

# ALTITUDE-VELOCITY TABLE AND CHARTS FOR IMPERFECT AIR

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## Errata, AEDC-TDR-64-214, \* January 1965

The formula given on page 5 for the correlation of Fay and Kemp's heat-transfer data is for frozen rather than for chemical equilibrium flow as incorrectly stated in the report. The correct correlation formula for chemical equilibrium should read (see Ref. 15)

$$\dot{q} \sqrt{r_n/p_o'} = 2080 (Nu/Re^{1/2})' (U_1/24,000)^2 (p_o'/\rho_o')^{1/4}$$

where

$$\begin{aligned} (Nu/Re^{1/2})' &= 0.47, 10,000 < U_1 < 24,000 \\ &= 0.47 (U_\infty/24,000)^{-N}, 24,000 < U_1 < 60,000 \\ N &= 0.83 - 0.11 (\log p_o') - 0.02 (\log p_o')^2 \end{aligned}$$

The following formulas were found based upon the tabulated results given in AEDC-TDR-64-214:

$$\begin{aligned} \dot{q} \sqrt{r_n/p_o'} &= 313.1 (U_1/10^4)^{2.3454} \left\{ \begin{array}{l} \pm 9\% \\ 10,000 < \text{Alt} \leq 390,000 \text{ ft} \\ 10,000 < U_1 \leq 24,000 \end{array} \right. \\ &= 713.4 (U_1/10^4)^{1.452} \left\{ \begin{array}{l} \pm 15\% \\ 150,000 \leq \text{Alt} \leq 390,000 \text{ ft} \\ 24,000 < U_1 \leq 50,000 \end{array} \right. \end{aligned}$$

Some unpublished results of Kemp<sup>†</sup> gave the following results (with the dimensions Btu  $\sqrt{\text{in.}/\text{atm}/\text{ft}^2\text{-sec}}$ ) for chemical equilibrium:

$$\dot{q} \sqrt{r_n/p_o'} = 308.5 (U_1/10^4)^{2.14} \left\{ \begin{array}{l} \pm 7\% \\ U_1 \leq 32,200 \end{array} \right.$$

The corrected correlation based on the tabulated results of AEDC-TDR-64-214 and Kemp's correlation formula are shown in Fig. 5, the revised version of which is on the reverse side of this page.

\* Clark H. Lewis and E. G. Burgess, III. "Altitude-Velocity Table and Charts for Imperfect Air." Arnold Engineering Development Center, Air Force Systems Command, Arnold Air Force Station, Tennessee. AEDC-TDR-64-214, January 1965.

<sup>†</sup> The authors are indebted to Dr. Kemp for indicating the error and for permission to publish this previously unpublished result.

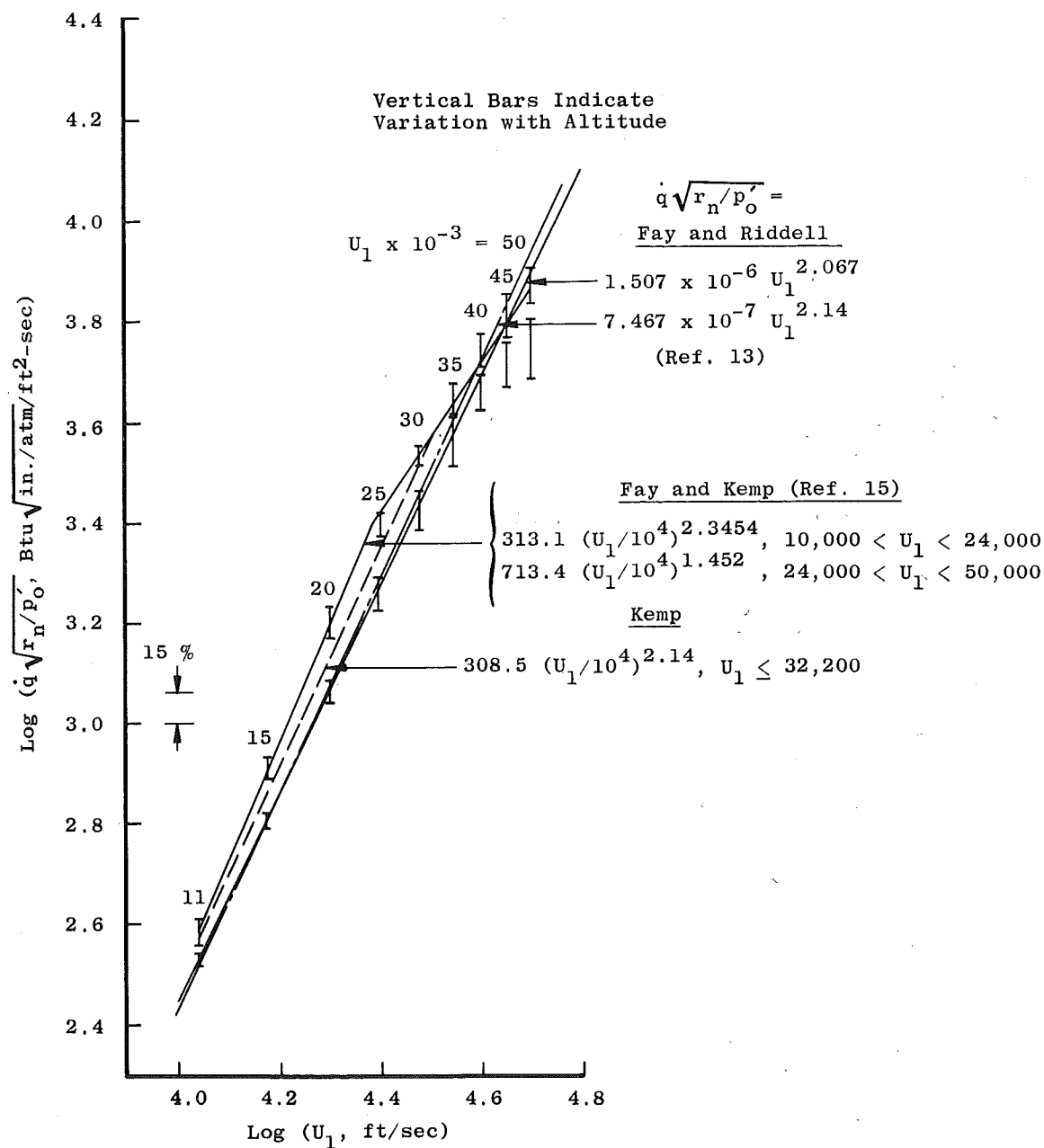


Fig. 5 Correlation Formulas for Sphere Stagnation Heat-Transfer Rates in Chemical Equilibrium

*H. Saha.*

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# ABSTRACT

Normal shock wave parameters are presented in tabular and graphical form over the ranges of altitude =  $10^4$  ( $10^4$ )  $4 \times 10^5$  ft and velocity = 6000 ( $10^3$ ) 50,000 ft/sec. The calculations are based on the thermodynamic data of Hilsenrath and Klein (AEDC-TDR-63-161) and Lewis and Neel (AEDC-TDR-64-36) and the 1962 U. S. Standard Atmosphere.

The results are tabulated in the form of ratios of enthalpy, pressure, density, and temperature with the free-stream quantity. In addition, speed of sound, compressibility factor, sphere stagnation heat transfer rate, and free-stream unit Reynolds number are also given. Altitude-velocity charts are given for the principal quantities of interest. Correlations of sphere stagnation heat-transfer rates based on Fay and Riddell and Fay and Kemp are presented. The constant K in  $(1/2) \rho_1 U_1^2 = K p_0'$  was determined to be  $0.52 \pm 0.01$  for  $U_1 \geq 10,000$  ft/sec.

## PUBLICATION REVIEW

This report has been reviewed and publication is approved.



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## NOMENCLATURE

|                      |                                                                                                                       |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|
| $a$                  | Speed of sound, ft/sec                                                                                                |
| $C_p/R$              | Dimensionless specific heat at constant pressure                                                                      |
| $H$                  | Enthalpy, ft <sup>2</sup> /sec <sup>2</sup>                                                                           |
| $M$                  | Mach number                                                                                                           |
| $M_S$                | Incident shock Mach number in a shock tube necessary to produce the stagnation enthalpy behind a reflected shock wave |
| $(Nu/Re^{1/2})'$     | Parameter in the Fay and Kemp heat transfer correlation formula                                                       |
| $p$                  | Pressure, atm                                                                                                         |
| $q_1$                | Dynamic pressure, $\rho_1 U_1^2/2$                                                                                    |
| $\dot{q} \sqrt{r_n}$ | Stagnation heat transfer rate, Btu - $\sqrt{\text{in.}}$ /ft <sup>2</sup> -sec                                        |
| $R$                  | Gas constant, ft <sup>2</sup> /sec <sup>2</sup> - °K                                                                  |
| $Re$                 | Unit Reynolds number, $\rho_1 * U_1 / \mu_1$ , ft <sup>-1</sup>                                                       |
| $r_n$                | Stagnation point radius of curvature, in.                                                                             |
| $S/R$                | Dimensionless entropy                                                                                                 |
| $T$                  | Temperature, °K                                                                                                       |
| $U$                  | Velocity, ft/sec                                                                                                      |
| $Z$                  | Compressibility factor, $p/\rho RT$                                                                                   |
| $\gamma_E$           | Isentropic exponent, $(\partial \log p / \partial \log p)_S$                                                          |
| $\mu$                | Coefficient of viscosity, lbf-sec/ft <sup>2</sup>                                                                     |
| $\rho$               | Density, amagat                                                                                                       |

## SUPERSSCRIPT

|   |                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------|
| * | Dimensional $p$ in lbf/ft <sup>2</sup> and $\rho$ in lbf-sec <sup>2</sup> /ft <sup>4</sup> or slugs/ft <sup>3</sup> |
|---|---------------------------------------------------------------------------------------------------------------------|

## SUBSCRIPTS

|    |                                              |
|----|----------------------------------------------|
| 0  | Free-stream isentropic stagnation conditions |
| 0' | Normal shock stagnation conditions           |

|    |                                              |
|----|----------------------------------------------|
| 1  | Free-stream conditions                       |
| a  | Reference conditions at one atm and 273.15°K |
| ij | Ratio, e. g., $\rho_{ij} = \rho_i/\rho_j$    |
| s  | Conditions downstream of a normal shock      |
| w  | Wall                                         |

### USEFUL CONSTANTS

|                    |                                                                                                                                                                                                                               |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $a_a =$            | 1087.33 ft/sec = 0.3314193 mm/ $\mu$ sec or km/sec                                                                                                                                                                            |
| $p_a =$            | 1 atm = 14.696 lbf/in. <sup>2</sup> = 2116.224 lbf/ft <sup>2</sup>                                                                                                                                                            |
| $=$                | 1.013246 x 10 <sup>6</sup> dynes/cm <sup>2</sup> = 760 mm Hg = 1.013246 x 10 <sup>5</sup> newtons/m <sup>2</sup>                                                                                                              |
| $R =$              | 3091.694 ft <sup>2</sup> /sec <sup>2</sup> °K = 1.98726 cal/mole°K = 6.860427 x 10 <sup>-2</sup> cal/gm °K or Btu/lbm°R                                                                                                       |
| $T_a =$            | 273.15°K = 491.67°R                                                                                                                                                                                                           |
| Molecular Weight = | 28.967 gm/mole                                                                                                                                                                                                                |
| $\rho_a =$         | 2.505901 x 10 <sup>-3</sup> lbf-sec <sup>2</sup> /ft <sup>4</sup> or slugs/ft <sup>3</sup> = 8.0624862 x 10 <sup>-2</sup> lbm/ft <sup>3</sup> = 1.2914889 kg/m <sup>3</sup> = 1.2914889 x 10 <sup>-3</sup> gm/cm <sup>3</sup> |

## 1.0 INTRODUCTION

Numerous authors have computed normal shock wave parameters based on perfect gas\* thermodynamic properties and various "standard" atmospheres (e. g., see Feldman (Ref. 1) and Wittliff and Curtis (Ref. 2)). At sufficiently low pressures, except for changes in standard atmosphere conditions, the results should be sufficiently accurate for most engineering purposes. However, at high pressures (or more correctly at high densities), the effects of intermolecular forces can become important and the thermodynamic properties are affected.

In addition to the imperfect gas effects on the thermodynamic properties, the interest in higher speeds and altitudes increases with time. The present results are intended to cover a larger area of the altitude-velocity map than previously available with data at intervals adequate for graphical and numerical interpolations.

The thermodynamic data were computed by Hilsenrath and Klein (Ref. 3) and include second virial corrections. Those data were interpolated and used to compute the specific heat and speed of sound data by Lewis and Neel (Refs. 4 through 6). The imperfect gas effects on the specific heat data were found to be negligible over the entire density and temperature ranges, but at high density the speed of sound data ( $\gamma_E = (\partial \log p / \partial \log \rho)_S$  and  $a/a_a$ ) were affected (see Ref. 6).

Lewis and Burgess (Ref. 7) computed normal shock wave properties based on the data of Refs. 4 through 6, and the results were given in the ranges  $M_S = 6$  through 28 and  $p_1 = 10^{-4}$  to  $10^3$  cm Hg where  $M_S$  is the incident shock Mach number and  $p_1$  is the undisturbed gas pressure. Those calculations were designed for use in shock tube analysis, and they did not adequately cover the range of interest for the altitude-velocity charts included in this report. This work was performed at the Arnold Engineering Development Center (AEDC), Air Force Systems Command (AFSC), U. S. Air Force.

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\*The following terminology will be used in this report. An ideal gas will denote a gas obeying the equations  $p = \rho RT$  and  $h = C_p T$ . A perfect gas will denote one obeying  $p = Z \rho RT$  which includes dissociation and ionization neglecting intermolecular effects. An imperfect gas obeys  $p = Z \rho RT$  but includes intermolecular (two-body interaction) forces. The term real gas is reserved for a gas under actual (experimental) conditions and is not subject to the theoretical approximations.

Manuscript received November 1964.

## 2.0 GOVERNING EQUATIONS AND CALCULATION PROCEDURE

### 2.1 FREE-STREAM CONDITIONS

The free-stream conditions are based on the 1962 U. S. Standard Atmosphere (Ref. 8) and ideal gas equations  $H_1/R = (C_p/R)T_1 = 3.5 T_1$  and

$$(S_1/R) = (S/R)_{\text{ref}} + 3.5 \ln (T/T_{\text{ref}}) - \ln (p/p_{\text{ref}})$$

where  $(S/R)_{\text{ref}} = 24.689$ ,  $T_{\text{ref}} = 100^\circ\text{K}$  and  $p_{\text{ref}} = 0.01 \text{ atm}$ .

The free-stream unit Reynolds number is

$$\text{Re}/\text{ft} = \rho_1^* U_1 / \mu_1 \quad (1)$$

where  $\mu_1 = 3.0485 \times 10^{-8} \sqrt{T_1} [1 + (112/T_1)]^{-1} \text{ lbf-sec/ft}^2$ .

### 2.2 NORMAL SHOCK WAVE PROPERTIES

The governing equations for an incident normal shock wave are

$$\rho_1^* U_1 = \rho_s^* U_s \quad (2)$$

$$p_1^* + \rho_1^* U_1^2 = p_s^* + \rho_s^* U_s^2 \quad (3)$$

$$H_1 + (1/2) U_1^2 = H_s + (1/2) U_s^2 \quad (4)$$

and eliminating  $U_s$  yields

$$p_s/p_1 = 1 + p_1 U_1^2 (1 - \rho_{1s}) / p_1 R T_a \quad (5)$$

$$H_s/H_1 = 1 + U_1^2 (1 - \rho_{1s}) / 2 H_1 \quad (6)$$

Equations (5) and (6) with the equation of state

$$\rho_s = \rho(p, H) \quad (7)$$

complete the system of equations in the unknowns  $p_s$ ,  $H_s$ , and  $\rho_s$ .

The calculating procedure for the solution of Equations (5) through (7) was as follows: With the given free-stream conditions, an initial guess for  $\rho_{1s}$  (say  $\rho_{1s}^{(0)}$ ) was made, and Equations (5) and (6) were solved for  $p_s$  and  $H_s$  with the aid of the empirical equations given by Lewis and Burgess (Ref. 9)\* for the perfect air properties of Hilsenrath, Klein,

---

\*An additional unpublished surface fit of the form  $S = S(p, H)$  was also used. The use of this permitted us to remove the explicit dependence of the properties on  $S$  which does not appear in the system (5) through (7).

and Woolley (Ref. 10). Equation (6) was then solved for  $\rho_s^{(1)}$ . A comparison between  $\rho_{1s}^{(1)}$  and  $\rho_{1s}^{(o)}$  was made, and the procedure was repeated until  $\left| \rho_{1s}^{(n)} - \rho_{1s}^{(n-1)} \right| < 0.00005$ . The solution procedure was repeated without change with a table-look-up procedure using the constant pressure interpolated data of Neel and Lewis (Ref. 5).

### 2.3 STAGNATION CONDITIONS

The stagnation conditions upstream and downstream of the normal shock were determined from  $\phi_o = \phi(S_1, H_o)$  and  $\psi_o' = \psi(S_s, H_o)$  where  $H_o = H_1 + (1/2)U_1^2$ . The stagnation conditions were determined from the constant entropy data of Neel and Lewis (Ref. 4) using a four-point Lagrange interpolation formula. The stagnation speed of sound data were determined from the data of Lewis and Neel (Ref. 6).

### 2.4 STAGNATION POINT HEAT TRANSFER RATE

The stagnation heat transfer rates were computed from the Fay and Riddell formula (Ref. 12) in the form given previously by Lewis and Burgess (Ref. 13) as

$$\dot{q} \sqrt{r_n} = 7.55274 \times 10^{-3} (\rho_w \mu_w)^{0.1} (\rho_o' \mu_o')^{0.4} (H_o - H_w) (p_o' / \rho_o')^{0.25}$$

where the viscosity data were determined from Hansen's data (Ref. 11),  $T_w = 300^\circ\text{K}$  was assumed, and the sphere radius  $r_n$  is in inches. The Lewis number was assumed to be unity.

## 3.0 RESULTS AND DISCUSSION

### 3.1 GRAPHICAL DATA

The data are presented in graphical form in Figs. 1 to 5. The following quantities are given as parameters on altitude against velocity charts:  $T_o$ ,  $p_o$ ,  $Z_o$ ,  $H_o$ ,  $T_o'$ ,  $p_o'$ ,  $Z_o'$ ,  $M_1$ ,  $\text{Re}/\text{ft}$ ,  $\dot{q} \sqrt{r_n}$ , and  $M_s^*$ .

---

\*The calculation of incident shock Mach number,  $M_s$ , assumed the undisturbed pressure to be  $10^{-3}$  cm Hg. However, undisturbed pressures less than 1 atm would not affect the results more than a few percent.

For convenience, a graph of  $H_0/R = U_1^2/2R$  is given in Fig. 1. A plot of the constant  $K$  in

$$q_1 \equiv (1/2) \rho_1 U_1^2 = K p_o'$$

is shown in Fig. 4. For the range of the present calculations, an average value of  $0.52 \pm 0.01$  is indicated for  $U_1 \geq 10,000$  ft/sec. This substantiates the frequent use of  $\rho_1 U_1^2 \approx p_o'$  in hypersonic flow theories even when imperfect gas effects are included.

A plot of the heat transfer parameter  $\log (\dot{q} \sqrt{r_n/p_o'})$  against  $\log U_1$  is shown in Fig. 5. A least squares curve fit of the data in the range  $U_1 = 6000$  to  $35,000$  ft/sec and altitude =  $10,000$  to  $390,000$  ft produced the following formula:

$$\dot{q} \sqrt{r_n/p_o'} = 1.507 \times 10^{-6} U_1^{2.067}$$

which is accurate to within 15 percent, whereas Dietra and Hidalgo (Ref. 14) obtained

$$\dot{q} \sqrt{r_n/p_o'} = 7.1 \times 10^{-6} U_1^{2.15*}$$

and Lewis and Burgess previously gave (Ref. 13)

$$\dot{q} \sqrt{r_n/p_o'} = 7.467 \times 10^{-7} U_1^{2.14**}$$

The present as well as the previous results (Ref. 13) were based on Hansen's (Ref. 11) viscosity data, whereas Dietra and Hidalgo used the Sutherland viscosity law. All solutions assumed a Newtonian velocity gradient at the stagnation point and Prandtl number of 0.71.

A comparison was given by Lewis and Burgess (Ref. 13) between their results using the Fay and Riddell formula and the more recent theory of Fay and Kemp (Ref. 15). They found that if the Fay and Riddell result was increased by 15 percent, reasonable agreement with the more exact theory (Fay and Kemp) was obtained (see Ref. 13) even in the range of velocities where appreciable ionization is evident.

\*This formula assumes  $T_w = 300^\circ\text{K}$ , Lewis number of 1.4, and  $\rho_1 U_1^2 = p_o'$ . The formula is claimed to be accurate within 10 percent over the ranges  $6000 \leq U_1 \leq 26,000$  ft/sec and  $8 \times 10^{-5} \leq \rho/\rho_{\text{ref}} \leq 1$ .

\*\*This correlation was determined for  $T_w = 300^\circ\text{K}$  and  $6700 \leq U_1 \leq 35,000$  ft/sec and is accurate within 5 percent based on the surface fit data of Ref. 9.

The results of calculations based on the correlation formula given by Fay and Kemp (Ref. 15) for chemical equilibrium,

$$\dot{q} \sqrt{r_n/p_o'} = 2080 (Nu/Re^{1/2})' (U_1/24,000)^2 (p_o'/\rho_o')^{1/4}$$

where  $(Nu/Re^{1/2})' = 0.47, 10,000 < U_1 < 24,000$

$$= 0.47 (U_1/24,000)^{-0.83}, 24,000 < U_1 < 34,000$$

$$= 0.35 \quad 34,000 < U_1 < 60,000$$

are also shown in Fig. 5. Fay and Kemp claim accuracy within  $\pm 9$  percent for the correlation formula. The use of  $p_o'$  and  $\rho_o'$  makes the application somewhat difficult, and the following formula was found based on the present results:

$$\dot{q} \sqrt{r_n/p_o'} = 1.325 \times 10^{-6} U_1^{2.1058}$$

The results of this correlation formula are shown in Fig. 5 and agree with the results of the Fay and Kemp formula within  $\pm 15$  percent over the range  $U_1 = 15,000$  to  $50,000$  ft/sec. The above formula represents approximately a 30-percent increase above the present Fay and Riddell (Lewis No. = 1) value. Vertical bars indicate the variation of the results with altitude.

### 3.2 TABULATED DATA

The results of the calculations are given in Table 1 where the data are given in the following form:

H0/H1, Stagnation to free-stream enthalpy ratio

P0/P1, Stagnation to free-stream pressure ratio

R0/R1  $\equiv \rho_o/\rho_1$ , Stagnation to free-stream density ratio

T0/T1, Stagnation to free-stream temperature ratio

A0/AA  $\equiv a_o/a_a$ , Stagnation to reference speed of sound ratio

Z0, Stagnation compressibility factor

GAME0  $\equiv \gamma_{E, o}$ , Stagnation isentropic exponent

HS/H1, Normal shock to free-stream enthalpy ratio

PS/P1, Normal shock to free-stream pressure ratio

RS/R1  $\equiv \rho_s/\rho_1$ , Normal shock to free-stream density ratio

TS/T1, Normal shock to free-stream temperature ratio

SS/R, Normal shock entropy

RE/FT, Unit free-stream Reynolds number

GAMES  $= \gamma_{E,s}$ , Normal shock isentropic exponent

Q RT RN  $= \dot{q} \sqrt{r_n}$ , Normal shock stagnation heat transfer rate times the root of the nose radius in inches

P0P/P1  $= p_o'/p_1$ , Pitot to free-stream pressure ratio

R0P/R1  $= \rho_o'/\rho_1$ , Normal shock stagnation density ratio

T0P/T1  $= T_o'/T_1$ , Normal shock stagnation temperature ratio

A0P/AA  $= a_o'/a_a$ , Normal shock stagnation to reference speed of sound ratio

Z0P  $= Z_o'$ , Normal shock stagnation compressibility factor

GAME0P  $= \gamma_{E,o}'$ , Normal shock stagnation isentropic exponent

For convenience, the free-stream conditions are printed at the top of each page in the table. When the computed conditions were outside the tables of thermodynamic properties (Refs. 3 through 6), zeros were printed in the table.

#### 4.0 COMPARISON WITH PREVIOUS RESULTS

A detailed comparison with a large body of previous calculations of the altitude-velocity data was not made. Instead, a comparison was made between the 1959 (Ref. 16) and 1962 standard atmospheres and between the present results and those of Marrone (Ref. 17). The choice of Marrone was somewhat arbitrary; however, he has computed normal shock wave parameters in the ranges of altitude = 0 to 300,000 ft and velocity  $U_1 = 26,000$  to 50,000 ft/sec. He also compared his results with the results of Wittliff and Curtis (Ref. 2) at  $U_1 = 26,000$  ft/sec where those two sources have a common boundary.

Since the differences in the standard atmospheres have a strong influence on the results of any comparison with previous normal shock wave calculations, the results of a comparison of model atmospheres will now be given.

##### 4.1 COMPARISON OF STANDARD ATMOSPHERES

The results of a comparison between 1959 and 1962 model atmospheres are given in Table 2. The data given are the percentage differences

between the free-stream conditions given in Refs. 8 and 16. In the present work,  $p_1$ ,  $\rho_1$  and  $T_1$  were obtained from the 1962 model atmosphere, and  $H_1/R$  and  $a_1$  were computed from ideal gas equations. For an altitude range of 0 to 400,000 ft, the range of  $T_1$  is 180.65 to 288.15°K. The corresponding range of  $H/RT$  is 3.4856 to 3.4888 in comparison with the ideal gas value of 3.50. In the present results, the maximum error in  $H_1/R$  is therefore 0.33 percent. As to be expected, the difference in  $a_1$  is approximately one-half the difference in  $T_1$ . The differences in the 1959 and 1962 model atmospheres as given in Table 2 are greater than 15 percent near 200,000 ft and affect the comparison of results based on the two model atmospheres.

#### 4.2 COMPARISON OF PRESENT AND PREVIOUS PERFECT GAS RESULTS

A comparison with the previous results of Marrone (Ref. 17) is shown in Table 3. The comparison shows differences as large as 11.6 percent; however, because of the differences in the model atmospheres, it is difficult to separate the imperfect gas effects from the effects on free-stream quantities and hence on the solution to the normal shock equation.

The data in Table 3 clearly indicate significant differences where imperfect gas effects are small. For example, at 280,000 ft and 32,000 ft/sec, the pitot pressure is only  $6.82 \times 10^{-3}$  atm, whereas the difference in the ratio  $p_0'/p_1$  is 8.92 percent. However, at that altitude the free-stream pressure difference is 11.25 percent as shown in Table 2. In fact, only the data of Marrone at altitudes less than about 30,000 ft should be affected by imperfect gas effects since he does not present the free-stream stagnation conditions. The differences between the present results and previous perfect gas normal shock wave properties such as Marrone and Wittliff and Curtis are due to differences in model atmospheres and not to imperfect gas effects. Free-stream stagnation conditions, however, are strongly dependent on the imperfect gas effects -- the effect is small below one atmosphere and increases rapidly as the stagnation pressure (or more correctly the stagnation density) increases.

#### 5.0 CONCLUDING REMARKS

The present results are based on the most recent and complete thermodynamic data and model atmosphere known to the authors. Moreover, the method of solving the normal shock wave conservation equations is direct and does not involve approximations other than numerical round-off and convergence criteria. Except for the viscosity data at the normal

shock stagnation conditions, the present results should be quite accurate, based, of course, on the current model atmosphere.

Correlation formulas were found to exist for the Fay and Riddell and Fay and Kemp stagnation heat transfer theories. In both cases, a correlation accurate within  $\pm 15$  percent was found. The usefulness of the present correlation of the Fay and Kemp results lies in its simplicity which allows one to compute the heat transfer rate from free-stream velocity and  $p_O' = \rho_1 U_1^2 / 1.04$ . Fay and Kemp's formula requires additionally the stagnation density  $\rho_O'$ . It should also be noted that the Fay and Kemp correlation formula was only claimed to be accurate within  $\pm 9$  percent; therefore the slightly more inaccurate formula found in the present results is made more attractive because of its simple form.

A correlation between the free-stream dynamic pressure  $q_1$  and the pitot pressure  $p_O'$  indicated the constant  $K$  in  $q_1 = K p_O'$  to be  $0.52 \pm 0.01$  and gives further support to the hypersonic approximation  $\rho_1 U_1^2 = p_O'$ .

Finally, the table and charts should prove useful to engineers in gas dynamics research and development since the results are tabulated and plotted at sufficiently close intervals to permit rapid interpolation of the data.

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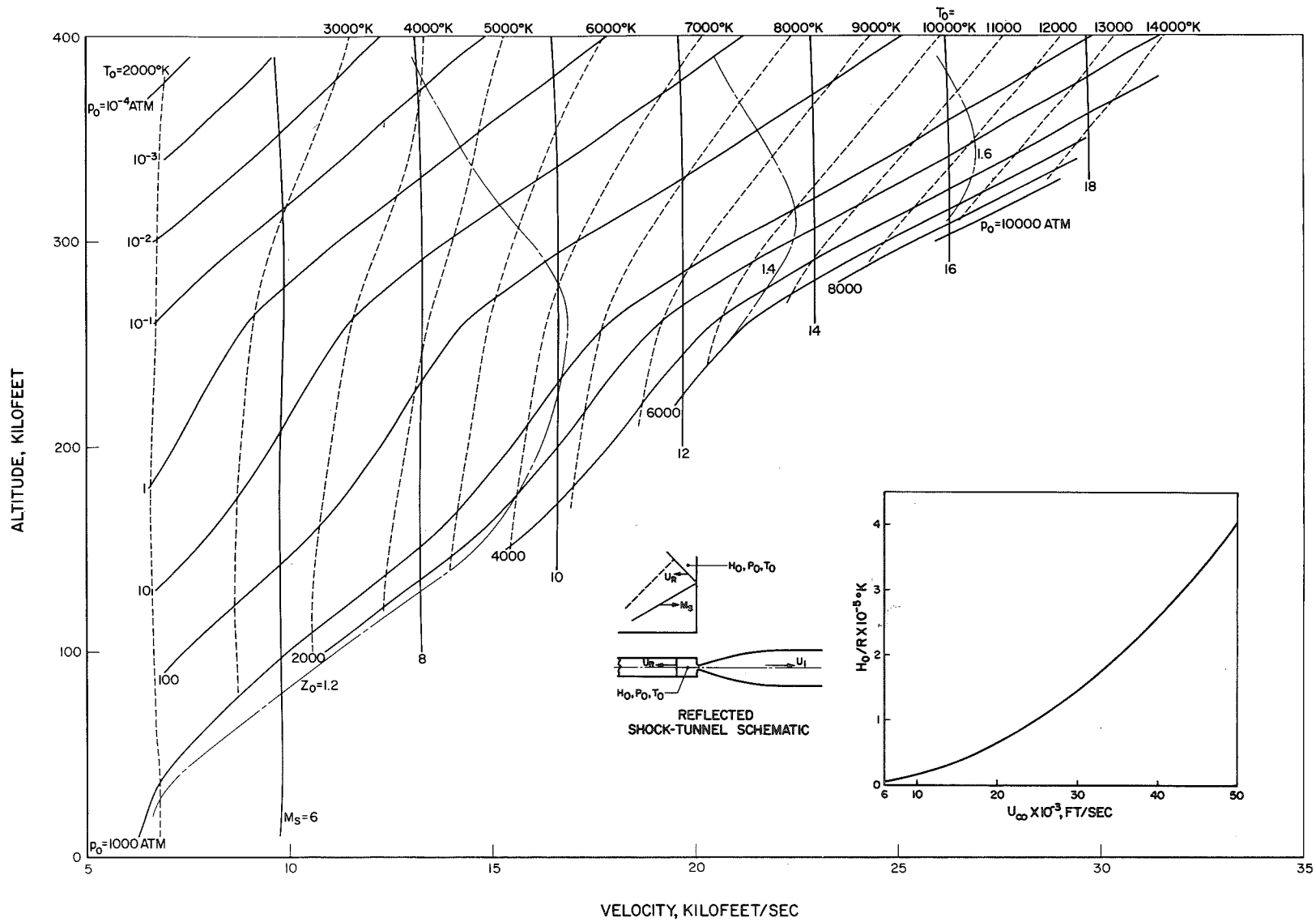


Fig. 1 Equilibrium Free-Stream Stagnation Conditions Necessary for Flight Duplication

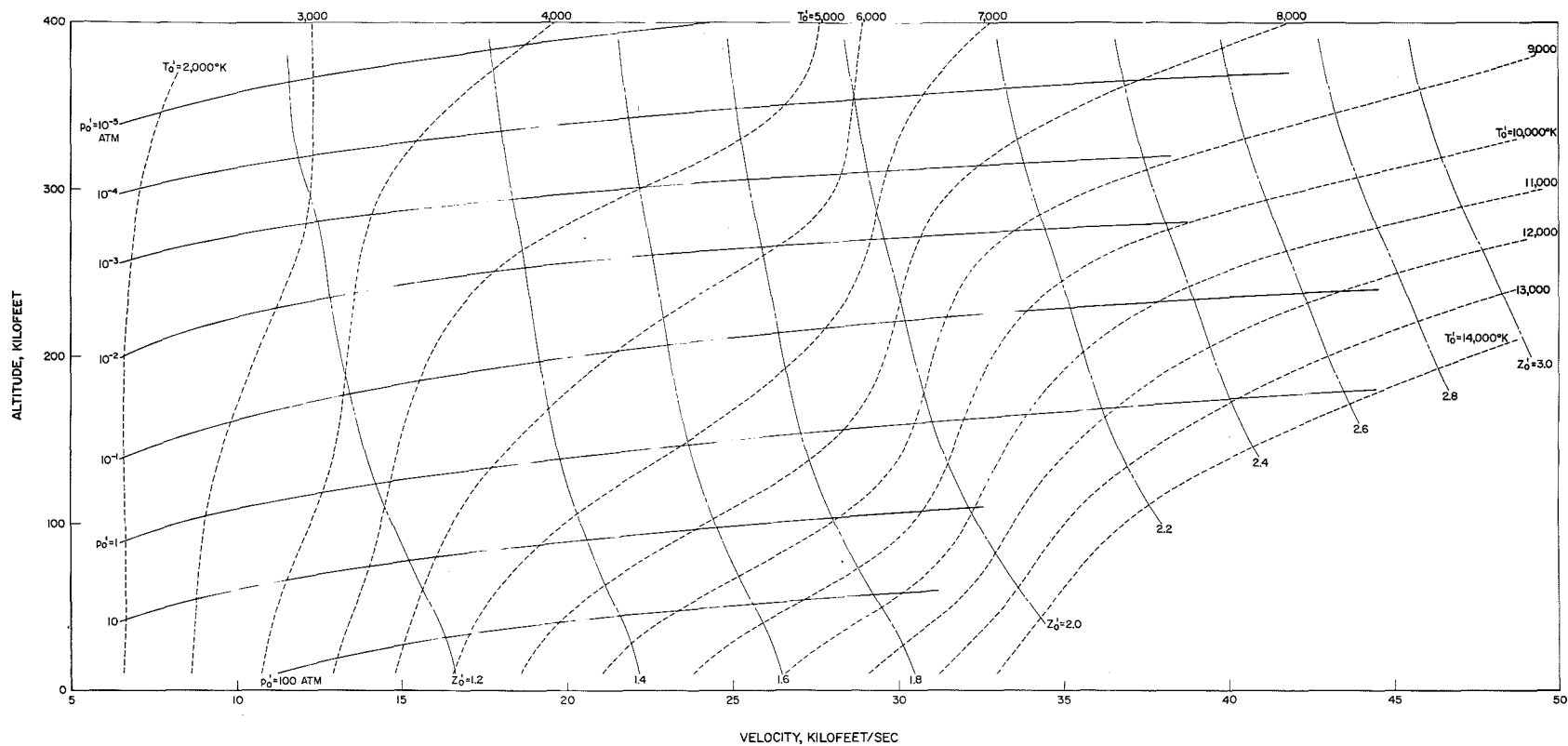


Fig. 2 Normal Shock Stagnation Conditions at Flight Duplication

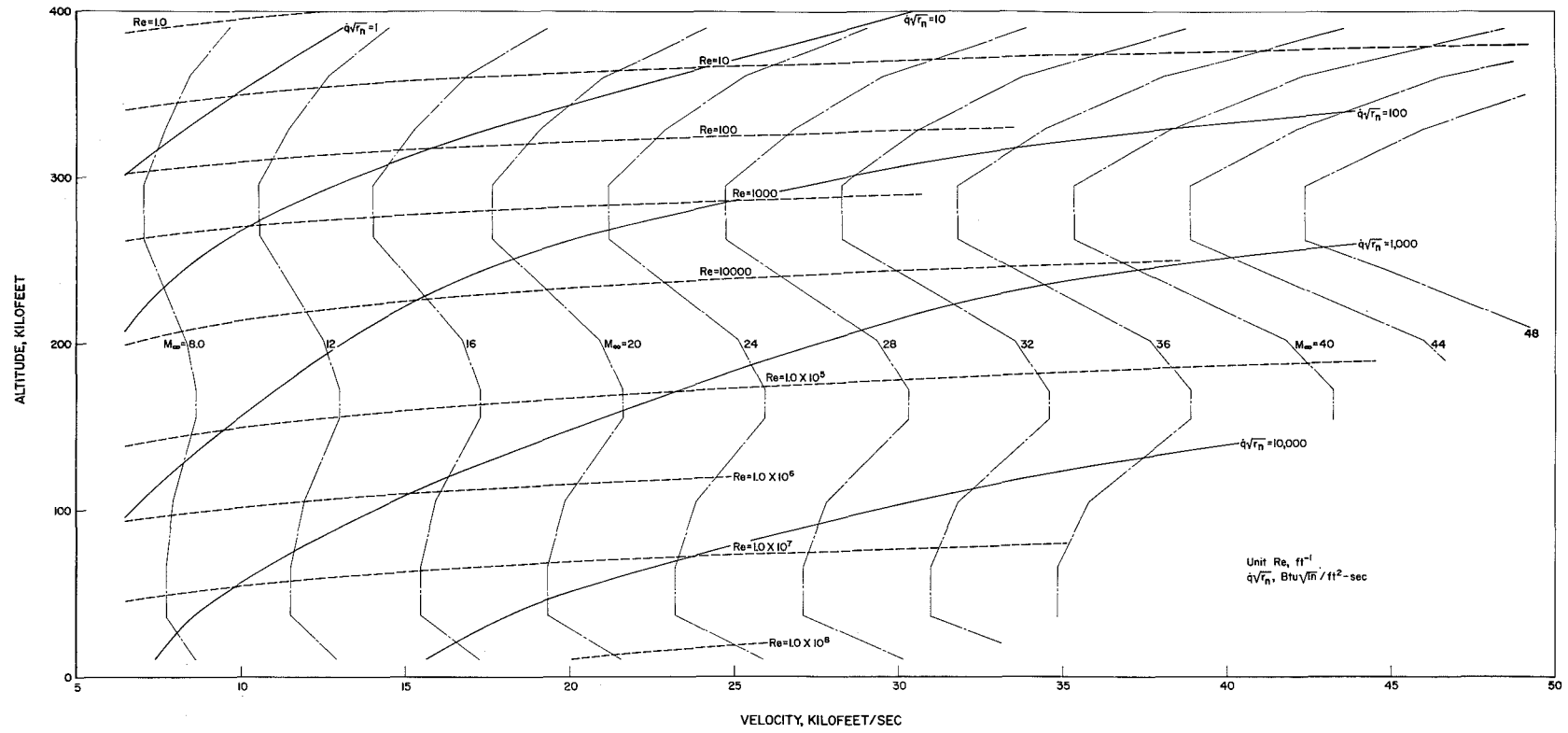


Fig. 3 Fay and Riddell Stagnation Heat Transfer, Free-Stream Mach Number, and Unit Reynolds Number for Flight Duplication

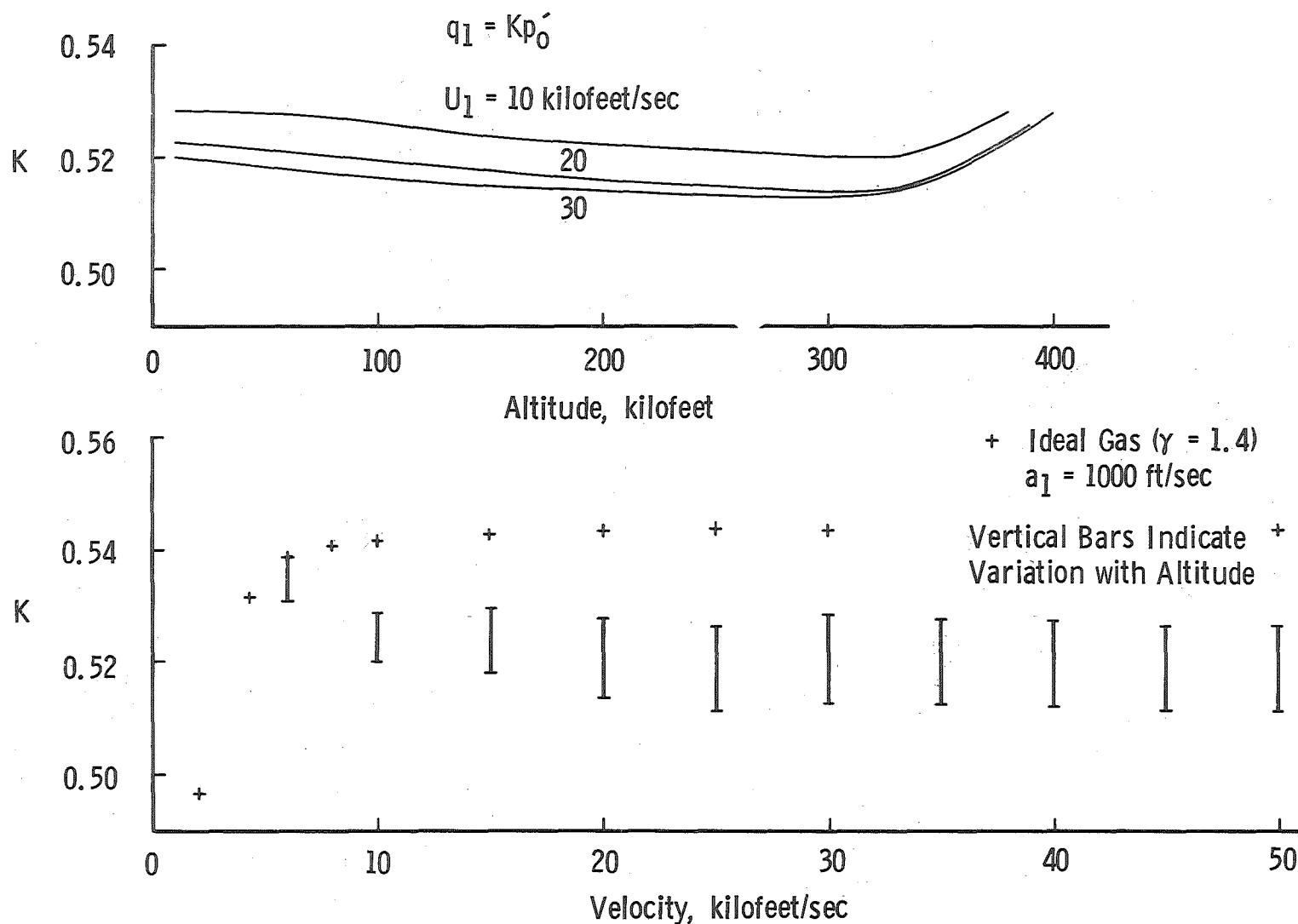


Fig. 4 The Constant K Relating Free-Stream Dynamic Pressure and Pitot Pressure

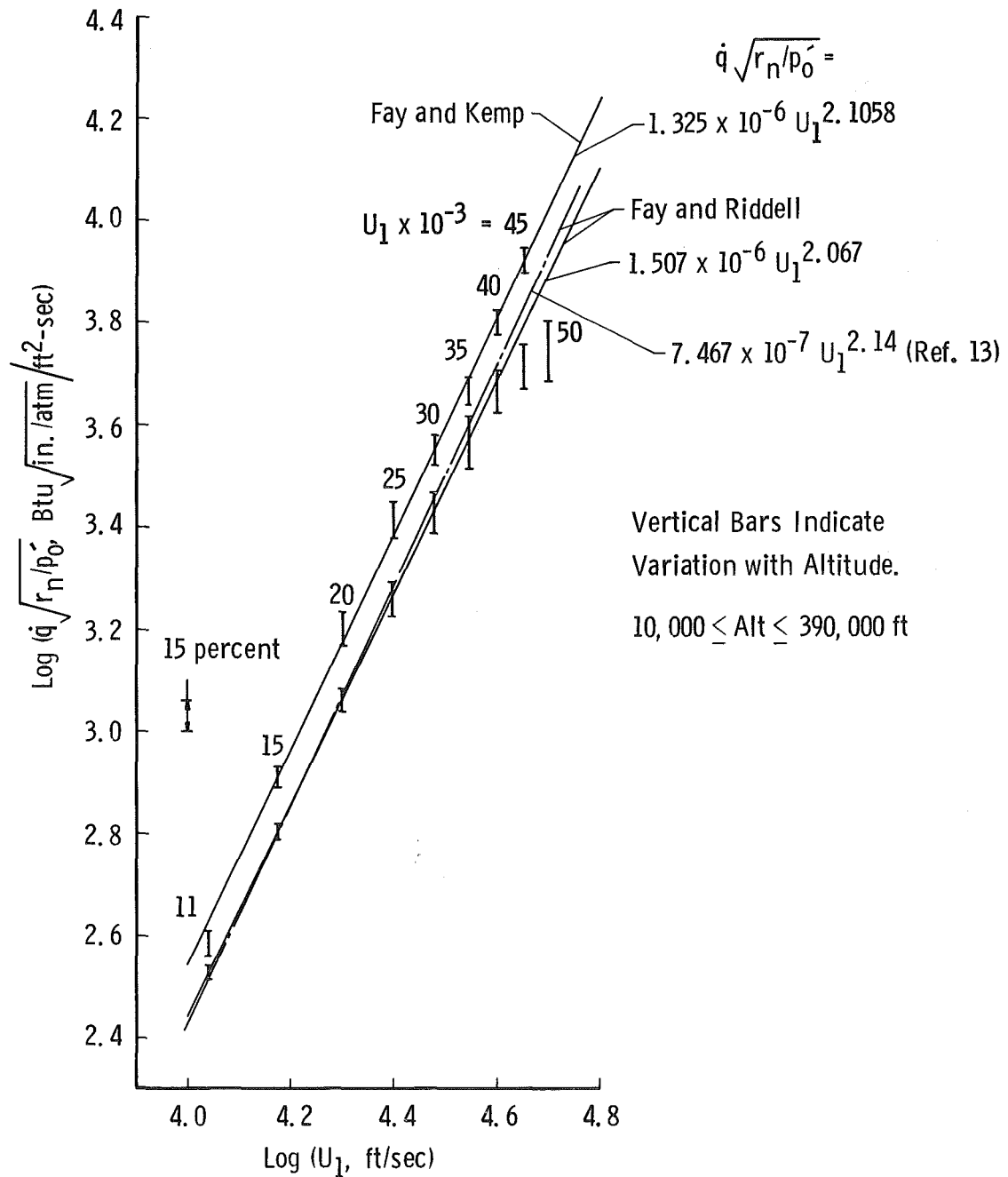


Fig. 5 Correlation Formulas for Sphere Stagnation Heat Transfer Rates

TABLE 1

## NORMAL SHOCK WAVE PARAMETERS IN IMPERFECT AIR FOR FLIGHT DUPLICATION

ALTITUDE = 10000. FT.

P1 = 6.878297-01 ATM. , RHO1 = 7.005709-01 AMA. , T1 = 268.35 K  
 S1/R = 23.903 , A1 = 1077.73 FT./SEC. , H1/R = 939.216 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1         | R0/R1<br>RS/R1<br>RCP/R1       | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|----------------------------------|--------------------------------|---------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.567  | 7.199<br>7.014<br>5.177551+02   | 1.063599+03<br>36.925<br>40.829  | 1.472826+02<br>5.7936<br>6.259 | 6.296<br>6.3295<br>6.475  | 2.7261<br>27.310<br>2.4372 | 1.1456<br>2.989615+07<br>1.0062 | 1.4683<br>1.3008<br>1.2993 |
| 7000.  | 6.495  | 9.437<br>9.223<br>8.397627+02   | .000000+00<br>50.675<br>55.548   | .000000+00<br>6.2700<br>6.737  | .000<br>8.0215<br>8.179   | .0000<br>28.073<br>2.7158  | .0000<br>3.487884+07<br>1.0068  | .0000<br>1.2778<br>1.2764  |
| 8000.  | 7.423  | 12.020<br>11.776<br>1.275358+03 | .000000+00<br>66.711<br>72.670   | .000000+00<br>6.7235<br>7.199  | .000<br>9.8354<br>10.001  | .0000<br>28.799<br>2.9768  | .0000<br>3.986153+07<br>1.0082  | .0000<br>1.2538<br>1.2524  |
| 9000.  | 8.351  | 14.947<br>14.678<br>1.840178+03 | .000000+00<br>85.122<br>92.148   | .000000+00<br>7.1982<br>7.678  | .000<br>11.6715<br>11.835 | .0000<br>29.498<br>3.2161  | .0000<br>4.484423+07<br>1.0129  | .0000<br>1.2304<br>1.2296  |
| 10000. | 9.279  | 18.219<br>17.928<br>2.550258+03 | .000000+00<br>105.936<br>114.038 | .000000+00<br>7.6954<br>8.176  | .000<br>13.4460<br>13.605 | .0000<br>30.181<br>3.4472  | .0000<br>4.982692+07<br>1.0239  | .0000<br>1.2153<br>1.2156  |
| 11000. | 10.207 | 21.835<br>21.524<br>3.421929+03 | .000000+00<br>129.106<br>138.280 | .000000+00<br>8.1848<br>8.662  | .000<br>15.1406<br>15.299 | .0000<br>30.858<br>3.6839  | .0000<br>5.480961+07<br>1.0423  | .0000<br>1.2118<br>1.2129  |
| 12000. | 11.134 | 25.795<br>25.462<br>4.454939+03 | .000000+00<br>154.526<br>164.896 | .000000+00<br>8.6195<br>9.091  | .000<br>16.8143<br>16.981 | .0000<br>31.531<br>3.9371  | .0000<br>5.979230+07<br>1.0669  | .0000<br>1.2177<br>1.2193  |
| 13000. | 12.062 | 30.100<br>29.739<br>5.682190+03 | .000000+00<br>182.118<br>193.791 | .000000+00<br>8.9719<br>9.440  | .000<br>18.5451<br>18.722 | .0000<br>32.201<br>4.1963  | .0000<br>6.477499+07<br>1.0951  | .0000<br>1.2195<br>1.2239  |
| 14000. | 12.990 | 34.749<br>34.352<br>7.113849+03 | .000000+00<br>211.730<br>224.864 | .000000+00<br>9.2087<br>9.666  | .000<br>20.4423<br>20.647 | .0000<br>32.863<br>4.5010  | .0000<br>6.975769+07<br>1.1254  | .0000<br>1.2415<br>1.2425  |
| 15000. | 13.918 | 39.743<br>39.301<br>8.770548+03 | .000000+00<br>243.394<br>258.265 | .000000+00<br>9.3643<br>9.822  | .000<br>22.5190<br>22.744 | .0000<br>33.512<br>4.7870  | .0000<br>7.474038+07<br>1.1547  | .0000<br>1.2429<br>1.2434  |
| 16000. | 14.846 | 45.081<br>44.594<br>1.066481+04 | .000000+00<br>277.311<br>293.908 | .000000+00<br>9.5153<br>9.975  | .000<br>24.6489<br>24.879 | .0000<br>34.145<br>5.0420  | .0000<br>7.972307+07<br>1.1829  | .0000<br>1.2319<br>1.2310  |
| 17000. | 15.774 | 50.763<br>50.236<br>1.281061+04 | .000000+00<br>313.679<br>332.066 | .000000+00<br>9.7149<br>10.181 | .000<br>26.6617<br>26.885 | .0000<br>34.767<br>5.2731  | .0000<br>8.470576+07<br>1.2117  | .0000<br>1.2168<br>1.2163  |

ALTITUDE = 10000. FT.

P1 = 6.878297-01 ATM. , RH01 = 7.005709-01 AMA. , T1 = 268.35 K  
 S1/R = 23.903 , A1 = 1077.73 FT./SEC. , H1/R = 939.216 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 18000. | 16.702 | 56.790<br>56.227<br>1.521504+04   | .000000+00<br>352.543<br>372.598   | .000000+00<br>9.9634<br>10.431  | .000<br>28.4921<br>28.708 | .0000<br>35.384<br>5.4940 | .0000<br>8.968845+07<br>1.2428 | .0000<br>1.2056<br>1.2057 |
| 19000. | 17.630 | 63.161<br>62.568<br>1.789236+04   | .000000+00<br>393.871<br>415.635   | .000000+00<br>10.2401<br>10.710 | .000<br>30.1566<br>30.365 | .0000<br>36.001<br>5.7119 | .0000<br>9.467114+07<br>1.2765 | .0000<br>1.1989<br>1.1995 |
| 20000. | 18.557 | 69.876<br>69.254<br>2.085484+04   | .000000+00<br>437.591<br>461.145   | .000000+00<br>10.5256<br>10.998 | .000<br>31.6932<br>31.899 | .0000<br>36.622<br>5.9288 | .0000<br>9.965384+07<br>1.3129 | .0000<br>1.1951<br>1.1960 |
| 21000. | 19.485 | 76.936<br>76.285<br>2.410951+04   | .000000+00<br>483.652<br>508.870   | .000000+00<br>10.8061<br>11.276 | .000<br>33.1387<br>33.343 | .0000<br>37.248<br>6.1494 | .0000<br>1.046365+08<br>1.3519 | .0000<br>1.1947<br>1.1955 |
| 22000. | 20.413 | 84.340<br>83.660<br>2.767321+04   | .000000+00<br>532.016<br>558.998   | .000000+00<br>11.0731<br>11.541 | .000<br>34.5203<br>34.725 | .0000<br>37.880<br>6.3736 | .0000<br>1.096192+08<br>1.3932 | .0000<br>1.1957<br>1.1966 |
| 23000. | 21.341 | 92.089<br>91.378<br>3.155564+04   | .000000+00<br>582.651<br>611.397   | .000000+00<br>11.3211<br>11.785 | .000<br>35.8611<br>36.068 | .0000<br>38.519<br>6.6016 | .0000<br>1.146019+08<br>1.4366 | .0000<br>1.1976<br>1.1986 |
| 24000. | 22.269 | 100.181<br>99.437<br>3.577541+04  | .000000+00<br>635.524<br>666.274   | .000000+00<br>11.5457<br>12.009 | .000<br>37.1833<br>37.395 | .0000<br>39.165<br>6.8337 | .0000<br>1.195846+08<br>1.4819 | .0000<br>1.2000<br>1.2010 |
| 25000. | 23.197 | 108.619<br>107.838<br>4.033710+04 | .000000+00<br>690.608<br>723.309   | .000000+00<br>11.7444<br>12.204 | .000<br>38.5030<br>38.719 | .0000<br>39.818<br>7.0743 | .0000<br>1.245673+08<br>1.5288 | .0000<br>1.2035<br>1.2048 |
| 26000. | 24.125 | 117.400<br>116.580<br>4.526126+04 | .000000+00<br>747.845<br>782.746   | .000000+00<br>11.9145<br>12.373 | .000<br>39.8383<br>40.063 | .0000<br>40.475<br>7.3204 | .0000<br>1.295500+08<br>1.5772 | .0000<br>1.2075<br>1.2085 |
| 27000. | 25.053 | 126.527<br>125.662<br>5.055742+04 | .000000+00<br>807.282<br>844.403   | .000000+00<br>12.0555<br>12.511 | .000<br>41.2087<br>41.443 | .0000<br>41.137<br>7.5770 | .0000<br>1.345327+08<br>1.6267 | .0000<br>1.2125<br>1.2136 |
| 28000. | 25.980 | 135.997<br>135.085<br>5.624418+04 | .000000+00<br>868.840<br>908.371   | .000000+00<br>12.1648<br>12.617 | .000<br>42.6370<br>42.883 | .0000<br>41.803<br>7.8434 | .0000<br>1.395154+08<br>1.6768 | .0000<br>1.2177<br>1.2192 |
| 29000. | 26.908 | 145.812<br>144.846<br>6.233592+04 | .000000+00<br>932.483<br>974.556   | .000000+00<br>12.2406<br>12.690 | .000<br>44.1475<br>44.409 | .0000<br>42.470<br>8.1222 | .0000<br>1.444981+08<br>1.7273 | .0000<br>1.2241<br>1.2256 |
| 30000. | 27.836 | 155.971<br>154.944<br>6.885677+04 | .000000+00<br>998.082<br>1043.079  | .000000+00<br>12.2807<br>12.729 | .000<br>45.7700<br>46.052 | .0000<br>43.138<br>8.4132 | .0000<br>1.494808+08<br>1.7773 | .0000<br>1.2309<br>1.2324 |
| 31000. | 28.764 | 166.475<br>165.379<br>7.582366+04 | .000000+00<br>1065.737<br>1113.746 | .000000+00<br>12.2854<br>12.730 | .000<br>47.5424<br>47.850 | .0000<br>43.803<br>8.7178 | .0000<br>1.544634+08<br>1.8262 | .0000<br>1.2385<br>1.2394 |

ALTITUDE = 10000. FT.

P1 = 6.878297-01 ATM. , RHO1 = 7.005709-01 AMA. , T1 = 268.35 K  
 S1/R = 23.903 , A1 = 1077.73 FT./SEC. , H1/R = 939.216 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 32000. | 29.692 | 177.323<br>176.148<br>8.326487+04 | .000000+00<br>1135.218<br>1186.627 | .000000+00<br>12.2534<br>12.697 | .000<br>49.5031<br>49.839 | .0000<br>44.463<br>9.0371 | .0000<br>1.594461+08<br>1.8729 | .0000<br>1.2458<br>1.2468 |
| 33000. | 30.620 | 188.515<br>187.252<br>9.120547+04 | .000000+00<br>1206.642<br>1261.598 | .000000+00<br>12.1894<br>12.631 | .000<br>51.6862<br>52.056 | .0000<br>45.116<br>9.3625 | .0000<br>1.644288+08<br>1.9164 | .0000<br>1.2510<br>1.2521 |
| 34000. | 31.548 | 200.052<br>198.692<br>9.967410+04 | .000000+00<br>1279.991<br>1338.723 | .000000+00<br>12.1027<br>12.543 | .000<br>54.0987<br>54.503 | .0000<br>45.760<br>9.6867 | .0000<br>1.694115+08<br>1.9559 | .0000<br>1.2543<br>1.2544 |

ALTITUDE = 20000. FT.

P1 = 4.599109-01 ATM. , RHO1 = 5.057132-01 AMA. , T1 = 248.56 K  
 S1/R = 24.038 , A1 = 1037.24 FT./SEC. , H1/R = 869.974 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1         | R0/R1<br>RS/R1<br>ROP/R1       | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|----------------------------------|--------------------------------|---------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.785  | 7.692<br>7.497<br>4.341753+02   | 1.362434+03<br>39.865<br>44.034  | 1.785451+02<br>5.8523<br>6.318 | 6.761<br>6.7755<br>6.930  | 2.6790<br>27.599<br>2.4233 | 1.1273<br>2.294871+07<br>1.0045 | 1.4488<br>1.2995<br>1.2979 |
| 7000.  | 6.749  | 10.109<br>9.881<br>7.067893+02  | 3.519824+03<br>54.709<br>59.925  | 3.378065+02<br>6.3200<br>6.788 | 8.367<br>8.6063<br>8.774  | 3.2213<br>28.370<br>2.7027 | 1.2438<br>2.677350+07<br>1.0050 | 1.5339<br>1.2761<br>1.2745 |
| 8000.  | 7.713  | 12.897<br>12.638<br>1.075908+03 | .000000+00<br>72.027<br>78.415   | .000000+00<br>6.7707<br>7.247  | .000<br>10.5634<br>10.739 | .0000<br>29.102<br>2.9624  | .0000<br>3.059828+07<br>1.0064  | .0000<br>1.2509<br>1.2493  |
| 9000.  | 8.677  | 16.057<br>15.771<br>1.554666+03 | .000000+00<br>91.926<br>99.452   | .000000+00<br>7.2522<br>7.733  | .000<br>12.5282<br>12.700 | .0000<br>29.806<br>3.1979  | .0000<br>3.442307+07<br>1.0114  | .0000<br>1.2258<br>1.2249  |
| 10000. | 9.641  | 19.589<br>19.281<br>2.156426+03 | .000000+00<br>114.440<br>123.093 | .000000+00<br>7.7651<br>8.247  | .000<br>14.4035<br>14.569 | .0000<br>30.496<br>3.4244  | .0000<br>3.824785+07<br>1.0233  | .0000<br>1.2100<br>1.2102  |
| 11000. | 10.605 | 23.493<br>23.165<br>2.895405+03 | .000000+00<br>139.505<br>149.303 | .000000+00<br>8.2723<br>8.751  | .000<br>16.1795<br>16.343 | .0000<br>31.181<br>3.6571  | .0000<br>4.207264+07<br>1.0427  | .0000<br>1.2065<br>1.2075  |
| 12000. | 11.569 | 27.769<br>27.417<br>3.786694+03 | .000000+00<br>167.009<br>178.025 | .000000+00<br>8.7221<br>9.194  | .000<br>17.9310<br>18.102 | .0000<br>31.864<br>3.9069  | .0000<br>4.589742+07<br>1.0684  | .0000<br>1.2127<br>1.2142  |
| 13000. | 12.533 | 32.416<br>32.035<br>4.850793+03 | .000000+00<br>196.805<br>209.256 | .000000+00<br>9.0731<br>9.545  | .000<br>19.7623<br>19.943 | .0000<br>32.544<br>4.1622  | .0000<br>4.972221+07<br>1.0979  | .0000<br>1.2166<br>1.2172  |
| 14000. | 13.497 | 37.435<br>37.016<br>6.023977+03 | .000000+00<br>228.827<br>242.816 | .000000+00<br>9.3192<br>9.776  | .000<br>21.7644<br>21.979 | .0000<br>33.218<br>4.4704  | .0000<br>5.354699+07<br>1.1287  | .0000<br>1.2381<br>1.2394  |

ALTITUDE = 20000. FT.

P1 = 4.599109-01 ATM. , RHO1 = 5.057132-01 AMA. , T1 = 248.56 K  
 S1/R = 24.038 , A1 = 1037.24 FT./SEC. , H1/R = 869.974 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1         | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|----------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 15000. | 14.461 | 42.826<br>42.360<br>7.429560+03   | .000000+00<br>263.033<br>278.919 | .000000+00<br>9.4700<br>9.929   | .000<br>23.9878<br>24.223 | .0000<br>33.877<br>4.7535 | .0000<br>5.737178+07<br>1.1583 | .0000<br>1.2391<br>1.2390 |
| 16000. | 15.425 | 48.589<br>48.075<br>9.036426+03   | .000000+00<br>299.689<br>317.404 | .000000+00<br>9.6220<br>10.083  | .000<br>26.2614<br>26.500 | .0000<br>34.520<br>5.0058 | .0000<br>6.119656+07<br>1.1864 | .0000<br>1.2268<br>1.2262 |
| 17000. | 16.390 | 54.724<br>54.168<br>1.085537+04   | .000000+00<br>339.017<br>358.552 | .000000+00<br>9.8310<br>10.296  | .000<br>28.3872<br>28.618 | .0000<br>35.152<br>5.2315 | .0000<br>6.502135+07<br>1.2154 | .0000<br>1.2108<br>1.2106 |
| 18000. | 17.354 | 61.230<br>60.639<br>1.289644+04   | .000000+00<br>381.068<br>402.476 | .000000+00<br>10.0928<br>10.564 | .000<br>30.3040<br>30.525 | .0000<br>35.781<br>5.4473 | .0000<br>6.884614+07<br>1.2467 | .0000<br>1.1993<br>1.1996 |
| 19000. | 18.318 | 68.108<br>67.485<br>1.516591+04   | .000000+00<br>425.772<br>448.928 | .000000+00<br>10.3833<br>10.855 | .000<br>32.0385<br>32.252 | .0000<br>36.409<br>5.6611 | .0000<br>7.267092+07<br>1.2808 | .0000<br>1.1931<br>1.1936 |
| 20000. | 19.282 | 75.358<br>74.706<br>1.767594+04   | .000000+00<br>473.061<br>498.001 | .000000+00<br>10.6816<br>11.153 | .000<br>33.6367<br>33.846 | .0000<br>37.041<br>5.8746 | .0000<br>7.649571+07<br>1.3177 | .0000<br>1.1901<br>1.1905 |
| 21000. | 20.246 | 82.980<br>82.299<br>2.043575+04   | .000000+00<br>522.880<br>549.593 | .000000+00<br>10.9741<br>11.443 | .000<br>35.1378<br>35.346 | .0000<br>37.681<br>6.0918 | .0000<br>8.032049+07<br>1.3571 | .0000<br>1.1897<br>1.1902 |
| 22000. | 21.210 | 90.973<br>90.262<br>2.345755+04   | .000000+00<br>575.187<br>603.781 | .000000+00<br>11.2525<br>11.721 | .000<br>36.5719<br>36.780 | .0000<br>38.327<br>6.3111 | .0000<br>8.414528+07<br>1.3990 | .0000<br>1.1901<br>1.1909 |
| 3000.  | 22.174 | 99.338<br>98.596<br>2.675083+04   | .000000+00<br>629.942<br>660.481 | .000000+00<br>11.5097<br>11.976 | .000<br>37.9668<br>38.177 | .0000<br>38.980<br>6.5343 | .0000<br>8.797006+07<br>1.4429 | .0000<br>1.1917<br>1.1925 |
| 4000.  | 23.138 | 108.075<br>107.299<br>3.032612+04 | .000000+00<br>687.116<br>719.679 | .000000+00<br>11.7429<br>12.207 | .000<br>39.3406<br>39.555 | .0000<br>39.641<br>6.7645 | .0000<br>9.179485+07<br>1.4887 | .0000<br>1.1946<br>1.1955 |
| 5000.  | 24.102 | 117.184<br>116.370<br>3.419473+04 | .000000+00<br>746.677<br>781.359 | .000000+00<br>11.9484<br>12.410 | .000<br>40.7167<br>40.937 | .0000<br>40.309<br>7.0009 | .0000<br>9.561963+07<br>1.5362 | .0000<br>1.1981<br>1.1990 |
| 6000.  | 25.066 | 126.665<br>125.810<br>3.836811+04 | .000000+00<br>808.596<br>845.530 | .000000+00<br>12.1244<br>12.583 | .000<br>42.1109<br>42.340 | .0000<br>40.983<br>7.2452 | .0000<br>9.944442+07<br>1.5852 | .0000<br>1.2026<br>1.2033 |
| 7000.  | 26.030 | 136.517<br>135.616<br>4.286005+04 | .000000+00<br>872.808<br>912.226 | .000000+00<br>12.2686<br>12.726 | .000<br>43.5460<br>43.785 | .0000<br>41.662<br>7.4980 | .0000<br>1.032692+08<br>1.6352 | .0000<br>1.2070<br>1.2080 |
| 8000.  | 26.995 | 146.742<br>145.790<br>4.767910+04 | .000000+00<br>939.353<br>981.238 | .000000+00<br>12.3799<br>12.833 | .000<br>45.0462<br>45.298 | .0000<br>42.344<br>7.7639 | .0000<br>1.070940+08<br>1.6860 | .0000<br>1.2131<br>1.2143 |

ALTITUDE = 20000. FT.

P1 = 4.599109-01 ATM. , RH01 = 5.057132-01 AMA. , T1 = 248.56 K  
 S1/R = 24.038 , A1 = 1037.24 FT./SEC. , H1/R = 869.974 K

| UI     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 29000. | 27.959 | 157.338<br>156.330<br>5.284755+04 | .000000+00<br>1008.139<br>1052.855 | .000000+00<br>12.4551<br>12.906 | .000<br>46.6420<br>46.912 | .0000<br>43.028<br>8.0403 | .0000<br>1.109188+08<br>1.7369 | .0000<br>1.2197<br>1.2206 |
| 30000. | 28.923 | 168.305<br>167.234<br>5.837650+04 | .000000+00<br>1079.099<br>1126.818 | .000000+00<br>12.4922<br>12.940 | .000<br>48.3686<br>48.660 | .0000<br>43.712<br>8.3324 | .0000<br>1.147436+08<br>1.7874 | .0000<br>1.2271<br>1.2281 |
| 31000. | 29.887 | 179.845<br>178.499<br>6.428638+04 | .000000+00<br>1152.068<br>1203.137 | .000000+00<br>12.4886<br>12.935 | .000<br>50.2690<br>50.587 | .0000<br>44.393<br>8.5411 | .0000<br>1.185683+08<br>1.8365 | .0000<br>1.2350<br>1.2365 |
| 32000. | 30.851 | 191.356<br>190.127<br>7.059984+04 | .000000+00<br>1227.171<br>1281.751 | .000000+00<br>12.4456<br>12.889 | .000<br>52.3932<br>52.745 | .0000<br>45.069<br>8.9639 | .0000<br>1.223931+08<br>1.8832 | .0000<br>1.2433<br>1.2445 |
| 33000. | 31.815 | 203.439<br>202.115<br>7.734247+04 | .000000+00<br>1304.263<br>1362.677 | .000000+00<br>12.3660<br>12.807 | .000<br>54.7798<br>55.169 | .0000<br>45.737<br>9.2955 | .0000<br>1.262179+08<br>1.9263 | .0000<br>1.2502<br>1.2509 |
| 34000. | 32.779 | 215.894<br>214.465<br>8.453804+04 | .000000+00<br>1383.409<br>1445.974 | .000000+00<br>12.2623<br>12.703 | .000<br>57.4281<br>57.854 | .0000<br>46.393<br>9.6251 | .0000<br>1.300427+08<br>1.9652 | .0000<br>1.2531<br>1.2536 |

ALTITUDE = 30000. FT.

P1 = 2.975430-01 ATM. , RH01 = 3.554379-01 AMA. , T1 = 228.80 K  
 S1/R = 24.184 , A1 = 995.15 FT./SEC. , H1/R = 800.798 K

| UI     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1         | RO/R1<br>RS/R1<br>ROP/R1       | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|----------------------------------|--------------------------------|---------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.029  | 8.270<br>8.062<br>3.591813+02   | 1.781030+03<br>43.308<br>47.787  | 2.194414+02<br>5.9102<br>6.376 | 7.303<br>7.2972<br>7.462  | 2.6334<br>27.914<br>2.4102 | 1.1099<br>1.726272+07<br>1.0032 | 1.4299<br>1.2988<br>1.2970 |
| 7000.  | 7.034  | 10.896<br>10.652<br>5.868982+02 | 4.701900+03<br>59.432<br>65.054  | 4.254100+02<br>6.3685<br>6.837 | 9.078<br>9.2903<br>9.470  | 3.1571<br>28.693<br>2.6904 | 1.2160<br>2.013984+07<br>1.0036 | 1.5091<br>1.2748<br>1.2730 |
| 8000.  | 8.039  | 13.925<br>13.647<br>8.954923+02 | .000000+00<br>78.252<br>85.145   | .000000+00<br>6.8166<br>7.294  | .000<br>11.4140<br>11.602 | .0000<br>29.431<br>2.9487  | .0000<br>2.301696+07<br>1.0050  | .0000<br>1.2482<br>1.2464  |
| 9000.  | 9.044  | 17.358<br>17.052<br>1.295820+03 | .000000+00<br>99.898<br>108.006  | .000000+00<br>7.3066<br>7.789  | .000<br>13.5250<br>13.706 | .0000<br>30.141<br>3.1799  | .0000<br>2.589408+07<br>1.0105  | .0000<br>1.2212<br>1.2203  |
| 10000. | 10.049 | 21.195<br>20.867<br>1.798855+03 | .000000+00<br>124.407<br>133.702 | .000000+00<br>7.8374<br>8.320  | .000<br>15.5124<br>15.684 | .0000<br>30.838<br>3.4017  | .0000<br>2.877120+07<br>1.0233  | .0000<br>1.2050<br>1.2050  |
| 11000. | 11.054 | 25.436<br>25.087<br>2.416917+03 | .000000+00<br>151.705<br>162.244 | .000000+00<br>8.3650<br>8.846  | .000<br>17.3778<br>17.548 | .0000<br>31.531<br>3.6303  | .0000<br>3.164832+07<br>1.0439  | .0000<br>1.2016<br>1.2024  |

ALTITUDE = 30000. FT.

P1 = 2.975430-01 ATM. , RHO1 = 3.554379-01 AMA. , T1 = 228.80 K  
 S1/R = 24.184 , A1 = 995.15 FT./SEC. , H1/R = 800.798 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1         | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|----------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 12000. | 12.058 | 30.081<br>29.708<br>3.162771+03   | .000000+00<br>181.633<br>193.459 | .000000+00<br>8.8300<br>9.303   | .000<br>19.2169<br>19.395 | .00000<br>32.225<br>3.8771 | .0000<br>3.452544+07<br>1.0709 | .0000<br>1.2083<br>1.2097 |
| 13000. | 13.063 | 35.130<br>34.726<br>4.051467+03   | .000000+00<br>214.045<br>227.358 | .000000+00<br>9.1872<br>9.652   | .000<br>21.1544<br>21.352 | .00000<br>32.918<br>4.1381 | .0000<br>3.740256+07<br>1.1019 | .0000<br>1.2187<br>1.2165 |
| 14000. | 14.068 | 40.583<br>40.138<br>5.101522+03   | .000000+00<br>248.868<br>263.933 | .000000+00<br>9.4345<br>9.894   | .000<br>23.2910<br>23.517 | .00000<br>33.603<br>4.4398 | .0000<br>4.027968+07<br>1.1330 | .0000<br>1.2356<br>1.2365 |
| 15000. | 15.073 | 46.439<br>45.945<br>6.328496+03   | .000000+00<br>286.059<br>303.082 | .000000+00<br>9.5792<br>10.038  | .000<br>25.6898<br>25.938 | .00000<br>34.274<br>4.7219 | .0000<br>4.315679+07<br>1.1627 | .0000<br>1.2363<br>1.2357 |
| 16000. | 16.078 | 52.700<br>52.154<br>7.554094+03   | .000000+00<br>325.911<br>344.944 | .000000+00<br>9.7322<br>10.195  | .000<br>28.1303<br>28.380 | .00000<br>34.929<br>4.9682 | .0000<br>4.603391+07<br>1.1908 | .0000<br>1.2212<br>1.2208 |
| 17000. | 17.083 | 59.364<br>58.775<br>9.077696+03   | .000000+00<br>368.725<br>389.806 | .000000+00<br>9.9525<br>10.423  | .000<br>30.3838<br>30.622 | .00000<br>35.572<br>5.1881 | .0000<br>4.891103+07<br>1.2198 | .0000<br>1.2048<br>1.2044 |
| 18000. | 18.088 | 66.433<br>65.807<br>1.078462+04   | .000000+00<br>414.505<br>437.498 | .000000+00<br>10.2295<br>10.703 | .000<br>32.3959<br>32.624 | .00000<br>36.211<br>5.3989 | .0000<br>5.178815+07<br>1.2515 | .0000<br>1.1931<br>1.1933 |
| 19000. | 19.093 | 73.905<br>73.248<br>1.268285+04   | .000000+00<br>463.171<br>487.986 | .000000+00<br>10.5349<br>11.008 | .000<br>34.2093<br>34.429 | .00000<br>36.852<br>5.6093 | .0000<br>5.466527+07<br>1.2860 | .0000<br>1.1874<br>1.1877 |
| 20000. | 20.097 | 81.781<br>81.095<br>1.478227+04   | .000000+00<br>514.649<br>541.330 | .000000+00<br>10.8477<br>11.321 | .000<br>35.8748<br>36.090 | .00000<br>37.498<br>5.8196 | .0000<br>5.754239+07<br>1.3234 | .0000<br>1.1847<br>1.1852 |
| 21000. | 21.102 | 90.061<br>89.345<br>1.709246+04   | .000000+00<br>568.875<br>597.555 | .000000+00<br>11.1536<br>11.627 | .000<br>37.4381<br>37.651 | .00000<br>38.152<br>6.0319 | .0000<br>6.041951+07<br>1.3634 | .0000<br>1.1839<br>1.1846 |
| 22000. | 22.107 | 98.745<br>97.999<br>1.961887+04   | .000000+00<br>625.800<br>656.392 | .000000+00<br>11.4430<br>11.913 | .000<br>38.9345<br>39.147 | .00000<br>38.813<br>6.2474 | .0000<br>6.329663+07<br>1.4057 | .0000<br>1.1847<br>1.1854 |
| 23000. | 23.112 | 107.833<br>107.054<br>2.237356+04 | .000000+00<br>685.387<br>718.058 | .000000+00<br>11.7108<br>12.179 | .000<br>40.3881<br>40.604 | .00000<br>39.482<br>6.4685 | .0000<br>6.617375+07<br>1.4503 | .0000<br>1.1869<br>1.1876 |
| 24000. | 24.117 | 117.325<br>116.511<br>2.536333+04 | .000000+00<br>747.605<br>782.389 | .000000+00<br>11.9530<br>12.419 | .000<br>41.8227<br>42.042 | .00000<br>40.160<br>6.6945 | .0000<br>6.905087+07<br>1.4967 | .0000<br>1.1895<br>1.1904 |
| 25000. | 25.122 | 127.221<br>126.368<br>2.859876+04 | .000000+00<br>812.416<br>849.449 | .000000+00<br>12.1662<br>12.629 | .000<br>43.2606<br>43.487 | .00000<br>40.844<br>6.9273 | .0000<br>7.192799+07<br>1.5449 | .0000<br>1.1932<br>1.1939 |

ALTITUDE = 30000. FT.

P1 = 2.975430-01 ATM. , RH01 = 3.554379-01 AMA. , T1 = 228.80 K  
 S1/R = 24.184 , A1 = 995.15 FT./SEC. , H1/R = 800.798 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 26000. | 26.127 | 137.520<br>136.625<br>3.208900+04 | .000000+00<br>879.787<br>919.198   | .000000+00<br>12.3480<br>12.808 | .000<br>44.7236<br>44.957 | .0000<br>41.536<br>7.1682 | .0000<br>7.480511+07<br>1.5944 | .0000<br>1.1972<br>1.1981 |
| 27000. | 27.132 | 148.224<br>147.280<br>3.584578+04 | .000000+00<br>949.638<br>991.700   | .000000+00<br>12.4964<br>12.955 | .000<br>46.2323<br>46.477 | .0000<br>42.232<br>7.4191 | .0000<br>7.768223+07<br>1.6451 | .0000<br>1.2022<br>1.2032 |
| 28000. | 28.136 | 159.331<br>158.335<br>3.987683+04 | .000000+00<br>1022.027<br>1066.742 | .000000+00<br>12.6094<br>13.064 | .000<br>47.8170<br>48.076 | .0000<br>42.933<br>7.6819 | .0000<br>8.055935+07<br>1.6964 | .0000<br>1.2082<br>1.2094 |
| 29000. | 29.141 | 170.843<br>169.788<br>4.419797+04 | .000000+00<br>1096.873<br>1144.459 | .000000+00<br>12.6838<br>13.135 | .000<br>49.5140<br>49.791 | .0000<br>43.635<br>7.9575 | .0000<br>8.343647+07<br>1.7479 | .0000<br>1.2155<br>1.2161 |
| 30000. | 30.146 | 182.758<br>181.634<br>4.882529+04 | .000000+00<br>1173.998<br>1224.906 | .000000+00<br>12.7163<br>13.165 | .000<br>51.3627<br>51.664 | .0000<br>44.337<br>8.2511 | .0000<br>8.631359+07<br>1.7987 | .0000<br>1.2232<br>1.2244 |
| 31000. | 31.151 | 195.077<br>193.873<br>5.377265+04 | .000000+00<br>1253.324<br>1307.860 | .000000+00<br>12.7040<br>13.151 | .000<br>53.4182<br>53.750 | .0000<br>45.036<br>8.5618 | .0000<br>8.919071+07<br>1.8481 | .0000<br>1.2322<br>1.2335 |
| 32000. | 32.156 | 207.800<br>206.507<br>5.906199+04 | .000000+00<br>1334.951<br>1393.343 | .000000+00<br>12.6475<br>13.091 | .000<br>55.7419<br>56.111 | .0000<br>45.729<br>8.8903 | .0000<br>9.206783+07<br>1.8946 | .0000<br>1.2418<br>1.2427 |
| 33000. | 33.161 | 220.927<br>219.530<br>6.471224+04 | .000000+00<br>1418.680<br>1481.233 | .000000+00<br>12.5508<br>12.992 | .000<br>58.3731<br>58.784 | .0000<br>46.412<br>9.2295 | .0000<br>9.494495+07<br>1.9372 | .0000<br>1.2492<br>1.2503 |
| 34000. | 34.166 | 234.458<br>232.946<br>7.074335+04 | .000000+00<br>1504.617<br>1571.628 | .000000+00<br>12.4289<br>12.869 | .000<br>61.3034<br>61.755 | .0000<br>47.082<br>9.5639 | .0000<br>9.782207+07<br>1.9753 | .0000<br>1.2528<br>1.2533 |

ALTITUDE = 40000. FT.

P1 = 1.857680-01 ATM. , RH01 = 2.343586-01 AMA. , T1 = 216.65 K  
 S1/R = 24.464 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1        | R0/R1<br>RS/R1<br>RCP/R1       | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|---------------------------------|--------------------------------|---------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.196 | 8.678<br>8.461<br>2.892734+02   | 2.160305+03<br>45.740<br>50.435 | 2.579740+02<br>5.9482<br>6.414 | 7.707<br>7.6657<br>7.838  | 2.5771<br>28.307<br>2.4015 | 1.0852<br>1.191257+07<br>1.0021 | 1.4016<br>1.2980<br>1.2961 |
| 7000. | 7.229 | 11.451<br>11.196<br>4.737732+02 | 5.858223+03<br>62.766<br>68.672 | 5.178381+02<br>6.4006<br>6.869 | 9.628<br>9.7727<br>9.961  | 3.0663<br>29.092<br>2.6819 | 1.1735<br>1.389800+07<br>1.0024 | 1.4689<br>1.2734<br>1.2715 |
| 8000. | 8.261 | 14.650<br>14.359<br>7.239051+02 | .000000+00<br>82.653<br>89.896  | .000000+00<br>6.8505<br>7.329  | .000<br>12.0078<br>12.203 | .0000<br>29.834<br>2.9373  | .0000<br>1.588343+07<br>1.0039  | .0000<br>1.2452<br>1.2431  |

ALTITUDE = 40000. FT.

