87E-05	0.	0.	0.	0.	0.	0.	9.64E-04	3.99E-02	8.90E-02	1.54E-02	1.45E-01
92	1.60	0.	7.22E-05	0.	0.	0.	0.	0.	0.	8.16E-04	4.80E-02	1.04E-01	1.81E-02	1.71E-01
93	1.50	0.	8.48E-05	0.	0.	0.	0.	0.	0.	3.71E-04	5.84E-02	1.33E-01	2.19E-02	2.14E-01
94	1.40	0.	8.48E-05	0.	0.	0.	0.	0.	0.	0.	7.20E-02	1.65E-01	2.60E-02	2.63E-01
95	1.30	0.	6.49E-05	0.	0.	0.	0.	0.	0.	0.	9.04E-02	2.14E-01	3.44E-02	3.39E-01
96	1.20	0.	6.24E-05	0.	0.	0.	0.	0.	0.	0.	1.16E-01	2.26E-01	3.43E-02	3.77E-01
97	1.10	0.	5.77E-05	0.	0.	0.	0.	1.06E-10	0.	0.	1.52E-01	2.79E-01	4.31E-02	4.74E-01
98	1.00	0.	5.29E-05	0.	0.	0.	0.	1.40E-09	0.	0.	2.03E-01	3.38E-01	4.86E-02	5.90E-01
99	0.90	0.	4.35E-05	0.	0.	0.	0.	1.61E-09	0.	0.	2.79E-01	3.87E-01	5.72E-02	7.23E-01
100	0.80	0.	2.05E-05	0.	0.	0.	0.	3.36E-08	0.	0.	4.00E-01	4.45E-01	6.58E-02	9.10E-01
101	0.70	0.	4.95E-06	0.	0.	0.	0.	2.79E-08	0.	0.	6.04E-01	4.86E-01	7.03E-02	1.16E 00
102	0.60	0.	7.23E-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) 15000. 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.	1.96E-06	0.	0.	0.	3.93E-05	1.03E-05	1.25E-01	3.62E-04	1.25E-01
2	10.60	0.	0.	1.76E-06	0.	0.	0.	3.93E-05	1.06E-05	1.53E-03	3.61E-04	1.94E-03
3	10.50	0.	0.	1.77E-06	0.	0.	0.	3.94E-05	1.09E-05	1.54E-03	3.60E-04	1.95E-03
4	10.40	0.	0.	1.65E-06	0.	0.	0.	3.94E-05	1.12E-05	1.54E-03	3.59E-04	1.96E-03
5	10.30	0.	0.	1.42E-06	0.	0.	0.	3.95E-05	1.15E-05	1.55E-03	3.58E-04	1.96E-03
6	10.20	0.	0.	1.46E-06	0.	0.	0.	3.95E-05	1.19E-05	1.55E-03	3.57E-04	1.96E-03
7	10.10	0.	0.	1.36E-06	0.	0.	0.	3.96E-05	1.22E-05	1.55E-03	3.55E-04	1.96E-03
8	10.00	0.	0.	1.17E-06	0.	0.	0.	3.96E-05	1.26E-05	1.56E-03	3.54E-04	1.96E-03
9	9.90	0.	0.	1.20E-06	0.	0.	0.	3.97E-05	1.30E-05	1.56E-03	3.53E-04	1.97E-03
10	9.80	0.	0.	1.11E-06	0.	0.	0.	3.98E-05	1.34E-05	1.56E-03	3.52E-04	1.97E-03
11	9.70	0.	0.	9.48E-07	0.	0.	0.	3.98E-05	1.38E-05	1.57E-03	3.51E-04	1.97E-03
12	9.60	0.	0.	1.02E-06	0.	0.	0.	3.99E-05	1.42E-05	1.57E-03	3.50E-04	1.98E-03
13	9.50	0.	0.	8.59E-07	0.	0.	0.	4.00E-05	1.47E-05	1.58E-03	3.49E-04	1.98E-03
14	9.40	0.	0.	8.02E-07	0.	0.	0.	4.01E-05	1.52E-05	1.58E-03	3.47E-04	1.98E-03
15	9.30	0.	0.	8.19E-07	0.	0.	0.	4.03E-05	1.57E-05	1.59E-03	3.46E-04	1.99E-03
16	9.20	0.	0.	6.65E-07	0.	0.	0.	4.04E-05	1.62E-05	1.59E-03	3.45E-04	1.99E-03
17	9.10	0.	0.	6.81E-07	0.	0.	0.	4.06E-05	1.67E-05	5.30E-04	3.44E-04	9.33E-04
18	9.00	0.	0.	6.11E-07	0.	0.	0.	4.07E-05	1.73E-05	5.30E-04	3.43E-04	9.32E-04
19	8.90	0.	0.	5.58E-07	0.	0.	0.	4.09E-05	1.79E-05	5.30E-04	3.42E-04	9.32E-04
20	8.80	0.	0.	5.45E-07	0.	0.	0.	4.10E-05	1.85E-05	5.30E-04	3.41E-04	9.31E-04
21	8.70	0.	0.	4.65E-07	0.	0.	0.	4.12E-05	1.91E-05	5.31E-04	3.40E-04	9.31E-04
22	8.60	0.	0.	4.77E-07	0.	0.	0.	4.13E-05	1.98E-05	5.31E-04	3.39E-04	9.31E-04
23	8.50	0.	0.	4.11E-07	0.	0.	0.	4.14E-05	2.05E-05	5.32E-04	3.38E-04	9.32E-04
24	8.40	0.	0.	4.06E-07	0.	0.	0.	4.17E-05	2.13E-05	5.33E-04	3.37E-04	9.33E-04
25	8.30	0.	0.	3.38E-07	0.	0.	0.	4.19E-05	2.20E-05	5.34E-04	3.37E-04	9.35E-04
26	8.20	0.	0.	3.40E-07	0.	0.	0.	4.21E-05	2.29E-05	5.35E-04	3.38E-04	9.38E-04
27	8.10	0.	0.	2.89E-07	0.	0.	0.	4.23E-05	2.37E-05	5.35E-04	3.39E-04	9.41E-04
28	8.00	0.	0.	2.89E-07	0.	0.	0.	4.25E-05	2.47E-05	5.37E-04	3.40E-04	9.45E-04
29	7.90	0.	0.	2.45E-07	0.	0.	0.	4.28E-05	2.56E-05	5.39E-04	3.42E-04	9.50E-04
30	7.80	0.	0.	2.52E-07	0.	0.	0.	4.30E-05	2.66E-05	5.42E-04	3.43E-04	9.54E-04
31	7.70	0.	0.	2.18E-07	0.	0.	0.	4.32E-05	2.77E-05	5.44E-04	3.44E-04	9.59E-04
32	7.60	0.	0.	2.05E-07	0.	1.10E-11	0.	4.34E-05	2.88E-05	5.46E-04	3.45E-04	9.64E-04
33	7.50	0.	0.	1.87E-07	0.	4.17E-11	0.	4.36E-05	3.00E-05	5.49E-04	3.47E-04	9.69E-04
34	7.40	0.	0.	1.66E-07	0.	3.06E-10	0.	4.39E-05	3.12E-05	5.51E-04	3.48E-04	9.74E-04
35	7.30	0.	0.	1.56E-07	0.	1.30E-09	0.	4.41E-05	3.25E-05	5.53E-04	3.49E-04	9.79E-04
36	7.20	0.	0.	1.39E-07	0.	3.48E-09	0.	4.44E-05	3.39E-05	5.56E-04	3.50E-04	9.85E-04
37	7.10	0.	0.	1.32E-07	0.	1.05E-08	0.	4.47E-05	3.53E-05	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-05	3.69E-05	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-05	3.85E-05	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-05	4.03E-05	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-05	4.21E-05	5.68E-04	3.57E-04	1.01E-03
42	6.60	2.38E-11	0.	7.85E-08	0.	4.19E-08	0.	4.65E-05	4.41E-05	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-05	4.61E-05	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-05	4.84E-05	5.82E-04	3.62E-04	1.04E-03
45	6.30	4.41E-12	0.	2.53E-08	1.20E-09	4.24E-08	0.	4.76E-05	5.07E-05	5.87E-04	3.65E-04	1.05E-03
46	6.20	1.97E-12	0.	1.37E-08	1.67E-09	6.00E-08	0.	4.80E-05	5.32E-05	5.93E-04	3.69E-04	1.06E-03
47	6.10	8.91E-13	0.	6.30E-09	4.73E-09	7.82E-08	0.	4.84E-05	5.59E-05	5.99E-04	3.73E-04	1.08E-03
48	6.00	3.68E-13	0.	1.58E-09	4.41E-09	3.61E-08	0.	4.87E-05	5.88E-05	6.07E-04	3.77E-04	1.09E-03
49	5.90	8.97E-14	0.	1.13E-10	6.41E-09	3.58E-08	0.	4.87E-05	6.19E-05	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.	4.80E-05	6.51E-05	6.23E-04	3.86E-04	1.12E-03
51	5.70	8.39E-16	0.	0.	1.02E-08	4.01E-08	0.	4.51E-05	6.87E-05	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-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	3.77E-17	0.	0.	0.	8.47E-09	5.52E-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.	1.03E-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.	9.33E-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-08	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-08	0.	0.	4.33E-05	9.60E-05	7.22E-04	4.27E-04	1.29E-03
58	5.00	5.06E-10	0.	0.	0.	9.20E-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	2.20E-09	0.	0.	0.	1.09E-08	4.45E-08	0.	0.	4.44E-05	1.15E-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	8.92E-04	4.88E-04	1.57E-03
64	4.40	4.35E-09	0.	2.52E-08	0.	9.88E-09	1.90E-08	0.	0.	4.58E-05	1.50E-04	9.32E-04	5.01E-04	1.63E-03
65	4.30	4.06E-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	1.73E-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	1.86E-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	1.82E-04	1.54E-03
69	3.90	2.68E-09	0.	1.71E-07	3.09E-07	8.21E-09	6.85E-10	0.	0.	4.67E-05	2.16E-04	1.05E-03	1.88E-04	1.50E-03
70	3.80	2.92E-09	0.	2.68E-07	1.47E-06	8.79E-09	0.	0.	0.	4.65E-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.	4.29E-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	6.14E-09	0.	0.	0.	3.93E-05	3.00E-04	9.70E-04	2.62E-04	1.58E-03
74	3.40	1.91E-09	0.	1.60E-07	8.28E-07	6.87E-09	0.	0.	0.	2.26E-05	3.27E-04	1.08E-03	2.90E-04	1.73E-03
75	3.30	1.51E-09	0.	1.65E-07	3.48E-06	5.39E-09	0.	0.	0.	2.27E-05	3.58E-04	1.20E-03	3.18E-04	1.90E-03
76	3.20	1.30E-09	0.	1.05E-07	6.41E-06	5.62E-09	0.	0.	0.	2.27E-05	3.93E-04	1.32E-03	3.48E-04	2.09E-03
77	3.10	1.23E-09	0.	8.12E-08	1.30E-06	5.25E-09	0.	0.	0.	2.28E-05	4.33E-04	1.44E-03	3.78E-04	2.27E-03
78	3.00	1.09E-09	0.	4.90E-08	3.36E-06	4.88E-09	0.	0.	0.	2.28E-05	4.78E-04	1.56E-03	4.08E-04	2.47E-03
79	2.90	9.05E-10	0.	3.02E-08	1.91E-06	3.65E-09	0.	0.	0.	2.29E-05	5.30E-04	1.68E-03	4.39E-04	2.68E-03
80	2.80	9.33E-10	0.	1.45E-08	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	2.70	5.89E-10	0.	6.76E-09	1.61E-06	1.31E-09	0.	0.	0.	2.29E-05	6.58E-04	1.98E-03	5.13E-04	3.18E-03
82	2.60	2.71E-10	0.	3.34E-09	1.57E-07	5.63E-10	0.	0.	0.	2.29E-05	7.38E-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	3.00E-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	3.59E-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	4.29E-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.	3.19E-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.	4.43E-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.	3.69E-07	0.	0.	0.	0.	0.	0.	2.01E-05	2.26E-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	1.16E-03	9.76E-03
92	1.60	0.	3.16E-07	0.	0.	0.	0.	0.	0.	1.60E-05	3.23E-03	6.87E-03	1.36E-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	1.66E-03	1.44E-02
94	1.40	0.	3.71E-07	0.	0.	0.	0.	0.	0.	0.	4.85E-03	1.09E-02	1.97E-03	1.77E-02
95	1.30	0.	2.84E-07	0.	0.	0.	0.	0.	0.	0.	6.09E-03	1.42E-02	2.60E-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.	5.28E-13	0.	0.	1.02E-02	1.85E-02	3.25E-03	3.20E-02
98	1.00	0.	2.32E-07	0.	0.	0.	0.	6.98E-12	0.	0.	1.37E-02	2.24E-02	3.67E-03	3.97E-02
99	0.90	0.	1.90E-07	0.	0.	0.	0.	8.03E-12	0.	0.	1.88E-02	2.56E-02	4.32E-03	4.87E-02
100	0.80	0.	8.95E-08	0.	0.	0.	0.	1.68E-10	0.	0.	2.69E-02	2.94E-02	4.97E-03	6.13E-02
101	0.70	0.	2.16E-08	0.	0.	0.	0.	1.39E-10	0.	0.	4.07E-02	3.22E-02	5.31E-03	7.81E-02
102	0.60	0.	3.16E-09	0.	0.	0.	0.	4.83E-10	0.	0.	6.55E-02	3.59E-02	5.94E-03	1.07E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1500. DENSITY (GM/CC) 1.293E-06 (10.0F-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	3.53E-07	5.07E-05	1.48E-05	6.61E-05
2	10.60	0.	0.	1.94E-09	0.	0.	0.	2.97E-07	3.63E-07	5.09E-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.	1.57E-09	0.	0.	0.	2.99E-07	3.96E-07	5.15E-05	1.46E-05	6.68E-05
6	10.20	0.	0.	1.61E-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.	7.33E-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	1.39E-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.	4.53E-10	0.	0.	0.	3.13E-07	7.06E-07	1.77E-05	1.38E-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	1.38E-05	3.27E-05
27	8.10	0.	0.	3.19E-10	0.	0.	0.	3.20E-07	8.17E-07	1.78E-05	1.38E-05	3.28E-05
28	8.00	0.	0.	3.19E-10	0.	0.	0.	3.22E-07	8.48E-07	1.78E-05	1.39E-05	3.29E-05
29	7.90	0.	0.	2.70E-10	0.	0.	0.	3.23E-07	8.81E-07	1.79E-05	1.39E-05	3.31E-05
30	7.80	0.	0.	2.78E-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.	1.53E-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.	3.38E-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.	8.86E-11	0.	3.55E-07	1.59E-06	1.92E-05	1.47E-05	3.58E-05
44	6.40	1.26E-14	0.	4.58E-11	3.50E-13	8.79E-11	0.	3.57E-07	1.66E-06	1.93E-05	1.48E-05	3.61E-05
45	6.30	7.3 E-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	8.12E-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	1.89E-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) 1500C. 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	6.26E-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.	1.29E-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	6.55E-11	0.	0.	3.27E-07	3.30E-06	2.40E-05	1.74E-05	4.50E-05
58	5.00	8.30E-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	3.66E-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	4.94E-11	0.	0.	3.41E-07	4.51E-06	2.83E-05	1.94E-05	5.26E-05
63	4.50	6.85E-12	0.	8.90E-12	0.	1.34E-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	5.81E-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	7.42E-06	5.15E-05
69	3.90	4.45E-12	0.	1.89E-10	1.84E-09	1.11E-11	9.27E-13	0.	0.	3.53E-07	7.43E-06	3.45E-05	7.65E-06	5.00E-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	7.95E-06	4.37E-05
71	3.70	4.24E-12	0.	3.23E-10	3.18E-09	9.92E-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.	6.95E-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	2.26E-05	6.58E-05	2.09E-05	1.10E-04
82	2.60	4.50E-13	0.	3.68E-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	2.86E-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	4.86E-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	3.89E-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	1.35E-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	7.82E-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.	2.78E-10	0.	0.	0.	0.	7.14E-16	0.	0.	3.53E-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	1.50E-04	1.36E-03
99	0.90	0.	2.10E-10	0.	0.	0.	0.	1.09E-14	0.	0.	6.48E-04	8.49E-04	1.76E-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.	1.89E-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.	4.48E-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	7.43E-07	2.35E-07	9.85E-07
3	10.50	0.	0.	4.04E-13	0.	0.	0.	5.75E-10	5.49E-09	7.37E-07	2.34E-07	9.77E-07
4	10.40	0.	0.	3.78E-13	0.	0.	0.	5.76E-10	5.65E-09	7.39E-07	2.33E-07	9.79E-07
5	10.30	0.	0.	3.26E-13	0.	0.	0.	5.76E-10	5.82E-09	7.40E-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.	2.68E-13	0.	0.	0.	5.79E-10	6.36E-09	7.46E-07	2.30E-07	9.83E-07
9	9.90	0.	0.	2.74E-13	0.	0.	0.	5.80E-10	6.56E-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.	1.96E-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.	5.88E-10	7.91E-09	2.56E-07	2.25E-07	4.89E-07
16	9.20	0.	0.	1.52E-13	0.	0.	0.	5.90E-10	8.17E-09	2.56E-07	2.24E-07	4.89E-07
17	9.10	0.	0.	1.56E-13	0.	0.	0.	5.93E-10	8.45E-09	2.56E-07	2.24E-07	4.88E-07
18	9.00	0.	0.	1.40E-13	0.	0.	0.	5.95E-10	8.73E-09	2.55E-07	2.23E-07	4.88E-07
19	8.90	0.	0.	1.28E-13	0.	0.	0.	5.97E-10	9.03E-09	2.55E-07	2.22E-07	4.87E-07
20	8.80	0.	0.	1.25E-13	0.	0.	0.	5.99E-10	9.34E-09	2.56E-07	2.22E-07	4.87E-07
21	8.70	0.	0.	1.06E-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.	4.98E-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	1.58E-08	2.64E-07	2.26E-07	5.07E-07
35	7.30	0.	0.	3.56E-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.	3.28E-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	2.76E-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.	9.50E-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	1.86E-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.	2.58E-17	1.99E-15	1.11E-14	0.	7.11E-10	3.12E-08	2.96E-07	2.48E-07	5.76E-07
50	5.80	4.82E-21	0.	6.47E-19	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	1.59E-23	0.	0.	0.	2.63E-15	1.71E-14	0.	0.	6.12E-10	3.66E-08	3.07E-07	2.56E-07	6.00E-07
53	5.50	0.	0.	0.	0.	3.21E-15	1.60E-14	0.	0.	6.15E-10	3.86E-08	3.13E-07	2.59E-07	6.11E-07
54	5.40	0.	0.	0.	0.	2.90E-15	1.25E-14	0.	0.	6.19E-10	4.08E-08	3.20E-07	2.63E-07	6.25E-07
55	5.30	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	5.20	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	5.10	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	4.90	5.05E-16	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	4.80	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	4.70	1.23E-15	0.	0.	0.	3.34E-15	1.24E-14	0.	0.	6.53E-10	6.20E-08	3.93E-07	3.02E-07	7.57E-07
62	4.60	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	4.50	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	4.40	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	4.30	1.71E-15	0.	1.77E-14	0.	2.89E-15	3.63E-15	0.	0.	6.74E-10	8.12E-08	4.67E-07	3.29E-07	8.77E-07
66	4.20	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	3.02E-07	8.78E-07
67	4.10	1.48E-15	0.	2.42E-14	0.	2.93E-15	7.16E-16	0.	0.	6.82E-10	9.38E-08	5.09E-07	1.15E-07	7.18E-07
68	4.00	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	1.18E-07	6.98E-07
69	3.90	1.13E-15	0.	3.92E-14	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	3.80	1.23E-15	0.	6.13E-14	1.49E-11	2.73E-15	0.	0.	0.	6.80E-10	1.18E-07	3.95E-07	1.27E-07	6.41E-07
71	3.70	1.08E-15	0.	6.70E-14	5.44E-12	2.28E-15	0.	0.	0.	6.89E-10	1.28E-07	3.84E-07	1.40E-07	6.53E-07
72	3.60	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	3.50	8.90E-16	0.	6.04E-14	6.58E-11	1.91E-15	0.	0.	0.	5.73E-10	1.51E-07	4.65E-07	1.70E-07	7.87E-07
74	3.40	8.05E-16	0.	3.65E-14	8.41E-12	2.13E-15	0.	0.	0.	3.31E-10	1.65E-07	5.19E-07	1.89E-07	8.74E-07
75	3.30	6.39E-16	0.	3.77E-14	3.54E-11	1.68E-15	0.	0.	0.	3.31E-10	1.81E-07	5.75E-07	2.07E-07	9.63E-07
76	3.20	5.50E-16	0.	2.41E-14	6.51E-11	1.75E-15	0.	0.	0.	3.32E-10	1.99E-07	6.30E-07	2.26E-07	1.06E-06
77	3.10	5.21E-16	0.	1.86E-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	2.90	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	2.80	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	2.70	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	2.60	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	2.50	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	2.40	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	2.30	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.	3.43E-14	0.	0.	0.	0.	0.	0.	3.31E-10	6.20E-07	1.30E-06	3.35E-07	2.26E-06
87	2.10	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	2.00	0.	7.29E-14	0.	0.	0.	0.	0.	0.	3.19E-10	8.28E-07	1.73E-06	4.47E-07	3.01E-06
89	1.90	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	1.80	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	1.70	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	1.60	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	1.50	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	1.40	0.	8.49E-14	0.	0.	0.	0.	0.	0.	0.	2.45E-06	3.56E-06	1.21E-06	7.23E-06
95	1.30	0.	6.49E-14	0.	0.	0.	0.	0.	0.	0.	3.08E-06	5.28E-06	1.25E-06	9.61E-06
96	1.20	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	1.97E-05
99	0.90	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.	1.36E-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 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.	4.96E-17	0.	0.	0.	6.31E-13	5.50E-11	7.84E-09	2.52E-09	1.04E-08
2	10.60	0.	0.	4.45E-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	5.82E-11	7.92E-09	2.51E-09	1.05E-08
4	10.40	0.	0.	4.18E-17	0.	0.	0.	6.34E-13	5.99E-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	1.05E-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.	2.58E-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.	2.07E-17	0.	0.	0.	6.47E-13	8.38E-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.	1.38E-17	0.	0.	0.	6.59E-13	9.90E-11	2.89E-09	2.37E-09	5.36E-09
21	8.70	0.	0.	1.18E-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	2.90E-09	2.35E-09	5.36E-09
24	8.40	0.	0.	.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.	.56E-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.	5.51E-18	0.	0.	0.	6.94E-13	1.48E-10	2.84E-09	2.39E-09	5.38E-09
32	7.60	0.	0.	5.18E-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.	3.51E-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.	3.02E-18	0.	7.92E-19	0.	7.25E-13	1.97E-10	2.96E-09	2.45E-09	5.61E-09
39	6.90	3.09E-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.	1.05E-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.	2.46E-19	5.84E-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	4.05E-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	1.82E-27	0.	0.	0.	2.96E-19	1.93E-18	0.	0.	6.74E-13	3.88E-10	3.26E-09	2.74E-09	6.39E-09
53	5.50	0.	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	1.56E-18	0.	0.	7.01E-13	5.46E-10	3.80E-09	3.03E-09	7.37E-09
59	4.90	5.71E-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	1.40E-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	1.28E-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.	7.30E-13	7.50E-10	4.56E-09	3.40E-09	8.70E-09
64	4.40	2.10E-19	0.	6.38E-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	1.82E-19	0.	6.60E-18	0.	3.42E-19	2.95E-19	0.	0.	7.48E-13	9.24E-10	5.22E-09	1.19E-09	7.33E-09
67	4.10	1.69E-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	1.88E-19	0.	0.	0.	3.65E-13	1.92E-09	6.06E-09	2.21E-09	1.02E-08
76	3.20	6.30E-20	0.	2.66E-18	7.00E-14	1.96E-19	0.	0.	0.	3.65E-13	2.10E-09	6.65E-09	2.42E-09	1.12E-08
77	3.10	5.97E-20	0.	2.05E-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	5.28E-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.	7.65E-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	2.85E-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.	8.44E-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	9.11E-22	0.	9.39E-21	1.60E-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.	3.65E-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	8.07E-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	9.04E-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.	3.26E-08	5.38E-08	1.34E-08	9.98E-08
96	1.20	0.	6.90E-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.	5.48E-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	2.82E-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	1.31E-07	2.78E-08	3.77E-07
102	0.60	0.	8.00E-20	0.	0.	0.	0.	1.69E-20	0.	0.	3.50E-07	1.48E-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 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.	5.00E-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.	6.48E-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.	2.84E-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.	2.19E-21	0.	0.	0.	6.59E-16	8.16E-13	1.00E-10	2.48E-11	1.26E-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	4.80E-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.	7.36E-22	0.	0.	0.	7.01E-16	1.37E-12	3.66E-11	2.41E-11	6.21E-11
29	7.90	0.	0.	6.23E-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.	3.96E-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	1.88E-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	1.96E-12	4.18E-11	2.50E-11	6.87E-11
38	7.00	1.64E-25	0.	3.04E-22	0.	8.07E-23	0.	7.43E-16	2.05E-12	4.26E-11	2.51E-11	6.97E-11
39	6.90	3.18E-25	0.	2.76E-22	0.	1.03E-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	3.83E-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.	6.44E-23	4.26E-24	1.51E-22	0.	7.85E-16	2.82E-12	4.91E-11	2.60E-11	7.79E-11
46	6.20	9.79E-27	0.	3.49E-23	5.95E-24	2.13E-22	0.	7.91E-16	2.96E-12	5.01E-11	2.63E-11	7.93E-11
47	6.10	4.44E-27	0.	1.60E-23	1.68E-23	2.78E-22	0.	7.97E-16	3.11E-12	3.36E-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	4.46E-28	0.	2.88E-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	5.68E-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	2.76E-11	6.72E-11

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 15000. 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	1.86E-31	0.	0.	0.	3.02E-23	1.96E-22	0.	0.	6.91E-16	4.02E-12	3.65E-11	2.79E-11	6.84E-11
53	5.50	0.	0.	0.	0.	3.68E-23	1.83E-22	0.	0.	6.95E-16	4.25E-12	3.74E-11	2.82E-11	6.99E-11
54	5.40	0.	0.	0.	0.	3.32E-23	1.43E-22	0.	0.	6.98E-16	4.49E-12	3.85E-11	2.86E-11	7.16E-11
55	5.30	0.	0.	0.	0.	3.40E-23	1.86E-22	0.	0.	7.03E-16	4.75E-12	3.96E-11	2.90E-11	7.34E-11
56	5.20	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	5.10	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	5.00	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	4.90	5.95E-24	0.	0.	0.	3.62E-23	1.70E-22	0.	0.	7.25E-16	6.02E-12	4.48E-11	3.13E-11	8.22E-11
60	4.80	1.10E-23	0.	0.	0.	3.87E-23	1.59E-22	0.	0.	7.31E-16	6.40E-12	4.64E-11	3.20E-11	8.48E-11
61	4.70	1.46E-23	0.	0.	0.	3.82E-23	1.43E-22	0.	0.	7.37E-16	6.82E-12	4.81E-11	3.28E-11	8.78E-11
62	4.60	1.98E-23	0.	0.	0.	3.90E-23	1.30E-22	0.	0.	7.43E-16	7.28E-12	5.03E-11	3.37E-11	9.12E-11
63	4.50	2.05E-23	0.	2.05E-23	0.	3.53E-23	9.70E-23	0.	0.	7.49E-16	7.78E-12	5.28E-11	3.45E-11	9.51E-11
64	4.40	2.16E-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	4.30	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	3.20E-11	9.90E-11
66	4.20	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	4.10	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	4.00	1.59E-23	0.	9.53E-22	0.	3.22E-23	6.23E-24	0.	0.	7.73E-16	1.11E-11	4.89E-11	1.29E-11	7.30E-11
69	3.90	1.33E-23	0.	4.36E-22	3.37E-18	2.92E-23	2.44E-24	0.	0.	7.70E-16	1.20E-11	5.13E-11	1.33E-11	7.66E-11
70	3.80	1.45E-23	0.	6.83E-22	1.60E-17	3.13E-23	0.	0.	0.	7.67E-16	1.30E-11	5.06E-11	1.39E-11	7.75E-11
71	3.70	1.27E-23	0.	7.46E-22	5.83E-18	2.61E-23	0.	0.	0.	7.55E-16	1.41E-11	5.31E-11	1.53E-11	8.24E-11
72	3.60	1.14E-23	0.	4.94E-22	3.29E-17	2.83E-23	0.	0.	0.	7.07E-16	1.53E-11	4.68E-11	1.68E-11	7.90E-11
73	3.50	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	3.40	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	3.30	7.54E-24	0.	4.20E-22	3.79E-17	1.92E-23	0.	0.	0.	3.74E-16	1.99E-11	6.39E-11	2.25E-11	1.06E-10
76	3.20	6.48E-24	0.	2.68E-22	6.98E-17	2.00E-23	0.	0.	0.	3.75E-16	2.18E-11	7.03E-11	2.46E-11	1.17E-10
77	3.10	6.14E-24	0.	2.07E-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	3.00	5.43E-24	0.	1.25E-22	3.66E-17	1.74E-23	0.	0.	0.	3.76E-16	2.66E-11	8.35E-11	2.88E-11	1.39E-10
79	2.90	4.50E-24	0.	7.70E-23	2.08E-17	1.30E-23	0.	0.	0.	3.77E-16	2.94E-11	9.04E-11	3.10E-11	1.51E-10
80	2.80	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	2.98E-11	1.61E-10
81	2.70	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	1.65E-11	1.59E-10
82	2.60	1.35E-24	0.	8.51E-24	1.71E-18	2.00E-24	0.	0.	0.	3.78E-16	4.10E-11	7.31E-11	1.79E-11	1.32E-10
83	2.50	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	1.53E-10
84	2.40	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	2.30	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	2.20	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	2.10	0.	4.27E-22	0.	0.	0.	0.	0.	0.	3.72E-16	7.85E-11	1.64E-10	4.25E-11	2.85E-10
88	2.00	0.	8.12E-22	0.	0.	0.	0.	0.	0.	3.60E-16	9.10E-11	1.88E-10	4.86E-11	3.27E-10
89	1.90	0.	1.13E-21	0.	0.	0.	0.	0.	0.	3.46E-16	1.06E-10	2.14E-10	5.59E-11	3.76E-10
90	1.80	0.	9.40E-22	0.	0.	0.	0.	0.	0.	3.31E-16	1.25E-10	2.54E-10	6.75E-11	4.47E-10
91	1.70	0.	1.10E-21	0.	0.	0.	0.	0.	0.	3.12E-16	1.49E-10	3.04E-10	7.75E-11	5.31E-10
92	1.60	0.	8.05E-22	0.	0.	0.	0.	0.	0.	2.64E-16	1.80E-10	3.28E-10	9.18E-11	5.99E-10
93	1.50	0.	9.45E-22	0.	0.	0.	0.	0.	0.	1.20E-16	2.18E-10	2.91E-10	1.06E-10	6.15E-10
94	1.40	0.	9.45E-22	0.	0.	0.	0.	0.	0.	0.	2.69E-10	3.83E-10	9.44E-11	7.47E-10
95	1.30	0.	7.23E-22	0.	0.	0.	0.	0.	0.	0.	3.38E-10	5.40E-10	1.36E-10	1.01E-09
96	1.20	0.	6.95E-22	0.	0.	0.	0.	0.	0.	0.	4.34E-10	7.36E-10	1.68E-10	1.34E-09
97	1.10	0.	6.43E-22	0.	0.	0.	0.	1.88E-27	0.	0.	5.69E-10	9.03E-10	2.13E-10	1.68E-09
98	1.00	0.	5.90E-22	0.	0.	0.	0.	2.48E-26	0.	0.	7.60E-10	1.10E-09	2.59E-10	2.11E-09
99	0.90	0.	4.84E-22	0.	0.	0.	0.	2.86E-26	0.	0.	1.05E-09	1.24E-09	2.86E-10	2.57E-09
100	0.80	0.	2.28E-22	0.	0.	0.	0.	5.97E-25	0.	0.	1.49E-09	1.15E-09	2.45E-10	2.89E-09
101	0.70	0.	5.51E-23	0.	0.	0.	0.	4.96E-25	0.	0.	2.26E-09	1.32E-09	2.82E-10	3.86E-09
102	0.60	0.	8.06E-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 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 00	0.	0.	0.	2.86E 00	3.76E-02	2.36E 02	8.80E-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	4.10E-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.	2.50E 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	4.48E-02	4.25E 00	8.62E-01	1.04E 01
8	10.00	0.	0.	2.04E 00	0.	0.	0.	2.89E 00	4.62E-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	5.06E-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.	1.52E 00	0.	0.	0.	2.92E 00	5.39E-02	4.31E 00	8.44E-01	9.65E 00
14	9.40	0.	0.	1.43E 00	0.	0.	0.	2.93E 00	5.56E-02	4.32E 00	8.41E-01	9.58E 00
15	9.30	0.	0.	1.46E 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	1.50E 00	8.32E-01	6.58E 00
18	9.00	0.	0.	1.11E 00	0.	0.	0.	2.97E 00	6.34E-02	1.50E 00	8.29E-01	6.47E 00
19	8.90	0.	0.	1.02E 00	0.	0.	0.	2.98E 00	6.55E-02	1.50E 00	8.26E-01	6.39E 00
20	8.80	0.	0.	9.98E-01	0.	0.	0.	2.99E 00	6.78E-02	1.50E 00	8.24E-01	6.38E 00
21	8.70	0.	0.	8.58E-01	0.	0.	0.	3.00E 00	7.02E-02	1.50E 00	8.21E-01	6.25E 00
22	8.60	0.	0.	8.82E-01	0.	0.	0.	3.01E 00	7.27E-02	1.50E 00	8.18E-01	6.29E 00
23	8.50	0.	0.	7.65E-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.	5.51E-01	0.	0.	0.	3.10E 00	9.05E-02	1.52E 00	8.20E-01	6.09E 00
29	7.90	0.	0.	4.70E-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.	1.80E-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.	6.55E-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.	2.08E-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.	2.40E-01	0.	3.60E-02	0.	3.29E 00	1.35E-01	1.60E 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	5.71E-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	6.28E 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	3.90E-04	1.01E-01	0.	3.45E 00	1.78E-01	1.67E 00	8.64E-01	6.35E 00
45	6.30	6.51E-06	0.	5.35E-02	1.82E-03	6.84E-02	0.	3.47E 00	1.86E-01	1.69E 00	8.70E-01	6.34E 00
46	6.20	2.92E-06	0.	2.93E-02	2.56E-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.	3.50E 00	2.39E-01	1.79E 00	9.16E-01	6.52E 00
51	5.70	1.76E-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.E.	TOTAL AIR
52	5.60	5.69E-11	0.	0.	0.	1.35E-02	8.75E-02	0.	0.	3.06E 00	2.66E-01	1.85E 00	9.35E-01	6.20E 00
53	5.50	0.	0.	0.	0.	1.65E-02	8.14E-02	0.	0.	3.07E 00	2.81E-01	1.88E 00	9.46E-01	6.28E 00
54	5.40	0.	0.	0.	0.	1.50E-02	6.46E-02	0.	0.	3.09E 00	2.97E-01	1.93E 00	9.59E-01	6.35E 00
55	5.30	0.	0.	0.	0.	1.53E-02	8.30E-02	0.	0.	3.11E 00	3.14E-01	1.98E 00	9.73E-01	6.47E 00
56	5.20	0.	0.	0.	0.	1.64E-02	6.04E-02	0.	0.	3.13E 00	3.32E-01	2.03E 00	9.92E-01	6.56E 00
57	5.10	0.	0.	0.	0.	1.64E-02	7.82E-02	0.	0.	3.15E 00	3.53E-01	2.09E 00	1.01E 00	6.70E 00
58	5.00	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	4.90	1.84E-03	0.	0.	0.	1.65E-02	7.84E-02	0.	0.	3.21E 00	3.98E-01	2.22E 00	1.05E 00	6.97E 00
60	4.80	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	4.70	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	4.60	6.22E-03	0.	0.	0.	1.80E-02	6.02E-02	0.	0.	3.29E 00	4.82E-01	2.47E 00	1.13E 00	7.45E 00
63	4.50	6.49E-03	0.	1.75E-02	0.	1.63E-02	4.51E-02	0.	0.	3.31E 00	5.15E-01	2.59E 00	1.15E 00	7.66E 00
64	4.40	6.89E-03	0.	5.40E-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	4.30	6.47E-03	0.	1.70E-01	0.	1.55E-02	1.94E-02	0.	0.	3.37E 00	5.91E-01	2.84E 00	1.22E 00	8.22E 00
66	4.20	6.01E-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	8.84E 00
67	4.10	5.61E-03	0.	2.34E-01	0.	1.58E-02	3.81E-03	0.	0.	3.41E 00	6.83E-01	3.10E 00	1.26E 00	8.71E 00
68	4.00	5.14E-03	0.	8.07E-01	0.	1.52E-02	2.89E-03	0.	0.	3.42E 00	7.36E-01	3.24E 00	4.67E-01	8.69E 00
69	3.90	4.34E-03	0.	3.72E-01	1.89E-02	1.39E-02	1.12E-03	0.	0.	3.41E 00	7.94E-01	3.10E 00	4.82E-01	8.19E 00
70	3.80	4.74E-03	0.	5.87E-01	8.60E-02	1.49E-02	0.	0.	0.	3.39E 00	8.60E-01	3.15E 00	5.01E-01	8.60E 00
71	3.70	4.18E-03	0.	6.30E-01	3.32E-02	1.25E-02	0.	0.	0.	3.34E 00	9.32E-01	2.56E 00	5.51E-01	8.06E 00
72	3.60	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	3.50	3.48E-03	0.	5.77E-01	3.76E-01	1.06E-02	0.	0.	0.	2.86E 00	1.10E 00	2.90E 00	6.69E-01	8.51E 00
74	3.40	3.17E-03	0.	3.56E-01	5.12E-02	1.19E-02	0.	0.	0.	1.65E 00	1.20E 00	3.24E 00	7.40E-01	7.26E 00
75	3.30	2.52E-03	0.	3.66E-01	2.09E-01	9.38E-03	0.	0.	0.	1.65E 00	1.32E 00	3.58E 00	8.11E-01	7.95E 00
76	3.20	2.18E-03	0.	2.36E-01	3.70E-01	9.81E-03	0.	0.	0.	1.66E 00	1.45E 00	3.92E 00	8.86E-01	8.53E 00
77	3.10	2.08E-03	0.	1.83E-01	8.07E-02	9.22E-03	0.	0.	0.	1.66E 00	1.59E 00	4.28E 00	9.61E-01	8.77E 00
78	3.00	1.85E-03	0.	1.11E-01	2.00E-01	8.63E-03	0.	0.	0.	1.66E 00	1.76E 00	4.64E 00	1.04E 00	9.42E 00
79	2.90	1.54E-03	0.	6.89E-02	1.12E-01	6.51E-03	0.	0.	0.	1.67E 00	1.95E 00	5.01E 00	1.12E 00	9.93E 00
80	2.80	1.60E-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	2.70	1.02E-03	0.	1.55E-02	9.55E-02	2.39E-03	0.	0.	0.	1.67E 00	2.42E 00	5.91E 00	1.30E 00	1.14E 01
82	2.60	4.74E-04	0.	7.59E-03	9.46E-03	1.04E-03	0.	0.	0.	1.67E 00	2.71E 00	6.41E 00	1.41E 00	1.22E 01
83	2.50	3.31E-05	0.	8.32E-04	8.94E-03	2.46E-04	0.	0.	0.	1.67E 00	3.06E 00	7.29E 00	7.95E-01	1.28E 01
84	2.40	0.	3.93E-02	0.	7.53E-03	2.60E-05	0.	0.	0.	1.67E 00	3.47E 00	8.50E 00	9.44E-01	1.46E 01
85	2.30	0.	1.28E-01	0.	0.	0.	0.	0.	0.	1.66E 00	3.95E 00	7.05E 00	1.13E 00	1.39E 01
86	2.20	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	2.10	0.	3.54E-01	0.	0.	0.	0.	0.	0.	1.64E 00	5.20E 00	9.71E 00	1.58E 00	1.85E 01
88	2.00	0.	6.82E-01	0.	0.	0.	0.	0.	0.	1.59E 00	6.03E 00	1.11E 01	1.81E 00	2.12E 01
89	1.90	0.	9.14E-01	0.	0.	0.	0.	0.	0.	1.53E 00	7.06E 00	1.26E 01	2.08E 00	2.42E 01
90	1.80	0.	7.66E-01	0.	0.	0.	0.	0.	0.	1.46E 00	8.33E 00	1.51E 01	2.52E 00	2.82E 01
91	1.70	0.	8.90E-01	0.	0.	0.	0.	0.	0.	1.38E 00	9.91E 00	1.81E 01	3.06E 00	3.33E 01
92	1.60	0.	6.56E-01	0.	0.	0.	0.	0.	0.	1.17E 00	1.19E 01	2.11E 01	3.60E 00	3.84E 01
93	1.50	0.	7.65E-01	0.	0.	0.	0.	0.	0.	5.30E-01	1.45E 01	2.72E 01	4.37E 00	4.73E 01
94	1.40	0.	7.62E-01	0.	0.	0.	0.	0.	0.	0.	1.79E 01	3.37E 01	5.21E 00	5.76E 01
95	1.30	0.	5.83E-01	0.	0.	0.	0.	0.	0.	0.	2.25E 01	4.41E 01	6.89E 00	7.41E 01
96	1.20	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.	8.36E-07	0.	0.	3.78E 01	5.83E 01	8.66E 00	1.05E 02
98	1.00	0.	4.80E-01	0.	0.	0.	0.	1.16E-05	0.	0.	5.04E 01	7.06E 01	9.81E 00	1.31E 02
99	0.90	0.	3.94E-01	0.	0.	0.	0.	1.33E-05	0.	0.	6.94E 01	8.09E 01	1.15E 01	1.62E 02
100	0.80	0.	1.86E-01	0.	0.	0.	0.	2.82E-04	0.	0.	9.96E 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.	1.50E 02	1.01E 02	1.40E 01	2.66E 02
102	0.60	0.	7.12E-03	0.	0.	0.	0.	8.19E-04	0.	0.	2.42E 02	1.13E 02	1.57E 01	3.71E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. 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.	3.27E-02	0.	0.	0.	8.69E-02	3.53E-03	2.35E 01	8.65E-02	2.37E 01
2	10.60	0.	0.	2.95E-02	0.	0.	0.	8.70E-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	3.96E-03	4.21E-01	8.54E-02	6.22E-01
6	10.20	0.	0.	2.48E-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	4.20E-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	4.60E-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.	1.51E-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.	8.95E-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.	1.10E-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.	8.51E-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.	7.51E-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	8.01E-02	3.39E-01
27	8.10	0.	0.	5.45E-03	0.	0.	0.	9.37E-02	8.17E-03	1.51E-01	8.04E-02	3.39E-01
28	8.00	0.	0.	5.46E-03	0.	0.	0.	9.42E-02	8.48E-03	1.52E-01	8.06E-02	3.41E-01
29	7.90	0.	0.	4.66E-03	0.	0.	0.	9.46E-02	8.81E-03	1.53E-01	8.08E-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	8.18E-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.	9.90E-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	8.89E-07	0.	2.17E-03	0.	4.64E-04	0.	1.01E-01	1.33E-02	1.60E-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	3.35E-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.	1.02E-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	6.30E-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	1.20E-03	0.	1.07E-01	1.92E-02	1.71E-01	8.74E-02	3.86E-01
48	6.00	5.33E-09	0.	3.39E-05	6.70E-05	5.66E-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	5.80	1.66E-10	0.	6.10E-08	1.36E-04	5.67E-04	0.	1.06E-01	2.24E-02	1.78E-01	9.01E-02	3.98E-01
51	5.70	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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.5[illegible]E-13	0.	0.	0.	1.32E-04	8.57E-04	0.	0.	9.28E-02	2.49E-02	1.84E-01	9.20E-02	3.94E-01
53	5.50	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	5.40	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	5.30	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	5.20	0.	0.	0.	0.	1.61E-04	5.92E-04	0.	0.	9.50E-02	3.12E-02	2.02E-01	9.75E-02	4.26E-01
57	5.10	0.	0.	0.	0.	1.60E-04	7.66E-04	0.	0.	9.58E-02	3.30E-02	2.08E-01	9.93E-02	4.37E-01
58	5.00	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	4.90	1.76E-05	0.	0.	0.	1.62E-04	7.68E-04	0.	0.	9.74E-02	3.73E-02	2.21E-01	1.03E-01	4.60E-01
60	4.80	3.30E-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	4.70	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	4.60	6.02E-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	4.50	6.28E-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	4.40	6.66E-05	0.	5.35E-04	0.	1.60E-04	3.07E-04	0.	0.	1.01E-01	5.16E-02	2.70E-01	1.16E-01	5.40E-01
65	4.30	6.25E-05	0.	1.68E-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	4.20	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	4.10	5.42E-05	0.	2.32E-03	0.	1.55E-04	3.73E-05	0.	0.	1.03E-01	6.40E-02	3.09E-01	1.23E-01	6.02E-01
68	4.00	4.97E-05	0.	8.00E-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	3.90	4.2[illegible]E-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	5.38E-01
70	3.80	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	3.70	4.04E-05	0.	6.25E-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	3.60	3.63E-05	0.	4.24E-03	5.88E-03	1.33E-04	0.	0.	0.	9.50E-02	9.49E-02	2.75E-01	5.97E-02	5.35E-01
73	3.50	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	3.40	3.06E-05	0.	3.53E-03	1.65E-03	1.16E-04	0.	0.	0.	5.01E-02	1.13E-01	3.22E-01	7.28E-02	5.63E-01
75	3.30	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	3.20	2.11E-05	0.	2.34E-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	3.10	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	3.00	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	2.90	1.49E-05	0.	6.83E-04	3.61E-03	6.37E-05	0.	0.	0.	5.06E-02	1.83E-01	4.99E-01	1.10E-01	8.46E-01
80	2.80	1.55E-05	0.	3.28E-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	2.70	9.85E-06	0.	1.53E-04	3.07E-03	2.34E-05	0.	0.	0.	5.07E-02	2.27E-01	5.88E-01	1.28E-01	9.97E-01
82	2.60	4.58E-06	0.	7.53E-05	3.04E-04	1.02E-05	0.	0.	0.	5.07E-02	2.54E-01	6.38E-01	1.38E-01	1.08E 00
83	2.50	3.20E-07	0.	8.25E-06	2.87E-04	2.41E-06	0.	0.	0.	5.07E-02	2.87E-01	7.26E-01	7.82E-02	1.14E 00
84	2.40	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	2.30	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	2.20	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	2.10	0.	3.51E-03	0.	0.	0.	0.	0.	0.	4.99E-02	4.87E-01	9.66E-01	1.55E-01	1.66E 00
88	2.00	0.	6.76E-03	0.	0.	0.	0.	0.	0.	4.83E-02	5.65E-01	1.10E 00	1.78E-01	1.90E 00
89	1.90	0.	9.07E-03	0.	0.	0.	0.	0.	0.	4.64E-02	6.61E-01	1.26E 00	2.05E-01	2.18E 00
90	1.80	0.	7.60E-03	0.	0.	0.	0.	0.	0.	4.44E-02	7.80E-01	1.50E 00	2.48E-01	2.58E 00
91	1.70	0.	8.82E-03	0.	0.	0.	0.	0.	0.	4.18E-02	9.29E-01	1.80E 00	3.01E-01	3.08E 00
92	1.60	0.	6.51E-03	0.	0.	0.	0.	0.	0.	3.54E-02	1.12E 00	2.10E 00	3.54E-01	3.61E 00
93	1.50	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	1.40	0.	7.56E-03	0.	0.	0.	0.	0.	0.	0.	1.68E 00	3.35E 00	5.12E-01	5.55E 00
95	1.30	0.	5.78E-03	0.	0.	0.	0.	0.	0.	0.	2.11E 00	4.39E 00	6.77E-01	7.19E 00
96	1.20	0.	5.55E-03	0.	0.	0.	0.	0.	0.	0.	2.71E 00	4.70E 00	6.77E-01	8.10E 00
97	1.10	0.	5.19E-03	0.	0.	0.	0.	8.18E-09	0.	0.	3.54E 00	5.80E 00	8.51E-01	1.02E 01
98	1.00	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	0.90	0.	3.91E-03	0.	0.	0.	0.	1.30E-07	0.	0.	6.50E 00	8.05E 00	1.13E 00	1.57E 01
100	0.80	0.	1.84E-03	0.	0.	0.	0.	2.76E-06	0.	0.	9.33E 00	9.27E 00	1.30E 00	1.99E 01
101	0.70	0.	4.41E-04	0.	0.	0.	0.	2.37E-06	0.	0.	1.41E 01	1.01E 01	1.38E 00	2.56E 01
102	0.60	0.	7.06E-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 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.	2.23E-04	0.	0.	0.	2.22E-03	2.92E-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	3.48E-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	8.20E-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	9.26E-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.	6.26E-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	1.26E-03	1.35E-02	7.45E-03	2.48E-02
43	6.50	1.50E-09	0.	8.61E-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	7.26E-06	0.	2.67E-03	1.38E-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	1.45E-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	7.65E-03	2.59E-02
47	6.10	1.01E-10	0.	9.18E-07	5.19E-07	8.76E-06	0.	2.73E-03	1.59E-03	1.42E-02	7.73E-03	2.62E-02
48	6.00	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	1.07E-11	0.	1.66E-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	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	4.36E-15	0.	0.	0.	9.66E-07	6.26E-06	0.	0.	2.36E-03	2.06E-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	2.18E-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	2.30E-03	1.59E-02	8.35E-03	2.89E-02
55	5.30	0.	0.	0.	0.	1.10E-06	5.94E-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	5.10	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	5.00	5.78E-08	0.	0.	0.	1.07E-06	5.19E-06	0.	0.	2.46E-03	2.91E-03	1.77E-02	8.95E-03	3.20E-02
59	4.90	1.39E-07	0.	0.	0.	1.18E-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
62	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	9.80E-03	3.64E-02
63	4.50	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	4.40	5.21E-07	0.	3.65E-06	0.	1.17E-06	2.24E-06	0.	0.	2.58E-03	4.28E-03	2.23E-02	1.03E-02	3.94E-02
65	4.30	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	4.20	4.55E-07	0.	3.79E-05	0.	1.16E-06	9.93E-07	0.	0.	2.63E-03	4.93E-03	2.44E-02	1.09E-02	4.29E-02
67	4.10	4.24E-07	0.	1.58E-05	0.	1.13E-06	2.73E-07	0.	0.	2.64E-03	5.30E-03	2.55E-02	1.09E-02	4.44E-02
68	4.00	3.89E-07	0.	5.46E-05	0.	1.09E-06	2.07E-07	0.	0.	2.65E-03	5.71E-03	2.66E-02	4.06E-03	3.91E-02
69	3.90	3.28E-07	0.	2.52E-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	3.59E-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	3.16E-07	0.	4.26E-05	2.52E-05	8.97E-07	0.	0.	0.	2.58E-03	7.23E-03	2.10E-02	4.79E-03	3.57E-02
72	3.60	2.84E-07	0.	2.89E-05	1.39E-04	9.71E-07	0.	0.	0.	2.42E-03	7.86E-03	2.27E-02	5.28E-03	3.85E-02
73	3.50	2.63E-07	0.	3.90E-05	2.86E-04	7.58E-07	0.	0.	0.	2.22E-03	8.56E-03	2.39E-02	5.82E-03	4.08E-02
74	3.40	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	4.38E-02
75	3.30	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	7.06E-03	4.82E-02
76	3.20	1.65E-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	3.10	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	3.00	1.40E-07	0.	7.51E-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	2.90	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	2.80	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	2.70	7.71E-08	0.	1.05E-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	2.50	2.50E-09	0.	5.63E-08	6.80E-06	1.76E-08	0.	0.	0.	1.29E-03	2.38E-02	6.00E-02	6.92E-03	9.20E-02
84	2.40	0.	2.66E-06	0.	5.73E-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	3.06E-02	5.80E-02	9.83E-03	9.98E-02
86	2.20	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	1.90	0.	6.18E-05	0.	0.	0.	0.	0.	0.	1.18E-03	5.48E-02	1.04E-01	1.81E-02	1.78E-01
90	1.80	0.	5.18E-05	0.	0.	0.	0.	0.	0.	1.13E-03	6.46E-02	1.24E-01	2.19E-02	2.12E-01
91	1.70	0.	6.02E-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.	4.44E-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	5.90E-02	5.98E-01
96	1.20	0.	3.78E-05	0.	0.	0.	0.	0.	0.	0.	2.24E-01	3.89E-01	6.00E-02	6.73E-01
97	1.10	0.	3.54E-05	0.	0.	0.	0.	5.98E-11	0.	0.	2.93E-01	4.79E-01	7.54E-02	8.48E-01
98	1.00	0.	3.25E-05	0.	0.	0.	0.	8.28E-10	0.	0.	3.91E-01	5.81E-01	8.53E-02	1.06E 00
99	0.90	0.	2.67E-05	0.	0.	0.	0.	9.53E-10	0.	0.	5.39E-01	6.65E-01	1.00E-01	1.30E 00
100	0.80	0.	1.26E-05	0.	0.	0.	0.	2.02E-08	0.	0.	7.73E-01	7.66E-01	1.15E-01	1.65E 00
101	0.70	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	0.60	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 OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. 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.	6.85E-07	0.	0.	0.	3.46E-05	1.66E-05	1.08E-01	5.01E-04	1.08E-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.	5.86E-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.	4.88E-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.	2.56E-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	4.72E-04	1.27E-03
33	7.50	0.	0.	7.62E-08	0.	1.70E-11	0.	3.84E-05	4.86E-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	1.53E-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.	4.55E-08	0.	1.23E-08	0.	4.00E-05	6.25E-05	7.35E-04	4.82E-04	1.32E-03
40	6.80	2.56E-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	1.85E-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	3.67E-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.	6.09E-09	8.64E-10	2.48E-08	0.	4.23E-05	8.64E-05	7.77E-04	5.01E-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	5.06E-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.	1.28E-12	3.61E-09	1.50E-08	0.	4.23E-05	1.06E-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	1.85E-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.	4.28E-09	2.11E-08	0.	0.	3.71E-05	1.24E-04	8.60E-04	5.39E-04	1.56E-03
54	5.40	0.	0.	0.	0.	3.89E-09	1.68E-08	0.	0.	3.73E-05	1.31E-04	8.81E-04	5.46E-04	1.60E-03
55	5.30	0.	0.	0.	0.	3.99E-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	1.57E-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	2.03E-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-10	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	1.90E-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	2.18E-09	0.	3.53E-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.	4.23E-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-08	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	3.25E-04	1.48E-03	2.66E-04	2.11E-03
69	3.90	1.41E-09	0.	7.74E-08	1.85E-07	3.60E-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	8.19E-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	2.70E-03
76	3.20	7.09E-10	0.	4.92E-08	3.63E-06	2.55E-09	0.	0.	0.	2.00E-05	6.39E-04	1.79E-03	5.05E-04	2.96E-03
77	3.10	6.75E-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	6.06E-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.	6.89E-09	6.62E-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	3.31E-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	4.96E-03
83	2.50	1.07E-11	0.	1.73E-10	8.77E-08	6.38E-11	0.	0.	0.	2.02E-05	1.35E-03	3.33E-03	4.53E-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	5.38E-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	9.00E-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	3.68E-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	4.38E-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	5.26E-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	2.49E-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	3.40E-02
96	1.20	0.	1.16E-07	0.	0.	0.	0.	0.	0.	0.	1.28E-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	4.82E-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.	3.46E-12	0.	0.	3.06E-02	3.69E-02	6.57E-03	7.41E-02
100	0.80	0.	3.86E-08	0.	0.	0.	0.	7.34E-11	0.	0.	4.40E-02	4.25E-02	7.55E-03	9.40E-02
101	0.70	0.	9.24E-09	0.	0.	0.	0.	6.28E-11	0.	0.	6.65E-02	4.63E-02	8.00E-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	8.94E-03	1.68E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. 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.	4.08E-10	0.	0.	0.	1.61E-07	4.19E-07	4.67E-05	1.47E-05	6.20E-05
2	10.60	0.	0.	3.68E-10	0.	0.	0.	1.62E-07	4.31E-07	4.69E-05	1.47E-05	6.22E-05
3	10.50	0.	0.	3.70E-10	0.	0.	0.	1.62E-07	4.44E-07	4.71E-05	1.46E-05	6.23E-05
4	10.40	0.	0.	3.49E-10	0.	0.	0.	1.62E-07	4.57E-07	4.73E-05	1.46E-05	6.25E-05
5	10.30	0.	0.	3.02E-10	0.	0.	0.	1.62E-07	4.70E-07	4.74E-05	1.45E-05	6.26E-05
6	10.20	0.	0.	3.10E-10	0.	0.	0.	1.62E-07	4.84E-07	4.75E-05	1.45E-05	6.26E-05
7	10.10	0.	0.	2.91E-10	0.	0.	0.	1.63E-07	4.99E-07	4.76E-05	1.44E-05	6.26E-05
8	10.00	0.	0.	2.53E-10	0.	0.	0.	1.63E-07	5.14E-07	4.74E-05	1.44E-05	6.24E-05
9	9.90	0.	0.	2.59E-10	0.	0.	0.	1.63E-07	5.30E-07	4.75E-05	1.43E-05	6.25E-05
10	9.80	0.	0.	2.41E-10	0.	0.	0.	1.63E-07	5.46E-07	4.76E-05	1.43E-05	6.26E-05
11	9.70	0.	0.	2.07E-10	0.	0.	0.	1.64E-07	5.63E-07	4.77E-05	1.42E-05	6.27E-05
12	9.60	0.	0.	2.23E-10	0.	0.	0.	1.64E-07	5.81E-07	4.79E-05	1.42E-05	6.28E-05
13	9.50	0.	0.	1.89E-10	0.	0.	0.	1.64E-07	6.00E-07	4.80E-05	1.41E-05	6.29E-05
14	9.40	0.	0.	1.77E-10	0.	0.	0.	1.65E-07	6.19E-07	4.81E-05	1.41E-05	6.30E-05
15	9.30	0.	0.	1.81E-10	0.	0.	0.	1.66E-07	6.39E-07	4.83E-05	1.40E-05	6.31E-05
16	9.20	0.	0.	1.49E-10	0.	0.	0.	1.66E-07	6.60E-07	4.84E-05	1.40E-05	6.32E-05
17	9.10	0.	0.	1.52E-10	0.	0.	0.	1.67E-07	6.82E-07	1.67E-05	1.39E-05	3.15E-05
18	9.00	0.	0.	1.38E-10	0.	0.	0.	1.67E-07	7.06E-07	1.67E-05	1.39E-05	3.15E-05
19	8.90	0.	0.	1.26E-10	0.	0.	0.	1.68E-07	7.30E-07	1.67E-05	1.38E-05	3.15E-05
20	8.80	0.	0.	1.24E-10	0.	0.	0.	1.69E-07	7.55E-07	1.67E-05	1.38E-05	3.14E-05
21	8.70	0.	0.	1.06E-10	0.	0.	0.	1.69E-07	7.82E-07	1.68E-05	1.37E-05	3.14E-05
22	8.60	0.	0.	1.09E-10	0.	0.	0.	1.70E-07	8.10E-07	1.68E-05	1.37E-05	3.14E-05
23	8.50	0.	0.	9.48E-11	0.	0.	0.	1.70E-07	8.39E-07	1.68E-05	1.36E-05	3.15E-05
24	8.40	0.	0.	9.38E-11	0.	0.	0.	1.71E-07	8.70E-07	1.68E-05	1.36E-05	3.15E-05
25	8.30	0.	0.	7.89E-11	0.	0.	0.	1.72E-07	9.02E-07	1.69E-05	1.36E-05	3.16E-05
26	8.20	0.	0.	7.95E-11	0.	0.	0.	1.73E-07	9.35E-07	1.69E-05	1.36E-05	3.17E-05
27	8.10	0.	0.	6.80E-11	0.	0.	0.	1.74E-07	9.71E-07	1.70E-05	1.37E-05	3.18E-05
28	8.00	0.	0.	6.82E-11	0.	0.	0.	1.75E-07	1.01E-06	1.70E-05	1.37E-05	3.19E-05
29	7.90	0.	0.	5.82E-11	0.	0.	0.	1.76E-07	1.05E-06	1.71E-05	1.38E-05	3.21E-05
30	7.80	0.	0.	6.01E-11	0.	0.	0.	1.77E-07	1.09E-06	1.72E-05	1.38E-05	3.23E-05
31	7.70	0.	0.	5.23E-11	0.	0.	0.	1.77E-07	1.13E-06	1.73E-05	1.38E-05	3.24E-05
32	7.60	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	7.50	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	7.40	0.	0.	4.05E-11	0.	9.37E-14	0.	1.80E-07	1.27E-06	1.75E-05	1.40E-05	3.29E-05
35	7.30	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	7.20	0.	0.	3.42E-11	0.	1.05E-12	0.	1.82E-07	1.38E-06	1.77E-05	1.40E-05	3.33E-05
37	7.10	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	7.00	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	6.90	2.57E-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	6.80	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	6.70	1.66E-14	0.	2.25E-11	0.	1.63E-11	0.	1.90E-07	1.72E-06	1.81E-05	1.43E-05	3.43E-05
42	6.60	9.70E-15	0.	2.00E-11	0.	1.27E-11	0.	1.91E-07	1.80E-06	1.83E-05	1.44E-05	3.46E-05
43	6.50	5.57E-15	0.	1.58E-11	0.	1.94E-11	0.	1.93E-07	1.89E-06	1.85E-05	1.45E-05	3.49E-05
44	6.40	3.16E-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	6.30	1.82E-15	0.	6.62E-12	3.38E-13	1.27E-11	0.	1.96E-07	2.07E-06	1.88E-05	1.46E-05	3.56E-05
46	6.20	8.17E-16	0.	3.62E-12	4.76E-13	1.78E-11	0.	1.97E-07	2.18E-06	1.90E-05	1.47E-05	3.61E-05
47	6.10	3.72E-16	0.	1.68E-12	1.35E-12	2.28E-11	0.	1.99E-07	2.29E-06	1.92E-05	1.49E-05	3.65E-05
48	6.00	1.54E-16	0.	4.24E-13	1.27E-12	1.08E-11	0.	2.00E-07	2.40E-06	1.94E-05	1.50E-05	3.71E-05
49	5.90	3.78E-17	0.	3.03E-14	1.86E-12	1.06E-11	0.	2.00E-07	2.53E-06	1.97E-05	1.52E-05	3.76E-05
50	5.80	4.81E-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	5.70	3.54E-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	1.59E-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	1.52E-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.	2.86E-12	1.55E-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	1.35E-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	1.46E-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	2.64E-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.	3.04E-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.	3.04E-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	3.16E-05	2.03E-05	5.87E-05
66	4.20	1.68E-12	0.	6.95E-11	0.	3.03E-12	2.58E-12	0.	0.	1.91E-07	7.07E-06	3.31E-05	2.09E-05	6.12E-05
67	4.10	1.57E-12	0.	2.90E-11	0.	2.94E-12	7.10E-13	0.	0.	1.92E-07	7.60E-06	3.45E-05	2.10E-05	6.33E-05
68	4.00	1.44E-12	0.	9.99E-11	0.	2.83E-12	5.38E-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	2.08E-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	4.55E-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.	5.30E-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	5.60E-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	7.07E-13	0.	4.53E-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	1.96E-05	5.16E-05	1.73E-05	8.86E-05
79	2.90	4.32E-13	0.	8.53E-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	4.48E-13	0.	4.10E-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.	9.40E-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	9.20E-15	0.	1.03E-13	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	3.86E-05	6.47E-05	1.58E-05	1.19E-04
85	2.30	0.	1.58E-11	0.	0.	0.	0.	0.	0.	9.34E-08	4.39E-05	7.85E-05	1.89E-05	1.41E-04
86	2.20	0.	4.01E-11	0.	0.	0.	0.	0.	0.	9.30E-08	5.03E-05	9.28E-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	6.03E-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.	6.48E-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	9.00E-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.	5.50E-12	0.	0.	0.	0.	4.50E-14	0.	0.	1.68E-03	1.13E-03	2.35E-04	3.04E-03
102	0.60	0.	8.61E-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 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.	6.09E-14	0.	0.	0.	2.33E-10	5.20E-09	6.00E-07	1.91E-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	1.89E-07	7.75E-07
5	10.30	0.	0.	4.51E-14	0.	0.	0.	2.34E-10	5.83E-09	5.80E-07	1.89E-07	7.75E-07
6	10.20	0.	0.	4.63E-14	0.	0.	0.	2.35E-10	6.00E-09	5.81E-07	1.88E-07	7.76E-07
7	10.10	0.	0.	4.34E-14	0.	0.	0.	2.35E-10	6.19E-09	5.83E-07	1.87E-07	7.77E-07
8	10.00	0.	0.	3.77E-14	0.	0.	0.	2.35E-10	6.37E-09	5.84E-07	1.87E-07	7.78E-07
9	9.90	0.	0.	3.86E-14	0.	0.	0.	2.36E-10	6.57E-09	5.86E-07	1.86E-07	7.79E-07
10	9.80	0.	0.	3.60E-14	0.	0.	0.	2.36E-10	6.77E-09	5.87E-07	1.85E-07	7.80E-07
11	9.70	0.	0.	3.09E-14	0.	0.	0.	2.37E-10	6.99E-09	5.89E-07	1.85E-07	7.81E-07
12	9.60	0.	0.	3.33E-14	0.	0.	0.	2.37E-10	7.21E-09	5.90E-07	1.84E-07	7.82E-07
13	9.50	0.	0.	2.82E-14	0.	0.	0.	2.37E-10	7.44E-09	5.92E-07	1.83E-07	7.83E-07
14	9.40	0.	0.	2.65E-14	0.	0.	0.	2.38E-10	7.68E-09	5.94E-07	1.83E-07	7.84E-07
15	9.30	0.	0.	2.71E-14	0.	0.	0.	2.39E-10	7.93E-09	2.10E-07	1.82E-07	4.00E-07
16	9.20	0.	0.	2.22E-14	0.	0.	0.	2.40E-10	8.19E-09	2.10E-07	1.81E-07	4.00E-07
17	9.10	0.	0.	2.28E-14	0.	0.	0.	2.41E-10	8.46E-09	2.10E-07	1.81E-07	3.99E-07
18	9.00	0.	0.	2.05E-14	0.	0.	0.	2.42E-10	8.75E-09	2.10E-07	1.80E-07	3.99E-07
19	8.90	0.	0.	1.89E-14	0.	0.	0.	2.43E-10	9.05E-09	2.10E-07	1.80E-07	3.99E-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.	1.40E-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	4.00E-07
26	8.20	0.	0.	1.19E-14	0.	0.	0.	2.50E-10	1.16E-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.	8.97E-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.	6.05E-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.	1.66E-16	0.	2.63E-10	1.72E-08	2.20E-07	1.82E-07	4.20E-07
37	7.10	0.	0.	4.87E-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.	3.86E-15	0.	2.52E-15	0.	2.72E-10	2.04E-08	2.25E-07	1.84E-07	4.30E-07
41	6.70	2.69E-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.	2.01E-15	0.	2.76E-10	2.23E-08	2.28E-07	1.86E-07	4.37E-07
43	6.50	9.37E-19	0.	2.36E-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.	1.61E-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	2.02E-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	6.27E-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	2.61E-20	0.	6.33E-17	2.02E-16	1.71E-15	0.	2.89E-10	2.98E-08	2.44E-07	1.95E-07	4.69E-07
49	5.90	6.36E-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	8.10E-22	0.	1.14E-19	4.10E-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	2.58E-15	0.	0.	2.49E-10	3.67E-08	2.52E-07	2.03E-07	4.93E-07
53	5.50	0.	0.	0.	0.	4.86E-16	2.40E-15	0.	0.	2.50E-10	3.88E-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	2.08E-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.	4.85E-16	1.78E-15	0.	0.	2.55E-10	4.59E-08	2.77E-07	2.15E-07	5.39E-07
57	5.10	0.	0.	0.	0.	4.83E-16	2.31E-15	0.	0.	2.57E-10	4.87E-08	2.86E-07	2.19E-07	5.54E-07
58	5.00	3.60E-17	0.	0.	0.	4.40E-16	2.14E-15	0.	0.	2.59E-10	5.17E-08	2.94E-07	2.23E-07	5.70E-07
59	4.90	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	4.80	1.61E-16	0.	0.	0.	5.22E-16	2.16E-15	0.	0.	2.63E-10	5.85E-08	3.15E-07	2.32E-07	6.06E-07
61	4.70	2.15E-16	0.	0.	0.	5.19E-16	1.95E-15	0.	0.	2.66E-10	6.23E-08	3.25E-07	2.38E-07	6.26E-07
62	4.60	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	4.50	3.06E-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	4.40	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	4.30	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	4.20	2.83E-16	0.	1.04E-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	4.10	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	9.82E-08	6.18E-07
68	4.00	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	6.08E-07
69	3.90	2.05E-16	0.	6.88E-15	9.31E-13	4.10E-16	3.30E-17	0.	0.	2.77E-10	1.10E-07	3.24E-07	1.05E-07	5.38E-07
70	3.80	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	5.66E-07
71	3.70	1.97E-16	0.	1.17E-14	1.64E-12	3.70E-16	0.	0.	0.	2.72E-10	1.29E-07	3.32E-07	1.20E-07	5.80E-07
72	3.60	1.77E-16	0.	7.92E-15	9.03E-12	4.01E-16	0.	0.	0.	2.55E-10	1.40E-07	3.60E-07	1.32E-07	6.32E-07
73	3.50	1.64E-16	0.	1.07E-14	1.86E-11	3.13E-16	0.	0.	0.	2.33E-10	1.52E-07	4.00E-07	1.45E-07	6.98E-07
74	3.40	1.49E-16	0.	6.58E-15	2.53E-12	3.50E-16	0.	0.	0.	1.34E-10	1.66E-07	4.45E-07	1.61E-07	7.73E-07
75	3.30	1.19E-16	0.	6.77E-15	1.03E-11	2.77E-16	0.	0.	0.	1.35E-10	1.82E-07	4.92E-07	1.76E-07	8.50E-07
76	3.20	1.03E-16	0.	4.37E-15	1.82E-11	2.90E-16	0.	0.	0.	1.35E-10	2.00E-07	5.39E-07	1.92E-07	9.32E-07
77	3.10	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	3.00	8.73E-17	0.	2.05E-15	9.89E-12	2.55E-16	0.	0.	0.	1.36E-10	2.43E-07	6.32E-07	2.25E-07	1.10E-06
79	2.90	7.28E-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	2.80	7.54E-17	0.	6.13E-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	2.70	4.81E-17	0.	2.86E-16	4.71E-12	7.06E-17	0.	0.	0.	1.36E-10	3.34E-07	8.06E-07	2.49E-07	1.39E-06
82	2.60	2.24E-17	0.	1.40E-16	4.67E-13	3.07E-17	0.	0.	0.	1.36E-10	3.75E-07	8.70E-07	1.45E-07	1.39E-06
83	2.50	1.56E-18	0.	1.54E-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	2.40	0.	7.28E-16	0.	3.72E-13	7.69E-19	0.	0.	0.	1.36E-10	4.79E-07	7.94E-07	2.05E-07	1.48E-06
85	2.30	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	2.20	0.	5.99E-15	0.	0.	0.	0.	0.	0.	1.34E-10	6.24E-07	1.14E-06	2.94E-07	2.06E-06
87	2.10	0.	6.55E-15	0.	0.	0.	0.	0.	0.	1.34E-10	7.18E-07	1.32E-06	3.43E-07	2.39E-06
88	2.00	0.	1.26E-14	0.	0.	0.	0.	0.	0.	1.29E-10	8.33E-07	1.51E-06	3.92E-07	2.74E-06
89	1.90	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	1.80	0.	1.42E-14	0.	0.	0.	0.	0.	0.	1.19E-10	1.15E-06	2.06E-06	5.47E-07	3.76E-06
91	1.70	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	1.60	0.	1.21E-14	0.	0.	0.	0.	0.	0.	9.50E-11	1.64E-06	2.87E-06	7.47E-07	5.27E-06
93	1.50	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	1.40	0.	1.41E-14	0.	0.	0.	0.	0.	0.	0.	2.47E-06	3.19E-06	1.07E-06	6.73E-06
95	1.30	0.	1.08E-14	0.	0.	0.	0.	0.	0.	0.	3.11E-06	4.74E-06	1.11E-06	8.97E-06
96	1.20	0.	1.03E-14	0.	0.	0.	0.	0.	0.	0.	3.99E-06	6.25E-06	1.50E-06	1.17E-05
97	1.10	0.	9.68E-15	0.	0.	0.	0.	2.47E-20	0.	0.	5.21E-06	7.93E-06	1.75E-06	1.49E-05
98	1.00	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	0.90	0.	7.29E-15	0.	0.	0.	0.	3.93E-19	0.	0.	9.58E-06	1.10E-05	2.50E-06	2.31E-05
100	0.80	0.	3.43E-15	0.	0.	0.	0.	8.34E-18	0.	0.	1.38E-05	1.22E-05	2.69E-06	2.86E-05
101	0.70	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	0.60	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 COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. 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.	6.38E-18	0.	0.	0.	2.46E-13	5.41E-11	6.34E-09	1.99E-09	8.38E-09
2	10.60	0.	0.	5.76E-18	0.	0.	0.	2.46E-13	5.57E-11	6.37E-09	1.98E-09	8.41E-09
3	10.50	0.	0.	5.79E-18	0.	0.	0.	2.46E-13	5.73E-11	6.40E-09	1.98E-09	8.43E-09
4	10.40	0.	0.	5.45E-18	0.	0.	0.	2.46E-13	5.90E-11	6.42E-09	1.97E-09	8.45E-09
5	10.30	0.	0.	4.72E-18	0.	0.	0.	2.47E-13	6.07E-11	6.43E-09	1.96E-09	8.45E-09
6	10.20	0.	0.	4.85E-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	7.05E-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	9.60	0.	0.	3.49E-18	0.	0.	0.	2.50E-13	7.50E-11	6.58E-09	1.91E-09	8.56E-09
13	9.50	0.	0.	2.95E-18	0.	0.	0.	2.50E-13	7.75E-11	6.60E-09	1.91E-09	8.58E-09
14	9.40	0.	0.	2.77E-18	0.	0.	0.	2.51E-13	8.00E-11	6.62E-09	1.90E-09	8.60E-09
15	9.30	0.	0.	2.84E-18	0.	0.	0.	2.52E-13	8.26E-11	2.70E-09	1.89E-09	4.67E-09
16	9.20	0.	0.	2.32E-18	0.	0.	0.	2.53E-13	8.53E-11	2.70E-09	1.89E-09	4.67E-09
17	9.10	0.	0.	2.38E-18	0.	0.	0.	2.54E-13	8.82E-11	2.71E-09	1.88E-09	4.68E-09
18	9.00	0.	0.	2.15E-18	0.	0.	0.	2.55E-13	9.11E-11	2.71E-09	1.88E-09	4.68E-09
19	8.90	0.	0.	1.97E-18	0.	0.	0.	2.56E-13	9.43E-11	2.72E-09	1.86E-09	4.68E-09
20	8.80	0.	0.	1.93E-18	0.	0.	0.	2.56E-13	9.76E-11	2.73E-09	1.86E-09	4.68E-09
21	8.70	0.	0.	1.66E-18	0.	0.	0.	2.57E-13	1.01E-10	2.73E-09	1.85E-09	4.69E-09
22	8.60	0.	0.	1.71E-18	0.	0.	0.	2.58E-13	1.05E-10	2.74E-09	1.85E-09	4.69E-09
23	8.50	0.	0.	1.48E-18	0.	0.	0.	2.59E-13	1.08E-10	2.75E-09	1.84E-09	4.70E-09
24	8.40	0.	0.	1.47E-18	0.	0.	0.	2.61E-13	1.12E-10	2.76E-09	1.83E-09	4.71E-09
25	8.30	0.	0.	1.23E-18	0.	0.	0.	2.62E-13	1.16E-10	2.37E-09	1.83E-09	4.32E-09
26	8.20	0.	0.	1.24E-18	0.	0.	0.	2.63E-13	1.21E-10	2.39E-09	1.84E-09	4.35E-09
27	8.10	0.	0.	1.06E-18	0.	0.	0.	2.65E-13	1.25E-10	2.41E-09	1.84E-09	4.38E-09
28	8.00	0.	0.	1.07E-18	0.	0.	0.	2.66E-13	1.30E-10	2.43E-09	1.85E-09	4.41E-09
29	7.90	0.	0.	9.10E-19	0.	0.	0.	2.67E-13	1.35E-10	2.45E-09	1.86E-09	4.44E-09
30	7.80	0.	0.	9.39E-19	0.	0.	0.	2.69E-13	1.41E-10	2.47E-09	1.86E-09	4.47E-09
31	7.70	0.	0.	8.18E-19	0.	0.	0.	2.70E-13	1.46E-10	2.50E-09	1.87E-09	4.51E-09
32	7.60	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	7.50	0.	0.	7.09E-19	0.	2.05E-22	0.	2.73E-13	1.58E-10	2.55E-09	1.88E-09	4.58E-09
34	7.40	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	7.30	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	7.20	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	7.10	0.	0.	5.10E-19	0.	5.40E-20	0.	2.80E-13	1.87E-10	2.65E-09	1.90E-09	4.73E-09
38	7.00	2.39E-22	0.	4.65E-19	0.	1.13E-19	0.	2.82E-13	1.95E-10	2.68E-09	1.91E-09	4.78E-09
39	6.90	4.65E-22	0.	4.23E-19	0.	1.48E-19	0.	2.84E-13	2.03E-10	2.71E-09	1.91E-09	4.83E-09
40	6.80	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	6.70	2.89E-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	6.60	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	6.50	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	6.40	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	6.30	3.29E-23	0.	1.04E-19	5.69E-21	2.14E-19	0.	2.98E-13	2.68E-10	2.96E-09	1.97E-09	5.19E-09
46	6.20	1.48E-23	0.	5.67E-20	8.00E-21	2.99E-19	0.	3.00E-13	2.81E-10	3.00E-09	1.99E-09	5.27E-09
47	6.10	6.72E-24	0.	2.63E-20	2.27E-20	3.83E-19	0.	3.02E-13	2.95E-10	3.05E-09	2.01E-09	5.36E-09
48	6.00	2.79E-24	0.	6.63E-21	2.14E-20	1.81E-19	0.	3.05E-13	3.10E-10	2.55E-09	2.02E-09	4.88E-09
49	5.90	6.82E-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	5.80	8.60E-26	0.	1.19E-23	4.35E-20	1.81E-19	0.	3.00E-13	3.44E-10	2.63E-09	2.06E-09	5.04E-09
51	5.70	6.39E-27	0.	0.	5.04E-20	2.02E-19	0.	2.82E-13	3.62E-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-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	2.88E-28	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	5.50	0.	0.	0.	0.	5.16E-20	2.55E-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	2.02E-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	2.36E-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.	3.40E-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	3.48E-20	0.	1.05E-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.	4.85E-20	6.08E-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.	4.54E-19	0.	4.95E-20	1.19E-20	0.	0.	2.92E-13	9.82E-10	4.32E-09	1.02E-09	6.32E-09
68	4.00	2.60E-20	0.	1.56E-19	0.	4.75E-20	9.04E-21	0.	0.	2.93E-13	1.06E-09	3.51E-09	1.05E-09	5.62E-09
69	3.90	2.20E-20	0.	7.21E-19	9.60E-16	4.34E-20	3.50E-21	0.	0.	2.92E-13	1.14E-09	3.67E-09	1.09E-09	5.90E-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	1.69E-15	3.92E-20	0.	0.	0.	2.86E-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	1.46E-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.	7.09E-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	1.16E-20	0.	4.58E-19	1.88E-14	3.07E-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.	3.54E-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.	1.33E-19	5.72E-15	2.04E-20	0.	0.	0.	1.43E-13	2.80E-09	7.18E-09	2.51E-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	4.86E-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	4.98E-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	2.55E-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.	6.86E-19	0.	0.	0.	0.	0.	0.	1.41E-13	7.48E-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	8.68E-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	4.69E-09	3.26E-08
90	1.80	0.	1.48E-18	0.	0.	0.	0.	0.	0.	1.25E-13	1.20E-08	2.12E-08	5.68E-09	3.89E-08
91	1.70	0.	1.72E-18	0.	0.	0.	0.	0.	0.	1.18E-13	1.42E-08	2.54E-08	6.89E-09	4.66E-08
92	1.60	0.	1.27E-18	0.	0.	0.	0.	0.	0.	1.00E-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	7.87E-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	1.90E-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	0.80	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	0.70	0.	8.60E-20	0.	0.	0.	0.	7.56E-22	0.	0.	2.16E-07	1.15E-07	2.39E-08	3.56E-07
102	0.60	0.	1.38E-20	0.	0.	0.	0.	2.56E-21	0.	0.	3.48E-07	1.30E-07	2.70E-08	5.05E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 16000. 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.	6.30E-22	0.	0.	0.	2.63E-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	6.52E-13	1.10E-10	2.12E-11	1.32E-10
4	10.40	0.	0.	5.39E-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	1.33E-10
6	10.20	0.	0.	4.79E-22	0.	0.	0.	2.65E-16	7.12E-13	1.12E-10	2.10E-11	1.34E-10
7	10.10	0.	0.	4.49E-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	9.70	0.	0.	3.19E-22	0.	0.	0.	2.67E-16	8.28E-13	1.16E-10	2.06E-11	1.37E-10
12	9.60	0.	0.	3.45E-22	0.	0.	0.	2.67E-16	8.54E-13	1.16E-10	2.06E-11	1.38E-10
13	9.50	0.	0.	2.92E-22	0.	0.	0.	2.68E-16	8.81E-13	1.17E-10	2.05E-11	1.38E-10
14	9.40	0.	0.	2.74E-22	0.	0.	0.	2.69E-16	9.10E-13	7.87E-11	2.04E-11	1.00E-10
15	9.30	0.	0.	2.80E-22	0.	0.	0.	2.70E-16	9.40E-13	7.92E-11	2.04E-11	1.01E-10
16	9.20	0.	0.	2.29E-22	0.	0.	0.	2.71E-16	9.71E-13	7.98E-11	2.03E-11	1.01E-10
17	9.10	0.	0.	2.35E-22	0.	0.	0.	2.72E-16	1.00E-12	8.03E-11	2.02E-11	1.02E-10
18	9.00	0.	0.	2.13E-22	0.	0.	0.	2.73E-16	1.04E-12	8.08E-11	1.97E-11	1.02E-10
19	8.90	0.	0.	1.95E-22	0.	0.	0.	2.74E-16	1.07E-12	8.14E-11	1.96E-11	1.02E-10
20	8.80	0.	0.	1.91E-22	0.	0.	0.	2.75E-16	1.11E-12	8.19E-11	1.95E-11	1.03E-10
21	8.70	0.	0.	1.64E-22	0.	0.	0.	2.76E-16	1.15E-12	8.25E-11	1.95E-11	1.03E-10
22	8.60	0.	0.	1.69E-22	0.	0.	0.	2.77E-16	1.19E-12	8.30E-11	1.94E-11	1.04E-10
23	8.50	0.	0.	1.46E-22	0.	0.	0.	2.78E-16	1.23E-12	4.50E-11	1.94E-11	6.56E-11
24	8.40	0.	0.	1.45E-22	0.	0.	0.	2.79E-16	1.28E-12	4.56E-11	1.93E-11	6.63E-11
25	8.30	0.	0.	1.22E-22	0.	0.	0.	2.81E-16	1.32E-12	4.66E-11	1.93E-11	6.72E-11
26	8.20	0.	0.	1.23E-22	0.	0.	0.	2.82E-16	1.38E-12	4.78E-11	1.94E-11	6.86E-11
27	8.10	0.	0.	1.05E-22	0.	0.	0.	2.84E-16	1.43E-12	4.90E-11	1.95E-11	6.99E-11
28	8.00	0.	0.	1.05E-22	0.	0.	0.	2.85E-16	1.48E-12	5.03E-11	1.96E-11	7.13E-11
29	7.90	0.	0.	8.99E-23	0.	0.	0.	2.86E-16	1.54E-12	5.16E-11	1.96E-11	7.27E-11
30	7.80	0.	0.	9.28E-23	0.	0.	0.	2.88E-16	1.60E-12	5.29E-11	1.97E-11	7.42E-11
31	7.70	0.	0.	8.08E-23	0.	0.	0.	2.89E-16	1.66E-12	5.42E-11	1.98E-11	7.57E-11
32	7.60	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	7.50	0.	0.	7.01E-23	0.	2.11E-26	0.	2.92E-16	1.80E-12	5.72E-11	2.00E-11	7.89E-11
34	7.40	0.	0.	6.26E-23	0.	1.62E-25	0.	2.94E-16	1.87E-12	5.66E-11	2.00E-11	7.85E-11
35	7.30	0.	0.	5.89E-23	0.	6.71E-25	0.	2.96E-16	1.95E-12	5.84E-11	2.01E-11	8.05E-11
36	7.20	0.	0.	5.28E-23	0.	1.81E-24	0.	2.97E-16	2.03E-12	6.07E-11	2.02E-11	8.30E-11
37	7.10	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	7.00	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	6.90	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	6.80	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	6.70	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	6.60	1.88E-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	6.50	1.08E-26	0.	2.44E-23	0.	3.35E-23	0.	3.14E-16	2.77E-12	7.69E-11	2.10E-11	1.01E-10
44	6.40	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	6.30	3.53E-27	0.	1.02E-23	5.85E-25	2.20E-23	0.	3.19E-16	3.05E-12	8.17E-11	2.13E-11	1.06E-10
46	6.20	1.58E-27	0.	5.60E-24	8.23E-25	3.08E-23	0.	3.22E-16	3.20E-12	8.42E-11	2.15E-11	1.09E-10
47	6.10	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	6.00	2.98E-28	0.	6.55E-25	2.20E-24	1.86E-23	0.	3.26E-16	3.53E-12	3.59E-11	2.11E-11	6.06E-11
49	5.90	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	5.80	9.30E-30	0.	1.18E-27	4.47E-24	1.86E-23	0.	3.22E-16	3.91E-12	3.75E-11	2.16E-11	6.30E-11
51	5.70	6.84E-31	0.	0.	5.18E-24	2.08E-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	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	3.08E-32	0.	0.	0.	4.34E-24	2.82E-23	0.	0.	2.81E-16	4.35E-12	3.97E-11	2.21E-	6.61E-11
53	5.50	0.	0.	0.	0.	5.30E-24	2.62E-23	0.	0.	2.82E-16	4.59E-12	4.11E-11	2.23E-	6.80E-11
54	5.40	0.	0.	0.	0.	4.82E-24	2.08E-23	0.	0.	2.84E-16	4.85E-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	2.52E-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.	5.69E-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	7.38E-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	3.52E-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.	1.03E-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.	4.98E-24	6.25E-24	0.	0.	3.09E-16	9.66E-12	6.92E-11	2.49E-11	1.04E-10
66	4.20	3.25E-24	0.	1.07E-22	0.	5.24E-24	4.47E-24	0.	0.	3.12E-16	1.04E-11	7.31E-11	1.05E-11	9.40E-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	1.09E-11	9.47E-11
68	4.00	2.79E-24	0.	1.54E-22	0.	4.89E-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	9.16E-19	4.47E-24	3.60E-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	4.04E-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	8.88E-18	4.37E-24	0.	0.	0.	2.87E-16	1.65E-11	4.63E-11	1.46E-11	7.74E-11
73	3.50	1.89E-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.	6.80E-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.	7.00E-23	1.01E-17	3.02E-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	6.81E-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	2.26E-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	8.36E-25	0.	1.32E-23	5.45E-18	2.09E-24	0.	0.	0.	1.53E-16	3.18E-11	8.92E-11	2.63E-11	1.47E-10
80	2.80	8.67E-25	0.	6.34E-24	3.27E-18	1.43E-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	7.70E-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.	1.45E-24	4.59E-19	3.35E-25	0.	0.	0.	1.53E-16	4.43E-11	8.12E-11	1.59E-11	1.42E-10
83	2.50	1.79E-26	0.	1.59E-25	4.34E-19	7.91E-26	0.	0.	0.	1.53E-16	5.00E-11	9.39E-11	1.85E-11	1.62E-10
84	2.40	0.	7.53E-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	1.55E-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	3.58E-10
90	1.80	0.	1.47E-22	0.	0.	0.	0.	0.	0.	1.34E-16	1.36E-10	2.30E-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	6.80E-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	8.06E-11	5.72E-10
93	1.50	0.	1.46E-22	0.	0.	0.	0.	0.	0.	4.87E-17	2.36E-10	2.72E-10	9.20E-11	6.00E-10
94	1.40	0.	1.46E-22	0.	0.	0.	0.	0.	0.	0.	2.92E-10	3.53E-10	8.35E-11	7.28E-10
95	1.30	0.	1.12E-22	0.	0.	0.	0.	0.	0.	0.	3.68E-10	4.66E-10	1.19E-10	9.53E-10
96	1.20	0.	1.07E-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.	9.18E-23	0.	0.	0.	0.	3.72E-27	0.	0.	8.22E-10	9.49E-10	2.28E-10	2.00E-09
99	0.90	0.	7.55E-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.	3.55E-23	0.	0.	0.	0.	9.09E-26	0.	0.	1.62E-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	1.29E-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-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.	2.10E 00	0.	0.	0.	3.38E 00	7.14E-02	2.63E 02	1.40E 00	2.70E 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	10.40	0.	0.	1.81E 00	0.	0.	0.	3.40E 00	7.78E-02	6.52E 00	1.38E 00	1.32E 01
5	10.30	0.	0.	1.58E 00	0.	0.	0.	3.40E 00	8.01E-02	6.54E 00	1.38E 00	1.30E 01
6	10.20	0.	0.	1.63E 00	0.	0.	0.	3.41E 00	8.25E-02	6.55E 00	1.37E 00	1.30E 01
7	10.10	0.	0.	1.53E 00	0.	0.	0.	3.41E 00	8.50E-02	6.56E 00	1.37E 00	1.29E 01
8	10.00	0.	0.	1.34E 00	0.	0.	0.	3.42E 00	8.76E-02	6.57E 00	1.36E 00	1.28E 01
9	9.90	0.	0.	1.37E 00	0.	0.	0.	3.42E 00	9.03E-02	6.59E 00	1.36E 00	1.28E 01
10	9.80	0.	0.	1.29E 00	0.	0.	0.	3.43E 00	9.31E-02	6.60E 00	1.35E 00	1.28E 01
11	9.70	0.	0.	1.11E 00	0.	0.	0.	3.44E 00	9.60E-02	6.62E 00	1.34E 00	1.26E 01
12	9.60	0.	0.	1.20E 00	0.	0.	0.	3.44E 00	9.91E-02	6.64E 00	1.34E 00	1.27E 01
13	9.50	0.	0.	1.02E 00	0.	0.	0.	3.45E 00	1.02E-01	6.65E 00	1.33E 00	1.26E 01
14	9.40	0.	0.	9.62E-01	0.	0.	0.	3.46E 00	1.06E-01	6.67E 00	1.33E 00	1.25E 01
15	9.30	0.	0.	9.85E-01	0.	0.	0.	3.47E 00	1.09E-01	6.70E 00	1.32E 00	1.26E 01
16	9.20	0.	0.	8.14E-01	0.	0.	0.	3.49E 00	1.13E-01	6.72E 00	1.32E 00	1.24E 01
17	9.10	0.	0.	8.35E-01	0.	0.	0.	3.50E 00	1.16E-01	2.39E 00	1.31E 00	8.15E 00
18	9.00	0.	0.	7.58E-01	0.	0.	0.	3.51E 00	1.20E-01	2.39E 00	1.31E 00	8.09E 00
19	8.90	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	8.70	0.	0.	5.94E-01	0.	0.	0.	3.55E 00	1.33E-01	2.39E 00	1.30E 00	7.97E 00
22	8.60	0.	0.	6.11E-01	0.	0.	0.	3.56E 00	1.38E-01	2.40E 00	1.29E 00	8.00E 00
23	8.50	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	8.10	0.	0.	3.90E-01	0.	0.	0.	3.65E 00	1.66E-01	2.43E 00	1.29E 00	7.92E 00
28	8.00	0.	0.	3.92E-01	0.	0.	0.	3.67E 00	1.72E-01	2.44E 00	1.29E 00	7.96E 00
29	7.90	0.	0.	3.37E-01	0.	0.	0.	3.69E 00	1.79E-01	2.45E 00	1.29E 00	7.95E 00
30	7.80	0.	0.	3.49E-01	0.	0.	0.	3.70E 00	1.86E-01	2.47E 00	1.30E 00	8.00E 00
31	7.70	0.	0.	3.05E-01	0.	0.	0.	3.72E 00	1.93E-01	2.48E 00	1.30E 00	8.00E 00
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	0.	0.	1.95E-01	0.	1.22E-02	0.	3.86E 00	2.47E-01	2.56E 00	1.32E 00	8.19E 00
38	7.00	3.40E-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	6.90	6.64E-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	6.80	5.71E-05	0.	1.57E-01	0.	5.95E-02	0.	3.95E 00	2.81E-01	2.61E 00	1.33E 00	8.38E 00
41	6.70	4.15E-05	0.	1.37E-01	0.	6.00E-02	0.	3.98E 00	2.94E-01	2.62E 00	1.33E 00	8.43E 00
42	6.60	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	6.50	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	6.40	8.30E-06	0.	6.72E-02	2.57E-04	6.91E-02	0.	4.07E 00	3.38E-01	2.70E 00	1.35E 00	8.59E 00
45	6.30	4.81E-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	6.20	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	6.10	9.90E-07	0.	1.08E-02	4.86E-03	8.36E-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	5.90	1.01E-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	5.80	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	5.70	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	4.26E-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	4.51E-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.	1.15E-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	8.59E-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	5.08E-03	0.	1.40E-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.	4.26E-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.	1.14E-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.	6.40E-01	0.	1.10E-02	2.06E-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	8.01E-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.	5.00E-01	3.10E-02	9.24E-03	0.	0.	0.	3.95E 00	1.77E 00	4.26E 00	9.15E-01	1.14E 01
72	3.60	3.04E-03	0.	3.47E-01	1.68E-01	1.00E-02	0.	0.	0.	3.70E 00	1.93E 00	4.60E 00	1.01E 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	2.10E 00	4.85E 00	1.11E 00	1.22E 01
74	3.40	2.60E-03	0.	2.90E-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	2.07E-03	0.	2.98E-01	1.90E-01	7.02E-03	0.	0.	0.	1.96E 00	2.51E 00	5.97E 00	1.34E 00	1.23E 01
76	3.20	1.80E-03	0.	1.94E-01	3.25E-01	7.36E-03	0.	0.	0.	1.96E 00	2.75E 00	6.54E 00	1.46E 00	1.32E 01
77	3.10	1.73E-03	0.	1.51E-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	3.35E 00	7.71E 00	1.71E 00	1.50E 01
79	2.90	1.36E-03	0.	5.74E-02	1.01E-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	4.06E-04	0.	6.31E-03	8.65E-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	2.85E-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	2.07E-05	0.	0.	0.	1.97E 00	6.61E 00	1.42E 01	1.61E 00	2.44E 01
85	2.30	0.	9.99E-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	2.30E 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.	6.98E-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	5.78E 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	1.50E 02
97	1.10	0.	4.01E-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.	8.29E-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.	5.86E-03	0.	0.	0.	0.	6.00E-04	0.	0.	4.64E 02	1.98E 02	2.67E 01	6.89E 02

