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MILLER and WILDER

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Charles G. Miller III and Sue E. Wilder
NASA Langley Research Center

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PREFACE

Equilibrium thermodynamic and flow properties are presented in tabulated and graphical form for moving, standing, and reflected normal shock waves in pure argon. Properties include pressure, temperature, density, enthalpy, speed of sound, entropy, molecular-weight ratio, isentropic exponent, velocity, and species mole fractions. Incident (moving) shock velocities are varied from 2 to 18 km/sec for a range of initial pressure of 5 N/m^2 to 500 kN/m^2. Working charts illustrating shock-tube performance with argon test gas and heated helium and hydrogen driver gases are also presented.

CONTENTS

SUMMARY

Equilibrium thermodynamic and flow properties are presented in tabulated and graphical form for moving, standing, and reflected normal shock waves in pure argon. Properties include pressure, temperature, density, enthalpy, speed of sound, entropy, molecular-weight ratio, isentropic exponent, velocity, and species mole fractions. Incident (moving) shock velocities are varied from 2 to 18 km/sec for a range of initial pressure of 5 N/m^2 to 500 kN/m^2. Working charts illustrating shock-tube performance with argon test gas and heated helium and hydrogen driver gases are also presented.

INTRODUCTION

An investigation was recently performed which reviewed and compared the accuracy of various means of determining incident shock velocity in a shock tube and studied more fully the phenomenon of shock strengths which significantly exceeded theoretical prediction. (See ref. 1.) Air, carbon dioxide, helium, and argon were used as the test gas. For the range of shock velocity in reference 1, tables and charts of equilibrium thermodynamic and flow properties were available from the open literature for air, carbon dioxide, and helium. However, a scarcity of such information existed for argon.

More recently, the need to consider equilibrium thermodynamic and flow properties for argon arose when a shock-tube study using argon was proposed at the NASA Ames Research Center. Of particular interest in this proposed study, which is in support of an investigation of a pulsed, self-excited magnetohydrodynamic generator, are the species mole fractions (number densities) in the high-temperature region behind the incident shock. Hence, calculations in support of this study and the study of reference 1 were undertaken and are reported herein.

This report presents for pure argon (1) charts and tables for use in the determination of equilibrium thermodynamic properties, flow velocity, and species mole fractions for incident (moving), standing, and reflected normal shocks, and (2) reasonable estimates of constant-area shock-tube performance for arc-heated helium driver gas or resistance-heated hydrogen driver gas. These argon properties were calculated by the computer program of reference 2 for a 10-species $\left(e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, Ar^{4+}, Ar^{5+}, Ar^{6+}, Ar^{7+}, \text{and } Ar^{8+}\right)$ model.

SYMBOLS

a	speed of sound, m/sec
$B(T)$	second virial coefficient, cm^3/mol
$C(T)$	third virial coefficient, $(cm^3/mol)^2$
$D(T)$	fourth virial coefficient, $(cm^3/mol)^3$
h	specific enthalpy, m^2/sec^2 or J/kg
p	pressure, N/m^2
p_o	reference pressure, 101.325 kN/m^2
R	universal gas constant, 8.31434 kJ/kmol-K
s	specific entropy, kJ/kg-K
$\frac{sW_o}{R}$	nondimensional specific entropy
T	temperature, K
U	velocity, m/sec
U_r	velocity of reflected shock, m/sec
U_s	velocity of incident shock, m/sec
W	molecular weight, kg/kmol
W_o	molecular weight of unionized argon, 39.944 kg/kmol
Z	compressibility factor
Z^*	number of kilomoles of argon per number of kilomoles of argon at 300 K, $\frac{W_o}{W}$

γ_E isentropic exponent, $\left(\frac{\partial \log p}{\partial \log \rho}\right)_{sW_o/R}$

ξ_ϕ percent difference between equilibrium thermodynamic property ϕ calculated by present method and that obtained from tabulations of reference 9 (see eq. (B1))

ρ density, kg/m^3

ρ_o reference density, 1.78096 kg/m^3

Subscripts:

1 state of quiescent test gas ahead of incident normal shock

2 state of test gas behind incident normal shock (see fig. 1)

2r state of test gas behind reflected normal shock into region 2 (see fig. 1)

2s state of test gas behind standing normal shock in region 2 (see fig. 1)

3 state of expanded driver gas (see fig. 1)

4 driver-gas conditions at time of diaphragm rupture

CONVERSION FACTORS AND CONSTANTS

Conversion factors (ref. 3) between the International System of Units (SI) and U.S. Customary Units for the quantities presented in table I and figures 2 to 4 are

$$1\ N/m^2 = 9.8692 \times 10^{-6}\ atm = 1.4504 \times 10^{-4}\ psi = 2.0885 \times 10^{-2}\ lbf/ft^2$$

$$1\ kg/m^3 = 6.2428 \times 10^{-2}\ lbm/ft^3 = 1.9403 \times 10^{-3}\ slug/ft^3$$

$$1\ J/kg = 1\ m^2/sec^2 = 1.0764 \times 10^{1}\ ft^2/sec^2 = 4.3021 \times 10^{-4}\ Btu/lbm$$

$$1\ m/sec = 3.2808\ ft/sec = 2.2369\ mph$$

Physical constants appearing herein for pure argon at an initial temperature T_1 of 300 K are

$$W_o = 39.944 \text{ kg/kmol}$$

$$h_1 = 1561 \text{ kJ/kg}$$

$$a_1 = 322.6 \text{ m/sec}$$

$$\gamma_{E,1} = 1.667$$

$$Z_1^* = 1.000$$

FLOW REGIONS AND COMPUTATION PROCEDURE

The regions of interest for a shock tube are illustrated in figure 1. The driver gas at the time of diaphragm rupture is designated as region 4, and the quiescent test gas is designated as region 1 (fig. 1(a)). Upon rupture of the diaphragm, an incident shock wave propagates into region 1 with a velocity U_s. The flow conditions immediately behind this shock are denoted as region 2 (fig. 1(b)). When the incident shock wave reaches the end wall of the shock tube, it is reflected back into region 2 (fig. 1(c)). The gas behind the reflected shock wave is brought to rest, relative to the shock tube. Flow conditions behind this reflected shock wave, which is propagating upstream with a velocity U_r, are designated as region 2r.

With a blunt model positioned in the driven section of the shock tube, a standing shock wave is formed at the model, provided the flow in region 2 is supersonic (fig. 1(d)). The flow conditions immediately behind this standing shock are designated as region 2s.

The conservation relations for an incident normal shock wave into region 1, a standing normal shock wave, and a reflected normal shock wave are presented in references 4 and 5, along with the method of solution. This method of solution of the three conservation relations for a normal shock wave and the equation of state (which represents the source of thermodynamic properties for real argon and cannot be expressed in closed analytical form when chemical processes occur) utilizes an iteration on the density immediately behind a normal shock wave (that is, ρ_2, ρ_{2s}, or ρ_{2r}), and is commonly referred to as the method of successive approximations. Iterative tolerances on density of 0.05, 0.1, and 0.5 percent were briefly examined for values of quiescent test-gas pressure p_1 of 10 N/m^2 and 100 kN/m^2 and incident shock velocity U_s from 2 to 18 km/sec. Refining the tolerance on ρ_2, ρ_{2s}, and ρ_{2r} from 0.5 percent to 0.1 percent increased computer time by roughly a factor 3 to 4. However, the thermodynamic

properties and velocity in region (2), calculated with these two tolerances, agreed to within 0.2 percent, and species mole fractions greater than 10^{-3} agreed to within 0.5 percent. In the reflected shock region (2r), thermodynamic properties agreed to within 0.5 percent, reflected shock velocity to within 0.6 percent, and species mole fractions to within 1 percent. Maximum differences between these two tolerances were observed at the lower values of U_s, corresponding to the initiation of argon ionization. As incident shock velocity increased, the percent difference in thermodynamic properties, in general, decreased and was often zero. This exact agreement (difference of zero) indicated that the tolerance of 0.1 percent was satisfied in the iterative process even though the actual tolerance was 0.5 percent. An iterative tolerance of 0.05 percent increased computer time by a factor of approximately 40 in comparison with a tolerance of 0.5 percent. Considering the large number of cases (combinations of p_1 and U_s) to be calculated, the required computer time for a tolerance of 0.05 percent was unacceptable. As a compromise between accuracy and computer time, an iterative tolerance on density of 0.5 percent was employed in the present calculations. The procedure for predicting shock-tube performance is discussed in reference 2. This procedure is commonly referred to as "simple shock-tube theory," since it is based on a simplified one-dimensional, inviscid-flow model which assumes instantaneous diaphragm rupture, no shock-wave attenuation, and a ratio of driver-section cross-sectional area to driven-section cross-sectional area of unity.

Thermochemical equilibrium properties are obtained by using the procedure of references 6 and 7, which is based upon minimization of the Gibbs free energy. Basic assumptions for atomic species are (1) that the mixture is composed of ideal gases (interatomic force effects are neglected), and (2) that only electronic levels with principal quantum number less than or equal to 5 are included. For a given pressure and temperature, the free energies for individual species are computed from partition functions of statistical mechanics. The equilibrium composition is then obtained by minimization of the free energy. In the present study, iterations on species concentration (number of kilomoles of species per mass of mixture) were continued until the absolute value of each species concentration changed by less than 10^{-12} between successive iterations. This iterative criterion is referred to in reference 6 as the absolute criterion. A relative criterion was also employed to prevent termination of the iterations while a minor species was still changing by as much as 0.1 of its previous value. Because of the expected high temperatures in regions (2), (2s), and (2r) for argon over the present range of quiescent pressure $\left(5\ N/m^2 \leqq p_1 \leqq 0.5\ MN/m^2\right)$ and incident shock velocity $\left(2 \leqq U_s \leqq 18\ km/sec\right)$, a detailed argon model was employed. The species used in the argon model are e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, Ar^{4+}, Ar^{5+}, Ar^{6+}, Ar^{7+}, and Ar^{8+}. Heats of formation and spectroscopic constants for these species were obtained from reference 8. Because of the

importance of these data for accurate determination of thermodynamic properties and species mole fractions, a listing of the input cards for the data is presented in appendix A.

Accurate solution of the relatively simple conservative relations for incident, standing, and reflected normal shock waves depends primarily on the real-gas equation of state (source of equilibrium thermodynamic properties). As discussed previously, the computer program of reference 2, used to calculate the present results, employs the method of references 6 and 7 as the equation of state. Results calculated by the method of references 6 and 7 have been compared with results calculated by other computational procedures for predicting equilibrium thermodynamic properties of several gases. In reference 7, it is concluded that the method of references 6 and 7 calculates first-order thermodynamic properties for air to within 1 percent and second-order properties to within 5 percent for $T \leqq 15\ 000$ K and $p \leqq 10$ MN/m^2. Shock crossing results for air and carbon dioxide, for which the method of references 6 and 7 was employed as the equation of state, were compared in references 4 and 5 with similar results from independent sources. This comparison revealed that for both gases, first-order thermodynamic properties and flow velocities were within 2 percent for $T \leqq 25\ 000$ K and $p \leqq 10$ MN/m^2. The upper limit on pressure recommended in reference 7 is to minimize imperfect-gas (intermolecular force) effects. Temperatures considered must be limited so that only negligible contributions are realized from coulomb interactions and from electronic energy levels past the fifth electron shell. These effects are neglected in the equilibrium program of references 6 and 7.

To examine possible differences for argon, comparison between computed thermodynamic properties from the present study and those computed by a second rigorous computational scheme is made and presented in appendix B. Equilibrium argon first-order properties – density, enthalpy, entropy, and molecular-weight ratio – calculated using the free-energy minimization method of references 6 and 7 are compared with those tabulated in reference 9. The results of reference 9 represent interpolations to the data of reference 10. The interpolations were performed to obtain tabulations of thermodynamic properties as a function of temperature for a given pressure. The computational procedure of reference 10 considers ionization, corrections for interatomic force effects, and corrections for coulombic force effects, and thus is a somewhat more rigorous computational scheme than that of references 6 and 7. A six-species (e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, and Ar^{4+}) argon model was employed in reference 10 for temperatures to 35 000 K. The comparison presented in appendix B shows that the two sources of density, entropy, and molecular-weight ratio for equilibrium argon are in reasonably good agreement (within 4 percent) for temperatures from 2000 K to 35 000 K and pressure $p \leqq 10$ MN/m^2. For enthalpy, agreement between the two sources over this temperature range was within 3 percent for $p \leqq 1$ MN/m^2 and within 7 percent for $p \leqq 10$ MN/m^2. Increasing the pressure from 10 MN/m^2 to 100 MN/m^2 resulted in significant increases in differences

between thermodynamic properties from the two sources. This trend is believed to be due primarily to interatomic force effects becoming significant at pressures greater than 10 MN/m^2. To provide a rapid method for estimating the pressure-temperature region in which interatomic effects are significant for argon, the results of reference 11 were used. Simple relations for the virial coefficients, hence compressibility factor, were obtained from reference 11 and are also presented in appendix B.