P1 = 1.857680-01 ATM. , RHO1 = 2.343586-01 AMA. , T1 = 216.65 K  
 S1/R = 24.464 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1    | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1         | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|-------|--------|-----------------------------------|----------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 0000. | 9.294  | 18.276<br>17.956<br>1.048297+03   | .000000+00<br>105.555<br>114.047 | .000000+00<br>7.3559<br>7.839   | .000<br>14.1992<br>14.384 | .0000<br>30.548<br>3.1626 | .0000<br>1.786886+07<br>1.0102 | .0000<br>1.2158<br>1.2150 |
| 0000. | 10.327 | 22.328<br>21.987<br>1.455780+03   | .000000+00<br>131.512<br>141.228 | .000000+00<br>7.9119<br>8.396   | .000<br>16.2278<br>16.401 | .0000<br>31.252<br>3.3786 | .0000<br>1.985429+07<br>1.0243 | .0000<br>1.1994<br>1.1994 |
| 0000. | 11.359 | 26.807<br>26.447<br>1.956560+03   | .000000+00<br>160.409<br>171.420 | .000000+00<br>8.4645<br>8.947   | .000<br>18.1147<br>18.286 | .0000<br>31.955<br>3.6027 | .0000<br>2.183971+07<br>1.0465 | .0000<br>1.1964<br>1.1973 |
| 0000. | 12.392 | 31.712<br>31.329<br>2.561067+03   | .000000+00<br>192.084<br>204.449 | .000000+00<br>8.9490<br>9.425   | .000<br>19.9777<br>20.158 | .0000<br>32.662<br>3.8464 | .0000<br>2.382514+07<br>1.0749 | .0000<br>1.2040<br>1.2053 |
| 0000. | 13.425 | 37.044<br>36.629<br>3.280300+03   | .000000+00<br>226.369<br>240.248 | .000000+00<br>9.3158<br>9.782   | .000<br>21.9592<br>22.160 | .0000<br>33.369<br>4.1177 | .0000<br>2.581057+07<br>1.1070 | .0000<br>1.2191<br>1.2200 |
| 0000. | 14.457 | 42.803<br>42.345<br>4.130281+03   | .000000+00<br>263.177<br>278.810 | .000000+00<br>9.5590<br>10.016  | .000<br>24.1818<br>24.412 | .0000<br>34.068<br>4.4097 | .0000<br>2.779600+07<br>1.1389 | .0000<br>1.2337<br>1.2345 |
| 0000. | 15.490 | 48.988<br>48.477<br>5.125642+03   | .000000+00<br>302.448<br>320.187 | .000000+00<br>9.6947<br>10.153  | .000<br>26.7010<br>26.954 | .0000<br>34.752<br>4.6902 | .0000<br>2.978143+07<br>1.1686 | .0000<br>1.2335<br>1.2328 |
| 0000. | 16.523 | 55.599<br>55.037<br>6.288343+03   | .000000+00<br>344.610<br>364.587 | .000000+00<br>9.8521<br>10.320  | .000<br>29.2397<br>29.491 | .0000<br>35.418<br>4.9273 | .0000<br>3.176686+07<br>1.1965 | .0000<br>1.2156<br>1.2145 |
| 0000. | 17.555 | 62.637<br>62.032<br>7.607413+03   | .000000+00<br>389.929<br>411.791 | .000000+00<br>10.0883<br>10.558 | .000<br>31.5456<br>31.783 | .0000<br>36.074<br>5.1417 | .0000<br>3.375229+07<br>1.2257 | .0000<br>1.1984<br>1.1979 |
| 0000. | 18.588 | 70.102<br>69.461<br>9.100583+03   | .000000+00<br>438.397<br>462.281 | .000000+00<br>10.3844<br>10.859 | .000<br>33.5824<br>33.808 | .0000<br>36.727<br>5.3474 | .0000<br>3.573771+07<br>1.2577 | .0000<br>1.1873<br>1.1871 |
| 0000. | 19.621 | 77.993<br>77.322<br>1.077768+04   | .000000+00<br>489.920<br>515.684 | .000000+00<br>10.7090<br>11.184 | .000<br>35.4078<br>35.625 | .0000<br>37.383<br>5.5536 | .0000<br>3.772314+07<br>1.2928 | .0000<br>1.1818<br>1.1820 |
| 0000. | 20.653 | 86.311<br>85.611<br>1.197527+04   | .000000+00<br>544.406<br>572.104 | .000000+00<br>11.0387<br>11.513 | .000<br>37.0825<br>37.294 | .0000<br>38.045<br>5.7590 | .0000<br>3.970857+07<br>1.3308 | .0000<br>1.1791<br>1.1795 |
| 0000. | 21.686 | 95.056<br>94.327<br>1.384507+04   | .000000+00<br>601.793<br>631.419 | .000000+00<br>11.3599<br>11.833 | .000<br>38.6544<br>38.864 | .0000<br>38.715<br>5.9664 | .0000<br>4.169400+07<br>1.3714 | .0000<br>1.1785<br>1.1789 |
| 0000. | 22.719 | 104.227<br>103.468<br>1.589157+04 | .000000+00<br>662.031<br>693.661 | .000000+00<br>11.6634<br>12.134 | .000<br>40.1580<br>40.368 | .0000<br>39.394<br>6.1793 | .0000<br>4.367943+07<br>1.4144 | .0000<br>1.1799<br>1.1804 |

ALTITUDE = 40000. FT.

P1 = 1.857680-01 ATM. , RHO1 = 2.343586-01 AMA. , T1 = 216.65 K  
 S1/R = 24.464 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 23000. | 23.751 | 113.824<br>113.033<br>1.812237+04 | .000000+00<br>725.083<br>758.842   | .000000+00<br>11.9439<br>12.413 | .000<br>41.6207<br>41.832 | .0000<br>40.082<br>6.3950 | .0000<br>4.566486+07<br>1.4597 | .0000<br>1.1815<br>1.1822 |
| 24000. | 24.784 | 123.848<br>123.022<br>2.054377+04 | .000000+00<br>790.909<br>826.859   | .000000+00<br>12.1964<br>12.663 | .000<br>43.0681<br>43.284 | .0000<br>40.780<br>6.6174 | .0000<br>4.765029+07<br>1.5068 | .0000<br>1.1845<br>1.1851 |
| 25000. | 25.817 | 134.299<br>133.435<br>2.316293+04 | .000000+00<br>859.480<br>897.682   | .000000+00<br>12.4189<br>12.882 | .000<br>44.5193<br>44.741 | .0000<br>41.485<br>6.8470 | .0000<br>4.963572+07<br>1.5557 | .0000<br>1.1881<br>1.1889 |
| 26000. | 26.849 | 145.176<br>144.269<br>2.599068+04 | .000000+00<br>930.752<br>971.509   | .000000+00<br>12.6078<br>13.069 | .000<br>46.0011<br>46.232 | .0000<br>42.197<br>7.0841 | .0000<br>5.162114+07<br>1.6060 | .0000<br>1.1922<br>1.1930 |
| 27000. | 27.882 | 156.480<br>155.525<br>2.903153+04 | .000000+00<br>1004.687<br>1048.037 | .000000+00<br>12.7612<br>13.219 | .000<br>47.5375<br>47.778 | .0000<br>42.915<br>7.3327 | .0000<br>5.360657+07<br>1.6574 | .0000<br>1.1975<br>1.1985 |
| 28000. | 28.915 | 168.210<br>167.201<br>3.229708+04 | .000000+00<br>1081.191<br>1127.402 | .000000+00<br>12.8756<br>13.331 | .000<br>49.1592<br>49.415 | .0000<br>43.637<br>7.5929 | .0000<br>5.559200+07<br>1.7094 | .0000<br>1.2037<br>1.2047 |
| 29000. | 29.947 | 180.367<br>179.297<br>3.579911+04 | .000000+00<br>1160.299<br>1209.658 | .000000+00<br>12.9484<br>13.401 | .000<br>50.9071<br>51.183 | .0000<br>44.361<br>7.8685 | .0000<br>5.757743+07<br>1.7614 | .0000<br>1.2112<br>1.2122 |
| 30000. | 30.980 | 192.951<br>191.810<br>3.954748+04 | .000000+00<br>1241.845<br>1294.578 | .000000+00<br>12.9749<br>13.425 | .000<br>52.8340<br>53.135 | .0000<br>45.084<br>8.1624 | .0000<br>5.956286+07<br>1.8127 | .0000<br>1.2197<br>1.2209 |
| 31000. | 32.013 | 205.960<br>204.738<br>4.355826+04 | .000000+00<br>1325.758<br>1382.184 | .000000+00<br>12.9515<br>13.398 | .000<br>55.0020<br>55.338 | .0000<br>45.804<br>8.4779 | .0000<br>6.154829+07<br>1.8621 | .0000<br>1.2299<br>1.2312 |
| 32000. | 33.045 | 219.397<br>218.080<br>4.784909+04 | .000000+00<br>1411.912<br>1472.453 | .000000+00<br>12.8770<br>13.320 | .000<br>57.4828<br>57.858 | .0000<br>46.516<br>8.8111 | .0000<br>6.353371+07<br>1.9083 | .0000<br>1.2403<br>1.2412 |
| 33000. | 34.078 | 233.260<br>231.833<br>5.243696+04 | .000000+00<br>1500.293<br>1565.254 | .000000+00<br>12.7585<br>13.199 | .000<br>60.3193<br>60.741 | .0000<br>47.217<br>9.1556 | .0000<br>6.551914+07<br>1.9500 | .0000<br>1.2483<br>1.2492 |
| 34000. | 35.111 | 247.550<br>246.000<br>5.733656+04 | .000000+00<br>1590.998<br>1660.735 | .000000+00<br>12.6156<br>13.056 | .000<br>63.4810<br>63.943 | .0000<br>47.903<br>9.4894 | .0000<br>6.750457+07<br>1.9870 | .0000<br>1.2513<br>1.2510 |
| 35000. | 36.143 | 262.266<br>260.587<br>6.255193+04 | .000000+00<br>1684.284<br>1759.011 | .000000+00<br>12.4767<br>12.918 | .000<br>66.8307<br>67.322 | .0000<br>48.572<br>9.8049 | .0000<br>6.949000+07<br>2.0201 | .0000<br>1.2482<br>1.2477 |

ALTITUDE = 50000. FT.

P1 = 1.151150-01 ATM. , RHO1 = 1.452252-01 AMA. , T1 = 216.65 K  
 S1/R = 24.942 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1         | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOF   |
|--------|--------|---------------------------------|----------------------------------|---------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.196  | 8.678<br>8.461<br>2.277498+02   | 2.228461+03<br>45.747<br>50.437  | 2.719430+02<br>5.9523<br>6.418  | 7.753<br>7.6671<br>7.839    | 2.5163<br>28.786<br>2.3996 | 1.0557<br>7.381873+06<br>1.0013 | 1.3655<br>1.2965<br>1.2948 |
| 7000.  | 7.229  | 11.451<br>11.196<br>3.730105+02 | 6.223123+03<br>62.776<br>68.677  | 5.708121+02<br>6.4064<br>6.876  | 9.734<br>9.7730<br>9.961    | 2.9505<br>29.571<br>2.6789 | 1.1186<br>8.612185+06<br>1.0016 | 1.4112<br>1.2718<br>1.2697 |
| 8000.  | 8.261  | 14.650<br>14.360<br>5.698861+02 | 1.522977+04<br>82.684<br>89.911  | 1.060222+03<br>6.8658<br>7.346  | 11.756<br>11.9921<br>12.184 | 3.4749<br>30.314<br>2.9293 | 1.2204<br>9.842497+06<br>1.0034 | 1.4855<br>1.2412<br>1.2389 |
| 9000.  | 9.294  | 18.276<br>17.960<br>8.249810+02 | .000000+00<br>105.644<br>114.081 | .000000+00<br>7.3964<br>7.881   | .000<br>14.1267<br>14.305   | .0000<br>31.031<br>3.1467  | .0000<br>1.107281+07<br>1.0107  | .0000<br>1.2096<br>1.2089  |
| 10000. | 10.327 | 22.328<br>21.994<br>1.145200+03 | .000000+00<br>131.684<br>141.332 | .000000+00<br>7.9857<br>8.473   | .000<br>16.0646<br>16.229   | .0000<br>31.742<br>3.3561  | .0000<br>1.230312+07<br>1.0265  | .0000<br>1.1934<br>1.1934  |
| 11000. | 11.359 | 26.807<br>26.455<br>1.538571+03 | .000000+00<br>160.666<br>171.528 | .000000+00<br>8.5687<br>9.052   | .000<br>17.8548<br>18.016   | .0000<br>32.456<br>3.5750  | .0000<br>1.353343+07<br>1.0505  | .0000<br>1.1911<br>1.1920  |
| 12000. | 12.392 | 31.712<br>31.339<br>2.013071+03 | .000000+00<br>192.416<br>204.551 | .000000+00<br>9.0751<br>9.549   | .000<br>19.6303<br>19.800   | .0000<br>33.177<br>3.8154  | .0000<br>1.476375+07<br>1.0805  | .0000<br>1.1996<br>1.2010  |
| 13000. | 13.425 | 37.044<br>36.641<br>2.578278+03 | .000000+00<br>226.755<br>240.449 | .000000+00<br>9.4513<br>9.918   | .000<br>21.5450<br>21.737   | .0000<br>33.999<br>4.0870  | .0000<br>1.599406+07<br>1.1140  | .0000<br>1.2159<br>1.2176  |
| 14000. | 14.457 | 42.803<br>42.357<br>3.246187+03 | .000000+00<br>263.569<br>279.033 | .000000+00<br>9.6869<br>10.146  | .000<br>23.7397<br>23.963   | .0000<br>34.614<br>4.3810  | .0000<br>1.722437+07<br>1.1464  | .0000<br>1.2325<br>1.2332  |
| 15000. | 15.490 | 48.988<br>48.489<br>4.029416+03 | .000000+00<br>302.862<br>320.398 | .000000+00<br>9.8128<br>10.272  | .000<br>26.2519<br>26.496   | .0000<br>35.312<br>4.6575  | .0000<br>1.845468+07<br>1.1758  | .0000<br>1.2297<br>1.2291  |
| 16000. | 16.523 | 55.599<br>55.051<br>4.939302+03 | .000000+00<br>345.102<br>364.700 | .000000+00<br>9.9791<br>10.445  | .000<br>28.7415<br>28.979   | .0000<br>35.992<br>4.8864  | .0000<br>1.968499+07<br>1.2034  | .0000<br>1.2099<br>1.2085  |
| 17000. | 17.555 | 62.637<br>62.049<br>5.980992+03 | .000000+00<br>390.547<br>412.208 | .000000+00<br>10.2368<br>10.712 | .000<br>30.9553<br>31.177   | .0000<br>36.661<br>5.0924  | .0000<br>2.091531+07<br>1.2328  | .0000<br>1.1914<br>1.1909  |
| 18000. | 18.588 | 70.102<br>69.482<br>7.155704+03 | .000000+00<br>439.158<br>462.634 | .000000+00<br>10.5571<br>11.033 | .000<br>32.8882<br>33.097   | .0000<br>37.329<br>5.2939  | .0000<br>2.214562+07<br>1.2654  | .0000<br>1.1813<br>1.1812  |
| 19000. | 19.621 | 77.993<br>77.346<br>8.476442+03 | .000000+00<br>490.819<br>516.143 | .000000+00<br>10.9040<br>11.381 | .000<br>34.6136<br>34.814   | .0000<br>38.003<br>5.4932  | .0000<br>2.337593+07<br>1.3011  | .0000<br>1.1755<br>1.1758  |

ALTITUDE = 50000. FT.

P1 = 1.151150-01 ATM. , RH01 = 1.452252-01 AMA. , T1 = 216.65 K  
 S1/R = 24.942 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | H1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMED<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 20000. | 20.653 | 86.311<br>85.637<br>9.955157+03   | .000000+00<br>545.440<br>572.582   | .000000+00<br>11.2539<br>11.729 | .000<br>36.1957<br>36.391 | .0000<br>38.683<br>5.6943 | .0000<br>2.460624+07<br>1.3398 | .0000<br>1.1735<br>1.1738 |
| 21000. | 21.686 | 95.056<br>94.356<br>1.160047+04   | .000000+00<br>602.961<br>631.966   | .000000+00<br>11.5936<br>12.067 | .000<br>37.6784<br>37.872 | .0000<br>39.372<br>5.8978 | .0000<br>2.583656+07<br>1.3812 | .0000<br>1.1733<br>1.1738 |
| 22000. | 22.719 | 104.227<br>103.499<br>1.342008+04 | .000000+00<br>663.332<br>694.372   | .000000+00<br>11.9135<br>12.387 | .000<br>39.0986<br>39.292 | .0000<br>40.072<br>6.1039 | .0000<br>2.706687+07<br>1.4250 | .0000<br>1.1740<br>1.1745 |
| 23000. | 23.751 | 113.824<br>113.067<br>1.544013+04 | .000000+00<br>726.512<br>759.482   | .000000+00<br>12.2076<br>12.677 | .000<br>40.4847<br>40.680 | .0000<br>40.782<br>6.3167 | .0000<br>2.829718+07<br>1.4710 | .0000<br>1.1765<br>1.1770 |
| 24000. | 24.784 | 123.848<br>123.059<br>1.766305+04 | .000000+00<br>792.474<br>827.592   | .000000+00<br>12.4730<br>12.940 | .000<br>41.8556<br>42.054 | .0000<br>41.502<br>6.5346 | .0000<br>2.952749+07<br>1.5190 | .0000<br>1.1792<br>1.1799 |
| 25000. | 25.817 | 134.299<br>133.473<br>1.819006+04 | .000000+00<br>861.173<br>898.509   | .000000+00<br>12.7051<br>13.169 | .000<br>43.2386<br>43.443 | .0000<br>42.231<br>6.7595 | .0000<br>3.075780+07<br>1.5687 | .0000<br>1.1830<br>1.1835 |
| 26000. | 26.849 | 145.176<br>144.310<br>2.040834+04 | .000000+00<br>932.582<br>972.303   | .000000+00<br>12.9027<br>13.364 | .000<br>44.6515<br>44.864 | .0000<br>42.967<br>6.9944 | .0000<br>3.198812+07<br>1.6198 | .0000<br>1.1876<br>1.1883 |
| 27000. | 27.882 | 156.480<br>155.568<br>2.279643+04 | .000000+00<br>1006.646<br>1049.014 | .000000+00<br>13.0611<br>13.520 | .000<br>46.1269<br>46.351 | .0000<br>43.710<br>7.2387 | .0000<br>3.321843+07<br>1.6719 | .0000<br>1.1927<br>1.1935 |
| 28000. | 28.915 | 168.210<br>167.246<br>2.535972+04 | .000000+00<br>1083.261<br>1128.436 | .000000+00<br>13.1772<br>13.634 | .000<br>47.6948<br>47.933 | .0000<br>44.457<br>7.4980 | .0000<br>3.444874+07<br>1.7247 | .0000<br>1.1993<br>1.2003 |
| 29000. | 29.947 | 180.367<br>179.344<br>2.810932+04 | .000000+00<br>1162.473<br>1210.732 | .000000+00<br>13.2474<br>13.701 | .000<br>49.4011<br>49.659 | .0000<br>45.206<br>7.7723 | .0000<br>3.567905+07<br>1.7773 | .0000<br>1.2072<br>1.2081 |
| 30000. | 30.980 | 192.951<br>191.859<br>3.105356+04 | .000000+00<br>1244.109<br>1295.692 | .000000+00<br>13.2659<br>13.716 | .000<br>51.3034<br>51.587 | .0000<br>45.954<br>8.0690 | .0000<br>3.690936+07<br>1.8290 | .0000<br>1.2168<br>1.2180 |
| 31000. | 32.013 | 205.960<br>204.789<br>3.420690+04 | .000000+00<br>1328.063<br>1383.363 | .000000+00<br>13.2267<br>13.673 | .000<br>53.4810<br>53.800 | .0000<br>46.697<br>8.3890 | .0000<br>3.813968+07<br>1.8783 | .0000<br>1.2282<br>1.2293 |
| 32000. | 33.045 | 219.397<br>218.130<br>3.758196+04 | .000000+00<br>1414.195<br>1473.529 | .000000+00<br>13.1293<br>13.572 | .000<br>56.0073<br>56.370 | .0000<br>47.431<br>8.7288 | .0000<br>3.936999+07<br>1.9238 | .0000<br>1.2392<br>1.2401 |
| 33000. | 34.078 | 233.260<br>231.882<br>4.119517+04 | .000000+00<br>1502.510<br>1566.326 | .000000+00<br>12.9841<br>13.424 | .000<br>58.9215<br>59.330 | .0000<br>48.152<br>9.0781 | .0000<br>4.060030+07<br>1.9643 | .0000<br>1.2479<br>1.2482 |

ALTITUDE = 50000. FT.

P1 = 1.151150-01 ATM. , RHD1 = 1.452252-01 AMA. , T1 = 216.65 K  
 S1/R = 24.942 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 34000. | 35.111 | 247.550<br>246.049<br>4.505395+04 | .000000+00<br>1593.175<br>1661.780 | .000000+00<br>12.8191<br>13.259 | .000<br>62.1482<br>62.594 | .0000<br>48.855<br>9.4137 | .0000<br>4.183061+07<br>1.9999 | .0000<br>1.2496<br>1.2496 |
| 35000. | 36.143 | 262.266<br>260.638<br>4.915837+04 | .000000+00<br>1686.514<br>1760.113 | .000000+00<br>12.6688<br>13.111 | .000<br>65.5052<br>65.974 | .0000<br>49.541<br>9.7219 | .0000<br>4.306093+07<br>2.0324 | .0000<br>1.2451<br>1.2443 |

ALTITUDE = 60000. FT.

P1 = 7.136607-02 ATM. , RHD1 = 9.003302-02 AMA. , T1 = 216.65 K  
 S1/R = 25.420 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1         | R0/R1<br>RS/R1<br>ROP/R1       | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|----------------------------------|--------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.196  | 8.678<br>8.462<br>1.793424+02   | 2.274852+03<br>45.750<br>50.440  | 2.818020+02<br>5.9548<br>6.421 | 7.784<br>7.6679<br>7.840    | 2.4744<br>29.265<br>2.3985 | 1.0358<br>4.576425+06<br>1.0008 | 1.3403<br>1.2963<br>1.2942 |
| 7000.  | 7.229  | 11.451<br>11.196<br>2.937271+02 | 6.492446+03<br>62.783<br>68.682  | 6.125242+02<br>6.4107<br>6.881 | 9.812<br>9.7722<br>9.959    | 2.8632<br>30.050<br>2.6764 | 1.0789<br>5.339163+06<br>1.0011 | 1.3668<br>1.2705<br>1.2682 |
| 8000.  | 8.261  | 14.650<br>14.362<br>4.486928+02 | 1.641243+04<br>82.714<br>89.924  | 1.192705+03<br>6.8810<br>7.362 | 11.910<br>11.9715<br>12.159 | 3.3294<br>30.793<br>2.9211 | 1.1540<br>6.101900+06<br>1.0033 | 1.4236<br>1.2372<br>1.2346 |
| 9000.  | 9.294  | 18.276<br>17.964<br>6.493184+02 | .000000+00<br>105.743<br>114.124 | .000000+00<br>7.4399<br>7.927  | .000<br>14.0427<br>14.213   | .0000<br>31.515<br>3.1302  | .0000<br>6.864638+06<br>1.0118  | .0000<br>1.2034<br>1.2027  |
| 10000. | 10.327 | 22.328<br>22.000<br>9.009913+02 | .000000+00<br>131.864<br>141.434 | .000000+00<br>8.0639<br>8.554  | .000<br>15.8877<br>16.044   | .0000<br>32.233<br>3.3338  | .0000<br>7.627375+06<br>1.0294  | .0000<br>1.1879<br>1.1879  |
| 11000. | 11.359 | 26.807<br>26.464<br>1.209896+03 | .000000+00<br>160.927<br>171.635 | .000000+00<br>8.6766<br>9.161  | .000<br>17.5853<br>17.737   | .0000<br>32.959<br>3.5478  | .0000<br>8.390113+06<br>1.0550  | .0000<br>1.1864<br>1.1873  |
| 12000. | 12.392 | 31.712<br>31.350<br>1.582531+03 | .000000+00<br>192.746<br>204.726 | .000000+00<br>9.2038<br>9.679  | .000<br>19.2792<br>19.440   | .0000<br>33.694<br>3.7853  | .0000<br>9.152850+06<br>1.0867  | .0000<br>1.1959<br>1.1973  |
| 13000. | 13.425 | 37.044<br>36.652<br>2.026742+03 | .000000+00<br>227.137<br>240.645 | .000000+00<br>9.5885<br>10.055 | .000<br>21.1347<br>21.318   | .0000<br>34.433<br>4.0574  | .0000<br>9.915588+06<br>1.1213  | .0000<br>1.2140<br>1.2157  |
| 14000. | 14.457 | 42.803<br>42.368<br>2.551918+03 | .000000+00<br>263.955<br>279.260 | .000000+00<br>9.8132<br>10.272 | .000<br>23.3133<br>23.531   | .0000<br>35.163<br>4.3532  | .0000<br>1.067833+07<br>1.1540  | .0000<br>1.2278<br>1.2319  |
| 15000. | 15.490 | 48.988<br>48.500<br>3.168743+03 | .000000+00<br>303.254<br>320.637 | .000000+00<br>9.9270<br>10.389 | .000<br>25.8264<br>26.061   | .0000<br>35.875<br>4.6258  | .0000<br>1.144106+07<br>1.1828  | .0000<br>1.2264<br>1.2253  |

ALTITUDE = 60000. FT.

PI = 7.136607-02 ATM. , RHO1 = 9.003302-02 AMA. , T1 = 216.65 K  
 S1/R = 25.420 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 16000. | 16.523 | 55.599<br>55.064<br>3.881365+03   | .000000+00<br>345.578<br>364.911   | .000000+00<br>10.1051<br>10.573 | .000<br>28.2611<br>28.485 | .0000<br>36.568<br>4.8462 | .0000<br>1.220380+07<br>1.2102 | .0000<br>1.2035<br>1.2026 |
| 17000. | 17.555 | 62.637<br>62.066<br>4.699314+03   | .000000+00<br>391.156<br>412.412   | .000000+00<br>10.3871<br>10.861 | .000<br>30.3795<br>30.586 | .0000<br>37.252<br>5.0459 | .0000<br>1.296654+07<br>1.2399 | .0000<br>1.1857<br>1.1850 |
| 18000. | 18.588 | 70.102<br>69.502<br>5.621090+03   | .000000+00<br>439.904<br>462.976   | .000000+00<br>10.7321<br>11.209 | .000<br>32.2121<br>32.406 | .0000<br>37.936<br>5.2410 | .0000<br>1.372928+07<br>1.2730 | .0000<br>1.1752<br>1.1752 |
| 19000. | 19.621 | 77.993<br>77.368<br>6.664260+03   | .000000+00<br>491.697<br>516.619   | .000000+00<br>11.1013<br>11.581 | .000<br>33.8423<br>34.028 | .0000<br>38.625<br>5.4349 | .0000<br>1.449201+07<br>1.3094 | .0000<br>1.1701<br>1.1701 |
| 20000. | 20.653 | 86.311<br>85.663<br>7.827792+03   | .000000+00<br>546.448<br>573.057   | .000000+00<br>11.4719<br>11.948 | .000<br>35.3349<br>35.516 | .0000<br>39.324<br>5.6324 | .0000<br>1.525475+07<br>1.3488 | .0000<br>1.1686<br>1.1689 |
| 21000. | 21.686 | 95.056<br>94.383<br>9.117505+03   | .000000+00<br>604.093<br>632.499   | .000000+00<br>11.8294<br>12.304 | .000<br>36.7365<br>36.915 | .0000<br>40.034<br>5.8309 | .0000<br>1.601749+07<br>1.3909 | .0000<br>1.1684<br>1.1688 |
| 22000. | 22.719 | 104.227<br>103.529<br>1.055319+04 | .000000+00<br>664.588<br>694.922   | .000000+00<br>12.1653<br>12.638 | .000<br>38.0798<br>38.259 | .0000<br>40.755<br>6.0337 | .0000<br>1.678023+07<br>1.4355 | .0000<br>1.1696<br>1.1701 |
| 23000. | 23.751 | 113.824<br>113.099<br>1.213035+04 | .000000+00<br>727.896<br>760.266   | .000000+00<br>12.4743<br>12.946 | .000<br>39.3906<br>39.571 | .0000<br>41.487<br>6.2411 | .0000<br>1.754296+07<br>1.4822 | .0000<br>1.1715<br>1.1722 |
| 24000. | 24.784 | 123.848<br>123.093<br>1.386596+04 | .000000+00<br>793.979<br>828.301   | .000000+00<br>12.7513<br>13.219 | .000<br>40.6948<br>40.878 | .0000<br>42.230<br>6.4550 | .0000<br>1.830570+07<br>1.5310 | .0000<br>1.1747<br>1.1752 |
| 25000. | 25.817 | 134.299<br>133.509<br>1.576904+04 | .000000+00<br>862.809<br>899.295   | .000000+00<br>12.9944<br>13.459 | .000<br>42.0093<br>42.198 | .0000<br>42.983<br>6.6768 | .0000<br>1.906844+07<br>1.5815 | .0000<br>1.1784<br>1.1791 |
| 26000. | 26.849 | 145.176<br>144.348<br>1.785650+04 | .000000+00<br>934.339<br>973.160   | .000000+00<br>13.1990<br>13.661 | .000<br>43.3635<br>43.560 | .0000<br>43.744<br>6.9068 | .0000<br>1.983118+07<br>1.6334 | .0000<br>1.1828<br>1.1834 |
| 27000. | 27.882 | 156.480<br>155.609<br>2.014772+04 | .000000+00<br>1008.528<br>1049.867 | .000000+00<br>13.3628<br>13.822 | .000<br>44.7801<br>44.987 | .0000<br>44.511<br>7.1498 | .0000<br>2.059391+07<br>1.6864 | .0000<br>1.1886<br>1.1893 |
| 28000. | 28.915 | 168.210<br>167.290<br>2.265420+04 | .000000+00<br>1085.307<br>1129.443 | .000000+00<br>13.4803<br>13.937 | .000<br>46.3010<br>46.522 | .0000<br>45.284<br>7.4066 | .0000<br>2.135665+07<br>1.7398 | .0000<br>1.1954<br>1.1963 |
| 29000. | 29.947 | 180.367<br>179.389<br>2.537920+04 | .000000+00<br>1164.553<br>1211.713 | .000000+00<br>13.5463<br>14.000 | .000<br>47.9708<br>48.212 | .0000<br>46.058<br>7.6824 | .0000<br>2.211939+07<br>1.7930 | .0000<br>1.2041<br>1.2051 |

ALTITUDE = 60000. FT.

P1 = 7.136607-02 ATM. , RHO1 = 9.003302-02 AMA. , T1 = 216.65 K  
 S1/R = 25.420 , A1 = 968.37 FT./SEC. , H1/R = 758.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 30000. | 30.980 | 192.951<br>191.905<br>2.834063+04 | .000000+00<br>1246.248<br>1296.792 | .000000+00<br>13.5543<br>14.005 | .000<br>49.8598<br>50.129 | .0000<br>46.831<br>7.9798 | .0000<br>2.288213+07<br>1.8449 | .0000<br>1.2144<br>1.2153 |
| 31000. | 32.013 | 205.960<br>204.835<br>3.156853+04 | .000000+00<br>1330.235<br>1384.372 | .000000+00<br>13.4969<br>13.943 | .000<br>52.0554<br>52.361 | .0000<br>47.598<br>8.3064 | .0000<br>2.364486+07<br>1.8940 | .0000<br>1.2272<br>1.2281 |
| 32000. | 33.045 | 219.397<br>218.176<br>2.952829+04 | .000000+00<br>1416.322<br>1474.581 | .000000+00<br>13.3733<br>13.815 | .000<br>54.6428<br>54.993 | .0000<br>48.353<br>8.6556 | .0000<br>2.440760+07<br>1.9386 | .0000<br>1.2393<br>1.2405 |
| 33000. | 34.078 | 233.260<br>231.927<br>3.237492+04 | .000000+00<br>1504.565<br>1567.308 | .000000+00<br>13.2003<br>13.640 | .000<br>57.6395<br>58.035 | .0000<br>49.093<br>9.0071 | .0000<br>2.517034+07<br>1.9776 | .0000<br>1.2474<br>1.2477 |
| 34000. | 35.111 | 247.550<br>246.094<br>3.541432+04 | .000000+00<br>1595.223<br>1662.737 | .000000+00<br>13.0165<br>13.457 | .000<br>60.9135<br>61.341 | .0000<br>49.813<br>9.3367 | .0000<br>2.593308+07<br>2.0119 | .0000<br>1.2471<br>1.2468 |
| 35000. | 36.143 | 262.266<br>260.686<br>3.864334+04 | .000000+00<br>1688.676<br>1761.119 | .000000+00<br>12.8608<br>13.304 | .000<br>64.2401<br>64.684 | .0000<br>50.514<br>9.6372 | .0000<br>2.669581+07<br>2.0440 | .0000<br>1.2394<br>1.2399 |
| 36000. | 37.176 | 277.409<br>275.707<br>4.205761+04 | .000000+00<br>1785.164<br>1862.512 | .000000+00<br>12.7485<br>13.195 | .000<br>67.4588<br>67.911 | .0000<br>51.198<br>9.9173 | .0000<br>2.745855+07<br>2.0759 | .0000<br>1.2323<br>1.2314 |

ALTITUDE = 70000. FT.

P1 = 4.428958-02 ATM. , RHO1 = 5.554998-02 AMA. , T1 = 217.91 K  
 S1/R = 25.918 , A1 = 971.19 FT./SEC. , H1/R = 762.701 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1         | R0/R1<br>RS/R1<br>RCP/R1       | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|----------------------------------|--------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.178  | 8.633<br>8.418<br>1.410044+02   | 2.265461+03<br>45.488<br>50.152  | 2.850447+02<br>5.9531<br>6.419 | 7.765<br>7.6283<br>7.799    | 2.4462<br>29.751<br>2.3984 | 1.0223<br>2.809861+06<br>1.0005 | 1.3228<br>1.2958<br>1.2937 |
| 7000.  | 7.208  | 11.390<br>11.137<br>2.308767+02 | 6.565507+03<br>62.426<br>68.290  | 6.359269+02<br>6.4117<br>6.882 | 9.815<br>9.7178<br>9.903    | 2.7992<br>30.535<br>2.6746 | 1.0506<br>3.278171+06<br>1.0008 | 1.3334<br>1.2691<br>1.2666 |
| 8000.  | 8.237  | 14.571<br>14.285<br>3.525715+02 | 1.703312+04<br>82.270<br>89.420  | 1.289363+03<br>6.8958<br>7.379 | 11.964<br>11.8795<br>12.062 | 3.2097<br>31.279<br>2.9126 | 1.1029<br>3.746482+06<br>1.0035 | 1.3702<br>1.2326<br>1.2299 |
| 9000.  | 9.267  | 18.175<br>17.869<br>5.099786+02 | .000000+00<br>105.233<br>113.516 | .000000+00<br>7.4863<br>7.975  | .000<br>13.8680<br>14.029   | .0000<br>32.005<br>3.1133  | .0000<br>4.214792+06<br>1.0134  | .0000<br>1.1973<br>1.1965  |
| 10000. | 10.297 | 22.204<br>21.885<br>7.073166+02 | .000000+00<br>131.296<br>140.698 | .000000+00<br>8.1468<br>8.638  | .000<br>15.6083<br>15.755   | .0000<br>32.731<br>3.3112  | .0000<br>4.683102+06<br>1.0327  | .0000<br>1.1825<br>1.1826  |

ALTITUDE = 70000. FT.

P1 = 4.428958-02 ATM. , RHO1 = 5.554998-C2 AMA. , T1 = 217.91 K  
 S1/R = 25.918 , A1 = 971.19 FT./SEC. , H1/R = 762.701 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1         | RC/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|----------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 11000. | 11.326 | 26.657<br>26.325<br>9.492813+02   | .000000+00<br>160.265<br>170.743 | .000000+00<br>8.7889<br>9.273   | .000<br>17.2072<br>17.349 | .0000<br>33.470<br>3.5209 | .0000<br>5.151412+06<br>1.0601 | .0000<br>1.1820<br>1.1828 |
| 12000. | 12.356 | 31.534<br>31.184<br>1.241066+03   | .000000+00<br>191.960<br>203.720 | .000000+00<br>9.3371<br>9.814   | .000<br>18.8144<br>18.966 | .0000<br>34.221<br>3.7558 | .0000<br>5.619723+06<br>1.0932 | .0000<br>1.1925<br>1.1939 |
| 13000. | 13.386 | 36.835<br>36.456<br>1.589429+03   | .000000+00<br>226.192<br>239.414 | .000000+00<br>9.7270<br>10.193  | .000<br>20.6088<br>20.784 | .0000<br>34.976<br>4.0288 | .0000<br>6.088033+06<br>1.1287 | .0000<br>1.2124<br>1.2141 |
| 14000. | 14.415 | 42.560<br>42.138<br>2.001386+03   | .000000+00<br>262.778<br>277.779 | .000000+00<br>9.9309<br>10.393  | .000<br>22.7792<br>22.983 | .0000<br>35.722<br>4.3175 | .0000<br>6.556343+06<br>1.1615 | .0000<br>1.2236<br>1.2254 |
| 15000. | 15.445 | 48.709<br>48.235<br>2.486128+03   | .000000+00<br>301.874<br>318.913 | .000000+00<br>10.0388<br>10.500 | .000<br>25.2752<br>25.499 | .0000<br>36.448<br>4.5952 | .0000<br>7.024653+06<br>1.1897 | .0000<br>1.2232<br>1.2215 |
| 16000. | 16.475 | 55.282<br>54.764<br>3.043730+03   | .000000+00<br>344.047<br>363.117 | .000000+00<br>10.2329<br>10.705 | .000<br>27.6327<br>27.842 | .0000<br>37.154<br>4.8049 | .0000<br>7.492963+06<br>1.2168 | .0000<br>1.1969<br>1.1959 |
| 17000. | 17.504 | 62.280<br>61.728<br>3.682101+03   | .000000+00<br>389.495<br>410.313 | .000000+00<br>10.5413<br>11.017 | .000<br>29.6413<br>29.833 | .0000<br>37.852<br>4.9991 | .0000<br>7.961274+06<br>1.2469 | .0000<br>1.1793<br>1.1790 |
| 18000. | 18.534 | 69.701<br>69.124<br>4.405788+03   | .000000+00<br>438.094<br>460.617 | .000000+00<br>10.9115<br>11.389 | .000<br>31.3645<br>31.544 | .0000<br>38.552<br>5.1888 | .0000<br>8.429584+06<br>1.2806 | .0000<br>1.1697<br>1.1696 |
| 19000. | 19.564 | 77.547<br>76.947<br>5.221685+03   | .000000+00<br>489.716<br>513.994 | .000000+00<br>11.3042<br>11.783 | .000<br>32.8933<br>33.065 | .0000<br>39.259<br>5.3794 | .0000<br>8.897894+06<br>1.3176 | .0000<br>1.1654<br>1.1655 |
| 20000. | 20.593 | 85.816<br>85.196<br>6.131590+03   | .000000+00<br>544.271<br>570.257 | .000000+00<br>11.6952<br>12.173 | .000<br>34.2940<br>34.461 | .0000<br>39.977<br>5.5708 | .0000<br>9.366204+06<br>1.3577 | .0000<br>1.1635<br>1.1640 |
| 21000. | 21.623 | 94.510<br>93.868<br>7.148602+03   | .000000+00<br>601.700<br>629.449 | .000000+00<br>12.0707<br>12.547 | .000<br>35.6110<br>35.776 | .0000<br>40.707<br>5.7654 | .0000<br>9.834514+06<br>1.4005 | .0000<br>1.1639<br>1.1642 |
| 22000. | 22.653 | 103.628<br>102.962<br>8.268981+03 | .000000+00<br>661.963<br>691.475 | .000000+00<br>12.4231<br>12.897 | .000<br>36.8734<br>37.038 | .0000<br>41.450<br>5.9640 | .0000<br>1.030283+07<br>1.4459 | .0000<br>1.1652<br>1.1656 |
| 23000. | 23.682 | 113.169<br>112.479<br>9.507205+03 | .000000+00<br>725.022<br>756.406 | .000000+00<br>12.7463<br>13.217 | .000<br>38.1096<br>38.275 | .0000<br>42.205<br>6.1677 | .0000<br>1.077113+07<br>1.4934 | .0000<br>1.1674<br>1.1679 |
| 24000. | 24.712 | 123.135<br>122.417<br>1.086366+04 | .000000+00<br>790.845<br>824.290 | .000000+00<br>13.0364<br>13.506 | .000<br>39.3388<br>39.508 | .0000<br>42.971<br>6.3779 | .0000<br>1.123944+07<br>1.5429 | .0000<br>1.1703<br>1.1710 |

ALTITUDE = 70000. FT.

P1 = 4.428958-02 ATM. , RH01 = 5.554998-02 AMA. , T1 = 217.91 K  
 S1/R = 25.918 , A1 = 971.19 FT./SEC. , H1/R = 762.701 K

| U1    | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|-------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 5000. | 25.742 | 133.525<br>132.775<br>1.234797+04 | .000000+00<br>859.392<br>894.841   | .000000+00<br>13.2891<br>13.754 | .000<br>40.5866<br>40.760 | .0000<br>43.748<br>6.5955 | .0000<br>1.170776+07<br>1.5942 | .0000<br>1.1742<br>1.1748 |
| 6000. | 26.771 | 144.339<br>143.553<br>1.396982+04 | .000000+00<br>930.629<br>968.341   | .000000+00<br>13.5020<br>13.964 | .000<br>41.8729<br>42.054 | .0000<br>44.535<br>6.8232 | .0000<br>1.217607+07<br>1.6469 | .0000<br>1.1789<br>1.1796 |
| 7000. | 27.801 | 155.578<br>154.750<br>1.574352+04 | .000000+00<br>1004.501<br>1044.678 | .000000+00<br>13.6699<br>14.130 | .000<br>43.2317<br>43.422 | .0000<br>45.328<br>7.0622 | .0000<br>1.264438+07<br>1.7006 | .0000<br>1.1845<br>1.1852 |
| 8000. | 28.831 | 167.240<br>166.365<br>1.769125+04 | .000000+00<br>1080.945<br>1123.803 | .000000+00<br>13.7885<br>14.246 | .000<br>44.6979<br>44.903 | .0000<br>46.126<br>7.3180 | .0000<br>1.311269+07<br>1.7548 | .0000<br>1.1918<br>1.1927 |
| 9000. | 29.860 | 179.326<br>178.395<br>1.981703+04 | .000000+00<br>1159.805<br>1205.705 | .000000+00<br>13.8487<br>14.303 | .000<br>46.3300<br>46.556 | .0000<br>46.927<br>7.5942 | .0000<br>1.358100+07<br>1.8084 | .0000<br>1.2011<br>1.2021 |
| 0000. | 30.890 | 191.837<br>190.840<br>2.212823+04 | .000000+00<br>1241.077<br>1290.241 | .000000+00<br>13.8440<br>14.295 | .000<br>48.2024<br>48.456 | .0000<br>47.724<br>7.8961 | .0000<br>1.404931+07<br>1.8605 | .0000<br>1.2127<br>1.2137 |
| 1000. | 31.920 | 204.771<br>203.695<br>2.464150+04 | .000000+00<br>1324.578<br>1377.356 | .000000+00<br>13.7647<br>14.210 | .000<br>50.4168<br>50.709 | .0000<br>48.515<br>8.2293 | .0000<br>1.451762+07<br>1.9091 | .0000<br>1.2265<br>1.2275 |
| 2000. | 32.949 | 218.130<br>216.957<br>2.738607+04 | .000000+00<br>1410.094<br>1466.981 | .000000+00<br>13.6109<br>14.052 | .000<br>53.0653<br>53.404 | .0000<br>49.292<br>8.5860 | .0000<br>1.498593+07<br>1.9525 | .0000<br>1.2399<br>1.2407 |
| 3000. | 33.979 | 231.912<br>230.628<br>3.034907+04 | .000000+00<br>1497.756<br>1559.135 | .000000+00<br>13.4098<br>13.849 | .000<br>56.1268<br>56.507 | .0000<br>50.050<br>8.9371 | .0000<br>1.545424+07<br>1.9900 | .0000<br>1.2463<br>1.2465 |
| 4000. | 35.008 | 246.119<br>244.714<br>3.340231+04 | .000000+00<br>1587.927<br>1654.045 | .000000+00<br>13.2120<br>13.653 | .000<br>59.4011<br>59.807 | .0000<br>50.787<br>9.2578 | .0000<br>1.592255+07<br>2.0233 | .0000<br>1.2433<br>1.2429 |
| 5000. | 36.038 | 260.750<br>259.226<br>3.667455+04 | .000000+00<br>1681.009<br>1751.944 | .000000+00<br>13.0566<br>13.501 | .000<br>62.6425<br>63.060 | .0000<br>51.503<br>9.5497 | .0000<br>1.639086+07<br>2.0553 | .0000<br>1.2352<br>1.2348 |
| 6000. | 37.068 | 275.805<br>274.166<br>3.996823+04 | .000000+00<br>1777.195<br>1852.888 | .000000+00<br>12.9526<br>13.401 | .000<br>65.7159<br>66.137 | .0000<br>52.203<br>9.8233 | .0000<br>1.685917+07<br>2.0881 | .0000<br>1.2266<br>1.2262 |

ALTITUDE = 80000. FT.

P1 = 2.764892-02 ATM. , RHO1 = 3.420354-02 AMA. , T1 = 220.94 K  
 S1/R = 26.438 , A1 = 977.91 FT./SEC. , H1/R = 773.293 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMED<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.136  | 8.529<br>8.316<br>1.108805+02   | 2.191169+03<br>44.868<br>49.474   | 2.810429+02<br>5.9461<br>6.413  | 7.683<br>7.5345<br>7.704    | 2.4288<br>30.242<br>2.3995 | 1.0135<br>1.710224+06<br>1.0003 | 1.3112<br>1.2953<br>1.2932 |
| 7000.  | 7.158  | 11.248<br>10.998<br>1.814429+02 | 6.411596+03<br>61.580<br>67.366   | 6.382723+02<br>6.4088<br>6.880  | 9.729<br>9.5916<br>9.773    | 2.7553<br>31.025<br>2.6734 | 1.0313<br>1.995262+06<br>1.0007 | 1.3097<br>1.2675<br>1.2648 |
| 8000.  | 8.181  | 14.385<br>14.105<br>2.769234+02 | 1.695174+04<br>81.188<br>88.220   | 1.335644+03<br>6.9107<br>7.395  | 11.894<br>11.6934<br>11.868 | 3.1193<br>31.770<br>2.9036 | 1.0657<br>2.280299+06<br>1.0039 | 1.3285<br>1.2276<br>1.2247 |
| 9000.  | 9.203  | 17.940<br>17.642<br>4.002949+02 | 4.071368+04<br>103.907<br>112.028 | 2.558864+03<br>7.5359<br>8.027  | 14.114<br>13.5780<br>13.729 | 3.5529<br>32.499<br>3.0959 | 1.1259<br>2.565336+06<br>1.0153 | 1.3749<br>1.1910<br>1.1901 |
| 10000. | 10.226 | 21.914<br>21.605<br>5.548225+02 | .000000+00<br>129.688<br>138.843  | .000000+00<br>8.2329<br>8.724   | .000<br>15.2019<br>15.337   | .0000<br>33.235<br>3.2887  | .0000<br>2.850374+06<br>1.0364  | .0000<br>1.1775<br>1.1776  |
| 11000. | 11.248 | 26.305<br>25.986<br>7.443176+02 | .000000+00<br>158.337<br>168.567  | .000000+00<br>8.9050<br>9.391   | .000<br>16.6947<br>16.827   | .0000<br>33.987<br>3.4944  | .0000<br>3.135411+06<br>1.0654  | .0000<br>1.1780<br>1.1789  |
| 12000. | 12.271 | 31.116<br>30.780<br>9.724440+02 | .000000+00<br>189.672<br>201.085  | .000000+00<br>9.4735<br>9.950   | .000<br>18.2108<br>18.352   | .0000<br>34.754<br>3.7269  | .0000<br>3.420448+06<br>1.0999  | .0000<br>1.1896<br>1.1910  |
| 13000. | 13.294 | 36.344<br>35.981<br>1.245001+03 | .000000+00<br>223.462<br>236.285  | .000000+00<br>9.8652<br>10.330  | .000<br>19.9408<br>20.107   | .0000<br>35.527<br>4.0021  | .0000<br>3.705486+06<br>1.1363  | .0000<br>1.2117<br>1.2134  |
| 14000. | 14.316 | 41.991<br>41.584<br>1.568196+03 | .000000+00<br>259.505<br>274.113  | .000000+00<br>10.0402<br>10.500 | .000<br>22.1038<br>22.301   | .0000<br>36.289<br>4.2959  | .0000<br>3.990523+06<br>1.1692  | .0000<br>1.2266<br>1.2250  |
| 15000. | 15.339 | 48.056<br>47.598<br>1.948760+03 | .000000+00<br>298.104<br>314.690  | .000000+00<br>10.1479<br>10.609 | .000<br>24.5565<br>24.768   | .0000<br>37.028<br>4.5647  | .0000<br>4.275560+06<br>1.1961  | .0000<br>1.2190<br>1.2173  |
| 16000. | 16.361 | 54.539<br>54.040<br>2.385109+03 | .000000+00<br>339.806<br>358.361  | .000000+00<br>10.3627<br>10.836 | .000<br>26.8103<br>27.004   | .0000<br>37.746<br>4.7644  | .0000<br>4.560598+06<br>1.2232  | .0000<br>1.1907<br>1.1895  |
| 17000. | 17.384 | 61.440<br>60.912<br>2.883946+03 | .000000+00<br>384.766<br>405.105  | .000000+00<br>10.6993<br>11.180 | .000<br>28.6924<br>28.869   | .0000<br>38.459<br>4.9525  | .0000<br>4.845635+06<br>1.2537  | .0000<br>1.1734<br>1.1729  |
| 18000. | 18.407 | 68.760<br>68.209<br>3.448901+03 | .000000+00<br>432.828<br>454.747  | .000000+00<br>11.0956<br>11.577 | .000<br>30.2985<br>30.462   | .0000<br>39.175<br>5.1379  | .0000<br>5.130673+06<br>1.2880  | .0000<br>1.1646<br>1.1646  |
| 19000. | 19.429 | 76.498<br>75.928<br>4.082675+03 | .000000+00<br>483.864<br>507.316  | .000000+00<br>11.5115<br>11.991 | .000<br>31.7205<br>31.877   | .0000<br>39.901<br>5.3238  | .0000<br>5.415710+06<br>1.3257  | .0000<br>1.1606<br>1.1609  |

ALTITUDE = 80000. FT.

P1 = 2.764892-02 ATM. , RHO1 = 3.420354-02 AMA. , T1 = 220.94 K  
 S1/R = 26.438 , A1 = 977.91 FT./SEC. , H1/R = 773.293 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOF  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 20000. | 20.452 | 84.655<br>84.066<br>4.797708+03   | .000000+00<br>537.786<br>562.929   | .000000+00<br>11.9227<br>12.402 | .000<br>33.0248<br>33.177 | .0000<br>40.638<br>5.5107 | .0000<br>5.700747+06<br>1.3665 | .0000<br>1.1592<br>1.1594 |
| 21000. | 21.474 | 93.229<br>92.621<br>5.590287+03   | .000000+00<br>594.544<br>621.313   | .000000+00<br>12.3173<br>12.794 | .000<br>34.2506<br>34.400 | .0000<br>41.389<br>5.7018 | .0000<br>5.985785+06<br>1.4100 | .0000<br>1.1597<br>1.1601 |
| 22000. | 22.497 | 102.222<br>101.593<br>6.469422+03 | .000000+00<br>654.091<br>682.594   | .000000+00<br>12.6856<br>13.160 | .000<br>35.4308<br>35.580 | .0000<br>42.154<br>5.8959 | .0000<br>6.270822+06<br>1.4560 | .0000<br>1.1609<br>1.1614 |
| 23000. | 23.519 | 111.633<br>110.981<br>7.436884+03 | .000000+00<br>716.400<br>746.681   | .000000+00<br>13.0237<br>13.495 | .000<br>36.5857<br>36.737 | .0000<br>42.932<br>6.0958 | .0000<br>6.555859+06<br>1.5043 | .0000<br>1.1633<br>1.1638 |
| 24000. | 24.542 | 121.463<br>120.784<br>8.500749+03 | .000000+00<br>781.432<br>813.608   | .000000+00<br>13.3259<br>13.795 | .000<br>37.7396<br>37.894 | .0000<br>43.722<br>6.3019 | .0000<br>6.840897+06<br>1.5546 | .0000<br>1.1664<br>1.1668 |
| 25000. | 25.565 | 131.710<br>131.002<br>9.662074+03 | .000000+00<br>849.158<br>883.387   | .000000+00<br>13.5895<br>14.056 | .000<br>38.9117<br>39.071 | .0000<br>44.525<br>6.5168 | .0000<br>7.125934+06<br>1.6066 | .0000<br>1.1703<br>1.1710 |
| 26000. | 26.587 | 142.376<br>141.635<br>1.092911+04 | .000000+00<br>919.530<br>955.876   | .000000+00<br>13.8096<br>14.273 | .000<br>40.1296<br>40.295 | .0000<br>45.336<br>6.7407 | .0000<br>7.410972+06<br>1.6601 | .0000<br>1.1750<br>1.1756 |
| 27000. | 27.610 | 153.460<br>152.680<br>1.230922+04 | .000000+00<br>992.500<br>1031.237  | .000000+00<br>13.9821<br>14.443 | .000<br>41.4204<br>41.596 | .0000<br>46.156<br>6.9789 | .0000<br>7.696009+06<br>1.7145 | .0000<br>1.1813<br>1.1820 |
| 28000. | 28.632 | 164.963<br>164.138<br>1.381768+04 | .000000+00<br>1067.992<br>1109.353 | .000000+00<br>14.0999<br>14.558 | .000<br>42.8294<br>43.018 | .0000<br>46.981<br>7.2324 | .0000<br>7.981046+06<br>1.7693 | .0000<br>1.1886<br>1.1895 |
| 29000. | 29.655 | 176.884<br>176.005<br>1.547967+04 | .000000+00<br>1145.848<br>1190.166 | .000000+00<br>14.1540<br>14.609 | .000<br>44.4143<br>44.624 | .0000<br>47.807<br>7.5103 | .0000<br>8.266084+06<br>1.8234 | .0000<br>1.1987<br>1.1998 |
| 30000. | 30.678 | 189.223<br>188.279<br>1.728519+04 | .000000+00<br>1226.033<br>1273.543 | .000000+00<br>14.1333<br>14.584 | .000<br>46.2667<br>46.505 | .0000<br>48.630<br>7.8173 | .0000<br>8.551121+06<br>1.8755 | .0000<br>1.2115<br>1.2126 |
| 31000. | 31.700 | 201.980<br>200.959<br>1.924622+04 | .000000+00<br>1308.366<br>1359.447 | .000000+00<br>14.0276<br>14.472 | .000<br>48.4975<br>48.776 | .0000<br>49.444<br>8.1589 | .0000<br>8.836158+06<br>1.9235 | .0000<br>1.2270<br>1.2281 |
| 32000. | 32.723 | 215.156<br>214.037<br>2.137882+04 | .000000+00<br>1392.620<br>1447.754 | .000000+00<br>13.8400<br>14.280 | .000<br>51.1966<br>51.522 | .0000<br>50.242<br>8.5211 | .0000<br>9.121196+06<br>1.9654 | .0000<br>1.2404<br>1.2410 |
| 33000. | 33.745 | 228.749<br>227.520<br>2.369563+04 | .000000+00<br>1479.027<br>1538.632 | .000000+00<br>13.6123<br>14.051 | .000<br>54.2871<br>54.649 | .0000<br>51.018<br>8.8668 | .0000<br>9.406233+06<br>2.0013 | .0000<br>1.2445<br>1.2442 |

ALTITUDE = 80000. FT.

P1 = 2.764892-02 ATM. , RHO1 = 3.420354-02 AMA. , T1 = 220.94 K  
 S1/R = 26.438 , A1 = 977.91 FT./SEC. , H1/R = 773.293 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 34000. | 34.768 | 242.762<br>241.416<br>2.606496+04 | .000000+00<br>1568.060<br>1632.322 | .000000+00<br>13.4071<br>13.849 | .000<br>57.5014<br>57.881 | .0000<br>51.770<br>9.1765 | .0000<br>9.691270+06<br>2.0339 | .0000<br>1.2385<br>1.2381 |
| 35000. | 35.791 | 257.192<br>255.734<br>2.856934+04 | .000000+00<br>1660.092<br>1728.973 | .000000+00<br>13.2582<br>13.704 | .000<br>60.5985<br>60.984 | .0000<br>52.502<br>9.4575 | .0000<br>9.976308+06<br>2.0663 | .0000<br>1.2291<br>1.2286 |
| 36000. | 36.813 | 272.041<br>270.477<br>3.110291+04 | .000000+00<br>1755.253<br>1828.673 | .000000+00<br>13.1665<br>13.616 | .000<br>63.4849<br>63.874 | .0000<br>53.217<br>9.7301 | .0000<br>1.026135+07<br>2.1002 | .0000<br>1.2212<br>1.2216 |

ALTITUDE = 90000. FT.

P1 = 1.737921-02 ATM. , RHO1 = 2.120901-02 AMA. , T1 = 223.96 K  
 S1/R = 26.949 , A1 = 984.58 FT./SEC. , H1/R = 783.874 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.094  | 8.427<br>8.217<br>8.749847+01   | 2.114544+03<br>44.265<br>48.815   | 2.756896+02<br>5.9388<br>6.405  | 7.598<br>7.4432<br>7.610    | 2.4187<br>30.726<br>2.4006 | 1.0082<br>1.048515+06<br>1.0002 | 1.3040<br>1.2949<br>1.2927 |
| 7000.  | 7.110  | 11.109<br>10.863<br>1.430935+02 | 6.221846+03<br>60.757<br>66.469   | 6.330765+02<br>6.4061<br>6.878  | 9.631<br>9.4678<br>9.646    | 2.7279<br>31.508<br>2.6719 | 1.0192<br>1.223267+06<br>1.0006 | 1.2944<br>1.2658<br>1.2628 |
| 8000.  | 8.125  | 14.204<br>13.929<br>2.182618+02 | 1.665498+04<br>80.137<br>87.056   | 1.353955+03<br>6.9281<br>7.414  | 11.797<br>11.5062<br>11.673 | 3.0581<br>32.253<br>2.8937 | 1.0415<br>1.398020+06<br>1.0046 | 1.2997<br>1.2223<br>1.2192 |
| 9000.  | 9.141  | 17.711<br>17.421<br>3.152976+02 | 4.086375+04<br>102.629<br>110.596 | 2.685861+03<br>7.5902<br>8.085  | 14.035<br>13.2870<br>13.427 | 3.4383<br>32.988<br>3.0782 | 1.0828<br>1.572772+06<br>1.0175 | 1.3284<br>1.1851<br>1.1842 |
| 10000. | 10.157 | 21.631<br>21.334<br>4.367522+02 | .000000+00<br>128.147<br>137.070  | .000000+00<br>8.3243<br>8.816   | .000<br>14.8014<br>14.927   | .0000<br>33.734<br>3.2661  | .0000<br>1.747524+06<br>1.0403  | .0000<br>1.1727<br>1.1729  |
| 11000. | 11.172 | 25.964<br>25.657<br>5.855863+02 | .000000+00<br>156.481<br>166.455  | .000000+00<br>9.0259<br>9.513   | .000<br>16.1963<br>16.320   | .0000<br>34.500<br>3.4679  | .0000<br>1.922277+06<br>1.0709  | .0000<br>1.1742<br>1.1751  |
| 12000. | 12.188 | 30.709<br>30.387<br>7.648156+02 | .000000+00<br>187.441<br>198.560  | .000000+00<br>9.6122<br>10.090  | .000<br>17.6308<br>17.764   | .0000<br>35.283<br>3.6987  | .0000<br>2.097029+06<br>1.1065  | .0000<br>1.1869<br>1.1884  |
| 13000. | 13.204 | 35.867<br>35.518<br>9.789048+02 | .000000+00<br>220.799<br>233.326  | .000000+00<br>10.0035<br>10.469 | .000<br>19.3065<br>19.466   | .0000<br>36.073<br>3.9773  | .0000<br>2.271782+06<br>1.1436  | .0000<br>1.2116<br>1.2134  |
| 14000. | 14.219 | 41.437<br>41.045<br>1.233154+03 | .000000+00<br>256.330<br>270.589  | .000000+00<br>10.1538<br>10.609 | .000<br>21.4636<br>21.661   | .0000<br>36.851<br>4.2838  | .0000<br>2.446534+06<br>1.1761  | .0000<br>1.2330<br>1.2300  |

ALTITUDE = 90000. FT.

P1 = 1.737921-02 ATM. , RHO1 = 2.120901-02 AMA. , T1 = 223.96 K  
 S1/R = 26.949 , A1 = 984.58 FT./SEC. , H1/R = 783.874 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 15000. | 15.235 | 47.420<br>46.979<br>1.532600+03   | .000000+00<br>294.426<br>310.666   | .000000+00<br>10.2547<br>10.719 | .000<br>23.8828<br>24.083 | .0000<br>37.602<br>4.5335 | .0000<br>2.621287+06<br>1.2020 | .0000<br>1.2141<br>1.2122 |
| 16000. | 16.251 | 53.816<br>53.336<br>1.876803+03   | .000000+00<br>335.678<br>353.730   | .000000+00<br>10.4936<br>10.968 | .000<br>26.0284<br>26.207 | .0000<br>38.333<br>4.7252 | .0000<br>2.796039+06<br>1.2291 | .0000<br>1.1847<br>1.1835 |
| 17000. | 17.266 | 60.625<br>60.119<br>2.268844+03   | .000000+00<br>380.161<br>399.816   | .000000+00<br>10.8594<br>11.338 | .000<br>27.7892<br>27.950 | .0000<br>39.060<br>4.9078 | .0000<br>2.970792+06<br>1.2601 | .0000<br>1.1681<br>1.1677 |
| 18000. | 18.282 | 67.845<br>67.320<br>2.711082+03   | .000000+00<br>427.694<br>448.903   | .000000+00<br>11.2816<br>11.762 | .000<br>29.2854<br>29.435 | .0000<br>39.793<br>5.0889 | .0000<br>3.145544+06<br>1.2950 | .0000<br>1.1600<br>1.1600 |
| 19000. | 19.298 | 75.479<br>74.937<br>3.207814+03   | .000000+00<br>478.152<br>500.871   | .000000+00<br>11.7199<br>12.200 | .000<br>30.6113<br>30.754 | .0000<br>40.536<br>5.2697 | .0000<br>3.320296+06<br>1.3333 | .0000<br>1.1561<br>1.1563 |
| 20000. | 20.313 | 83.525<br>82.966<br>3.763959+03   | .000000+00<br>531.455<br>555.749   | .000000+00<br>12.1521<br>12.632 | .000<br>31.8259<br>31.965 | .0000<br>41.293<br>5.4535 | .0000<br>3.495049+06<br>1.3748 | .0000<br>1.1552<br>1.1555 |
| 21000. | 21.329 | 91.984<br>91.408<br>4.384498+03   | .000000+00<br>587.549<br>613.479   | .000000+00<br>12.5643<br>13.043 | .000<br>32.9709<br>33.108 | .0000<br>42.065<br>5.6389 | .0000<br>3.669801+06<br>1.4190 | .0000<br>1.1554<br>1.1557 |
| 22000. | 22.345 | 100.856<br>100.260<br>5.073830+03 | .000000+00<br>646.399<br>673.899   | .000000+00<br>12.9495<br>13.424 | .000<br>34.0735<br>34.210 | .0000<br>42.852<br>5.8307 | .0000<br>3.844554+06<br>1.4657 | .0000<br>1.1572<br>1.1577 |
| 23000. | 23.360 | 110.140<br>109.523<br>5.833582+03 | .000000+00<br>707.967<br>737.182   | .000000+00<br>13.3012<br>13.773 | .000<br>35.1573<br>35.295 | .0000<br>43.653<br>6.0261 | .0000<br>4.019306+06<br>1.5146 | .0000<br>1.1594<br>1.1598 |
| 24000. | 24.376 | 119.836<br>119.195<br>6.668805+03 | .000000+00<br>772.229<br>803.274   | .000000+00<br>13.6163<br>14.086 | .000<br>36.2403<br>36.381 | .0000<br>44.468<br>6.2291 | .0000<br>4.194059+06<br>1.5657 | .0000<br>1.1626<br>1.1631 |
| 25000. | 25.392 | 129.946<br>129.277<br>7.584358+03 | .000000+00<br>839.144<br>872.124   | .000000+00<br>13.8894<br>14.356 | .000<br>37.3467<br>37.492 | .0000<br>45.295<br>6.4399 | .0000<br>4.368811+06<br>1.6184 | .0000<br>1.1666<br>1.1670 |
| 26000. | 26.407 | 140.468<br>139.768<br>8.580610+03 | .000000+00<br>908.672<br>943.730   | .000000+00<br>14.1172<br>14.580 | .000<br>38.4988<br>38.651 | .0000<br>46.133<br>6.6625 | .0000<br>4.543563+06<br>1.6726 | .0000<br>1.1718<br>1.1724 |
| 27000. | 27.423 | 151.402<br>150.666<br>9.667082+03 | .000000+00<br>980.757<br>1018.138  | .000000+00<br>14.2933<br>14.754 | .000<br>39.7315<br>39.892 | .0000<br>46.978<br>6.8970 | .0000<br>4.718316+06<br>1.7277 | .0000<br>1.1777<br>1.1784 |
| 28000. | 28.438 | 162.750<br>161.971<br>1.084726+04 | .000000+00<br>1055.320<br>1095.255 | .000000+00<br>14.4103<br>14.869 | .000<br>41.0873<br>41.262 | .0000<br>47.829<br>7.1519 | .0000<br>4.893068+06<br>1.7831 | .0000<br>1.1861<br>1.1870 |

ALTITUDE = 90000. FT.

P1 = 1.737921-02 ATM. , RH01 = 2.120901-02 AMA. , T1 = 223.96 K  
 S1/R = 26.949 , A1 = 984.58 FT./SEC. , H1/R = 783.874 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 29000. | 29.454 | 174.509<br>173.679<br>1.214218+04 | .000000+00<br>1132.244<br>1174.999 | .000000+00<br>14.4566<br>14.911 | .000<br>42.6346<br>42.830 | .0000<br>48.681<br>7.4306 | .0000<br>5.067821+06<br>1.8376 | .0000<br>1.1967<br>1.1978 |
| 30000. | 30.470 | 186.682<br>185.787<br>1.357784+04 | .000000+00<br>1211.300<br>1257.270 | .000000+00<br>14.4169<br>14.867 | .000<br>44.4745<br>44.701 | .0000<br>49.529<br>7.7440 | .0000<br>5.242573+06<br>1.8896 | .0000<br>1.2112<br>1.2123 |
| 31000. | 31.485 | 199.267<br>198.295<br>1.511875+04 | .000000+00<br>1292.469<br>1341.928 | .000000+00<br>14.2802<br>14.723 | .000<br>46.7353<br>47.003 | .0000<br>50.366<br>8.0945 | .0000<br>5.417326+06<br>1.9368 | .0000<br>1.2279<br>1.2289 |
| 32000. | 32.501 | 212.265<br>211.195<br>1.678051+04 | .000000+00<br>1375.484<br>1429.008 | .000000+00<br>14.0566<br>14.496 | .000<br>49.4904<br>49.803 | .0000<br>51.184<br>8.4609 | .0000<br>5.592078+06<br>1.9771 | .0000<br>1.2409<br>1.2414 |
| 33000. | 33.517 | 225.675<br>224.496<br>1.857948+04 | .000000+00<br>1460.708<br>1518.669 | .000000+00<br>13.8069<br>14.247 | .000<br>52.5894<br>52.932 | .0000<br>51.977<br>8.7975 | .0000<br>5.766831+06<br>2.0115 | .0000<br>1.2414<br>1.2412 |
| 34000. | 34.532 | 239.498<br>238.209<br>2.043508+04 | .000000+00<br>1548.687<br>1611.153 | .000000+00<br>13.6012<br>14.045 | .000<br>55.7096<br>56.063 | .0000<br>52.744<br>9.0930 | .0000<br>5.941583+06<br>2.0437 | .0000<br>1.2329<br>1.2322 |
| 35000. | 35.548 | 253.734<br>252.339<br>2.234388+04 | .000000+00<br>1639.737<br>1706.636 | .000000+00<br>13.4637<br>13.911 | .000<br>58.6431<br>58.999 | .0000<br>53.492<br>9.3658 | .0000<br>6.116336+06<br>2.0768 | .0000<br>1.2229<br>1.2224 |
| 36000. | 36.564 | 268.382<br>266.889<br>2.432666+04 | .000000+00<br>1733.901<br>1805.129 | .000000+00<br>13.3853<br>13.837 | .000<br>61.3435<br>61.699 | .0000<br>54.223<br>9.6249 | .0000<br>6.291088+06<br>2.1119 | .0000<br>1.2145<br>1.2139 |
| 37000. | 37.579 | 283.443<br>281.858<br>2.629624+04 | .000000+00<br>1831.114<br>1906.603 | .000000+00<br>13.3498<br>13.804 | .000<br>63.8343<br>64.190 | .0000<br>54.944<br>9.8823 | .0000<br>6.465840+06<br>2.1492 | .0000<br>1.2087<br>1.2087 |

ALTITUDE = 100000. FT.

P1 = 1.099700-02 ATM. , RH01 = 1.324179-02 AMA. , T1 = 226.98 K  
 S1/R = 27.454 , A1 = 991.20 FT./SEC. , H1/R = 794.446 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1        | RO/R1<br>RS/R1<br>RCP/R1       | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|---------------------------------|--------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.053 | 8.328<br>8.120<br>6.928315+01   | 2.036346+03<br>43.678<br>48.175 | 2.693792+02<br>5.9312<br>6.398 | 7.513<br>7.3543<br>7.520    | 2.4133<br>31.203<br>2.4019 | 1.0050<br>6.473829+05<br>1.0001 | 1.2995<br>1.2947<br>1.2924 |
| 7000. | 7.062 | 10.975<br>10.732<br>1.132346+02 | 6.009240+03<br>59.958<br>65.596 | 6.226781+02<br>6.4039<br>6.876 | 9.526<br>9.3463<br>9.521    | 2.7111<br>31.984<br>2.6700 | 1.0118<br>7.552800+05<br>1.0007 | 1.2846<br>1.2637<br>1.2605 |
| 8000. | 8.071 | 14.028<br>13.758<br>1.726077+02 | 1.621169+04<br>79.120<br>85.927 | 1.351092+03<br>6.9488<br>7.437 | 11.680<br>11.3176<br>11.477 | 3.0177<br>32.730<br>2.8827 | 1.0261<br>8.631772+05<br>1.0055 | 1.2801<br>1.2164<br>1.2133 |

ALTITUDE = 100000. FT.

P1 = 1.099700-02 ATM. , RHO1 = 1.324179-02 AMA. , T1 = 226.98 K  
 S1/R = 27.454 , A1 = 991.20 FT./SEC. , H1/R = 794.446 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 9000.  | 9.080  | 17.489<br>17.207<br>2.491845+02 | 4.037169+04<br>101.393<br>109.200 | 2.749639+03<br>7.6491<br>8.146  | 13.915<br>12.9958<br>13.127 | 3.3564<br>33.471<br>3.0603 | 1.0539<br>9.710743+05<br>1.0200 | 1.2942<br>1.1795<br>1.1785 |
| 10000. | 10.089 | 21.357<br>21.070<br>3.449884+02 | 9.316136+04<br>126.648<br>135.368 | 5.202627+03<br>8.4196<br>8.913  | 16.220<br>14.4076<br>14.525 | 3.7631<br>34.227<br>3.2434 | 1.1026<br>1.078971+06<br>1.0443 | 1.3340<br>1.1682<br>1.1685 |
| 11000. | 11.098 | 25.632<br>25.337<br>4.621538+02 | .000000+00<br>154.668<br>164.349  | .000000+00<br>9.1492<br>9.636   | .000<br>15.7141<br>15.828   | .0000<br>35.007<br>3.4417  | .0000<br>1.186869+06<br>1.0762  | .0000<br>1.1705<br>1.1714  |
| 12000. | 12.107 | 30.314<br>30.005<br>6.035957+02 | .000000+00<br>185.266<br>196.068  | .000000+00<br>9.7528<br>10.230  | .000<br>17.0753<br>17.200   | .0000<br>35.807<br>3.6711  | .0000<br>1.294766+06<br>1.1130  | .0000<br>1.1846<br>1.1861  |
| 13000. | 13.115 | 35.403<br>35.068<br>7.722349+02 | .000000+00<br>218.196<br>230.331  | .000000+00<br>10.1398<br>10.602 | .000<br>18.7078<br>18.860   | .0000<br>36.615<br>3.9542  | .0000<br>1.402663+06<br>1.1505  | .0000<br>1.2120<br>1.2140  |
| 14000. | 14.124 | 40.899<br>40.520<br>9.732054+02 | .000000+00<br>253.220<br>267.159  | .000000+00<br>10.2615<br>10.717 | .000<br>20.8698<br>21.060   | .0000<br>37.409<br>4.2712  | .0000<br>1.510560+06<br>1.1823  | .0000<br>1.2346<br>1.2343  |
| 15000. | 15.133 | 46.803<br>46.376<br>1.209456+03 | .000000+00<br>290.839<br>306.673  | .000000+00<br>10.3600<br>10.825 | .000<br>23.2482<br>23.436   | .0000<br>38.171<br>4.5022  | .0000<br>1.618457+06<br>1.2074  | .0000<br>1.2089<br>1.2068  |
| 16000. | 16.142 | 53.113<br>52.652<br>1.481367+03 | .000000+00<br>331.659<br>349.215  | .000000+00<br>10.6266<br>11.102 | .000<br>25.2823<br>25.447   | .0000<br>38.915<br>4.6863  | .0000<br>1.726354+06<br>1.2346  | .0000<br>1.1787<br>1.1777  |
| 17000. | 17.151 | 59.831<br>59.347<br>1.790692+03 | .000000+00<br>375.673<br>394.784  | .000000+00<br>11.0214<br>11.502 | .000<br>26.9284<br>27.077   | .0000<br>39.656<br>4.8639  | .0000<br>1.834251+06<br>1.2661  | .0000<br>1.1628<br>1.1626  |
| 18000. | 18.160 | 66.956<br>66.454<br>2.139782+03 | .000000+00<br>422.686<br>443.275  | .000000+00<br>11.4692<br>11.951 | .000<br>28.3240<br>28.462   | .0000<br>40.405<br>5.0405  | .0000<br>1.942149+06<br>1.3016  | .0000<br>1.1554<br>1.1554  |
| 19000. | 19.169 | 74.488<br>73.971<br>2.533595+03 | .000000+00<br>472.575<br>494.668  | .000000+00<br>11.9298<br>12.413 | .000<br>29.5606<br>29.692   | .0000<br>41.166<br>5.2175  | .0000<br>2.050046+06<br>1.3406  | .0000<br>1.1520<br>1.1522  |
| 20000. | 20.178 | 82.427<br>81.896<br>2.969965+03 | .000000+00<br>525.268<br>548.810  | .000000+00<br>12.3819<br>12.863 | .000<br>30.6948<br>30.822   | .0000<br>41.943<br>5.3970  | .0000<br>2.157943+06<br>1.3826  | .0000<br>1.1512<br>1.1515  |
| 21000. | 21.186 | 90.773<br>90.226<br>3.458966+03 | .000000+00<br>580.714<br>605.734  | .000000+00<br>12.8125<br>13.290 | .000<br>31.7650<br>31.891   | .0000<br>42.736<br>5.5798  | .0000<br>2.265840+06<br>1.4275  | .0000<br>1.1519<br>1.1522  |
| 22000. | 22.195 | 99.527<br>98.962<br>3.997145+03 | .000000+00<br>638.876<br>665.503  | .000000+00<br>13.2135<br>13.690 | .000<br>32.7978<br>32.923   | .0000<br>43.545<br>5.7663  | .0000<br>2.373737+06<br>1.4748  | .0000<br>1.1532<br>1.1537  |

ALTITUDE = 100000. FT.

P1 = 1.099700-02 ATM. , RHQ1 = 1.324179-02 AMA. , T1 = 226.98 K  
 S1/R = 27.454 , A1 = 991.20 FT./SEC. , H1/R = 794.446 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 23000. | 23.204 | 108.687<br>108.103<br>4.592556+03 | .000000+00<br>699.724<br>727.947   | .000000+00<br>13.5798<br>14.052 | .000<br>33.8149<br>33.941 | .0000<br>44.369<br>5.9598 | .0000<br>2.481634+06<br>1.5244 | .0000<br>1.1561<br>1.1566 |
| 24000. | 24.213 | 118.255<br>117.649<br>5.246610+03 | .000000+00<br>763.226<br>793.185   | .000000+00<br>13.9065<br>14.376 | .000<br>34.8354<br>34.964 | .0000<br>45.208<br>6.1584 | .0000<br>2.589532+06<br>1.5761 | .0000<br>1.1590<br>1.1595 |
| 25000. | 25.222 | 128.230<br>127.598<br>5.966654+03 | .000000+00<br>829.351<br>861.172   | .000000+00<br>14.1902<br>14.657 | .000<br>35.8794<br>36.012 | .0000<br>46.060<br>6.3667 | .0000<br>2.697429+06<br>1.6296 | .0000<br>1.1631<br>1.1637 |
| 26000. | 26.231 | 138.612<br>137.950<br>6.757463+03 | .000000+00<br>898.050<br>931.874   | .000000+00<br>14.4247<br>14.888 | .000<br>36.9744<br>37.113 | .0000<br>46.923<br>6.5854 | .0000<br>2.805326+06<br>1.6845 | .0000<br>1.1682<br>1.1687 |
| 27000. | 27.240 | 149.401<br>148.705<br>7.615790+03 | .000000+00<br>969.268<br>1005.355  | .000000+00<br>14.6044<br>15.066 | .000<br>38.1519<br>38.301 | .0000<br>47.795<br>6.8201 | .0000<br>2.913223+06<br>1.7402 | .0000<br>1.1750<br>1.1758 |
| 28000. | 28.249 | 160.597<br>159.860<br>8.553788+03 | .000000+00<br>1042.918<br>1081.502 | .000000+00<br>14.7192<br>15.178 | .000<br>39.4618<br>39.624 | .0000<br>48.672<br>7.0729 | .0000<br>3.021120+06<br>1.7961 | .0000<br>1.1834<br>1.1842 |
| 29000. | 29.258 | 172.201<br>171.414<br>9.570152+03 | .000000+00<br>1118.869<br>1160.201 | .000000+00<br>14.7552<br>15.210 | .000<br>40.9789<br>41.162 | .0000<br>49.550<br>7.3555 | .0000<br>3.129017+06<br>1.8509 | .0000<br>1.1955<br>1.1964 |
| 30000. | 30.266 | 184.211<br>183.362<br>1.069802+04 | .000000+00<br>1196.934<br>1241.363 | .000000+00<br>14.6945<br>15.143 | .000<br>42.8156<br>43.030 | .0000<br>50.422<br>7.6755 | .0000<br>3.236914+06<br>1.9028 | .0000<br>1.2112<br>1.2122 |
| 31000. | 31.275 | 196.629<br>195.701<br>1.192878+04 | .000000+00<br>1276.880<br>1324.846 | .000000+00<br>14.5217<br>14.964 | .000<br>45.1181<br>45.376 | .0000<br>51.281<br>8.0356 | .0000<br>3.344812+06<br>1.9488 | .0000<br>1.2292<br>1.2301 |
| 32000. | 32.284 | 209.453<br>208.428<br>1.323825+04 | .000000+00<br>1358.688<br>1410.718 | .000000+00<br>14.2615<br>14.700 | .000<br>47.9294<br>48.230 | .0000<br>52.118<br>8.4028 | .0000<br>3.452709+06<br>1.9874 | .0000<br>1.2407<br>1.2411 |
| 33000. | 33.293 | 222.685<br>221.554<br>1.463222+04 | .000000+00<br>1442.807<br>1499.204 | .000000+00<br>13.9961<br>14.437 | .000<br>51.0678<br>51.331 | .0000<br>52.926<br>8.7267 | .0000<br>3.560606+06<br>2.0206 | .0000<br>1.2375<br>1.2370 |
| 34000. | 34.302 | 236.324<br>235.087<br>1.608413+04 | .000000+00<br>1529.755<br>1590.384 | .000000+00<br>13.7962<br>14.242 | .000<br>54.0052<br>54.327 | .0000<br>53.709<br>9.0111 | .0000<br>3.668503+06<br>2.0531 | .0000<br>1.2258<br>1.2265 |
| 35000. | 35.311 | 250.371<br>249.036<br>1.756886+04 | .000000+00<br>1619.868<br>1684.908 | .000000+00<br>13.6735<br>14.123 | .000<br>56.7653<br>57.093 | .0000<br>54.472<br>9.2734 | .0000<br>3.776400+06<br>2.0870 | .0000<br>1.2162<br>1.2159 |
| 36000. | 36.320 | 264.824<br>263.398<br>1.911371+04 | .000000+00<br>1713.051<br>1782.249 | .000000+00<br>13.6104<br>14.064 | .000<br>59.2812<br>59.607 | .0000<br>55.220<br>9.5279 | .0000<br>3.884297+06<br>2.1234 | .0000<br>1.2085<br>1.2084 |

ALTITUDE = 100000. FT.

P1 = 1.099700-02 ATM. , RHO1 = 1.324179-02 AMA. , T1 = 226.98 K  
S1/R = 27.454 , A1 = 991.20 FT./SEC. , H1/R = 794.446 K

| U1     | M1     | H0/H1       | P0/P1      | R0/R1      | T0/T1   | A0/AA   | Z0          | GAME0  |
|--------|--------|-------------|------------|------------|---------|---------|-------------|--------|
|        |        | HS/H1       | PS/P1      | RS/R1      | TS/T1   | SS/R    | RE/FT.      | GAMES  |
|        |        | Q RT RN     | POP/P1     | ROP/R1     | TOP/T1  | AOP/AA  | ZOP         | GAMEOP |
| 37000. | 37.329 | 279.684     | .000000+00 | .000000+00 | .000    | .0000   | .0000       | .0000  |
|        |        | 278.175     | 1809.357   | 13.5907    | 61.5886 | 55.959  | 3.992194+06 | 1.2029 |
|        |        | 2.067930+04 | 1882.493   | 14.045     | 61.915  | 9.7823  | 2.1621      | 1.2043 |
| 38000. | 38.337 | 294.952     | .000000+00 | .000000+00 | .000    | .0000   | .0000       | .0000  |
|        |        | 293.361     | 1908.467   | 13.5945    | 63.7400 | 56.691  | 4.100092+06 | 1.1999 |
|        |        | 2.223133+04 | 1985.600   | 14.051     | 64.067  | 10.0266 | 2.2031      | 1.2000 |

ALTITUDE = 110000. FT.

P1 = 7.011179-03 ATM. , RHO1 = 8.244355-03 AMA. , T1 = 232.44 K  
S1/R = 27.987 , A1 = 1003.03 FT./SEC. , H1/R = 813.525 K

| U1     | M1     | H0/H1       | P0/P1       | R0/R1       | T0/T1   | A0/AA  | Z0          | GAME0  |
|--------|--------|-------------|-------------|-------------|---------|--------|-------------|--------|
|        |        | HS/H1       | PS/P1       | RS/R1       | TS/T1   | SS/R   | RE/FT.      | GAMES  |
|        |        | Q RT RN     | POP/P1      | ROP/R1      | TOP/T1  | AOP/AA | ZOP         | GAMEOP |
| 6000.  | 5.982  | 8.157       | 1.898469+03 | 2.569349+02 | 7.358   | 2.4116 | 1.0030      | 1.2966 |
|        |        | 7.952       | 42.657      | 5.9174      | 7.1996  | 31.688 | 3.952204+05 | 1.2942 |
|        |        | 5.487480+01 | 47.061      | 6.385       | 7.362   | 2.4044 | 1.0001      | 1.2919 |
| 7000.  | 6.979  | 10.741      | 5.604350+03 | 5.958411+02 | 9.328   | 2.7014 | 1.0071      | 1.2781 |
|        |        | 10.503      | 58.565      | 6.3978      | 9.1372  | 32.467 | 4.610905+05 | 1.2611 |
|        |        | 8.958809+01 | 64.077      | 6.871       | 9.307   | 2.6683 | 1.0008      | 1.2577 |
| 8000.  | 7.976  | 13.723      | 1.518426+04 | 1.305016+03 | 11.438  | 2.9907 | 1.0160      | 1.2663 |
|        |        | 13.461      | 77.326      | 6.9707      | 11.0157 | 33.214 | 5.269605+05 | 1.2100 |
|        |        | 1.364309+02 | 83.953      | 7.462       | 11.165  | 2.8711 | 1.0065      | 1.2068 |
| 9000.  | 8.973  | 17.102      | 3.819724+04 | 2.706221+03 | 13.629  | 3.2972 | 1.0343      | 1.2687 |
|        |        | 16.831      | 99.157      | 7.7117      | 12.5736 | 33.960 | 5.928306+05 | 1.1739 |
|        |        | 1.967842+02 | 106.720     | 8.211       | 12.694  | 3.0423 | 1.0227      | 1.1730 |
| 10000. | 9.970  | 20.879      | 8.976400+04 | 5.279550+03 | 15.898  | 3.6533 | 1.0682      | 1.2931 |
|        |        | 20.605      | 123.893     | 8.5189      | 13.8741 | 34.728 | 6.587006+05 | 1.1639 |
|        |        | 2.722469+02 | 132.313     | 9.014       | 13.982  | 3.2209 | 1.0486      | 1.1642 |
| 11000. | 10.967 | 25.054      | 1.965084+05 | 9.579231+03 | 18.237  | 4.0890 | 1.1235      | 1.3426 |
|        |        | 24.774      | 151.315     | 9.2756      | 15.0867 | 35.523 | 7.245707+05 | 1.1672 |
|        |        | 3.643761+02 | 160.635     | 9.763       | 15.192  | 3.4159 | 1.0818      | 1.1682 |
| 12000. | 11.964 | 29.626      | .000000+00  | .000000+00  | .000    | .0000  | .0000       | .0000  |
|        |        | 29.334      | 181.239     | 9.8951      | 16.3682 | 36.340 | 7.904408+05 | 1.1824 |
|        |        | 4.758109+02 | 191.616     | 10.372      | 16.484  | 3.6442 | 1.1195      | 1.1840 |
| 13000. | 12.961 | 34.596      | .000000+00  | .000000+00  | .000    | .0000  | .0000       | .0000  |
|        |        | 34.278      | 213.403     | 10.2738     | 17.9509 | 37.166 | 8.563108+05 | 1.2131 |
|        |        | 6.087333+02 | 225.124     | 10.736      | 18.096  | 3.9331 | 1.1573      | 1.2152 |
| 14000. | 13.958 | 39.964      | .000000+00  | .000000+00  | .000    | .0000  | .0000       | .0000  |
|        |        | 39.600      | 247.563     | 10.3626     | 20.1057 | 37.973 | 9.221809+05 | 1.2348 |
|        |        | 7.673217+02 | 261.051     | 10.818      | 20.289  | 4.2522 | 1.1880      | 1.2342 |
| 15000. | 14.955 | 45.729      | .000000+00  | .000000+00  | .000    | .0000  | .0000       | .0000  |
|        |        | 45.320      | 284.346     | 10.4653     | 22.4077 | 38.748 | 9.880510+05 | 1.2029 |
|        |        | 9.534398+02 | 299.630     | 10.931      | 22.581  | 4.4702 | 1.2124      | 1.2008 |

ALTITUDE = 110000. FT.