ABSORPTION COEFFICIENTS 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 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.	1.90E-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.	1.48E-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	9.36E-03	6.34E-01	1.29E-01	8.83E-01
14	9.40	0.	0.	8.74E-03	0.	0.	0.	1.02E-01	9.66E-03	6.36E-01	1.28E-01	8.84E-01
15	9.30	0.	0.	8.94E-03	0.	0.	0.	1.02E-01	9.98E-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.	7.54E-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.	4.81E-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.	3.54E-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	6.16E-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	2.34E-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-06	6.34E-04	0.	1.20E-01	3.09E-02	2.57E-01	1.30E-01	5.39E-01
45	6.30	4.40E-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	2.01E-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	9.25E-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	3.76E-02	2.68E-01	1.35E-01	5.64E-01
49	5.90	9.45E-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	1.25E-10	0.	4.46E-08	8.68E-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
52	5.60	3.97E-13	0.	0.	0.	8.57E-05	5.54E-04	0.	0.	1.06E-01	4.63E-02	2.85E-01	1.40E-01	5.78E-01
53	5.50	0.	0.	0.	0.	1.05E-04	5.15E-04	0.	0.	1.07E-01	4.88E-02	2.90E-01	1.42E-01	5.88E-01
54	5.40	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
55	5.30	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
56	5.20	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
57	5.10	0.	0.	0.	0.	1.05E-04	5.04E-04	0.	0.	1.10E-01	6.14E-02	3.22E-01	1.51E-01	6.45E-01
58	5.00	5.40E-06	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
59	4.90	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	4.80	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	4.70	3.20E-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	4.60	4.50E-05	0.	0.	0.	1.17E-04	3.95E-04	0.	0.	1.14E-01	8.39E-02	3.83E-01	1.68E-01	7.50E-01
63	4.50	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	4.40	5.03E-05	0.	3.86E-04	0.	1.07E-04	2.05E-04	0.	0.	1.16E-01	9.60E-02	4.21E-01	1.77E-01	8.10E-01
65	4.30	4.74E-05	0.	1.24E-03	0.	1.02E-04	1.28E-04	0.	0.	1.17E-01	1.03E-01	4.42E-01	1.82E-01	8.44E-01
66	4.20	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	4.10	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	9.10E-01
68	4.00	3.81E-05	0.	5.81E-03	0.	1.01E-04	1.89E-05	0.	0.	1.19E-01	1.28E-01	5.05E-01	7.48E-02	8.33E-01
69	3.90	3.23E-05	0.	2.70E-03	5.20E-04	9.29E-05	7.24E-06	0.	0.	1.18E-01	1.38E-01	4.88E-01	7.72E-02	8.25E-01
70	3.80	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	3.70	3.14E-05	0.	4.54E-03	9.25E-04	8.48E-05	0.	0.	0.	1.16E-01	1.62E-01	4.06E-01	8.82E-02	7.78E-01
72	3.60	2.83E-05	0.	3.15E-03	5.01E-03	9.18E-05	0.	0.	0.	1.09E-01	1.76E-01	4.38E-01	9.70E-02	8.28E-01
73	3.50	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	3.40	2.41E-05	0.	2.63E-03	1.43E-03	8.10E-05	0.	0.	0.	5.74E-02	2.10E-01	5.15E-01	1.18E-01	9.04E-01
75	3.30	1.93E-05	0.	2.70E-03	5.65E-03	6.45E-05	0.	0.	0.	5.74E-02	2.29E-01	5.69E-01	1.29E-01	9.93E-01
76	3.20	1.68E-05	0.	1.76E-03	9.68E-03	6.76E-05	0.	0.	0.	5.75E-02	2.52E-01	6.23E-01	1.41E-01	1.08E 00
77	3.10	1.60E-05	0.	1.37E-03	2.25E-03	6.39E-05	0.	0.	0.	5.77E-02	2.77E-01	6.79E-01	1.53E-01	1.17E 00
78	3.00	1.43E-05	0.	8.36E-04	5.41E-03	6.01E-05	0.	0.	0.	5.78E-02	3.06E-01	7.35E-01	1.65E-01	1.27E 00
79	2.90	1.20E-05	0.	5.21E-04	3.00E-03	4.57E-05	0.	0.	0.	5.79E-02	3.40E-01	7.94E-01	1.77E-01	1.37E 00
80	2.80	1.25E-05	0.	2.51E-04	1.87E-03	3.15E-05	0.	0.	0.	5.80E-02	3.78E-01	8.63E-01	1.92E-01	1.49E 00
81	2.70	8.03E-06	0.	1.17E-04	2.57E-03	1.72E-05	0.	0.	0.	5.80E-02	4.22E-01	9.37E-01	2.08E-01	1.63E 00
82	2.60	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	2.50	2.64E-07	0.	6.20E-06	2.46E-04	1.79E-06	0.	0.	0.	5.80E-02	5.34E-01	1.16E 00	1.31E-01	1.88E 00
84	2.40	0.	2.87E-04	0.	2.02E-04	1.90E-07	0.	0.	0.	5.80E-02	6.05E-01	1.35E 00	1.55E-01	2.17E 00
85	2.30	0.	9.07E-04	0.	0.	0.	0.	0.	0.	5.75E-02	6.88E-01	1.14E 00	1.85E-01	2.07E 00
86	2.20	0.	2.34E-03	0.	0.	0.	0.	0.	0.	5.73E-02	7.88E-01	1.35E 00	2.22E-01	2.42E 00
87	2.10	0.	2.50E-03	0.	0.	0.	0.	0.	0.	5.71E-02	9.08E-01	1.57E 00	2.58E-01	2.80E 00
88	2.00	0.	4.88E-03	0.	0.	0.	0.	0.	0.	5.52E-02	1.05E 00	1.79E 00	2.95E-01	3.20E 00
89	1.90	0.	6.34E-03	0.	0.	0.	0.	0.	0.	5.31E-02	1.23E 00	2.05E 00	3.41E-01	3.68E 00
90	1.80	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	1.70	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	1.60	0.	4.57E-03	0.	0.	0.	0.	0.	0.	4.05E-02	2.08E 00	3.43E 00	5.93E-01	6.15E 00
93	1.50	0.	5.30E-03	0.	0.	0.	0.	0.	0.	1.84E-02	2.53E 00	4.43E 00	7.20E-01	7.70E 00
94	1.40	0.	5.26E-03	0.	0.	0.	0.	0.	0.	0.	3.14E 00	5.51E 00	8.58E-01	9.51E 00
95	1.30	0.	4.03E-03	0.	0.	0.	0.	0.	0.	0.	3.95E 00	7.26E 00	1.13E 00	1.23E 01
96	1.20	0.	3.86E-03	0.	0.	0.	0.	0.	0.	0.	5.05E 00	7.86E 00	1.14E 00	1.41E 01
97	1.10	0.	3.64E-03	0.	0.	0.	0.	5.28E-09	0.	0.	6.58E 00	9.70E 00	1.43E 00	1.77E 01
98	1.00	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	0.90	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	0.80	0.	1.29E-03	0.	0.	0.	0.	1.88E-06	0.	0.	1.74E 01	1.55E 01	2.20E 00	3.52E 01
101	0.70	0.	3.06E-04	0.	0.	0.	0.	1.65E-06	0.	0.	2.64E 01	1.69E 01	2.30E 00	4.55E 01
102	0.60	0.	5.32E-05	0.	0.	0.	0.	5.51E-06	0.	0.	4.24E 01	1.89E 01	2.57E 00	6.39E 01

ABSORPTION COEFFICIENTS 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.	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.	1.11E-04	0.	0.	0.	2.31E-03	5.03E-04	1.91E 00	1.13E-02	1.93E 00
2	10.60	0.	0.	1.00E-04	0.	0.	0.	2.31E-03	5.18E-04	4.70E-02	1.12E-02	6.12E-02
3	10.50	0.	0.	1.01E-04	0.	0.	0.	2.31E-03	5.33E-04	4.73E-02	1.12E-02	6.14E-02
4	10.40	0.	0.	9.58E-05	0.	0.	0.	2.32E-03	5.48E-04	4.74E-02	1.11E-02	6.15E-02
5	10.30	0.	0.	8.34E-05	0.	0.	0.	2.32E-03	5.64E-04	4.75E-02	1.11E-02	6.16E-02
6	10.20	0.	0.	8.59E-05	0.	0.	0.	2.32E-03	5.81E-04	4.76E-02	1.11E-02	6.17E-02
7	10.10	0.	0.	8.08E-05	0.	0.	0.	2.33E-03	5.99E-04	4.77E-02	1.10E-02	6.17E-02
8	10.00	0.	0.	7.06E-05	0.	0.	0.	2.33E-03	6.17E-04	4.78E-02	1.10E-02	6.17E-02
9	9.90	0.	0.	7.24E-05	0.	0.	0.	2.33E-03	6.36E-04	4.79E-02	1.09E-02	6.18E-02
10	9.80	0.	0.	6.79E-05	0.	0.	0.	2.34E-03	6.56E-04	4.80E-02	1.09E-02	6.19E-02
11	9.70	0.	0.	5.85E-05	0.	0.	0.	2.34E-03	6.76E-04	4.81E-02	1.08E-02	6.20E-02
12	9.60	0.	0.	6.32E-05	0.	0.	0.	2.35E-03	6.98E-04	4.82E-02	1.08E-02	6.21E-02
13	9.50	0.	0.	5.38E-05	0.	0.	0.	2.35E-03	7.20E-04	4.84E-02	1.08E-02	6.22E-02
14	9.40	0.	0.	5.08E-05	0.	0.	0.	2.36E-03	7.44E-04	4.85E-02	1.07E-02	6.24E-02
15	9.30	0.	0.	5.20E-05	0.	0.	0.	2.37E-03	7.68E-04	4.87E-02	1.07E-02	6.25E-02
16	9.20	0.	0.	4.30E-05	0.	0.	0.	2.38E-03	7.94E-04	4.88E-02	1.06E-02	6.27E-02
17	9.10	0.	0.	4.41E-05	0.	0.	0.	2.38E-03	8.21E-04	1.74E-02	1.06E-02	3.12E-02
18	9.00	0.	0.	4.00E-05	0.	0.	0.	2.39E-03	8.49E-04	1.74E-02	1.06E-02	3.12E-02
19	8.90	0.	0.	3.69E-05	0.	0.	0.	2.40E-03	8.78E-04	1.74E-02	1.05E-02	3.12E-02
20	8.80	0.	0.	3.62E-05	0.	0.	0.	2.41E-03	9.08E-04	1.74E-02	1.05E-02	3.12E-02
21	8.70	0.	0.	3.13E-05	0.	0.	0.	2.42E-03	9.40E-04	1.74E-02	1.04E-02	3.12E-02
22	8.60	0.	0.	3.23E-05	0.	0.	0.	2.43E-03	9.74E-04	1.74E-02	1.04E-02	3.13E-02
23	8.50	0.	0.	2.82E-05	0.	0.	0.	2.44E-03	1.01E-03	1.75E-02	1.04E-02	3.13E-02
24	8.40	0.	0.	2.80E-05	0.	0.	0.	2.45E-03	1.04E-03	1.75E-02	1.03E-02	3.14E-02
25	8.30	0.	0.	2.37E-05	0.	0.	0.	2.46E-03	1.08E-03	1.76E-02	1.03E-02	3.15E-02
26	8.20	0.	0.	2.39E-05	0.	0.	0.	2.47E-03	1.12E-03	1.76E-02	1.04E-02	3.16E-02
27	8.10	0.	0.	2.06E-05	0.	0.	0.	2.49E-03	1.17E-03	1.77E-02	1.04E-02	3.17E-02
28	8.00	0.	0.	2.07E-05	0.	0.	0.	2.50E-03	1.21E-03	1.77E-02	1.04E-02	3.19E-02
29	7.90	0.	0.	1.78E-05	0.	0.	0.	2.51E-03	1.26E-03	1.78E-02	1.04E-02	3.21E-02
30	7.80	0.	0.	1.84E-05	0.	0.	0.	2.53E-03	1.31E-03	1.79E-02	1.05E-02	3.22E-02
31	7.70	0.	0.	1.61E-05	0.	0.	0.	2.54E-03	1.36E-03	1.80E-02	1.05E-02	3.24E-02
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	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	6.40	5.40E-10	0.	3.55E-06	1.51E-08	4.05E-06	0.	2.78E-03	2.38E-03	1.96E-02	1.09E-02	3.56E-02
45	6.30	3.12E-10	0.	2.20E-06	7.07E-08	2.80E-06	0.	2.80E-03	2.49E-03	1.98E-02	1.09E-02	3.60E-02
46	6.20	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	6.10	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	6.00	2.68E-11	0.	1.44E-07	2.71E-07	2.36E-06	0.	2.86E-03	2.89E-03	2.05E-02	1.13E-02	3.75E-02
49	5.90	6.50E-12	0.	1.03E-08	3.97E-07	2.31E-06	0.	2.86E-03	3.04E-03	2.08E-02	1.14E-02	3.81E-02
50	5.80	8.38E-13	0.	2.60E-10	5.54E-07	2.36E-06	0.	2.82E-03	3.20E-03	2.11E-02	1.15E-02	3.86E-02
51	5.70	6.17E-14	0.	0.	6.46E-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	NO VIB-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	2.7(E-1(	0.	0.	0.	5.47E-07	3.54E-06	0.	0.	2.46E-03	3.56E-03	2.17E-02	1.17E-02	3.94E-02
53	5.50	0.	0.	0.	0.	6.68E-07	3.28E-06	0.	0.	2.48E-03	3.76E-03	2.22E-02	1.18E-02	4.02E-02
54	5.40	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	5.30	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	5.20	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	5.10	0.	0.	0.	0.	6.71E-07	3.22E-06	0.	0.	2.54E-03	4.72E-03	2.46E-02	1.26E-02	4.45E-02
58	5.00	3.7(E-08	0.	0.	0.	6.13E-07	3.01E-06	0.	0.	2.56E-03	5.01E-03	2.54E-02	1.28E-02	4.58E-02
59	4.90	9.1(E-08	0.	0.	0.	6.81E-07	3.27E-06	0.	0.	2.59E-03	5.33E-03	2.62E-02	1.31E-02	4.72E-02
60	4.80	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	4.70	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	4.60	3.15E-07	0.	0.	0.	7.48E-07	2.52E-06	0.	0.	2.65E-03	6.46E-03	2.92E-02	1.41E-02	5.24E-02
63	4.50	3.3(E-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	4.40	3.5(E-07	0.	2.25E-06	0.	6.85E-07	1.31E-06	0.	0.	2.69E-03	7.39E-03	3.21E-02	1.48E-02	5.70E-02
65	4.30	3.3(E-07	0.	7.22E-06	0.	6.52E-07	8.16E-07	0.	0.	2.71E-03	7.92E-03	3.37E-02	1.52E-02	5.95E-02
66	4.20	3.09E-07	0.	2.35E-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	4.10	2.9(E-07	0.	1.01E-05	0.	6.69E-07	1.60E-07	0.	0.	2.75E-03	9.15E-03	3.69E-02	1.57E-02	6.45E-02
68	4.00	2.67E-07	0.	3.38E-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	3.90	2.2(E-07	0.	1.57E-05	1.09E-05	5.93E-07	4.62E-08	0.	0.	2.75E-03	1.06E-02	3.72E-02	6.46E-03	5.71E-02
70	3.80	2.4(E-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	3.70	2.2(E-07	0.	2.64E-05	1.94E-05	5.41E-07	0.	0.	0.	2.69E-03	1.25E-02	3.09E-02	7.38E-03	5.35E-02
72	3.60	1.96E-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	3.50	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	3.40	1.69E-07	0.	1.53E-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	3.30	1.35E-07	0.	1.57E-05	1.18E-04	4.11E-07	0.	0.	0.	1.33E-03	1.77E-02	4.34E-02	1.08E-02	7.33E-02
76	3.20	1.17E-07	0.	1.03E-05	2.03E-04	4.31E-07	0.	0.	0.	1.34E-03	1.94E-02	4.75E-02	1.18E-02	8.03E-02
77	3.10	1.12E-07	0.	7.95E-06	4.72E-05	4.08E-07	0.	0.	0.	1.34E-03	2.13E-02	5.18E-02	1.28E-02	8.73E-02
78	3.00	1.0(E-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	2.90	8.42E-08	0.	3.03E-06	6.29E-05	2.91E-07	0.	0.	0.	1.34E-03	2.61E-02	6.06E-02	1.48E-02	1.03E-01
80	2.80	8.76E-08	0.	1.46E-06	3.93E-05	2.01E-07	0.	0.	0.	1.35E-03	2.91E-02	6.58E-02	1.61E-02	1.12E-01
81	2.70	5.62E-08	0.	6.82E-07	5.38E-05	1.09E-07	0.	0.	0.	1.35E-03	3.25E-02	7.15E-02	1.74E-02	1.23E-01
82	2.60	2.64E-08	0.	3.33E-07	5.40E-06	4.80E-08	0.	0.	0.	1.35E-03	3.65E-02	7.76E-02	1.87E-02	1.34E-01
83	2.50	1.85E-09	0.	3.60E-08	5.16E-06	1.14E-08	0.	0.	0.	1.35E-03	4.11E-02	8.84E-02	1.10E-02	1.42E-01
84	2.40	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	1.64E-01
85	2.30	0.	5.28E-06	0.	0.	0.	0.	0.	0.	1.34E-03	5.30E-02	8.70E-02	1.55E-02	1.57E-01
86	2.20	0.	1.36E-05	0.	0.	0.	0.	0.	0.	1.33E-03	6.06E-02	1.03E-01	1.86E-02	1.83E-01
87	2.10	0.	1.46E-05	0.	0.	0.	0.	0.	0.	1.32E-03	6.99E-02	1.20E-01	2.16E-02	2.13E-01
88	2.00	0.	2.84E-05	0.	0.	0.	0.	0.	0.	1.28E-03	8.11E-02	1.37E-01	2.47E-02	2.44E-01
89	1.90	0.	3.69E-05	0.	0.	0.	0.	0.	0.	1.23E-03	9.49E-02	1.56E-01	2.86E-02	2.81E-01
90	1.80	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	1.70	0.	3.58E-05	0.	0.	0.	0.	0.	0.	1.11E-03	1.33E-01	2.24E-01	4.21E-02	4.00E-01
92	1.60	0.	2.66E-05	0.	0.	0.	0.	0.	0.	9.40E-04	1.60E-01	2.62E-01	4.96E-02	4.72E-01
93	1.50	0.	3.08E-05	0.	0.	0.	0.	0.	0.	4.27E-04	1.95E-01	3.38E-01	6.02E-02	5.93E-01
94	1.40	0.	3.06E-05	0.	0.	0.	0.	0.	0.	0.	2.41E-01	4.20E-01	7.18E-02	7.33E-01
95	1.30	0.	2.34E-05	0.	0.	0.	0.	0.	0.	0.	3.04E-01	5.54E-01	9.50E-02	9.53E-01
96	1.20	0.	2.24E-05	0.	0.	0.	0.	0.	0.	0.	3.89E-01	5.99E-01	9.54E-02	1.08E 00
97	1.10	0.	2.12E-05	0.	0.	0.	0.	3.37E-11	0.	0.	5.07E-01	7.40E-01	1.20E-01	1.37E 00
98	1.00	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	0.90	0.	1.60E-05	0.	0.	0.	0.	5.60E-10	0.	0.	9.33E-01	1.03E 00	1.60E-01	2.12E 00
100	0.80	0.	7.51E-06	0.	0.	0.	0.	1.20E-08	0.	0.	1.34E 00	1.18E 00	1.84E-01	2.71E 00
101	0.70	0.	1.78E-06	0.	0.	0.	0.	1.06E-08	0.	0.	2.03E 00	1.29E 00	1.93E-01	3.51E 00
102	0.60	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 COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. 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.	2.27E-07	0.	0.	0.	2.72E-05	2.35E-05	8.67E-02	6.15E-04	8.73E-02
2	10.60	0.	0.	2.06E-07	0.	0.	0.	2.73E-05	2.42E-05	2.13E-03	6.12E-04	2.80E-03
3	10.50	0.	0.	2.08E-07	0.	0.	0.	2.73E-05	2.49E-05	2.14E-03	6.10E-04	2.81E-03
4	10.40	0.	0.	1.97E-07	0.	0.	0.	2.73E-05	2.56E-05	2.15E-03	6.08E-04	2.81E-03
5	10.30	0.	0.	1.71E-07	0.	0.	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.	0.	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	2.80E-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	9.90	0.	0.	1.49E-07	0.	0.	0.	2.75E-05	2.97E-05	2.17E-03	5.97E-04	2.82E-03
10.	9.80	0.	0.	1.39E-07	0.	0.	0.	2.76E-05	3.06E-05	2.17E-03	5.94E-04	2.83E-03
11	9.70	0.	0.	1.20E-07	0.	0.	0.	2.76E-05	3.16E-05	2.18E-03	5.92E-04	2.83E-03
12	9.60	0.	0.	1.30E-07	0.	0.	0.	2.77E-05	3.26E-05	2.18E-03	5.90E-04	2.83E-03
13	9.50	0.	0.	1.10E-07	0.	0.	0.	2.77E-05	3.36E-05	2.19E-03	5.87E-04	2.84E-03
14	9.40	0.	0.	1.04E-07	0.	0.	0.	2.78E-05	3.47E-05	2.20E-03	5.85E-04	2.84E-03
15	9.30	0.	0.	1.07E-07	0.	0.	0.	2.79E-05	3.59E-05	2.20E-03	5.83E-04	2.85E-03
16	9.20	0.	0.	8.81E-08	0.	0.	0.	2.80E-05	3.71E-05	2.21E-03	5.81E-04	2.86E-03
17	9.10	0.	0.	9.05E-08	0.	0.	0.	2.81E-05	3.83E-05	7.87E-04	5.79E-04	1.43E-03
18	9.00	0.	0.	8.21E-08	0.	0.	0.	2.82E-05	3.96E-05	7.87E-04	5.77E-04	1.43E-03
19	8.90	0.	0.	7.58E-08	0.	0.	0.	2.83E-05	4.10E-05	7.87E-04	5.75E-04	1.43E-03
20	8.80	0.	0.	7.44E-08	0.	0.	0.	2.84E-05	4.24E-05	7.88E-04	5.72E-04	1.43E-03
21	8.70	0.	0.	6.43E-08	0.	0.	0.	2.85E-05	4.39E-05	7.89E-04	5.70E-04	1.43E-03
22	8.60	0.	0.	6.62E-08	0.	0.	0.	2.86E-05	4.54E-05	7.90E-04	5.68E-04	1.43E-03
23	8.50	0.	0.	5.79E-08	0.	0.	0.	2.87E-05	4.71E-05	7.92E-04	5.67E-04	1.43E-03
24	8.40	0.	0.	5.74E-08	0.	0.	0.	2.89E-05	4.88E-05	7.94E-04	5.65E-04	1.44E-03
25	8.30	0.	0.	4.86E-08	0.	0.	0.	2.91E-05	5.06E-05	7.96E-04	5.64E-04	1.44E-03
26	8.20	0.	0.	4.91E-08	0.	0.	0.	2.92E-05	5.25E-05	7.99E-04	5.65E-04	1.45E-03
27	8.10	0.	0.	4.23E-08	0.	0.	0.	2.94E-05	5.45E-05	8.00E-04	5.67E-04	1.45E-03
28	8.00	0.	0.	4.25E-08	0.	0.	0.	2.95E-05	5.65E-05	8.04E-04	5.68E-04	1.46E-03
29	7.90	0.	0.	3.65E-08	0.	0.	0.	2.97E-05	5.87E-05	8.09E-04	5.69E-04	1.47E-03
30	7.80	0.	0.	3.78E-08	0.	0.	0.	2.98E-05	6.10E-05	8.13E-04	5.71E-04	1.47E-03
31	7.70	0.	0.	3.31E-08	0.	0.	0.	3.00E-05	6.35E-05	8.18E-04	5.72E-04	1.48E-03
32	7.60	0.	0.	3.13E-08	0.	1.84E-12	0.	3.01E-05	6.60E-05	8.22E-04	5.74E-04	1.49E-03
33	7.50	0.	0.	2.89E-08	0.	6.49E-12	0.	3.03E-05	6.87E-05	8.26E-04	5.75E-04	1.50E-03
34	7.40	0.	0.	2.59E-08	0.	5.19E-11	0.	3.04E-05	7.16E-05	8.31E-04	5.76E-04	1.51E-03
35	7.30	0.	0.	2.45E-08	0.	2.10E-10	0.	3.06E-05	7.46E-05	8.35E-04	5.78E-04	1.52E-03
36	7.20	0.	0.	2.21E-08	0.	5.73E-10	0.	3.08E-05	7.78E-05	8.40E-04	5.79E-04	1.53E-03
37	7.10	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	7.00	6.60E-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	6.90	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	6.80	1.11E-11	0.	1.70E-08	0.	8.02E-09	0.	3.18E-05	9.25E-05	8.59E-04	5.85E-04	1.57E-03
41	6.70	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	6.60	4.89E-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	6.50	2.82E-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	6.40	1.61E-12	0.	7.28E-09	3.73E-11	1.00E-08	0.	3.28E-05	1.11E-04	8.88E-04	5.94E-04	1.63E-03
45	6.30	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	6.20	4.19E-13	0.	2.49E-09	2.47E-10	9.60E-09	0.	3.33E-05	1.22E-04	9.06E-04	6.03E-04	1.66E-03
47	6.10	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	6.00	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	5.90	1.96E-14	0.	2.12E-11	9.82E-10	5.71E-09	0.	3.38E-05	1.42E-04	9.42E-04	6.21E-04	1.74E-03
50	5.80	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	5.70	1.84E-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
52	5.60	8.30E-18	0.	0.	0.	1.35E-09	8.75E-09	0.	0.	2.91E-05	1.66E-04	9.84E-04	6.39E-04	1.82E-03
53	5.50	0.	0.	0.	0.	1.65E-09	8.12E-09	0.	0.	2.92E-05	1.75E-04	1.00E-03	6.47E-04	1.86E-03
54	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
55	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
56	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
57	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
58	5.00	1.13E-10	0.	0.	0.	1.52E-09	7.43E-09	0.	0.	3.03E-05	2.34E-04	1.15E-03	7.01E-04	2.11E-03
59	4.90	2.73E-10	0.	0.	0.	1.68E-09	8.08E-09	0.	0.	3.05E-05	2.49E-04	1.19E-03	7.14E-04	2.18E-03
60	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
61	4.70	6.84E-10	0.	0.	0.	1.80E-09	6.86E-09	0.	0.	3.10E-05	2.82E-04	1.27E-03	7.48E-04	2.33E-03
62	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
63	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
64	4.40	1.05E-09	0.	4.61E-09	0.	1.69E-09	3.23E-09	0.	0.	3.18E-05	3.45E-04	1.45E-03	8.08E-04	2.64E-03
65	4.30	9.90E-10	0.	1.48E-08	0.	1.61E-09	2.02E-09	0.	0.	3.20E-05	3.70E-04	1.53E-03	8.30E-04	2.76E-03
66	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
67	4.10	8.64E-10	0.	2.06E-08	0.	1.66E-09	3.95E-10	0.	0.	3.24E-05	4.27E-04	1.67E-03	8.55E-04	2.99E-03
68	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	3.42E-04	2.58E-03
69	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	3.53E-04	2.57E-03
70	3.80	7.39E-10	0.	5.12E-08	4.54E-07	1.58E-09	0.	0.	0.	3.23E-05	5.38E-04	1.71E-03	3.67E-04	2.65E-03
71	3.70	6.55E-10	0.	5.41E-08	1.84E-07	1.34E-09	0.	0.	0.	3.18E-05	5.83E-04	1.40E-03	4.03E-04	2.42E-03
72	3.60	5.90E-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	2.62E-03
73	3.50	5.50E-10	0.	5.01E-08	1.97E-06	1.14E-09	0.	0.	0.	2.72E-05	6.90E-04	1.60E-03	4.88E-04	2.80E-03
74	3.40	5.03E-10	0.	3.14E-08	2.84E-07	1.28E-09	0.	0.	0.	1.57E-05	7.53E-04	1.78E-03	5.39E-04	3.09E-03
75	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
76	3.20	3.50E-10	0.	2.10E-08	1.93E-06	1.07E-09	0.	0.	0.	1.58E-05	9.05E-04	2.15E-03	6.44E-04	3.72E-03
77	3.10	3.35E-10	0.	1.63E-08	4.48E-07	1.01E-09	0.	0.	0.	1.58E-05	9.97E-04	2.35E-03	6.98E-04	4.06E-03
78	3.00	2.99E-10	0.	9.97E-09	1.08E-06	9.48E-10	0.	0.	0.	1.58E-05	1.10E-03	2.54E-03	7.52E-04	4.41E-03
79	2.90	2.51E-10	0.	6.22E-09	5.97E-07	7.21E-10	0.	0.	0.	1.59E-05	1.22E-03	2.74E-03	8.11E-04	4.79E-03
80	2.80	2.61E-10	0.	2.99E-09	3.73E-07	4.98E-10	0.	0.	0.	1.59E-05	1.36E-03	2.98E-03	8.77E-04	5.23E-03
81	2.70	1.68E-10	0.	1.40E-09	5.11E-07	2.71E-10	0.	0.	0.	1.59E-05	1.52E-03	3.24E-03	9.49E-04	5.72E-03
82	2.60	7.88E-11	0.	6.84E-10	5.13E-08	1.19E-10	0.	0.	0.	1.59E-05	1.70E-03	3.51E-03	1.02E-03	6.25E-03
83	2.50	5.52E-12	0.	7.39E-11	4.91E-08	2.82E-11	0.	0.	0.	1.59E-05	1.92E-03	4.00E-03	5.98E-04	6.53E-03
84	2.40	0.	3.43E-09	0.	4.02E-08	3.01E-12	0.	0.	0.	1.59E-05	2.17E-03	4.66E-03	7.08E-04	7.56E-03
85	2.30	0.	1.08E-08	0.	0.	0.	0.	0.	0.	1.58E-05	2.47E-03	3.94E-03	8.46E-04	7.27E-03
86	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
87	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
88	2.00	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
89	1.90	0.	7.56E-08	0.	0.	0.	0.	0.	0.	1.46E-05	4.43E-03	7.07E-03	1.56E-03	1.31E-02
90	1.80	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
91	1.70	0.	7.35E-08	0.	0.	0.	0.	0.	0.	1.31E-05	6.21E-03	1.01E-02	2.30E-03	1.87E-02
92	1.60	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
93	1.50	0.	6.33E-08	0.	0.	0.	0.	0.	0.	5.04E-06	9.10E-03	1.53E-02	3.29E-03	2.77E-02
94	1.40	0.	6.28E-08	0.	0.	0.	0.	0.	0.	0.	1.13E-02	1.90E-02	3.92E-03	3.42E-02
95	1.30	0.	4.81E-08	0.	0.	0.	0.	0.	0.	0.	1.42E-02	2.51E-02	5.19E-03	4.44E-02
96	1.20	0.	4.60E-08	0.	0.	0.	0.	0.	0.	0.	1.82E-02	2.72E-02	5.21E-03	5.05E-02
97	1.10	0.	4.35E-08	0.	0.	0.	0.	8.33E-14	0.	0.	2.37E-02	3.35E-02	6.54E-03	6.37E-02
98	1.00	0.	3.99E-08	0.	0.	0.	0.	1.20E-12	0.	0.	3.16E-02	4.06E-02	7.42E-03	7.96E-02
99	0.90	0.	3.28E-08	0.	0.	0.	0.	1.39E-12	0.	0.	4.36E-02	4.66E-02	8.72E-03	9.89E-02
100	0.80	0.	1.54E-08	0.	0.	0.	0.	2.97E-11	0.	0.	6.27E-02	5.36E-02	1.00E-02	1.26E-01
101	0.70	0.	3.66E-09	0.	0.	0.	0.	2.61E-11	0.	0.	9.47E-02	5.83E-02	1.05E-02	1.64E-01
102	0.60	0.	6.35E-10	0.	0.	0.	0.	8.69E-11	0.	0.	1.52E-01	6.52E-02	1.18E-02	2.29E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. 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.	8.02E-11	0.	0.	0.	8.25E-08	4.54E-07	4.05E-05	1.34E-05	5.45E-05
2	10.60	0.	0.	7.27E-11	0.	0.	0.	8.26E-08	4.67E-07	4.07E-05	1.33E-05	5.46E-05
3	10.50	0.	0.	7.33E-11	0.	0.	0.	8.27E-08	4.81E-07	4.09E-05	1.33E-05	5.48E-05
4	10.40	0.	0.	6.94E-11	0.	0.	0.	8.29E-08	4.95E-07	4.11E-05	1.33E-05	5.49E-05
5	10.30	0.	0.	6.03E-11	0.	0.	0.	8.30E-08	5.09E-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.	5.85E-11	0.	0.	0.	8.32E-08	5.40E-07	4.13E-05	1.31E-05	5.50E-05
8	10.00	0.	0.	5.11E-11	0.	0.	0.	8.33E-08	5.57E-07	4.08E-05	1.31E-05	5.45E-05
9	9.90	0.	0.	5.24E-11	0.	0.	0.	8.34E-08	5.74E-07	4.09E-05	1.30E-05	5.45E-05
10	9.80	0.	0.	4.91E-11	0.	0.	0.	8.36E-08	5.92E-07	4.10E-05	1.30E-05	5.46E-05
11	9.70	0.	0.	4.23E-11	0.	0.	0.	8.37E-08	6.10E-07	4.11E-05	1.29E-05	5.47E-05
12	9.60	0.	0.	4.57E-11	0.	0.	0.	8.39E-08	6.30E-07	4.12E-05	1.29E-05	5.47E-05
13	9.50	0.	0.	3.90E-11	0.	0.	0.	8.41E-08	6.50E-07	4.13E-05	1.28E-05	5.48E-05
14	9.40	0.	0.	3.68E-11	0.	0.	0.	8.44E-08	6.71E-07	4.14E-05	1.28E-05	5.49E-05
15	9.30	0.	0.	3.77E-11	0.	0.	0.	8.47E-08	6.93E-07	4.15E-05	1.27E-05	5.50E-05
16	9.20	0.	0.	3.11E-11	0.	0.	0.	8.50E-08	7.16E-07	4.17E-05	1.27E-05	5.51E-05
17	9.10	0.	0.	3.19E-11	0.	0.	0.	8.53E-08	7.41E-07	1.49E-05	1.26E-05	2.84E-05
18	9.00	0.	0.	2.90E-11	0.	0.	0.	8.56E-08	7.66E-07	1.49E-05	1.26E-05	2.83E-05
19	8.90	0.	0.	2.67E-11	0.	0.	0.	8.59E-08	7.92E-07	1.49E-05	1.25E-05	2.83E-05
20	8.80	0.	0.	2.62E-11	0.	0.	0.	8.62E-08	8.20E-07	1.49E-05	1.25E-05	2.83E-05
21	8.70	0.	0.	2.27E-11	0.	0.	0.	8.65E-08	8.48E-07	1.50E-05	1.24E-05	2.83E-05
22	8.60	0.	0.	2.34E-11	0.	0.	0.	8.68E-08	8.79E-07	1.50E-05	1.24E-05	2.83E-05
23	8.50	0.	0.	2.04E-11	0.	0.	0.	8.71E-08	9.10E-07	1.50E-05	1.23E-05	2.84E-05
24	8.40	0.	0.	2.03E-11	0.	0.	0.	8.76E-08	9.43E-07	1.51E-05	1.23E-05	2.84E-05
25	8.30	0.	0.	1.71E-11	0.	0.	0.	8.80E-08	9.78E-07	1.51E-05	1.23E-05	2.85E-05
26	8.20	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	1.24E-05	2.87E-05
28	8.00	0.	0.	1.50E-11	0.	0.	0.	8.94E-08	1.09E-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	1.18E-06	1.54E-05	1.24E-05	2.91E-05
31	7.70	0.	0.	1.17E-11	0.	0.	0.	9.08E-08	1.23E-06	1.55E-05	1.25E-05	2.93E-05
32	7.60	0.	0.	1.10E-11	0.	7.54E-16	0.	9.12E-08	1.28E-06	1.55E-05	1.25E-05	2.94E-05
33	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	6.11E-15	0.	6.26E-12	0.	2.00E-12	0.	9.55E-08	1.71E-06	1.62E-05	1.27E-05	3.07E-05
40	6.80	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	6.70	3.82E-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	6.60	2.32E-15	0.	4.70E-12	0.	2.85E-12	0.	9.78E-08	1.96E-06	1.65E-05	1.28E-05	3.14E-05
43	6.50	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	6.40	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	6.30	4.42E-16	0.	1.59E-12	7.16E-14	2.84E-12	0.	1.00E-07	2.25E-06	1.70E-05	1.30E-05	3.24E-05
46	6.20	1.99E-16	0.	8.80E-13	1.01E-13	3.93E-12	0.	1.01E-07	2.36E-06	1.72E-05	1.32E-05	3.28E-05
47	6.10	9.12E-17	0.	4.11E-13	2.88E-13	4.96E-12	0.	1.02E-07	2.48E-06	1.74E-05	1.33E-05	3.32E-05
48	6.00	3.79E-17	0.	1.04E-13	2.75E-13	2.39E-12	0.	1.02E-07	2.61E-06	1.76E-05	1.34E-05	3.37E-05
49	5.90	9.32E-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	5.80	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	5.70	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.	8.81E-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.	8.86E-08	3.39E-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.	8.90E-08	3.59E-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.	9.02E-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.	9.09E-08	4.26E-06	2.10E-05	1.50E-05	4.03E-05
58	5.00	5.35E-14	0.	0.	0.	6.20E-13	3.04E-12	0.	0.	9.17E-08	4.52E-06	2.16E-05	1.53E-05	4.15E-05
59	4.90	1.30E-13	0.	0.	0.	6.90E-13	3.31E-12	0.	0.	9.25E-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.	7.38E-13	2.81E-12	0.	0.	9.40E-08	5.46E-06	2.40E-05	1.63E-05	4.58E-05
62	4.60	4.46E-13	0.	0.	0.	7.57E-13	2.55E-12	0.	0.	9.48E-08	5.83E-06	2.49E-05	1.67E-05	4.76E-05
63	4.50	4.68E-13	0.	5.36E-13	0.	6.92E-13	1.92E-12	0.	0.	9.55E-08	6.23E-06	2.61E-05	1.72E-05	4.96E-05
64	4.40	4.96E-13	0.	1.63E-12	0.	6.93E-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.	9.70E-08	7.15E-06	2.87E-05	1.81E-05	5.41E-05
66	4.20	4.38E-13	0.	1.70E-11	0.	6.94E-13	5.85E-13	0.	0.	9.78E-08	7.68E-06	3.01E-05	1.86E-05	5.65E-05
67	4.10	4.11E-13	0.	7.27E-12	0.	6.78E-13	1.62E-13	0.	0.	9.82E-08	8.26E-06	3.15E-05	1.86E-05	5.85E-05
68	4.00	3.76E-13	0.	2.45E-11	0.	6.53E-13	1.22E-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	6.00E-13	4.68E-14	0.	0.	9.82E-08	9.61E-06	3.15E-05	7.69E-06	4.89E-05
70	3.80	3.51E-13	0.	1.80E-11	1.15E-09	6.45E-13	0.	0.	0.	9.78E-08	1.04E-05	2.53E-05	8.01E-06	4.38E-05
71	3.70	3.11E-13	0.	1.91E-11	4.67E-10	5.48E-13	0.	0.	0.	9.63E-08	1.13E-05	2.54E-05	8.79E-06	4.66E-05
72	3.60	2.80E-13	0.	1.33E-11	2.53E-09	5.93E-13	0.	0.	0.	9.02E-08	1.22E-05	2.86E-05	9.66E-06	5.06E-05
73	3.50	2.61E-13	0.	1.77E-11	5.01E-09	4.66E-13	0.	0.	0.	8.25E-08	1.33E-05	3.01E-05	1.06E-05	5.42E-05
74	3.40	2.39E-13	0.	1.11E-11	7.20E-10	5.23E-13	0.	0.	0.	4.76E-08	1.46E-05	3.35E-05	1.17E-05	5.99E-05
75	3.30	1.91E-13	0.	1.14E-11	2.85E-09	4.17E-13	0.	0.	0.	4.77E-08	1.59E-05	3.71E-05	1.29E-05	6.59E-05
76	3.20	1.66E-13	0.	7.42E-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	3.10	1.59E-13	0.	5.75E-12	1.14E-09	4.13E-13	0.	0.	0.	4.79E-08	1.93E-05	4.42E-05	1.52E-05	7.88E-05
78	3.00	1.42E-13	0.	3.52E-12	2.73E-09	3.88E-13	0.	0.	0.	4.80E-08	2.13E-05	4.79E-05	1.64E-05	8.56E-05
79	2.90	1.19E-13	0.	2.19E-12	1.51E-09	2.95E-13	0.	0.	0.	4.81E-08	2.36E-05	5.18E-05	1.77E-05	9.31E-05
80	2.80	1.24E-13	0.	1.06E-12	9.46E-10	2.04E-13	0.	0.	0.	4.81E-08	2.62E-05	5.62E-05	1.91E-05	1.02E-04
81	2.70	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	2.60	3.74E-14	0.	2.41E-13	1.30E-10	4.86E-14	0.	0.	0.	4.81E-08	3.29E-05	6.61E-05	2.23E-05	1.21E-04
83	2.50	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	2.40	0.	1.21E-12	0.	1.02E-10	1.23E-15	0.	0.	0.	4.81E-08	4.20E-05	6.11E-05	1.54E-05	1.19E-04
85	2.30	0.	3.82E-12	0.	0.	0.	0.	0.	0.	4.78E-08	4.78E-05	7.41E-05	1.84E-05	1.40E-04
86	2.20	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	2.10	0.	1.05E-11	0.	0.	0.	0.	0.	0.	4.74E-08	6.30E-05	1.02E-04	2.57E-05	1.91E-04
88	2.00	0.	2.05E-11	0.	0.	0.	0.	0.	0.	4.58E-08	7.32E-05	1.16E-04	2.94E-05	2.19E-04
89	1.90	0.	2.67E-11	0.	0.	0.	0.	0.	0.	4.41E-08	8.56E-05	1.33E-04	3.40E-05	2.53E-04
90	1.80	0.	2.25E-11	0.	0.	0.	0.	0.	0.	4.22E-08	1.01E-04	1.59E-04	4.12E-05	3.01E-04
91	1.70	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	1.60	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	1.50	0.	2.23E-11	0.	0.	0.	0.	0.	0.	1.53E-08	1.76E-04	2.88E-04	7.17E-05	5.35E-04
94	1.40	0.	2.21E-11	0.	0.	0.	0.	0.	0.	0.	2.18E-04	3.40E-04	8.55E-05	6.44E-04
95	1.30	0.	1.70E-11	0.	0.	0.	0.	0.	0.	0.	2.74E-04	4.71E-04	1.07E-04	8.53E-04
96	1.20	0.	1.62E-11	0.	0.	0.	0.	0.	0.	0.	3.51E-04	5.10E-04	1.13E-04	9.75E-04
97	1.10	0.	1.53E-11	0.	0.	0.	0.	3.41E-17	0.	0.	4.57E-04	6.29E-04	1.43E-04	1.23E-03
98	1.00	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	0.90	0.	1.16E-11	0.	0.	0.	0.	5.67E-16	0.	0.	8.42E-04	8.75E-04	1.90E-04	1.91E-03
100	0.80	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	0.70	0.	1.29E-12	0.	0.	0.	0.	1.07E-14	0.	0.	1.83E-03	1.10E-03	2.29E-04	3.16E-03
102	0.60	0.	2.24E-13	0.	0.	0.	0.	3.56E-14	0.	0.	2.95E-03	1.10E-03	2.56E-04	4.31E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. DENSITY (GM/CC) 1.293E-07 (10.0E-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	10.70	0.	0.	1.00E-14	0.	0.	0.	1.01E-10	5.14E-09	5.18E-07	1.55E-07	6.79E-07
2	10.60	0.	0.	9.07E-15	0.	0.	0.	1.02E-10	5.28E-09	5.22E-07	1.55E-07	6.82E-07
3	10.50	0.	0.	9.15E-15	0.	0.	0.	1.02E-10	5.44E-09	4.62E-07	1.54E-07	6.22E-07
4	10.40	0.	0.	8.66E-15	0.	0.	0.	1.02E-10	5.60E-09	4.64E-07	1.54E-07	6.23E-07
5	10.30	0.	0.	7.53E-15	0.	0.	0.	1.02E-10	5.76E-09	4.64E-07	1.53E-07	6.23E-07
6	10.20	0.	0.	7.76E-15	0.	0.	0.	1.02E-10	5.93E-09	4.65E-07	1.52E-07	6.24E-07
7	10.10	0.	0.	7.29E-15	0.	0.	0.	1.02E-10	6.11E-09	4.67E-07	1.52E-07	6.25E-07
8	10.00	0.	0.	6.38E-15	0.	0.	0.	1.02E-10	6.30E-09	4.68E-07	1.51E-07	6.26E-07
9	9.90	0.	0.	6.54E-15	0.	0.	0.	1.02E-10	6.49E-09	4.69E-07	1.51E-07	6.26E-07
10	9.80	0.	0.	6.13E-15	0.	0.	0.	1.03E-10	6.69E-09	4.70E-07	1.50E-07	6.27E-07
11	9.70	0.	0.	5.28E-15	0.	0.	0.	1.03E-10	6.90E-09	4.72E-07	1.50E-07	6.28E-07
12	9.60	0.	0.	5.71E-15	0.	0.	0.	1.03E-10	7.12E-09	4.73E-07	1.49E-07	6.29E-07
13	9.50	0.	0.	4.86E-15	0.	0.	0.	1.03E-10	7.35E-09	4.74E-07	1.48E-07	6.30E-07
14	9.40	0.	0.	4.59E-15	0.	0.	0.	1.04E-10	7.59E-09	4.76E-07	1.48E-07	6.32E-07
15	9.30	0.	0.	4.70E-15	0.	0.	0.	1.04E-10	7.84E-09	1.80E-07	1.47E-07	3.35E-07
16	9.20	0.	0.	3.88E-15	0.	0.	0.	1.04E-10	8.10E-09	1.80E-07	1.47E-07	3.35E-07
17	9.10	0.	0.	3.98E-15	0.	0.	0.	1.05E-10	8.37E-09	1.81E-07	1.46E-07	3.35E-07
18	9.00	0.	0.	3.61E-15	0.	0.	0.	1.05E-10	8.66E-09	1.81E-07	1.46E-07	3.35E-07
19	8.90	0.	0.	3.33E-15	0.	0.	0.	1.05E-10	8.96E-09	1.81E-07	1.45E-07	3.35E-07
20	8.80	0.	0.	3.27E-15	0.	0.	0.	1.06E-10	9.27E-09	1.81E-07	1.45E-07	3.35E-07
21	8.70	0.	0.	2.83E-15	0.	0.	0.	1.06E-10	9.60E-09	1.82E-07	1.44E-07	3.36E-07
22	8.60	0.	0.	2.92E-15	0.	0.	0.	1.07E-10	9.94E-09	1.82E-07	1.43E-07	3.36E-07
23	8.50	0.	0.	2.55E-15	0.	0.	0.	1.07E-10	1.03E-08	1.83E-07	1.43E-07	3.36E-07
24	8.40	0.	0.	2.53E-15	0.	0.	0.	1.08E-10	1.07E-08	1.83E-07	1.43E-07	3.36E-07
25	8.30	0.	0.	2.14E-15	0.	0.	0.	1.08E-10	1.11E-08	1.84E-07	1.42E-07	3.37E-07
26	8.20	0.	0.	2.16E-15	0.	0.	0.	1.09E-10	1.15E-08	1.85E-07	1.43E-07	3.39E-07
27	8.10	0.	0.	1.86E-15	0.	0.	0.	1.09E-10	1.19E-08	1.76E-07	1.43E-07	3.31E-07
28	8.00	0.	0.	1.87E-15	0.	0.	0.	1.10E-10	1.24E-08	1.77E-07	1.43E-07	3.33E-07
29	7.90	0.	0.	1.60E-15	0.	0.	0.	1.10E-10	1.28E-08	1.78E-07	1.44E-07	3.35E-07
30	7.80	0.	0.	1.66E-15	0.	0.	0.	1.11E-10	1.33E-08	1.79E-07	1.44E-07	3.37E-07
31	7.70	0.	0.	1.45E-15	0.	0.	0.	1.11E-10	1.39E-08	1.81E-07	1.44E-07	3.39E-07
32	7.60	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	7.50	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	7.40	0.	0.	1.14E-15	0.	2.75E-18	0.	1.13E-10	1.56E-08	1.85E-07	1.46E-07	3.46E-07
35	7.30	0.	0.	1.08E-15	0.	1.11E-17	0.	1.14E-10	1.63E-08	1.86E-07	1.46E-07	3.49E-07
36	7.20	0.	0.	9.73E-16	0.	3.03E-17	0.	1.14E-10	1.70E-08	1.88E-07	1.46E-07	3.51E-07
37	7.10	0.	0.	9.32E-16	0.	9.36E-17	0.	1.16E-10	1.77E-08	1.89E-07	1.47E-07	3.54E-07
38	7.00	4.19E-19	0.	8.54E-16	0.	1.91E-16	0.	1.16E-10	1.85E-08	1.90E-07	1.47E-07	3.56E-07
39	6.90	8.18E-19	0.	7.81E-16	0.	2.58E-16	0.	1.17E-10	1.93E-08	1.92E-07	1.47E-07	3.59E-07
40	6.80	7.03E-19	0.	7.50E-16	0.	4.56E-16	0.	1.18E-10	2.02E-08	1.93E-07	1.48E-07	3.61E-07
41	6.70	5.11E-19	0.	6.55E-16	0.	4.60E-16	0.	1.19E-10	2.11E-08	1.95E-07	1.48E-07	3.65E-07
42	6.60	3.11E-19	0.	5.86E-16	0.	3.68E-16	0.	1.20E-10	2.21E-08	1.97E-07	1.49E-07	3.68E-07
43	6.50	1.79E-19	0.	4.65E-16	0.	5.52E-16	0.	1.21E-10	2.32E-08	2.00E-07	1.49E-07	3.72E-07
44	6.40	1.02E-19	0.	3.20E-16	1.97E-18	5.30E-16	0.	1.22E-10	2.43E-08	2.02E-07	1.50E-07	3.77E-07
45	6.30	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	3.81E-07
46	6.20	2.66E-20	0.	1.10E-16	1.31E-17	5.08E-16	0.	1.24E-10	2.67E-08	2.07E-07	1.53E-07	3.86E-07
47	6.10	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	6.00	5.06E-21	0.	1.30E-17	3.55E-17	3.08E-16	0.	1.26E-10	2.95E-08	2.13E-07	1.56E-07	3.98E-07
49	5.90	1.25E-21	0.	9.32E-19	5.20E-17	3.02E-16	0.	1.26E-10	3.10E-08	2.16E-07	1.57E-07	4.05E-07
50	5.80	1.59E-22	0.	2.35E-20	7.25E-17	3.09E-16	0.	1.24E-10	3.27E-08	2.20E-07	1.59E-07	4.11E-07
51	5.70	1.17E-23	0.	0.	8.46E-17	3.46E-16	0.	1.16E-10	3.44E-08	2.07E-07	1.60E-07	4.01E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 1700. 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	5.27E-25	0.	0.	0.	7.16E-17	4.63E-16	0.	0.	1.08E-10	3.63E-08	2.11E-07	1.61E-07	4.08E-07
53	5.50	0.	0.	0.	0.	8.74E-17	4.30E-16	0.	0.	1.09E-10	3.84E-08	2.15E-07	1.63E-07	4.17E-07
54	5.40	0.	0.	0.	0.	8.00E-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	4.29E-08	2.27E-07	1.68E-07	4.37E-07
56	5.20	0.	0.	0.	0.	8.81E-17	3.27E-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	4.82E-08	2.39E-07	1.74E-07	4.62E-07
58	5.00	7.16E-18	0.	0.	0.	8.02E-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	4.00E-16	0.	0.	1.14E-10	5.79E-08	2.64E-07	1.84E-07	5.06E-07
61	4.70	4.35E-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	6.26E-17	0.	6.69E-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	6.67E-17	0.	2.03E-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	6.29E-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	5.87E-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	5.50E-17	0.	9.08E-16	0.	8.76E-17	2.09E-17	0.	0.	1.21E-10	9.34E-08	3.61E-07	8.36E-08	5.38E-07
68	4.00	5.06E-17	0.	3.05E-15	0.	8.44E-17	1.58E-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	3.08E-13	7.76E-17	6.05E-18	0.	0.	1.21E-10	1.09E-07	2.81E-07	8.91E-08	4.79E-07
70	3.80	4.70E-17	0.	2.25E-15	1.35E-12	8.34E-17	0.	0.	0.	1.20E-10	1.18E-07	2.94E-07	9.28E-08	5.05E-07
71	3.70	4.16E-17	0.	2.38E-15	5.49E-13	7.09E-17	0.	0.	0.	1.18E-10	1.27E-07	2.92E-07	1.02E-07	5.21E-07
72	3.60	3.[illegible]E-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.[illegible]-17	0.	2.21E-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.	1.38E-15	8.46E-13	6.76E-17	0.	0.	0.	5.85E-11	1.65E-07	3.88E-07	1.36E-07	6.89E-07
75	3.30	2.56E-17	0.	1.42E-15	3.35E-12	5.38E-17	0.	0.	0.	5.86E-11	1.80E-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.	5.87E-11	1.98E-07	4.69E-07	1.63E-07	8.29E-07
77	3.10	2.13E-17	0.	7.18E-16	1.34E-12	5.33E-17	0.	0.	0.	5.88E-11	2.18E-07	4.97E-07	1.76E-07	8.91E-07
78	3.00	1.90E-17	0.	4.39E-16	3.21E-12	5.02E-17	0.	0.	0.	5.90E-11	2.41E-07	5.38E-07	1.90E-07	9.69E-07
79	2.90	1.60E-17	0.	2.74E-16	1.78E-12	3.81E-17	0.	0.	0.	5.90E-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.	5.91E-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.	5.91E-11	3.32E-07	6.87E-07	2.08E-07	1.23E-06
82	2.60	5.01E-18	0.	3.01E-17	1.53E-13	6.28E-18	0.	0.	0.	5.91E-11	3.72E-07	7.42E-07	1.26E-07	1.24E-06
83	2.50	3.51E-19	0.	3.25E-18	1.46E-13	1.49E-18	0.	0.	0.	5.91E-11	4.19E-07	5.65E-07	1.46E-07	1.13E-06
84	2.40	0.	1.51E-16	0.	1.20E-13	1.59E-19	0.	0.	0.	5.91E-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.	5.87E-11	5.40E-07	8.36E-07	2.14E-07	1.59E-06
86	2.20	0.	1.23E-15	0.	0.	0.	0.	0.	0.	5.84E-11	6.19E-07	9.90E-07	2.56E-07	1.86E-06
87	2.10	0.	1.32E-15	0.	0.	0.	0.	0.	0.	5.82E-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.	5.63E-11	8.28E-07	1.31E-06	3.40E-07	2.48E-06
89	1.90	0.	3.33E-15	0.	0.	0.	0.	0.	0.	5.42E-11	9.68E-07	1.50E-06	3.94E-07	2.86E-06
90	1.80	0.	2.80E-15	0.	0.	0.	0.	0.	0.	5.18E-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	5.80E-07	4.07E-06
92	1.60	0.	2.40E-15	0.	0.	0.	0.	0.	0.	4.13E-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	8.00E-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.	3.10E-06	4.20E-06	9.77E-07	8.28E-06
96	1.20	0.	2.03E-15	0.	0.	0.	0.	0.	0.	0.	3.97E-06	5.55E-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.	6.36E-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.	7.33E-20	0.	0.	9.52E-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	1.08E-05	2.34E-06	2.68E-05
101	0.70	0.	1.61E-16	0.	0.	0.	0.	1.38E-18	0.	0.	2.07E-05	1.00E-05	2.01E-06	3.27E-05
102	0.60	0.	2.80E-17	0.	0.	0.	0.	4.60E-18	0.	0.	3.33E-05	1.13E-05	2.28E-06	4.69E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 17000. 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.	1.02E-18	0.	0.	0.	1.06E-13	5.49E-11	5.82E-09	1.62E-09	7.49E-09
2	10.60	0.	0.	9.24E-19	0.	0.	0.	1.07E-13	5.65E-11	5.85E-09	1.61E-09	7.52E-09
3	10.50	0.	0.	9.32E-19	0.	0.	0.	1.07E-13	5.81E-11	5.87E-09	1.61E-09	7.54E-09
4	10.40	0.	0.	8.82E-19	0.	0.	0.	1.07E-13	5.98E-11	5.90E-09	1.60E-09	7.56E-09
5	10.30	0.	0.	7.67E-19	0.	0.	0.	1.07E-13	6.16E-11	5.91E-09	1.60E-09	7.57E-09
6	10.20	0.	0.	7.91E-19	0.	0.	0.	1.07E-13	6.34E-11	5.94E-09	1.59E-09	7.59E-09
7	10.10	0.	0.	7.43E-19	0.	0.	0.	1.07E-13	6.53E-11	5.96E-09	1.59E-09	7.62E-09
8	10.00	0.	0.	6.50E-19	0.	0.	0.	1.07E-13	6.73E-11	5.99E-09	1.58E-09	7.64E-09
9	9.90	0.	0.	6.67E-19	0.	0.	0.	1.08E-13	6.94E-11	6.02E-09	1.57E-09	7.66E-09
10	9.80	0.	0.	6.25E-19	0.	0.	0.	1.08E-13	7.15E-11	6.05E-09	1.57E-09	7.69E-09
11	9.70	0.	0.	5.38E-19	0.	0.	0.	1.08E-13	7.38E-11	6.07E-09	1.56E-09	7.71E-09
12	9.60	0.	0.	5.81E-19	0.	0.	0.	1.08E-13	7.61E-11	6.10E-09	1.56E-09	7.74E-09
13	9.50	0.	0.	4.95E-19	0.	0.	0.	1.08E-13	7.86E-11	6.13E-09	1.55E-09	7.76E-09
14	9.40	0.	0.	4.68E-19	0.	0.	0.	1.09E-13	8.11E-11	6.16E-09	1.55E-09	7.79E-09
15	9.30	0.	0.	4.79E-19	0.	0.	0.	1.09E-13	8.38E-11	3.19E-09	1.54E-09	4.81E-09
16	9.20	0.	0.	3.95E-19	0.	0.	0.	1.10E-13	8.66E-11	3.20E-09	1.53E-09	4.83E-09
17	9.10	0.	0.	4.06E-19	0.	0.	0.	1.10E-13	8.95E-11	3.22E-09	1.53E-09	4.84E-09
18	9.00	0.	0.	3.68E-19	0.	0.	0.	1.10E-13	9.26E-11	3.24E-09	1.52E-09	4.85E-09
19	8.90	0.	0.	3.40E-19	0.	0.	0.	1.11E-13	9.58E-11	3.25E-09	1.50E-09	4.85E-09
20	8.80	0.	0.	3.33E-19	0.	0.	0.	1.11E-13	9.91E-11	3.27E-09	1.50E-09	4.87E-09
21	8.70	0.	0.	2.88E-19	0.	0.	0.	1.12E-13	1.03E-10	3.29E-09	1.49E-09	4.88E-09
22	8.60	0.	0.	2.97E-19	0.	0.	0.	1.12E-13	1.06E-10	3.30E-09	1.49E-09	4.90E-09
23	8.50	0.	0.	2.59E-19	0.	0.	0.	1.12E-13	1.10E-10	3.33E-09	1.48E-09	4.92E-09
24	8.40	0.	0.	2.58E-19	0.	0.	0.	1.13E-13	1.14E-10	3.35E-09	1.48E-09	4.94E-09
25	8.30	0.	0.	2.18E-19	0.	0.	0.	1.14E-13	1.18E-10	2.42E-09	1.48E-09	4.01E-09
26	8.20	0.	0.	2.20E-19	0.	0.	0.	1.14E-13	1.23E-10	2.46E-09	1.48E-09	4.06E-09
27	8.10	0.	0.	1.90E-19	0.	0.	0.	1.15E-13	1.27E-10	2.49E-09	1.49E-09	4.11E-09
28	8.00	0.	0.	1.91E-19	0.	0.	0.	1.15E-13	1.32E-10	2.53E-09	1.49E-09	4.16E-09
29	7.90	0.	0.	1.64E-19	0.	0.	0.	1.16E-13	1.37E-10	2.58E-09	1.49E-09	4.21E-09
30	7.80	0.	0.	1.69E-19	0.	0.	0.	1.17E-13	1.43E-10	2.62E-09	1.50E-09	4.26E-09
31	7.70	0.	0.	1.48E-19	0.	0.	0.	1.17E-13	1.48E-10	2.66E-09	1.50E-09	4.32E-09
32	7.60	0.	0.	1.40E-19	0.	1.01E-23	0.	1.18E-13	1.54E-10	2.71E-09	1.51E-09	4.38E-09
33	7.50	0.	0.	1.30E-19	0.	3.57E-23	0.	1.18E-13	1.61E-10	2.76E-09	1.51E-09	4.44E-09
34	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	8.66E-23	0.	7.96E-20	0.	2.68E-20	0.	1.23E-13	2.07E-10	3.08E-09	1.54E-09	4.82E-09
40	6.80	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	6.70	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	6.60	3.29E-23	0.	5.97E-20	0.	3.82E-20	0.	1.26E-13	2.36E-10	3.29E-09	1.56E-09	5.08E-09
43	6.50	1.90E-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	6.40	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	6.30	6.27E-24	0.	2.03E-20	9.61E-22	3.81E-20	0.	1.29E-13	2.72E-10	3.53E-09	1.58E-09	5.39E-09
46	6.20	2.82E-24	0.	1.12E-20	1.36E-21	5.27E-20	0.	1.30E-13	2.86E-10	3.61E-09	1.60E-09	5.50E-09
47	6.10	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	6.00	5.38E-25	0.	1.33E-21	3.69E-21	3.20E-20	0.	1.32E-13	3.15E-10	2.33E-09	1.61E-09	4.25E-09
49	5.90	1.37E-25	0.	9.49E-23	5.40E-21	3.14E-20	0.	1.32E-13	3.32E-10	2.37E-09	1.62E-09	4.33E-09
50	5.80	1.68E-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	5.70	1.24E-27	0.	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 (IONS)	N P.E.	O P.E.	TOTAL AIR
52	5.60	5.5?E-29	0.	0.	0.	7.44E-21	4.81E-20	0.	0.	1.14E-13	3.88E-10	2.52E-09	1.67E-09	4.58E-09
53	5.50	0.	0.	0.	0.	9.08E-21	4.46E-20	0.	0.	1.14E-13	4.10E-10	2.59E-09	1.69E-09	4.69E-09
54	5.40	0.	0.	0.	0.	8.30E-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.	8.51E-21	4.57E-20	0.	0.	1.16E-13	4.58E-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	7.58E-22	0.	0.	0.	8.33E-21	4.09E-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	3.45E-21	0.	0.	0.	9.93E-21	4.16E-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	6.3?E-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	6.63E-21	0.	6.82E-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.	2.07E-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	6.66E-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	6.21E-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	5.82E-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	5.36E-21	0.	3.11E-19	0.	8.76E-21	1.64E-21	0.	0.	1.27E-13	1.07E-09	3.72E-09	9.03E-10	5.70E-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	1.16E-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	1.26E-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	1.36E-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	1.48E-09	4.44E-09	1.17E-09	7.09E-09
73	3.50	3.7?E-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	1.76E-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	1.96E-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	1.15E-21	0.	6.28E-21	1.52E-15	1.49E-21	0.	0.	0.	6.21E-14	3.54E-09	7.60E-09	1.21E-09	1.23E-08
82	2.60	5.30E-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.	1.25E-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.	3.39E-19	0.	0.	0.	0.	0.	0.	5.69E-14	1.03E-08	1.56E-08	4.06E-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.	2.06E-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	1.40E-07
98	1.00	0.	1.79E-19	0.	0.	0.	0.	6.60E-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 COEFFICIENTS 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.	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.	9.41E-23	0.	0.	0.	1.29E-16	7.84E-13	1.59E-10	1.99E-11	1.80E-10
2	10.60	0.	0.	8.54E-23	0.	0.	0.	1.29E-16	8.06E-13	1.60E-10	1.98E-11	1.80E-10
3	10.50	0.	0.	8.61E-23	0.	0.	0.	1.29E-16	8.29E-13	1.61E-10	1.98E-11	1.81E-10
4	10.40	0.	0.	8.14E-23	0.	0.	0.	1.29E-16	8.54E-13	1.61E-10	1.97E-11	1.82E-10
5	10.30	0.	0.	7.09E-23	0.	0.	0.	1.29E-16	8.79E-13	1.62E-10	1.96E-11	1.83E-10
6	10.20	0.	0.	7.30E-23	0.	0.	0.	1.29E-16	9.05E-13	1.64E-10	1.96E-11	1.84E-10
7	10.10	0.	0.	6.86E-23	0.	0.	0.	1.30E-16	9.32E-13	1.65E-10	1.95E-11	1.86E-10
8	10.00	0.	0.	6.00E-23	0.	0.	0.	1.30E-16	9.60E-13	1.67E-10	1.95E-11	1.88E-10
9	9.90	0.	0.	6.16E-23	0.	0.	0.	1.30E-16	9.90E-13	1.69E-10	1.94E-11	1.89E-10
10	9.80	0.	0.	5.77E-23	0.	0.	0.	1.30E-16	1.02E-12	1.70E-10	1.94E-11	1.91E-10
11	9.70	0.	0.	4.97E-23	0.	0.	0.	1.30E-16	1.05E-12	1.72E-10	1.94E-11	1.92E-10
12	9.60	0.	0.	5.37E-23	0.	0.	0.	1.31E-16	1.09E-12	1.73E-10	1.93E-11	1.94E-10
13	9.50	0.	0.	4.57E-23	0.	0.	0.	1.31E-16	1.12E-12	1.75E-10	1.93E-11	1.95E-10
14	9.40	0.	0.	4.32E-23	0.	0.	0.	1.31E-16	1.16E-12	1.47E-10	1.92E-11	1.68E-10
15	9.30	0.	0.	4.42E-23	0.	0.	0.	1.32E-16	1.19E-12	1.49E-10	1.92E-11	1.69E-10
16	9.20	0.	0.	3.65E-23	0.	0.	0.	1.32E-16	1.23E-12	1.50E-10	1.91E-11	1.71E-10
17	9.10	0.	0.	3.75E-23	0.	0.	0.	1.33E-16	1.28E-12	1.52E-10	1.91E-11	1.72E-10
18	9.00	0.	0.	3.40E-23	0.	0.	0.	1.33E-16	1.32E-12	1.53E-10	1.77E-11	1.72E-10
19	8.90	0.	0.	3.14E-23	0.	0.	0.	1.34E-16	1.37E-12	1.54E-10	1.75E-11	1.73E-10
20	8.80	0.	0.	3.08E-23	0.	0.	0.	1.34E-16	1.41E-12	1.56E-10	1.75E-11	1.75E-10
21	8.70	0.	0.	2.66E-23	0.	0.	0.	1.35E-16	1.46E-12	1.57E-10	1.75E-11	1.76E-10
22	8.60	0.	0.	2.74E-23	0.	0.	0.	1.35E-16	1.51E-12	1.58E-10	1.74E-11	1.77E-10
23	8.50	0.	0.	2.40E-23	0.	0.	0.	1.36E-16	1.57E-12	7.63E-11	1.74E-11	9.53E-11
24	8.40	0.	0.	2.38E-23	0.	0.	0.	1.36E-16	1.63E-12	7.79E-11	1.74E-11	9.69E-11
25	8.30	0.	0.	2.01E-23	0.	0.	0.	1.37E-16	1.68E-12	8.01E-11	1.74E-11	9.92E-11
26	8.20	0.	0.	2.03E-23	0.	0.	0.	1.38E-16	1.75E-12	8.30E-11	1.75E-11	1.02E-10
27	8.10	0.	0.	1.75E-23	0.	0.	0.	1.39E-16	1.81E-12	8.60E-11	1.76E-11	1.05E-10
28	8.00	0.	0.	1.76E-23	0.	0.	0.	1.39E-16	1.88E-12	8.89E-11	1.77E-11	1.09E-10
29	7.90	0.	0.	1.51E-23	0.	0.	0.	1.40E-16	1.96E-12	9.19E-11	1.78E-11	1.12E-10
30	7.80	0.	0.	1.56E-23	0.	0.	0.	1.41E-16	2.03E-12	9.49E-11	1.79E-11	1.15E-10
31	7.70	0.	0.	1.37E-23	0.	0.	0.	1.41E-16	2.11E-12	9.81E-11	1.80E-11	1.18E-10
32	7.60	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	7.50	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	7.40	0.	0.	1.07E-23	0.	3.00E-26	0.	1.44E-16	2.38E-12	1.02E-10	1.84E-11	1.23E-10
35	7.30	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	7.20	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	7.10	0.	0.	8.77E-24	0.	1.02E-24	0.	1.46E-16	2.70E-12	1.17E-10	1.88E-11	1.39E-10
38	7.00	5.30E-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	6.90	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	6.80	8.89E-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	6.70	6.47E-27	0.	6.17E-24	0.	5.02E-24	0.	1.51E-16	3.22E-12	1.39E-10	1.95E-11	1.61E-10
42	6.60	3.93E-27	0.	5.51E-24	0.	4.01E-24	0.	1.52E-16	3.37E-12	1.44E-10	1.97E-11	1.67E-10
43	6.50	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	6.40	1.29E-27	0.	3.01E-24	2.15E-26	5.78E-24	0.	1.55E-16	3.69E-12	1.55E-10	2.01E-11	1.79E-10
45	6.30	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	6.20	3.37E-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	6.10	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	6.00	6.42E-29	0.	1.22E-25	3.87E-25	3.36E-24	0.	1.59E-16	4.49E-12	5.09E-11	1.83E-11	7.37E-11
49	5.90	1.50E-29	0.	8.77E-27	5.67E-25	3.30E-24	0.	1.59E-16	4.72E-12	5.23E-11	1.85E-11	7.55E-11
50	5.80	2.01E-30	0.	2.21E-28	7.91E-25	3.38E-24	0.	1.57E-16	4.97E-12	5.37E-11	1.87E-11	7.74E-11
51	5.70	1.46E-31	0.	0.	9.22E-25	3.77E-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 IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	6.67E-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	5.50	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	5.40	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	5.30	0.	0.	0.	0.	8.94E-25	4.80E-24	0.	0.	1.40E-16	6.52E-12	6.70E-11	1.96E-11	9.31E-11
56	5.20	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	5.10	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	5.00	9.06E-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	4.90	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	4.80	4.09E-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	4.70	5.50E-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	4.60	7.55E-25	0.	0.	0.	1.07E-24	3.60E-24	0.	0.	1.48E-16	1.00E-11	9.34E-11	2.28E-11	1.26E-10
63	4.50	7.92E-25	0.	6.30E-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	4.40	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	2.36E-11	1.41E-10
65	4.30	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	4.20	7.42E-25	0.	1.99E-23	0.	9.79E-25	8.25E-25	0.	0.	1.52E-16	1.32E-11	1.19E-10	1.04E-11	1.43E-10
67	4.10	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	1.08E-11	1.49E-10
68	4.00	6.40E-25	0.	2.87E-23	0.	9.20E-25	1.72E-25	0.	0.	1.54E-16	1.53E-11	1.23E-10	1.12E-11	1.50E-10
69	3.90	5.42E-25	0.	1.33E-23	2.57E-19	8.47E-25	6.60E-26	0.	0.	1.53E-16	1.65E-11	1.30E-10	1.17E-11	1.58E-10
70	3.80	5.94E-25	0.	2.12E-23	1.13E-18	9.10E-25	0.	0.	0.	1.52E-16	1.79E-11	1.36E-10	1.22E-11	1.66E-10
71	3.70	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	3.60	4.74E-25	0.	1.56E-23	2.48E-18	8.36E-25	0.	0.	0.	1.40E-16	2.10E-11	1.51E-10	1.43E-11	1.86E-10
73	3.50	4.42E-25	0.	2.07E-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	3.40	4.05E-25	0.	1.30E-23	7.06E-19	7.37E-25	0.	0.	0.	7.42E-17	2.50E-11	6.82E-11	1.73E-11	1.11E-10
75	3.30	3.23E-25	0.	1.34E-23	2.80E-18	5.87E-25	0.	0.	0.	7.43E-17	2.74E-11	7.45E-11	1.81E-11	1.20E-10
76	3.20	2.81E-25	0.	8.72E-24	4.79E-18	6.16E-25	0.	0.	0.	7.44E-17	3.00E-11	8.32E-11	1.92E-11	1.32E-10
77	3.10	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	3.00	2.41E-25	0.	4.13E-24	2.66E-18	5.47E-25	0.	0.	0.	7.48E-17	3.65E-11	1.03E-10	2.26E-11	1.62E-10
79	2.90	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	2.80	2.16E-25	0.	1.24E-24	9.28E-19	2.87E-25	0.	0.	0.	7.50E-17	4.50E-11	1.23E-10	2.31E-11	1.91E-10
81	2.70	1.35E-25	0.	5.80E-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	2.60	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	2.50	4.44E-27	0.	3.06E-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	2.40	0.	1.42E-24	0.	1.00E-19	1.74E-27	0.	0.	0.	7.50E-17	7.20E-11	1.58E-10	2.23E-11	2.52E-10
85	2.30	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	2.20	0.	1.15E-23	0.	0.	0.	0.	0.	0.	7.41E-17	9.37E-11	2.08E-10	3.14E-11	3.33E-10
87	2.10	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	2.00	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	1.90	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	1.80	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	1.70	0.	3.05E-23	0.	0.	0.	0.	0.	0.	6.19E-17	2.05E-10	2.75E-10	6.37E-11	5.44E-10
92	1.60	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	1.50	0.	2.62E-23	0.	0.	0.	0.	0.	0.	2.38E-17	3.01E-10	2.87E-10	8.53E-11	6.73E-10
94	1.40	0.	2.60E-23	0.	0.	0.	0.	0.	0.	0.	3.72E-10	3.59E-10	7.86E-11	8.10E-10
95	1.30	0.	1.99E-23	0.	0.	0.	0.	0.	0.	0.	4.68E-10	3.93E-10	1.10E-10	9.71E-10
96	1.20	0.	1.91E-23	0.	0.	0.	0.	0.	0.	0.	5.99E-10	5.37E-10	1.37E-10	1.27E-09
97	1.10	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	1.00	0.	1.65E-23	0.	0.	0.	0.	6.93E-28	0.	0.	1.04E-09	8.03E-10	2.10E-10	2.06E-09
99	0.90	0.	1.36E-23	0.	0.	0.	0.	8.00E-28	0.	0.	1.44E-09	9.08E-10	2.27E-10	2.57E-09
100	0.80	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	0.70	0.	1.51E-24	0.	0.	0.	0.	1.51E-26	0.	0.	3.11E-09	9.74E-10	2.26E-10	4.32E-09
102	0.60	0.	2.63E-25	0.	0.	0.	0.	5.02E-26	0.	0.	5.01E-09	1.09E-09	2.56E-10	6.36E-09