In subsequent discussion of the present results, no upper limitations on pressure and temperature are imposed on the data presented in table I. However, a maximum pressure limitation of 10 MN/m^2 is imposed on the corresponding data shown in figures 2 to 4. Because of the detailed argon model used herein, no temperature limitation is imposed on the data in these figures. However, the user of figures 2 to 4 should exercise discretion for $T > 35\ 000$ K.

DISCUSSION OF TABLE AND CHARTS

Table

The solutions for incident (moving), standing, and reflected normal shocks are presented in table I for pure argon. These tabulated computer results are arranged in groups of constant pressure in region 1 (P1), and the incident shock velocity (US1) is varied within the group. In table I, p_1 is varied from 5 N/m^2 to 500 kN/m^2 and U_s is varied from 2 to 11 km/sec in increments of 200 m/sec and from 11 to 18 km/sec in increments of 500 m/sec.

For each p_1, a complete list of calculated thermodynamic properties (p, T, ρ, h, a, sW_o/R, Z^*, and γ_E), flow velocity (U), and species volumetric composition is given for the three shock-tube regions under consideration. The rows in the upper portion of each tabulation, for a given p_1 and U_s, are identified by letters (FORTRAN symbols), the meaning of which, in terms of the defined symbols, is given in the following table:

FORTRAN symbol	Moving shock	Standing shock	Reflected shock
P	p_2/p_1	p_{2s}/p_1	p_{2r}/p_1
T	T_2/T_1	T_{2s}/T_1	T_{2r}/T_1
RHO	ρ_2/ρ_1	ρ_{2s}/ρ_1	ρ_{2r}/ρ_1
H	h_2/h_1	h_{2s}/h_1	h_{2r}/h_1
A	a_2/a_1	a_{2s}/a_1	a_{2r}/a_1
S	s_2/s_1	s_{2s}/s_1	s_{2r}/s_1
Z	Z_2^*/Z_1^*	Z_{2s}^*/Z_1^*	Z_{2r}^*/Z_1^*
GAME	$\gamma_{E,2}/\gamma_{E,1}$	$\gamma_{E,2s}/\gamma_{E,1}$	$\gamma_{E,2r}/\gamma_{E,1}$
U	U_2/a_1	U_{2s}/a_1	U_r/a_1

The lower portion of each tabulation presents the species composition for moving, standing, and reflected shock regions. Rows are identified by FORTRAN symbols for the species. (Note that AV denotes Ar^{5+}, AVI denotes Ar^{6+}, and so forth.)

The conditions in region 1 are used to nondimensionalize calculated properties in regions 2, 2s, and 2r. The temperature in region 1 T_1 is 300 K for all cases in table I. Corresponding thermodynamic properties for pure argon in region 1 are given in the following table:

INITIAL CONDITIONS AHEAD OF INCIDENT

NORMAL SHOCK IN PURE ARGON

T_1 = 300 K a_1 = 322.6 m/sec h_1 = 1561 kJ/kg Z_1^* = 1.000 $\gamma_{E,1}$ = 1.667		
p_1, N/m^2	ρ_1, kg/m^3	$\frac{s_1 W_o}{R}$
5	0.00008007	28.54
10	.0001601	27.85
20	.0003203	27.16
50	.0008007	26.24
100	.001601	25.55
200	.003203	24.85
500	.008007	23.94
1 000	.01601	23.24
2 000	.03203	22.55
5 000	.08007	21.63
10 000	.1601	20.94
20 000	.3203	20.25
50 000	.8007	19.33
100 000	1.601	18.64
200 000	3.203	17.95
500 000	8.007	17.03

No maximum pressure and temperature limitations were imposed on the results of table I. The user should exercise discretion in the use of this table for $p > 10\ MN/m^2$ or $T > 35\ 000$ K.

Charts

Working charts for pure argon (corresponding to the results of table I) are shown in figures 2 to 4. In these figures, the nondimensionalized thermodynamic properties and flow velocity for regions 2, 2s, and 2r are plotted as a function of incident shock velocity U_s for various quiescent test-gas pressures. For each property, the incident-shock-velocity scale is 0 to 18 km/sec for an incident shock into region 1, for a standing shock, and for a reflected shock. The figures were generated by machine, and linear line segments were used to connect adjacent data points.

Unlike table I, a maximum pressure limitation of $10\ MN/m^2$ is imposed on the results of figures 2 to 4. Again, the properties in region 1 presented previously must be used to obtain the desired value of the thermodynamic property or flow velocity from the ratio presented. The user of figures 2 to 4 is cautioned to use discretion for $T > 35\ 000$ K.

THEORETICAL SHOCK-TUBE PERFORMANCE

Before a study is performed in a shock tube, it is essential to ascertain the theoretical performance for the gas being tested. The wide range of flow conditions and very short test times (generally, a few μsec to several msec) impose stringent requirements on shock-tube instrumentation. Thus, in preparing shock-tube instrumentation for a test, it is necessary that the physical quantities to be measured be known to within reasonable limits.

Results from the procedure for determining shock-tube performance (ref. 2) for pure argon test gas are shown in figure 5(a) for heated helium driver gas and figure 5(b) for heated hydrogen driver gas. In figure 5, the incident shock velocity U_s is shown as a function of the ratio of driver-gas pressure in region 4 to quiescent test-gas pressure in region 1 p_4/p_1 for various driver-gas temperatures T_4. With p_4, T_4, and p_1 known, a theoretical value of U_s may be obtained from these figures. Corresponding thermodynamic properties and flow velocity in regions 2, 2s, and 2r may be obtained from figures 2 to 4, or from table I. Variation in p_4/p_1 is obtained by varying p_1. The range of T_4 is 300 K to 26 000 K for helium driver gas and 300 K to 700 K for hydrogen driver gas; p_4 is equal to $150\ MN/m^2$ for helium driver and equal to $15\ MN/m^2$ for hydrogen driver. At the maximum value of T_4 of 26 000 K and p_4 of

150 MN/m^2, ionization of the helium driver gas is small (Z^* is less than 1.05, or so (ref. 12)), and the results of reference 2 are applicable. Because of the large amount of computer time required to generate the results of figure 5, the argon model was simplified (that is, the species considered were reduced to e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, Ar^{4+}, and Ar^{5+}) for these computations with no loss in accuracy.

CONCLUDING REMARKS

Equilibrium thermodynamic and flow properties are presented in tabulated and graphical form for moving, standing, and reflected normal shock waves in pure argon. Properties include pressure, temperature, density, enthalpy, speed of sound, entropy, molecular-weight ratio, isentropic exponent, velocity, and species mole fractions. Incident (moving) shock velocities are varied from 2 to 18 km/sec for a range of initial pressure of 5 N/m^2 to 500 kN/m^2. Working charts illustrating shock-tube performance with argon test gas and heated helium and hydrogen driver gases are also presented.

Langley Research Center
National Aeronautics and Space Administration
Hampton, Va. 23665
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APPENDIX A

HEATS OF FORMATION AND SPECTROSCOPIC CONSTANTS FOR IONIZED ARGON

The accuracy associated with the computation of thermodynamic properties and species mole fractions by means of the free-energy minimization method of references 6 and 7 depends on the spectroscopic-constant and heat-of-formation inputs. Because of the importance of such input data, a listing of the input cards for species e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, Ar^{4+}, Ar^{5+}, Ar^{6+}, Ar^{7+}, and Ar^{8+} is presented. For each species, the first card contains (1) the chemical symbol for the species, (2) the integer number of electronic levels considered, (3) a flag which is zero for a monatomic species, (4) a flag to call a debug subroutine, (5) the molecular weight of the species, (6) the standard heat of formation of 1 mole of the species at 0 K, in ergs/mol, and (7) the symmetry number for the species. The cards immediately following the first card for a given species contain the degeneracy of the energy level followed by the energy of the electronic level of the species in cm^{-1}, for all electronic levels considered. The location of the decimal point in noninteger numbers is before the first digit. For example, for Ar^+ (A^+ in listing), 30 electronic levels are considered, the molecular weight is 39.94345 kg/kmol, the heat of formation is 0.1520235×10^{14} ergs/mol, and the symmetry number is zero. For the first electronic level the degeneracy is 6 and the energy is zero, for the second level the degeneracy is 2 and the energy is 108723.0 cm^{-1}, for the third level the degeneracy is 20 and the energy is 132400.0 cm^{-1}, and so forth.

The input cards for species e^-, Ar, Ar^+, and Ar^{++} were obtained from the author of reference 6; hence, for these species, the heats of formation and spectroscopic constants correspond to the tabulations presented in reference 6. (Note that these values of heats of formation and spectroscopic constants tabulated in ref. 6 were obtained from the tables of ref. 8.) Heats of formation and spectroscopic constants for the remaining species Ar^{+++}, Ar^{4+}, Ar^{5+}, Ar^{6+}, Ar^{7+}, and Ar^{8+} were also obtained from reference 8. The reduced list of energy levels in comparison with the numerous energy levels presented in reference 8 was obtained by grouping terms which were close together in energy as a single energy level. The equivalent degeneracy for a group was the sum of the degeneracies of the energy levels contained within this group. For such a group, the energy level represents a weighted value based on the values of the degeneracies within the group.

In the method of references 6 and 7, electrons are treated as an atomic species. The internal partition function for an electron is its spin degeneracy. Thus, the electron is assumed to have a "ground-state" degeneracy of 2 and no electric excitation states.

APPENDIX A

The listing of the required input data for the present 10-species argon model is as follows (note that Ar^{4+} is denoted by AIV, Ar^{5+} by AV, and so forth):

```
E-        1     0     0   54847000-03   00000000+00   00000000+00
 20000000+01   00000000+00
A        30     0     0   39944000+02   00000000+00   00000000+00
 10000000+01   00000000+00   50000000+01   93144000+05   30000000+01
 93751000+05   10000000+01   94554000+05   30000000+01   95400000+05
 30000000+01   10410200+06   12000000+02   10550000+06   80000000+01
 10615000+06   10000000+01   10705400+06   80000000+01   10722000+06
 40000000+01   10800000+06   40000000+01   11128000+06   16000000+02
 11175000+06   80000000+01   11290000+06   20000000+02   11355000+06
 16000000+02   11475000+06   80000000+01   11500000+06   30000000+01
 11666000+06   12000000+02   11696000+06   80000000+01   11717000+06
 10000000+01   11756300+06   16000000+02   11853000+06   36000000+02
 11930000+06   56000000+02   12025000+06   20000000+02   12070000+06
 32000000+02   12175000+06   36000000+02   12220000+06   56000000+02
 12270000+06   20000000+02   12350000+06   28000000+02   12413600+06
A+       30     0     0   39943450+02   15202350+14   00000000+00
 60000000+01   00000000+00   20000000+01   10872300+06   20000000+02
 13240000+06   12000000+02   13480000+06   60000000+01   13860000+06
 28000000+02   14270000+06   60000000+01   14520000+06   12000000+02
 14765000+06   10000000+02   14875000+06   10000000+02   15000000+06
 12000000+02   15516000+06   30000000+02   15830000+06   12000000+02
 16100000+06   20000000+01   16730900+06   14000000+02   17060000+06
 26000000+02   17300000+06   38000000+02   17480000+06   60000000+01
 17970000+06   40000000+02   18300000+06   60000000+02   18600000+06
 62000000+02   19020000+06   34000000+02   19220000+06   12000000+03
 19400000+06   84000000+02   19600000+06   48000000+02   20000000+06
 18000000+02   20500000+06   60000000+01   20859300+06   22000000+03
 21000000+06   50000000+02   21500000+06   70000000+02   22000000+06
A++      30     0     0   39942900+02   41851700+14   00000000+00
 50000000+01   00000000+00   30000000+01   11120000+04   10000000+01
 15700000+04   50000000+01   14010000+05   10000000+01   33267000+05
 90000000+01   11440000+06   10000000+02   12800000+06   28000000+02
 14465000+06   15000000+02   15695000+06   50000000+01   17437500+06
 15000000+02   18200000+06   75000000+02   18950000+06   15000000+02
 19660000+06   50000000+01   20000000+06   18000000+02   20470000+06
 21000000+02   20830000+06   27000000+02   21080000+06   33000000+02
 21450000+06   46000000+02   22450000+06   90000000+01   23150000+06
 50000000+01   23500000+06   26000000+02   24000000+06   50000000+02
 24603600+06   91000000+02   25100000+06   24000000+02   25800000+06
 12700000+03   27000000+06   12100000+03   27850000+06   11600000+03
 28200000+06   11100000+03   28600000+06   52400000+03   30200000+06
A+++     24     0     0   39942350+02   81316593+14   00000000+00
 40000000+01   00000000+00   40000000+01   21090000+05   60000000+01
 21219000+05   20000000+01   34854000+05   40000000+01   35035000+05
 60000000+01   11756400+06   40000000+01   11851500+06   20000000+01
 11904400+06   40000000+01   14592100+06   60000000+01   14600000+06
 40000000+01   16635600+06   20000000+01   16744400+06   20000000+01
 17783300+06   12000000+02   25132477+06   60000000+01   25693036+06
 10000000+02   26815938+06   20000000+02   28688961+06   12000000+02
 28951759+06   10000000+02   29110322+06   40000000+01   29174870+06
 60000000+01   29576269+06   20000000+01   29956320+06   14000000+02
 30426035+06   10000000+02   30626507+06
```