P1 = 7.011179-03 ATM. , RHO1 = 8.244355-03 AMA. , T1 = 232.44 K  
 S1/R = 27.987 , A1 = 1003.03 FT./SEC. , H1/R = 813.525 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 1600C. | 15.952 | 51.891<br>51.452<br>1.167600+03   | .000000+00<br>324.329<br>341.310   | .000000+00<br>10.7632<br>11.242 | .000<br>24.3062<br>24.457 | .0000<br>39.503<br>4.6472 | .0000<br>1.053921+06<br>1.2399 | .0000<br>1.1726<br>1.1718 |
| 17000. | 16.949 | 58.451<br>57.992<br>1.410579+03   | .000000+00<br>367.429<br>385.868   | .000000+00<br>11.1879<br>11.671 | .000<br>25.8264<br>25.961 | .0000<br>40.260<br>4.8200 | .0000<br>1.119791+06<br>1.2719 | .0000<br>1.1577<br>1.1575 |
| 18000. | 17.946 | 65.409<br>64.935<br>1.686699+03   | .000000+00<br>413.445<br>433.261   | .000000+00<br>11.6617<br>12.146 | .000<br>27.1124<br>27.238 | .0000<br>41.025<br>4.9927 | .0000<br>1.185661+06<br>1.3081 | .0000<br>1.1510<br>1.1511 |
| 19000. | 18.943 | 72.764<br>72.278<br>1.995661+03   | .000000+00<br>462.261<br>483.390   | .000000+00<br>12.1447<br>12.627 | .000<br>28.2541<br>28.373 | .0000<br>41.805<br>5.1664 | .0000<br>1.251531+06<br>1.3476 | .0000<br>1.1483<br>1.1485 |
| 20000. | 19.940 | 80.517<br>80.018<br>2.341521+03   | .000000+00<br>513.809<br>536.348   | .000000+00<br>12.6166<br>13.097 | .000<br>29.3035<br>29.419 | .0000<br>42.602<br>5.3416 | .0000<br>1.317401+06<br>1.3903 | .0000<br>1.1474<br>1.1477 |
| 21000. | 20.937 | 88.668<br>88.154<br>2.724134+03   | .000000+00<br>568.046<br>591.967   | .000000+00<br>13.0655<br>13.543 | .000<br>30.2940<br>30.408 | .0000<br>43.416<br>5.5208 | .0000<br>1.383271+06<br>1.4357 | .0000<br>1.1482<br>1.1486 |
| 22000. | 21.934 | 97.216<br>96.687<br>3.149065+03   | .000000+00<br>624.934<br>650.382   | .000000+00<br>13.4827<br>13.959 | .000<br>31.2525<br>31.366 | .0000<br>44.247<br>5.7042 | .0000<br>1.449141+06<br>1.4837 | .0000<br>1.1500<br>1.1503 |
| 23000. | 22.931 | 106.162<br>105.614<br>3.614952+03 | .000000+00<br>684.447<br>711.437   | .000000+00<br>13.8635<br>14.336 | .000<br>32.1970<br>32.311 | .0000<br>45.095<br>5.8930 | .0000<br>1.515011+06<br>1.5340 | .0000<br>1.1523<br>1.1527 |
| 24000. | 23.928 | 115.505<br>114.937<br>4.127253+03 | .000000+00<br>746.553<br>775.199   | .000000+00<br>14.2028<br>14.673 | .000<br>33.1487<br>33.266 | .0000<br>45.959<br>6.0899 | .0000<br>1.580882+06<br>1.5863 | .0000<br>1.1559<br>1.1563 |
| 25000. | 24.924 | 125.246<br>124.655<br>4.688027+03 | .000000+00<br>811.218<br>841.615   | .000000+00<br>14.4961<br>14.963 | .000<br>34.1261<br>34.246 | .0000<br>46.836<br>6.2942 | .0000<br>1.646752+06<br>1.6404 | .0000<br>1.1597<br>1.1602 |
| 26000. | 25.921 | 135.384<br>134.766<br>5.303047+03 | .000000+00<br>878.400<br>910.721   | .000000+00<br>14.7382<br>15.202 | .000<br>35.1550<br>35.281 | .0000<br>47.725<br>6.5113 | .0000<br>1.712622+06<br>1.6959 | .0000<br>1.1651<br>1.1657 |
| 27000. | 26.918 | 145.921<br>145.269<br>5.978633+03 | .000000+00<br>948.033<br>982.527   | .000000+00<br>14.9206<br>15.383 | .000<br>36.2713<br>36.406 | .0000<br>48.623<br>6.7428 | .0000<br>1.778492+06<br>1.7523 | .0000<br>1.1718<br>1.1725 |
| 28000. | 27.915 | 156.854<br>156.164<br>6.715363+03 | .000000+00<br>1020.026<br>1056.900 | .000000+00<br>15.0321<br>15.491 | .000<br>37.5266<br>37.676 | .0000<br>49.527<br>6.9975 | .0000<br>1.844362+06<br>1.8087 | .0000<br>1.1814<br>1.1822 |
| 29000. | 28.912 | 168.185<br>167.448<br>7.524192+03 | .000000+00<br>1094.239<br>1133.797 | .000000+00<br>15.0563<br>15.511 | .000<br>39.0018<br>39.172 | .0000<br>50.431<br>7.2827 | .0000<br>1.910232+06<br>1.8638 | .0000<br>1.1940<br>1.1951 |

## ALTITUDE = 110000. FT.

P1 = 7.011179-03 ATM. , RH01 = 8.244355-03 AMA. , T1 = 232.44 K  
 S1/R = 27.987 , A1 = 1003.03 FT./SEC. , H1/R = 813.525 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 30000. | 29.909 | 179.914<br>179.116<br>8.412083+03 | .000000+00<br>1170.450<br>1213.049 | .000000+00<br>14.9690<br>15.417 | .000<br>40.8290<br>41.032 | .0000<br>51.328<br>7.6119  | .0000<br>1.976102+06<br>1.9153 | .0000<br>1.2117<br>1.2130 |
| 31000. | 30.906 | 192.041<br>191.163<br>9.402975+03 | .000000+00<br>1248.419<br>1294.512 | .000000+00<br>14.7557<br>15.196 | .000<br>43.1621<br>43.409 | .0000<br>52.208<br>7.9835  | .0000<br>2.041972+06<br>1.9600 | .0000<br>1.2314<br>1.2325 |
| 32000. | 31.903 | 204.565<br>203.591<br>1.043858+04 | .000000+00<br>1328.214<br>1378.317 | .000000+00<br>14.4591<br>14.897 | .000<br>45.9937<br>46.279 | .0000<br>53.062<br>8.3454  | .0000<br>2.107842+06<br>1.9968 | .0000<br>1.2399<br>1.2399 |
| 33000. | 32.900 | 217.486<br>216.409<br>1.152254+04 | .000000+00<br>1410.396<br>1464.777 | .000000+00<br>14.1852<br>14.628 | .000<br>48.9879<br>49.287 | .0000<br>53.886<br>8.6531  | .0000<br>2.173712+06<br>2.0293 | .0000<br>1.2322<br>1.2317 |
| 34000. | 33.897 | 230.805<br>229.632<br>1.265902+04 | .000000+00<br>1495.621<br>1554.108 | .000000+00<br>13.9981<br>14.446 | .000<br>51.8099<br>52.110 | .0000<br>54.684<br>8.9243  | .0000<br>2.239582+06<br>2.0621 | .0000<br>1.2197<br>1.2194 |
| 35000. | 34.894 | 244.522<br>243.260<br>1.380908+04 | .000000+00<br>1583.914<br>1646.391 | .000000+00<br>13.8930<br>14.345 | .000<br>54.3642<br>54.661 | .0000<br>55.463<br>9.1795  | .0000<br>2.305452+06<br>2.0972 | .0000<br>1.2096<br>1.2093 |
| 36000. | 35.891 | 258.636<br>257.292<br>1.500571+04 | .000000+00<br>1675.205<br>1741.585 | .000000+00<br>13.8466<br>14.301 | .000<br>56.6759<br>56.971 | .0000<br>56.229<br>9.4277  | .0000<br>2.371322+06<br>2.1349 | .0000<br>1.2025<br>1.2023 |
| 37000. | 36.888 | 273.148<br>271.726<br>1.623689+04 | .000000+00<br>1769.395<br>1839.612 | .000000+00<br>13.8392<br>14.296 | .000<br>58.7930<br>59.087 | .0000<br>56.986<br>9.6732  | .0000<br>2.437192+06<br>2.1751 | .0000<br>1.1976<br>1.1978 |
| 38000. | 37.885 | 288.058<br>286.563<br>1.746969+04 | .000000+00<br>1866.539<br>1940.455 | .000000+00<br>13.8573<br>14.315 | .000<br>60.7596<br>61.055 | .0000<br>57.738<br>9.9176  | .0000<br>2.503062+06<br>2.2175 | .0000<br>1.1962<br>1.1953 |
| 39000. | 38.882 | 303.365<br>301.798<br>1.872937+04 | .000000+00<br>1966.377<br>2044.039 | .000000+00<br>13.8903<br>14.349 | .000<br>62.6089<br>62.906 | .0000<br>58.485<br>10.1588 | .0000<br>2.568933+06<br>2.2619 | .0000<br>1.1931<br>1.1933 |

## ALTITUDE = 120000. FT.

P1 = 4.537017-03 ATM. , RH01 = 5.148064-03 AMA. , T1 = 240.88 K  
 S1/R = 28.548 , A1 = 1021.08 FT./SEC. , H1/R = 843.069 K

| U1    | M1    | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1        | RO/R1<br>RS/R1<br>ROP/R1       | TO/T1<br>TS/T1<br>TOP/T1 | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|---------------------------------|--------------------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 5.876 | 7.906<br>7.707<br>4.361532+01   | 1.706406+03<br>41.167<br>45.434 | 2.386370+02<br>5.8957<br>6.363 | 7.130<br>6.9738<br>7.131 | 2.4131<br>32.175<br>2.4084 | 1.0017<br>2.396644+05<br>1.0001 | 1.2945<br>1.2936<br>1.2912 |
| 7000. | 6.855 | 10.400<br>10.169<br>7.108719+01 | 5.027493+03<br>56.530<br>61.859 | 5.536907+02<br>6.3869<br>6.862 | 9.031<br>8.8333<br>8.995 | 2.6972<br>32.951<br>2.6668 | 1.0042<br>2.796084+05<br>1.0010 | 1.2735<br>1.2577<br>1.2539 |

ALTITUDE = 120000. FT.

P1 = 4.537017-03 ATM. , RH01 = 5.148064-03 AMA. , T1 = 240.88 K  
 S1/R = 28.548 , A1 = 1021.08 FT./SEC. , H1/R = 843.069 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOF   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 8000.  | 7.835  | 13.277<br>13.026<br>1.081101+02 | 1.364104+04<br>74.696<br>81.064   | 1.219320+03<br>6.9938<br>7.487   | 11.065<br>10.5934<br>10.731 | 2.9738<br>33.699<br>2.8591 | 1.0098<br>3.195525+05<br>1.0078 | 1.2564<br>1.2031<br>1.2000 |
| 9000.  | 8.814  | 16.538<br>16.281<br>1.557580+02 | 3.452785+04<br>95.836<br>103.071  | 2.561692+03<br>7.7773<br>8.278   | 13.171<br>12.0165<br>12.126 | 3.2559<br>34.452<br>3.0246 | 1.0221<br>3.594965+05<br>1.0256 | 1.2502<br>1.1686<br>1.1678 |
| 10000. | 9.794  | 20.183<br>19.924<br>2.153049+02 | 8.220798+04<br>119.772<br>127.807 | 5.115227+03<br>8.6203<br>9.117   | 15.351<br>13.2001<br>13.298 | 3.5729<br>35.231<br>3.1987 | 1.0457<br>3.994406+05<br>1.0530 | 1.2625<br>1.1598<br>1.1601 |
| 11000. | 10.773 | 24.211<br>23.949<br>2.879518+02 | 1.838430+05<br>146.285<br>155.176 | 9.604850+03<br>9.4038<br>9.892   | 17.616<br>14.3129<br>14.409 | 3.9521<br>36.041<br>3.3907 | 1.0852<br>4.393846+05<br>1.0873 | 1.2970<br>1.1640<br>1.1650 |
| 12000. | 11.752 | 28.623<br>28.349<br>3.757564+02 | 3.847646+05<br>175.197<br>185.048 | 1.678479+04<br>10.0364<br>10.512 | 19.990<br>15.5098<br>15.616 | 4.4148<br>36.876<br>3.6188 | 1.1453<br>4.793287+05<br>1.1259 | 1.3515<br>1.1808<br>1.1825 |
| 13000. | 12.732 | 33.419<br>33.119<br>4.808109+02 | .000000+00<br>206.233<br>217.418  | .000000+00<br>10.4030<br>10.865  | .000<br>17.0353<br>17.173   | .0000<br>37.718<br>3.9147  | .0000<br>5.192727+05<br>1.1639  | .0000<br>1.2149<br>1.2172  |
| 14000. | 13.711 | 38.598<br>38.254<br>6.062128+02 | .000000+00<br>239.147<br>252.052  | .000000+00<br>10.4549<br>10.910  | .000<br>19.1653<br>19.339   | .0000<br>38.540<br>4.2337  | .0000<br>5.592168+05<br>1.1932  | .0000<br>1.2345<br>1.2332  |
| 15000. | 14.690 | 44.161<br>43.775<br>7.530808+02 | .000000+00<br>274.701<br>289.329  | .000000+00<br>10.5697<br>11.039  | .000<br>21.3522<br>21.511   | .0000<br>39.325<br>4.4380  | .0000<br>5.991609+05<br>1.2170  | .0000<br>1.1965<br>1.1944  |
| 16000. | 15.670 | 50.108<br>49.694<br>9.214817+02 | .000000+00<br>313.404<br>329.561  | .000000+00<br>10.9015<br>11.382  | .000<br>23.0955<br>23.231   | .0000<br>40.093<br>4.6089  | .0000<br>6.391049+05<br>1.2449  | .0000<br>1.1670<br>1.1660  |
| 17000. | 16.649 | 56.438<br>56.008<br>1.113119+03 | .000000+00<br>355.102<br>372.613  | .000000+00<br>11.3563<br>11.841  | .000<br>24.4813<br>24.602   | .0000<br>40.864<br>4.7774  | .0000<br>6.790490+05<br>1.2776  | .0000<br>1.1530<br>1.1528  |
| 18000. | 17.628 | 63.152<br>62.710<br>1.330508+03 | .000000+00<br>399.603<br>418.347  | .000000+00<br>11.8557<br>12.339  | .000<br>25.6535<br>25.766   | .0000<br>41.646<br>4.9465  | .0000<br>7.189930+05<br>1.3143  | .0000<br>1.1470<br>1.1471  |
| 19000. | 18.608 | 70.250<br>69.796<br>1.573574+03 | .000000+00<br>446.796<br>466.819  | .000000+00<br>12.3610<br>12.844  | .000<br>26.6959<br>26.803   | .0000<br>42.445<br>5.1160  | .0000<br>7.589371+05<br>1.3544  | .0000<br>1.1444<br>1.1446  |
| 20000. | 19.587 | 77.731<br>77.266<br>1.846676+03 | .000000+00<br>496.622<br>517.959  | .000000+00<br>12.8529<br>13.334  | .000<br>27.6549<br>27.759   | .0000<br>43.261<br>5.2879  | .0000<br>7.988811+05<br>1.3977  | .0000<br>1.1439<br>1.1442  |
| 21000. | 20.566 | 85.596<br>85.119<br>2.148832+03 | .000000+00<br>549.041<br>571.721  | .000000+00<br>13.3196<br>13.799  | .000<br>28.5628<br>28.665   | .0000<br>44.097<br>5.4632  | .0000<br>8.388252+05<br>1.4437  | .0000<br>1.1447<br>1.1450  |

ALTITUDE = 120000. FT.

P1 = 4.537017-03 ATM. , RHO1 = 5.148064-03 AMA. , T1 = 240.88 K  
 S1/R = 28.548 , A1 = 1021.08 FT./SEC. , H1/R = 843.069 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 22000. | 21.546 | 93.844<br>93.353<br>2.482774+03   | .000000+00<br>604.021<br>628.050   | .000000+00<br>13.7537<br>14.230 | .000<br>29.4407<br>29.543 | .0000<br>44.951<br>5.6435 | .0000<br>8.787693+05<br>1.4922 | .0000<br>1.1465<br>1.1469 |
| 23000. | 22.525 | 102.477<br>101.970<br>2.851001+03 | .000000+00<br>661.530<br>687.037   | .000000+00<br>14.1486<br>14.622 | .000<br>30.3104<br>30.413 | .0000<br>45.822<br>5.8287 | .0000<br>9.187133+05<br>1.5431 | .0000<br>1.1489<br>1.1493 |
| 24000. | 23.505 | 111.492<br>110.967<br>3.253753+03 | .000000+00<br>721.546<br>748.588   | .000000+00<br>14.5006<br>14.971 | .000<br>31.1869<br>31.292 | .0000<br>46.711<br>6.0221 | .0000<br>9.586574+05<br>1.5960 | .0000<br>1.1523<br>1.1528 |
| 25000. | 24.484 | 120.892<br>120.345<br>3.693954+03 | .000000+00<br>784.030<br>812.760   | .000000+00<br>14.8039<br>15.271 | .000<br>32.0928<br>32.201 | .0000<br>47.613<br>6.2246 | .0000<br>9.986014+05<br>1.6508 | .0000<br>1.1567<br>1.1571 |
| 26000. | 25.463 | 130.675<br>130.103<br>4.175360+03 | .000000+00<br>848.940<br>879.466   | .000000+00<br>15.0526<br>15.517 | .000<br>33.0505<br>33.164 | .0000<br>48.529<br>6.4384 | .0000<br>1.038545+06<br>1.7069 | .0000<br>1.1620<br>1.1626 |
| 27000. | 26.443 | 140.842<br>140.240<br>4.701808+03 | .000000+00<br>916.212<br>948.807   | .000000+00<br>15.2377<br>15.700 | .000<br>34.0972<br>34.220 | .0000<br>49.453<br>6.6697 | .0000<br>1.078490+06<br>1.7639 | .0000<br>1.1693<br>1.1700 |
| 28000. | 27.422 | 151.393<br>150.754<br>5.280730+03 | .000000+00<br>985.748<br>1020.637  | .000000+00<br>15.3456<br>15.805 | .000<br>35.2875<br>35.423 | .0000<br>50.384<br>6.9239 | .0000<br>1.118434+06<br>1.8208 | .0000<br>1.1791<br>1.1800 |
| 29000. | 28.401 | 162.327<br>161.642<br>5.915916+03 | .000000+00<br>1057.386<br>1094.816 | .000000+00<br>15.3544<br>15.809 | .000<br>36.7138<br>36.871 | .0000<br>51.313<br>7.2138 | .0000<br>1.158378+06<br>1.8760 | .0000<br>1.1933<br>1.1944 |
| 30000. | 29.381 | 173.645<br>172.900<br>6.613143+03 | .000000+00<br>1130.825<br>1171.253 | .000000+00<br>15.2355<br>15.683 | .000<br>38.5189<br>38.711 | .0000<br>52.234<br>7.5541 | .0000<br>1.198322+06<br>1.9270 | .0000<br>1.2134<br>1.2145 |
| 31000. | 30.360 | 185.346<br>184.524<br>7.390123+03 | .000000+00<br>1206.003<br>1249.807 | .000000+00<br>14.9777<br>15.417 | .000<br>40.8626<br>41.098 | .0000<br>53.135<br>7.9348 | .0000<br>1.238266+06<br>1.9702 | .0000<br>1.2335<br>1.2344 |
| 32000. | 31.339 | 197.431<br>196.514<br>8.210931+03 | .000000+00<br>1282.875<br>1330.637 | .000000+00<br>14.6475<br>15.087 | .000<br>43.6647<br>43.931 | .0000<br>54.006<br>8.2861 | .0000<br>1.278210+06<br>2.0053 | .0000<br>1.2379<br>1.2374 |
| 33000. | 32.319 | 209.900<br>208.889<br>9.053128+03 | .000000+00<br>1362.399<br>1414.137 | .000000+00<br>14.3750<br>14.819 | .000<br>46.5097<br>46.783 | .0000<br>54.845<br>8.5779 | .0000<br>1.318154+06<br>2.0374 | .0000<br>1.2262<br>1.2256 |
| 34000. | 33.298 | 222.752<br>221.654<br>9.935625+03 | .000000+00<br>1444.891<br>1500.484 | .000000+00<br>14.2049<br>14.654 | .000<br>49.1141<br>49.384 | .0000<br>55.659<br>8.8378 | .0000<br>1.358098+06<br>2.0709 | .0000<br>1.2129<br>1.2125 |
| 35000. | 34.277 | 235.988<br>234.810<br>1.082876+04 | .000000+00<br>1530.370<br>1589.654 | .000000+00<br>14.1189<br>14.572 | .000<br>51.4405<br>51.707 | .0000<br>56.454<br>9.0875 | .0000<br>1.398042+06<br>2.1072 | .0000<br>1.2038<br>1.2033 |

ALTITUDE = 120000. FT.

P1 = 4.537017-03 ATM. , RH01 = 5.148064-03 AMA. , T1 = 240.88 K  
 S1/R = 28.548 , A1 = 1021.08 FT./SEC. , H1/R = 843.069 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 36000. | 35.257 | 249.608<br>248.354<br>1.175779+04 | .000000+00<br>1618.670<br>1681.638 | .000000+00<br>14.0894<br>14.546 | .000<br>53.5352<br>53.799 | .0000<br>57.238<br>9.3284  | .0000<br>1.437986+06<br>2.1463 | .0000<br>1.1964<br>1.1964 |
| 37000. | 36.236 | 263.612<br>262.289<br>1.271824+04 | .000000+00<br>1709.895<br>1776.385 | .000000+00<br>14.0972<br>14.556 | .000<br>55.4514<br>55.714 | .0000<br>58.014<br>9.5685  | .0000<br>1.477930+06<br>2.1879 | .0000<br>1.1923<br>1.1925 |
| 38000. | 37.215 | 277.999<br>276.609<br>1.370980+04 | .000000+00<br>1803.769<br>1873.788 | .000000+00<br>14.1273<br>14.587 | .000<br>57.2295<br>57.493 | .0000<br>58.786<br>9.8033  | .0000<br>1.517874+06<br>2.2317 | .0000<br>1.1897<br>1.1891 |
| 39000. | 38.195 | 292.769<br>291.316<br>1.469515+04 | .000000+00<br>1900.422<br>1973.874 | .000000+00<br>14.1710<br>14.631 | .000<br>58.9035<br>59.168 | .0000<br>59.555<br>10.0437 | .0000<br>1.557818+06<br>2.2774 | .0000<br>1.1886<br>1.1885 |
| 40000. | 39.174 | 307.924<br>306.406<br>1.573125+04 | .000000+00<br>1999.622<br>2076.634 | .000000+00<br>14.2223<br>14.682 | .000<br>60.4945<br>60.762 | .0000<br>60.322<br>10.2829 | .0000<br>1.597762+06<br>2.3250 | .0000<br>1.1880<br>1.1883 |

ALTITUDE = 130000. FT.

P1 = 2.981479-03 ATM. , RH01 = 3.268594-03 AMA. , T1 = 249.31 K  
 S1/R = 29.087 , A1 = 1038.80 FT./SEC. , H1/R = 872.585 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.776  | 7.672<br>7.479<br>3.495457+01   | 1.541165+03<br>39.780<br>43.920   | 2.223344+02<br>5.8742<br>6.342   | 6.916<br>6.7633<br>6.916    | 2.4158<br>32.646<br>2.4122 | 1.0010<br>1.479655+05<br>1.0001 | 1.2930<br>1.2929<br>1.2904 |
| 7000.  | 6.739  | 10.082<br>9.858<br>5.687626+01  | 4.528496+03<br>54.637<br>59.794   | 5.154890+02<br>6.3776<br>6.854   | 8.752<br>8.5483<br>8.703    | 2.6957<br>33.419<br>2.6643 | 1.0025<br>1.726264+05<br>1.0012 | 1.2703<br>1.2539<br>1.2496 |
| 8000.  | 7.701  | 12.862<br>12.621<br>8.637988+01 | 1.228766+04<br>72.248<br>78.377   | 1.138684+03<br>7.0205<br>7.516   | 10.709<br>10.1939<br>10.321 | 2.9630<br>34.168<br>2.8465 | 1.0064<br>1.972874+05<br>1.0092 | 1.2494<br>1.1963<br>1.1933 |
| 9000.  | 8.664  | 16.012<br>15.768<br>1.243098+02 | 3.121678+04<br>92.746<br>99.670   | 2.413258+03<br>7.8460<br>8.347   | 12.722<br>11.4946<br>11.595 | 3.2284<br>34.927<br>3.0071 | 1.0155<br>2.219483+05<br>1.0286 | 1.2374<br>1.1638<br>1.1630 |
| 10000. | 9.626  | 19.534<br>19.290<br>1.716853+02 | 7.498804+04<br>115.930<br>123.601 | 4.898367+03<br>8.7224<br>9.219   | 14.800<br>12.5761<br>12.665 | 3.5184<br>35.718<br>3.1773 | 1.0331<br>2.466092+05<br>1.0573 | 1.2418<br>1.1560<br>1.1564 |
| 11000. | 10.589 | 23.426<br>23.179<br>2.294888+02 | 1.702982+05<br>141.593<br>150.053 | 9.432960+03<br>9.5308<br>10.019  | 16.969<br>13.6024<br>13.690 | 3.8569<br>36.544<br>3.3665 | 1.0626<br>2.712701+05<br>1.0927 | 1.2654<br>1.1611<br>1.1621 |
| 12000. | 11.552 | 27.689<br>27.431<br>2.992566+02 | 3.644333+05<br>169.558<br>178.975 | 1.705266+04<br>10.1751<br>10.652 | 19.269<br>14.7259<br>14.825 | 4.2660<br>37.396<br>3.5949 | 1.1077<br>2.959310+05<br>1.1320 | 1.3078<br>1.1794<br>1.1812 |

ALTITUDE = 130000. FT.

P1 = 2.981479-03 ATM. , RH01 = 3.268594-03 AMA. , T1 = 249.31 K  
 S1/R = 29.087 , A1 = 1038.80 FT./SEC. , H1/R = 872.585 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 13000. | 12.514 | 32.322<br>32.039<br>3.828767+02   | 7.320139+05<br>199.544<br>210.198 | 2.879644+04<br>10.5247<br>10.984 | 21.673<br>16.2077<br>16.339 | 4.7579<br>38.255<br>3.8990 | 1.1715<br>3.205920+05<br>1.1699 | 1.3676<br>1.2175<br>1.2199 |
| 14000. | 13.477 | 37.326<br>36.999<br>4.829789+02   | .000000+00<br>231.286<br>243.667  | .000000+00<br>10.5393<br>10.995  | .000<br>18.3165<br>18.481   | .0000<br>39.088<br>4.2153  | .0000<br>3.452529+05<br>1.1978  | .0000<br>1.2332<br>1.2313  |
| 15000. | 14.440 | 42.701<br>42.335<br>5.999435+02   | .000000+00<br>265.712<br>279.731  | .000000+00<br>10.6734<br>11.145  | .000<br>20.3832<br>20.528   | .0000<br>39.883<br>4.4062  | .0000<br>3.699138+05<br>1.2212  | .0000<br>1.1889<br>1.1879  |
| 16000. | 15.402 | 48.447<br>48.057<br>7.332287+02   | .000000+00<br>303.217<br>318.603  | .000000+00<br>11.0391<br>11.520  | .000<br>21.9841<br>22.107   | .0000<br>40.664<br>4.5726  | .0000<br>3.945747+05<br>1.2495  | .0000<br>1.1618<br>1.1610  |
| 17000. | 16.365 | 54.563<br>54.159<br>8.857542+02   | .000000+00<br>343.602<br>360.252  | .000000+00<br>11.5226<br>12.007  | .000<br>23.2518<br>23.361   | .0000<br>41.449<br>4.7370  | .0000<br>4.192356+05<br>1.2828  | .0000<br>1.1487<br>1.1485  |
| 18000. | 17.328 | 61.050<br>60.636<br>1.057713+03   | .000000+00<br>386.682<br>404.547  | .000000+00<br>12.0467<br>12.532  | .000<br>24.3235<br>24.425   | .0000<br>42.249<br>4.9020  | .0000<br>4.438966+05<br>1.3201  | .0000<br>1.1430<br>1.1432  |
| 19000. | 18.290 | 67.907<br>67.484<br>1.251496+03   | .000000+00<br>432.358<br>451.417  | .000000+00<br>12.5737<br>13.058  | .000<br>25.2775<br>25.374   | .0000<br>43.065<br>5.0683  | .0000<br>4.685575+05<br>1.3608  | .0000<br>1.1410<br>1.1412  |
| 20000. | 19.253 | 75.135<br>74.702<br>1.466926+03   | .000000+00<br>480.574<br>500.808  | .000000+00<br>13.0847<br>13.566  | .000<br>26.1583<br>26.252   | .0000<br>43.901<br>5.2369  | .0000<br>4.932184+05<br>1.4045  | .0000<br>1.1406<br>1.1409  |
| 21000. | 20.216 | 82.734<br>82.290<br>1.708130+03   | .000000+00<br>531.292<br>552.825  | .000000+00<br>13.5686<br>14.049  | .000<br>26.9933<br>27.085   | .0000<br>44.758<br>5.4087  | .0000<br>5.178793+05<br>1.4510  | .0000<br>1.1414<br>1.1417  |
| 22000. | 21.178 | 90.704<br>90.247<br>1.973198+03   | .000000+00<br>584.486<br>607.306  | .000000+00<br>14.0183<br>14.496  | .000<br>27.8026<br>27.894   | .0000<br>45.634<br>5.5854  | .0000<br>5.425402+05<br>1.5001  | .0000<br>1.1432<br>1.1436  |
| 23000. | 22.141 | 99.044<br>98.573<br>2.265664+03   | .000000+00<br>640.127<br>664.258  | .000000+00<br>14.4278<br>14.901  | .000<br>28.6039<br>28.696   | .0000<br>46.528<br>5.7685  | .0000<br>5.672011+05<br>1.5516  | .0000<br>1.1460<br>1.1464  |
| 24000. | 23.104 | 107.755<br>107.267<br>2.586707+03 | .000000+00<br>698.188<br>723.805  | .000000+00<br>14.7916<br>15.263  | .000<br>29.4165<br>29.511   | .0000<br>47.440<br>5.9581  | .0000<br>5.918621+05<br>1.6051  | .0000<br>1.1492<br>1.1496  |
| 25000. | 24.066 | 116.837<br>116.329<br>2.936830+03 | .000000+00<br>758.636<br>785.817  | .000000+00<br>15.1049<br>15.573  | .000<br>30.2568<br>30.355   | .0000<br>48.368<br>6.1580  | .0000<br>6.165230+05<br>1.6604  | .0000<br>1.1536<br>1.1541  |
| 26000. | 25.029 | 126.289<br>125.758<br>3.318184+03 | .000000+00<br>821.425<br>850.342  | .000000+00<br>15.3598<br>15.825  | .000<br>31.1532<br>31.256   | .0000<br>49.309<br>6.3703  | .0000<br>6.411839+05<br>1.7171  | .0000<br>1.1593<br>1.1598  |

ALTITUDE = 130000. FT.

P1 = 2.981479-03 ATM. , RHO1 = 3.268594-03 AMA. , T1 = 249.31 K  
 S1/R = 29.087 , A1 = 1038.80 FT./SEC. , H1/R = 872.585 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 27000. | 25.992 | 136.112<br>135.553<br>3.735384+03 | .000000+00<br>886.491<br>917.355   | .000000+00<br>15.5471<br>16.010 | .000<br>32.1381<br>32.249 | .0000<br>50.260<br>6.5998  | .0000<br>6.658448+05<br>1.7746 | .0000<br>1.1667<br>1.1674 |
| 28000. | 26.954 | 146.305<br>145.712<br>4.191486+03 | .000000+00<br>953.727<br>986.777   | .000000+00<br>15.6497<br>16.109 | .000<br>33.2732<br>33.398 | .0000<br>51.215<br>6.8555  | .0000<br>6.905057+05<br>1.8319 | .0000<br>1.1774<br>1.1782 |
| 29000. | 27.917 | 156.870<br>156.233<br>4.694917+03 | .000000+00<br>1022.961<br>1058.467 | .000000+00<br>15.6420<br>16.096 | .000<br>34.6562<br>34.803 | .0000<br>52.170<br>7.1518  | .0000<br>7.151667+05<br>1.8872 | .0000<br>1.1934<br>1.1945 |
| 30000. | 28.879 | 167.805<br>167.108<br>5.252005+03 | .000000+00<br>1093.862<br>1132.265 | .000000+00<br>15.4883<br>15.934 | .000<br>36.4497<br>36.631 | .0000<br>53.114<br>7.5028  | .0000<br>7.398276+05<br>1.9375 | .0000<br>1.2151<br>1.2166 |
| 31000. | 29.842 | 179.110<br>178.338<br>5.863181+03 | .000000+00<br>1166.365<br>1208.087 | .000000+00<br>15.1820<br>15.620 | .000<br>38.8105<br>39.034 | .0000<br>54.035<br>7.8901  | .0000<br>7.644885+05<br>1.9790 | .0000<br>1.2355<br>1.2361 |
| 32000. | 30.805 | 190.787<br>189.923<br>6.516642+03 | .000000+00<br>1240.633<br>1286.188 | .000000+00<br>14.8265<br>15.266 | .000<br>41.5614<br>41.809 | .0000<br>54.921<br>8.2277  | .0000<br>7.891494+05<br>2.0127 | .0000<br>1.2346<br>1.2340 |
| 33000. | 31.767 | 202.834<br>201.882<br>7.179510+03 | .000000+00<br>1317.636<br>1366.979 | .000000+00<br>14.5618<br>15.008 | .000<br>44.2416<br>44.490 | .0000<br>55.774<br>8.5031  | .0000<br>8.138103+05<br>2.0449 | .0000<br>1.2199<br>1.2191 |
| 34000. | 32.730 | 215.251<br>214.221<br>7.862873+03 | .000000+00<br>1397.588<br>1450.487 | .000000+00<br>14.4112<br>14.862 | .000<br>46.6367<br>46.880 | .0000<br>56.603<br>8.7532  | .0000<br>8.384713+05<br>2.0793 | .0000<br>1.2061<br>1.2057 |
| 35000. | 33.693 | 228.040<br>226.937<br>8.563763+03 | .000000+00<br>1480.435<br>1536.786 | .000000+00<br>14.3449<br>14.800 | .000<br>48.7566<br>48.994 | .0000<br>57.415<br>8.9912  | .0000<br>8.631322+05<br>2.1168 | .0000<br>1.1962<br>1.1956 |
| 36000. | 34.655 | 241.199<br>240.030<br>9.276443+03 | .000000+00<br>1566.061<br>1625.789 | .000000+00<br>14.3325<br>14.790 | .000<br>50.6598<br>50.896 | .0000<br>58.217<br>9.2323  | .0000<br>8.877931+05<br>2.1571 | .0000<br>1.1909<br>1.1908 |
| 37000. | 35.618 | 254.729<br>253.497<br>1.001622+04 | .000000+00<br>1654.372<br>1717.440 | .000000+00<br>14.3543<br>14.814 | .000<br>52.3989<br>52.634 | .0000<br>59.012<br>9.4672  | .0000<br>9.124540+05<br>2.2000 | .0000<br>1.1872<br>1.1873 |
| 38000. | 36.581 | 268.629<br>267.337<br>1.077929+04 | .000000+00<br>1745.299<br>1811.678 | .000000+00<br>14.3967<br>14.857 | .000<br>54.0134<br>54.249 | .0000<br>59.803<br>9.7010  | .0000<br>9.371149+05<br>2.2450 | .0000<br>1.1849<br>1.1852 |
| 39000. | 37.543 | 282.900<br>281.548<br>1.155920+04 | .000000+00<br>1838.791<br>1908.474 | .000000+00<br>14.4513<br>14.912 | .000<br>55.5313<br>55.770 | .0000<br>60.593<br>9.9264  | .0000<br>9.617759+05<br>2.2921 | .0000<br>1.1830<br>1.1824 |
| 40000. | 38.506 | 297.542<br>296.133<br>1.231578+04 | .000000+00<br>1934.932<br>2007.863 | .000000+00<br>14.5117<br>14.972 | .000<br>56.9786<br>57.218 | .0000<br>61.382<br>10.1672 | .0000<br>9.864368+05<br>2.3409 | .0000<br>1.1835<br>1.1838 |

ALTITUDE = 130000. FT.

P1 = 2.981479-03 ATM. , RH01 = 3.268594-03 AMA. , T1 = 249.31 K  
 S1/R = 29.087 , A1 = 1038.80 FT./SEC. , H1/R = 872.585 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 41000. | 39.469 | 312.554<br>311.087<br>1.311518+04 | .000000+00<br>2033.474<br>2109.758 | .000000+00<br>14.5736<br>15.034 | .000<br>58.3679<br>58.610 | .0000<br>62.172<br>10.4029 | .0000<br>1.011098+06<br>2.3915 | .0000<br>1.1839<br>1.1843 |

ALTITUDE = 140000. FT.

P1 = 1.987580-03 ATM. , RH01 = 2.107755-03 AMA. , T1 = 257.73 K  
 S1/R = 29.609 , A1 = 1056.21 FT./SEC. , H1/R = 902.072 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.681  | 7.454<br>7.266<br>2.823080+01   | 1.396929+03<br>38.484<br>42.505   | 2.076022+02<br>5.8531<br>6.322   | 6.717<br>6.5667<br>6.715    | 2.4192<br>33.102<br>2.4160 | 1.0006<br>9.289231+04<br>1.0001 | 1.2921<br>1.2921<br>1.2896 |
| 7000.  | 6.627  | 9.785<br>9.568<br>4.585937+01   | 4.092368+03<br>52.874<br>57.868   | 4.806882+02<br>6.3702<br>6.848   | 8.490<br>8.2800<br>8.427    | 2.6957<br>33.872<br>2.6610 | 1.0016<br>1.083744+05<br>1.0015 | 1.2680<br>1.2495<br>1.2449 |
| 8000.  | 7.574  | 12.474<br>12.243<br>6.955160+01 | 1.109666+04<br>69.968<br>75.869   | 1.063797+03<br>7.0509<br>7.548   | 10.370<br>9.8156<br>9.932   | 2.9554<br>34.622<br>2.8335 | 1.0047<br>1.238564+05<br>1.0108 | 1.2438<br>1.1895<br>1.1866 |
| 9000.  | 8.521  | 15.522<br>15.290<br>9.998368+01 | 2.825843+04<br>89.863<br>96.498   | 2.269184+03<br>7.9169<br>8.419   | 12.288<br>11.0060<br>11.098 | 3.2083<br>35.389<br>2.9899 | 1.0122<br>1.393385+05<br>1.0316 | 1.2279<br>1.1592<br>1.1585 |
| 10000. | 9.468  | 18.928<br>18.698<br>1.379619+02 | 6.832282+04<br>112.340<br>119.664 | 4.661992+03<br>8.8249<br>9.322   | 14.257<br>11.9982<br>12.079 | 3.4798<br>36.191<br>3.1564 | 1.0267<br>1.548205+05<br>1.0614 | 1.2274<br>1.1525<br>1.1529 |
| 11000. | 10.415 | 22.693<br>22.460<br>1.843169+02 | 1.569673+05<br>137.204<br>145.260 | 9.148161+03<br>9.6561<br>10.143  | 16.319<br>12.9488<br>13.030 | 3.7900<br>37.032<br>3.3433 | 1.0502<br>1.703026+05<br>1.0978 | 1.2436<br>1.1585<br>1.1595 |
| 12000. | 11.361 | 26.816<br>26.573<br>2.401957+02 | 3.416044+05<br>164.282<br>173.280 | 1.697109+04<br>10.3113<br>10.788 | 18.526<br>14.0084<br>14.101 | 4.1597<br>37.901<br>3.5721 | 1.0852<br>1.857846+05<br>1.1377 | 1.2770<br>1.1783<br>1.1801 |
| 13000. | 12.308 | 31.298<br>31.031<br>3.073421+02 | 7.015748+05<br>193.269<br>203.474 | 2.960032+04<br>10.6381<br>11.095 | 20.869<br>15.4578<br>15.584 | 4.5950<br>38.776<br>3.8860 | 1.1344<br>2.012667+05<br>1.1753 | 1.3233<br>1.2208<br>1.2233 |
| 14000. | 13.255 | 36.139<br>35.827<br>3.878095+02 | 1.353958+06<br>223.930<br>235.812 | 4.815345+04<br>10.6171<br>11.073 | 23.391<br>17.5459<br>17.701 | 5.1137<br>39.620<br>4.1963 | 1.2006<br>2.167487+05<br>1.2017 | 1.3815<br>1.2306<br>1.2283 |
| 15000. | 14.202 | 41.338<br>40.990<br>4.816830+02 | .000000+00<br>257.312<br>270.744  | .000000+00<br>10.7763<br>11.250  | .000<br>19.4898<br>19.622   | .0000<br>40.425<br>4.3717  | .0000<br>2.322308+05<br>1.2250  | .0000<br>1.1801<br>1.1797  |
| 16000. | 15.149 | 46.896<br>46.528<br>5.889178+02 | .000000+00<br>293.694<br>308.393  | .000000+00<br>11.1758<br>11.658  | .000<br>20.9612<br>21.072   | .0000<br>41.218<br>4.5374  | .0000<br>2.477128+05<br>1.2539  | .0000<br>1.1567<br>1.1561  |

ALTITUDE = 140000. FT.

P1 = 1.987580-03 ATM. , RH01 = 2.107755-03 AMA. , T1 = 257.73 K  
 S1/R = 29.609 , A1 = 1056.21 FT./SEC. , H1/R = 902.072 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 17000. | 16.095 | 52.812<br>52.432<br>7.112143+02   | .000000+00<br>332.845<br>348.723   | .000000+00<br>11.6867<br>12.172 | .000<br>22.1233<br>22.222 | .0000<br>42.017<br>4.6984 | .0000<br>2.631949+05<br>1.2876 | .0000<br>1.1449<br>1.1447 |
| 18000. | 17.042 | 59.087<br>58.698<br>8.482667+02   | .000000+00<br>374.593<br>391.613   | .000000+00<br>12.2343<br>12.721 | .000<br>23.1070<br>23.199 | .0000<br>42.833<br>4.8596 | .0000<br>2.786769+05<br>1.3254 | .0000<br>1.1394<br>1.1395 |
| 19000. | 17.989 | 65.720<br>65.324<br>1.003163+03   | .000000+00<br>418.846<br>436.931   | .000000+00<br>12.7821<br>13.266 | .000<br>23.9844<br>24.072 | .0000<br>43.667<br>5.0229 | .0000<br>2.941590+05<br>1.3666 | .0000<br>1.1377<br>1.1379 |
| 20000. | 18.936 | 72.712<br>72.307<br>1.175041+03   | .000000+00<br>465.551<br>484.826   | .000000+00<br>13.3115<br>13.795 | .000<br>24.7958<br>24.881 | .0000<br>44.523<br>5.1882 | .0000<br>3.096410+05<br>1.4109 | .0000<br>1.1375<br>1.1377 |
| 21000. | 19.882 | 80.063<br>79.648<br>1.366911+03   | .000000+00<br>514.679<br>535.093   | .000000+00<br>13.8128<br>14.293 | .000<br>25.5654<br>25.649 | .0000<br>45.399<br>5.3574 | .0000<br>3.251231+05<br>1.4579 | .0000<br>1.1385<br>1.1389 |
| 22000. | 20.829 | 87.772<br>87.346<br>1.580003+03   | .000000+00<br>566.199<br>587.851   | .000000+00<br>14.2774<br>14.755 | .000<br>26.3141<br>26.397 | .0000<br>46.297<br>5.5308 | .0000<br>3.406051+05<br>1.5075 | .0000<br>1.1402<br>1.1406 |
| 23000. | 21.776 | 95.839<br>95.400<br>1.813567+03   | .000000+00<br>620.090<br>642.989   | .000000+00<br>14.7005<br>15.174 | .000<br>27.0567<br>27.140 | .0000<br>47.214<br>5.7104 | .0000<br>3.560872+05<br>1.5594 | .0000<br>1.1428<br>1.1432 |
| 24000. | 22.723 | 104.265<br>103.811<br>2.071024+03 | .000000+00<br>676.322<br>700.602   | .000000+00<br>15.0764<br>15.547 | .000<br>27.8105<br>27.896 | .0000<br>48.149<br>5.8982 | .0000<br>3.715692+05<br>1.6134 | .0000<br>1.1464<br>1.1468 |
| 25000. | 23.670 | 113.050<br>112.577<br>2.352781+03 | .000000+00<br>734.862<br>760.668   | .000000+00<br>15.3988<br>15.867 | .000<br>28.5949<br>28.683 | .0000<br>49.101<br>6.0948 | .0000<br>3.870513+05<br>1.6693 | .0000<br>1.1507<br>1.1511 |
| 26000. | 24.616 | 122.193<br>121.699<br>2.659029+03 | .000000+00<br>795.667<br>823.080   | .000000+00<br>15.6604<br>16.126 | .000<br>29.4336<br>29.527 | .0000<br>50.067<br>6.3056 | .0000<br>4.025333+05<br>1.7265 | .0000<br>1.1566<br>1.1572 |
| 27000. | 25.563 | 131.695<br>131.175<br>2.992825+03 | .000000+00<br>858.666<br>887.967   | .000000+00<br>15.8487<br>16.312 | .000<br>30.3663<br>30.468 | .0000<br>51.043<br>6.5339 | .0000<br>4.180154+05<br>1.7845 | .0000<br>1.1644<br>1.1650 |
| 28000. | 26.510 | 141.556<br>141.003<br>3.357767+03 | .000000+00<br>923.751<br>955.124   | .000000+00<br>15.9457<br>16.405 | .000<br>31.4508<br>31.566 | .0000<br>52.024<br>6.7911 | .0000<br>4.334974+05<br>1.8422 | .0000<br>1.1758<br>1.1767 |
| 29000. | 27.457 | 151.775<br>151.180<br>3.760258+03 | .000000+00<br>990.729<br>1024.473  | .000000+00<br>15.9190<br>16.372 | .000<br>32.7994<br>32.936 | .0000<br>53.003<br>7.0923 | .0000<br>4.489795+05<br>1.8976 | .0000<br>1.1930<br>1.1941 |
| 30000. | 28.404 | 162.352<br>161.699<br>4.208781+03 | .000000+00<br>1059.244<br>1095.803 | .000000+00<br>15.7256<br>16.170 | .000<br>34.5916<br>34.765 | .0000<br>53.969<br>7.4571 | .0000<br>4.644615+05<br>1.9470 | .0000<br>1.2176<br>1.2190 |

ALTITUDE = 140000. FT.

P1 = 1.987580-03 ATM. , RHO1 = 2.107755-03 AMA. , T1 = 257.73 K  
 S1/R = 29.609 , A1 = 1056.21 FT./SEC. , H1/R = 902.072 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEO   |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 31000. | 29.350 | 173.288<br>172.558<br>4.696136+03 | .000000+00<br>1129.196<br>1169.103 | .000000+00<br>15.3698<br>15.807 | .000<br>36.9677<br>37.181 | .0000<br>54.907<br>7.8481  | .0000<br>4.799436+05<br>1.9868 | .0000<br>1.2361<br>1.2372 |
| 32000. | 30.297 | 184.583<br>183.767<br>5.214818+03 | .000000+00<br>1201.124<br>1244.670 | .000000+00<br>14.9981<br>15.439 | .000<br>39.6458<br>39.875 | .0000<br>55.808<br>8.1681  | .0000<br>4.954256+05<br>2.0194 | .0000<br>1.2303<br>1.2294 |
| 33000. | 31.244 | 196.236<br>195.339<br>5.742585+03 | .000000+00<br>1275.799<br>1322.879 | .000000+00<br>14.7473<br>15.195 | .000<br>42.1534<br>42.379 | .0000<br>56.675<br>8.4300  | .0000<br>5.109077+05<br>2.0519 | .0000<br>1.2132<br>1.2126 |
| 34000. | 32.191 | 208.248<br>207.279<br>6.282083+03 | .000000+00<br>1353.375<br>1403.816 | .000000+00<br>14.6175<br>15.070 | .000<br>44.3530<br>44.573 | .0000<br>57.518<br>8.6722  | .0000<br>5.263897+05<br>2.0873 | .0000<br>1.1999<br>1.1994 |
| 35000. | 33.137 | 220.618<br>219.585<br>6.841134+03 | .000000+00<br>1433.751<br>1487.403 | .000000+00<br>14.5704<br>15.027 | .000<br>46.2876<br>46.503 | .0000<br>58.347<br>8.9078  | .0000<br>5.418718+05<br>2.1260 | .0000<br>1.1910<br>1.1908 |
| 36000. | 34.084 | 233.347<br>232.254<br>7.399230+03 | .000000+00<br>1516.802<br>1573.615 | .000000+00<br>14.5745<br>15.034 | .000<br>48.0213<br>48.234 | .0000<br>59.166<br>9.1410  | .0000<br>5.573538+05<br>2.1675 | .0000<br>1.1860<br>1.1859 |
| 37000. | 35.031 | 246.435<br>245.286<br>7.976079+03 | .000000+00<br>1602.520<br>1662.382 | .000000+00<br>14.6108<br>15.071 | .000<br>49.6054<br>49.817 | .0000<br>59.980<br>9.3699  | .0000<br>5.728359+05<br>2.2115 | .0000<br>1.1823<br>1.1824 |
| 38000. | 35.978 | 259.881<br>258.676<br>8.569596+03 | .000000+00<br>1690.599<br>1753.611 | .000000+00<br>14.6644<br>15.126 | .000<br>51.0761<br>51.288 | .0000<br>60.792<br>9.5994  | .0000<br>5.883179+05<br>2.2577 | .0000<br>1.1806<br>1.1808 |
| 39000. | 36.925 | 273.685<br>272.427<br>9.180211+03 | .000000+00<br>1781.230<br>1847.367 | .000000+00<br>14.7289<br>15.191 | .000<br>52.4607<br>52.674 | .0000<br>61.602<br>9.8279  | .0000<br>6.038000+05<br>2.3059 | .0000<br>1.1796<br>1.1799 |
| 40000. | 37.871 | 287.848<br>286.538<br>9.802231+03 | .000000+00<br>1874.404<br>1943.577 | .000000+00<br>14.7990<br>15.261 | .000<br>53.7789<br>53.993 | .0000<br>62.413<br>10.0496 | .0000<br>6.192820+05<br>2.3559 | .0000<br>1.1782<br>1.1780 |
| 41000. | 38.818 | 302.370<br>301.007<br>1.039233+04 | .000000+00<br>1969.916<br>2042.239 | .000000+00<br>14.8691<br>15.330 | .000<br>55.0466<br>55.265 | .0000<br>63.226<br>10.2873 | .0000<br>6.347641+05<br>2.4076 | .0000<br>1.1801<br>1.1801 |
| 42000. | 39.765 | 317.250<br>315.833<br>1.100236+04 | .000000+00<br>2067.808<br>2143.298 | .000000+00<br>14.9370<br>15.397 | .000<br>56.2754<br>56.496 | .0000<br>64.040<br>10.5205 | .0000<br>6.502461+05<br>2.4609 | .0000<br>1.1808<br>1.1812 |

ALTITUDE = 150000. FT.

P1 = 1.342896-03 ATM. , RHO1 = 1.379055-03 AMA. , T1 = 266.15 K  
 S1/R = 30.113 , A1 = 1073.31 FT./SEC. , H1/R = 931.531 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.590  | 7.250<br>7.066<br>2.296566+01   | 1.270351+03<br>37.272<br>41.182   | 1.942504+02<br>5.8323<br>6.301   | 6.529<br>6.3825<br>6.527    | 2.4229<br>33.542<br>2.4196 | 1.0004<br>5.923556+04<br>1.0001 | 1.2913<br>1.2914<br>1.2887 |
| 7000.  | 6.522  | 9.507<br>9.297<br>3.724404+01   | 3.709794+03<br>51.225<br>56.067   | 4.490365+02<br>6.3647<br>6.845   | 8.242<br>8.0264<br>8.166    | 2.6963<br>34.310<br>2.6567 | 1.0011<br>6.910816+04<br>1.0019 | 1.2659<br>1.2446<br>1.2396 |
| 8000.  | 7.454  | 12.111<br>11.890<br>5.640765+01 | 1.004935+04<br>67.840<br>73.526   | 9.951285+02<br>7.0848<br>7.584   | 10.048<br>9.4572<br>9.564   | 2.9491<br>35.062<br>2.8204 | 1.0039<br>7.898075+04<br>1.0124 | 1.2389<br>1.1831<br>1.1804 |
| 9000.  | 8.385  | 15.062<br>14.842<br>8.100238+01 | 2.563713+04<br>87.166<br>93.529   | 2.134154+03<br>7.9896<br>8.492   | 11.868<br>10.5486<br>10.633 | 3.1920<br>35.836<br>2.9730 | 1.0109<br>8.885334+04<br>1.0346 | 1.2202<br>1.1550<br>1.1545 |
| 10000. | 9.317  | 18.361<br>18.143<br>1.116665+02 | 6.231177+04<br>108.977<br>115.974 | 4.427285+03<br>8.9270<br>9.424   | 13.727<br>11.4620<br>11.536 | 3.4504<br>36.651<br>3.1360 | 1.0241<br>9.872594+04<br>1.0655 | 1.2168<br>1.1491<br>1.1496 |
| 11000. | 10.249 | 22.007<br>21.787<br>1.491289+02 | 1.444733+05<br>133.089<br>140.798 | 8.814039+03<br>9.7800<br>10.268  | 15.678<br>12.3465<br>12.421 | 3.7414<br>37.507<br>3.3211 | 1.0443<br>1.085985+05<br>1.1027 | 1.2284<br>1.1561<br>1.1571 |
| 12000. | 11.180 | 26.000<br>25.770<br>1.941900+02 | 3.185727+05<br>159.333<br>167.908 | 1.667725+04<br>10.4435<br>10.918 | 17.782<br>13.3506<br>13.437 | 4.0816<br>38.392<br>3.5508 | 1.0729<br>1.184711+05<br>1.1431 | 1.2546<br>1.1775<br>1.1794 |
| 13000. | 12.112 | 30.340<br>30.086<br>2.485444+02 | 6.657042+05<br>187.378<br>197.175 | 2.983240+04<br>10.7432<br>11.199 | 20.046<br>14.7771<br>14.900 | 4.4753<br>39.282<br>3.8756 | 1.1118<br>1.283437+05<br>1.1802 | 1.2912<br>1.2247<br>1.2272 |
| 14000. | 13.044 | 35.028<br>34.730<br>3.136720+02 | 1.312826+06<br>217.031<br>228.431 | 5.002780+04<br>10.6893<br>11.145 | 22.515<br>16.8419<br>16.987 | 4.9398<br>40.137<br>4.1763 | 1.1641<br>1.382163+05<br>1.2051 | 1.3377<br>1.2270<br>1.2242 |
| 15000. | 13.975 | 40.062<br>39.732<br>3.894140+02 | 2.437929+06<br>249.436<br>262.265 | 7.874262+04<br>10.8748<br>11.351 | 25.112<br>18.6678<br>18.784 | 5.4736<br>40.951<br>4.3385 | 1.2315<br>1.480889+05<br>1.2285 | 1.3920<br>1.1731<br>1.1719 |
| 16000. | 14.907 | 45.444<br>45.097<br>4.763558+02 | .000000+00<br>284.771<br>298.849  | .000000+00<br>11.3113<br>11.795  | .000<br>20.0167<br>20.118   | .0000<br>41.755<br>4.5035  | .0000<br>1.579615+05<br>1.2579  | .0000<br>1.1522<br>1.1516  |
| 17000. | 15.839 | 51.173<br>50.816<br>5.750124+02 | .000000+00<br>322.762<br>337.947  | .000000+00<br>11.8488<br>12.336  | .000<br>21.0852<br>21.175   | .0000<br>42.569<br>4.6614  | .0000<br>1.678341+05<br>1.2922  | .0000<br>1.1411<br>1.1410  |
| 18000. | 16.770 | 57.250<br>56.885<br>6.862379+02 | .000000+00<br>363.256<br>379.482  | .000000+00<br>12.4183<br>12.905  | .000<br>21.9916<br>22.075   | .0000<br>43.400<br>4.8195  | .0000<br>1.777067+05<br>1.3305  | .0000<br>1.1362<br>1.1363  |
| 19000. | 17.702 | 63.673<br>63.302<br>8.108319+02 | .000000+00<br>406.171<br>423.452  | .000000+00<br>12.9861<br>13.472  | .000<br>22.8009<br>22.880   | .0000<br>44.252<br>4.9794  | .0000<br>1.875793+05<br>1.3721  | .0000<br>1.1345<br>1.1347  |

ALTITUDE = 150000. FT.

P1 = 1.342896-03 ATM. , RHO1 = 1.379055-03 AMA. , T1 = 266.15 K  
 S1/R = 30.113 , A1 = 1073.31 FT./SEC. , H1/R = 931.531 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 20000. | 18.634 | 70.444<br>70.065<br>9.501294+02   | .000000+00<br>451.461<br>469.795   | .000000+00<br>13.5341<br>14.017 | .000<br>23.5499<br>23.627 | .0000<br>45.126<br>5.1420 | .0000<br>1.974519+05<br>1.4168 | .0000<br>1.1346<br>1.1348 |
| 21000. | 19.566 | 77.562<br>77.174<br>1.103717+03   | .000000+00<br>499.093<br>518.505   | .000000+00<br>14.0511<br>14.531 | .000<br>24.2637<br>24.339 | .0000<br>46.023<br>5.3080 | .0000<br>2.073245+05<br>1.4643 | .0000<br>1.1356<br>1.1358 |
| 22000. | 20.497 | 85.027<br>84.629<br>1.274609+03   | .000000+00<br>549.045<br>569.599   | .000000+00<br>14.5309<br>15.008 | .000<br>24.9576<br>25.033 | .0000<br>46.941<br>5.4792 | .0000<br>2.171971+05<br>1.5143 | .0000<br>1.1376<br>1.1379 |
| 23000. | 21.429 | 92.840<br>92.430<br>1.462728+03   | .000000+00<br>601.291<br>623.024   | .000000+00<br>14.9671<br>15.440 | .000<br>25.6480<br>25.724 | .0000<br>47.880<br>5.6560 | .0000<br>2.270697+05<br>1.5667 | .0000<br>1.1401<br>1.1405 |
| 24000. | 22.361 | 101.000<br>100.575<br>1.669341+03 | .000000+00<br>655.807<br>678.877   | .000000+00<br>15.3547<br>15.826 | .000<br>26.3502<br>26.428 | .0000<br>48.839<br>5.8405 | .0000<br>2.369422+05<br>1.6212 | .0000<br>1.1435<br>1.1439 |
| 25000. | 23.292 | 109.507<br>109.066<br>1.897008+03 | .000000+00<br>712.559<br>737.066   | .000000+00<br>15.6864<br>16.155 | .000<br>27.0834<br>27.164 | .0000<br>49.814<br>6.0357 | .0000<br>2.468148+05<br>1.6776 | .0000<br>1.1482<br>1.1486 |
| 26000. | 24.224 | 118.361<br>117.900<br>2.146379+03 | .000000+00<br>771.501<br>797.591   | .000000+00<br>15.9538<br>16.420 | .000<br>27.8722<br>27.958 | .0000<br>50.804<br>6.2435 | .0000<br>2.566874+05<br>1.7353 | .0000<br>1.1538<br>1.1544 |
| 27000. | 25.156 | 127.562<br>127.076<br>2.416283+03 | .000000+00<br>832.564<br>860.420   | .000000+00<br>16.1436<br>16.607 | .000<br>28.7552<br>28.849 | .0000<br>51.805<br>6.4723 | .0000<br>2.665600+05<br>1.7938 | .0000<br>1.1625<br>1.1631 |
| 28000. | 26.087 | 137.111<br>136.594<br>2.712386+03 | .000000+00<br>895.629<br>925.464   | .000000+00<br>16.2333<br>16.693 | .000<br>29.7975<br>29.904 | .0000<br>52.810<br>6.7305 | .0000<br>2.764326+05<br>1.8518 | .0000<br>1.1745<br>1.1754 |
| 29000. | 27.019 | 147.006<br>146.449<br>3.035905+03 | .000000+00<br>960.485<br>992.608   | .000000+00<br>16.1851<br>16.637 | .000<br>31.1181<br>31.247 | .0000<br>53.812<br>7.0397 | .0000<br>2.863052+05<br>1.9071 | .0000<br>1.1936<br>1.1949 |
| 30000. | 27.951 | 157.249<br>156.634<br>3.398066+03 | .000000+00<br>1026.753<br>1061.628 | .000000+00<br>15.9480<br>16.390 | .000<br>32.9166<br>33.083 | .0000<br>54.799<br>7.4176 | .0000<br>2.961778+05<br>1.9555 | .0000<br>1.2207<br>1.2219 |
| 31000. | 28.882 | 167.840<br>167.149<br>3.793366+03 | .000000+00<br>1094.384<br>1132.570 | .000000+00<br>15.5445<br>15.981 | .000<br>35.3040<br>35.507 | .0000<br>55.753<br>7.8069 | .0000<br>3.060504+05<br>1.9935 | .0000<br>1.2371<br>1.2372 |
| 32000. | 29.814 | 178.777<br>178.004<br>4.206840+03 | .000000+00<br>1164.100<br>1205.790 | .000000+00<br>15.1647<br>15.607 | .000<br>37.8874<br>38.099 | .0000<br>56.668<br>8.1085 | .0000<br>3.159230+05<br>2.0255 | .0000<br>1.2251<br>1.2242 |
| 33000. | 30.746 | 190.062<br>189.215<br>4.629018+03 | .000000+00<br>1236.612<br>1281.624 | .000000+00<br>14.9320<br>15.381 | .000<br>40.2228<br>40.428 | .0000<br>57.548<br>8.3583 | .0000<br>3.257956+05<br>2.0586 | .0000<br>1.2068<br>1.2061 |

ALTITUDE = 150000. FT.

P1 = 1.342896-03 ATM. , RH01 = 1.379055-03 AMA. , T1 = 266.15 K  
 S1/R = 30.113 , A1 = 1073.31 FT./SEC. , H1/R = 931.531 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 3400C. | 31.678 | 201.694<br>200.782<br>5.059836+03 | .000000+00<br>1311.959<br>1360.101 | .000000+00<br>14.8237<br>15.278 | .000<br>42.2426<br>42.441 | .0000<br>58.407<br>8.5944  | .0000<br>3.356682+05<br>2.0950 | .0000<br>1.1939<br>1.1936 |
| 3500C. | 32.609 | 213.673<br>212.703<br>5.503950+03 | .000000+00<br>1390.007<br>1441.164 | .000000+00<br>14.7953<br>15.253 | .000<br>44.0117<br>44.206 | .0000<br>59.252<br>8.8247  | .0000<br>3.455408+05<br>2.1348 | .0000<br>1.1857<br>1.1856 |
| 3600C. | 33.541 | 225.999<br>224.975<br>5.956482+03 | .000000+00<br>1470.633<br>1524.752 | .000000+00<br>14.8151<br>15.276 | .000<br>45.5957<br>45.787 | .0000<br>60.089<br>9.0515  | .0000<br>3.554134+05<br>2.1774 | .0000<br>1.1807<br>1.1808 |
| 3700C. | 34.473 | 238.673<br>237.597<br>6.415804+03 | .000000+00<br>1553.754<br>1610.769 | .000000+00<br>14.8641<br>15.326 | .000<br>47.0430<br>47.234 | .0000<br>60.922<br>9.2766  | .0000<br>3.652860+05<br>2.2224 | .0000<br>1.1776<br>1.1779 |
| 3800C. | 35.404 | 251.694<br>250.569<br>6.888165+03 | .000000+00<br>1639.309<br>1699.224 | .000000+00<br>14.9298<br>15.393 | .000<br>48.3877<br>48.579 | .0000<br>61.753<br>9.5010  | .0000<br>3.751586+05<br>2.2697 | .0000<br>1.1761<br>1.1763 |
| 3900C. | 36.336 | 265.062<br>263.888<br>7.368928+03 | .000000+00<br>1727.253<br>1790.093 | .000000+00<br>15.0045<br>15.468 | .000<br>49.6545<br>49.846 | .0000<br>62.584<br>9.7255  | .0000<br>3.850312+05<br>2.3190 | .0000<br>1.1755<br>1.1757 |
| 4000C. | 37.268 | 278.777<br>277.554<br>7.862680+03 | .000000+00<br>1817.554<br>1883.347 | .000000+00<br>15.0827<br>15.546 | .000<br>50.8611<br>51.055 | .0000<br>63.416<br>9.9502  | .0000<br>3.949037+05<br>2.3700 | .0000<br>1.1753<br>1.1756 |
| 4100C. | 38.199 | 292.839<br>291.570<br>8.362296+03 | .000000+00<br>1910.303<br>1978.953 | .000000+00<br>15.1616<br>15.624 | .000<br>52.0218<br>52.218 | .0000<br>64.251<br>10.1696 | .0000<br>4.047763+05<br>2.4228 | .0000<br>1.1751<br>1.1746 |
| 4200C. | 39.131 | 307.249<br>305.930<br>8.832264+03 | .000000+00<br>2005.275<br>2076.910 | .000000+00<br>15.2370<br>15.698 | .000<br>53.1475<br>53.347 | .0000<br>65.088<br>10.4063 | .0000<br>4.146489+05<br>2.4771 | .0000<br>1.1781<br>1.1774 |
| 4300C. | 40.063 | 322.006<br>320.636<br>9.289674+03 | .000000+00<br>2102.528<br>2177.210 | .000000+00<br>15.3073<br>15.768 | .000<br>54.2476<br>54.449 | .0000<br>65.928<br>10.6365 | .0000<br>4.245215+05<br>2.5329 | .0000<br>1.1781<br>1.1787 |

ALTITUDE = 160000. FT.

P1 = 9.176265-04 ATM. , RH01 = 9.266733-04 AMA. , T1 = 270.65 K  
 S1/R = 30.553 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1    | M1    | HO/H1<br>HS/H1<br>Q RT RN     | PO/P1<br>PS/P1<br>POP/P1        | RO/R1<br>RS/R1<br>RCP/R1       | TO/T1<br>TS/T1<br>TOP/T1 | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|-------------------------------|---------------------------------|--------------------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 5.544 | 7.146<br>6.965<br>1.888278+01 | 1.208568+03<br>36.655<br>40.508 | 1.875682+02<br>5.8215<br>6.291 | 6.434<br>6.2885<br>6.431 | 2.4247<br>33.949<br>2.4212 | 1.0003<br>3.927763+04<br>1.0001 | 1.2907<br>1.2906<br>1.2878 |
| 7000. | 6.467 | 9.366<br>9.159<br>3.059392+01 | 3.523631+03<br>50.391<br>55.155 | 4.333087+02<br>6.3674<br>6.850 | 8.115<br>7.8898<br>8.025 | 2.6957<br>34.715<br>2.6507 | 1.0009<br>4.582390+04<br>1.0022 | 1.2642<br>1.2397<br>1.2343 |

ALTITUDE = 160000. FT.

P1 = 9.176265-04 ATM. , RH01 = 9.266733-04 AMA. , T1 = 270.65 K  
 S1/R = 30.553 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 8000.  | 7.391  | 11.926<br>11.711<br>4.629438+01 | 9.544253+03<br>66.789<br>72.349   | 9.619951+02<br>7.1246<br>7.626   | 9.874<br>9.2453<br>9.346    | 2.9427<br>35.470<br>2.8070 | 1.0036<br>5.237017+04<br>1.0139 | 1.2347<br>1.1774<br>1.1749 |
| 9000.  | 8.315  | 14.829<br>14.616<br>6.643070+01 | 2.440017+04<br>85.845<br>92.037   | 2.073356+03<br>8.0640<br>8.567   | 11.629<br>10.2662<br>10.344 | 3.1781<br>36.253<br>2.9563 | 1.0108<br>5.891644+04<br>1.0373 | 1.2141<br>1.1513<br>1.1509 |
| 10000. | 9.239  | 18.073<br>17.863<br>9.152157+01 | 5.958643+04<br>107.332<br>114.136 | 4.335609+03<br>9.0282<br>9.525   | 13.410<br>11.1245<br>11.194 | 3.4277<br>37.080<br>3.1164 | 1.0236<br>6.546272+04<br>1.0691 | 1.2094<br>1.1460<br>1.1465 |
| 11000. | 10.163 | 21.658<br>21.447<br>1.221933+02 | 1.391882+05<br>131.075<br>138.567 | 8.727108+03<br>9.9014<br>10.390  | 15.282<br>11.9628<br>12.033 | 3.7065<br>37.950<br>3.2997 | 1.0424<br>7.200899+04<br>1.1070 | 1.2185<br>1.1538<br>1.1548 |
| 12000. | 11.087 | 25.584<br>25.364<br>1.590396+02 | 3.100201+05<br>156.900<br>165.234 | 1.675127+04<br>10.5710<br>11.046 | 17.314<br>12.9335<br>13.016 | 4.0275<br>38.851<br>3.5308 | 1.0676<br>7.855526+04<br>1.1479 | 1.2399<br>1.1769<br>1.1789 |
| 13000. | 12.011 | 29.853<br>29.607<br>2.036086+02 | 6.562036+05<br>184.450<br>193.990 | 3.051252+04<br>10.8411<br>11.295 | 19.523<br>14.3629<br>14.484 | 4.3947<br>39.755<br>3.8666 | 1.1003<br>8.510153+04<br>1.1844 | 1.2704<br>1.2288<br>1.2314 |
| 14000. | 12.935 | 34.462<br>34.173<br>2.570255+02 | 1.314767+06<br>213.584<br>224.692 | 5.231868+04<br>10.7592<br>11.215 | 21.957<br>16.4271<br>16.565 | 4.8210<br>40.620<br>4.1557 | 1.1431<br>9.164780+04<br>1.2080 | 1.3084<br>1.2226<br>1.2195 |
| 15000. | 13.859 | 39.413<br>39.094<br>3.190499+02 | 2.488595+06<br>245.523<br>258.017 | 8.452227+04<br>10.9705<br>11.448 | 24.543<br>18.1672<br>18.275 | 5.3066<br>41.443<br>4.3107 | 1.1982<br>9.819408+04<br>1.2317 | 1.3531<br>1.1681<br>1.1664 |
| 16000. | 14.783 | 44.706<br>44.372<br>3.902075+02 | .000000+00<br>280.367<br>294.024  | .000000+00<br>11.4431<br>11.927  | .000<br>19.4249<br>19.519   | .0000<br>42.258<br>4.4718  | .0000<br>1.047403+05<br>1.2614  | .0000<br>1.1481<br>1.1475  |
| 17000. | 15.707 | 50.340<br>49.997<br>4.706787+02 | .000000+00<br>317.794<br>332.515  | .000000+00<br>12.0050<br>12.492  | .000<br>20.4261<br>20.510   | .0000<br>43.085<br>4.6269  | .0000<br>1.112866+05<br>1.2962  | .0000<br>1.1379<br>1.1378  |
| 18000. | 16.631 | 56.315<br>55.966<br>5.620636+02 | .000000+00<br>357.672<br>373.388  | .000000+00<br>12.5948<br>13.082  | .000<br>21.2784<br>21.356   | .0000<br>43.932<br>4.7822  | .0000<br>1.178329+05<br>1.3349  | .0000<br>1.1334<br>1.1335  |
| 19000. | 17.554 | 62.632<br>62.277<br>6.636844+02 | .000000+00<br>399.930<br>416.677  | .000000+00<br>13.1813<br>13.668  | .000<br>22.0393<br>22.113   | .0000<br>44.800<br>4.9391  | .0000<br>1.243792+05<br>1.3770  | .0000<br>1.1317<br>1.1319  |
| 20000. | 18.478 | 69.290<br>68.928<br>7.778551+02 | .000000+00<br>444.519<br>462.243  | .000000+00<br>13.7459<br>14.229  | .000<br>22.7451<br>22.817   | .0000<br>45.692<br>5.0991  | .0000<br>1.309254+05<br>1.4221  | .0000<br>1.1319<br>1.1322  |
| 21000. | 19.402 | 76.290<br>75.920<br>9.040374+02 | .000000+00<br>491.413<br>510.228  | .000000+00<br>14.2785<br>14.760  | .000<br>23.4179<br>23.488   | .0000<br>46.607<br>5.2626  | .0000<br>1.374717+05<br>1.4700  | .0000<br>1.1331<br>1.1333  |

ALTITUDE = 160000. FT.

P1 = 9.176265-04 ATM. , RHO1 = 9.266733-04 AMA. , T1 = 270.65 K  
 S1/R = 30.553 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 22000. | 20.326 | 83.631<br>83.252<br>1.042819+03   | .000000+00<br>540.588<br>560.444   | .000000+00<br>14.7723<br>15.249 | .000<br>24.0740<br>24.144 | .0000<br>47.546<br>5.4309 | .0000<br>1.440180+05<br>1.5204 | .0000<br>1.1349<br>1.1353 |
| 23000. | 21.250 | 91.314<br>90.924<br>1.196237+03   | .000000+00<br>592.019<br>613.059   | .000000+00<br>15.2208<br>15.695 | .000<br>24.7281<br>24.799 | .0000<br>48.506<br>5.6054 | .0000<br>1.505643+05<br>1.5732 | .0000<br>1.1376<br>1.1380 |
| 24000. | 22.174 | 99.338<br>98.934<br>1.364500+03   | .000000+00<br>645.684<br>668.020   | .000000+00<br>15.6189<br>16.091 | .000<br>25.3951<br>25.467 | .0000<br>49.486<br>5.7877 | .0000<br>1.571105+05<br>1.6282 | .0000<br>1.1411<br>1.1414 |
| 25000. | 23.098 | 107.703<br>107.284<br>1.548728+03 | .000000+00<br>701.549<br>725.218   | .000000+00<br>15.9598<br>16.429 | .000<br>26.0924<br>26.167 | .0000<br>50.484<br>5.9802 | .0000<br>1.636568+05<br>1.6849 | .0000<br>1.1456<br>1.1461 |
| 26000. | 24.022 | 116.410<br>115.972<br>1.751105+03 | .000000+00<br>759.566<br>784.775   | .000000+00<br>16.2326<br>16.699 | .000<br>26.8479<br>26.928 | .0000<br>51.497<br>6.1872 | .0000<br>1.702031+05<br>1.7431 | .0000<br>1.1518<br>1.1523 |
| 27000. | 24.946 | 125.459<br>124.997<br>1.973825+03 | .000000+00<br>819.664<br>846.600   | .000000+00<br>16.4236<br>16.888 | .000<br>27.6990<br>27.787 | .0000<br>52.520<br>6.4145 | .0000<br>1.767493+05<br>1.8020 | .0000<br>1.1603<br>1.1610 |
| 28000. | 25.870 | 134.848<br>134.357<br>2.216221+03 | .000000+00<br>881.712<br>910.570   | .000000+00<br>16.5053<br>16.964 | .000<br>28.7178<br>28.818 | .0000<br>53.549<br>6.6751 | .0000<br>1.832956+05<br>1.8603 | .0000<br>1.1735<br>1.1743 |
| 29000. | 26.794 | 144.580<br>144.048<br>2.484150+03 | .000000+00<br>945.482<br>976.585   | .000000+00<br>16.4344<br>16.886 | .000<br>30.0334<br>30.157 | .0000<br>54.573<br>6.9924 | .0000<br>1.898419+05<br>1.9155 | .0000<br>1.1945<br>1.1959 |
| 30000. | 27.718 | 154.653<br>154.063<br>2.781977+03 | .000000+00<br>1010.561<br>1044.412 | .000000+00<br>16.1514<br>16.592 | .000<br>31.8679<br>32.030 | .0000<br>55.579<br>7.3850 | .0000<br>1.963882+05<br>1.9629 | .0000<br>1.2242<br>1.2256 |
| 31000. | 28.641 | 165.067<br>164.401<br>3.107185+03 | .000000+00<br>1076.975<br>1114.127 | .000000+00<br>15.7041<br>16.141 | .000<br>34.2897<br>34.485 | .0000<br>56.548<br>7.7668 | .0000<br>2.029344+05<br>1.9992 | .0000<br>1.2367<br>1.2363 |
| 32000. | 29.565 | 175.823<br>175.078<br>3.441545+03 | .000000+00<br>1145.626<br>1186.181 | .000000+00<br>15.3244<br>15.768 | .000<br>36.7995<br>36.998 | .0000<br>57.475<br>8.0506 | .0000<br>2.094807+05<br>2.0308 | .0000<br>1.2198<br>1.2188 |
| 33000. | 30.489 | 186.920<br>186.107<br>3.784321+03 | .000000+00<br>1217.126<br>1260.838 | .000000+00<br>15.1117<br>15.562 | .000<br>39.0029<br>39.193 | .0000<br>58.369<br>8.2909 | .0000<br>2.160270+05<br>2.0647 | .0000<br>1.2009<br>1.2002 |
| 34000. | 31.413 | 198.358<br>197.484<br>4.134881+03 | .000000+00<br>1291.347<br>1338.123 | .000000+00<br>15.0230<br>15.480 | .000<br>40.8894<br>41.073 | .0000<br>59.242<br>8.5209 | .0000<br>2.225732+05<br>2.1021 | .0000<br>1.1885<br>1.1882 |
| 35000. | 32.337 | 210.138<br>209.212<br>4.495593+03 | .000000+00<br>1368.361<br>1417.921 | .000000+00<br>15.0123<br>15.472 | .000<br>42.5380<br>42.717 | .0000<br>60.103<br>8.7458 | .0000<br>2.291195+05<br>2.1428 | .0000<br>1.1808<br>1.1807 |

## ALTITUDE = 160000. FT.

P1 = 9.176265-04 ATM. , RH01 = 9.266733-04 AMA. , T1 = 270.65 K  
 S1/R = 30.553 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 36000. | 33.261 | 222.260<br>221.283<br>4.868237+03 | .000000+00<br>1447.827<br>1500.205 | .000000+00<br>15.0469<br>15.509 | .000<br>44.0136<br>44.190 | .0000<br>60.957<br>8.9686  | .0000<br>2.356658+05<br>2.1864 | .0000<br>1.1761<br>1.1763 |
| 37000. | 34.185 | 234.723<br>233.699<br>5.240139+03 | .000000+00<br>1529.734<br>1584.854 | .000000+00<br>15.1080<br>15.571 | .000<br>45.3621<br>45.538 | .0000<br>61.807<br>9.1899  | .0000<br>2.422121+05<br>2.2325 | .0000<br>1.1736<br>1.1737 |
| 38000. | 35.109 | 247.527<br>246.456<br>5.622365+03 | .000000+00<br>1613.953<br>1671.910 | .000000+00<br>15.1841<br>15.648 | .000<br>46.6157<br>46.791 | .0000<br>62.657<br>9.4103  | .0000<br>2.487583+05<br>2.2807 | .0000<br>1.1722<br>1.1725 |
| 39000. | 36.033 | 260.673<br>259.558<br>6.016595+03 | .000000+00<br>1700.673<br>1761.329 | .000000+00<br>15.2688<br>15.732 | .000<br>47.7975<br>47.974 | .0000<br>63.508<br>9.6301  | .0000<br>2.553046+05<br>2.3309 | .0000<br>1.1716<br>1.1718 |
| 40000. | 36.957 | 274.160<br>273.000<br>6.412198+03 | .000000+00<br>1789.631<br>1853.103 | .000000+00<br>15.3555<br>15.819 | .000<br>48.9240<br>49.102 | .0000<br>64.361<br>9.8511  | .0000<br>2.618509+05<br>2.3828 | .0000<br>1.1716<br>1.1719 |
| 41000. | 37.881 | 287.989<br>286.783<br>6.818264+03 | .000000+00<br>1880.880<br>1947.208 | .000000+00<br>15.4412<br>15.905 | .000<br>50.0079<br>50.188 | .0000<br>65.216<br>10.0733 | .0000<br>2.683971+05<br>2.4365 | .0000<br>1.1722<br>1.1725 |
| 42000. | 38.805 | 302.159<br>300.909<br>7.225434+03 | .000000+00<br>1974.525<br>2043.580 | .000000+00<br>15.5241<br>15.985 | .000<br>51.0601<br>51.242 | .0000<br>66.075<br>10.2919 | .0000<br>2.749434+05<br>2.4918 | .0000<br>1.1728<br>1.1721 |
| 43000. | 39.728 | 316.671<br>315.374<br>7.609709+03 | .000000+00<br>2070.324<br>2142.295 | .000000+00<br>15.6011<br>16.061 | .000<br>52.0877<br>52.273 | .0000<br>66.937<br>10.5308 | .0000<br>2.814897+05<br>2.5486 | .0000<br>1.1764<br>1.1762 |
| 44000. | 40.652 | 331.524<br>330.178<br>7.967562+03 | .000000+00<br>2168.349<br>2243.314 | .000000+00<br>15.6708<br>16.130 | .000<br>53.0992<br>53.288 | .0000<br>67.804<br>10.7544 | .0000<br>2.880360+05<br>2.6068 | .0000<br>1.1760<br>1.1764 |

## ALTITUDE = 170000. FT.

P1 = 6.283318-04 ATM. , RH01 = 6.345265-04 AMA. , T1 = 270.65 K  
 S1/R = 30.932 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1        | RO/R1<br>RS/R1<br>ROP/R1       | TO/T1<br>TS/T1<br>TOP/T1 | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|---------------------------------|--------------------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 5.544 | 7.146<br>6.965<br>1.562516+01   | 1.208667+03<br>36.656<br>40.509 | 1.875983+02<br>5.8221<br>6.292 | 6.434<br>6.2880<br>6.430 | 2.4244<br>34.328<br>2.4204 | 1.0002<br>2.689480+04<br>1.0001 | 1.2905<br>1.2901<br>1.2871 |
| 7000. | 6.467 | 9.366<br>9.160<br>2.531274+01   | 3.524763+03<br>50.407<br>55.164 | 4.336481+02<br>6.3795<br>6.864 | 8.112<br>7.8748<br>8.006 | 2.6936<br>35.094<br>2.6429 | 1.0008<br>3.137727+04<br>1.0026 | 1.2628<br>1.2350<br>1.2294 |
| 8000. | 7.391 | 11.926<br>11.714<br>3.828915+01 | 9.557090+03<br>66.858<br>72.378 | 9.650834+02<br>7.1704<br>7.673 | 9.855<br>9.1831<br>9.279 | 2.9357<br>35.854<br>2.7931 | 1.0036<br>3.585974+04<br>1.0154 | 1.2311<br>1.1723<br>1.1700 |

ALTITUDE = 170000. FT.