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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.	1.36E 00	0.	0.	0.	3.89E 00	1.26E-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 00	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 00	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	1.46E-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	1.59E-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	1.75E-01	9.51E 00	2.01E 00	1.65E 01
13	9.50	0.	0.	6.91E-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	1.86E-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	2.06E-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	4.18E-01	3.80E 00	1.96E 00	1.07E 01
37	7.10	0.	0.	1.45E-01	0.	8.78E-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	4.91E-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-05	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	6.26E-01	4.07E 00	2.01E 00	1.15E 01
46	6.20	1.64E-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	8.46E-01	4.40E 00	2.12E 00	1.19E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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	3.28E-11	0.	0.	0.	6.58E-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.	8.03E-03	3.93E-02	0.	0.	4.17E 00	9.43E-01	4.57E 00	2.16E 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	4.04E-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	3.05E-02	0.	0.	4.25E 00	1.12E 00	4.94E 00	2.26E 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	1.26E 00	5.24E 00	2.34E 00	1.32E 01
59	4.90	1.16E-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.	8.94E-03	3.78E-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.	8.95E-03	3.43E-02	0.	0.	4.43E 00	1.52E 00	5.82E 00	2.50E 00	1.43E 01
62	4.60	3.83E-03	0.	0.	0.	9.20E-03	3.12E-02	0.	0.	4.46E 00	1.62E 00	6.06E 00	2.56E 00	1.47E 01
63	4.50	4.03E-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.	8.48E-03	1.61E-02	0.	0.	4.53E 00	1.85E 00	6.67E 00	2.70E 00	1.58E 01
65	4.30	4.09E-03	0.	1.09E-01	0.	8.10E-03	1.01E-02	0.	0.	4.57E 00	1.99E 00	7.01E 00	2.77E 00	1.65E 01
66	4.20	3.82E-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.	8.36E-03	1.98E-03	0.	0.	4.63E 00	2.30E 00	7.69E 00	2.85E 00	1.76E 01
68	4.00	3.32E-03	0.	5.05E-01	0.	8.08E-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.	2.36E-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	3.10E-03	0.	3.77E-01	6.73E-02	8.05E-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	7.06E 00	1.57E 00	1.67E 01
73	3.50	2.34E-03	0.	3.68E-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	1.68E 01
75	3.30	1.72E-03	0.	2.40E-01	1.70E-01	5.30E-03	0.	0.	0.	2.25E 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.	2.25E 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.	2.25E 00	5.36E 00	1.09E 01	2.46E 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	2.86E 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.	1.07E-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	3.50E-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.	6.02E-03	1.66E-05	0.	0.	0.	2.27E 00	1.17E 01	2.18E 01	2.56E 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	1.76E 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	4.86E 00	5.73E 01
89	1.90	0.	5.32E-01	0.	0.	0.	0.	0.	0.	2.08E 00	2.39E 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	4.03E 01	6.84E 00	7.77E 01
91	1.70	0.	5.17E-01	0.	0.	0.	0.	0.	0.	1.87E 00	3.35E 01	4.84E 01	8.32E 00	9.26E 01
92	1.60	0.	3.86E-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.	6.09E 01	9.12E 01	1.42E 01	1.67E 02
95	1.30	0.	3.37E-01	0.	0.	0.	0.	0.	0.	0.	7.67E 01	1.21E 02	1.88E 01	2.17E 02
96	1.20	0.	3.22E-01	0.	0.	0.	0.	0.	0.	0.	9.78E 01	1.32E 02	1.89E 01	2.49E 02
97	1.10	0.	3.07E-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.	2.82E-01	0.	0.	0.	0.	6.03E-06	0.	0.	1.70E 02	1.98E 02	2.70E 01	3.95E 02
99	0.90	0.	2.32E-01	0.	0.	0.	0.	6.97E-06	0.	0.	2.35E 02	2.27E 02	3.17E 01	4.95E 02
100	0.80	0.	1.09E-01	0.	0.	0.	0.	1.51E-04	0.	0.	3.39E 02	2.61E 02	3.64E 01	6.37E 02
101	0.70	0.	2.56E-02	0.	0.	0.	0.	1.36E-04	0.	0.	5.12E 02	2.84E 02	3.78E 01	8.34E 02
102	0.60	0.	4.78E-03	0.	0.	0.	0.	4.44E-04	0.	0.	8.26E 02	3.17E 02	4.23E 01	1.19E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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.	1.13E-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	1.26E-02	8.57E-01	1.94E-01	1.18E 00
6	10.20	0.	0.	8.97E-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.	7.63E-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	1.46E-02	8.64E-01	1.91E-01	1.19E 00
11	9.70	0.	0.	6.22E-03	0.	0.	0.	1.11E-01	1.51E-02	8.66E-01	1.90E-01	1.19E 00
12	9.60	0.	0.	6.72E-03	0.	0.	0.	1.12E-01	1.56E-02	8.68E-01	1.89E-01	1.19E 00
13	9.50	0.	0.	5.76E-03	0.	0.	0.	1.12E-01	1.61E-02	8.71E-01	1.88E-01	1.19E 00
14	9.40	0.	0.	5.46E-03	0.	0.	0.	1.12E-01	1.66E-02	8.74E-01	1.87E-01	1.20E 00
15	9.30	0.	0.	5.60E-03	0.	0.	0.	1.13E-01	1.71E-02	8.76E-01	1.87E-01	1.20E 00
16	9.20	0.	0.	4.66E-03	0.	0.	0.	1.13E-01	1.77E-02	8.79E-01	1.86E-01	1.20E 00
17	9.10	0.	0.	4.78E-03	0.	0.	0.	1.13E-01	1.83E-02	3.22E-01	1.85E-01	6.44E-01
18	9.00	0.	0.	4.36E-03	0.	0.	0.	1.14E-01	1.89E-02	3.22E-01	1.85E-01	6.44E-01
19	8.90	0.	0.	4.04E-03	0.	0.	0.	1.14E-01	1.96E-02	3.22E-01	1.84E-01	6.44E-01
20	8.80	0.	0.	3.97E-03	0.	0.	0.	1.15E-01	2.02E-02	3.23E-01	1.83E-01	6.45E-01
21	8.70	0.	0.	3.46E-03	0.	0.	0.	1.15E-01	2.10E-02	3.23E-01	1.82E-01	6.45E-01
22	8.60	0.	0.	3.57E-03	0.	0.	0.	1.15E-01	2.17E-02	3.24E-01	1.82E-01	6.46E-01
23	8.50	0.	0.	3.13E-03	0.	0.	0.	1.16E-01	2.25E-02	3.25E-01	1.81E-01	6.47E-01
24	8.40	0.	0.	3.12E-03	0.	0.	0.	1.16E-01	2.33E-02	3.26E-01	1.80E-01	6.49E-01
25	8.30	0.	0.	2.65E-03	0.	0.	0.	1.17E-01	2.42E-02	3.27E-01	1.80E-01	6.51E-01
26	8.20	0.	0.	2.69E-03	0.	0.	0.	1.18E-01	2.51E-02	3.28E-01	1.81E-01	6.54E-01
27	8.10	0.	0.	2.33E-03	0.	0.	0.	1.18E-01	2.60E-02	3.29E-01	1.81E-01	6.56E-01
28	8.00	0.	0.	2.34E-03	0.	0.	0.	1.19E-01	2.70E-02	3.31E-01	1.81E-01	6.60E-01
29	7.90	0.	0.	2.02E-03	0.	0.	0.	1.20E-01	2.81E-02	3.33E-01	1.82E-01	6.64E-01
30	7.80	0.	0.	2.10E-03	0.	0.	0.	1.20E-01	2.92E-02	3.35E-01	1.82E-01	6.68E-01
31	7.70	0.	0.	1.85E-03	0.	0.	0.	1.21E-01	3.03E-02	3.37E-01	1.82E-01	6.72E-01
32	7.60	0.	0.	1.76E-03	0.	7.85E-08	0.	1.21E-01	3.15E-02	3.39E-01	1.83E-01	6.76E-01
33	7.50	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	7.40	0.	0.	1.47E-03	0.	2.23E-06	0.	1.23E-01	3.42E-02	3.43E-01	1.83E-01	6.85E-0
35	7.30	0.	0.	1.39E-03	0.	8.85E-06	0.	1.23E-01	3.56E-02	3.45E-01	1.84E-01	6.89E-0
36	7.20	0.	0.	1.26E-03	0.	2.43E-05	0.	1.24E-01	3.72E-02	3.47E-01	1.84E-01	6.94E-0.
37	7.10	0.	0.	1.21E-03	0.	7.55E-05	0.	1.25E-01	3.88E-02	3.49E-01	1.84E-01	6.99E-01
38	7.00	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.	2.09E-04	0.	1.27E-01	4.23E-02	3.53E-01	1.85E-01	7.09E-01
40	6.80	3.75E-07	0.	9.88E-04	0.	3.63E-04	0.	1.28E-01	4.42E-02	3.55E-01	1.86E-01	7.15E-01
41	6.70	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	6.60	1.67E-07	0.	7.79E-04	0.	2.95E-04	0.	1.30E-01	4.84E-02	3.61E-01	1.87E-01	7.27E-01
43	6.50	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	6.40	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	6.30	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	6.20	1.45E-08	0.	1.50E-04	1.00E-05	4.02E-04	0.	1.34E-01	5.84E-02	3.76E-01	1.91E-01	7.60E-01
47	6.10	6.67E-09	0.	7.08E-05	2.86E-05	5.00E-04	0.	1.35E-01	6.13E-02	3.80E-01	1.93E-01	7.70E-01
48	6.00	2.79E-09	0.	1.80E-05	2.75E-05	2.45E-04	0.	1.36E-01	6.45E-02	3.85E-01	1.94E-01	7.81E-01
49	5.90	6.86E-10	0.	1.29E-06	4.03E-05	2.39E-04	0.	1.36E-01	6.78E-02	3.91E-01	1.96E-01	7.92E-01
50	5.80	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	8.00E-01
51	5.70	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) 18000. 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	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	5.50	0.	0.	0.	0.	6.90E-05	3.38E-04	0.	0.	1.18E-01	8.39E-02	4.18E-01	2.04E-01	8.24E-01
54	5.40	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	5.30	0.	0.	0.	0.	6.51E-05	3.48E-04	0.	0.	1.19E-01	9.38E-02	4.40E-01	2.09E-01	8.62E-01
56	5.20	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	5.10	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	5.00	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	4.90	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	4.80	1.82E-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	4.70	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	4.60	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	4.50	3.56E-05	0.	9.29E-05	0.	7.26E-05	2.02E-04	0.	0.	1.27E-01	1.54E-01	5.81E-01	2.48E-01	1.11E 00
64	4.40	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	4.30	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	4.20	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	4.10	3.18E-05	0.	1.28E-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	4.00	2.94E-05	0.	4.21E-03	0.	6.95E-05	1.28E-05	0.	0.	1.31E-01	2.20E-01	7.34E-01	1.14E-01	1.20E 00
69	3.90	2.50E-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	1.20E 00
70	3.80	2.75E-05	0.	3.15E-03	1.87E-03	6.92E-05	0.	0.	0.	1.30E-01	2.57E-01	7.25E-01	1.23E-01	1.24E 00
71	3.70	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	3.60	2.21E-05	0.	2.32E-03	4.22E-03	6.40E-05	0.	0.	0.	1.20E-01	3.03E-01	6.45E-01	1.48E-01	1.22E 00
73	3.50	2.07E-05	0.	3.97E-03	8.09E-03	5.07E-05	0.	0.	0.	1.10E-01	3.30E-01	6.83E-01	1.62E-01	1.30E 00
74	3.40	1.90E-05	0.	1.96E-03	1.22E-03	5.69E-05	0.	0.	0.	6.34E-02	3.60E-01	7.59E-01	1.79E-01	1.37E 00
75	3.30	1.53E-05	0.	2.01E-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	3.20	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	3.10	1.28E-05	0.	1.02E-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	3.00	1.15E-05	0.	6.30E-04	4.50E-03	4.30E-05	0.	0.	0.	6.39E-02	5.27E-01	1.08E 00	2.49E-01	1.93E 00
79	2.90	9.70E-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	2.80	1.01E-05	0.	1.90E-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	2.70	6.55E-06	0.	8.90E-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	2.60	3.10E-06	0.	4.33E-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	2.50	2.18E-07	0.	4.62E-06	2.09E-04	1.33E-06	0.	0.	0.	6.41E-02	9.19E-01	1.71E 00	2.05E-01	2.90E 00
84	2.40	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	2.30	0.	6.50E-04	0.	0.	0.	0.	0.	0.	6.36E-02	1.18E 00	1.71E 00	2.88E-01	3.25E 00
86	2.20	0.	1.70E-03	0.	0.	0.	0.	0.	0.	6.33E-02	1.36E 00	2.02E 00	3.44E-01	3.79E 00
87	2.10	0.	1.79E-03	0.	0.	0.	0.	0.	0.	6.30E-02	1.56E 00	2.36E 00	4.01E-01	4.38E 00
88	2.00	0.	3.51E-03	0.	0.	0.	0.	0.	0.	6.10E-02	1.81E 00	2.69E 00	4.57E-01	5.03E 00
89	1.90	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	1.80	0.	3.76E-03	0.	0.	0.	0.	0.	0.	5.61E-02	2.50E 00	3.68E 00	6.44E-01	6.89E 00
91	1.70	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	1.60	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	1.50	0.	3.71E-03	0.	0.	0.	0.	0.	0.	2.03E-02	4.38E 00	6.68E 00	1.12E 00	1.22E 01
94	1.40	0.	3.67E-03	0.	0.	0.	0.	0.	0.	0.	5.42E 00	8.33E 00	1.34E 00	1.51E 01
95	1.30	0.	2.81E-03	0.	0.	0.	0.	0.	0.	0.	6.82E 00	1.10E 01	1.77E 00	1.96E 01
96	1.20	0.	2.69E-03	0.	0.	0.	0.	0.	0.	0.	8.70E 00	1.21E 01	1.78E 00	2.26E 01
97	1.10	0.	2.56E-03	0.	0.	0.	0.	3.47E-09	0.	0.	1.13E 01	1.49E 01	2.23E 00	2.85E 01
98	1.00	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	0.90	0.	1.93E-03	0.	0.	0.	0.	5.99E-08	0.	0.	2.09E 01	2.07E 01	2.98E 00	4.47E 01
100	0.80	0.	9.08E-04	0.	0.	0.	0.	1.30E-06	0.	0.	3.01E 01	2.39E 01	3.43E 00	5.74E 01
101	0.70	0.	2.14E-04	0.	0.	0.	0.	1.17E-06	0.	0.	4.55E 01	2.59E 01	3.56E 00	7.50E 01
102	0.60	0.	3.99E-05	0.	0.	0.	0.	3.82E-06	0.	0.	7.34E 01	2.90E 01	3.98E 00	1.06E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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 (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	1.80E 00	1.54E-02	1.82E 00
2	10.60	0.	0.	4.98E-05	0.	0.	0.	2.27E-03	8.11E-04	5.89E-02	1.53E-02	7.73E-02
3	10.50	0.	0.	5.03E-05	0.	0.	0.	2.27E-03	8.35E-04	5.91E-02	1.52E-02	7.76E-02
4	10.40	0.	0.	4.78E-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	9.38E-04	5.96E-02	1.50E-02	7.79E-02
8	10.00	0.	0.	3.58E-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	4.04E-02
18	9.00	0.	0.	2.10E-05	0.	0.	0.	2.35E-03	1.33E-03	2.24E-02	1.44E-02	4.04E-02
19	8.90	0.	0.	1.95E-05	0.	0.	0.	2.36E-03	1.38E-03	2.24E-02	1.43E-02	4.04E-02
20	8.80	0.	0.	1.91E-05	0.	0.	0.	2.37E-03	1.42E-03	2.24E-02	1.42E-02	4.05E-02
21	8.70	0.	0.	1.67E-05	0.	0.	0.	2.38E-03	1.47E-03	2.24E-02	1.42E-02	4.05E-02
22	8.60	0.	0.	1.72E-05	0.	0.	0.	2.39E-03	1.53E-03	2.25E-02	1.41E-02	4.06E-02
23	8.50	0.	0.	1.51E-05	0.	0.	0.	2.39E-03	1.58E-03	2.25E-02	1.41E-02	4.06E-02
24	8.40	0.	0.	1.50E-05	0.	0.	0.	2.41E-03	1.64E-03	2.26E-02	1.40E-02	4.07E-02
25	8.30	0.	0.	1.28E-05	0.	0.	0.	2.42E-03	1.70E-03	2.27E-02	1.40E-02	4.08E-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.	7.85E-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.	7.06E-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.	6.07E-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.	1.60E-06	0.	2.69E-03	3.40E-03	2.50E-02	1.45E-02	4.57E-02
43	6.50	5.84E-10	0.	3.00E-06	0.	2.35E-06	0.	2.71E-03	3.56E-03	2.53E-02	1.46E-02	4.62E-02
44	6.40	3.35E-10	0.	2.08E-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	8.79E-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	4.04E-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	1.48E-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	2.18E-07	1.29E-06	0.	2.81E-03	4.77E-03	2.71E-02	1.53E-02	5.00E-02
50	5.80	5.36E-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.	3.58E-07	1.49E-06	0.	2.60E-03	5.30E-03	2.79E-02	1.55E-02	5.14E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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	1.76E-15	0.	0.	0.	3.05E-07	1.97E-06	0.	0.	2.42E-03	5.59E-03	2.84E-02	1.57E-02	5.21E-02
53	5.50	0.	0.	0.	0.	3.73E-07	1.83E-06	0.	0.	2.43E-03	5.90E-03	2.90E-02	1.58E-02	5.32E-02
54	5.40	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	5.30	0.	0.	0.	0.	3.52E-07	1.88E-06	0.	0.	2.46E-03	6.60E-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	1.66E-02	5.73E-02
57	5.10	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	5.00	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	4.90	5.89E-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	4.80	1.11E-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	4.70	1.49E-07	0.	0.	0.	4.16E-07	1.59E-06	0.	0.	2.58E-03	9.50E-03	3.69E-02	1.83E-02	6.73E-02
62	4.60	2.06E-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	4.50	2.17E-07	0.	4.48E-07	0.	3.92E-07	1.09E-06	0.	0.	2.63E-03	1.08E-02	4.03E-02	1.93E-02	7.30E-02
64	4.40	2.32E-07	0.	1.34E-06	0.	3.94E-07	7.50E-07	0.	0.	2.65E-03	1.16E-02	4.22E-02	1.98E-02	7.63E-02
65	4.30	2.20E-07	0.	4.40E-06	0.	3.76E-07	4.71E-07	0.	0.	2.67E-03	1.24E-02	4.44E-02	2.03E-02	7.98E-02
66	4.20	2.05E-07	0.	1.40E-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	4.10	1.93E-07	0.	6.16E-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	4.00	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	3.90	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	7.82E-02
70	3.80	1.67E-07	0.	1.51E-05	3.39E-05	3.74E-07	0.	0.	0.	2.69E-03	1.81E-02	5.03E-02	9.56E-03	8.07E-02
71	3.70	1.48E-07	0.	1.58E-05	1.44E-05	3.20E-07	0.	0.	0.	2.65E-03	1.96E-02	4.15E-02	1.05E-02	7.42E-02
72	3.60	1.34E-07	0.	1.12E-05	7.66E-05	3.46E-07	0.	0.	0.	2.48E-03	2.13E-02	4.48E-02	1.15E-02	8.01E-02
73	3.50	1.26E-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	3.40	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	1.39E-02	9.33E-02
75	3.30	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	3.20	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	3.10	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	3.00	6.97E-08	0.	3.03E-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	2.90	5.88E-08	0.	1.90E-06	4.49E-05	1.78E-07	0.	0.	0.	1.32E-03	4.11E-02	8.12E-02	2.09E-02	1.45E-01
80	2.80	6.13E-08	0.	9.15E-07	2.90E-05	1.24E-07	0.	0.	0.	1.32E-03	4.58E-02	8.82E-02	2.26E-02	1.58E-01
81	2.70	3.97E-08	0.	4.29E-07	3.87E-05	6.80E-08	0.	0.	0.	1.32E-03	5.11E-02	9.58E-02	2.45E-02	1.73E-01
82	2.60	1.88E-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	2.50	1.32E-09	0.	2.23E-08	3.79E-06	7.19E-09	0.	0.	0.	1.32E-03	6.46E-02	1.19E-01	1.59E-02	2.00E-01
84	2.40	0.	1.02E-06	0.	3.04E-06	7.69E-10	0.	0.	0.	1.32E-03	7.32E-02	1.38E-01	1.87E-02	2.31E-01
85	2.30	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	2.20	0.	8.17E-06	0.	0.	0.	0.	0.	0.	1.31E-03	9.54E-02	1.40E-01	2.68E-02	2.64E-01
87	2.10	0.	8.60E-06	0.	0.	0.	0.	0.	0.	1.30E-03	1.10E-01	1.63E-01	3.12E-02	3.06E-01
88	2.00	0.	1.69E-05	0.	0.	0.	0.	0.	0.	1.26E-03	1.28E-01	1.87E-01	3.56E-02	3.51E-01
89	1.90	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	1.80	0.	1.81E-05	0.	0.	0.	0.	0.	0.	1.16E-03	1.76E-01	2.55E-01	5.01E-02	4.83E-01
91	1.70	0.	2.08E-05	0.	0.	0.	0.	0.	0.	1.09E-03	2.09E-01	3.07E-01	6.10E-02	5.78E-01
92	1.60	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	1.50	0.	1.79E-05	0.	0.	0.	0.	0.	0.	4.20E-04	3.08E-01	4.64E-01	8.72E-02	8.59E-01
94	1.40	0.	1.77E-05	0.	0.	0.	0.	0.	0.	0.	3.81E-01	5.78E-01	1.04E-01	1.06E 00
95	1.30	0.	1.35E-05	0.	0.	0.	0.	0.	0.	0.	4.80E-01	7.66E-01	1.38E-01	1.38E 00
96	1.20	0.	1.29E-05	0.	0.	0.	0.	0.	0.	0.	6.12E-01	8.38E-01	1.38E-01	1.59E 00
97	1.10	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	1.00	0.	1.13E-05	0.	0.	0.	0.	2.80E-10	0.	0.	1.06E 00	1.25E 00	1.98E-01	2.52E 00
99	0.90	0.	9.30E-06	0.	0.	0.	0.	3.24E-10	0.	0.	1.47E 00	1.44E 00	2.32E-01	3.14E 00
100	0.80	0.	4.37E-06	0.	0.	0.	0.	7.01E-09	0.	0.	2.12E 00	1.66E 00	2.67E-01	4.04E 00
101	0.70	0.	1.03E-06	0.	0.	0.	0.	6.30E-09	0.	0.	3.20E 00	1.80E 00	2.77E-01	5.28E 00
102	0.60	0.	1.92E-07	0.	0.	0.	0.	2.06E-08	0.	0.	5.17E 00	2.01E 00	3.10E-01	7.49E 00

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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.	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.	6.63E-08	0.	0.	0.	1.95E-05	3.06E-05	2.16E-03	6.77E-04	2.89E-03
3	10.50	0.	0.	6.70E-08	0.	0.	0.	1.95E-05	3.15E-05	2.17E-03	6.75E-04	2.89E-03
4	10.40	0.	0.	6.37E-08	0.	0.	0.	1.95E-05	3.24E-05	2.18E-03	6.72E-04	2.90E-03
5	10.30	0.	0.	5.56E-08	0.	0.	0.	1.96E-05	3.34E-05	2.18E-03	6.69E-04	2.90E-03
6	10.20	0.	0.	5.75E-08	0.	0.	0.	1.96E-05	3.44E-05	2.19E-03	6.67E-04	2.91E-03
7	10.10	0.	0.	5.42E-08	0.	0.	0.	1.96E-05	3.54E-05	2.19E-03	6.64E-04	2.91E-03
8	10.00	0.	0.	4.77E-08	0.	0.	0.	1.97E-05	3.65E-05	2.18E-03	6.61E-04	2.90E-03
9	9.90	0.	0.	4.89E-08	0.	0.	0.	1.97E-05	3.76E-05	2.19E-03	6.59E-04	2.90E-03
10	9.80	0.	0.	4.61E-08	0.	0.	0.	1.97E-05	3.88E-05	2.19E-03	6.56E-04	2.91E-03
11	9.70	0.	0.	3.99E-08	0.	0.	0.	1.98E-05	4.00E-05	2.20E-03	6.53E-04	2.91E-03
12	9.60	0.	0.	4.31E-08	0.	0.	0.	1.98E-05	4.13E-05	2.20E-03	6.51E-04	2.91E-03
13	9.50	0.	0.	3.70E-08	0.	0.	0.	1.98E-05	4.26E-05	2.21E-03	6.48E-04	2.92E-03
14	9.40	0.	0.	3.50E-08	0.	0.	0.	1.99E-05	4.40E-05	2.22E-03	6.45E-04	2.92E-03
15	9.30	0.	0.	3.59E-08	0.	0.	0.	2.00E-05	4.55E-05	2.22E-03	6.43E-04	2.93E-03
16	9.20	0.	0.	2.99E-08	0.	0.	0.	2.00E-05	4.70E-05	2.23E-03	6.40E-04	2.94E-03
17	9.10	0.	0.	3.07E-08	0.	0.	0.	2.01E-05	4.85E-05	8.18E-04	6.38E-04	1.52E-03
18	9.00	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	5.56E-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.	2.00E-08	0.	0.	0.	2.07E-05	6.18E-05	8.28E-04	6.21E-04	1.53E-03
25	8.30	0.	0.	1.70E-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	7.90	0.	0.	1.30E-08	0.	0.	0.	2.12E-05	7.44E-05	8.45E-04	6.25E-04	1.57E-03
30	7.80	0.	0.	1.35E-08	0.	0.	0.	2.13E-05	7.74E-05	8.51E-04	6.26E-04	1.58E-03
31	7.70	0.	0.	1.18E-08	0.	0.	0.	2.14E-05	8.05E-05	8.56E-04	6.28E-04	1.59E-03
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	0.	0.	8.08E-09	0.	2.12E-10	0.	2.20E-05	9.86E-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	2.64E-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.	5.56E-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.	5.00E-09	0.	2.57E-09	0.	2.31E-05	1.28E-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	6.40	6.55E-13	0.	2.77E-09	1.30E-11	3.59E-09	0.	2.34E-05	1.41E-04	9.35E-04	6.48E-04	1.75E-03
45	6.30	3.81E-13	0.	1.73E-09	6.14E-11	2.55E-09	0.	2.36E-05	1.48E-04	9.45E-04	6.51E-04	1.77E-03
46	6.20	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	6.10	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	6.00	3.30E-14	0.	1.16E-10	2.40E-10	2.13E-09	0.	2.42E-05	1.71E-04	9.79E-04	6.69E-04	1.84E-03
49	5.90	8.13E-15	0.	8.28E-12	3.52E-10	2.08E-09	0.	2.42E-05	1.80E-04	9.94E-04	6.75E-04	1.87E-03
50	5.80	1.04E-15	0.	2.09E-13	4.92E-10	2.15E-09	0.	2.38E-05	1.90E-04	1.01E-03	6.81E-04	1.90E-03
51	5.70	7.64E-17	0.	0.	5.77E-10	2.40E-09	0.	2.24E-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	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	3.45E-18	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	5.50	0.	0.	0.	0.	6.02E-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	2.40E-09	0.	0.	2.10E-05	2.35E-04	1.09E-03	7.10E-04	2.06E-03
55	5.30	0.	0.	0.	0.	5.68E-10	3.03E-09	0.	0.	2.11E-05	2.49E-04	1.12E-03	7.20E-04	2.11E-03
56	5.20	0.	0.	0.	0.	6.12E-10	2.29E-09	0.	0.	2.13E-05	2.64E-04	1.14E-03	7.33E-04	2.16E-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	5.00	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.	6.23E-10	3.02E-09	0.	0.	2.18E-05	3.16E-04	1.25E-03	7.73E-04	2.37E-03
60	4.80	2.16E-10	0.	0.	0.	6.70E-10	2.83E-09	0.	0.	2.20E-05	3.36E-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	3.58E-04	1.35E-03	8.10E-04	2.54E-03
62	4.60	4.08E-10	0.	0.	0.	6.90E-10	2.34E-09	0.	0.	2.24E-05	3.83E-04	1.40E-03	8.31E-04	2.64E-03
63	4.50	4.24E-10	0.	5.96E-10	0.	6.33E-10	1.76E-09	0.	0.	2.25E-05	4.09E-04	1.47E-03	8.53E-04	2.76E-03
64	4.40	4.54E-10	0.	1.79E-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	4.30	4.30E-10	0.	5.85E-09	0.	6.07E-10	7.60E-10	0.	0.	2.29E-05	4.69E-04	1.62E-03	8.99E-04	3.01E-03
66	4.20	4.02E-10	0.	1.87E-08	0.	6.40E-10	5.33E-10	0.	0.	2.31E-05	5.04E-04	1.70E-03	9.23E-04	3.15E-03
67	4.10	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	4.00	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	3.90	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	4.06E-04	2.87E-03
70	3.80	3.26E-10	0.	2.02E-08	2.33E-07	6.03E-10	0.	0.	0.	2.31E-05	6.83E-04	1.84E-03	4.23E-04	2.97E-03
71	3.70	2.90E-10	0.	2.11E-08	9.87E-08	5.16E-10	0.	0.	0.	2.27E-05	7.40E-04	1.52E-03	4.63E-04	2.74E-03
72	3.60	2.62E-10	0.	1.49E-08	5.25E-07	5.58E-10	0.	0.	0.	2.13E-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.	1.95E-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	9.56E-04	1.93E-03	6.17E-04	3.51E-03
75	3.30	1.81E-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	1.15E-03	2.33E-03	7.36E-04	4.23E-03
77	3.10	1.52E-10	0.	6.57E-09	2.40E-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.	4.04E-09	5.60E-07	3.75E-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	2.00E-10	0.	0.	0.	1.14E-05	1.73E-03	3.22E-03	1.00E-03	5.96E-03
81	2.70	7.76E-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	2.40E-08	1.16E-11	0.	0.	0.	1.14E-05	2.44E-03	4.33E-03	7.04E-04	7.48E-03
84	2.40	0.	1.35E-09	0.	2.08E-08	1.24E-12	0.	0.	0.	1.14E-05	2.76E-03	5.04E-03	8.29E-04	8.64E-03
85	2.30	0.	4.17E-09	0.	0.	0.	0.	0.	0.	1.13E-05	3.14E-03	4.34E-03	9.90E-04	8.48E-03
86	2.20	0.	1.09E-08	0.	0.	0.	0.	0.	0.	1.12E-05	3.60E-03	5.13E-03	1.18E-03	9.92E-03
87	2.10	0.	1.15E-08	0.	0.	0.	0.	0.	0.	1.12E-05	4.15E-03	5.97E-03	1.38E-03	1.15E-02
88	2.00	0.	2.25E-08	0.	0.	0.	0.	0.	0.	1.08E-05	4.82E-03	6.81E-03	1.57E-03	1.32E-02
89	1.90	0.	2.85E-08	0.	0.	0.	0.	0.	0.	1.04E-05	5.63E-03	7.79E-03	1.83E-03	1.53E-02
90	1.80	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	1.70	0.	2.77E-08	0.	0.	0.	0.	0.	0.	9.38E-06	7.90E-03	1.12E-02	2.70E-03	2.18E-02
92	1.60	0.	2.07E-08	0.	0.	0.	0.	0.	0.	7.93E-06	9.50E-03	1.31E-02	3.18E-03	2.58E-02
93	1.50	0.	2.38E-08	0.	0.	0.	0.	0.	0.	3.61E-06	1.16E-02	1.69E-02	3.86E-03	3.24E-02
94	1.40	0.	2.35E-08	0.	0.	0.	0.	0.	0.	0.	1.44E-02	2.11E-02	4.61E-03	4.01E-02
95	1.30	0.	1.80E-08	0.	0.	0.	0.	0.	0.	0.	1.81E-02	2.80E-02	6.09E-03	5.22E-02
96	1.20	0.	1.72E-08	0.	0.	0.	0.	0.	0.	0.	2.31E-02	3.06E-02	6.13E-03	5.98E-02
97	1.10	0.	1.64E-08	0.	0.	0.	0.	3.02E-14	0.	0.	3.01E-02	3.77E-02	7.69E-03	7.55E-02
98	1.00	0.	1.51E-08	0.	0.	0.	0.	4.52E-13	0.	0.	4.02E-02	4.57E-02	8.74E-03	9.46E-02
99	0.90	0.	1.24E-08	0.	0.	0.	0.	5.22E-13	0.	0.	5.56E-02	5.25E-02	1.03E-02	1.18E-01
100	0.80	0.	5.82E-09	0.	0.	0.	0.	1.13E-11	0.	0.	8.00E-02	6.05E-02	1.18E-02	1.52E-01
101	0.70	0.	1.47E-09	0.	0.	0.	0.	1.02E-11	0.	0.	1.21E-01	6.56E-02	1.23E-02	1.99E-01
102	0.60	0.	2.56E-10	0.	0.	0.	0.	3.33E-11	0.	0.	1.95E-01	7.34E-02	1.37E-02	2.82E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