APPENDIX A

```
AIV     12     0     0   39941806+02   13900778+15   00000000+00
 10000000+01   00000000+00   30000000+01   76500000+03   50000000+01
 20320000+04   50000000+01   16301000+05   15000000+02   12173040+06
 90000000+01   14177000+06   30000000+01   19153700+06   30000000+01
 19535600+06   90000000+01   21793222+06   15000000+02   22454613+06
 90000000+01   29710599+06   30000000+01   30130000+06
AV      16     0     0   39941258+02   21137497+15   00000000+00
 20000000+01   00000000+00   40000000+01   22100000+04   20000000+01
 10000000+06   40000000+01   10080200+06   60000000+01   10203400+06
 20000000+01   16980100+06   20000000+01   18218200+06   40000000+01
 18357700+06   10000000+02   21862450+06   40000000+01   27035600+06
 12000000+02   31658700+06   20000000+02   31957400+06   20000000+01
 34228600+06   12000000+02   45528850+06   10000000+02   45479000+06
 10000000+02   55546500+06
AVI     10     0     0   39940709+02   29946995+15   00000000+00
 10000000+01   00000000+00   90000000+01   11474444+06   30000000+01
 17072000+06   90000000+01   27165655+06   15000000+02   32415060+06
 30000000+01   51408300+06   30000000+01   56636200+06   15000000+02
 63464940+06   21000000+02   66009200+06   15000000+02   77233400+06
AVII    12     0     0   39940161+02   41911702+15   00000000+00
 20000000+01   00000000+00   60000000+01   14186999+06   10000000+02
 33266666+06   20000000+01   57591000+06   60000000+01   62890464+06
 10000000+02   69751720+06   14000000+02   71683743+06   20000000+01
 81242200+06   60000000+01   83254233+06   10000000+02   86510020+06
 14000000+02   87526457+06   10000000+02   95556000+06
AVIII    3     0     0   39939612+02   55754097+15   00000000+00
 10000000+01   00000000+00   80000000+01   20333500+07   40000000+01
 20521000+07
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APPENDIX B

COMPARISON OF EQUILIBRIUM THERMODYNAMIC PROPERTIES FOR ARGON

Tabulations of equilibrium, first-order thermodynamic properties for argon are presented in reference 9 for temperatures from 300 K to 35 000 K and pressures from 0.013 N/m^2 to 1.606 GN/m^2. These data were tabulated for various values of pressure, and the temperature was varied for each pressure. In order to obtain this format for the tabulations, the data of reference 10 were interpolated and tabulated in reference 9. The source of these thermodynamic properties for argon (that is, ref. 10) employed a six-species $\left(e^-, Ar, Ar^+, Ar^{++}, Ar^{+++}, \text{and } Ar^{4+}\right)$ argon model, included second virial coefficient corrections for the interactions Ar-Ar, Ar-Ar^+, and Ar-Ar^{++}, and included the effect of coulombic forces on the external partition function. The corrections for interatomic force effects were applied as additive terms to a mixture of ideal gases and increased with increasing density; correction for coulombic forces represents the first term in an infinite power series in powers of ionic strength, and thus is a first-order correction. This latter correction was essentially negligible for $T < 20\ 000$ K. For values of temperature greater than 25 000 K, reference 10 cautions the user that the correction for coulombic forces represents only a first-order approximation.

To compare argon properties calculated by the method of references 6 and 7 with those tabulated in reference 9, the subroutine designated as "ROGO" in reference 2 was used. Required inputs to ROGO, which represents the method of references 6 and 7, are pressure and temperature; thereby comparisons for identical values of p and T are permitted. Comparisons of the nondimensional thermodynamic properties – density ρ/ρ_o, entropy sW_o/R, enthalpy hW_o/RT, and molecular-weight ratio Z^* – between the two sources are presented in figure 6 for a range of temperature from 2000 K to 34 000 K and several values of pressure p/p_o. In figure 6, the quantity

$$\xi_\phi \equiv \frac{\phi_{\text{ref. 9}} - \phi_{\text{ROGO}}}{\phi_{\text{ROGO}}} \times 100 \tag{B1}$$

where ϕ may be any of the four thermodynamic quantities given previously, is plotted as a function of temperature for values of pressure p/p_o ranging from 0.1 to 1000. For $p/p_o < 100$, thermodynamic quantities ρ/ρ_o, sW_o/R, and Z^* agree to within 4 percent over the entire temperature range; for $p/p_o < 10$, values of hW_o/RT agree to within 3 percent over this temperature range, but for $p/p_o = 100$ and $15\ 000\ K < T < 21\ 000$ K, the difference increases to 7 percent. For temperatures less than approximately 12 000 K and $p/p_o < 100$, the thermodynamic quantities from the two sources agree to within

approximately 1 percent. As expected, agreement between the two sources increases with decreasing pressure (diminishing interatomic force effects); however, for $p/p_0 > 100$, figure 6 demonstrates that the user of the method of references 6 and 7 should exercise discretion in determining thermodynamic properties of argon. This finding, naturally, applies to the present calculated thermodynamic properties in regions 2, 2s, and 2r.

To provide a rapid means for estimating interatomic force effects for argon, the results of reference 11 were used to obtain simple relations for the virial coefficients. The second, third, and fourth virial coefficient data of reference 11 were extrapolated to a temperature of 25 000 K, and curve fits were applied to these data for a temperature range from 2000 K to 25 000 K. Since the virial coefficients are functions only of the temperature, the following relations were obtained:

$$\left.\begin{aligned}
B(T) &= 26.6714 - 1.18333 \times 10^{-3}\,T + 5.84511 \times 10^{-8}\,T^2 \\
&\quad - 1.7535 \times 10^{-12}\,T^3 + 2.40564 \times 10^{-17}\,T^4 \\
C(T) &= 7.12883 - 1.81714 \times 10^{-3}\,T + 2.66935 \times 10^{-7}\,T^2 \\
&\quad - 1.98066 \times 10^{-11}\,T^3 + 7.05012 \times 10^{-16}\,T^4 \\
&\quad - 9.54818 \times 10^{-21}\,T^5 \\
D(T) &= 17.20921 - 7.2224 \times 10^{-3}\,T + 1.51448 \times 10^{-6}\,T^2 \\
&\quad - 1.65403 \times 10^{-10}\,T^3 + 9.60161 \times 10^{-15}\,T^4 \\
&\quad - 2.80616 \times 10^{-19}\,T^5 + 3.24449 \times 10^{-24}\,T^6
\end{aligned}\right\} \tag{B2}$$

where the units for the quantities $B(T)$, $C(T)$, $D(T)$, and T are given in the section "Symbols." The compressibility factor Z is determined from

$$Z = 1 + \rho\alpha\,B(T) + \rho^2\alpha^2\,C(T) + \rho^3\alpha^3\,D(T) \tag{B3}$$

where α is defined as $10^{-3}\,Z^*/W_0$. Equations (B2) and (B3) provide a simple means of estimating interatomic force effects for argon, where interactions involving five or more argon atoms are neglected and the density and temperature are given. For convenience, the compressibility factor for argon is plotted in figure 7 as a function of pressure for various temperatures. From figure 7, the value of Z for argon corresponding to known values of p and T in regions 2, 2s, or 2r may be determined. At the lowest temperature presented in figure 7 (that is, $T = 2000$ K), the argon is unionized. The present values of compressibility factor at this temperature are in excellent agreement

(within 0.5 percent) with those tabulated in reference 9 over the pressure range plotted. At temperatures and pressures for which ionization of argon has occurred, the results of figure 7 provide only rough estimates of the compressibility factor Z since interactions between ionized species are not considered. For such conditions, the reader is referred to reference 9 for more accurate values of Z.