P1 = 6.283318-04 ATM. , RHO1 = 6.345265-04 AMA. , T1 = 270.65 K  
 S1/R = 30.932 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 9000.  | 8.315  | 14.829<br>14.620<br>5.492746+01 | 2.449947+04<br>85.959<br>92.089   | 2.090328+03<br>8.1412<br>8.645   | 11.577<br>10.1584<br>10.233 | 3.1653<br>36.646<br>2.9396 | 1.0112<br>4.034221+04<br>1.0398 | 1.2093<br>1.1478<br>1.1475 |
| 10000. | 9.239  | 18.073<br>17.868<br>7.565023+01 | 6.010845+04<br>107.479<br>114.216 | 4.402082+03<br>9.1300<br>9.629   | 13.316<br>10.9818<br>11.048 | 3.4087<br>37.485<br>3.0971 | 1.0242<br>4.482467+04<br>1.0724 | 1.2038<br>1.1434<br>1.1439 |
| 11000. | 10.163 | 21.658<br>21.452<br>1.009875+02 | 1.413369+05<br>131.251<br>138.657 | 8.941379+03<br>10.0224<br>10.511 | 15.145<br>11.7925<br>11.860 | 3.6796<br>38.369<br>3.2786 | 1.0424<br>4.930714+04<br>1.1109 | 1.2117<br>1.1517<br>1.1527 |
| 12000. | 11.087 | 25.584<br>25.369<br>1.314298+02 | 3.174113+05<br>157.093<br>165.342 | 1.735327+04<br>10.6981<br>11.173 | 17.140<br>12.7480<br>12.828 | 3.9887<br>39.286<br>3.5114 | 1.0659<br>5.378961+04<br>1.1522 | 1.2304<br>1.1766<br>1.1787 |
| 13000. | 12.011 | 29.853<br>29.611<br>1.682880+02 | 6.787324+05<br>184.609<br>194.051 | 3.204037+04<br>10.9347<br>11.385 | 19.327<br>14.2083<br>14.329 | 4.3389<br>40.204<br>3.8584 | 1.0948<br>5.827207+04<br>1.1880 | 1.2572<br>1.2331<br>1.2356 |
| 14000. | 12.935 | 34.462<br>34.177<br>2.125280+02 | 1.375955+06<br>213.727<br>224.765 | 5.582916+04<br>10.8304<br>11.288 | 21.756<br>16.2971<br>16.430 | 4.7394<br>41.078<br>4.1346 | 1.1315<br>6.275454+04<br>1.2104 | 1.2893<br>1.2179<br>1.2146 |
| 15000. | 13.859 | 39.413<br>39.100<br>2.637727+02 | 2.641923+06<br>245.746<br>258.158 | 9.197933+04<br>11.0712<br>11.550 | 24.356<br>17.9782<br>18.084 | 5.1887<br>41.910<br>4.2855 | 1.1779<br>6.723701+04<br>1.2346 | 1.3260<br>1.1646<br>1.1623 |
| 16000. | 14.783 | 44.706<br>44.379<br>3.224730+02 | 4.804616+06<br>280.668<br>294.181 | 1.435199+05<br>11.5733<br>12.059 | 27.040<br>19.1781<br>19.267 | 5.6814<br>42.736<br>4.4415 | 1.2365<br>7.171948+04<br>1.2646 | 1.3640<br>1.1444<br>1.1440 |
| 17000. | 15.707 | 50.340<br>50.006<br>3.887741+02 | .000000+00<br>318.155<br>332.680  | .000000+00<br>12.1577<br>12.646  | .000<br>20.1357<br>20.215   | .0000<br>43.576<br>4.5939  | .0000<br>7.620194+04<br>1.2999  | .0000<br>1.1348<br>1.1348  |
| 18000. | 16.631 | 56.315<br>55.975<br>4.643184+02 | .000000+00<br>358.087<br>373.616  | .000000+00<br>12.7669<br>13.255  | .000<br>20.9523<br>21.026   | .0000<br>44.437<br>4.7467  | .0000<br>8.068441+04<br>1.3389  | .0000<br>1.1307<br>1.1308  |
| 19000. | 17.554 | 62.632<br>62.287<br>5.485229+02 | .000000+00<br>400.394<br>416.886  | .000000+00<br>13.3706<br>13.857  | .000<br>21.6827<br>21.752   | .0000<br>45.321<br>4.9008  | .0000<br>8.516688+04<br>1.3814  | .0000<br>1.1292<br>1.1294  |
| 20000. | 18.478 | 69.290<br>68.939<br>6.423196+02 | .000000+00<br>445.032<br>462.506  | .000000+00<br>13.9513<br>14.435  | .000<br>22.3609<br>22.428   | .0000<br>46.231<br>5.0583  | .0000<br>8.964934+04<br>1.4269  | .0000<br>1.1294<br>1.1297  |
| 21000. | 19.402 | 76.290<br>75.931<br>7.467690+02 | .000000+00<br>491.974<br>510.453  | .000000+00<br>14.4987<br>14.979  | .000<br>23.0076<br>23.074   | .0000<br>47.164<br>5.2195  | .0000<br>9.413181+04<br>1.4751  | .0000<br>1.1307<br>1.1310  |
| 22000. | 20.326 | 83.631<br>83.264<br>8.616413+02 | .000000+00<br>541.197<br>560.766  | .000000+00<br>15.0056<br>15.483  | .000<br>23.6402<br>23.706   | .0000<br>48.122<br>5.3854  | .0000<br>9.861428+04<br>1.5259  | .0000<br>1.1325<br>1.1328  |

ALTITUDE = 170000. FT.

P1 = 6.283318-04 ATM. , RH01 = 6.345265-04 AMA. , T1 = 270.65 K  
 S1/R = 30.932 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 23000. | 21.250 | 91.314<br>90.936<br>9.877736+02   | .000000+00<br>592.680<br>613.401   | .000000+00<br>15.4668<br>15.942 | .000<br>24.2708<br>24.337 | .0000<br>49.102<br>5.5579 | .0000<br>1.030968+05<br>1.5791 | .0000<br>1.1353<br>1.1357 |
| 24000. | 22.174 | 99.338<br>98.947<br>1.126332+03   | .000000+00<br>646.395<br>668.435   | .000000+00<br>15.8749<br>16.349 | .000<br>24.9163<br>24.985 | .0000<br>50.103<br>5.7376 | .0000<br>1.075792+05<br>1.6344 | .0000<br>1.1387<br>1.1391 |
| 25000. | 23.098 | 107.703<br>107.298<br>1.277916+03 | .000000+00<br>702.311<br>725.618   | .000000+00<br>16.2238<br>16.694 | .000<br>25.5938<br>25.665 | .0000<br>51.122<br>5.9282 | .0000<br>1.120617+05<br>1.6916 | .0000<br>1.1433<br>1.1437 |
| 26000. | 24.022 | 116.410<br>115.986<br>1.443508+03 | .000000+00<br>760.381<br>785.168   | .000000+00<br>16.5026<br>16.969 | .000<br>26.3292<br>26.405 | .0000<br>52.157<br>6.1336 | .0000<br>1.165441+05<br>1.7502 | .0000<br>1.1497<br>1.1502 |
| 27000. | 24.946 | 125.459<br>125.012<br>1.625623+03 | .000000+00<br>820.523<br>847.025   | .000000+00<br>16.6935<br>17.158 | .000<br>27.1662<br>27.250 | .0000<br>53.203<br>6.3599 | .0000<br>1.210266+05<br>1.8095 | .0000<br>1.1584<br>1.1591 |
| 28000. | 25.870 | 134.848<br>134.372<br>1.825788+03 | .000000+00<br>882.601<br>910.996   | .000000+00<br>16.7678<br>17.227 | .000<br>28.1789<br>28.276 | .0000<br>54.254<br>6.6237 | .0000<br>1.255091+05<br>1.8680 | .0000<br>1.1726<br>1.1736 |
| 29000. | 26.794 | 144.580<br>144.063<br>2.048316+03 | .000000+00<br>946.354<br>977.000   | .000000+00<br>16.6721<br>17.122 | .000<br>29.5154<br>29.637 | .0000<br>55.299<br>6.9489 | .0000<br>1.299916+05<br>1.9230 | .0000<br>1.1957<br>1.1971 |
| 30000. | 27.718 | 154.653<br>154.077<br>2.293747+03 | .000000+00<br>1011.338<br>1044.771 | .000000+00<br>16.3403<br>16.779 | .000<br>31.4196<br>31.581 | .0000<br>56.323<br>7.3543 | .0000<br>1.344740+05<br>1.9693 | .0000<br>1.2273<br>1.2288 |
| 31000. | 28.641 | 165.067<br>164.414<br>2.562530+03 | .000000+00<br>1077.680<br>1114.468 | .000000+00<br>15.8546<br>16.292 | .000<br>33.9014<br>34.092 | .0000<br>57.306<br>7.7263 | .0000<br>1.389565+05<br>2.0042 | .0000<br>1.2350<br>1.2344 |
| 32000. | 29.565 | 175.823<br>175.094<br>2.836354+03 | .000000+00<br>1146.448<br>1186.565 | .000000+00<br>15.4812<br>15.926 | .000<br>36.3647<br>36.553 | .0000<br>58.244<br>7.9932 | .0000<br>1.434390+05<br>2.0358 | .0000<br>1.2140<br>1.2131 |
| 33000. | 30.489 | 186.920<br>186.124<br>3.117033+03 | .000000+00<br>1218.065<br>1261.317 | .000000+00<br>15.2884<br>15.741 | .000<br>38.4758<br>38.656 | .0000<br>59.151<br>8.2263 | .0000<br>1.479214+05<br>2.0704 | .0000<br>1.1953<br>1.1948 |
| 34000. | 31.413 | 198.358<br>197.506<br>3.404400+03 | .000000+00<br>1292.536<br>1338.687 | .000000+00<br>15.2195<br>15.678 | .000<br>40.2711<br>40.444 | .0000<br>60.038<br>8.4512 | .0000<br>1.524039+05<br>2.1087 | .0000<br>1.1835<br>1.1833 |
| 35000. | 32.337 | 210.138<br>209.236<br>3.700505+03 | .000000+00<br>1369.656<br>1418.584 | .000000+00<br>15.2245<br>15.686 | .000<br>41.8372<br>42.006 | .0000<br>60.915<br>8.6720 | .0000<br>1.568864+05<br>2.1504 | .0000<br>1.1764<br>1.1763 |
| 36000. | 33.261 | 222.260<br>221.312<br>4.008368+03 | .000000+00<br>1449.358<br>1500.907 | .000000+00<br>15.2732<br>15.735 | .000<br>43.2393<br>43.405 | .0000<br>61.785<br>8.8902 | .0000<br>1.613688+05<br>2.1949 | .0000<br>1.1722<br>1.1722 |

ALTITUDE = 170000. FT.

P1 = 6.283318-04 ATM. , RH01 = 6.345265-04 AMA. , T1 = 270.65 K  
 S1/R = 30.932 , A1 = 1082.35 FT./SEC. , H1/R = 947.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 37000. | 34.185 | 234.723<br>233.731<br>4.327295+03 | .000000+00<br>1531.423<br>1585.604 | .000000+00<br>15.3463<br>15.809 | .000<br>44.5213<br>44.686 | .0000<br>62.654<br>9.1074  | .0000<br>1.658513+05<br>2.2418 | .0000<br>1.1697<br>1.1699 |
| 38000. | 35.109 | 247.527<br>246.493<br>4.642872+03 | .000000+00<br>1615.908<br>1672.730 | .000000+00<br>15.4331<br>15.896 | .000<br>45.7140<br>45.878 | .0000<br>63.522<br>9.3233  | .0000<br>1.703338+05<br>2.2908 | .0000<br>1.1684<br>1.1686 |
| 39000. | 36.033 | 260.673<br>259.595<br>4.964057+03 | .000000+00<br>1702.656<br>1762.263 | .000000+00<br>15.5261<br>15.990 | .000<br>46.8384<br>47.004 | .0000<br>64.392<br>9.5402  | .0000<br>1.748162+05<br>2.3418 | .0000<br>1.1680<br>1.1683 |
| 40000. | 36.957 | 274.160<br>273.040<br>5.295663+03 | .000000+00<br>1791.760<br>1854.105 | .000000+00<br>15.6210<br>16.085 | .000<br>47.9108<br>48.077 | .0000<br>65.264<br>9.7577  | .0000<br>1.792987+05<br>2.3947 | .0000<br>1.1682<br>1.1685 |
| 41000. | 37.881 | 287.989<br>286.825<br>5.625639+03 | .000000+00<br>1883.155<br>1948.258 | .000000+00<br>15.7141<br>16.178 | .000<br>48.9435<br>49.112 | .0000<br>66.140<br>9.9766  | .0000<br>1.837812+05<br>2.4492 | .0000<br>1.1688<br>1.1692 |
| 42000. | 38.805 | 302.159<br>300.953<br>5.963847+03 | .000000+00<br>1976.929<br>2044.732 | .000000+00<br>15.8035<br>16.266 | .000<br>49.9462<br>50.117 | .0000<br>67.020<br>10.1970 | .0000<br>1.882636+05<br>2.5053 | .0000<br>1.1698<br>1.1701 |
| 43000. | 39.728 | 316.671<br>315.420<br>6.299009+03 | .000000+00<br>2072.875<br>2143.525 | .000000+00<br>15.8870<br>16.348 | .000<br>50.9259<br>51.100 | .0000<br>67.904<br>10.4177 | .0000<br>1.927461+05<br>2.5629 | .0000<br>1.1712<br>1.1709 |
| 44000. | 40.652 | 331.524<br>330.227<br>6.620911+03 | .000000+00<br>2171.069<br>2244.651 | .000000+00<br>15.9646<br>16.422 | .000<br>51.8881<br>52.067 | .0000<br>68.792<br>10.6576 | .0000<br>1.972286+05<br>2.6220 | .0000<br>1.1742<br>1.1756 |
| 45000. | 41.576 | 346.718<br>345.373<br>6.902201+03 | .000000+00<br>2271.435<br>2348.002 | .000000+00<br>16.0286<br>16.487 | .000<br>52.8465<br>53.026 | .0000<br>69.685<br>10.8762 | .0000<br>2.017110+05<br>2.6824 | .0000<br>1.1746<br>1.1750 |
| 46000. | 42.500 | 362.254<br>360.858<br>7.220856+03 | .000000+00<br>2374.030<br>2453.712 | .000000+00<br>16.0863<br>16.544 | .000<br>53.7981<br>53.982 | .0000<br>70.582<br>11.1097 | .0000<br>2.061935+05<br>2.7442 | .0000<br>1.1768<br>1.1772 |

ALTITUDE = 180000. FT.

P1 = 4.292351-04 ATM. , RH01 = 4.412751-04 AMA. , T1 = 265.86 K  
 S1/R = 31.250 , A1 = 1072.73 FT./SEC. , H1/R = 930.513 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN     | P0/P1<br>PS/P1<br>POP/P1        | R0/R1<br>RS/R1<br>RCP/R1       | T0/T1<br>TS/T1<br>TOP/T1 | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|-------|-------|-------------------------------|---------------------------------|--------------------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 5.593 | 7.257<br>7.073<br>1.298818+01 | 1.274825+03<br>37.314<br>41.227 | 1.947982+02<br>5.8347<br>6.304 | 6.536<br>6.3870<br>6.531 | 2.4217<br>34.681<br>2.4172 | 1.0001<br>1.897093+04<br>1.0001 | 1.2906<br>1.2898<br>1.2867 |
| 7000. | 6.525 | 9.516<br>9.308<br>2.105677+01 | 3.725983+03<br>51.332<br>56.155 | 4.511872+02<br>6.4015<br>6.887 | 8.242<br>7.9894<br>8.120 | 2.6899<br>35.451<br>2.6337 | 1.0007<br>2.213275+04<br>1.0030 | 1.2618<br>1.2308<br>1.2251 |

ALTITUDE = 180000. FT.

P1 = 4.292351-04 ATM. , RH01 = 4.412751-04 AMA. , T1 = 265.86 K  
 S1/R = 31.250 , A1 = 1072.73 FT./SEC. , H1/R = 930.513 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 8000.  | 7.458  | 12.123<br>11.910<br>3.185865+01 | 1.012523+04<br>68.122<br>73.698   | 1.007225+03<br>7.2220<br>7.726   | 10.003<br>9.2782<br>9.371   | 2.9280<br>36.216<br>2.7787 | 1.0038<br>2.529457+04<br>1.0167 | 1.2282<br>1.1679<br>1.1657 |
| 9000.  | 8.390  | 15.078<br>14.869<br>4.570879+01 | 2.604420+04<br>87.608<br>93.788   | 2.192591+03<br>8.2215<br>8.726   | 11.726<br>10.2306<br>10.303 | 3.1531<br>37.018<br>2.9226 | 1.0118<br>2.845639+04<br>1.0420 | 1.2054<br>1.1447<br>1.1445 |
| 10000. | 9.322  | 18.380<br>18.176<br>6.295808+01 | 6.420929+04<br>109.547<br>116.330 | 4.647898+03<br>9.2333<br>9.733   | 13.460<br>11.0376<br>11.102 | 3.3921<br>37.869<br>3.0779 | 1.0251<br>3.161821+04<br>1.0753 | 1.1995<br>1.1409<br>1.1414 |
| 11000. | 10.254 | 22.030<br>21.825<br>8.403597+01 | 1.518946+05<br>133.774<br>141.218 | 9.513672+03<br>10.1444<br>10.633 | 15.285<br>11.8374<br>11.903 | 3.6576<br>38.768<br>3.2577 | 1.0433<br>3.478004+04<br>1.1144 | 1.2067<br>1.1497<br>1.1508 |
| 12000. | 11.186 | 26.027<br>25.813<br>1.093951+02 | 3.435165+05<br>160.096<br>168.393 | 1.862793+04<br>10.8251<br>11.300 | 17.281<br>12.7973<br>12.877 | 3.9591<br>39.699<br>3.4920 | 1.0658<br>3.794186+04<br>1.1559 | 1.2241<br>1.1761<br>1.1783 |
| 13000. | 12.119 | 30.372<br>30.131<br>1.400971+02 | 7.406254+05<br>188.074<br>197.594 | 3.475064+04<br>11.0265<br>11.475 | 19.484<br>14.3164<br>14.440 | 4.2983<br>40.631<br>3.8500 | 1.0925<br>4.110368+04<br>1.1911 | 1.2485<br>1.2373<br>1.2396 |
| 14000. | 13.051 | 35.065<br>34.778<br>1.770234+02 | 1.515353+06<br>217.709<br>228.908 | 6.128638+04<br>10.9046<br>11.366 | 21.946<br>16.4594<br>16.591 | 4.6811<br>41.513<br>4.1131 | 1.1253<br>4.426550+04<br>1.2125 | 1.2763<br>1.2132<br>1.2097 |
| 15000. | 13.983 | 40.105<br>39.792<br>2.196477+02 | 2.941399+06<br>250.385<br>262.914 | 1.024569+05<br>11.1753<br>11.655 | 24.599<br>18.1118<br>18.215 | 5.1033<br>42.355<br>4.2618 | 1.1657<br>4.742732+04<br>1.2370 | 1.3064<br>1.1616<br>1.1595 |
| 16000. | 14.915 | 45.493<br>45.168<br>2.684001+02 | 5.415282+06<br>286.004<br>299.624 | 1.625818+05<br>11.7030<br>12.190 | 27.346<br>19.2823<br>19.368 | 5.5631<br>43.193<br>4.4125 | 1.2165<br>5.058914+04<br>1.2675 | 1.3381<br>1.1411<br>1.1408 |
| 17000. | 15.847 | 51.228<br>50.897<br>3.236777+02 | 9.486293+06<br>324.222<br>338.837 | 2.457885+05<br>12.3082<br>12.797 | 30.100<br>20.2177<br>20.294 | 6.0749<br>44.046<br>4.5622 | 1.2807<br>5.375097+04<br>1.3031 | 1.3770<br>1.1321<br>1.1320 |
| 18000. | 16.780 | 57.311<br>56.975<br>3.862134+02 | .000000+00<br>364.923<br>380.509  | .000000+00<br>12.9357<br>13.424  | .000<br>21.0163<br>21.087   | .0000<br>44.920<br>4.7127  | .0000<br>5.691279+04<br>1.3426  | .0000<br>1.1282<br>1.1284  |
| 19000. | 17.712 | 63.742<br>63.400<br>4.564787+02 | .000000+00<br>408.037<br>424.560  | .000000+00<br>13.5555<br>14.041  | .000<br>21.7324<br>21.800   | .0000<br>45.820<br>4.8646  | .0000<br>6.007461+04<br>1.3853  | .0000<br>1.1269<br>1.1271  |
| 20000. | 18.644 | 70.520<br>70.173<br>5.343149+02 | .000000+00<br>453.525<br>471.075  | .000000+00<br>14.1517<br>14.636  | .000<br>22.3968<br>22.462   | .0000<br>46.746<br>5.0194  | .0000<br>6.323643+04<br>1.4311  | .0000<br>1.1271<br>1.1273  |
| 21000. | 19.576 | 77.646<br>77.292<br>6.212098+02 | .000000+00<br>501.359<br>519.893  | .000000+00<br>14.7134<br>15.194  | .000<br>23.0318<br>23.096   | .0000<br>47.698<br>5.1784  | .0000<br>6.639825+04<br>1.4797  | .0000<br>1.1284<br>1.1287  |

ALTITUDE = 180000. FT.

P1 = 4.292351-04 ATM. , RHO1 = 4.412751-04 AMA. , T1 = 265.86 K  
 S1/R = 31.250 , A1 = 1072.73 FT./SEC. , H1/R = 930.513 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 22000. | 20.508 | 85.119<br>84.757<br>7.170409+02   | .000000+00<br>551.515<br>571.133   | .000000+00<br>15.2336<br>15.712 | .000<br>23.6525<br>23.716 | .0000<br>48.673<br>5.3422 | .0000<br>6.956007+04<br>1.5309 | .0000<br>1.1304<br>1.1306 |
| 23000. | 21.441 | 92.940<br>92.568<br>8.221087+02   | .000000+00<br>603.972<br>624.733   | .000000+00<br>15.7058<br>16.181 | .000<br>24.2745<br>24.339 | .0000<br>49.673<br>5.5122 | .0000<br>7.272189+04<br>1.5844 | .0000<br>1.1330<br>1.1333 |
| 24000. | 22.373 | 101.109<br>100.724<br>9.370615+02 | .000000+00<br>658.704<br>680.702   | .000000+00<br>16.1244<br>16.597 | .000<br>24.9106<br>24.977 | .0000<br>50.694<br>5.6904 | .0000<br>7.588372+04<br>1.6401 | .0000<br>1.1366<br>1.1370 |
| 25000. | 23.305 | 109.625<br>109.225<br>1.062879+03 | .000000+00<br>715.677<br>738.983   | .000000+00<br>16.4811<br>16.950 | .000<br>25.5812<br>25.650 | .0000<br>51.735<br>5.8786 | .0000<br>7.904554+04<br>1.6977 | .0000<br>1.1411<br>1.1416 |
| 26000. | 24.237 | 118.489<br>118.071<br>1.200666+03 | .000000+00<br>774.840<br>799.685   | .000000+00<br>16.7648<br>17.232 | .000<br>26.3126<br>26.386 | .0000<br>52.791<br>6.0822 | .0000<br>8.220736+04<br>1.7566 | .0000<br>1.1475<br>1.1480 |
| 27000. | 25.169 | 127.701<br>127.260<br>1.350723+03 | .000000+00<br>836.109<br>862.667   | .000000+00<br>16.9562<br>17.421 | .000<br>27.1506<br>27.232 | .0000<br>53.859<br>6.3093 | .0000<br>8.536918+04<br>1.8162 | .0000<br>1.1570<br>1.1577 |
| 28000. | 26.102 | 137.260<br>136.789<br>1.517039+03 | .000000+00<br>899.332<br>927.844   | .000000+00<br>17.0219<br>17.481 | .000<br>28.1777<br>28.273 | .0000<br>54.931<br>6.5744 | .0000<br>8.853100+04<br>1.8750 | .0000<br>1.1718<br>1.1728 |
| 29000. | 27.034 | 147.166<br>146.653<br>1.701637+03 | .000000+00<br>964.159<br>994.985   | .000000+00<br>16.8989<br>17.349 | .000<br>29.5614<br>29.683 | .0000<br>55.996<br>6.9088 | .0000<br>9.169282+04<br>1.9298 | .0000<br>1.1971<br>1.1986 |
| 30000. | 27.966 | 157.420<br>156.847<br>1.906984+03 | .000000+00<br>1030.264<br>1063.924 | .000000+00<br>16.5169<br>16.954 | .000<br>31.5737<br>31.738 | .0000<br>57.036<br>7.3259 | .0000<br>9.485465+04<br>1.9749 | .0000<br>1.2306<br>1.2316 |
| 31000. | 28.898 | 168.022<br>167.369<br>2.130447+03 | .000000+00<br>1097.699<br>1134.847 | .000000+00<br>15.9984<br>16.437 | .000<br>34.1458<br>34.334 | .0000<br>58.032<br>7.6841 | .0000<br>9.801647+04<br>2.0086 | .0000<br>1.2325<br>1.2316 |
| 32000. | 29.830 | 178.972<br>178.245<br>2.355674+03 | .000000+00<br>1167.894<br>1208.308 | .000000+00<br>15.6368<br>16.083 | .000<br>36.5944<br>36.777 | .0000<br>58.982<br>7.9371 | .0000<br>1.011783+05<br>2.0404 | .0000<br>1.2086<br>1.2076 |
| 33000. | 30.763 | 190.269<br>189.477<br>2.584974+03 | .000000+00<br>1240.976<br>1284.498 | .000000+00<br>15.4644<br>15.919 | .000<br>38.6532<br>38.826 | .0000<br>59.901<br>8.1639 | .0000<br>1.043401+05<br>2.0757 | .0000<br>1.1901<br>1.1895 |
| 34000. | 31.695 | 201.913<br>201.068<br>2.819184+03 | .000000+00<br>1316.966<br>1363.358 | .000000+00<br>15.4138<br>15.873 | .000<br>40.3952<br>40.561 | .0000<br>60.803<br>8.3839 | .0000<br>1.075019+05<br>2.1150 | .0000<br>1.1788<br>1.1786 |
| 35000. | 32.627 | 213.906<br>213.012<br>3.059701+03 | .000000+00<br>1395.640<br>1444.776 | .000000+00<br>15.4339<br>15.896 | .000<br>41.9135<br>42.075 | .0000<br>61.694<br>8.6011 | .0000<br>1.106638+05<br>2.1575 | .0000<br>1.1722<br>1.1722 |

ALTITUDE = 180000. FT.

P1 = 4.292351-04 ATM. , RHO1 = 4.412751-04 AMA. , T1 = 265.86 K  
 S1/R = 31.250 , A1 = 1072.73 FT./SEC. , H1/R = 930.513 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 36000. | 33.559 | 226.245<br>225.308<br>3.308803+03 | .000000+00<br>1476.934<br>1528.654 | .000000+00<br>15.4955<br>15.959 | .000<br>43.2733<br>43.432 | .0000<br>62.581<br>8.8158  | .0000<br>1.138256+05<br>2.2028 | .0000<br>1.1684<br>1.1685 |
| 37000. | 34.492 | 238.933<br>237.953<br>3.565268+03 | .000000+00<br>1560.619<br>1614.961 | .000000+00<br>15.5793<br>16.044 | .000<br>44.5175<br>44.675 | .0000<br>63.467<br>9.0286  | .0000<br>1.169874+05<br>2.2505 | .0000<br>1.1661<br>1.1662 |
| 38000. | 35.424 | 251.968<br>250.947<br>3.826924+03 | .000000+00<br>1646.728<br>1703.776 | .000000+00<br>15.6760<br>16.141 | .000<br>45.6752<br>45.833 | .0000<br>64.353<br>9.2419  | .0000<br>1.201492+05<br>2.3003 | .0000<br>1.1650<br>1.1653 |
| 39000. | 36.356 | 265.350<br>264.288<br>4.096415+03 | .000000+00<br>1735.219<br>1794.990 | .000000+00<br>15.7779<br>16.243 | .000<br>46.7677<br>46.926 | .0000<br>65.242<br>9.4550  | .0000<br>1.233110+05<br>2.3521 | .0000<br>1.1647<br>1.1650 |
| 40000. | 37.288 | 279.081<br>277.977<br>4.370485+03 | .000000+00<br>1826.065<br>1888.535 | .000000+00<br>15.8805<br>16.346 | .000<br>47.8100<br>47.970 | .0000<br>66.133<br>9.6686  | .0000<br>1.264729+05<br>2.4056 | .0000<br>1.1649<br>1.1652 |
| 41000. | 38.220 | 293.159<br>292.013<br>4.655995+03 | .000000+00<br>1919.241<br>1984.440 | .000000+00<br>15.9806<br>16.445 | .000<br>48.8139<br>48.975 | .0000<br>67.029<br>9.8843  | .0000<br>1.296347+05<br>2.4609 | .0000<br>1.1657<br>1.1660 |
| 42000. | 39.153 | 307.584<br>306.396<br>4.942038+03 | .000000+00<br>2014.732<br>2082.754 | .000000+00<br>16.0761<br>16.540 | .000<br>49.7892<br>49.953 | .0000<br>67.930<br>10.1016 | .0000<br>1.327965+05<br>2.5178 | .0000<br>1.1667<br>1.1670 |
| 43000. | 40.085 | 322.357<br>321.127<br>5.236763+03 | .000000+00<br>2112.640<br>2183.359 | .000000+00<br>16.1657<br>16.628 | .000<br>50.7432<br>50.909 | .0000<br>68.835<br>10.3214 | .0000<br>1.359583+05<br>2.5762 | .0000<br>1.1680<br>1.1684 |
| 44000. | 41.017 | 337.478<br>336.203<br>5.526488+03 | .000000+00<br>2212.721<br>2286.311 | .000000+00<br>16.2464<br>16.707 | .000<br>51.6825<br>51.851 | .0000<br>69.745<br>10.5439 | .0000<br>1.391201+05<br>2.6360 | .0000<br>1.1698<br>1.1700 |
| 45000. | 41.949 | 352.946<br>351.625<br>5.807662+03 | .000000+00<br>2315.107<br>2391.627 | .000000+00<br>16.3229<br>16.781 | .000<br>52.6081<br>52.782 | .0000<br>70.659<br>10.7743 | .0000<br>1.422820+05<br>2.6970 | .0000<br>1.1710<br>1.1730 |
| 46000. | 42.881 | 368.762<br>367.391<br>6.028677+03 | .000000+00<br>2419.652<br>2499.293 | .000000+00<br>16.3804<br>16.838 | .000<br>53.5409<br>53.717 | .0000<br>71.578<br>10.9998 | .0000<br>1.454438+05<br>2.7598 | .0000<br>1.1735<br>1.1740 |
| 47000. | 43.814 | 384.925<br>383.503<br>6.253928+03 | .000000+00<br>2526.468<br>2609.296 | .000000+00<br>16.4319<br>16.889 | .000<br>54.4708<br>54.651 | .0000<br>72.502<br>11.2347 | .0000<br>1.486056+05<br>2.8236 | .0000<br>1.1760<br>1.1765 |

ALTITUDE = 190000. FT.

P1 = 2.908457-04 ATM. , RHO1 = 3.058950-04 AMA. , T1 = 259.87 K  
 S1/R = 31.560 , A1 = 1060.58 FT./SEC. , H1/R = 909.551 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | RC/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.657  | 7.401<br>7.214<br>1.076996+01   | 1.363241+03<br>38.172<br>42.163   | 2.041816+02<br>5.8504<br>6.320   | 6.668<br>6.5161<br>6.662    | 2.4185<br>35.036<br>2.4134 | 1.0001<br>1.339233+04<br>1.0001 | 1.2907<br>1.2896<br>1.2863 |
| 7000.  | 6.600  | 9.712<br>9.502<br>1.747765+01   | 3.995371+03<br>52.529<br>57.445   | 4.740391+02<br>6.4267<br>6.914   | 8.412<br>8.1410<br>8.271    | 2.6855<br>35.809<br>2.6235 | 1.0007<br>1.562438+04<br>1.0034 | 1.2607<br>1.2265<br>1.2206 |
| 8000.  | 7.543  | 12.380<br>12.165<br>2.645386+01 | 1.088554+04<br>69.753<br>75.415   | 1.061853+03<br>7.2777<br>7.783   | 10.198<br>9.4158<br>9.506   | 2.9197<br>36.580<br>2.7639 | 1.0040<br>1.785644+04<br>1.0180 | 1.2251<br>1.1637<br>1.1616 |
| 9000.  | 8.486  | 15.402<br>15.193<br>3.796397+01 | 2.810491+04<br>89.728<br>95.995   | 2.323742+03<br>8.3057<br>8.812   | 11.931<br>10.3506<br>10.421 | 3.1408<br>37.392<br>2.9053 | 1.0125<br>2.008849+04<br>1.0441 | 1.2016<br>1.1418<br>1.1416 |
| 10000. | 9.429  | 18.781<br>18.577<br>5.229520+01 | 6.964210+04<br>112.203<br>119.060 | 4.958644+03<br>9.3403<br>9.840   | 13.667<br>11.1462<br>11.209 | 3.3759<br>38.256<br>3.0586 | 1.0264<br>2.232054+04<br>1.0782 | 1.1955<br>1.1386<br>1.1391 |
| 11000. | 10.372 | 22.515<br>22.310<br>6.979901+01 | 1.657417+05<br>137.014<br>144.535 | 1.022546+04<br>10.2697<br>10.759 | 15.496<br>11.9404<br>12.004 | 3.6371<br>39.169<br>3.2366 | 1.0447<br>2.455260+04<br>1.1177 | 1.2024<br>1.1478<br>1.1489 |
| 12000. | 11.315 | 26.604<br>26.391<br>9.088292+01 | 3.773571+05<br>163.968<br>172.322 | 2.018530+04<br>10.9551<br>11.427 | 17.503<br>12.9099<br>12.989 | 3.9325<br>40.117<br>3.4727 | 1.0668<br>2.678465+04<br>1.1596 | 1.2188<br>1.1759<br>1.1782 |
| 13000. | 12.257 | 31.049<br>30.806<br>1.164247+02 | 8.198389+05<br>192.538<br>202.178 | 3.800482+04<br>11.1159<br>11.561 | 19.731<br>14.5032<br>14.630 | 4.2634<br>41.063<br>3.8422 | 1.0920<br>2.901671+04<br>1.1939 | 1.2414<br>1.2417<br>1.2437 |
| 14000. | 13.200 | 35.850<br>35.561<br>1.471889+02 | 1.691621+06<br>222.861<br>234.256 | 6.773464+04<br>10.9817<br>11.445 | 22.235<br>16.7039<br>16.833 | 4.6334<br>41.953<br>4.0907 | 1.1218<br>3.124876+04<br>1.2145 | 1.2665<br>1.2080<br>1.2046 |
| 15000. | 14.143 | 41.006<br>40.692<br>1.826440+02 | 3.314789+06<br>256.373<br>269.074 | 1.146536+05<br>11.2832<br>11.765 | 24.948<br>18.3330<br>18.433 | 5.0332<br>42.804<br>4.2369 | 1.1575<br>3.348082+04<br>1.2393 | 1.2910<br>1.1578<br>1.1564 |
| 16000. | 15.086 | 46.518<br>46.193<br>2.230274+02 | 6.168889+06<br>292.881<br>306.673 | 1.846472+05<br>11.8371<br>12.326 | 27.766<br>19.4798<br>19.564 | 5.4648<br>43.653<br>4.3823 | 1.2018<br>3.571287+04<br>1.2703 | 1.3170<br>1.1371<br>1.1371 |
| 17000. | 16.029 | 52.386<br>52.055<br>2.689320+02 | 1.094476+07<br>332.034<br>346.780 | 2.840094+05<br>12.4626<br>12.951 | 30.597<br>20.3985<br>20.473 | 5.9402<br>44.519<br>4.5305 | 1.2579<br>3.794492+04<br>1.3063 | 1.3491<br>1.1294<br>1.1294 |
| 18000. | 16.972 | 58.609<br>58.274<br>3.205167+02 | .000000+00<br>373.722<br>389.431  | .000000+00<br>13.1086<br>13.597  | .000<br>21.1833<br>21.252   | .0000<br>45.409<br>4.6787  | .0000<br>4.017698+04<br>1.3461  | .0000<br>1.1259<br>1.1260  |
| 19000. | 17.915 | 65.188<br>64.848<br>3.790426+02 | .000000+00<br>417.874<br>434.567  | .000000+00<br>13.7446<br>14.232  | .000<br>21.8889<br>21.954   | .0000<br>46.324<br>4.8284  | .0000<br>4.240903+04<br>1.3892  | .0000<br>1.1247<br>1.1248  |

ALTITUDE = 190000. FT.

P1 = 2.908457-04 ATM. , RHO1 = 3.058950-04 AMA. , T1 = 259.87 K  
 S1/R = 31.560 , A1 = 1060.58 FT./SEC. , H1/R = 909.551 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 20000. | 18.858 | 72.122<br>71.777<br>4.438691+02   | .000000+00<br>464.456<br>482.147   | .000000+00<br>14.3560<br>14.841 | .000<br>22.5441<br>22.607 | .0000<br>47.267<br>4.9808 | .0000<br>4.464109+04<br>1.4353 | .0000<br>1.1248<br>1.1250 |
| 21000. | 19.801 | 79.412<br>79.061<br>5.155970+02   | .000000+00<br>513.437<br>532.133   | .000000+00<br>14.9320<br>15.414 | .000<br>23.1705<br>23.233 | .0000<br>48.236<br>5.1374 | .0000<br>4.687314+04<br>1.4842 | .0000<br>1.1260<br>1.1263 |
| 22000. | 20.743 | 87.058<br>86.698<br>5.953459+02   | .000000+00<br>564.797<br>584.530   | .000000+00<br>15.4655<br>15.943 | .000<br>23.7837<br>23.846 | .0000<br>49.231<br>5.2991 | .0000<br>4.910520+04<br>1.5357 | .0000<br>1.1281<br>1.1284 |
| 23000. | 21.686 | 95.059<br>94.690<br>6.828631+02   | .000000+00<br>618.510<br>639.412   | .000000+00<br>15.9497<br>16.425 | .000<br>24.3986<br>24.461 | .0000<br>50.251<br>5.4671 | .0000<br>5.133725+04<br>1.5896 | .0000<br>1.1309<br>1.1312 |
| 24000. | 22.629 | 103.416<br>103.034<br>7.785227+02 | .000000+00<br>674.552<br>696.622   | .000000+00<br>16.3782<br>16.849 | .000<br>25.0299<br>25.094 | .0000<br>51.292<br>5.6428 | .0000<br>5.356931+04<br>1.6456 | .0000<br>1.1342<br>1.1346 |
| 25000. | 23.572 | 112.129<br>111.732<br>8.828435+02 | .000000+00<br>732.887<br>756.354   | .000000+00<br>16.7430<br>17.212 | .000<br>25.6969<br>25.764 | .0000<br>52.354<br>5.8297 | .0000<br>5.580136+04<br>1.7035 | .0000<br>1.1391<br>1.1395 |
| 26000. | 24.515 | 121.197<br>120.782<br>9.971212+02 | .000000+00<br>793.462<br>818.482   | .000000+00<br>17.0319<br>17.500 | .000<br>26.4284<br>26.500 | .0000<br>53.432<br>6.0318 | .0000<br>5.803342+04<br>1.7629 | .0000<br>1.1456<br>1.1461 |
| 27000. | 25.458 | 130.621<br>130.184<br>1.121748+03 | .000000+00<br>856.188<br>882.945   | .000000+00<br>17.2238<br>17.689 | .000<br>27.2714<br>27.351 | .0000<br>54.522<br>6.2581 | .0000<br>6.026547+04<br>1.8228 | .0000<br>1.1553<br>1.1560 |
| 28000. | 26.401 | 140.400<br>139.933<br>1.258655+03 | .000000+00<br>920.892<br>949.622   | .000000+00<br>17.2798<br>17.739 | .000<br>28.3194<br>28.413 | .0000<br>55.615<br>6.5258 | .0000<br>6.249752+04<br>1.8818 | .0000<br>1.1711<br>1.1720 |
| 29000. | 27.344 | 150.535<br>150.024<br>1.411947+03 | .000000+00<br>987.184<br>1018.289  | .000000+00<br>17.1271<br>17.575 | .000<br>29.7623<br>29.886 | .0000<br>56.701<br>6.8714 | .0000<br>6.472958+04<br>1.9363 | .0000<br>1.1991<br>1.2006 |
| 30000. | 28.287 | 161.025<br>160.451<br>1.583593+03 | .000000+00<br>1054.694<br>1088.766 | .000000+00<br>16.6895<br>17.125 | .000<br>31.9032<br>32.071 | .0000<br>57.758<br>7.2998 | .0000<br>6.696163+04<br>1.9801 | .0000<br>1.2340<br>1.2349 |
| 31000. | 29.229 | 171.872<br>171.216<br>1.769068+03 | .000000+00<br>1123.713<br>1161.303 | .000000+00<br>16.1445<br>16.583 | .000<br>34.5673<br>34.753 | .0000<br>58.766<br>7.6394 | .0000<br>6.919369+04<br>2.0127 | .0000<br>1.2289<br>1.2278 |
| 32000. | 30.172 | 183.073<br>182.345<br>1.954281+03 | .000000+00<br>1195.629<br>1236.541 | .000000+00<br>15.7580<br>16.246 | .000<br>36.9995<br>37.177 | .0000<br>59.728<br>7.8804 | .0000<br>7.142574+04<br>2.0449 | .0000<br>1.2030<br>1.2021 |
| 33000. | 31.115 | 194.631<br>193.840<br>2.142389+03 | .000000+00<br>1270.576<br>1314.601 | .000000+00<br>15.6467<br>16.103 | .000<br>39.0130<br>39.180 | .0000<br>60.660<br>8.1013 | .0000<br>7.365780+04<br>2.0811 | .0000<br>1.1850<br>1.1845 |

ALTITUDE = 190000. FT.

P1 = 2.908457-04 ATM. , RHO1 = 3.058950-04 AMA. , T1 = 259.87 K  
 S1/R = 31.560 , A1 = 1060.58 FT./SEC. , H1/R = 909.551 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | RC/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA     | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|-----------------------------|--------------------------------|---------------------------|
| 34000. | 32.058 | 206.544<br>205.701<br>2.334634+03 | .000000+00<br>1348.497<br>1395.376 | .000000+00<br>15.6146<br>16.076 | .000<br>40.7109<br>40.871 | .00000<br>61.576<br>8.3175  | .0000<br>7.588985+04<br>2.1212 | .0000<br>1.1744<br>1.1742 |
| 35000. | 33.001 | 218.812<br>217.923<br>2.532091+03 | .000000+00<br>1429.145<br>1478.744 | .000000+00<br>15.6497<br>16.114 | .000<br>42.1901<br>42.346 | .00000<br>62.483<br>8.5304  | .0000<br>7.812191+04<br>2.1645 | .0000<br>1.1683<br>1.1683 |
| 36000. | 33.944 | 231.437<br>230.506<br>2.731927+03 | .000000+00<br>1512.465<br>1564.636 | .000000+00<br>15.7239<br>16.189 | .000<br>43.5154<br>43.669 | .00000<br>63.387<br>8.7407  | .0000<br>8.035396+04<br>2.2106 | .0000<br>1.1645<br>1.1646 |
| 37000. | 34.887 | 244.416<br>243.444<br>2.939231+03 | .000000+00<br>1598.225<br>1653.070 | .000000+00<br>15.8191<br>16.285 | .000<br>44.7286<br>44.881 | .00000<br>64.290<br>8.9508  | .0000<br>8.258601+04<br>2.2590 | .0000<br>1.1626<br>1.1628 |
| 38000. | 35.830 | 257.752<br>256.740<br>3.154282+03 | .000000+00<br>1686.456<br>1743.986 | .000000+00<br>15.9252<br>16.392 | .000<br>45.8586<br>46.011 | .00000<br>65.195<br>9.1598  | .0000<br>8.481807+04<br>2.3096 | .0000<br>1.1616<br>1.1618 |
| 39000. | 36.772 | 271.443<br>270.391<br>3.368545+03 | .000000+00<br>1777.124<br>1837.308 | .000000+00<br>16.0359<br>16.502 | .000<br>46.9252<br>47.078 | .00000<br>66.102<br>9.3695  | .0000<br>8.705012+04<br>2.3621 | .0000<br>1.1614<br>1.1617 |
| 40000. | 37.715 | 285.490<br>284.398<br>3.591218+03 | .000000+00<br>1870.200<br>1933.078 | .000000+00<br>16.1464<br>16.613 | .000<br>47.9436<br>48.097 | .00000<br>67.014<br>9.5800  | .0000<br>8.928218+04<br>2.4164 | .0000<br>1.1617<br>1.1620 |
| 41000. | 38.658 | 299.892<br>298.759<br>3.815849+03 | .000000+00<br>1965.664<br>2031.255 | .000000+00<br>16.2541<br>16.719 | .000<br>48.9249<br>49.080 | .00000<br>67.930<br>9.7918  | .0000<br>9.151423+04<br>2.4724 | .0000<br>1.1624<br>1.1627 |
| 42000. | 39.601 | 314.650<br>313.476<br>4.049860+03 | .000000+00<br>2063.492<br>2131.840 | .000000+00<br>16.3559<br>16.820 | .000<br>49.8781<br>50.036 | .00000<br>68.852<br>10.0063 | .0000<br>9.374629+04<br>2.5300 | .0000<br>1.1636<br>1.1639 |
| 43000. | 40.544 | 329.763<br>328.547<br>4.283829+03 | .000000+00<br>2163.670<br>2234.834 | .000000+00<br>16.4508<br>16.914 | .000<br>50.8113<br>50.971 | .00000<br>69.778<br>10.2223 | .0000<br>9.597834+04<br>2.5891 | .0000<br>1.1648<br>1.1652 |
| 44000. | 41.487 | 345.233<br>343.974<br>4.525164+03 | .000000+00<br>2266.314<br>2340.210 | .000000+00<br>16.5382<br>16.999 | .000<br>51.7308<br>51.893 | .00000<br>70.710<br>10.4414 | .0000<br>9.821039+04<br>2.6497 | .0000<br>1.1664<br>1.1668 |
| 45000. | 42.430 | 361.057<br>359.753<br>4.763709+03 | .000000+00<br>2371.156<br>2447.994 | .000000+00<br>16.6148<br>17.075 | .000<br>52.6422<br>52.807 | .00000<br>71.647<br>10.6650 | .0000<br>1.004425+05<br>2.7117 | .0000<br>1.1683<br>1.1688 |
| 46000. | 43.373 | 377.238<br>375.886<br>5.005606+03 | .000000+00<br>2478.333<br>2558.148 | .000000+00<br>16.6850<br>17.143 | .000<br>53.5472<br>53.716 | .00000<br>72.590<br>10.8828 | .0000<br>1.026745+05<br>2.7747 | .0000<br>1.1678<br>1.1693 |
| 47000. | 44.316 | 393.774<br>392.372<br>5.204779+03 | .000000+00<br>2587.744<br>2670.728 | .000000+00<br>16.7388<br>17.194 | .000<br>54.4612<br>54.636 | .00000<br>73.537<br>11.1232 | .0000<br>1.049066+05<br>2.8396 | .0000<br>1.1742<br>1.1735 |

## ALTITUDE = 190000. FT.

P1 = 2.908457-04 ATM. , RH01 = 3.058950-04 AMA. , T1 = 259.87 K  
 S1/R = 31.560 , A1 = 1060.58 FT./SEC. , H1/R = 909.551 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 45.258 | 410.665<br>409.210<br>5.384561+03 | .000000+00<br>2699.422<br>2785.623 | .000000+00<br>16.7811<br>17.236 | .000<br>55.3828<br>55.560 | .0000<br>74.489<br>11.3565 | .0000<br>1.071386+03<br>2.9054 | .0000<br>1.1752<br>1.1757 |

## ALTITUDE = 200000. FT.

P1 = 1.953685-04 ATM. , RH01 = 2.103202-04 AMA. , T1 = 253.89 K  
 S1/R = 31.876 , A1 = 1048.29 FT./SEC. , H1/R = 888.608 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.724  | 7.552<br>7.362<br>8.894030+00   | 1.461904+03<br>39.069<br>43.142   | 2.145139+02<br>5.8664<br>6.336   | 6.806<br>6.6511<br>6.800    | 2.4152<br>35.399<br>2.4094 | 1.0001<br>9.381985+03<br>1.0001 | 1.2908<br>1.2893<br>1.2858 |
| 7000.  | 6.678  | 9.918<br>9.704<br>1.444742+01   | 4.296449+03<br>53.784<br>58.797   | 4.992288+02<br>6.4538<br>6.943   | 8.590<br>8.2974<br>8.426    | 2.6810<br>36.175<br>2.6127 | 1.0007<br>1.094565+04<br>1.0038 | 1.2595<br>1.2217<br>1.2157 |
| 8000.  | 7.631  | 12.648<br>12.431<br>2.187566+01 | 1.173744+04<br>71.464<br>77.212   | 1.122346+03<br>7.3369<br>7.844   | 10.400<br>9.5563<br>9.645   | 2.9111<br>36.953<br>2.7487 | 1.0043<br>1.250931+04<br>1.0194 | 1.2220<br>1.1594<br>1.1575 |
| 9000.  | 8.585  | 15.742<br>15.532<br>3.140167+01 | 3.042643+04<br>91.950<br>98.304   | 2.470012+03<br>8.3937<br>8.901   | 12.140<br>10.4734<br>10.542 | 3.1278<br>37.775<br>2.8877 | 1.0134<br>1.407298+04<br>1.0463 | 1.1977<br>1.1388<br>1.1387 |
| 10000. | 9.539  | 19.200<br>18.996<br>4.325892+01 | 7.579188+04<br>114.984<br>121.911 | 5.306498+03<br>9.4518<br>9.951   | 13.878<br>11.2577<br>11.319 | 3.3598<br>38.652<br>3.0390 | 1.0279<br>1.563664+04<br>1.0810 | 1.1918<br>1.1363<br>1.1368 |
| 11000. | 10.493 | 23.022<br>22.818<br>5.773078+01 | 1.814811+05<br>140.407<br>147.990 | 1.102395+04<br>10.3996<br>10.887 | 15.710<br>12.0466<br>12.110 | 3.6171<br>39.581<br>3.2152 | 1.0466<br>1.720031+04<br>1.1211 | 1.1986<br>1.1458<br>1.1469 |
| 12000. | 11.447 | 27.208<br>26.994<br>7.519623+01 | 4.160424+05<br>168.008<br>176.452 | 2.193737+04<br>11.0871<br>11.559 | 17.726<br>13.0299<br>13.109 | 3.9075<br>40.545<br>3.4538 | 1.0686<br>1.876397+04<br>1.1632 | 1.2141<br>1.1760<br>1.1784 |
| 13000. | 12.401 | 31.757<br>31.512<br>9.636985+01 | 9.104719+05<br>197.202<br>206.986 | 4.165541+04<br>11.2024<br>11.646 | 19.977<br>14.7066<br>14.837 | 4.2271<br>41.505<br>3.8351 | 1.0928<br>2.032763+04<br>1.1965 | 1.2328<br>1.2462<br>1.2479 |
| 14000. | 13.355 | 36.671<br>36.379<br>1.218722+02 | 1.893816+06<br>228.254<br>239.822 | 7.495594+04<br>11.0613<br>11.526 | 22.524<br>16.9588<br>17.085 | 4.5906<br>42.403<br>4.0671 | 1.1204<br>2.189130+04<br>1.2163 | 1.2578<br>1.2023<br>1.1989 |
| 15000. | 14.309 | 41.949<br>41.634<br>1.512501+02 | 3.743111+06<br>262.643<br>275.517 | 1.282806+05<br>11.3958<br>11.879 | 25.294<br>18.5614<br>18.658 | 4.9719<br>43.264<br>4.2097 | 1.1522<br>2.345496+04<br>1.2416 | 1.2776<br>1.1533<br>1.1522 |
| 16000. | 15.263 | 47.591<br>47.266<br>1.846037+02 | 7.034402+06<br>300.077<br>313.996 | 2.093596+05<br>11.9745<br>12.464 | 28.179<br>19.6859<br>19.766 | 5.3791<br>44.124<br>4.3504 | 1.1909<br>2.501863+04<br>1.2730 | 1.2987<br>1.1329<br>1.1329 |

ALTITUDE = 200000. FT.

P1 = 1.953685-04 ATM. , RHD1 = 2.103202-04 AMA. , T1 = 253.89 K  
 S1/R = 31.876 , A1 = 1048.29 FT./SEC. , H1/R = 888.608 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 17000. | 16.217 | 53.597<br>53.267<br>2.227856+02   | 1.262523+07<br>340.209<br>355.094  | 3.271942+05<br>12.6220<br>13.111 | 31.081<br>20.5868<br>20.659 | 5.8207<br>45.005<br>4.4985 | 1.2400<br>2.658229+04<br>1.3094 | 1.3241<br>1.1267<br>1.1267 |
| 18000. | 17.171 | 59.967<br>59.633<br>2.654312+02   | 2.166893+07<br>382.928<br>398.793  | 4.896920+05<br>13.2864<br>13.775 | 33.948<br>21.3587<br>21.426 | 6.3115<br>45.909<br>4.6443 | 1.3019<br>2.814596+04<br>1.3496 | 1.3575<br>1.1235<br>1.1236 |
| 19000. | 18.125 | 66.701<br>66.362<br>3.134755+02   | .000000+00<br>428.168<br>445.027   | .000000+00<br>13.9395<br>14.427  | .000<br>22.0535<br>22.117   | .0000<br>46.841<br>4.7920  | .0000<br>2.970962+04<br>1.3930  | .0000<br>1.1225<br>1.1227  |
| 20000. | 19.079 | 73.799<br>73.455<br>3.670477+02   | .000000+00<br>475.892<br>493.709   | .000000+00<br>14.5664<br>15.051  | .000<br>22.7000<br>22.762   | .0000<br>47.801<br>4.9421  | .0000<br>3.127328+04<br>1.4394  | .0000<br>1.1227<br>1.1229  |
| 21000. | 20.033 | 81.260<br>80.911<br>4.262738+02   | .000000+00<br>526.074<br>544.913   | .000000+00<br>15.1574<br>15.639  | .000<br>23.3176<br>23.378   | .0000<br>48.789<br>5.0963  | .0000<br>3.283695+04<br>1.4886  | .0000<br>1.1238<br>1.1241  |
| 22000. | 20.986 | 89.086<br>88.729<br>4.919827+02   | .000000+00<br>578.690<br>598.585   | .000000+00<br>15.7040<br>16.182  | .000<br>23.9238<br>23.984   | .0000<br>49.803<br>5.2556  | .0000<br>3.440061+04<br>1.5404  | .0000<br>1.1258<br>1.1261  |
| 23000. | 21.940 | 97.276<br>96.909<br>5.644922+02   | .000000+00<br>633.720<br>654.716   | .000000+00<br>16.2010<br>16.675  | .000<br>24.5316<br>24.592   | .0000<br>50.843<br>5.4215  | .0000<br>3.596428+04<br>1.5946  | .0000<br>1.1286<br>1.1289  |
| 24000. | 22.894 | 105.830<br>105.451<br>6.439444+02 | .000000+00<br>691.131<br>713.418   | .000000+00<br>16.6397<br>17.112  | .000<br>25.1582<br>25.220   | .0000<br>51.906<br>5.5955  | .0000<br>3.752794+04<br>1.6510  | .0000<br>1.1322<br>1.1326  |
| 25000. | 23.848 | 114.748<br>114.355<br>7.305108+02 | .000000+00<br>750.892<br>774.584   | .000000+00<br>17.0134<br>17.485  | .000<br>25.8213<br>25.886   | .0000<br>52.989<br>5.7803  | .0000<br>3.909160+04<br>1.7093  | .0000<br>1.1370<br>1.1374  |
| 26000. | 24.802 | 124.030<br>123.619<br>8.248387+02 | .000000+00<br>812.944<br>838.184   | .000000+00<br>17.3072<br>17.776  | .000<br>26.5528<br>26.622   | .0000<br>54.090<br>5.9809  | .0000<br>4.065527+04<br>1.7690  | .0000<br>1.1436<br>1.1441  |
| 27000. | 25.756 | 133.675<br>133.242<br>9.285716+02 | .000000+00<br>877.191<br>904.161   | .000000+00<br>17.4989<br>17.964  | .000<br>27.4028<br>27.480   | .0000<br>55.202<br>6.2068  | .0000<br>4.221893+04<br>1.8293  | .0000<br>1.1536<br>1.1543  |
| 28000. | 26.710 | 143.685<br>143.222<br>1.041026+03 | .000000+00<br>943.444<br>972.356   | .000000+00<br>17.5444<br>18.002  | .000<br>28.4737<br>28.567   | .0000<br>56.318<br>6.4783  | .0000<br>4.378260+04<br>1.8885  | .0000<br>1.1707<br>1.1717  |
| 29000. | 27.664 | 154.059<br>153.550<br>1.167498+03 | .000000+00<br>1011.264<br>1042.641 | .000000+00<br>17.3578<br>17.804  | .000<br>29.9839<br>30.109   | .0000<br>57.424<br>6.8353  | .0000<br>4.534626+04<br>1.9427  | .0000<br>1.2013<br>1.2031  |
| 30000. | 28.618 | 164.797<br>164.220<br>1.310424+03 | .000000+00<br>1080.224<br>1114.735 | .000000+00<br>16.8588<br>17.293  | .000<br>32.2668<br>32.438   | .0000<br>58.498<br>7.2731  | .0000<br>4.690993+04<br>1.9849  | .0000<br>1.2368<br>1.2375  |

ALTITUDE = 200000. FT.

P1 = 1.953685-04 ATM. , RHO1 = 2.103202-04 AMA. , T1 = 253.89 K  
 S1/R = 31.876 , A1 = 1048.29 FT./SEC. , H1/R = 888.608 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 31000. | 29.572 | 175.899<br>175.240<br>1.462730+03 | .000000+00<br>1150.876<br>1188.981 | .000000+00<br>16.2934<br>16.733 | .000<br>35.0091<br>35.192 | .0000<br>59.518<br>7.5919  | .0000<br>4.847359+04<br>2.0167 | .0000<br>1.2246<br>1.2232 |
| 32000. | 30.526 | 187.364<br>186.635<br>1.615487+03 | .000000+00<br>1224.667<br>1266.097 | .000000+00<br>15.9670<br>16.417 | .000<br>37.4139<br>37.586 | .0000<br>60.492<br>7.8222  | .0000<br>5.003725+04<br>2.0494 | .0000<br>1.1974<br>1.1965 |
| 33000. | 31.480 | 199.194<br>198.404<br>1.770113+03 | .000000+00<br>1301.569<br>1346.105 | .000000+00<br>15.8380<br>16.296 | .000<br>39.3796<br>39.541 | .0000<br>61.438<br>8.0382  | .0000<br>5.160092+04<br>2.0865 | .0000<br>1.1801<br>1.1796 |
| 34000. | 32.434 | 211.388<br>210.548<br>1.927749+03 | .000000+00<br>1381.504<br>1428.850 | .000000+00<br>15.8241<br>16.287 | .000<br>41.0333<br>41.188 | .0000<br>62.369<br>8.2501  | .0000<br>5.316458+04<br>2.1275 | .0000<br>1.1701<br>1.1700 |
| 35000. | 33.388 | 223.946<br>223.061<br>2.087503+03 | .000000+00<br>1464.216<br>1514.249 | .000000+00<br>15.8744<br>16.339 | .000<br>42.4741<br>42.624 | .0000<br>63.293<br>8.4587  | .0000<br>5.472825+04<br>2.1716 | .0000<br>1.1642<br>1.1643 |
| 36000. | 34.341 | 236.868<br>235.943<br>2.251726+03 | .000000+00<br>1549.651<br>1602.278 | .000000+00<br>15.9614<br>16.427 | .000<br>43.7659<br>43.914 | .0000<br>64.214<br>8.6659  | .0000<br>5.629191+04<br>2.2184 | .0000<br>1.1610<br>1.1611 |
| 37000. | 35.295 | 250.153<br>249.189<br>2.420515+03 | .000000+00<br>1637.575<br>1692.847 | .000000+00<br>16.0676<br>16.535 | .000<br>44.9493<br>45.096 | .0000<br>65.135<br>8.8716  | .0000<br>5.785558+04<br>2.2676 | .0000<br>1.1591<br>1.1593 |
| 38000. | 36.249 | 263.803<br>262.800<br>2.591827+03 | .000000+00<br>1728.027<br>1785.893 | .000000+00<br>16.1837<br>16.651 | .000<br>46.0520<br>46.198 | .0000<br>66.059<br>9.0773  | .0000<br>5.941924+04<br>2.3189 | .0000<br>1.1582<br>1.1585 |
| 39000. | 37.203 | 277.817<br>276.775<br>2.770677+03 | .000000+00<br>1820.971<br>1881.504 | .000000+00<br>16.3034<br>16.770 | .000<br>47.0937<br>47.240 | .0000<br>66.986<br>9.2831  | .0000<br>6.098290+04<br>2.3721 | .0000<br>1.1581<br>1.1584 |
| 40000. | 38.157 | 292.194<br>291.114<br>2.945696+03 | .000000+00<br>1916.380<br>1979.578 | .000000+00<br>16.4223<br>16.889 | .000<br>48.0885<br>48.236 | .0000<br>67.918<br>9.4905  | .0000<br>6.254657+04<br>2.4271 | .0000<br>1.1585<br>1.1588 |
| 41000. | 39.111 | 306.936<br>305.816<br>3.127944+03 | .000000+00<br>2014.230<br>2080.132 | .000000+00<br>16.5370<br>17.003 | .000<br>49.0478<br>49.197 | .0000<br>68.856<br>9.6984  | .0000<br>6.411023+04<br>2.4838 | .0000<br>1.1591<br>1.1594 |
| 42000. | 40.065 | 322.042<br>320.882<br>3.310935+03 | .000000+00<br>2114.513<br>2183.172 | .000000+00<br>16.6463<br>17.111 | .000<br>49.9801<br>50.131 | .0000<br>69.799<br>9.9094  | .0000<br>6.567390+04<br>2.5421 | .0000<br>1.1603<br>1.1606 |
| 43000. | 41.019 | 337.512<br>336.310<br>3.500028+03 | .000000+00<br>2217.192<br>2288.672 | .000000+00<br>16.7474<br>17.211 | .000<br>50.8929<br>51.046 | .0000<br>70.747<br>10.1226 | .0000<br>6.723756+04<br>2.6019 | .0000<br>1.1616<br>1.1620 |
| 44000. | 41.973 | 353.345<br>352.101<br>3.690143+03 | .000000+00<br>2322.262<br>2396.623 | .000000+00<br>16.8395<br>17.302 | .000<br>51.7928<br>51.948 | .0000<br>71.702<br>10.3383 | .0000<br>6.880122+04<br>2.6633 | .0000<br>1.1632<br>1.1636 |

ALTITUDE = 200000. FT.

P1 = 1.953685-04 ATM. , RH01 = 2.103202-04 AMA. , T1 = 253.89 K  
 S1/R = 31.876 , A1 = 1048.29 FT./SEC. , H1/R = 888.608 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 45000. | 42.927 | 369.543<br>368.256<br>3.883743+03 | .000000+00<br>2429.844<br>2507.046 | .000000+00<br>16.9227<br>17.383 | .000<br>52.6855<br>52.844 | .0000<br>72.663<br>10.5570 | .0000<br>7.036489+04<br>2.7260 | .0000<br>1.1650<br>1.1654 |
| 46000. | 43.881 | 386.105<br>384.771<br>4.078237+03 | .000000+00<br>2539.663<br>2619.874 | .000000+00<br>16.9943<br>17.453 | .000<br>53.5758<br>53.738 | .0000<br>73.629<br>10.7806 | .0000<br>7.192855+04<br>2.7901 | .0000<br>1.1671<br>1.1675 |
| 47000. | 44.835 | 403.030<br>401.648<br>4.272428+03 | .000000+00<br>2651.828<br>2735.070 | .000000+00<br>17.0550<br>17.510 | .000<br>54.4689<br>54.636 | .0000<br>74.601<br>10.9971 | .0000<br>7.349222+04<br>2.8554 | .0000<br>1.1684<br>1.1676 |
| 48000. | 45.789 | 420.320<br>418.887<br>4.449412+03 | .000000+00<br>2766.343<br>2852.915 | .000000+00<br>17.1061<br>17.558 | .000<br>55.3686<br>55.543 | .0000<br>75.577<br>11.2534 | .0000<br>7.505588+04<br>2.9220 | .0000<br>1.1740<br>1.1753 |
| 49000. | 46.743 | 437.974<br>436.485<br>4.594962+03 | .000000+00<br>2883.079<br>2973.257 | .000000+00<br>17.1360<br>17.591 | .000<br>56.2914<br>56.467 | .0000<br>76.558<br>11.4780 | .0000<br>7.661955+04<br>2.9897 | .0000<br>1.1749<br>1.1755 |
| 50000. | 47.697 | 455.991<br>454.445<br>4.752051+03 | .000000+00<br>3002.139<br>3095.966 | .000000+00<br>17.1567<br>17.610 | .000<br>57.2307<br>57.412 | .0000<br>77.544<br>11.7219 | .0000<br>7.818321+04<br>3.0584 | .0000<br>1.1782<br>1.1786 |

ALTITUDE = 210000. FT.

P1 = 1.296397-04 ATM. , RH01 = 1.457122-04 AMA. , T1 = 243.17 K  
 S1/R = 32.136 , A1 = 1025.93 FT./SEC. , H1/R = 851.096 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | R0/R1<br>RS/R1<br>RCP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.848  | 7.841<br>7.644<br>7.348938+00   | 1.662316+03<br>40.786<br>45.015   | 2.347828+02<br>5.8946<br>6.364   | 7.071<br>6.9102<br>7.064    | 2.4096<br>35.745<br>2.4032 | 1.0001<br>6.731250+03<br>1.0002 | 1.2912<br>1.2892<br>1.2855 |
| 7000.  | 6.823  | 10.311<br>10.090<br>1.196029+01 | 4.908942+03<br>56.166<br>61.375   | 5.484741+02<br>6.4899<br>6.982   | 8.933<br>8.6139<br>8.744    | 2.6750<br>36.526<br>2.6007 | 1.0007<br>7.853126+03<br>1.0042 | 1.2589<br>1.2176<br>1.2114 |
| 8000.  | 7.798  | 13.161<br>12.939<br>1.812700+01 | 1.346298+04<br>74.672<br>80.622   | 1.238255+03<br>7.4018<br>7.910   | 10.810<br>9.8862<br>9.974   | 2.9021<br>37.312<br>2.7330 | 1.0046<br>8.975001+03<br>1.0206 | 1.2196<br>1.1556<br>1.1538 |
| 9000.  | 8.773  | 16.391<br>16.178<br>2.603642+01 | 3.506191+04<br>96.098<br>102.659  | 2.740645+03<br>8.4857<br>8.994   | 12.599<br>10.8071<br>10.876 | 3.1154<br>38.145<br>2.8697 | 1.0142<br>1.009688+04<br>1.0483 | 1.1945<br>1.1361<br>1.1360 |
| 10000. | 9.747  | 20.002<br>19.794<br>3.588308+01 | 8.780154+04<br>120.177<br>127.320 | 5.925224+03<br>9.5665<br>10.066  | 14.380<br>11.5977<br>11.659 | 3.3451<br>39.036<br>3.0191 | 1.0293<br>1.121875+04<br>1.0836 | 1.1890<br>1.1342<br>1.1346 |
| 11000. | 10.722 | 23.992<br>23.785<br>4.789150+01 | 2.114559+05<br>146.746<br>154.569 | 1.239157+04<br>10.5318<br>11.020 | 16.258<br>12.3991<br>12.462 | 3.5996<br>39.981<br>3.1936 | 1.0484<br>1.234063+04<br>1.1241 | 1.1955<br>1.1438<br>1.1449 |

ALTITUDE = 210000. FT.

P1 = 1.296397-04 ATM. , RH01 = 1.457122-04 AMA. , T1 = 243.17 K  
 S1/R = 32.136 , A1 = 1025.93 FT./SEC. , H1/R = 851.096 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1          | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 12000. | 11.697 | 28.363<br>28.145<br>6.240898+01   | 4.879434+05<br>175.577<br>184.294 | 2.483721+04<br>11.2225<br>11.694 | 18.331<br>13.4149<br>13.496 | 3.8869<br>40.961<br>3.4346 | 1.0704<br>1.346250+04<br>1.1664 | 1.2109<br>1.1759<br>1.1785 |
| 13000. | 12.671 | 33.113<br>32.861<br>8.003083+01   | 1.074399+06<br>206.006<br>216.149 | 4.748658+04<br>11.2900<br>11.732 | 20.654<br>15.2149<br>15.352 | 4.1941<br>41.934<br>3.8269 | 1.0941<br>1.458438+04<br>1.1987 | 1.2240<br>1.2504<br>1.2516 |
| 14000. | 13.646 | 38.244<br>37.943<br>1.012280+02   | 2.249750+06<br>238.449<br>250.386 | 8.609543+04<br>11.1454<br>11.610 | 23.296<br>17.5585<br>17.685 | 4.5584<br>42.841<br>4.0433 | 1.1203<br>1.570625+04<br>1.2180 | 1.2520<br>1.1970<br>1.1936 |
| 15000. | 14.621 | 43.754<br>43.431<br>1.256406+02   | 4.477072+06<br>274.438<br>287.748 | 1.485758+05<br>11.5111<br>11.996 | 26.180<br>19.1681<br>19.264 | 4.9282<br>43.711<br>4.1826 | 1.1496<br>1.682813+04<br>1.2437 | 1.2690<br>1.1494<br>1.1483 |
| 16000. | 15.596 | 49.645<br>49.313<br>1.533643+02   | 8.479921+06<br>313.576<br>327.910 | 2.449805+05<br>12.1092<br>12.599 | 29.187<br>20.2995<br>20.378 | 5.3174<br>44.585<br>4.3212 | 1.1845<br>1.795000+04<br>1.2757 | 1.2861<br>1.1299<br>1.1297 |
| 17000. | 16.570 | 55.915<br>55.579<br>1.850996+02   | 1.535415+07<br>355.541<br>370.915 | 3.875202+05<br>12.7818<br>13.272 | 32.215<br>21.1985<br>21.270 | 5.7329<br>45.478<br>4.4672 | 1.2284<br>1.907188+04<br>1.3123 | 1.3061<br>1.1243<br>1.1243 |
| 18000. | 17.545 | 62.566<br>62.226<br>2.206903+02   | 2.661731+07<br>400.191<br>416.560 | 5.879775+05<br>13.4644<br>13.954 | 35.210<br>21.9743<br>22.041 | 6.1944<br>46.398<br>4.6108 | 1.2841<br>2.019375+04<br>1.3527 | 1.3346<br>1.1212<br>1.1213 |
| 19000. | 18.520 | 69.597<br>69.253<br>2.603537+02   | .000000+00<br>447.470<br>464.803  | .000000+00<br>14.1344<br>14.622  | .000<br>22.6728<br>22.736   | .0000<br>47.346<br>4.7563  | .0000<br>2.131563+04<br>1.3965  | .0000<br>1.1203<br>1.1205  |
| 20000. | 19.495 | 77.007<br>76.659<br>3.049131+02   | .000000+00<br>497.342<br>515.679  | .000000+00<br>14.7761<br>15.261  | .000<br>23.3246<br>23.386   | .0000<br>48.323<br>4.9044  | .0000<br>2.243750+04<br>1.4432  | .0000<br>1.1206<br>1.1208  |
| 21000. | 20.469 | 84.798<br>84.444<br>3.541013+02   | .000000+00<br>549.781<br>569.163  | .000000+00<br>15.3813<br>15.864  | .000<br>23.9480<br>24.008   | .0000<br>49.329<br>5.0563  | .0000<br>2.355938+04<br>1.4927  | .0000<br>1.1217<br>1.1219  |
| 22000. | 21.444 | 92.969<br>92.607<br>4.081847+02   | .000000+00<br>604.764<br>625.248  | .000000+00<br>15.9415<br>16.421  | .000<br>24.5592<br>24.619   | .0000<br>50.363<br>5.2137  | .0000<br>2.468125+04<br>1.5448  | .0000<br>1.1238<br>1.1241  |
| 23000. | 22.419 | 101.520<br>101.148<br>4.681469+02 | .000000+00<br>662.265<br>683.866  | .000000+00<br>16.4501<br>16.925  | .000<br>25.1737<br>25.234   | .0000<br>51.422<br>5.3772  | .0000<br>2.580313+04<br>1.5993  | .0000<br>1.1264<br>1.1268  |
| 24000. | 23.393 | 110.450<br>110.067<br>5.341695+02 | .000000+00<br>722.259<br>745.192  | .000000+00<br>16.9003<br>17.374  | .000<br>25.8070<br>25.869   | .0000<br>52.506<br>5.5494  | .0000<br>2.692500+04<br>1.6560  | .0000<br>1.1301<br>1.1305  |
| 25000. | 24.368 | 119.761<br>119.364<br>6.065885+02 | .000000+00<br>784.703<br>809.097  | .000000+00<br>17.2816<br>17.754  | .000<br>26.4818<br>26.546   | .0000<br>53.611<br>5.7323  | .0000<br>2.804688+04<br>1.7146  | .0000<br>1.1349<br>1.1353  |

ALTITUDE = 210000. FT.

P1 = 1.296397-04 ATM. , RH01 = 1.457122-04 AMA. , T1 = 243.17 K  
 S1/R = 32.136 , A1 = 1025.93 FT./SEC. , H1/R = 851.096 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 26000. | 25.343 | 129.452<br>129.037<br>6.850143+02 | .000000+00<br>849.540<br>875.452   | .000000+00<br>17.5811<br>18.050 | .000<br>27.2277<br>27.297 | .0000<br>54.734<br>5.9317 | .0000<br>2.916875+04<br>1.7747 | .0000<br>1.1417<br>1.1422 |
| 27000. | 26.318 | 139.523<br>139.085<br>7.710212+02 | .000000+00<br>916.662<br>944.356   | .000000+00<br>17.7724<br>18.237 | .000<br>28.1027<br>28.181 | .0000<br>55.868<br>6.1571 | .0000<br>3.029063+04<br>1.8353 | .0000<br>1.1520<br>1.1527 |
| 28000. | 27.292 | 149.974<br>149.504<br>8.651730+02 | .000000+00<br>985.858<br>1015.574  | .000000+00<br>17.8064<br>18.264 | .000<br>29.2197<br>29.314 | .0000<br>57.006<br>6.4318 | .0000<br>3.141250+04<br>1.8946 | .0000<br>1.1701<br>1.1713 |
| 29000. | 28.267 | 160.805<br>160.288<br>9.696124+02 | .000000+00<br>1056.619<br>1088.963 | .000000+00<br>17.5822<br>18.028 | .000<br>30.8354<br>30.964 | .0000<br>58.133<br>6.8019 | .0000<br>3.253438+04<br>1.9484 | .0000<br>1.2041<br>1.2060 |
| 30000. | 29.242 | 172.016<br>171.427<br>1.089022+03 | .000000+00<br>1128.530<br>1164.153 | .000000+00<br>17.0216<br>17.454 | .000<br>33.3143<br>33.491 | .0000<br>59.222<br>7.2462 | .0000<br>3.365625+04<br>1.9892 | .0000<br>1.2392<br>1.2395 |
| 31000. | 30.216 | 183.607<br>182.932<br>1.214215+03 | .000000+00<br>1202.283<br>1241.701 | .000000+00<br>16.4434<br>16.884 | .000<br>36.1730<br>36.356 | .0000<br>60.254<br>7.5437 | .0000<br>3.477813+04<br>2.0204 | .0000<br>1.2198<br>1.2183 |
| 32000. | 31.191 | 195.578<br>194.831<br>1.340506+03 | .000000+00<br>1279.439<br>1322.299 | .000000+00<br>16.1376<br>16.590 | .000<br>38.5917<br>38.762 | .0000<br>61.240<br>7.7648 | .0000<br>3.590000+04<br>2.0538 | .0000<br>1.1920<br>1.1910 |
| 33000. | 32.166 | 207.930<br>207.125<br>1.468166+03 | .000000+00<br>1359.993<br>1405.916 | .000000+00<br>16.0310<br>16.490 | .000<br>40.5507<br>40.710 | .0000<br>62.200<br>7.9762 | .0000<br>3.702188+04<br>2.0917 | .0000<br>1.1754<br>1.1749 |
| 34000. | 33.141 | 220.661<br>219.807<br>1.597972+03 | .000000+00<br>1443.627<br>1492.355 | .000000+00<br>16.0348<br>16.498 | .000<br>42.1960<br>42.348 | .0000<br>63.147<br>8.1841 | .0000<br>3.814375+04<br>2.1335 | .0000<br>1.1660<br>1.1658 |
| 35000. | 34.115 | 233.772<br>232.874<br>1.730895+03 | .000000+00<br>1530.141<br>1581.613 | .000000+00<br>16.0992<br>16.565 | .000<br>43.6299<br>43.778 | .0000<br>64.087<br>8.3891 | .0000<br>3.926563+04<br>2.1784 | .0000<br>1.1605<br>1.1605 |
| 36000. | 35.090 | 247.263<br>246.326<br>1.867280+03 | .000000+00<br>1619.489<br>1673.567 | .000000+00<br>16.1987<br>16.665 | .000<br>44.9165<br>45.062 | .0000<br>65.025<br>8.5925 | .0000<br>4.038750+04<br>2.2259 | .0000<br>1.1574<br>1.1575 |
| 37000. | 36.065 | 261.135<br>260.158<br>2.004150+03 | .000000+00<br>1711.436<br>1768.183 | .000000+00<br>16.3157<br>16.783 | .000<br>46.0958<br>46.240 | .0000<br>65.964<br>8.7951 | .0000<br>4.150938+04<br>2.2757 | .0000<br>1.1558<br>1.1560 |
| 38000. | 37.040 | 275.386<br>274.371<br>2.146730+03 | .000000+00<br>1806.013<br>1865.387 | .000000+00<br>16.4415<br>16.909 | .000<br>47.1956<br>47.339 | .0000<br>66.907<br>8.9971 | .0000<br>4.263125+04<br>2.3277 | .0000<br>1.1550<br>1.1553 |
| 39000. | 38.014 | 290.017<br>288.965<br>2.289129+03 | .000000+00<br>1903.188<br>1965.235 | .000000+00<br>16.5698<br>17.036 | .000<br>48.2350<br>48.379 | .0000<br>67.854<br>9.2000 | .0000<br>4.375313+04<br>2.3815 | .0000<br>1.1550<br>1.1553 |

ALTITUDE = 210000. FT.

P1 = 1.296397-04 ATM. , RHO1 = 1.457122-04 AMA. , T1 = 243.17 K  
 S1/R = 32.136 , A1 = 1025.93 FT./SEC. , H1/R = 851.096 K

| UI     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 40000. | 38.989 | 305.029<br>303.938<br>2.437939+03 | .000000+00<br>2002.938<br>2067.749 | .000000+00<br>16.6967<br>17.163 | .000<br>49.2281<br>49.373 | .0000<br>68.807<br>9.4034  | .0000<br>4.487500+04<br>2.4372 | .0000<br>1.1553<br>1.1556 |
| 41000. | 39.964 | 320.420<br>319.290<br>2.582070+03 | .000000+00<br>2105.234<br>2172.843 | .000000+00<br>16.8191<br>17.285 | .000<br>50.1860<br>50.332 | .0000<br>69.765<br>9.6090  | .0000<br>4.599688+04<br>2.4945 | .0000<br>1.1562<br>1.1565 |
| 42000. | 40.938 | 336.192<br>335.022<br>2.731315+03 | .000000+00<br>2210.069<br>2280.488 | .000000+00<br>16.9346<br>17.400 | .000<br>51.1176<br>51.266 | .0000<br>70.729<br>9.8158  | .0000<br>4.711875+04<br>2.5535 | .0000<br>1.1572<br>1.1575 |
| 43000. | 41.913 | 352.343<br>351.132<br>2.880686+03 | .000000+00<br>2317.418<br>2390.730 | .000000+00<br>17.0424<br>17.507 | .000<br>52.0301<br>52.180 | .0000<br>71.700<br>10.0258 | .0000<br>4.824063+04<br>2.6140 | .0000<br>1.1585<br>1.1589 |
| 44000. | 42.888 | 368.875<br>367.621<br>3.033155+03 | .000000+00<br>2427.261<br>2503.628 | .000000+00<br>17.1403<br>17.604 | .000<br>52.9298<br>53.082 | .0000<br>72.678<br>10.2382 | .0000<br>4.936250+04<br>2.6760 | .0000<br>1.1601<br>1.1605 |
| 45000. | 43.863 | 385.787<br>384.488<br>3.186913+03 | .000000+00<br>2539.597<br>2618.919 | .000000+00<br>17.2280<br>17.690 | .000<br>53.8227<br>53.978 | .0000<br>73.661<br>10.4545 | .0000<br>5.048438+04<br>2.7394 | .0000<br>1.1621<br>1.1624 |
| 46000. | 44.837 | 403.078<br>401.733<br>3.341366+03 | .000000+00<br>2654.392<br>2736.765 | .000000+00<br>17.3044<br>17.765 | .000<br>54.7141<br>54.873 | .0000<br>74.651<br>10.6740 | .0000<br>5.160625+04<br>2.8042 | .0000<br>1.1639<br>1.1644 |
| 47000. | 45.812 | 420.750<br>419.358<br>3.497089+03 | .000000+00<br>2771.787<br>2857.223 | .000000+00<br>17.3696<br>17.827 | .000<br>55.6098<br>55.772 | .0000<br>75.647<br>10.8975 | .0000<br>5.272813+04<br>2.8702 | .0000<br>1.1662<br>1.1666 |
| 48000. | 46.787 | 438.802<br>437.359<br>3.652373+03 | .000000+00<br>2891.467<br>2980.348 | .000000+00<br>17.4209<br>17.878 | .000<br>56.5154<br>56.682 | .0000<br>76.648<br>11.1275 | .0000<br>5.385000+04<br>2.9375 | .0000<br>1.1690<br>1.1695 |
| 49000. | 47.762 | 457.233<br>455.737<br>3.805444+03 | .000000+00<br>3013.615<br>3106.147 | .000000+00<br>17.4645<br>17.921 | .000<br>57.4306<br>57.603 | .0000<br>77.654<br>11.3608 | .0000<br>5.497188+04<br>3.0054 | .0000<br>1.1702<br>1.1724 |
| 50000. | 48.736 | 476.045<br>474.491<br>3.920121+03 | .000000+00<br>3138.025<br>3234.352 | .000000+00<br>17.4821<br>17.938 | .000<br>58.3807<br>58.559 | .0000<br>78.665<br>11.6009 | .0000<br>5.609375+04<br>3.0754 | .0000<br>1.1753<br>1.1752 |

ALTITUDE = 220000. FT.