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

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-K 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.	1.72E-11	0.	0.	0.	4.19E-08	4.69E-07	3.44E-05	1.17E-05	4.65E-05
2	10.60	0.	0.	1.57E-11	0.	0.	0.	4.20E-08	4.82E-07	3.45E-05	1.16E-05	4.67E-05
3	10.50	0.	0.	1.59E-11	0.	0.	0.	4.20E-08	4.96E-07	3.47E-05	1.16E-05	4.68E-05
4	10.40	0.	0.	1.51E-11	0.	0.	0.	4.21E-08	5.10E-07	3.48E-05	1.15E-05	4.69E-05
5	10.30	0.	0.	1.32E-11	0.	0.	0.	4.22E-08	5.26E-07	3.49E-05	1.15E-05	4.70E-05
6	10.20	0.	0.	1.36E-11	0.	0.	0.	4.22E-08	5.41E-07	3.51E-05	1.14E-05	4.71E-05
7	10.10	0.	0.	1.28E-11	0.	0.	0.	4.23E-08	5.58E-07	3.51E-05	1.14E-05	4.71E-05
8	10.00	0.	0.	1.13E-11	0.	0.	0.	4.23E-08	5.75E-07	3.38E-05	1.14E-05	4.58E-05
9	9.90	0.	0.	1.16E-11	0.	0.	0.	4.24E-08	5.92E-07	3.39E-05	1.13E-05	4.59E-05
10	9.80	0.	0.	1.09E-11	0.	0.	0.	4.25E-08	6.11E-07	3.40E-05	1.13E-05	4.59E-05
11	9.70	0.	0.	9.44E-12	0.	0.	0.	4.26E-08	6.30E-07	3.41E-05	1.12E-05	4.60E-05
12	9.60	0.	0.	1.02E-11	0.	0.	0.	4.26E-08	6.51E-07	3.42E-05	1.12E-05	4.60E-05
13	9.50	0.	0.	8.75E-12	0.	0.	0.	4.27E-08	6.72E-07	3.43E-05	1.11E-05	4.61E-05
14	9.40	0.	0.	8.29E-12	0.	0.	0.	4.29E-08	6.93E-07	3.44E-05	1.11E-05	4.62E-05
15	9.30	0.	0.	8.50E-12	0.	0.	0.	4.30E-08	7.16E-07	3.45E-05	1.10E-05	4.63E-05
16	9.20	0.	0.	7.07E-12	0.	0.	0.	4.32E-08	7.40E-07	3.46E-05	1.10E-05	4.64E-05
17	9.10	0.	0.	7.26E-12	0.	0.	0.	4.33E-08	7.65E-07	1.29E-05	1.10E-05	2.47E-05
18	9.00	0.	0.	6.62E-12	0.	0.	0.	4.35E-08	7.91E-07	1.29E-05	1.09E-05	2.47E-05
19	8.90	0.	0.	6.14E-12	0.	0.	0.	4.36E-08	8.18E-07	1.29E-05	1.09E-05	2.47E-05
20	8.80	0.	0.	6.04E-12	0.	0.	0.	4.38E-08	8.46E-07	1.29E-05	1.08E-05	2.47E-05
21	8.70	0.	0.	5.25E-12	0.	0.	0.	4.40E-08	8.76E-07	1.30E-05	1.08E-05	2.47E-05
22	8.60	0.	0.	5.42E-12	0.	0.	0.	4.41E-08	9.07E-07	1.30E-05	1.07E-05	2.47E-05
23	8.50	0.	0.	4.76E-12	0.	0.	0.	4.43E-08	9.40E-07	1.30E-05	1.07E-05	2.47E-05
24	8.40	0.	0.	4.74E-12	0.	0.	0.	4.45E-08	9.74E-07	1.31E-05	1.07E-05	2.48E-05
25	8.30	0.	0.	4.03E-12	0.	0.	0.	4.47E-08	1.01E-06	1.31E-05	1.07E-05	2.48E-05
26	8.20	0.	0.	4.08E-12	0.	0.	0.	4.50E-08	1.05E-06	1.32E-05	1.07E-05	2.49E-05
27	8.10	0.	0.	3.53E-12	0.	0.	0.	4.52E-08	1.09E-06	1.32E-05	1.07E-05	2.50E-05
28	8.00	0.	0.	3.56E-12	0.	0.	0.	4.54E-08	1.13E-06	1.33E-05	1.07E-05	2.52E-05
29	7.90	0.	0.	3.07E-12	0.	0.	0.	4.57E-08	1.17E-06	1.34E-05	1.07E-05	2.53E-05
30	7.80	0.	0.	3.19E-12	0.	0.	0.	4.59E-08	1.22E-06	1.35E-05	1.08E-05	2.55E-05
31	7.70	0.	0.	2.80E-12	0.	0.	0.	4.61E-08	1.27E-06	1.36E-05	1.08E-05	2.56E-05
32	7.60	0.	0.	2.67E-12	0.	1.81E-16	0.	4.64E-08	1.32E-06	1.34E-05	1.08E-05	2.56E-05
33	7.50	0.	0.	2.48E-12	0.	6.18E-16	0.	4.66E-08	1.37E-06	1.35E-05	1.08E-05	2.58E-05
34	7.40	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	7.30	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	7.20	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	7.10	0.	0.	1.84E-12	0.	1.74E-13	0.	4.78E-08	1.62E-06	1.39E-05	1.09E-05	2.65E-05
38	7.00	7.76E-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	6.90	1.52E-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	6.80	1.31E-15	0.	1.50E-12	0.	8.35E-13	0.	4.89E-08	1.85E-06	1.42E-05	1.10E-05	2.71E-05
41	6.70	9.55E-16	0.	1.32E-12	0.	8.31E-13	0.	4.93E-08	1.93E-06	1.43E-05	1.10E-05	2.73E-05
42	6.60	5.82E-16	0.	1.18E-12	0.	6.80E-13	0.	4.97E-08	2.02E-06	1.44E-05	1.10E-05	2.75E-05
43	6.50	3.36E-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	6.40	1.93E-16	0.	6.55E-13	3.44E-15	9.49E-13	0.	5.05E-08	2.22E-06	1.47E-05	1.11E-05	2.81E-05
45	6.30	1.12E-16	0.	4.11E-13	1.62E-14	6.75E-13	0.	5.09E-08	2.33E-06	1.49E-05	1.12E-05	2.85E-05
46	6.20	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	6.10	2.33E-17	0.	1.07E-13	6.59E-14	1.15E-12	0.	5.16E-08	2.56E-06	1.52E-05	1.14E-05	2.92E-05
48	6.00	9.73E-18	0.	2.74E-14	6.33E-14	5.63E-13	0.	5.20E-08	2.70E-06	1.55E-05	1.15E-05	2.97E-05
49	5.90	2.40E-18	0.	1.96E-15	9.29E-14	5.50E-13	0.	5.20E-08	2.84E-06	1.57E-05	1.16E-05	3.02E-05
50	5.80	3.05E-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	5.70	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	8.40E-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	3.39E-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	6.36E-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	8.66E-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	2.64E-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	6.97E-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.	4.89E-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	3.50	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	7.58E-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	3.76E-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.	6.57E-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	7.62E-16	0.	7.02E-15	4.91E-11	3.06E-15	0.	0.	0.	2.45E-08	3.84E-05	6.65E-05	1.17E-05	1.17E-04
84	2.40	0.	3.20E-13	0.	3.93E-11	3.28E-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	8.87E-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.	6.55E-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	5.81E-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	1.50E-04	1.49E-03
99	0.90	0.	2.93E-12	0.	0.	0.	0.	1.38E-16	0.	0.	8.76E-04	8.09E-04	1.76E-04	1.86E-03
100	0.80	0.	1.38E-12	0.	0.	0.	0.	2.99E-15	0.	0.	1.26E-03	9.31E-04	2.03E-04	2.39E-03
101	0.70	0.	3.25E-13	0.	0.	0.	0.	2.69E-15	0.	0.	1.90E-03	1.01E-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 COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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.	1.95E-15	0.	0.	0.	4.75E-11	5.10E-09	5.00E-07	1.28E-07	6.33E-07
2	10.60	0.	0.	1.78E-15	0.	0.	0.	4.76E-11	5.25E-09	5.04E-07	1.27E-07	6.37E-07
3	10.50	0.	0.	1.80E-15	0.	0.	0.	4.76E-11	5.40E-09	3.84E-07	1.27E-07	5.16E-07
4	10.40	0.	0.	1.71E-15	0.	0.	0.	4.77E-11	5.56E-09	3.85E-07	1.26E-07	5.17E-07
5	10.30	0.	0.	1.49E-15	0.	0.	0.	4.78E-11	5.72E-09	3.85E-07	1.26E-07	5.17E-07
6	10.20	0.	0.	1.54E-15	0.	0.	0.	4.78E-11	5.90E-09	3.87E-07	1.25E-07	5.18E-07
7	10.10	0.	0.	1.45E-15	0.	0.	0.	4.79E-11	6.07E-09	3.88E-07	1.25E-07	5.19E-07
8	10.00	0.	0.	1.28E-15	0.	0.	0.	4.79E-11	6.26E-09	3.89E-07	1.24E-07	5.20E-07
9	9.90	0.	0.	1.31E-15	0.	0.	0.	4.80E-11	6.45E-09	3.90E-07	1.24E-07	5.21E-07
10	9.80	0.	0.	1.24E-15	0.	0.	0.	4.81E-11	6.66E-09	3.92E-07	1.23E-07	5.22E-07
11	9.70	0.	0.	1.07E-15	0.	0.	0.	4.82E-11	6.87E-09	3.93E-07	1.23E-07	5.23E-07
12	9.60	0.	0.	1.16E-15	0.	0.	0.	4.83E-11	7.09E-09	3.94E-07	1.22E-07	5.24E-07
13	9.50	0.	0.	9.91E-16	0.	0.	0.	4.84E-11	7.31E-09	3.96E-07	1.22E-07	5.25E-07
14	9.40	0.	0.	9.39E-16	0.	0.	0.	4.86E-11	7.55E-09	3.97E-07	1.21E-07	5.26E-07
15	9.30	0.	0.	9.63E-16	0.	0.	0.	4.87E-11	7.80E-09	1.69E-07	1.21E-07	2.98E-07
16	9.20	0.	0.	8.01E-16	0.	0.	0.	4.89E-11	8.06E-09	1.69E-07	1.21E-07	2.98E-07
17	9.10	0.	0.	8.23E-16	0.	0.	0.	4.91E-11	8.33E-09	1.70E-07	1.20E-07	2.98E-07
18	9.00	0.	0.	7.50E-16	0.	0.	0.	4.93E-11	8.61E-09	1.70E-07	1.20E-07	2.98E-07
19	8.90	0.	0.	6.95E-16	0.	0.	0.	4.94E-11	8.91E-09	1.71E-07	1.19E-07	2.99E-07
20	8.80	0.	0.	6.84E-16	0.	0.	0.	4.96E-11	9.22E-09	1.71E-07	1.19E-07	2.99E-07
21	8.70	0.	0.	5.95E-16	0.	0.	0.	4.98E-11	9.54E-09	1.72E-07	1.18E-07	3.00E-07
22	8.60	0.	0.	6.14E-16	0.	0.	0.	5.00E-11	9.88E-09	1.72E-07	1.17E-07	3.00E-07
23	8.50	0.	0.	5.39E-16	0.	0.	0.	5.01E-11	1.02E-08	1.73E-07	1.17E-07	3.00E-07
24	8.40	0.	0.	5.36E-16	0.	0.	0.	5.04E-11	1.06E-08	1.74E-07	1.17E-07	3.01E-07
25	8.30	0.	0.	4.56E-16	0.	0.	0.	5.07E-11	1.10E-08	1.75E-07	1.16E-07	3.02E-07
26	8.20	0.	0.	4.62E-16	0.	0.	0.	5.09E-11	1.14E-08	1.76E-07	1.17E-07	3.04E-07
27	8.10	0.	0.	4.00E-16	0.	0.	0.	5.12E-11	1.18E-08	1.56E-07	1.17E-07	2.85E-07
28	8.00	0.	0.	4.03E-16	0.	0.	0.	5.15E-11	1.23E-08	1.58E-07	1.17E-07	2.88E-07
29	7.90	0.	0.	3.48E-16	0.	0.	0.	5.17E-11	1.28E-08	1.60E-07	1.17E-07	2.90E-07
30	7.80	0.	0.	3.61E-16	0.	0.	0.	5.20E-11	1.33E-08	1.61E-07	1.18E-07	2.92E-07
31	7.70	0.	0.	3.18E-16	0.	0.	0.	5.23E-11	1.38E-08	1.63E-07	1.18E-07	2.95E-07
32	7.60	0.	0.	3.02E-16	0.	2.10E-20	0.	5.25E-11	1.44E-08	1.65E-07	1.18E-07	2.97E-07
33	7.50	0.	0.	2.80E-16	0.	7.17E-20	0.	5.28E-11	1.49E-08	1.67E-07	1.18E-07	3.00E-07
34	7.40	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	7.30	0.	0.	2.40E-16	0.	2.36E-18	0.	5.34E-11	1.62E-08	1.71E-07	1.19E-07	3.06E-07
36	7.20	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	7.10	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	7.00	9.22E-20	0.	1.92E-16	0.	4.03E-17	0.	5.45E-11	1.84E-08	1.75E-07	1.20E-07	3.14E-07
39	6.90	1.85E-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	6.80	1.56E-19	0.	1.70E-16	0.	9.69E-17	0.	5.54E-11	2.01E-08	1.80E-07	1.20E-07	3.21E-07
41	6.70	1.15E-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	6.60	6.92E-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	6.50	4.00E-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	6.40	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	6.30	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	6.20	6.02E-21	0.	2.58E-17	2.67E-18	1.07E-16	0.	5.81E-11	2.66E-08	1.97E-07	1.24E-07	3.48E-07
47	6.10	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	6.00	1.16E-21	0.	3.10E-18	7.34E-18	6.54E-17	0.	5.89E-11	2.94E-08	2.05E-07	1.26E-07	3.60E-07
49	5.90	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	5.80	3.63E-23	0.	5.60E-21	1.51E-17	6.57E-17	0.	5.81E-11	3.25E-08	2.13E-07	1.29E-07	3.74E-07
51	5.70	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 IONS	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.	5.07E-11	3.62E-08	1.81E-07	1.30E-07	3.48E-07
53	5.50	0.	0.	0.	0.	1.84E-17	9.03E-17	0.	0.	5.10E-11	3.82E-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	9.28E-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	7.01E-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	9.00E-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	4.03E-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.	1.60E-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	2.76E-07	1.64E-07	5.15E-07
65	4.30	1.50E-17	0.	1.57E-16	0.	1.86E-17	2.33E-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.	5.01E-16	0.	1.96E-17	1.63E-17	0.	0.	5.63E-11	8.65E-08	3.05E-07	1.47E-07	5.39E-07
67	4.10	1.32E-17	0.	2.20E-16	0.	1.92E-17	4.54E-18	0.	0.	5.65E-11	9.30E-08	3.20E-07	7.17E-08	4.85E-07
68	4.00	1.22E-17	0.	7.24E-16	0.	1.86E-17	3.43E-18	0.	0.	5.67E-11	1.00E-07	3.07E-07	7.41E-08	4.81E-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	1.02E-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	4.86E-07
72	3.60	9.16E-18	0.	4.00E-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	7.96E-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.	2.76E-11	2.17E-07	4.29E-07	1.50E-07	7.96E-07
78	3.00	4.77E-18	0.	1.08E-16	1.15E-12	1.15E-17	0.	0.	0.	2.76E-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	4.10E-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	3.80E-20	0.	0.	0.	2.77E-11	4.73E-07	6.15E-07	1.56E-07	1.24E-06
85	2.30	0.	1.12E-16	0.	0.	0.	0.	0.	0.	2.75E-11	5.39E-07	7.43E-07	1.86E-07	1.47E-06
86	2.20	0.	2.92E-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.	3.07E-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	8.26E-07	1.16E-06	2.96E-07	2.26E-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.	6.38E-16	0.	0.	0.	0.	0.	0.	8.80E-12	1.99E-06	2.65E-06	6.98E-07	5.34E-06
94	1.40	0.	6.31E-16	0.	0.	0.	0.	0.	0.	0.	2.47E-06	2.51E-06	8.03E-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	7.67E-06
96	1.20	0.	4.62E-16	0.	0.	0.	0.	0.	0.	0.	3.96E-06	4.89E-06	1.15E-06	10.00E-06
97	1.10	0.	4.40E-16	0.	0.	0.	0.	9.26E-22	0.	0.	5.16E-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.	6.89E-06	7.33E-06	1.64E-06	1.59E-05
99	0.90	0.	3.32E-16	0.	0.	0.	0.	1.60E-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	2.02E-06	2.52E-05
101	0.70	0.	3.68E-17	0.	0.	0.	0.	3.12E-19	0.	0.	2.07E-05	8.86E-06	1.75E-06	3.13E-05
102	0.60	0.	6.86E-18	0.	0.	0.	0.	1.02E-18	0.	0.	3.34E-05	9.98E-06	1.98E-06	4.54E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 18000. 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.	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	6.19E-11	6.42E-09	1.39E-09	7.87E-09
3	10.50	0.	0.	1.78E-19	0.	0.	0.	5.21E-14	6.37E-11	6.45E-09	1.39E-09	7.90E-09
4	10.40	0.	0.	1.69E-19	0.	0.	0.	5.22E-14	6.55E-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.	1.53E-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	8.18E-09
11	9.70	0.	0.	1.06E-19	0.	0.	0.	5.28E-14	8.09E-11	6.79E-09	1.35E-09	8.22E-09
12	9.60	0.	0.	1.15E-19	0.	0.	0.	5.29E-14	8.35E-11	6.84E-09	1.35E-09	8.27E-09
13	9.50	0.	0.	9.82E-20	0.	0.	0.	5.30E-14	8.62E-11	6.89E-09	1.34E-09	8.31E-09
14	9.40	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	4.70E-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.	5.90E-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.	4.00E-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.	2.50E-20	0.	6.20E-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	5.66E-09
38	7.00	1.01E-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.	5.80E-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.	1.00E-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.	1.06E-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	4.16E-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.	4.61E-21	1.96E-22	8.15E-21	0.	6.31E-14	2.98E-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	3.03E-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.	3.07E-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	7.66E-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	5.50	0.	0.	0.	0.	1.92E-21	9.41E-21	0.	0.	5.58E-14	4.49E-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	3.28E-09	1.47E-09	5.29E-09
57	5.10	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	5.00	1.81E-22	0.	0.	0.	1.78E-21	8.82E-21	0.	0.	5.78E-14	5.99E-10	3.55E-09	1.51E-09	5.66E-09
59	4.90	4.41E-22	0.	0.	0.	1.99E-21	9.62E-21	0.	0.	5.83E-14	6.37E-10	3.69E-09	1.54E-09	5.87E-09
60	4.80	8.28E-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	1.12E-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	1.54E-21	0.	0.	0.	2.20E-21	7.46E-21	0.	0.	5.97E-14	7.72E-10	4.25E-09	1.66E-09	6.69E-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.	1.56E-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.	5.60E-20	1.93E-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	1.01E-21	0.	3.96E-20	1.02E-15	1.78E-21	0.	0.	0.	5.68E-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	8.65E-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	6.06E-22	0.	2.25E-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	4.68E-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	6.00E-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	4.60E-22	0.	3.24E-21	3.88E-16	6.38E-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	3.50E-22	0.	0.	0.	3.03E-14	3.89E-09	7.77E-09	1.11E-09	1.28E-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.	7.84E-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.	3.60E-21	0.	4.06E-17	3.96E-24	0.	0.	0.	3.03E-14	5.56E-09	8.67E-09	1.70E-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.	3.05E-20	0.	0.	0.	0.	0.	0.	2.99E-14	8.36E-09	1.36E-08	2.80E-09	2.47E-08
88	2.00	0.	5.99E-20	0.	0.	0.	0.	0.	0.	2.89E-14	9.70E-09	1.53E-08	3.13E-09	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.	6.41E-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.	6.26E-20	0.	0.	0.	0.	0.	0.	0.	2.89E-08	2.72E-08	6.31E-09	6.25E-08
95	1.30	0.	4.80E-20	0.	0.	0.	0.	0.	0.	0.	3.64E-08	3.83E-08	9.01E-09	8.37E-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.	9.64E-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.	8.08E-08	7.27E-08	1.71E-08	1.71E-07
99	0.90	0.	3.29E-20	0.	0.	0.	0.	1.67E-24	0.	0.	1.12E-07	8.18E-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.	3.64E-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.	6.80E-22	0.	0.	0.	0.	1.06E-22	0.	0.	3.91E-07	9.94E-08	2.07E-08	5.11E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K)· 1800C. 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	1.26E-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	1.46E-12	2.52E-10	2.18E-11	2.76E-10
10	9.80	0.	0.	9.07E-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	9.60	0.	0.	8.49E-24	0.	0.	0.	7.53E-17	1.60E-12	2.61E-10	2.18E-11	2.84E-10
13	9.50	0.	0.	7.28E-24	0.	0.	0.	7.55E-17	1.65E-12	2.64E-10	2.18E-11	2.87E-10
14	9.40	0.	0.	6.90E-24	0.	0.	0.	7.57E-17	1.70E-12	2.47E-10	2.18E-11	2.70E-10
15	9.30	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.	5.88E-24	0.	0.	0.	7.63E-17	1.82E-12	2.52E-10	2.19E-11	2.76E-10
17	9.10	0.	0.	6.04E-24	0.	0.	0.	7.66E-17	1.88E-12	2.55E-10	2.19E-11	2.79E-10
18	9.00	0.	0.	5.51E-24	0.	0.	0.	7.68E-17	1.94E-12	2.58E-10	1.84E-11	2.78E-10
19	8.90	0.	0.	5.10E-24	0.	0.	0.	7.71E-17	2.01E-12	2.60E-10	1.80E-11	2.80E-10
20	8.80	0.	0.	5.02E-24	0.	0.	0.	7.74E-17	2.08E-12	2.63E-10	1.81E-11	2.83E-10
21	8.70	0.	0.	4.37E-24	0.	0.	0.	7.77E-17	2.15E-12	2.66E-10	1.81E-11	2.86E-10
22	8.60	0.	0.	4.51E-24	0.	0.	0.	7.79E-17	2.23E-12	2.68E-10	1.82E-11	2.89E-10
23	8.50	0.	0.	3.96E-24	0.	0.	0.	7.82E-17	2.31E-12	1.29E-10	1.82E-11	1.49E-10
24	8.40	0.	0.	3.94E-24	0.	0.	0.	7.86E-17	2.39E-12	1.32E-10	1.83E-11	1.53E-10
25	8.30	0.	0.	3.35E-24	0.	0.	0.	7.90E-17	2.48E-12	1.36E-10	1.83E-11	1.57E-10
26	8.20	0.	0.	3.39E-24	0.	0.	0.	7.94E-17	2.57E-12	1.42E-10	1.86E-11	1.63E-10
27	8.10	0.	0.	2.94E-24	0.	0.	0.	7.98E-17	2.67E-12	1.47E-10	1.88E-11	1.69E-10
28	8.00	0.	0.	2.96E-24	0.	0.	0.	8.03E-17	2.77E-12	1.53E-10	1.90E-11	1.75E-10
29	7.90	0.	0.	2.55E-24	0.	0.	0.	8.07E-17	2.88E-12	1.58E-10	1.92E-11	1.80E-10
30	7.80	0.	0.	2.65E-24	0.	0.	0.	8.11E-17	2.99E-12	1.64E-10	1.94E-11	1.86E-10
31	7.70	0.	0.	2.33E-24	0.	0.	0.	8.15E-17	3.11E-12	1.70E-10	1.96E-11	1.93E-10
32	7.60	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	7.50	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	7.40	0.	0.	1.85E-24	0.	6.25E-27	0.	8.28E-17	3.50E-12	1.75E-10	2.03E-11	1.99E-10
35	7.30	0.	0.	1.76E-24	0.	2.48E-26	0.	8.32E-17	3.65E-12	1.83E-10	2.06E-11	2.08E-10
36	7.20	0.	0.	1.59E-24	0.	6.81E-26	0.	8.37E-17	3.81E-12	1.93E-10	2.10E-11	2.18E-10
37	7.10	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	7.00	1.39E-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	6.90	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	6.80	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	6.70	1.71E-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	6.60	1.04E-27	0.	9.84E-25	0.	8.28E-25	0.	8.78E-17	4.95E-12	2.54E-10	2.34E-11	2.82E-10
43	6.50	6.01E-28	0.	7.86E-25	0.	1.22E-24	0.	8.85E-17	5.18E-12	2.64E-10	2.38E-11	2.93E-10
44	6.40	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	6.30	2.00E-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	6.20	9.04E-29	0.	1.90E-25	2.81E-26	1.13E-24	0.	9.06E-17	5.98E-12	2.95E-10	2.52E-11	3.26E-10
47	6.10	4.10E-29	0.	8.94E-26	8.03E-26	1.40E-24	0.	9.12E-17	6.28E-12	7.80E-11	1.78E-11	1.02E-10
48	6.00	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	5.90	4.20E-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	1.58E-25	6.90E-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	7.70E-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	1.90E-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	9.06E-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	9.59E-12	1.11E-10	1.88E-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	2.38E-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	2.32E-10
66	4.20	2.11E-25	0.	3.68E-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	3.60E-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	1.46E-11	2.76E-10
70	3.80	1.71E-25	0.	3.97E-24	2.76E-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	1.66E-25	0.	0.	0.	8.64E-17	2.84E-11	2.62E-10	1.67E-11	3.07E-10
72	3.60	1.36E-25	0.	2.93E-24	6.24E-19	1.80E-25	0.	0.	0.	8.09E-17	3.09E-11	2.76E-10	1.73E-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	8.88E-11	1.89E-11	1.41E-10
74	3.40	1.19E-25	0.	2.47E-24	1.80E-19	1.60E-25	0.	0.	0.	4.27E-17	3.67E-11	9.70E-11	2.06E-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	6.04E-26	0.	4.98E-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	2.38E-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	3.73E-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	1.06E-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	1.59E-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	2.15E-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	2.70E-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	3.10E-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	8.67E-10
94	1.40	0.	4.64E-24	0.	0.	0.	0.	0.	0.	0.	5.47E-10	4.04E-10	8.00E-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.	8.78E-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	2.00E-10	2.35E-09
99	0.90	0.	2.44E-24	0.	0.	0.	0.	1.68E-28	0.	0.	2.11E-09	7.03E-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	6.64E-10	1.86E-10	3.88E-09
101	0.70	0.	2.70E-25	0.	0.	0.	0.	3.27E-27	0.	0.	4.56E-09	7.60E-10	2.14E-10	5.54E-09
102	0.60	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	10.70	0.	0.	9.00E-01	0.	0.	0.	4.35E 00	2.09E-01	2.97E 02	2.99E 00	3.05E 02
2	10.60	0.	0.	8.23E-01	0.	0.	0.	4.35E 00	2.15E-01	1.26E 01	2.98E 00	2.09E 01
3	10.50	0.	0.	8.34E-01	0.	0.	0.	4.36E 00	2.21E-01	1.26E 01	2.96E 00	2.10E 01
4	10.40	0.	0.	7.95E-01	0.	0.	0.	4.37E 00	2.27E-01	1.26E 01	2.95E 00	2.10E 01
5	10.30	0.	0.	6.97E-01	0.	0.	0.	4.37E 00	2.34E-01	1.27E 01	2.94E 00	2.09E 01
6	10.20	0.	0.	7.23E-01	0.	0.	0.	4.38E 00	2.41E-01	1.27E 01	2.93E 00	2.10E 01
7	10.10	0.	0.	6.83E-01	0.	0.	0.	4.38E 00	2.49E-01	1.27E 01	2.91E 00	2.09E 01
8	10.00	0.	0.	6.04E-01	0.	0.	0.	4.39E 00	2.56E-01	1.27E 01	2.90E 00	2.09E 01
9	9.90	0.	0.	6.20E-01	0.	0.	0.	4.40E 00	2.64E-01	1.28E 01	2.89E 00	2.09E 01
10	9.80	0.	0.	5.86E-01	0.	0.	0.	4.40E 00	2.72E-01	1.28E 01	2.88E 00	2.09E 01
11	9.70	0.	0.	5.10E-01	0.	0.	0.	4.41E 00	2.81E-01	1.28E 01	2.87E 00	2.09E 01
12	9.60	0.	0.	5.52E-01	0.	0.	0.	4.42E 00	2.90E-01	1.28E 01	2.85E 00	2.10E 01
13	9.50	0.	0.	4.75E-01	0.	0.	0.	4.43E 00	2.99E-01	1.29E 01	2.84E 00	2.09E 01
14	9.40	0.	0.	4.52E-01	0.	0.	0.	4.44E 00	3.09E-01	1.29E 01	2.83E 00	2.10E 01
15	9.30	0.	0.	4.64E-01	0.	0.	0.	4.46E 00	3.19E-01	1.30E 01	2.82E 00	2.10E 01
16	9.20	0.	0.	3.88E-01	0.	0.	0.	4.48E 00	3.30E-01	1.30E 01	2.81E 00	2.10E 01
17	9.10	0.	0.	3.99E-01	0.	0.	0.	4.49E 00	3.41E-01	4.90E 00	2.79E 00	1.29E 01
18	9.00	0.	0.	3.65E-01	0.	0.	0.	4.51E 00	3.52E-01	4.91E 00	2.78E 00	1.29E 01
19	8.90	0.	0.	3.40E-01	0.	0.	0.	4.53E 00	3.64E-01	4.91E 00	2.77E 00	1.29E 01
20	8.80	0.	0.	3.35E-01	0.	0.	0.	4.54E 00	3.77E-01	4.92E 00	2.76E 00	1.29E 01
21	8.70	0.	0.	2.93E-01	0.	0.	0.	4.56E 00	3.90E-01	4.93E 00	2.75E 00	1.29E 01
22	8.60	0.	0.	3.03E-01	0.	0.	0.	4.57E 00	4.04E-01	4.94E 00	2.74E 00	1.30E 01
23	8.50	0.	0.	2.67E-01	0.	0.	0.	4.59E 00	4.19E-01	4.95E 00	2.73E 00	1.30E 01
24	8.40	0.	0.	2.67E-01	0.	0.	0.	4.61E 00	4.34E-01	4.97E 00	2.72E 00	1.30E 01
25	8.30	0.	0.	2.28E-01	0.	0.	0.	4.64E 00	4.50E-01	4.99E 00	2.71E 00	1.30E 01
26	8.20	0.	0.	2.31E-01	0.	0.	0.	4.66E 00	4.67E-01	5.01E 00	2.72E 00	1.31E 01
27	8.10	0.	0.	2.01E-01	0.	0.	0.	4.69E 00	4.85E-01	5.02E 00	2.72E 00	1.31E 01
28	8.00	0.	0.	2.03E-01	0.	0.	0.	4.71E 00	5.03E-01	5.05E 00	2.73E 00	1.32E 01
29	7.90	0.	0.	1.76E-01	0.	0.	0.	4.73E 00	5.23E-01	5.08E 00	2.73E 00	1.32E 01
30	7.80	0.	0.	1.83E-01	0.	0.	0.	4.76E 00	5.43E-01	5.12E 00	2.73E 00	1.33E 01
31	7.70	0.	0.	1.62E-01	0.	0.	0.	4.78E 00	5.65E-01	5.15E 00	2.74E 00	1.34E 01
32	7.60	0.	0.	1.55E-01	0.	6.65E-06	0.	4.81E 00	5.88E-01	5.19E 00	2.74E 00	1.35E 01
33	7.50	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	7.40	0.	0.	1.30E-01	0.	1.90E-04	0.	4.86E 00	6.37E-01	5.25E 00	2.75E 00	1.36E 01
35	7.30	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	7.20	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	7.10	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	7.00	1.89E-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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	8.29E-06	0.	5.72E-02	0.	3.63E-02	0.	5.19E 00	9.43E-01	5.61E 00	2.80E 00	1.46E 01
44	6.40	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	6.30	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	6.20	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	6.10	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	6.00	2.44E-07	0.	1.71E-03	2.25E-03	2.05E-02	0.	5.40E 00	1.20E 00	5.94E 00	2.90E 00	1.55E 01
49	5.90	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	5.80	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	5.70	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	1.48E 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	1.56E 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	6.61E 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.	5.40E-03	2.69E-02	0.	0.	4.83E 00	2.09E 00	7.40E 00	3.27E 00	1.76E 01
59	4.90	8.66E-04	0.	0.	0.	6.04E-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.	6.50E-03	2.77E-02	0.	0.	4.91E 00	2.36E 00	7.93E 00	3.40E 00	1.86E 01
61	4.70	2.24E-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.	8.83E-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.	1.87E-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.	3.00E-01	5.87E-02	6.02E-03	0.	0.	0.	5.15E 00	4.80E 00	1.14E 01	1.93E 00	2.36E 01
71	3.70	2.28E-03	0.	3.10E-01	2.60E-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	4.96E-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	5.02E-03	0.	0.	0.	2.51E 00	6.72E 00	1.20E 01	2.79E 00	2.42E 01
75	3.30	1.44E-03	0.	1.94E-01	1.51E-01	4.04E-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.	1.28E-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	6.30E-02	4.05E-03	0.	0.	0.	2.52E 00	8.91E 00	1.57E 01	3.60E 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	2.09E-03	0.	0.	0.	2.54E 00	1.21E 01	2.00E 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	3.03E-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.	5.30E-03	1.33E-05	0.	0.	0.	2.54E 00	1.94E 01	3.14E 01	3.83E 00	5.72E 01
85	2.30	0.	6.07E-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	4.30E 01	7.26E 00	8.69E 01
89	1.90	0.	4.06E-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.	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	8.29E 01	1.47E 01	1.67E 02
93	1.50	0.	3.40E-01	0.	0.	0.	0.	0.	0.	8.05E-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.	2.57E-01	0.	0.	0.	0.	0.	0.	0.	1.27E 02	1.79E 02	2.82E 01	3.35E 02
96	1.20	0.	2.45E-01	0.	0.	0.	0.	0.	0.	0.	1.63E 02	1.98E 02	2.84E 01	3.89E 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	6.20E 02
99	0.90	0.	1.77E-01	0.	0.	0.	0.	5.15E-06	0.	0.	3.93E 02	3.40E 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.	1.03E-04	0.	0.	8.53E 02	4.24E 02	5.63E 01	1.33E 03
102	0.60	0.	3.88E-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	NO 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	6.87E-03	0.	0.	0.	1.17E-01	1.79E-02	2.59E 01	2.73E-01	2.64E 01
2	10.60	0.	0.	6.28E-03	0.	0.	0.	1.17E-01	1.84E-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	1.51E 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	4.36E-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.	1.40E-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	1.56E-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	2.68E-04	0.	1.43E-01	9.36E-02	5.06E-01	2.61E-01	1.00E 00
47	6.10	4.86E-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	1.80E-05	1.64E-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.	2.36E-08	3.71E-05	1.65E-04	0.	1.43E-01	1.14E-01	5.34E-01	2.70E-01	1.06E 00
51	5.70	4.74E-12	0.	0.	4.37E-05	1.85E-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 (1.0E CC 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	2.15E-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	5.50	0.	0.	0.	0.	4.60E-05	2.25E-04	0.	0.	1.26E-01	1.34E-01	5.63E-01	2.77E-01	1.10E 00
54	5.40	0.	0.	0.	0.	4.25E-05	1.84E-04	0.	0.	1.26E-01	1.42E-01	5.78E-01	2.81E-01	1.13E 00
55	5.30	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	5.20	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	5.10	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	5.00	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	4.90	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	4.80	1.37E-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	4.70	1.86E-05	0.	0.	0.	5.22E-05	2.02E-04	0.	0.	1.34E-01	2.17E-01	7.19E-01	3.20E-01	1.39E 00
62	4.60	2.57E-05	0.	0.	0.	5.38E-05	1.83E-04	0.	0.	1.35E-01	2.31E-01	7.48E-01	3.28E-01	1.44E 00
63	4.50	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	4.40	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	4.30	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	4.20	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	4.10	2.45E-05	0.	9.40E-04	0.	4.95E-05	1.16E-05	0.	0.	1.40E-01	3.28E-01	9.55E-01	3.65E-01	1.79E 00
68	4.00	2.27E-05	0.	3.03E-03	0.	4.80E-05	8.75E-06	0.	0.	1.40E-01	3.53E-01	9.98E-01	1.64E-01	1.66E 00
69	3.90	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	3.80	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	3.70	1.91E-05	0.	2.37E-03	6.72E-04	4.14E-05	0.	0.	0.	1.37E-01	4.47E-01	8.23E-01	1.93E-01	1.60E 00
72	3.60	1.73E-05	0.	1.70E-03	3.52E-03	4.48E-05	0.	0.	0.	1.28E-01	4.86E-01	8.88E-01	2.11E-01	1.72E 00
73	3.50	1.63E-05	0.	2.23E-03	6.54E-03	3.57E-05	0.	0.	0.	1.17E-01	5.29E-01	9.42E-01	2.32E-01	1.83E 00
74	3.40	1.50E-05	0.	1.44E-03	1.03E-03	4.01E-05	0.	0.	0.	6.77E-02	5.78E-01	1.05E 00	2.56E-01	1.95E 00
75	3.30	1.21E-05	0.	1.48E-03	3.90E-03	3.23E-05	0.	0.	0.	6.78E-02	6.33E-01	1.15E 00	2.80E-01	2.14E 00
76	3.20	1.06E-05	0.	9.77E-04	6.31E-03	3.40E-05	0.	0.	0.	6.79E-02	6.95E-01	1.26E 00	3.05E-01	2.34E 00
77	3.10	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	3.30E-01	2.54E 00
78	3.00	9.20E-06	0.	4.70E-04	3.70E-03	3.08E-05	0.	0.	0.	6.82E-02	8.46E-01	1.49E 00	3.55E-01	2.76E 00
79	2.90	7.79E-06	0.	2.95E-04	2.02E-03	2.37E-05	0.	0.	0.	6.83E-02	9.39E-01	1.61E 00	3.83E-01	3.00E 00
80	2.80	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	2.70	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	1.80E-04	4.11E-06	0.	0.	0.	6.84E-02	1.31E 00	2.06E 00	4.84E-01	3.93E 00
83	2.50	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	1.04E-07	0.	0.	0.	6.84E-02	1.67E 00	2.74E 00	3.51E-01	4.83E 00
85	2.30	0.	4.63E-04	0.	0.	0.	0.	0.	0.	6.79E-02	1.90E 00	2.39E 00	4.19E-01	5.78E 00
86	2.20	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	2.10	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	2.00	0.	2.52E-03	0.	0.	0.	0.	0.	0.	6.52E-02	2.92E 00	3.76E 00	6.64E-01	7.41E 00
89	1.90	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	1.80	0.	2.64E-03	0.	0.	0.	0.	0.	0.	6.00E-02	4.02E 00	5.15E 00	9.39E-01	1.02E 01
91	1.70	0.	3.01E-03	0.	0.	0.	0.	0.	0.	5.65E-02	4.78E 00	6.19E 00	1.14E 00	1.22E 01
92	1.60	0.	2.26E-03	0.	0.	0.	0.	0.	0.	4.78E-02	5.77E 00	7.24E 00	1.35E 00	1.44E 01
93	1.50	0.	2.59E-03	0.	0.	0.	0.	0.	0.	2.17E-02	7.05E 00	9.40E 00	1.63E 00	1.81E 01
94	1.40	0.	2.56E-03	0.	0.	0.	0.	0.	0.	0.	8.73E 00	1.17E 01	1.95E 00	2.24E 01
95	1.30	0.	1.96E-03	0.	0.	0.	0.	0.	0.	0.	1.09E 01	1.56E 01	2.58E 00	2.92E 01
96	1.20	0.	1.87E-03	0.	0.	0.	0.	0.	0.	0.	1.40E 01	1.73E 01	2.60E 00	3.38E 01
97	1.10	0.	1.80E-03	0.	0.	0.	0.	2.30E-09	0.	0.	1.82E 01	2.13E 01	3.26E 00	4.28E 01
98	1.00	0.	1.65E-03	0.	0.	0.	0.	3.55E-08	0.	0.	2.44E 01	2.58E 01	3.71E 00	5.39E 01
99	0.90	0.	1.35E-03	0.	0.	0.	0.	4.12E-08	0.	0.	3.38E 01	2.97E 01	4.36E 00	6.78E 01
100	0.80	0.	6.36E-04	0.	0.	0.	0.	8.98E-07	0.	0.	4.86E 01	3.42E 01	5.00E 00	8.78E 01
101	0.70	0.	1.49E-04	0.	0.	0.	0.	8.25E-07	0.	0.	7.34E 01	3.70E 01	5.15E 00	1.16E 02
102	0.60	0.	2.96E-05	0.	0.	0.	0.	2.66E-06	0.	0.	1.18E 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 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.	2.66E-05	0.	0.	0.	2.11E-03	1.14E-03	1.62E 00	1.95E-02	1.64E 00
2	10.60	0.	0.	2.43E-05	0.	0.	0.	2.11E-03	1.17E-03	6.84E-02	1.94E-02	9.11E-02
3	10.50	0.	0.	2.47E-05	0.	0.	0.	2.11E-03	1.20E-03	6.87E-02	1.93E-02	9.14E-02
4	10.40	0.	0.	2.35E-05	0.	0.	0.	2.11E-03	1.24E-03	6.90E-02	1.92E-02	9.16E-02
5	10.30	0.	0.	2.06E-05	0.	0.	0.	2.12E-03	1.28E-03	6.91E-02	1.92E-02	9.17E-02
6	10.20	0.	0.	2.14E-05	0.	0.	0.	2.12E-03	1.32E-03	6.93E-02	1.91E-02	9.18E-02
7	10.10	0.	0.	2.02E-05	0.	0.	0.	2.12E-03	1.36E-03	6.92E-02	1.90E-02	9.17E-02
8	10.00	0.	0.	1.79E-05	0.	0.	0.	2.13E-03	1.40E-03	6.93E-02	1.89E-02	9.17E-02
9	9.90	0.	0.	1.84E-05	0.	0.	0.	2.13E-03	1.44E-03	6.94E-02	1.88E-02	9.19E-02
10	9.80	0.	0.	1.73E-05	0.	0.	0.	2.13E-03	1.49E-03	6.96E-02	1.88E-02	9.20E-02
11	9.70	0.	0.	1.51E-05	0.	0.	0.	2.14E-03	1.53E-03	6.97E-02	1.87E-02	9.21E-02
12	9.60	0.	0.	1.63E-05	0.	0.	0.	2.14E-03	1.58E-03	6.99E-02	1.86E-02	9.23E-02
13	9.50	0.	0.	1.41E-05	0.	0.	0.	2.14E-03	1.63E-03	7.01E-02	1.85E-02	9.24E-02
14	9.40	0.	0.	1.34E-05	0.	0.	0.	2.15E-03	1.68E-03	7.03E-02	1.84E-02	9.26E-02
15	9.30	0.	0.	1.37E-05	0.	0.	0.	2.16E-03	1.74E-03	7.06E-02	1.84E-02	9.29E-02
16	9.20	0.	0.	1.15E-05	0.	0.	0.	2.17E-03	1.80E-03	7.08E-02	1.83E-02	9.31E-02
17	9.10	0.	0.	1.18E-05	0.	0.	0.	2.18E-03	1.86E-03	2.67E-02	1.82E-02	4.90E-02
18	9.00	0.	0.	1.08E-05	0.	0.	0.	2.18E-03	1.92E-03	2.67E-02	1.81E-02	4.90E-02
19	8.90	0.	0.	1.01E-05	0.	0.	0.	2.19E-03	1.99E-03	2.68E-02	1.81E-02	4.90E-02
20	8.80	0.	0.	9.91E-06	0.	0.	0.	2.20E-03	2.06E-03	2.68E-02	1.80E-02	4.91E-02
21	8.70	0.	0.	8.67E-06	0.	0.	0.	2.21E-03	2.13E-03	2.68E-02	1.79E-02	4.91E-02
22	8.60	0.	0.	8.96E-06	0.	0.	0.	2.21E-03	2.20E-03	2.69E-02	1.79E-02	4.92E-02
23	8.50	0.	0.	7.91E-06	0.	0.	0.	2.22E-03	2.28E-03	2.70E-02	1.78E-02	4.93E-02
24	8.40	0.	0.	7.89E-06	0.	0.	0.	2.23E-03	2.37E-03	2.71E-02	1.77E-02	4.94E-02
25	8.30	0.	0.	6.75E-06	0.	0.	0.	2.25E-03	2.45E-03	2.72E-02	1.77E-02	4.96E-02
26	8.20	0.	0.	6.84E-06	0.	0.	0.	2.26E-03	2.55E-03	2.73E-02	1.77E-02	4.98E-02
27	8.10	0.	0.	5.95E-06	0.	0.	0.	2.27E-03	2.64E-03	2.74E-02	1.77E-02	5.00E-02
28	8.00	0.	0.	6.01E-06	0.	0.	0.	2.28E-03	2.74E-03	2.75E-02	1.78E-02	5.03E-02
29	7.90	0.	0.	5.21E-06	0.	0.	0.	2.29E-03	2.85E-03	2.77E-02	1.78E-02	5.07E-02
30	7.80	0.	0.	5.42E-06	0.	0.	0.	2.30E-03	2.96E-03	2.79E-02	1.78E-02	5.10E-02
31	7.70	0.	0.	4.79E-06	0.	0.	0.	2.32E-03	3.08E-03	2.81E-02	1.79E-02	5.13E-02
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	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	6.40	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	6.30	1.18E-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	6.20	5.36E-11	0.	4.17E-07	2.87E-08	1.19E-06	0.	2.57E-03	5.93E-03	3.15E-02	1.86E-02	5.86E-02
47	6.10	2.49E-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	6.00	1.04E-11	0.	5.05E-08	7.97E-08	7.26E-07	0.	2.61E-03	6.55E-03	3.23E-02	1.89E-02	6.04E-02
49	5.90	2.56E-12	0.	3.62E-09	1.17E-07	7.05E-07	0.	2.61E-03	6.90E-03	3.28E-02	1.91E-02	6.14E-02
50	5.80	3.27E-13	0.	9.15E-11	1.65E-07	7.32E-07	0.	2.57E-03	7.26E-03	3.33E-02	1.92E-02	6.24E-02
51	5.70	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) 19500. 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	1.08E-06	0.	0.	2.25E-03	8.07E-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	8.12E-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.	2.20E-07	6.12E-07	0.	0.	2.44E-03	1.57E-02	4.90E-02	2.40E-02	9.11E-02
64	4.40	1.45E-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	5.16E-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	1.06E-07	0.	8.89E-06	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	9.70E-08	0.	9.18E-06	1.03E-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.	2.30E-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	5.70E-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.	2.59E-07	2.69E-05	4.10E-08	0.	0.	0.	1.23E-03	7.40E-02	1.18E-01	3.20E-02	2.26E-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	2.70E-06	4.38E-09	0.	0.	0.	1.23E-03	9.36E-02	1.47E-01	2.13E-02	2.63E-01
84	2.40	0.	5.96E-07	0.	2.11E-06	4.70E-10	0.	0.	0.	1.23E-03	1.06E-01	1.71E-01	2.50E-02	3.03E-01
85	2.30	0.	1.80E-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	3.56E-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.	1.02E-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.	1.00E-05	0.	0.	0.	0.	0.	0.	3.90E-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	1.85E 00
96	1.20	0.	7.26E-06	0.	0.	0.	0.	0.	0.	0.	8.86E-01	1.07E 00	1.85E-01	2.15E 00
97	1.10	0.	6.96E-06	0.	0.	0.	0.	1.02E-11	0.	0.	1.15E 00	1.33E 00	2.32E-01	2.71E 00
98	1.00	0.	6.39E-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.	1.83E-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.	3.98E-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.	4.66E 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 C.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.	2.31E-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	2.04E-03	6.86E-04	2.77E-03
3	10.50	0.	0.	2.14E-08	0.	0.	0.	1.30E-05	3.67E-05	2.05E-03	6.83E-04	2.78E-03
4	10.40	0.	0.	2.04E-08	0.	0.	0.	1.30E-05	3.77E-05	2.05E-03	6.80E-04	2.78E-03
5	10.30	0.	0.	1.79E-08	0.	0.	0.	1.30E-05	3.89E-05	2.06E-03	6.77E-04	2.79E-03
6	10.20	0.	0.	1.86E-08	0.	0.	0.	1.31E-05	4.00E-05	2.06E-03	6.75E-04	2.79E-03
7	10.10	0.	0.	1.75E-08	0.	0.	0.	1.31E-05	4.13E-05	2.06E-03	6.72E-04	2.79E-03
8	10.00	0.	0.	1.55E-08	0.	0.	0.	1.31E-05	4.25E-05	2.05E-03	6.69E-04	2.77E-03
9	9.90	0.	0.	1.59E-08	0.	0.	0.	1.31E-05	4.38E-05	2.05E-03	6.66E-04	2.77E-03
10	9.80	0.	0.	1.50E-08	0.	0.	0.	1.31E-05	4.52E-05	2.05E-03	6.63E-04	2.78E-03
11	9.70	0.	0.	1.31E-08	0.	0.	0.	1.32E-05	4.66E-05	2.06E-03	6.61E-04	2.78E-03
12	9.60	0.	0.	1.42E-08	0.	0.	0.	1.32E-05	4.81E-05	2.06E-03	6.58E-04	2.78E-03
13	9.50	0.	0.	1.22E-08	0.	0.	0.	1.32E-05	4.97E-05	2.07E-03	6.55E-04	2.79E-03
14	9.40	0.	0.	1.16E-08	0.	0.	0.	1.33E-05	5.13E-05	2.08E-03	6.52E-04	2.79E-03
15	9.30	0.	0.	1.19E-08	0.	0.	0.	1.33E-05	5.30E-05	2.08E-03	6.49E-04	2.80E-03
16	9.20	0.	0.	9.97E-09	0.	0.	0.	1.34E-05	5.47E-05	2.09E-03	6.47E-04	2.81E-03
17	9.10	0.	0.	1.03E-08	0.	0.	0.	1.34E-05	5.66E-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.	8.60E-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	9.38E-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	1.00E-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.	6.55E-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.	1.36E-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	6.70E-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	1.90E-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	4.08E-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) 19000. 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-18	0.	0.	0.	1.74E-10	1.12E-09	0.	0.	1.39E-05	2.46E-04	1.02E-03	6.91E-04	1.97E-03
53	5.50	0.	0.	0.	0.	2.12E-10	1.04E-09	0.	0.	1.39E-05	2.59E-04	1.04E-03	6.98E-04	2.01E-03
54	5.40	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	1.8cE-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	4.90	4.6cE-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	8.67E-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	1.18E-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	8.46E-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	1.76E-10	0.	2.24E-09	0.	2.21E-10	2.76E-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.	7.06E-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	1.76E-03	9.19E-04	3.33E-03
68	4.00	1.44E-10	0.	1.02E-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.	1.54E-05	7.36E-04	1.80E-03	4.26E-04	2.98E-03
70	3.80	1.35E-10	0.	7.71E-09	1.16E-07	2.22E-10	0.	0.	0.	1.54E-05	7.96E-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	5.01E-07	1.65E-10	0.	0.	0.	1.30E-05	1.02E-03	1.74E-03	5.84E-04	3.36E-03
74	3.40	9.52E-11	0.	4.85E-09	7.89E-08	1.85E-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.	7.50E-06	1.22E-03	2.13E-03	7.04E-04	4.06E-03
76	3.20	6.71E-11	0.	3.29E-09	4.83E-07	1.57E-10	0.	0.	0.	7.51E-06	1.34E-03	2.33E-03	7.67E-04	4.45E-03
77	3.10	6.47E-11	0.	2.56E-09	1.25E-07	1.50E-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	2.84E-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	4.94E-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.	4.80E-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	1.90E-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.	1.15E-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	4.21E-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	6.90E-03	1.67E-03	1.42E-02
89	1.90	0.	1.04E-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.	8.89E-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.	1.01E-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	6.50E-03	5.63E-02
96	1.20	0.	6.30E-09	0.	0.	0.	0.	0.	0.	0.	2.70E-02	3.17E-02	6.55E-03	6.52E-02
97	1.10	0.	6.04E-09	0.	0.	0.	0.	1.06E-14	0.	0.	3.51E-02	3.91E-02	8.21E-03	8.24E-02
98	1.00	0.	5.55E-09	0.	0.	0.	0.	1.64E-13	0.	0.	4.70E-02	4.74E-02	9.35E-03	1.04E-01
99	0.90	0.	4.56E-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	1.26E-02	1.69E-01
101	0.70	0.	5.01E-10	0.	0.	0.	0.	3.81E-12	0.	0.	1.42E-01	6.80E-02	1.30E-02	2.23E-01
102	0.60	0.	9.95E-11	0.	0.	0.	0.	1.23E-11	0.	0.	2.29E-01	7.60E-02	1.45E-02	3.19E-01

ABSORPTION COEFFICIENTS 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 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.	4.13E-12	0.	0.	0.	2.18E-08	4.72E-07	2.96E-05	9.95E-06	4.00E-05
2	10.60	0.	0.	3.77E-12	0.	0.	0.	2.19E-08	4.86E-07	2.97E-05	9.90E-06	4.02E-05
3	10.50	0.	0.	3.82E-12	0.	0.	0.	2.19E-08	5.00E-07	2.99E-05	9.86E-06	4.03E-05
4	10.40	0.	0.	3.64E-12	0.	0.	0.	2.19E-08	5.15E-07	3.00E-05	9.82E-06	4.04E-05
5	10.30	0.	0.	3.20E-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.	2.69E-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	6.36E-07	2.81E-05	9.54E-06	3.83E-05
12	9.60	0.	0.	2.53E-12	0.	0.	0.	2.22E-08	6.56E-07	2.82E-05	9.50E-06	3.84E-05
13	9.50	0.	0.	2.18E-12	0.	0.	0.	2.22E-08	6.77E-07	2.83E-05	9.46E-06	3.85E-05
14	9.40	0.	0.	2.07E-12	0.	0.	0.	2.23E-08	6.99E-07	2.84E-05	9.42E-06	3.85E-05
15	9.30	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.	1.67E-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	1.06E-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.	7.08E-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	9.16E-06	2.25E-05
35	7.30	0.	0.	5.68E-13	0.	5.28E-15	0.	2.43E-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	2.09E-16	0.	4.60E-13	0.	8.93E-14	0.	2.51E-08	1.71E-06	1.23E-05	9.22E-06	2.32E-05
39	6.90	4.09E-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.	2.16E-13	0.	2.55E-08	1.86E-06	1.25E-05	9.25E-06	2.36E-05
41	6.70	2.58E-16	0.	3.62E-13	0.	2.13E-13	0.	2.57E-08	1.95E-06	1.26E-05	9.28E-06	2.38E-05
42	6.60	1.56E-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	3.07E-17	0.	1.16E-13	4.03E-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.	3.06E-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	1.60E-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	2.86E-06	1.39E-05	9.74E-06	2.66E-05
50	5.80	8.49E-20	0.	1.42E-17	3.30E-14	1.47E-13	0.	2.67E-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	3.18E-06	1.44E-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	5.60	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	5.50	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	5.40	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	5.30	0.	0.	0.	0.	3.88E-14	2.06E-13	0.	0.	2.37E-08	3.96E-06	1.58E-05	1.04E-05	3.02E-05
56	5.20	0.	0.	0.	0.	4.19E-14	1.58E-13	0.	0.	2.39E-08	4.19E-06	1.53E-05	1.05E-05	3.00E-05
57	5.10	0.	0.	0.	0.	4.19E-14	2.02E-13	0.	0.	2.41E-08	4.45E-06	1.57E-05	1.07E-05	3.09E-05
58	5.00	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	4.90	9.57E-15	0.	0.	0.	4.30E-14	2.10E-13	0.	0.	2.45E-08	5.02E-06	1.68E-05	1.11E-05	3.29E-05
60	4.80	1.85E-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	4.70	2.45E-14	0.	0.	0.	4.65E-14	1.80E-13	0.	0.	2.49E-08	5.70E-06	1.81E-05	1.16E-05	3.54E-05
62	4.60	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	4.50	3.56E-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	4.40	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	4.30	3.66E-14	0.	4.00E-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	4.20	3.43E-14	0.	1.26E-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	4.10	3.23E-14	0.	5.65E-13	0.	4.41E-14	1.04E-14	0.	0.	2.60E-08	8.63E-06	2.41E-05	1.33E-05	4.60E-05
68	4.00	2.99E-14	0.	1.82E-12	0.	4.27E-14	7.78E-15	0.	0.	2.61E-08	9.30E-06	2.52E-05	5.96E-06	4.05E-05
69	3.90	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	3.80	2.81E-14	0.	1.38E-12	1.78E-10	4.28E-14	0.	0.	0.	2.59E-08	1.09E-05	2.01E-05	6.42E-06	3.74E-05
71	3.70	2.52E-14	0.	1.42E-12	7.88E-11	3.69E-14	0.	0.	0.	2.55E-08	1.18E-05	2.10E-05	7.02E-06	3.98E-05
72	3.60	2.26E-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	4.32E-05
73	3.50	2.15E-14	0.	1.34E-12	7.67E-10	3.18E-14	0.	0.	0.	2.18E-08	1.39E-05	2.40E-05	8.44E-06	4.64E-05
74	3.40	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	3.30	1.59E-14	0.	8.87E-13	4.57E-10	2.87E-14	0.	0.	0.	1.26E-08	1.67E-05	2.93E-05	1.02E-05	5.62E-05
76	3.20	1.40E-14	0.	5.87E-13	7.40E-10	3.03E-14	0.	0.	0.	1.26E-08	1.83E-05	3.21E-05	1.11E-05	6.15E-05
77	3.10	1.35E-14	0.	4.58E-13	1.91E-10	2.88E-14	0.	0.	0.	1.27E-08	2.02E-05	3.49E-05	1.20E-05	6.71E-05
78	3.00	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	2.90	1.03E-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	7.94E-05
80	2.80	1.08E-14	0.	8.56E-14	1.58E-10	1.48E-14	0.	0.	0.	1.27E-08	2.75E-05	4.43E-05	1.51E-05	8.69E-05
81	2.70	7.09E-15	0.	4.02E-14	2.05E-10	8.22E-15	0.	0.	0.	1.27E-08	3.07E-05	4.71E-05	1.63E-05	9.42E-05
82	2.60	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	2.50	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	1.05E-05	1.07E-04
84	2.40	0.	9.23E-14	0.	1.41E-11	9.43E-17	0.	0.	0.	1.27E-08	4.40E-05	4.91E-05	1.28E-05	1.06E-04
85	2.30	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	2.20	0.	7.35E-13	0.	0.	0.	0.	0.	0.	1.26E-08	5.74E-05	7.02E-05	1.82E-05	1.46E-04
87	2.10	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	2.00	0.	1.51E-12	0.	0.	0.	0.	0.	0.	1.21E-08	7.68E-05	9.32E-05	2.42E-05	1.94E-04
89	1.90	0.	1.86E-12	0.	0.	0.	0.	0.	0.	1.17E-08	8.97E-05	1.07E-04	2.81E-05	2.24E-04
90	1.80	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	1.70	0.	1.81E-12	0.	0.	0.	0.	0.	0.	1.05E-08	1.26E-04	1.53E-04	4.15E-05	3.21E-04
92	1.60	0.	1.36E-12	0.	0.	0.	0.	0.	0.	8.89E-09	1.52E-04	1.79E-04	4.89E-05	3.80E-04
93	1.50	0.	1.56E-12	0.	0.	0.	0.	0.	0.	4.04E-09	1.86E-04	2.32E-04	5.94E-05	4.77E-04
94	1.40	0.	1.54E-12	0.	0.	0.	0.	0.	0.	0.	2.30E-04	2.76E-04	7.10E-05	5.77E-04
95	1.30	0.	1.18E-12	0.	0.	0.	0.	0.	0.	0.	2.88E-04	3.85E-04	8.81E-05	7.61E-04
96	1.20	0.	1.12E-12	0.	0.	0.	0.	0.	0.	0.	3.68E-04	4.24E-04	9.44E-05	8.86E-04
97	1.10	0.	1.08E-12	0.	0.	0.	0.	2.04E-18	0.	0.	4.79E-04	5.23E-04	1.18E-04	1.12E-03
98	1.00	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	0.90	0.	8.14E-13	0.	0.	0.	0.	3.66E-17	0.	0.	8.88E-04	7.29E-04	1.58E-04	1.78E-03
100	0.80	0.	3.82E-13	0.	0.	0.	0.	8.00E-16	0.	0.	1.28E-03	8.39E-04	1.82E-04	2.30E-03
101	0.70	0.	8.94E-14	0.	0.	0.	0.	7.35E-16	0.	0.	1.93E-03	9.09E-04	1.87E-04	3.03E-03
102	0.60	0.	1.78E-14	0.	0.	0.	0.	2.37E-15	0.	0.	3.12E-03	9.21E-04	2.09E-04	4.25E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. DENSITY (GM/CC) 1.293E-07 (10.0E-05 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-K 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	5.33E-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	4.58E-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.	2.97E-16	0.	0.	0.	2.42E-11	6.36E-09	3.50E-07	1.04E-07	4.60E-07
9	9.90	0.	0.	3.05E-16	0.	0.	0.	2.42E-11	6.56E-09	3.52E-07	1.04E-07	4.62E-07
10	9.80	0.	0.	2.88E-16	0.	0.	0.	2.43E-11	6.76E-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.	2.28E-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.	1.96E-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	9.36E-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	1.57E-07	9.73E-08	2.66E-07
28	8.00	0.	0.	9.99E-17	0.	0.	0.	2.60E-11	1.25E-08	1.59E-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	2.76E-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	1.59E-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	1.66E-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.	4.55E-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.	4.40E-17	0.	2.38E-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	9.37E-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	2.62E-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.	6.02E-20	2.59E-18	1.56E-17	0.	2.98E-11	3.14E-08	2.36E-07	1.06E-07	3.74E-07
50	5.80	9.50E-24	0.	1.52E-21	3.63E-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	1.64E-07	1.06E-07	3.05E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 19000. 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	3.19E-26	0.	0.	0.	3.68E-18	2.37E-17	0.	0.	2.56E-11	3.67E-08	1.68E-07	1.07E-07	3.12E-07
53	5.50	0.	0.	0.	0.	4.59E-18	2.20E-17	0.	0.	2.57E-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.	2.59E-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.	2.60E-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	2.10E-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	1.98E-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	1.79E-17	0.	0.	2.75E-11	6.67E-08	2.39E-07	1.28E-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.	6.06E-17	0.	4.85E-18	1.14E-18	0.	0.	2.85E-11	9.46E-08	3.11E-07	6.26E-08	4.68E-07
68	4.00	3.38E-18	0.	1.95E-16	0.	4.70E-18	8.56E-19	0.	0.	2.86E-11	1.02E-07	3.04E-07	6.48E-08	4.70E-07
69	3.90	2.89E-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.	1.48E-16	1.85E-13	4.71E-18	0.	0.	0.	2.84E-11	1.19E-07	2.81E-07	6.97E-08	4.70E-07
71	3.70	2.84E-18	0.	1.53E-16	8.16E-14	4.05E-18	0.	0.	0.	2.80E-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	7.95E-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.	6.30E-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.	3.03E-17	4.50E-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.	9.18E-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	7.96E-19	0.	4.31E-18	2.13E-13	9.04E-19	0.	0.	0.	1.40E-11	3.37E-07	5.37E-07	1.50E-07	1.02E-06
82	2.60	3.77E-19	0.	2.09E-18	2.19E-14	4.03E-19	0.	0.	0.	1.40E-11	3.78E-07	5.79E-07	9.73E-08	1.05E-06
83	2.50	2.66E-20	0.	2.20E-19	2.13E-14	9.66E-20	0.	0.	0.	1.40E-11	4.26E-07	4.74E-07	1.13E-07	1.01E-06
84	2.40	0.	9.90E-18	0.	1.67E-14	1.04E-20	0.	0.	0.	1.40E-11	4.82E-07	5.75E-07	1.38E-07	1.19E-06
85	2.30	0.	2.98E-17	0.	0.	0.	0.	0.	0.	1.39E-11	5.49E-07	6.90E-07	1.64E-07	1.40E-06
86	2.20	0.	7.88E-17	0.	0.	0.	0.	0.	0.	1.38E-11	6.29E-07	8.09E-07	1.96E-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	1.89E-06
88	2.00	0.	1.62E-16	0.	0.	0.	0.	0.	0.	1.33E-11	8.41E-07	1.06E-06	2.59E-07	2.16E-06
89	1.90	0.	2.00E-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.	1.46E-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	7.00E-07	5.45E-06
95	1.30	0.	1.26E-16	0.	0.	0.	0.	0.	0.	0.	3.16E-06	3.30E-06	7.50E-07	7.20E-06
96	1.20	0.	1.21E-16	0.	0.	0.	0.	0.	0.	0.	4.03E-06	4.33E-06	1.00E-06	9.37E-06
97	1.10	0.	1.16E-16	0.	0.	0.	0.	2.25E-22	0.	0.	5.25E-06	5.49E-06	1.18E-06	1.19E-05
98	1.00	0.	1.06E-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.	4.03E-21	0.	0.	9.73E-06	7.51E-06	1.68E-06	1.89E-05
100	0.80	0.	4.10E-17	0.	0.	0.	0.	8.79E-20	0.	0.	1.40E-05	8.29E-06	1.75E-06	2.40E-05
101	0.70	0.	9.58E-18	0.	0.	0.	0.	8.08E-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.	2.60E-19	0.	0.	3.41E-05	8.77E-06	1.72E-06	4.46E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	4.12E-20	0.	0.	0.	2.89E-14	7.39E-11	8.19E-09	1.31E-09	9.58E-09
2	10.60	0.	0.	3.77E-20	0.	0.	0.	2.89E-14	7.60E-11	8.24E-09	1.31E-09	9.63E-09
3	10.50	0.	0.	3.82E-20	0.	0.	0.	2.90E-14	7.83E-11	8.29E-09	1.31E-09	9.68E-09
4	10.40	0.	0.	3.64E-20	0.	0.	0.	2.90E-14	8.06E-11	8.34E-09	1.30E-09	9.72E-09
5	10.30	0.	0.	3.19E-20	0.	0.	0.	2.91E-14	8.3CE-11	8.39E-09	1.30E-09	9.77E-09
6	10.20	0.	0.	3.31E-20	0.	0.	0.	2.91E-14	8.54E-11	8.48E-09	1.29E-09	9.85E-09
7	10.10	0.	0.	3.13E-20	0.	0.	0.	2.91E-14	8.80E-11	8.56E-09	1.29E-09	9.94E-09
8	10.00	0.	0.	2.77E-20	0.	0.	0.	2.92E-14	9.07E-11	8.65E-09	1.29E-09	1.00E-08
9	9.90	0.	0.	2.84E-20	0.	0.	0.	2.92E-14	9.35E-11	8.74E-09	1.28E-09	1.01E-08
10	9.80	0.	0.	2.69E-20	0.	0.	0.	2.93E-14	9.64E-11	8.83E-09	1.28E-09	1.02E-08
11	9.70	0.	0.	2.34E-20	0.	0.	0.	2.93E-14	9.95E-11	8.91E-09	1.28E-09	1.03E-08
12	9.60	0.	0.	2.53E-20	0.	0.	0.	2.94E-14	1.03E-10	9.00E-09	1.27E-09	1.04E-08
13	9.50	0.	0.	2.18E-20	0.	0.	0.	2.94E-14	1.06E-10	9.08E-09	1.27E-09	1.05E-08
14	9.40	0.	0.	2.07E-20	0.	0.	0.	2.96E-14	1.09E-10	9.17E-09	1.27E-09	1.05E-08
15	9.30	0.	0.	2.13E-20	0.	0.	0.	2.97E-14	1.13E-10	7.53E-09	1.27E-09	8.91E-09
16	9.20	0.	0.	1.78E-20	0.	0.	0.	2.98E-14	1.17E-10	7.61E-09	1.26E-09	8.99E-09
17	9.10	0.	0.	1.83E-20	0.	0.	0.	2.99E-14	1.21E-10	7.69E-09	1.26E-09	9.07E-09
18	9.00	0.	0.	1.67E-20	0.	0.	0.	3.00E-14	1.25E-10	7.77E-09	1.26E-09	9.15E-09
19	8.90	0.	0.	1.56E-20	0.	0.	0.	3.01E-14	1.29E-10	7.85E-09	1.17E-09	9.15E-09
20	8.80	0.	0.	1.54E-20	0.	0.	0.	3.02E-14	1.33E-10	7.93E-09	1.16E-09	9.22E-09
21	8.70	0.	0.	1.34E-20	0.	0.	0.	3.03E-14	1.38E-10	8.01E-09	1.16E-09	9.31E-09
22	8.60	0.	0.	1.39E-20	0.	0.	0.	3.04E-14	1.43E-10	8.09E-09	1.16E-09	9.39E-09
23	8.50	0.	0.	1.23E-20	0.	0.	0.	3.05E-14	1.48E-10	8.18E-09	1.16E-09	9.48E-09
24	8.40	0.	0.	1.22E-20	0.	0.	0.	3.07E-14	1.54E-10	8.27E-09	1.16E-09	9.58E-09
25	8.30	0.	0.	1.04E-20	0.	0.	0.	3.08E-14	1.59E-10	4.72E-09	1.16E-09	6.04E-09
26	8.20	0.	0.	1.06E-20	0.	0.	0.	3.10E-14	1.65E-10	4.89E-09	1.16E-09	6.22E-09
27	8.10	0.	0.	9.22E-21	0.	0.	0.	3.12E-14	1.71E-10	5.05E-09	1.17E-09	6.39E-09
28	8.00	0.	0.	9.31E-21	0.	0.	0.	3.13E-14	1.78E-10	5.21E-09	1.18E-09	6.57E-09
29	7.90	0.	0.	8.07E-21	0.	0.	0.	3.15E-14	1.85E-10	5.38E-09	1.18E-09	6.75E-09
30	7.80	0.	0.	8.40E-21	0.	0.	0.	3.16E-14	1.92E-10	5.54E-09	1.19E-09	6.93E-09
31	7.70	0.	0.	7.42E-21	0.	0.	0.	3.18E-14	2.00E-10	5.73E-09	1.20E-09	7.12E-09
32	7.60	0.	0.	7.08E-21	0.	5.47E-25	0.	3.19E-14	2.08E-10	5.93E-09	1.20E-09	7.34E-09
33	7.50	0.	0.	6.60E-21	0.	1.82E-24	0.	3.21E-14	2.16E-10	6.13E-09	1.21E-09	7.55E-09
34	7.40	0.	0.	5.96E-21	0.	1.56E-23	0.	3.23E-14	2.25E-10	6.33E-09	1.22E-09	7.77E-09
35	7.30	0.	0.	5.68E-21	0.	6.11E-23	0.	3.25E-14	2.35E-10	6.05E-09	1.23E-09	7.51E-09
36	7.20	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	7.10	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	7.00	2.8CE-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	6.90	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	6.80	4.74E-24	0.	4.10E-21	0.	2.50E-21	0.	3.37E-14	2.91E-10	7.51E-09	1.28E-09	9.08E-09
41	6.70	3.47E-24	0.	3.62E-21	0.	2.46E-21	0.	3.40E-14	3.04E-10	7.80E-09	1.30E-09	9.40E-09
42	6.60	2.12E-24	0.	3.26E-21	0.	2.06E-21	0.	3.43E-14	3.18E-10	8.10E-09	1.31E-09	9.72E-09
43	6.50	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	6.40	7.07E-25	0.	1.83E-21	9.86E-24	2.79E-21	0.	3.48E-14	3.49E-10	8.69E-09	1.34E-09	1.04E-08
45	6.30	4.12E-25	0.	1.15E-21	4.67E-23	2.03E-21	0.	3.51E-14	3.66E-10	8.99E-09	1.35E-09	1.07E-08
46	6.20	1.87E-25	0.	6.46E-22	6.67E-23	2.76E-21	0.	3.53E-14	3.84E-10	9.30E-09	1.37E-09	1.11E-08
47	6.10	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	6.00	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	5.90	8.92E-27	0.	5.61E-24	2.72E-22	1.64E-21	0.	3.59E-14	4.46E-10	3.44E-09	1.20E-09	5.09E-09
50	5.80	1.14E-27	0.	1.42E-25	3.82E-22	1.70E-21	0.	3.53E-14	4.70E-10	3.53E-09	1.22E-09	5.22E-09
51	5.70	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-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	3.79E-30	0.	0.	0.	3.88E-22	2.50E-21	0.	0.	3.09E-14	5.23E-10	3.83E-09	1.24E-09	5.60E-09
53	5.50	0.	0.	0.	0.	4.74E-22	2.31E-21	0.	0.	3.10E-14	5.52E-10	4.01E-09	1.26E-09	5.82E-09
54	5.40	0.	0.	0.	0.	4.38E-22	1.90E-21	0.	0.	3.12E-14	5.83E-10	4.21E-09	1.28E-09	6.07E-09
55	5.30	0.	0.	0.	0.	4.49E-22	2.38E-21	0.	0.	3.14E-14	6.18E-10	4.41E-09	1.30E-09	6.33E-09
56	5.20	0.	0.	0.	0.	4.85E-22	1.83E-21	0.	0.	3.16E-14	6.54E-10	4.61E-09	1.33E-09	6.59E-09
57	5.10	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	5.00	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	4.90	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	4.80	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	7.70E-09
61	4.70	3.28E-22	0.	0.	0.	5.38E-22	2.08E-21	0.	0.	3.29E-14	8.89E-10	5.76E-09	1.44E-09	8.09E-09
62	4.60	4.55E-22	0.	0.	0.	5.54E-22	1.89E-21	0.	0.	3.32E-14	9.49E-10	6.14E-09	1.48E-09	8.58E-09
63	4.50	4.81E-22	0.	4.05E-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	4.40	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	4.30	4.91E-22	0.	4.00E-21	0.	4.93E-22	6.15E-22	0.	0.	3.40E-14	1.16E-09	7.37E-09	1.58E-09	1.01E-08
66	4.20	4.60E-22	0.	1.26E-20	0.	5.19E-22	4.28E-22	0.	0.	3.43E-14	1.25E-09	7.84E-09	7.71E-10	9.86E-09
67	4.10	4.34E-22	0.	5.64E-21	0.	5.10E-22	1.20E-22	0.	0.	3.44E-14	1.34E-09	8.18E-09	8.04E-10	1.03E-08
68	4.00	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	3.90	3.43E-22	0.	8.58E-21	3.78E-17	4.60E-22	3.39E-23	0.	0.	3.44E-14	1.56E-09	8.58E-09	8.70E-10	1.10E-08
70	3.80	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	3.70	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	3.60	3.06E-22	0.	1.02E-20	3.61E-16	4.61E-22	0.	0.	0.	3.16E-14	1.99E-09	9.96E-09	1.08E-09	1.30E-08
73	3.50	2.88E-22	0.	1.34E-20	6.71E-16	3.68E-22	0.	0.	0.	2.89E-14	2.17E-09	1.06E-08	1.18E-09	1.39E-08
74	3.40	2.66E-22	0.	8.66E-21	1.06E-16	4.13E-22	0.	0.	0.	1.67E-14	2.37E-09	4.82E-09	1.27E-09	8.46E-09
75	3.30	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	3.20	1.87E-22	0.	5.87E-21	6.48E-16	3.50E-22	0.	0.	0.	1.67E-14	2.85E-09	5.88E-09	1.43E-09	1.02E-08
77	3.10	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	3.00	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	2.90	1.38E-22	0.	1.77E-21	2.08E-16	2.44E-22	0.	0.	0.	1.68E-14	3.84E-09	7.93E-09	1.75E-09	1.35E-08
80	2.80	1.44E-22	0.	8.56E-22	1.38E-16	1.72E-22	0.	0.	0.	1.69E-14	4.28E-09	8.68E-09	1.90E-09	1.49E-08
81	2.70	9.39E-23	0.	4.02E-22	1.80E-16	9.51E-23	0.	0.	0.	1.69E-14	4.78E-09	9.42E-09	1.12E-09	1.53E-08
82	2.60	4.49E-23	0.	1.94E-22	1.85E-17	4.24E-23	0.	0.	0.	1.69E-14	5.36E-09	1.02E-08	1.22E-09	1.68E-08
83	2.50	3.16E-24	0.	2.05E-23	1.80E-17	1.02E-23	0.	0.	0.	1.69E-14	6.04E-09	9.67E-09	1.41E-09	1.71E-08
84	2.40	0.	9.23E-22	0.	1.41E-17	1.09E-24	0.	0.	0.	1.69E-14	6.83E-09	1.13E-08	1.70E-09	1.99E-08
85	2.30	0.	2.78E-21	0.	0.	0.	0.	0.	0.	1.67E-14	7.78E-09	1.31E-08	2.01E-09	2.29E-08
86	2.20	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	2.10	0.	7.62E-21	0.	0.	0.	0.	0.	0.	1.66E-14	1.03E-08	1.68E-08	2.75E-09	2.99E-08
88	2.00	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	1.90	0.	1.86E-20	0.	0.	0.	0.	0.	0.	1.55E-14	1.39E-08	1.47E-08	3.39E-09	3.20E-08
90	1.80	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	1.70	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	1.60	0.	1.36E-20	0.	0.	0.	0.	0.	0.	1.18E-14	2.36E-08	2.32E-08	5.64E-09	5.24E-08
93	1.50	0.	1.56E-20	0.	0.	0.	0.	0.	0.	5.35E-15	2.87E-08	2.77E-08	6.30E-09	6.28E-08
94	1.40	0.	1.54E-20	0.	0.	0.	0.	0.	0.	0.	3.56E-08	2.71E-08	5.93E-09	6.86E-08
95	1.30	0.	1.18E-20	0.	0.	0.	0.	0.	0.	0.	4.46E-08	3.67E-08	8.39E-09	8.97E-08
96	1.20	0.	1.12E-20	0.	0.	0.	0.	0.	0.	0.	5.69E-08	4.10E-08	1.02E-08	1.08E-07
97	1.10	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	1.00	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	0.90	0.	8.13E-21	0.	0.	0.	0.	4.24E-25	0.	0.	1.37E-07	6.93E-08	1.65E-08	2.23E-07
100	0.80	0.	3.82E-21	0.	0.	0.	0.	9.26E-24	0.	0.	1.97E-07	8.00E-08	1.91E-08	2.97E-07
101	0.70	0.	8.93E-22	0.	0.	0.	0.	8.50E-24	0.	0.	2.98E-07	7.52E-08	1.66E-08	3.90E-07
102	0.60	0.	1.78E-22	0.	0.	0.	0.	2.74E-23	0.	0.	4.80E-07	8.47E-08	1.87E-08	5.84E-07