Figure 8 demonstrates the variation in the species mole fractions for argon, as calculated by the method of references 6 and 7 for the 10 species argon model, with temperature for the same values of pressure shown in figure 6. Because of the high temperatures behind incident, standing, and reflected normal shocks for the present range of incident shock velocity, the temperature scale of figure 8 is extended (as compared with fig. 6) to 100 000 K. If mole fractions greater than 10^{-2} are assumed to be significant contributors, this figure shows that for p/p_0 equal to 0.1, third ionization $\left(e^-, Ar, Ar^+, Ar^{++}, \text{and } Ar^{+++}\right)$ should be included at the higher temperatures of the comparison made previously between the present data and the data of reference 9. For the highest pressure, $p/p_0 = 1000$, an argon model including second ionization $\left(e^-, Ar, Ar^+, \text{and } Ar^{++}\right)$ would suffice. Since calculated temperatures in region 2 are as high as 70 000 K for the present range of quiescent test-gas pressure $\left(5\ N/m^2 < p_1 < 0.5\ MN/m^2\right)$ and incident shock velocity $\left(2 < U_s < 18\ km/sec\right)$, and as high as 140 000 K behind a reflected shock (region 2r), figure 8 demonstrates the reason for employing the detailed 10-species argon model in the present calculations.

The primary purpose of presenting the data of figure 8 is to demonstrate what argon species of the 10-species model are significant contributors over the temperature range expected behind an incident shock (region 2) traveling at velocities up to 18 km/sec in argon at various values of p_1. As discussed in reference 13, it is an extremely difficult task to compare various compilations of thermodynamic properties and compositions because of a number of reasons. As a specific example of this problem, calculated compositions for argon at a pressure p/p_0 of unity and temperatures of 10 000 K, 20 000 K, and 30 000 K are compared in reference 13 for several sources. This comparison demonstrated relatively large differences in composition among the various species obtained from several sources. The uncertainty in calculated species mole fractions will, in almost all cases, exceed the uncertainty in corresponding calculated thermodynamic properties. Now, the relatively good agreement observed in the comparison between thermodynamic properties from the present source and that of reference 9 (fig. 6) for $p/p_0 < 100$ and $T < 35\ 000$ K tends to imply a corresponding reasonably good agreement between major species mole fractions. Because of the unknown uncertainties in thermodynamic properties for $T > 35\ 000$ K and the caution expressed in reference 13, the results of figure 8 should be viewed as an illustration of trends for $p/p_0 > 100$ or $T > 35\ 000$ K, and not viewed quantitatively.

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TABLE I.- NONDIMENSIONAL THERMODYNAMIC PROPERTIES AND FLOW VELOCITY FOR INCIDENT (MOVING), STANDING, AND REFLECTED NORMAL SHOCKS IN PURE ARGON

[User cautioned about using table at pressures exceeding 10 MN/m^2 and temperatures exceeding 35 000 K]

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4682E+01	2.5355E+02
T	1.2892E+01	1.6279E+01	2.5706E+01
RHO	3.7155E+00	5.2020E+00	9.7743E+00
H	1.2892E+01	1.6281E+01	2.8164E+01
A	3.5905E+00	4.0312E+00	4.4632E+00
S	1.0884E+00	1.0889E+00	1.0995E+00
Z	1.0000E+00	1.0000E+00	1.0091E+00
GAME	9.9998E-01	9.9828E-01	7.6792E-01
U	4.5391E+00	3.2304E+00	2.7775E+00

SPECIES	MOLE FRACTIONS		
E-	6.5909E-08	9.2442E-06	9.0388E-03
A	1.0000E+00	9.9998E-01	9.8192E-01
A+	6.5909E-08	9.2442E-06	9.0388E-03
A++	7.2487E-31	3.9729E-24	3.5002E-13
A+++	1.1760E-69	2.6301E-54	1.0052E-32
A++++	0.	0.	5.2200E-64
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9107E+01	1.3717E+02	3.5136E+02
T	1.8163E+01	2.3239E+01	2.8867E+01
RHO	3.8044E+00	5.8845E+00	1.1785E+01
H	1.8185E+01	2.4068E+01	3.7803E+01
A	4.2365E+00	4.4299E+00	4.5893E+00
S	1.1057E+00	1.1065E+00	1.1186E+00
Z	1.0001E+00	1.0031E+00	1.0328E+00
GAME	9.8804E-01	8.4181E-01	7.0645E-01
U	5.4930E+00	3.5387E+00	2.6108E+00

SPECIES	MOLE FRACTIONS		
E-	8.2327E-05	3.0963E-03	3.1735E-02
A	9.9984E-01	9.9381E-01	9.3653E-01
A+	8.2327E-05	3.0963E-03	3.1735E-02
A++	1.4884E-20	5.9841E-15	3.2696E-11
A+++	1.5875E-48	1.0422E-36	2.2004E-28
A++++	0.	1.4652E-71	6.3276E-56
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8004E+01	1.0592E+02	3.0070E+02
T	1.5416E+01	1.9667E+01	2.7492E+01
RHO	3.7627E+00	5.3841E+00	1.0727E+01
H	1.5416E+01	1.9736E+01	3.2831E+01
A	3.9248E+00	4.3659E+00	4.5111E+00
S	1.0973E+00	1.0979E+00	1.1087E+00
Z	1.0000E+00	1.0003E+00	1.0197E+00
GAME	9.9923E-01	9.6897E-01	7.2593E-01
U	5.0156E+00	3.4923E+00	2.7004E+00

SPECIES	MOLE FRACTIONS		
E-	3.6818E-06	2.6499E-04	1.9300E-02
A	9.9999E-01	9.9947E-01	9.6140E-01
A+	3.6818E-06	2.6499E-04	1.9300E-02
A++	3.4492E-25	1.1815E-18	5.2390E-12
A+++	4.0070E-59	9.4630E-45	3.4906E-30
A++++	0.	2.2376E-86	8.4401E-60
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1334E+01	1.8549E+02	4.0985E+02
T	2.0981E+01	2.6076E+01	3.0038E+01
RHO	3.8732E+00	7.0232E+00	1.3018E+01
H	2.1210E+01	2.9541E+01	4.3214E+01
A	4.4034E+00	4.4356E+00	4.6812E+00
S	1.1135E+00	1.1152E+00	1.1290E+00
Z	1.0009E+00	1.0128E+00	1.0481E+00
GAME	9.2337E-01	7.4494E-01	6.9605E-01
U	5.9808E+00	3.2831E+00	2.5282E+00

SPECIES	MOLE FRACTIONS		
E-	8.6511E-04	1.2677E-02	4.5906E-02
A	9.9827E-01	9.7465E-01	9.0819E-01
A+	8.6511E-04	1.2677E-02	4.5906E-02
A++	5.5838E-17	8.9711E-13	1.3190E-10
A+++	3.7268E-41	6.3229E-32	4.7541E-27
A++++	1.2093E-79	1.2494E-62	1.6641E-53
AV	0.	0.	6.4737E-89
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5677E+01	2.5019E+02	4.9531E+02
T	2.3456E+01	2.8099E+01	3.1209E+01
RHO	4.0617E+00	8.6603E+00	1.4872E+01
H	2.4591E+01	3.5754E+01	4.9668E+01
A	4.3838E+00	4.5290E+00	4.7926E+00
S	1.1211E+00	1.1245E+00	1.1405E+00
Z	1.0042E+00	1.0282E+00	1.0671E+00
GAME	8.1582E-01	7.1002E-01	6.8968E-01
U	6.5451E+00	3.0577E+00	2.4745E+00

SPECIES	MOLE FRACTIONS		
E-	4.2289E-03	2.7385E-02	6.2894E-02
A	9.9154E-01	9.4523E-01	8.7421E-01
A+	4.2289E-03	2.7385E-02	6.2894E-02
A++	1.3613E-14	1.5449E-11	4.6010E-10
A+++	5.2526E-36	3.1777E-29	7.9842E-26
A++++	2.7065E-70	3.6355E-58	3.3447E-51
AV	0.	0.	3.3247E-85
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3094E+02	4.4964E+02	7.7481E+02
T	2.6717E+01	3.1184E+01	3.3534E+01
RHO	4.8010E+00	1.3478E+01	2.0722E+01
H	3.2383E+01	5.0377E+01	6.5432E+01
A	4.4268E+00	4.7926E+00	5.0569E+00
S	1.1369E+00	1.1461E+00	1.1660E+00
Z	1.0209E+00	1.0698E+00	1.1150E+00
GAME	7.1851E-01	6.8852E-01	6.8392E-01
U	7.8603E+00	2.7933E+00	2.3767E+00

SPECIES	MOLE FRACTIONS		
E-	2.0428E-02	6.5238E-02	1.0314E-01
A	9.5914E-01	8.6952E-01	7.9373E-01
A+	2.0428E-02	6.5238E-02	1.0314E-01
A++	3.6137E-12	4.9174E-10	3.8346E-09
A+++	9.7328E-31	8.7052E-26	1.0472E-23
A++++	1.2279E-60	3.7151E-51	3.3563E-47
AV	0.	3.8590E-85	8.1895E-79
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1247E+02	3.3876E+02	6.1842E+02
T	2.5322E+01	2.9763E+01	3.2392E+01
RHO	4.3924E+00	1.0864E+01	1.7520E+01
H	2.8345E+01	4.2796E+01	5.7176E+01
A	4.3813E+00	4.6564E+00	4.9207E+00
S	1.1288E+00	1.1348E+00	1.1528E+00
Z	1.0112E+00	1.0476E+00	1.0897E+00
GAME	7.4965E-01	6.9536E-01	6.8595E-01
U	7.1925E+00	2.8948E+00	2.4165E+00

SPECIES	MOLE FRACTIONS		
E-	1.1108E-02	4.5471E-02	8.2336E-02
A	9.7778E-01	9.0906E-01	8.3533E-01
A+	1.1108E-02	4.5471E-02	8.2336E-02
A++	3.9783E-13	1.1223E-10	1.4224E-09
A+++	5.5024E-33	3.0425E-27	1.0474E-24
A++++	5.8479E-64	7.2783E-54	3.9333E-49
AV	0.	1.7076E-89	2.4460E-82
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5095E+02	5.8660E+02	9.6399E+02
T	2.7850E+01	3.2467E+01	3.4631E+01
RHO	5.2493E+00	1.6509E+01	2.4362E+01
H	3.6687E+01	5.8543E+01	7.4348E+01
A	4.4941E+00	4.9335E+00	5.1984E+00
S	1.1457E+00	1.1585E+00	1.1803E+00
Z	1.0325E+00	1.0944E+00	1.1426E+00
GAME	7.0237E-01	6.8503E-01	6.8293E-01
U	8.5368E+00	2.7038E+00	2.3490E+00

SPECIES	MOLE FRACTIONS		
E-	3.1507E-02	8.6235E-02	1.2481E-01
A	9.3699E-01	8.2753E-01	7.5038E-01
A+	3.1507E-02	8.6235E-02	1.2481E-01
A++	1.7831E-11	1.6292E-09	9.2332E-09
A+++	3.2689E-29	1.3786E-24	8.1984E-23
A++++	7.0946E-58	7.0077E-49	1.7654E-45
AV	0.	1.7922E-81	5.8403E-76
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7233E+02	7.4888E+02	1.1864E+03
T	2.8806E+01	3.3644E+01	3.5686E+01
RHO	5.7214E+00	1.9858E+01	2.8360E+01
H	4.1244E+01	6.7193E+01	8.3850E+01
A	4.5695E+00	5.0761E+00	5.3438E+00
S	1.1550E+00	1.1719E+00	1.1955E+00
Z	1.0456E+00	1.1209E+00	1.1723E+00