P1 = 8.431699-05 ATM. , RHO1 = 9.966607-05 AMA. , T1 = 231.23 K  
 S1/R = 32.390 , A1 = 1000.42 FT./SEC. , H1/R = 809.291 K

| UI     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>RGP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.998  | 8.194<br>7.989<br>6.028086+00   | 1.933967+03<br>42.887<br>47.308   | 2.611739+02<br>5.9263<br>6.396   | 7.396<br>7.2272<br>7.387    | 2.4033<br>36.101<br>2.3962 | 1.0001<br>4.798457+03<br>1.0002 | 1.2915<br>1.2891<br>1.2853 |
| 7000.  | 6.997  | 10.792<br>10.562<br>9.831966+00 | 5.741915+03<br>59.081<br>64.533   | 6.127005+02<br>6.5303<br>7.024   | 9.353<br>9.0017<br>9.134    | 2.6685<br>36.888<br>2.5878 | 1.0008<br>5.598200+03<br>1.0046 | 1.2582<br>1.2132<br>1.2070 |
| 8000.  | 7.997  | 13.789<br>13.560<br>1.491761+01 | 1.581503+04<br>78.591<br>84.793   | 1.389514+03<br>7.4717<br>7.982   | 11.313<br>10.2953<br>10.384 | 2.8925<br>37.683<br>2.7165 | 1.0049<br>6.397943+03<br>1.0219 | 1.2172<br>1.1519<br>1.1502 |
| 9000.  | 8.996  | 17.187<br>16.967<br>2.144116+01 | 4.139331+04<br>101.162<br>107.978 | 3.093762+03<br>8.5833<br>9.092   | 13.166<br>11.2265<br>11.295 | 3.1027<br>38.527<br>2.8511 | 1.0150<br>7.197686+03<br>1.0502 | 1.1914<br>1.1334<br>1.1333 |
| 10000. | 9.996  | 20.983<br>20.770<br>2.956458+01 | 1.042151+05<br>126.516<br>133.923 | 6.731281+03<br>9.6873<br>10.187  | 15.004<br>12.0292<br>12.090 | 3.3304<br>39.433<br>2.9986 | 1.0306<br>7.997429+03<br>1.0861 | 1.1862<br>1.1320<br>1.1325 |
| 11000. | 10.995 | 25.180<br>24.967<br>3.946762+01 | 2.525058+05<br>154.484<br>162.610 | 1.417313+04<br>10.6709<br>11.160 | 16.944<br>12.8483<br>12.912 | 3.5824<br>40.394<br>3.1714 | 1.0502<br>8.797172+03<br>1.1271 | 1.1928<br>1.1419<br>1.1430 |
| 12000. | 11.995 | 29.776<br>29.553<br>5.145215+01 | 5.865583+05<br>184.819<br>193.878 | 2.861230+04<br>11.3636<br>11.835 | 19.092<br>13.9076<br>13.991 | 3.8672<br>41.392<br>3.4151 | 1.0725<br>9.596915+03<br>1.1695 | 1.2079<br>1.1761<br>1.1788 |
| 13000. | 12.995 | 34.772<br>34.511<br>6.603542+01 | 1.299343+06<br>216.757<br>227.384 | 5.503931+04<br>11.3778<br>11.820 | 21.513<br>15.8577<br>16.002 | 4.1682<br>42.378<br>3.8181 | 1.0960<br>1.039666+04<br>1.2007 | 1.2186<br>1.2541<br>1.2547 |
| 14000. | 13.994 | 40.167<br>39.857<br>8.353511+01 | 2.737823+06<br>250.911<br>263.357 | 1.005109+05<br>11.2350<br>11.702 | 24.266<br>18.3048<br>18.431 | 4.5301<br>43.294<br>4.0185 | 1.1212<br>1.119640+04<br>1.2196 | 1.2475<br>1.1914<br>1.1881 |
| 15000. | 14.994 | 45.963<br>45.630<br>1.036609+02 | 5.483240+06<br>288.851<br>302.707 | 1.747612+05<br>11.6333<br>12.119 | 27.288<br>19.9293<br>20.025 | 4.8902<br>44.175<br>4.1550 | 1.1484<br>1.199614+04<br>1.2458 | 1.2620<br>1.1456<br>1.1445 |
| 16000. | 15.993 | 52.157<br>51.817<br>1.266000+02 | 1.046392+07<br>330.070<br>345.005 | 2.909006+05<br>12.2532<br>12.744 | 30.443<br>21.0729<br>21.153 | 5.2624<br>45.061<br>4.2928 | 1.1802<br>1.279589+04<br>1.2784 | 1.2748<br>1.1275<br>1.1271 |
| 17000. | 16.993 | 58.752<br>58.407<br>1.526948+02 | 1.909156+07<br>374.267<br>390.259 | 4.650330+05<br>12.9499<br>13.442 | 33.619<br>21.9775<br>22.049 | 5.6563<br>45.969<br>4.4349 | 1.2197<br>1.359563+04<br>1.3151 | 1.2904<br>1.1216<br>1.1217 |
| 18000. | 17.993 | 65.746<br>65.398<br>1.821688+02 | 3.339303+07<br>421.271<br>438.209 | 7.143810+05<br>13.6504<br>14.140 | 36.763<br>22.7626<br>22.829 | 6.0918<br>46.904<br>4.5766 | 1.2699<br>1.439537+04<br>1.3559 | 1.3145<br>1.1190<br>1.1191 |
| 19000. | 18.992 | 73.140<br>72.789<br>2.149517+02 | 5.614340+07<br>471.040<br>488.986 | 1.055204+06<br>14.3373<br>14.825 | 39.862<br>23.4703<br>23.533 | 6.5869<br>47.869<br>4.7198 | 1.3332<br>1.519511+04<br>1.3999 | 1.3502<br>1.1181<br>1.1183 |

ALTITUDE = 220000. FT.

P1 = 8.431699-05 ATM. , RH01 = 9.966607-05 AMA. , T1 = 231.23 K  
 S1/R = 32.390 , A1 = 1000.42 FT./SEC. , H1/R = 809.291 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 20000. | 19.992 | 80.934<br>80.578<br>2.515710+02   | .000000+00<br>523.536<br>542.520   | .000000+00<br>14.9954<br>15.480 | .000<br>24.1308<br>24.192 | .0000<br>48.864<br>4.8660 | .0000<br>1.599486+04<br>1.4469 | .0000<br>1.1185<br>1.1187 |
| 21000. | 20.991 | 89.127<br>88.765<br>2.922163+02   | .000000+00<br>578.730<br>598.818   | .000000+00<br>15.6149<br>16.098 | .000<br>24.7640<br>24.824 | .0000<br>49.889<br>5.0158 | .0000<br>1.679460+04<br>1.4967 | .0000<br>1.1196<br>1.1198 |
| 22000. | 21.991 | 97.720<br>97.350<br>3.369047+02   | .000000+00<br>636.603<br>657.809   | .000000+00<br>16.1894<br>16.669 | .000<br>25.3848<br>25.444 | .0000<br>50.942<br>5.1707 | .0000<br>1.759434+04<br>1.5491 | .0000<br>1.1215<br>1.1218 |
| 23000. | 22.990 | 106.712<br>106.333<br>3.859482+02 | .000000+00<br>697.126<br>719.506   | .000000+00<br>16.7105<br>17.187 | .000<br>26.0099<br>26.070 | .0000<br>52.023<br>5.3323 | .0000<br>1.839409+04<br>1.6039 | .0000<br>1.1243<br>1.1246 |
| 24000. | 23.990 | 116.104<br>115.714<br>4.399899+02 | .000000+00<br>760.271<br>783.987   | .000000+00<br>17.1717<br>17.646 | .000<br>26.6555<br>26.717 | .0000<br>53.129<br>5.5022 | .0000<br>1.919383+04<br>1.6610 | .0000<br>1.1279<br>1.1282 |
| 25000. | 24.990 | 125.896<br>125.491<br>4.993307+02 | .000000+00<br>825.996<br>851.204   | .000000+00<br>17.5623<br>18.034 | .000<br>27.3447<br>27.409 | .0000<br>54.256<br>5.6835 | .0000<br>1.999357+04<br>1.7199 | .0000<br>1.1329<br>1.1333 |
| 26000. | 25.989 | 136.088<br>135.664<br>5.644938+02 | .000000+00<br>894.234<br>921.027   | .000000+00<br>17.8667<br>18.335 | .000<br>28.1119<br>28.181 | .0000<br>55.402<br>5.8811 | .0000<br>2.079332+04<br>1.7803 | .0000<br>1.1396<br>1.1401 |
| 27000. | 26.989 | 146.679<br>146.232<br>6.354375+02 | .000000+00<br>964.868<br>993.556   | .000000+00<br>18.0571<br>18.523 | .000<br>29.0189<br>29.097 | .0000<br>56.560<br>6.1068 | .0000<br>2.159306+04<br>1.8412 | .0000<br>1.1506<br>1.1512 |
| 28000. | 27.988 | 157.670<br>157.190<br>7.145516+02 | .000000+00<br>1037.659<br>1068.484 | .000000+00<br>18.0781<br>18.536 | .000<br>30.1942<br>30.290 | .0000<br>57.720<br>6.3847 | .0000<br>2.239280+04<br>1.9007 | .0000<br>1.1698<br>1.1710 |
| 29000. | 28.988 | 169.060<br>168.530<br>8.004635+02 | .000000+00<br>1112.017<br>1145.599 | .000000+00<br>17.8116<br>18.255 | .000<br>31.9411<br>32.076 | .0000<br>58.867<br>6.7700 | .0000<br>2.319254+04<br>1.9540 | .0000<br>1.2074<br>1.2093 |
| 30000. | 29.988 | 180.850<br>180.242<br>8.996580+02 | .000000+00<br>1187.432<br>1224.570 | .000000+00<br>17.1835<br>17.615 | .000<br>34.6517<br>34.836 | .0000<br>59.972<br>7.2165 | .0000<br>2.399229+04<br>1.9932 | .0000<br>1.2406<br>1.2404 |
| 31000. | 30.987 | 193.040<br>192.344<br>1.001843+03 | .000000+00<br>1265.124<br>1306.165 | .000000+00<br>16.6015<br>17.044 | .000<br>37.6327<br>37.817 | .0000<br>61.017<br>7.4921 | .0000<br>2.479203+04<br>2.0241 | .0000<br>1.2143<br>1.2128 |
| 32000. | 31.987 | 205.630<br>204.862<br>1.105313+03 | .000000+00<br>1346.473<br>1391.041 | .000000+00<br>16.3202<br>16.775 | .000<br>40.0731<br>40.242 | .0000<br>62.016<br>7.7058 | .0000<br>2.559177+04<br>2.0582 | .0000<br>1.1864<br>1.1856 |
| 33000. | 32.986 | 218.619<br>217.794<br>1.210226+03 | .000000+00<br>1431.392<br>1479.049 | .000000+00<br>16.2354<br>16.696 | .000<br>42.0352<br>42.193 | .0000<br>62.991<br>7.9128 | .0000<br>2.639152+04<br>2.0970 | .0000<br>1.1707<br>1.1703 |

ALTITUDE = 220000. FT.

P1 = 8.431699-05 ATM. , RHO1 = 9.966607-05 AMA. , T1 = 231.23 K  
 S1/R = 32.390 , A1 = 1000.42 FT./SEC. , H1/R = 809.291 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 34000. | 33.986 | 232.008<br>231.134<br>1.317658+03 | .000000+00<br>1519.526<br>1570.042 | .000000+00<br>16.2567<br>16.721 | .000<br>43.6818<br>43.833 | .0000<br>63.953<br>8.1164  | .0000<br>2.719126+04<br>2.1396 | .0000<br>1.1619<br>1.1617 |
| 35000. | 34.985 | 245.796<br>244.879<br>1.428029+03 | .000000+00<br>1610.677<br>1664.018 | .000000+00<br>16.3361<br>16.803 | .000<br>45.1178<br>45.264 | .0000<br>64.910<br>8.3181  | .0000<br>2.799100+04<br>2.1852 | .0000<br>1.1568<br>1.1569 |
| 36000. | 35.985 | 259.985<br>259.029<br>1.538780+03 | .000000+00<br>1704.791<br>1760.830 | .000000+00<br>16.4479<br>16.915 | .000<br>46.4072<br>46.551 | .0000<br>65.867<br>8.5178  | .0000<br>2.879074+04<br>2.2335 | .0000<br>1.1540<br>1.1541 |
| 37000. | 36.985 | 274.572<br>273.578<br>1.653822+03 | .000000+00<br>1801.629<br>1860.376 | .000000+00<br>16.5759<br>17.044 | .000<br>47.5901<br>47.733 | .0000<br>66.826<br>8.7165  | .0000<br>2.959049+04<br>2.2840 | .0000<br>1.1524<br>1.1525 |
| 38000. | 37.984 | 289.560<br>288.527<br>1.768227+03 | .000000+00<br>1901.236<br>1962.672 | .000000+00<br>16.7117<br>17.180 | .000<br>48.6938<br>48.836 | .0000<br>67.788<br>8.9154  | .0000<br>3.039023+04<br>2.3365 | .0000<br>1.1518<br>1.1520 |
| 39000. | 38.984 | 304.947<br>303.876<br>1.887190+03 | .000000+00<br>2003.576<br>2067.792 | .000000+00<br>16.8492<br>17.317 | .000<br>49.7375<br>49.880 | .0000<br>68.756<br>9.1148  | .0000<br>3.118997+04<br>2.3910 | .0000<br>1.1518<br>1.1520 |
| 40000. | 39.983 | 320.734<br>319.625<br>2.005383+03 | .000000+00<br>2108.621<br>2175.679 | .000000+00<br>16.9844<br>17.452 | .000<br>50.7352<br>50.879 | .0000<br>69.729<br>9.3153  | .0000<br>3.198972+04<br>2.4473 | .0000<br>1.1523<br>1.1526 |
| 41000. | 40.983 | 336.921<br>335.773<br>2.128319+03 | .000000+00<br>2216.357<br>2286.254 | .000000+00<br>17.1145<br>17.582 | .000<br>51.6980<br>51.843 | .0000<br>70.710<br>9.5167  | .0000<br>3.278946+04<br>2.5053 | .0000<br>1.1529<br>1.1532 |
| 42000. | 41.983 | 353.507<br>352.319<br>2.246352+03 | .000000+00<br>2326.753<br>2399.531 | .000000+00<br>17.2374<br>17.703 | .000<br>52.6347<br>52.781 | .0000<br>71.697<br>9.7211  | .0000<br>3.358920+04<br>2.5649 | .0000<br>1.1541<br>1.1545 |
| 43000. | 42.982 | 370.493<br>369.264<br>2.366998+03 | .000000+00<br>2439.795<br>2515.546 | .000000+00<br>17.3514<br>17.817 | .000<br>53.5527<br>53.701 | .0000<br>72.691<br>9.9274  | .0000<br>3.438894+04<br>2.6261 | .0000<br>1.1555<br>1.1558 |
| 44000. | 43.982 | 387.878<br>386.607<br>2.487712+03 | .000000+00<br>2555.469<br>2634.238 | .000000+00<br>17.4557<br>17.920 | .000<br>54.4582<br>54.609 | .0000<br>73.692<br>10.1363 | .0000<br>3.518869+04<br>2.6887 | .0000<br>1.1570<br>1.1573 |
| 45000. | 44.981 | 405.663<br>404.348<br>2.608449+03 | .000000+00<br>2673.755<br>2755.570 | .000000+00<br>17.5490<br>18.011 | .000<br>55.3570<br>55.510 | .0000<br>74.700<br>10.3495 | .0000<br>3.598843+04<br>2.7528 | .0000<br>1.1589<br>1.1592 |
| 46000. | 45.981 | 423.848<br>422.486<br>2.730095+03 | .000000+00<br>2794.640<br>2879.559 | .000000+00<br>17.6306<br>18.091 | .000<br>56.2552<br>56.412 | .0000<br>75.714<br>10.5655 | .0000<br>3.678817+04<br>2.8182 | .0000<br>1.1608<br>1.1612 |
| 47000. | 46.980 | 442.433<br>441.021<br>2.850750+03 | .000000+00<br>2918.102<br>3006.329 | .000000+00<br>17.6995<br>18.158 | .000<br>57.1581<br>57.318 | .0000<br>76.735<br>10.7857 | .0000<br>3.758792+04<br>2.8850 | .0000<br>1.1631<br>1.1634 |

## ALTITUDE = 220000. FT.

P1 = 8.431699-05 ATM. , RHO1 = 9.966607-05 AMA. , T1 = 231.23 K  
 S1/R = 32.390 , A1 = 1000.42 FT./SEC. , H1/R = 809.291 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 47.980 | 461.417<br>459.954<br>2.970492+03 | .000000+00<br>3044.122<br>3135.901 | .000000+00<br>17.7551<br>18.213 | .000<br>58.0717<br>58.236 | .0000<br>77.762<br>11.0110 | .0000<br>3.838766+04<br>2.9530 | .0000<br>1.1657<br>1.1660 |
| 49000. | 48.980 | 480.801<br>479.284<br>3.090895+03 | .000000+00<br>3172.679<br>3268.127 | .000000+00<br>17.7964<br>18.253 | .000<br>59.0022<br>59.172 | .0000<br>78.795<br>11.2423 | .0000<br>3.918740+04<br>3.0221 | .0000<br>1.1684<br>1.1689 |
| 50000. | 49.979 | 500.585<br>499.010<br>3.208014+03 | .000000+00<br>3303.775<br>3403.187 | .000000+00<br>17.8256<br>18.280 | .000<br>59.9533<br>60.132 | .0000<br>79.832<br>11.4640 | .0000<br>3.998714+04<br>3.0923 | .0000<br>1.1692<br>1.1689 |

## ALTITUDE = 230000. FT.

P1 = 5.362568-05 ATM. , RHO1 = 6.683705-05 AMA. , T1 = 219.29 K  
 S1/R = 32.657 , A1 = 974.26 FT./SEC. , H1/R = 767.525 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.159  | 8.585<br>8.372<br>4.895788+00   | 2.272300+03<br>45.217<br>49.848   | 2.926525+02<br>5.9588<br>6.428   | 7.755<br>7.5783<br>7.744    | 2.3970<br>36.477<br>2.3890 | 1.0001<br>3.362960+03<br>1.0002 | 1.2919<br>1.2889<br>1.2849 |
| 7000.  | 7.185  | 11.325<br>11.086<br>8.002451+00 | 6.783237+03<br>62.315<br>68.031   | 6.894995+02<br>6.5735<br>7.070   | 9.818<br>9.4281<br>9.563    | 2.6618<br>37.270<br>2.5741 | 1.0008<br>3.923454+03<br>1.0050 | 1.2574<br>1.2084<br>1.2022 |
| 8000.  | 8.211  | 14.485<br>14.248<br>1.215492+01 | 1.876576+04<br>82.938<br>89.413   | 1.571175+03<br>7.5466<br>8.058   | 11.867<br>10.7431<br>10.831 | 2.8825<br>38.074<br>2.6994 | 1.0053<br>4.483947+03<br>1.0232 | 1.2146<br>1.1481<br>1.1465 |
| 9000.  | 9.238  | 18.067<br>17.841<br>1.748216+01 | 4.937498+04<br>106.779<br>113.869 | 3.520343+03<br>8.6869<br>9.196   | 13.789<br>11.6855<br>11.754 | 3.0896<br>38.931<br>2.8318 | 1.0160<br>5.044440+03<br>1.0523 | 1.1882<br>1.1306<br>1.1306 |
| 10000. | 10.264 | 22.071<br>21.852<br>2.411853+01 | 1.250164+05<br>133.545<br>141.248 | 7.710859+03<br>9.8157<br>10.315  | 15.688<br>12.5010<br>12.563 | 3.3150<br>39.853<br>2.9772 | 1.0322<br>5.604934+03<br>1.0887 | 1.1834<br>1.1297<br>1.1302 |
| 11000. | 11.291 | 26.496<br>26.278<br>3.220995+01 | 3.048612+05<br>163.064<br>171.510 | 1.635224+04<br>10.8183<br>11.307 | 17.695<br>13.3406<br>13.405 | 3.5647<br>40.831<br>3.1485 | 1.0523<br>6.165427+03<br>1.1301 | 1.1901<br>1.1401<br>1.1411 |
| 12000. | 12.317 | 31.342<br>31.113<br>4.199787+01 | 7.129452+05<br>195.062<br>204.491 | 3.325041+04<br>11.5118<br>11.982 | 19.924<br>14.4493<br>14.535 | 3.8474<br>41.846<br>3.3954 | 1.0749<br>6.725920+03<br>1.1727 | 1.2054<br>1.1765<br>1.1794 |
| 13000. | 13.343 | 36.610<br>36.339<br>5.395108+01 | 1.589588+06<br>228.664<br>239.794 | 6.434705+04<br>11.4646<br>11.906 | 22.457<br>16.5747<br>16.727 | 4.1483<br>42.847<br>3.8087 | 1.0987<br>7.286414+03<br>1.2026 | 1.2162<br>1.2577<br>1.2574 |
| 14000. | 14.370 | 42.299<br>41.977<br>6.825574+01 | 3.370814+06<br>264.728<br>277.756 | 1.183960+05<br>11.3307<br>11.800 | 25.329<br>19.1241<br>19.251 | 4.5042<br>43.772<br>3.9924 | 1.1227<br>7.846907+03<br>1.2213 | 1.2441<br>1.1854<br>1.1823 |

ALTITUDE = 230000. FT.

P1 = 5.362568-05 ATM. , RHO1 = 6.683705-05 AMA. , T1 = 219.29 K  
 S1/R = 32.657 , A1 = 974.26 FT./SEC. , H1/R = 767.525 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 15.396 | 48.409<br>48.066<br>8.466029+01   | 6.794072+06<br>304.832<br>319.289  | 2.073424+05<br>11.7639<br>12.252 | 28.501<br>20.7629<br>20.858 | 4.8568<br>44.663<br>4.1262 | 1.1483<br>8.407400+03<br>1.2479 | 1.2569<br>1.1415<br>1.1406 |
| 16000. | 16.423 | 54.941<br>54.591<br>1.034408+02   | 1.305433+07<br>348.365<br>363.926  | 3.480978+05<br>12.4093<br>12.901 | 31.814<br>21.9168<br>21.997 | 5.2127<br>45.564<br>4.2637 | 1.1774<br>8.967894+03<br>1.2809 | 1.2650<br>1.1255<br>1.1251 |
| 17000. | 17.449 | 61.895<br>61.541<br>1.246244+02   | 2.399355+07<br>395.024<br>411.631  | 5.620975+05<br>13.1275<br>13.620 | 35.147<br>22.8312<br>22.902 | 5.5877<br>46.486<br>4.4000 | 1.2130<br>9.528387+03<br>1.3181 | 1.2771<br>1.1182<br>1.1184 |
| 18000. | 18.476 | 69.269<br>68.913<br>1.487897+02   | 4.234319+07<br>444.639<br>462.236  | 8.741484+05<br>13.8475<br>14.337 | 38.451<br>23.6263<br>23.692 | 5.9994<br>47.438<br>4.5411 | 1.2583<br>1.008888+04<br>1.3591 | 1.2973<br>1.1166<br>1.1167 |
| 19000. | 19.502 | 77.066<br>76.706<br>1.756858+02   | 7.192533+07<br>497.168<br>515.831  | 1.309234+06<br>14.5526<br>15.041 | 41.715<br>24.3438<br>24.407 | 6.4642<br>48.421<br>4.6821 | 1.3154<br>1.064937+04<br>1.4035 | 1.3280<br>1.1159<br>1.1161 |
| 20000. | 20.528 | 85.283<br>84.920<br>2.054406+02   | .000000+00<br>552.571<br>572.271   | .000000+00<br>15.2276<br>15.713  | .000<br>25.0137<br>25.074   | .0000<br>49.434<br>4.8261  | .0000<br>1.120987+04<br>1.4507  | .0000<br>1.1163<br>1.1165  |
| 21000. | 21.555 | 93.922<br>93.553<br>2.386781+02   | .000000+00<br>610.820<br>631.673   | .000000+00<br>15.8628<br>16.346  | .000<br>25.6578<br>25.717   | .0000<br>50.479<br>4.9739  | .0000<br>1.177036+04<br>1.5008  | .0000<br>1.1175<br>1.1178  |
| 22000. | 22.581 | 102.983<br>102.606<br>2.752235+02 | .000000+00<br>671.893<br>693.856   | .000000+00<br>16.4512<br>16.931  | .000<br>26.2902<br>26.349   | .0000<br>51.554<br>5.1266  | .0000<br>1.233085+04<br>1.5535  | .0000<br>1.1194<br>1.1196  |
| 23000. | 23.608 | 112.465<br>112.078<br>3.153023+02 | .000000+00<br>735.765<br>758.960   | .000000+00<br>16.9861<br>17.462  | .000<br>26.9262<br>26.986   | .0000<br>52.657<br>5.2857  | .0000<br>1.289135+04<br>1.6086  | .0000<br>1.1220<br>1.1223  |
| 24000. | 24.634 | 122.368<br>121.970<br>3.591717+02 | .000000+00<br>802.403<br>826.966   | .000000+00<br>17.4589<br>17.933  | .000<br>27.5856<br>27.647   | .0000<br>53.786<br>5.4535  | .0000<br>1.345184+04<br>1.6660  | .0000<br>1.1257<br>1.1260  |
| 25000. | 25.661 | 132.693<br>132.280<br>4.072396+02 | .000000+00<br>871.762<br>897.815   | .000000+00<br>17.8591<br>18.330  | .000<br>28.2908<br>28.355   | .0000<br>54.937<br>5.6328  | .0000<br>1.401233+04<br>1.7253  | .0000<br>1.1306<br>1.1310  |
| 26000. | 26.687 | 143.439<br>143.007<br>4.600769+02 | .000000+00<br>943.770<br>971.564   | .000000+00<br>18.1692<br>18.639  | .000<br>29.0810<br>29.150   | .0000<br>56.107<br>5.8295  | .0000<br>1.457283+04<br>1.7860  | .0000<br>1.1378<br>1.1382  |
| 27000. | 27.713 | 154.606<br>154.150<br>5.180285+02 | .000000+00<br>1018.300<br>1048.048 | .000000+00<br>18.3595<br>18.825  | .000<br>30.0222<br>30.101   | .0000<br>57.289<br>6.0549  | .0000<br>1.513332+04<br>1.8473  | .0000<br>1.1491<br>1.1498  |
| 28000. | 28.740 | 166.195<br>165.705<br>5.822293+02 | .000000+00<br>1095.067<br>1127.083 | .000000+00<br>18.3640<br>18.822  | .000<br>31.2662<br>31.365   | .0000<br>58.474<br>6.3375  | .0000<br>1.569381+04<br>1.9069  | .0000<br>1.1698<br>1.1710  |

ALTITUDE = 230000. FT.

P1 = 5.362568-05 ATM. , RHO1 = 6.683705-05 AMA. , T1 = 219.29 K  
 S1/R = 32.657 , A1 = 974.26 FT./SEC. , H1/R = 767.525 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 29000. | 29.766 | 178.205<br>177.661<br>6.534136+02 | .000000+00<br>1173.390<br>1208.317 | .000000+00<br>18.0470<br>18.489 | .000<br>33.1686<br>33.311 | .0000<br>59.643<br>6.7401 | .0000<br>1.625431+04<br>1.9596 | .0000<br>1.2117<br>1.2137 |
| 30000. | 30.793 | 190.637<br>190.008<br>7.344834+02 | .000000+00<br>1252.739<br>1291.494 | .000000+00<br>17.3484<br>17.780 | .000<br>36.1389<br>36.330 | .0000<br>60.764<br>7.1828 | .0000<br>1.681480+04<br>1.9970 | .0000<br>1.2407<br>1.2401 |
| 31000. | 31.819 | 203.490<br>202.771<br>8.173525+02 | .000000+00<br>1334.786<br>1377.615 | .000000+00<br>16.7711<br>17.216 | .000<br>39.2302<br>39.414 | .0000<br>61.821<br>7.4371 | .0000<br>1.737529+04<br>2.0278 | .0000<br>1.2082<br>1.2068 |
| 32000. | 32.845 | 216.765<br>215.974<br>9.009020+02 | .000000+00<br>1420.791<br>1467.228 | .000000+00<br>16.5167<br>16.973 | .000<br>41.6875<br>41.855 | .0000<br>62.834<br>7.6442 | .0000<br>1.793579+04<br>2.0628 | .0000<br>1.1810<br>1.1802 |
| 33000. | 33.872 | 230.461<br>229.614<br>9.860778+02 | .000000+00<br>1510.551<br>1560.136 | .000000+00<br>16.4551<br>16.917 | .000<br>43.6524<br>43.809 | .0000<br>63.825<br>7.8469 | .0000<br>1.849628+04<br>2.1025 | .0000<br>1.1661<br>1.1658 |
| 34000. | 34.898 | 244.579<br>243.683<br>1.074312+03 | .000000+00<br>1603.672<br>1656.203 | .000000+00<br>16.4946<br>16.960 | .000<br>45.3012<br>45.450 | .0000<br>64.804<br>8.0468 | .0000<br>1.905677+04<br>2.1459 | .0000<br>1.1578<br>1.1577 |
| 35000. | 35.925 | 259.117<br>258.181<br>1.164141+03 | .000000+00<br>1700.047<br>1755.374 | .000000+00<br>16.5899<br>17.057 | .000<br>46.7407<br>46.886 | .0000<br>65.780<br>8.2446 | .0000<br>1.961727+04<br>2.1923 | .0000<br>1.1532<br>1.1532 |
| 36000. | 36.951 | 274.078<br>273.101<br>1.258206+03 | .000000+00<br>1799.349<br>1857.527 | .000000+00<br>16.7140<br>17.183 | .000<br>48.0338<br>48.176 | .0000<br>66.756<br>8.4407 | .0000<br>2.017776+04<br>2.2412 | .0000<br>1.1505<br>1.1507 |
| 37000. | 37.978 | 289.459<br>288.444<br>1.351253+03 | .000000+00<br>1901.618<br>1962.585 | .000000+00<br>16.8535<br>17.323 | .000<br>49.2210<br>49.362 | .0000<br>67.735<br>8.6359 | .0000<br>2.073825+04<br>2.2924 | .0000<br>1.1491<br>1.1493 |
| 38000. | 39.004 | 305.262<br>304.210<br>1.446973+03 | .000000+00<br>2006.801<br>2070.587 | .000000+00<br>16.9997<br>17.469 | .000<br>50.3299<br>50.471 | .0000<br>68.719<br>8.8310 | .0000<br>2.129875+04<br>2.3456 | .0000<br>1.1485<br>1.1487 |
| 39000. | 40.030 | 321.487<br>320.397<br>1.542245+03 | .000000+00<br>2114.865<br>2181.486 | .000000+00<br>17.1469<br>17.616 | .000<br>51.3788<br>51.520 | .0000<br>69.708<br>9.0268 | .0000<br>2.185924+04<br>2.4007 | .0000<br>1.1486<br>1.1488 |
| 40000. | 41.057 | 338.133<br>337.005<br>1.641062+03 | .000000+00<br>2225.782<br>2295.266 | .000000+00<br>17.2908<br>17.760 | .000<br>52.3821<br>52.524 | .0000<br>70.705<br>9.2238 | .0000<br>2.241973+04<br>2.4577 | .0000<br>1.1491<br>1.1493 |
| 41000. | 42.083 | 355.200<br>354.033<br>1.737794+03 | .000000+00<br>2339.528<br>2411.900 | .000000+00<br>17.4289<br>17.897 | .000<br>53.3507<br>53.494 | .0000<br>71.708<br>9.4223 | .0000<br>2.298023+04<br>2.5163 | .0000<br>1.1499<br>1.1502 |
| 42000. | 43.110 | 372.689<br>371.482<br>1.837731+03 | .000000+00<br>2456.087<br>2531.420 | .000000+00<br>17.5592<br>18.026 | .000<br>54.2937<br>54.438 | .0000<br>72.719<br>9.6223 | .0000<br>2.354072+04<br>2.5765 | .0000<br>1.1508<br>1.1511 |

ALTITUDE = 230000. FT.

P1 = 5.362568-05 ATM. , RHQ1 = 6.683705-05 AMA. , T1 = 219.29 K  
 S1/R = 32.657 , A1 = 974.26 FT./SEC. , H1/R = 767.525 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | RC/R1<br>RS/R1<br>RCP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 44.136 | 390.599<br>389.351<br>1.934534+03 | .000000+00<br>2575.442<br>2653.712 | .000000+00<br>17.6806<br>18.146 | .000<br>55.2178<br>55.364 | .0000<br>73.738<br>9.8253  | .0000<br>2.410121+04<br>2.6383 | .0000<br>1.1521<br>1.1525 |
| 44000. | 45.163 | 408.931<br>407.640<br>2.030387+03 | .000000+00<br>2697.572<br>2778.956 | .000000+00<br>17.7914<br>18.255 | .000<br>56.1301<br>56.279 | .0000<br>74.764<br>10.0312 | .0000<br>2.466171+04<br>2.7016 | .0000<br>1.1538<br>1.1541 |
| 45000. | 46.189 | 427.684<br>426.349<br>2.126593+03 | .000000+00<br>2822.462<br>2906.912 | .000000+00<br>17.8906<br>18.353 | .000<br>57.0364<br>57.188 | .0000<br>75.798<br>10.2404 | .0000<br>2.522220+04<br>2.7664 | .0000<br>1.1556<br>1.1559 |
| 46000. | 47.215 | 446.858<br>445.477<br>2.220077+03 | .000000+00<br>2950.094<br>3037.713 | .000000+00<br>17.9776<br>18.438 | .000<br>57.9421<br>58.096 | .0000<br>76.839<br>10.4528 | .0000<br>2.578269+04<br>2.8325 | .0000<br>1.1575<br>1.1578 |
| 47000. | 48.242 | 466.454<br>465.024<br>2.312952+03 | .000000+00<br>3080.451<br>3171.562 | .000000+00<br>18.0518<br>18.511 | .000<br>58.8535<br>59.011 | .0000<br>77.887<br>10.6699 | .0000<br>2.634319+04<br>2.9000 | .0000<br>1.1597<br>1.1601 |
| 48000. | 49.268 | 486.471<br>484.989<br>2.404240+03 | .000000+00<br>3213.508<br>3308.126 | .000000+00<br>18.1118<br>18.569 | .000<br>59.7764<br>59.939 | .0000<br>78.941<br>10.8922 | .0000<br>2.690368+04<br>2.9687 | .0000<br>1.1624<br>1.1627 |
| 49000. | 50.295 | 506.910<br>505.373<br>2.492690+03 | .000000+00<br>3349.243<br>3447.770 | .000000+00<br>18.1569<br>18.614 | .000<br>60.7175<br>60.884 | .0000<br>80.001<br>11.1194 | .0000<br>2.746417+04<br>3.0385 | .0000<br>1.1650<br>1.1655 |
| 50000. | 51.321 | 527.770<br>526.175<br>2.578527+03 | .000000+00<br>3487.632<br>3589.705 | .000000+00<br>18.1865<br>18.641 | .000<br>61.6839<br>61.856 | .0000<br>81.066<br>11.3533 | .0000<br>2.802467+04<br>3.1095 | .0000<br>1.1681<br>1.1686 |

ALTITUDE = 240000. FT.

P1 = 3.326850-05 ATM. , RHQ1 = 4.384842-05 AMA. , T1 = 207.37 K  
 S1/R = 32.939 , A1 = 947.41 FT./SEC. , H1/R = 725.798 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | RC/R1<br>RS/R1<br>RCP/R1       | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|-----------------------------------|--------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.333 | 9.022<br>8.798<br>3.932604+00   | 2.695116+03<br>47.810<br>52.679   | 3.300791+02<br>5.9915<br>6.460 | 8.155<br>7.9690<br>8.143    | 2.3906<br>36.874<br>2.3817 | 1.0000<br>2.312898+03<br>1.0002 | 1.2924<br>1.2886<br>1.2844 |
| 7000. | 7.389 | 11.918<br>11.669<br>6.441648+00 | 8.089728+03<br>65.921<br>71.925   | 7.810864+02<br>6.6197<br>7.118 | 10.336<br>9.8993<br>10.037  | 2.6547<br>37.674<br>2.5595 | 1.0009<br>2.698381+03<br>1.0055 | 1.2563<br>1.2032<br>1.1970 |
| 8000. | 8.444 | 15.261<br>15.015<br>9.795212+00 | 2.248354+04<br>87.789<br>94.565   | 1.789034+03<br>7.6273<br>8.140 | 12.482<br>11.2356<br>11.324 | 2.8718<br>38.487<br>2.6815 | 1.0057<br>3.083864+03<br>1.0246 | 1.2116<br>1.1442<br>1.1428 |
| 9000. | 9.500 | 19.049<br>18.815<br>1.409826+01 | 5.948396+04<br>113.043<br>120.444 | 4.035382+03<br>8.7978<br>9.307 | 14.477<br>12.1904<br>12.259 | 3.0758<br>39.358<br>2.8117 | 1.0170<br>3.469347+03<br>1.0544 | 1.1850<br>1.1278<br>1.1278 |

ALTITUDE = 240000. FT.

P1 = 3.326850-05 ATM. , RHO1 = 4.384842-05 AMA. , T1 = 207.37 K  
 S1/R = 32.939 , A1 = 947.41 FT./SEC. , H1/R = 725.798 K

| UI     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 10000. | 10.555 | 23.282<br>23.057<br>1.946076+01   | 1.515326+05<br>141.383<br>149.424 | 8.902618+03<br>9.9523<br>10.453  | 16.442<br>13.0209<br>13.083 | 3.2989<br>40.297<br>2.9550 | 1.0340<br>3.854830+03<br>1.0914 | 1.1805<br>1.1272<br>1.1277 |
| 11000. | 11.611 | 27.961<br>27.737<br>2.599886+01   | 3.720797+05<br>172.630<br>181.431 | 1.902388+04<br>10.9747<br>11.464 | 18.523<br>13.8831<br>13.948 | 3.5465<br>41.293<br>3.1249 | 1.0547<br>4.240313+03<br>1.1333 | 1.1873<br>1.1381<br>1.1392 |
| 12000. | 12.666 | 33.086<br>32.851<br>3.390166+01   | 8.761608+05<br>206.478<br>216.318 | 3.896957+04<br>11.6667<br>12.136 | 20.838<br>15.0498<br>15.139 | 3.8270<br>42.327<br>3.3759 | 1.0777<br>4.625796+03<br>1.1760 | 1.2027<br>1.1775<br>1.1805 |
| 13000. | 13.722 | 38.657<br>38.375<br>4.359496+01   | 1.967371+06<br>241.923<br>253.602 | 7.592966+04<br>11.5502<br>11.990 | 23.490<br>17.3793<br>17.540 | 4.1328<br>43.343<br>3.7982 | 1.1017<br>5.011279+03<br>1.2044 | 1.2171<br>1.2606<br>1.2593 |
| 14000. | 14.777 | 44.673<br>44.339<br>5.516071+01   | 4.198752+06<br>280.135<br>293.820 | 1.406859+05<br>11.4340<br>11.907 | 26.497<br>20.0270<br>20.154 | 4.4794<br>44.277<br>3.9651 | 1.1250<br>5.396762+03<br>1.2229 | 1.2412<br>1.1793<br>1.1763 |
| 15000. | 15.833 | 51.135<br>50.781<br>6.835943+01   | 8.517487+06<br>322.649<br>337.726 | 2.481095+05<br>11.9033<br>12.391 | 29.836<br>21.6805<br>21.775 | 4.8245<br>45.180<br>4.0962 | 1.1492<br>5.782245+03<br>1.2501 | 1.2518<br>1.1374<br>1.1366 |
| 16000. | 16.888 | 58.042<br>57.681<br>8.356383+01   | 1.646744+07<br>368.761<br>385.001 | 4.197649+05<br>12.5755<br>13.068 | 33.321<br>22.8458<br>22.925 | 5.1660<br>46.095<br>4.2322 | 1.1759<br>6.167728+03<br>1.2836 | 1.2560<br>1.1227<br>1.1225 |
| 17000. | 17.944 | 65.395<br>65.032<br>1.006584+02   | 3.050112+07<br>418.152<br>435.417 | 6.847615+05<br>13.3114<br>13.804 | 36.822<br>23.7759<br>23.846 | 5.5235<br>47.034<br>4.3656 | 1.2082<br>6.553211+03<br>1.3212 | 1.2646<br>1.1155<br>1.1155 |
| 18000. | 18.999 | 73.194<br>72.829<br>1.201023+02   | 5.428435+07<br>470.689<br>489.022 | 1.077408+06<br>14.0571<br>14.547 | 40.295<br>24.5768<br>24.643 | 5.9121<br>48.003<br>4.5043 | 1.2489<br>6.938694+03<br>1.3625 | 1.2809<br>1.1141<br>1.1143 |
| 19000. | 20.055 | 81.439<br>81.070<br>1.419011+02   | 9.311168+07<br>526.291<br>545.698 | 1.635386+06<br>14.7810<br>15.269 | 43.733<br>25.3056<br>25.368 | 6.3481<br>49.005<br>4.6432 | 1.3003<br>7.324177+03<br>1.4071 | 1.3068<br>1.1136<br>1.1138 |
| 20000. | 21.110 | 90.129<br>89.756<br>1.660409+02   | 1.539349+08<br>584.933<br>605.442 | 2.390999+06<br>15.4736<br>15.960 | 47.139<br>25.9871<br>26.048 | 6.8413<br>50.039<br>4.7848 | 1.3642<br>7.709660+03<br>1.4546 | 1.3422<br>1.1141<br>1.1143 |
| 21000. | 22.166 | 99.264<br>98.886<br>1.927249+02   | .000000+00<br>646.587<br>668.230  | .000000+00<br>16.1260<br>16.609  | .000<br>26.6414<br>26.701   | .00000<br>51.105<br>4.9304 | .0000<br>8.095143+03<br>1.5050  | .0000<br>1.1153<br>1.1155  |
| 22000. | 23.221 | 108.846<br>108.460<br>2.222811+02 | .000000+00<br>711.227<br>734.043  | .000000+00<br>16.7296<br>17.209  | .000<br>27.2864<br>27.346   | .0000<br>52.202<br>5.0810  | .0000<br>8.480626+03<br>1.5580  | .0000<br>1.1172<br>1.1174  |
| 23000. | 24.277 | 118.873<br>118.478<br>2.546996+02 | .000000+00<br>778.829<br>802.897  | .000000+00<br>17.2783<br>17.754  | .000<br>27.9365<br>27.996   | .0000<br>53.328<br>5.2379  | .0000<br>8.866108+03<br>1.6134  | .0000<br>1.1199<br>1.1201  |

ALTITUDE = 240000. FT.

P1 = 3.326850-05 ATM. , RHO1 = 4.384842-05 AMA. , T1 = 207.37 K  
 S1/R = 32.939 , A1 = 947.41 FT./SEC. , H1/R = 725.798 K

| UI     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 24000. | 25.332 | 129.345<br>128.939<br>2.901936+02 | .000000+00<br>849.359<br>874.879   | .000000+00<br>17.7638<br>18.238 | .000<br>28.6098<br>28.671 | .00000<br>54.481<br>5.4032 | .0000<br>9.251591+03<br>1.6711 | .0000<br>1.1233<br>1.1236 |
| 25000. | 26.388 | 140.264<br>139.842<br>3.288500+02 | .000000+00<br>922.769<br>949.835   | .000000+00<br>18.1740<br>18.646 | .000<br>29.3338<br>29.398 | .00000<br>55.658<br>5.5805 | .0000<br>9.637075+03<br>1.7308 | .0000<br>1.1283<br>1.1287 |
| 26000. | 27.443 | 151.627<br>151.187<br>3.711677+02 | .000000+00<br>998.981<br>1027.860  | .000000+00<br>18.4910<br>18.961 | .000<br>30.1474<br>30.217 | .00000<br>56.854<br>5.7756 | .0000<br>1.002256+04<br>1.7919 | .0000<br>1.1356<br>1.1361 |
| 27000. | 28.499 | 163.437<br>162.971<br>4.179040+02 | .000000+00<br>1077.846<br>1108.776 | .000000+00<br>18.6793<br>19.146 | .000<br>31.1298<br>31.209 | .00000<br>58.062<br>6.0009 | .0000<br>1.040804+04<br>1.8534 | .0000<br>1.1474<br>1.1481 |
| 28000. | 29.554 | 175.692<br>175.191<br>4.694928+02 | .000000+00<br>1159.043<br>1192.363 | .000000+00<br>18.6660<br>19.123 | .000<br>32.4501<br>32.552 | .00000<br>59.273<br>6.2892 | .0000<br>1.079352+04<br>1.9132 | .0000<br>1.1700<br>1.1712 |
| 29000. | 30.610 | 188.393<br>187.832<br>5.277460+02 | .000000+00<br>1241.761<br>1278.169 | .000000+00<br>18.2888<br>18.728 | .000<br>34.5391<br>34.690 | .00000<br>60.464<br>6.7121 | .0000<br>1.117901+04<br>1.9650 | .0000<br>1.2166<br>1.2188 |
| 30000. | 31.665 | 201.540<br>200.887<br>5.929017+02 | .000000+00<br>1325.495<br>1366.080 | .000000+00<br>17.5174<br>17.949 | .000<br>37.7974<br>37.994 | .00000<br>61.601<br>7.1449 | .0000<br>1.156449+04<br>2.0007 | .0000<br>1.2396<br>1.2384 |
| 31000. | 32.721 | 215.132<br>214.388<br>6.595590+02 | .000000+00<br>1412.439<br>1457.232 | .000000+00<br>16.9542<br>17.401 | .000<br>40.9852<br>41.169 | .00000<br>62.671<br>7.3786 | .0000<br>1.194997+04<br>2.0318 | .0000<br>1.2017<br>1.2003 |
| 32000. | 33.776 | 229.169<br>228.354<br>7.260508+02 | .000000+00<br>1503.647<br>1552.135 | .000000+00<br>16.7297<br>17.188 | .000<br>43.4555<br>43.622 | .00000<br>63.699<br>7.5797 | .0000<br>1.233546+04<br>2.0677 | .0000<br>1.1752<br>1.1746 |
| 33000. | 34.832 | 243.653<br>242.782<br>7.933051+02 | .000000+00<br>1598.799<br>1650.507 | .000000+00<br>16.6917<br>17.156 | .000<br>45.4234<br>45.578 | .00000<br>64.707<br>7.7782 | .0000<br>1.272094+04<br>2.1083 | .0000<br>1.1613<br>1.1610 |
| 34000. | 35.887 | 258.582<br>257.664<br>8.618647+02 | .000000+00<br>1697.479<br>1752.210 | .000000+00<br>16.7501<br>17.217 | .000<br>47.0756<br>47.224 | .00000<br>65.705<br>7.9744 | .0000<br>1.310642+04<br>2.1525 | .0000<br>1.1537<br>1.1537 |
| 35000. | 36.943 | 273.957<br>272.998<br>9.330883+02 | .000000+00<br>1799.577<br>1857.180 | .000000+00<br>16.8610<br>17.330 | .000<br>48.5193<br>48.663 | .00000<br>66.700<br>8.1682 | .0000<br>1.349190+04<br>2.1996 | .0000<br>1.1494<br>1.1494 |
| 36000. | 37.998 | 289.777<br>288.779<br>1.005739+03 | .000000+00<br>1904.762<br>1965.294 | .000000+00<br>16.9986<br>17.469 | .000<br>49.8177<br>49.959 | .00000<br>67.697<br>8.3602 | .0000<br>1.387739+04<br>2.2492 | .0000<br>1.1469<br>1.1470 |
| 37000. | 39.054 | 306.043<br>305.007<br>1.080757+03 | .000000+00<br>2013.074<br>2076.449 | .000000+00<br>17.1501<br>17.620 | .000<br>51.0109<br>51.151 | .00000<br>68.698<br>8.5518 | .0000<br>1.426287+04<br>2.3011 | .0000<br>1.1457<br>1.1459 |

ALTITUDE = 240000. FT.

P1 = 3.326850-05 ATM. , RHO1 = 4.384842-05 AMA. , T1 = 207.37 K  
 S1/R = 32.939 , A1 = 947.41 FT./SEC. , H1/R = 725.798 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 38000. | 40.110 | 322.755<br>321.681<br>1.157357+03 | .000000+00<br>2124.468<br>2190.728 | .000000+00<br>17.3072<br>17.778 | .000<br>52.1257<br>52.265 | .0000<br>69.704<br>8.7432  | .0000<br>1.464835+04<br>2.3549 | .0000<br>1.1451<br>1.1453 |
| 39000. | 41.165 | 339.912<br>338.800<br>1.236828+03 | .000000+00<br>2238.907<br>2308.101 | .000000+00<br>17.4644<br>17.935 | .000<br>53.1812<br>53.321 | .0000<br>70.717<br>8.9355  | .0000<br>1.503384+04<br>2.4107 | .0000<br>1.1453<br>1.1455 |
| 40000. | 42.221 | 357.515<br>356.366<br>1.316266+03 | .000000+00<br>2356.366<br>2428.493 | .000000+00<br>17.6178<br>18.087 | .000<br>54.1913<br>54.332 | .0000<br>71.738<br>9.1290  | .0000<br>1.541932+04<br>2.4682 | .0000<br>1.1457<br>1.1460 |
| 41000. | 43.276 | 375.563<br>374.376<br>1.399152+03 | .000000+00<br>2476.819<br>2551.881 | .000000+00<br>17.7647<br>18.233 | .000<br>55.1671<br>55.308 | .0000<br>72.766<br>9.3238  | .0000<br>1.580480+04<br>2.5275 | .0000<br>1.1465<br>1.1468 |
| 42000. | 44.332 | 394.058<br>392.830<br>1.481059+03 | .000000+00<br>2600.246<br>2678.324 | .000000+00<br>17.9030<br>18.370 | .000<br>56.1170<br>56.260 | .0000<br>73.803<br>9.5211  | .0000<br>1.619028+04<br>2.5884 | .0000<br>1.1477<br>1.1480 |
| 43000. | 45.387 | 412.997<br>411.729<br>1.564367+03 | .000000+00<br>2726.632<br>2807.719 | .000000+00<br>18.0316<br>18.497 | .000<br>57.0489<br>57.193 | .0000<br>74.848<br>9.7203  | .0000<br>1.657577+04<br>2.6508 | .0000<br>1.1490<br>1.1492 |
| 44000. | 46.443 | 432.383<br>431.072<br>1.647602+03 | .000000+00<br>2855.958<br>2940.156 | .000000+00<br>18.1493<br>18.613 | .000<br>57.9689<br>58.115 | .0000<br>75.901<br>9.9217  | .0000<br>1.696125+04<br>2.7148 | .0000<br>1.1503<br>1.1506 |
| 45000. | 47.498 | 452.214<br>450.858<br>1.724063+03 | .000000+00<br>2988.210<br>3075.575 | .000000+00<br>18.2553<br>18.717 | .000<br>58.8834<br>59.032 | .0000<br>76.962<br>10.1280 | .0000<br>1.734673+04<br>2.7802 | .0000<br>1.1522<br>1.1525 |
| 46000. | 48.554 | 472.491<br>471.088<br>1.798617+03 | .000000+00<br>3123.363<br>3214.069 | .000000+00<br>18.3482<br>18.809 | .000<br>59.7985<br>59.950 | .0000<br>78.031<br>10.3367 | .0000<br>1.773222+04<br>2.8470 | .0000<br>1.1540<br>1.1544 |
| 47000. | 49.609 | 493.213<br>491.762<br>1.870250+03 | .000000+00<br>3261.399<br>3355.639 | .000000+00<br>18.4275<br>18.887 | .000<br>60.7195<br>60.875 | .0000<br>79.107<br>10.5502 | .0000<br>1.811770+04<br>2.9151 | .0000<br>1.1563<br>1.1566 |
| 48000. | 50.665 | 514.381<br>512.878<br>1.938527+03 | .000000+00<br>3402.304<br>3500.234 | .000000+00<br>18.4927<br>18.951 | .000<br>61.6530<br>61.812 | .0000<br>80.191<br>10.7682 | .0000<br>1.850318+04<br>2.9845 | .0000<br>1.1587<br>1.1591 |
| 49000. | 51.720 | 535.995<br>534.437<br>2.003530+03 | .000000+00<br>3546.042<br>3647.849 | .000000+00<br>18.5421<br>18.999 | .000<br>62.6059<br>62.770 | .0000<br>81.280<br>10.9928 | .0000<br>1.888867+04<br>3.0551 | .0000<br>1.1616<br>1.1620 |
| 50000. | 52.776 | 558.054<br>556.438<br>2.065113+03 | .000000+00<br>3692.587<br>3798.275 | .000000+00<br>18.5748<br>19.030 | .000<br>63.5863<br>63.756 | .0000<br>82.376<br>11.2229 | .0000<br>1.927415+04<br>3.1268 | .0000<br>1.1647<br>1.1651 |

ALTITUDE = 250000. FT.

P1 = 2.007372-05 ATM. , RHO1 = 2.806970-05 AMA. , T1 = 195.46 K  
 S1/R = 33.238 , A1 = 919.80 FT./SEC. , H1/R = 684.112 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.523  | 9.510<br>9.276<br>3.120237+00   | 3.232665+03<br>50.717<br>55.852   | 3.752821+02<br>6.0247<br>6.494   | 8.603<br>8.4067<br>8.588    | 2.3843<br>37.296<br>2.3741 | 1.0000<br>1.557642+03<br>1.0002 | 1.2928<br>1.2881<br>1.2837 |
| 7000.  | 7.610  | 12.584<br>12.323<br>5.121747+00 | 9.757421+03<br>69.969<br>76.292   | 8.920531+02<br>6.6697<br>7.171   | 10.915<br>10.4228<br>10.562 | 2.6474<br>38.103<br>2.5439 | 1.0009<br>1.817249+03<br>1.0061 | 1.2551<br>1.1976<br>1.1915 |
| 8000.  | 8.698  | 16.130<br>15.875<br>7.796927+00 | 2.724925+04<br>93.235<br>100.342  | 2.054502+03<br>7.7147<br>8.229   | 13.166<br>11.7802<br>11.869 | 2.8604<br>38.927<br>2.6628 | 1.0061<br>2.076856+03<br>1.0262 | 1.2084<br>1.1403<br>1.1390 |
| 9000.  | 9.785  | 20.148<br>19.907<br>1.122997+01 | 7.251045+04<br>120.074<br>127.814 | 4.666980+03<br>8.9165<br>9.426   | 15.241<br>12.7489<br>12.818 | 3.0614<br>39.812<br>2.7907 | 1.0182<br>2.336463+03<br>1.0567 | 1.1816<br>1.1250<br>1.1250 |
| 10000. | 10.872 | 24.640<br>24.408<br>1.550983+01 | 1.859747+05<br>150.179<br>158.586 | 1.037801+04<br>10.0988<br>10.599 | 17.278<br>13.5948<br>13.658 | 3.2822<br>40.768<br>2.9318 | 1.0359<br>2.596070+03<br>1.0942 | 1.1775<br>1.1248<br>1.1253 |
| 11000. | 11.959 | 29.604<br>29.374<br>2.072780+01 | 4.599825+05<br>183.363<br>192.542 | 2.235477+04<br>11.1422<br>11.630 | 19.439<br>14.4826<br>14.549 | 3.5274<br>41.784<br>3.1004 | 1.0573<br>2.855677+03<br>1.1365 | 1.1845<br>1.1363<br>1.1374 |
| 12000. | 13.046 | 35.042<br>34.798<br>2.702975+01 | 1.091285+06<br>219.280<br>229.555 | 4.615514+04<br>11.8296<br>12.297 | 21.850<br>15.7183<br>15.812 | 3.8061<br>42.839<br>3.3565 | 1.0808<br>3.115284+03<br>1.1792 | 1.2001<br>1.1788<br>1.1822 |
| 13000. | 14.134 | 40.952<br>40.656<br>3.479153+01 | 2.468382+06<br>256.779<br>269.039 | 9.060022+04<br>11.6343<br>12.072 | 24.626<br>18.2875<br>18.456 | 4.1185<br>43.869<br>3.7858 | 1.1050<br>3.374891+03<br>1.2060 | 1.2195<br>1.2620<br>1.2598 |
| 14000. | 15.221 | 47.334<br>46.986<br>4.403829+01 | 5.303117+06<br>297.419<br>311.799 | 1.689643+05<br>11.5456<br>12.020 | 27.792<br>21.0279<br>21.155 | 4.4548<br>44.812<br>3.9364 | 1.1280<br>3.634498+03<br>1.2246 | 1.2386<br>1.1730<br>1.1701 |
| 15000. | 16.308 | 54.190<br>53.823<br>5.457833+01 | 1.082648+07<br>342.637<br>358.406 | 2.999824+05<br>12.0525<br>12.541 | 31.316<br>22.6969<br>22.791 | 4.7933<br>45.729<br>4.0653 | 1.1511<br>3.894105+03<br>1.2524 | 1.2470<br>1.1335<br>1.1327 |
| 16000. | 17.395 | 61.518<br>61.146<br>6.669687+01 | 2.106331+07<br>391.641<br>408.631 | 5.113654+05<br>12.7535<br>13.247 | 34.988<br>23.8739<br>23.953 | 5.1236<br>46.659<br>4.1988 | 1.1759<br>4.153713+03<br>1.2863 | 1.2484<br>1.1197<br>1.1195 |
| 17000. | 18.482 | 69.319<br>68.945<br>8.034949+01 | 3.929006+07<br>444.102<br>462.183 | 8.419896+05<br>13.5108<br>14.004 | 38.671<br>24.8187<br>24.890 | 5.4640<br>47.615<br>4.3313 | 1.2052<br>4.413320+03<br>1.3244 | 1.2533<br>1.1135<br>1.1134 |
| 18000. | 19.570 | 77.593<br>77.218<br>9.567396+01 | 7.049456+07<br>499.907<br>519.052 | 1.339648+06<br>14.2805<br>14.772 | 42.322<br>25.6294<br>25.695 | 5.8325<br>48.603<br>4.4648 | 1.2419<br>4.672926+03<br>1.3659 | 1.2663<br>1.1111<br>1.1113 |
| 19000. | 20.657 | 86.340<br>85.962<br>1.131132+02 | 1.220734+08<br>558.955<br>579.216 | 2.060253+06<br>15.0242<br>15.513 | 45.947<br>26.3707<br>26.434 | 6.2422<br>49.625<br>4.6028 | 1.2880<br>4.932534+03<br>1.4108 | 1.2882<br>1.1114<br>1.1115 |

ALTITUDE = 250000. FT.

P1 = 2.007372-05 ATM. , RHQ1 = 2.806970-05 AMA. , T1 = 195.46 K  
 S1/R = 33.238 , A1 = 919.80 FT./SEC. , H1/R = 684.112 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 20000. | 21.744 | 95.560<br>95.178<br>1.324346+02   | 2.040540+08<br>621.229<br>642.616  | 3.056852+06<br>15.7361<br>16.222 | 49.551<br>27.0643<br>27.125 | 6.7046<br>50.680<br>4.7421 | 1.3455<br>5.192141+03<br>1.4586 | 1.3191<br>1.1118<br>1.1119 |
| 21000. | 22.831 | 105.252<br>104.865<br>1.537408+02 | 3.294106+08<br>686.699<br>709.235  | 4.374449+06<br>16.4057<br>16.889 | 53.134<br>27.7317<br>27.791 | 7.2185<br>51.769<br>4.8854 | 1.4156<br>5.451748+03<br>1.5093 | 1.3553<br>1.1130<br>1.1132 |
| 22000. | 23.918 | 115.417<br>115.023<br>1.772418+02 | .000000+00<br>755.340<br>779.080   | .000000+00<br>17.0262<br>17.505  | .000<br>28.3893<br>28.448   | .0000<br>52.890<br>5.0337  | .0000<br>5.711355+03<br>1.5626  | .0000<br>1.1150<br>1.1152  |
| 23000. | 25.006 | 126.055<br>125.651<br>2.031363+02 | .000000+00<br>827.125<br>852.196   | .000000+00<br>17.5899<br>18.066  | .000<br>29.0544<br>29.114   | .0000<br>54.041<br>5.1883  | .0000<br>5.970962+03<br>1.6183  | .0000<br>1.1176<br>1.1178  |
| 24000. | 26.093 | 137.166<br>136.750<br>2.314925+02 | .000000+00<br>902.018<br>928.578   | .000000+00<br>18.0883<br>18.562  | .000<br>29.7450<br>29.806   | .0000<br>55.220<br>5.3513  | .0000<br>6.230569+03<br>1.6763  | .0000<br>1.1210<br>1.1213  |
| 25000. | 27.180 | 148.750<br>148.318<br>2.625220+02 | .000000+00<br>979.970<br>1008.186  | .000000+00<br>18.5095<br>18.982  | .000<br>30.4884<br>30.553   | .0000<br>56.423<br>5.5264  | .0000<br>6.490176+03<br>1.7363  | .0000<br>1.1260<br>1.1263  |
| 26000. | 28.267 | 160.806<br>160.355<br>2.961188+02 | .000000+00<br>1060.893<br>1090.988 | .000000+00<br>18.8330<br>19.304  | .000<br>31.3304<br>31.400   | .0000<br>57.647<br>5.7197  | .0000<br>6.749783+03<br>1.7978  | .0000<br>1.1334<br>1.1339  |
| 27000. | 29.354 | 173.335<br>172.859<br>3.330659+02 | .000000+00<br>1144.623<br>1176.855 | .000000+00<br>19.0203<br>19.487  | .000<br>32.3557<br>32.437   | .0000<br>58.883<br>5.9456  | .0000<br>7.009390+03<br>1.8596  | .0000<br>1.1458<br>1.1465  |
| 28000. | 30.442 | 186.337<br>185.823<br>3.742381+02 | .000000+00<br>1230.780<br>1265.520 | .000000+00<br>18.9854<br>19.442  | .000<br>33.7662<br>33.871   | .0000<br>60.120<br>6.2402  | .0000<br>7.268997+03<br>1.9195  | .0000<br>1.1704<br>1.1718  |
| 29000. | 31.529 | 199.812<br>199.233<br>4.212329+02 | .000000+00<br>1318.391<br>1356.474 | .000000+00<br>18.5355<br>18.971  | .000<br>36.0828<br>36.244   | .0000<br>61.335<br>6.6867  | .0000<br>7.528604+03<br>1.9704  | .0000<br>1.2227<br>1.2249  |
| 30000. | 32.616 | 213.760<br>213.081<br>4.729863+02 | .000000+00<br>1407.061<br>1449.667 | .000000+00<br>17.6931<br>18.125  | .000<br>39.6529<br>39.855   | .0000<br>62.488<br>7.1014  | .0000<br>7.788211+03<br>2.0044  | .0000<br>1.2367<br>1.2351  |
| 31000. | 33.703 | 228.180<br>227.409<br>5.257465+02 | .000000+00<br>1499.540<br>1546.508 | .000000+00<br>17.1530<br>17.602  | .000<br>42.9216<br>43.105   | .0000<br>63.573<br>7.3164  | .0000<br>8.047818+03<br>2.0358  | .0000<br>1.1949<br>1.1935  |
| 32000. | 34.790 | 243.073<br>242.232<br>5.781153+02 | .000000+00<br>1596.591<br>1647.336 | .000000+00<br>16.9605<br>17.420  | .000<br>45.4019<br>45.567   | .0000<br>64.617<br>7.5125  | .0000<br>8.307425+03<br>2.0728  | .0000<br>1.1696<br>1.1690  |
| 33000. | 35.878 | 258.439<br>257.543<br>6.308150+02 | .000000+00<br>1697.789<br>1751.821 | .000000+00<br>16.9469<br>17.412  | .000<br>47.3737<br>47.527   | .0000<br>65.643<br>7.7065  | .0000<br>8.567032+03<br>2.1143  | .0000<br>1.1566<br>1.1563  |

ALTITUDE = 250000. FT.

P1 = 2.007372-05 ATM. , RHQ1 = 2.806970-05 AMA. , T1 = 195.46 K  
 S1/R = 33.238 , A1 = 919.80 FT./SEC. , H1/R = 684.112 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 34000. | 36.965 | 274.278<br>273.335<br>6.849979+02 | .000000+00<br>1802.699<br>1859.858 | .000000+00<br>17.0249<br>17.494 | .000<br>49.0306<br>49.177 | .0000<br>66.661<br>7.8986  | .0000<br>8.826639+03<br>2.1593 | .0000<br>1.1496<br>1.1495 |
| 35000. | 38.052 | 290.589<br>289.607<br>7.404974+02 | .000000+00<br>1911.208<br>1971.301 | .000000+00<br>17.1518<br>17.622 | .000<br>50.4804<br>50.623 | .0000<br>67.678<br>8.0881  | .0000<br>9.086246+03<br>2.2072 | .0000<br>1.1454<br>1.1454 |
| 36000. | 39.139 | 307.374<br>306.352<br>7.969636+02 | .000000+00<br>2022.987<br>2086.094 | .000000+00<br>17.3036<br>17.775 | .000<br>51.7855<br>51.925 | .0000<br>68.697<br>8.2767  | .0000<br>9.345853+03<br>2.2575 | .0000<br>1.1432<br>1.1433 |
| 37000. | 40.226 | 324.631<br>323.571<br>8.550344+02 | .000000+00<br>2138.081<br>2204.115 | .000000+00<br>17.4680<br>17.939 | .000<br>52.9861<br>53.125 | .0000<br>69.721<br>8.4648  | .0000<br>9.605460+03<br>2.3100 | .0000<br>1.1422<br>1.1423 |
| 38000. | 41.313 | 342.361<br>341.264<br>9.144113+02 | .000000+00<br>2256.438<br>2325.433 | .000000+00<br>17.6365<br>18.108 | .000<br>54.1087<br>54.247 | .0000<br>70.752<br>8.6524  | .0000<br>9.865067+03<br>2.3645 | .0000<br>1.1417<br>1.1419 |
| 39000. | 42.401 | 360.564<br>359.429<br>9.746077+02 | .000000+00<br>2378.029<br>2450.014 | .000000+00<br>17.8045<br>18.276 | .000<br>55.1719<br>55.310 | .0000<br>71.790<br>8.8407  | .0000<br>1.012467+04<br>2.4209 | .0000<br>1.1418<br>1.1420 |
| 40000. | 43.488 | 379.239<br>378.067<br>1.037492+03 | .000000+00<br>2502.820<br>2577.821 | .000000+00<br>17.9677<br>18.438 | .000<br>56.1903<br>56.329 | .0000<br>72.836<br>9.0309  | .0000<br>1.038428+04<br>2.4791 | .0000<br>1.1424<br>1.1426 |
| 41000. | 44.575 | 398.388<br>397.177<br>1.099422+03 | .000000+00<br>2630.791<br>2708.773 | .000000+00<br>18.1237<br>18.593 | .000<br>57.1742<br>57.314 | .0000<br>73.891<br>9.2218  | .0000<br>1.064389+04<br>2.5389 | .0000<br>1.1431<br>1.1434 |
| 42000. | 45.662 | 418.009<br>416.758<br>1.163554+03 | .000000+00<br>2761.923<br>2843.012 | .000000+00<br>18.2710<br>18.739 | .000<br>58.1329<br>58.274 | .0000<br>74.955<br>9.4152  | .0000<br>1.090350+04<br>2.6005 | .0000<br>1.1443<br>1.1445 |
| 43000. | 46.749 | 438.103<br>436.811<br>1.228697+03 | .000000+00<br>2896.194<br>2980.386 | .000000+00<br>18.4075<br>18.874 | .000<br>59.0735<br>59.216 | .0000<br>76.028<br>9.6110  | .0000<br>1.116310+04<br>2.6635 | .0000<br>1.1455<br>1.1458 |
| 44000. | 47.837 | 458.669<br>457.335<br>1.293653+03 | .000000+00<br>3033.590<br>3120.949 | .000000+00<br>18.5327<br>18.997 | .000<br>60.0029<br>60.147 | .0000<br>77.110<br>9.8094  | .0000<br>1.142271+04<br>2.7282 | .0000<br>1.1469<br>1.1473 |
| 45000. | 48.924 | 479.709<br>478.330<br>1.359580+03 | .000000+00<br>3174.090<br>3264.751 | .000000+00<br>18.6453<br>19.108 | .000<br>60.9272<br>61.074 | .0000<br>78.200<br>10.0110 | .0000<br>1.168232+04<br>2.7942 | .0000<br>1.1487<br>1.1490 |
| 46000. | 50.011 | 501.221<br>499.796<br>1.423369+03 | .000000+00<br>3317.680<br>3411.804 | .000000+00<br>18.7449<br>19.206 | .000<br>61.8523<br>62.002 | .0000<br>79.299<br>10.2165 | .0000<br>1.194192+04<br>2.8617 | .0000<br>1.1506<br>1.1509 |
| 47000. | 51.098 | 523.207<br>521.732<br>1.484707+03 | .000000+00<br>3464.334<br>3562.189 | .000000+00<br>18.8301<br>19.290 | .000<br>62.7847<br>62.938 | .0000<br>80.406<br>10.4263 | .0000<br>1.220153+04<br>2.9305 | .0000<br>1.1528<br>1.1531 |

## ALTITUDE = 250000. FT.

P1 = 2.007372-05 ATM. , RHO1 = 2.806970-05 AMA. , T1 = 195.46 K  
 S1/R = 33.238 , A1 = 919.80 FT./SEC. , H1/R = 684.112 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 52.185 | 545.665<br>544.138<br>1.543948+03 | .000000+00<br>3614.029<br>3715.611 | .000000+00<br>18.9001<br>19.359 | .000<br>63.7306<br>63.887 | .0000<br>81.520<br>10.6411 | .0000<br>1.246114+04<br>3.0006 | .0000<br>1.1553<br>1.1556 |
| 49000. | 53.273 | 568.595<br>567.014<br>1.599067+03 | .000000+00<br>3766.744<br>3872.297 | .000000+00<br>18.9543<br>19.412 | .000<br>64.6972<br>64.859 | .0000<br>82.642<br>10.8605 | .0000<br>1.272074+04<br>3.0720 | .0000<br>1.1578<br>1.1582 |
| 50000. | 54.360 | 591.999<br>590.358<br>1.648623+03 | .000000+00<br>3922.441<br>4032.001 | .000000+00<br>18.9910<br>19.447 | .000<br>65.6929<br>65.860 | .0000<br>83.770<br>11.0873 | .0000<br>1.298035+04<br>3.1444 | .0000<br>1.1610<br>1.1614 |

## ALTITUDE = 260000. FT.

P1 = 1.173957-05 ATM. , RHO1 = 1.747994-05 AMA. , T1 = 183.56 K  
 S1/R = 33.555 , A1 = 891.36 FT./SEC. , H1/R = 642.464 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.731  | 10.062<br>9.815<br>2.441638+00  | 3.927197+03<br>53.999<br>59.435   | 4.305914+02<br>6.0587<br>6.528   | 9.109<br>8.9003<br>9.091    | 2.3780<br>37.746<br>2.3661 | 1.0000<br>1.024578+03<br>1.0003 | 1.2932<br>1.2874<br>1.2826 |
| 7000.  | 7.853  | 13.334<br>13.062<br>4.016215+00 | 1.192087+04<br>74.544<br>81.221   | 1.028278+03<br>6.7242<br>7.227   | 11.567<br>11.0078<br>11.148 | 2.6397<br>38.560<br>2.5272 | 1.0010<br>1.195341+03<br>1.0068 | 1.2537<br>1.1914<br>1.1854 |
| 8000.  | 8.975  | 17.110<br>16.846<br>6.120883+00 | 3.345925+04<br>99.391<br>106.869  | 2.382419+03<br>7.8090<br>8.325   | 13.934<br>12.3865<br>12.475 | 2.8483<br>39.395<br>2.6432 | 1.0067<br>1.366104+03<br>1.0278 | 1.2049<br>1.1363<br>1.1351 |
| 9000.  | 10.097 | 21.390<br>21.140<br>8.822099+00 | 8.958817+04<br>128.019<br>136.137 | 5.453062+03<br>9.0441<br>9.554   | 16.094<br>13.3705<br>13.439 | 3.0463<br>40.297<br>2.7688 | 1.0196<br>1.536867+03<br>1.0590 | 1.1782<br>1.1222<br>1.1222 |
| 10000. | 11.219 | 26.172<br>25.933<br>1.219087+01 | 2.314888+05<br>160.116<br>168.931 | 1.223117+04<br>10.2555<br>10.757 | 18.211<br>14.2349<br>14.298 | 3.2645<br>41.271<br>2.9077 | 1.0380<br>1.707630+03<br>1.0971 | 1.1745<br>1.1224<br>1.1229 |
| 11000. | 12.341 | 31.459<br>31.221<br>1.629877+01 | 5.771010+05<br>195.485<br>205.105 | 2.657440+04<br>11.3199<br>11.809 | 20.460<br>15.1531<br>15.220 | 3.5077<br>42.308<br>3.0749 | 1.0602<br>1.878393+03<br>1.1398 | 1.1818<br>1.1344<br>1.1355 |
| 12000. | 13.463 | 37.248<br>36.996<br>2.125545+01 | 1.380088+06<br>233.734<br>244.513 | 5.532538+04<br>11.9994<br>12.465 | 22.978<br>16.4702<br>16.568 | 3.7846<br>43.384<br>3.3376 | 1.0843<br>2.049156+03<br>1.1825 | 1.1976<br>1.1809<br>1.1845 |
| 13000. | 14.584 | 43.541<br>43.232<br>2.738697+01 | 3.144985+06<br>273.543<br>286.483 | 1.094186+05<br>11.7180<br>12.155 | 25.892<br>19.3175<br>19.494 | 4.0986<br>44.429<br>3.7704 | 1.1088<br>2.219919+03<br>1.2075 | 1.2190<br>1.2615<br>1.2582 |
| 14000. | 15.706 | 50.338<br>49.975<br>3.466630+01 | 6.803076+06<br>316.945<br>332.072 | 2.053879+05<br>11.6665<br>12.143 | 29.236<br>22.1441<br>22.271 | 4.4310<br>45.382<br>3.9962 | 1.1316<br>2.390682+03<br>1.2264 | 1.2364<br>1.1663<br>1.1637 |

ALTITUDE = 260000. FT.

P1 = 1.173957-05 ATM. , RH01 = 1.747994-05 AMA. , T1 = 183.56 K  
 S1/R = 33.555 , A1 = 891.36 FT./SEC. , H1/R = 642.464 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 16.828 | 57.638<br>57.258<br>4.299061+01   | 1.397607+07<br>365.218<br>381.839  | 3.669808+05<br>12.2138<br>12.705 | 32.968<br>23.8281<br>23.923 | 4.7630<br>46.312<br>4.0330 | 1.1538<br>2.561446+03<br>1.2548 | 1.2425<br>1.1294<br>1.1288 |
| 16000. | 17.950 | 65.441<br>65.057<br>5.250900+01   | 2.736452+07<br>417.487<br>435.317  | 6.302167+05<br>12.9444<br>13.439 | 36.847<br>25.0189<br>25.099 | 5.0833<br>47.259<br>4.1640 | 1.1770<br>2.732209+03<br>1.2891 | 1.2413<br>1.1166<br>1.1165 |
| 17000. | 19.072 | 73.748<br>73.362<br>6.331460+01   | 5.139633+07<br>473.420<br>492.372  | 1.046974+06<br>13.7268<br>14.220 | 40.726<br>25.9783<br>26.049 | 5.4074<br>48.234<br>4.2953 | 1.2039<br>2.902972+03<br>1.3276 | 1.2423<br>1.1113<br>1.1114 |
| 18000. | 20.194 | 82.559<br>82.171<br>7.538746+01   | 9.295737+07<br>532.893<br>552.912  | 1.683965+06<br>14.5140<br>15.005 | 44.569<br>26.8075<br>26.873 | 5.7566<br>49.242<br>4.4254 | 1.2371<br>3.073735+03<br>1.3695 | 1.2521<br>1.1085<br>1.1086 |
| 19000. | 21.316 | 91.872<br>91.483<br>8.895968+01   | 1.624341+08<br>595.848<br>617.080  | 2.622240+06<br>15.2850<br>15.775 | 48.392<br>27.5571<br>27.620 | 6.1410<br>50.285<br>4.5602 | 1.2785<br>3.244498+03<br>1.4146 | 1.2698<br>1.1086<br>1.1089 |
| 20000. | 22.438 | 101.690<br>101.297<br>1.041420+02 | 2.744219+08<br>662.220<br>684.577  | 3.946856+06<br>16.0162<br>16.503 | 52.207<br>28.2653<br>28.326 | 6.5739<br>51.364<br>4.6977 | 1.3302<br>3.415261+03<br>1.4627 | 1.2964<br>1.1094<br>1.1096 |
| 21000. | 23.560 | 112.010<br>111.612<br>1.209155+02 | 4.482346+08<br>731.998<br>755.563  | 5.735307+06<br>16.7050<br>17.188 | 56.022<br>28.9465<br>29.006 | 7.0609<br>52.477<br>4.8386 | 1.3934<br>3.586024+03<br>1.5137 | 1.3306<br>1.1107<br>1.1109 |
| 22000. | 24.681 | 122.834<br>122.429<br>1.393677+02 | .000000+00<br>805.156<br>829.941   | .000000+00<br>17.3432<br>17.822  | .000<br>29.6189<br>29.678   | .0000<br>53.623<br>4.9845  | .0000<br>3.756787+03<br>1.5672  | .0000<br>1.1126<br>1.1128  |
| 23000. | 25.803 | 134.162<br>133.747<br>1.596976+02 | .000000+00<br>881.663<br>907.817   | .000000+00<br>17.9229<br>18.358  | .000<br>30.3000<br>30.360   | .0000<br>54.800<br>5.1369  | .0000<br>3.927550+03<br>1.6233  | .0000<br>1.1153<br>1.1155  |
| 24000. | 26.925 | 145.993<br>145.566<br>1.820331+02 | .000000+00<br>961.484<br>989.220   | .000000+00<br>18.4354<br>18.910  | .000<br>31.0097<br>31.071   | .0000<br>56.007<br>5.2976  | .0000<br>4.098313+03<br>1.6816  | .0000<br>1.1187<br>1.1190  |
| 25000. | 28.047 | 158.327<br>157.885<br>2.064851+02 | .000000+00<br>1044.563<br>1074.028 | .000000+00<br>18.8682<br>19.341  | .000<br>31.7762<br>31.840   | .0000<br>57.239<br>5.4701  | .0000<br>4.269076+03<br>1.7420  | .0000<br>1.1236<br>1.1239  |
| 26000. | 29.169 | 171.165<br>170.704<br>2.332980+02 | .000000+00<br>1130.806<br>1162.273 | .000000+00<br>19.1987<br>19.670  | .000<br>32.6487<br>32.719   | .0000<br>58.492<br>5.6620  | .0000<br>4.439839+03<br>1.8038  | .0000<br>1.1312<br>1.1316  |
| 27000. | 30.291 | 184.507<br>184.018<br>2.621241+02 | .000000+00<br>1220.025<br>1253.693 | .000000+00<br>19.3840<br>19.851  | .000<br>33.7241<br>33.806   | .0000<br>59.758<br>5.8878  | .0000<br>4.610602+03<br>1.8659  | .0000<br>1.1441<br>1.1448  |
| 28000. | 31.413 | 198.352<br>197.823<br>2.944503+02 | .000000+00<br>1311.772<br>1348.094 | .000000+00<br>19.3230<br>19.779  | .000<br>35.2405<br>35.349   | .0000<br>61.024<br>6.1901  | .0000<br>4.781365+03<br>1.9259  | .0000<br>1.1711<br>1.1725  |

| ALTITUDE = 260000. FT.                                          |        |                                   |                                    |                                 |                           |                           |                                |                           |
|-----------------------------------------------------------------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| P1 = 1.173957-05 ATM. , RHO1 = 1.747994-05 AMA. , T1 = 183.56 K |        |                                   |                                    |                                 |                           |                           |                                |                           |
| S1/R = 33.555 , A1 = 891.36 FT./SEC. , H1/R = 642.464 K         |        |                                   |                                    |                                 |                           |                           |                                |                           |
| U1                                                              | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
| 29000.                                                          | 32.535 | 212.700<br>212.100<br>3.316845+02 | .000000+00<br>1404.869<br>1444.861 | .000000+00<br>18.7860<br>19.219 | .000<br>37.8361<br>38.010 | .0000<br>62.263<br>6.6635 | .0000<br>4.952128+03<br>1.9755 | .0000<br>1.2297<br>1.2319 |
| 30000.                                                          | 33.656 | 227.552<br>226.844<br>3.723330+02 | .000000+00<br>1499.147<br>1544.026 | .000000+00<br>17.8782<br>18.312 | .000<br>41.7358<br>41.942 | .0000<br>63.433<br>7.0510 | .0000<br>5.122891+03<br>2.0079 | .0000<br>1.2318<br>1.2298 |
| 31000.                                                          | 34.778 | 242.907<br>242.106<br>4.133688+02 | .000000+00<br>1597.926<br>1647.299 | .000000+00<br>17.3709<br>17.822 | .000<br>45.0697<br>45.252 | .0000<br>64.532<br>7.2508 | .0000<br>5.293654+03<br>2.0401 | .0000<br>1.1876<br>1.1864 |
| 32000.                                                          | 35.900 | 258.765<br>257.895<br>4.542188+02 | .000000+00<br>1701.577<br>1754.801 | .000000+00<br>17.2116<br>17.674 | .000<br>47.5583<br>47.721 | .0000<br>65.595<br>7.4416 | .0000<br>5.464417+03<br>2.0781 | .0000<br>1.1638<br>1.1633 |
| 33000.                                                          | 37.022 | 275.127<br>274.203<br>4.957091+02 | .000000+00<br>1809.603<br>1866.219 | .000000+00<br>17.2237<br>17.691 | .000<br>49.5353<br>49.687 | .0000<br>66.641<br>7.6320 | .0000<br>5.635180+03<br>2.1206 | .0000<br>1.1518<br>1.1516 |
| 34000.                                                          | 38.144 | 291.993<br>291.023<br>5.380482+02 | .000000+00<br>1921.543<br>1981.360 | .000000+00<br>17.3216<br>17.792 | .000<br>51.1988<br>51.344 | .0000<br>67.680<br>7.8198 | .0000<br>5.805943+03<br>2.1664 | .0000<br>1.1453<br>1.1453 |
| 35000.                                                          | 39.266 | 309.362<br>308.352<br>5.808259+02 | .000000+00<br>2037.288<br>2100.152 | .000000+00<br>17.4655<br>17.937 | .000<br>52.6565<br>52.798 | .0000<br>68.720<br>8.0058 | .0000<br>5.976706+03<br>2.2150 | .0000<br>1.1417<br>1.1417 |
| 6000.                                                           | 40.388 | 327.234<br>326.186<br>6.253366+02 | .000000+00<br>2156.512<br>2222.481 | .000000+00<br>17.6319<br>18.104 | .000<br>53.9704<br>54.109 | .0000<br>69.763<br>8.1901 | .0000<br>6.147469+03<br>2.2660 | .0000<br>1.1396<br>1.1397 |
| 7000.                                                           | 41.510 | 345.610<br>344.524<br>6.697465+02 | .000000+00<br>2279.260<br>2348.253 | .000000+00<br>17.8097<br>18.282 | .000<br>55.1801<br>55.317 | .0000<br>70.812<br>8.3738 | .0000<br>6.318232+03<br>2.3191 | .0000<br>1.1385<br>1.1386 |
| 8000.                                                           | 42.632 | 364.489<br>363.368<br>7.153330+02 | .000000+00<br>2405.582<br>2477.498 | .000000+00<br>17.9913<br>18.463 | .000<br>56.3123<br>56.449 | .0000<br>71.869<br>8.5580 | .0000<br>6.488995+03<br>2.3743 | .0000<br>1.1382<br>1.1384 |
| 9000.                                                           | 43.753 | 383.872<br>382.712<br>7.621238+02 | .000000+00<br>2535.141<br>2610.232 | .000000+00<br>18.1696<br>18.641 | .000<br>57.3851<br>57.522 | .0000<br>72.934<br>8.7428 | .0000<br>6.659758+03<br>2.4313 | .0000<br>1.1384<br>1.1386 |
| 0000.                                                           | 44.875 | 403.758<br>402.561<br>8.084605+02 | .000000+00<br>2668.214<br>2746.386 | .000000+00<br>18.3435<br>18.814 | .000<br>58.4130<br>58.550 | .0000<br>74.008<br>8.9283 | .0000<br>6.830521+03<br>2.4901 | .0000<br>1.1388<br>1.1390 |
| 1000.                                                           | 45.997 | 424.148<br>422.912<br>8.565876+02 | .000000+00<br>2804.674<br>2885.942 | .000000+00<br>18.5094<br>18.979 | .000<br>59.4069<br>59.545 | .0000<br>75.091<br>9.1163 | .0000<br>7.001284+03<br>2.5506 | .0000<br>1.1397<br>1.1400 |
| 2000.                                                           | 47.119 | 445.041<br>443.765<br>9.048050+02 | .000000+00<br>2944.502<br>3028.975 | .000000+00<br>18.6658<br>19.134 | .000<br>60.3757<br>60.515 | .0000<br>76.185<br>9.3059 | .0000<br>7.172048+03<br>2.6128 | .0000<br>1.1408<br>1.1411 |

## ALTITUDE = 260000. FT.

P1 = 1.173957-05 ATM. , RHO1 = 1.747994-05 AMA. , T1 = 183.56 K  
 S1/R = 33.555 , A1 = 891.36 FT./SEC. , H1/R = 642.464 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 48.241 | 466.438<br>465.121<br>9.532004+02 | .000000+00<br>3087.679<br>3175.342 | .000000+00<br>18.8112<br>19.278 | .000<br>61.3268<br>61.467 | .0000<br>77.287<br>9.4977  | .0000<br>7.342810+03<br>2.6765 | .0000<br>1.1420<br>1.1423 |
| 44000. | 49.363 | 488.338<br>486.978<br>1.002655+03 | .000000+00<br>3234.185<br>3325.141 | .000000+00<br>18.9443<br>19.409 | .000<br>62.2669<br>62.409 | .0000<br>78.400<br>9.6925  | .0000<br>7.513574+03<br>2.7418 | .0000<br>1.1435<br>1.1438 |
| 45000. | 50.485 | 510.741<br>509.337<br>1.052234+03 | .000000+00<br>3384.004<br>3478.282 | .000000+00<br>19.0645<br>19.527 | .000<br>63.2026<br>63.347 | .0000<br>79.522<br>9.8904  | .0000<br>7.684337+03<br>2.8085 | .0000<br>1.1451<br>1.1454 |
| 46000. | 51.607 | 533.648<br>532.197<br>1.101811+03 | .000000+00<br>3537.116<br>3634.986 | .000000+00<br>19.1708<br>19.632 | .000<br>64.1399<br>64.287 | .0000<br>80.653<br>10.0922 | .0000<br>7.855100+03<br>2.8767 | .0000<br>1.1470<br>1.1473 |
| 47000. | 52.728 | 557.058<br>555.558<br>1.151254+03 | .000000+00<br>3693.498<br>3795.271 | .000000+00<br>19.2623<br>19.723 | .000<br>65.0851<br>65.236 | .0000<br>81.793<br>10.2974 | .0000<br>8.025863+03<br>2.9462 | .0000<br>1.1490<br>1.1494 |
| 48000. | 53.850 | 580.972<br>579.420<br>1.198953+03 | .000000+00<br>3853.127<br>3958.822 | .000000+00<br>19.3382<br>19.798 | .000<br>66.0449<br>66.199 | .0000<br>82.940<br>10.5085 | .0000<br>8.196626+03<br>3.0170 | .0000<br>1.1516<br>1.1519 |
| 49000. | 54.972 | 605.389<br>603.781<br>1.244399+03 | .000000+00<br>4015.973<br>4125.702 | .000000+00<br>19.3971<br>19.855 | .000<br>67.0273<br>67.186 | .0000<br>84.096<br>10.7252 | .0000<br>8.367389+03<br>3.0890 | .0000<br>1.1543<br>1.1547 |
| 50000. | 56.094 | 630.310<br>628.643<br>1.286933+03 | .000000+00<br>4182.004<br>4296.070 | .000000+00<br>19.4379<br>19.895 | .000<br>68.0408<br>68.205 | .0000<br>85.258<br>10.9470 | .0000<br>8.538152+03<br>3.1622 | .0000<br>1.1571<br>1.1575 |

## ALTITUDE = 270000. FT.

P1 = 6.699860-06 ATM. , RHO1 = 1.013670-05 AMA. , T1 = 180.65 K  
 S1/R = 34.061 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1    | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1       | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|-------|--------|---------------------------------|-----------------------------------|--------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.785  | 10.208<br>9.958<br>1.855441+00  | 4.124232+03<br>54.871<br>60.385   | 4.456709+02<br>6.0695<br>6.540 | 9.242<br>9.0275<br>9.219    | 2.3759<br>38.285<br>2.3610 | 1.0001<br>6.025832+02<br>1.0003 | 1.2929<br>1.2850<br>1.2795 |
| 7000. | 7.916  | 13.533<br>13.260<br>3.052544+00 | 1.254239+04<br>75.827<br>82.559   | 1.067144+03<br>6.7747<br>7.281 | 11.725<br>11.1025<br>11.236 | 2.6324<br>39.103<br>2.5095 | 1.0012<br>7.030137+02<br>1.0079 | 1.2496<br>1.1827<br>1.1772 |
| 8000. | 9.047  | 17.370<br>17.108<br>4.651912+00 | 3.534138+04<br>101.167<br>108.664 | 2.490441+03<br>7.9116<br>8.428 | 14.063<br>12.4168<br>12.501 | 2.8324<br>39.950<br>2.6224 | 1.0079<br>8.034443+02<br>1.0301 | 1.1982<br>1.1315<br>1.1304 |
| 9000. | 10.178 | 21.718<br>21.473<br>6.704671+00 | 9.530563+04<br>130.314<br>138.436 | 5.759422+03<br>9.1861<br>9.696 | 16.170<br>13.3605<br>13.426 | 3.0259<br>40.870<br>2.7455 | 1.0221<br>9.038748+02<br>1.0621 | 1.1726<br>1.1189<br>1.1189 |

ALTITUDE = 270000. FT.