ABSORPTION COEFFICIENTS 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	10.70	0.	0.	1.87E-24	0.	0.	0.	4.46E-17	1.70E-12	3.01E-10	2.82E-11	3.31E-10
2	10.60	0.	0.	1.71E-24	0.	0.	0.	4.47E-17	1.75E-12	3.03E-10	2.82E-11	3.33E-10
3	10.50	0.	0.	1.73E-24	0.	0.	0.	4.48E-17	1.80E-12	3.05E-10	2.81E-11	3.35E-10
4	10.40	0.	0.	1.65E-24	0.	0.	0.	4.48E-17	1.85E-12	3.07E-10	2.81E-11	3.37E-10
5	10.30	0.	0.	1.45E-24	0.	0.	0.	4.49E-17	1.91E-12	3.10E-10	2.80E-11	3.40E-10
6	10.20	0.	0.	1.50E-24	0.	0.	0.	4.49E-17	1.97E-12	3.14E-10	2.81E-11	3.44E-10
7	10.10	0.	0.	1.42E-24	0.	0.	0.	4.50E-17	2.03E-12	3.18E-10	2.82E-11	3.48E-10
8	10.00	0.	0.	1.26E-24	0.	0.	0.	4.50E-17	2.09E-12	3.22E-10	2.83E-11	3.53E-10
9	9.90	0.	0.	1.29E-24	0.	0.	0.	4.51E-17	2.15E-12	3.27E-10	2.84E-11	3.57E-10
10	9.80	0.	0.	1.22E-24	0.	0.	0.	4.52E-17	2.22E-12	3.31E-10	2.85E-11	3.62E-10
11	9.70	0.	0.	1.06E-24	0.	0.	0.	4.53E-17	2.29E-12	3.35E-10	2.86E-11	3.66E-10
12	9.60	0.	0.	1.15E-24	0.	0.	0.	4.54E-17	2.36E-12	3.39E-10	2.87E-11	3.70E-10
13	9.50	0.	0.	9.88E-25	0.	0.	0.	4.55E-17	2.44E-12	3.43E-10	2.88E-11	3.74E-10
14	9.40	0.	0.	9.40E-25	0.	0.	0.	4.56E-17	2.51E-12	3.36E-10	2.89E-11	3.67E-10
15	9.30	0.	0.	9.65E-25	0.	0.	0.	4.58E-17	2.60E-12	3.40E-10	2.90E-11	3.71E-10
16	9.20	0.	0.	8.08E-25	0.	0.	0.	4.60E-17	2.68E-12	3.44E-10	2.91E-11	3.76E-10
17	9.10	0.	0.	8.31E-25	0.	0.	0.	4.61E-17	2.77E-12	3.48E-10	2.93E-11	3.80E-10
18	9.00	0.	0.	7.60E-25	0.	0.	0.	4.63E-17	2.87E-12	3.52E-10	2.19E-11	3.77E-10
19	8.90	0.	0.	7.07E-25	0.	0.	0.	4.65E-17	2.96E-12	3.56E-10	2.11E-11	3.80E-10
20	8.80	0.	0.	6.97E-25	0.	0.	0.	4.66E-17	3.07E-12	3.60E-10	2.13E-11	3.84E-10
21	8.70	0.	0.	6.10E-25	0.	0.	0.	4.68E-17	3.17E-12	3.64E-10	2.15E-11	3.89E-10
22	8.60	0.	0.	6.30E-25	0.	0.	0.	4.70E-17	3.29E-12	3.68E-10	2.17E-11	3.93E-10
23	8.50	0.	0.	5.56E-25	0.	0.	0.	4.71E-17	3.41E-12	3.72E-10	2.19E-11	3.98E-10
24	8.40	0.	0.	5.55E-25	0.	0.	0.	4.74E-17	3.53E-12	1.89E-10	2.21E-11	2.14E-10
25	8.30	0.	0.	4.74E-25	0.	0.	0.	4.76E-17	3.66E-12	1.95E-10	2.24E-11	2.21E-10
26	8.20	0.	0.	4.81E-25	0.	0.	0.	4.79E-17	3.80E-12	2.03E-10	2.29E-11	2.30E-10
27	8.10	0.	0.	4.19E-25	0.	0.	0.	4.81E-17	3.94E-12	2.11E-10	2.33E-11	2.38E-10
28	8.00	0.	0.	4.23E-25	0.	0.	0.	4.84E-17	4.09E-12	2.19E-10	2.38E-11	2.47E-10
29	7.90	0.	0.	3.66E-25	0.	0.	0.	4.86E-17	4.25E-12	2.27E-10	2.43E-11	2.56E-10
30	7.80	0.	0.	3.81E-25	0.	0.	0.	4.89E-17	4.41E-12	2.36E-10	2.48E-11	2.65E-10
31	7.70	0.	0.	3.37E-25	0.	0.	0.	4.91E-17	4.59E-12	2.45E-10	2.52E-11	2.74E-10
32	7.60	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	7.50	0.	0.	3.00E-25	0.	1.45E-28	0.	4.96E-17	4.97E-12	2.64E-10	2.62E-11	2.96E-10
34	7.40	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	7.30	0.	0.	2.58E-25	0.	4.84E-27	0.	5.01E-17	5.39E-12	2.60E-10	2.74E-11	2.93E-10
36	7.20	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	7.10	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	7.00	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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	1.71E-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	6.40	9.78E-29	0.	8.30E-26	7.82E-28	2.21E-25	0.	5.37E-17	8.01E-12	3.92E-10	3.55E-11	4.35E-10
45	6.30	5.71E-29	0.	5.24E-26	3.70E-27	1.61E-25	0.	5.41E-17	8.40E-12	4.06E-10	3.64E-11	4.51E-10
46	6.20	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	6.10	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	6.00	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	5.90	1.20E-30	0.	2.55E-28	2.16E-26	1.30E-25	0.	5.54E-17	1.02E-11	1.19E-10	2.03E-11	1.49E-10
50	5.80	1.58E-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	5.70	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) 19000. 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	5.29E-34	0.	0.	0.	3.07E-26	1.96E-25	0.	0.	4.77E-17	1.20E-11	1.36E-10	2.16E-11	1.70E-10
53	5.50	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	5.40	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	5.30	0.	0.	0.	0.	3.56E-26	1.89E-25	0.	0.	4.85E-17	1.41E-11	1.61E-10	2.03E-11	1.96E-10
56	5.20	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	5.10	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	5.00	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	4.90	1.77E-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	4.80	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	4.70	4.55E-26	0.	0.	0.	4.26E-26	1.65E-25	0.	0.	5.08E-17	2.04E-11	2.17E-10	2.46E-11	2.62E-10
62	4.60	6.30E-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	4.50	6.65E-26	0.	1.84E-26	0.	4.04E-26	1.13E-25	0.	0.	5.17E-17	2.32E-11	2.50E-10	2.64E-11	3.00E-10
64	4.40	7.15E-26	0.	5.44E-26	0.	4.07E-26	7.73E-26	0.	0.	5.21E-17	2.48E-11	2.67E-10	2.70E-11	3.19E-10
65	4.30	6.79E-26	0.	1.82E-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	4.20	6.37E-26	0.	5.72E-25	0.	4.12E-26	3.40E-26	0.	0.	5.29E-17	2.86E-11	3.03E-10	1.89E-11	3.50E-10
67	4.10	6.06E-26	0.	2.56E-25	0.	4.05E-26	9.50E-27	0.	0.	5.31E-17	3.08E-11	3.21E-10	2.01E-11	3.72E-10
68	4.00	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	3.90	4.75E-26	0.	3.90E-25	1.31E-20	3.64E-26	2.69E-27	0.	0.	5.31E-17	3.58E-11	3.58E-10	2.26E-11	4.16E-10
70	3.80	5.22E-26	0.	6.25E-25	5.39E-20	3.93E-26	0.	0.	0.	5.29E-17	3.87E-11	3.77E-10	2.39E-11	4.40E-10
71	3.70	4.68E-26	0.	6.46E-25	2.38E-20	3.38E-26	0.	0.	0.	5.21E-17	4.19E-11	3.97E-10	2.57E-11	4.65E-10
72	3.60	4.24E-26	0.	4.64E-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	3.50	3.98E-26	0.	6.09E-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	3.40	3.68E-26	0.	3.93E-25	3.65E-20	3.28E-26	0.	0.	0.	2.57E-17	5.42E-11	1.33E-10	2.98E-11	2.17E-10
75	3.30	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	3.20	2.59E-26	0.	2.66E-25	2.24E-19	2.78E-26	0.	0.	0.	2.58E-17	6.51E-11	1.64E-10	2.39E-11	2.53E-10
77	3.10	2.50E-26	0.	2.08E-25	5.79E-20	2.65E-26	0.	0.	0.	2.59E-17	7.17E-11	1.86E-10	2.63E-11	2.84E-10
78	3.00	2.25E-26	0.	1.28E-25	1.31E-19	2.51E-26	0.	0.	0.	2.60E-17	7.92E-11	2.09E-10	2.88E-11	3.17E-10
79	2.90	1.91E-26	0.	8.06E-26	7.18E-20	1.94E-26	0.	0.	0.	2.60E-17	8.78E-11	2.31E-10	3.14E-11	3.50E-10
80	2.80	2.01E-26	0.	3.88E-26	4.79E-20	1.36E-26	0.	0.	0.	2.60E-17	9.77E-11	2.54E-10	3.12E-11	3.83E-10
81	2.70	1.30E-26	0.	1.82E-26	6.21E-20	7.54E-27	0.	0.	0.	2.60E-17	1.09E-10	2.77E-10	2.61E-11	4.12E-10
82	2.60	6.21E-27	0.	8.82E-27	6.40E-21	3.36E-27	0.	0.	0.	2.60E-17	1.22E-10	2.89E-10	2.84E-11	4.40E-10
83	2.50	4.36E-28	0.	9.33E-28	6.21E-21	8.07E-28	0.	0.	0.	2.60E-17	1.38E-10	3.20E-10	3.20E-11	4.90E-10
84	2.40	0.	4.19E-26	0.	4.87E-21	8.66E-29	0.	0.	0.	2.60E-17	1.56E-10	3.65E-10	3.75E-11	5.58E-10
85	2.30	0.	1.26E-25	0.	0.	0.	0.	0.	0.	2.58E-17	1.77E-10	4.11E-10	4.32E-11	6.32E-10
86	2.20	0.	3.34E-25	0.	0.	0.	0.	0.	0.	2.57E-17	2.03E-10	4.58E-10	4.95E-11	7.10E-10
87	2.10	0.	3.46E-25	0.	0.	0.	0.	0.	0.	2.56E-17	2.34E-10	2.21E-10	3.89E-11	4.94E-10
88	2.00	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	1.90	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	1.80	0.	7.20E-25	0.	0.	0.	0.	0.	0.	2.28E-17	3.74E-10	3.20E-10	6.07E-11	7.55E-10
91	1.70	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	1.60	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	1.50	0.	7.07E-25	0.	0.	0.	0.	0.	0.	8.27E-18	6.53E-10	4.09E-10	9.00E-11	1.15E-09
94	1.40	0.	6.97E-25	0.	0.	0.	0.	0.	0.	0.	8.08E-10	4.66E-10	8.68E-11	1.36E-09
95	1.30	0.	5.34E-25	0.	0.	0.	0.	0.	0.	0.	1.01E-09	2.02E-10	9.59E-11	1.31E-09
96	1.20	0.	5.10E-25	0.	0.	0.	0.	0.	0.	0.	1.29E-09	2.76E-10	1.20E-10	1.69E-09
97	1.10	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	1.00	0.	4.50E-25	0.	0.	0.	0.	2.90E-29	0.	0.	2.25E-09	4.16E-10	1.84E-10	2.85E-09
99	0.90	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	0.80	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	0.70	0.	4.05E-26	0.	0.	0.	0.	6.74E-28	0.	0.	6.72E-09	5.07E-10	1.95E-10	7.42E-09
102	0.60	0.	8.06E-27	0.	0.	0.	0.	2.17E-27	0.	0.	1.08E-08	5.68E-10	2.20E-10	1.16E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. 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.	6.06E-01	0.	0.	0.	4.76E 00	3.27E-01 3.03E 02	4.06E 00		3.13E 02
2	10.60	0.	0.	5.56E-01	0.	0.	0.	4.76E 00	3.37E-01 1.61E 01	4.05E 00		2.58E 01
3	10.50	0.	0.	5.64E-01	0.	0.	0.	4.77E 00	3.47E-01 1.62E 01	4.03E 00		2.59E 01
4	10.40	0.	0.	5.40E-01	0.	0.	0.	4.78E 00	3.57E-01 1.62E 01	4.01E 00		2.59E 01
5	10.30	0.	0.	4.75E-01	0.	0.	0.	4.78E 00	3.68E-01 1.63E 01	4.00E 00		2.59E 01
6	10.20	0.	0.	4.93E-01	0.	0.	0.	4.79E 00	3.79E-01 1.63E 01	3.98E 00		2.59E 01
7	10.10	0.	0.	4.67E-01	0.	0.	0.	4.80E 00	3.90E-01 1.63E 01	3.96E 00		2.59E 01
8	10.00	0.	0.	4.15E-01	0.	0.	0.	4.80E 00	4.02E-01 1.63E 01	3.94E 00		2.59E 01
9	9.90	0.	0.	4.27E-01	0.	0.	0.	4.81E 00	4.14E-01 1.63E 01	3.93E 00		2.59E 01
10	9.80	0.	0.	4.05E-01	0.	0.	0.	4.82E 00	4.27E-01 1.64E 01	3.91E 00		2.59E 01
11	9.70	0.	0.	3.53E-01	0.	0.	0.	4.83E 00	4.41E-01 1.64E 01	3.89E 00		2.59E 01
12	9.60	0.	0.	3.83E-01	0.	0.	0.	4.84E 00	4.55E-01 1.65E 01	3.87E 00		2.60E 01
13	9.50	0.	0.	3.31E-01	0.	0.	0.	4.85E 00	4.69E-01 1.65E 01	3.86E 00		2.60E 01
14	9.40	0.	0.	3.16E-01	0.	0.	0.	4.86E 00	4.85E-01 1.66E 01	3.84E 00		2.61E 01
15	9.30	0.	0.	3.25E-01	0.	0.	0.	4.88E 00	5.01E-01 1.66E 01	3.82E 00		2.61E 01
16	9.20	0.	0.	2.73E-01	0.	0.	0.	4.90E 00	5.17E-01 1.67E 01	3.81E 00		2.62E 01
17	9.10	0.	0.	2.81E-01	0.	0.	0.	4.92E 00	5.35E-01 6.44E 00	3.79E 00		1.60E 01
18	9.00	0.	0.	2.58E-01	0.	0.	0.	4.93E 00	5.53E-01 6.45E 00	3.77E 00		1.60E 01
19	8.90	0.	0.	2.41E-01	0.	0.	0.	4.95E 00	5.72E-01 6.46E 00	3.76E 00		1.60E 01
20	8.80	0.	0.	2.38E-01	0.	0.	0.	4.97E 00	5.92E-01 6.47E 00	3.74E 00		1.60E 01
21	8.70	0.	0.	2.09E-01	0.	0.	0.	4.99E 00	6.13E-01 6.48E 00	3.73E 00		1.60E 01
22	8.60	0.	0.	2.17E-01	0.	0.	0.	5.00E 00	6.35E-01 6.50E 00	3.71E 00		1.61E 01
23	8.50	0.	0.	1.92E-01	0.	0.	0.	5.02E 00	6.58E-01 6.52E 00	3.70E 00		1.61E 01
24	8.40	0.	0.	1.92E-01	0.	0.	0.	5.05E 00	6.82E-01 6.54E 00	3.68E 00		1.61E 01
25	8.30	0.	0.	1.65E-01	0.	0.	0.	5.08E 00	7.07E-01 6.57E 00	3.68E 00		1.62E 01
26	8.20	0.	0.	1.68E-01	0.	0.	0.	5.10E 00	7.33E-01 6.60E 00	3.68E 00		1.63E 01
27	8.10	0.	0.	1.46E-01	0.	0.	0.	5.13E 00	7.61E-01 6.62E 00	3.69E 00		1.63E 01
28	8.00	0.	0.	1.48E-01	0.	0.	0.	5.15E 00	7.90E-01 6.66E 00	3.69E 00		1.64E 01
29	7.90	0.	0.	1.29E-01	0.	0.	0.	5.18E 00	8.21E-01 6.71E 00	3.69E 00		1.65E 01
30	7.80	0.	0.	1.34E-01	0.	0.	0.	5.21E 00	8.53E-01 6.76E 00	3.70E 00		1.67E 01
31	7.70	0.	0.	1.19E-01	0.	0.	0.	5.23E 00	8.87E-01 6.81E 00	3.70E 00		1.67E 01
32	7.60	0.	0.	1.14E-01	0.	4.89E-06	0.	5.26E 00	9.23E-01 6.85E 00	3.71E 00		1.69E 01
33	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	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	6.80	2.46E-05	0.	6.80E-02	0.	2.21E-02	0.	5.55E 00	1.29E 00 7.24E 00	3.74E 00		1.79E 01
41	6.70	1.80E-05	0.	6.01E-02	0.	2.16E-02	0.	5.59E 00	1.35E 00 7.29E 00	3.75E 00		1.81E 01
42	6.60	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	6.50	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	6.40	3.71E-06	0.	3.08E-02	8.39E-05	2.43E-02	0.	5.73E 00	1.55E 00 7.53E 00	3.78E 00		1.86E 01
45	6.30	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	6.20	9.85E-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	6.10	4.56E-07	0.	5.26E-03	1.65E-03	2.96E-02	0.	5.86E 00	1.79E 00 7.78E 00	3.86E 00		1.93E 01
48	6.00	1.92E-07	0.	1.35E-03	1.60E-03	1.49E-02	0.	5.90E 00	1.89E 00 7.89E 00	3.89E 00		1.96E 01
49	5.90	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	5.80	6.06E-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	5.70	4.40E-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) 1.293E-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	2.02E-11	0.	0.	0.	3.41E-03	2.20E-02	0.	0.	5.08E 00	2.33E 00	8.39E 00	4.02E 00	1.98E 01
53	5.50	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	5.40	0.	0.	0.	0.	3.88E-03	1.68E-02	0.	0.	5.13E 00	2.60E 00	8.80E 00	4.11E 00	2.07E 01
55	5.30	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	5.20	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	5.10	0.	0.	0.	0.	4.31E-03	2.08E-02	0.	0.	5.24E 00	3.09E 00	9.56E 00	4.31E 00	2.22E 01
58	5.00	2.82E-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	4.90	6.92E-04	0.	0.	0.	4.43E-03	2.18E-02	0.	0.	5.33E 00	3.49E 00	1.02E 01	4.46E 00	2.35E 01
60	4.80	1.31E-03	0.	0.	0.	4.78E-03	2.06E-02	0.	0.	5.38E 00	3.71E 00	1.06E 01	4.55E 00	2.42E 01
61	4.70	1.79E-03	0.	0.	0.	4.82E-03	1.88E-02	0.	0.	5.42E 00	3.96E 00	1.10E 01	4.67E 00	2.51E 01
62	4.60	2.49E-03	0.	0.	0.	4.97E-03	1.70E-02	0.	0.	5.46E 00	4.23E 00	1.14E 01	4.80E 00	2.59E 01
63	4.50	2.63E-03	0.	6.99E-03	0.	4.59E-03	1.28E-02	0.	0.	5.51E 00	4.52E 00	1.20E 01	4.93E 00	2.70E 01
64	4.40	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	5.06E 00	2.81E 01
65	4.30	2.71E-03	0.	6.96E-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	4.20	2.54E-03	0.	2.16E-01	0.	4.70E-03	3.85E-03	0.	0.	5.64E 00	5.57E 00	1.40E 01	5.34E 00	3.08E 01
67	4.10	2.40E-03	0.	9.87E-02	0.	4.64E-03	1.08E-03	0.	0.	5.66E 00	5.99E 00	1.47E 01	5.33E 00	3.17E 01
68	4.00	2.23E-03	0.	3.13E-01	0.	4.50E-03	8.11E-04	0.	0.	5.68E 00	6.45E 00	1.53E 01	2.51E 00	3.03E 01
69	3.90	1.91E-03	0.	1.48E-01	1.27E-02	4.20E-03	3.03E-04	0.	0.	5.66E 00	6.97E 00	1.51E 01	2.59E 00	3.05E 01
70	3.80	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	2.70E 00	3.15E 01
71	3.70	1.90E-03	0.	2.45E-01	2.34E-02	3.93E-03	0.	0.	0.	5.55E 00	8.17E 00	1.28E 01	2.95E 00	2.97E 01
72	3.60	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	3.50	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	3.40	1.56E-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	3.30	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	4.26E 00	3.68E 01
76	3.20	1.07E-03	0.	1.03E-01	2.10E-01	3.27E-03	0.	0.	0.	2.75E 00	1.27E 01	1.96E 01	4.64E 00	4.00E 01
77	3.10	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	4.33E 01
78	3.00	9.33E-04	0.	5.01E-02	1.26E-01	2.98E-03	0.	0.	0.	2.77E 00	1.55E 01	2.31E 01	5.40E 00	4.69E 01
79	2.90	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	2.80	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	2.70	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	6.05E 01
82	2.60	2.62E-04	0.	3.45E-03	6.19E-03	4.10E-04	0.	0.	0.	2.78E 00	2.40E 01	3.20E 01	7.37E 00	6.61E 01
83	2.50	1.86E-05	0.	3.62E-04	6.04E-03	9.87E-05	0.	0.	0.	2.78E 00	2.70E 01	3.65E 01	4.66E 00	7.10E 01
84	2.40	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	2.30	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	2.20	0.	1.26E-01	0.	0.	0.	0.	0.	0.	2.74E 00	3.99E 01	4.44E 01	7.74E 00	9.50E 01
87	2.10	0.	1.29E-01	0.	0.	0.	0.	0.	0.	2.73E 00	4.60E 01	5.17E 01	9.00E 00	1.10E 02
88	2.00	0.	2.59E-01	0.	0.	0.	0.	0.	0.	2.64E 00	5.34E 01	5.90E 01	1.03E 01	1.26E 02
89	1.90	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	1.80	0.	2.67E-01	0.	0.	0.	0.	0.	0.	2.43E 00	7.36E 01	8.12E 01	1.46E 01	1.72E 02
91	1.70	0.	3.02E-01	0.	0.	0.	0.	0.	0.	2.29E 00	8.78E 01	9.76E 01	1.77E 01	2.06E 02
92	1.60	0.	2.28E-01	0.	0.	0.	0.	0.	0.	1.94E 00	1.06E 02	1.14E 02	2.09E 01	2.43E 02
93	1.50	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	1.40	0.	2.56E-01	0.	0.	0.	0.	0.	0.	0.	1.60E 02	1.85E 02	3.03E 01	3.76E 02
95	1.30	0.	1.96E-01	0.	0.	0.	0.	0.	0.	0.	2.00E 02	2.48E 02	4.00E 01	4.89E 02
96	1.20	0.	1.87E-01	0.	0.	0.	0.	0.	0.	0.	2.56E 02	2.76E 02	4.04E 01	5.72E 02
97	1.10	0.	1.81E-01	0.	0.	0.	2.08E-07	0.	0.	0.	3.33E 02	3.40E 02	5.06E 01	7.24E 02
98	1.00	0.	1.66E-01	0.	0.	0.	3.30E-06	0.	0.	0.	4.47E 02	4.13E 02	5.77E 01	9.18E 02
99	0.90	0.	1.36E-01	0.	0.	0.	3.84E-06	0.	0.	0.	6.20E 02	4.75E 02	6.77E 01	1.16E 03
100	0.80	0.	6.41E-02	0.	0.	0.	8.44E-05	0.	0.	0.	8.92E 02	5.47E 02	7.77E 01	1.52E 03
101	0.70	0.	1.49E-02	0.	0.	0.	7.91E-05	0.	0.	0.	1.35E 03	5.91E 02	7.92E 01	2.02E 03
102	0.60	0.	3.13E-03	0.	0.	0.	2.51E-04	0.	0.	0.	2.18E 03	6.61E 02	8.86E 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.	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	10.70	0.	0.	4.20E-03	0.	0.	0.	1.22E-01	2.71E-02	2.52E 01	3.60E-01	2.57E 01
2	10.60	0.	0.	3.85E-03	0.	0.	0.	1.22E-01	2.78E-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.	2.25E-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.	1.65E-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.	1.59E-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.	8.96E-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.	5.66E-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	5.03E-08	0.	3.05E-04	0.	1.94E-04	0.	1.45E-01	1.22E-01	6.20E-01	3.34E-01	1.22E 00
44	6.40	2.90E-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.	7.65E-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	2.18E-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	1.06E-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	3.51E-12	0.	0.	2.91E-05	1.24E-04	0.	1.40E-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 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	1.5 E-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	5.50	0.	0.	0.	0.	3.08E-05	1.50E-04	0.	0.	1.30E-01	2.03E-01	7.14E-01	3.59E-01	1.41E 00
54	5.40	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	1.55E-04	0.	0.	1.32E-01	2.27E-01	7.53E-01	3.69E-01	1.48E 00
56	5.20	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	5.10	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	4.70	1.40E-05	0.	0.	0.	3.55E-05	1.38E-04	0.	0.	1.38E-01	3.27E-01	9.14E-01	4.14E-01	1.79E 00
62	4.60	1.93E-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.	4.85E-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	4.28E-01	1.11E 00	4.60E-01	2.14E 00
66	4.20	1.99E-05	0.	1.50E-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.	6.85E-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	2.18E 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	5.76E-01	1.26E 00	2.29E-01	2.21E 00
70	3.80	1.65E-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	2.90E-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.	1.61E-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	2.83E-05	0.	0.	0.	7.02E-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	5.05E-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	1.58E 00	2.26E 00	5.58E-01	4.47E 00
81	2.70	4.28E-06	0.	4.98E-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	3.02E-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	7.28E-07	0.	0.	0.	7.09E-02	2.23E 00	3.04E 00	4.13E-01	5.76E 00
84	2.40	0.	1.11E-04	0.	1.11E-04	7.84E-08	0.	0.	0.	7.09E-02	2.53E 00	3.54E 00	4.82E-01	6.62E 00
85	2.30	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	2.20	0.	8.77E-04	0.	0.	0.	0.	0.	0.	7.01E-02	3.30E 00	3.70E 00	6.85E-01	7.76E 00
87	2.10	0.	8.98E-04	0.	0.	0.	0.	0.	0.	6.98E-02	3.80E 00	4.31E 00	7.96E-01	8.97E 00
88	2.00	0.	1.79E-03	0.	0.	0.	0.	0.	0.	6.76E-02	4.41E 00	4.92E 00	9.09E-01	1.03E 01
89	1.90	0.	2.16E-03	0.	0.	0.	0.	0.	0.	6.50E-02	5.15E 00	5.64E 00	1.06E 00	1.19E 01
90	1.80	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	1.70	0.	2.10E-03	0.	0.	0.	0.	0.	0.	5.86E-02	7.25E 00	8.13E 00	1.57E 00	1.70E 01
92	1.60	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	1.50	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	1.40	0.	1.78E-03	0.	0.	0.	0.	0.	0.	0.	1.32E 01	1.54E 01	2.69E 00	3.13E 01
95	1.30	0.	1.36E-03	0.	0.	0.	0.	0.	0.	0.	1.66E 01	2.07E 01	3.54E 00	4.08E 01
96	1.20	0.	1.30E-03	0.	0.	0.	0.	0.	0.	0.	2.11E 01	2.30E 01	3.57E 00	4.77E 01
97	1.10	0.	1.26E-03	0.	0.	0.	0.	1.53E-09	0.	0.	2.75E 01	2.83E 01	4.48E 00	6.04E 01
98	1.00	0.	1.15E-03	0.	0.	0.	0.	2.44E-08	0.	0.	3.70E 01	3.44E 01	5.11E 00	7.64E 01
99	0.90	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	0.80	0.	4.45E-04	0.	0.	0.	0.	6.23E-07	0.	0.	7.37E 01	4.55E 01	6.88E 00	1.26E 02
101	0.70	0.	1.03E-04	0.	0.	0.	0.	5.14E-07	0.	0.	1.11E 02	4.92E 01	7.01E 00	1.68E 02
102	0.60	0.	2.17E-05	0.	0.	0.	0.	1.85E-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) 2000C. 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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.10	0.	0.	1.28E-05	0.	0.	0.	1.85E-03	1.53E-03	1.39E 00	2.31E-02	1.42E 00
2	10.00	0.	0.	1.18E-05	0.	0.	0.	1.86E-03	1.57E-03	7.44E-02	2.30E-02	1.01E-01
3	10.00	0.	0.	1.19E-05	0.	0.	0.	1.86E-03	1.62E-03	7.47E-02	2.29E-02	1.01E-01
4	10.40	0.	0.	1.14E-05	0.	0.	0.	1.86E-03	1.67E-03	7.49E-02	2.28E-02	1.01E-01
5	10.30	0.	0.	1.01E-05	0.	0.	0.	1.86E-03	1.71E-03	7.51E-02	2.27E-02	1.01E-01
6	10.20	0.	0.	1.04E-05	0.	0.	0.	1.87E-03	1.77E-03	7.53E-02	2.26E-02	1.02E-01
7	10.10	0.	0.	9.89E-06	0.	0.	0.	1.87E-03	1.82E-03	7.52E-02	2.25E-02	1.01E-01
8	10.00	0.	0.	8.79E-06	0.	0.	0.	1.87E-03	1.87E-03	7.51E-02	2.24E-02	1.01E-01
9	9.90	0.	0.	9.04E-06	0.	0.	0.	1.87E-03	1.93E-03	7.53E-02	2.23E-02	1.01E-01
10	9.80	0.	0.	8.57E-06	0.	0.	0.	1.88E-03	1.99E-03	7.54E-02	2.22E-02	1.02E-01
11	9.70	0.	0.	7.48E-06	0.	0.	0.	1.88E-03	2.06E-03	7.56E-02	2.21E-02	1.02E-01
12	9.60	0.	0.	8.10E-06	0.	0.	0.	1.88E-03	2.12E-03	7.58E-02	2.20E-02	1.02E-01
13	9.50	0.	0.	7.01E-06	0.	0.	0.	1.89E-03	2.19E-03	7.60E-02	2.19E-02	1.02E-01
14	9.40	0.	0.	6.69E-06	0.	0.	0.	1.89E-03	2.26E-03	7.63E-02	2.18E-02	1.02E-01
15	9.30	0.	0.	6.88E-06	0.	0.	0.	1.90E-03	2.34E-03	7.65E-02	2.17E-02	1.02E-01
16	9.20	0.	0.	5.79E-06	0.	0.	0.	1.91E-03	2.41E-03	7.67E-02	2.16E-02	1.03E-01
17	9.10	0.	0.	5.96E-06	0.	0.	0.	1.91E-03	2.49E-03	2.97E-02	2.15E-02	5.57E-02
18	9.00	0.	0.	5.47E-06	0.	0.	0.	1.92E-03	2.58E-03	2.98E-02	2.14E-02	5.57E-02
19	8.90	0.	0.	5.11E-06	0.	0.	0.	1.93E-03	2.67E-03	2.98E-02	2.13E-02	5.57E-02
20	8.80	0.	0.	5.04E-06	0.	0.	0.	1.94E-03	2.76E-03	2.99E-02	2.12E-02	5.58E-02
21	8.70	0.	0.	4.43E-06	0.	0.	0.	1.94E-03	2.86E-03	2.99E-02	2.12E-02	5.59E-02
22	8.60	0.	0.	4.59E-06	0.	0.	0.	1.95E-03	2.96E-03	3.00E-02	2.11E-02	5.60E-02
23	8.50	0.	0.	4.07E-06	0.	0.	0.	1.96E-03	3.07E-03	3.01E-02	2.10E-02	5.61E-02
24	8.40	0.	0.	4.06E-06	0.	0.	0.	1.97E-03	3.18E-03	3.02E-02	2.09E-02	5.63E-02
25	8.30	0.	0.	3.49E-06	0.	0.	0.	1.98E-03	3.30E-03	3.03E-02	2.09E-02	5.65E-02
26	8.20	0.	0.	3.55E-06	0.	0.	0.	1.99E-03	3.42E-03	3.05E-02	2.09E-02	5.68E-02
27	8.10	0.	0.	3.10E-06	0.	0.	0.	2.00E-03	3.55E-03	3.06E-02	2.09E-02	5.70E-02
28	8.00	0.	0.	3.14E-06	0.	0.	0.	2.01E-03	3.69E-03	3.08E-02	2.09E-02	5.74E-02
29	7.90	0.	0.	2.73E-06	0.	0.	0.	2.02E-03	3.83E-03	3.10E-02	2.10E-02	5.78E-02
30	7.80	0.	0.	2.85E-06	0.	0.	0.	2.03E-03	3.98E-03	3.12E-02	2.10E-02	5.82E-02
31	7.70	0.	0.	2.53E-06	0.	0.	0.	2.04E-03	4.14E-03	3.14E-02	2.10E-02	5.86E-02
32	7.60	0.	0.	2.42E-06	0.	1.28E-10	0.	2.05E-03	4.31E-03	3.16E-02	2.10E-02	5.90E-02
33	7.50	0.	0.	2.26E-06	0.	4.16E-10	0.	2.06E-03	4.48E-03	3.18E-02	2.11E-02	5.94E-02
34	7.40	0.	0.	2.05E-06	0.	3.68E-09	0.	2.07E-03	4.67E-03	3.20E-02	2.11E-02	5.99E-02
35	7.30	0.	0.	1.96E-06	0.	1.41E-08	0.	2.08E-03	4.86E-03	3.23E-02	2.11E-02	6.03E-02
36	7.20	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	7.10	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	7.00	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	6.90	9.13E-10	0.	1.48E-06	0.	3.43E-07	0.	2.14E-03	5.77E-03	3.32E-02	2.12E-02	6.23E-02
40	6.80	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	6.70	5.80E-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	6.60	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	6.50	2.06E-10	0.	9.30E-07	0.	6.86E-07	0.	2.21E-03	6.91E-03	3.43E-02	2.14E-02	6.49E-02
44	6.40	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	6.30	6.98E-11	0.	4.15E-07	1.04E-08	4.71E-07	0.	2.25E-03	7.59E-03	3.51E-02	2.16E-02	6.65E-02
46	6.20	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	6.10	1.47E-11	0.	1.11E-07	4.30E-08	7.73E-07	0.	2.28E-03	8.37E-03	3.59E-02	2.19E-02	6.85E-02
48	6.00	6.1?E-12	0.	2.86E-08	4.19E-08	3.89E-07	0.	2.30E-03	8.80E-03	3.64E-02	2.21E-02	6.96E-02
49	5.90	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	5.80	1.95E-13	0.	5.18E-11	8.69E-08	3.94E-07	0.	2.26E-03	9.75E-03	3.75E-02	2.24E-02	7.20E-02
51	5.70	1.44E-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) 1.293E-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	6.51E-16	0.	0.	0.	8.92E-08	5.74E-07	0.	0.	1.98E-03	1.08E-02	3.87E-02	2.28E-02	7.44E-02
53	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
54	5.40	0.	0.	0.	0.	1.01E-07	4.40E-07	0.	0.	2.00E-03	1.21E-02	4.06E-02	2.33E-02	7.81E-02
55	5.30	0.	0.	0.	0.	1.04E-07	5.49E-07	0.	0.	2.01E-03	1.28E-02	4.17E-02	2.36E-02	8.02E-02
56	5.20	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
57	5.10	0.	0.	0.	0.	1.13E-07	5.45E-07	0.	0.	2.04E-03	1.44E-02	4.40E-02	2.44E-02	8.49E-02
58	5.00	9.08E-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
59	4.90	2.23E-08	0.	0.	0.	1.16E-07	5.70E-07	0.	0.	2.08E-03	1.63E-02	4.70E-02	2.53E-02	9.06E-02
60	4.80	4.27E-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
61	4.70	5.76E-08	0.	0.	0.	1.26E-07	4.90E-07	0.	0.	2.11E-03	1.85E-02	5.06E-02	2.65E-02	9.76E-02
62	4.60	8.01E-08	0.	0.	0.	1.30E-07	4.44E-07	0.	0.	2.13E-03	1.97E-02	5.27E-02	2.72E-02	1.02E-01
63	4.50	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
64	4.40	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
65	4.30	8.72E-08	0.	1.47E-06	0.	1.16E-07	1.45E-07	0.	0.	2.18E-03	2.42E-02	6.13E-02	2.95E-02	1.17E-01
66	4.20	8.19E-08	0.	4.58E-06	0.	1.23E-07	1.00E-07	0.	0.	2.20E-03	2.60E-02	6.44E-02	3.03E-02	1.23E-01
67	4.10	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
68	4.00	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
69	3.90	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
70	3.80	6.79E-08	0.	5.06E-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
71	3.70	6.11E-08	0.	5.18E-06	7.22E-06	1.03E-07	0.	0.	0.	2.16E-03	3.81E-02	5.88E-02	1.67E-02	1.16E-01
72	3.60	5.55E-08	0.	3.78E-06	3.72E-05	1.11E-07	0.	0.	0.	2.02E-03	4.14E-02	6.35E-02	1.83E-02	1.25E-01
73	3.50	5.23E-08	0.	4.93E-06	6.74E-05	8.89E-08	0.	0.	0.	1.85E-03	4.51E-02	6.75E-02	2.01E-02	1.35E-01
74	3.40	4.85E-08	0.	3.22E-06	1.10E-05	1.00E-07	0.	0.	0.	1.07E-03	4.93E-02	7.49E-02	2.21E-02	1.47E-01
75	3.30	3.90E-08	0.	3.29E-06	4.09E-05	8.09E-08	0.	0.	0.	1.07E-03	5.40E-02	8.26E-02	2.42E-02	1.62E-01
76	3.20	3.43E-08	0.	2.19E-06	6.48E-05	8.54E-08	0.	0.	0.	1.07E-03	5.93E-02	9.03E-02	2.63E-02	1.77E-01
77	3.10	3.32E-08	0.	1.71E-06	1.75E-05	8.16E-08	0.	0.	0.	1.07E-03	6.54E-02	9.82E-02	2.85E-02	1.93E-01
78	3.00	3.01E-08	0.	1.06E-06	3.88E-05	7.79E-08	0.	0.	0.	1.08E-03	7.23E-02	1.06E-01	3.06E-02	2.10E-01
79	2.90	2.56E-08	0.	6.69E-07	2.11E-05	6.04E-08	0.	0.	0.	1.08E-03	8.01E-02	1.15E-01	3.30E-02	2.29E-01
80	2.80	2.68E-08	0.	3.23E-07	1.44E-05	4.28E-08	0.	0.	0.	1.08E-03	8.92E-02	1.25E-01	3.58E-02	2.51E-01
81	2.70	1.76E-08	0.	1.52E-07	1.83E-05	2.39E-08	0.	0.	0.	1.08E-03	9.96E-02	1.36E-01	3.88E-02	2.75E-01
82	2.60	8.45E-09	0.	7.31E-08	1.91E-06	1.07E-08	0.	0.	0.	1.08E-03	1.12E-01	1.47E-01	4.18E-02	3.02E-01
83	2.50	5.98E-10	0.	7.66E-09	1.86E-06	2.58E-09	0.	0.	0.	1.08E-03	1.26E-01	1.68E-01	2.65E-02	3.22E-01
84	2.40	0.	3.39E-07	0.	1.43E-06	2.78E-10	0.	0.	0.	1.08E-03	1.43E-01	1.96E-01	3.09E-02	3.70E-01
85	2.30	0.	1.00E-06	0.	0.	0.	0.	0.	0.	1.07E-03	1.63E-01	1.73E-01	3.68E-02	3.74E-01
86	2.20	0.	2.68E-06	0.	0.	0.	0.	0.	0.	1.07E-03	1.86E-01	2.05E-01	4.39E-02	4.36E-01
87	2.10	0.	2.74E-06	0.	0.	0.	0.	0.	0.	1.06E-03	2.15E-01	2.38E-01	5.10E-02	5.05E-01
88	2.00	0.	5.47E-06	0.	0.	0.	0.	0.	0.	1.03E-03	2.49E-01	2.72E-01	5.82E-02	5.80E-01
89	1.90	0.	6.59E-06	0.	0.	0.	0.	0.	0.	9.90E-04	2.91E-01	3.12E-01	6.79E-02	6.72E-01
90	1.80	0.	5.64E-06	0.	0.	0.	0.	0.	0.	9.47E-04	3.43E-01	3.74E-01	8.27E-02	8.00E-01
91	1.70	0.	6.40E-06	0.	0.	0.	0.	0.	0.	8.92E-04	4.10E-01	4.49E-01	1.01E-01	9.60E-01
92	1.60	0.	4.83E-06	0.	0.	0.	0.	0.	0.	7.55E-04	4.94E-01	5.26E-01	1.19E-01	1.14E 00
93	1.50	0.	5.51E-06	0.	0.	0.	0.	0.	0.	3.43E-04	6.03E-01	6.83E-01	1.44E-01	1.43E 00
94	1.40	0.	5.43E-06	0.	0.	0.	0.	0.	0.	0.	7.46E-01	8.54E-01	1.72E-01	1.77E 00
95	1.30	0.	4.16E-06	0.	0.	0.	0.	0.	0.	0.	9.35E-01	1.14E 00	2.27E-01	2.30E 00
96	1.20	0.	3.97E-06	0.	0.	0.	0.	0.	0.	0.	1.19E 00	1.27E 00	2.29E-01	2.69E 00
97	1.10	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
98	1.00	0.	3.52E-06	0.	0.	0.	0.	8.62E-11	0.	0.	2.09E 00	1.90E 00	3.27E-01	4.31E 00
99	0.90	0.	2.89E-06	0.	0.	0.	0.	1.00E-10	0.	0.	2.89E 00	2.18E 00	3.84E-01	5.46E 00
100	0.80	0.	1.36E-06	0.	0.	0.	0.	2.21E-09	0.	0.	4.16E 00	2.52E 00	4.41E-01	7.12E 00
101	0.70	0.	3.15E-07	0.	0.	0.	0.	2.07E-09	0.	0.	6.29E 00	2.72E 00	4.49E-01	9.46E 00
102	0.60	0.	6.64E-08	0.	0.	0.	0.	6.57E-09	0.	0.	1.02E 01	3.04E 00	5.03E-01	1.37E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. 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.	7.48E-09	0.	0.	0.	8.30E-06	3.81E-05	3.37E-02	6.55E-04	3.44E-02
2	10.60	0.	0.	6.86E-09	0.	0.	0.	8.31E-06	3.92E-05	1.84E-03	6.53E-04	2.54E-03
3	10.50	0.	0.	6.96E-09	0.	0.	0.	8.32E-06	4.03E-05	1.85E-03	6.50E-04	2.54E-03
4	10.40	0.	0.	6.66E-09	0.	0.	0.	8.33E-06	4.15E-05	1.85E-03	6.47E-04	2.55E-03
5	10.30	0.	0.	5.86E-09	0.	0.	0.	8.34E-06	4.27E-05	1.86E-03	6.44E-04	2.55E-03
6	10.20	0.	0.	6.09E-09	0.	0.	0.	8.35E-06	4.40E-05	1.86E-03	6.41E-04	2.56E-03
7	10.10	0.	0.	5.77E-09	0.	0.	0.	8.37E-06	4.53E-05	1.86E-03	6.39E-04	2.55E-03
8	10.00	0.	0.	5.12E-09	0.	0.	0.	8.38E-06	4.67E-05	1.82E-03	6.36E-04	2.52E-03
9	9.90	0.	0.	5.27E-09	0.	0.	0.	8.39E-06	4.82E-05	1.83E-03	6.33E-04	2.52E-03
10	9.80	0.	0.	4.99E-09	0.	0.	0.	8.41E-06	4.97E-05	1.83E-03	6.30E-04	2.52E-03
11	9.70	0.	0.	4.36E-09	0.	0.	0.	8.42E-06	5.12E-05	1.84E-03	6.27E-04	2.52E-03
12	9.60	0.	0.	4.72E-09	0.	0.	0.	8.44E-06	5.29E-05	1.84E-03	6.25E-04	2.53E-03
13	9.50	0.	0.	4.09E-09	0.	0.	0.	8.45E-06	5.46E-05	1.85E-03	6.22E-04	2.53E-03
14	9.40	0.	0.	3.90E-09	0.	0.	0.	8.48E-06	5.63E-05	1.85E-03	6.19E-04	2.54E-03
15	9.30	0.	0.	4.01E-09	0.	0.	0.	8.51E-06	5.82E-05	1.86E-03	6.16E-04	2.54E-03
16	9.20	0.	0.	3.37E-09	0.	0.	0.	8.55E-06	6.01E-05	1.87E-03	6.14E-04	2.55E-03
17	9.10	0.	0.	3.47E-09	0.	0.	0.	8.58E-06	6.22E-05	7.30E-04	6.11E-04	1.41E-03
18	9.00	0.	0.	3.19E-09	0.	0.	0.	8.61E-06	6.43E-05	7.31E-04	6.09E-04	1.41E-03
19	8.90	0.	0.	2.98E-09	0.	0.	0.	8.64E-06	6.65E-05	7.32E-04	6.06E-04	1.41E-03
20	8.80	0.	0.	2.94E-09	0.	0.	0.	8.67E-06	6.88E-05	7.33E-04	6.04E-04	1.41E-03
21	8.70	0.	0.	2.58E-09	0.	0.	0.	8.70E-06	7.12E-05	7.35E-04	6.01E-04	1.42E-03
22	8.60	0.	0.	2.67E-09	0.	0.	0.	8.73E-06	7.38E-05	7.37E-04	5.99E-04	1.42E-03
23	8.50	0.	0.	2.37E-09	0.	0.	0.	8.76E-06	7.64E-05	7.39E-04	5.96E-04	1.42E-03
24	8.40	0.	0.	2.37E-09	0.	0.	0.	8.81E-06	7.92E-05	7.42E-04	5.94E-04	1.42E-03
25	8.30	0.	0.	2.04E-09	0.	0.	0.	8.85E-06	8.22E-05	7.45E-04	5.93E-04	1.43E-03
26	8.20	0.	0.	2.07E-09	0.	0.	0.	8.90E-06	8.52E-05	7.49E-04	5.94E-04	1.44E-03
27	8.10	0.	0.	1.81E-09	0.	0.	0.	8.94E-06	8.85E-05	7.52E-04	5.94E-04	1.44E-03
28	8.00	0.	0.	1.83E-09	0.	0.	0.	8.99E-06	9.19E-05	7.57E-04	5.95E-04	1.45E-03
29	7.90	0.	0.	1.59E-09	0.	0.	0.	9.04E-06	9.54E-05	7.62E-04	5.96E-04	1.46E-03
30	7.80	0.	0.	1.66E-09	0.	0.	0.	9.08E-06	9.92E-05	7.68E-04	5.96E-04	1.47E-03
31	7.70	0.	0.	1.47E-09	0.	0.	0.	9.13E-06	1.03E-04	7.73E-04	5.97E-04	1.48E-03
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	3.75E-13	0.	9.33E-10	0.	1.63E-10	0.	9.53E-06	1.38E-04	8.08E-04	6.02E-04	1.56E-03
39	6.90	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	6.80	6.37E-13	0.	8.39E-10	0.	3.96E-10	0.	9.68E-06	1.50E-04	8.20E-04	6.03E-04	1.58E-03
41	6.70	4.67E-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	6.60	2.86E-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	6.50	1.66E-13	0.	5.42E-10	0.	4.70E-10	0.	9.91E-06	1.72E-04	8.43E-04	6.08E-04	1.63E-03
44	6.40	9.60E-14	0.	3.81E-10	1.50E-12	4.35E-10	0.	9.99E-06	1.80E-04	8.52E-04	6.10E-04	1.65E-03
45	6.30	5.62E-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	6.20	2.56E-14	0.	1.36E-10	1.02E-11	4.35E-10	0.	1.01E-05	1.99E-04	8.72E-04	6.18E-04	1.70E-03
47	6.10	1.18E-14	0.	6.49E-11	2.94E-11	5.30E-10	0.	1.02E-05	2.09E-04	8.83E-04	6.23E-04	1.72E-03
48	6.00	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	5.90	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	5.80	1.57E-16	0.	3.02E-14	5.95E-11	2.70E-10	0.	1.01E-05	2.43E-04	9.23E-04	6.38E-04	1.81E-03
51	5.70	1.16E-17	0.	0.	7.05E-11	3.02E-10	0.	9.53E-06	2.56E-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.	6.11E-11	3.93E-10	0.	0.	8.36E-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	3.02E-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	1.04E-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.	7.94E-11	3.90E-10	0.	0.	9.30E-06	4.06E-04	1.14E-03	7.18E-04	2.27E-03
60	4.80	3.40E-11	0.	0.	0.	8.56E-11	3.68E-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.	8.62E-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	5.62E-04	1.41E-03	8.15E-04	2.80E-03
65	4.30	7.02E-11	0.	8.58E-10	0.	7.98E-11	9.95E-11	0.	0.	9.76E-06	6.03E-04	1.49E-03	8.38E-04	2.94E-03
66	4.20	6.60E-11	0.	2.67E-09	0.	8.41E-11	6.88E-11	0.	0.	9.84E-06	6.47E-04	1.57E-03	8.61E-04	3.08E-03
67	4.10	6.23E-11	0.	1.22E-09	0.	8.30E-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.	8.06E-11	1.45E-11	0.	0.	9.91E-06	7.50E-04	1.72E-03	4.04E-04	2.88E-03
69	3.90	4.97E-11	0.	1.83E-09	1.45E-08	7.52E-11	5.42E-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	8.76E-04	1.72E-03	4.35E-04	3.04E-03
71	3.70	4.92E-11	0.	3.02E-09	2.67E-08	7.04E-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.	2.20E-09	1.38E-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.	8.30E-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	6.28E-04	3.69E-03
75	3.30	3.14E-11	0.	1.92E-09	1.51E-07	5.54E-11	0.	0.	0.	4.80E-06	1.35E-03	2.01E-03	6.86E-04	4.05E-03
76	3.20	2.77E-11	0.	1.28E-09	2.39E-07	5.85E-11	0.	0.	0.	4.80E-06	1.48E-03	2.20E-03	7.47E-04	4.43E-03
77	3.10	2.67E-11	0.	9.98E-10	6.46E-08	5.59E-11	0.	0.	0.	4.81E-06	1.63E-03	2.39E-03	8.09E-04	4.84E-03
78	3.00	2.42E-11	0.	6.18E-10	1.43E-07	5.34E-11	0.	0.	0.	4.83E-06	1.80E-03	2.59E-03	8.70E-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	2.80E-03	9.39E-04	5.74E-03
80	2.80	2.16E-11	0.	1.88E-10	5.34E-08	2.93E-11	0.	0.	0.	4.84E-06	2.22E-03	3.04E-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	4.07E-03	7.52E-04	7.97E-03
84	2.40	0.	1.98E-10	0.	5.29E-09	1.90E-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.	4.80E-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.	4.76E-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.	4.61E-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	9.05E-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	2.86E-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.	1.54E-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.	1.86E-02	2.06E-02	4.89E-03	4.41E-02
95	1.30	0.	2.42E-09	0.	0.	0.	0.	0.	0.	0.	2.33E-02	2.76E-02	6.45E-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.	3.72E-15	0.	0.	0.	3.88E-02	3.78E-02	8.15E-03	8.47E-02
98	1.00	0.	2.05E-09	0.	0.	0.	5.91E-14	0.	0.	0.	5.20E-02	4.59E-02	9.29E-03	1.07E-01
99	0.90	0.	1.68E-09	0.	0.	0.	6.88E-14	0.	0.	0.	7.20E-02	5.28E-02	1.09E-02	1.36E-01
100	0.80	0.	7.91E-10	0.	0.	0.	1.51E-12	0.	0.	0.	1.04E-01	6.08E-02	1.25E-02	1.77E-01
101	0.70	0.	1.84E-10	0.	0.	0.	1.42E-12	0.	0.	0.	1.57E-01	6.57E-02	1.28E-02	2.35E-01
102	0.60	0.	3.87E-11	0.	0.	0.	4.50E-12	0.	0.	0.	2.53E-01	7.35E-02	1.43E-02	3.41E-01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. 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.	1.10E-12	0.	0.	0.	1.18E-08	4.74E-07	2.67E-05	8.44E-06	3.56E-05
2	10.60	0.	0.	1.01E-12	0.	0.	0.	1.18E-08	4.88E-07	2.69E-05	8.39E-06	3.58E-05
3	10.50	0.	0.	1.03E-12	0.	0.	0.	1.19E-08	5.02E-07	2.70E-05	8.36E-06	3.59E-05
4	10.40	0.	0.	9.83E-13	0.	0.	0.	1.19E-08	5.17E-07	2.72E-05	8.32E-06	3.60E-05
5	10.30	0.	0.	8.65E-13	0.	0.	0.	1.19E-08	5.32E-07	2.73E-05	8.29E-06	3.62E-05
6	10.20	0.	0.	8.99E-13	0.	0.	0.	1.19E-08	5.48E-07	2.75E-05	8.25E-06	3.63E-05
7	10.10	0.	0.	8.51E-13	0.	0.	0.	1.19E-08	5.65E-07	2.75E-05	8.22E-06	3.63E-05
8	10.00	0.	0.	7.56E-13	0.	0.	0.	1.19E-08	5.82E-07	2.33E-05	8.18E-06	3.21E-05
9	9.90	0.	0.	7.77E-13	0.	0.	0.	1.20E-08	6.00E-07	2.34E-05	8.15E-06	3.22E-05
10	9.80	0.	0.	7.37E-13	0.	0.	0.	1.20E-08	6.18E-07	2.35E-05	8.11E-06	3.22E-05
11	9.70	0.	0.	6.44E-13	0.	0.	0.	1.20E-08	6.38E-07	2.35E-05	8.08E-06	3.23E-05
12	9.60	0.	0.	6.97E-13	0.	0.	0.	1.20E-08	6.58E-07	2.36E-05	8.04E-06	3.23E-05
13	9.50	0.	0.	6.03E-13	0.	0.	0.	1.20E-08	6.79E-07	2.37E-05	8.00E-06	3.24E-05
14	9.40	0.	0.	5.76E-13	0.	0.	0.	1.21E-08	7.02E-07	2.38E-05	7.97E-06	3.25E-05
15	9.30	0.	0.	5.92E-13	0.	0.	0.	1.21E-08	7.25E-07	2.39E-05	7.94E-06	3.25E-05
16	9.20	0.	0.	4.98E-13	0.	0.	0.	1.22E-08	7.49E-07	2.40E-05	7.90E-06	3.26E-05
17	9.10	0.	0.	5.12E-13	0.	0.	0.	1.22E-08	7.74E-07	1.02E-05	7.87E-06	1.89E-05
18	9.00	0.	0.	4.70E-13	0.	0.	0.	1.23E-08	8.00E-07	1.02E-05	7.84E-06	1.89E-05
19	8.90	0.	0.	4.40E-13	0.	0.	0.	1.23E-08	8.28E-07	1.03E-05	7.80E-06	1.89E-05
20	8.80	0.	0.	4.34E-13	0.	0.	0.	1.24E-08	8.57E-07	1.03E-05	7.77E-06	1.89E-05
21	8.70	0.	0.	3.81E-13	0.	0.	0.	1.24E-08	8.87E-07	1.03E-05	7.74E-06	1.90E-05
22	8.60	0.	0.	3.94E-13	0.	0.	0.	1.24E-08	9.18E-07	1.04E-05	7.71E-06	1.90E-05
23	8.50	0.	0.	3.50E-13	0.	0.	0.	1.25E-08	9.52E-07	1.04E-05	7.68E-06	1.91E-05
24	8.40	0.	0.	3.50E-13	0.	0.	0.	1.26E-08	9.86E-07	1.05E-05	7.65E-06	1.91E-05
25	8.30	0.	0.	3.00E-13	0.	0.	0.	1.26E-08	1.02E-06	1.05E-05	7.64E-06	1.92E-05
26	8.20	0.	0.	3.05E-13	0.	0.	0.	1.27E-08	1.06E-06	1.06E-05	7.65E-06	1.93E-05
27	8.10	0.	0.	2.67E-13	0.	0.	0.	1.28E-08	1.10E-06	1.07E-05	7.64E-06	1.94E-05
28	8.00	0.	0.	2.70E-13	0.	0.	0.	1.28E-08	1.14E-06	1.08E-05	7.65E-06	1.96E-05
29	7.90	0.	0.	2.35E-13	0.	0.	0.	1.29E-08	1.19E-06	1.09E-05	7.66E-06	1.97E-05
30	7.80	0.	0.	2.45E-13	0.	0.	0.	1.29E-08	1.23E-06	1.10E-05	7.67E-06	1.99E-05
31	7.70	0.	0.	2.17E-13	0.	0.	0.	1.30E-08	1.28E-06	1.11E-05	7.68E-06	2.00E-05
32	7.60	0.	0.	2.08E-13	0.	1.36E-17	0.	1.31E-08	1.34E-06	1.04E-05	7.69E-06	1.94E-05
33	7.50	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	7.40	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	7.30	0.	0.	1.68E-13	0.	1.51E-15	0.	1.33E-08	1.51E-06	1.08E-05	7.72E-06	2.00E-05
36	7.20	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	7.10	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	7.00	6.10E-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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	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	6.40	1.58E-17	0.	5.62E-14	2.34E-16	6.79E-14	0.	1.42E-08	2.25E-06	1.19E-05	7.87E-06	2.20E-05
45	6.30	9.24E-18	0.	3.57E-14	1.11E-15	5.03E-14	0.	1.44E-08	2.36E-06	1.21E-05	7.91E-06	2.24E-05
46	6.20	4.26E-18	0.	2.01E-14	1.60E-15	6.78E-14	0.	1.45E-08	2.47E-06	1.23E-05	7.98E-06	2.27E-05
47	6.10	1.95E-18	0.	9.58E-15	4.59E-15	8.25E-14	0.	1.46E-08	2.60E-06	1.25E-05	8.04E-06	2.31E-05
48	6.00	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	5.90	2.02E-19	0.	1.76E-16	6.59E-15	4.02E-14	0.	1.47E-08	2.87E-06	1.29E-05	8.18E-06	2.40E-05
50	5.80	2.58E-20	0.	4.46E-18	9.27E-15	4.20E-14	0.	1.45E-08	3.02E-06	1.32E-05	8.24E-06	2.44E-05
51	5.70	1.96E-21	0.	0.	1.10E-14	4.70E-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	NO 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	4.70E-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	5.86E-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	5.81E-14	0.	0.	1.30E-08	4.47E-06	1.37E-05	8.92E-06	2.71E-05
58	5.00	1.20E-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	2.95E-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	5.59E-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	3.58E-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	1.55E-14	0.	0.	1.39E-08	7.50E-06	1.93E-05	1.08E-05	3.76E-05
66	4.20	1.06E-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	1.10E-05	4.10E-05
68	4.00	9.52E-15	0.	5.71E-13	0.	1.26E-14	2.26E-15	0.	0.	1.41E-08	9.34E-06	2.23E-05	5.22E-06	3.69E-05
69	3.90	8.16E-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	8.09E-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	1.28E-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	3.39E-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.	6.58E-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	2.96E-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.	2.30E-13	0.	0.	0.	0.	0.	0.	6.82E-09	5.78E-05	6.20E-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.	6.57E-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.	6.05E-09	1.06E-04	1.12E-04	3.02E-05	2.49E-04
91	1.70	0.	5.51E-13	0.	0.	0.	0.	0.	0.	5.70E-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	6.28E-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.	3.30E-13	0.	0.	0.	0.	5.79E-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	1.19E-04	1.33E-03
99	0.90	0.	2.48E-13	0.	0.	0.	0.	1.07E-17	0.	0.	8.96E-04	6.43E-04	1.40E-04	1.68E-03
100	0.80	0.	1.17E-13	0.	0.	0.	0.	2.35E-16	0.	0.	1.29E-03	7.40E-04	1.60E-04	2.19E-03
101	0.70	0.	2.71E-14	0.	0.	0.	0.	2.21E-16	0.	0.	1.95E-03	8.00E-04	1.64E-04	2.91E-03
102	0.60	0.	5.71E-15	0.	0.	0.	0.	7.01E-16	0.	0.	3.15E-03	8.12E-04	1.83E-04	4.15E-03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

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

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	N2 H-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.	1.14E-16	0.	0.	0.	1.31E-11	5.52E-09	7.10E-07	9.26E-08	8.08E-07
2	10.60	0.	0.	1.04E-16	0.	0.	0.	1.31E-11	5.68E-09	7.19E-07	9.23E-08	8.17E-07
3	10.50	0.	0.	1.06E-16	0.	0.	0.	1.32E-11	5.84E-09	3.43E-07	9.19E-08	4.41E-07
4	10.40	0.	0.	1.01E-16	0.	0.	0.	1.32E-11	6.02E-09	3.45E-07	9.15E-08	4.42E-07
5	10.30	0.	0.	8.91E-17	0.	0.	0.	1.32E-11	6.19E-09	3.46E-07	9.12E-08	4.43E-07
6	10.20	0.	0.	9.26E-17	0.	0.	0.	1.32E-11	6.38E-09	3.48E-07	9.08E-08	4.45E-07
7	10.10	0.	0.	8.77E-17	0.	0.	0.	1.32E-11	6.57E-09	3.50E-07	9.05E-08	4.47E-07
8	10.00	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	7.43E-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	8.79E-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	8.40E-08	3.39E-07
23	8.50	0.	0.	3.61E-17	0.	0.	0.	1.38E-11	1.11E-08	2.47E-07	8.35E-08	3.41E-07
24	8.40	0.	0.	3.60E-17	0.	0.	0.	1.39E-11	1.15E-08	2.49E-07	8.33E-08	3.44E-07
25	8.30	0.	0.	3.10E-17	0.	0.	0.	1.40E-11	1.19E-08	2.52E-07	8.32E-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.	2.75E-17	0.	0.	0.	1.41E-11	1.28E-08	1.84E-07	8.36E-08	2.80E-07
28	8.00	0.	0.	2.78E-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.	1.62E-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.	1.13E-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.	5.50E-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	3.80E-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.	3.68E-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.	1.82E-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	2.90E-24	0.	4.59E-22	9.97E-19	4.52E-18	0.	1.60E-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 2	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	6.58E-18	0.	0.	1.40E-11	3.91E-08	1.76E-07	9.02E-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	6.30E-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.	1.29E-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.	1.46E-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	6.16E-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	9.17E-19	0.	2.79E-17	1.89E-14	1.26E-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	5.33E-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	9.10E-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	7.65E-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	3.45E-07	1.07E-07	6.66E-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	3.73E-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	1.02E-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.	2.86E-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	8.96E-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	2.96E-06
91	1.70	0.	5.68E-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	4.80E-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	8.90E-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	1.48E-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	3.06E-05
102	0.60	0.	5.88E-19	0.	0.	0.	0.	7.54E-20	0.	0.	3.65E-05	7.59E-06	1.50E-06	4.55E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 20000. 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.	9.09E-21	0.	0.	0.	1.80E-14	1.00E-10	1.09E-08	1.38E-09	1.24E-08
2	10.60	0.	0.	8.33E-21	0.	0.	0.	1.80E-14	1.03E-10	1.10E-08	1.37E-09	1.25E-08
3	10.50	0.	0.	8.46E-21	0.	0.	0.	1.80E-14	1.06E-10	1.11E-08	1.37E-09	1.26E-08
4	10.40	0.	0.	8.09E-21	0.	0.	0.	1.80E-14	1.09E-10	1.12E-08	1.37E-09	1.26E-08
5	10.30	0.	0.	7.12E-21	0.	0.	0.	1.80E-14	1.13E-10	1.12E-08	1.36E-09	1.27E-08
6	10.20	0.	0.	7.40E-21	0.	0.	0.	1.81E-14	1.16E-10	1.14E-08	1.36E-09	1.29E-08
7	10.10	0.	0.	7.01E-21	0.	0.	0.	1.81E-14	1.20E-10	1.15E-08	1.36E-09	1.30E-08
8	10.00	0.	0.	6.22E-21	0.	0.	0.	1.81E-14	1.23E-10	1.17E-08	1.36E-09	1.32E-08
9	9.90	0.	0.	6.40E-21	0.	0.	0.	1.82E-14	1.27E-10	1.18E-08	1.36E-09	1.33E-08
10	9.80	0.	0.	6.07E-21	0.	0.	0.	1.82E-14	1.31E-10	1.20E-08	1.36E-09	1.35E-08
11	9.70	0.	0.	5.30E-21	0.	0.	0.	1.82E-14	1.35E-10	1.21E-08	1.36E-09	1.36E-08
12	9.60	0.	0.	5.74E-21	0.	0.	0.	1.83E-14	1.39E-10	1.23E-08	1.36E-09	1.38E-08
13	9.50	0.	0.	4.97E-21	0.	0.	0.	1.83E-14	1.44E-10	1.24E-08	1.36E-09	1.39E-08
14	9.40	0.	0.	4.74E-21	0.	0.	0.	1.84E-14	1.48E-10	1.25E-08	1.36E-09	1.41E-08
15	9.30	0.	0.	4.87E-21	0.	0.	0.	1.84E-14	1.53E-10	1.14E-08	1.36E-09	1.30E-08
16	9.20	0.	0.	4.10E-21	0.	0.	0.	1.85E-14	1.58E-10	1.16E-08	1.36E-09	1.31E-08
17	9.10	0.	0.	4.22E-21	0.	0.	0.	1.86E-14	1.64E-10	1.17E-08	1.36E-09	1.32E-08
18	9.00	0.	0.	3.87E-21	0.	0.	0.	1.86E-14	1.69E-10	1.19E-08	1.36E-09	1.34E-08
19	8.90	0.	0.	3.62E-21	0.	0.	0.	1.87E-14	1.75E-10	1.20E-08	1.19E-09	1.34E-08
20	8.80	0.	0.	3.57E-21	0.	0.	0.	1.88E-14	1.81E-10	1.21E-08	1.17E-09	1.35E-08
21	8.70	0.	0.	3.14E-21	0.	0.	0.	1.88E-14	1.87E-10	1.23E-08	1.17E-09	1.36E-08
22	8.60	0.	0.	3.25E-21	0.	0.	0.	1.89E-14	1.94E-10	1.24E-08	1.18E-09	1.38E-08
23	8.50	0.	0.	2.88E-21	0.	0.	0.	1.90E-14	2.01E-10	1.26E-08	1.18E-09	1.40E-08
24	8.40	0.	0.	2.88E-21	0.	0.	0.	1.91E-14	2.08E-10	1.27E-08	1.18E-09	1.41E-08
25	8.30	0.	0.	2.47E-21	0.	0.	0.	1.92E-14	2.16E-10	7.22E-09	1.19E-09	8.63E-09
26	8.20	0.	0.	2.51E-21	0.	0.	0.	1.93E-14	2.24E-10	7.50E-09	1.20E-09	8.92E-09
27	8.10	0.	0.	2.20E-21	0.	0.	0.	1.94E-14	2.33E-10	7.78E-09	1.21E-09	9.22E-09
28	8.00	0.	0.	2.22E-21	0.	0.	0.	1.95E-14	2.42E-10	8.05E-09	1.22E-09	9.52E-09
29	7.90	0.	0.	1.93E-21	0.	0.	0.	1.95E-14	2.51E-10	8.33E-09	1.24E-09	9.82E-09
30	7.80	0.	0.	2.02E-21	0.	0.	0.	1.96E-14	2.61E-10	8.61E-09	1.25E-09	1.01E-08
31	7.70	0.	0.	1.79E-21	0.	0.	0.	1.97E-14	2.71E-10	8.92E-09	1.26E-09	1.05E-08
32	7.60	0.	0.	1.71E-21	0.	1.50E-25	0.	1.98E-14	2.82E-10	9.26E-09	1.28E-09	1.08E-08
33	7.50	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	7.40	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	7.30	0.	0.	1.39E-21	0.	1.66E-23	0.	2.02E-14	3.19E-10	9.32E-09	1.32E-09	1.10E-08
36	7.20	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	7.10	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	7.00	9.06E-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	6.90	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	6.80	1.55E-24	0.	1.02E-21	0.	6.80E-22	0.	2.09E-14	3.94E-10	1.18E-08	1.44E-09	1.36E-08
41	6.70	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	6.60	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	6.50	4.03E-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	6.40	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	6.30	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	6.20	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	6.10	2.87E-26	0.	7.89E-23	5.05E-23	9.09E-22	0.	2.21E-14	5.47E-10	1.53E-08	1.63E-09	1.75E-08
48	6.00	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	5.90	2.98E-27	0.	1.45E-24	7.26E-23	4.43E-22	0.	2.23E-14	6.05E-10	4.94E-09	1.18E-09	6.73E-09
50	5.80	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	5.70	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	5.60	1.27E-30	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	5.50	0.	0.	0.	0.	1.28E-22	6.24E-22	0.	0.	1.93E-14	7.49E-10	5.91E-09	1.25E-09	7.90E-09
54	5.40	0.	0.	0.	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	5.30	0.	0.	0.	0.	1.22E-22	6.45E-22	0.	0.	1.95E-14	8.38E-10	6.56E-09	1.30E-09	8.70E-09
56	5.20	0.	0.	0.	0.	1.32E-22	5.01E-22	0.	0.	1.96E-14	8.88E-10	6.89E-09	1.33E-09	9.11E-09
57	5.10	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	5.00	1.77E-23	0.	0.	0.	1.22E-22	6.09E-22	0.	0.	1.99E-14	10.00E-10	7.56E-09	1.31E-09	9.87E-09
59	4.90	4.39E-23	0.	0.	0.	1.36E-22	6.70E-22	0.	0.	2.01E-14	1.06E-09	7.90E-09	1.34E-09	1.03E-08
60	4.80	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	4.70	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	4.60	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	4.50	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	4.40	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	4.30	1.72E-22	0.	1.04E-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	4.20	1.60E-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	4.10	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	4.00	1.40E-22	0.	4.70E-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	3.90	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	3.80	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	3.70	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	3.60	1.06E-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	3.50	1.02E-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	3.30	7.61E-23	0.	2.33E-21	1.32E-16	9.51E-23	0.	0.	0.	1.04E-14	3.52E-09	6.84E-09	1.58E-09	1.19E-08
76	3.20	6.70E-23	0.	1.55E-21	2.09E-16	1.00E-22	0.	0.	0.	1.04E-14	3.86E-09	7.71E-09	1.54E-09	1.31E-08
77	3.10	6.48E-23	0.	1.21E-21	5.65E-17	9.60E-23	0.	0.	0.	1.04E-14	4.26E-09	8.69E-09	1.55E-09	1.45E-08
78	3.00	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	2.90	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	2.80	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	2.70	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	2.05E-08
82	2.60	1.65E-23	0.	5.18E-23	6.16E-18	1.26E-23	0.	0.	0.	1.05E-14	7.26E-09	1.38E-08	1.43E-09	2.25E-08
83	2.50	1.17E-24	0.	5.42E-24	6.02E-18	3.03E-24	0.	0.	0.	1.05E-14	8.18E-09	1.40E-08	1.64E-09	2.38E-08
84	2.40	0.	2.40E-22	0.	4.62E-18	3.26E-25	0.	0.	0.	1.05E-14	9.27E-09	1.62E-08	1.95E-09	2.74E-08
85	2.30	0.	7.10E-22	0.	0.	0.	0.	0.	0.	1.04E-14	1.05E-08	1.84E-08	2.28E-09	3.13E-08
86	2.20	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	2.10	0.	1.94E-21	0.	0.	0.	0.	0.	0.	1.03E-14	1.39E-08	2.31E-08	3.04E-09	4.01E-08
88	2.00	0.	3.88E-21	0.	0.	0.	0.	0.	0.	9.98E-15	1.61E-08	2.55E-08	2.97E-09	4.46E-08
89	1.90	0.	4.67E-21	0.	0.	0.	0.	0.	0.	9.60E-15	1.89E-08	1.63E-08	3.38E-09	3.85E-08
90	1.80	0.	4.00E-21	0.	0.	0.	0.	0.	0.	9.18E-15	2.22E-08	1.88E-08	4.07E-09	4.51E-08
91	1.70	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	1.60	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	1.50	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	1.40	0.	3.84E-21	0.	0.	0.	0.	0.	0.	0.	4.82E-08	2.88E-08	5.88E-09	8.29E-08
95	1.30	0.	2.95E-21	0.	0.	0.	0.	0.	0.	0.	6.04E-08	3.70E-08	8.18E-09	1.06E-07
96	1.20	0.	2.81E-21	0.	0.	0.	0.	0.	0.	0.	7.70E-08	3.28E-08	9.44E-09	1.19E-07
97	1.10	0.	2.71E-21	0.	0.	0.	0.	6.37E-27	0.	0.	1.00E-07	4.05E-08	1.20E-08	1.53E-07
98	1.00	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	0.90	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	0.80	0.	9.61E-22	0.	0.	0.	0.	2.59E-24	0.	0.	2.67E-07	6.38E-08	1.75E-08	3.48E-07
101	0.70	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	0.60	0.	4.70E-23	0.	0.	0.	0.	7.72E-24	0.	0.	6.49E-07	6.78E-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	10.70	0.	0.	1.97E-25	0.	0.	0.	2.44E-17	2.28E-12	3.23E-10	3.78E-11	3.63E-10
2	10.60	0.	0.	1.81E-25	0.	0.	0.	2.44E-17	2.35E-12	3.25E-10	3.77E-11	3.65E-10
3	10.50	0.	0.	1.84E-25	0.	0.	0.	2.44E-17	2.42E-12	3.27E-10	3.77E-11	3.67E-10
4	10.40	0.	0.	1.76E-25	0.	0.	0.	2.45E-17	2.49E-12	3.30E-10	3.76E-11	3.70E-10
5	10.30	0.	0.	1.55E-25	0.	0.	0.	2.45E-17	2.56E-12	3.33E-10	3.76E-11	3.73E-10
6	10.20	0.	0.	1.61E-25	0.	0.	0.	2.45E-17	2.64E-12	3.38E-10	3.79E-11	3.78E-10
7	10.10	0.	0.	1.52E-25	0.	0.	0.	2.46E-17	2.72E-12	3.43E-10	3.81E-11	3.83E-10
8	10.00	0.	0.	1.35E-25	0.	0.	0.	2.46E-17	2.80E-12	3.48E-10	3.84E-11	3.89E-10
9	9.90	0.	0.	1.39E-25	0.	0.	0.	2.46E-17	2.89E-12	3.52E-10	3.87E-11	3.94E-10
10	9.80	0.	0.	1.32E-25	0.	0.	0.	2.47E-17	2.98E-12	3.57E-10	3.90E-11	3.99E-10
11	9.70	0.	0.	1.15E-25	0.	0.	0.	2.47E-17	3.07E-12	3.62E-10	3.93E-11	4.05E-10
12	9.60	0.	0.	1.25E-25	0.	0.	0.	2.48E-17	3.17E-12	3.67E-10	3.95E-11	4.10E-10
13	9.50	0.	0.	1.08E-25	0.	0.	0.	2.48E-17	3.27E-12	3.72E-10	3.98E-11	4.15E-10
14	9.40	0.	0.	1.03E-25	0.	0.	0.	2.49E-17	3.37E-12	3.71E-10	4.02E-11	4.15E-10
15	9.30	0.	0.	1.06E-25	0.	0.	0.	2.50E-17	3.48E-12	3.76E-10	4.05E-11	4.20E-10
16	9.20	0.	0.	8.90E-26	0.	0.	0.	2.51E-17	3.60E-12	3.81E-10	4.07E-11	4.25E-10
17	9.10	0.	0.	9.16E-26	0.	0.	0.	2.52E-17	3.72E-12	3.86E-10	4.11E-11	4.30E-10
18	9.00	0.	0.	8.41E-26	0.	0.	0.	2.53E-17	3.84E-12	3.90E-10	2.81E-11	4.22E-10
19	8.90	0.	0.	7.86E-26	0.	0.	0.	2.54E-17	3.98E-12	3.95E-10	2.67E-11	4.26E-10
20	8.80	0.	0.	7.76E-26	0.	0.	0.	2.54E-17	4.11E-12	4.00E-10	2.72E-11	4.31E-10
21	8.70	0.	0.	6.82E-26	0.	0.	0.	2.55E-17	4.26E-12	4.05E-10	2.77E-11	4.37E-10
22	8.60	0.	0.	7.05E-26	0.	0.	0.	2.56E-17	4.41E-12	4.10E-10	2.81E-11	4.42E-10
23	8.50	0.	0.	6.26E-26	0.	0.	0.	2.57E-17	4.57E-12	4.15E-10	2.86E-11	4.48E-10
24	8.40	0.	0.	6.25E-26	0.	0.	0.	2.58E-17	4.73E-12	2.21E-10	2.90E-11	2.54E-10
25	8.30	0.	0.	5.37E-26	0.	0.	0.	2.60E-17	4.91E-12	2.28E-10	2.95E-11	2.62E-10
26	8.20	0.	0.	5.46E-26	0.	0.	0.	2.61E-17	5.09E-12	2.38E-10	3.04E-11	2.73E-10
27	8.10	0.	0.	4.77E-26	0.	0.	0.	2.63E-17	5.28E-12	2.47E-10	3.14E-11	2.84E-10
28	8.00	0.	0.	4.82E-26	0.	0.	0.	2.64E-17	5.48E-12	2.57E-10	3.23E-11	2.94E-10
29	7.90	0.	0.	4.20E-26	0.	0.	0.	2.65E-17	5.70E-12	2.66E-10	3.32E-11	3.05E-10
30	7.80	0.	0.	4.38E-26	0.	0.	0.	2.67E-17	5.92E-12	2.76E-10	3.41E-11	3.16E-10
31	7.70	0.	0.	3.88E-26	0.	0.	0.	2.68E-17	6.15E-12	2.86E-10	3.50E-11	3.28E-10
32	7.60	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	7.50	0.	0.	3.48E-26	0.	2.32E-29	0.	2.71E-17	6.66E-12	3.10E-10	3.69E-11	3.53E-10
34	7.40	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	7.30	0.	0.	3.01E-26	0.	7.88E-28	0.	2.74E-17	7.23E-12	2.99E-10	3.9 E-11	3.46E-10
36	7.20	0.	0.	2.74E-26	0.	2.19E-27	0.	2.75E-17	7.53E-12	3.16E-10	4.08E-11	3.65E-10
37	7.10	0.	0.	2.66E-26	0.	6.87E-27	0.	2.77E-17	7.86E-12	3.33E-10	4.25E-11	3.84E-10
38	7.00	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	6.90	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	6.80	1.63E-28	0.	2.21E-26	0.	3.23E-26	0.	2.84E-17	8.95E-12	3.84E-10	4.77E-11	4.41E-10
41	6.70	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	6.60	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	6.50	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	6.40	2.41E-29	0.	1.00E-26	1.22E-28	3.54E-26	0.	2.93E-17	1.07E-11	4.52E-10	5.48E-11	5.18E-10
45	6.30	1.41E-29	0.	6.38E-27	5.81E-28	2.63E-26	0.	2.95E-17	1.13E-11	4.69E-10	5.66E-11	5.37E-10
46	6.20	6.42E-30	0.	3.59E-27	8.34E-28	3.54E-26	0.	2.98E-17	1.18E-11	4.87E-10	5.87E-11	5.58E-10
47	6.10	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	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	3.09E-31	0.	3.15E-29	3.45E-27	2.10E-26	0.	3.02E-17	1.37E-11	1.43E-10	2.49E-11	1.82E-10
50	5.80	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	5.70	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) 1.293E-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	1.32E-34	0.	0.	0.	4.97E-27	3.20E-26	0.	0.	2.60E-17	1.61E-11	1.65E-10	2.70E-11	2.08E-10
53	5.50	0.	0.	0.	0.	6.08E-27	2.96E-26	0.	0.	2.61E-17	1.70E-11	1.75E-10	2.78E-11	2.19E-10
54	5.40	0.	0.	0.	0.	5.65E-27	2.45E-26	0.	0.	2.63E-17	1.79E-11	1.85E-10	2.89E-11	2.32E-10
55	5.30	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	5.20	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	5.10	0.	0.	0.	0.	6.28E-27	3.04E-26	0.	0.	2.68E-17	2.13E-11	2.17E-10	2.62E-11	2.64E-10
58	5.00	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	4.90	4.51E-27	0.	0.	0.	6.46E-27	3.18E-26	0.	0.	2.73E-17	2.41E-11	2.38E-10	2.84E-11	2.91E-10
60	4.80	8.54E-27	0.	0.	0.	6.96E-27	3.00E-26	0.	0.	2.75E-17	2.56E-11	2.49E-10	2.95E-11	3.04E-10
61	4.70	1.16E-26	0.	0.	0.	7.02E-27	2.73E-26	0.	0.	2.77E-17	2.73E-11	2.64E-10	3.08E-11	3.23E-10
62	4.60	1.62E-26	0.	0.	0.	7.25E-27	2.48E-26	0.	0.	2.80E-17	2.91E-11	2.85E-10	3.21E-11	3.46E-10
63	4.50	1.72E-26	0.	2.28E-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	4.40	1.85E-26	0.	6.68E-27	0.	6.75E-27	1.28E-26	0.	0.	2.84E-17	3.33E-11	3.25E-10	3.49E-11	3.94E-10
65	4.30	1.76E-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	4.20	1.66E-26	0.	7.04E-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	4.10	1.57E-26	0.	3.21E-26	0.	6.75E-27	1.58E-27	0.	0.	2.90E-17	4.12E-11	3.94E-10	3.28E-11	4.68E-10
68	4.00	1.45E-26	0.	1.02E-25	0.	6.56E-27	1.18E-27	0.	0.	2.91E-17	4.44E-11	4.16E-10	3.51E-11	4.96E-10
69	3.90	1.25E-26	0.	4.83E-26	2.06E-21	6.13E-27	4.41E-28	0.	0.	2.90E-17	4.80E-11	4.41E-10	3.75E-11	5.27E-10
70	3.80	1.37E-26	0.	7.78E-26	8.27E-21	6.61E-27	0.	0.	0.	2.89E-17	5.19E-11	4.66E-10	3.99E-11	5.57E-10
71	3.70	1.24E-26	0.	7.96E-26	3.79E-21	5.73E-27	0.	0.	0.	2.84E-17	5.62E-11	4.90E-10	4.26E-11	5.89E-10
72	3.60	1.12E-26	0.	5.81E-26	1.96E-20	6.19E-27	0.	0.	0.	2.66E-17	6.11E-11	5.15E-10	4.07E-11	6.17E-10
73	3.50	1.06E-26	0.	7.58E-26	3.54E-20	4.96E-27	0.	0.	0.	2.44E-17	6.65E-11	1.47E-10	4.35E-11	2.57E-10
74	3.40	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	3.30	7.89E-27	0.	5.06E-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	3.20	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	3.10	6.72E-27	0.	2.63E-26	9.20E-21	4.55E-27	0.	0.	0.	1.41E-17	9.62E-11	2.24E-10	3.50E-11	3.56E-10
78	3.00	6.09E-27	0.	1.63E-26	2.04E-20	4.34E-27	0.	0.	0.	1.42E-17	1.06E-10	2.52E-10	3.86E-11	3.97E-10
79	2.90	5.18E-27	0.	1.03E-26	1.11E-20	3.37E-27	0.	0.	0.	1.42E-17	1.18E-10	2.80E-10	4.24E-11	4.40E-10
80	2.80	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	2.70	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	2.60	1.71E-27	0.	1.12E-27	1.00E-21	5.97E-28	0.	0.	0.	1.42E-17	1.64E-10	3.58E-10	4.55E-11	5.68E-10
83	2.50	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	2.40	0.	5.22E-27	0.	7.53E-22	1.55E-29	0.	0.	0.	1.42E-17	2.09E-10	4.50E-10	5.85E-11	7.17E-10
85	2.30	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	2.20	0.	4.12E-26	0.	0.	0.	0.	0.	0.	1.40E-17	2.73E-10	5.60E-10	7.48E-11	9.07E-10
87	2.10	0.	4.21E-26	0.	0.	0.	0.	0.	0.	1.40E-17	3.14E-10	2.49E-10	4.58E-11	6.09E-10
88	2.00	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	1.90	0.	1.01E-25	0.	0.	0.	0.	0.	0.	1.30E-17	4.25E-10	3.18E-10	5.96E-11	8.03E-10
90	1.80	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	1.70	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	1.60	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	1.50	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	1.40	0.	8.34E-26	0.	0.	0.	0.	0.	0.	0.	1.08E-09	5.07E-10	9.84E-11	1.69E-09
95	1.30	0.	6.39E-26	0.	0.	0.	0.	0.	0.	0.	1.36E-09	1.11E-10	7.69E-11	1.55E-09
96	1.20	0.	6.10E-26	0.	0.	0.	0.	0.	0.	0.	1.73E-09	1.53E-10	9.61E-11	1.98E-09
97	1.10	0.	5.89E-26	0.	0.	0.	0.	3.02E-31	0.	0.	2.26E-09	1.89E-10	1.22E-10	2.57E-09
98	1.00	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	0.90	0.	4.44E-26	0.	0.	0.	0.	5.60E-30	0.	0.	4.17E-09	2.57E-10	1.54E-10	4.59E-09
100	0.80	0.	2.09E-26	0.	0.	0.	0.	1.23E-28	0.	0.	5.99E-09	2.45E-10	1.35E-10	6.37E-09
101	0.70	0.	4.85E-27	0.	0.	0.	0.	1.15E-28	0.	0.	9.02E-09	2.81E-10	1.55E-10	9.45E-09
102	0.60	0.	1.02E-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) 21000. 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.	4.14E-01	0.	0.	0.	5.10E 00	4.90E-01	3.02E 02	5.28E 00	3.13E 02
2	10.60	0.	0.	3.81E-01	0.	0.	0.	5.11E 00	5.04E-01	1.97E 01	5.26E 00	3.09E 01
3	10.50	0.	0.	3.88E-01	0.	0.	0.	5.11E 00	5.19E-01	1.97E 01	5.24E 00	3.10E 01
4	10.40	0.	0.	3.72E-01	0.	0.	0.	5.12E 00	5.34E-01	1.98E 01	5.22E 00	3.11E 01
5	10.30	0.	0.	3.28E-01	0.	0.	0.	5.13E 00	5.50E-01	1.99E 01	5.19E 00	3.11E 01
6	10.20	0.	0.	3.42E-01	0.	0.	0.	5.13E 00	5.67E-01	1.99E 01	5.17E 00	3.11E 01
7	10.10	0.	0.	3.24E-01	0.	0.	0.	5.14E 00	5.84E-01	1.99E 01	5.15E 00	3.11E 01
8	10.00	0.	0.	2.89E-01	0.	0.	0.	5.15E 00	6.02E-01	1.99E 01	5.12E 00	3.11E 01
9	9.90	0.	0.	2.98E-01	0.	0.	0.	5.16E 00	6.20E-01	1.99E 01	5.10E 00	3.11E 01
10	9.80	0.	0.	2.83E-01	0.	0.	0.	5.17E 00	6.40E-01	2.00E 01	5.08E 00	3.11E 01
11	9.70	0.	0.	2.48E-01	0.	0.	0.	5.18E 00	6.60E-01	2.00E 01	5.05E 00	3.12E 01
12	9.60	0.	0.	2.69E-01	0.	0.	0.	5.19E 00	6.81E-01	2.01E 01	5.03E 00	3.12E 01
13	9.50	0.	0.	2.33E-01	0.	0.	0.	5.19E 00	7.03E-01	2.01E 01	5.01E 00	3.13E 01
14	9.40	0.	0.	2.24E-01	0.	0.	0.	5.21E 00	7.26E-01	2.02E 01	4.98E 00	3.13E 01
15	9.30	0.	0.	2.30E-01	0.	0.	0.	5.23E 00	7.50E-01	2.03E 01	4.96E 00	3.14E 01
16	9.20	0.	0.	1.95E-01	0.	0.	0.	5.25E 00	7.75E-01	2.03E 01	4.94E 00	3.15E 01
17	9.10	0.	0.	2.00E-01	0.	0.	0.	5.27E 00	8.01E-01	8.07E 00	4.92E 00	1.93E 01
18	9.00	0.	0.	1.85E-01	0.	0.	0.	5.29E 00	8.28E-01	8.08E 00	4.90E 00	1.93E 01
19	8.90	0.	0.	1.73E-01	0.	0.	0.	5.31E 00	8.57E-01	8.09E 00	4.87E 00	1.93E 01
20	8.80	0.	0.	1.71E-01	0.	0.	0.	5.33E 00	8.86E-01	8.11E 00	4.85E 00	1.93E 01
21	8.70	0.	0.	1.51E-01	0.	0.	0.	5.35E 00	9.18E-01	8.12E 00	4.83E 00	1.94E 01
22	8.60	0.	0.	1.56E-01	0.	0.	0.	5.36E 00	9.50E-01	8.14E 00	4.81E 00	1.94E 01
23	8.50	0.	0.	1.39E-01	0.	0.	0.	5.38E 00	9.85E-01	8.17E 00	4.79E 00	1.95E 01
24	8.40	0.	0.	1.39E-01	0.	0.	0.	5.41E 00	1.02E 00	8.20E 00	4.77E 00	1.96E 01
25	8.30	0.	0.	1.20E-01	0.	0.	0.	5.44E 00	1.06E 00	8.24E 00	4.76E 00	1.96E 01
26	8.20	0.	0.	1.22E-01	0.	0.	0.	5.47E 00	1.10E 00	8.28E 00	4.77E 00	1.97E 01
27	8.10	0.	0.	1.07E-01	0.	0.	0.	5.50E 00	1.14E 00	8.31E 00	4.77E 00	1.98E 01
28	8.00	0.	0.	1.09E-01	0.	0.	0.	5.53E 00	1.18E 00	8.37E 00	4.78E 00	2.00E 01
29	7.90	0.	0.	9.50E-02	0.	0.	0.	5.55E 00	1.23E 00	8.43E 00	4.78E 00	2.01E 01
30	7.80	0.	0.	9.94E-02	0.	0.	0.	5.58E 00	1.28E 00	8.49E 00	4.78E 00	2.02E 01
31	7.70	0.	0.	8.85E-02	0.	0.	0.	5.61E 00	1.33E 00	8.56E 00	4.79E 00	2.04E 01
32	7.60	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	7.50	0.	0.	7.97E-02	0.	1.16E-05	0.	5.67E 00	1.44E 00	8.69E 00	4.79E 00	2.07E 01
34	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	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	6.80	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	6.70	1.40E-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	6.60	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	6.50	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	6.40	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	6.30	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	6.20	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	6.10	3.61E-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	6.00	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	5.90	3.77E-08	0.	7.65E-05	1.71E-03	1.06E-02	0.	6.33E 00	2.97E 00	1.01E 01	5.04E 00	2.45E 01
50	5.80	4.82E-09	0.	1.94E-06	2.41E-03	1.11E-02	0.	6.23E 00	3.13E 00	1.03E 01	5.08E 00	2.47E 01
51	5.70	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.	3.18E-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	2.26E-04	0.	0.	0.	2.93E-03	1.48E-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	5.98E 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.	5.90E 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.	6.00E 00	7.77E 00	1.69E 01	6.66E 00	3.74E 01
66	4.20	2.10E-03	0.	1.70E-01	0.	3.54E-03	2.87E-03	0.	0.	6.04E 00	8.34E 00	1.78E 01	6.85E 00	3.92E 01
67	4.10	1.98E-03	0.	7.90E-02	0.	3.50E-03	8.11E-04	0.	0.	6.07E 00	8.97E 00	1.87E 01	6.82E 00	4.06E 01
68	4.00	1.85E-03	0.	2.47E-01	0.	3.41E-03	6.07E-04	0.	0.	6.09E 00	9.67E 00	1.95E 01	3.35E 00	3.89E 01
69	3.90	1.59E-03	0.	1.18E-01	1.13E-02	3.19E-03	2.25E-04	0.	0.	6.07E 00	1.04E 01	1.94E 01	3.46E 00	3.95E 01
70	3.80	1.75E-03	0.	1.90E-01	4.41E-02	3.45E-03	0.	0.	0.	6.04E 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	3.00E-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.	5.57E 00	1.33E 01	1.77E 01	4.30E 00	4.12E 01
73	3.50	1.36E-03	0.	1.85E-01	1.88E-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.	2.94E 00	1.59E 01	2.09E 01	5.18E 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	1.80E-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.	4.06E-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	2.90	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	7.25E-04	0.	0.	0.	2.97E 00	3.20E 01	3.79E 01	9.08E 00	8.21E 01
82	2.60	2.28E-04	0.	2.80E-03	5.46E-03	3.27E-04	0.	0.	0.	2.97E 00	3.60E 01	4.12E 01	9.80E 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	4.70E 01	6.33E 00	9.69E 01
84	2.40	0.	1.27E-02	0.	4.04E-03	8.54E-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	4.89E 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.	2.06E-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.	2.46E 00	1.32E 02	1.27E 02	2.40E 01	2.86E 02
92	1.60	0.	1.76E-01	0.	0.	0.	0.	0.	0.	2.08E 00	1.59E 02	1.49E 02	2.83E 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.	1.97E-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.	1.40E-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.	1.28E-01	0.	0.	0.	0.	2.48E-06	0.	0.	6.74E 02	5.47E 02	7.80E 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	7.83E 02	1.06E 02	2.92E 03
102	0.60	0.	2.53E-03	0.	0.	0.	0.	1.91E-04	0.	0.	3.28E 03	8.76E 02	1.19E 02	4.28E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. 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.	2.59E-03	0.	0.	0.	1.22E-01	3.87E-02	2.39E 01	4.50E-01	2.45E 01
2	10.60	0.	0.	2.38E-03	0.	0.	0.	1.23E-01	3.98E-02	1.56E 00	4.48E-01	2.17E 00
3	10.50	0.	0.	2.43E-03	0.	0.	0.	1.23E-01	4.10E-02	1.56E 00	4.46E-01	2.18E 00
4	10.40	0.	0.	2.33E-03	0.	0.	0.	1.23E-01	4.22E-02	1.57E 00	4.44E-01	2.18E 00
5	10.30	0.	0.	2.05E-03	0.	0.	0.	1.23E-01	4.34E-02	1.57E 00	4.42E-01	2.18E 00
6	10.20	0.	0.	2.14E-03	0.	0.	0.	1.23E-01	4.47E-02	1.58E 00	4.40E-01	2.19E 00
7	10.10	0.	0.	2.03E-03	0.	0.	0.	1.23E-01	4.61E-02	1.57E 00	4.38E-01	2.18E 00
8	10.00	0.	0.	1.81E-03	0.	0.	0.	1.24E-01	4.75E-02	1.57E 00	4.37E-01	2.18E 00
9	9.90	0.	0.	1.86E-03	0.	0.	0.	1.24E-01	4.89E-02	1.58E 00	4.35E-01	2.19E 00
10	9.80	0.	0.	1.77E-03	0.	0.	0.	1.24E-01	5.05E-02	1.58E 00	4.33E-01	2.19E 00
11	9.70	0.	0.	1.55E-03	0.	0.	0.	1.24E-01	5.21E-02	1.58E 00	4.31E-01	2.19E 00
12	9.60	0.	0.	1.68E-03	0.	0.	0.	1.25E-01	5.37E-02	1.59E 00	4.28E-01	2.20E 00
13	9.50	0.	0.	1.46E-03	0.	0.	0.	1.25E-01	5.55E-02	1.59E 00	4.26E-01	2.20E 00
14	9.40	0.	0.	1.40E-03	0.	0.	0.	1.25E-01	5.73E-02	1.60E 00	4.25E-01	2.21E 00
15	9.30	0.	0.	1.44E-03	0.	0.	0.	1.26E-01	5.92E-02	1.60E 00	4.23E-01	2.21E 00
16	9.20	0.	0.	1.22E-03	0.	0.	0.	1.26E-01	6.11E-02	1.61E 00	4.21E-01	2.22E 00
17	9.10	0.	0.	1.25E-03	0.	0.	0.	1.27E-01	6.32E-02	6.39E-01	4.19E-01	1.25E 00
18	9.00	0.	0.	1.16E-03	0.	0.	0.	1.27E-01	6.53E-02	6.40E-01	4.17E-01	1.25E 00
19	8.90	0.	0.	1.08E-03	0.	0.	0.	1.27E-01	6.76E-02	6.41E-01	4.15E-01	1.25E 00
20	8.80	0.	0.	1.07E-03	0.	0.	0.	1.28E-01	6.99E-02	6.42E-01	4.14E-01	1.25E 00
21	8.70	0.	0.	9.45E-04	0.	0.	0.	1.28E-01	7.24E-02	6.43E-01	4.12E-01	1.26E 00
22	8.60	0.	0.	9.79E-04	0.	0.	0.	1.29E-01	7.50E-02	6.45E-01	4.10E-01	1.26E 00
23	8.50	0.	0.	8.72E-04	0.	0.	0.	1.29E-01	7.77E-02	6.47E-01	4.08E-01	1.26E 00
24	8.40	0.	0.	8.73E-04	0.	0.	0.	1.30E-01	8.05E-02	6.50E-01	4.07E-01	1.27E 00
25	8.30	0.	0.	7.53E-04	0.	0.	0.	1.31E-01	8.35E-02	6.53E-01	4.06E-01	1.27E 00
26	8.20	0.	0.	7.66E-04	0.	0.	0.	1.31E-01	8.66E-02	6.56E-01	4.06E-01	1.28E 00
27	8.10	0.	0.	6.72E-04	0.	0.	0.	1.32E-01	8.99E-02	6.58E-01	4.07E-01	1.29E 00
28	8.00	0.	0.	6.81E-04	0.	0.	0.	1.33E-01	9.34E-02	6.63E-01	4.07E-01	1.30E 00
29	7.90	0.	0.	5.95E-04	0.	0.	0.	1.33E-01	9.70E-02	6.68E-01	4.07E-01	1.31E 00
30	7.80	0.	0.	6.22E-04	0.	0.	0.	1.34E-01	1.01E-01	6.73E-01	4.08E-01	1.32E 00
31	7.70	0.	0.	5.54E-04	0.	0.	0.	1.35E-01	1.05E-01	6.78E-01	4.08E-01	1.33E 00
32	7.60	0.	0.	5.31E-04	0.	2.45E-08	0.	1.35E-01	1.09E-01	6.83E-01	4.08E-01	1.34E 00
33	7.50	0.	0.	4.99E-04	0.	7.82E-08	0.	1.36E-01	1.13E-01	6.88E-01	4.09E-01	1.35E 00
34	7.40	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	7.30	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	7.20	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	7.10	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	7.00	8.12E-08	0.	3.58E-04	0.	4.51E-05	0.	1.41E-01	1.40E-01	7.13E-01	4.10E-01	1.40E 00
39	6.90	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	6.80	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	6.70	1.02E-07	0.	2.88E-04	0.	1.06E-04	0.	1.44E-01	1.60E-01	7.29E-01	4.12E-01	1.44E 00
42	6.60	6.25E-08	0.	2.61E-04	0.	9.18E-05	0.	1.45E-01	1.67E-01	7.36E-01	4.13E-01	1.46E 00
43	6.50	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	6.40	2.11E-08	0.	1.50E-04	4.02E-07	1.19E-04	0.	1.47E-01	1.83E-01	7.53E-01	4.15E-01	1.50E 00
45	6.30	1.24E-08	0.	9.56E-05	1.92E-06	9.00E-05	0.	1.49E-01	1.92E-01	7.61E-01	4.17E-01	1.52E 00
46	6.20	5.64E-09	0.	5.41E-05	2.77E-06	1.20E-04	0.	1.50E-01	2.02E-01	7.70E-01	4.20E-01	1.54E 00
47	6.10	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	6.00	1.11E-09	0.	6.67E-06	7.81E-06	7.40E-05	0.	1.52E-01	2.23E-01	7.90E-01	4.26E-01	1.59E 00
49	5.90	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	5.80	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	5.70	2.58E-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	1.00E-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	8.18E-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.	1.98E-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.	3.46E-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	1.34E-05	0.	1.54E-03	0.	2.30E-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	9.78E-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	2.02E-05	0.	0.	0.	1.43E-01	9.67E-01	1.30E 00	3.35E-01	2.75E 00
72	3.60	1.05E-05	0.	8.92E-04	2.36E-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	1.76E-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.	7.63E-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.	7.80E-04	2.58E-03	1.61E-05	0.	0.	0.	7.08E-02	1.37E 00	1.83E 00	4.82E-01	3.75E 00
76	3.20	6.55E-06	0.	5.22E-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.	4.09E-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.	1.61E-04	1.32E-03	1.22E-05	0.	0.	0.	7.14E-02	2.03E 00	2.54E 00	6.59E-01	5.30E 00
80	2.80	5.18E-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	4.88E-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	2.20E-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	5.76E-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.	7.06E-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.	7.03E-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.	6.26E-02	8.73E 00	8.38E 00	1.68E 00	1.89E 01
91	1.70	0.	1.46E-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	1.26E 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	3.50E 00	4.17E 01
95	1.30	0.	9.43E-04	0.	0.	0.	0.	0.	0.	0.	2.37E 01	2.58E 01	4.61E 00	5.42E 01
96	1.20	0.	8.99E-04	0.	0.	0.	0.	0.	0.	0.	3.03E 01	2.89E 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.	8.03E-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.	1.95E-08	0.	0.	7.36E 01	4.98E 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.	1.60E 02	6.19E 01	9.03E 00	2.31E 02
102	0.60	0.	1.58E-05	0.	0.	0.	0.	1.29E-06	0.	0.	2.59E 02	6.93E 01	1.01E 01	3.38E 02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. DENSITY (GM/CC) 1.293E-04 (1.0E-01 NORMAL)