GAME	6.9324E-01	6.8326E-01	6.8263E-01
U	9.2123E+00	2.6492E+00	2.3311E+00

SPECIES	MOLE FRACTIONS		
E-	4.3635E-02	1.0786E-01	1.4696E-01
A	9.1273E-01	7.8428E-01	7.0608E-01
A+	4.3635E-02	1.0786E-01	1.4696E-01
A++	6.1304E-11	4.4438E-09	2.0257E-08
A+++	5.4241E-28	1.4241E-23	5.1758E-22
A++++	1.9470E-55	6.0137E-47	5.8844E-44
AV	0.	2.4109E-78	1.6876E-73
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1899E+02	1.1560E+03	1.7323E+03
T	3.0408E+01	3.5790E+01	3.7687E+01
RHO	6.6963E+00	2.7386E+01	3.7162E+01
H	5.1102E+01	8.5959E+01	1.0441E+02
A	4.7296E+00	5.3666E+00	5.6436E+00
S	1.1752E+00	1.2018E+00	1.2286E+00
Z	1.0755E+00	1.1794E+00	1.2369E+00
GAME	6.8402E-01	6.8231E-01	6.8326E-01
U	1.0549E+01	2.5903E+00	2.3051E+00

SPECIES	MOLE FRACTIONS		
E-	7.0173E-02	1.5210E-01	1.9153E-01
A	8.5965E-01	6.9581E-01	6.1693E-01
A+	7.0173E-02	1.5210E-01	1.9153E-01
A++	3.9383E-10	2.2874E-08	7.8905E-08
A+++	3.5099E-26	6.6160E-22	1.2832E-20
A++++	4.6261E-52	8.7183E-44	2.5361E-41
AV	1.0900E-86	2.6055E-73	1.8857E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9502E+02	9.3946E+02	1.4427E+03
T	2.9647E+01	3.4743E+01	3.6704E+01
RHO	6.2058E+00	2.3532E+01	3.2650E+01
H	4.6049E+01	7.6355E+01	9.3905E+01
A	4.6486E+00	5.2199E+00	5.4927E+00
S	1.1648E+00	1.1862E+00	1.2117E+00
Z	1.0600E+00	1.1491E+00	1.2038E+00
GAME	6.8764E-01	6.8250E-01	6.8278E-01
U	9.8834E+00	2.6010E+00	2.3214E+00

SPECIES	MOLE FRACTIONS		
E-	5.6587E-02	1.2974E-01	1.6932E-01
A	8.8683E-01	7.4051E-01	6.6135E-01
A+	5.6587E-02	1.2974E-01	1.6932E-01
A++	1.6775E-10	1.0557E-08	4.1269E-08
A+++	5.1579E-27	1.0770E-22	2.7538E-21
A++++	1.2793E-53	2.7998E-45	1.3401E-42
AV	3.1830E-89	1.1399E-75	1.7850E-71
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4439E+02	1.4081E+03	2.0639E+03
T	3.1110E+01	3.6805E+01	3.8666E+01
RHO	7.1936E+00	3.1581E+01	4.1951E+01
H	5.6414E+01	9.6165E+01	1.1564E+02
A	4.8121E+00	5.5167E+00	5.8009E+00
S	1.1862E+00	1.2181E+00	1.2467E+00
Z	1.0920E+00	1.2115E+00	1.2724E+00
GAME	6.8162E-01	6.8256E-01	6.8399E-01
U	1.1217E+01	2.5644E+00	2.3113E+00

SPECIES	MOLE FRACTIONS		
E-	8.4284E-02	1.7455E-01	2.1406E-01
A	8.3143E-01	6.5090E-01	5.7189E-01
A+	8.4284E-02	1.7455E-01	2.1406E-01
A++	8.2924E-10	4.6169E-08	1.4562E-07
A+++	1.8751E-25	3.5110E-21	5.5703E-20
A++++	1.0565E-50	2.2092E-42	4.4735E-40
AV	1.6930E-84	5.8502E-71	3.1879E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE 1.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7081E+02	1.6886E+03	2.4282E+03
T	3.1763E+01	3.7778E+01	3.9618E+01
RHO	7.6840E+00	3.5904E+01	4.6816E+01
H	6.1961E+01	1.0677E+02	1.2731E+02
A	4.8954E+00	5.6680E+00	5.9603E+00
S	1.1976E+00	1.2352E+00	1.2654E+00
Z	1.1096E+00	1.2449E+00	1.3092E+00
GAME	6.8000E-01	6.8310E-01	6.8492E-01
U	1.1870E+01	2.5431E+00	2.3228E+00

SPECIES	MOLE FRACTIONS		
E-	9.8759E-02	1.9672E-01	2.3616E-01
A	8.0248E-01	6.0656E-01	5.2767E-01
A+	9.8759E-02	1.9672E-01	2.3616E-01
A++	1.6025E-09	8.7226E-08	2.5702E-07
A+++	8.1553E-25	1.5810E-20	2.1710E-19
A++++	1.4428E-49	3.7343E-41	6.0702E-39
AV	6.7412E-83	4.4661E-69	2.2293E-65
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2738E+02	2.3435E+03	3.2736E+03
T	3.2968E+01	3.9653E+01	4.1503E+01
RHO	8.6534E+00	4.4896E+01	5.6834E+01
H	7.3808E+01	1.2940E+02	1.5225E+02
A	5.0653E+00	5.9789E+00	6.2920E+00
S	1.2222E+00	1.2717E+00	1.3052E+00
Z	1.1475E+00	1.3164E+00	1.3878E+00
GAME	6.7819E-01	6.8481E-01	6.8733E-01
U	1.3162E+01	2.5407E+00	2.3592E+00

SPECIES	MOLE FRACTIONS		
E-	1.2858E-01	2.4036E-01	2.7945E-01
A	7.4285E-01	5.1928E-01	4.4109E-01
A+	1.2858E-01	2.4036E-01	2.7945E-01
A++	5.0154E-09	2.7327E-07	7.3665E-07
A+++	1.0974E-23	2.4289E-19	2.7212E-18
A++++	1.6884E-47	7.1267E-39	7.5370E-37
AV	2.1757E-79	2.6731E-65	5.4451E-62
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9848E+02	1.9997E+03	2.8312E+03
T	3.2380E+01	3.8724E+01	4.0562E+01
RHO	8.1714E+00	4.0348E+01	5.1792E+01
H	6.7759E+01	1.1784E+02	1.3951E+02
A	4.9798E+00	5.8218E+00	6.1239E+00
S	1.2097E+00	1.2531E+00	1.2850E+00
Z	1.1281E+00	1.2799E+00	1.3477E+00
GAME	6.7891E-01	6.8386E-01	6.8604E-01
U	1.2518E+01	2.5386E+00	2.3388E+00

SPECIES	MOLE FRACTIONS		
E-	1.1355E-01	2.1868E-01	2.5799E-01
A	7.7291E-01	5.6265E-01	4.8403E-01
A+	1.1355E-01	2.1868E-01	2.5799E-01
A++	2.9042E-09	1.5728E-07	4.4025E-07
A+++	3.0480E-24	6.4781E-20	7.8933E-19
A++++	1.0005E-48	5.7262E-40	7.1363E-38
AV	1.4760E-80	4.5683E-67	1.2092E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5752E+02	2.7207E+03	3.7565E+03
T	3.3533E+01	4.0571E+01	4.2449E+01
RHO	9.1288E+00	4.9510E+01	6.1902E+01
H	8.0108E+01	1.4144E+02	1.6554E+02
A	5.1520E+00	6.1395E+00	6.4653E+00
S	1.2352E+00	1.2910E+00	1.3261E+00
Z	1.1679E+00	1.3544E+00	1.4296E+00
GAME	6.7775E-01	6.8593E-01	6.8881E-01
U	1.3802E+01	2.5489E+00	2.3838E+00

SPECIES	MOLE FRACTIONS		
E-	1.4378E-01	2.6169E-01	3.0050E-01
A	7.1244E-01	4.7662E-01	3.9900E-01
A+	1.4378E-01	2.6169E-01	3.0050E-01
A++	8.3103E-09	4.6104E-07	1.2112E-06
A+++	3.6081E-23	8.5062E-19	9.0226E-18
A++++	2.0512E-46	7.7110E-38	7.3652E-36
AV	1.1722E-77	1.2139E-63	2.1486E-60
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8907E+02	3.1357E+03	4.2857E+03
T	3.4078E+01	4.1491E+01	4.3412E+01
RHO	9.6003E+00	5.4208E+01	6.7013E+01
H	8.6668E+01	1.5404E+02	1.7946E+02
A	5.2401E+00	6.3050E+00	6.6453E+00
S	1.2487E+00	1.3111E+00	1.3478E+00
Z	1.1892E+00	1.3942E+00	1.4732E+00
GAME	6.7755E-01	6.8723E-01	6.9051E-01
U	1.4446E+01	2.5625E+00	2.4127E+00

SPECIES	MOLE FRACTIONS		
E-	1.5912E-01	2.8272E-01	3.2119E-01
A	6.8175E-01	4.3456E-01	3.5762E-01
A+	1.5912E-01	2.8272E-01	3.2119E-01
A++	1.3267E-08	7.6267E-07	1.9734E-06
A+++	1.0324E-22	2.8638E-18	2.9359E-17
A++++	1.2900E-45	7.8990E-37	6.9274E-35
AV	1.2963E-76	5.4325E-62	7.9444E-59
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5514E+02	4.0508E+03	5.4494E+03
T	3.5119E+01	4.3318E+01	4.5384E+01
RHO	1.0499E+01	6.3317E+01	7.6779E+01
H	1.0052E+02	1.8039E+02	2.0866E+02
A	5.4199E+00	6.6456E+00	7.0218E+00
S	1.2771E+00	1.3526E+00	1.3927E+00
Z	1.2344E+00	1.4769E+00	1.5639E+00
GAME	6.7759E-01	6.9032E-01	6.9470E-01
U	1.5698E+01	2.6072E+00	2.4848E+00

SPECIES	MOLE FRACTIONS		
E-	1.8991E-01	3.2291E-01	3.6056E-01
A	6.2017E-01	3.5419E-01	2.7889E-01
A+	1.8991E-01	3.2290E-01	3.6055E-01
A++	3.1222E-08	1.9663E-06	5.1057E-06
A+++	7.6572E-22	2.8160E-17	2.9411E-16
A++++	6.3912E-44	6.0781E-35	5.4431E-33
AV	1.1363E-73	5.9418E-59	8.8045E-56
AVI	0.	0.	4.6193E-85
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2126E+02	3.5707E+03	4.8397E+03
T	3.4603E+01	4.2392E+01	4.4374E+01
RHO	1.0050E+01	5.8715E+01	7.1874E+01
H	9.3456E+01	1.6688E+02	1.9367E+02
A	5.3291E+00	6.4715E+00	6.8283E+00
S	1.2627E+00	1.3315E+00	1.3698E+00
Z	1.2114E+00	1.4346E+00	1.5175E+00
GAME	6.7750E-01	6.8866E-01	6.9243E-01
U	1.5064E+01	2.5828E+00	2.4466E+00

SPECIES	MOLE FRACTIONS		
E-	1.7448E-01	3.0292E-01	3.4100E-01
A	6.5103E-01	3.9416E-01	3.1800E-01
A+	1.7448E-01	3.0292E-01	3.4100E-01
A++	2.0547E-08	1.2270E-06	3.1632E-06
A+++	2.7703E-22	8.9834E-18	9.2030E-17
A++++	5.6903E-45	6.8412E-36	6.0443E-34
AV	1.0477E-74	1.6766E-60	2.5895E-57
AVI	0.	0.	2.6729E-87
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.9042E+02	4.5695E+03	6.1077E+03
T	3.5624E+01	4.4265E+01	4.6446E+01
RHO	1.0940E+01	6.7882E+01	8.1582E+01
H	1.0784E+02	1.9445E+02	2.2430E+02
A	5.5123E+00	6.8262E+00	7.2258E+00
S	1.2920E+00	1.3744E+00	1.4162E+00
Z	1.2584E+00	1.5207E+00	1.6119E+00
GAME	6.7780E-01	6.9222E-01	6.9741E-01
U	1.6334E+01	2.6367E+00	2.5282E+00

SPECIES	MOLE FRACTIONS		
E-	2.0533E-01	3.4243E-01	3.7961E-01
A	5.8933E-01	3.1515E-01	2.4079E-01
A+	2.0533E-01	3.4242E-01	3.7959E-01
A++	4.6301E-08	3.1340E-06	8.3085E-06
A+++	1.8698E-21	8.7023E-17	9.5966E-16
A++++	3.0313E-43	5.1474E-34	5.0484E-32
AV	8.2245E-73	1.8392E-57	3.0851E-54
AVI	0.	1.4190E-87	8.1696E-83
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.2671E+02	5.1166E+03	6.8029E+03
T	3.6119E+01	4.5230E+01	4.7562E+01
RHO	1.1364E+01	7.2257E+01	8.6120E+01
H	1.1540E+02	2.0890E+02	2.4043E+02
A	5.6062E+00	7.0123E+00	7.4398E+00
S	1.3073E+00	1.3966E+00	1.4400E+00
Z	1.2832E+00	1.5656E+00	1.6608E+00
GAME	6.7812E-01	6.9441E-01	7.0070E-01