P1 = 6.699860-06 ATM. , RHO1 = 1.013670-05 AMA. , T1 = 180.65 K  
 S1/R = 34.061 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 10000. | 11.309 | 26.578<br>26.343<br>9.264355+00   | 2.487001+05<br>162.973<br>171.767 | 1.307519+04<br>10.4305<br>10.931 | 18.234<br>14.1975<br>14.258 | 3.2401<br>41.865<br>2.8819 | 1.0419<br>1.004305+03<br>1.1008 | 1.1698<br>1.1197<br>1.1202 |
| 11000. | 12.440 | 31.949<br>31.716<br>1.238629+01   | 6.267576+05<br>198.949<br>208.536 | 2.875396+04<br>11.5183<br>12.005 | 20.438<br>15.0999<br>15.166 | 3.4804<br>42.926<br>3.0481 | 1.0652<br>1.104736+03<br>1.1440 | 1.1778<br>1.1325<br>1.1336 |
| 12000. | 13.571 | 37.832<br>37.584<br>1.615311+01   | 1.515230+06<br>237.798<br>248.601 | 6.055476+04<br>12.1771<br>12.641 | 22.921<br>16.4557<br>16.555 | 3.7549<br>44.026<br>3.3218 | 1.0903<br>1.205166+03<br>1.1865 | 1.1942<br>1.1851<br>1.1892 |
| 13000. | 14.702 | 44.227<br>43.916<br>2.083121+01   | 3.489697+06<br>278.095<br>291.161 | 1.210151+05<br>11.7910<br>12.230 | 25.821<br>19.4909<br>19.665 | 4.0679<br>45.084<br>3.7518 | 1.1154<br>1.305597+03<br>1.2092 | 1.2162<br>1.2576<br>1.2531 |
| 14000. | 15.832 | 51.133<br>50.773<br>2.635355+01   | 7.620329+06<br>322.379<br>337.580 | 2.291456+05<br>11.8009<br>12.280 | 29.184<br>22.2279<br>22.347 | 4.4008<br>46.048<br>3.8727 | 1.1381<br>1.406028+03<br>1.2286 | 1.2343<br>1.1586<br>1.1563 |
| 15000. | 16.963 | 58.551<br>58.176<br>3.269179+01   | 1.578551+07<br>371.576<br>388.209 | 4.128040+05<br>12.3970<br>12.889 | 32.943<br>23.8295<br>23.919 | 4.7252<br>46.994<br>3.9972 | 1.1594<br>1.506458+03<br>1.2577 | 1.2375<br>1.1249<br>1.1243 |
| 16000. | 18.094 | 66.480<br>66.102<br>3.987948+01   | 3.116986+07<br>424.785<br>442.599 | 7.159390+05<br>13.1621<br>13.657 | 36.827<br>24.9694<br>25.045 | 5.0324<br>47.959<br>4.1255 | 1.1808<br>1.606889+03<br>1.2925 | 1.2328<br>1.1131<br>1.1130 |
| 17000. | 19.225 | 74.921<br>74.542<br>4.812679+01   | 5.908093+07<br>481.698<br>500.621 | 1.203590+06<br>13.9730<br>14.467 | 40.685<br>25.8919<br>25.959 | 5.3365<br>48.955<br>4.2540 | 1.2051<br>1.707319+03<br>1.3314 | 1.2296<br>1.1084<br>1.1084 |
| 18000. | 20.356 | 83.873<br>83.494<br>5.735021+01   | 1.080470+08<br>542.198<br>562.224 | 1.964837+06<br>14.7852<br>15.278 | 44.502<br>26.6925<br>26.755 | 5.6604<br>49.987<br>4.3830 | 1.2342<br>1.807750+03<br>1.3738 | 1.2349<br>1.1063<br>1.1063 |
| 19000. | 21.487 | 93.337<br>92.956<br>6.760341+01   | 1.912051+08<br>606.233<br>627.327 | 3.113051+06<br>15.5791<br>16.069 | 48.309<br>27.4175<br>27.476 | 6.0138<br>51.055<br>4.5128 | 1.2699<br>1.908180+03<br>1.4191 | 1.2479<br>1.1055<br>1.1056 |
| 20000. | 22.618 | 103.312<br>102.929<br>7.908086+01 | 3.276231+08<br>673.755<br>696.029 | 4.777860+06<br>16.3373<br>16.824 | 52.128<br>28.0993<br>28.157 | 6.4045<br>52.159<br>4.6482 | 1.3138<br>2.008611+03<br>1.4675 | 1.2678<br>1.1066<br>1.1068 |
| 21000. | 23.749 | 113.799<br>113.411<br>9.180742+01 | 5.440436+08<br>744.729<br>768.177 | 7.097877+06<br>17.0475<br>17.531 | 55.973<br>28.7599<br>28.816 | 6.8449<br>53.300<br>4.7868 | 1.3677<br>2.109041+03<br>1.5188 | 1.2956<br>1.1081<br>1.1083 |
| 22000. | 24.879 | 124.798<br>124.403<br>1.058131+02 | 8.749346+08<br>819.141<br>843.864 | 1.019441+07<br>17.7064<br>18.187 | 59.840<br>29.4123<br>29.468 | 7.3367<br>54.476<br>4.9300 | 1.4325<br>2.209472+03<br>1.5727 | 1.3292<br>1.1100<br>1.1102 |
| 23000. | 26.010 | 136.308<br>135.904<br>1.211707+02 | .000000+00<br>896.960<br>922.956  | .000000+00<br>18.3052<br>18.781  | .000<br>30.0742<br>30.130   | .0000<br>55.684<br>5.0797  | .0000<br>2.309902+03<br>1.6291  | .0000<br>1.1126<br>1.1128  |

ALTITUDE = 270000. FT.

P1 = 6.699860-06 ATM. , RHO1 = 1.013670-05 AMA. , T1 = 180.65 K  
 S1/R = 34.061 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 24000. | 27.141 | 148.330<br>147.914<br>1.380104+02 | .000000+00<br>978.147<br>1005.678  | .000000+00<br>18.8341<br>19.308 | .000<br>30.7663<br>30.824 | .0000<br>56.922<br>5.2381 | .0000<br>2.410333+03<br>1.6878 | .0000<br>1.1162<br>1.1164 |
| 25000. | 28.272 | 160.863<br>160.433<br>1.564969+02 | .000000+00<br>1062.647<br>1091.955 | .000000+00<br>19.2797<br>19.753 | .000<br>31.5180<br>31.579 | .0000<br>58.187<br>5.4081 | .0000<br>2.510763+03<br>1.7484 | .0000<br>1.1210<br>1.1213 |
| 26000. | 29.403 | 173.908<br>173.458<br>1.768381+02 | .000000+00<br>1150.362<br>1181.662 | .000000+00<br>19.6184<br>20.090 | .000<br>32.3791<br>32.446 | .0000<br>59.473<br>5.5977 | .0000<br>2.611194+03<br>1.8106 | .0000<br>1.1286<br>1.1291 |
| 27000. | 30.534 | 187.464<br>186.988<br>1.991873+02 | .000000+00<br>1241.085<br>1274.610 | .000000+00<br>19.7998<br>20.267 | .000<br>33.4559<br>33.535 | .0000<br>60.774<br>5.8242 | .0000<br>2.711624+03<br>1.8731 | .0000<br>1.1424<br>1.1432 |
| 28000. | 31.665 | 201.532<br>201.015<br>2.236051+02 | .000000+00<br>1334.303<br>1370.481 | .000000+00<br>19.7045<br>20.159 | .000<br>35.0196<br>35.128 | .0000<br>62.073<br>6.1381 | .0000<br>2.812055+03<br>1.9330 | .0000<br>1.1729<br>1.1745 |
| 29000. | 32.796 | 216.111<br>215.519<br>2.520096+02 | .000000+00<br>1428.621<br>1468.654 | .000000+00<br>19.0499<br>19.479 | .000<br>37.8357<br>38.015 | .0000<br>63.339<br>6.6437 | .0000<br>2.912486+03<br>1.9809 | .0000<br>1.2389<br>1.2408 |
| 30000. | 33.927 | 231.202<br>230.500<br>2.830353+02 | .000000+00<br>1524.336<br>1569.406 | .000000+00<br>18.0863<br>18.522 | .000<br>41.8658<br>42.064 | .0000<br>64.526<br>6.9894 | .0000<br>3.012916+03<br>2.0119 | .0000<br>1.2242<br>1.2220 |
| 31000. | 35.057 | 246.805<br>246.015<br>3.137817+02 | .000000+00<br>1625.095<br>1674.527 | .000000+00<br>17.6253<br>18.079 | .000<br>45.0636<br>45.234 | .0000<br>65.643<br>7.1765 | .0000<br>3.113347+03<br>2.0452 | .0000<br>1.1796<br>1.1784 |
| 32000. | 36.188 | 262.919<br>262.065<br>3.448113+02 | .000000+00<br>1730.769<br>1783.949 | .000000+00<br>17.5052<br>17.969 | .000<br>47.4217<br>47.574 | .0000<br>66.727<br>7.3629 | .0000<br>3.213777+03<br>2.0843 | .0000<br>1.1578<br>1.1573 |
| 33000. | 37.319 | 279.545<br>278.640<br>3.763366+02 | .000000+00<br>1840.827<br>1897.317 | .000000+00<br>17.5459<br>18.015 | .000<br>49.2967<br>49.439 | .0000<br>67.796<br>7.5485 | .0000<br>3.314208+03<br>2.1278 | .0000<br>1.1468<br>1.1466 |
| 34000. | 38.450 | 296.682<br>295.735<br>4.080969+02 | .000000+00<br>1954.827<br>2014.385 | .000000+00<br>17.6665<br>18.138 | .000<br>50.8777<br>51.014 | .0000<br>68.861<br>7.7315 | .0000<br>3.414638+03<br>2.1745 | .0000<br>1.1408<br>1.1407 |
| 35000. | 39.581 | 314.331<br>313.347<br>4.412822+02 | .000000+00<br>2072.658<br>2135.170 | .000000+00<br>17.8296<br>18.302 | .000<br>52.2655<br>52.398 | .0000<br>69.927<br>7.9128 | .0000<br>3.515069+03<br>2.2239 | .0000<br>1.1373<br>1.1374 |
| 36000. | 40.712 | 332.492<br>331.471<br>4.741678+02 | .000000+00<br>2194.023<br>2259.576 | .000000+00<br>18.0130<br>18.486 | .000<br>53.5182<br>53.648 | .0000<br>70.998<br>8.0928 | .0000<br>3.615499+03<br>2.2756 | .0000<br>1.1355<br>1.1357 |
| 37000. | 41.843 | 351.164<br>350.107<br>5.084408+02 | .000000+00<br>2318.962<br>2387.557 | .000000+00<br>18.2060<br>18.680 | .000<br>54.6731<br>54.802 | .0000<br>72.076<br>8.2726 | .0000<br>3.715930+03<br>2.3295 | .0000<br>1.1346<br>1.1348 |

ALTITUDE = 270000. FT.

P1 = 6.699860-06 ATM. , RHQ1 = 1.013670-05 AMA. , T1 = 180.65 K  
 S1/R = 34.061 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 38000. | 42.974 | 370.347<br>369.256<br>5.428621+02 | .000000+00<br>2447.383<br>2518.980 | .000000+00<br>18.4009<br>18.875 | .000<br>55.7545<br>55.883 | .0000<br>73.163<br>8.4522  | .0000<br>3.816360+03<br>2.3853 | .0000<br>1.1343<br>1.1345 |
| 39000. | 44.105 | 390.042<br>388.916<br>5.771546+02 | .000000+00<br>2579.390<br>2653.919 | .000000+00<br>18.5932<br>19.066 | .000<br>56.7805<br>56.909 | .0000<br>74.259<br>8.6330  | .0000<br>3.916791+03<br>2.4430 | .0000<br>1.1346<br>1.1348 |
| 40000. | 45.235 | 410.249<br>409.088<br>6.128527+02 | .000000+00<br>2714.820<br>2792.391 | .000000+00<br>18.7793<br>19.251 | .000<br>57.7642<br>57.892 | .0000<br>75.366<br>8.8147  | .0000<br>4.017221+03<br>2.5025 | .0000<br>1.1351<br>1.1353 |
| 41000. | 46.366 | 430.967<br>429.770<br>6.476184+02 | .000000+00<br>2853.693<br>2934.291 | .000000+00<br>18.9565<br>19.427 | .000<br>58.7156<br>58.844 | .0000<br>76.482<br>8.9982  | .0000<br>4.117652+03<br>2.5637 | .0000<br>1.1359<br>1.1361 |
| 42000. | 47.497 | 452.197<br>450.962<br>6.826208+02 | .000000+00<br>2995.994<br>3079.663 | .000000+00<br>19.1238<br>19.593 | .000<br>59.6433<br>59.773 | .0000<br>77.609<br>9.1834  | .0000<br>4.218082+03<br>2.6266 | .0000<br>1.1368<br>1.1371 |
| 43000. | 48.628 | 473.938<br>472.665<br>7.184556+02 | .000000+00<br>3141.701<br>3228.554 | .000000+00<br>19.2792<br>19.746 | .000<br>60.5550<br>60.686 | .0000<br>78.747<br>9.3713  | .0000<br>4.318513+03<br>2.6910 | .0000<br>1.1381<br>1.1384 |
| 44000. | 49.759 | 496.191<br>494.877<br>7.535455+02 | .000000+00<br>3290.797<br>3380.953 | .000000+00<br>19.4218<br>19.888 | .000<br>61.4567<br>61.589 | .0000<br>79.896<br>9.5617  | .0000<br>4.418943+03<br>2.7570 | .0000<br>1.1395<br>1.1398 |
| 45000. | 50.890 | 518.956<br>517.599<br>7.884049+02 | .000000+00<br>3443.265<br>3536.714 | .000000+00<br>19.5509<br>20.015 | .000<br>62.3547<br>62.489 | .0000<br>81.054<br>9.7555  | .0000<br>4.519374+03<br>2.8244 | .0000<br>1.1412<br>1.1415 |
| 46000. | 52.021 | 542.232<br>540.831<br>8.232220+02 | .000000+00<br>3599.085<br>3695.931 | .000000+00<br>19.6652<br>20.127 | .000<br>63.2549<br>63.392 | .0000<br>82.222<br>9.9529  | .0000<br>4.619805+03<br>2.8933 | .0000<br>1.1430<br>1.1433 |
| 47000. | 53.152 | 566.019<br>564.571<br>8.581470+02 | .000000+00<br>3758.234<br>3858.611 | .000000+00<br>19.7642<br>20.224 | .000<br>64.1637<br>64.304 | .0000<br>83.400<br>10.1540 | .0000<br>4.720235+03<br>2.9635 | .0000<br>1.1450<br>1.1453 |
| 48000. | 54.283 | 590.318<br>588.821<br>8.924309+02 | .000000+00<br>3920.688<br>4024.869 | .000000+00<br>19.8465<br>20.305 | .000<br>65.0877<br>65.231 | .0000<br>84.587<br>10.3608 | .0000<br>4.820666+03<br>3.0351 | .0000<br>1.1474<br>1.1477 |
| 49000. | 55.413 | 615.129<br>613.579<br>9.253893+02 | .000000+00<br>4086.422<br>4194.950 | .000000+00<br>19.9115<br>20.370 | .000<br>66.0348<br>66.183 | .0000<br>85.781<br>10.5723 | .0000<br>4.921096+03<br>3.1079 | .0000<br>1.1499<br>1.1503 |
| 50000. | 56.544 | 640.451<br>638.845<br>9.576684+02 | .000000+00<br>4255.398<br>4368.029 | .000000+00<br>19.9572<br>20.414 | .000<br>67.0135<br>67.166 | .0000<br>86.984<br>10.7913 | .0000<br>5.021527+03<br>3.1819 | .0000<br>1.1531<br>1.1535 |

ALTITUDE = 280000. FT.

P1 = 3.821248-06 ATM. , RHO1 = 5.781440-06 AMA. , T1 = 180.65 K  
 S1/R = 34.622 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RC/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.785  | 10.208<br>9.959<br>1.401185+00  | 4.124342+03<br>54.878<br>60.389   | 4.457304+02<br>6.0736<br>6.545   | 9.241<br>9.0219<br>9.211    | 2.3752<br>38.847<br>2.3562 | 1.0001<br>3.436818+02<br>1.0004 | 1.2922<br>1.2815<br>1.2753 |
| 7000.  | 7.916  | 13.533<br>13.264<br>2.304104+00 | 1.255240+04<br>75.928<br>82.602   | 1.069914+03<br>6.8281<br>7.337   | 11.700<br>11.0174<br>11.142 | 2.6242<br>39.669<br>2.4914 | 1.0016<br>4.009621+02<br>1.0092 | 1.2440<br>1.1738<br>1.1686 |
| 8000.  | 9.047  | 17.370<br>17.115<br>3.509870+00 | 3.551354+04<br>101.361<br>108.752 | 2.518097+03<br>8.0191<br>8.537   | 13.954<br>12.2447<br>12.323 | 2.8145<br>40.528<br>2.6016 | 1.0095<br>4.582424+02<br>1.0326 | 1.1904<br>1.1268<br>1.1260 |
| 9000.  | 10.178 | 21.718<br>21.480<br>5.057362+00 | 9.654289+04<br>130.562<br>138.555 | 5.892216+03<br>9.3329<br>9.844   | 15.963<br>13.1347<br>13.196 | 3.0035<br>41.466<br>2.7222 | 1.0252<br>5.155227+02<br>1.0654 | 1.1669<br>1.1157<br>1.1158 |
| 10000. | 11.309 | 26.578<br>26.351<br>6.986840+00 | 2.546810+05<br>163.265<br>171.905 | 1.355451+04<br>10.6105<br>11.111 | 17.934<br>13.9326<br>13.990 | 3.2135<br>42.483<br>2.8563 | 1.0464<br>5.728030+02<br>1.1046 | 1.1648<br>1.1171<br>1.1176 |
| 11000. | 12.440 | 31.949<br>31.724<br>9.340806+00 | 6.494299+05<br>199.273<br>208.705 | 3.020267+04<br>11.7202<br>12.207 | 20.052<br>14.8086<br>14.872 | 3.4506<br>43.569<br>3.0218 | 1.0710<br>6.300833+02<br>1.1482 | 1.1736<br>1.1308<br>1.1319 |
| 12000. | 13.571 | 37.832<br>37.591<br>1.218431+01 | 1.589913+06<br>238.094<br>248.753 | 6.443853+04<br>12.3496<br>12.811 | 22.459<br>16.1928<br>16.293 | 3.7235<br>44.692<br>3.3101 | 1.0973<br>6.873636+02<br>1.1903 | 1.1909<br>1.1913<br>1.1959 |
| 13000. | 14.702 | 44.227<br>43.919<br>1.572094+01 | 3.704094+06<br>278.228<br>291.245 | 1.302131+05<br>11.8589<br>12.301 | 25.298<br>19.3647<br>19.533 | 4.0371<br>45.763<br>3.7291 | 1.1231<br>7.446439+02<br>1.2106 | 1.2143<br>1.2503<br>1.2449 |
| 14000. | 15.832 | 51.133<br>50.781<br>1.987290+01 | 8.173764+06<br>322.733<br>337.779 | 2.488470+05<br>11.9425<br>12.425 | 28.631<br>21.9479<br>22.058 | 4.3715<br>46.738<br>3.8391 | 1.1459<br>8.019242+02<br>1.2309 | 1.2330<br>1.1511<br>1.1491 |
| 15000. | 16.963 | 58.551<br>58.187<br>2.465051+01 | 1.707512+07<br>372.065<br>388.391 | 4.518747+05<br>12.5865<br>13.079 | 32.358<br>23.4453<br>23.528 | 4.6901<br>47.700<br>3.9615 | 1.1664<br>8.592045+02<br>1.2607 | 1.2338<br>1.1205<br>1.1200 |
| 16000. | 18.094 | 66.480<br>66.114<br>3.006050+01 | 3.401297+07<br>425.370<br>442.851 | 7.915354+05<br>13.3869<br>13.882 | 36.171<br>24.5175<br>24.587 | 4.9839<br>48.685<br>4.0870 | 1.1866<br>9.164848+02<br>1.2959 | 1.2251<br>1.1098<br>1.1097 |
| 17000. | 19.225 | 74.921<br>74.555<br>3.624664+01 | 6.504236+07<br>482.364<br>500.968 | 1.345807+06<br>14.2284<br>14.724 | 39.925<br>25.3883<br>25.451 | 5.2725<br>49.703<br>4.2128 | 1.2090<br>9.737651+02<br>1.3352 | 1.2191<br>1.1055<br>1.1056 |
| 18000. | 20.356 | 83.873<br>83.508<br>4.322282+01 | 1.202363+08<br>542.934<br>562.594 | 2.227995+06<br>15.0676<br>15.561 | 43.631<br>26.1477<br>26.206 | 5.5744<br>50.759<br>4.3395 | 1.2354<br>1.031045+03<br>1.3779 | 1.2203<br>1.1038<br>1.1039 |
| 19000. | 21.487 | 93.337<br>92.971<br>5.098461+01 | 2.152504+08<br>607.029<br>627.747 | 3.585859+06<br>15.8837<br>16.374 | 47.330<br>26.8388<br>26.894 | 5.8976<br>51.852<br>4.4674 | 1.2668<br>1.088326+03<br>1.4238 | 1.2280<br>1.1033<br>1.1033 |

ALTITUDE = 280000. FT.

P1 = 3.821248-06 ATM. , RHO1 = 5.781440-C6 AMA. , T1 = 180.65 K  
 S1/R = 34.622 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| UI     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 20000. | 22.618 | 103.312<br>102.944<br>5.957308+01 | 3.739878+08<br>674.623<br>696.401  | 5.607611+06<br>16.6671<br>17.154 | 51.062<br>27.4859<br>27.539 | 6.2562<br>52.984<br>4.5981 | 1.3046<br>1.145606+03<br>1.4724 | 1.2439<br>1.1036<br>1.1037 |
| 21000. | 23.749 | 113.799<br>113.427<br>6.912807+01 | 6.306837+08<br>745.674<br>768.622  | 8.506493+06<br>17.4024<br>17.886 | 54.843<br>28.1133<br>28.166 | 6.6541<br>54.154<br>4.7347 | 1.3502<br>1.202886+03<br>1.5239 | 1.2657<br>1.1053<br>1.1056 |
| 22000. | 24.879 | 124.798<br>124.419<br>7.966838+01 | 1.032410+09<br>820.159<br>844.387  | 1.250477+07<br>18.0821<br>18.564 | 58.680<br>28.7368<br>28.789 | 7.0984<br>55.360<br>4.8754 | 1.4052<br>1.260167+03<br>1.5781 | 1.2935<br>1.1073<br>1.1075 |
| 23000. | 26.010 | 136.308<br>135.921<br>9.122851+01 | 1.639336+09<br>898.054<br>923.616  | 1.780058+07<br>18.7004<br>19.179 | 62.560<br>29.3697<br>29.422 | 7.5911<br>56.599<br>5.0225 | 1.4704<br>1.317447+03<br>1.6348 | 1.3261<br>1.1099<br>1.1101 |
| 24000. | 27.141 | 148.330<br>147.932<br>1.038804+02 | .000000+00<br>979.322<br>1006.250  | .000000+00<br>19.2468<br>19.721  | .000<br>30.0334<br>30.087   | .0000<br>57.871<br>5.1781  | .0000<br>1.374727+03<br>1.6938  | .0000<br>1.1134<br>1.1137  |
| 25000. | 28.272 | 160.863<br>160.451<br>1.177040+02 | .000000+00<br>1063.905<br>1092.539 | .000000+00<br>19.7064<br>20.179  | .000<br>30.7577<br>30.815   | .0000<br>59.169<br>5.3461  | .0000<br>1.432007+03<br>1.7549  | .0000<br>1.1185<br>1.1188  |
| 26000. | 29.403 | 173.908<br>173.478<br>1.328520+02 | .000000+00<br>1151.698<br>1182.295 | .000000+00<br>20.0523<br>20.524  | .000<br>31.5954<br>31.658   | .0000<br>60.491<br>5.5339  | .0000<br>1.489288+03<br>1.8174  | .0000<br>1.1263<br>1.1267  |
| 27000. | 30.534 | 187.464<br>187.008<br>1.496509+02 | .000000+00<br>1242.487<br>1275.333 | .000000+00<br>20.2297<br>20.698  | .000<br>32.6571<br>32.732   | .0000<br>61.826<br>5.7607  | .0000<br>1.546568+03<br>1.8802  | .0000<br>1.1407<br>1.1415  |
| 28000. | 31.665 | 201.532<br>201.034<br>1.681929+02 | .000000+00<br>1335.611<br>1371.142 | .000000+00<br>20.0919<br>20.545  | .000<br>34.2529<br>34.359   | .0000<br>63.159<br>6.0880  | .0000<br>1.603848+03<br>1.9400  | .0000<br>1.1752<br>1.1771  |
| 29000. | 32.796 | 216.111<br>215.534<br>1.896710+02 | .000000+00<br>1429.664<br>1469.144 | .000000+00<br>19.2999<br>19.725  | .000<br>37.2780<br>37.460   | .0000<br>64.452<br>6.6260  | .0000<br>1.661129+03<br>1.9859  | .0000<br>1.2481<br>1.2493  |
| 30000. | 33.927 | 231.202<br>230.517<br>2.130176+02 | .000000+00<br>1525.402<br>1569.938 | .000000+00<br>18.3043<br>18.743  | .000<br>41.3146<br>41.500   | .0000<br>65.656<br>6.9229  | .0000<br>1.718409+03<br>2.0159  | .0000<br>1.2150<br>1.2127  |
| 31000. | 35.057 | 246.805<br>246.039<br>2.357145+02 | .000000+00<br>1626.573<br>1675.250 | .000000+00<br>17.8959<br>18.352  | .000<br>44.3104<br>44.467   | .0000<br>66.792<br>7.1009  | .0000<br>1.775689+03<br>2.0503  | .0000<br>1.1717<br>1.1707  |
| 32000. | 36.188 | 262.919<br>262.094<br>2.585981+02 | .000000+00<br>1732.590<br>1784.810 | .000000+00<br>17.8148<br>18.280  | .000<br>46.5048<br>46.645   | .0000<br>67.898<br>7.2827  | .0000<br>1.832970+03<br>2.0906  | .0000<br>1.1517<br>1.1513  |
| 33000. | 37.319 | 279.545<br>278.674<br>2.817999+02 | .000000+00<br>1842.930<br>1898.324 | .000000+00<br>17.8841<br>18.354  | .000<br>48.2532<br>48.384   | .0000<br>68.991<br>7.4635  | .0000<br>1.890250+03<br>2.1350  | .0000<br>1.1416<br>1.1415  |

ALTITUDE = 280000. FT.

P1 = 3.821248-06 ATM. , RHO1 = 5.781440-06 AMA. , T1 = 180.65 K  
 S1/R = 34.622 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 34000. | 38.450 | 296.682<br>295.774<br>3.062565+02 | .000000+00<br>1957.266<br>2015.547 | .000000+00<br>18.0284<br>18.500 | .000<br>49.7312<br>49.856 | .0000<br>70.083<br>7.6426  | .0000<br>1.947530+03<br>2.1826 | .0000<br>1.1363<br>1.1363 |
| 35000. | 39.581 | 314.331<br>313.387<br>3.305304+02 | .000000+00<br>2075.218<br>2136.355 | .000000+00<br>18.2102<br>18.683 | .000<br>51.0308<br>51.152 | .0000<br>71.177<br>7.8194  | .0000<br>2.004810+03<br>2.2328 | .0000<br>1.1332<br>1.1333 |
| 36000. | 40.712 | 332.492<br>331.514<br>3.564424+02 | .000000+00<br>2196.797<br>2260.785 | .000000+00<br>18.4110<br>18.884 | .000<br>52.2057<br>52.325 | .0000<br>72.277<br>7.9954  | .0000<br>2.062091+03<br>2.2852 | .0000<br>1.1316<br>1.1317 |
| 37000. | 41.843 | 351.164<br>350.154<br>3.823908+02 | .000000+00<br>2321.943<br>2388.898 | .000000+00<br>18.6195<br>19.093 | .000<br>53.2901<br>53.408 | .0000<br>73.386<br>8.1707  | .0000<br>2.119371+03<br>2.3398 | .0000<br>1.1308<br>1.1309 |
| 38000. | 42.974 | 370.347<br>369.305<br>4.092962+02 | .000000+00<br>2450.616<br>2520.497 | .000000+00<br>18.8290<br>19.303 | .000<br>54.3066<br>54.424 | .0000<br>74.504<br>8.3465  | .0000<br>2.176651+03<br>2.3963 | .0000<br>1.1306<br>1.1308 |
| 39000. | 44.105 | 390.042<br>388.968<br>4.372494+02 | .000000+00<br>2582.782<br>2655.566 | .000000+00<br>19.0345<br>19.508 | .000<br>55.2714<br>55.389 | .0000<br>75.633<br>8.5228  | .0000<br>2.233932+03<br>2.4547 | .0000<br>1.1307<br>1.1309 |
| 40000. | 45.235 | 410.249<br>409.142<br>4.629067+02 | .000000+00<br>2718.418<br>2794.128 | .000000+00<br>19.2331<br>19.706 | .000<br>56.1973<br>56.315 | .0000<br>76.773<br>8.7004  | .0000<br>2.291212+03<br>2.5148 | .0000<br>1.1312<br>1.1314 |
| 41000. | 46.366 | 430.967<br>429.826<br>4.893577+02 | .000000+00<br>2857.502<br>2936.155 | .000000+00<br>19.4224<br>19.894 | .000<br>57.0934<br>57.212 | .0000<br>77.924<br>8.8799  | .0000<br>2.348492+03<br>2.5767 | .0000<br>1.1321<br>1.1323 |
| 42000. | 47.497 | 452.197<br>451.021<br>5.165644+02 | .000000+00<br>3000.016<br>3081.660 | .000000+00<br>19.6007<br>20.071 | .000<br>57.9677<br>58.087 | .0000<br>79.086<br>9.0609  | .0000<br>2.405773+03<br>2.6402 | .0000<br>1.1331<br>1.1333 |
| 43000. | 48.628 | 473.938<br>472.727<br>5.419174+02 | .000000+00<br>3145.941<br>3230.591 | .000000+00<br>19.7666<br>20.234 | .000<br>58.8271<br>58.947 | .0000<br>80.261<br>9.2449  | .0000<br>2.463053+03<br>2.7052 | .0000<br>1.1344<br>1.1346 |
| 44000. | 49.759 | 496.191<br>494.942<br>5.673608+02 | .000000+00<br>3295.261<br>3383.048 | .000000+00<br>19.9191<br>20.385 | .000<br>59.6775<br>59.799 | .0000<br>81.446<br>9.4309  | .0000<br>2.520333+03<br>2.7719 | .0000<br>1.1356<br>1.1358 |
| 45000. | 50.890 | 518.956<br>517.667<br>5.928453+02 | .000000+00<br>3447.959<br>3539.021 | .000000+00<br>20.0573<br>20.522 | .000<br>60.5255<br>60.649 | .0000<br>82.642<br>9.6206  | .0000<br>2.577613+03<br>2.8400 | .0000<br>1.1373<br>1.1375 |
| 46000. | 52.021 | 542.232<br>540.901<br>6.172922+02 | .000000+00<br>3604.015<br>3698.597 | .000000+00<br>20.1803<br>20.644 | .000<br>61.3761<br>61.502 | .0000<br>83.850<br>9.8138  | .0000<br>2.634894+03<br>2.9096 | .0000<br>1.1391<br>1.1393 |
| 47000. | 53.152 | 566.019<br>564.645<br>6.406859+02 | .000000+00<br>3763.406<br>3861.424 | .000000+00<br>20.2869<br>20.749 | .000<br>62.2356<br>62.364 | .0000<br>85.067<br>10.0108 | .0000<br>2.692174+03<br>2.9806 | .0000<br>1.1410<br>1.1413 |

## ALTITUDE = 280000. FT.

P1 = 3.821248-06 ATM. , RHO1 = 5.781440-06 AMA. , T1 = 180.65 K  
 S1/R = 34.622 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 54.283 | 590.318<br>588.898<br>6.629968+02 | .000000+00<br>3926.112<br>4027.656 | .000000+00<br>20.3764<br>20.836 | .000<br>63.1108<br>63.242 | .0000<br>86.294<br>10.2130 | .0000<br>2.749454+03<br>3.0529 | .0000<br>1.1433<br>1.1436 |
| 49000. | 55.413 | 615.129<br>613.659<br>6.848517+02 | .000000+00<br>4092.101<br>4197.444 | .000000+00<br>20.4474<br>20.906 | .000<br>64.0089<br>64.144 | .0000<br>87.530<br>10.4205 | .0000<br>2.806735+03<br>3.1264 | .0000<br>1.1459<br>1.1462 |
| 50000. | 56.544 | 640.451<br>638.928<br>7.056565+02 | .000000+00<br>4261.341<br>4370.944 | .000000+00<br>20.4984<br>20.956 | .000<br>64.9391<br>65.079 | .0000<br>88.774<br>10.6349 | .0000<br>2.864015+03<br>3.2011 | .0000<br>1.1489<br>1.1493 |

## ALTITUDE = 290000. FT.

P1 = 2.180597-06 ATM. , RHO1 = 3.299181-06 AMA. , T1 = 180.65 K  
 S1/R = 35.183 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.785  | 10.208<br>9.959<br>1.058409+00  | 4.124502+03<br>54.887<br>60.394   | 4.458083+02<br>6.0790<br>6.552   | 9.240<br>9.0146<br>9.201    | 2.3743<br>39.408<br>2.3502 | 1.0001<br>1.961222+02<br>1.0006 | 1.2914<br>1.2772<br>1.2701 |
| 7000.  | 7.916  | 13.533<br>13.269<br>1.739555+00 | 1.256535+04<br>76.037<br>82.648   | 1.073391+03<br>6.8865<br>7.398   | 11.669<br>10.9253<br>11.041 | 2.6143<br>40.235<br>2.4732 | 1.0020<br>2.288092+02<br>1.0106 | 1.2375<br>1.1653<br>1.1606 |
| 8000.  | 9.047  | 17.370<br>17.122<br>2.648653+00 | 3.571859+04<br>101.555<br>108.823 | 2.550291+03<br>8.1294<br>8.647   | 13.834<br>12.0728<br>12.145 | 2.7957<br>41.107<br>2.5810 | 1.0112<br>2.614962+02<br>1.0351 | 1.1827<br>1.1225<br>1.1218 |
| 9000.  | 10.178 | 21.718<br>21.488<br>3.815823+00 | 9.796689+04<br>130.809<br>138.672 | 6.042529+03<br>9.4829<br>9.994   | 15.746<br>12.9125<br>12.970 | 2.9807<br>42.064<br>2.6992 | 1.0284<br>2.941833+02<br>1.0686 | 1.1614<br>1.1127<br>1.1128 |
| 10000. | 11.309 | 26.578<br>26.358<br>5.270451+00 | 2.613742+05<br>163.550<br>172.023 | 1.408855+04<br>10.7925<br>11.292 | 17.631<br>13.6749<br>13.729 | 3.1868<br>43.103<br>2.8311 | 1.0510<br>3.268703+02<br>1.1083 | 1.1602<br>1.1146<br>1.1151 |
| 11000. | 12.440 | 31.949<br>31.732<br>7.045874+00 | 6.749964+05<br>199.591<br>208.851 | 3.182996+04<br>11.9252<br>12.411 | 19.669<br>14.5249<br>14.587 | 3.4210<br>44.213<br>2.9959 | 1.0768<br>3.595573+02<br>1.1523 | 1.1696<br>1.1293<br>1.1304 |
| 12000. | 13.571 | 37.832<br>37.597<br>9.193577+00 | 1.673555+06<br>238.369<br>248.876 | 6.879751+04<br>12.5144<br>12.971 | 22.004<br>15.9500<br>16.053 | 3.6927<br>45.360<br>3.3020 | 1.1042<br>3.922444+02<br>1.1938 | 1.1880<br>1.1991<br>1.2043 |
| 13000. | 14.702 | 44.227<br>43.923<br>1.186904+01 | 3.945338+06<br>278.380<br>291.360 | 1.405734+05<br>11.9293<br>12.376 | 24.790<br>19.2400<br>19.401 | 4.0078<br>46.442<br>3.7035 | 1.1308<br>4.249314+02<br>1.2120 | 1.2130<br>1.2407<br>1.2348 |
| 14000. | 15.832 | 51.133<br>50.790<br>1.499800+01 | 8.793280+06<br>323.091<br>337.951 | 2.709110+05<br>12.0896<br>12.575 | 28.102<br>21.6658<br>21.768 | 4.3406<br>47.428<br>3.8061 | 1.1536<br>4.576184+02<br>1.2331 | 1.2302<br>1.1442<br>1.1424 |

ALTITUDE = 290000. FT.

P1 = 2.180597-06 ATM. , RH01 = 3.299181-06 AMA. , T1 = 180.65 K  
 S1/R = 35.183 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAME0P   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 16.963 | 58.551<br>58.198<br>1.859408+01   | 1.852759+07<br>372.551<br>388.663  | 4.958136+05<br>12.7802<br>13.275 | 31.802<br>23.0669<br>23.144 | 4.6573<br>48.408<br>3.9265 | 1.1736<br>4.903054+02<br>1.2636 | 1.2302<br>1.1165<br>1.1160 |
| 16000. | 18.094 | 66.480<br>66.126<br>2.267390+01   | 3.720296+07<br>425.944<br>443.177  | 8.763405+05<br>13.6148<br>14.112 | 35.538<br>24.0768<br>24.142 | 4.9384<br>49.412<br>4.0493 | 1.1931<br>5.229925+02<br>1.2993 | 1.2175<br>1.1067<br>1.1066 |
| 17000. | 19.225 | 74.921<br>74.568<br>2.727588+01   | 7.174783+07<br>483.011<br>501.267  | 1.505731+06<br>14.4859<br>14.982 | 39.181<br>24.9009<br>24.959 | 5.2163<br>50.452<br>4.1723 | 1.2147<br>5.556795+02<br>1.3389 | 1.2103<br>1.1026<br>1.1027 |
| 18000. | 20.356 | 83.873<br>83.521<br>3.254651+01   | 1.338673+08<br>543.649<br>562.927  | 2.522502+06<br>15.3521<br>15.846 | 42.765<br>25.6217<br>25.676 | 5.5022<br>51.532<br>4.2966 | 1.2395<br>5.883665+02<br>1.3820 | 1.2090<br>1.1012<br>1.1013 |
| 19000. | 21.487 | 93.337<br>92.985<br>3.841422+01   | 2.422283+08<br>607.808<br>628.109  | 4.116103+06<br>16.1933<br>16.684 | 46.348<br>26.2791<br>26.331 | 5.8070<br>52.652<br>4.4227 | 1.2682<br>6.210536+02<br>1.4281 | 1.2144<br>1.1010<br>1.1011 |
| 20000. | 22.618 | 103.312<br>102.958<br>4.491258+01 | 4.260807+08<br>675.458<br>696.814  | 6.541188+06<br>16.9970<br>17.484 | 49.976<br>26.8982<br>26.948 | 6.1374<br>53.811<br>4.5511 | 1.3018<br>6.537406+02<br>1.4772 | 1.2256<br>1.1013<br>1.1015 |
| 21000. | 23.749 | 113.799<br>113.441<br>5.207297+01 | 7.283679+08<br>746.582<br>769.000  | 1.010308+07<br>17.7574<br>18.241 | 53.672<br>27.4944<br>27.543 | 6.5024<br>55.009<br>4.6833 | 1.3416<br>6.864276+02<br>1.5288 | 1.2430<br>1.1025<br>1.1027 |
| 22000. | 24.879 | 124.798<br>124.434<br>5.999142+01 | 1.210771+09<br>821.141<br>844.802  | 1.515599+07<br>18.4603<br>18.941 | 57.450<br>28.0882<br>28.137 | 6.9063<br>56.246<br>4.8221 | 1.3889<br>7.191146+02<br>1.5833 | 1.2654<br>1.1048<br>1.1050 |
| 23000. | 26.010 | 136.308<br>135.937<br>6.869647+01 | 1.955403+09<br>899.109<br>924.192  | 2.204956+07<br>19.0979<br>19.578 | 61.303<br>28.6949<br>28.744 | 7.3544<br>57.517<br>4.9669 | 1.4448<br>7.518017+02<br>1.6403 | 1.2926<br>1.1074<br>1.1076 |
| 24000. | 27.141 | 148.330<br>147.948<br>7.821983+01 | 3.067562+09<br>980.453<br>1006.896 | 3.111370+07<br>19.6616<br>20.138 | 65.213<br>29.3320<br>29.382 | 7.8433<br>58.822<br>5.1199 | 1.5100<br>7.844887+02<br>1.6996 | 1.3224<br>1.1109<br>1.1111 |
| 25000. | 28.272 | 160.863<br>160.468<br>8.864805+01 | .000000+00<br>1065.116<br>1093.139 | .000000+00<br>20.1357<br>20.609  | .000<br>30.0305<br>30.084   | .0000<br>60.155<br>5.2855  | .0000<br>8.171757+02<br>1.7610  | .0000<br>1.1159<br>1.1162  |
| 26000. | 29.403 | 173.908<br>173.496<br>1.000172+02 | .000000+00<br>1152.987<br>1182.894 | .000000+00<br>20.4895<br>20.961  | .000<br>30.8449<br>30.904   | .0000<br>61.511<br>5.4720  | .0000<br>8.498628+02<br>1.8239  | .0000<br>1.1241<br>1.1245  |
| 27000. | 30.534 | 187.464<br>187.027<br>1.125287+02 | .000000+00<br>1243.834<br>1275.901 | .000000+00<br>20.6608<br>21.127  | .000<br>31.8952<br>31.966   | .0000<br>62.882<br>5.6996  | .0000<br>8.825498+02<br>1.8870  | .0000<br>1.1393<br>1.1400  |
| 28000. | 31.665 | 201.532<br>201.053<br>1.266665+02 | .000000+00<br>1336.925<br>1371.771 | .000000+00<br>20.4749<br>20.926  | .000<br>33.5303<br>33.635   | .0000<br>64.248<br>6.0426  | .0000<br>9.152368+02<br>1.9466  | .0000<br>1.1784<br>1.1805  |

ALTITUDE = 290000. FT.

P1 = 2.180597-06 ATM. , RH01 = 3.299181-06 AMA. , T1 = 180.65 K  
 S1/R = 35.183 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 29000. | 32.796 | 216.111<br>215.548<br>1.429269+02 | .000000+00<br>1430.604<br>1469.602 | .000000+00<br>19.5304<br>19.953 | .000<br>36.7821<br>36.966 | .0000<br>65.567<br>6.6066 | .0000<br>9.479239+02<br>1.9901 | .0000<br>1.2557<br>1.2560 |
| 30000. | 33.927 | 231.202<br>230.533<br>1.602987+02 | .000000+00<br>1526.474<br>1570.469 | .000000+00<br>18.5305<br>18.973 | .000<br>40.7613<br>40.933 | .0000<br>66.787<br>6.8547 | .0000<br>9.806109+02<br>2.0197 | .0000<br>1.2053<br>1.2031 |
| 31000. | 35.057 | 246.805<br>246.062<br>1.771219+02 | .000000+00<br>1628.054<br>1675.993 | .000000+00<br>18.1762<br>18.635 | .000<br>43.5590<br>43.703 | .0000<br>67.943<br>7.0269 | .0000<br>1.013298+03<br>2.0554 | .0000<br>1.1645<br>1.1636 |
| 32000. | 36.188 | 262.919<br>262.123<br>1.939020+02 | .000000+00<br>1734.392<br>1785.690 | .000000+00<br>18.1322<br>18.599 | .000<br>45.6028<br>45.732 | .0000<br>69.071<br>7.2045 | .0000<br>1.045985+03<br>2.0968 | .0000<br>1.1461<br>1.1458 |
| 33000. | 37.319 | 279.545<br>278.707<br>2.112594+02 | .000000+00<br>1844.993<br>1899.305 | .000000+00<br>18.2290<br>18.700 | .000<br>47.2356<br>47.356 | .0000<br>70.190<br>7.3812 | .0000<br>1.078672+03<br>2.1421 | .0000<br>1.1370<br>1.1369 |
| 34000. | 38.450 | 296.682<br>295.810<br>2.286599+02 | .000000+00<br>1959.544<br>2016.677 | .000000+00<br>18.3952<br>18.868 | .000<br>48.6194<br>48.735 | .0000<br>71.308<br>7.5557 | .0000<br>1.111359+03<br>2.1905 | .0000<br>1.1320<br>1.1320 |
| 35000. | 39.581 | 314.331<br>313.426<br>2.470364+02 | .000000+00<br>2077.705<br>2137.635 | .000000+00<br>18.5961<br>19.070 | .000<br>49.8387<br>49.951 | .0000<br>72.431<br>7.7286 | .0000<br>1.144046+03<br>2.2414 | .0000<br>1.1293<br>1.1294 |
| 36000. | 40.712 | 332.492<br>331.555<br>2.650526+02 | .000000+00<br>2199.483<br>2262.087 | .000000+00<br>18.8136<br>19.288 | .000<br>50.9425<br>51.052 | .0000<br>73.561<br>7.9001 | .0000<br>1.176733+03<br>2.2945 | .0000<br>1.1278<br>1.1279 |
| 37000. | 41.843 | 351.164<br>350.198<br>2.841446+02 | .000000+00<br>2324.874<br>2390.153 | .000000+00<br>19.0383<br>19.512 | .000<br>51.9624<br>52.071 | .0000<br>74.700<br>8.0715 | .0000<br>1.209420+03<br>2.3497 | .0000<br>1.1270<br>1.1272 |
| 38000. | 42.974 | 370.347<br>369.351<br>3.035916+02 | .000000+00<br>2453.693<br>2521.917 | .000000+00<br>19.2617<br>19.736 | .000<br>52.9192<br>53.027 | .0000<br>75.850<br>8.2436 | .0000<br>1.242107+03<br>2.4068 | .0000<br>1.1270<br>1.1272 |
| 39000. | 44.105 | 390.042<br>389.016<br>3.231263+02 | .000000+00<br>2586.053<br>2657.057 | .000000+00<br>19.4806<br>19.954 | .000<br>53.8282<br>53.936 | .0000<br>77.012<br>8.4159 | .0000<br>1.274794+03<br>2.4658 | .0000<br>1.1271<br>1.1273 |
| 40000. | 45.235 | 410.249<br>409.193<br>3.435401+02 | .000000+00<br>2721.885<br>2795.735 | .000000+00<br>19.6918<br>20.165 | .000<br>54.7007<br>54.809 | .0000<br>78.185<br>8.5895 | .0000<br>1.307481+03<br>2.5266 | .0000<br>1.1276<br>1.1278 |
| 41000. | 46.366 | 430.967<br>429.880<br>3.642579+02 | .000000+00<br>2861.168<br>2937.900 | .000000+00<br>19.8930<br>20.365 | .000<br>55.5458<br>55.654 | .0000<br>79.371<br>8.7650 | .0000<br>1.340168+03<br>2.5890 | .0000<br>1.1285<br>1.1287 |
| 42000. | 47.497 | 452.197<br>451.077<br>3.845435+02 | .000000+00<br>3003.883<br>3083.657 | .000000+00<br>20.0824<br>20.554 | .000<br>56.3708<br>56.480 | .0000<br>80.569<br>8.9423 | .0000<br>1.372855+03<br>2.6531 | .0000<br>1.1294<br>1.1297 |

ALTITUDE = 290000. FT.

P1 = 2.180597-06 ATM. , RHO1 = 3.299181-06 AMA. , T1 = 180.65 K  
 S1/R = 35.183 , A1 = 884.26 FT./SEC. , H1/R = 632.275 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 48.628 | 473.938<br>472.785<br>4.052248+02 | .000000+00<br>3150.016<br>3232.671 | .000000+00<br>20.2589<br>20.728 | .000<br>57.1823<br>57.292 | .00000<br>81.780<br>9.1220 | .0000<br>1.405542+03<br>2.7188 | .0000<br>1.1306<br>1.1309 |
| 44000. | 49.759 | 496.191<br>495.003<br>4.262403+02 | .000000+00<br>3299.550<br>3385.135 | .000000+00<br>20.4215<br>20.888 | .000<br>57.9858<br>58.097 | .0000<br>83.003<br>9.3043  | .0000<br>1.438229+03<br>2.7861 | .0000<br>1.1319<br>1.1321 |
| 45000. | 50.890 | 518.956<br>517.730<br>4.459527+02 | .000000+00<br>3452.464<br>3541.175 | .000000+00<br>20.5689<br>21.034 | .000<br>58.7873<br>58.900 | .0000<br>84.238<br>9.4900  | .0000<br>1.470916+03<br>2.8548 | .0000<br>1.1335<br>1.1337 |
| 46000. | 52.021 | 542.232<br>540.967<br>4.651684+02 | .000000+00<br>3608.744<br>3700.914 | .000000+00<br>20.7004<br>21.165 | .000<br>59.5920<br>59.707 | .0000<br>85.484<br>9.6787  | .0000<br>1.503603+03<br>2.9251 | .0000<br>1.1352<br>1.1354 |
| 47000. | 53.152 | 566.019<br>564.714<br>4.836185+02 | .000000+00<br>3768.368<br>3864.102 | .000000+00<br>20.8152<br>21.279 | .000<br>60.4062<br>60.524 | .0000<br>86.742<br>9.8721  | .0000<br>1.536290+03<br>2.9967 | .0000<br>1.1372<br>1.1374 |
| 48000. | 54.283 | 590.318<br>588.970<br>5.006389+02 | .000000+00<br>3931.308<br>4030.684 | .000000+00<br>20.9115<br>21.375 | .000<br>61.2360<br>61.356 | .0000<br>88.009<br>10.0700 | .0000<br>1.568977+03<br>3.0697 | .0000<br>1.1394<br>1.1397 |
| 49000. | 55.413 | 615.129<br>613.734<br>5.154798+02 | .000000+00<br>4097.543<br>4200.578 | .000000+00<br>20.9889<br>21.450 | .000<br>62.0888<br>62.213 | .0000<br>89.287<br>10.2732 | .0000<br>1.601664+03<br>3.1440 | .0000<br>1.1420<br>1.1422 |
| 50000. | 56.544 | 640.451<br>639.007<br>5.275068+02 | .000000+00<br>4267.036<br>4373.841 | .000000+00<br>21.0453<br>21.505 | .000<br>62.9742<br>63.102 | .0000<br>90.572<br>10.4834 | .0000<br>1.634352+03<br>3.2194 | .0000<br>1.1448<br>1.1452 |

ALTITUDE = 300000. FT.

P1 = 1.248756-06 ATM. , RHO1 = 1.845134-06 AMA. , T1 = 184.90 K  
 S1/R = 35.821 , A1 = 894.60 FT./SEC. , H1/R = 647.148 K

| U1    | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|--------|---------------------------------|-----------------------------------|---------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.707  | 9.996<br>9.753<br>7.938412-01   | 3.840435+03<br>53.620<br>59.003   | 4.242872+02<br>6.0753<br>6.551  | 9.043<br>8.8142<br>8.992    | 2.3749<br>39.998<br>2.3439 | 1.0001<br>1.074639+02<br>1.0008 | 1.2898<br>1.2710<br>1.2626 |
| 7000. | 7.825  | 13.245<br>12.991<br>1.302911+00 | 1.169495+04<br>74.391<br>80.789   | 1.024836+03<br>6.9473<br>7.462  | 11.373<br>10.5833<br>10.687 | 2.6025<br>40.829<br>2.4550 | 1.0026<br>1.253746+02<br>1.0122 | 1.2286<br>1.1564<br>1.1523 |
| 8000. | 8.943  | 16.994<br>16.758<br>1.981932+00 | 3.341798+04<br>99.389<br>106.387  | 2.462540+03<br>8.2433<br>8.762  | 13.380<br>11.6261<br>11.691 | 2.7743<br>41.716<br>2.5605 | 1.0134<br>1.432852+02<br>1.0378 | 1.1740<br>1.1182<br>1.1176 |
| 9000. | 10.060 | 21.242<br>21.024<br>2.853743+00 | 9.259835+04<br>128.012<br>135.575 | 5.918657+03<br>9.6375<br>10.149 | 15.143<br>12.3992<br>12.451 | 2.9552<br>42.691<br>2.6764 | 1.0323<br>1.611959+02<br>1.0720 | 1.1554<br>1.1098<br>1.1099 |

ALTITUDE = 300000. FT.

P1 = 1.248756-06 ATM. , RH01 = 1.845134-06 AMA. , T1 = 184.90 K  
S1/R = 35.821 , A1 = 894.60 FT./SEC. , H1/R = 647.148 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 10000. | 11.178 | 25.990<br>25.783<br>3.939713+00   | 2.502302+05<br>160.026<br>168.142 | 1.400995+04<br>10.9812<br>11.479 | 16.896<br>13.1088<br>13.160 | 3.1573<br>43.753<br>2.8062 | 1.0563<br>1.791065+02<br>1.1122 | 1.1552<br>1.1122<br>1.1127 |
| 11000. | 12.296 | 31.238<br>31.032<br>5.265757+00   | 6.556613+05<br>195.250<br>204.131 | 3.215414+04<br>12.1332<br>12.618 | 18.805<br>13.9196<br>13.977 | 3.3886<br>44.889<br>2.9708 | 1.0835<br>1.970172+02<br>1.1565 | 1.1655<br>1.1280<br>1.1292 |
| 12000. | 13.414 | 36.986<br>36.761<br>6.872773+00   | 1.648656+06<br>233.054<br>243.185 | 7.050132+04<br>12.6640<br>13.116 | 21.012<br>15.3715<br>15.475 | 3.6592<br>46.060<br>3.3010 | 1.1120<br>2.149278+02<br>1.1972 | 1.1851<br>1.2103<br>1.2164 |
| 13000. | 14.532 | 43.233<br>42.940<br>8.876436+00   | 3.940606+06<br>272.036<br>284.646 | 1.458733+05<br>11.9988<br>12.450 | 23.690<br>18.6797<br>18.828 | 3.9780<br>47.151<br>3.6749 | 1.1394<br>2.328385+02<br>1.2134 | 1.2125<br>1.2288<br>1.2227 |
| 14000. | 15.649 | 49.981<br>49.654<br>1.121176+01   | 8.874251+06<br>315.913<br>330.221 | 2.833767+05<br>12.2435<br>12.730 | 26.920<br>20.8864<br>20.978 | 4.3037<br>48.148<br>3.7729 | 1.1624<br>2.507491+02<br>1.2355 | 1.2242<br>1.1374<br>1.1359 |
| 15000. | 16.767 | 57.228<br>56.894<br>1.389226+01   | 1.886500+07<br>364.339<br>379.825 | 5.229677+05<br>12.9824<br>13.478 | 30.501<br>22.1630<br>22.233 | 4.6223<br>49.145<br>3.8913 | 1.1817<br>2.686598+02<br>1.2666 | 1.2259<br>1.1125<br>1.1121 |
| 16000. | 17.885 | 64.975<br>64.641<br>1.695173+01   | 3.818847+07<br>416.566<br>433.041 | 9.330041+05<br>13.8515<br>14.347 | 34.056<br>23.0916<br>23.150 | 4.8927<br>50.171<br>4.0115 | 1.2009<br>2.865704+02<br>1.3027 | 1.2106<br>1.1036<br>1.1035 |
| 17000. | 19.003 | 73.222<br>72.890<br>2.039407+01   | 7.436805+07<br>472.366<br>489.848 | 1.622014+06<br>14.7525<br>15.248 | 37.486<br>23.8533<br>23.906 | 5.1581<br>51.234<br>4.1319 | 1.2221<br>3.044811+02<br>1.3427 | 1.2011<br>1.1000<br>1.1000 |
| 18000. | 20.121 | 81.968<br>81.637<br>2.427124+01   | 1.401719+08<br>531.651<br>550.116 | 2.751563+06<br>15.6474<br>16.141 | 40.848<br>24.5199<br>24.569 | 5.4320<br>52.338<br>4.2534 | 1.2461<br>3.223917+02<br>1.3861 | 1.1989<br>1.0986<br>1.0988 |
| 19000. | 21.238 | 91.215<br>90.884<br>2.864462+01   | 2.564249+08<br>594.372<br>613.806 | 4.551463+06<br>16.5147<br>17.005 | 44.212<br>25.1304<br>25.177 | 5.7206<br>53.485<br>4.3771 | 1.2733<br>3.403024+02<br>1.4325 | 1.2022<br>1.0985<br>1.0986 |
| 20000. | 22.356 | 100.961<br>100.628<br>3.349392+01 | 4.565655+08<br>660.502<br>680.912 | 7.344571+06<br>17.3432<br>17.830 | 47.631<br>25.7061<br>25.751 | 6.0292<br>54.673<br>4.5036 | 1.3041<br>3.582130+02<br>1.4818 | 1.2104<br>1.0992<br>1.0993 |
| 21000. | 23.474 | 111.207<br>110.871<br>3.884729+01 | 7.911790+08<br>730.019<br>751.477 | 1.154354+07<br>18.1239<br>18.607 | 51.130<br>26.2638<br>26.308 | 6.3627<br>55.902<br>4.6334 | 1.3394<br>3.761237+02<br>1.5339 | 1.2226<br>1.1001<br>1.1003 |
| 22000. | 24.592 | 121.953<br>121.612<br>4.473112+01 | 1.334965+09<br>802.906<br>825.425 | 1.765664+07<br>18.8507<br>19.330 | 54.730<br>26.8156<br>26.859 | 6.7313<br>57.170<br>4.7683 | 1.3804<br>3.940343+02<br>1.5886 | 1.2404<br>1.1019<br>1.1020 |
| 23000. | 25.710 | 133.198<br>132.851<br>5.120488+01 | 2.191824+09<br>879.126<br>902.950 | 2.624453+07<br>19.5111<br>19.989 | 58.431<br>27.3807<br>27.425 | 7.1365<br>58.475<br>4.9107 | 1.4282<br>4.119450+02<br>1.6459 | 1.2622<br>1.1047<br>1.1049 |

ALTITUDE = 300000. FT.

P1 = 1.248756-06 ATM. , RH01 = 1.845134-06 AMA. , T1 = 184.90 K  
 S1/R = 35.821 , A1 = 894.60 FT./SEC. , H1/R = 647.148 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1            | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 24000. | 26.828 | 144.944<br>144.587<br>5.830534+01 | 3.500692+09<br>958.641<br>983.926   | 3.788297+07<br>20.0929<br>20.570 | 62.223<br>27.9788<br>28.025 | 7.5846<br>59.813<br>5.0616 | 1.4839<br>4.298556+02<br>1.7055 | 1.2886<br>1.1084<br>1.1086 |
| 25000. | 27.945 | 157.189<br>156.820<br>6.607719+01 | 5.440190+09<br>1041.398<br>1068.228 | 5.314457+07<br>20.5812<br>21.057 | 66.088<br>28.6370<br>28.685 | 8.0641<br>61.182<br>5.2247 | 1.5477<br>4.477663+02<br>1.7672 | 1.3149<br>1.1134<br>1.1137 |
| 26000. | 29.063 | 169.934<br>169.549<br>7.461654+01 | .000000+00<br>1127.290<br>1155.892  | .000000+00<br>20.9438<br>21.417  | .000<br>29.4103<br>29.464   | .0000<br>62.575<br>5.4093  | .0000<br>4.656770+02<br>1.8303  | .0000<br>1.1217<br>1.1221  |
| 27000. | 30.181 | 183.179<br>182.770<br>8.392081+01 | .000000+00<br>1216.067<br>1246.673  | .000000+00<br>21.1077<br>21.573  | .000<br>30.4258<br>30.492   | .0000<br>63.982<br>5.6390  | .0000<br>4.835876+02<br>1.8937  | .0000<br>1.1381<br>1.1389  |
| 28000. | 31.299 | 196.923<br>196.472<br>9.446795+01 | .000000+00<br>1306.925<br>1340.330  | .000000+00<br>20.8626<br>21.312  | .000<br>32.0748<br>32.177   | .0000<br>65.383<br>6.0008  | .0000<br>5.014983+02<br>1.9530  | .0000<br>1.1828<br>1.1852  |
| 29000. | 32.417 | 211.168<br>210.629<br>1.067178+02 | .000000+00<br>1398.008<br>1435.641  | .000000+00<br>19.7474<br>20.168  | .000<br>35.4944<br>35.673   | .0000<br>66.726<br>6.5804  | .0000<br>5.194089+02<br>1.9939  | .0000<br>1.2599<br>1.2591  |
| 30000. | 33.534 | 225.912<br>225.275<br>1.194825+02 | .000000+00<br>1491.876<br>1534.287  | .000000+00<br>18.7723<br>19.218  | .000<br>39.2636<br>39.419   | .0000<br>67.963<br>6.7842  | .0000<br>5.373196+02<br>2.0237  | .0000<br>1.1953<br>1.1933  |
| 31000. | 34.652 | 241.156<br>240.453<br>1.318938+02 | .000000+00<br>1591.479<br>1637.561  | .000000+00<br>18.4739<br>18.936  | .000<br>41.8036<br>41.933   | .0000<br>69.140<br>6.9516  | .0000<br>5.552302+02<br>2.0607  | .0000<br>1.1573<br>1.1566  |
| 32000. | 35.770 | 256.900<br>256.149<br>1.444096+02 | .000000+00<br>1695.635<br>1744.875  | .000000+00<br>18.4673<br>18.937  | .000<br>43.6603<br>43.777   | .0000<br>70.292<br>7.1255  | .0000<br>5.731409+02<br>2.1032  | .0000<br>1.1408<br>1.1405  |
| 33000. | 36.888 | 273.143<br>272.357<br>1.570741+02 | .000000+00<br>1803.976<br>1855.945  | .000000+00<br>18.5924<br>19.065  | .000<br>45.1488<br>45.257   | .0000<br>71.438<br>7.2979  | .0000<br>5.910515+02<br>2.1494  | .0000<br>1.1324<br>1.1324  |
| 34000. | 38.006 | 289.887<br>289.068<br>1.700502+02 | .000000+00<br>1915.966<br>1970.661  | .000000+00<br>18.7802<br>19.255  | .000<br>46.4133<br>46.517   | .0000<br>72.584<br>7.4682  | .0000<br>6.089622+02<br>2.1985  | .0000<br>1.1279<br>1.1279  |
| 35000. | 39.124 | 307.130<br>306.282<br>1.831858+02 | .000000+00<br>2031.563<br>2088.925  | .000000+00<br>19.0005<br>19.477  | .000<br>47.5299<br>47.631   | .0000<br>73.736<br>7.6368  | .0000<br>6.268728+02<br>2.2500  | .0000<br>1.1254<br>1.1255  |
| 36000. | 40.241 | 324.873<br>323.998<br>1.971073+02 | .000000+00<br>2150.684<br>2210.640  | .000000+00<br>19.2355<br>19.712  | .000<br>48.5424<br>48.642   | .0000<br>74.897<br>7.8045  | .0000<br>6.447835+02<br>2.3038  | .0000<br>1.1241<br>1.1242  |
| 37000. | 41.359 | 343.116<br>342.214<br>2.103930+02 | .000000+00<br>2273.281<br>2335.731  | .000000+00<br>19.4756<br>19.951  | .000<br>49.4788<br>49.577   | .0000<br>76.068<br>7.9718  | .0000<br>6.626941+02<br>2.3596  | .0000<br>1.1234<br>1.1235  |

ALTITUDE = 300000. FT.

P1 = 1.248756-06 ATM. , RHO1 = 1.845134-06 AMA. , T1 = 184.90 K  
 S1/R = 35.821 , A1 = 894.60 FT./SEC. , H1/R = 647.148 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 38000. | 42.477 | 361.858<br>360.929<br>2.242957+02 | .000000+00<br>2399.318<br>2464.398 | .000000+00<br>19.7143<br>20.189 | .000<br>50.3582<br>50.455 | .0000<br>77.252<br>8.1396  | .0000<br>6.806048+02<br>2.4174 | .0000<br>1.1233<br>1.1235 |
| 39000. | 43.595 | 381.101<br>380.145<br>2.388542+02 | .000000+00<br>2528.767<br>2596.428 | .000000+00<br>19.9471<br>20.421 | .000<br>51.1941<br>51.291 | .0000<br>78.448<br>8.3082  | .0000<br>6.985154+02<br>2.4769 | .0000<br>1.1235<br>1.1237 |
| 40000. | 44.713 | 400.843<br>399.860<br>2.529664+02 | .000000+00<br>2661.610<br>2731.933 | .000000+00<br>20.1716<br>20.645 | .000<br>51.9969<br>52.094 | .0000<br>79.657<br>8.4780  | .0000<br>7.164261+02<br>2.5382 | .0000<br>1.1241<br>1.1243 |
| 41000. | 45.830 | 421.085<br>420.073<br>2.674143+02 | .000000+00<br>2797.824<br>2870.793 | .000000+00<br>20.3850<br>20.857 | .000<br>52.7751<br>52.872 | .0000<br>80.879<br>8.6496  | .0000<br>7.343367+02<br>2.6013 | .0000<br>1.1248<br>1.1250 |
| 42000. | 46.948 | 441.827<br>440.786<br>2.823113+02 | .000000+00<br>2937.395<br>3013.211 | .000000+00<br>20.5861<br>21.057 | .000<br>53.5352<br>53.633 | .0000<br>82.115<br>8.8231  | .0000<br>7.522474+02<br>2.6660 | .0000<br>1.1258<br>1.1260 |
| 43000. | 48.066 | 463.069<br>461.997<br>2.973213+02 | .000000+00<br>3080.308<br>3159.073 | .000000+00<br>20.7738<br>21.244 | .000<br>54.2831<br>54.382 | .0000<br>83.364<br>8.9986  | .0000<br>7.701580+02<br>2.7323 | .0000<br>1.1269<br>1.1271 |
| 44000. | 49.184 | 484.810<br>483.706<br>3.120699+02 | .000000+00<br>3226.548<br>3308.197 | .000000+00<br>20.9467<br>21.416 | .000<br>55.0243<br>55.124 | .0000<br>84.626<br>9.1772  | .0000<br>7.880687+02<br>2.8001 | .0000<br>1.1283<br>1.1285 |
| 45000. | 50.302 | 507.051<br>505.914<br>3.268448+02 | .000000+00<br>3376.094<br>3460.457 | .000000+00<br>21.1038<br>21.570 | .000<br>55.7641<br>55.865 | .0000<br>85.901<br>9.3586  | .0000<br>8.059793+02<br>2.8695 | .0000<br>1.1297<br>1.1299 |
| 46000. | 51.419 | 529.792<br>528.620<br>3.415728+02 | .000000+00<br>3528.933<br>3616.430 | .000000+00<br>21.2444<br>21.709 | .000<br>56.5076<br>56.610 | .0000<br>87.188<br>9.5437  | .0000<br>8.238900+02<br>2.9404 | .0000<br>1.1314<br>1.1317 |
| 47000. | 52.537 | 553.033<br>551.823<br>3.559727+02 | .000000+00<br>3685.042<br>3775.875 | .000000+00<br>21.3672<br>21.831 | .000<br>57.2604<br>57.365 | .0000<br>88.488<br>9.7327  | .0000<br>8.418006+02<br>3.0127 | .0000<br>1.1333<br>1.1336 |
| 48000. | 53.655 | 576.774<br>575.524<br>3.697152+02 | .000000+00<br>3844.402<br>3938.951 | .000000+00<br>21.4714<br>21.936 | .000<br>58.0285<br>58.136 | .0000<br>89.797<br>9.9263  | .0000<br>8.597113+02<br>3.0863 | .0000<br>1.1355<br>1.1357 |
| 49000. | 54.773 | 601.015<br>599.722<br>3.824757+02 | .000000+00<br>4006.983<br>4105.511 | .000000+00<br>21.5554<br>22.020 | .000<br>58.8194<br>58.931 | .0000<br>91.118<br>10.1259 | .0000<br>8.776220+02<br>3.1613 | .0000<br>1.1380<br>1.1383 |
| 50000. | 55.891 | 625.755<br>624.417<br>3.940407+02 | .000000+00<br>4172.750<br>4274.803 | .000000+00<br>21.6172<br>22.080 | .000<br>59.6421<br>59.757 | .0000<br>92.448<br>10.3314 | .0000<br>8.955326+02<br>3.2374 | .0000<br>1.1408<br>1.1411 |

ALTITUDE = 310000. FT.

P1 = 7.322901-07 ATM. , RHO1 = 1.031019-06 AMA. , T1 = 193.87 K  
 S1/R = 36.520 , A1 = 916.05 FT./SEC. , H1/R = 678.554 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.550  | 9.580<br>9.347<br>5.971046-01   | 3.315745+03<br>51.122<br>56.262   | 3.829597+02<br>6.0630<br>6.542   | 8.658<br>8.4261<br>8.591    | 2.3770<br>40.599<br>2.3370 | 1.0002<br>5.761842+01<br>1.0011 | 1.2870<br>1.2622<br>1.2526 |
| 7000.  | 7.641  | 12.678<br>12.441<br>9.776961-01 | 1.007938+04<br>71.035<br>77.076   | 9.284845+02<br>7.0089<br>7.527   | 10.819<br>10.0084<br>10.099 | 2.5883<br>41.433<br>2.4374 | 1.0035<br>6.722148+01<br>1.0140 | 1.2171<br>1.1478<br>1.1442 |
| 8000.  | 8.733  | 16.253<br>16.035<br>1.485057+00 | 2.897066+04<br>94.931<br>101.510  | 2.260325+03<br>8.3590<br>8.878   | 12.614<br>10.9300<br>10.988 | 2.7512<br>42.334<br>2.5409 | 1.0162<br>7.682455+01<br>1.0407 | 1.1648<br>1.1142<br>1.1137 |
| 9000.  | 9.825  | 20.305<br>20.104<br>2.136089+00 | 8.121218+04<br>122.247<br>129.330 | 5.519737+03<br>9.7924<br>10.303  | 14.192<br>11.6248<br>11.672 | 2.9278<br>43.328<br>2.6544 | 1.0368<br>8.642762+01<br>1.0755 | 1.1490<br>1.1069<br>1.1071 |
| 10000. | 10.916 | 24.834<br>24.642<br>2.947241+00 | 2.226213+05<br>152.783<br>160.403 | 1.328546+04<br>11.1668<br>11.666 | 15.776<br>12.2740<br>12.319 | 3.1256<br>44.414<br>2.7824 | 1.0623<br>9.603069+01<br>1.1163 | 1.1499<br>1.1100<br>1.1105 |
| 11000. | 12.008 | 29.839<br>29.649<br>3.937231+00 | 5.923673+05<br>186.372<br>194.677 | 3.100349+04<br>12.3393<br>12.821 | 17.518<br>13.0270<br>13.082 | 3.3542<br>45.574<br>2.9473 | 1.0908<br>1.056338+02<br>1.1608 | 1.1614<br>1.1270<br>1.1283 |
| 12000. | 13.100 | 35.320<br>35.110<br>5.140374+00 | 1.513575+06<br>222.304<br>231.856 | 6.907716+04<br>12.7898<br>13.234 | 19.556<br>14.4927<br>14.598 | 3.6245<br>46.768<br>3.3080 | 1.1205<br>1.152368+02<br>1.2003 | 1.1825<br>1.2249<br>1.2318 |
| 13000. | 14.191 | 41.279<br>41.002<br>6.639781+00 | 3.668708+06<br>259.395<br>271.342 | 1.447139+05<br>12.0672<br>12.524 | 22.073<br>17.7064<br>17.838 | 3.9487<br>47.866<br>3.6451 | 1.1486<br>1.248399+02<br>1.2148 | 1.2131<br>1.2153<br>1.2094 |
| 14000. | 15.283 | 47.714<br>47.410<br>8.381351+00 | 8.359119+06<br>301.408<br>314.861 | 2.833367+05<br>12.3999<br>12.888 | 25.181<br>19.6544<br>19.735 | 4.2847<br>48.876<br>3.7408 | 1.1718<br>1.344430+02<br>1.2380 | 1.2273<br>1.1311<br>1.1297 |
| 15000. | 16.375 | 54.626<br>54.317<br>1.037128+01 | 1.791921+07<br>347.660<br>362.186 | 5.274730+05<br>13.1853<br>13.682 | 28.546<br>20.7905<br>20.852 | 4.5868<br>49.890<br>3.8572 | 1.1902<br>1.440460+02<br>1.2697 | 1.2214<br>1.1088<br>1.1085 |
| 16000. | 17.466 | 62.014<br>61.706<br>1.266318+01 | 3.660964+07<br>397.500<br>412.949 | 9.512427+05<br>14.0893<br>14.586 | 31.828<br>21.6240<br>21.676 | 4.8457<br>50.937<br>3.9748 | 1.2093<br>1.536491+02<br>1.3062 | 1.2033<br>1.1007<br>1.1006 |
| 17000. | 18.558 | 69.879<br>69.574<br>1.524285+01 | 7.196961+07<br>450.733<br>467.120 | 1.672991+06<br>15.0208<br>15.518 | 34.956<br>22.3104<br>22.358 | 5.1003<br>52.023<br>4.0926 | 1.2308<br>1.632522+02<br>1.3465 | 1.1926<br>1.0974<br>1.0975 |
| 18000. | 19.650 | 78.221<br>77.917<br>1.812675+01 | 1.370354+08<br>507.281<br>524.535 | 2.873214+06<br>15.9427<br>16.437 | 38.015<br>22.9144<br>22.958 | 5.3627<br>53.152<br>4.2116 | 1.2548<br>1.728552+02<br>1.3902 | 1.1893<br>1.0962<br>1.0963 |
| 19000. | 20.741 | 87.039<br>86.736<br>2.136481+01 | 2.536829+08<br>567.104<br>585.303 | 4.820116+06<br>16.8371<br>17.329 | 41.081<br>23.4672<br>23.509 | 5.6396<br>54.326<br>4.3328 | 1.2813<br>1.824583+02<br>1.4369 | 1.1919<br>1.0961<br>1.0962 |

ALTITUDE = 310000. FT.

P1 = 7.322901-07 ATM. , RHO1 = 1.031019-06 AMA. , T1 = 193.87 K  
 S1/R = 36.520 , A1 = 916.05 FT./SEC. , H1/R = 678.554 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1            | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 20000. | 21.833 | 96.334<br>96.030<br>2.497872+01   | 4.572236+08<br>630.174<br>649.251   | 7.893524+06<br>17.6904<br>18.178 | 44.202<br>23.9902<br>24.031 | 5.9301<br>55.543<br>4.4570 | 1.3106<br>1.920614+02<br>1.4864 | 1.1974<br>1.0968<br>1.0970 |
| 21000. | 22.924 | 106.106<br>105.799<br>2.896800+01 | 8.027811+08<br>696.473<br>716.476   | 1.260761+07<br>18.4945<br>18.977 | 47.413<br>24.4975<br>24.537 | 6.2434<br>56.802<br>4.5849 | 1.3431<br>2.016645+02<br>1.5388 | 1.2073<br>1.0980<br>1.0982 |
| 22000. | 24.016 | 116.354<br>116.043<br>3.335547+01 | 1.373707+09<br>765.979<br>787.020   | 1.962883+07<br>19.2410<br>19.721 | 50.732<br>25.0024<br>25.042 | 6.5810<br>58.102<br>4.7175 | 1.3797<br>2.112675+02<br>1.5939 | 1.2205<br>1.0997<br>1.0998 |
| 23000. | 25.108 | 127.080<br>126.762<br>3.816351+01 | 2.291109+09<br>838.673<br>860.802   | 2.976374+07<br>19.9230<br>20.399 | 54.169<br>25.5172<br>25.557 | 6.9511<br>59.440<br>4.8561 | 1.4212<br>2.208706+02<br>1.6513 | 1.2380<br>1.1020<br>1.1022 |
| 24000. | 26.199 | 138.281<br>137.955<br>4.342794+01 | 3.722679+09<br>914.514<br>937.979   | 4.391193+07<br>20.5258<br>21.001 | 57.720<br>26.0627<br>26.104 | 7.3570<br>60.813<br>5.0046 | 1.4689<br>2.304737+02<br>1.7112 | 1.2592<br>1.1057<br>1.1060 |
| 25000. | 27.291 | 149.960<br>149.623<br>4.919905+01 | 5.891417+09<br>993.440<br>1018.439  | 6.300678+07<br>21.0284<br>21.504 | 61.379<br>26.6692<br>26.713 | 7.8017<br>62.218<br>5.1659 | 1.5236<br>2.400767+02<br>1.7732 | 1.2839<br>1.1111<br>1.1113 |
| 26000. | 28.383 | 162.115<br>161.763<br>5.555057+01 | 9.085544+09<br>1075.351<br>1102.061 | 8.802913+07<br>21.3986<br>21.873 | 65.120<br>27.3877<br>27.436 | 8.2707<br>63.647<br>5.3489 | 1.5851<br>2.496798+02<br>1.8367 | 1.3072<br>1.1195<br>1.1199 |
| 27000. | 29.474 | 174.747<br>174.373<br>6.262619+01 | 1.365547+10<br>1159.993<br>1188.624 | 1.201093+08<br>21.5544<br>22.021 | 68.885<br>28.3476<br>28.408 | 8.6936<br>65.090<br>5.5803 | 1.6507<br>2.592829+02<br>1.9002 | 1.3111<br>1.1370<br>1.1378 |
| 28000. | 30.566 | 187.855<br>187.440<br>7.044859+01 | .000000+00<br>1246.490<br>1277.729  | .000000+00<br>21.2383<br>21.684  | .000<br>29.9826<br>30.080   | .00000<br>66.525<br>5.9659 | .0000<br>2.688859+02<br>1.9591  | .0000<br>1.1886<br>1.1913  |
| 29000. | 31.658 | 201.440<br>200.936<br>7.971478+01 | .000000+00<br>1332.817<br>1368.368  | .000000+00<br>19.9463<br>20.368  | .000<br>33.4743<br>33.641   | .0000<br>67.891<br>6.5444  | .0000<br>2.784890+02<br>1.9973  | .0000<br>1.2593<br>1.2573  |
| 30000. | 32.749 | 215.502<br>214.910<br>8.908258+01 | .000000+00<br>1422.651<br>1462.533  | .000000+00<br>19.0224<br>19.472  | .000<br>36.9085<br>37.044   | .0000<br>69.146<br>6.7140  | .0000<br>2.880921+02<br>2.0278  | .0000<br>1.1854<br>1.1837  |
| 31000. | 33.841 | 230.041<br>229.392<br>9.833423+01 | .000000+00<br>1517.925<br>1561.102  | .000000+00<br>18.7795<br>19.243  | .000<br>39.1565<br>39.270   | .0000<br>70.344<br>6.8778  | .0000<br>2.976952+02<br>2.0660  | .0000<br>1.1507<br>1.1500  |
| 32000. | 34.932 | 245.056<br>244.367<br>1.076827+02 | .000000+00<br>1617.521<br>1663.515  | .000000+00<br>18.8098<br>19.280  | .000<br>40.8047<br>40.906   | .0000<br>71.521<br>7.0479  | .0000<br>3.072982+02<br>2.1095  | .0000<br>1.1357<br>1.1354  |
| 33000. | 36.024 | 260.547<br>259.827<br>1.170412+02 | .000000+00<br>1720.884<br>1769.519  | .000000+00<br>18.9606<br>19.435  | .000<br>42.1306<br>42.226   | .0000<br>72.693<br>7.2165  | .0000<br>3.169013+02<br>2.1564  | .0000<br>1.1282<br>1.1281  |

ALTITUDE = 310000. FT.