	PHOTON ENERGY E.V.	O2 S-R BANDS	O2 S-R CONT.	O2 H-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.	6.11E-06	0.	0.	0.	1.55E-03	1.93E-03	1.16E 00	2.56E-02	1.19E 00
2	10.60	0.	0.	5.62E-06	0.	0.	0.	1.55E-03	1.98E-03	7.61E-02	2.55E-02	1.05E-01
3	10.50	0.	0.	5.72E-06	0.	0.	0.	1.56E-03	2.04E-03	7.64E-02	2.54E-02	1.05E-01
4	10.40	0.	0.	5.49E-06	0.	0.	0.	1.56E-03	2.10E-03	7.67E-02	2.52E-02	1.06E-01
5	10.30	0.	0.	4.85E-06	0.	0.	0.	1.56E-03	2.16E-03	7.69E-02	2.51E-02	1.06E-01
6	10.20	0.	0.	5.05E-06	0.	0.	0.	1.56E-03	2.23E-03	7.71E-02	2.50E-02	1.06E-01
7	10.10	0.	0.	4.79E-06	0.	0.	0.	1.57E-03	2.29E-03	7.69E-02	2.49E-02	1.06E-01
8	10.00	0.	0.	4.27E-06	0.	0.	0.	1.57E-03	2.36E-03	7.66E-02	2.48E-02	1.05E-01
9	9.90	0.	0.	4.40E-06	0.	0.	0.	1.57E-03	2.44E-03	7.68E-02	2.47E-02	1.05E-01
10	9.80	0.	0.	4.18E-06	0.	0.	0.	1.57E-03	2.51E-03	7.69E-02	2.46E-02	1.06E-01
11	9.70	0.	0.	3.66E-06	0.	0.	0.	1.58E-03	2.59E-03	7.71E-02	2.45E-02	1.06E-01
12	9.60	0.	0.	3.97E-06	0.	0.	0.	1.58E-03	2.67E-03	7.73E-02	2.43E-02	1.06E-01
13	9.50	0.	0.	3.45E-06	0.	0.	0.	1.58E-03	2.76E-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.	2.06E-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.	1.78E-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.	1.40E-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.	1.25E-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.	1.18E-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.	6.53E-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	6.96E-02
43	6.50	1.17E-10	0.	4.99E-07	0.	3.58E-07	0.	1.85E-03	8.71E-03	3.63E-02	2.35E-02	7.04E-02
44	6.40	6.80E-11	0.	3.53E-07	1.11E-09	3.29E-07	0.	1.87E-03	9.13E-03	3.67E-02	2.36E-02	7.13E-02
45	6.30	3.99E-11	0.	2.26E-07	5.30E-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	8.46E-12	0.	6.12E-08	2.20E-08	4.01E-07	0.	1.91E-03	1.06E-02	3.81E-02	2.40E-02	7.46E-02
48	6.00	3.57E-12	0.	1.57E-08	2.15E-08	2.04E-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	2.07E-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	7.99E-02

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. 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	3.77E-16	0.	0.	0.	4.66E-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	8.56E-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	5.3.E-09	0.	0.	0.	5.45E-08	2.75E-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	4.98E-02	2.76E-02	9.97E-02
60	4.80	2.48E-08	0.	0.	0.	6.61E-08	2.86E-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.	6.90E-08	2.37E-07	0.	0.	1.78E-03	2.49E-02	5.59E-02	2.97E-02	1.12E-01
63	4.50	5.04E-08	0.	8.18E-08	0.	6.40E-08	1.79E-07	0.	0.	1.80E-03	2.66E-02	5.88E-02	3.05E-02	1.18E-01
64	4.40	5.45E-08	0.	2.37E-07	0.	6.46E-08	1.22E-07	0.	0.	1.81E-03	2.85E-02	6.18E-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.	6.58E-08	5.34E-08	0.	0.	1.84E-03	3.28E-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.	3.64E-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.	2.10E-06	2.50E-05	6.04E-08	0.	0.	0.	1.70E-03	5.23E-02	6.84E-02	2.08E-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	7.28E-02	2.28E-02	1.54E-01
74	3.40	2.97E-08	0.	1.80E-06	7.48E-06	5.48E-08	0.	0.	0.	8.96E-04	6.23E-02	8.08E-02	2.51E-02	1.69E-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	8.90E-02	2.74E-02	1.86E-01
76	3.20	2.11E-08	0.	1.23E-06	4.23E-05	4.70E-08	0.	0.	0.	8.99E-04	7.50E-02	9.72E-02	2.98E-02	2.03E-01
77	3.10	2.05E-08	0.	9.66E-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	1.86E-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	2.40E-08	0.	0.	0.	9.06E-04	1.13E-01	1.34E-01	4.06E-02	2.89E-01
81	2.70	1.10E-08	0.	8.63E-08	1.21E-05	1.35E-08	0.	0.	0.	9.06E-04	1.26E-01	1.46E-01	4.40E-02	3.17E-01
82	2.60	5.33E-09	0.	4.14E-08	1.28E-06	6.08E-09	0.	0.	0.	9.06E-04	1.41E-01	1.58E-01	4.74E-02	3.48E-01
83	2.50	3.78E-10	0.	4.30E-09	1.26E-06	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	4.28E-01
85	2.30	0.	5.46E-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	5.06E-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.	3.53E-06	0.	0.	0.	0.	0.	0.	8.30E-04	3.68E-01	3.40E-01	7.83E-02	7.86E-01
90	1.80	0.	3.04E-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	4.90E-01	1.16E-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.	2.88E-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.	1.18E 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.	2.06E-06	0.	0.	0.	2.82E-12	0.	0.	0.	1.97E 00	1.73E 00	3.31E-01	4.03E 00
98	1.00	0.	1.89E-06	0.	0.	0.	4.61E-11	0.	0.	0.	2.65E 00	2.10E 00	3.77E-01	5.12E 00
99	0.90	0.	1.55E-06	0.	0.	0.	5.39E-11	0.	0.	0.	3.66E 00	2.42E 00	4.43E-01	6.53E 00
100	0.80	0.	7.29E-07	0.	0.	0.	1.19E-09	0.	0.	0.	5.27E 00	2.79E 00	5.08E-01	8.57E 00
101	0.70	0.	1.68E-07	0.	0.	0.	1.13E-09	0.	0.	0.	7.98E 00	3.01E 00	5.13E-01	1.15E 01
102	0.60	0.	3.74E-08	0.	0.	0.	3.56E-09	0.	0.	0.	1.29E 01	3.36E 00	5.74E-01	1.68E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. 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.	2.51E-09	0.	0.	0.	5.21E-06	4.02E-05	2.36E-02	5.95E-04	2.42E-02
2	10.60	0.	0.	2.31E-09	0.	0.	0.	5.22E-06	4.13E-05	1.61E-03	5.92E-04	2.25E-03
3	10.50	0.	0.	2.35E-09	0.	0.	0.	5.22E-06	4.25E-05	1.62E-03	5.89E-04	2.26E-03
4	10.40	0.	0.	2.26E-09	0.	0.	0.	5.23E-06	4.38E-05	1.63E-03	5.87E-04	2.26E-03
5	10.30	0.	0.	1.99E-09	0.	0.	0.	5.24E-06	4.51E-05	1.63E-03	5.84E-04	2.27E-03
6	10.20	0.	0.	2.08E-09	0.	0.	0.	5.24E-06	4.64E-05	1.64E-03	5.82E-04	2.27E-03
7	10.10	0.	0.	1.97E-09	0.	0.	0.	5.25E-06	4.79E-05	1.63E-03	5.79E-04	2.27E-03
8	10.00	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	1.58E-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.	1.40E-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.	1.05E-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.	6.03E-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.	3.08E-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.	8.60E-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.	1.38E-10	0.	6.13E-06	1.66E-04	7.48E-04	5.44E-04	1.46E-03
42	6.60	1.09E-13	0.	2.54E-10	0.	1.19E-10	0.	6.17E-06	1.74E-04	7.57E-04	5.46E-04	1.48E-03
43	6.50	6.34E-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	1.55E-10	0.	6.27E-06	1.90E-04	7.72E-04	5.48E-04	1.52E-03
45	6.30	2.16E-14	0.	9.28E-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	3.60E-12	1.57E-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	1.89E-10	0.	6.41E-06	2.20E-04	8.02E-04	5.59E-04	1.59E-03
48	6.00	1.93E-15	0.	6.47E-12	1.02E-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	9.29E-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	2.04E-19	0.	0.	0.	2.19E-11	1.41E-10	0.	0.	5.56E-06	2.86E-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.	5.59E-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.	2.57E-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	3.80E-04	9.59E-04	6.20E-04	1.96E-03
58	5.00	2.86E-12	0.	0.	0.	2.57E-11	1.79E-10	0.	0.	5.79E-06	4.03E-04	9.90E-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.	3.25E-11	1.12E-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	2.52E-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.	4.80E-10	0.	3.07E-11	7.10E-12	0.	0.	6.20E-06	7.36E-04	1.48E-03	7.67E-04	2.99E-03
68	4.00	2.34E-11	0.	1.50E-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	7.52E-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	3.02E-11	0.	0.	0.	6.17E-06	9.26E-04	1.56E-03	4.06E-04	2.90E-03
71	3.70	2.00E-11	0.	1.17E-09	1.40E-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	1.60E-11	0.	7.40E-10	2.13E-08	2.58E-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.	7.56E-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	7.50E-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	8.07E-04	5.08E-03
79	2.90	8.59E-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	9.03E-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.	3.55E-11	3.46E-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	2.04E-13	0.	1.77E-12	3.58E-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.	2.70E-09	7.48E-14	0.	0.	0.	3.04E-06	3.77E-03	4.30E-03	8.29E-04	8.90E-03
85	2.30	0.	2.25E-10	0.	0.	0.	0.	0.	0.	3.01E-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.	3.00E-06	4.91E-03	4.55E-03	1.18E-03	1.06E-02
87	2.10	0.	6.13E-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	6.04E-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.	1.25E-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.	1.07E-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.	9.15E-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.	5.52E-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.	3.00E-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	6.10E-02	1.19E-02	2.39E-01
102	0.60	0.	1.54E-11	0.	0.	0.	0.	1.68E-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) 1.293E-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.	3.27E-13	0.	0.	0.	6.71E-09	4.79E-07	2.59E-05	7.17E-06	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-06	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-06	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-06	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-06	3.43E-05
6	10.20	0.	0.	2.70E-13	0.	0.	0.	6.75E-09	5.53E-07	2.69E-05	7.00E-06	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-06	3.46E-05
8	10.00	0.	0.	2.28E-13	0.	0.	0.	6.77E-09	5.88E-07	2.01E-05	6.94E-06	2.77E-05
9	9.90	0.	0.	2.35E-13	0.	0.	0.	6.78E-09	6.06E-07	2.02E-05	6.91E-06	2.77E-05
10	9.80	0.	0.	2.23E-13	0.	0.	0.	6.79E-09	6.25E-07	2.03E-05	6.88E-06	2.78E-05
11	9.70	0.	0.	1.96E-13	0.	0.	0.	6.81E-09	6.44E-07	2.04E-05	6.84E-06	2.78E-05
12	9.60	0.	0.	2.12E-13	0.	0.	0.	6.82E-09	6.65E-07	2.04E-05	6.81E-06	2.79E-05
13	9.50	0.	0.	1.84E-13	0.	0.	0.	6.83E-09	6.86E-07	2.05E-05	6.78E-06	2.80E-05
14	9.40	0.	0.	1.77E-13	0.	0.	0.	6.85E-09	7.09E-07	2.06E-05	6.75E-06	2.81E-05
15	9.30	0.	0.	1.82E-13	0.	0.	0.	6.88E-09	7.32E-07	2.07E-05	6.73E-06	2.82E-05
16	9.20	0.	0.	1.54E-13	0.	0.	0.	6.90E-09	7.56E-07	2.08E-05	6.70E-06	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-06	1.74E-05
18	9.00	0.	0.	1.46E-13	0.	0.	0.	6.95E-09	8.08E-07	1.00E-05	6.64E-06	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-06	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-06	1.76E-05
21	8.70	0.	0.	1.19E-13	0.	0.	0.	7.03E-09	8.96E-07	1.02E-05	6.56E-06	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-06	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-06	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-06	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-06	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-06	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-06	1.82E-05
28	8.00	0.	0.	8.59E-14	0.	0.	0.	7.26E-09	1.15E-06	1.08E-05	6.46E-06	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-06	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-06	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-06	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-06	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-06	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-06	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-06	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-06	1.87E-05
37	7.10	0.	0.	4.86E-14	0.	4.17E-15	0.	7.64E-09	1.66E-06	1.08E-05	6.53E-06	1.90E-05
38	7.00	2.00E-17	0.	4.51E-14	0.	7.94E-15	0.	7.70E-09	1.73E-06	1.10E-05	6.54E-06	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-06	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-06	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-06	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-06	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-06	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-06	2.07E-05
45	6.30	3.05E-18	0.	1.21E-14	3.39E-16	1.59E-14	0.	8.13E-09	2.38E-06	1.20E-05	6.68E-06	2.11E-05
46	6.20	1.39E-18	0.	6.82E-15	4.88E-16	2.12E-14	0.	8.20E-09	2.50E-06	1.23E-05	6.74E-06	2.15E-05
47	6.10	6.47E-19	0.	3.27E-15	1.40E-15	2.56E-14	0.	8.26E-09	2.62E-06	1.25E-05	6.80E-06	2.19E-05
48	6.00	2.73E-19	0.	8.41E-16	1.38E-15	1.30E-14	0.	8.32E-09	2.76E-06	1.28E-05	6.85E-06	2.24E-05
49	5.90	6.75E-20	0.	6.04E-17	2.04E-15	1.26E-14	0.	8.32E-09	2.90E-06	1.30E-05	6.91E-06	2.29E-05
50	5.80	8.63E-21	0.	1.53E-18	2.87E-15	1.32E-14	0.	8.20E-09	3.06E-06	1.33E-05	6.96E-06	2.34E-05
51	5.70	6.36E-22	0.	0.	3.41E-15	1.48E-14	0.	7.70E-09	3.22E-06	1.36E-05	7.02E-06	2.39E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 21000. 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.	3.40E-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.	7.28E-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	4.26E-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	4.52E-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	4.80E-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	3.75E-15	0.	1.34E-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	3.55E-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.	4.05E-15	7.21E-16	0.	0.	8.01E-09	9.44E-06	2.07E-05	4.58E-06	3.47E-05
69	3.90	2.85E-15	0.	9.28E-14	9.03E-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	3.36E-05
71	3.70	2.83E-15	0.	1.52E-13	1.68E-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	1.83E-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	8.40E-06	5.45E-05
77	3.10	1.57E-15	0.	5.16E-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.	3.20E-14	8.82E-11	2.76E-15	0.	0.	0.	3.90E-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.	4.61E-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	4.07E-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.	2.30E-16	4.30E-12	9.40E-17	0.	0.	0.	3.91E-09	3.96E-05	4.46E-05	8.31E-06	9.25E-05
84	2.40	0.	1.01E-14	0.	3.24E-12	1.01E-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	1.10E-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.	7.96E-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.	1.62E-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.	1.83E-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	1.90E-04	1.80E-04	4.62E-05	4.16E-04
94	1.40	0.	1.55E-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	6.60E-04
96	1.20	0.	1.13E-13	0.	0.	0.	0.	0.	0.	0.	3.75E-04	3.28E-04	7.32E-05	7.76E-04
97	1.10	0.	1.10E-13	0.	0.	0.	0.	1.80E-19	0.	0.	4.89E-04	4.04E-04	9.16E-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.	8.30E-14	0.	0.	0.	0.	3.44E-18	0.	0.	9.10E-04	5.64E-04	1.23E-04	1.60E-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	2.10E-03
101	0.70	0.	8.99E-15	0.	0.	0.	0.	7.25E-17	0.	0.	1.98E-03	7.01E-04	1.42E-04	2.82E-03
102	0.60	0.	2.00E-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 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.	3.22E-17	0.	0.	0.	7.83E-12	6.31E-09	9.54E-07	8.39E-08	1.04E-06
2	10.60	0.	0.	2.96E-17	0.	0.	0.	7.84E-12	6.49E-09	9.68E-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.	2.55E-17	0.	0.	0.	7.87E-12	7.08E-09	3.89E-07	8.27E-08	4.79E-07
6	10.20	0.	0.	2.65E-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.	2.20E-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.	8.00E-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	4.10E-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	3.41E-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.	8.34E-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.	6.59E-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	1.04E-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	6.04E-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	1.70E-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	1.50E-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	7.85E-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	1.01E-24	0.	1.50E-22	3.07E-19	1.41E-18	0.	9.56E-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	2.03E-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	2.05E-18	0.	0.	8.35E-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.	8.40E-12	4.73E-08	2.21E-07	8.06E-08	3.49E-07
54	5.40	0.	0.	0.	0.	3.64E-19	1.58E-18	0.	0.	8.44E-12	5.00E-08	2.31E-07	8.17E-08	3.63E-07
55	5.30	0.	0.	0.	0.	3.73E-19	1.96E-18	0.	0.	8.50E-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.	8.55E-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.	8.62E-12	5.94E-08	2.63E-07	8.63E-08	4.09E-07
58	5.00	4.71E-20	0.	0.	0.	3.73E-19	1.88E-18	0.	0.	8.70E-12	6.31E-08	2.74E-07	8.79E-08	4.25E-07
59	4.90	1.16E-19	0.	0.	0.	4.18E-19	2.07E-18	0.	0.	8.77E-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.	8.84E-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.	8.91E-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.	8.99E-12	8.13E-08	3.34E-07	9.50E-08	5.10E-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	4.84E-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.	4.26E-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.	4.50E-19	3.65E-19	0.	0.	9.27E-12	1.07E-07	4.24E-07	9.02E-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	4.06E-19	2.86E-20	0.	0.	9.31E-12	1.34E-07	4.53E-07	5.98E-08	6.47E-07
70	3.80	3.65E-19	0.	1.48E-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	3.30E-19	0.	1.50E-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	7.78E-14	4.13E-19	0.	0.	0.	8.55E-12	1.71E-07	5.27E-07	7.40E-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	5.61E-07	8.07E-08	8.28E-07
74	3.40	2.64E-19	0.	9.46E-18	2.33E-14	3.75E-19	0.	0.	0.	4.51E-12	2.03E-07	6.01E-07	8.83E-08	8.93E-07
75	3.30	2.13E-19	0.	9.67E-18	8.49E-14	3.04E-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	3.70E-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.	2.00E-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.	4.56E-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	8.68E-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	1.00E-07	1.20E-06
84	2.40	0.	9.89E-19	0.	2.95E-15	1.09E-21	0.	0.	0.	4.56E-12	5.88E-07	6.86E-07	1.21E-07	1.39E-06
85	2.30	0.	2.87E-18	0.	0.	0.	0.	0.	0.	4.53E-12	6.70E-07	8.01E-07	1.43E-07	1.61E-06
86	2.20	0.	7.75E-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	1.30E-06	2.57E-07	2.76E-06
90	1.80	0.	1.60E-17	0.	0.	0.	0.	0.	0.	4.00E-12	1.41E-06	1.50E-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	1.60E-06	4.07E-07	4.04E-06
93	1.50	0.	1.55E-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.	1.53E-17	0.	0.	0.	0.	0.	0.	0.	3.06E-06	1.92E-06	5.58E-07	5.54E-06
95	1.30	0.	1.17E-17	0.	0.	0.	0.	0.	0.	0.	3.84E-06	2.72E-06	6.04E-07	7.16E-06
96	1.20	0.	1.12E-17	0.	0.	0.	0.	0.	0.	0.	4.90E-06	3.50E-06	8.04E-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	9.43E-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.	3.83E-18	0.	0.	0.	0.	8.13E-21	0.	0.	1.71E-05	6.08E-06	1.35E-06	2.45E-05
101	0.70	0.	8.85E-19	0.	0.	0.	0.	7.76E-21	0.	0.	2.58E-05	5.76E-06	1.18E-06	3.28E-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 (1.0E-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.	1.88E-21	0.	0.	0.	1.17E-14	1.39E-10	1.37E-08	1.58E-09	1.54E-08
2	10.60	0.	0.	1.73E-21	0.	0.	0.	1.17E-14	1.43E-10	1.38E-08	1.58E-09	1.55E-08
3	10.50	0.	0.	1.76E-21	0.	0.	0.	1.17E-14	1.47E-10	1.39E-08	1.58E-09	1.56E-08
4	10.40	0.	0.	1.69E-21	0.	0.	0.	1.17E-14	1.52E-10	1.40E-08	1.58E-09	1.57E-08
5	10.30	0.	0.	1.49E-21	0.	0.	0.	1.17E-14	1.56E-10	1.42E-08	1.57E-09	1.59E-08
6	10.20	0.	0.	1.55E-21	0.	0.	0.	1.18E-14	1.61E-10	1.44E-08	1.58E-09	1.61E-08
7	10.10	0.	0.	1.48E-21	0.	0.	0.	1.18E-14	1.66E-10	1.46E-08	1.58E-09	1.63E-08
8	10.00	0.	0.	1.32E-21	0.	0.	0.	1.18E-14	1.71E-10	1.48E-08	1.59E-09	1.65E-08
9	9.90	0.	0.	1.35E-21	0.	0.	0.	1.18E-14	1.76E-10	1.50E-08	1.59E-09	1.67E-08
10	9.80	0.	0.	1.29E-21	0.	0.	0.	1.18E-14	1.81E-10	1.52E-08	1.60E-09	1.70E-08
11	9.70	0.	0.	1.13E-21	0.	0.	0.	1.19E-14	1.87E-10	1.54E-08	1.60E-09	1.72E-08
12	9.60	0.	0.	1.22E-21	0.	0.	0.	1.19E-14	1.93E-10	1.56E-08	1.61E-09	1.74E-08
13	9.50	0.	0.	1.06E-21	0.	0.	0.	1.19E-14	1.99E-10	1.58E-08	1.61E-09	1.76E-08
14	9.40	0.	0.	1.02E-21	0.	0.	0.	1.19E-14	2.06E-10	1.60E-08	1.62E-09	1.78E-08
15	9.30	0.	0.	1.05E-21	0.	0.	0.	1.20E-14	2.13E-10	1.54E-08	1.63E-09	1.72E-08
16	9.20	0.	0.	8.86E-22	0.	0.	0.	1.20E-14	2.20E-10	1.56E-08	1.63E-09	1.75E-08
17	9.10	0.	0.	9.12E-22	0.	0.	0.	1.21E-14	2.27E-10	1.58E-08	1.64E-09	1.77E-08
18	9.00	0.	0.	8.40E-22	0.	0.	0.	1.21E-14	2.35E-10	1.60E-08	1.64E-09	1.79E-08
19	8.90	0.	0.	7.88E-22	0.	0.	0.	1.22E-14	2.43E-10	1.62E-08	1.65E-09	1.81E-08
20	8.80	0.	0.	7.79E-22	0.	0.	0.	1.22E-14	2.51E-10	1.64E-08	1.30E-09	1.80E-08
21	8.70	0.	0.	6.87E-22	0.	0.	0.	1.22E-14	2.60E-10	1.66E-08	1.30E-09	1.82E-08
22	8.60	0.	0.	7.12E-22	0.	0.	0.	1.23E-14	2.69E-10	1.68E-08	1.31E-09	1.84E-08
23	8.50	0.	0.	6.34E-22	0.	0.	0.	1.23E-14	2.79E-10	1.71E-08	1.32E-09	1.87E-08
24	8.40	0.	0.	6.35E-22	0.	0.	0.	1.24E-14	2.89E-10	1.73E-08	1.33E-09	1.89E-08
25	8.30	0.	0.	5.47E-22	0.	0.	0.	1.25E-14	3.00E-10	1.00E-08	1.35E-09	1.17E-08
26	8.20	0.	0.	5.57E-22	0.	0.	0.	1.25E-14	3.11E-10	1.04E-08	1.37E-09	1.21E-08
27	8.10	0.	0.	4.89E-22	0.	0.	0.	1.26E-14	3.23E-10	1.08E-08	1.40E-09	1.25E-08
28	8.00	0.	0.	4.95E-22	0.	0.	0.	1.27E-14	3.35E-10	1.12E-08	1.42E-09	1.30E-08
29	7.90	0.	0.	4.32E-22	0.	0.	0.	1.27E-14	3.48E-10	1.16E-08	1.45E-09	1.34E-08
30	7.80	0.	0.	4.52E-22	0.	0.	0.	1.28E-14	3.61E-10	1.20E-08	1.47E-09	1.39E-08
31	7.70	0.	0.	4.03E-22	0.	0.	0.	1.28E-14	3.76E-10	1.25E-08	1.50E-09	1.43E-08
32	7.60	0.	0.	3.86E-22	0.	4.12E-26	0.	1.29E-14	3.91E-10	1.30E-08	1.52E-09	1.49E-08
33	7.50	0.	0.	3.63E-22	0.	1.31E-25	0.	1.30E-14	4.07E-10	1.35E-08	1.55E-09	1.54E-08
34	7.40	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	7.30	0.	0.	3.16E-22	0.	4.51E-24	0.	1.31E-14	4.41E-10	1.28E-08	1.61E-09	1.49E-08
36	7.20	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	7.10	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	7.00	3.15E-25	0.	2.60E-22	0.	7.56E-23	0.	1.34E-14	5.01E-10	1.49E-08	1.75E-09	1.72E-08
39	6.90	6.19E-25	0.	2.42E-22	0.	1.11E-22	0.	1.35E-14	5.23E-10	1.56E-08	1.79E-09	1.79E-08
40	6.80	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	6.70	3.95E-25	0.	2.09E-22	0.	1.78E-22	0.	1.37E-14	5.72E-10	1.70E-08	1.89E-09	1.95E-08
42	6.60	2.42E-25	0.	1.90E-22	0.	1.54E-22	0.	1.39E-14	5.98E-10	1.77E-08	1.94E-09	2.03E-08
43	6.50	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	6.40	8.17E-26	0.	1.09E-22	6.75E-25	2.00E-22	0.	1.41E-14	6.56E-10	1.91E-08	2.04E-09	2.18E-08
45	6.30	4.80E-26	0.	6.95E-23	3.22E-24	1.51E-22	0.	1.42E-14	6.88E-10	1.98E-08	2.09E-09	2.26E-08
46	6.20	2.19E-26	0.	3.93E-23	9.54E-24	2.02E-22	0.	1.43E-14	7.22E-10	2.06E-08	2.15E-09	2.34E-08
47	6.10	1.02E-26	0.	1.88E-23	2.34E-23	2.44E-22	0.	1.44E-14	7.59E-10	2.13E-08	2.21E-09	2.43E-08
48	6.00	4.28E-27	0.	4.85E-24	7.31E-23	1.24E-22	0.	1.45E-14	7.97E-10	6.56E-09	1.26E-09	8.62E-09
49	5.90	1.06E-27	0.	3.48E-25	1.94E-23	1.20E-22	0.	1.45E-14	8.39E-10	6.79E-09	1.27E-09	8.90E-09
50	5.80	1.36E-28	0.	6.81E-27	2.73E-23	1.26E-22	0.	1.43E-14	8.84E-10	7.02E-09	1.29E-09	9.19E-09
51	5.70	9.91E-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) 1.293E-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 (INS)	N P.E.	O P.E.	TOTAL AIR
92	5.60	4.53E-31	0.	0.	0.	2.83E-23	1.82E-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.	3.46E-23	1.69E-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	4.37E-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	1.85E-22	0.	0.	1.31E-14	1.47E-09	1.11E-08	1.45E-09	1.41E-08
60	4.80	2.9 E-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
61	4.70	4.04E-23	0.	0.	0.	4.06E-23	1.59E-22	0.	0.	1.33E-14	1.67E-09	1.23E-08	1.55E-09	1.56E-08
62	4.60	5.7 E-23	0.	0.	0.	4.20E-23	1.44E-22	0.	0.	1.34E-14	1.78E-09	1.33E-08	1.61E-09	1.66E-08
63	4.50	6.05E-23	0.	2.52E-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
64	4.40	6.54E-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
65	4.30	6.2 E-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
66	4.20	5.89E-23	0.	7.74E-22	0.	4.00E-23	3.25E-23	0.	0.	1.39E-14	2.35E-09	1.71E-08	1.24E-09	2.07E-08
67	4.10	5.55E-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
68	4.00	5.2 E-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
69	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	1.48E-09	2.46E-08
70	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
71	3.70	4.46E-23	0.	8.77E-22	6.97E-18	3.40E-23	0.	0.	0.	1.36E-14	3.44E-09	2.24E-08	1.68E-09	2.75E-08
72	3.60	4.06E-23	0.	6.48E-22	3.55E-17	3.67E-23	0.	0.	0.	1.28E-14	3.74E-09	2.36E-08	1.81E-09	2.91E-08
73	3.50	3.83E-23	0.	8.41E-22	6.27E-17	2.96E-23	0.	0.	0.	1.17E-14	4.08E-09	2.48E-08	1.94E-09	3.08E-08
74	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
75	3.30	2.87E-23	0.	5.67E-22	3.87E-17	2.70E-23	0.	0.	0.	6.75E-15	4.88E-09	8.94E-09	2.09E-09	1.59E-08
76	3.20	2.54E-23	0.	3.80E-22	6.00E-17	2.86E-23	0.	0.	0.	6.76E-15	5.35E-09	1.01E-08	1.89E-09	1.74E-08
77	3.10	2.46E-23	0.	2.98E-22	1.69E-17	2.74E-23	0.	0.	0.	6.78E-15	5.90E-09	1.15E-08	1.78E-09	1.92E-08
78	3.00	2.24E-23	0.	1.85E-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
79	2.90	1.91E-23	0.	1.17E-22	1.98E-17	2.05E-23	0.	0.	0.	6.81E-15	7.22E-09	1.43E-08	2.12E-09	2.36E-08
80	2.80	2.01E-23	0.	5.65E-23	1.39E-17	1.46E-23	0.	0.	0.	6.82E-15	8.03E-09	1.57E-08	2.31E-09	2.60E-08
81	2.70	1.37E-23	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
82	2.60	6.4 E-24	0.	1.28E-23	1.87E-18	3.70E-24	0.	0.	0.	6.82E-15	1.01E-08	1.85E-08	1.94E-09	3.05E-08
83	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
84	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
85	2.30	0.	1.68E-22	0.	0.	0.	0.	0.	0.	6.76E-15	1.46E-08	2.53E-08	2.96E-09	4.29E-08
86	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
87	2.10	0.	4.09E-22	0.	0.	0.	0.	0.	0.	6.71E-15	1.93E-08	3.12E-08	3.84E-09	5.49E-08
88	2.00	0.	9.25E-22	0.	0.	0.	0.	0.	0.	6.49E-15	2.23E-08	3.42E-08	4.28E-09	6.09E-08
89	1.90	0.	1.09E-21	0.	0.	0.	0.	0.	0.	6.24E-15	2.61E-08	1.89E-08	3.59E-09	4.86E-08
90	1.80	0.	9.36E-22	0.	0.	0.	0.	0.	0.	5.97E-15	3.08E-08	2.14E-08	4.28E-09	5.65E-08
91	1.70	0.	1.06E-21	0.	0.	0.	0.	0.	0.	5.63E-15	3.68E-08	2.43E-08	5.09E-09	6.61E-08
92	1.60	0.	8.01E-22	0.	0.	0.	0.	0.	0.	4.76E-15	4.43E-08	2.71E-08	5.73E-09	7.72E-08
93	1.50	0.	9.10E-22	0.	0.	0.	0.	0.	0.	2.16E-15	5.40E-08	3.09E-08	6.83E-09	9.18E-08
94	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
95	1.30	0.	6.85E-22	0.	0.	0.	0.	0.	0.	0.	8.35E-08	3.86E-08	8.28E-09	1.30E-07
96	1.20	0.	6.54E-22	0.	0.	0.	0.	0.	0.	0.	1.07E-07	2.39E-08	8.55E-09	1.39E-07
97	1.10	0.	6.35E-22	0.	0.	0.	0.	1.72E-27	0.	0.	1.39E-07	2.96E-08	1.08E-08	1.79E-07
98	1.00	0.	5.84E-22	0.	0.	0.	0.	2.80E-26	0.	0.	1.86E-07	3.60E-08	1.31E-08	2.35E-07
99	0.90	0.	4.79E-22	0.	0.	0.	0.	3.28E-26	0.	0.	2.57E-07	4.03E-08	1.35E-08	3.11E-07
100	0.80	0.	2.25E-22	0.	0.	0.	0.	7.24E-25	0.	0.	3.69E-07	4.65E-08	1.57E-08	4.32E-07
101	0.70	0.	5.19E-23	0.	0.	0.	0.	6.90E-25	0.	0.	5.58E-07	4.41E-08	1.37E-08	6.15E-07
102	0.60	0.	1.15E-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 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.82E-26	0.	0.	0.	1.11E-17	2.76E-12	3.03E-10	4.65E-11	3.52E-10
2	10.60	0.	0.	1.67E-26	0.	0.	0.	1.11E-17	2.84E-12	3.06E-10	4.65E-11	3.55E-10
3	10.50	0.	0.	1.70E-26	0.	0.	0.	1.11E-17	2.92E-12	3.08E-10	4.65E-11	3.57E-10
4	10.40	0.	0.	1.63E-26	0.	0.	0.	1.11E-17	3.01E-12	3.10E-10	4.65E-11	3.60E-10
5	10.30	0.	0.	1.44E-26	0.	0.	0.	1.11E-17	3.10E-12	3.14E-10	4.66E-11	3.63E-10
6	10.20	0.	0.	1.50E-26	0.	0.	0.	1.12E-17	3.19E-12	3.18E-10	4.70E-11	3.69E-10
7	10.10	0.	0.	1.42E-26	0.	0.	0.	1.12E-17	3.29E-12	3.23E-10	4.75E-11	3.74E-10
8	10.00	0.	0.	1.27E-26	0.	0.	0.	1.12E-17	3.39E-12	3.28E-10	4.80E-11	3.80E-10
9	9.90	0.	0.	1.31E-26	0.	0.	0.	1.12E-17	3.49E-12	3.33E-10	4.85E-11	3.85E-10
10	9.80	0.	0.	1.24E-26	0.	0.	0.	1.12E-17	3.60E-12	3.38E-10	4.90E-11	3.91E-10
11	9.70	0.	0.	1.09E-26	0.	0.	0.	1.12E-17	3.71E-12	3.43E-10	4.95E-11	3.96E-10
12	9.60	0.	0.	1.18E-26	0.	0.	0.	1.13E-17	3.83E-12	3.48E-10	5.00E-11	4.02E-10
13	9.50	0.	0.	1.03E-26	0.	0.	0.	1.13E-17	3.95E-12	3.53E-10	5.05E-11	4.07E-10
14	9.40	0.	0.	9.84E-27	0.	0.	0.	1.13E-17	4.08E-12	3.55E-10	5.10E-11	4.10E-10
15	9.30	0.	0.	1.01E-26	0.	0.	0.	1.14E-17	4.21E-12	3.60E-10	5.16E-11	4.16E-10
16	9.20	0.	0.	8.56E-27	0.	0.	0.	1.14E-17	4.35E-12	3.65E-10	5.20E-11	4.22E-10
17	9.10	0.	0.	8.81E-27	0.	0.	0.	1.14E-17	4.50E-12	3.70E-10	5.26E-11	4.27E-10
18	9.00	0.	0.	8.12E-27	0.	0.	0.	1.15E-17	4.65E-12	3.75E-10	5.47E-11	4.14E-10
19	8.90	0.	0.	7.61E-27	0.	0.	0.	1.15E-17	4.81E-12	3.80E-10	3.27E-11	4.18E-10
20	8.80	0.	0.	7.52E-27	0.	0.	0.	1.16E-17	4.98E-12	3.85E-10	3.34E-11	4.23E-10
21	8.70	0.	0.	6.64E-27	0.	0.	0.	1.16E-17	5.15E-12	3.90E-10	3.42E-11	4.29E-10
22	8.60	0.	0.	6.88E-27	0.	0.	0.	1.17E-17	5.33E-12	3.95E-10	3.49E-11	4.35E-10
23	8.50	0.	0.	6.12E-27	0.	0.	0.	1.17E-17	5.52E-12	4.00E-10	3.57E-11	4.42E-10
24	8.40	0.	0.	6.13E-27	0.	0.	0.	1.18E-17	5.72E-12	2.23E-10	3.64E-11	2.45E-10
25	8.30	0.	0.	5.29E-27	0.	0.	0.	1.18E-17	5.93E-12	2.31E-10	3.72E-11	2.74E-10
26	8.20	0.	0.	5.38E-27	0.	0.	0.	1.19E-17	6.16E-12	2.40E-10	3.86E-11	2.85E-10
27	8.10	0.	0.	4.72E-27	0.	0.	0.	1.19E-17	6.39E-12	2.50E-10	4.00E-11	2.96E-10
28	8.00	0.	0.	4.79E-27	0.	0.	0.	1.20E-17	6.63E-12	2.59E-10	4.14E-11	3.07E-10
29	7.90	0.	0.	4.18E-27	0.	0.	0.	1.21E-17	6.89E-12	2.69E-10	4.27E-11	3.18E-10
30	7.80	0.	0.	4.37E-27	0.	0.	0.	1.21E-17	7.16E-12	2.79E-10	4.41E-11	3.30E-10
31	7.70	0.	0.	3.89E-27	0.	0.	0.	1.22E-17	7.44E-12	2.89E-10	4.55E-11	3.42E-10
32	7.60	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	7.50	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	7.40	0.	0.	3.18E-27	0.	2.73E-29	0.	1.24E-17	8.39E-12	3.23E-10	5.01E-11	3.42E-10
35	7.30	0.	0.	3.05E-27	0.	1.03E-28	0.	1.24E-17	8.74E-12	3.37E-10	5.18E-11	3.57E-10
36	7.20	0.	0.	2.79E-27	0.	2.89E-28	0.	1.25E-17	9.11E-12	3.14E-10	5.45E-11	3.77E-10
37	7.10	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	7.00	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	6.90	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	6.80	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	6.70	2.15E-29	0.	2.02E-27	0.	4.09E-27	0.	1.30E-17	1.13E-11	3.97E-10	6.77E-11	4.76E-10
42	6.60	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	6.50	7.67E-30	0.	1.49E-27	0.	5.00E-27	0.	1.32E-17	1.24E-11	4.31E-10	7.30E-11	5.16E-10
44	6.40	4.44E-30	0.	1.05E-27	1.55E-29	4.58E-27	0.	1.33E-17	1.30E-11	4.48E-10	7.58E-11	5.37E-10
45	6.30	2.61E-30	0.	6.72E-28	7.39E-29	3.46E-27	0.	1.34E-17	1.36E-11	4.65E-10	7.86E-11	5.57E-10
46	6.20	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	6.10	5.52E-31	0.	1.82E-28	3.06E-28	5.59E-27	0.	1.36E-17	1.50E-11	1.39E-10	2.91E-11	1.83E-10
48	6.00	2.33E-31	0.	4.68E-29	3.00E-28	2.85E-27	0.	1.37E-17	1.58E-11	1.44E-10	2.94E-11	1.89E-10
49	5.90	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	5.80	7.37E-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	5.70	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 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.	1.82E-26	0.	0.	0.	1.11E-17	2.76E-12	3.03E-10	4.65E-11	3.52E-10
2	10.60	0.	0.	1.67E-26	0.	0.	0.	1.11E-17	2.84E-12	3.06E-10	4.65E-11	3.55E-10
3	10.50	0.	0.	1.70E-26	0.	0.	0.	1.11E-17	2.92E-12	3.08E-10	4.65E-11	3.57E-10
4	10.40	0.	0.	1.63E-26	0.	0.	0.	1.11E-17	3.01E-12	3.10E-10	4.65E-11	3.60E-10
5	10.30	0.	0.	1.44E-26	0.	0.	0.	1.11E-17	3.10E-12	3.14E-10	4.66E-11	3.63E-10
6	10.20	0.	0.	1.50E-26	0.	0.	0.	1.12E-17	3.19E-12	3.18E-10	4.70E-11	3.69E-10
7	10.10	0.	0.	1.42E-26	0.	0.	0.	1.12E-17	3.29E-12	3.23E-10	4.75E-11	3.74E-10
8	10.00	0.	0.	1.27E-26	0.	0.	0.	1.12E-17	3.39E-12	3.28E-10	4.80E-11	3.80E-10
9	9.90	0.	0.	1.31E-26	0.	0.	0.	1.12E-17	3.49E-12	3.33E-10	4.85E-11	3.85E-10
10	9.80	0.	0.	1.24E-26	0.	0.	0.	1.12E-17	3.60E-12	3.38E-10	4.90E-11	3.91E-10
11	9.70	0.	0.	1.09E-26	0.	0.	0.	1.12E-17	3.71E-12	3.43E-10	4.95E-11	3.96E-10
12	9.60	0.	0.	1.18E-26	0.	0.	0.	1.13E-17	3.83E-12	3.48E-10	5.00E-11	4.02E-10
13	9.50	0.	0.	1.03E-26	0.	0.	0.	1.13E-17	3.95E-12	3.53E-10	5.05E-11	4.07E-10
14	9.40	0.	0.	9.84E-27	0.	0.	0.	1.13E-17	4.08E-12	3.55E-10	5.10E-11	4.10E-10
15	9.30	0.	0.	1.01E-26	0.	0.	0.	1.14E-17	4.21E-12	3.60E-10	5.16E-11	4.16E-10
16	9.20	0.	0.	8.56E-27	0.	0.	0.	1.14E-17	4.35E-12	3.65E-10	5.20E-11	4.22E-10
17	9.10	0.	0.	8.81E-27	0.	0.	0.	1.14E-17	4.50E-12	3.70E-10	5.26E-11	4.27E-10
18	9.00	0.	0.	8.12E-27	0.	0.	0.	1.15E-17	4.65E-12	3.75E-10	5.47E-11	4.14E-10
19	8.90	0.	0.	7.61E-27	0.	0.	0.	1.15E-17	4.81E-12	3.80E-10	3.27E-11	4.18E-10
20	8.80	0.	0.	7.52E-27	0.	0.	0.	1.16E-17	4.98E-12	3.85E-10	3.34E-11	4.23E-10
21	8.70	0.	0.	6.64E-27	0.	0.	0.	1.16E-17	5.15E-12	3.90E-10	3.42E-11	4.29E-10
22	8.60	0.	0.	6.88E-27	0.	0.	0.	1.17E-17	5.33E-12	3.95E-10	3.49E-11	4.35E-10
23	8.50	0.	0.	6.12E-27	0.	0.	0.	1.17E-17	5.52E-12	4.00E-10	3.57E-11	4.42E-10
24	8.40	0.	0.	6.13E-27	0.	0.	0.	1.18E-17	5.72E-12	2.23E-10	3.64E-11	2.45E-10
25	8.30	0.	0.	5.29E-27	0.	0.	0.	1.18E-17	5.93E-12	2.31E-10	3.72E-11	2.74E-10
26	8.20	0.	0.	5.38E-27	0.	0.	0.	1.19E-17	6.16E-12	2.40E-10	3.86E-11	2.85E-10
27	8.10	0.	0.	4.72E-27	0.	0.	0.	1.19E-17	6.39E-12	2.50E-10	4.00E-11	2.96E-10
28	8.00	0.	0.	4.79E-27	0.	0.	0.	1.20E-17	6.63E-12	2.59E-10	4.14E-11	3.07E-10
29	7.90	0.	0.	4.18E-27	0.	0.	0.	1.21E-17	6.89E-12	2.69E-10	4.27E-11	3.18E-10
30	7.80	0.	0.	4.37E-27	0.	0.	0.	1.21E-17	7.16E-12	2.79E-10	4.41E-11	3.30E-10
31	7.70	0.	0.	3.89E-27	0.	0.	0.	1.22E-17	7.44E-12	2.89E-10	4.55E-11	3.42E-10
32	7.60	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	7.50	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	7.40	0.	0.	3.18E-27	0.	2.73E-29	0.	1.24E-17	8.39E-12	2.83E-10	5.01E-11	3.42E-10
35	7.30	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	7.20	0.	0.	2.79E-27	0.	2.89E-28	0.	1.25E-17	9.11E-12	3.14E-10	5.45E-11	3.77E-10
37	7.10	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	7.00	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	6.90	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	6.80	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	6.70	2.15E-29	0.	2.02E-27	0.	4.09E-27	0.	1.30E-17	1.13E-11	3.97E-10	6.77E-11	4.76E-10
42	6.60	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	6.50	7.67E-30	0.	1.49E-27	0.	5.00E-27	0.	1.32E-17	1.24E-11	4.31E-10	7.30E-11	5.16E-10
44	6.40	4.44E-30	0.	1.05E-27	1.55E-29	4.58E-27	0.	1.33E-17	1.30E-11	4.48E-10	7.58E-11	5.37E-10
45	6.30	2.61E-30	0.	6.72E-28	7.39E-29	3.46E-27	0.	1.34E-17	1.36E-11	4.65E-10	7.86E-11	5.57E-10
46	6.20	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	6.10	5.52E-31	0.	1.82E-28	3.06E-28	5.59E-27	0.	1.36E-17	1.50E-11	1.39E-10	2.91E-11	1.83E-10
48	6.00	2.33E-31	0.	4.68E-29	3.00E-28	2.85E-27	0.	1.37E-17	1.58E-11	1.44E-10	2.94E-11	1.89E-10
49	5.90	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	5.80	7.37E-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	5.70	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 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	2.46E-35	0.	0.	0.	6.49E-28	4.17E-27	0.	0.	1.18E-17	1.94E-11	1.72E-10	3.36E-11	2.25E-10
53	5.50	0.	0.	0.	0.	7.94E-28	3.86E-27	0.	0.	1.19E-17	2.05E-11	1.83E-10	3.49E-11	2.38E-10
54	5.40	0.	0.	0.	0.	7.41E-28	3.22E-27	0.	0.	1.20E-17	2.17E-11	1.94E-10	3.65E-11	2.52E-10
55	5.30	0.	0.	0.	0.	7.60E-28	4.00E-27	0.	0.	1.20E-17	2.30E-11	2.05E-10	3.84E-11	2.67E-10
56	5.20	0.	0.	0.	0.	8.24E-28	3.15E-27	0.	0.	1.21E-17	2.43E-11	2.16E-10	3.07E-11	2.71E-10
57	5.10	0.	0.	0.	0.	8.26E-28	4.01E-27	0.	0.	1.22E-17	2.58E-11	2.28E-10	3.23E-11	2.86E-10
58	5.00	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	4.90	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	4.80	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	4.70	2.22E-27	0.	0.	0.	9.30E-28	3.65E-27	0.	0.	1.26E-17	3.30E-11	2.78E-10	3.89E-11	3.50E-10
62	4.60	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	4.50	3.29E-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	4.40	3.56E-27	0.	7.07E-28	0.	9.00E-28	1.70E-27	0.	0.	1.29E-17	4.03E-11	3.42E-10	4.51E-11	4.27E-10
65	4.30	3.40E-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	4.20	3.20E-27	0.	7.48E-27	0.	9.17E-28	7.44E-28	0.	0.	1.31E-17	4.64E-11	3.88E-10	4.49E-11	4.80E-10
67	4.10	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	4.00	2.82E-27	0.	1.08E-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	3.90	2.43E-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	3.80	2.68E-27	0.	8.35E-27	1.10E-21	8.95E-28	0.	0.	0.	1.31E-17	6.27E-11	4.92E-10	5.96E-11	6.14E-10
71	3.70	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	3.60	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	6.47E-10
73	3.50	2.08E-27	0.	8.13E-27	4.71E-21	6.78E-28	0.	0.	0.	1.11E-17	8.05E-11	1.56E-10	6.31E-11	3.00E-10
74	3.40	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	6.76E-11	3.25E-10
75	3.30	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	5.06E-11	3.30E-10
76	3.20	1.38E-27	0.	3.67E-27	4.50E-21	6.56E-28	0.	0.	0.	6.41E-18	1.06E-10	2.09E-10	4.09E-11	3.55E-10
77	3.10	1.34E-27	0.	2.87E-27	1.27E-21	6.28E-28	0.	0.	0.	6.43E-18	1.16E-10	2.39E-10	4.61E-11	4.01E-10
78	3.00	1.22E-27	0.	1.78E-27	2.75E-21	6.02E-28	0.	0.	0.	6.44E-18	1.29E-10	2.68E-10	5.13E-11	4.48E-10
79	2.90	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	2.80	1.09E-27	0.	5.45E-28	1.04E-21	3.35E-28	0.	0.	0.	6.47E-18	1.58E-10	3.28E-10	6.04E-11	5.47E-10
81	2.70	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	2.60	3.48E-28	0.	1.23E-28	1.37E-22	8.47E-29	0.	0.	0.	6.47E-18	1.98E-10	3.86E-10	6.74E-11	6.51E-10
83	2.50	2.47E-29	0.	1.28E-29	1.34E-22	2.05E-29	0.	0.	0.	6.47E-18	2.24E-10	4.25E-10	7.49E-11	7.23E-10
84	2.40	0.	5.60E-28	0.	1.01E-22	2.21E-30	0.	0.	0.	6.47E-18	2.53E-10	4.83E-10	8.54E-11	8.22E-10
85	2.30	0.	1.63E-27	0.	0.	0.	0.	0.	0.	6.41E-18	2.88E-10	5.41E-10	9.61E-11	9.26E-10
86	2.20	0.	4.38E-27	0.	0.	0.	0.	0.	0.	6.39E-18	3.30E-10	6.00E-10	1.07E-10	1.04E-09
87	2.10	0.	4.43E-27	0.	0.	0.	0.	0.	0.	6.36E-18	3.80E-10	2.59E-10	5.46E-11	6.93E-10
88	2.00	0.	8.91E-27	0.	0.	0.	0.	0.	0.	6.16E-18	4.40E-10	2.94E-10	6.20E-11	7.96E-10
89	1.90	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	1.80	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	1.70	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	1.60	0.	7.74E-27	0.	0.	0.	0.	0.	0.	4.92E-18	8.72E-10	4.41E-10	10.00E-11	1.41E-09
93	1.50	0.	8.79E-27	0.	0.	0.	0.	0.	0.	2.05E-18	1.06E-09	4.74E-10	1.09E-10	1.65E-09
94	1.40	0.	8.64E-27	0.	0.	0.	0.	0.	0.	0.	1.31E-09	5.16E-10	1.12E-10	1.94E-09
95	1.30	0.	6.62E-27	0.	0.	0.	0.	0.	0.	0.	1.64E-09	5.40E-11	5.04E-11	1.75E-09
96	1.20	0.	6.32E-27	0.	0.	0.	0.	0.	0.	0.	2.10E-09	7.42E-11	6.20E-11	2.23E-09
97	1.10	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	1.00	0.	5.64E-27	0.	0.	0.	0.	6.43E-31	0.	0.	3.66E-09	1.12E-10	9.64E-11	3.87E-09
99	0.90	0.	4.62E-27	0.	0.	0.	0.	7.51E-31	0.	0.	5.05E-09	1.25E-10	9.97E-11	5.28E-09
100	0.80	0.	2.17E-27	0.	0.	0.	0.	1.66E-29	0.	0.	7.25E-09	1.20E-10	8.75E-11	7.46E-09
101	0.70	0.	5.01E-28	0.	0.	0.	0.	1.58E-29	0.	0.	1.09E-08	1.37E-10	1.01E-10	1.12E-08
102	0.60	0.	1.11E-28	0.	0.	0.	0.	4.96E-29	0.	0.	1.76E-08	1.51E-10	1.14E-10	1.79E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 2200C. 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.	2.87E-01	0.	0.	0.	5.37E 00	7.04E-01	2.34E 02	6.60E 00	3.07E 2
2	10.60	0.	0.	2.64E-01	0.	0.	0.	5.37E 00	7.24E-01	2.31E 01	6.57E 00	3.60E 01
3	10.50	0.	0.	2.70E-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	10.30	0.	0.	2.30E-01	0.	0.	0.	5.40E 00	7.90E-01	2.33E 01	6.48E 00	3.62E 01
6	10.20	0.	0.	2.39E-01	0.	0.	0.	5.40E 00	8.14E-01	2.34E 01	6.45E 00	3.63E 01
7	10.10	0.	0.	2.28E-01	0.	0.	0.	5.41E 00	8.38E-01	2.33E 01	6.42E 00	3.62E 01
8	10.00	0.	0.	2.04E-01	0.	0.	0.	5.42E 00	8.64E-01	2.33E 01	6.39E 00	3.62E 01
9	9.90	0.	0.	2.10E-01	0.	0.	0.	5.43E 00	8.91E-01	2.34E 01	6.36E 00	3.63E 01
10	9.80	0.	0.	2.00E-01	0.	0.	0.	5.44E 00	9.19E-01	2.34E 01	6.33E 00	3.63E 01
11	9.70	0.	0.	1.76E-01	0.	0.	0.	5.45E 00	9.48E-01	2.35E 01	6.30E 00	3.63E 01
12	9.60	0.	0.	1.91E-01	0.	0.	0.	5.46E 00	9.78E-01	2.35E 01	6.27E 00	3.64E 01
13	9.50	0.	0.	1.66E-01	0.	0.	0.	5.47E 00	1.01E 00	2.36E 01	6.24E 00	3.65E 01
14	9.40	0.	0.	1.60E-01	0.	0.	0.	5.49E 00	1.04E 00	2.37E 01	6.21E 00	3.66E 01
15	9.30	0.	0.	1.65E-01	0.	0.	0.	5.51E 00	1.08E 00	2.38E 01	6.18E 00	3.67E 01
16	9.20	0.	0.	1.40E-01	0.	0.	0.	5.53E 00	1.11E 00	2.38E 01	6.15E 00	3.68E 01
17	9.10	0.	0.	1.44E-01	0.	0.	0.	5.55E 00	1.15E 00	9.67E 00	6.13E 00	2.26E 01
18	9.00	0.	0.	1.33E-01	0.	0.	0.	5.57E 00	1.19E 00	9.69E 00	6.10E 00	2.27E 01
19	8.90	0.	0.	1.25E-01	0.	0.	0.	5.59E 00	1.23E 00	9.70E 00	6.07E 00	2.27E 01
20	8.80	0.	0.	1.24E-01	0.	0.	0.	5.61E 00	1.27E 00	9.72E 00	6.04E 00	2.28E 01
21	8.70	0.	0.	1.10E-01	0.	0.	0.	5.63E 00	1.32E 00	9.75E 00	6.02E 00	2.28E 01
22	8.60	0.	0.	1.14E-01	0.	0.	0.	5.65E 00	1.36E 00	9.77E 00	5.99E 00	2.29E 01
23	8.50	0.	0.	1.02E-01	0.	0.	0.	5.66E 00	1.41E 00	9.81E 00	5.97E 00	2.30E 01
24	8.40	0.	0.	1.02E-01	0.	0.	0.	5.69E 00	1.47E 00	9.85E 00	5.94E 00	2.31E 01
25	8.30	0.	0.	8.84E-02	0.	0.	0.	5.72E 00	1.53E 00	9.90E 00	5.93E 00	2.32E 01
26	8.20	0.	0.	9.01E-02	0.	0.	0.	5.75E 00	1.58E 00	9.95E 00	5.93E 00	2.33E 01
27	8.10	0.	0.	7.93E-02	0.	0.	0.	5.78E 00	1.64E 00	9.99E 00	5.94E 00	2.34E 01
28	8.00	0.	0.	8.05E-02	0.	0.	0.	5.81E 00	1.70E 00	1.01E 01	5.94E 00	2.36E 01
29	7.90	0.	0.	7.05E-02	0.	0.	0.	5.84E 00	1.77E 00	1.01E 01	5.94E 00	2.38E 01
30	7.80	0.	0.	7.39E-02	0.	0.	0.	5.87E 00	1.83E 00	1.02E 01	5.94E 00	2.39E 01
31	7.70	0.	0.	6.60E-02	0.	0.	0.	5.90E 00	1.91E 00	1.03E 01	5.95E 00	2.41E 01
32	7.60	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	7.50	0.	0.	5.98E-02	0.	8.53E-06	0.	5.96E 00	2.07E 00	1.05E 01	5.95E 00	2.45E 01
34	7.40	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	7.30	0.	0.	5.23E-02	0.	2.96E-04	0.	6.03E 00	2.24E 00	1.06E 01	5.96E 00	2.49E 01
36	7.20	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	7.10	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	7.00	8.75E-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	6.90	1.72E-05	0.	4.05E-02	0.	7.38E-03	0.	6.21E 00	2.66E 00	1.10E 01	5.97E 00	2.58E 01
40	6.80	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	6.70	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	6.60	6.79E-06	0.	3.21E-02	0.	1.02E-02	0.	6.36E 00	3.04E 00	1.12E 01	6.00E 00	2.67E 01
43	6.50	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	6.40	2.30E-06	0.	1.85E-02	4.29E-05	1.30E-02	0.	6.46E 00	3.34E 00	1.15E 01	6.03E 00	2.74E 01
45	6.30	1.35E-06	0.	1.19E-02	2.06E-04	9.96E-03	0.	6.51E 00	3.50E 00	1.16E 01	6.05E 00	2.77E 01
46	6.20	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	6.10	2.89E-07	0.	3.26E-03	8.58E-04	1.58E-02	0.	6.61E 00	3.86E 00	1.19E 01	6.14E 00	2.85E 01
48	6.00	1.22E-07	0.	8.42E-04	8.46E-04	8.16E-03	0.	6.66E 00	4.06E 00	1.21E 01	6.13E 00	2.90E 01
49	5.90	3.02E-08	0.	6.04E-05	1.25E-03	7.86E-03	0.	6.66E 00	4.28E 00	1.22E 01	6.22E 00	2.94E 01
50	5.80	3.87E-09	0.	1.53E-06	1.77E-03	8.28E-03	0.	6.56E 00	4.50E 00	1.24E 01	6.27E 00	2.98E 01
51	5.70	2.85E-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.	1.85E-03	1.19E-02	0.	0.	5.73E 00	5.01E 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	9.09E-03	0.	0.	5.86E 00	6.28E 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	1.83E-04	0.	0.	0.	2.19E-03	1.12E-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	1.03E-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	1.16E-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	1.08E-02	0.	0.	6.11E 00	8.53E 00	1.69E 01	7.36E 00	3.89E 01
62	4.60	1.66E-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.	2.59E-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	8.40E 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	1.39E 01	2.38E 01	4.28E 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	3.80E-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.	6.26E 00	1.76E 01	2.02E 01	5.03E 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	2.02E-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	6.60E 00	5.84E 01
75	3.30	3.64E-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	1.54E-01	1.96E-03	0.	0.	0.	3.11E 00	2.75E 01	3.10E 01	7.84E 00	6.96E 01
77	3.10	7.45E-04	0.	5.28E-02	4.50E-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	3.93E 01	9.83E 00	8.95E 01
80	2.80	6.13E-04	0.	1.01E-02	3.70E-02	1.02E-03	0.	0.	0.	3.13E 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	4.60E-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	1.40E-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.	1.01E-02	0.	3.51E-03	6.87E-06	0.	0.	0.	3.13E 00	6.62E 01	6.72E 01	9.51E 00	1.46E 02
85	2.30	0.	2.89E-02	0.	0.	0.	0.	0.	0.	3.11E 00	7.53E 01	6.07E 01	1.13E 01	1.50E 02
86	2.20	0.	7.87E-02	0.	0.	0.	0.	0.	0.	3.09E 00	8.43E 01	7.17E 01	1.35E 01	1.75E 02
87	2.10	0.	7.88E-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.	1.84E-01	0.	0.	0.	0.	0.	0.	2.87E 00	1.35E 02	1.10E 02	2.09E 01	2.69E 02
90	1.80	0.	1.59E-01	0.	0.	0.	0.	0.	0.	2.74E 00	1.60E 02	1.31E 02	2.55E 01	3.20E 02
91	1.70	0.	1.79E-01	0.	0.	0.	0.	0.	0.	2.58E 00	1.91E 02	1.58E 02	3.10E 01	3.83E 02
92	1.60	0.	1.36E-01	0.	0.	0.	0.	0.	0.	2.19E 00	2.30E 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	2.80E 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	4.08E 02	6.98E 01	9.12E 02
96	1.20	0.	1.11E-01	0.	0.	0.	0.	0.	0.	0.	5.53E 02	4.59E 02	7.04E 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	1.38E 03
98	1.00	0.	9.92E-02	0.	0.	0.	0.	1.87E-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.	4.88E-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.	2.96E 03	9.84E 02	1.36E 02	4.06E 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	6.00E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. 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.	1.60E-03	0.	0.	0.	1.20E-01	5.28E-02	2.20E 01	5.37E-01	2.27E 01
2	10.60	0.	0.	1.48E-03	0.	0.	0.	1.20E-01	5.43E-02	1.73E 00	5.35E-01	2.44E 00
3	10.50	0.	0.	1.51E-03	0.	0.	0.	1.20E-01	5.59E-02	1.74E 00	5.33E-01	2.45E 00
4	10.40	0.	0.	1.45E-03	0.	0.	0.	1.20E-01	5.75E-02	1.74E 00	5.30E-01	2.45E 00
5	10.30	0.	0.	1.28E-03	0.	0.	0.	1.21E-01	5.92E-02	1.75E 00	5.28E-01	2.46E 00
6	10.20	0.	0.	1.34E-03	0.	0.	0.	1.21E-01	6.10E-02	1.75E 00	5.25E-01	2.46E 00
7	10.10	0.	0.	1.27E-03	0.	0.	0.	1.21E-01	6.28E-02	1.75E 00	5.23E-01	2.45E 00
8	10.00	0.	0.	1.14E-03	0.	0.	0.	1.21E-01	6.48E-02	1.75E 00	5.20E-01	2.45E 00
9	9.90	0.	0.	1.17E-03	0.	0.	0.	1.21E-01	6.68E-02	1.75E 00	5.18E-01	2.46E 00
10	9.80	0.	0.	1.12E-03	0.	0.	0.	1.22E-01	6.88E-02	1.75E 00	5.16E-01	2.46E 00
11	9.70	0.	0.	9.85E-04	0.	0.	0.	1.22E-01	7.10E-02	1.76E 00	5.13E-01	2.46E 00
12	9.60	0.	0.	1.07E-03	0.	0.	0.	1.22E-01	7.33E-02	1.76E 00	5.11E-01	2.47E 00
13	9.50	0.	0.	9.31E-04	0.	0.	0.	1.22E-01	7.57E-02	1.77E 00	5.08E-01	2.47E 00
14	9.40	0.	0.	8.94E-04	0.	0.	0.	1.23E-01	7.81E-02	1.77E 00	5.06E-01	2.48E 00
15	9.30	0.	0.	9.21E-04	0.	0.	0.	1.23E-01	8.07E-02	1.78E 00	5.03E-01	2.49E 00
16	9.20	0.	0.	7.82E-04	0.	0.	0.	1.24E-01	8.34E-02	1.78E 00	5.01E-01	2.49E 00
17	9.10	0.	0.	8.06E-04	0.	0.	0.	1.24E-01	8.62E-02	7.25E-01	4.99E-01	1.44E 00
18	9.00	0.	0.	7.45E-04	0.	0.	0.	1.24E-01	8.91E-02	7.26E-01	4.97E-01	1.44E 00
19	8.90	0.	0.	7.00E-04	0.	0.	0.	1.25E-01	9.22E-02	7.27E-01	4.94E-01	1.44E 00
20	8.80	0.	0.	6.93E-04	0.	0.	0.	1.25E-01	9.54E-02	7.29E-01	4.92E-01	1.44E 00
21	8.70	0.	0.	6.14E-04	0.	0.	0.	1.26E-01	9.88E-02	7.31E-01	4.90E-01	1.45E 00
22	8.60	0.	0.	6.37E-04	0.	0.	0.	1.26E-01	1.02E-01	7.32E-01	4.88E-01	1.45E 00
23	8.50	0.	0.	5.69E-04	0.	0.	0.	1.27E-01	1.06E-01	7.35E-01	4.86E-01	1.45E 00
24	8.40	0.	0.	5.71E-04	0.	0.	0.	1.27E-01	1.10E-01	7.39E-01	4.84E-01	1.46E 00
25	8.30	0.	0.	4.96E-04	0.	0.	0.	1.28E-01	1.14E-01	7.42E-01	4.83E-01	1.47E 00
26	8.20	0.	0.	5.04E-04	0.	0.	0.	1.29E-01	1.18E-01	7.46E-01	4.83E-01	1.48E 00
27	8.10	0.	0.	4.44E-04	0.	0.	0.	1.29E-01	1.23E-01	7.49E-01	4.83E-01	1.48E 00
28	8.00	0.	0.	4.50E-04	0.	0.	0.	1.30E-01	1.27E-01	7.54E-01	4.84E-01	1.50E 00
29	7.90	0.	0.	3.94E-04	0.	0.	0.	1.31E-01	1.32E-01	7.60E-01	4.84E-01	1.51E 00
30	7.80	0.	0.	4.13E-04	0.	0.	0.	1.31E-01	1.37E-01	7.66E-01	4.84E-01	1.52E 00
31	7.70	0.	0.	3.69E-04	0.	0.	0.	1.32E-01	1.43E-01	7.73E-01	4.84E-01	1.53E 00
32	7.60	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	7.50	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	7.40	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	7.30	0.	0.	2.93E-04	0.	1.81E-06	0.	1.35E-01	1.68E-01	7.96E-01	4.85E-01	1.58E 00
36	7.20	0.	0.	2.68E-04	0.	5.08E-06	0.	1.36E-01	1.75E-01	8.02E-01	4.86E-01	1.60E 00
37	7.10	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	7.00	5.8[illegible]E-08	0.	2.43E-04	0.	3.02E-05	0.	1.38E-01	1.91E-01	8.15E-01	4.87E-01	1.63E 00
39	6.90	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	6.80	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	6.70	7.32E-08	0.	1.97E-04	0.	7.08E-05	0.	1.41E-01	2.18E-01	8.33E-01	4.88E-01	1.68E 00
42	6.60	4.5[illegible]E-08	0.	1.80E-04	0.	6.21E-05	0.	1.42E-01	2.28E-01	8.42E-01	4.89E-01	1.70E 00
43	6.50	2.6[illegible]E-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	6.40	1.5[illegible]E-08	0.	1.04E-04	2.61E-07	7.90E-05	0.	1.44E-01	2.50E-01	8.62E-01	4.91E-01	1.75E 00
45	6.30	8.9[illegible]E-09	0.	6.66E-05	1.25E-06	6.07E-05	0.	1.46E-01	2.62E-01	8.72E-01	4.91E-01	1.77E 00
46	6.20	4.1[illegible]E-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	6.10	1.91E-09	0.	1.82E-05	5.23E-06	9.65E-05	0.	1.48E-01	2.90E-01	8.93E-01	5.09E-01	1.83E 00
48	6.00	8.08E-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	5.90	2.01E-10	0.	3.38E-07	7.64E-06	4.79E-05	0.	1.49E-01	3.20E-01	9.18E-01	5.07E-01	1.89E 00
50	5.80	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	5.70	1.89E-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) 2200C. 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	8.58E-14	0.	0.	0.	1.13E-05	7.26E-05	0.	0.	1.28E-01	3.76E-01	9.63E-01	5.18E-01	1.98E 00
53	5.50	0.	0.	0.	0.	1.38E-05	6.71E-05	0.	0.	1.29E-01	3.97E-01	9.85E-01	5.23E-01	2.03E 00
54	5.40	0.	0.	0.	0.	1.30E-05	5.64E-05	0.	0.	1.29E-01	4.19E-01	1.01E 00	5.29E-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	5.36E-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	5.44E-01	2.21E 00
57	5.10	0.	0.	0.	0.	1.45E-05	7.04E-05	0.	0.	1.32E-01	4.99E-01	1.10E 00	5.53E-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	5.61E-01	2.36E 00
59	4.90	3.00E-06	0.	0.	0.	1.50E-05	7.49E-05	0.	0.	1.34E-01	5.63E-01	1.17E 00	5.71E-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	5.84E-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.	1.63E-05	1.31E-05	0.	0.	1.42E-01	8.99E-01	1.62E 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.	1.09E-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	2.02E-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	9.70E-06	0.	8.44E-04	7.75E-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.	8.50E-04	3.79E-04	1.41E-05	0.	0.	0.	1.40E-01	1.32E 00	1.51E 00	4.10E-01	3.39E 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	1.23E-05	0.	0.	0.	1.20E-01	1.57E 00	1.74E 00	4.89E-01	3.92E 00
74	3.40	7.10E-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	4.25E 00
75	3.30	5.73E-06	0.	5.58E-04	2.07E-03	1.13E-05	0.	0.	0.	6.94E-02	1.88E 00	2.12E 00	5.87E-01	4.66E 00
76	3.20	5.06E-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	9.16E-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	4.50E-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	3.86E-06	0.	1.17E-04	1.05E-03	8.65E-06	0.	0.	0.	6.99E-02	2.78E 00	2.95E 00	8.01E-01	6.60E 00
80	2.80	4.07E-06	0.	5.63E-05	7.53E-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	5.65E 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	1.10E 00	1.30E 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	1.50E 01
88	2.00	0.	8.90E-04	0.	0.	0.	0.	0.	0.	6.67E-02	8.64E 00	7.15E 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	2.39E 01
91	1.70	0.	1.00E-03	0.	0.	0.	0.	0.	0.	5.78E-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.	6.03E-04	0.	0.	0.	0.	6.82E-10	0.	0.	5.43E 01	4.24E 01	7.18E 00	1.04E 02
98	1.00	0.	5.55E-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.	4.55E-04	0.	0.	0.	0.	1.34E-08	0.	0.	1.01E 02	5.93E 01	9.61E 00	1.70E 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.	4.90E-05	0.	0.	0.	0.	2.88E-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	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.	2.90E-06	0.	0.	0.	1.25E-03	2.30E-03	9.34E-01	2.63E-02	9.65E-01
2	10.60	0.	0.	2.67E-06	0.	0.	0.	1.25E-03	2.37E-03	7.44E-02	2.66E-02	1.05E-01
3	10.50	0.	0.	2.73E-06	0.	0.	0.	1.25E-03	2.44E-03	7.47E-02	2.65E-02	1.05E-01
4	10.40	0.	0.	2.62E-06	0.	0.	0.	1.25E-03	2.51E-03	7.49E-02	2.64E-02	1.05E-01
5	10.30	0.	0.	2.32E-06	0.	0.	0.	1.26E-03	2.58E-03	7.51E-02	2.63E-02	1.05E-01
6	10.20	0.	0.	2.42E-06	0.	0.	0.	1.26E-03	2.66E-03	7.53E-02	2.62E-02	1.05E-01
7	10.10	0.	0.	2.30E-06	0.	0.	0.	1.26E-03	2.74E-03	7.51E-02	2.60E-02	1.05E-01
8	10.00	0.	0.	2.06E-06	0.	0.	0.	1.26E-03	2.83E-03	7.45E-02	2.59E-02	1.04E-01
9	9.90	0.	0.	2.12E-06	0.	0.	0.	1.26E-03	2.91E-03	7.46E-02	2.58E-02	1.05E-01
10	9.80	0.	0.	2.02E-06	0.	0.	0.	1.26E-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	3.10E-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.	1.62E-06	0.	0.	0.	1.28E-03	3.41E-03	7.56E-02	2.52E-02	1.06E-01
15	9.30	0.	0.	1.66E-06	0.	0.	0.	1.28E-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.	1.35E-06	0.	0.	0.	1.29E-03	3.89E-03	3.11E-02	2.47E-02	6.11E-02
19	8.90	0.	0.	1.27E-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.	8.02E-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.	3.46E-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.	6.38E-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.	4.00E-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.	1.50E-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.	1.50E-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	2.06E-12	0.	8.51E-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.	6.11E-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	6.36E-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	5.60	2.13E-16	0.	0.	0.	2.39E-08	1.54E-07	0.	0.	1.33E-03	1.64E-02	4.14E-02	2.58E-02	8.50E-02
53	5.50	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.	2.81E-08	1.47E-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	1.49E-07	0.	0.	1.38E-03	2.18E-02	4.69E-02	2.75E-02	9.76E-02
58	5.00	3.01E-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	9.39E-08	0.	0.	1.45E-03	3.18E-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	7.58E-02	1.79E-02	1.44E-01
70	3.80	2.41E-08	0.	1.53E-06	6.70E-06	3.40E-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	2.98E-08	0.	0.	0.	1.46E-03	5.77E-02	6.47E-02	2.04E-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.	1.01E-06	1.79E-05	2.39E-08	0.	0.	0.	7.22E-04	8.18E-02	9.07E-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	1.23E-08	0.	5.34E-07	7.92E-06	2.43E-08	0.	0.	0.	7.24E-04	9.90E-02	1.08E-01	3.44E-02	2.42E-01
78	3.00	1.12E-08	0.	3.32E-07	1.69E-05	2.34E-08	0.	0.	0.	7.26E-04	1.09E-01	1.16E-01	3.70E-02	2.64E-01
79	2.90	9.56E-09	0.	2.11E-07	9.08E-06	1.83E-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	6.31E-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	1.51E-01	1.49E-01	4.69E-02	3.48E-01
82	2.60	3.25E-09	0.	2.30E-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	8.18E-10	0.	0.	0.	7.29E-04	1.91E-01	1.84E-01	3.35E-02	4.09E-01
84	2.40	0.	1.02E-07	0.	6.17E-07	8.85E-11	0.	0.	0.	7.29E-04	2.16E-01	2.14E-01	3.86E-02	4.70E-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.	7.96E-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	6.55E-01
88	2.00	0.	1.61E-06	0.	0.	0.	0.	0.	0.	6.96E-04	3.77E-01	3.04E-01	7.23E-02	7.54E-01
89	1.90	0.	1.86E-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.	1.61E-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	5.90E-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	7.69E-01	1.80E-01	1.87E 00
94	1.40	0.	1.53E-06	0.	0.	0.	0.	0.	0.	0.	1.13E 00	9.44E-01	2.15E-01	2.31E 00
95	1.30	0.	1.17E-06	0.	0.	0.	0.	0.	0.	0.	1.42E 00	1.30E 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	3.57E-01	4.53E 00
98	1.00	0.	1.00E-06	0.	0.	0.	0.	2.42E-11	0.	0.	3.18E 00	2.19E 00	4.08E-01	5.78E 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.	3.86E-07	0.	0.	0.	0.	6.29E-10	0.	0.	6.34E 00	2.90E 00	5.49E-01	9.79E 00
101	0.70	0.	8.86E-08	0.	0.	0.	0.	6.10E-10	0.	0.	9.61E 00	3.13E 00	5.49E-01	1.33E 01
102	0.60	0.	2.06E-08	0.	0.	0.	0.	1.89E-09	0.	0.	1.55E 01	3.50E 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.	8.89E-10	0.	0.	0.	3.28E-06	4.15E-05	1.65E-02	5.25E-04	1.70E-02
2	10.60	0.	0.	8.20E-10	0.	0.	0.	3.28E-06	4.27E-05	1.42E-03	5.23E-04	1.99E-03
3	10.50	0.	0.	8.35E-10	0.	0.	0.	3.28E-06	4.39E-05	1.43E-03	5.20E-04	1.99E-03
4	10.40	0.	0.	8.03E-10	0.	0.	0.	3.29E-06	4.52E-05	1.43E-03	5.18E-04	2.00E-03
5	10.30	0.	0.	7.11E-10	0.	0.	0.	3.29E-06	4.66E-05	1.44E-03	5.16E-04	2.00E-03
6	10.20	0.	0.	7.42E-10	0.	0.	0.	3.30E-06	4.80E-05	1.44E-03	5.13E-04	2.01E-03
7	10.10	0.	0.	7.05E-10	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-10	0.	0.	0.	3.31E-06	5.09E-05	1.34E-03	5.08E-04	1.90E-03
9	9.90	0.	0.	6.51E-10	0.	0.	0.	3.31E-06	5.25E-05	1.34E-03	5.06E-04	1.90E-03
10	9.80	0.	0.	6.20E-10	0.	0.	0.	3.32E-06	5.42E-05	1.35E-03	5.04E-04	1.91E-03
11	9.70	0.	0.	5.46E-10	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-10	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-10	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-10	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-10	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-10	0.	0.	0.	3.37E-06	6.56E-05	1.37E-03	4.90E-04	1.93E-03
17	9.10	0.	0.	4.47E-10	0.	0.	0.	3.38E-06	6.78E-05	5.86E-04	4.88E-04	1.14E-03
18	9.00	0.	0.	4.13E-10	0.	0.	0.	3.40E-06	7.01E-05	5.87E-04	4.85E-04	1.15E-03
19	8.90	0.	0.	3.88E-10	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-10	0.	0.	0.	3.42E-06	7.51E-05	5.90E-04	4.81E-04	1.15E-03
21	8.70	0.	0.	3.40E-10	0.	0.	0.	3.43E-06	7.77E-05	5.92E-04	4.79E-04	1.15E-03
22	8.60	0.	0.	3.53E-10	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-10	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-10	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-10	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-10	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-10	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-10	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-10	0.	0.	0.	3.57E-06	1.04E-04	6.22E-04	4.73E-04	1.20E-03
30	7.80	0.	0.	2.29E-10	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-10	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-10	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-10	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.	1.69E-10	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.	1.62E-10	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-10	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-10	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-10	0.	2.19E-11	0.	3.76E-06	1.50E-04	6.57E-04	4.75E-04	1.29E-03
39	6.90	1.09E-13	0.	1.25E-10	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-10	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-10	0.	5.14E-11	0.	3.85E-06	1.71E-04	6.78E-04	4.77E-04	1.33E-03
42	6.60	4.28E-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.	8.09E-11	0.	6.30E-11	0.	3.91E-06	1.88E-04	6.89E-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	9.09E-13	4.40E-11	0.	3.97E-06	2.06E-04	7.08E-04	4.83E-04	1.40E-03
46	6.20	3.91E-15	0.	2.10E-11	1.31E-12	5.86E-11	0.	4.00E-06	2.17E-04	7.18E-04	4.86E-04	1.43E-03
47	6.10	1.82E-15	0.	1.01E-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	7.66E-16	0.	2.61E-12	3.74E-12	3.60E-11	0.	4.06E-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	3.66E-11	0.	4.00E-06	2.66E-04	7.65E-04	5.00E-04	1.54E-03
51	5.70	1.85E-18	0.	0.	9.34E-12	4.10E-11	0.	3.76E-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) 1.293E-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-20	0.	0.	0.	8.19E-12	5.26E-11	0.	0.	3.50E-06	2.95E-04	7.94E-04	5.08E-04	1.60E-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	4.02E-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.	1.05E-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	2.85E-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.	2.89E-10	3.99E-09	1.08E-11	7.45E-13	0.	0.	3.90E-06	8.85E-04	1.38E-03	3.53E-04	2.63E-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.	3.52E-10	3.77E-09	1.10E-11	0.	0.	0.	3.59E-06	1.13E-03	1.29E-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.	2.08E-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.	1.02E-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	2.08E-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	3.86E-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.	7.04E-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	1.90E-09	2.80E-13	0.	0.	0.	1.91E-06	3.44E-03	3.27E-03	6.56E-04	7.37E-03
84	2.40	0.	3.14E-12	0.	1.41E-09	3.03E-14	0.	0.	0.	1.91E-06	3.90E-03	3.81E-03	7.58E-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	9.02E-04	8.80E-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	5.86E-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	5.40E-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	6.20E-03	1.66E-03	1.58E-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.	5.55E-10	0.	0.	0.	0.	0.	0.	1.58E-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.	4.78E-10	0.	0.	0.	0.	0.	0.	6.07E-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	1.70E-02	4.22E-03	4.16E-02
95	1.30	0.	3.59E-10	0.	0.	0.	0.	0.	0.	0.	2.55E-02	2.29E-02	5.56E-03	5.40E-02
96	1.20	0.	3.42E-10	0.	0.	0.	0.	0.	0.	0.	3.26E-02	2.57E-02	5.60E-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	7.00E-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	5.48E-02	1.08E-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) 1.293E-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.	1.06E-13	0.	0.	0.	3.99E-09	4.93E-07	2.76E-05	6.15E-06	3.42E-05
2	10.60	0.	0.	9.77E-14	0.	0.	0.	4.00E-09	5.07E-07	2.79E-05	6.09E-06	3.45E-05
3	10.50	0.	0.	9.96E-14	0.	0.	0.	4.00E-09	5.22E-07	2.82E-05	6.06E-06	3.47E-05
4	10.40	0.	0.	9.58E-14	0.	0.	0.	4.01E-09	5.37E-07	2.84E-05	6.03E-06	3.50E-05
5	10.30	0.	0.	8.48E-14	0.	0.	0.	4.01E-09	5.53E-07	2.87E-05	6.01E-06	3.53E-05
6	10.20	0.	0.	8.85E-14	0.	0.	0.	4.02E-09	5.70E-07	2.90E-05	5.98E-06	3.55E-05
7	10.10	0.	0.	8.41E-14	0.	0.	0.	4.02E-09	5.87E-07	2.92E-05	5.96E-06	3.57E-05
8	10.00	0.	0.	7.53E-14	0.	0.	0.	4.03E-09	6.05E-07	1.84E-05	5.93E-06	2.50E-05
9	9.90	0.	0.	7.76E-14	0.	0.	0.	4.04E-09	6.24E-07	1.85E-05	5.91E-06	2.51E-05
10	9.80	0.	0.	7.40E-14	0.	0.	0.	4.04E-09	6.43E-07	1.86E-05	5.88E-06	2.52E-05
11	9.70	0.	0.	6.51E-14	0.	0.	0.	4.05E-09	6.64E-07	1.87E-05	5.86E-06	2.53E-05
12	9.60	0.	0.	7.05E-14	0.	0.	0.	4.06E-09	6.85E-07	1.88E-05	5.83E-06	2.54E-05
13	9.50	0.	0.	6.15E-14	0.	0.	0.	4.07E-09	7.07E-07	1.89E-05	5.81E-06	2.55E-05
14	9.40	0.	0.	5.91E-14	0.	0.	0.	4.08E-09	7.30E-07	1.91E-05	5.78E-06	2.56E-05
15	9.30	0.	0.	6.08E-14	0.	0.	0.	4.10E-09	7.54E-07	1.92E-05	5.76E-06	2.57E-05
16	9.20	0.	0.	5.17E-14	0.	0.	0.	4.11E-09	7.79E-07	1.93E-05	5.74E-06	2.58E-05
17	9.10	0.	0.	5.33E-14	0.	0.	0.	4.12E-09	8.05E-07	1.07E-05	5.71E-06	1.73E-05
18	9.00	0.	0.	4.92E-14	0.	0.	0.	4.14E-09	8.33E-07	1.08E-05	5.69E-06	1.73E-05
19	8.90	0.	0.	4.63E-14	0.	0.	0.	4.15E-09	8.61E-07	1.09E-05	5.67E-06	1.74E-05
20	8.80	0.	0.	4.58E-14	0.	0.	0.	4.17E-09	8.91E-07	1.10E-05	5.65E-06	1.75E-05
21	8.70	0.	0.	4.06E-14	0.	0.	0.	4.18E-09	9.23E-07	1.11E-05	5.63E-06	1.76E-05
22	8.60	0.	0.	4.21E-14	0.	0.	0.	4.20E-09	9.56E-07	1.12E-05	5.61E-06	1.77E-05
23	8.50	0.	0.	3.76E-14	0.	0.	0.	4.21E-09	9.90E-07	1.12E-05	5.59E-06	1.78E-05
24	8.40	0.	0.	3.77E-14	0.	0.	0.	4.24E-09	1.03E-06	1.13E-05	5.56E-06	1.79E-05
25	8.30	0.	0.	3.27E-14	0.	0.	0.	4.26E-09	1.06E-06	1.15E-05	5.56E-06	1.81E-05
26	8.20	0.	0.	3.33E-14	0.	0.	0.	4.28E-09	1.10E-06	1.16E-05	5.56E-06	1.83E-05
27	8.10	0.	0.	2.93E-14	0.	0.	0.	4.30E-09	1.15E-06	1.18E-05	5.51E-06	1.84E-05
28	8.00	0.	0.	2.98E-14	0.	0.	0.	4.32E-09	1.19E-06	1.20E-05	5.51E-06	1.87E-05
29	7.90	0.	0.	2.61E-14	0.	0.	0.	4.35E-09	1.24E-06	1.21E-05	5.52E-06	1.89E-05
30	7.80	0.	0.	2.73E-14	0.	0.	0.	4.37E-09	1.28E-06	1.23E-05	5.52E-06	1.91E-05
31	7.70	0.	0.	2.44E-14	0.	0.	0.	4.39E-09	1.34E-06	1.25E-05	5.53E-06	1.94E-05
32	7.60	0.	0.	2.35E-14	0.	1.50E-18	0.	4.41E-09	1.39E-06	1.05E-05	5.54E-06	1.74E-05
33	7.50	0.	0.	2.21E-14	0.	4.68E-18	0.	4.44E-09	1.45E-06	1.07E-05	5.55E-06	1.77E-05
34	7.40	0.	0.	2.01E-14	0.	4.35E-17	0.	4.46E-09	1.51E-06	1.09E-05	5.56E-06	1.[illegible]-05
35	7.30	0.	0.	1.93E-14	0.	1.63E-16	0.	4.48E-09	1.57E-06	1.11E-05	5.57E-06	1.[illegible]-05
36	7.20	0.	0.	1.77E-14	0.	4.58E-16	0.	4.51E-09	1.64E-06	1.14E-05	5.58E-06	1.[illegible]E-05
37	7.10	0.	0.	1.72E-14	0.	1.45E-15	0.	4.55E-09	1.71E-06	1.17E-05	5.59E-06	1.90E-05
38	7.00	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	6.90	1.41E-17	0.	1.50E-14	0.	4.05E-15	0.	4.62E-09	1.86E-06	1.23E-05	5.62E-06	1.98E-05
40	6.80	1.22E-17	0.	1.46E-14	0.	6.66E-15	0.	4.66E-09	1.95E-06	1.26E-05	5.64E-06	2.02E-05
41	6.70	9.01E-18	0.	1.30E-14	0.	6.39E-15	0.	4.69E-09	2.03E-06	1.29E-05	5.66E-06	2.06E-05
42	6.60	5.54E-18	0.	1.19E-14	0.	5.60E-15	0.	4.73E-09	2.13E-06	1.24E-05	5.68E-06	2.02E-05
43	6.50	3.23E-18	0.	9.65E-15	0.	7.83E-15	0.	4.77E-09	2.23E-06	1.27E-05	5.70E-06	2.07E-05
44	6.40	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	6.30	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	6.20	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	6.10	2.36E-19	0.	1.21E-15	4.71E-16	8.70E-15	0.	4.92E-09	2.70E-06	1.40E-05	5.86E-06	2.26E-05
48	6.00	9.85E-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	5.90	2.47E-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	5.80	3.16E-21	0.	5.66E-19	9.72E-16	4.55E-15	0.	4.88E-09	3.15E-06	1.51E-05	6.01E-06	2.43E-05
51	5.70	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-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	1.06E-23	0.	0.	0.	1.02E-15	6.54E-15	0.	0.	4.26E-09	3.51E-06	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-06	1.64E-05	6.19E-06	2.63E-05
54	5.40	0.	0.	0.	0.	1.17E-15	5.09E-15	0.	0.	4.31E-09	3.92E-06	1.70E-05	6.27E-06	2.72E-05
55	5.30	0.	0.	0.	0.	1.20E-15	6.28E-15	0.	0.	4.33E-09	4.14E-06	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-06	1.17E-05	6.18E-06	2.23E-05
57	5.10	0.	0.	0.	0.	1.30E-15	6.35E-15	0.	0.	4.40E-09	4.66E-06	1.22E-05	6.28E-06	2.31E-05
58	5.00	1.49E-16	0.	0.	0.	1.20E-15	6.09E-15	0.	0.	4.44E-09	4.95E-06	1.26E-05	6.38E-06	2.39E-05
59	4.90	3.69E-16	0.	0.	0.	1.35E-15	6.75E-15	0.	0.	4.47E-09	5.26E-06	1.31E-05	6.50E-06	2.49E-05
60	4.80	7.05E-16	0.	0.	0.	1.46E-15	6.38E-15	0.	0.	4.51E-09	5.60E-06	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-06	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-06	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-06	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.	4.66E-09	7.29E-06	1.67E-05	7.37E-06	3.14E-05
65	4.30	1.50E-15	0.	1.63E-14	0.	1.39E-15	1.73E-15	0.	0.	4.69E-09	7.81E-06	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-06	1.87E-05	7.81E-06	3.49E-05
67	4.10	1.34E-15	0.	2.33E-14	0.	1.46E-15	3.36E-16	0.	0.	4.75E-09	9.02E-06	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-06	2.08E-05	4.08E-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.	4.75E-09	1.05E-05	2.09E-05	4.23E-06	3.56E-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.	4.36E-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	1.46E-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	6.08E-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	4.30E-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	3.16E-16	0.	0.	0.	2.33E-09	3.23E-05	3.38E-05	1.09E-05	7.70E-05
82	2.60	1.61E-16	0.	8.39E-16	2.16E-12	1.43E-16	0.	0.	0.	2.33E-09	3.62E-05	3.63E-05	1.17E-05	8.43E-05
83	2.50	1.15E-17	0.	8.64E-17	2.12E-12	3.48E-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	9.02E-06	9.27E-05
85	2.30	0.	1.07E-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.	2.91E-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.	5.88E-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.	5.03E-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.	3.03E-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	6.40E-05	7.38E-04
97	1.10	0.	3.99E-14	0.	0.	0.	0.	6.15E-20	0.	0.	5.06E-04	3.53E-04	8.00E-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.	2.60E-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.	8.05E-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) 1.293E-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.	9.63E-18	0.	0.	0.	5.06E-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	8.46E-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.	7.65E-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.	5.28E-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	5.16E-07	7.20E-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	6.28E-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.	2.48E-18	0.	0.	0.	5.54E-12	2.02E-08	3.80E-07	7.46E-08	4.76E-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.	2.01E-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.	4.62E-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.	1.61E-18	0.	4.86E-20	0.	5.71E-12	2.57E-08	4.72E-07	7.88E-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	7.98E-08	6.00E-07
38	7.00	8.82E-22	0.	1.46E-18	0.	2.88E-19	0.	5.81E-12	2.80E-08	6.56E-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.	7.06E-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	3.93E-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.	4.00E-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.	2.28E-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.	1.10E-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	3.05E-24	0.	2.03E-21	7.30E-20	4.57E-19	0.	6.28E-12	4.69E-08	6.79E-07	9.54E-08	8.22E-07
50	5.80	3.90E-25	0.	5.15E-23	1.03E-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	2.44E-07	7.44E-08	3.92E-07