U	1.6960E+01	2.6719E+00	2.5777E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2069E-01	3.6125E-01	3.9789E-01
A	5.5863E-01	2.7750E-01	2.0423E-01
A+	2.2069E-01	3.6124E-01	3.9787E-01
A++	6.7509E-08	4.9682E-06	1.3653E-05
A+++	4.4607E-21	2.6514E-16	3.2017E-15
A++++	1.3322E-42	4.1384E-33	4.8011E-31
AV	1.7924E-71	4.6832E-56	1.0954E-52
AVI	0.	8.2410E-86	1.4243E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.0296E+02	6.3092E+03	8.3313E+03
T	3.7092E+01	4.7290E+01	5.0139E+01
RHO	1.2174E+01	8.0443E+01	9.4262E+01
H	1.3129E+02	2.3925E+02	2.7473E+02
A	5.7991E+00	7.4101E+00	7.9249E+00
S	1.3391E+00	1.4423E+00	1.4895E+00
Z	1.3353E+00	1.6585E+00	1.7628E+00
GAME	6.7900E-01	7.0010E-01	7.1058E-01
U	1.8206E+01	2.7598E+00	2.7141E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.5110E-01	3.9704E-01	4.3272E-01
A	4.9780E-01	2.0593E-01	1.3461E-01
A+	2.5110E-01	3.9702E-01	4.3263E-01
A++	1.3764E-07	1.2736E-05	4.0841E-05
A+++	2.3633E-20	2.6248E-15	4.6249E-14
A++++	3.2813E-41	3.1962E-31	7.1359E-29
AV	1.7994E-70	5.5982E-53	3.2089E-49
AVI	0.	5.3631E-81	1.6572E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.6422E+02	5.6965E+03	7.5419E+03
T	3.6608E+01	4.6233E+01	4.8775E+01
RHO	1.1776E+01	7.6457E+01	9.0363E+01
H	1.2322E+02	2.2384E+02	2.5717E+02
A	5.7018E+00	7.2062E+00	7.6702E+00
S	1.3230E+00	1.4192E+00	1.4644E+00
Z	1.3089E+00	1.6115E+00	1.7111E+00
GAME	6.7851E-01	6.9699E-01	7.0490E-01
U	1.7584E+01	2.7127E+00	2.6343E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.3596E-01	3.7947E-01	4.1559E-01
A	5.2809E-01	2.4107E-01	1.6884E-01
A+	2.3596E-01	3.7945E-01	4.1555E-01
A++	9.7191E-08	7.9134E-06	2.3048E-05
A+++	1.0783E-20	8.2583E-16	1.1377E-14
A++++	9.3126E-42	3.6400E-32	4.9376E-30
AV	3.4140E-70	1.7402E-54	3.4851E-51
AVI	0.	3.3527E-83	1.1085E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.4292E+02	6.9523E+03	9.1586E+03
T	3.7573E+01	4.8423E+01	5.1698E+01
RHO	1.2558E+01	8.4145E+01	9.7648E+01
H	1.3962E+02	2.5513E+02	2.9273E+02
A	5.8984E+00	7.6266E+00	8.2097E+00
S	1.3556E+00	1.4656E+00	1.5145E+00
Z	1.3626E+00	1.7063E+00	1.8142E+00
GAME	6.7956E-01	7.0398E-01	7.1861E-01
U	1.8827E+01	2.8141E+00	2.7852E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6611E-01	4.1393E-01	4.4880E-01
A	4.6778E-01	1.7216E-01	1.0247E-01
A+	2.6611E-01	4.1389E-01	4.4865E-01
A++	1.9361E-07	2.0909E-05	7.6799E-05
A+++	5.4020E-20	8.7629E-15	2.1603E-13
A++++	1.8689E-40	3.0455E-30	1.2605E-27
AV	3.7454E-68	2.0029E-51	3.0749E-47
AVI	0.	9.4032E-79	1.2532E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.8409E+02	7.6249E+03	1.0032E+04
T	3.8052E+01	4.9665E+01	5.3602E+01
RHO	1.2927E+01	8.7497E+01	1.0034E+02
H	1.4820E+02	2.7148E+02	3.1143E+02
A	5.9997E+00	7.8606E+00	8.5501E+00
S	1.3725E+00	1.4892E+00	1.5398E+00
Z	1.3907E+00	1.7546E+00	1.8653E+00
GAME	6.8020E-01	7.0905E-01	7.3114E-01
U	1.9445E+01	2.8772E+00	2.8694E+00

SPECIES	MOLE FRACTIONS		
E-	2.8095E-01	4.3008E-01	4.6390E-01
A	4.3811E-01	1.3987E-01	7.2359E-02
A+	2.8095E-01	4.3001E-01	4.6358E-01
A++	2.6946E-07	3.5479E-05	1.6118E-04
A+++	1.1746E-15	3.1796E-14	1.3159E-12
A++++	8.0629E-40	3.3988E-29	3.5575E-26
AV	4.0300E-67	9.4364E-50	5.9555E-45
AVI	0.	2.6536E-76	2.4788E-69
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.7008E+02	9.0453E+03	1.1971E+04
T	3.9016E+01	5.2725E+01	6.0005E+01
RHO	1.3618E+01	9.2677E+01	1.0180E+02
H	1.6613E+02	3.0555E+02	3.5262E+02
A	6.2088E+00	8.4195E+00	9.6189E+00
S	1.4073E+00	1.5368E+00	1.5919E+00
Z	1.4493E+00	1.8511E+00	1.9598E+00
GAME	6.8172E-01	7.2631E-01	7.8678E-01
U	2.0676E+01	3.0426E+00	3.1916E+00

SPECIES	MOLE FRACTIONS		
E-	3.1003E-01	4.5979E-01	4.8974E-01
A	3.7994E-01	8.0539E-02	2.2043E-02
A+	3.1003E-01	4.5955E-01	4.8668E-01
A++	5.1298E-07	1.2266E-04	1.5328E-03
A+++	5.4269E-19	6.5395E-13	3.2226E-10
A++++	1.4750E-38	9.3359E-27	8.7977E-22
AV	4.3821E-65	6.9027E-46	4.9273E-38
AVI	0.	1.0635E-70	2.4470E-59
AVII	0.	0.	5.0157E-89
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.2648E+02	8.3241E+03	1.0969E+04
T	3.8533E+01	5.1069E+01	5.6184E+01
RHO	1.3281E+01	9.0394E+01	1.0193E+02
H	1.5704E+02	2.8829E+02	3.3138E+02
A	6.1031E+00	8.1201E+00	9.0029E+00
S	1.3897E+00	1.5130E+00	1.5657E+00
Z	1.4196E+00	1.8032E+00	1.9154E+00
GAME	6.8092E-01	7.1602E-01	7.5317E-01
U	2.0061E+01	2.9519E+00	3.0047E+00

SPECIES	MOLE FRACTIONS		
E-	2.9559E-01	4.4542E-01	4.7791E-01
A	4.0882E-01	1.0923E-01	4.4596E-02
A+	2.9559E-01	4.4529E-01	4.7707E-01
A++	3.7195E-07	6.3379E-05	4.1848E-04
A+++	2.4518E-19	1.3097E-13	1.3520E-11
A++++	2.5389E-39	4.7707E-28	2.6223E-24
AV	2.0206E-66	6.3480E-48	5.3348E-42
AVI	0.	1.2329E-73	4.8038E-65
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1489E+02	9.7830E+03	1.3036E+04
T	3.9503E+01	5.4792E+01	6.4980E+01
RHO	1.3940E+01	9.4106E+01	1.0060E+02
H	1.7547E+02	3.2323E+02	3.7509E+02
A	6.3170E+00	8.7871E+00	1.0040E+01
S	1.4253E+00	1.5605E+00	1.6175E+00
Z	1.4798E+00	1.8973E+00	1.9943E+00
GAME	6.8263E-01	7.4274E-01	7.7788E-01
U	2.1289E+01	3.1579E+00	3.4195E+00

SPECIES	MOLE FRACTIONS		
E-	3.2423E-01	4.7294E-01	4.9858E-01
A	3.5153E-01	5.4396E-02	9.5430E-03
A+	3.2423E-01	4.7240E-01	4.8519E-01
A++	7.0202E-07	2.7051E-04	6.6941E-03
A+++	1.1220E-18	4.5066E-12	1.2091E-08
A++++	5.2499E-38	3.3170E-25	6.7471E-19
AV	2.2906E-64	1.9715E-43	1.6762E-33
AVI	0.	3.9562E-67	8.4117E-53
AVII	0.	0.	1.5981E-79
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.6089E+02	1.0527E+04	1.4116E+04
T	3.9999E+01	5.7562E+01	6.8985E+01
RHO	1.4244E+01	9.4308E+01	1.0102E+02
H	1.8507E+02	3.4130E+02	3.9743E+02
A	6.4279E+00	9.2670E+00	1.0164E+01
S	1.4436E+00	1.5838E+00	1.6411E+00
Z	1.5110E+00	1.9393E+00	2.0257E+00
GAME	6.8364E-01	7.6932E-01	7.3925E-01
U	2.1901E+01	3.3088E+00	3.5942E+00

SPECIES	MOLE FRACTIONS		
E-	3.3820E-01	4.8434E-01	5.0635E-01
A	3.2360E-01	3.2058E-02	5.3288E-03
A+	3.3820E-01	4.8287E-01	4.7030E-01
A++	9.6080E-07	7.3324E-04	1.8027E-02
A+++	2.3634E-18	5.1189E-11	1.4521E-07
A++++	2.0489E-37	2.8476E-23	6.5886E-17
AV	8.1637E-64	2.0797E-40	2.2856E-30
AVI	0.	7.9176E-63	2.8237E-48
AVII	0.	0.	4.1020E-73
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5647E+02	1.2011E+04	1.6308E+04
T	4.1022E+01	6.5466E+01	7.4035E+01
RHO	1.4798E+01	9.1712E+01	1.0519E+02
H	2.0503E+02	3.7855E+02	4.4185E+02
A	6.6592E+00	1.0041E+01	1.0498E+01
S	1.4810E+00	1.6279E+00	1.6849E+00
Z	1.5756E+00	2.0005E+00	2.0941E+00
GAME	6.8606E-01	7.6979E-01	7.1080E-01
U	2.3119E+01	3.7311E+00	3.8058E+00

SPECIES	MOLE FRACTIONS		
E-	3.6534E-01	5.0012E-01	5.2247E-01
A	2.6933E-01	8.0869E-03	2.8712E-03
A+	3.6533E-01	4.8348E-01	4.2686E-01
A++	1.8038E-06	8.3205E-03	4.7798E-02
A+++	1.0619E-17	1.9906E-08	1.9032E-06
A++++	3.4928E-36	1.5848E-18	8.2584E-15
AV	1.5724E-61	5.9579E-33	4.9946E-27
AVI	0.	4.7042E-52	2.0150E-43
AVII	0.	1.4003E-78	3.3384E-66
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.0808E+02	1.1258E+04	1.5198E+04
T	4.0504E+01	6.1389E+01	7.1772E+01
RHO	1.4530E+01	9.2912E+01	1.0288E+02
H	1.9493E+02	3.5969E+02	4.1940E+02
A	6.5419E+00	9.8061E+00	1.0315E+01
S	1.4622E+00	1.6067E+00	1.6628E+00
Z	1.5430E+00	1.9737E+00	2.0583E+00
GAME	6.8477E-01	7.9361E-01	7.2017E-01
U	2.2511E+01	3.5248E+00	3.7027E+00

SPECIES	MOLE FRACTIONS		
E-	3.5191E-01	4.9335E-01	5.1416E-01
A	2.9619E-01	1.5880E-02	3.7367E-03
A+	3.5190E-01	4.8819E-01	4.5004E-01
A++	1.3175E-06	2.5805E-03	3.2059E-02
A+++	5.1135E-18	1.1102E-09	6.4733E-07
A++++	9.9433E-37	8.0217E-21	1.0728E-15
AV	3.6987E-62	1.4988E-36	1.9136E-28
AVI	0.	3.1953E-57	1.7393E-45
AVII	0.	8.2170E-86	3.8011E-69
AVIII	0.	0.	0.

P1 = 5.00E+00 N/SQ-M. US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0060E+03	1.2804E+04	1.7411E+04
T	4.1558E+01	6.8831E+01	7.5849E+01
RHO	1.5046E+01	9.1700E+01	1.0782E+02
H	2.1535E+02	3.9796E+02	4.6391E+02
A	6.7803E+00	1.0142E+01	1.0680E+01
S	1.5002E+00	1.6492E+00	1.7054E+00
Z	1.6090E+00	2.0285E+00	2.1291E+00
GAME	6.8753E-01	7.3662E-01	7.0628E-01
U	2.3725E+01	3.8943E+00	3.8500E+00

SPECIES	MOLE FRACTIONS		
E-	3.7849E-01	5.0703E-01	5.3031E-01
A	2.4303E-01	4.9398E-03	2.3614E-03
A+	3.7848E-01	4.6902E-01	4.0435E-01
A++	2.4869E-06	1.9007E-02	6.2975E-02
A+++	2.2965E-17	1.5912E-07	4.1441E-06
A++++	1.4756E-35	7.3432E-17	3.6830E-14