P1 = 7.322901-07 ATM. , RH01 = 1.031019-06 AMA. , T1 = 193.87 K  
 S1/R = 36.520 , A1 = 916.05 FT./SEC. , H1/R = 678.554 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 34000. | 37.116 | 276.516<br>275.767<br>1.268032+02 | .000000+00<br>1827.787<br>1878.897 | .000000+00<br>19.1703<br>19.647 | .000<br>43.2604<br>43.352 | .0000<br>73.868<br>7.3827 | .0000<br>3.265044+02<br>2.2062 | .0000<br>1.1240<br>1.1240 |
| 35000. | 38.207 | 292.961<br>292.186<br>1.366580+02 | .000000+00<br>1938.112<br>1991.654 | .000000+00<br>19.4096<br>19.887 | .000<br>44.2600<br>44.349 | .0000<br>75.050<br>7.5478 | .0000<br>3.361074+02<br>2.2584 | .0000<br>1.1218<br>1.1219 |
| 36000. | 39.299 | 309.883<br>309.084<br>1.465952+02 | .000000+00<br>2051.817<br>2107.748 | .000000+00<br>19.6622<br>20.140 | .000<br>45.1677<br>45.255 | .0000<br>76.242<br>7.7112 | .0000<br>3.457105+02<br>2.3128 | .0000<br>1.1205<br>1.1206 |
| 37000. | 40.391 | 327.281<br>326.459<br>1.570590+02 | .000000+00<br>2168.778<br>2227.156 | .000000+00<br>19.9180<br>20.396 | .000<br>46.0081<br>46.095 | .0000<br>77.447<br>7.8751 | .0000<br>3.553136+02<br>2.3692 | .0000<br>1.1200<br>1.1201 |
| 38000. | 41.482 | 345.157<br>344.310<br>1.673079+02 | .000000+00<br>2289.041<br>2349.773 | .000000+00<br>20.1715<br>20.649 | .000<br>46.7980<br>46.884 | .0000<br>78.664<br>8.0388 | .0000<br>3.649166+02<br>2.4275 | .0000<br>1.1198<br>1.1200 |
| 39000. | 42.574 | 363.508<br>362.638<br>1.774564+02 | .000000+00<br>2412.557<br>2475.625 | .000000+00<br>20.4184<br>20.894 | .000<br>47.5494<br>47.635 | .0000<br>79.894<br>8.2040 | .0000<br>3.745197+02<br>2.4876 | .0000<br>1.1202<br>1.1203 |
| 40000. | 43.666 | 382.337<br>381.442<br>1.879785+02 | .000000+00<br>2539.306<br>2604.771 | .000000+00<br>20.6557<br>21.130 | .000<br>48.2715<br>48.357 | .0000<br>81.139<br>8.3699 | .0000<br>3.841228+02<br>2.5495 | .0000<br>1.1207<br>1.1208 |
| 41000. | 44.757 | 401.642<br>400.722<br>1.987833+02 | .000000+00<br>2669.273<br>2737.106 | .000000+00<br>20.8817<br>21.354 | .000<br>48.9717<br>49.057 | .0000<br>82.398<br>8.5375 | .0000<br>3.937258+02<br>2.6131 | .0000<br>1.1213<br>1.1215 |
| 42000. | 45.849 | 421.424<br>420.478<br>2.090003+02 | .000000+00<br>2802.442<br>2872.732 | .000000+00<br>21.0947<br>21.565 | .000<br>49.6560<br>49.742 | .0000<br>83.672<br>8.7073 | .0000<br>4.033289+02<br>2.6783 | .0000<br>1.1223<br>1.1225 |
| 43000. | 46.941 | 441.683<br>440.710<br>2.193670+02 | .000000+00<br>2938.799<br>3011.651 | .000000+00<br>21.2934<br>21.762 | .000<br>50.3299<br>50.416 | .0000<br>84.960<br>8.8790 | .0000<br>4.129320+02<br>2.7452 | .0000<br>1.1233<br>1.1235 |
| 44000. | 48.032 | 462.418<br>461.416<br>2.298427+02 | .000000+00<br>3078.331<br>3153.968 | .000000+00<br>21.4770<br>21.945 | .000<br>50.9982<br>51.085 | .0000<br>86.261<br>9.0539 | .0000<br>4.225351+02<br>2.8137 | .0000<br>1.1247<br>1.1249 |
| 45000. | 49.124 | 483.630<br>482.599<br>2.403202+02 | .000000+00<br>3221.017<br>3299.400 | .000000+00<br>21.6438<br>22.111 | .000<br>51.6654<br>51.754 | .0000<br>87.577<br>9.2316 | .0000<br>4.321381+02<br>2.8836 | .0000<br>1.1262<br>1.1264 |
| 46000. | 50.215 | 505.318<br>504.256<br>2.505715+02 | .000000+00<br>3366.847<br>3447.981 | .000000+00<br>21.7935<br>22.258 | .000<br>52.3367<br>52.426 | .0000<br>88.906<br>9.4125 | .0000<br>4.417412+02<br>2.9551 | .0000<br>1.1278<br>1.1280 |
| 47000. | 51.307 | 527.483<br>526.387<br>2.605421+02 | .000000+00<br>3515.801<br>3599.819 | .000000+00<br>21.9249<br>22.388 | .000<br>53.0172<br>53.109 | .0000<br>90.247<br>9.5978 | .0000<br>4.513443+02<br>3.0280 | .0000<br>1.1296<br>1.1299 |

## ALTITUDE = 310000. FT.

P1 = 7.322901-07 ATM. , RH01 = 1.031019-06 AMA. , T1 = 193.87 K  
 S1/R = 36.520 , A1 = 916.05 FT./SEC. , H1/R = 678.554 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 52.399 | 550.125<br>548.994<br>2.700805+02 | .000000+00<br>3667.856<br>3755.096 | .000000+00<br>22.0367<br>22.499 | .000<br>53.7124<br>53.806 | .0000<br>91.600<br>9.7873  | .0000<br>4.609473+02<br>3.1022 | .0000<br>1.1317<br>1.1319 |
| 49000. | 53.490 | 573.244<br>572.075<br>2.794893+02 | .000000+00<br>3822.989<br>3913.777 | .000000+00<br>22.1276<br>22.590 | .000<br>54.4293<br>54.526 | .0000<br>92.964<br>9.9828  | .0000<br>4.705504+02<br>3.1778 | .0000<br>1.1342<br>1.1345 |
| 50000. | 54.582 | 596.839<br>595.629<br>2.884956+02 | .000000+00<br>3981.164<br>4075.768 | .000000+00<br>22.1952<br>22.658 | .000<br>55.1760<br>55.276 | .0000<br>94.338<br>10.1845 | .0000<br>4.801535+02<br>3.2545 | .0000<br>1.1370<br>1.1373 |

## ALTITUDE = 320000. FT.

P1 = 4.403215-07 ATM. , RH01 = 5.920666-07 AMA. , T1 = 202.82 K  
 S1/R = 37.187 , A1 = 936.96 FT./SEC. , H1/R = 709.874 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | R0/R1<br>RS/R1<br>RCP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.404  | 9.202<br>8.978<br>4.552622-01   | 2.885772+03<br>48.853<br>53.772   | 3.477161+02<br>6.0541<br>6.537   | 8.306<br>8.0688<br>8.222    | 2.3780<br>41.172<br>2.3284 | 1.0002<br>3.182686+01<br>1.0015 | 1.2834<br>1.2523<br>1.2416 |
| 7000.  | 7.471  | 12.163<br>11.940<br>7.437278-01 | 8.762119+03<br>67.986<br>73.704   | 8.473259+02<br>7.0729<br>7.593   | 10.303<br>9.4836<br>9.564   | 2.5725<br>42.011<br>2.4208 | 1.0046<br>3.713134+01<br>1.0159 | 1.2054<br>1.1403<br>1.1372 |
| 8000.  | 8.538  | 15.581<br>15.377<br>1.128104+00 | 2.535417+04<br>90.869<br>97.078   | 2.090778+03<br>8.4718<br>8.992   | 11.912<br>10.3046<br>10.356 | 2.7288<br>42.926<br>2.5226 | 1.0191<br>4.243581+01<br>1.0435 | 1.1566<br>1.1106<br>1.1102 |
| 9000.  | 9.606  | 19.453<br>19.267<br>1.620984+00 | 7.192662+04<br>116.993<br>123.646 | 5.186171+03<br>9.9421<br>10.452  | 13.334<br>10.9333<br>10.976 | 2.9015<br>43.938<br>2.6339 | 1.0411<br>4.774029+01<br>1.0789 | 1.1434<br>1.1044<br>1.1046 |
| 10000. | 10.673 | 23.782<br>23.605<br>2.234908+00 | 2.000376+05<br>146.186<br>153.311 | 1.268961+04<br>11.3490<br>11.843 | 14.776<br>11.5258<br>11.570 | 3.0959<br>45.046<br>2.7600 | 1.0679<br>5.304477+01<br>1.1200 | 1.1452<br>1.1080<br>1.1084 |
| 11000. | 11.740 | 28.566<br>28.391<br>2.984841+00 | 5.405931+05<br>178.275<br>186.093 | 3.010602+04<br>12.5313<br>13.015 | 16.375<br>12.2398<br>12.289 | 3.3221<br>46.231<br>2.9261 | 1.0976<br>5.834924+01<br>1.1647 | 1.1577<br>1.1265<br>1.1279 |
| 12000. | 12.807 | 33.806<br>33.609<br>3.898193+00 | 1.402727+06<br>212.489<br>221.531 | 6.810772+04<br>12.8881<br>13.326 | 18.270<br>13.7294<br>13.836 | 3.5928<br>47.445<br>3.3203 | 1.1284<br>6.365372+01<br>1.2027 | 1.1805<br>1.2419<br>1.2491 |
| 13000. | 13.875 | 39.502<br>39.240<br>5.034835+00 | 3.446318+06<br>247.909<br>259.241 | 1.443425+05<br>12.1394<br>12.600 | 20.657<br>16.8184<br>16.935 | 3.9234<br>48.548<br>3.6158 | 1.1570<br>6.895820+01<br>1.2161 | 1.2144<br>1.2024<br>1.1969 |
| 14000. | 14.942 | 45.653<br>45.369<br>6.350807+00 | 7.932423+06<br>288.205<br>300.868 | 2.846659+05<br>12.5525<br>13.042 | 23.648<br>18.5462<br>18.617 | 4.2727<br>49.571<br>3.7108 | 1.1795<br>7.426267+01<br>1.2404 | 1.2340<br>1.1255<br>1.1243 |

ALTITUDE = 320000. FT.

P1 = 4.403215-07 ATM. , RH01 = 5.920666-07 AMA. , T1 = 202.82 K  
 S1/R = 37.187 , A1 = 936.96 FT./SEC. , H1/R = 709.874 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1            | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 16.009 | 52.260<br>51.973<br>7.849143+00   | 1.714031+07<br>332.470<br>346.155   | 5.340036+05<br>13.3818<br>13.880 | 26.829<br>19.5630<br>19.618 | 4.5527<br>50.602<br>3.8253 | 1.1976<br>7.956715+01<br>1.2726 | 1.2163<br>1.1054<br>1.1052 |
| 16000. | 17.077 | 59.322<br>59.037<br>9.582570+00   | 3.530667+07<br>380.132<br>394.689   | 9.726830+05<br>14.3180<br>14.817 | 29.856<br>20.3159<br>20.363 | 4.8001<br>51.669<br>3.9406 | 1.2170<br>8.487163+01<br>1.3095 | 1.1956<br>1.0980<br>1.0980 |
| 17000. | 18.144 | 66.840<br>66.558<br>1.153879+01   | 7.002838+07<br>431.024<br>446.366   | 1.729387+06<br>15.2773<br>15.774 | 32.716<br>20.9395<br>20.982 | 5.0487<br>52.777<br>4.0561 | 1.2389<br>9.017610+01<br>1.3501 | 1.1857<br>1.0949<br>1.0950 |
| 18000. | 19.211 | 74.814<br>74.533<br>1.372895+01   | 1.346886+08<br>485.079<br>501.297   | 3.005469+06<br>16.2261<br>16.721 | 35.508<br>21.4888<br>21.528 | 5.3042<br>53.931<br>4.1728 | 1.2633<br>9.548058+01<br>1.3940 | 1.1825<br>1.0939<br>1.0940 |
| 19000. | 20.278 | 83.243<br>82.963<br>1.616355+01   | 2.520605+08<br>542.261<br>559.297   | 5.105324+06<br>17.1454<br>17.637 | 38.312<br>21.9930<br>22.030 | 5.5707<br>55.130<br>4.2916 | 1.2900<br>1.007851+02<br>1.4409 | 1.1839<br>1.0939<br>1.0940 |
| 20000. | 21.346 | 92.128<br>91.848<br>1.888398+01   | 4.592416+08<br>602.545<br>620.472   | 8.466226+06<br>18.0231<br>18.512 | 41.172<br>22.4702<br>22.506 | 5.8508<br>56.374<br>4.4136 | 1.3188<br>1.060895+02<br>1.4907 | 1.1887<br>1.0946<br>1.0947 |
| 21000. | 22.413 | 101.469<br>101.186<br>2.189783+01 | 8.160392+08<br>665.914<br>684.672   | 1.371290+07<br>18.8498<br>19.333 | 44.123<br>22.9343<br>22.970 | 6.1474<br>57.662<br>4.5393 | 1.3501<br>1.113940+02<br>1.5433 | 1.1961<br>1.0958<br>1.0960 |
| 22000. | 23.480 | 111.265<br>110.978<br>2.521249+01 | 1.414032+09<br>732.348<br>752.032   | 2.167163+07<br>19.6177<br>20.097 | 47.184<br>23.3967<br>23.432 | 6.4660<br>58.993<br>4.6700 | 1.3842<br>1.166985+02<br>1.5986 | 1.2070<br>1.0976<br>1.0978 |
| 23000. | 24.548 | 121.517<br>121.225<br>2.884750+01 | 2.389627+09<br>801.824<br>822.592   | 3.339526+07<br>20.3172<br>20.794 | 50.371<br>23.8708<br>23.906 | 6.8097<br>60.363<br>4.8067 | 1.4220<br>1.220030+02<br>1.6564 | 1.2207<br>1.0999<br>1.1000 |
| 24000. | 25.615 | 132.225<br>131.925<br>3.282389+01 | 3.937994+09<br>874.313<br>896.233   | 5.014582+07<br>20.9379<br>21.412 | 53.682<br>24.3722<br>24.409 | 7.1834<br>61.769<br>4.9518 | 1.4643<br>1.273074+02<br>1.7165 | 1.2376<br>1.1032<br>1.1034 |
| 25000. | 26.682 | 143.388<br>143.078<br>3.716245+01 | 6.325969+09<br>949.756<br>973.114   | 7.331196+07<br>21.4573<br>21.932 | 57.120<br>24.9307<br>24.970 | 7.5917<br>63.208<br>5.1109 | 1.5121<br>1.326119+02<br>1.7787 | 1.2581<br>1.1086<br>1.1089 |
| 26000. | 27.749 | 155.007<br>154.683<br>4.191645+01 | 9.910806+09<br>1028.043<br>1053.019 | 1.044154+08<br>21.8349<br>22.308 | 60.669<br>25.6015<br>25.645 | 8.0346<br>64.673<br>5.2928 | 1.5661<br>1.379164+02<br>1.8424 | 1.2810<br>1.1175<br>1.1179 |
| 27000. | 28.817 | 167.081<br>166.737<br>4.721111+01 | 1.514657+10<br>1108.917<br>1135.743 | 1.450213+08<br>21.9803<br>22.447 | 64.309<br>26.5142<br>26.570 | 8.4910<br>66.151<br>5.5264 | 1.6257<br>1.432209+02<br>1.9062 | 1.3002<br>1.1360<br>1.1369 |
| 28000. | 29.884 | 179.611<br>179.227<br>5.320601+01 | 2.259091+10<br>1191.434<br>1220.766 | 1.971552+08<br>21.5855<br>22.028 | 67.966<br>28.1439<br>28.239 | 8.8727<br>67.618<br>5.9401 | 1.6876<br>1.485253+02<br>1.9645 | 1.2941<br>1.1962<br>1.1992 |

ALTITUDE = 320000. FT.

P1 = 4.403215-07 ATM. , RHO1 = 5.920666-07 AMA. , T1 = 202.82 K  
 S1/R = 37.187 , A1 = 936.96 FT./SEC. , H1/R = 709.874 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 29000. | 30.951 | 192.597<br>192.124<br>6.026273+01 | .000000+00<br>1273.540<br>1307.168 | .000000+00<br>20.1302<br>20.553 | .000<br>31.6750<br>31.828 | .0000<br>69.004<br>6.5003 | .0000<br>1.538298+02<br>2.0002 | .0000<br>1.2543<br>1.2514 |
| 30000. | 32.019 | 206.038<br>205.487<br>6.722893+01 | .000000+00<br>1359.683<br>1397.303 | .000000+00<br>19.2709<br>19.724 | .000<br>34.7848<br>34.905 | .0000<br>70.275<br>6.6478 | .0000<br>1.591343+02<br>2.0317 | .0000<br>1.1766<br>1.1750 |
| 31000. | 33.086 | 219.935<br>219.335<br>7.413954+01 | .000000+00<br>1450.982<br>1491.578 | .000000+00<br>19.0787<br>19.544 | .000<br>36.7864<br>36.887 | .0000<br>71.494<br>6.8092 | .0000<br>1.644388+02<br>2.0710 | .0000<br>1.1449<br>1.1443 |
| 32000. | 34.153 | 234.288<br>233.652<br>8.096297+01 | .000000+00<br>1546.320<br>1589.466 | .000000+00<br>19.1417<br>19.613 | .000<br>38.2597<br>38.350 | .0000<br>72.696<br>6.9760 | .0000<br>1.697433+02<br>2.1153 | .0000<br>1.1313<br>1.1311 |
| 33000. | 35.220 | 249.096<br>248.432<br>8.821587+01 | .000000+00<br>1645.217<br>1690.764 | .000000+00<br>19.3169<br>19.792 | .000<br>39.4495<br>39.534 | .0000<br>73.894<br>7.1409 | .0000<br>1.750477+02<br>2.1630 | .0000<br>1.1244<br>1.1243 |
| 34000. | 36.288 | 264.360<br>263.672<br>9.535630+01 | .000000+00<br>1747.476<br>1795.365 | .000000+00<br>19.5472<br>20.025 | .000<br>40.4660<br>40.547 | .0000<br>75.096<br>7.3035 | .0000<br>1.803522+02<br>2.2134 | .0000<br>1.1206<br>1.1206 |
| 35000. | 37.355 | 280.080<br>279.369<br>1.030048+02 | .000000+00<br>1852.992<br>1903.132 | .000000+00<br>19.8041<br>20.283 | .000<br>41.3668<br>41.446 | .0000<br>76.308<br>7.4643 | .0000<br>1.856567+02<br>2.2662 | .0000<br>1.1184<br>1.1185 |
| 36000. | 38.422 | 296.255<br>295.522<br>1.108180+02 | .000000+00<br>1961.706<br>2014.043 | .000000+00<br>20.0730<br>20.552 | .000<br>42.1860<br>42.263 | .0000<br>77.530<br>7.6250 | .0000<br>1.909612+02<br>2.3211 | .0000<br>1.1174<br>1.1175 |
| 37000. | 39.490 | 312.886<br>312.132<br>1.186519+02 | .000000+00<br>2073.575<br>2128.139 | .000000+00<br>20.3436<br>20.822 | .000<br>42.9452<br>43.022 | .0000<br>78.765<br>7.7851 | .0000<br>1.962656+02<br>2.3780 | .0000<br>1.1169<br>1.1170 |
| 38000. | 40.557 | 329.973<br>329.198<br>1.269146+02 | .000000+00<br>2188.573<br>2245.337 | .000000+00<br>20.6112<br>21.089 | .000<br>43.6593<br>43.735 | .0000<br>80.015<br>7.9455 | .0000<br>2.015701+02<br>2.4368 | .0000<br>1.1167<br>1.1168 |
| 39000. | 41.624 | 347.515<br>346.719<br>1.352738+02 | .000000+00<br>2306.680<br>2365.638 | .000000+00<br>20.8715<br>21.348 | .000<br>44.3391<br>44.415 | .0000<br>81.279<br>8.1069 | .0000<br>2.068746+02<br>2.4974 | .0000<br>1.1170<br>1.1171 |
| 40000. | 42.691 | 365.513<br>364.695<br>1.428495+02 | .000000+00<br>2427.876<br>2489.027 | .000000+00<br>21.1216<br>21.597 | .000<br>44.9927<br>45.068 | .0000<br>82.558<br>8.2699 | .0000<br>2.121791+02<br>2.5598 | .0000<br>1.1176<br>1.1177 |
| 41000. | 43.759 | 383.966<br>383.126<br>1.506135+02 | .000000+00<br>2552.146<br>2615.503 | .000000+00<br>21.3593<br>21.833 | .000<br>45.6268<br>45.702 | .0000<br>83.853<br>8.4340 | .0000<br>2.174835+02<br>2.6239 | .0000<br>1.1183<br>1.1184 |
| 42000. | 44.826 | 402.875<br>402.012<br>1.585471+02 | .000000+00<br>2679.479<br>2745.075 | .000000+00<br>21.5837<br>22.055 | .000<br>46.2468<br>46.323 | .0000<br>85.163<br>8.6003 | .0000<br>2.227880+02<br>2.6896 | .0000<br>1.1192<br>1.1194 |

ALTITUDE = 320000. FT.

P1 = 4.403215-07 ATM. , RH01 = 5.920666-07 AMA. , T1 = 202.82 K  
 S1/R = 37.187 , A1 = 936.96 FT./SEC. , H1/R = 709.874 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 45.893 | 422.240<br>421.352<br>1.665012+02 | .000000+00<br>2809.859<br>2877.672 | .000000+00<br>21.7931<br>22.262 | .000<br>46.8576<br>46.934 | .0000<br>86.488<br>8.7689  | .0000<br>2.280925+02<br>2.7570 | .0000<br>1.1202<br>1.1204 |
| 44000. | 46.961 | 442.060<br>441.147<br>1.738353+02 | .000000+00<br>2943.272<br>3013.506 | .000000+00<br>21.9864<br>22.453 | .000<br>47.4637<br>47.541 | .0000<br>87.827<br>8.9399  | .0000<br>2.333970+02<br>2.8259 | .0000<br>1.1215<br>1.1217 |
| 45000. | 48.028 | 462.336<br>461.396<br>1.810725+02 | .000000+00<br>3079.709<br>3152.509 | .000000+00<br>22.1630<br>22.629 | .000<br>48.0694<br>48.147 | .0000<br>89.182<br>9.1140  | .0000<br>2.387015+02<br>2.8964 | .0000<br>1.1228<br>1.1230 |
| 46000. | 49.095 | 483.068<br>482.100<br>1.881330+02 | .000000+00<br>3219.150<br>3294.637 | .000000+00<br>22.3216<br>22.786 | .000<br>48.6792<br>48.758 | .0000<br>90.550<br>9.2915  | .0000<br>2.440059+02<br>2.9684 | .0000<br>1.1244<br>1.1246 |
| 47000. | 50.162 | 504.255<br>503.257<br>1.949505+02 | .000000+00<br>3361.579<br>3439.885 | .000000+00<br>22.4611<br>22.925 | .000<br>49.2976<br>49.378 | .0000<br>91.932<br>9.4730  | .0000<br>2.493104+02<br>3.0419 | .0000<br>1.1263<br>1.1265 |
| 48000. | 51.230 | 525.898<br>524.868<br>2.016071+02 | .000000+00<br>3506.976<br>3588.090 | .000000+00<br>22.5803<br>23.042 | .000<br>49.9305<br>50.013 | .0000<br>93.326<br>9.6590  | .0000<br>2.546149+02<br>3.1167 | .0000<br>1.1283<br>1.1285 |
| 49000. | 52.297 | 547.997<br>546.933<br>2.076430+02 | .000000+00<br>3655.317<br>3739.456 | .000000+00<br>22.6777<br>23.138 | .000<br>50.5841<br>50.669 | .0000<br>94.732<br>9.8507  | .0000<br>2.599194+02<br>3.1928 | .0000<br>1.1307<br>1.1309 |
| 50000. | 53.364 | 570.551<br>569.450<br>2.128023+02 | .000000+00<br>3806.571<br>3894.296 | .000000+00<br>22.7510<br>23.213 | .000<br>51.2662<br>51.354 | .0000<br>96.149<br>10.0486 | .0000<br>2.652238+02<br>3.2701 | .0000<br>1.1334<br>1.1337 |

ALTITUDE = 330000. FT.

P1 = 2.709440-07 ATM. , RH01 = 3.467345-07 AMA. , T1 = 212.81 K  
 S1/R = 37.840 , A1 = 959.76 FT./SEC. , H1/R = 744.852 K

| U1    | M1    | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 6.252 | 8.816<br>8.603<br>3.507683-01   | 2.491955+03<br>46.533<br>51.223   | 3.142630+02<br>6.0470<br>6.535   | 7.945<br>7.7020<br>7.842    | 2.3781<br>41.728<br>2.3185 | 1.0004<br>1.789200+01<br>1.0019 | 1.2786<br>1.2410<br>1.2295 |
| 7000. | 7.293 | 11.639<br>11.430<br>5.716176-01 | 7.560163+03<br>64.850<br>70.243   | 7.707004+02<br>7.1387<br>7.661   | 9.775<br>8.9586<br>9.029    | 2.5558<br>42.572<br>2.4051 | 1.0059<br>2.087400+01<br>1.0178 | 1.1937<br>1.1336<br>1.1310 |
| 8000. | 8.335 | 14.896<br>14.707<br>8.657100-01 | 2.203802+04<br>86.679<br>92.513   | 1.928230+03<br>8.5817<br>9.103   | 11.209<br>9.6913<br>9.737   | 2.7067<br>43.500<br>2.5052 | 1.0220<br>2.385600+01<br>1.0462 | 1.1491<br>1.1074<br>1.1071 |
| 9000. | 9.377 | 18.587<br>18.414<br>1.242639+00 | 6.327382+04<br>111.572<br>117.803 | 4.857065+03<br>10.0863<br>10.596 | 12.490<br>10.2609<br>10.299 | 2.8761<br>44.531<br>2.6146 | 1.0455<br>2.683799+01<br>1.0821 | 1.1383<br>1.1021<br>1.1023 |

ALTITUDE = 330000. FT.

P1 = 2.709440-07 ATM. , RHO1 = 3.467345-07 AMA. , T1 = 212.81 K  
 S1/R = 37.840 , A1 = 959.76 FT./SEC. , H1/R = 744.852 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>RCP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 1000C. | 10.419 | 22.712<br>22.548<br>1.712378+00   | 1.785468+05<br>139.376<br>146.094 | 1.207865+04<br>11.5190<br>12.019 | 13.804<br>10.8079<br>10.844 | 3.0675<br>45.660<br>2.7392 | 1.0734<br>2.981999+01<br>1.1236 | 1.1411<br>1.1061<br>1.1065 |
| 1100C. | 11.461 | 27.272<br>27.109<br>2.285468+00   | 4.901548+05<br>169.939<br>177.230 | 2.913663+04<br>12.7224<br>13.197 | 15.271<br>11.4690<br>11.520 | 3.2913<br>46.868<br>2.9064 | 1.1042<br>3.280199+01<br>1.1685 | 1.1544<br>1.1262<br>1.1277 |
| 1200C. | 12.503 | 32.266<br>32.079<br>2.986418+00   | 1.290690+06<br>202.363<br>210.927 | 6.687315+04<br>12.9580<br>13.390 | 17.033<br>12.9997<br>13.107 | 3.5627<br>48.101<br>3.3371 | 1.1358<br>3.578399+01<br>1.2047 | 1.1790<br>1.2602<br>1.2673 |
| 1300C. | 13.545 | 37.694<br>37.447<br>3.841763+00   | 3.213337+06<br>236.123<br>246.818 | 1.432713+05<br>12.2147<br>12.679 | 19.303<br>15.9244<br>16.027 | 3.9017<br>49.209<br>3.5875 | 1.1646<br>3.876599+01<br>1.2175 | 1.2168<br>1.1903<br>1.1852 |
| 1400C. | 14.587 | 43.556<br>43.292<br>4.819863+00   | 7.467859+06<br>274.625<br>286.545 | 2.843905+05<br>12.7036<br>13.195 | 22.185<br>17.4540<br>17.517 | 4.2524<br>50.244<br>3.6827 | 1.1865<br>4.174799+01<br>1.2427 | 1.2345<br>1.1206<br>1.1196 |
| 1500C. | 15.629 | 49.852<br>49.587<br>5.937074+00   | 1.625758+07<br>316.832<br>329.670 | 5.376420+05<br>13.5736<br>14.072 | 25.171<br>18.3645<br>18.414 | 4.5183<br>51.292<br>3.7952 | 1.2042<br>4.472999+01<br>1.2753 | 1.2103<br>1.1024<br>1.1021 |
| 1600C. | 16.671 | 56.583<br>56.320<br>7.318149+00   | 3.375011+07<br>362.247<br>375.864 | 9.889746+05<br>14.5396<br>15.038 | 27.946<br>19.0457<br>19.087 | 4.7568<br>52.378<br>3.9084 | 1.2240<br>4.771199+01<br>1.3125 | 1.1886<br>1.0956<br>1.0956 |
| 1700C. | 17.713 | 63.748<br>63.488<br>8.816012+00   | 6.758283+07<br>410.729<br>425.111 | 1.778618+06<br>15.5263<br>16.023 | 30.551<br>19.6115<br>19.649 | 4.9993<br>53.508<br>4.0217 | 1.2467<br>5.069399+01<br>1.3534 | 1.1791<br>1.0928<br>1.0928 |
| 1800C. | 18.755 | 71.347<br>71.089<br>1.049219+01   | 1.312747+08<br>462.220<br>477.329 | 3.126483+06<br>16.5008<br>16.994 | 33.094<br>20.1108<br>20.146 | 5.2487<br>54.685<br>4.1362 | 1.2718<br>5.367599+01<br>1.3975 | 1.1761<br>1.0918<br>1.0919 |
| 1900C. | 19.797 | 79.381<br>79.123<br>1.235809+01   | 2.481908+08<br>516.684<br>532.603 | 5.372704+06<br>17.4438<br>17.935 | 35.650<br>20.5708<br>20.604 | 5.5083<br>55.909<br>4.2531 | 1.2989<br>5.665799+01<br>1.4447 | 1.1775<br>1.0918<br>1.0919 |
| 2000C. | 20.839 | 87.849<br>87.591<br>1.442266+01   | 4.570566+08<br>574.102<br>590.864 | 9.016872+06<br>18.3447<br>18.834 | 38.264<br>21.0062<br>21.039 | 5.7801<br>57.179<br>4.3728 | 1.3279<br>5.963999+01<br>1.4947 | 1.1816<br>1.0926<br>1.0927 |
| 2100C. | 21.880 | 96.751<br>96.491<br>1.671656+01   | 8.212415+08<br>634.458<br>652.025 | 1.478837+07<br>19.1936<br>19.678 | 40.968<br>21.4300<br>21.462 | 6.0673<br>8.496<br>4.4965  | 1.3587<br>6.262199+01<br>1.5475 | 1.1883<br>1.0938<br>1.0939 |
| 2200C. | 22.922 | 106.087<br>105.824<br>1.924520+01 | 1.439106+09<br>697.732<br>716.111 | 2.367425+07<br>19.9819<br>20.461 | 43.781<br>21.8534<br>21.885 | 6.3706<br>59.856<br>4.6251 | 1.3917<br>6.560399+01<br>1.6030 | 1.1969<br>1.0956<br>1.0957 |
| 2300C. | 23.964 | 115.857<br>115.589<br>2.201924+01 | 2.460521+09<br>763.905<br>783.298 | 3.698705+07<br>20.7008<br>21.178 | 46.716<br>22.2880<br>22.320 | 6.6956<br>61.257<br>4.7599 | 1.4274<br>6.858599+01<br>1.6610 | 1.2081<br>1.0980<br>1.0981 |

ALTITUDE = 330000. FT.

P1 = 2.709440-07 ATM. , RH01 = 3.467345-07 AMA. , T1 = 212.81 K  
 S1/R = 37.840 , A1 = 959.76 FT./SEC. , H1/R = 744.852 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1            | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 24000. | 25.006 | 126.062<br>125.787<br>2.505527+01 | 4.105725+09<br>832.944<br>853.463   | 5.637814+07<br>21.3368<br>21.813 | 49.784<br>22.7505<br>22.784 | 7.0454<br>62.696<br>4.9031 | 1.4663<br>7.156798+01<br>1.7214 | 1.2219<br>1.1013<br>1.1014 |
| 25000. | 26.048 | 136.701<br>136.417<br>2.837816+01 | 6.684574+09<br>904.801<br>926.598   | 8.378352+07<br>21.8709<br>22.345 | 52.987<br>23.2655<br>23.301 | 7.4273<br>64.167<br>5.0593 | 1.5093<br>7.454998+01<br>1.7838 | 1.2395<br>1.1063<br>1.1065 |
| 26000. | 27.090 | 147.774<br>147.478<br>3.199471+01 | 1.061831+10<br>979.364<br>1002.697  | 1.213629+08<br>22.2570<br>22.731 | 56.319<br>23.8890<br>23.929 | 7.8378<br>65.666<br>5.2401 | 1.5572<br>7.753198+01<br>1.8478 | 1.2587<br>1.1155<br>1.1159 |
| 27000. | 28.132 | 159.282<br>158.966<br>3.599598+01 | 1.645988+10<br>1056.369<br>1081.398 | 1.714314+08<br>22.3917<br>22.857 | 59.767<br>24.7553<br>24.806 | 8.2796<br>67.178<br>5.4763 | 1.6103<br>8.051398+01<br>1.9117 | 1.2799<br>1.1355<br>1.1364 |
| 28000. | 29.174 | 171.223<br>170.868<br>4.061683+01 | 2.492163+10<br>1134.793<br>1162.271 | 2.365684+08<br>21.9063<br>22.344 | 63.303<br>26.3836<br>26.476 | 8.7266<br>68.676<br>5.9224 | 1.6681<br>8.349598+01<br>1.9693 | 1.2959<br>1.2054<br>1.2088 |
| 29000. | 30.216 | 183.599<br>183.157<br>4.601881+01 | 3.687741+10<br>1212.674<br>1244.406 | 3.204766+08<br>20.3067<br>20.732 | 66.846<br>29.9006<br>30.040 | 9.0473<br>70.080<br>6.4506 | 1.7255<br>8.647798+01<br>2.0028 | 1.2752<br>1.2462<br>1.2428 |
| 30000. | 31.258 | 196.410<br>195.897<br>5.129225+01 | .000000+00<br>1295.002<br>1330.355  | .000000+00<br>19.5193<br>19.975  | .000<br>32.6933<br>32.799   | .0000<br>71.368<br>6.5851  | .0000<br>8.945998+01<br>2.0354  | .0000<br>1.1686<br>1.1672  |
| 31000. | 32.300 | 209.654<br>209.099<br>5.639432+01 | .000000+00<br>1382.159<br>1420.219  | .000000+00<br>19.3739<br>19.841  | .000<br>34.4757<br>34.564   | .0000<br>72.608<br>6.7446  | .0000<br>9.244198+01<br>2.0758  | .0000<br>1.1398<br>1.1393  |
| 32000. | 33.342 | 223.333<br>222.747<br>6.156812+01 | .000000+00<br>1473.083<br>1513.454  | .000000+00<br>19.4668<br>19.940  | .000<br>35.7938<br>35.874   | .0000<br>73.832<br>6.9079  | .0000<br>9.542398+01<br>2.1208  | .0000<br>1.1273<br>1.1271  |
| 33000. | 34.384 | 237.446<br>236.835<br>6.686688+01 | .000000+00<br>1567.364<br>1609.884  | .000000+00<br>19.6649<br>20.140  | .000<br>36.8622<br>36.937   | .0000<br>75.056<br>7.0694  | .0000<br>9.840598+01<br>2.1692  | .0000<br>1.1209<br>1.1208  |
| 34000. | 35.425 | 251.993<br>251.360<br>7.236162+01 | .000000+00<br>1664.827<br>1709.510  | .000000+00<br>19.9143<br>20.392  | .000<br>37.7771<br>37.849   | .0000<br>76.286<br>7.2286  | .0000<br>1.013880+02<br>2.2201  | .0000<br>1.1174<br>1.1174  |
| 35000. | 36.467 | 266.974<br>266.322<br>7.778591+01 | .000000+00<br>1765.389<br>1812.181  | .000000+00<br>20.1886<br>20.668  | .000<br>38.5895<br>38.659   | .0000<br>77.525<br>7.3865  | .0000<br>1.043700+02<br>2.2734  | .0000<br>1.1154<br>1.1155  |
| 36000. | 37.509 | 282.390<br>281.718<br>8.355140+01 | .000000+00<br>1868.977<br>1917.810  | .000000+00<br>20.4726<br>20.952  | .000<br>39.3290<br>39.398   | .0000<br>78.777<br>7.5435  | .0000<br>1.073520+02<br>2.3288  | .0000<br>1.1143<br>1.1144  |
| 37000. | 38.551 | 298.240<br>297.549<br>8.953603+01 | .000000+00<br>1975.574<br>2026.415  | .000000+00<br>20.7581<br>21.237  | .000<br>40.0149<br>40.083   | .0000<br>80.043<br>7.7005  | .0000<br>1.103340+02<br>2.3862  | .0000<br>1.1139<br>1.1140  |

ALTITUDE = 330000. FT.

P1 = 2.709440-07 ATM. , RH01 = 3.467345-07 AMA. , T1 = 212.81 K  
 S1/R = 37.840 , A1 = 959.76 FT./SEC. , H1/R = 744.852 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 38000. | 39.593 | 314.524<br>313.815<br>9.536168+01 | .000000+00<br>2085.147<br>2138.023 | .000000+00<br>21.0392<br>21.517 | .000<br>40.6607<br>40.728 | .0000<br>81.324<br>7.8581 | .0000<br>1.133160+02<br>2.4455 | .0000<br>1.1140<br>1.1141 |
| 39000. | 40.635 | 331.242<br>330.514<br>1.014544+02 | .000000+00<br>2197.678<br>2252.622 | .000000+00<br>21.3120<br>21.789 | .000<br>41.2756<br>41.343 | .0000<br>82.620<br>8.0165 | .0000<br>1.162980+02<br>2.5065 | .0000<br>1.1142<br>1.1144 |
| 40000. | 41.677 | 348.395<br>347.648<br>1.078099+02 | .000000+00<br>2313.152<br>2370.114 | .000000+00<br>21.5741<br>22.050 | .000<br>41.8673<br>41.934 | .0000<br>83.933<br>8.1760 | .0000<br>1.192800+02<br>2.5693 | .0000<br>1.1147<br>1.1148 |
| 41000. | 42.719 | 365.982<br>365.214<br>1.141832+02 | .000000+00<br>2431.554<br>2490.587 | .000000+00<br>21.8235<br>22.298 | .000<br>42.4416<br>42.508 | .0000<br>85.262<br>8.3370 | .0000<br>1.222620+02<br>2.6339 | .0000<br>1.1154<br>1.1155 |
| 42000. | 43.761 | 384.003<br>383.215<br>1.202974+02 | .000000+00<br>2552.873<br>2613.956 | .000000+00<br>22.0586<br>22.531 | .000<br>43.0033<br>43.070 | .0000<br>86.607<br>8.5000 | .0000<br>1.252440+02<br>2.7001 | .0000<br>1.1163<br>1.1164 |
| 43000. | 44.803 | 402.458<br>401.648<br>1.264691+02 | .000000+00<br>2677.097<br>2740.268 | .000000+00<br>22.2785<br>22.748 | .000<br>43.5571<br>43.624 | .0000<br>87.968<br>8.6654 | .0000<br>1.282260+02<br>2.7679 | .0000<br>1.1173<br>1.1174 |
| 44000. | 45.845 | 421.348<br>420.515<br>1.326608+02 | .000000+00<br>2804.212<br>2869.518 | .000000+00<br>22.4818<br>22.949 | .000<br>44.1067<br>44.175 | .0000<br>89.345<br>8.8334 | .0000<br>1.312080+02<br>2.8373 | .0000<br>1.1185<br>1.1187 |
| 45000. | 46.887 | 440.671<br>439.815<br>1.387522+02 | .000000+00<br>2934.205<br>3001.701 | .000000+00<br>22.6674<br>23.132 | .000<br>44.6564<br>44.725 | .0000<br>90.737<br>9.0041 | .0000<br>1.341900+02<br>2.9083 | .0000<br>1.1198<br>1.1200 |
| 46000. | 47.929 | 460.430<br>459.548<br>1.442629+02 | .000000+00<br>3067.064<br>3137.069 | .000000+00<br>22.8346<br>23.298 | .000<br>45.2101<br>45.280 | .0000<br>92.144<br>9.1781 | .0000<br>1.371720+02<br>2.9807 | .0000<br>1.1213<br>1.1215 |
| 47000. | 48.970 | 480.622<br>479.713<br>1.493652+02 | .000000+00<br>3202.772<br>3275.431 | .000000+00<br>22.9822<br>23.445 | .000<br>45.7725<br>45.843 | .0000<br>93.565<br>9.3565 | .0000<br>1.401540+02<br>3.0547 | .0000<br>1.1231<br>1.1233 |
| 48000. | 50.012 | 501.248<br>500.311<br>1.538877+02 | .000000+00<br>3341.309<br>3416.751 | .000000+00<br>23.1086<br>23.571 | .000<br>46.3484<br>46.421 | .0000<br>94.999<br>9.5392 | .0000<br>1.431360+02<br>3.1300 | .0000<br>1.1252<br>1.1254 |
| 49000. | 51.054 | 522.309<br>521.342<br>1.576289+02 | .000000+00<br>3482.653<br>3560.978 | .000000+00<br>23.2124<br>23.675 | .000<br>46.9439<br>47.019 | .0000<br>96.446<br>9.7271 | .0000<br>1.461180+02<br>3.2066 | .0000<br>1.1275<br>1.1277 |
| 50000. | 52.096 | 543.804<br>542.802<br>1.609945+02 | .000000+00<br>3626.627<br>3708.129 | .000000+00<br>23.2904<br>23.753 | .000<br>47.5666<br>47.644 | .0000<br>97.904<br>9.9221 | .0000<br>1.491000+02<br>3.2844 | .0000<br>1.1302<br>1.1305 |

ALTITUDE = 340000. FT.

P1 = 1.717009-07 ATM. , RH01 = 2.050837-07 AMA. , T1 = 227.24 K  
 S1/R = 38.525 , A1 = 991.76 FT./SEC. , H1/R = 795.349 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 6.050  | 8.320<br>8.119<br>2.724109-01   | 2.041626+03<br>43.481<br>47.870   | 2.743707+02<br>6.0362<br>6.529   | 7.480<br>7.2305<br>7.355    | 2.3777<br>42.283<br>2.3079 | 1.0005<br>1.001696+01<br>1.0026 | 1.2712<br>1.2276<br>1.2157 |
| 7000.  | 7.058  | 10.963<br>10.771<br>4.424541-01 | 6.185745+03<br>60.682<br>65.667   | 6.781102+02<br>7.2035<br>7.727   | 9.105<br>8.3184<br>8.380    | 2.5377<br>43.132<br>2.3905 | 1.0076<br>1.168645+01<br>1.0200 | 1.1812<br>1.1274<br>1.1252 |
| 8000.  | 8.066  | 14.014<br>13.841<br>6.687449-01 | 1.817494+04<br>81.100<br>86.475   | 1.721464+03<br>8.6905<br>9.212   | 10.356<br>8.9599<br>9.000   | 2.6843<br>44.073<br>2.4889 | 1.0254<br>1.335595+01<br>1.0491 | 1.1419<br>1.1043<br>1.1041 |
| 9000.  | 9.075  | 17.470<br>17.313<br>9.585596-01 | 5.284621+04<br>104.359<br>110.078 | 4.405955+03<br>10.2285<br>10.736 | 11.488<br>9.4665<br>9.501   | 2.8503<br>45.122<br>2.5965 | 1.0501<br>1.502544+01<br>1.0854 | 1.1333<br>1.0999<br>1.1001 |
| 10000. | 10.083 | 21.334<br>21.185<br>1.319565+00 | 1.514207+05<br>130.333<br>136.464 | 1.114404+04<br>11.6912<br>12.183 | 12.663<br>9.9579<br>9.994   | 3.0390<br>46.272<br>2.7197 | 1.0792<br>1.669493+01<br>1.1272 | 1.1373<br>1.1044<br>1.1049 |
| 11000. | 11.091 | 25.604<br>25.456<br>1.760693+00 | 4.224297+05<br>158.855<br>165.618 | 2.734048+04<br>12.8914<br>13.376 | 13.987<br>10.5840<br>10.624 | 3.2604<br>47.502<br>2.8893 | 1.1110<br>1.836443+01<br>1.1722 | 1.1512<br>1.1266<br>1.1281 |
| 12000. | 12.100 | 30.280<br>30.107<br>2.301387+00 | 1.129913+06<br>188.986<br>196.952 | 6.370472+04<br>12.9950<br>13.419 | 15.602<br>12.1298<br>12.237 | 3.5337<br>48.752<br>3.3571 | 1.1434<br>2.003392+01<br>1.2063 | 1.1779<br>1.2789<br>1.2849 |
| 13000. | 13.108 | 35.364<br>35.136<br>2.958995+00 | 2.850276+06<br>220.571<br>230.474 | 1.378676+05<br>12.2901<br>12.758 | 17.739<br>14.8172<br>14.906 | 3.8837<br>49.863<br>3.5604 | 1.1722<br>2.170341+01<br>1.2190 | 1.2207<br>1.1786<br>1.1741 |
| 14000. | 14.116 | 40.854<br>40.613<br>3.710393+00 | 6.682973+06<br>256.639<br>267.664 | 2.751849+05<br>12.8524<br>13.347 | 20.475<br>16.1464<br>16.201 | 4.2312<br>50.909<br>3.6560 | 1.1929<br>2.337291+01<br>1.2450 | 1.2334<br>1.1160<br>1.1151 |
| 15000. | 15.125 | 46.751<br>46.509<br>4.568366+00 | 1.465583+07<br>296.099<br>307.904 | 5.246510+05<br>13.7610<br>14.260 | 23.210<br>16.9494<br>16.992 | 4.4821<br>51.974<br>3.7665 | 1.2105<br>2.504240+01<br>1.2781 | 1.2033<br>1.0995<br>1.0993 |
| 16000. | 16.133 | 53.054<br>52.815<br>5.542472+00 | 3.067840+07<br>338.535<br>351.077 | 9.754699+05<br>14.7576<br>15.257 | 25.696<br>17.5541<br>17.591 | 4.7127<br>53.079<br>3.8777 | 1.2310<br>2.671189+01<br>1.3156 | 1.1816<br>1.0933<br>1.0933 |
| 17000. | 17.141 | 59.764<br>59.528<br>6.639368+00 | 6.202938+07<br>383.826<br>397.068 | 1.774933+06<br>15.7710<br>16.269 | 28.018<br>18.0592<br>18.093 | 4.9484<br>54.231<br>3.9890 | 1.2545<br>2.838139+01<br>1.3567 | 1.1723<br>1.0908<br>1.0908 |
| 18000. | 18.150 | 66.881<br>66.647<br>7.865365+00 | 1.217375+08<br>431.920<br>445.831 | 3.157063+06<br>16.7691<br>17.264 | 30.289<br>18.5070<br>18.538 | 5.1924<br>55.431<br>4.1016 | 1.2804<br>3.005088+01<br>1.4011 | 1.1698<br>1.0898<br>1.0899 |
| 19000. | 19.158 | 74.405<br>74.171<br>9.226974+00 | 2.326312+08<br>482.793<br>497.383 | 5.490318+06<br>17.7365<br>18.228 | 32.574<br>18.9188<br>18.948 | 5.4455<br>56.679<br>4.2163 | 1.3083<br>3.172037+01<br>1.4484 | 1.1709<br>1.0899<br>1.0900 |

ALTITUDE = 340000. FT.

P1 = 1.717009-07 ATM. , RHO1 = 2.050837-07 AMA. , T1 = 227.24 K  
 S1/R = 38.525 , A1 = 991.76 FT./SEC. , H1/R = 795.349 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1            | RO/R1<br>RS/R1<br>RCP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 20000. | 20.166 | 82.335<br>82.101<br>1.073073+01   | 4.333169+08<br>536.422<br>551.750   | 9.329896+06<br>18.6596<br>19.148 | 34.918<br>19.3106<br>19.339 | 5.7116<br>57.976<br>4.3342 | 1.3378<br>3.338987+01<br>1.4986 | 1.1753<br>1.0906<br>1.0907 |
| 21000. | 21.174 | 90.671<br>90.436<br>1.283023+01   | 7.870265+08<br>592.794<br>608.929   | 1.548527+07<br>19.5307<br>20.017 | 37.345<br>19.6914<br>19.719 | 5.9886<br>59.320<br>4.4558 | 1.3688<br>3.505936+01<br>1.5516 | 1.1806<br>1.0918<br>1.0919 |
| 22000. | 22.183 | 99.415<br>99.177<br>1.476540+01   | 1.395338+09<br>651.893<br>668.765   | 2.511124+07<br>20.3396<br>20.820 | 39.878<br>20.0724<br>20.100 | 6.2827<br>60.709<br>4.5823 | 1.4015<br>3.672885+01<br>1.6073 | 1.1885<br>1.0936<br>1.0937 |
| 23000. | 23.191 | 108.565<br>108.323<br>1.689225+01 | 2.413977+09<br>713.697<br>731.448   | 3.975544+07<br>21.0771<br>21.554 | 42.529<br>20.4647<br>20.493 | 6.5945<br>62.140<br>4.7152 | 1.4360<br>3.839835+01<br>1.6655 | 1.1983<br>1.0960<br>1.0962 |
| 24000. | 24.199 | 118.122<br>117.874<br>1.922120+01 | 4.076933+09<br>778.180<br>796.985   | 6.144589+07<br>21.7300<br>22.206 | 45.310<br>20.8831<br>20.913 | 6.9262<br>63.610<br>4.8566 | 1.4728<br>4.006784+01<br>1.7261 | 1.2097<br>1.0994<br>1.0996 |
| 25000. | 25.208 | 128.085<br>127.829<br>2.177111+01 | 6.720883+09<br>845.291<br>865.275   | 9.267164+07<br>22.2755<br>22.751 | 48.224<br>21.3528<br>21.384 | 7.2831<br>65.115<br>5.0110 | 1.5126<br>4.173733+01<br>1.7888 | 1.2238<br>1.1044<br>1.1046 |
| 26000. | 26.216 | 138.456<br>138.188<br>2.457644+01 | 1.081507+10<br>914.932<br>936.327   | 1.363411+08<br>22.6700<br>23.145 | 51.276<br>21.9232<br>21.958 | 7.6681<br>66.647<br>5.1896 | 1.5559<br>4.340683+01<br>1.8530 | 1.2403<br>1.1135<br>1.1139 |
| 27000. | 27.224 | 149.232<br>148.947<br>2.762516+01 | 1.699411+10<br>986.831<br>1009.763  | 1.957430+08<br>22.7927<br>23.258 | 54.457<br>22.7323<br>22.779 | 8.0827<br>68.193<br>5.4292 | 1.6035<br>4.507632+01<br>1.9170 | 1.2591<br>1.1350<br>1.1359 |
| 28000. | 28.233 | 160.416<br>160.092<br>3.118813+01 | 2.608584+10<br>1059.898<br>1085.156 | 2.744417+08<br>22.2018<br>22.634 | 57.756<br>24.3410<br>24.431 | 8.5176<br>69.719<br>5.9134 | 1.6552<br>4.674581+01<br>1.9737 | 1.2771<br>1.2164<br>1.2204 |
| 29000. | 29.241 | 172.006<br>171.599<br>3.533144+01 | 3.913793+10<br>1132.403<br>1161.770 | 3.763948+08<br>20.4800<br>20.909 | 61.138<br>27.7441<br>27.867 | 8.9483<br>71.140<br>6.3973 | 1.7106<br>4.841531+01<br>2.0053 | 1.2885<br>1.2359<br>1.2324 |
| 30000. | 30.249 | 184.003<br>183.535<br>3.931956+01 | 5.749028+10<br>1209.566<br>1242.134 | 5.082479+08<br>19.7690<br>20.227 | 64.524<br>30.1977<br>30.289 | 9.2151<br>72.444<br>6.5249 | 1.7632<br>5.008480+01<br>2.0391 | 1.2561<br>1.1612<br>1.1600 |
| 31000. | 31.258 | 196.407<br>195.902<br>4.320376+01 | .000000+00<br>1291.138<br>1326.127  | .000000+00<br>19.6677<br>20.137  | .000<br>31.7600<br>31.837   | .0000<br>73.705<br>6.6823  | .0000<br>5.175429+01<br>2.0804  | .0000<br>1.1349<br>1.1345  |
| 32000. | 32.266 | 209.217<br>208.686<br>4.726148+01 | .000000+00<br>1376.163<br>1413.244  | .000000+00<br>19.7894<br>20.263  | .000<br>32.9214<br>32.991   | .0000<br>74.953<br>6.8427  | .0000<br>5.342379+01<br>2.1262  | .0000<br>1.1235<br>1.1233  |
| 33000. | 33.274 | 222.434<br>221.881<br>5.116147+01 | .000000+00<br>1464.295<br>1503.291  | .000000+00<br>20.0099<br>20.486  | .000<br>33.8661<br>33.931   | .0000<br>76.202<br>7.0011  | .0000<br>5.509328+01<br>2.1751  | .0000<br>1.1176<br>1.1176  |

ALTITUDE = 340000. FT.

P1 = 1.717009-07 ATM. , RHO1 = 2.050837-07 AMA. , T1 = 227.24 K  
 S1/R = 38.525 , A1 = 991.76 FT./SEC. , H1/R = 795.349 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>R0P/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAME0<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 34000. | 34.282 | 236.057<br>235.486<br>5.532882+01 | .000000+00<br>1555.382<br>1596.302 | .000000+00<br>20.2777<br>20.756 | .000<br>34.6772<br>34.740 | .00000<br>77.459<br>7.1572 | .0000<br>5.676277+01<br>2.2266 | .0000<br>1.1144<br>1.1144 |
| 35000. | 35.291 | 250.087<br>249.499<br>5.957125+01 | .000000+00<br>1649.351<br>1692.191 | .000000+00<br>20.5685<br>21.048 | .000<br>35.3984<br>35.459 | .0000<br>78.726<br>7.3119  | .0000<br>5.843227+01<br>2.2804 | .0000<br>1.1126<br>1.1127 |
| 36000. | 36.299 | 264.524<br>263.919<br>6.372028+01 | .000000+00<br>1746.149<br>1790.864 | .000000+00<br>20.8676<br>21.348 | .000<br>36.0558<br>36.116 | .0000<br>80.007<br>7.4659  | .0000<br>6.010176+01<br>2.3362 | .0000<br>1.1116<br>1.1117 |
| 37000. | 37.307 | 279.368<br>278.746<br>6.809315+01 | .000000+00<br>1845.749<br>1892.261 | .000000+00<br>21.1670<br>21.646 | .000<br>36.6662<br>36.725 | .0000<br>81.303<br>7.6199  | .0000<br>6.177125+01<br>2.3940 | .0000<br>1.1113<br>1.1114 |
| 38000. | 38.316 | 294.618<br>293.980<br>7.269083+01 | .000000+00<br>1948.126<br>1996.481 | .000000+00<br>21.4611<br>21.940 | .000<br>37.2410<br>37.300 | .0000<br>82.615<br>7.7743  | .0000<br>6.344075+01<br>2.4537 | .0000<br>1.1112<br>1.1113 |
| 39000. | 39.324 | 310.275<br>309.620<br>7.712721+01 | .000000+00<br>2053.267<br>2103.480 | .000000+00<br>21.7467<br>22.224 | .000<br>37.7889<br>37.847 | .0000<br>83.944<br>7.9295  | .0000<br>6.511024+01<br>2.5152 | .0000<br>1.1114<br>1.1115 |
| 40000. | 40.332 | 326.339<br>325.667<br>8.163167+01 | .000000+00<br>2161.155<br>2213.191 | .000000+00<br>22.0210<br>22.497 | .000<br>38.3163<br>38.374 | .0000<br>85.289<br>8.0863  | .0000<br>6.677973+01<br>2.5784 | .0000<br>1.1119<br>1.1121 |
| 41000. | 41.341 | 342.809<br>342.120<br>8.628140+01 | .000000+00<br>2271.778<br>2325.659 | .000000+00<br>22.2816<br>22.756 | .000<br>38.8282<br>38.886 | .0000<br>86.652<br>8.2446  | .0000<br>6.844923+01<br>2.6434 | .0000<br>1.1127<br>1.1128 |
| 42000. | 42.349 | 359.686<br>358.978<br>9.106888+01 | .000000+00<br>2385.126<br>2440.907 | .000000+00<br>22.5276<br>23.000 | .000<br>39.3295<br>39.388 | .0000<br>88.032<br>8.4047  | .0000<br>7.011872+01<br>2.7100 | .0000<br>1.1135<br>1.1136 |
| 43000. | 43.357 | 376.970<br>376.243<br>9.580766+01 | .000000+00<br>2501.186<br>2558.979 | .000000+00<br>22.7573<br>23.228 | .000<br>39.8236<br>39.882 | .0000<br>89.428<br>8.5668  | .0000<br>7.178821+01<br>2.7782 | .0000<br>1.1145<br>1.1146 |
| 44000. | 44.366 | 394.660<br>393.913<br>1.004297+02 | .000000+00<br>2619.950<br>2679.698 | .000000+00<br>22.9705<br>23.439 | .000<br>40.3144<br>40.374 | .0000<br>90.842<br>8.7316  | .0000<br>7.345771+01<br>2.8481 | .0000<br>1.1156<br>1.1158 |
| 45000. | 45.374 | 412.757<br>411.989<br>1.050143+02 | .000000+00<br>2741.405<br>2803.154 | .000000+00<br>23.1654<br>23.632 | .000<br>40.8056<br>40.865 | .0000<br>92.271<br>8.8994  | .0000<br>7.512720+01<br>2.9195 | .0000<br>1.1170<br>1.1171 |
| 46000. | 46.382 | 431.260<br>430.470<br>1.095130+02 | .000000+00<br>2865.537<br>2929.320 | .000000+00<br>23.3411<br>23.805 | .000<br>41.3006<br>41.361 | .0000<br>93.716<br>9.0706  | .0000<br>7.679669+01<br>2.9924 | .0000<br>1.1185<br>1.1187 |
| 47000. | 47.390 | 450.171<br>449.357<br>1.138686+02 | .000000+00<br>2992.331<br>3058.489 | .000000+00<br>23.4964<br>23.959 | .000<br>41.8038<br>41.865 | .0000<br>95.176<br>9.2456  | .0000<br>7.846619+01<br>3.0667 | .0000<br>1.1202<br>1.1204 |

## ALTITUDE = 340000. FT.

P1 = 1.717009-07 ATM. , RHO1 = 2.050837-07 AMA. , T1 = 227.24 K  
 S1/R = 38.525 , A1 = 991.76 FT./SEC. , H1/R = 795.349 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 48000. | 48.399 | 469.488<br>468.649<br>1.179640+02 | .000000+00<br>3121.771<br>3190.531 | .000000+00<br>23.6301<br>24.093 | .000<br>42.3197<br>42.383 | .0000<br>96.650<br>9.4248 | .0000<br>8.013568+01<br>3.1425 | .0000<br>1.1221<br>1.1223 |
| 49000. | 49.407 | 489.211<br>488.345<br>1.215984+02 | .000000+00<br>3253.837<br>3325.316 | .000000+00<br>23.7405<br>24.203 | .000<br>42.8541<br>42.919 | .0000<br>98.137<br>9.6099 | .0000<br>8.180517+01<br>3.2196 | .0000<br>1.1244<br>1.1246 |
| 50000. | 50.415 | 509.342<br>508.447<br>1.245709+02 | .000000+00<br>3388.573<br>3462.808 | .000000+00<br>23.8248<br>24.287 | .000<br>43.4139<br>43.481 | .0000<br>99.636<br>9.8012 | .0000<br>8.347467+01<br>3.2980 | .0000<br>1.1271<br>1.1273 |

## ALTITUDE = 350000. FT.

P1 = 1.121046-07 ATM. , RHO1 = 1.255401-07 AMA. , T1 = 241.55 K  
 S1/R = 39.166 , A1 = 1022.51 FT./SEC. , H1/R = 845.438 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1          | R0/R1<br>RS/R1<br>RCP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.868  | 7.886<br>7.697<br>2.151781-01   | 1.698067+03<br>40.820<br>44.942   | 2.422207+02<br>6.0310<br>6.530   | 7.069<br>6.8127<br>6.923    | 2.3750<br>42.804<br>2.2969 | 1.0008<br>5.831043+00<br>1.0033 | 1.2622<br>1.2144<br>1.2025 |
| 7000.  | 6.846  | 10.373<br>10.196<br>3.483793-01 | 5.142731+03<br>57.034<br>61.663   | 6.039590+02<br>7.2665<br>7.792   | 8.513<br>7.7612<br>7.814    | 2.5201<br>43.658<br>2.3771 | 1.0094<br>6.802883+00<br>1.0220 | 1.1700<br>1.1220<br>1.1201 |
| 8000.  | 7.824  | 13.243<br>13.084<br>5.255342-01 | 1.523483+04<br>76.214<br>81.192   | 1.554745+03<br>8.7943<br>9.315   | 9.614<br>8.3277<br>8.364    | 2.6636<br>44.612<br>2.4740 | 1.0286<br>7.774723+00<br>1.0517 | 1.1358<br>1.1017<br>1.1015 |
| 9000.  | 8.802  | 16.494<br>16.350<br>7.522941-01 | 4.485390+04<br>98.041<br>103.329  | 4.040338+03<br>10.3621<br>10.868 | 10.625<br>8.7832<br>8.815   | 2.8267<br>45.678<br>2.5799 | 1.0544<br>8.746564+00<br>1.0885 | 1.1291<br>1.0980<br>1.0982 |
| 10000. | 9.780  | 20.129<br>19.993<br>1.034606+00 | 1.304096+05<br>122.412<br>128.057 | 1.038465+04<br>11.819<br>12.338  | 11.686<br>9.2286<br>9.265   | 3.0129<br>46.847<br>2.7019 | 1.0845<br>9.718404+00<br>1.1306 | 1.1339<br>1.1029<br>1.1034 |
| 11000. | 10.758 | 24.146<br>24.010<br>1.379620+00 | 3.692998+05<br>149.160<br>155.370 | 2.587708+04<br>13.0604<br>13.533 | 12.892<br>9.8123<br>9.855   | 3.2324<br>48.099<br>2.8742 | 1.1171<br>1.069024+01<br>1.1756 | 1.1485<br>1.1270<br>1.1288 |
| 12000. | 11.736 | 28.546<br>28.383<br>1.804434+00 | 1.002505+06<br>177.265<br>184.722 | 6.114447+04<br>13.0088<br>13.428 | 14.386<br>11.3923<br>11.498 | 3.5084<br>49.362<br>3.3738 | 1.1502<br>1.166209+01<br>1.2074 | 1.1777<br>1.2941<br>1.2980 |
| 13000. | 12.714 | 33.328<br>33.116<br>2.318590+00 | 2.558677+06<br>206.975<br>216.200 | 1.334293+05<br>12.3665<br>12.838 | 16.419<br>13.8492<br>13.926 | 3.8704<br>50.476<br>3.5355 | 1.1787<br>1.263393+01<br>1.2204 | 1.2254<br>1.1684<br>1.1643 |
| 14000. | 13.692 | 38.493<br>38.271<br>2.905725+00 | 6.045019+06<br>240.899<br>251.122 | 2.675760+05<br>12.9947<br>13.490 | 19.027<br>15.0150<br>15.063 | 4.2108<br>51.534<br>3.6315 | 1.1982<br>1.360577+01<br>1.2472 | 1.2312<br>1.1121<br>1.1114 |

ALTITUDE = 350000. FT.

P1 = 1.121046-07 ATM. , RHO1 = 1.255401-07 AMA. , T1 = 241.55 K  
 S1/R = 39.166 , A1 = 1022.51 FT./SEC. , H1/R = 845.438 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 14.670 | 44.040<br>43.819<br>3.576341+00   | 1.334845+07<br>277.950<br>288.874  | 5.145837+05<br>13.9387<br>14.437 | 21.532<br>15.7294<br>15.768 | 4.4473<br>52.614<br>3.7403 | 1.2158<br>1.457761+01<br>1.2806 | 1.1961<br>1.0969<br>1.0968 |
| 16000. | 15.648 | 49.970<br>49.751<br>4.337700+00   | 2.816462+07<br>317.775<br>329.362  | 9.667125+05<br>14.9623<br>15.462 | 23.768<br>16.2723<br>16.305 | 4.6715<br>53.737<br>3.8495 | 1.2371<br>1.554945+01<br>1.3184 | 1.1750<br>1.0913<br>1.0913 |
| 17000. | 16.626 | 56.283<br>56.067<br>5.194981+00   | 5.745148+07<br>360.272<br>372.484  | 1.777857+06<br>15.9999<br>16.498 | 25.853<br>16.7274<br>16.757 | 4.9026<br>54.909<br>3.9590 | 1.2615<br>1.652129+01<br>1.3598 | 1.1668<br>1.0889<br>1.0890 |
| 18000. | 17.604 | 62.978<br>62.764<br>6.153495+00   | 1.138918+08<br>405.395<br>418.257  | 3.198352+06<br>17.0216<br>17.517 | 27.897<br>17.1313<br>17.159 | 5.1417<br>56.130<br>4.0698 | 1.2882<br>1.749313+01<br>1.4043 | 1.1646<br>1.0882<br>1.0882 |
| 19000. | 18.582 | 70.056<br>69.843<br>7.217578+00   | 2.198269+08<br>453.122<br>466.591  | 5.623601+06<br>18.0105<br>18.502 | 29.957<br>17.5039<br>17.530 | 5.3909<br>57.402<br>4.1828 | 1.3169<br>1.846497+01<br>1.4518 | 1.1662<br>1.0882<br>1.0883 |
| 20000. | 19.560 | 77.516<br>77.303<br>8.392767+00   | 4.138394+08<br>503.436<br>517.575  | 9.666484+06<br>18.9555<br>19.444 | 32.075<br>17.8579<br>17.883 | 5.6509<br>58.723<br>4.2988 | 1.3470<br>1.943681+01<br>1.5022 | 1.1701<br>1.0889<br>1.0890 |
| 21000. | 20.538 | 85.359<br>85.144<br>9.684140+00   | 7.595939+08<br>556.320<br>571.239  | 1.622552+07<br>19.8456<br>20.333 | 34.272<br>18.2040<br>18.229 | 5.9229<br>60.093<br>4.4187 | 1.3785<br>2.040865+01<br>1.5554 | 1.1755<br>1.0901<br>1.0902 |
| 22000. | 21.516 | 93.584<br>93.368<br>1.109447+01   | 1.360753+09<br>611.764<br>627.340  | 2.660790+07<br>20.6744<br>21.155 | 36.569<br>18.5494<br>18.574 | 6.2083<br>61.509<br>4.5433 | 1.4113<br>2.138049+01<br>1.6112 | 1.1822<br>1.0918<br>1.0919 |
| 23000. | 22.494 | 102.192<br>101.972<br>1.263064+01 | 2.379069+09<br>669.747<br>686.101  | 4.261182+07<br>21.4298<br>21.907 | 38.978<br>18.9058<br>18.931 | 6.5095<br>62.969<br>4.6743 | 1.4456<br>2.235233+01<br>1.6696 | 1.1906<br>1.0942<br>1.0944 |
| 24000. | 23.472 | 111.183<br>110.957<br>1.429860+01 | 4.060695+09<br>730.242<br>747.573  | 6.664061+07<br>22.0987<br>22.575 | 41.510<br>19.2872<br>19.314 | 6.8296<br>64.469<br>4.8139 | 1.4814<br>2.332417+01<br>1.7304 | 1.2008<br>1.0976<br>1.0977 |
| 25000. | 24.450 | 120.556<br>120.323<br>1.610337+01 | 6.766094+09<br>793.202<br>811.622  | 1.017395+08<br>22.6566<br>23.132 | 44.173<br>19.7172<br>19.746 | 7.1712<br>66.004<br>4.9669 | 1.5194<br>2.429601+01<br>1.7933 | 1.2130<br>1.1027<br>1.1030 |
| 26000. | 25.428 | 130.312<br>130.068<br>1.805380+01 | 1.101069+10<br>858.529<br>878.275  | 1.516448+08<br>23.0548<br>23.531 | 46.974<br>20.2457<br>20.277 | 7.5376<br>67.567<br>5.1444 | 1.5599<br>2.526785+01<br>1.8576 | 1.2275<br>1.1119<br>1.1123 |
| 27000. | 26.406 | 140.450<br>140.190<br>2.159672+01 | 1.750094+10<br>925.965<br>947.126  | 2.206667+08<br>23.1670<br>23.632 | 49.911<br>21.0041<br>21.047 | 7.9292<br>69.144<br>5.3866 | 1.6036<br>2.623969+01<br>1.9218 | 1.2436<br>1.1346<br>1.1357 |
| 28000. | 27.383 | 150.971<br>150.674<br>2.437621+01 | 2.717644+10<br>994.329<br>1017.712 | 3.135944+08<br>22.4599<br>22.888 | 52.978<br>22.6052<br>22.692 | 8.3454<br>70.697<br>5.9124 | 1.6509<br>2.721153+01<br>1.9775 | 1.2607<br>1.2289<br>1.2333 |

ALTITUDE = 350000. FT.

P1 = 1.121046-07 ATM. , RH01 = 1.2554C1-07 AMA. , T1 = 241.55 K  
 S1/R = 39.166 , A1 = 1022.51 FT./SEC. , H1/R = 845.438 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1            | RO/R1<br>RS/R1<br>RCP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 29000. | 28.361 | 161.875<br>161.497<br>2.760508+01 | 4.126296+10<br>1062.205<br>1089.515 | 4.358358+08<br>20.6481<br>21.081 | 56.157<br>25.8704<br>25.979 | 8.7764<br>72.132<br>6.3452 | 1.7014<br>2.818337+01<br>2.0077 | 1.2762<br>1.2255<br>1.2220 |
| 30000. | 29.339 | 173.161<br>172.731<br>3.068868+01 | 6.130808+10<br>1134.828<br>1164.999 | 5.937006+08<br>20.0093<br>20.469 | 59.410<br>28.0390<br>28.119 | 9.1925<br>73.452<br>6.4701 | 1.7541<br>2.915521+01<br>2.0426 | 1.2837<br>1.1550<br>1.1539 |
| 31000. | 30.317 | 184.829<br>184.368<br>3.374052+01 | .000000+00<br>1211.489<br>1243.843  | .000000+00<br>19.9474<br>20.418  | .000<br>29.4220<br>29.490   | .0000<br>74.733<br>6.6256  | .0000<br>3.012705+01<br>2.0847  | .0000<br>1.1309<br>1.1305  |
| 32000. | 31.295 | 196.881<br>196.396<br>3.683842+01 | .000000+00<br>1291.339<br>1325.608  | .000000+00<br>20.0950<br>20.571  | .000<br>30.4553<br>30.517   | .0000<br>76.004<br>6.7831  | .0000<br>3.109889+01<br>2.1311  | .0000<br>1.1201<br>1.1200  |
| 33000. | 32.273 | 209.314<br>208.811<br>4.000535+01 | .000000+00<br>1374.078<br>1410.088  | .000000+00<br>20.3353<br>20.813  | .000<br>31.2987<br>31.356   | .0000<br>77.277<br>6.9384  | .0000<br>3.207073+01<br>2.1805  | .0000<br>1.1147<br>1.1147  |
| 34000. | 33.251 | 222.131<br>221.611<br>4.315120+01 | .000000+00<br>1459.599<br>1497.266  | .000000+00<br>20.6205<br>21.099  | .000<br>32.0243<br>32.080   | .0000<br>78.558<br>7.0918  | .0000<br>3.304258+01<br>2.2325  | .0000<br>1.1118<br>1.1118  |
| 35000. | 34.229 | 235.330<br>234.794<br>4.649426+01 | .000000+00<br>1547.775<br>1587.243  | .000000+00<br>20.9260<br>21.406  | .000<br>32.6705<br>32.724   | .0000<br>79.852<br>7.2435  | .0000<br>3.401442+01<br>2.2867  | .0000<br>1.1100<br>1.1100  |
| 36000. | 35.207 | 248.911<br>248.361<br>4.987537+01 | .000000+00<br>1638.624<br>1679.790  | .000000+00<br>21.2395<br>21.720  | .000<br>33.2602<br>33.313   | .0000<br>81.160<br>7.3950  | .0000<br>3.498626+01<br>2.3429  | .0000<br>1.1091<br>1.1092  |
| 37000. | 36.185 | 262.876<br>262.311<br>5.311896+01 | .000000+00<br>1732.095<br>1774.955  | .000000+00<br>21.5520<br>22.032  | .000<br>33.8081<br>33.860   | .0000<br>82.485<br>7.5463  | .0000<br>3.595810+01<br>2.4011  | .0000<br>1.1088<br>1.1089  |
| 38000. | 37.163 | 277.222<br>276.643<br>5.650849+01 | .000000+00<br>1828.172<br>1872.691  | .000000+00<br>21.8586<br>22.338  | .000<br>34.3245<br>34.376   | .0000<br>83.826<br>7.6982  | .0000<br>3.692994+01<br>2.4612  | .0000<br>1.1088<br>1.1089  |
| 39000. | 38.141 | 291.952<br>291.358<br>6.004171+01 | .000000+00<br>1926.839<br>1973.017  | .000000+00<br>22.1557<br>22.634  | .000<br>34.8167<br>34.868   | .0000<br>85.185<br>7.8509  | .0000<br>3.790178+01<br>2.5230  | .0000<br>1.1091<br>1.1092  |
| 40000. | 39.119 | 307.063<br>306.455<br>6.359367+01 | .000000+00<br>2028.083<br>2075.948  | .000000+00<br>22.4409<br>22.917  | .000<br>35.2908<br>35.342   | .0000<br>86.561<br>8.0048  | .0000<br>3.887362+01<br>2.5866  | .0000<br>1.1096<br>1.1097  |
| 41000. | 40.097 | 322.558<br>321.934<br>6.698821+01 | .000000+00<br>2131.894<br>2181.401  | .000000+00<br>22.7123<br>23.187  | .000<br>35.7514<br>35.803   | .0000<br>87.956<br>8.1603  | .0000<br>3.984546+01<br>2.6519  | .0000<br>1.1102<br>1.1103  |
| 42000. | 41.075 | 338.435<br>337.795<br>7.044899+01 | .000000+00<br>2238.262<br>2289.512  | .000000+00<br>22.9685<br>23.441  | .000<br>36.2023<br>36.254   | .0000<br>89.368<br>8.3177  | .0000<br>4.081730+01<br>2.7189  | .0000<br>1.1110<br>1.1111  |

## ALTITUDE = 350000. FT.

P1 = 1.121046-07 ATM. , RHO1 = 1.255401-07 AMA. , T1 = 241.55 K  
 S1/R = 39.166 , A1 = 1022.51 FT./SEC. , H1/R = 845.438 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 42.053 | 354.695<br>354.037<br>7.396164+01 | .000000+00<br>2347.175<br>2400.236 | .000000+00<br>23.2079<br>23.679 | .000<br>36.6471<br>36.699 | .0000<br>90.799<br>8.4774  | .0000<br>4.178914+01<br>2.7875 | .0000<br>1.1120<br>1.1122 |
| 44000. | 43.031 | 371.337<br>370.662<br>7.750886+01 | .000000+00<br>2458.625<br>2513.529 | .000000+00<br>23.4298<br>23.899 | .000<br>37.0892<br>37.141 | .0000<br>92.246<br>8.6395  | .0000<br>4.276098+01<br>2.8577 | .0000<br>1.1132<br>1.1133 |
| 45000. | 44.009 | 388.362<br>387.668<br>8.101051+01 | .000000+00<br>2572.601<br>2629.373 | .000000+00<br>23.6332<br>24.100 | .000<br>37.5316<br>37.584 | .0000<br>93.710<br>8.8041  | .0000<br>4.373282+01<br>2.9295 | .0000<br>1.1144<br>1.1145 |
| 46000. | 44.987 | 405.769<br>405.055<br>8.441775+01 | .000000+00<br>2689.092<br>2747.739 | .000000+00<br>23.8171<br>24.282 | .000<br>37.9780<br>38.031 | .0000<br>95.191<br>8.9724  | .0000<br>4.470466+01<br>3.0028 | .0000<br>1.1159<br>1.1160 |
| 47000. | 45.965 | 423.559<br>422.824<br>8.769433+01 | .000000+00<br>2808.082<br>2868.734 | .000000+00<br>23.9801<br>24.443 | .000<br>38.4322<br>38.486 | .0000<br>96.688<br>9.1444  | .0000<br>4.567650+01<br>3.0776 | .0000<br>1.1175<br>1.1177 |
| 48000. | 46.943 | 441.731<br>440.974<br>9.077613+01 | .000000+00<br>2929.557<br>2992.617 | .000000+00<br>24.1209<br>24.584 | .000<br>38.8981<br>38.953 | .0000<br>98.199<br>9.3211  | .0000<br>4.664834+01<br>3.1538 | .0000<br>1.1194<br>1.1196 |
| 49000. | 47.921 | 460.286<br>459.504<br>9.365868+01 | .000000+00<br>3053.486<br>3119.063 | .000000+00<br>24.2368<br>24.700 | .000<br>39.3814<br>39.438 | .0000<br>99.723<br>9.5034  | .0000<br>4.762018+01<br>3.2313 | .0000<br>1.1217<br>1.1219 |
| 50000. | 48.899 | 479.224<br>478.416<br>9.647217+01 | .000000+00<br>3179.869<br>3248.136 | .000000+00<br>24.3262<br>24.790 | .000<br>39.8885<br>39.948 | .0000<br>101.261<br>9.6916 | .0000<br>4.859202+01<br>3.3101 | .0000<br>1.1243<br>1.1246 |

## ALTITUDE = 360000. FT.

P1 = 7.513642-08 ATM. , RHO1 = 7.920103-08 AMA. , T1 = 255.75 K  
 S1/R = 39.765 , A1 = 1052.13 FT./SEC. , H1/R = 895.122 K

| U1    | M1    | H0/H1<br>HS/H1<br>Q RT RN       | P0/P1<br>PS/P1<br>POP/P1        | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1 | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|-------|-------|---------------------------------|---------------------------------|----------------------------------|--------------------------|----------------------------|---------------------------------|----------------------------|
| 6000. | 5.703 | 7.504<br>7.325<br>1.725194-01   | 1.433891+03<br>38.484<br>42.363 | 2.163888+02<br>6.0314<br>6.535   | 6.703<br>6.4395<br>6.537 | 2.3701<br>43.295<br>2.2859 | 1.0011<br>3.512288+00<br>1.0042 | 1.2518<br>1.2017<br>1.1903 |
| 7000. | 6.653 | 9.853<br>9.688<br>2.784568-01   | 4.344525+03<br>53.815<br>58.135 | 5.447041+02<br>7.3284<br>7.856   | 7.987<br>7.2720<br>7.318 | 2.5035<br>44.154<br>2.3647 | 1.0112<br>4.097669+00<br>1.0240 | 1.1603<br>1.1174<br>1.1157 |
| 8000. | 7.604 | 12.563<br>12.417<br>4.192492-01 | 1.297764+04<br>71.897<br>76.526 | 1.420856+03<br>8.8915<br>9.412   | 8.964<br>7.7776<br>7.810 | 2.6444<br>45.120<br>2.4602 | 1.0317<br>4.683051+00<br>1.0543 | 1.1305<br>1.0994<br>1.0992 |
| 9000. | 8.554 | 15.634<br>15.501<br>5.994665-01 | 3.867454+04<br>92.458<br>97.396 | 3.746095+03<br>10.4855<br>10.995 | 9.877<br>8.1920<br>8.219 | 2.8050<br>46.202<br>2.5648 | 1.0585<br>5.268432+00<br>1.0914 | 1.1254<br>1.0964<br>1.0966 |

ALTITUDE = 360000. FT.

P1 = 7.513642-08 ATM. , RH01 = 7.920103-08 AMA. , T1 = 255.75 K  
 S1/R = 39.765 , A1 = 1052.13 FT./SEC. , H1/R = 895.122 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>RCP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 10000. | 9.505  | 19.067<br>18.941<br>8.237808-01 | 1.140170+05<br>115.408<br>120.705 | 9.775189+03<br>11.9934<br>12.490 | 10.843<br>8.6048<br>8.632   | 2.9889<br>47.389<br>2.6858 | 1.0893<br>5.853813+00<br>1.1337 | 1.1310<br>1.1017<br>1.1021 |
| 11000. | 10.455 | 22.861<br>22.736<br>1.097596+00 | 3.275067+05<br>140.596<br>146.350 | 2.471854+04<br>13.2144<br>13.681 | 11.950<br>9.1462<br>9.189   | 3.2069<br>48.661<br>2.8609 | 1.1227<br>6.439195+00<br>1.1788 | 1.1462<br>1.1279<br>1.1298 |
| 12000. | 11.405 | 27.017<br>26.863<br>1.436400+00 | 9.008558+05<br>166.913<br>173.930 | 5.913097+04<br>13.0064<br>13.422 | 13.343<br>10.7578<br>10.860 | 3.4862<br>49.936<br>3.3851 | 1.1562<br>7.024576+00<br>1.2083 | 1.1779<br>1.3043<br>1.3057 |
| 13000. | 12.356 | 31.534<br>31.336<br>1.844397+00 | 2.323870+06<br>194.987<br>203.620 | 1.299211+05<br>12.4436<br>12.918 | 15.295<br>12.9961<br>13.064 | 3.8615<br>51.053<br>3.5126 | 1.1842<br>7.609958+00<br>1.2218 | 1.2309<br>1.1595<br>1.1559 |
| 14000. | 13.306 | 36.412<br>36.206<br>2.310087+00 | 5.525884+06<br>227.008<br>236.508 | 2.616333+05<br>13.1302<br>13.626 | 17.784<br>14.0277<br>14.071 | 4.1900<br>52.121<br>3.6090 | 1.2026<br>8.195339+00<br>1.2492 | 1.2274<br>1.1087<br>1.1080 |
| 15000. | 14.257 | 41.651<br>41.447<br>2.842307+00 | 1.227933+07<br>261.927<br>272.069 | 5.074742+05<br>14.1049<br>14.604 | 20.077<br>14.6701<br>14.704 | 4.4145<br>53.217<br>3.7162 | 1.2205<br>8.780720+00<br>1.2830 | 1.1892<br>1.0947<br>1.0946 |
| 16000. | 15.207 | 47.252<br>47.051<br>3.446664+00 | 2.610573+07<br>299.448<br>310.219 | 9.628319+05<br>15.1555<br>15.656 | 22.099<br>15.1597<br>15.189 | 4.6331<br>54.357<br>3.8236 | 1.2424<br>9.366102+00<br>1.3211 | 1.1690<br>1.0895<br>1.0895 |
| 17000. | 16.158 | 53.214<br>53.016<br>4.127086+00 | 5.374032+07<br>339.477<br>350.839 | 1.789846+06<br>16.2158<br>16.715 | 23.985<br>15.5725<br>15.599 | 4.8601<br>55.547<br>3.9315 | 1.2676<br>9.951483+00<br>1.3626 | 1.1616<br>1.0873<br>1.0873 |
| 18000. | 17.108 | 59.538<br>59.341<br>4.887412+00 | 1.075043+08<br>381.978<br>393.887 | 3.253065+06<br>17.2591<br>17.754 | 25.837<br>15.9397<br>15.965 | 5.0958<br>56.789<br>4.0406 | 1.2952<br>1.053686+01<br>1.4073 | 1.1603<br>1.0865<br>1.0866 |
| 19000. | 18.059 | 66.223<br>66.027<br>5.732002+00 | 2.095336+08<br>426.929<br>439.431 | 5.780822+06<br>18.2685<br>18.760 | 27.709<br>16.2792<br>16.303 | 5.3408<br>58.083<br>4.1520 | 1.3246<br>1.112225+01<br>1.4549 | 1.1620<br>1.0866<br>1.0867 |
| 20000. | 19.009 | 73.269<br>73.073<br>6.664360+00 | 3.983615+08<br>474.315<br>487.415 | 1.004180+07<br>19.2331<br>19.721 | 29.636<br>16.6018<br>16.625 | 5.5963<br>59.427<br>4.2663 | 1.3555<br>1.170763+01<br>1.5055 | 1.1657<br>1.0874<br>1.0875 |
| 21000. | 19.960 | 80.676<br>80.480<br>7.688822+00 | 7.383412+08<br>524.124<br>537.917 | 1.703011+07<br>20.1433<br>20.629 | 31.639<br>16.9170<br>16.940 | 5.8633<br>60.820<br>4.3846 | 1.3876<br>1.229301+01<br>1.5588 | 1.1708<br>1.0885<br>1.0887 |
| 22000. | 20.910 | 88.445<br>88.247<br>8.808226+00 | 1.335774+09<br>576.340<br>590.793 | 2.821970+07<br>20.9887<br>21.470 | 33.735<br>17.2336<br>17.256 | 6.1437<br>62.262<br>4.5076 | 1.4209<br>1.287839+01<br>1.6148 | 1.1775<br>1.0902<br>1.0903 |
| 23000. | 21.860 | 96.576<br>96.374<br>1.002706+01 | 2.357482+09<br>630.950<br>646.123 | 4.564944+07<br>21.7610<br>22.239 | 35.937<br>17.5598<br>17.582 | 6.4384<br>63.749<br>4.6368 | 1.4552<br>1.346377+01<br>1.6733 | 1.1853<br>1.0925<br>1.0927 |

ALTITUDE = 360000. FT.