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. 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	1.3[illegible]E-27	0.	0.	0.	1.08E-19	6.93E-19	0.	0.	5.40E-12	5.50E-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	6.66E-19	0.	0.	5.49E-12	6.50E-08	3.24E-07	7.90E-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	1.85E-20	0.	0.	0.	1.27E-19	6.46E-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	8.78E-08	4.05E-07	8.44E-08	5.78E-07
61	4.70	1.20E-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	2.88E-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	7.70E-07
66	4.20	1.75E-19	0.	4.50E-18	0.	1.56E-19	1.26E-19	0.	0.	6.00E-12	1.31E-07	5.88E-07	8.79E-08	8.07E-07
67	4.10	1.66E-19	0.	2.12E-18	0.	1.55E-19	3.56E-20	0.	0.	6.02E-12	1.41E-07	6.25E-07	6.12E-08	8.28E-07
68	4.00	1.55E-19	0.	6.54E-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	6.83E-07	6.59E-08	9.13E-07
70	3.80	1.48E-19	0.	5.07E-18	1.36E-14	1.54E-19	0.	0.	0.	6.00E-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	10.00E-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.	3.28E-18	1.01E-14	1.32E-19	0.	0.	0.	2.92E-12	2.50E-07	8.70E-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	9.90E-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	1.08E-06	1.17E-07	9.30E-07
78	3.00	6.85E-20	0.	1.10E-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	5.86E-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.	1.60E-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	2.40	0.	3.40E-19	0.	1.25E-15	4.00E-22	0.	0.	0.	2.95E-12	7.22E-07	8.74E-07	1.28E-07	1.72E-06
85	2.30	0.	9.72E-19	0.	0.	0.	0.	0.	0.	2.93E-12	8.22E-07	1.01E-06	1.50E-07	1.98E-06
86	2.20	0.	2.64E-18	0.	0.	0.	0.	0.	0.	2.92E-12	9.41E-07	1.14E-06	1.75E-07	2.26E-06
87	2.10	0.	2.65E-18	0.	0.	0.	0.	0.	0.	2.90E-12	1.08E-06	1.28E-06	2.01E-07	2.56E-06
88	2.00	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	1.90	0.	6.19E-18	0.	0.	0.	0.	0.	0.	2.70E-12	1.47E-06	1.57E-06	2.61E-07	3.30E-06
90	1.80	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	1.70	0.	6.02E-18	0.	0.	0.	0.	0.	0.	2.44E-12	2.07E-06	1.39E-06	3.38E-07	3.80E-06
92	1.60	0.	4.58E-18	0.	0.	0.	0.	0.	0.	2.06E-12	2.50E-06	1.59E-06	3.83E-07	4.47E-06
93	1.50	0.	5.18E-18	0.	0.	0.	0.	0.	0.	9.37E-13	3.05E-06	1.89E-06	4.63E-07	5.40E-06
94	1.40	0.	5.08E-18	0.	0	0.	0.	0.	0.	0.	3.76E-06	1.91E-06	5.20E-07	6.19E-06
95	1.30	0.	3.89E-18	0.	0.	0.	0.	0.	0.	0.	4.71E-06	2.59E-06	5.65E-07	7.87E-06
96	1.20	0.	3.71E-18	0.	0.	0.	0.	0.	0.	0.	6.01E-06	3.26E-06	7.45E-07	1.00E-05
97	1.10	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	1.00	0.	3.33E-18	0.	0.	0.	0.	1.09E-22	0.	0.	1.05E-05	4.66E-06	1.05E-06	1.63E-05
99	0.90	0.	2.73E-18	0.	0.	0.	0.	1.28E-22	0.	0.	1.46E-05	4.60E-06	1.18E-06	2.04E-05
100	0.80	0.	1.28E-18	0.	0.	0.	0.	2.84E-21	0.	0.	2.09E-05	5.03E-06	1.20E-06	2.72E-05
101	0.70	0.	2.94E-19	0.	0.	0.	0.	2.75E-21	0.	0.	3.17E-05	4.78E-06	1.05E-06	3.75E-05
102	0.60	0.	6.85E-20	0.	0.	0.	0.	8.54E-21	0.	0.	5.11E-05	5.38E-06	1.19E-06	5.77E-05

ABSORPTION COEFFICIENTS 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	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	3.48E-22	0.	0.	0.	7.33E-15	1.84E-10	1.55E-08	1.91E-09	1.76E-08
2	10.60	0.	0.	3.21E-22	0.	0.	0.	7.34E-15	1.89E-10	1.56E-08	1.91E-09	1.77E-08
3	10.50	0.	0.	3.27E-22	0.	0.	0.	7.34E-15	1.95E-10	1.57E-08	1.91E-09	1.78E-08
4	10.40	0.	0.	3.15E-22	0.	0.	0.	7.35E-15	2.01E-10	1.59E-08	1.91E-09	1.80E-08
5	10.30	0.	0.	2.79E-22	0.	0.	0.	7.36E-15	2.07E-10	1.60E-08	1.91E-09	1.81E-08
6	10.20	0.	0.	2.91E-22	0.	0.	0.	7.37E-15	2.13E-10	1.63E-08	1.92E-09	1.84E-08
7	10.10	0.	0.	2.76E-22	0.	0.	0.	7.38E-15	2.19E-10	1.65E-08	1.93E-09	1.87E-08
8	10.00	0.	0.	2.47E-22	0.	0.	0.	7.39E-15	2.26E-10	1.68E-08	1.95E-09	1.90E-08
9	9.90	0.	0.	2.55E-22	0.	0.	0.	7.41E-15	2.33E-10	1.70E-08	1.96E-09	1.92E-08
10	9.80	0.	0.	2.43E-22	0.	0.	0.	7.42E-15	2.40E-10	1.73E-08	1.97E-09	1.95E-08
11	9.70	0.	0.	2.14E-22	0.	0.	0.	7.43E-15	2.48E-10	1.76E-08	1.99E-09	1.98E-08
12	9.60	0.	0.	2.32E-22	0.	0.	0.	7.45E-15	2.55E-10	1.78E-08	2.00E-09	2.01E-08
13	9.50	0.	0.	2.02E-22	0.	0.	0.	7.46E-15	2.64E-10	1.81E-08	2.01E-09	2.03E-08
14	9.40	0.	0.	1.94E-22	0.	0.	0.	7.49E-15	2.72E-10	1.83E-08	2.03E-09	2.06E-08
15	9.30	0.	0.	2.00E-22	0.	0.	0.	7.52E-15	2.81E-10	1.81E-08	2.05E-09	2.04E-08
16	9.20	0.	0.	1.70E-22	0.	0.	0.	7.54E-15	2.90E-10	1.84E-08	2.06E-09	2.07E-08
17	9.10	0.	0.	1.75E-22	0.	0.	0.	7.57E-15	3.00E-10	1.86E-08	2.07E-09	2.10E-08
18	9.00	0.	0.	1.62E-22	0.	0.	0.	7.60E-15	3.10E-10	1.89E-08	2.09E-09	2.13E-08
19	8.90	0.	0.	1.52E-22	0.	0.	0.	7.62E-15	3.21E-10	1.91E-08	2.11E-09	2.16E-08
20	8.80	0.	0.	1.50E-22	0.	0.	0.	7.65E-15	3.32E-10	1.94E-08	1.53E-09	2.13E-08
21	8.70	0.	0.	1.33E-22	0.	0.	0.	7.68E-15	3.44E-10	1.97E-08	1.55E-09	2.15E-08
22	8.60	0.	0.	1.38E-22	0.	0.	0.	7.71E-15	3.56E-10	1.99E-08	1.57E-09	2.18E-08
23	8.50	0.	0.	1.24E-22	0.	0.	0.	7.73E-15	3.69E-10	2.02E-08	1.59E-09	2.22E-08
24	8.40	0.	0.	1.24E-22	0.	0.	0.	7.77E-15	3.82E-10	2.05E-08	1.61E-09	2.25E-08
25	8.30	0.	0.	1.07E-22	0.	0.	0.	7.81E-15	3.96E-10	1.23E-08	1.64E-09	1.43E-08
26	8.20	0.	0.	1.09E-22	0.	0.	0.	7.85E-15	4.11E-10	1.28E-08	1.68E-09	1.49E-08
27	8.10	0.	0.	9.62E-23	0.	0.	0.	7.90E-15	4.26E-10	1.33E-08	1.72E-09	1.54E-08
28	8.00	0.	0.	9.77E-23	0.	0.	0.	7.94E-15	4.43E-10	1.38E-08	1.76E-09	1.60E-08
29	7.90	0.	0.	8.56E-23	0.	0.	0.	7.98E-15	4.60E-10	1.43E-08	1.81E-09	1.65E-08
30	7.80	0.	0.	8.96E-23	0.	0.	0.	8.02E-15	4.78E-10	1.48E-08	1.85E-09	1.71E-08
31	7.70	0.	0.	8.01E-23	0.	0.	0.	8.06E-15	4.97E-10	1.54E-08	1.90E-09	1.77E-08
32	7.60	0.	0.	7.70E-23	0.	1.03E-26	0.	8.10E-15	5.17E-10	1.59E-08	1.94E-09	1.84E-08
33	7.50	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	7.40	0.	0.	6.60E-23	0.	3.01E-25	0.	8.18E-15	5.60E-10	1.72E-08	2.04E-09	1.98E-08
35	7.30	0.	0.	6.35E-23	0.	1.12E-24	0.	8.23E-15	5.83E-10	1.55E-08	2.09E-09	1.81E-08
36	7.20	0.	0.	5.82E-23	0.	3.14E-24	0.	8.27E-15	6.08E-10	1.63E-08	2.18E-09	1.91E-08
37	7.10	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	7.00	1.03E-25	0.	5.29E-23	0.	1.88E-23	0.	8.41E-15	6.62E-10	1.80E-08	2.34E-09	2.10E-08
39	6.90	2.04E-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	6.80	1.77E-25	0.	4.80E-23	0.	4.60E-23	0.	8.55E-15	7.22E-10	1.97E-08	2.51E-09	2.30E-08
41	6.70	1.31E-25	0.	4.28E-23	0.	4.41E-23	0.	8.61E-15	7.56E-10	2.06E-08	2.59E-09	2.39E-08
42	6.60	8.03E-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	6.50	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	6.40	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	6.30	1.61E-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	6.20	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	6.10	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	6.00	1.44E-27	0.	1.02E-24	3.21E-24	3.09E-23	0.	9.09E-15	1.05E-09	8.10E-09	3.01E-09	1.22E-08
49	5.90	3.58E-28	0.	7.33E-26	4.75E-24	2.98E-23	0.	9.09E-15	1.11E-09	8.39E-09	1.47E-09	1.10E-08
50	5.80	4.58E-29	0.	1.86E-27	6.71E-24	3.14E-23	0.	8.95E-15	1.17E-09	8.68E-09	1.51E-09	1.14E-08
51	5.70	3.37E-30	0.	0.	8.01E-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) 22000. 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	1.53E-31	0.	0.	0.	7.02E-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	4.18E-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.	8.06E-24	3.51E-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.	8.26E-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	1.60E-08
58	5.00	2.16E-24	0.	0.	0.	8.30E-24	4.20E-23	0.	0.	8.14E-15	1.83E-09	1.33E-08	1.66E-09	1.68E-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	4.03E-23	0.	0.	8.34E-15	2.21E-09	1.54E-08	1.86E-09	1.95E-08
62	4.60	1.96E-23	0.	0.	0.	1.06E-23	3.65E-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	2.76E-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.	1.53E-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.	9.62E-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.	7.66E-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	9.58E-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.	1.83E-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	1.50E-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	1.33E-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	1.08E-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	1.23E-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	1.41E-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	1.58E-08	2.45E-09	2.68E-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	9.90E-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	2.80E-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	2.13E-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	8.09E-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.	1.36E-15	7.13E-08	3.30E-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	6.72E-09	1.29E-07
95	1.30	0.	1.41E-22	0.	0.	0.	0.	0.	0.	0.	1.10E-07	4.00E-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	9.06E-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	1.09E-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.	4.88E-07	3.02E-08	1.30E-08	5.31E-07
101	0.70	0.	1.06E-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.	5.96E-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) 22000. 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.	1.65E-27	0.	0.	0.	4.19E-18	3.08E-12	2.65E-10	4.95E-11	3.17E-10
2	10.60	0.	0.	1.52E-27	0.	0.	0.	4.20E-18	3.17E-12	2.67E-10	4.95E-11	3.19E-10
3	10.50	0.	0.	1.55E-27	0.	0.	0.	4.20E-18	3.26E-12	2.69E-10	4.96E-11	3.22E-10
4	10.40	0.	0.	1.49E-27	0.	0.	0.	4.21E-18	3.36E-12	2.71E-10	4.96E-11	3.24E-10
5	10.30	0.	0.	1.32E-27	0.	0.	0.	4.21E-18	3.46E-12	2.74E-10	4.97E-11	3.27E-10
6	10.20	0.	0.	1.38E-27	0.	0.	0.	4.22E-18	3.56E-12	2.79E-10	5.03E-11	3.33E-10
7	10.10	0.	0.	1.31E-27	0.	0.	0.	4.22E-18	3.67E-12	2.83E-10	5.09E-11	3.38E-10
8	10.00	0.	0.	1.17E-27	0.	0.	0.	4.23E-18	3.78E-12	2.88E-10	5.16E-11	3.43E-10
9	9.90	0.	0.	1.21E-27	0.	0.	0.	4.24E-18	3.89E-12	2.92E-10	5.22E-11	3.48E-10
10	9.80	0.	0.	1.15E-27	0.	0.	0.	4.24E-18	4.02E-12	2.97E-10	5.28E-11	3.54E-10
11	9.70	0.	0.	1.01E-27	0.	0.	0.	4.25E-18	4.14E-12	3.01E-10	5.35E-11	3.59E-10
12	9.60	0.	0.	1.10E-27	0.	0.	0.	4.26E-18	4.27E-12	3.06E-10	5.41E-11	3.64E-10
13	9.50	0.	0.	9.56E-28	0.	0.	0.	4.27E-18	4.41E-12	3.10E-10	5.47E-11	3.70E-10
14	9.40	0.	0.	9.19E-28	0.	0.	0.	4.28E-18	4.55E-12	3.14E-10	5.55E-11	3.74E-10
15	9.30	0.	0.	9.46E-28	0.	0.	0.	4.30E-18	4.70E-12	3.19E-10	5.62E-11	3.80E-10
16	9.20	0.	0.	8.04E-28	0.	0.	0.	4.31E-18	4.86E-12	3.23E-10	5.68E-11	3.85E-10
17	9.10	0.	0.	8.29E-28	0.	0.	0.	4.33E-18	5.02E-12	3.28E-10	5.75E-11	3.91E-10
18	9.00	0.	0.	7.65E-28	0.	0.	0.	4.35E-18	5.19E-12	3.33E-10	3.80E-11	3.76E-10
19	8.90	0.	0.	7.20E-28	0.	0.	0.	4.36E-18	5.37E-12	3.37E-10	3.57E-11	3.78E-10
20	8.80	0.	0.	7.12E-28	0.	0.	0.	4.38E-18	5.55E-12	3.42E-10	3.66E-11	3.84E-10
21	8.70	0.	0.	6.31E-28	0.	0.	0.	4.39E-18	5.75E-12	3.47E-10	3.75E-11	3.90E-10
22	8.60	0.	0.	6.54E-28	0.	0.	0.	4.41E-18	5.95E-12	3.52E-10	3.84E-11	3.96E-10
23	8.50	0.	0.	5.85E-28	0.	0.	0.	4.42E-18	6.17E-12	3.57E-10	3.94E-11	4.02E-10
24	8.40	0.	0.	5.87E-28	0.	0.	0.	4.45E-18	6.39E-12	2.08E-10	4.03E-11	2.55E-10
25	8.30	0.	0.	5.08E-28	0.	0.	0.	4.47E-18	6.63E-12	2.15E-10	4.13E-11	2.63E-10
26	8.20	0.	0.	5.18E-28	0.	0.	0.	4.49E-18	6.87E-12	2.24E-10	4.29E-11	2.74E-10
27	8.10	0.	0.	4.56E-28	0.	0.	0.	4.52E-18	7.13E-12	2.33E-10	4.46E-11	2.84E-10
28	8.00	0.	0.	4.63E-28	0.	0.	0.	4.54E-18	7.40E-12	2.41E-10	4.63E-11	2.95E-10
29	7.90	0.	0.	4.05E-28	0.	0.	0.	4.56E-18	7.69E-12	2.50E-10	4.79E-11	3.06E-10
30	7.80	0.	0.	4.25E-28	0.	0.	0.	4.59E-18	7.99E-12	2.59E-10	4.96E-11	3.16E-10
31	7.70	0.	0.	3.79E-28	0.	0.	0.	4.61E-18	8.30E-12	2.69E-10	5.13E-11	3.28E-10
32	7.60	0.	0.	3.65E-28	0.	1.06E-31	0.	4.63E-18	8.64E-12	2.80E-10	5.30E-11	3.41E-10
33	7.50	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	7.40	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	7.30	0.	0.	3.01E-28	0.	1.15E-29	0.	4.71E-18	9.75E-12	2.71E-10	5.89E-11	3.40E-10
36	7.20	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	7.10	0.	0.	2.68E-28	0.	1.02E-28	0.	4.77E-18	1.06E-11	3.01E-10	6.53E-11	3.77E-10
38	7.00	2.28E-30	0.	2.50E-28	0.	1.92E-28	0.	4.81E-18	1.11E-11	3.17E-10	6.85E-11	3.96E-10
39	6.90	4.50E-30	0.	2.33E-28	0.	2.86E-28	0.	4.85E-18	1.15E-11	3.32E-10	7.17E-11	4.15E-10
40	6.80	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	6.70	2.88E-30	0.	2.03E-28	0.	4.50E-28	0.	4.93E-18	1.26E-11	3.62E-10	7.81E-11	4.53E-10
42	6.60	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	6.50	1.03E-30	0.	1.50E-28	0.	5.52E-28	0.	5.00E-18	1.38E-11	3.93E-10	8.45E-11	4.91E-10
44	6.40	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	6.30	3.54E-31	0.	6.85E-29	7.97E-30	3.86E-28	0.	5.08E-18	1.52E-11	4.23E-10	9.12E-11	5.30E-10
46	6.20	1.62E-31	0.	3.89E-29	1.15E-29	5.14E-28	0.	5.12E-18	1.60E-11	4.40E-10	9.50E-11	5.50E-10
47	6.10	7.54E-32	0.	1.87E-29	3.32E-29	6.14E-28	0.	5.16E-18	1.68E-11	1.33E-10	3.23E-11	1.82E-10
48	6.00	3.18E-32	0.	4.84E-30	3.28E-29	3.16E-28	0.	5.20E-18	1.76E-11	1.38E-10	3.26E-11	1.89E-10
49	5.90	7.90E-33	0.	3.47E-31	4.86E-29	3.04E-28	0.	5.20E-18	1.85E-11	1.43E-10	3.38E-11	1.96E-10
50	5.80	1.01E-33	0.	8.80E-33	6.86E-29	3.21E-28	0.	5.12E-18	1.95E-11	1.49E-10	3.51E-11	2.03E-10
51	5.70	7.44E-35	0.	0.	8.19E-29	3.59E-28	0.	4.81E-18	2.06E-11	1.56E-10	3.64E-11	2.13E-10

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 22000. 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	3.38E-36	0.	0.	0.	7.18E-29	4.61E-28	0.	0.	4.47E-18	2.17E-11	1.66E-10	3.78E-11	2.25E-10
53	5.50	0.	0.	0.	0.	8.78E-29	4.27E-28	0.	0.	4.50E-18	2.29E-11	1.76E-10	3.94E-11	2.38E-10
54	5.40	0.	0.	0.	0.	8.24E-29	3.59E-28	0.	0.	4.52E-18	2.42E-11	1.86E-10	4.15E-11	2.52E-10
55	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
56	5.20	0.	0.	0.	0.	9.18E-29	3.52E-28	0.	0.	4.58E-18	2.72E-11	2.08E-10	3.46E-11	2.70E-10
57	5.10	0.	0.	0.	0.	9.21E-29	4.48E-28	0.	0.	4.62E-18	2.88E-11	2.19E-10	3.65E-11	2.84E-10
58	5.00	4.76E-29	0.	0.	0.	8.49E-29	4.30E-28	0.	0.	4.66E-18	3.06E-11	2.30E-10	3.85E-11	2.99E-10
59	4.90	1.18E-28	0.	0.	0.	9.54E-29	4.76E-28	0.	0.	4.69E-18	3.25E-11	2.41E-10	4.05E-11	3.14E-10
60	4.80	2.25E-28	0.	0.	0.	1.03E-28	4.50E-28	0.	0.	4.73E-18	3.46E-11	2.52E-10	4.25E-11	3.29E-10
61	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
62	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
63	4.50	4.62E-28	0.	2.52E-29	0.	1.00E-28	2.82E-28	0.	0.	4.85E-18	4.20E-11	3.08E-10	4.95E-11	4.00E-10
64	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
65	4.30	4.80E-28	0.	2.53E-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
66	4.20	4.53E-28	0.	7.69E-28	0.	1.04E-28	8.36E-29	0.	0.	4.97E-18	5.18E-11	3.73E-10	5.55E-11	4.81E-10
67	4.10	4.30E-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
68	4.00	4.01E-28	0.	1.12E-27	0.	1.00E-28	1.77E-29	0.	0.	5.00E-18	6.00E-11	4.23E-10	6.48E-11	5.48E-10
69	3.90	3.46E-28	0.	5.36E-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	3.82E-28	0.	8.68E-28	1.43E-22	1.02E-28	0.	0.	0.	4.97E-18	7.01E-11	4.74E-10	7.41E-11	6.18E-10
71	3.70	3.47E-28	0.	8.74E-28	7.00E-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.	6.53E-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	9.00E-11	1.52E-10	7.72E-11	3.20E-10
74	3.40	2.80E-28	0.	5.61E-28	1.06E-22	8.81E-29	0.	0.	0.	2.42E-18	9.83E-11	1.65E-10	8.26E-11	3.46E-10
75	3.30	2.26E-28	0.	5.73E-28	3.82E-22	7.18E-29	0.	0.	0.	2.42E-18	1.08E-10	1.79E-10	6.07E-11	3.47E-10
76	3.20	2.00E-28	0.	3.86E-28	5.80E-22	7.61E-29	0.	0.	0.	2.42E-18	1.18E-10	2.04E-10	4.81E-11	3.70E-10
77	3.10	1.95E-28	0.	3.03E-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.	1.89E-28	3.60E-22	7.03E-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.	1.20E-28	1.94E-22	5.50E-29	0.	0.	0.	2.44E-18	1.59E-10	2.91E-10	6.75E-11	5.18E-10
80	2.80	1.60E-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	2.73E-29	0.	0.	0.	2.44E-18	1.98E-10	3.50E-10	7.79E-11	6.25E-10
82	2.60	5.16E-29	0.	1.31E-29	1.81E-23	1.01E-29	0.	0.	0.	2.44E-18	2.22E-10	3.78E-10	8.43E-11	6.84E-10
83	2.50	3.66E-30	0.	1.34E-30	1.78E-23	2.46E-30	0.	0.	0.	2.44E-18	2.50E-10	4.16E-10	9.34E-11	7.60E-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.	4.52E-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.	4.53E-28	0.	0.	0.	0.	0.	0.	2.41E-18	4.24E-10	2.51E-10	6.12E-11	7.37E-10
88	2.00	0.	9.15E-28	0.	0.	0.	0.	0.	0.	2.33E-18	4.92E-10	2.86E-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.	9.15E-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-18	8.10E-10	3.91E-10	9.71E-11	1.30E-09
92	1.60	0.	7.83E-28	0.	0.	0.	0.	0.	0.	1.71E-18	9.76E-10	4.26E-10	1.07E-10	1.51E-09
93	1.50	0.	8.86E-28	0.	0.	0.	0.	0.	0.	7.76E-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	2.69E-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.	6.20E-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.	7.26E-32	0.	0.	4.09E-09	5.10E-11	5.14E-11	4.20E-09
99	0.90	0.	4.67E-28	0.	0.	0.	0.	8.52E-32	0.	0.	5.65E-09	5.69E-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	8.21E-09
101	0.70	.	5.03E-29	0.	0.	0.	0.	1.83E-30	0.	0.	1.22E-08	6.25E-11	5.33E-11	1.24E-08
102	0.60	0.	1.17E-29	0.	0.	0.	0.	5.68E-30	0.	0.	1.97E-08	6.99E-11	6.03E-11	1.98E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. 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.	2.00E-01	0.	0.	0.	5.55E 00	9.74E-01	2.81E 02	7.94E 00	2.95E 02
2	10.60	0.	0.	1.85E-01	0.	0.	0.	5.56E 00	1.00E 00	2.61E 01	7.91E 00	4.07E 01
3	10.50	0.	0.	1.89E-01	0.	0.	0.	5.56E 00	1.03E 00	2.62E 01	7.87E 00	4.08E 01
4	10.40	0.	0.	1.82E-01	0.	0.	0.	5.57E 00	1.06E 00	2.63E 01	7.83E 00	4.09E 01
5	10.30	0.	0.	1.62E-01	0.	0.	0.	5.58E 00	1.09E 00	2.63E 01	7.80E 00	4.10E 01
6	10.20	0.	0.	1.69E-01	0.	0.	0.	5.59E 00	1.13E 00	2.64E 01	7.76E 00	4.10E 01
7	10.10	0.	0.	1.61E-01	0.	0.	0.	5.59E 00	1.16E 00	2.63E 01	7.72E 00	4.09E 01
8	10.00	0.	0.	1.45E-01	0.	0.	0.	5.60E 00	1.20E 00	2.63E 01	7.69E 00	4.09E 01
9	9.90	0.	0.	1.49E-01	0.	0.	0.	5.61E 00	1.23E 00	2.64E 01	7.65E 00	4.10E 01
10	9.80	0.	0.	1.43E-01	0.	0.	0.	5.62E 00	1.27E 00	2.64E 01	7.61E 00	4.11E 01
11	9.70	0.	0.	1.26E-01	0.	0.	0.	5.63E 00	1.31E 00	2.65E 01	7.57E 00	4.11E 01
12	9.60	0.	0.	1.37E-01	0.	0.	0.	5.64E 00	1.35E 00	2.66E 01	7.54E 00	4.12E 01
13	9.50	0.	0.	1.19E-01	0.	0.	0.	5.65E 00	1.40E 00	2.66E 01	7.50E 00	4.13E 01
14	9.40	0.	0.	1.15E-01	0.	0.	0.	5.67E 00	1.44E 00	2.67E 01	7.46E 00	4.14E 01
15	9.30	0.	0.	1.19E-01	0.	0.	0.	5.69E 00	1.49E 00	2.68E 01	7.43E 00	4.15E 01
16	9.20	0.	0.	1.01E-01	0.	0.	0.	5.71E 00	1.54E 00	2.69E 01	7.39E 00	4.16E 01
17	9.10	0.	0.	1.04E-01	0.	0.	0.	5.73E 00	1.59E 00	1.12E 01	7.36E 00	2.60E 01
18	9.00	0.	0.	9.66E-02	0.	0.	0.	5.76E 00	1.65E 00	1.12E 01	7.32E 00	2.60E 01
19	8.90	0.	0.	9.11E-02	0.	0.	0.	5.78E 00	1.70E 00	1.12E 01	7.29E 00	2.61E 01
20	8.80	0.	0.	9.03E-02	0.	0.	0.	5.80E 00	1.76E 00	1.12E 01	7.26E 00	2.61E 01
21	8.70	0.	0.	8.02E-02	0.	0.	0.	5.82E 00	1.82E 00	1.13E 01	7.23E 00	2.62E 01
22	8.60	0.	0.	8.33E-02	0.	0.	0.	5.84E 00	1.89E 00	1.13E 01	7.19E 00	2.63E 01
23	8.50	0.	0.	7.48E-02	0.	0.	0.	5.86E 00	1.96E 00	1.13E 01	7.16E 00	2.64E 01
24	8.40	0.	0.	7.51E-02	0.	0.	0.	5.89E 00	2.03E 00	1.14E 01	7.13E 00	2.65E 01
25	8.30	0.	0.	6.52E-02	0.	0.	0.	5.92E 00	2.10E 00	1.15E 01	7.12E 00	2.67E 01
26	8.20	0.	0.	6.66E-02	0.	0.	0.	5.95E 00	2.18E 00	1.15E 01	7.12E 00	2.68E 01
27	8.10	0.	0.	5.88E-02	0.	0.	0.	5.98E 00	2.26E 00	1.16E 01	7.12E 00	2.70E 01
28	8.00	0.	0.	5.98E-02	0.	0.	0.	6.01E 00	2.35E 00	1.16E 01	7.12E 00	2.72E 01
29	7.90	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	7.70	0.	0.	4.94E-02	0.	0.	0.	6.10E 00	2.64E 00	1.19E 01	7.13E 00	2.79E 01
32	7.60	0.	0.	4.76E-02	0.	2.06E-06	0.	6.14E 00	2.75E 00	1.20E 01	7.13E 00	2.81E 01
33	7.50	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	7.40	0.	0.	4.10E-02	0.	8.00E-05	0.	6.20E 00	2.96E 00	1.22E 01	7.13E 00	2.86E 01
35	7.30	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	7.20	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	7.10	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	7.00	6.89E-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	6.90	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	6.80	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	6.70	8.74E-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	6.60	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	6.50	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	6.40	1.81E-06	0.	1.44E-02	3.11E-05	9.59E-03	0.	6.68E 00	4.63E 00	1.34E 01	7.20E 00	3.19E 01
45	6.30	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	6.20	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	6.10	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	6.00	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	5.90	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	5.80	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	5.70	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) 1.293E-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 V18-ROT	NO 2	O- PHOTO-DET	FREE-FREE IONS	N P.E.	O P.E.	TOTAL AIR
52	5.60	1.04E-11	0.	0.	0.	1.38E-03	8.87E-03	0.	0.	5.92E 00	6.94E 00	1.50E 01	7.57E 00	3.54E 01
53	5.50	0.	0.	0.	0.	1.69E-03	8.20E-03	0.	0.	5.96E 00	7.33E 00	1.53E 01	7.64E 00	3.62E 01
54	5.40	0.	0.	0.	0.	1.59E-03	6.94E-03	0.	0.	5.99E 00	7.75E 00	1.57E 01	7.72E 00	3.72E 01
55	5.30	0.	0.	0.	0.	1.63E-03	8.53E-03	0.	0.	6.03E 00	8.20E 00	1.62E 01	7.82E 00	3.82E 01
56	5.20	0.	0.	0.	0.	1.78E-03	6.86E-03	0.	0.	6.06E 00	8.69E 00	1.66E 01	7.94E 00	3.93E 01
57	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
58	5.00	1.48E-04	0.	0.	0.	1.64E-03	8.38E-03	0.	0.	6.17E 00	9.79E 00	1.76E 01	8.19E 00	4.18E 01
59	4.90	3.68E-04	0.	0.	0.	1.85E-03	9.31E-03	0.	0.	6.22E 00	1.04E 01	1.83E 01	8.34E 00	4.32E 01
60	4.80	7.05E-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	1.50E-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.	1.05E-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.	6.60E 00	1.79E 01	2.66E 01	9.97E 00	6.11E 01
68	4.00	1.28E-03	0.	1.53E-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.	6.60E 00	2.08E 01	2.79E 01	5.43E 00	6.08E 01
70	3.80	1.22E-03	0.	1.20E-01	3.27E-02	2.03E-03	0.	0.	0.	6.58E 00	2.25E 01	2.81E 01	5.67E 00	6.30E 01
71	3.70	1.11E-03	0.	1.20E-01	1.64E-02	1.78E-03	0.	0.	0.	6.47E 00	2.45E 01	2.38E 01	6.17E 00	6.11E 01
72	3.60	1.02E-03	0.	9.04E-02	8.17E-02	1.92E-03	0.	0.	0.	6.06E 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.	5.55E 00	2.90E 01	2.74E 01	7.35E 00	6.96E 01
74	3.40	9.04E-04	0.	7.80E-02	2.49E-02	1.76E-03	0.	0.	0.	3.20E 00	3.17E 01	3.04E 01	8.08E 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	6.50E-04	0.	5.38E-02	1.32E-01	1.53E-03	0.	0.	0.	3.21E 00	3.81E 01	3.65E 01	9.58E 00	8.76E 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	5.79E-04	0.	2.64E-02	8.30E-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	4.45E-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	1.02E 01	1.63E 02
84	2.40	0.	8.02E-03	0.	3.03E-03	5.52E-06	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.	3.08E 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	1.58E 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.	1.05E-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	6.57E 01	9.07E 02
95	1.30	0.	8.91E-02	0.	0.	0.	0.	0.	0.	0.	6.01E 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	1.80E 03
98	1.00	0.	7.67E-02	0.	0.	0.	0.	1.42E-06	0.	0.	1.35E 03	8.30E 02	1.24E 02	2.31E 03
99	0.90	0.	6.28E-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.	3.68E-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	1.85E 02	8.12E 03

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 23000. 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.	9.95E-04	0.	0.	0.	1.15E-01	6.90E-02	1.98E 01	6.15E-01	2.06E 01
2	10.60	0.	0.	9.20E-04	0.	0.	0.	1.15E-01	7.10E-02	1.84E 00	6.13E-01	2.54E 00
3	10.50	0.	0.	9.39E-04	0.	0.	0.	1.15E-01	7.30E-02	1.85E 00	6.10E-01	2.65E 00
4	10.40	0.	0.	9.05E-04	0.	0.	0.	1.15E-01	7.52E-02	1.86E 00	6.07E-01	2.66E 00
5	10.30	0.	0.	8.04E-04	0.	0.	0.	1.15E-01	7.74E-02	1.86E 00	6.04E-01	2.66E 00
6	10.20	0.	0.	8.40E-04	0.	0.	0.	1.15E-01	7.98E-02	1.87E 00	6.01E-01	2.66E 00
7	10.10	0.	0.	8.00E-04	0.	0.	0.	1.16E-01	8.22E-02	1.86E 00	5.98E-01	2.66E 00
8	10.00	0.	0.	7.18E-04	0.	0.	0.	1.16E-01	8.47E-02	1.86E 00	5.95E-01	2.65E 00
9	9.90	0.	0.	7.41E-04	0.	0.	0.	1.16E-01	8.73E-02	1.86E 00	5.93E-01	2.66E 00
10	9.80	0.	0.	7.08E-04	0.	0.	0.	1.16E-01	9.00E-02	1.87E 00	5.90E-01	2.66E 00
11	9.70	0.	0.	6.25E-04	0.	0.	0.	1.16E-01	9.29E-02	1.87E 00	5.87E-01	2.67E 00
12	9.60	0.	0.	6.78E-04	0.	0.	0.	1.17E-01	9.59E-02	1.87E 00	5.84E-01	2.67E 00
13	9.50	0.	0.	5.93E-04	0.	0.	0.	1.17E-01	9.90E-02	1.88E 00	5.81E-01	2.68E 00
14	9.40	0.	0.	5.71E-04	0.	0.	0.	1.17E-01	1.02E-01	1.89E 00	5.78E-01	2.68E 00
15	9.30	0.	0.	5.88E-04	0.	0.	0.	1.18E-01	1.06E-01	1.89E 00	5.76E-01	2.69E 00
16	9.20	0.	0.	5.02E-04	0.	0.	0.	1.18E-01	1.09E-01	1.90E 00	5.73E-01	2.70E 00
17	9.10	0.	0.	5.18E-04	0.	0.	0.	1.19E-01	1.13E-01	7.90E-01	5.70E-01	1.59E 00
18	9.00	0.	0.	4.80E-04	0.	0.	0.	1.19E-01	1.17E-01	7.91E-01	5.67E-01	1.59E 00
19	8.90	0.	0.	4.52E-04	0.	0.	0.	1.19E-01	1.21E-01	7.92E-01	5.65E-01	1.60E 00
20	8.80	0.	0.	4.48E-04	0.	0.	0.	1.20E-01	1.25E-01	7.94E-01	5.62E-01	1.60E 00
21	8.70	0.	0.	3.98E-04	0.	0.	0.	1.20E-01	1.29E-01	7.96E-01	5.60E-01	1.61E 00
22	8.60	0.	0.	4.14E-04	0.	0.	0.	1.21E-01	1.34E-01	7.99E-01	5.57E-01	1.61E 00
23	8.50	0.	0.	3.71E-04	0.	0.	0.	1.21E-01	1.39E-01	8.02E-01	5.55E-01	1.62E 00
24	8.40	0.	0.	3.73E-04	0.	0.	0.	1.22E-01	1.44E-01	8.06E-01	5.53E-01	1.62E 00
25	8.30	0.	0.	3.24E-04	0.	0.	0.	1.22E-01	1.49E-01	8.10E-01	5.51E-01	1.63E 00
26	8.20	0.	0.	3.30E-04	0.	0.	0.	1.23E-01	1.55E-01	8.14E-01	5.52E-01	1.64E 00
27	8.10	0.	0.	2.92E-04	0.	0.	0.	1.24E-01	1.60E-01	8.18E-01	5.52E-01	1.65E 00
28	8.00	0.	0.	2.97E-04	0.	0.	0.	1.24E-01	1.67E-01	8.24E-01	5.52E-01	1.67E 00
29	7.90	0.	0.	2.61E-04	0.	0.	0.	1.25E-01	1.73E-01	8.31E-01	5.52E-01	1.68E 00
30	7.80	0.	0.	2.74E-04	0.	0.	0.	1.26E-01	1.80E-01	8.38E-01	5.52E-01	1.70E 00
31	7.70	0.	0.	2.45E-04	0.	0.	0.	1.26E-01	1.87E-01	8.45E-01	5.52E-01	1.71E 00
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	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	6.80	7.15E-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	6.70	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	6.60	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	6.50	1.89E-08	0.	1.00E-04	0.	5.79E-05	0.	1.37E-01	3.13E-01	9.34E-01	5.57E-01	1.94E 00
44	6.40	1.15E-08	0.	7.14E-05	1.70E-07	5.23E-05	0.	1.38E-01	3.28E-01	9.45E-01	5.58E-01	1.97E 00
45	6.30	6.48E-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	6.20	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	6.10	1.39E-09	0.	1.27E-05	3.43E-06	6.40E-05	0.	1.41E-01	3.79E-01	9.80E-01	5.67E-01	2.07E 00
48	6.00	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	5.90	1.46E-10	0.	2.37E-07	5.04E-06	3.20E-05	0.	1.42E-01	4.20E-01	1.01E 00	5.75E-01	2.15E 00
50	5.80	1.87E-11	0.	6.00E-09	7.13E-06	3.38E-05	0.	1.40E-01	4.42E-01	1.02E 00	5.78E-01	2.18E 00
51	5.70	1.36E-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) 1.293E-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	6.25E-14	0.	0.	0.	7.53E-06	4.84E-05	0.	0.	1.22E-01	4.92E-01	1.06E 00	5.86E-01	2.26E 00
53	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
54	5.40	0.	0.	0.	0.	8.68E-06	3.78E-05	0.	0.	1.24E-01	5.49E-01	1.11E 00	5.98E-01	2.38E 00
55	5.30	0.	0.	0.	0.	8.89E-06	4.65E-05	0.	0.	1.25E-01	5.81E-01	1.14E 00	6.06E-01	2.46E 00
56	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
57	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
58	5.00	8.9CE-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
59	4.90	2.21E-06	0.	0.	0.	1.01E-05	5.08E-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	8.16E-06	0.	0.	0.	1.15E-05	3.99E-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	2.05E-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	2.53E-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	4.00E 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.	5.94E-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	1.52E-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	6.24E-01	5.08E 00
75	3.30	4.38E-06	0.	3.95E-04	1.64E-03	7.86E-06	0.	0.	0.	6.63E-02	2.44E 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	6.09E 00
77	3.10	3.80E-06	0.	2.10E-04	7.38E-04	8.03E-06	0.	0.	0.	6.66E-02	2.97E 00	2.80E 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	2.98E-06	0.	8.37E-05	8.28E-04	6.09E-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.	4.04E-05	6.05E-04	4.40E-06	0.	0.	0.	6.69E-02	4.06E 00	3.57E 00	1.01E 00	8.70E 00
81	2.70	2.09E-06	0.	1.91E-05	7.23E-04	2.50E-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.	5.63E-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.	3.08E-04	0.	0.	0.	0.	0.	0.	6.61E-02	8.47E 00	6.01E 00	1.29E 00	1.58E 01
87	2.10	0.	3.05E-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.	7.05E-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	2.98E 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.	4.26E 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	4.82E 01	8.42E 00	1.28E 02
98	1.00	0.	3.81E-04	0.	0.	0.	0.	7.76E-09	0.	0.	9.58E 01	5.85E 01	9.62E 00	1.64E 02
99	0.90	0.	3.12E-04	0.	0.	0.	0.	9.15E-09	0.	0.	1.33E 02	6.75E 01	1.13E 01	2.11E 02
100	0.80	0.	1.46E-04	0.	0.	0.	0.	2.04E-07	0.	0.	1.91E 02	7.77E 01	1.29E 01	2.82E 02
101	0.70	0.	3.34E-05	0.	0.	0.	0.	2.00E-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.	6.15E-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) 23000. 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 (IONS)	N P.E.	O P.E.	TOTAL AIR
1	10.70	0.	0.	1.38E-06	0.	0.	0.	9.72E-04	2.64E-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.	1.30E-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	9.76E-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	6.83E-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.	6.63E-07	0.	0.	0.	1.01E-03	4.46E-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.	5.51E-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	2.85E-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	7.76E-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	6.06E-11	0.	1.70E-07	0.	6.75E-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	5.56E-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	8.12E-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
52	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
53	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
54	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
55	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
56	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
57	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
58	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
59	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
60	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
61	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
62	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
63	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
64	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
65	4.30	1.71E-08	0.	2.40E-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
66	4.20	1.62E-08	0.	7.22E-07	0.	1.79E-08	1.49E-08	0.	0.	1.15E-03	4.50E-02	6.06E-02	3.37E-02	1.40E-01
67	4.10	1.54E-08	0.	3.45E-07	0.	1.78E-08	4.08E-09	0.	0.	1.16E-03	4.84E-02	6.38E-02	3.35E-02	1.47E-01
68	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
69	3.90	1.25E-08	0.	5.06E-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
70	3.80	1.38E-08	0.	8.21E-07	4.30E-06	1.78E-08	0.	0.	0.	1.15E-03	6.11E-02	6.71E-02	1.91E-02	1.48E-01
71	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
72	3.60	1.15E-08	0.	6.20E-07	1.07E-05	1.69E-08	0.	0.	0.	1.06E-03	7.20E-02	4.03E-02	2.26E-02	1.56E-01
73	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
74	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
75	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
76	3.20	7.32E-09	0.	3.69E-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
77	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
78	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
79	2.90	5.60E-09	0.	1.16E-07	5.85E-06	9.82E-09	0.	0.	0.	5.66E-04	1.39E-01	1.11E-01	4.04E-02	2.91E-01
80	2.80	5.91E-09	0.	5.58E-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
81	2.70	3.93E-09	0.	2.64E-08	5.11E-06	4.03E-09	0.	0.	0.	5.67E-04	1.73E-01	1.32E-01	4.75E-02	3.53E-01
82	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
83	2.50	1.37E-10	0.	1.28E-08	5.44E-07	4.47E-10	0.	0.	0.	5.67E-04	2.19E-01	1.62E-01	3.43E-02	4.17E-01
84	2.40	0.	5.50E-08	0.	3.98E-07	4.85E-11	0.	0.	0.	5.67E-04	2.48E-01	1.90E-01	3.96E-02	4.78E-01
85	2.30	0.	1.55E-07	0.	0.	0.	0.	0.	0.	5.63E-04	2.83E-01	1.69E-01	4.71E-02	5.00E-01
86	2.20	0.	4.25E-07	0.	0.	0.	0.	0.	0.	5.60E-04	3.24E-01	2.02E-01	5.60E-02	5.83E-01
87	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
88	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
89	1.90	0.	9.75E-07	0.	0.	0.	0.	0.	0.	5.19E-04	5.08E-01	3.15E-01	8.68E-02	9.11E-01
90	1.80	0.	8.46E-07	0.	0.	0.	0.	0.	0.	4.97E-04	6.01E-01	3.82E-01	1.06E-01	1.09E 00
91	1.70	0.	9.47E-07	0.	0.	0.	0.	0.	0.	4.68E-04	7.17E-01	4.64E-01	1.29E-01	1.31E 00
92	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
93	1.50	0.	8.15E-07	0.	0.	0.	0.	0.	0.	1.80E-04	1.05E 00	7.22E-01	1.84E-01	1.96E 00
94	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
95	1.30	0.	6.11E-07	0.	0.	0.	0.	0.	0.	0.	1.63E 00	1.29E 00	2.90E-01	3.20E 00
96	1.20	0.	5.83E-07	0.	0.	0.	0.	0.	0.	0.	2.08E 00	1.45E 00	2.92E-01	3.83E 00
97	1.10	0.	5.72E-07	0.	0.	0.	0.	7.31E-13	0.	0.	2.73E 00	1.79E 00	3.65E-01	4.88E 00
98	1.00	0.	5.26E-07	0.	0.	0.	0.	1.25E-11	0.	0.	3.66E 00	2.18E 00	4.17E-01	6.25E 00
99	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
100	0.80	0.	2.02E-07	0.	0.	0.	0.	3.28E-10	0.	0.	7.30E 00	2.89E 00	5.60E-01	1.08E 01
101	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
102	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) 23000. 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.	3.32E-10	0.	0.	0.	2.09E-06	4.24E-05	1.16E-02	4.57E-04	1.21E-02
2	10.60	0.	0.	3.07E-10	0.	0.	0.	2.09E-06	4.37E-05	1.24E-03	4.55E-04	1.74E-03
3	10.50	0.	0.	3.13E-10	0.	0.	0.	2.09E-06	4.49E-05	1.25E-03	4.52E-04	1.75E-03
4	10.40	0.	0.	3.02E-10	0.	0.	0.	2.10E-06	4.63E-05	1.26E-03	4.50E-04	1.76E-03
5	10.30	0.	0.	2.68E-10	0.	0.	0.	2.10E-06	4.76E-05	1.26E-03	4.48E-04	1.76E-03
6	10.20	0.	0.	2.80E-10	0.	0.	0.	2.10E-06	4.91E-05	1.27E-03	4.46E-04	1.77E-03
7	10.10	0.	0.	2.67E-10	0.	0.	0.	2.10E-06	5.06E-05	1.27E-03	4.44E-04	1.77E-03
8	10.00	0.	0.	2.40E-10	0.	0.	0.	2.11E-06	5.21E-05	1.11E-03	4.42E-04	1.61E-03
9	9.90	0.	0.	2.47E-10	0.	0.	0.	2.11E-06	5.37E-05	1.11E-03	4.39E-04	1.61E-03
10	9.80	0.	0.	2.36E-10	0.	0.	0.	2.11E-06	5.54E-05	1.12E-03	4.37E-04	1.61E-03
11	9.70	0.	0.	2.09E-10	0.	0.	0.	2.12E-06	5.72E-05	1.12E-03	4.35E-04	1.62E-03
12	9.60	0.	0.	2.26E-10	0.	0.	0.	2.12E-06	5.90E-05	1.13E-03	4.33E-04	1.62E-03
13	9.50	0.	0.	1.98E-10	0.	0.	0.	2.13E-06	6.09E-05	1.13E-03	4.31E-04	1.62E-03
14	9.40	0.	0.	1.91E-10	0.	0.	0.	2.13E-06	6.29E-05	1.13E-03	4.29E-04	1.63E-03
15	9.30	0.	0.	1.96E-10	0.	0.	0.	2.14E-06	6.49E-05	1.14E-03	4.27E-04	1.63E-03
16	9.20	0.	0.	1.68E-10	0.	0.	0.	2.15E-06	6.71E-05	1.14E-03	4.25E-04	1.64E-03
17	9.10	0.	0.	1.73E-10	0.	0.	0.	2.16E-06	6.94E-05	5.02E-04	4.23E-04	9.97E-04
18	9.00	0.	0.	1.60E-10	0.	0.	0.	2.16E-06	7.17E-05	5.03E-04	4.21E-04	9.98E-04
19	8.90	0.	0.	1.51E-10	0.	0.	0.	2.17E-06	7.42E-05	5.05E-04	4.19E-04	1.00E-03
20	8.80	0.	0.	1.50E-10	0.	0.	0.	2.18E-06	7.68E-05	5.06E-04	4.18E-04	1.00E-03
21	8.70	0.	0.	1.33E-10	0.	0.	0.	2.19E-06	7.95E-05	5.08E-04	4.16E-04	1.01E-03
22	8.60	0.	0.	1.38E-10	0.	0.	0.	2.20E-06	8.23E-05	5.10E-04	4.14E-04	1.01E-03
23	8.50	0.	0.	1.24E-10	0.	0.	0.	2.20E-06	8.53E-05	5.13E-04	4.12E-04	1.01E-03
24	8.40	0.	0.	1.24E-10	0.	0.	0.	2.22E-06	8.84E-05	5.15E-04	4.11E-04	1.02E-03
25	8.30	0.	0.	1.08E-10	0.	0.	0.	2.23E-06	9.17E-05	5.19E-04	4.10E-04	1.02E-03
26	8.20	0.	0.	1.10E-10	0.	0.	0.	2.24E-06	9.51E-05	5.23E-04	4.10E-04	1.03E-03
27	8.10	0.	0.	9.74E-11	0.	0.	0.	2.25E-06	9.87E-05	5.27E-04	4.10E-04	1.04E-03
28	8.00	0.	0.	9.90E-11	0.	0.	0.	2.26E-06	1.02E-04	5.32E-04	4.09E-04	1.05E-03
29	7.90	0.	0.	8.70E-11	0.	0.	0.	2.27E-06	1.06E-04	5.37E-04	4.09E-04	1.06E-03
30	7.80	0.	0.	9.13E-11	0.	0.	0.	2.28E-06	1.11E-04	5.43E-04	4.10E-04	1.07E-03
31	7.70	0.	0.	8.18E-11	0.	0.	0.	2.30E-06	1.15E-04	5.48E-04	4.10E-04	1.08E-03
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	0.	0.	6.01E-11	0.	1.46E-12	0.	2.36E-06	1.41E-04	5.46E-04	4.11E-04	1.10E-03
37	7.10	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	7.00	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	6.90	4.43E-14	0.	5.12E-11	0.	1.30E-11	0.	2.42E-06	1.60E-04	5.68E-04	4.12E-04	1.14E-03
40	6.80	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	6.70	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	6.60	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	6.50	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	6.40	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	6.30	3.52E-15	0.	1.54E-11	3.48E-13	1.74E-11	0.	2.53E-06	2.11E-04	6.07E-04	4.18E-04	1.24E-03
46	6.20	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	6.10	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	6.00	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	5.90	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	5.80	1.01E-17	0.	2.00E-15	3.04E-12	1.44E-11	0.	2.55E-06	2.72E-04	6.64E-04	4.33E-04	1.37E-03
51	5.70	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) 2300C. 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	3.40E-20	0.	0.	0.	3.21E-12	2.06E-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	1.98E-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	1.59E-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	2.02E-11	0.	0.	2.30E-06	4.02E-04	6.81E-04	4.63E-04	1.55E-03
58	5.00	4.83E-13	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	2.16E-11	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.	4.65E-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	1.70E-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	5.57E-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	4.46E-12	0.	8.33E-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	8.24E-13	0.	0.	2.49E-06	8.40E-04	1.14E-03	3.04E-04	2.29E-03
69	3.90	3.60E-12	0.	1.22E-10	2.18E-09	4.34E-12	2.95E-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	3.28E-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.	1.50E-10	2.05E-08	4.46E-12	0.	0.	0.	2.28E-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	6.26E-09	4.09E-12	0.	0.	0.	1.20E-06	1.38E-03	1.25E-03	4.67E-04	3.10E-03
75	3.30	2.38E-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.	7.02E-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	2.09E-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	5.56E-13	0.	3.03E-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	1.18E-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	1.28E-14	0.	0.	0.	1.22E-06	4.00E-03	3.06E-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	3.28E-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	6.98E-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.	2.04E-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.	1.97E-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	2.80E-02	6.21E-03	7.81E-02
98	1.00	0.	1.27E-10	0.	0.	0.	0.	3.31E-15	0.	0.	5.89E-02	3.40E-02	7.10E-03	9.99E-02
99	0.90	0.	1.04E-10	0.	0.	0.	0.	3.90E-15	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.	8.54E-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	1.06E-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	10.70	0.	0.	3.72E-14	0.	0.	0.	2.50E-09	5.25E-07	3.15E-05	5.40E-06	3.74E-05
2	10.60	0.	0.	3.44E-14	0.	0.	0.	2.51E-09	5.40E-07	3.19E-05	5.32E-06	3.77E-05
3	10.50	0.	0.	3.51E-14	0.	0.	0.	2.51E-09	5.56E-07	3.23E-05	5.29E-06	3.81E-05
4	10.40	0.	0.	3.38E-14	0.	0.	0.	2.51E-09	5.72E-07	3.26E-05	5.27E-06	3.85E-05
5	10.30	0.	0.	3.00E-14	0.	0.	0.	2.52E-09	5.89E-07	3.30E-05	5.25E-06	3.88E-05
6	10.20	0.	0.	3.14E-14	0.	0.	0.	2.52E-09	6.07E-07	3.34E-05	5.23E-06	3.93E-05
7	10.10	0.	0.	2.99E-14	0.	0.	0.	2.52E-09	6.25E-07	3.38E-05	5.21E-06	3.96E-05
8	10.00	0.	0.	2.68E-14	0.	0.	0.	2.53E-09	6.45E-07	1.80E-05	5.19E-06	2.38E-05
9	9.90	0.	0.	2.77E-14	0.	0.	0.	2.53E-09	6.64E-07	1.81E-05	5.17E-06	2.39E-05
10	9.80	0.	0.	2.64E-14	0.	0.	0.	2.54E-09	6.85E-07	1.82E-05	5.15E-06	2.41E-05
11	9.70	0.	0.	2.33E-14	0.	0.	0.	2.54E-09	7.07E-07	1.84E-05	5.13E-06	2.42E-05
12	9.60	0.	0.	2.53E-14	0.	0.	0.	2.55E-09	7.29E-07	1.85E-05	5.11E-06	2.44E-05
13	9.50	0.	0.	2.21E-14	0.	0.	0.	2.55E-09	7.53E-07	1.87E-05	5.09E-06	2.45E-05
14	9.40	0.	0.	2.13E-14	0.	0.	0.	2.56E-09	7.77E-07	1.88E-05	5.07E-06	2.47E-05
15	9.30	0.	0.	2.20E-14	0.	0.	0.	2.57E-09	8.03E-07	1.90E-05	5.06E-06	2.48E-05
16	9.20	0.	0.	1.88E-14	0.	0.	0.	2.58E-09	8.30E-07	1.91E-05	5.04E-06	2.50E-05
17	9.10	0.	0.	1.93E-14	0.	0.	0.	2.59E-09	8.58E-07	1.24E-05	5.02E-06	1.83E-05
18	9.00	0.	0.	1.79E-14	0.	0.	0.	2.60E-09	8.87E-07	1.26E-05	5.00E-06	1.85E-05
19	8.90	0.	0.	1.69E-14	0.	0.	0.	2.61E-09	9.18E-07	1.27E-05	4.99E-06	1.86E-05
20	8.80	0.	0.	1.67E-14	0.	0.	0.	2.62E-09	9.50E-07	1.28E-05	4.97E-06	1.87E-05
21	8.70	0.	0.	1.49E-14	0.	0.	0.	2.63E-09	9.83E-07	1.29E-05	4.96E-06	1.89E-05
22	8.60	0.	0.	1.55E-14	0.	0.	0.	2.63E-09	1.02E-06	1.31E-05	4.94E-06	1.90E-05
23	8.50	0.	0.	1.39E-14	0.	0.	0.	2.64E-09	1.05E-06	1.32E-05	4.93E-06	1.92E-05
24	8.40	0.	0.	1.39E-14	0.	0.	0.	2.66E-09	1.09E-06	1.34E-05	4.91E-06	1.94E-05
25	8.30	0.	0.	1.21E-14	0.	0.	0.	2.67E-09	1.13E-06	1.35E-05	4.90E-06	1.96E-05
26	8.20	0.	0.	1.23E-14	0.	0.	0.	2.69E-09	1.18E-06	1.38E-05	4.92E-06	1.99E-05
27	8.10	0.	0.	1.09E-14	0.	0.	0.	2.70E-09	1.22E-06	1.40E-05	4.82E-06	2.00E-05
28	8.00	0.	0.	1.11E-14	0.	0.	0.	2.71E-09	1.27E-06	1.42E-05	4.81E-06	2.03E-05
29	7.90	0.	0.	9.74E-15	0.	0.	0.	2.73E-09	1.32E-06	1.45E-05	4.82E-06	2.06E-05
30	7.80	0.	0.	1.02E-14	0.	0.	0.	2.74E-09	1.37E-06	1.47E-05	4.83E-06	2.09E-05
31	7.70	0.	0.	9.15E-15	0.	0.	0.	2.75E-09	1.42E-06	1.50E-05	4.84E-06	2.13E-05
32	7.60	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	7.50	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	7.40	0.	0.	7.60E-15	0.	1.65E-17	0.	2.80E-09	1.60E-06	1.25E-05	4.88E-06	1.90E-05
35	7.30	0.	0.	7.33E-15	0.	6.08E-17	0.	2.81E-09	1.67E-06	1.28E-05	4.90E-06	1.94E-05
36	7.20	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	7.10	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	7.00	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	6.90	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	6.80	4.80E-18	0.	5.62E-15	0.	2.49E-15	0.	2.92E-09	2.07E-06	1.50E-05	5.00E-06	2.21E-05
41	6.70	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	6.60	2.18E-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	6.50	1.28E-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	6.40	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	6.30	4.38E-19	0.	1.72E-15	4.11E-17	2.05E-15	0.	3.04E-09	2.61E-06	1.58E-05	5.16E-06	2.36E-05
46	6.20	2.01E-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	6.10	9.36E-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	6.00	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	5.90	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	5.80	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	5.70	9.31E-23	0.	0.	4.29E-16	1.90E-15	0.	2.88E-09	3.54E-06	1.89E-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	2.88E-05
53	5.50	0.	0.	0.	0.	4.63E-16	2.25E-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	1.88E-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.	4.88E-16	2.38E-15	0.	0.	2.76E-09	4.96E-06	1.23E-05	5.44E-06	2.27E-05
58	5.00	6.02E-17	0.	0.	0.	4.51E-16	2.30E-15	0.	0.	2.78E-09	5.27E-06	1.28E-05	5.53E-06	2.36E-05
59	4.90	1.49E-16	0.	0.	0.	5.07E-16	2.55E-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.	5.78E-16	2.00E-15	0.	0.	2.88E-09	6.78E-06	1.55E-05	6.10E-06	2.84E-05
63	4.50	5.96E-16	0.	6.42E-16	0.	5.39E-16	1.52E-15	0.	0.	2.90E-09	7.25E-06	1.65E-05	6.28E-06	3.00E-05
64	4.40	6.42E-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	6.17E-16	0.	6.47E-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	5.83E-16	0.	1.95E-14	0.	5.59E-16	4.47E-16	0.	0.	2.97E-09	8.93E-06	1.96E-05	6.78E-06	3.54E-05
67	4.10	5.55E-16	0.	9.32E-15	0.	5.55E-16	1.27E-16	0.	0.	2.98E-09	9.61E-06	2.08E-05	6.76E-06	3.72E-05
68	4.00	5.16E-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	8.55E-12	5.55E-16	0.	0.	0.	2.97E-09	1.21E-05	2.11E-05	4.12E-06	3.73E-05
71	3.70	4.51E-16	0.	2.22E-14	4.30E-12	4.88E-16	0.	0.	0.	2.92E-09	1.31E-05	2.22E-05	4.47E-06	3.98E-05
72	3.60	4.13E-16	0.	1.68E-14	2.14E-11	5.27E-16	0.	0.	0.	2.74E-09	1.43E-05	2.35E-05	4.85E-06	4.27E-05
73	3.50	3.92E-16	0.	2.16E-14	3.62E-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	4.83E-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.	7.86E-15	1.04E-11	4.04E-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.	4.90E-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	2.90	2.01E-16	0.	3.13E-15	1.16E-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	8.51E-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	1.02E-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	6.92E-17	0.	3.39E-16	1.10E-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.	3.47E-17	1.08E-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.	1.15E-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	7.40E-05	5.60E-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	1.76E-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	2.58E-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.	1.65E-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-20	0.	0.	5.40E-04	3.10E-04	7.01E-05	9.20E-04
98	1.00	0.	1.42E-14	0.	0.	0.	0.	3.90E-19	0.	0.	7.24E-04	3.74E-04	8.00E-05	1.18E-03
99	0.90	0.	1.16E-14	0.	0.	0.	0.	4.60E-19	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.	1.02E-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.	1.01E-17	0.	0.	2.19E-03	5.31E-04	1.06E-04	2.82E-03
102	0.60	0.	3.03E-16	0.	0.	0.	0.	3.09E-17	0.	0.	3.53E-03	5.42E-04	1.19E-04	4.19E-03