AV	1.1140E-60	2.5409E-30	5.5578E-26
AVI	0.	3.0685E-48	6.8822E-42
AVII	0.	4.1862E-73	5.2939E-64
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0568E+03	1.3644E+04	1.8543E+04
T	4.2117E+01	7.1303E+01	7.7548E+01
RHO	1.5272E+01	9.2976E+01	1.1033E+02
H	2.2601E+02	4.1797E+02	4.8669E+02
A	6.9060E+00	1.0277E+01	1.0875E+01
S	1.5196E+00	1.6691E+00	1.7271E+00
Z	1.6429E+00	2.0582E+00	2.1673E+00
GAME	6.8924E-01	7.1970E-01	7.0371E-01
U	2.4329E+01	4.0028E+00	3.9075E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9134E-01	5.1413E-01	5.3859E-01
A	2.1733E-01	3.5822E-03	1.9766E-03
A+	3.9133E-01	4.5045E-01	3.8030E-01
A++	3.4598E-06	3.1835E-02	7.9133E-02
A+++	5.1645E-17	6.0730E-07	8.1189E-06
A++++	7.5280E-35	8.9354E-16	1.3615E-13
AV	3.5961E-59	1.3334E-28	4.6148E-25
AVI	0.	9.4659E-46	1.5340E-40
AVII	0.	1.3885E-69	4.4806E-62
AVIII	0.	0.	1.5716E-88

P1 = 5.00E+00 N/SQ-M. US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1087E+03	1.4516E+04	1.9689E+04
T	4.2705E+01	7.3352E+01	7.9089E+01
RHO	1.5476E+01	9.4662E+01	1.1286E+02
H	2.3688E+02	4.3852E+02	5.0991E+02
A	7.0370E+00	1.0441E+01	1.1070E+01
S	1.5393E+00	1.6895E+00	1.7485E+00
Z	1.6775E+00	2.0906E+00	2.2058E+00
GAME	6.9125E-01	7.1084E-01	7.0244E-01
U	2.4932E+01	4.0831E+00	3.9608E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.0387E-01	5.2166E-01	5.4665E-01
A	1.9226E-01	2.8009E-03	1.6906E-03
A+	4.0386E-01	4.2941E-01	3.5669E-01
A++	4.8500E-06	4.6127E-02	9.4955E-02
A+++	1.1540E-16	1.6479E-06	1.4259E-05
A++++	3.2737E-34	5.9040E-15	4.1318E-13
AV	3.4784E-58	2.7367E-27	2.8206E-24
AVI	0.	7.8479E-44	2.2141E-39
AVII	0.	7.9727E-67	2.0889E-60
AVIII	0.	0.	3.4240E-86

P1 = 5.00E+00 N/SQ-M. US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1617E+03	1.5408E+04	2.0843E+04
T	4.3330E+01	7.5115E+01	8.0543E+01
RHO	1.5656E+01	9.6541E+01	1.1526E+02
H	2.4800E+02	4.5955E+02	5.3357E+02
A	7.1745E+00	1.0615E+01	1.1267E+01
S	1.5591E+00	1.7099E+00	1.7700E+00
Z	1.7126E+00	2.1247E+00	2.2453E+00
GAME	6.9366E-01	7.0607E-01	7.0195E-01
U	2.5532E+01	4.1476E+00	4.0118E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1608E-01	5.2935E-01	5.5462E-01
A	1.6786E-01	2.2946E-03	1.4609E-03
A+	4.1606E-01	4.0738E-01	3.3323E-01
A++	6.8997E-06	6.0979E-02	1.1066E-01
A+++	2.6638E-16	3.6005E-06	2.3432E-05
A++++	1.4379E-33	2.6370E-14	1.1134E-12
AV	2.2440E-57	3.0351E-26	1.4360E-23
AVI	1.8087E-87	2.6467E-42	2.4776E-38
AVII	0.	1.2240E-64	7.0022E-59
AVIII	0.	0.	4.3324E-84

P1 = 5.00E+00 N/SQ-M. US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2159E+03	1.6309E+04	2.1998E+04
T	4.4004E+01	7.6695E+01	8.1938E+01
RHO	1.5807E+01	9.8439E+01	1.1746E+02
H	2.5938E+02	4.8106E+02	5.5770E+02
A	7.3203E+00	1.0795E+01	1.1466E+01
S	1.5792E+00	1.7305E+00	1.7918E+00
Z	1.7480E+00	2.1602E+00	2.2857E+00
GAME	6.9664E-01	7.0342E-01	7.0198E-01
U	2.6129E+01	4.2030E+00	4.0618E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.2793E-01	5.3707E-01	5.6250E-01
A	1.4415E-01	1.9322E-03	1.2694E-03
A+	4.2791E-01	3.8493E-01	3.1000E-01
A++	1.0032E-05	7.6061E-02	1.2619E-01
A+++	6.5488E-16	6.8638E-06	3.6695E-05
A++++	7.3960E-33	9.2138E-14	2.7524E-12
AV	1.5926E-56	2.2966E-25	6.3796E-23
AVI	2.2107E-85	5.1627E-41	2.2659E-37
AVII	0.	8.7126E-63	1.7265E-57
AVIII	0.	0.	3.3985E-82

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2711E+03	1.7209E+04	2.3142E+04
T	4.4745E+01	7.8150E+01	8.3292E+01
RHO	1.5925E+01	1.0024E+02	1.1940E+02
H	2.7100E+02	5.0301E+02	5.8229E+02
A	7.4772E+00	1.0978E+01	1.1668E+01
S	1.5994E+00	1.7512E+00	1.8137E+00
Z	1.7838E+00	2.1967E+00	2.3269E+00
GAME	7.0045E-01	7.0198E-01	7.0241E-01
U	2.6723E+01	4.2530E+00	4.1116E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3941E-01	5.4478E-01	5.7025E-01
A	1.2120E-01	1.6544E-03	1.1053E-03
A+	4.3938E-01	3.6237E-01	2.8711E-01
A++	1.5016E-05	9.1188E-02	1.4149E-01
A+++	1.7395E-15	1.1934E-05	5.5421E-05
A++++	4.5977E-32	2.7292E-13	6.3821E-12
AV	3.4038E-55	1.3463E-24	2.5680E-22
AVI	1.3459E-83	7.0160E-40	1.8026E-36
AVII	0.	3.7618E-61	3.5144E-56
AVIII	0.	3.3961E-87	2.0848E-80

P1 = 5.00E+00 N/SQ-M. US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3846E+03	1.8944E+04	2.5323E+04
T	4.6541E+01	8.0809E+01	8.5927E+01
RHO	1.6034E+01	1.0316E+02	1.2221E+02
H	2.9501E+02	5.4815E+02	6.3277E+02
A	7.8442E+00	1.1348E+01	1.2080E+01
S	1.6401E+00	1.7934E+00	1.8585E+00
Z	1.8554E+00	2.2726E+00	2.4115E+00
GAME	7.1255E-01	7.0117E-01	7.0420E-01
U	2.7898E+01	4.3439E+00	4.2120E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6104E-01	5.5998E-01	5.8531E-01
A	7.7960E-02	1.2443E-03	8.3395E-04
A+	4.6096E-01	3.1761E-01	2.4251E-01
A++	3.8607E-05	1.2114E-01	1.7123E-01
A+++	1.7333E-14	3.0113E-05	1.1722E-04
A++++	3.5463E-30	1.7247E-12	3.0017E-11
AV	7.9463E-52	2.7416E-23	3.3600E-21
AVI	6.1411E-80	5.9336E-38	8.2584E-35
AVII	0.	2.1436E-58	8.8380E-54
AVIII	0.	1.5776E-83	3.7020E-77

P1 = 5.00E+00 N/SQ-M. US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3274E+03	1.8094E+04	2.4258E+04
T	4.5578E+01	7.9514E+01	8.4618E+01
RHO	1.6004E+01	1.0185E+02	1.2102E+02
H	2.8288E+02	5.2539E+02	6.0733E+02
A	7.6493E+00	1.1162E+01	1.1872E+01
S	1.6197E+00	1.7722E+00	1.8360E+00
Z	1.8197E+00	2.2343E+00	2.3689E+00
GAME	7.0549E-01	7.0132E-01	7.0316E-01
U	2.7313E+01	4.2995E+00	4.1615E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5047E-01	5.5242E-01	5.7786E-01
A	9.9093E-02	1.4309E-03	9.6164E-04
A+	4.5042E-01	3.3988E-01	2.6459E-01
A++	2.3386E-05	1.0624E-01	1.5651E-01
A+++	5.0861E-15	1.9427E-05	8.1450E-05
A++++	3.3978E-31	7.1752E-13	1.4095E-11
AV	1.0461E-53	6.5335E-24	9.5543E-22
AVI	8.7314E-82	7.2216E-39	1.2705E-35
AVII	0.	1.0824E-59	5.9043E-55
AVIII	0.	3.2249E-85	9.5090E-79

P1 = 5.00E+00 N/SQ-M. US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4426E+03	1.9731E+04	2.6298E+04
T	4.7702E+01	8.2046E+01	8.7221E+01
RHO	1.5998E+01	1.0403E+02	1.2283E+02
H	3.0738E+02	5.7124E+02	6.5858E+02
A	8.0751E+00	1.1534E+01	1.2290E+01
S	1.6604E+00	1.8150E+00	1.8814E+00
Z	1.8904E+00	2.3116E+00	2.4546E+00
GAME	7.2310E-01	7.0141E-01	7.0550E-01
U	2.8475E+01	4.3864E+00	4.2631E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7102E-01	5.6741E-01	5.9260E-01
A	5.8026E-02	1.0841E-03	7.1911E-04
A+	4.7088E-01	2.9565E-01	2.2094E-01
A++	6.9337E-05	1.3581E-01	1.8558E-01
A+++	7.2287E-14	4.4950E-05	1.6595E-04
A++++	5.0849E-29	3.8765E-12	6.2147E-11
AV	5.7508E-50	1.0409E-22	1.1310E-20
AVI	3.9503E-77	4.2955E-37	5.0443E-34
AVII	0.	3.7742E-57	1.2151E-52
AVIII	0.	7.9673E-82	1.3004E-75

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5013E+03	2.0405E+04	2.7118E+04
T	4.9177E+01	8.3226E+01	8.8498E+01
RHO	1.5868E+01	1.0427E+02	1.2267E+02
H	3.1999E+02	5.9457E+02	6.8463E+02
A	8.3676E+00	1.1720E+01	1.2502E+01
S	1.6805E+00	1.8370E+00	1.9047E+00
Z	1.9239E+00	2.3512E+00	2.4980E+00
GAME	7.4004E-01	7.0192E-01	7.0705E-01
U	2.9040E+01	4.4268E+00	4.3141E+00

SPECIES	MOLE FRACTIONS		
E-	4.8022E-01	5.7469E-01	5.9968E-01
A	3.9707E-02	9.4329E-04	6.1493E-04
A+	4.7993E-01	2.7411E-01	1.9996E-01
A++	1.4173E-04	1.5019E-01	1.9951E-01
A+++	4.1181E-13	6.5072E-05	2.3180E-04
A++++	1.2623E-27	8.2286E-12	1.2568E-10
AV	9.2050E-48	3.6009E-22	3.6668E-20
AVI	6.2483E-74	2.7039E-36	2.9169E-33
AVII	0.	5.3922E-56	1.5468E-51
AVIII	0.	3.0083E-80	4.1565E-74

P1 = 5.00E+00 N/SQ-M. US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6185E+03	2.1086E+04	2.7870E+04
T	5.3992E+01	8.5363E+01	9.0947E+01
RHO	1.5150E+01	1.0161E+02	1.1855E+02
H	3.4589E+02	6.4126E+02	7.3690E+02
A	9.2645E+00	1.2083E+01	1.2928E+01
S	1.7197E+00	1.8827E+00	1.9533E+00
Z	1.9786E+00	2.4309E+00	2.5850E+00
GAME	8.0342E-01	7.0356E-01	7.1090E-01
U	3.0105E+01	4.4958E+00	4.4295E+00

SPECIES	MOLE FRACTIONS		
E-	4.9460E-01	5.8863E-01	6.1316E-01
A	1.1968E-02	7.0291E-04	4.3240E-04
A+	4.9226E-01	2.3282E-01	1.6010E-01
A++	1.1721E-03	1.7772E-01	2.2587E-01
A+++	7.0367E-11	1.2617E-04	4.3797E-04
A++++	1.5396E-23	3.1868E-11	4.8357E-10
AV	2.2811E-41	3.3578E-21	3.4715E-19
AVI	9.3805E-65	7.4075E-35	8.2921E-32
AVII	0.	6.4889E-54	1.9580E-49
AVIII	0.	2.1205E-77	3.0224E-71

P1 = 5.00E+00 N/SQ-M. US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5601E+03	2.0886E+04	2.7695E+04
T	5.1177E+01	8.4339E+01	8.9764E+01