P1 = 7.513642-08 ATM. , RH01 = 7.920103-08 AMA. , T1 = 255.75 K  
 S1/R = 39.765 , A1 = 1052.13 FT./SEC. , H1/R = 895.122 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1            | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 24000. | 22.811 | 105.067<br>104.861<br>1.135025+01 | 4.062077+09<br>687.926<br>703.982   | 7.212544+07<br>22.4449<br>22.921 | 38.256<br>17.9093<br>17.933 | 6.7493<br>65.276<br>4.7748 | 1.4908<br>1.404915+01<br>1.7343 | 1.1943<br>1.0959<br>1.0961 |
| 25000. | 23.761 | 113.920<br>113.707<br>1.278237+01 | 6.835703+09<br>747.224<br>764.311   | 1.113117+08<br>23.0148<br>23.491 | 40.703<br>18.3058<br>18.331 | 7.0804<br>66.841<br>4.9263 | 1.5278<br>1.463453+01<br>1.7974 | 1.2054<br>1.1011<br>1.1013 |
| 26000. | 24.712 | 123.134<br>122.912<br>1.432968+01 | 1.123304+10<br>808.749<br>827.034   | 1.677444+08<br>23.4196<br>23.895 | 43.282<br>18.7952<br>18.824 | 7.4318<br>68.433<br>5.1030 | 1.5667<br>1.521992+01<br>1.8619 | 1.2179<br>1.1106<br>1.1110 |
| 27000. | 25.662 | 132.710<br>132.472<br>1.600331+01 | 1.803138+10<br>872.239<br>891.869   | 2.468675+08<br>23.5162<br>23.981 | 45.999<br>19.5136<br>19.552 | 7.8067<br>70.039<br>5.3478 | 1.6080<br>1.580530+01<br>1.9261 | 1.2321<br>1.1344<br>1.1355 |
| 28000. | 26.613 | 142.647<br>142.372<br>1.785051+01 | 2.828414+10<br>936.443<br>958.214   | 3.549346+08<br>22.6840<br>23.106 | 48.850<br>21.1155<br>21.201 | 8.2056<br>71.618<br>5.9181 | 1.6519<br>1.639068+01<br>1.9807 | 1.2476<br>1.2425<br>1.2471 |
| 29000. | 27.563 | 152.945<br>152.595<br>1.992723+01 | 4.337444+10<br>1000.347<br>1025.802 | 4.988946+08<br>20.8130<br>21.248 | 51.829<br>24.2266<br>24.323 | 8.6264<br>73.065<br>6.2951 | 1.6987<br>1.697606+01<br>2.0099 | 1.2639<br>1.2154<br>1.2121 |
| 30000. | 28.514 | 163.605<br>163.208<br>2.208992+01 | 6.508710+10<br>1068.894<br>1096.968 | 6.868036+08<br>20.2409<br>20.703 | 54.911<br>26.1555<br>26.227 | 9.0466<br>74.401<br>6.4193 | 1.7477<br>1.756144+01<br>2.0459 | 1.2751<br>1.1494<br>1.1484 |
| 31000. | 29.464 | 174.626<br>174.201<br>2.436112+01 | .000000+00<br>1141.203<br>1171.253  | .000000+00<br>20.2138<br>20.686  | .000<br>27.3905<br>27.451   | .0000<br>75.701<br>6.5731  | .0000<br>1.814682+01<br>2.0887  | .0000<br>1.1271<br>1.1267  |
| 32000. | 30.414 | 186.008<br>185.563<br>2.676008+01 | .000000+00<br>1216.474<br>1248.272  | .000000+00<br>20.3848<br>20.861  | .000<br>28.3177<br>28.372   | .0000<br>76.993<br>6.7282  | .0000<br>1.873220+01<br>2.1356  | .0000<br>1.1172<br>1.1171  |
| 33000. | 31.365 | 197.752<br>197.290<br>2.929511+01 | .000000+00<br>1294.449<br>1327.859  | .000000+00<br>20.6436<br>21.122  | .000<br>29.0769<br>29.128   | .0000<br>78.288<br>6.8809  | .0000<br>1.931758+01<br>2.1855  | .0000<br>1.1121<br>1.1121  |
| 34000. | 32.315 | 209.857<br>209.381<br>3.430554+01 | .000000+00<br>1375.016<br>1409.949  | .000000+00<br>20.9445<br>21.424  | .000<br>29.7312<br>29.780   | .0000<br>79.593<br>7.0317  | .0000<br>1.990297+01<br>2.2379  | .0000<br>1.1093<br>1.1094  |
| 35000. | 33.266 | 222.323<br>221.834<br>3.688769+01 | .000000+00<br>1458.112<br>1494.673  | .000000+00<br>21.2644<br>21.745  | .000<br>30.3148<br>30.363   | .0000<br>80.912<br>7.1812  | .0000<br>2.048835+01<br>2.2924  | .0000<br>1.1078<br>1.1078  |
| 36000. | 34.216 | 235.151<br>234.648<br>3.961267+01 | .000000+00<br>1543.703<br>1581.848  | .000000+00<br>21.5905<br>22.072  | .000<br>30.8479<br>30.895   | .0000<br>82.246<br>7.3299  | .0000<br>2.107373+01<br>2.3490  | .0000<br>1.1069<br>1.1070  |
| 37000. | 35.167 | 248.340<br>247.825<br>4.238944+01 | .000000+00<br>1631.764<br>1671.449  | .000000+00<br>21.9155<br>22.397  | .000<br>31.3434<br>31.390   | .0000<br>83.597<br>7.4787  | .0000<br>2.165911+01<br>2.4075  | .0000<br>1.1065<br>1.1067  |

ALTITUDE = 360000. FT.

P1 = 7.513642-08 ATM. , RHO1 = 7.920103-08 AMA. , T1 = 255.75 K  
 S1/R = 39.765 , A1 = 1052.13 FT./SEC. , H1/R = 895.122 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 38000. | 36.117 | 261.891<br>261.362<br>4.497201+01 | .000000+00<br>1722.277<br>1763.445 | .000000+00<br>22.2338<br>22.713 | .000<br>31.8109<br>31.857 | .0000<br>84.966<br>7.6282  | .0000<br>2.224449+01<br>2.4679 | .0000<br>1.1066<br>1.1067 |
| 39000. | 37.068 | 275.802<br>275.261<br>4.764834+01 | .000000+00<br>1815.228<br>1857.961 | .000000+00<br>22.5420<br>23.021 | .000<br>32.2567<br>32.302 | .0000<br>86.353<br>7.7785  | .0000<br>2.282987+01<br>2.5301 | .0000<br>1.1068<br>1.1069 |
| 40000. | 38.018 | 290.075<br>289.520<br>5.041256+01 | .000000+00<br>1910.606<br>1954.873 | .000000+00<br>22.8375<br>23.315 | .000<br>32.6861<br>32.732 | .0000<br>87.759<br>7.9301  | .0000<br>2.341525+01<br>2.5940 | .0000<br>1.1073<br>1.1074 |
| 41000. | 38.969 | 304.710<br>304.141<br>5.325957+01 | .000000+00<br>2008.402<br>2054.158 | .000000+00<br>23.1189<br>23.593 | .000<br>33.1034<br>33.149 | .0000<br>89.184<br>8.0832  | .0000<br>2.400064+01<br>2.6597 | .0000<br>1.1080<br>1.1081 |
| 42000. | 39.919 | 319.706<br>319.122<br>5.592318+01 | .000000+00<br>2108.605<br>2155.919 | .000000+00<br>23.3843<br>23.857 | .000<br>33.5121<br>33.558 | .0000<br>90.627<br>8.2382  | .0000<br>2.458602+01<br>2.7270 | .0000<br>1.1088<br>1.1089 |
| 43000. | 40.869 | 335.063<br>334.464<br>5.853317+01 | .000000+00<br>2211.208<br>2260.179 | .000000+00<br>23.6329<br>24.104 | .000<br>33.9156<br>33.961 | .0000<br>92.089<br>8.3951  | .0000<br>2.517140+01<br>2.7959 | .0000<br>1.1097<br>1.1098 |
| 44000. | 41.820 | 350.781<br>350.167<br>6.113426+01 | .000000+00<br>2316.202<br>2366.861 | .000000+00<br>23.8637<br>24.333 | .000<br>34.3166<br>34.363 | .0000<br>93.569<br>8.5548  | .0000<br>2.575678+01<br>2.8665 | .0000<br>1.1108<br>1.1109 |
| 45000. | 42.770 | 366.861<br>366.229<br>6.370243+01 | .000000+00<br>2423.575<br>2475.939 | .000000+00<br>24.0752<br>24.542 | .000<br>34.7183<br>34.765 | .0000<br>95.066<br>8.7175  | .0000<br>2.634216+01<br>2.9386 | .0000<br>1.1121<br>1.1123 |
| 46000. | 43.721 | 383.302<br>382.653<br>6.620880+01 | .000000+00<br>2533.316<br>2587.411 | .000000+00<br>24.2663<br>24.731 | .000<br>35.1238<br>35.171 | .0000<br>96.581<br>8.8830  | .0000<br>2.692754+01<br>3.0123 | .0000<br>1.1135<br>1.1136 |
| 47000. | 44.671 | 400.105<br>399.436<br>6.872220+01 | .000000+00<br>2645.414<br>2701.360 | .000000+00<br>24.4363<br>24.899 | .000<br>35.5364<br>35.584 | .0000<br>98.112<br>9.0525  | .0000<br>2.751292+01<br>3.0874 | .0000<br>1.1151<br>1.1153 |
| 48000. | 45.622 | 417.269<br>416.578<br>7.107218+01 | .000000+00<br>2759.725<br>2817.990 | .000000+00<br>24.5822<br>25.046 | .000<br>35.9603<br>36.009 | .0000<br>99.658<br>9.2263  | .0000<br>2.809830+01<br>3.1640 | .0000<br>1.1170<br>1.1172 |
| 49000. | 46.572 | 434.794<br>434.085<br>7.317229+01 | .000000+00<br>2876.763<br>2937.139 | .000000+00<br>24.7064<br>25.169 | .000<br>36.4007<br>36.451 | .0000<br>101.218<br>9.4054 | .0000<br>2.868369+01<br>3.2419 | .0000<br>1.1192<br>1.1194 |
| 50000. | 47.523 | 452.680<br>451.946<br>7.490804+01 | .000000+00<br>2995.677<br>3058.678 | .000000+00<br>24.7997<br>25.264 | .000<br>36.8632<br>36.916 | .0000<br>102.792<br>9.5915 | .0000<br>2.926907+01<br>3.3211 | .0000<br>1.1218<br>1.1220 |

ALTITUDE = 370000. FT.

P1 = 5.197733-08 ATM. , RH01 = 4.925201-08 AMA. , T1 = 283.06 K  
 S1/R = 40.488 , A1 = 1106.88 FT./SEC. , H1/R = 990.706 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.421  | 6.877<br>6.714<br>1.385061-01   | 1.064064+03<br>34.681<br>38.178   | 1.772258+02<br>6.0190<br>6.529   | 6.100<br>5.8379<br>5.919    | 2.3631<br>43.827<br>2.2753 | 1.0018<br>2.015115+00<br>1.0055 | 1.2346<br>1.1856<br>1.1752 |
| 7000.  | 6.324  | 8.999<br>8.852<br>2.223504-01   | 3.219951+03<br>48.537<br>52.389   | 4.512513+02<br>7.3875<br>7.916   | 7.163<br>6.5229<br>6.561    | 2.4853<br>44.690<br>2.3536 | 1.0139<br>2.350967+00<br>1.0266 | 1.1490<br>1.1124<br>1.1110 |
| 8000.  | 7.228  | 11.447<br>11.318<br>3.336312-01 | 9.703531+03<br>64.818<br>68.932   | 1.194479+03<br>8.9864<br>9.507   | 7.982<br>6.9516<br>6.979    | 2.6235<br>45.668<br>2.4479 | 1.0359<br>2.686820+00<br>1.0575 | 1.1246<br>1.0972<br>1.0970 |
| 9000.  | 8.131  | 14.223<br>14.105<br>4.759213-01 | 2.931375+04<br>83.317<br>87.686   | 3.201100+03<br>10.6102<br>11.115 | 8.762<br>7.3081<br>7.333    | 2.7813<br>46.766<br>2.5508 | 1.0637<br>3.022672+00<br>1.0949 | 1.1213<br>1.0946<br>1.0948 |
| 10000. | 9.034  | 17.324<br>17.213<br>6.529145-01 | 8.777376+04<br>103.960<br>108.623 | 8.495979+03<br>12.1423<br>12.629 | 9.599<br>7.6686<br>7.696    | 2.9626<br>47.971<br>2.6711 | 1.0954<br>3.358525+00<br>1.1375 | 1.1277<br>1.1005<br>1.1010 |
| 11000. | 9.938  | 20.752<br>20.641<br>8.693284-01 | 2.562026+05<br>126.588<br>131.749 | 2.183986+04<br>13.3441<br>13.819 | 10.570<br>8.1720<br>8.206   | 3.1794<br>49.261<br>2.8519 | 1.1296<br>3.694377+00<br>1.1825 | 1.1438<br>1.1304<br>1.1324 |
| 12000. | 10.841 | 24.507<br>24.366<br>1.137850+00 | 7.153124+05<br>150.097<br>156.429 | 5.295007+04<br>12.9555<br>13.370 | 11.817<br>9.7551<br>9.850   | 3.4649<br>50.543<br>3.3953 | 1.1635<br>4.030229+00<br>1.2090 | 1.1797<br>1.3095<br>1.3079 |
| 13000. | 11.745 | 28.588<br>28.411<br>1.459271+00 | 1.864783+06<br>175.470<br>183.192 | 1.169294+05<br>12.5157<br>12.994 | 13.636<br>11.6712<br>11.728 | 3.8579<br>51.661<br>3.4903 | 1.1903<br>4.366082+00<br>1.2235 | 1.2388<br>1.1501<br>1.1470 |
| 14000. | 12.648 | 32.995<br>32.813<br>1.826172+00 | 4.459944+06<br>204.337<br>212.777 | 2.364866+05<br>13.2642<br>13.760 | 15.898<br>12.5385<br>12.574 | 4.1638<br>52.741<br>3.5870 | 1.2074<br>4.701934+00<br>1.2516 | 1.2203<br>1.1051<br>1.1045 |
| 15000. | 13.552 | 37.729<br>37.549<br>2.245826+00 | 9.976835+06<br>235.769<br>244.795 | 4.634690+05<br>14.2742<br>14.774 | 17.874<br>13.0868<br>13.116 | 4.3721<br>53.852<br>3.6927 | 1.2258<br>5.037787+00<br>1.2858 | 1.1786<br>1.0925<br>1.0924 |
| 16000. | 14.455 | 42.790<br>42.612<br>2.722053+00 | 2.140193+07<br>269.527<br>279.076 | 8.898360+05<br>15.3508<br>15.851 | 19.603<br>13.5092<br>13.534 | 4.5890<br>55.009<br>3.7982 | 1.2487<br>5.373639+00<br>1.3241 | 1.1623<br>1.0876<br>1.0876 |
| 17000. | 15.358 | 48.177<br>48.002<br>3.258408+00 | 4.451940+07<br>305.537<br>315.623 | 1.674782+06<br>16.4349<br>16.934 | 21.221<br>13.8666<br>13.890 | 4.8106<br>56.218<br>3.9044 | 1.2749<br>5.709492+00<br>1.3658 | 1.1556<br>1.0856<br>1.0857 |
| 18000. | 16.262 | 53.890<br>53.717<br>3.857633+00 | 9.008865+07<br>343.766<br>354.338 | 3.083270+06<br>17.5000<br>17.995 | 22.815<br>14.1856<br>14.207 | 5.0419<br>57.481<br>4.0119 | 1.3035<br>6.045344+00<br>1.4106 | 1.1548<br>1.0849<br>1.0850 |
| 19000. | 17.165 | 59.930<br>59.758<br>4.523015+00 | 1.776057+08<br>384.198<br>395.261 | 5.547500+06<br>18.5309<br>19.022 | 24.430<br>14.4807<br>14.501 | 5.2821<br>58.797<br>4.1216 | 1.3338<br>6.381197+00<br>1.4584 | 1.1568<br>1.0851<br>1.0852 |

ALTITUDE = 370000. FT.

P1 = 5.197733-08 ATM. , RH01 = 4.925201-08 AMA. , T1 = 283.06 K  
 S1/R = 40.488 , A1 = 1106.88 FT./SEC. , H1/R = 990.706 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1            | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 20000. | 18.069 | 66.296<br>66.125<br>5.257713+00   | 3.415143+08<br>426.818<br>438.415   | 9.753903+06<br>19.5152<br>20.003 | 26.095<br>14.7622<br>14.782 | 5.5324<br>60.165<br>4.2343 | 1.3656<br>6.717049+00<br>1.5091 | 1.1604<br>1.0857<br>1.0858 |
| 21000. | 18.972 | 72.989<br>72.817<br>6.064933+00   | 6.406238+08<br>471.619<br>483.831   | 1.675136+07<br>20.4450<br>20.931 | 27.831<br>15.0368<br>15.056 | 5.7956<br>61.583<br>4.3509 | 1.3986<br>7.052902+00<br>1.5626 | 1.1659<br>1.0869<br>1.0870 |
| 22000. | 19.876 | 80.009<br>79.835<br>6.946920+00   | 1.171801+09<br>518.585<br>531.383   | 2.808064+07<br>21.3099<br>21.791 | 29.649<br>15.3128<br>15.332 | 6.0700<br>63.051<br>4.4722 | 1.4325<br>7.388754+00<br>1.6187 | 1.1720<br>1.0886<br>1.0887 |
| 23000. | 20.779 | 87.354<br>87.178<br>7.906974+00   | 2.092387+09<br>567.703<br>581.104   | 4.598252+07<br>22.0989<br>22.575 | 31.563<br>15.5986<br>15.618 | 6.3580<br>64.565<br>4.5998 | 1.4673<br>7.724607+00<br>1.6774 | 1.1792<br>1.0909<br>1.0910 |
| 24000. | 21.683 | 95.027<br>94.846<br>8.949753+00   | 3.646144+09<br>618.949<br>633.185   | 7.352059+07<br>22.7970<br>23.275 | 33.583<br>15.9063<br>15.926 | 6.6610<br>66.121<br>4.7360 | 1.5030<br>8.060459+00<br>1.7386 | 1.1875<br>1.0942<br>1.0944 |
| 25000. | 22.586 | 103.026<br>102.839<br>1.007780+01 | 6.203559+09<br>672.285<br>687.405   | 1.148076+08<br>23.3800<br>23.856 | 35.718<br>16.2547<br>16.277 | 6.9818<br>67.715<br>4.8860 | 1.5397<br>8.396312+00<br>1.8018 | 1.1974<br>1.0995<br>1.0997 |
| 26000. | 23.489 | 111.351<br>111.156<br>1.129670+01 | 1.030553+10<br>727.621<br>743.779   | 1.750759+08<br>23.7899<br>24.264 | 37.975<br>16.6896<br>16.716 | 7.3206<br>69.338<br>5.0621 | 1.5776<br>8.732164+00<br>1.8665 | 1.2085<br>1.1092<br>1.1096 |
| 27000. | 24.393 | 120.003<br>119.794<br>1.261626+01 | 1.672490+10<br>784.699<br>802.093   | 2.608214+08<br>23.8660<br>24.331 | 40.362<br>17.3443<br>17.378 | 7.6808<br>70.974<br>5.3113 | 1.6170<br>9.068016+00<br>1.9307 | 1.2212<br>1.1347<br>1.1359 |
| 28000. | 25.296 | 128.981<br>128.736<br>1.407824+01 | 2.652846+10<br>842.239<br>861.629   | 3.797221+08<br>22.8775<br>23.294 | 42.882<br>18.8956<br>18.977 | 8.0632<br>72.577<br>5.9340 | 1.6582<br>9.403869+00<br>1.9839 | 1.2353<br>1.2590<br>1.2636 |
| 29000. | 26.200 | 138.286<br>137.974<br>1.571682+01 | 4.114277+10<br>899.697<br>922.410   | 5.405380+08<br>20.9793<br>21.419 | 45.532<br>21.7004<br>21.782 | 8.4652<br>74.035<br>6.2436 | 1.7014<br>9.739721+00<br>2.0123 | 1.2497<br>1.2046<br>1.2015 |
| 30000. | 27.103 | 147.917<br>147.567<br>1.741739+01 | 6.242844+10<br>961.548<br>986.496   | 7.531570+08<br>20.4788<br>20.943 | 48.301<br>23.3335<br>23.394 | 8.8833<br>75.387<br>6.3689 | 1.7466<br>1.007557+01<br>2.0494 | 1.2637<br>1.1439<br>1.1430 |
| 31000. | 28.007 | 157.874<br>157.501<br>1.920482+01 | 9.277847+10<br>1026.683<br>1053.336 | 1.029444+09<br>20.4883<br>20.961 | 51.164<br>24.3862<br>24.437 | 9.2898<br>76.707<br>6.5207 | 1.7929<br>1.041143+01<br>2.0930 | 1.2711<br>1.1234<br>1.1231 |
| 32000. | 28.910 | 168.159<br>167.768<br>2.109344+01 | .000000+00<br>1094.444<br>1122.628  | .000000+00<br>20.6834<br>21.161  | .000<br>25.1808<br>25.227   | .0000<br>78.020<br>6.6733  | .0000<br>1.074728+01<br>2.1404  | .0000<br>1.1143<br>1.1142  |
| 33000. | 29.814 | 178.769<br>178.366<br>2.308933+01 | .000000+00<br>1164.681<br>1194.207  | .000000+00<br>20.9622<br>21.441  | .000<br>25.8336<br>25.877   | .0000<br>79.339<br>6.8234  | .0000<br>1.108313+01<br>2.1907  | .0000<br>1.1095<br>1.1095  |

ALTITUDE = 370000. FT.

P1 = 5.197733-08 ATM. , RHO1 = 4.925201-08 AMA. , T1 = 283.06 K  
 S1/R = 40.488 , A1 = 1106.88 FT./SEC. , H1/R = 990.706 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|---------------------------|--------------------------------|---------------------------|
| 34000. | 30.717 | 189.706<br>189.289<br>2.519705+01 | .000000+00<br>1237.120<br>1268.055 | .000000+00<br>21.2780<br>21.758 | .000<br>26.3976<br>26.439 | .0000<br>80.670<br>6.9715 | .0000<br>1.141898+01<br>2.2435 | .0000<br>1.1069<br>1.1069 |
| 35000. | 31.620 | 200.970<br>200.542<br>2.742065+01 | .000000+00<br>1311.890<br>1344.197 | .000000+00<br>21.6127<br>22.094 | .000<br>26.9011<br>26.942 | .0000<br>82.014<br>7.1183 | .0000<br>1.175484+01<br>2.2984 | .0000<br>1.1055<br>1.1055 |
| 36000. | 32.524 | 212.560<br>212.121<br>2.976336+01 | .000000+00<br>1388.900<br>1422.625 | .000000+00<br>21.9526<br>22.435 | .000<br>27.3617<br>27.402 | .0000<br>83.375<br>7.2649 | .0000<br>1.209069+01<br>2.3553 | .0000<br>1.1047<br>1.1048 |
| 37000. | 33.427 | 224.477<br>224.026<br>3.222684+01 | .000000+00<br>1468.130<br>1503.210 | .000000+00<br>22.2901<br>22.772 | .000<br>27.7902<br>27.830 | .0000<br>84.753<br>7.4112 | .0000<br>1.242654+01<br>2.4142 | .0000<br>1.1044<br>1.1045 |
| 38000. | 34.331 | 236.720<br>236.258<br>3.481403+01 | .000000+00<br>1549.563<br>1585.974 | .000000+00<br>22.6202<br>23.101 | .000<br>28.1945<br>28.234 | .0000<br>86.151<br>7.5583 | .0000<br>1.276239+01<br>2.4749 | .0000<br>1.1044<br>1.1045 |
| 39000. | 35.234 | 249.289<br>248.817<br>3.752790+01 | .000000+00<br>1633.189<br>1670.928 | .000000+00<br>22.9396<br>23.419 | .000<br>28.5805<br>28.619 | .0000<br>87.568<br>7.7061 | .0000<br>1.309825+01<br>2.5374 | .0000<br>1.1046<br>1.1047 |
| 40000. | 36.138 | 262.185<br>261.701<br>4.037132+01 | .000000+00<br>1718.998<br>1758.089 | .000000+00<br>23.2462<br>23.724 | .000<br>28.9524<br>28.991 | .0000<br>89.004<br>7.8552 | .0000<br>1.343410+01<br>2.6017 | .0000<br>1.1051<br>1.1053 |
| 41000. | 37.041 | 275.408<br>274.912<br>4.334601+01 | .000000+00<br>1806.982<br>1847.382 | .000000+00<br>23.5378<br>24.013 | .000<br>29.3139<br>29.353 | .0000<br>90.460<br>8.0060 | .0000<br>1.376995+01<br>2.6676 | .0000<br>1.1058<br>1.1059 |
| 42000. | 37.944 | 288.957<br>288.449<br>4.427716+01 | .000000+00<br>1897.131<br>1938.852 | .000000+00<br>23.8132<br>24.286 | .000<br>29.6680<br>29.707 | .0000<br>91.935<br>8.1583 | .0000<br>1.410580+01<br>2.7353 | .0000<br>1.1065<br>1.1066 |
| 43000. | 38.848 | 302.832<br>302.311<br>4.647169+01 | .000000+00<br>1989.440<br>2032.581 | .000000+00<br>24.0713<br>24.542 | .000<br>30.0178<br>30.057 | .0000<br>93.429<br>8.3133 | .0000<br>1.444166+01<br>2.8046 | .0000<br>1.1075<br>1.1076 |
| 44000. | 39.751 | 317.034<br>316.499<br>4.840990+01 | .000000+00<br>2083.898<br>2128.539 | .000000+00<br>24.3106<br>24.779 | .000<br>30.3657<br>30.405 | .0000<br>94.943<br>8.4703 | .0000<br>1.477751+01<br>2.8755 | .0000<br>1.1085<br>1.1087 |
| 45000. | 40.655 | 331.563<br>331.013<br>5.029319+01 | .000000+00<br>2180.500<br>2226.634 | .000000+00<br>24.5307<br>24.997 | .000<br>30.7143<br>30.754 | .0000<br>96.474<br>8.6300 | .0000<br>1.511336+01<br>2.9479 | .0000<br>1.1097<br>1.1099 |
| 46000. | 41.558 | 346.418<br>345.853<br>5.209260+01 | .000000+00<br>2279.233<br>2326.928 | .000000+00<br>24.7301<br>25.195 | .000<br>31.0664<br>31.106 | .0000<br>98.024<br>8.7933 | .0000<br>1.544921+01<br>3.0219 | .0000<br>1.1111<br>1.1113 |
| 47000. | 42.462 | 361.599<br>361.018<br>5.376852+01 | .000000+00<br>2380.086<br>2429.400 | .000000+00<br>24.9071<br>25.370 | .000<br>31.4251<br>31.466 | .0000<br>99.590<br>8.9601 | .0000<br>1.578507+01<br>3.0974 | .0000<br>1.1127<br>1.1129 |

## ALTITUDE = 370000. FT.

P1 = 5.197733-08 ATM. , RHO1 = 4.925201-08 AMA. , T1 = 283.06 K  
 S1/R = 40.488 , A1 = 1106.88 FT./SEC. , H1/R = 990.706 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1        | TO/T1<br>TS/T1<br>TOP/T1  | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 48000. | 43.365 | 377.107<br>376.508<br>5.530310+01 | .000000+00<br>2483.059<br>2534.259 | .000000+00<br>25.0612<br>25.524 | .000<br>31.7940<br>31.835 | .0000<br>101.173<br>9.1314 | .0000<br>1.612092+01<br>3.1743 | .0000<br>1.1146<br>1.1148 |
| 49000. | 44.269 | 392.941<br>392.324<br>5.687691+01 | .000000+00<br>2588.099<br>2641.410 | .000000+00<br>25.1888<br>25.653 | .000<br>32.1773<br>32.220 | .0000<br>102.770<br>9.3083 | .0000<br>1.645677+01<br>3.2526 | .0000<br>1.1167<br>1.1169 |
| 50000. | 45.172 | 409.102<br>408.464<br>5.814452+01 | .000000+00<br>2695.220<br>2750.733 | .000000+00<br>25.2881<br>25.753 | .000<br>32.5810<br>32.625 | .0000<br>104.381<br>9.4914 | .0000<br>1.679262+01<br>3.3322 | .0000<br>1.1193<br>1.1195 |

## ALTITUDE = 380000. FT.

P1 = 3.732453-08 ATM. , RHO1 = 3.198646-08 AMA. , T1 = 311.33 K  
 S1/R = 41.153 , A1 = 1160.85 FT./SEC. , H1/R = 1089.668 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 6000.  | 5.169  | 6.343<br>6.195<br>.000000+00    | 8.077087+02<br>31.456<br>.000     | 1.477601+02<br>6.0131<br>.000    | 5.578<br>5.3212<br>.000     | 2.3536<br>44.317<br>.0000  | 1.0027<br>1.215734+00<br>.0000  | 1.2166<br>1.1720<br>.0000  |
| 7000.  | 6.030  | 8.272<br>8.141<br>.000000+00    | 2.443432+03<br>44.044<br>.000     | 3.804927+02<br>7.4435<br>.000    | 6.463<br>5.8909<br>.000     | 2.4691<br>45.184<br>.0000  | 1.0167<br>1.418357+00<br>.0000  | 1.1396<br>1.1093<br>.0000  |
| 8000.  | 6.892  | 10.499<br>10.383<br>.000000+00  | 7.425601+03<br>58.786<br>.000     | 1.020593+03<br>9.0739<br>.000    | 7.159<br>6.2586<br>.000     | 2.6051<br>46.173<br>.0000  | 1.0399<br>1.620979+00<br>.0000  | 1.1198<br>1.0944<br>.0000  |
| 9000.  | 7.753  | 13.022<br>12.917<br>.000000+00  | 2.271531+04<br>75.530<br>.000     | 2.775854+03<br>10.7241<br>.000   | 7.836<br>6.5686<br>.000     | 2.7604<br>47.285<br>.0000  | 1.0685<br>1.823602+00<br>.0000  | 1.1178<br>1.0931<br>.0000  |
| 10000. | 8.614  | 15.842<br>15.743<br>5.289919-01 | 6.896132+04<br>94.210<br>98.341   | 7.478710+03<br>12.2781<br>12.752 | 8.569<br>6.8858<br>6.915    | 2.9395<br>48.508<br>2.6584 | 1.1010<br>2.026224+00<br>1.1411 | 1.1249<br>1.0995<br>1.1001 |
| 11000. | 9.476  | 18.958<br>18.859<br>7.037871-01 | 2.041990+05<br>114.659<br>119.298 | 1.950654+04<br>13.4570<br>13.932 | 9.430<br>7.3582<br>7.389    | 3.1559<br>49.814<br>2.8467 | 1.1358<br>2.228846+00<br>1.1858 | 1.1421<br>1.1334<br>1.1360 |
| 12000. | 10.337 | 22.372<br>22.243<br>9.213116-01 | 5.779133+05<br>135.791<br>141.545 | 4.785026+04<br>12.8946<br>13.310 | 10.563<br>8.9094<br>8.995   | 3.4492<br>51.100<br>3.3980 | 1.1699<br>2.431469+00<br>1.2096 | 1.1825<br>1.3075<br>1.3035 |
| 13000. | 11.199 | 26.082<br>25.924<br>1.180053+00 | 1.519152+06<br>158.865<br>165.814 | 1.059224+05<br>12.5835<br>13.065 | 12.277<br>10.5509<br>10.599 | 3.8581<br>52.219<br>3.4709 | 1.1953<br>2.634091+00<br>1.2252 | 1.2459<br>1.1422<br>1.1395 |
| 14000. | 12.060 | 30.089<br>29.927<br>1.475630+00 | 3.649297+06<br>185.037<br>192.609 | 2.151942+05<br>13.3880<br>13.885 | 14.324<br>11.2884<br>11.320 | 4.1377<br>53.309<br>3.5677 | 1.2113<br>2.836714+00<br>1.2539 | 1.2119<br>1.1021<br>1.1015 |

ALTITUDE = 380000. FT.

P1 = 3.732453-08 ATM. , RH01 = 3.198646-08 AMA. , T1 = 311.33 K  
 S1/R = 41.153 , A1 = 1160.85 FT./SEC. , H1/R = 1089.668 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 15000. | 12.922 | 34.393<br>34.233<br>1.813755+00   | 8.212728+06<br>213.495<br>221.587 | 4.258732+05<br>14.4266<br>14.928 | 16.036<br>11.7634<br>11.788 | 4.3333<br>54.433<br>3.6718 | 1.2305<br>3.039336+00<br>1.2884 | 1.1689<br>1.0905<br>1.0904 |
| 16000. | 13.783 | 38.994<br>38.837<br>2.197331+00   | 1.777013+07<br>244.049<br>252.582 | 8.270238+05<br>15.5274<br>16.027 | 17.527<br>12.1313<br>12.153 | 4.5494<br>55.606<br>3.7758 | 1.2543<br>3.241958+00<br>1.3268 | 1.1563<br>1.0859<br>1.0859 |
| 17000. | 14.644 | 43.892<br>43.737<br>2.629315+00   | 3.731385+07<br>276.637<br>285.627 | 1.573953+06<br>16.6334<br>17.132 | 18.930<br>12.4438<br>12.464 | 4.7667<br>56.833<br>3.8804 | 1.2814<br>3.444581+00<br>1.3687 | 1.1505<br>1.0842<br>1.0842 |
| 18000. | 15.506 | 49.087<br>48.933<br>3.112123+00   | 7.628818+07<br>311.230<br>320.680 | 2.931145+06<br>17.7186<br>18.215 | 20.316<br>12.7236<br>12.742 | 4.9938<br>58.114<br>3.9865 | 1.3108<br>3.647203+00<br>1.4137 | 1.1502<br>1.0835<br>1.0836 |
| 19000. | 16.367 | 54.578<br>54.426<br>3.648071+00   | 1.520645+08<br>347.815<br>357.707 | 5.336497+06<br>18.7685<br>19.260 | 21.726<br>12.9829<br>13.001 | 5.2302<br>59.450<br>4.0948 | 1.3420<br>3.849826+00<br>1.4617 | 1.1524<br>1.0837<br>1.0838 |
| 20000. | 17.229 | 60.366<br>60.214<br>4.239698+00   | 2.954985+08<br>386.381<br>396.732 | 9.488477+06<br>19.7716<br>20.259 | 23.181<br>13.2304<br>13.247 | 5.4778<br>60.840<br>4.2061 | 1.3746<br>4.052448+00<br>1.5125 | 1.1566<br>1.0844<br>1.0845 |
| 21000. | 18.090 | 66.451<br>66.299<br>4.889762+00   | 5.602979+08<br>426.917<br>437.814 | 1.647956+07<br>20.7181<br>21.205 | 24.700<br>13.4730<br>13.490 | 5.7362<br>62.281<br>4.3212 | 1.4084<br>4.255070+00<br>1.5661 | 1.1618<br>1.0856<br>1.0857 |
| 22000. | 18.952 | 72.833<br>72.679<br>5.599724+00   | 1.035944+09<br>469.415<br>480.784 | 2.793415+07<br>21.6001<br>22.080 | 26.294<br>13.7160<br>13.733 | 6.0062<br>63.773<br>4.4410 | 1.4431<br>4.457693+00<br>1.6223 | 1.1678<br>1.0872<br>1.0873 |
| 23000. | 19.813 | 79.512<br>79.355<br>6.372846+00   | 1.869231+09<br>513.860<br>525.772 | 4.623871+07<br>22.4054<br>22.880 | 27.975<br>13.9681<br>13.985 | 6.2902<br>65.312<br>4.5671 | 1.4785<br>4.660315+00<br>1.6812 | 1.1750<br>1.0895<br>1.0896 |
| 24000. | 20.675 | 86.487<br>86.327<br>7.212329+00   | 3.289986+09<br>560.231<br>572.856 | 7.470175+07<br>23.1186<br>23.592 | 29.751<br>14.2398<br>14.258 | 6.5876<br>66.894<br>4.7018 | 1.5147<br>4.862938+00<br>1.7424 | 1.1829<br>1.0928<br>1.0930 |
| 25000. | 21.536 | 93.760<br>93.595<br>8.120927+00   | 5.651944+09<br>608.491<br>621.950 | 1.178419+08<br>23.7117<br>24.187 | 31.630<br>14.5503<br>14.570 | 6.9005<br>68.515<br>4.8503 | 1.5515<br>5.065560+00<br>1.8058 | 1.1918<br>1.0981<br>1.0983 |
| 26000. | 22.397 | 101.329<br>101.156<br>9.102615+00 | 9.482406+09<br>658.559<br>672.968 | 1.815857+08<br>24.1256<br>24.598 | 33.623<br>14.9404<br>14.964 | 7.2316<br>70.165<br>5.0260 | 1.5891<br>5.268182+00<br>1.8706 | 1.2022<br>1.1081<br>1.1085 |
| 27000. | 23.259 | 109.195<br>109.010<br>1.016563+01 | 1.553963+10<br>710.185<br>725.685 | 2.733652+08<br>24.1819<br>24.644 | 35.736<br>15.5400<br>15.572 | 7.5809<br>71.828<br>5.2801 | 1.6276<br>5.470805+00<br>1.9349 | 1.2136<br>1.1354<br>1.1366 |
| 28000. | 24.120 | 117.358<br>117.138<br>1.134873+01 | 2.488286+10<br>762.051<br>779.457 | 4.021202+08<br>23.0275<br>23.438 | 37.976<br>17.0522<br>17.130 | 7.9512<br>73.452<br>5.9523 | 1.6672<br>5.673427+00<br>1.9864 | 1.2265<br>1.2749<br>1.2789 |

ALTITUDE = 380000. FT.

P1 = 3.732453-08 ATM. , RH01 = 3.198646-08 AMA. , T1 = 311.33 K  
 S1/R = 41.153 , A1 = 1160.85 FT./SEC. , H1/R = 1089.668 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1         | T0/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 29000. | 24.982 | 125.817<br>125.538<br>1.266878+01 | 3.895804+10<br>814.073<br>834.472  | 5.784232+08<br>21.1355<br>21.578 | 40.342<br>19.5709<br>19.640 | 8.3413<br>74.920<br>6.1975 | 1.7082<br>5.876050+00<br>2.0146 | 1.2401<br>1.1951<br>1.1923 |
| 30000. | 25.843 | 134.574<br>134.262<br>1.403583+01 | 5.966435+10<br>870.194<br>892.517  | 8.141392+08<br>20.6986<br>21.164 | 42.834<br>20.9699<br>21.021 | 8.7475<br>76.286<br>6.3239 | 1.7506<br>6.078672+00<br>2.0526 | 1.2534<br>1.1392<br>1.1385 |
| 31000. | 26.705 | 143.627<br>143.296<br>1.547379+01 | 8.947834+10<br>929.204<br>953.019  | 1.123287+09<br>20.7399<br>21.214 | 45.433<br>21.8780<br>21.922 | 9.1577<br>77.624<br>6.4741 | 1.7939<br>6.281294+00<br>2.0968 | 1.2639<br>1.1202<br>1.1200 |
| 32000. | 27.566 | 152.977<br>152.632<br>1.699354+01 | .000000+00<br>990.563<br>1015.726  | .000000+00<br>20.9563<br>21.435  | .000<br>22.5671<br>22.607   | .0000<br>78.958<br>6.6244  | .0000<br>6.483917+00<br>2.1447  | .0000<br>1.1118<br>1.1117  |
| 33000. | 28.427 | 162.624<br>162.266<br>1.859993+01 | .000000+00<br>1054.046<br>1080.514 | .000000+00<br>21.2501<br>21.732  | .000<br>23.1347<br>23.172   | .0000<br>80.299<br>6.7721  | .0000<br>6.686539+00<br>2.1954  | .0000<br>1.1073<br>1.1073  |
| 34000. | 29.289 | 172.568<br>172.200<br>2.029646+01 | .000000+00<br>1119.724<br>1147.353 | .000000+00<br>21.5827<br>22.064  | .000<br>23.6263<br>23.663   | .0000<br>81.651<br>6.9181  | .0000<br>6.889161+00<br>2.2485  | .0000<br>1.1049<br>1.1049  |
| 35000. | 30.150 | 182.809<br>182.431<br>2.208610+01 | .000000+00<br>1187.402<br>1216.241 | .000000+00<br>21.9306<br>22.413  | .000<br>24.0659<br>24.101   | .0000<br>83.019<br>7.0627  | .0000<br>7.091784+00<br>2.3037  | .0000<br>1.1034<br>1.1035  |
| 36000. | 31.012 | 193.347<br>192.959<br>2.397138+01 | .000000+00<br>1257.105<br>1287.173 | .000000+00<br>22.2829<br>22.766  | .000<br>24.4681<br>24.503   | .0000<br>84.404<br>7.2070  | .0000<br>7.294406+00<br>2.3610  | .0000<br>1.1027<br>1.1028  |
| 37000. | 31.873 | 204.181<br>203.784<br>2.595400+01 | .000000+00<br>1328.813<br>1360.081 | .000000+00<br>22.6317<br>23.114  | .000<br>24.8427<br>24.877   | .0000<br>85.808<br>7.3514  | .0000<br>7.497029+00<br>2.4201  | .0000<br>1.1025<br>1.1026  |
| 38000. | 32.735 | 215.312<br>214.905<br>2.803598+01 | .000000+00<br>1402.516<br>1434.930 | .000000+00<br>22.9726<br>23.454  | .000<br>25.1964<br>25.230   | .0000<br>87.232<br>7.4961  | .0000<br>7.699651+00<br>2.4811  | .0000<br>1.1025<br>1.1026  |
| 39000. | 33.596 | 226.740<br>226.324<br>3.022009+01 | .000000+00<br>1478.202<br>1511.788 | .000000+00<br>23.3024<br>23.782  | .000<br>25.5340<br>25.568   | .0000<br>88.676<br>7.6419  | .0000<br>7.902274+00<br>2.5439  | .0000<br>1.1028<br>1.1029  |
| 40000. | 34.458 | 238.465<br>238.039<br>3.250806+01 | .000000+00<br>1555.863<br>1590.604 | .000000+00<br>23.6188<br>24.096  | .000<br>25.8595<br>25.893   | .0000<br>90.140<br>7.7889  | .0000<br>8.104896+00<br>2.6085  | .0000<br>1.1032<br>1.1033  |
| 41000. | 35.319 | 250.486<br>250.050<br>3.490188+01 | .000000+00<br>1635.491<br>1671.369 | .000000+00<br>23.9198<br>24.394  | .000<br>26.1761<br>26.209   | .0000<br>91.624<br>7.9376  | .0000<br>8.307518+00<br>2.6747  | .0000<br>1.1038<br>1.1040  |
| 42000. | 36.180 | 262.805<br>262.358<br>3.740426+01 | .000000+00<br>1717.081<br>1754.139 | .000000+00<br>24.2041<br>24.676  | .000<br>26.4864<br>26.520   | .0000<br>93.128<br>8.0879  | .0000<br>8.510141+00<br>2.7426  | .0000<br>1.1046<br>1.1047  |

ALTITUDE = 380000. FT.

P1 = 3.732453-08 ATM. , RH01 = 3.198646-08 AMA. , T1 = 311.33 K  
 S1/R = 41.153 , A1 = 1160.85 FT./SEC. , H1/R = 1089.668 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 43000. | 37.042 | 275.420<br>274.962<br>4.001794+01 | .000000+00<br>1800.624<br>1838.956 | .000000+00<br>24.4709<br>24.941 | .000<br>26.7929<br>26.826 | .0000<br>94.652<br>8.2403  | .0000<br>8.712763+00<br>2.8122 | .0000<br>1.1055<br>1.1056 |
| 44000. | 37.903 | 288.332<br>287.862<br>4.274415+01 | .000000+00<br>1886.114<br>1925.746 | .000000+00<br>24.7186<br>25.187 | .000<br>27.0978<br>27.131 | .0000<br>96.196<br>8.3955  | .0000<br>8.915385+00<br>2.8834 | .0000<br>1.1066<br>1.1067 |
| 45000. | 38.765 | 301.541<br>301.058<br>4.558487+01 | .000000+00<br>1973.542<br>2014.483 | .000000+00<br>24.9461<br>25.412 | .000<br>27.4035<br>27.437 | .0000<br>97.759<br>8.5533  | .0000<br>9.118008+00<br>2.9561 | .0000<br>1.1078<br>1.1079 |
| 46000. | 39.626 | 315.047<br>314.551<br>4.854278+01 | .000000+00<br>2062.901<br>2105.200 | .000000+00<br>25.1526<br>25.617 | .000<br>27.7125<br>27.747 | .0000<br>99.340<br>8.7140  | .0000<br>9.320630+00<br>3.0305 | .0000<br>1.1090<br>1.1092 |
| 47000. | 40.488 | 328.850<br>328.339<br>5.162127+01 | .000000+00<br>2154.181<br>2197.979 | .000000+00<br>25.3368<br>25.800 | .000<br>28.0275<br>28.062 | .0000<br>100.939<br>8.8787 | .0000<br>9.523253+00<br>3.1063 | .0000<br>1.1107<br>1.1108 |
| 48000. | 41.349 | 342.949<br>342.423<br>5.482410+01 | .000000+00<br>2247.368<br>2292.931 | .000000+00<br>25.4965<br>25.960 | .000<br>28.3517<br>28.387 | .0000<br>102.555<br>9.0477 | .0000<br>9.725875+00<br>3.1835 | .0000<br>1.1125<br>1.1126 |
| 49000. | 42.211 | 357.346<br>356.803<br>5.815204+01 | .000000+00<br>2342.448<br>2389.870 | .000000+00<br>25.6299<br>26.095 | .000<br>28.6892<br>28.726 | .0000<br>104.186<br>9.2220 | .0000<br>9.928497+00<br>3.2621 | .0000<br>1.1146<br>1.1148 |
| 50000. | 43.072 | 372.039<br>371.479<br>6.160775+01 | .000000+00<br>2439.401<br>2488.785 | .000000+00<br>25.7336<br>26.199 | .000<br>29.0449<br>29.083 | .0000<br>105.831<br>9.4028 | .0000<br>1.013112+01<br>3.3420 | .0000<br>1.1171<br>1.1173 |

ALTITUDE = 390000. FT.

P1 = 2.763332-08 ATM. , RH01 = 2.161671-08 AMA. , T1 = 339.27 K  
 S1/R = 41.755 , A1 = 1211.81 FT./SEC. , H1/R = 1187.438 K

| U1     | M1    | H0/H1<br>HS/H1<br>Q RT RN      | P0/P1<br>PS/P1<br>POP/P1      | R0/R1<br>RS/R1<br>ROP/R1       | T0/T1<br>TS/T1<br>TOP/T1 | A0/AA<br>SS/R<br>AOP/AA   | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|-------|--------------------------------|-------------------------------|--------------------------------|--------------------------|---------------------------|--------------------------------|---------------------------|
| 6000.  | 4.951 | 5.903<br>5.767<br>.000000+00   | 6.331127+02<br>28.801<br>.000 | 1.262336+02<br>6.0136<br>.000  | 5.139<br>4.8907<br>.000  | 2.3430<br>44.768<br>.0000 | 1.0038<br>7.699077-01<br>.0000 | 1.1995<br>1.1514<br>.0000 |
| 8000.  | 6.602 | 9.717<br>9.612<br>.000000+00   | 5.869796+03<br>53.806<br>.000 | 8.915930+02<br>9.1544<br>.000  | 6.489<br>5.6925<br>.000  | 2.5890<br>46.637<br>.0000 | 1.0436<br>1.026544+00<br>.0000 | 1.1157<br>1.0926<br>.0000 |
| 9000.  | 7.427 | 11.032<br>11.938<br>.000000+00 | 1.815849+04<br>69.098<br>.000 | 2.456900+03<br>10.8258<br>.000 | 7.085<br>5.9669<br>.000  | 2.7422<br>47.762<br>.0000 | 1.0729<br>1.154862+00<br>.0000 | 1.1149<br>1.0930<br>.0000 |
| 10000. | 8.252 | 14.620<br>14.531<br>.000000+00 | 5.580264+04<br>86.154<br>.000 | 6.707319+03<br>12.3939<br>.000 | 7.737<br>6.2528<br>.000  | 2.9194<br>49.000<br>.0000 | 1.1060<br>1.283179+00<br>.0000 | 1.1226<br>1.0988<br>.0000 |

ALTITUDE = 390000. FT.

P1 = 2.763332-08 ATM. , RH01 = 2.161671-08 AMA. , T1 = 339.27 K  
 S1/R = 41.755 , A1 = 1211.81 FT./SEC. , H1/R = 1187.438 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 11000. | 9.077  | 17.480<br>17.390<br>5.811334-01 | 1.673711+05<br>104.814<br>108.989 | 1.772099+04<br>13.5606<br>14.023 | 8.512<br>6.6917<br>6.724    | 3.1360<br>50.321<br>2.8433 | 1.1414<br>1.411497+00<br>1.1889 | 1.1411<br>1.1369<br>1.1399 |
| 12000. | 9.903  | 20.612<br>20.493<br>7.609358-01 | 4.792139+05<br>123.991<br>129.273 | 4.388367+04<br>12.8339<br>13.252 | 9.556<br>8.2139<br>8.292    | 3.4384<br>51.608<br>3.3949 | 1.1754<br>1.539815+00<br>1.2101 | 1.1863<br>1.3007<br>1.2947 |
| 13000. | 10.728 | 24.017<br>23.873<br>9.733973-01 | 1.267846+06<br>145.166<br>151.476 | 9.719175+04<br>12.6480<br>13.132 | 11.190<br>9.6304<br>9.671   | 3.8593<br>52.728<br>3.4538 | 1.1991<br>1.668133+00<br>1.2268 | 1.2512<br>1.1356<br>1.1332 |
| 14000. | 11.553 | 27.694<br>27.548<br>1.216379+00 | 3.055788+06<br>169.105<br>175.976 | 1.984230+05<br>13.5002<br>13.999 | 13.042<br>10.2676<br>10.295 | 4.1126<br>53.827<br>3.5506 | 1.2146<br>1.796451+00<br>1.2560 | 1.2035<br>1.0994<br>1.0990 |
| 15000. | 12.378 | 31.644<br>31.499<br>1.494242+00 | 6.918398+06<br>195.108<br>202.424 | 3.962970+05<br>14.5664<br>15.068 | 14.543<br>10.6839<br>10.706 | 4.3030<br>54.964<br>3.6533 | 1.2347<br>1.924769+00<br>1.2907 | 1.1622<br>1.0888<br>1.0887 |
| 16000. | 13.203 | 35.866<br>35.724<br>1.809514+00 | 1.508238+07<br>223.016<br>230.727 | 7.775898+05<br>15.6875<br>16.188 | 15.845<br>11.0094<br>11.028 | 4.5139<br>56.152<br>3.7559 | 1.2592<br>2.053087+00<br>1.3294 | 1.1512<br>1.0846<br>1.0846 |
| 17000. | 14.029 | 40.360<br>40.221<br>2.164578+00 | 3.194846+07<br>252.779<br>260.910 | 1.495056+06<br>16.8135<br>17.313 | 17.079<br>11.2862<br>11.304 | 4.7280<br>57.394<br>3.8591 | 1.2870<br>2.181405+00<br>1.3714 | 1.1463<br>1.0828<br>1.0829 |
| 18000. | 14.854 | 45.127<br>44.990<br>2.561236+00 | 6.594479+07<br>284.372<br>292.891 | 2.813818+06<br>17.9174<br>18.413 | 18.302<br>11.5346<br>11.551 | 4.9518<br>58.693<br>3.9639 | 1.3172<br>2.309723+00<br>1.4165 | 1.1465<br>1.0823<br>1.0824 |
| 19000. | 15.679 | 50.167<br>50.030<br>3.001653+00 | 1.327071+08<br>317.782<br>326.704 | 5.175744+06<br>18.9843<br>19.476 | 19.549<br>11.7656<br>11.781 | 5.1849<br>60.047<br>4.0709 | 1.3491<br>2.438041+00<br>1.4646 | 1.1490<br>1.0825<br>1.0826 |
| 20000. | 16.504 | 55.478<br>55.342<br>3.487797+00 | 2.604820+08<br>353.001<br>362.342 | 9.300215+06<br>20.0041<br>20.492 | 20.839<br>11.9861<br>12.001 | 5.4285<br>61.456<br>4.1809 | 1.3825<br>2.566359+00<br>1.5155 | 1.1530<br>1.0832<br>1.0833 |
| 21000. | 17.329 | 61.062<br>60.926<br>4.021632+00 | 4.987472+08<br>390.020<br>399.801 | 1.631795+07<br>20.9671<br>21.451 | 22.187<br>12.2021<br>12.217 | 5.6833<br>62.918<br>4.2948 | 1.4170<br>2.694677+00<br>1.5692 | 1.1580<br>1.0843<br>1.0844 |
| 22000. | 18.155 | 66.919<br>66.781<br>4.604963+00 | 9.309315+08<br>428.828<br>439.044 | 2.793187+07<br>21.8634<br>22.342 | 23.603<br>12.4198<br>12.435 | 5.9503<br>64.432<br>4.4133 | 1.4524<br>2.822995+00<br>1.6256 | 1.1641<br>1.0860<br>1.0861 |
| 23000. | 18.980 | 73.047<br>72.907<br>5.240328+00 | 1.695054+09<br>469.415<br>480.164 | 4.666986+07<br>22.6824<br>23.158 | 25.097<br>12.6455<br>12.660 | 6.2294<br>65.993<br>4.5380 | 1.4886<br>2.951313+00<br>1.6846 | 1.1708<br>1.0882<br>1.0884 |
| 24000. | 19.805 | 79.449<br>79.305<br>5.930072+00 | 3.011254+09<br>511.762<br>523.171 | 7.611714+07<br>23.4075<br>23.884 | 26.680<br>12.8894<br>12.905 | 6.5230<br>67.599<br>4.6715 | 1.5252<br>3.079631+00<br>1.7459 | 1.1786<br>1.0916<br>1.0917 |

ALTITUDE = 390000. FT.

P1 = 2.763332-08 ATM. , RH01 = 2.161671-08 AMA. , T1 = 339.27 K  
 S1/R = 41.755 , A1 = 1211.81 FT./SEC. , H1/R = 1187.438 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 25000. | 20.630 | 86.122<br>85.975<br>6.676376+00   | 5.219791+09<br>555.834<br>567.977  | 1.211878+08<br>24.0115<br>24.487 | 28.356<br>13.1682<br>13.186 | 6.8315<br>69.244<br>4.8188 | 1.5624<br>3.207949+00<br>1.8094 | 1.1873<br>1.0968<br>1.0970 |
| 26000. | 21.456 | 93.068<br>92.914<br>7.482958+00   | 8.832471+09<br>601.553<br>614.565  | 1.884006+08<br>24.4276<br>24.903 | 30.138<br>13.5230<br>13.543 | 7.1558<br>70.919<br>4.9940 | 1.6000<br>3.336267+00<br>1.8744 | 1.1969<br>1.1070<br>1.1074 |
| 27000. | 22.281 | 100.286<br>100.121<br>8.356555+00 | 1.459538+10<br>648.679<br>662.658  | 2.861067+08<br>24.4635<br>24.925 | 32.030<br>14.0780<br>14.106 | 7.4981<br>72.607<br>5.2534 | 1.6383<br>3.464585+00<br>1.9386 | 1.2077<br>1.1363<br>1.1376 |
| 28000. | 23.106 | 107.777<br>107.578<br>9.333299+00 | 2.356174+10<br>695.861<br>711.658  | 4.245216+08<br>23.1414<br>23.547 | 34.040<br>15.5599<br>15.634 | 7.8609<br>74.249<br>5.9684 | 1.6771<br>3.592903+00<br>1.9885 | 1.2200<br>1.2884<br>1.2915 |
| 29000. | 23.931 | 115.540<br>115.288<br>1.041734+01 | 3.718750+10<br>743.434<br>761.929  | 6.159276+08<br>21.2821<br>21.728 | 36.175<br>17.8249<br>17.885 | 8.2411<br>75.725<br>6.1563 | 1.7168<br>3.721220+00<br>2.0168 | 1.2327<br>1.1869<br>1.1844 |
| 30000. | 24.756 | 123.576<br>123.295<br>1.153875+01 | 5.740999+10<br>794.805<br>814.985  | 8.744038+08<br>20.9008<br>21.368 | 38.433<br>19.0411<br>19.086 | 8.6393<br>77.106<br>6.2838 | 1.7572<br>3.849538+00<br>2.0556 | 1.2457<br>1.1352<br>1.1345 |
| 31000. | 25.582 | 131.884<br>131.586<br>1.271915+01 | 8.676698+10<br>848.750<br>870.265  | 1.216182+09<br>20.9700<br>21.445 | 40.808<br>19.8362<br>19.874 | 9.0451<br>78.460<br>6.4325 | 1.7983<br>3.977856+00<br>2.1003 | 1.2567<br>1.1176<br>1.1173 |
| 32000. | 26.407 | 140.464<br>140.154<br>1.396699+01 | 1.285303+11<br>904.821<br>927.545  | 1.660896+09<br>21.2057<br>21.685 | 43.275<br>20.4423<br>20.477 | 9.4459<br>79.813<br>6.5809 | 1.8394<br>4.106174+00<br>2.1486 | 1.2634<br>1.1096<br>1.1095 |
| 33000. | 27.232 | 149.317<br>148.996<br>1.528599+01 | .000000+00<br>962.866<br>986.709   | .000000+00<br>21.5155<br>21.997  | .000<br>20.9431<br>20.976   | .0000<br>81.173<br>6.7266  | .0000<br>4.234492+00<br>2.1996  | .0000<br>1.1054<br>1.1054  |
| 34000. | 28.057 | 158.442<br>158.112<br>1.667916+01 | .000000+00<br>1022.819<br>1047.757 | .000000+00<br>21.8606<br>22.343  | .000<br>21.3774<br>21.409   | .0000<br>82.546<br>6.8705  | .0000<br>4.362810+00<br>2.2530  | .0000<br>1.1030<br>1.1030  |
| 35000. | 28.882 | 167.839<br>167.501<br>1.814898+01 | .000000+00<br>1084.642<br>1110.697 | .000000+00<br>22.2205<br>22.704  | .000<br>21.7662<br>21.797   | .0000<br>83.935<br>7.0132  | .0000<br>4.491128+00<br>2.3085  | .0000<br>1.1017<br>1.1018  |
| 36000. | 29.708 | 177.509<br>177.163<br>1.969688+01 | .000000+00<br>1148.311<br>1175.446 | .000000+00<br>22.5835<br>23.068  | .000<br>22.1224<br>22.153   | .0000<br>85.343<br>7.1555  | .0000<br>4.619446+00<br>2.3660  | .0000<br>1.1010<br>1.1011  |
| 37000. | 30.533 | 187.452<br>187.097<br>2.132444+01 | .000000+00<br>1213.812<br>1241.962 | .000000+00<br>22.9431<br>23.426  | .000<br>22.4542<br>22.484   | .0000<br>86.770<br>7.2980  | .0000<br>4.747764+00<br>2.4254  | .0000<br>1.1008<br>1.1009  |
| 38000. | 31.358 | 197.666<br>197.303<br>2.303400+01 | .000000+00<br>1281.131<br>1310.312 | .000000+00<br>23.2937<br>23.775  | .000<br>22.7677<br>22.797   | .0000<br>88.217<br>7.4411  | .0000<br>4.876082+00<br>2.4867  | .0000<br>1.1008<br>1.1009  |

ALTITUDE = 390000. FT.

P1 = 2.763332-08 ATM. , RHQ1 = 2.161671-08 AMA. , T1 = 339.27 K  
 S1/R = 41.755 , A1 = 1211.81 FT./SEC. , H1/R = 1187.438 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>ROP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 39000. | 32.183 | 208.153<br>207.782<br>2.482709+01 | .000000+00<br>1350.262<br>1380.457 | .000000+00<br>23.6327<br>24.112 | .000<br>23.0671<br>23.096 | .0000<br>89.685<br>7.5850  | .0000<br>5.004400+00<br>2.5497 | .0000<br>1.1011<br>1.1012 |
| 40000. | 33.009 | 218.913<br>218.533<br>2.670551+01 | .000000+00<br>1421.196<br>1452.399 | .000000+00<br>23.9580<br>24.435 | .000<br>23.3558<br>23.385 | .0000<br>91.174<br>7.7300  | .0000<br>5.132718+00<br>2.6145 | .0000<br>1.1015<br>1.1016 |
| 41000. | 33.834 | 229.945<br>229.555<br>2.867137+01 | .000000+00<br>1493.928<br>1526.171 | .000000+00<br>24.2679<br>24.742 | .000<br>23.6367<br>23.666 | .0000<br>92.684<br>7.8767  | .0000<br>5.261036+00<br>2.6810 | .0000<br>1.1021<br>1.1022 |
| 42000. | 34.659 | 241.249<br>240.850<br>3.072664+01 | .000000+00<br>1568.450<br>1601.811 | .000000+00<br>24.5603<br>25.033 | .000<br>23.9122<br>23.941 | .0000<br>94.215<br>8.0255  | .0000<br>5.389354+00<br>2.7491 | .0000<br>1.1029<br>1.1030 |
| 43000. | 35.484 | 252.825<br>252.417<br>3.287254+01 | .000000+00<br>1644.757<br>1679.252 | .000000+00<br>24.8345<br>25.306 | .000<br>24.1843<br>24.213 | .0000<br>95.766<br>8.1758  | .0000<br>5.517672+00<br>2.8190 | .0000<br>1.1038<br>1.1039 |
| 44000. | 36.309 | 264.674<br>264.255<br>3.511054+01 | .000000+00<br>1722.843<br>1758.451 | .000000+00<br>25.0898<br>25.558 | .000<br>24.4552<br>24.484 | .0000<br>97.338<br>8.3287  | .0000<br>5.645990+00<br>2.8904 | .0000<br>1.1047<br>1.1048 |
| 45000. | 37.135 | 276.796<br>276.366<br>3.744276+01 | .000000+00<br>1802.699<br>1839.460 | .000000+00<br>25.3245<br>25.791 | .000<br>24.7268<br>24.756 | .0000<br>98.929<br>8.4846  | .0000<br>5.774308+00<br>2.9634 | .0000<br>1.1059<br>1.1060 |
| 46000. | 37.960 | 289.190<br>288.748<br>3.987204+01 | .000000+00<br>1884.320<br>1922.361 | .000000+00<br>25.5376<br>26.002 | .000<br>25.0015<br>25.031 | .0000<br>100.539<br>8.6435 | .0000<br>5.902626+00<br>3.0380 | .0000<br>1.1072<br>1.1074 |
| 47000. | 38.785 | 301.856<br>301.401<br>4.240154+01 | .000000+00<br>1967.653<br>2007.264 | .000000+00<br>25.7273<br>26.194 | .000<br>25.2817<br>25.312 | .0000<br>102.168<br>8.8061 | .0000<br>6.030943+00<br>3.1141 | .0000<br>1.1088<br>1.1089 |
| 48000. | 39.610 | 314.794<br>314.326<br>4.503181+01 | .000000+00<br>2052.814<br>2094.014 | .000000+00<br>25.8934<br>26.361 | .000<br>25.5704<br>25.602 | .0000<br>103.813<br>8.9731 | .0000<br>6.159261+00<br>3.1916 | .0000<br>1.1105<br>1.1107 |
| 49000. | 40.435 | 328.005<br>327.523<br>4.776337+01 | .000000+00<br>2139.661<br>2182.461 | .000000+00<br>26.0317<br>26.499 | .000<br>25.8712<br>25.903 | .0000<br>105.475<br>9.1455 | .0000<br>6.287579+00<br>3.2705 | .0000<br>1.1127<br>1.1128 |
| 50000. | 41.261 | 341.489<br>340.991<br>5.059982+01 | .000000+00<br>2228.221<br>2272.705 | .000000+00<br>26.1397<br>26.607 | .000<br>26.1887<br>26.222 | .0000<br>107.152<br>9.3245 | .0000<br>6.415897+00<br>3.3506 | .0000<br>1.1152<br>1.1154 |

ALTITUDE = 400000. FT.

P1 = 2.107093-08 ATM. , RH01 = 1.442542-08 AMA. , T1 = 385.88 K  
 S1/R = 42.478 , A1 = 1292.38 FT./SEC. , H1/R = 1350.593 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN       | PO/P1<br>PS/P1<br>POP/P1          | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP             | GAME0<br>GAMES<br>GAMEOP   |
|--------|--------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 9000.  | 6.964  | 10.699<br>10.618<br>.000000+00  | 1.296009+04<br>60.647<br>.000     | 2.025956+03<br>10.9163<br>.000   | 6.128<br>5.1988<br>.000     | 2.7232<br>48.286<br>.0000  | 1.0787<br>7.009578-01<br>.0000  | 1.1118<br>1.0927<br>.0000  |
| 10000. | 7.738  | 12.974<br>12.897<br>.000000+00  | 4.034869+04<br>75.572<br>.000     | 5.609536+03<br>12.4855<br>.000   | 6.682<br>5.4508<br>.000     | 2.8986<br>49.538<br>.0000  | 1.1124<br>7.788420-01<br>.0000  | 1.1203<br>1.1037<br>.0000  |
| 11000. | 8.511  | 15.489<br>15.411<br>.000000+00  | 1.226878+05<br>91.889<br>.000     | 1.502282+04<br>13.6260<br>.000   | 7.350<br>5.8462<br>.000     | 3.1164<br>50.872<br>.0000  | 1.1482<br>8.567262-01<br>.0000  | 1.1405<br>1.1471<br>.0000  |
| 12000. | 9.285  | 18.243<br>18.136<br>6.264727-01 | 3.552880+05<br>108.560<br>113.227 | 3.749409+04<br>12.7263<br>13.150 | 8.284<br>7.2822<br>7.349    | 3.4346<br>52.155<br>3.3878 | 1.1820<br>9.346104-01<br>1.2107 | 1.1939<br>1.2861<br>1.2784 |
| 13000. | 10.059 | 21.237<br>21.111<br>.000000+00  | 9.441235+05<br>127.216<br>.000    | 8.278224+04<br>12.7038<br>.000   | 9.796<br>8.4272<br>.000     | 3.8614<br>53.273<br>.0000  | 1.2031<br>1.012495+00<br>.0000  | 1.2538<br>1.1291<br>.0000  |
| 14000. | 10.833 | 24.470<br>24.343<br>.000000+00  | 2.280469+06<br>148.212<br>.000    | 1.700911+05<br>13.6081<br>.000   | 11.370<br>8.9501<br>.000    | 4.0825<br>54.381<br>.0000  | 1.2185<br>1.090379+00<br>.0000  | 1.1922<br>1.0970<br>.0000  |
| 15000. | 11.606 | 27.942<br>27.817<br>.000000+00  | 5.197694+06<br>170.993<br>.000    | 3.435109+05<br>14.7040<br>.000   | 12.612<br>9.2976<br>.000    | 4.2705<br>55.531<br>.0000  | 1.2397<br>1.168263+00<br>.0000  | 1.1559<br>1.0869<br>.0000  |
| 16000. | 12.380 | 31.654<br>31.532<br>.000000+00  | 1.142892+07<br>195.433<br>.000    | 6.819130+05<br>15.8475<br>.000   | 13.690<br>9.5721<br>.000    | 4.4739<br>56.733<br>.0000  | 1.2651<br>1.246147+00<br>.0000  | 1.1453<br>1.0831<br>.0000  |
| 17000. | 13.154 | 35.606<br>35.486<br>.000000+00  | 2.446217+07<br>221.494<br>.000    | 1.327094+06<br>16.9928<br>.000   | 14.723<br>9.8067<br>.000    | 4.6841<br>57.991<br>.0000  | 1.2937<br>1.324031+00<br>.0000  | 1.1415<br>1.0816<br>.0000  |
| 18000. | 13.928 | 39.797<br>39.678<br>2.097347+00 | 5.105795+07<br>249.156<br>256.546 | 2.528695+06<br>18.1156<br>18.612 | 15.750<br>10.0178<br>10.032 | 4.9032<br>59.307<br>3.9419 | 1.3248<br>1.401916+00<br>1.4199 | 1.1419<br>1.0810<br>1.0811 |
| 19000. | 14.702 | 44.227<br>44.110<br>2.457038+00 | 1.039216+08<br>278.409<br>286.134 | 4.708444+06<br>19.2008<br>19.693 | 16.800<br>10.2143<br>10.227 | 5.1327<br>60.680<br>4.0476 | 1.3576<br>1.479800+00<br>1.4681 | 1.1447<br>1.0812<br>1.0813 |
| 20000. | 15.475 | 48.897<br>48.780<br>.000000+00  | 2.063077+08<br>309.244<br>.000    | 8.562324+06<br>20.2373<br>.000   | 17.889<br>10.4024<br>.000   | 5.3724<br>62.109<br>.0000  | 1.3918<br>1.557684+00<br>.0000  | 1.1488<br>1.0820<br>.0000  |
| 21000. | 16.249 | 53.807<br>53.689<br>3.289891+00 | 3.994228+08<br>341.655<br>350.088 | 1.519800+07<br>21.2162<br>21.699 | 19.028<br>10.5870<br>10.599 | 5.6234<br>63.592<br>4.2689 | 1.4272<br>1.635568+00<br>1.5729 | 1.1539<br>1.0832<br>1.0833 |
| 22000. | 17.023 | 58.955<br>58.837<br>3.766154+00 | 7.542836+08<br>375.634<br>384.425 | 2.632858+07<br>22.1288<br>22.604 | 20.228<br>10.7727<br>10.785 | 5.8868<br>65.128<br>4.3861 | 1.4635<br>1.713452+00<br>1.6294 | 1.1601<br>1.0847<br>1.0848 |

ALTITUDE = 400000. FT.

P1 = 2.107093-08 ATM. , RHO1 = 1.442542-08 AMA. , T1 = 385.88 K  
 S1/R = 42.478 , A1 = 1292.38 FT./SEC. , H1/R = 1350.593 K

| U1     | M1     | HO/H1<br>HS/H1<br>Q RT RN         | PO/P1<br>PS/P1<br>POP/P1           | RO/R1<br>RS/R1<br>ROP/R1         | TO/T1<br>TS/T1<br>TOP/T1    | AO/AA<br>SS/R<br>AOP/AA    | ZO<br>RE/FT.<br>ZOP             | GAMEO<br>GAMES<br>GAMEOP   |
|--------|--------|-----------------------------------|------------------------------------|----------------------------------|-----------------------------|----------------------------|---------------------------------|----------------------------|
| 23000. | 17.797 | 64.344<br>64.224<br>4.285116+00   | 1.388332+09<br>411.170<br>420.452  | 4.448107+07<br>22.9628<br>23.437 | 21.495<br>10.9659<br>10.979 | 6.1626<br>66.712<br>4.5096 | 1.5005<br>1.791337+00<br>1.6885 | 1.1669<br>1.0870<br>1.0871 |
| 24000. | 18.570 | 69.972<br>69.849<br>4.848364+00   | 2.492738+09<br>448.245<br>458.113  | 7.333757+07<br>23.7004<br>24.177 | 22.838<br>11.1756<br>11.189 | 6.4515<br>68.342<br>4.6418 | 1.5379<br>1.869221+00<br>1.7500 | 1.1744<br>1.0903<br>1.0905 |
| 25000. | 19.344 | 75.839<br>75.713<br>5.457989+00   | 4.365758+09<br>486.829<br>497.384  | 1.179935+08<br>24.3102<br>24.790 | 24.265<br>11.4180<br>11.432 | 6.7550<br>70.012<br>4.7881 | 1.5757<br>1.947105+00<br>1.8136 | 1.1827<br>1.0957<br>1.0959 |
| 26000. | 20.118 | 81.946<br>81.814<br>6.116129+00   | 7.460570+09<br>526.857<br>538.077  | 1.853031+08<br>24.7316<br>25.205 | 25.781<br>11.7253<br>11.743 | 7.0736<br>71.713<br>4.9630 | 1.6137<br>2.024989+00<br>1.8786 | 1.1919<br>1.1061<br>1.1065 |
| 27000. | 20.892 | 88.292<br>88.149<br>6.829997+00   | 1.244738+10<br>568.063<br>580.172  | 2.841950+08<br>24.7382<br>25.199 | 27.397<br>12.2212<br>12.246 | 7.4092<br>73.425<br>5.2298 | 1.6520<br>2.102873+00<br>1.9428 | 1.2020<br>1.1379<br>1.1393 |
| 28000. | 21.665 | 94.878<br>94.704<br>7.632394+00   | 2.028459+10<br>609.202<br>622.981  | 4.258223+08<br>23.2122<br>23.614 | 29.120<br>13.6286<br>13.695 | 7.7649<br>75.084<br>5.9841 | 1.6904<br>2.180757+00<br>1.9906 | 1.2138<br>1.3005<br>1.3018 |
| 29000. | 22.439 | 101.704<br>101.485<br>8.516429+00 | 3.230677+10<br>650.992<br>667.059  | 6.236837+08<br>21.4278<br>21.876 | 30.956<br>15.5551<br>15.604 | 8.1381<br>76.568<br>6.1151 | 1.7291<br>2.258642+00<br>2.0193 | 1.2262<br>1.1783<br>1.1761 |
| 30000. | 23.213 | 108.768<br>108.527<br>9.430490+00 | 5.031647+10<br>696.045<br>713.544  | 8.936019+08<br>21.1051<br>21.574 | 32.910<br>16.5630<br>16.600 | 8.5282<br>77.962<br>6.2440 | 1.7680<br>2.336526+00<br>2.0589 | 1.2387<br>1.1311<br>1.1305 |
| 31000. | 23.987 | 116.073<br>115.817<br>1.039346+01 | 7.670136+10<br>743.326<br>761.968  | 1.253984+09<br>21.2041<br>21.681 | 34.978<br>17.2282<br>17.260 | 8.9295<br>79.334<br>6.3912 | 1.8070<br>2.414410+00<br>2.1041 | 1.2501<br>1.1149<br>1.1147 |
| 32000. | 24.761 | 123.617<br>123.351<br>1.141150+01 | 1.145449+11<br>792.482<br>812.106  | 1.726312+09<br>21.4608<br>21.940 | 37.146<br>17.7379<br>17.767 | 9.3315<br>80.705<br>6.5374 | 1.8458<br>2.492294+00<br>2.1528 | 1.2586<br>1.1073<br>1.1073 |
| 33000. | 25.534 | 131.400<br>131.125<br>1.248787+01 | .000000+00<br>843.294<br>863.919   | .000000+00<br>21.7858<br>22.268  | .000<br>18.1604<br>18.188   | .0000<br>82.085<br>6.6811  | .0000<br>2.570178+00<br>2.2042  | .0000<br>1.1034<br>1.1034  |
| 34000. | 26.308 | 139.423<br>139.140<br>1.362482+01 | .000000+00<br>895.804<br>917.374   | .000000+00<br>22.1448<br>22.629  | .000<br>18.5275<br>18.554   | .0000<br>83.480<br>6.8229  | .0000<br>2.648063+00<br>2.2579  | .0000<br>1.1012<br>1.1012  |
| 35000. | 27.082 | 147.685<br>147.395<br>1.482414+01 | .000000+00<br>949.948<br>972.465   | .000000+00<br>22.5171<br>23.002  | .000<br>18.8566<br>18.883   | .0000<br>84.891<br>6.9637  | .0000<br>2.725947+00<br>2.3136  | .0000<br>1.1000<br>1.1000  |
| 36000. | 27.856 | 156.187<br>155.890<br>1.608692+01 | .000000+00<br>1005.706<br>1029.105 | .000000+00<br>22.8917<br>23.376  | .000<br>19.1584<br>19.184   | .0000<br>86.322<br>7.1041  | .0000<br>2.803831+00<br>2.3714  | .0000<br>1.0993<br>1.0994  |

ALTITUDE = 400000. FT.

P1 = 2.107093-08 ATM. , RHO1 = 1.442542-08 AMA. , T1 = 385.88 K  
 S1/R = 42.478 , A1 = 1292.38 FT./SEC. , H1/R = 1350.593 K

| U1     | M1     | H0/H1<br>HS/H1<br>Q RT RN         | P0/P1<br>PS/P1<br>POP/P1           | R0/R1<br>RS/R1<br>RCP/R1        | T0/T1<br>TS/T1<br>TOP/T1  | A0/AA<br>SS/R<br>AOP/AA    | Z0<br>RE/FT.<br>ZOP            | GAMEO<br>GAMES<br>GAMEOP  |
|--------|--------|-----------------------------------|------------------------------------|---------------------------------|---------------------------|----------------------------|--------------------------------|---------------------------|
| 37000. | 28.629 | 164.928<br>164.624<br>1.741504+01 | .000000+00<br>1063.067<br>1087.340 | .000000+00<br>23.2618<br>23.744 | .000<br>19.4399<br>19.465 | .0000<br>87.772<br>7.2445  | .0000<br>2.881715+00<br>2.4311 | .0000<br>1.0990<br>1.0991 |
| 38000. | 29.403 | 173.908<br>173.598<br>1.881006+01 | .000000+00<br>1122.021<br>1147.173 | .000000+00<br>23.6231<br>24.104 | .000<br>19.7058<br>19.730 | .0000<br>89.244<br>7.3858  | .0000<br>2.959599+00<br>2.4926 | .0000<br>1.0991<br>1.0992 |
| 39000. | 30.177 | 183.129<br>182.811<br>2.027324+01 | .000000+00<br>1182.559<br>1208.581 | .000000+00<br>23.9719<br>24.451 | .000<br>19.9599<br>19.984 | .0000<br>90.738<br>7.5279  | .0000<br>3.037484+00<br>2.5558 | .0000<br>1.0994<br>1.0995 |
| 40000. | 30.951 | 192.588<br>192.264<br>2.180615+01 | .000000+00<br>1244.677<br>1271.583 | .000000+00<br>24.3063<br>24.783 | .000<br>20.2051<br>20.229 | .0000<br>92.253<br>7.6713  | .0000<br>3.115368+00<br>2.6209 | .0000<br>1.0999<br>1.1000 |
| 41000. | 31.724 | 202.287<br>201.955<br>2.341051+01 | .000000+00<br>1308.368<br>1336.203 | .000000+00<br>24.6248<br>25.100 | .000<br>20.4438<br>20.468 | .0000<br>93.789<br>7.8159  | .0000<br>3.193252+00<br>2.6876 | .0000<br>1.1004<br>1.1005 |
| 42000. | 32.498 | 212.226<br>211.886<br>2.508807+01 | .000000+00<br>1373.627<br>1402.472 | .000000+00<br>24.9261<br>25.401 | .000<br>20.6778<br>20.702 | .0000<br>95.347<br>7.9625  | .0000<br>3.271136+00<br>2.7560 | .0000<br>1.1011<br>1.1013 |
| 43000. | 33.272 | 222.404<br>222.056<br>2.683902+01 | .000000+00<br>1440.449<br>1470.266 | .000000+00<br>25.2084<br>25.681 | .000<br>20.9092<br>20.934 | .0000<br>96.927<br>8.1113  | .0000<br>3.349020+00<br>2.8261 | .0000<br>1.1020<br>1.1021 |
| 44000. | 34.046 | 232.822<br>232.464<br>2.866506+01 | .000000+00<br>1508.829<br>1539.601 | .000000+00<br>25.4711<br>25.941 | .000<br>21.1395<br>21.164 | .0000<br>98.527<br>8.2622  | .0000<br>3.426905+00<br>2.8978 | .0000<br>1.1030<br>1.1031 |
| 45000. | 34.819 | 243.479<br>243.112<br>3.056775+01 | .000000+00<br>1578.760<br>1610.492 | .000000+00<br>25.7131<br>26.180 | .000<br>21.3707<br>21.395 | .0000<br>100.148<br>8.4160 | .0000<br>3.504789+00<br>2.9711 | .0000<br>1.1041<br>1.1042 |
| 46000. | 35.593 | 254.376<br>253.999<br>3.255028+01 | .000000+00<br>1650.236<br>1683.113 | .000000+00<br>25.9330<br>26.400 | .000<br>21.6046<br>21.630 | .0000<br>101.788<br>8.5730 | .0000<br>3.582673+00<br>3.0459 | .0000<br>1.1054<br>1.1055 |
| 47000. | 36.367 | 265.512<br>265.125<br>3.461431+01 | .000000+00<br>1723.293<br>1757.460 | .000000+00<br>26.1302<br>26.597 | .000<br>21.8433<br>21.869 | .0000<br>103.447<br>8.7336 | .0000<br>3.660557+00<br>3.1222 | .0000<br>1.1069<br>1.1070 |
| 48000. | 37.141 | 276.887<br>276.488<br>3.676046+01 | .000000+00<br>1797.789<br>1833.418 | .000000+00<br>26.3010<br>26.770 | .000<br>22.0893<br>22.116 | .0000<br>105.123<br>8.8986 | .0000<br>3.738441+00<br>3.2000 | .0000<br>1.1086<br>1.1088 |
| 49000. | 37.915 | 288.502<br>288.091<br>3.898930+01 | .000000+00<br>1873.845<br>1910.861 | .000000+00<br>26.4446<br>26.914 | .000<br>22.3460<br>22.373 | .0000<br>106.817<br>9.0688 | .0000<br>3.816326+00<br>3.2792 | .0000<br>1.1108<br>1.1109 |
| 50000. | 38.688 | 300.357<br>299.933<br>4.130238+01 | .000000+00<br>1951.400<br>1989.757 | .000000+00<br>26.5569<br>27.025 | .000<br>22.6175<br>22.645 | .0000<br>108.526<br>9.2456 | .0000<br>3.894210+00<br>3.3596 | .0000<br>1.1132<br>1.1134 |

TABLE 2

## COMPARISON OF ARDC (1959) AND U. S. STANDARD (1962) MODEL ATMOSPHERES

| Geometric Altitude,<br>kilofeet | $p_1$  | $\rho_1$ | $T_1$ | $H_1/R^\dagger$ | $a_1^\dagger$ |
|---------------------------------|--------|----------|-------|-----------------|---------------|
| 0                               | --     | --       | --    | -0.4            | --            |
| 70                              | -0.06  | 0.52     | -0.57 | -1.06           | -0.32         |
| 100                             | -0.8   | -3.16    | 2.50  | 2.00            | 1.21          |
| 120                             | 2.44   | -1.58    | 4.12  | 3.62            | 2.00          |
| 160                             | 9.41   | 4.77     | 4.45  | 3.98            | 2.15          |
| 170                             | 11.2   | 6.45     | 4.34  | 3.98            | 2.15          |
| 200                             | 14.1   | 16.09    | -1.75 | -2.22           | -0.92         |
| 220                             | 11.15  | 15.5     | -3.76 | -4.21           | -1.93         |
| 250                             | 2.74   | 10.2     | -6.74 | -7.16           | -3.45         |
| 280                             | -11.25 | -2.96    | -8.29 | -8.70           | -4.27         |

\*Data shown were computed from

$$\text{percent difference} = \frac{100 \left[ x(1959) - x(1962) \right]}{x(1962)}$$

$^\dagger H(1959)$  and  $a(1959)$  were obtained from Wittliff and Curtis (Ref. 2).

TABLE 3

COMPARISON OF PRESENT WITH PREVIOUS PERFECT GAS RESULTS\*

|                             |       |       |       |       |       |       |       |      |
|-----------------------------|-------|-------|-------|-------|-------|-------|-------|------|
| Altitude, kilofeet          | 70    | 100   | 120   | 170   | 200   | 220   | 250   | 280  |
| Velocity x 10 <sup>-3</sup> | 36    | 26    | 40    | 35    | 26    | 28    | 45    | 32   |
| M <sub>1</sub>              | 0.33  | -1.19 | -1.95 | -2.13 | 0.92  | 1.97  | 3.57  | 4.46 |
| $\rho_S/\rho_1$             | -0.79 | 0.24  | -0.86 | -0.49 | -0.56 | -0.49 | -0.73 | 0.14 |
| $p_S/p_1$                   | 0.44  | -2.47 | -4.03 | -4.35 | 1.70  | 3.79  | 7.10  | 8.98 |
| $T_S/T_1$                   | 1.38  | -2.64 | -3.41 | -3.75 | 2.62  | 4.56  | 7.93  | 8.96 |
| $H_S/H_1$                   | 1.03  | -1.99 | -3.53 | -3.85 | 2.17  | 4.33  | 7.64  | 9.46 |
| $H_O/H_1$                   | 1.09  | -1.96 | -3.47 | -3.83 | 2.23  | 4.38  | 7.66  | 9.50 |
| $p_O'/p_1$                  | 0.44  | -2.52 | -4.07 | -4.35 | 1.67  | 11.6  | 7.12  | 8.92 |
| $T_O'/T_1$                  | 1.34  | -2.54 | -3.35 | -3.71 | 2.59  | 8.83  | 7.97  | 8.97 |

\*Data shown were computed from

$$\text{percent difference} = \frac{100 \left[ x(\text{Marrone}) - x(\text{Present Results}) \right]}{x(\text{Present Results})}$$