ABSORPTION COEFFICIENTS 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	10.70	0.	0.	2.91E-18	0.	0.	0.	3.46E-12	10.00E-09	1.60E-06	8.38E-08	1.70E-06
2	10.60	0.	0.	2.70E-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	1.06E-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.	1.52E-18	0.	0.	0.	3.58E-12	1.63E-08	6.23E-07	8.47E-08	7.24E-07
18	9.00	0.	0.	1.40E-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.	8.01E-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.	5.69E-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.	1.66E-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.	5.28E-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.	5.50E-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.	1.02E-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	6.73E-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.	2.09E-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	2.45E-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	7.90E-08	4.11E-07	7.96E-08	5.70E-07
55	5.30	0.	0.	0.	0.	4.51E-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.	4.93E-20	2.41E-19	0.	0.	3.82E-12	9.40E-08	4.78E-07	8.64E-08	6.59E-07
58	5.00	7.81E-21	0.	0.	0.	4.55E-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.	5.64E-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.	5.08E-19	0.	5.34E-20	6.64E-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	9.03E-07	7.97E-08	1.18E-06
69	3.90	5.82E-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	2.49E-07	1.04E-06	9.29E-08	1.38E-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.	2.00E-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	3.98E-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.	3.16E-19	6.71E-15	4.07E-20	0.	0.	0.	2.01E-12	4.26E-07	5.90E-07	1.39E-07	1.15E-06
78	3.00	3.04E-20	0.	3.84E-19	1.40E-14	3.93E-20	0.	0.	0.	2.01E-12	4.70E-07	6.59E-07	1.50E-07	1.28E-06
79	2.90	2.62E-20	0.	2.45E-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	1.84E-20	0.	5.59E-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	6.41E-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.	5.12E-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.	9.01E-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.	2.07E-18	0.	0.	0.	0.	0.	0.	1.85E-12	1.89E-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.	1.30E-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	7.08E-07	1.16E-05
97	1.10	0.	1.21E-18	0.	0.	0.	0.	2.30E-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	2.79E-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	2.18E-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.	3.00E-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.	2.59E-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.	2.39E-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	1.98E-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.	6.64E-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.	2.45E-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.	2.20E-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.	4.08E-24	0.	4.79E-15	8.17E-10	1.94E-08	3.08E-09	2.33E-08
39	6.90	5.79E-26	0.	8.87E-24	0.	6.18E-24	0.	4.83E-15	8.53E-10	2.03E-08	3.21E-09	2.43E-08
40	6.80	5.05E-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.	7.10E-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.	2.67E-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	9.86E-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	4.16E-28	0.	1.91E-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	1.04E-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.	5.10E-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	1.97E-09	1.43E-08
53	5.50	0.	0.	0.	0.	1.87E-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.	1.82E-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	4.14E-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.	2.35E-24	8.09E-24	0.	0.	4.79E-15	2.91E-09	1.87E-08	2.42E-09	2.40E-08
63	4.50	6.26E-24	0.	9.94E-25	0.	2.17E-24	6.12E-24	0.	0.	4.83E-15	3.11E-09	2.00E-08	2.53E-09	2.56E-08
64	4.40	6.75E-24	0.	2.84E-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	2.65E-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	3.06E-08
67	4.10	5.83E-24	0.	1.45E-23	0.	2.24E-24	5.14E-25	0.	0.	4.96E-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.	4.96E-15	4.79E-09	2.90E-08	3.20E-09	3.69E-08
70	3.80	5.21E-24	0.	3.45E-23	8.16E-19	2.24E-24	0.	0.	0.	4.94E-15	5.18E-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.	4.56E-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	6.66E-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	2.10E-24	0.	1.22E-23	9.90E-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	9.70E-19	5.07E-25	0.	0.	0.	2.43E-15	1.46E-08	2.36E-08	3.75E-09	4.19E-08
82	2.60	7.26E-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	2.38E-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	6.50E-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	8.23E-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	9.18E-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	3.64E-08	7.54E-09	1.53E-07
95	1.30	0.	2.56E-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	6.72E-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.	1.86E-27	0.	0.	4.20E-07	1.54E-08	8.22E-09	4.43E-07
100	0.80	0.	8.46E-24	0.	0.	0.	0.	4.13E-26	0.	0.	6.03E-07	1.77E-08	9.51E-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.	1.25E-25	0.	0.	1.47E-06	1.90E-08	9.43E-09	1.50E-06

ABSORPTION COEFFICIENTS 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.	N2 H-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-28	0.	0.	0.	1.41E-18	3.24E-12	2.23E-10	4.65E-11	2.73E-10
2	10.60	0.	0.	1.46E-28	0.	0.	0.	1.41E-18	3.34E-12	2.26E-10	4.66E-11	2.75E-10
3	10.50	0.	0.	1.49E-28	0.	0.	0.	1.41E-18	3.43E-12	2.27E-10	4.66E-11	2.78E-10
4	10.40	0.	0.	1.44E-28	0.	0.	0.	1.41E-18	3.53E-12	2.29E-10	4.67E-11	2.80E-10
5	10.30	0.	0.	1.28E-28	0.	0.	0.	1.42E-18	3.64E-12	2.32E-10	4.69E-11	2.83E-10
6	10.20	0.	0.	1.33E-28	0.	0.	0.	1.42E-18	3.75E-12	2.36E-10	4.75E-11	2.87E-10
7	10.10	0.	0.	1.27E-28	0.	0.	0.	1.42E-18	3.86E-12	2.40E-10	4.81E-11	2.92E-10
8	10.00	0.	0.	1.14E-28	0.	0.	0.	1.42E-18	3.98E-12	2.44E-10	4.88E-11	2.97E-10
9	9.90	0.	0.	1.18E-28	0.	0.	0.	1.42E-18	4.10E-12	2.48E-10	4.95E-11	3.02E-10
10	9.80	0.	0.	1.12E-28	0.	0.	0.	1.43E-18	4.23E-12	2.52E-10	5.01E-11	3.07E-10
11	9.70	0.	0.	9.97E-29	0.	0.	0.	1.43E-18	4.36E-12	2.56E-10	5.08E-11	3.11E-10
12	9.60	0.	0.	1.08E-28	0.	0.	0.	1.43E-18	4.50E-12	2.60E-10	5.15E-11	3.16E-10
13	9.50	0.	0.	9.41E-29	0.	0.	0.	1.43E-18	4.64E-12	2.64E-10	5.22E-11	3.21E-10
14	9.40	0.	0.	9.07E-29	0.	0.	0.	1.44E-18	4.79E-12	2.68E-10	5.29E-11	3.26E-10
15	9.30	0.	0.	9.34E-29	0.	0.	0.	1.44E-18	4.95E-12	2.72E-10	5.37E-11	3.31E-10
16	9.20	0.	0.	7.97E-29	0.	0.	0.	1.45E-18	5.11E-12	2.76E-10	5.43E-11	3.36E-10
17	9.10	0.	0.	8.22E-29	0.	0.	0.	1.46E-18	5.29E-12	2.81E-10	5.51E-11	3.41E-10
18	9.00	0.	0.	7.61E-29	0.	0.	0.	1.46E-18	5.46E-12	2.85E-10	3.71E-11	3.27E-10
19	8.90	0.	0.	7.18E-29	0.	0.	0.	1.47E-18	5.65E-12	2.89E-10	3.48E-11	3.29E-10
20	8.80	0.	0.	7.12E-29	0.	0.	0.	1.47E-18	5.85E-12	2.93E-10	3.57E-11	3.35E-10
21	8.70	0.	0.	6.32E-29	0.	0.	0.	1.48E-18	6.05E-12	2.97E-10	3.67E-11	3.40E-10
22	8.60	0.	0.	6.57E-29	0.	0.	0.	1.48E-18	6.27E-12	3.02E-10	3.76E-11	3.46E-10
23	8.50	0.	0.	5.89E-29	0.	0.	0.	1.49E-18	6.49E-12	3.06E-10	3.86E-11	3.51E-10
24	8.40	0.	0.	5.92E-29	0.	0.	0.	1.49E-18	6.73E-12	1.87E-10	3.95E-11	2.33E-10
25	8.30	0.	0.	5.14E-29	0.	0.	0.	1.50E-18	6.97E-12	1.93E-10	4.05E-11	2.40E-10
26	8.20	0.	0.	5.24E-29	0.	0.	0.	1.51E-18	7.23E-12	2.00E-10	4.22E-11	2.50E-10
27	8.10	0.	0.	4.63E-29	0.	0.	0.	1.52E-18	7.51E-12	2.08E-10	4.39E-11	2.60E-10
28	8.00	0.	0.	4.71E-29	0.	0.	0.	1.53E-18	7.79E-12	2.16E-10	4.56E-11	2.69E-10
29	7.90	0.	0.	4.14E-29	0.	0.	0.	1.53E-18	8.09E-12	2.24E-10	4.72E-11	2.79E-10
30	7.80	0.	0.	4.34E-29	0.	0.	0.	1.54E-18	8.41E-12	2.31E-10	4.89E-11	2.89E-10
31	7.70	0.	0.	3.89E-29	0.	0.	0.	1.55E-18	8.74E-12	2.40E-10	5.07E-11	2.99E-10
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	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	7.00	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	6.90	5.00E-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	6.80	4.36E-31	0.	2.39E-29	0.	4.89E-29	0.	1.64E-18	1.27E-11	3.03E-10	7.47E-11	3.91E-10
41	6.70	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	6.60	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	6.50	1.16E-31	0.	1.59E-29	0.	5.72E-29	0.	1.68E-18	1.46E-11	3.43E-10	8.44E-11	4.42E-10
44	6.40	6.74E-32	0.	1.13E-29	1.68E-31	5.16E-29	0.	1.70E-18	1.53E-11	3.56E-10	8.78E-11	4.59E-10
45	6.30	3.98E-32	0.	7.32E-30	8.07E-31	4.03E-29	0.	1.71E-18	1.60E-11	3.69E-10	9.12E-11	4.77E-10
46	6.20	1.82E-32	0.	4.18E-30	1.17E-30	5.33E-29	0.	1.72E-18	1.68E-11	3.84E-10	9.50E-11	4.96E-10
47	6.10	8.51E-33	0.	2.07E-30	3.38E-30	6.32E-29	0.	1.73E-18	1.77E-11	1.23E-10	3.24E-11	1.73E-10
48	6.00	3.61E-33	0.	5.23E-31	3.35E-30	3.28E-29	0.	1.75E-18	1.86E-11	1.27E-10	3.26E-11	1.79E-10
49	5.90	8.96E-34	0.	3.76E-32	4.98E-30	3.16E-29	0.	1.75E-18	1.95E-11	1.32E-10	3.39E-11	1.86E-10
50	5.80	1.15E-34	0.	9.52E-34	7.04E-30	3.34E-29	0.	1.72E-18	2.06E-11	1.37E-10	3.52E-11	1.93E-10
51	5.70	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
52	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
53	5.50	0.	0.	0.	0.	9.10E-30	4.42E-29	0.	0.	1.51E-18	2.41E-11	1.62E-10	3.98E-11	2.26E-10
54	5.40	0.	0.	0.	0.	8.57E-30	3.74E-29	0.	0.	1.52E-18	2.55E-11	1.72E-10	4.20E-11	2.39E-10
55	5.30	0.	0.	0.	0.	8.78E-30	4.59E-29	0.	0.	1.53E-18	2.70E-11	1.82E-10	4.45E-11	2.53E-10
56	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
57	5.10	0.	0.	0.	0.	9.60E-30	4.68E-29	0.	0.	1.55E-18	3.03E-11	2.02E-10	3.73E-11	2.70E-10
58	5.00	5.46E-30	0.	0.	0.	8.86E-30	4.51E-29	0.	0.	1.56E-18	3.22E-11	2.12E-10	3.94E-11	2.84E-10
59	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
60	4.80	2.59E-29	0.	0.	0.	1.08E-29	4.75E-29	0.	0.	1.59E-18	3.64E-11	2.32E-10	4.37E-11	3.12E-10
61	4.70	3.57E-29	0.	0.	0.	1.10E-29	4.35E-29	0.	0.	1.60E-18	3.88E-11	2.47E-10	4.60E-11	3.31E-10
62	4.60	5.02E-29	0.	0.	0.	1.14E-29	3.94E-29	0.	0.	1.62E-18	4.14E-11	2.65E-10	4.85E-11	3.55E-10
63	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
64	4.40	5.82E-29	0.	7.80E-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
65	4.30	5.60E-29	0.	2.75E-29	0.	1.04E-29	1.29E-29	0.	0.	1.66E-18	5.08E-11	3.21E-10	5.47E-11	4.27E-10
66	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
67	4.10	5.03E-29	0.	3.96E-29	0.	1.09E-29	2.50E-30	0.	0.	1.68E-18	5.87E-11	3.67E-10	6.39E-11	4.89E-10
68	4.00	4.70E-29	0.	1.21E-28	0.	1.07E-29	1.86E-30	0.	0.	1.68E-18	6.32E-11	3.90E-10	6.39E-11	5.22E-10
69	3.90	4.07E-29	0.	5.81E-29	5.17E-24	1.01E-29	6.84E-31	0.	0.	1.48E-18	6.83E-11	4.13E-10	7.38E-11	5.55E-10
70	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
71	3.70	4.10E-29	0.	9.43E-29	9.79E-24	9.58E-30	0.	0.	0.	1.64E-18	6.01E-11	4.60E-10	8.38E-11	6.24E-10
72	3.60	3.74E-29	0.	7.13E-29	4.86E-23	1.04E-29	0.	0.	0.	1.54E-18	8.71E-11	4.83E-10	7.68E-11	6.47E-10
73	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
74	3.40	3.33E-29	0.	6.14E-29	1.48E-23	9.49E-30	0.	0.	0.	8.13E-19	1.04E-10	1.56E-10	8.69E-11	3.46E-10
75	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
76	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	5.05E-11	3.67E-10
77	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
78	3.00	2.13E-29	0.	2.08E-29	4.94E-23	7.65E-30	0.	0.	0.	8.19E-19	1.51E-10	2.46E-10	6.42E-11	4.62E-10
79	2.90	1.83E-29	0.	1.33E-29	2.65E-23	6.02E-30	0.	0.	0.	8.20E-19	1.68E-10	2.74E-10	7.11E-11	5.12E-10
80	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
81	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
82	2.60	6.28E-30	0.	1.44E-30	2.50E-24	1.12E-30	0.	0.	0.	8.22E-19	2.34E-10	3.56E-10	9.06E-11	6.80E-10
83	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	7.55E-10
84	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
85	2.30	0.	1.78E-29	0.	0.	0.	0.	0.	0.	8.15E-19	3.39E-10	4.99E-10	1.28E-10	9.66E-10
86	2.20	0.	4.88E-29	0.	0.	0.	0.	0.	0.	8.12E-19	3.88E-10	5.53E-10	1.41E-10	1.08E-09
87	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
88	2.00	0.	9.83E-29	0.	0.	0.	0.	0.	0.	7.83E-19	5.19E-10	2.69E-10	7.18E-11	8.60E-10
89	1.90	0.	1.12E-28	0.	0.	0.	0.	0.	0.	7.53E-19	6.08E-10	3.02E-10	8.06E-11	9.90E-10
90	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
91	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
92	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
93	1.50	0.	9.38E-29	0.	0.	0.	0.	0.	0.	2.61E-19	1.25E-09	4.33E-10	1.17E-10	1.80E-09
94	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
95	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
96	1.20	0.	6.70E-29	0.	0.	0.	0.	0.	0.	0.	2.47E-09	1.51E-11	1.57E-11	2.50E-09
97	1.10	0.	6.57E-29	0.	0.	0.	0.	4.48E-34	0.	0.	3.23E-09	1.87E-11	1.97E-11	3.27E-09
98	1.00	0.	6.04E-29	0.	0.	0.	0.	7.67E-33	0.	0.	4.32E-09	2.28E-11	2.38E-11	4.37E-09
99	0.90	0.	4.95E-29	0.	0.	0.	0.	9.04E-33	0.	0.	5.97E-09	2.54E-11	2.42E-11	6.02E-09
100	0.80	0.	2.32E-29	0.	0.	0.	0.	2.01E-31	0.	0.	8.57E-09	2.45E-11	2.13E-11	8.61E-09
101	0.70	0.	5.30E-30	0.	0.	0.	0.	1.98E-31	0.	0.	1.29E-08	2.80E-11	2.45E-11	1.30E-08
102	0.60	0.	1.29E-30	0.	0.	0.	0.	6.07E-31	0.	0.	2.08E-08	3.13E-11	2.77E-11	2.09E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. 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.	1.41E-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.	5.68E 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.	5.70E 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.	9.05E-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.	8.61E-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.	8.58E-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	2.06E 00	2.93E 01	8.57E 00	4.59E 01
17	9.10	0	0.	7.58E-02	0.	0.	0.	5.84E 00	2.13E 00	1.24E 01	8.53E 00	2.90E 01
18	9.00	0.	0.	7.04E-02	0.	0.	0.	5.86E 00	2.20E 00	1.25E 01	8.49E 00	2.91E 01
19	8.90	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.	6.12E-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.	4.95E-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	8.00	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	7.70	0.	0.	3.70E-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.	4.70E-06	0.	6.28E 00	3.83E 00	1.36E 01	8.24E 00	3.19E 01
34	7.40	0.	0.	3.09E-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	1.08E-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.	6.45E-03	0.	6.64E 00	5.39E 00	1.45E 01	8.26E 00	3.48E 01
42	6.60	4.29E-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.	1.53E-02	0.	7.94E-03	0.	6.75E 00	5.91E 00	1.48E 01	8.28E 00	3.58E 01
44	6.40	1.40E-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	8.38E 00	3.75E 01
47	6.10	1.86E-07	0.	2.01E-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	4.58E-03	0.	7.01E 00	7.54E 00	1.57E 01	8.48E 00	3.86E 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	5.70	1.86E-10	0.	0.	1.17E-03	5.22E-03	0.	6.49E 00	8.81E 00	1.65E 01	8.64E 00	4.04E 01

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. 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	8.44E-12	0.	0.	0.	1.03E-03	6.64E-03	0.	0.	6.03E 00	9.30E 00	1.68E 01	8.70E 00	4.08E 01
53	5.50	0.	0.	0.	0.	1.26E-03	6.14E-03	0.	0.	6.06E 00	9.82E 00	1.72E 01	8.78E 00	4.18E 01
54	5.40	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	5.30	0.	0.	0.	0.	1.22E-03	6.39E-03	0.	0.	6.13E 00	1.10E 01	1.81E 01	8.99E 00	4.43E 01
56	5.20	0.	0.	0.	0.	1.34E-03	5.19E-03	0.	0.	6.17E 00	1.16E 01	1.86E 01	9.13E 00	4.56E 01
57	5.10	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	5.00	1.21E-04	0.	0.	0.	1.24E-03	6.35E-03	0.	0.	6.28E 00	1.31E 01	1.98E 01	9.40E 00	4.86E 01
59	4.90	3.06E-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	4.80	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	4.70	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	4.60	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	4.50	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	4.40	1.31E-03	0.	7.73E-03	0.	1.51E-03	2.85E-03	0.	0.	6.59E 00	1.93E 01	2.57E 01	1.09E 01	6.25E 01
65	4.30	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	4.20	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	4.10	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	4.00	1.06E-03	0.	1.20E-01	0.	1.52E-03	2.63E-04	0.	0.	6.75E 00	2.58E 01	3.15E 01	6.22E 00	7.04E 01
69	3.90	9.24E-04	0.	5.81E-02	7.56E-03	1.44E-03	9.59E-05	0.	0.	6.72E 00	2.79E 01	3.16E 01	6.42E 00	7.27E 01
70	3.80	1.02E-03	0.	9.44E-02	2.80E-02	1.56E-03	0.	0.	0.	6.70E 00	3.02E 01	3.17E 01	6.71E 00	7.55E 01
71	3.70	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	3.60	8.55E-04	0.	7.16E-02	7.09E-02	1.48E-03	0.	0.	0.	6.17E 00	3.57E 01	2.92E 01	7.94E 00	7.91E 01
73	3.50	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	3.40	7.63E-04	0.	6.20E-02	2.18E-02	1.37E-03	0.	0.	0.	3.26E 00	4.24E 01	3.46E 01	9.53E 00	8.99E 01
75	3.30	6.18E-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	3.20	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	3.10	5.38E-04	0.	3.39E-02	3.48E-02	1.15E-03	0.	0.	0.	3.28E 00	5.63E 01	4.51E 01	1.22E 01	1.17E 02
78	3.00	4.97E-04	0.	2.12E-02	7.15E-02	1.11E-03	0.	0.	0.	3.29E 00	6.22E 01	4.87E 01	1.31E 01	1.27E 02
79	2.90	4.24E-04	0.	1.36E-02	3.83E-02	8.78E-04	0.	0.	0.	3.29E 00	6.90E 01	5.27E 01	1.41E 01	1.39E 02
80	2.80	4.49E-04	0.	6.54E-03	2.85E-02	6.38E-04	0.	0.	0.	3.30E 00	7.68E 01	5.73E 01	1.53E 01	1.53E 02
81	2.70	2.99E-04	0.	3.10E-03	3.34E-02	3.64E-04	0.	0.	0.	3.30E 00	8.59E 01	6.24E 01	1.66E 01	1.68E 02
82	2.60	1.47E-04	0.	1.47E-03	3.65E-03	1.67E-04	0.	0.	0.	3.30E 00	9.64E 01	6.77E 01	1.80E 01	1.85E 02
83	2.50	1.05E-05	0.	1.49E-04	3.61E-03	4.07E-05	0.	0.	0.	3.30E 00	1.09E 02	7.74E 01	1.22E 01	2.02E 02
84	2.40	0.	6.34E-03	0.	2.60E-03	4.42E-06	0.	0.	0.	3.30E 00	1.23E 02	9.00E 01	1.40E 01	2.30E 02
85	2.30	0.	1.76E-02	0.	0.	0.	0.	0.	0.	3.27E 00	1.40E 02	8.27E 01	1.67E 01	2.43E 02
86	2.20	0.	4.87E-02	0.	0.	0.	0.	0.	0.	3.26E 00	1.60E 02	9.77E 01	1.98E 01	2.81E 02
87	2.10	0.	4.78E-02	0.	0.	0.	0.	0.	0.	3.24E 00	1.85E 02	1.14E 02	2.30E 01	3.25E 02
88	2.00	0.	9.75E-02	0.	0.	0.	0.	0.	0.	3.14E 00	2.15E 02	1.30E 02	2.62E 01	3.74E 02
89	1.90	0.	1.09E-01	0.	0.	0.	0.	0.	0.	3.02E 00	2.52E 02	1.50E 02	3.08E 01	4.36E 02
90	1.80	0.	9.53E-02	0.	0.	0.	0.	0.	0.	2.89E 00	2.98E 02	1.80E 02	3.76E 01	5.18E 02
91	1.70	0.	1.06E-01	0.	0.	0.	0.	0.	0.	2.72E 00	3.55E 02	2.16E 02	4.58E 01	6.20E 02
92	1.60	0.	8.14E-02	0.	0.	0.	0.	0.	0.	2.30E 00	4.28E 02	2.54E 02	5.40E 01	7.38E 02
93	1.50	0.	9.14E-02	0.	0.	0.	0.	0.	0.	1.05E 00	5.21E 02	3.32E 02	6.54E 01	9.19E 02
94	1.40	0.	8.95E-02	0.	0.	0.	0.	0.	0.	0.	6.43E 02	4.17E 02	7.82E 01	1.14E 03
95	1.30	0.	6.85E-02	0.	0.	0.	0.	0.	0.	0.	8.07E 02	5.65E 02	1.03E 02	1.48E 03
96	1.20	0.	6.53E-02	0.	0.	0.	0.	0.	0.	0.	1.03E 03	6.43E 02	1.03E 02	1.78E 03
97	1.10	0.	6.43E-02	0.	0.	0.	0.	6.21E-08	0.	0.	1.35E 03	7.92E 02	1.29E 02	2.27E 03
98	1.00	0.	5.93E-02	0.	0.	0.	0.	1.08E-06	0.	0.	1.82E 03	9.62E 02	1.48E 02	2.93E 03
99	0.90	0.	4.85E-02	0.	0.	0.	0.	1.28E-06	0.	0.	2.52E 03	1.11E 03	1.73E 02	3.60E 03
100	0.80	0.	2.27E-02	0.	0.	0.	0.	2.84E-05	0.	0.	3.63E 03	1.28E 03	1.98E 02	5.11E 03
101	0.70	0.	5.17E-03	0.	0.	0.	0.	2.86E-05	0.	0.	5.50E 03	1.37E 03	1.95E 02	7.07E 03
102	0.60	0.	1.31E-03	0.	0.	0.	0.	8.69E-05	0.	0.	8.89E 03	1.54E 03	2.18E 02	1.06E 04

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. 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.	6.18E-04	0.	0.	0.	1.07E-01	8.70E-02	1.75E 01	6.75E-01	1.83E 01
2	10.60	0.	0.	5.72E-04	0.	0.	0.	1.07E-01	8.95E-02	1.90E 00	6.72E-01	2.77E 00
3	10.50	0.	0.	5.85E-04	0.	0.	0.	1.07E-01	9.21E-02	1.90E 00	6.69E-01	2.77E 00
4	10.40	0.	0.	5.65E-04	0.	0.	0.	1.07E-01	9.48E-02	1.91E 00	6.65E-01	2.78E 00
5	10.30	0.	0.	5.03E-04	0.	0.	0.	1.08E-01	9.76E-02	1.92E 00	6.62E-01	2.78E 00
6	10.20	0.	0.	5.27E-04	0.	0.	0.	1.08E-01	1.01E-01	1.92E 00	6.59E-01	2.79E 00
7	10.10	0.	0.	5.02E-04	0.	0.	0.	1.08E-01	1.04E-01	1.91E 00	6.56E-01	2.78E 00
8	10.00	0.	0.	4.52E-04	0.	0.	0.	1.08E-01	1.07E-01	1.90E 00	6.53E-01	2.77E 00
9	9.90	0.	0.	4.67E-04	0.	0.	0.	1.08E-01	1.10E-01	1.91E 00	6.49E-01	2.78E 00
10	9.80	0.	0.	4.47E-04	0.	0.	0.	1.08E-01	1.14E-01	1.91E 00	6.46E-01	2.78E 00
11	9.70	0.	0.	3.96E-04	0.	0.	0.	1.09E-01	1.17E-01	1.92E 00	6.43E-01	2.79E 00
12	9.60	0.	0.	4.30E-04	0.	0.	0.	1.09E-01	1.21E-01	1.92E 00	6.40E-01	2.79E 00
13	9.50	0.	0.	3.77E-04	0.	0.	0.	1.09E-01	1.25E-01	1.93E 00	6.36E-01	2.80E 00
14	9.40	0.	0.	3.64E-04	0.	0.	0.	1.09E-01	1.29E-01	1.93E 00	6.33E-01	2.81E 00
15	9.30	0.	0.	3.75E-04	0.	0.	0.	1.10E-01	1.33E-01	1.94E 00	6.30E-01	2.81E 00
16	9.20	0.	0.	3.21E-04	0.	0.	0.	1.10E-01	1.38E-01	1.95E 00	6.27E-01	2.82E 00
17	9.10	0.	0.	3.32E-04	0.	0.	0.	1.11E-01	1.42E-01	8.27E-01	6.24E-01	1.70E 00
18	9.00	0.	0.	3.08E-04	0.	0.	0.	1.11E-01	1.47E-01	8.28E-01	6.21E-01	1.71E 00
19	8.90	0.	0.	2.91E-04	0.	0.	0.	1.11E-01	1.52E-01	8.30E-01	6.18E-01	1.71E 00
20	8.80	0.	0.	2.89E-04	0.	0.	0.	1.12E-01	1.57E-01	8.32E-01	6.16E-01	1.72E 00
21	8.70	0.	0.	2.58E-04	0.	0.	0.	1.12E-01	1.63E-01	8.35E-01	6.13E-01	1.72E 00
22	8.60	0.	0.	2.68E-04	0.	0.	0.	1.13E-01	1.69E-01	8.37E-01	6.10E-01	1.73E 00
23	8.50	0.	0.	2.41E-04	0.	0.	0.	1.13E-01	1.75E-01	8.41E-01	6.07E-01	1.74E 00
24	8.40	0.	0.	2.42E-04	0.	0.	0.	1.14E-01	1.81E-01	8.45E-01	6.05E-01	1.74E 00
25	8.30	0.	0.	2.11E-04	0.	0.	0.	1.14E-01	1.88E-01	8.50E-01	6.03E-01	1.76E 00
26	8.20	0.	0.	2.16E-04	0.	0.	0.	1.15E-01	1.95E-01	8.55E-01	6.03E-01	1.77E 00
27	8.10	0.	0.	1.91E-04	0.	0.	0.	1.15E-01	2.02E-01	8.59E-01	6.03E-01	1.78E 00
28	8.00	0.	0.	1.95E-04	0.	0.	0.	1.16E-01	2.10E-01	8.66E-01	6.03E-01	1.80E 00
29	7.90	0.	0.	1.71E-04	0.	0.	0.	1.17E-01	2.18E-01	8.73E-01	6.03E-01	1.81E 00
30	7.80	0.	0.	1.80E-04	0.	0.	0.	1.17E-01	2.27E-01	8.81E-01	6.03E-01	1.83E 00
31	7.70	0.	0.	1.62E-04	0.	0.	0.	1.18E-01	2.36E-01	8.88E-01	6.03E-01	1.85E 00
32	7.60	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	7.50	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	7.40	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	7.30	0.	0.	1.31E-04	0.	8.06E-07	0.	1.20E-01	2.77E-01	9.17E-01	6.03E-01	1.92E 00
36	7.20	0.	0.	1.20E-04	0.	2.30E-06	0.	1.21E-01	2.89E-01	9.25E-01	6.03E-01	1.94E 00
37	7.10	0.	0.	1.18E-04	0.	7.28E-06	0.	1.22E-01	3.02E-01	9.32E-01	6.03E-01	1.96E 00
38	7.00	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	6.90	5.77E-08	0.	1.03E-04	0.	2.05E-05	0.	1.24E-01	3.29E-01	9.48E-01	6.03E-01	2.00E 00
40	6.80	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	6.70	3.72E-08	0.	9.07E-05	0.	3.12E-05	0.	1.26E-01	3.60E-01	9.64E-01	6.04E-01	2.05E 00
42	6.60	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	6.50	1.34E-08	0.	6.80E-05	0.	3.84E-05	0.	1.28E-01	3.96E-01	9.86E-01	6.06E-01	2.11E 00
44	6.40	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	6.30	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	2.18E 00
46	6.20	2.13E-09	0.	1.81E-05	7.73E-07	3.59E-05	0.	1.31E-01	4.55E-01	1.02E 00	6.13E-01	2.22E 00
47	6.10	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	6.00	4.23E-10	0.	2.28E-06	2.23E-06	2.22E-05	0.	1.33E-01	5.03E-01	1.05E 00	6.21E-01	2.31E 00
49	5.90	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	5.80	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	5.70	9.94E-13	0.	0.	5.65E-06	2.53E-05	0.	1.23E-01	5.88E-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 (IONS)	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	2.56E 00
54	5.40	0.	0.	0.	0.	5.78E-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	6.58E-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	3.18E-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.	6.00E-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	7.00E-01	3.11E 00
60	4.80	3.09E-06	0.	0.	0.	7.33E-06	3.25E-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	1.13E 00	1.53E 00	7.56E-01	3.54E 00
63	4.50	6.43E-06	0.	1.19E-05	0.	7.23E-06	2.04E-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	7.98E-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	5.99E-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-06	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-06	0.	0.	1.28E-01	1.72E 00	2.09E 00	4.55E-01	4.40E 00
69	3.90	4.95E-06	0.	2.54E-04	1.28E-04	6.95E-06	4.64E-07	0.	0.	1.27E-01	1.86E 00	2.09E 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	1.80E 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	5.02E 00
73	3.50	4.35E-06	0.	4.02E-04	1.99E-03	5.85E-06	0.	0.	0.	1.07E-01	2.59E 00	2.07E 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	5.89E 00
75	3.30	3.31E-06	0.	2.77E-04	1.29E-03	5.42E-06	0.	0.	0.	6.18E-02	3.10E 00	2.52E 00	7.60E-01	6.45E 00
76	3.20	2.95E-06	0.	1.88E-04	1.89E-03	5.76E-06	0.	0.	0.	6.19E-02	3.41E 00	2.76E 00	8.26E-01	7.05E 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	7.70E 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	8.40E 00
79	2.90	2.27E-06	0.	5.93E-05	6.47E-04	4.25E-06	0.	0.	0.	6.23E-02	4.60E 00	3.50E 00	1.04E 00	9.20E 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 00	1.53E 01
85	2.30	0.	7.71E-05	0.	0.	0.	0.	0.	0.	6.19E-02	9.35E 00	5.48E 00	1.22E 00	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 00	1.87E 01
87	2.10	0.	2.09E-04	0.	0.	0.	0.	0.	0.	6.15E-02	1.23E 01	7.53E 00	1.68E 00	2.16E 01
88	2.00	0.	4.27E-04	0.	0.	0.	0.	0.	0.	5.95E-02	1.44E 01	8.60E 00	1.91E 00	2.49E 01
89	1.90	0.	4.79E-04	0.	0.	0.	0.	0.	0.	5.72E-02	1.68E 01	9.90E 00	2.25E 00	2.90E 01
90	1.80	0.	4.17E-04	0.	0.	0.	0.	0.	0.	5.47E-02	1.99E 01	1.19E 01	2.75E 00	3.46E 01
91	1.70	0.	4.65E-04	0.	0.	0.	0.	0.	0.	5.15E-02	2.37E 01	1.43E 01	3.35E 00	4.14E 01
92	1.60	0.	3.56E-04	0.	0.	0.	0.	0.	0.	4.36E-02	2.85E 01	1.68E 01	3.95E 00	4.93E 01
93	1.50	0.	4.00E-04	0.	0.	0.	0.	0.	0.	1.98E-02	3.48E 01	2.20E 01	4.78E 00	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 00	7.62E 01
95	1.30	0.	3.00E-04	0.	0.	0.	0.	0.	0.	0.	5.39E 01	3.74E 01	7.51E 00	9.88E 01
96	1.20	0.	2.86E-04	0.	0.	0.	0.	0.	0.	0.	6.90E 01	4.25E 01	7.56E 00	1.19E 02
97	1.10	0.	2.82E-04	0.	0.	0.	0.	3.00E-10	0.	0.	9.03E 01	5.24E 01	9.45E 00	1.52E 02
98	1.00	0.	2.59E-04	0.	0.	0.	0.	5.25E-09	0.	0.	1.21E 02	6.37E 01	1.08E 01	1.96E 02
99	0.90	0.	2.12E-04	0.	0.	0.	0.	6.21E-09	0.	0.	1.68E 02	7.35E 01	1.26E 01	2.54E 02
100	0.80	0.	9.94E-05	0.	0.	0.	0.	1.39E-07	0.	0.	2.42E 02	8.46E 01	1.45E 01	3.41E 02
101	0.70	0.	2.26E-05	0.	0.	0.	0.	1.38E-07	0.	0.	3.67E 02	9.09E 01	1.43E 01	4.72E 02
102	0.60	0.	5.71E-06	0.	0.	0.	0.	4.20E-07	0.	0.	5.93E 02	1.02E 02	1.60E 01	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 IONS	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.	6.08E-07	0.	0.	0.	7.39E-04	3.00E-03	6.41E-02	2.54E-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.	6.01E-07	0.	0.	0.	7.41E-04	3.18E-03	6.46E-02	2.51E-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.	5.60E-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.	4.81E-07	0.	0.	0.	7.45E-04	3.58E-03	6.29E-02	2.46E-02	9.18E-02
9	9.90	0.	0.	4.96E-07	0.	0.	0.	7.47E-04	3.70E-03	6.30E-02	2.45E-02	9.20E-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.	4.01E-07	0.	0.	0.	7.52E-04	4.19E-03	6.37E-02	2.40E-02	9.27E-02
14	9.40	0.	0.	3.87E-07	0.	0.	0.	7.55E-04	4.33E-03	6.39E-02	2.39E-02	9.29E-02
15	9.30	0.	0.	3.99E-07	0.	0.	0.	7.58E-04	4.47E-03	6.41E-02	2.38E-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.	2.58E-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.	8.16E-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.	8.20E-04	8.58E-03	3.03E-02	2.28E-02	6.24E-02
34	7.40	0.	0.	1.44E-07	0.	2.71E-10	0.	8.25E-04	8.93E-03	3.06E-02	2.28E-02	6.31E-02
35	7.30	0.	0.	1.39E-07	0.	9.90E-10	0.	8.30E-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	2.28E-02	6.52E-02
38	7.00	4.14E-11	0.	1.17E-07	0.	1.64E-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	6.76E-02
41	6.70	5.28E-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.	3.45E-08	0.	8.75E-04	1.26E-02	3.31E-02	2.29E-02	6.95E-02
43	6.50	1.91E-11	0.	7.23E-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	3.02E-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	6.01E-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	2.61E-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

TEMPERATURE (DEGREES K) 2400C. 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	6.41E-17	0.	0.	0.	6.14E-09	3.95E-08	0.	0.	7.88E-04	2.08E-02	3.81E-02	2.41E-02	8.38E-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	3.08E-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	2.28E-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	2.50E-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.	3.60E-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.	1.28E-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.	9.25E-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	3.16E-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	1.72E-02	1.45E-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	1.78E-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	2.20E-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	7.67E-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	4.18E-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.	1.58E-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.	9.85E-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	1.55E-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	3.28E-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	2.63E-11	0.	0.	0.	4.31E-04	2.76E-01	1.96E-01	3.89E-02	5.11E-01
85	2.30	0.	8.19E-08	0.	0.	0.	0.	0.	0.	4.27E-04	3.14E-01	1.80E-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.	4.54E-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.	1.37E-04	1.17E 00	7.19E-01	1.80E-01	2.07E 00
94	1.40	0.	4.16E-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.	2.40E-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) 24000. DENSITY (GM/CC) 1.293E-05 (10.3E-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.	1.31E-10	0.	0.	0.	1.36E-06	4.33E-05	8.37E-03	3.93E-04	8.80E-03
2	10.60	0.	0.	1.22E-10	0.	0.	0.	1.36E-06	4.45E-05	1.19E-03	3.91E-04	1.63E-03
3	10.50	0.	0.	1.24E-10	0.	0.	0.	1.36E-06	4.58E-05	1.20E-03	3.88E-04	1.63E-03
4	10.40	0.	0.	1.20E-10	0.	0.	0.	1.36E-06	4.72E-05	1.21E-03	3.86E-04	1.64E-03
5	10.30	0.	0.	1.07E-10	0.	0.	0.	1.36E-06	4.86E-05	1.21E-03	3.85E-04	1.65E-03
6	10.20	0.	0.	1.12E-10	0.	0.	0.	1.37E-06	5.01E-05	1.22E-03	3.83E-04	1.66E-03
7	10.10	0.	0.	1.07E-10	0.	0.	0.	1.37E-06	5.16E-05	1.22E-03	3.81E-04	1.66E-03
8	10.00	0.	0.	9.61E-11	0.	0.	0.	1.37E-06	5.32E-05	9.89E-04	3.79E-04	1.42E-03
9	9.90	0.	0.	9.92E-11	0.	0.	0.	1.37E-06	5.48E-05	9.93E-04	3.78E-04	1.43E-03
10	9.80	0.	0.	9.50E-11	0.	0.	0.	1.37E-06	5.65E-05	9.97E-04	3.76E-04	1.43E-03
11	9.70	0.	0.	8.41E-11	0.	0.	0.	1.38E-06	5.83E-05	1.00E-03	3.74E-04	1.43E-03
12	9.60	0.	0.	9.13E-11	0.	0.	0.	1.38E-06	6.02E-05	1.01E-03	3.72E-04	1.44E-03
13	9.50	0.	0.	8.01E-11	0.	0.	0.	1.38E-06	6.21E-05	1.01E-03	3.70E-04	1.44E-03
14	9.40	0.	0.	7.73E-11	0.	0.	0.	1.39E-06	6.41E-05	1.01E-03	3.69E-04	1.45E-03
15	9.30	0.	0.	7.97E-11	0.	0.	0.	1.39E-06	6.62E-05	1.02E-03	3.67E-04	1.45E-03
16	9.20	0.	0.	6.83E-11	0.	0.	0.	1.40E-06	6.85E-05	1.02E-03	3.65E-04	1.46E-03
17	9.10	0.	0.	7.05E-11	0.	0.	0.	1.40E-06	7.08E-05	5.11E-04	3.64E-04	9.47E-04
18	9.00	0.	0.	6.54E-11	0.	0.	0.	1.41E-06	7.32E-05	5.13E-04	3.62E-04	9.50E-04
19	8.90	0.	0.	6.19E-11	0.	0.	0.	1.41E-06	7.57E-05	5.16E-04	3.61E-04	9.54E-04
20	8.80	0.	0.	6.14E-11	0.	0.	0.	1.42E-06	7.83E-05	5.19E-04	3.59E-04	9.58E-04
21	8.70	0.	0.	5.47E-11	0.	0.	0.	1.42E-06	8.11E-05	5.22E-04	3.58E-04	9.62E-04
22	8.60	0.	0.	5.69E-11	0.	0.	0.	1.43E-06	8.40E-05	5.25E-04	3.56E-04	9.67E-04
23	8.50	0.	0.	5.12E-11	0.	0.	0.	1.43E-06	8.70E-05	5.29E-04	3.55E-04	9.73E-04
24	8.40	0.	0.	5.15E-11	0.	0.	0.	1.44E-06	9.02E-05	5.34E-04	3.53E-04	9.78E-04
25	8.30	0.	0.	4.49E-11	0.	0.	0.	1.45E-06	9.35E-05	5.39E-04	3.52E-04	9.86E-04
26	8.20	0.	0.	4.58E-11	0.	0.	0.	1.46E-06	9.70E-05	5.44E-04	3.53E-04	9.95E-04
27	8.10	0.	0.	4.06E-11	0.	0.	0.	1.46E-06	1.01E-04	5.50E-04	3.53E-04	1.00E-03
28	8.00	0.	0.	4.13E-11	0.	0.	0.	1.47E-06	1.05E-04	5.56E-04	3.51E-04	1.01E-03
29	7.90	0.	0.	3.64E-11	0.	0.	0.	1.48E-06	1.09E-04	5.63E-04	3.51E-04	1.02E-03
30	7.80	0.	0.	3.83E-11	0.	0.	0.	1.49E-06	1.13E-04	5.70E-04	3.51E-04	1.04E-03
31	7.70	0.	0.	3.44E-11	0.	0.	0.	1.49E-06	1.17E-04	5.78E-04	3.51E-04	1.05E-03
32	7.60	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	7.50	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	7.40	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	7.30	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	7.20	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	7.10	0.	0.	2.50E-11	0.	1.93E-12	0.	1.55E-06	1.50E-04	5.78E-04	3.53E-04	1.08E-03
38	7.00	9.60E-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	6.90	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	6.80	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	6.70	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	6.60	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	6.50	4.42E-15	0.	1.44E-11	0.	1.02E-11	0.	1.62E-06	1.96E-04	6.16E-04	3.57E-04	1.17E-03
44	6.40	2.58E-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	6.30	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	6.20	7.00E-16	0.	3.85E-12	2.04E-13	9.49E-12	0.	1.66E-06	2.27E-04	6.52E-04	3.62E-04	1.24E-03
47	6.10	3.26E-16	0.	1.87E-12	5.92E-13	1.12E-11	0.	1.67E-06	2.38E-04	6.65E-04	3.65E-04	1.27E-03
48	6.00	1.39E-16	0.	4.85E-13	5.89E-13	5.86E-12	0.	1.68E-06	2.50E-04	6.78E-04	3.67E-04	1.30E-03
49	5.90	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	5.80	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	5.70	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-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	1.49E-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
53	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
54	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
55	5.30	0.	0.	0.	0.	1.57E-12	8.18E-12	0.	0.	1.47E-06	3.65E-04	8.11E-04	3.92E-04	1.57E-03
56	5.20	0.	0.	0.	0.	1.71E-12	6.64E-12	0.	0.	1.48E-06	3.87E-04	8.64E-04	3.97E-04	1.45E-03
57	5.10	0.	0.	0.	0.	1.72E-12	8.41E-12	0.	0.	1.50E-06	4.10E-04	6.86E-04	3.94E-04	1.49E-03
58	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
59	4.90	5.29E-13	0.	0.	0.	1.79E-12	9.05E-12	0.	0.	1.52E-06	4.63E-04	7.37E-04	4.08E-04	1.61E-03
60	4.80	1.02E-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
61	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
62	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
63	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
64	4.40	2.30E-12	0.	7.19E-12	0.	1.94E-12	3.65E-12	0.	0.	1.58E-06	6.41E-04	9.36E-04	4.66E-04	2.04E-03
65	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
66	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
67	4.10	2.00E-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
68	4.00	1.88E-12	0.	1.12E-10	0.	1.94E-12	3.36E-13	0.	0.	1.62E-06	8.58E-04	1.16E-03	2.69E-04	2.28E-03
69	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
70	3.80	1.80E-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
71	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
72	3.60	1.51E-12	0.	6.66E-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
73	3.50	1.43E-12	0.	8.53E-11	1.92E-08	1.55E-12	0.	0.	0.	1.36E-06	1.29E-03	1.21E-03	3.76E-04	2.87E-03
74	3.40	1.34E-12	0.	5.76E-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
75	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
76	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
77	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
78	3.00	8.87E-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
79	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
80	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
81	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
82	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
83	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
84	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
85	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
86	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
87	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
88	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
89	1.90	0.	1.02E-10	0.	0.	0.	0.	0.	0.	7.26E-07	8.37E-03	4.92E-03	1.31E-03	1.46E-02
90	1.80	0.	8.86E-11	0.	0.	0.	0.	0.	0.	6.94E-07	9.89E-03	5.87E-03	1.60E-03	1.74E-02
91	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
92	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
93	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
94	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
95	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
96	1.20	0.	6.07E-11	0.	0.	0.	0.	0.	0.	0.	3.43E-02	2.02E-02	4.37E-03	5.88E-02
97	1.10	0.	5.98E-11	0.	0.	0.	0.	7.95E-17	0.	0.	4.49E-02	2.44E-02	5.44E-03	7.48E-02
98	1.00	0.	5.51E-11	0.	0.	0.	0.	1.39E-15	0.	0.	6.03E-02	2.97E-02	6.21E-03	9.61E-02
99	0.90	0.	4.51E-11	0.	0.	0.	0.	1.64E-15	0.	0.	8.35E-02	3.42E-02	7.27E-03	1.25E-01
100	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
101	0.70	0.	4.80E-12	0.	0.	0.	0.	3.65E-14	0.	0.	1.82E-01	4.23E-02	8.20E-03	2.33E-01
102	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 COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.243E-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.	1.39E-14	0.	0.	0.	1.66E-09	5.84E-07	3.86E-05	4.89E-06	4.40E-05
2	10.60	0.	0.	1.28E-14	0.	0.	0.	1.66E-09	6.01E-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	4.70E-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.	.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.	.00E-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.	8.45E-15	0.	0.	0.	1.69E-09	8.38E-07	2.07E-0	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	1.63E-05	4.57E-06	2.18E-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.	6.48E-15	0.	0.	0.	1.73E-09	1.06E-06	1.69E-05	4.54E-06	2.25E-05
21	8.70	0.	0.	6.78E-15	0.	0.	0.	1.74E-09	1.09E-06	1.71E-05	4.53E-06	2.27E-05
22	8.60	0.	0.	6.01E-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.	4.29E-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.	4.04E-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.	3.04E-15	0.	6.67E-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.	8.95E-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.	2.20E-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.	4.05E-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	2.05E-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	9.35E-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	3.33E-18	1.04E-15	0.	1.99E-09	2.77E-06	2.07E-05	4.84E-06	2.83E-05
45	6.30	1.99E-19	0.	7.09E-16	1.61E-17	8.25E-16	0.	2.01E-09	2.91E-06	2.14E-05	4.90E-06	2.92E-05
46	6.20	8.67E-20	0.	4.07E-16	2.34E-17	1.08E-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	1.28E-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.	3.68E-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	4.05E-23	0.	0.	1.71E-16	7.64E-16	0.	1.90E-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 2	O- PHOTO-DET	FREE-FREE (IONS)	N P.E.	O P.E.	TOTAL AIR
52	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	5.37E-06	3.63E-05
53	5.50	0.	0.	0.	0.	1.85E-16	8.98E-16	0.	0.	1.78E-09	4.39E-06	2.78E-05	5.46E-06	3.76E-05
54	5.40	0.	0.	0.	0.	1.75E-16	7.64E-16	0.	0.	1.79E-09	4.64E-06	2.89E-05	5.55E-06	3.91E-05
55	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
56	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
57	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
58	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
59	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
60	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	2.85E-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	2.75E-16	0.	2.71E-15	0.	2.15E-16	2.68E-16	0.	0.	1.95E-09	9.25E-06	2.36E-05	5.91E-06	3.88E-05
66	4.20	2.60E-16	0.	8.08E-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	2.46E-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.	1.18E-14	0.	2.22E-16	3.85E-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.	9.27E-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	1.59E-05	3.19E-05	4.79E-06	5.26E-05
73	3.50	1.77E-16	0.	9.01E-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.	9.56E-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	2.28E-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	9.25E-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.	3.04E-16	5.23E-12	5.32E-17	0.	0.	0.	9.67E-10	3.83E-05	3.68E-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	5.95E-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.	4.06E-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.	4.78E-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	1.42E-05	1.82E-04
89	1.90	0.	1.07E-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.	9.35E-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.	1.04E-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.	3.07E-10	2.32E-04	1.49E-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.	6.00E-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.	8.06E-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	1.58E-03
100	0.80	0.	2.23E-15	0.	0.	0.	0.	4.19E-18	0.	0.	1.61E-03	4.33E-04	9.45E-05	2.13E-03
101	0.70	0.	5.07E-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.	1.28E-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-K 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.	8.53E-19	0.	0.	0.	2.41E-12	1.29E-08	1.88E-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	7.82E-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.	7.28E-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	8.20E-07
8	10.00	0.	0.	6.25E-19	0.	0.	0.	2.43E-12	1.58E-08	7.24E-07	9.23E-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.	4.58E-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.	4.02E-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	9.30E-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	8.89E-07	8.25E-08	9.99E-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	8.50E-08	1.05E-06
28	8.00	0.	0.	2.69E-19	0.	0.	0.	2.61E-12	3.10E-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.	6.17E-21	0.	2.73E-12	4.26E-08	8.50E-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.	3.60E-20	0.	2.77E-12	4.64E-08	7.96E-07	1.10E-07	9.53E-07
39	6.90	3.01E-22	0.	1.42E-19	0.	5.51E-20	0.	2.79E-12	4.85E-08	8.35E-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	7.02E-23	0.	9.39E-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	1.11E-23	0.	2.50E-20	2.08E-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	6.01E-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	5.95E-20	0.	2.99E-12	7.41E-08	1.17E-06	1.45E-07	1.39E-06
49	5.90	5.50E-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	6.07E-20	0.	2.95E-12	8.21E-08	1.26E-06	1.53E-07	1.49E-06
51	5.70	5.19E-27	0.	0.	1.52E-20	6.79E-20	0.	2.77E-12	8.65E-08	4.53E-07	8.33E-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	2.36E-28	0.	0.	0.	1.34E-20	6.63E-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	7.98E-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.	1.55E-20	6.79E-20	0.	0.	2.60E-12	1.02E-07	5.37E-07	8.56E-08	7.27E-07
55	5.30	0.	0.	0.	0.	1.59E-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	9.62E-08	8.47E-07
58	5.00	3.38E-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	7.26E-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-20	0.	1.94E-20	5.48E-20	0.	0.	2.79E-12	1.77E-07	8.77E-07	1.09E-07	1.16E-06
64	4.40	3.66E-20	0.	4.67E-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	3.34E-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	3.18E-20	0.	2.41E-19	0.	2.02E-20	4.60E-21	0.	0.	2.87E-12	2.35E-07	1.13E-06	1.22E-07	1.47E-06
68	4.00	2.98E-20	0.	7.25E-19	0.	1.97E-20	3.42E-21	0.	0.	2.88E-12	2.53E-07	1.20E-06	1.08E-07	1.54E-06
69	3.90	2.58E-20	0.	3.51E-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	2.86E-20	0.	5.71E-19	2.09E-15	2.03E-20	0.	0.	0.	2.86E-12	2.96E-07	1.32E-06	1.17E-07	1.73E-06
71	3.70	2.61E-20	0.	5.68E-19	1.08E-15	1.79E-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.	5.55E-19	8.84E-15	1.57E-20	0.	0.	0.	2.41E-12	3.80E-07	1.54E-06	1.43E-07	2.06E-06
74	3.40	2.13E-20	0.	3.75E-19	1.63E-15	1.78E-20	0.	0.	0.	1.39E-12	4.15E-07	1.63E-06	1.54E-07	2.20E-06
75	3.30	1.73E-20	0.	3.83E-19	5.70E-15	1.46E-20	0.	0.	0.	1.39E-12	4.54E-07	1.72E-06	1.65E-07	2.36E-06
76	3.20	1.54E-20	0.	2.60E-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	1.51E-20	0.	2.05E-19	2.60E-15	1.50E-20	0.	0.	0.	1.40E-12	5.49E-07	7.51E-07	1.79E-07	1.48E-06
78	3.00	1.38E-20	0.	1.28E-19	5.36E-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	2.87E-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	1.26E-20	0.	3.96E-20	2.13E-15	8.29E-21	0.	0.	0.	1.41E-12	7.48E-07	1.03E-06	1.61E-07	1.93E-06
81	2.70	8.38E-21	0.	1.87E-20	2.50E-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.	8.87E-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-20	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	1.67E-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.	5.90E-19	0.	0.	0.	0.	0.	0.	1.34E-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.	5.76E-19	0.	0.	0.	0.	0.	0.	1.23E-12	2.89E-06	2.70E-06	4.03E-07	5.99E-06
91	1.70	0.	6.42E-19	0.	0.	0.	0.	0.	0.	1.16E-12	3.44E-06	2.95E-06	3.41E-07	6.73E-06
92	1.60	0.	4.92E-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	2.05E-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	5.00E-07	9.07E-06
95	1.30	0.	4.14E-19	0.	0.	0.	0.	0.	0.	0.	7.79E-06	2.62E-06	5.44E-07	1.10E-05
96	1.20	0.	3.95E-19	0.	0.	0.	0.	0.	0.	0.	9.97E-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	3.60E-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	4.06E-06	9.40E-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	2.78E-05
100	0.80	0.	1.37E-19	0.	0.	0.	0.	3.72E-22	0.	0.	3.47E-05	2.90E-06	9.07E-07	3.86E-05
101	0.70	0.	3.12E-20	0.	0.	0.	0.	3.72E-22	0.	0.	5.25E-05	2.85E-06	7.97E-07	5.61E-05
102	0.60	0.	7.89E-21	0.	0.	0.	0.	1.13E-21	0.	0.	8.46E-05	3.21E-06	9.02E-07	8.87E-05

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. 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.	8.97E-24	0.	0.	0.	2.10E-15	2.62E-10	1.51E-08	2.53E-09	1.79E-08
2	10.60	0.	0.	8.31E-24	0.	0.	0.	2.10E-15	2.70E-10	1.53E-08	2.54E-09	1.81E-08
3	10.50	0.	0.	8.50E-24	0.	0.	0.	2.11E-15	2.78E-10	1.54E-08	2.54E-09	1.82E-08
4	10.40	0.	0.	8.21E-24	0.	0.	0.	2.11E-15	2.86E-10	1.55E-08	2.55E-09	1.84E-08
5	10.30	0.	0.	7.31E-24	0.	0.	0.	2.11E-15	2.94E-10	1.57E-08	2.55E-09	1.86E-08
6	10.20	0.	0.	7.65E-24	0.	0.	0.	2.12E-15	3.03E-10	1.60E-08	2.58E-09	1.89E-08
7	10.10	0.	0.	7.29E-24	0.	0.	0.	2.12E-15	3.12E-10	1.63E-08	2.62E-09	1.92E-08
8	10.00	0.	0.	6.57E-24	0.	0.	0.	2.12E-15	3.21E-10	1.66E-08	2.65E-09	1.95E-08
9	9.90	0.	0.	6.78E-24	0.	0.	0.	2.13E-15	3.31E-10	1.68E-08	2.68E-09	1.98E-08
10	9.80	0.	0.	6.49E-24	0.	0.	0.	2.13E-15	3.42E-10	1.71E-08	2.72E-09	2.02E-08
11	9.70	0.	0.	5.75E-24	0.	0.	0.	2.13E-15	3.53E-10	1.74E-08	2.75E-09	2.05E-08
12	9.60	0.	0.	6.24E-24	0.	0.	0.	2.14E-15	3.64E-10	1.77E-08	2.78E-09	2.08E-08
13	9.50	0.	0.	5.47E-24	0.	0.	0.	2.14E-15	3.75E-10	1.80E-08	2.82E-09	2.11E-08
14	9.40	0.	0.	5.29E-24	0.	0.	0.	2.15E-15	3.88E-10	1.82E-08	2.86E-09	2.15E-08
15	9.30	0.	0.	5.45E-24	0.	0.	0.	2.16E-15	4.00E-10	1.84E-08	2.90E-09	2.17E-08
16	9.20	0.	0.	4.67E-24	0.	0.	0.	2.16E-15	4.13E-10	1.87E-08	2.94E-09	2.21E-08
17	9.10	0.	0.	4.82E-24	0.	0.	0.	2.17E-15	4.27E-10	1.90E-08	2.97E-09	2.24E-08
18	9.00	0.	0.	4.47E-24	0.	0.	0.	2.18E-15	4.42E-10	1.93E-08	3.01E-09	2.27E-08
19	8.90	0.	0.	4.23E-24	0.	0.	0.	2.19E-15	4.57E-10	1.96E-08	3.04E-09	2.31E-08
20	8.80	0.	0.	4.20E-24	0.	0.	0.	2.19E-15	4.73E-10	1.99E-08	3.07E-09	2.34E-08
21	8.70	0.	0.	3.74E-24	0.	0.	0.	2.20E-15	4.89E-10	2.02E-08	3.11E-09	2.38E-08
22	8.60	0.	0.	3.89E-24	0.	0.	0.	2.21E-15	5.07E-10	2.05E-08	3.15E-09	2.41E-08
23	8.50	0.	0.	3.50E-24	0.	0.	0.	2.22E-15	5.25E-10	2.08E-08	3.20E-09	2.45E-08
24	8.40	0.	0.	3.52E-24	0.	0.	0.	2.23E-15	5.44E-10	2.11E-08	3.25E-09	2.49E-08
25	8.30	0.	0.	3.07E-24	0.	0.	0.	2.24E-15	5.64E-10	1.36E-08	2.30E-09	1.65E-08
26	8.20	0.	0.	3.13E-24	0.	0.	0.	2.25E-15	5.85E-10	1.41E-08	2.39E-09	1.71E-08
27	8.10	0.	0.	2.78E-24	0.	0.	0.	2.26E-15	6.07E-10	1.47E-08	2.47E-09	1.77E-08
28	8.00	0.	0.	2.83E-24	0.	0.	0.	2.28E-15	6.30E-10	1.52E-08	2.56E-09	1.84E-08
29	7.90	0.	0.	2.49E-24	0.	0.	0.	2.29E-15	6.54E-10	1.57E-08	2.64E-09	1.90E-08
30	7.80	0.	0.	2.62E-24	0.	0.	0.	2.30E-15	6.80E-10	1.63E-08	2.73E-09	1.97E-08
31	7.70	0.	0.	2.35E-24	0.	0.	0.	2.31E-15	7.07E-10	1.69E-08	2.82E-09	2.04E-08
32	7.60	0.	0.	2.27E-24	0.	4.40E-28	0.	2.32E-15	7.35E-10	1.75E-08	2.91E-09	2.12E-08
33	7.50	0.	0.	2.15E-24	0.	1.33E-27	0.	2.33E-15	7.65E-10	1.82E-08	3.00E-09	2.20E-08
34	7.40	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	7.30	0.	0.	1.90E-24	0.	4.71E-26	0.	2.36E-15	8.30E-10	1.64E-08	3.21E-09	2.05E-08
36	7.20	0.	0.	1.75E-24	0.	1.34E-25	0.	2.37E-15	8.65E-10	1.73E-08	3.38E-09	2.16E-08
37	7.10	0.	0.	1.71E-24	0.	4.26E-25	0.	2.39E-15	9.03E-10	1.82E-08	3.54E-09	2.27E-08
38	7.00	6.86E-27	0.	1.60E-24	0.	7.82E-25	0.	2.41E-15	9.42E-10	1.91E-08	3.71E-09	2.38E-08
39	6.90	1.36E-26	0.	1.50E-24	0.	1.20E-24	0.	2.43E-15	9.84E-10	2.00E-08	3.87E-09	2.49E-08
40	6.80	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	6.70	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	6.60	5.40E-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	6.50	3.16E-27	0.	9.87E-25	0.	2.25E-24	0.	2.51E-15	1.18E-09	2.37E-08	4.53E-09	2.94E-08
44	6.40	1.84E-27	0.	7.07E-25	6.44E-27	2.02E-24	0.	2.53E-15	1.23E-09	2.46E-08	4.71E-09	3.05E-08
45	6.30	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	3.16E-08
46	6.20	5.01E-28	0.	2.63E-25	4.52E-26	2.10E-24	0.	2.57E-15	1.36E-09	2.65E-08	5.08E-09	3.29E-08
47	6.10	2.35E-28	0.	1.28E-25	1.31E-25	2.47E-24	0.	2.59E-15	1.43E-09	2.75E-08	5.27E-09	3.42E-08
48	6.00	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	5.90	2.48E-29	0.	2.38E-27	1.94E-25	1.24E-24	0.	2.61E-15	1.58E-09	9.60E-09	2.03E-09	1.32E-08
50	5.80	3.17E-30	0.	6.04E-29	2.75E-25	1.32E-24	0.	2.57E-15	1.66E-09	9.94E-09	2.10E-09	1.37E-08
51	5.70	2.34E-31	0.	0.	3.30E-25	1.48E-24	0.	2.41E-15	1.75E-09	1.04E-08	2.18E-09	1.44E-08

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. 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	1.06E-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
53	5.50	0.	0.	0.	0.	3.58E-25	1.74E-24	0.	0.	2.26E-15	1.95E-09	1.17E-08	2.35E-09	1.60E-08
54	5.40	0.	0.	0.	0.	3.38E-25	1.48E-24	0.	0.	2.27E-15	2.07E-09	1.25E-08	2.47E-09	1.70E-08
55	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	1.80E-08
56	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	1.90E-08
57	5.10	0.	0.	0.	0.	3.80E-25	1.86E-24	0.	0.	2.32E-15	2.45E-09	1.46E-08	2.26E-09	1.94E-08
58	5.00	1.52E-25	0.	0.	0.	3.51E-25	1.80E-24	0.	0.	2.33E-15	2.61E-09	1.54E-08	2.38E-09	2.04E-08
59	4.90	3.76E-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
60	4.80	7.26E-25	0.	0.	0.	4.28E-25	1.90E-24	0.	0.	2.37E-15	2.95E-09	1.68E-08	2.62E-09	2.24E-08
61	4.70	1.00E-24	0.	0.	0.	4.36E-25	1.74E-24	0.	0.	2.39E-15	3.14E-09	1.79E-08	2.75E-09	2.38E-08
62	4.60	1.41E-24	0.	0.	0.	4.53E-25	1.57E-24	0.	0.	2.41E-15	3.35E-09	1.92E-08	2.89E-09	2.55E-08
63	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
64	4.40	1.65E-24	0.	4.91E-25	0.	4.28E-25	8.07E-25	0.	0.	2.45E-15	3.83E-09	2.20E-08	3.23E-09	2.90E-08
65	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
66	4.20	1.50E-24	0.	5.23E-24	0.	4.40E-25	3.50E-25	0.	0.	2.49E-15	4.41E-09	2.49E-08	3.35E-09	3.27E-08
67	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	3.62E-09	3.50E-08
68	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	3.90E-09	3.73E-08
69	3.90	1.16E-24	0.	3.69E-24	4.59E-20	4.06E-25	2.71E-26	0.	0.	2.50E-15	5.53E-09	2.99E-08	4.17E-09	3.96E-08
70	3.80	1.29E-24	0.	6.00E-24	1.69E-19	4.41E-25	0.	0.	0.	2.49E-15	5.98E-09	3.16E-08	4.44E-09	4.20E-08
71	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
72	3.60	1.05E-24	0.	4.55E-24	4.30E-19	4.20E-25	0.	0.	0.	2.30E-15	7.05E-09	3.50E-08	5.02E-09	4.70E-08
73	3.50	1.02E-24	0.	5.83E-24	7.15E-19	3.42E-25	0.	0.	0.	2.10E-15	7.68E-09	3.68E-08	5.34E-09	4.98E-08
74	3.40	9.60E-25	0.	3.94E-24	1.32E-19	3.87E-25	0.	0.	0.	1.21E-15	8.39E-09	1.34E-08	4.93E-09	2.67E-08
75	3.30	7.78E-25	0.	4.02E-24	4.61E-19	3.17E-25	0.	0.	0.	1.21E-15	9.18E-09	1.26E-08	5.26E-09	2.70E-08
76	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
77	3.10	6.77E-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
78	3.00	6.20E-25	0.	1.35E-24	4.34E-19	3.14E-25	0.	0.	0.	1.22E-15	1.23E-08	1.84E-08	3.87E-09	3.45E-08
79	2.90	5.34E-25	0.	8.61E-25	2.32E-19	2.48E-25	0.	0.	0.	1.22E-15	1.36E-08	2.04E-08	4.28E-09	3.83E-08
80	2.80	5.66E-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
81	2.70	3.77E-25	0.	1.97E-25	2.03E-19	1.03E-25	0.	0.	0.	1.23E-15	1.69E-08	2.45E-08	4.86E-09	4.63E-08
82	2.60	1.85E-25	0.	9.33E-26	2.21E-20	4.71E-26	0.	0.	0.	1.23E-15	1.90E-08	2.66E-08	5.24E-09	5.08E-08
83	2.50	1.32E-26	0.	9.47E-27	2.19E-20	1.15E-26	0.	0.	0.	1.23E-15	2.13E-08	2.91E-08	5.82E-09	5.63E-08
84	2.40	0.	4.03E-25	0.	1.58E-20	1.25E-27	0.	0.	0.	1.23E-15	2.42E-08	3.32E-08	6.64E-09	6.40E-08
85	2.30	0.	1.12E-24	0.	0.	0.	0.	0.	0.	1.22E-15	2.75E-08	3.72E-08	7.46E-09	7.22E-08
86	2.20	0.	3.09E-24	0.	0.	0.	0.	0.	0.	1.21E-15	3.14E-08	4.13E-08	8.31E-09	8.10E-08
87	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
88	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
89	1.90	0.	6.95E-24	0.	0.	0.	0.	0.	0.	1.12E-15	4.94E-08	2.34E-08	5.29E-09	7.80E-08
90	1.80	0.	6.05E-24	0.	0.	0.	0.	0.	0.	1.07E-15	5.83E-08	2.60E-08	5.98E-09	9.03E-08
91	1.70	0.	6.75E-24	0.	0.	0.	0.	0.	0.	1.01E-15	6.94E-08	2.87E-08	6.71E-09	1.05E-07
92	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
93	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
94	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
95	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
96	1.20	0.	4.15E-24	0.	0.	0.	0.	0.	0.	0.	2.01E-07	4.96E-09	3.45E-09	2.09E-07
97	1.10	0.	4.09E-24	0.	0.	0.	0.	1.76E-29	0.	0.	2.62E-07	6.16E-09	4.34E-09	2.73E-07
98	1.00	0.	3.76E-24	0.	0.	0.	0.	3.07E-28	0.	0.	3.51E-07	7.51E-09	5.24E-09	3.64E-07
99	0.90	0.	3.08E-24	0.	0.	0.	0.	3.63E-28	0.	0.	4.85E-07	8.37E-09	5.26E-09	4.98E-07
100	0.80	0.	1.44E-24	0.	0.	0.	0.	8.10E-27	0.	0.	6.97E-07	9.65E-09	6.08E-09	7.13E-07
101	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
102	0.60	0.	8.30E-26	0.	0.	0.	0.	2.46E-26	0.	0.	1.70E-06	1.04E-08	6.05E-09	1.71E-06

ABSORPTION COEFFICIENTS OF HEATED AIR (INVERSE CM.)

TEMPERATURE (DEGREES K) 24000. DENSITY (GM/CC) 1.293E-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.	1.68E-29	0.	0.	0.	4.59E-19	3.30E-12	1.88E-10	4.08E-11	2.32E-10
2	10.60	0.	0.	1.55E-29	0.	0.	0.	4.60E-19	3.39E-12	1.89E-10	4.09E-11	2.34E-10
3	10.50	0.	0.	1.59E-29	0.	0.	0.	4.60E-19	3.49E-12	1.91E-10	4.10E-11	2.36E-10
4	10.40	0.	0.	1.54E-29	0.	0.	0.	4.61E-19	3.59E-12	1.93E-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	2.45E-10
7	10.10	0.	0.	1.36E-29	0.	0.	0.	4.63E-19	3.93E-12	2.02E-10	4.24E-11	2.49E-10
8	10.00	0.	0.	1.23E-29	0.	0.	0.	4.63E-19	4.04E-12	2.06E-10	4.31E-11	2.53E-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	2.66E-10
12	9.60	0.	0.	1.17E-29	0.	0.	0.	4.67E-19	4.57E-12	2.20E-10	4.56E-11	2.70E-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.	9.01E-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	3.38E-11	2.81E-10
19	8.90	0.	0.	7.91E-30	0.	0.	0.	4.78E-19	5.75E-12	2.46E-10	3.17E-11	2.83E-10
20	8.80	0.	0.	7.85E-30	0.	0.	0.	4.79E-19	5.95E-12	2.50E-10	3.26E-11	2.88E-10
21	8.70	0.	0.	7.00E-30	0.	0.	0.	4.81E-19	6.15E-12	2.53E-10	3.35E-11	2.93E-10
22	8.60	0.	0.	7.28E-30	0.	0.	0.	4.83E-19	6.37E-12	2.57E-10	3.44E-11	2.98E-10
23	8.50	0.	0.	6.55E-30	0.	0.	0.	4.84E-19	6.60E-12	2.61E-10	3.53E-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	2.08E-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	8.00	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.	3.51E-32	0.	5.13E-19	1.00E-11	1.95E-10	5.15E-11	2.57E-10
35	7.30	0.	0.	3.55E-30	0.	1.28E-31	0.	5.16E-19	1.04E-11	2.04E-10	5.36E-11	2.68E-10
36	7.20	0.	0.	3.27E-30	0.	3.66E-31	0.	5.18E-19	1.09E-11	2.15E-10	5.66E-11	2.83E-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.	2.13E-30	0.	5.27E-19	1.18E-11	2.38E-10	6.26E-11	3.12E-10
39	6.90	5.36E-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.	4.96E-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.	6.12E-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	5.49E-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	3.06E-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.	5.61E-19	2.09E-11	1.24E-10	3.32E-11	1.78E-10
51	5.70	9.26E-37	0.	0.	8.99E-31	4.02E-30	0.	5.27E-19	2.20E-11	1.30E-10	3.46E-11	1.07E-10

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Volume II

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11 SUPPLEMENTARY NOTES	12 SPONSORING MILITARY ACTIVITY
	Air Force Weapons Laboratory (WLRTH) Kirtland Air Force Base, New Mexico

13 ABSTRACT

An extensive tabulation of absorption coefficients of heated air has been carried out with the aid of several large digital computer programs. These tables supersede the previous ones computed at Lockheed by Meyerott, Sokoloff, and Nicholls in 1959. Tables are presented for temperatures at every 1000°K between 1000°K and 24,000°K and for eight densities between ten times normal atmospheric to 10^{-6} times normal. Absorption coefficients are individually listed for each of 14 contributing absorbers. The photon energy range is 0.6–10.7 eV with a partition interval of 0.1 eV.

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14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Absorption coefficients of heated air Spectral absorption of air diatomic molecules Spectral absorption of air atoms Air thermal radiation						

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