RHO	1.5600E+01	1.0357E+02	1.2137E+02
H	3.3283E+02	6.1799E+02	7.1115E+02
A	8.7659E+00	1.1904E+01	1.2719E+01
S	1.7004E+00	1.8595E+00	1.9289E+00
Z	1.9541E+00	2.3911E+00	2.5422E+00
GAME	7.6837E-01	7.0266E-01	7.0888E-01
U	2.9587E+01	4.4640E+00	4.3863E+00

SPECIES	MOLE FRACTIONS		
E-	4.8826E-01	5.8178E-01	6.0663E-01
A	2.3839E-02	8.1719E-04	5.1853E-04
A+	4.8755E-01	2.5312E-01	1.7939E-01
A++	3.5474E-04	1.6419E-01	2.1314E-01
A+++	3.8080E-12	9.1737E-05	3.2161E-04
A++++	7.2366E-26	1.6609E-11	2.5135E-10
AV	4.7669E-45	1.1493E-21	1.1672E-19
AVI	3.6050E-70	1.5196E-35	1.6406E-32
AVII	0.	6.6585E-55	1.8916E-50
AVIII	0.	9.7396E-79	1.2667E-72

P1 = 5.00E+00 N/SQ-M. US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6773E+03	2.1181E+04	2.7912E+04
T	5.7312E+01	8.6366E+01	9.2155E+01
RHO	1.4656E+01	9.9251E+01	1.1525E+02
H	3.5917E+02	6.6470E+02	7.6284E+02
A	9.5219E+00	1.2263E+01	1.3143E+01
S	1.7381E+00	1.9062E+00	1.9780E+00
Z	1.9970E+00	2.4710E+00	2.6279E+00
GAME	7.9220E-01	7.0467E-01	7.1328E-01
U	3.0612E+01	4.5276E+00	4.4739E+00

SPECIES	MOLE FRACTIONS		
E-	4.9924E-01	5.9531E-01	6.1947E-01
A	5.6612E-03	6.0112E-04	3.5563E-04
A+	4.9096E-01	2.1304E-01	1.4147E-01
A++	4.1382E-03	1.9088E-01	2.3811E-01
A+++	1.5405E-09	1.7121E-04	5.9590E-04
A++++	4.3165E-21	5.9732E-11	9.3291E-10
AV	1.4820E-37	9.4566E-21	1.0381E-18
AVI	2.2722E-59	3.4239E-34	4.2167E-31
AVII	0.	5.8646E-53	2.0285E-48
AVIII	0.	4.1835E-76	7.1108E-70

TABLE 1.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7385E+03	2.1530E+04	2.8306E+04
T	6.0121E+01	8.7472E+01	9.3556E+01
RHO	1.4351E+01	9.7982E+01	1.1324E+02
H	3.7274E+02	6.8903E+02	7.9001E+02
A	9.5289E+00	1.2456E+01	1.3380E+01
S	1.7558E+00	1.9293E+00	2.0023E+00
Z	2.0149E+00	2.5121E+00	2.6718E+00
GAME	7.4956E-01	7.0613E-01	7.1626E-01
U	3.1141E+01	4.5684E+00	4.5287E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0370E-01	6.0193E-01	6.2572E-01
A	3.1873E-03	5.1325E-04	2.8884E-04
A+	4.8253E-01	1.9343E-01	1.2310E-01
A++	1.0586E-02	2.0390E-01	2.5007E-01
A+++	1.5783E-08	2.3294E-04	8.2560E-04
A++++	3.1417E-19	1.1385E-10	1.8938E-09
AV	1.3293E-34	2.7628E-20	3.4046E-18
AVI	5.2646E-55	1.6798E-33	2.4638E-30
AVII	1.6901E-83	5.7734E-52	2.5374E-47
AVIII	0.	9.1223E-75	2.0634E-68

P1 = 5.00E+00 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9708E+03	2.4437E+04	3.2038E+04
T	6.5682E+01	9.2300E+01	1.0043E+02
RHO	1.4330E+01	9.9444E+01	1.1275E+02
H	4.2249E+02	7.8129E+02	8.9531E+02
A	9.8080E+00	1.3252E+01	1.4425E+01
S	1.8160E+00	2.0078E+00	2.0857E+00
Z	2.0938E+00	2.6624E+00	2.8294E+00
GAME	6.9948E-01	7.1461E-01	7.3229E-01
U	3.3156E+01	4.7852E+00	4.8131E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2241E-01	6.2440E-01	6.4657E-01
A	1.1895E-03	2.7893E-04	1.1560E-04
A+	4.3039E-01	1.2698E-01	6.3240E-02
A++	4.6008E-02	2.4762E-01	2.8691E-01
A+++	7.0235E-07	7.2476E-04	3.1700E-03
A++++	3.7007E-16	1.3415E-09	3.9135E-08
AV	9.5882E-30	1.7823E-18	5.9611E-16
AVI	5.5701E-48	8.7257E-31	5.8672E-27
AVII	1.5094E-73	5.1500E-48	2.0619E-42
AVIII	0.	2.2320E-69	1.0242E-61

P1 = 5.00E+00 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8024E+03	2.2176E+04	2.9111E+04
T	6.2184E+01	8.8715E+01	9.5205E+01
RHO	1.4242E+01	9.7864E+01	1.1255E+02
H	3.8661E+02	7.1443E+02	8.1867E+02
A	9.5683E+00	1.2666E+01	1.3646E+01
S	1.7730E+00	1.9520E+00	2.0263E+00
Z	2.0352E+00	2.5543E+00	2.7167E+00
GAME	7.2342E-01	7.0799E-01	7.1999E-01
U	3.1699E+01	4.6202E+00	4.5963E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0865E-01	6.0850E-01	6.3191E-01
A	2.1638E-03	4.3662E-04	2.3044E-04
A+	4.6973E-01	1.7395E-01	1.0499E-01
A++	1.9460E-02	2.1680E-01	2.6170E-01
A+++	7.3236E-08	3.1943E-04	1.1737E-03
A++++	5.3330E-18	2.2365E-10	4.1272E-09
AV	1.1396E-32	8.5830E-20	1.2779E-17
AVI	3.1795E-52	9.1641E-33	1.8035E-29
AVII	1.4056E-79	6.8071E-51	4.6440E-46
AVIII	0.	2.6596E-73	1.1328E-66

P1 = 5.00E+00 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1488E+03	2.7161E+04	3.5685E+04
T	6.8154E+01	9.6686E+01	1.0736E+02
RHO	1.4611E+01	1.0139E+02	1.1329E+02
H	4.6002E+02	8.5180E+02	9.7802E+02
A	1.0094E+01	1.3933E+01	1.5261E+01
S	1.8583E+00	2.0632E+00	2.1441E+00
Z	2.1579E+00	2.7706E+00	2.9341E+00
GAME	6.9279E-01	7.2470E-01	7.3932E-01
U	3.4646E+01	4.9999E+00	5.1038E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3659E-01	6.3907E-01	6.5919E-01
A	8.0652E-04	1.5947E-04	4.7152E-05
A+	3.8862E-01	8.4238E-02	3.2093E-02
A++	7.3983E-02	2.7477E-01	2.9893E-01
A+++	2.6943E-06	1.7622E-03	9.7416E-03
A++++	4.8957E-15	9.8362E-09	5.3768E-07
AV	6.0327E-28	5.3389E-17	5.4644E-14
AVI	2.2625E-45	1.4640E-28	5.4519E-24
AVII	6.3940E-70	8.9376E-45	4.3206E-38
AVIII	0.	5.8276E-65	8.0523E-56

TABLE I.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3352E+03	3.0101E+04	3.9717E+04
T	7.0248E+01	1.0225E+02	1.1483E+02
RHO	1.4930E+01	1.0245E+02	1.1409E+02
H	4.9917E+02	9.2540E+02	1.0652E+03
A	1.0393E+01	1.4713E+01	1.5911E+01
S	1.9014E+00	2.1179E+00	2.2028E+00
Z	2.2266E+00	2.8735E+00	3.0317E+00
GAME	6.9062E-01	7.3675E-01	7.2724E-01
U	3.6146E+01	5.2755E+00	5.4157E+00

SPECIES	MOLE FRACTIONS		
E-	5.5088E-01	6.5199E-01	6.7015E-01
A	5.8603E-04	7.6568E-05	1.8866E-05
A+	3.4620E-01	4.8675E-02	1.5724E-02
A++	1.0233E-01	2.9447E-01	2.8790E-01
A+++	7.3013E-06	4.7916E-03	2.6201E-02
A++++	3.4995E-14	9.7751E-08	5.9774E-06
AV	1.5094E-26	2.7487E-15	3.6675E-12
AVI	2.7633E-43	5.6095E-26	3.2814E-21
AVII	8.4664E-67	5.1149E-41	4.8869E-34
AVIII	0.	7.6263E-60	2.7429E-50

P1 = 5.00E+00 N/SQ-M. US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7314E+03	3.6489E+04	4.8442E+04
T	7.3998E+01	1.1539E+02	1.2618E+02
RHO	1.5552E+01	1.0364E+02	1.1909E+02
H	5.8227E+02	1.0816E+03	1.2470E+03
A	1.1018E+01	1.5967E+01	1.7033E+01
S	1.9897E+00	2.2236E+00	2.3126E+00
Z	2.3734E+00	3.0514E+00	3.2236E+00
GAME	6.9123E-01	7.2410E-01	7.1327E-01
U	3.9150E+01	5.8840E+00	5.8942E+00

SPECIES	MOLE FRACTIONS		
E-	5.7867E-01	6.7228E-01	6.8979E-01
A	3.3015E-04	1.4601E-05	5.4538E-06
A+	2.6336E-01	1.3511E-02	5.6302E-03
A++	1.5760E-01	2.8380E-01	2.2967E-01
A+++	3.3423E-05	3.0379E-02	7.4805E-02
A++++	7.6993E-13	8.3781E-06	1.0164E-04
AV	2.4725E-24	6.3817E-12	6.0800E-10
AVI	5.3283E-40	7.2894E-21	8.9025E-18
AVII	4.8043E-62	1.4595E-33	5.5503E-29
AVIII	0.	1.1395E-49	2.4185E-43

P1 = 5.00E+00 N/SQ-M. US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5295E+03	3.3202E+04	4.3991E+04
T	7.2160E+01	1.0896E+02	1.2098E+02
RHO	1.5250E+01	1.0276E+02	1.1631E+02
H	5.3992E+02	1.0020E+03	1.1550E+03
A	1.0701E+01	1.5430E+01	1.6469E+01
S	1.9452E+00	2.1714E+00	2.2584E+00
Z	2.2986E+00	2.9655E+00	3.1265E+00
GAME	6.9037E-01	7.3684E-01	7.1706E-01
U	3.7649E+01	5.5953E+00	5.6799E+00

SPECIES	MOLE FRACTIONS		
E-	5.6495E-01	6.6279E-01	6.8015E-01
A	4.3839E-04	3.1990E-05	9.4644E-06
A+	3.0430E-01	2.5042E-02	8.9656E-03
A++	1.3030E-01	2.9866E-01	2.6146E-01
A+++	1.6455E-05	1.3477E-02	4.9379E-02
A++++	1.7900E-13	1.1252E-06	3.1157E-05
AV	2.1790E-25	1.8836E-13	6.9826E-11
AVI	1.3895E-41	3.3818E-23	3.0547E-19
AVII	2.1731E-64	5.6939E-37	3.7929E-31
AVIII	0.	2.4974E-54	2.5130E-46

P1 = 5.00E+00 N/SQ-M. US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9409E+03	3.9985E+04	5.3076E+04
T	7.5812E+01	1.2083E+02	1.3096E+02
RHO	1.5835E+01	1.0542E+02	1.2193E+02
H	6.2621E+02	1.1645E+03	1.3419E+03
A	1.1344E+01	1.6476E+01	1.7618E+01
S	2.0342E+00	2.2751E+00	2.3664E+00
Z	2.4498E+00	3.1391E+00	3.3239E+00
GAME	6.9292E-01	7.1568E-01	7.1308E-01
U	4.0648E+01	6.1176E+00	6.0858E+00

SPECIES	MOLE FRACTIONS		
E-	5.9180E-01	6.8144E-01	6.9915E-01
A	2.4782E-04	7.8950E-06	3.3158E-06
A+	2.2416E-01	8.1647E-03	3.6692E-03
A++	1.8373E-01	2.5792E-01	1.9630E-01
A+++	6.3415E-05	5.2432E-02	1.0061E-01
A++++	2.9438E-12	3.5370E-05	2.5997E-04
AV	2.3115E-23	8.4195E-11	3.5507E-09
AVI	1.4833E-38	3.8855E-19	1.4403E-16
AVII	5.8663E-60	5.0260E-31	3.4962E-27
AVIII	2.8423E-86	3.4409E-46	7.4725E-41

TABLE I. - Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1577E+03	4.3558E+04	5.7746E+04
T	7.7729E+01	1.2557E+02	1.3562E+02
RHO	1.6055E+01	1.0737E+02	1.2422E+02
H	6.7174E+02	1.2504E+03	1.4399E+03
A	1.1696E+01	1.7001E+01	1.8233E+01
S	2.0806E+00	2.3266E+00	2.4208E+00
Z	2.5304E+00	3.2307E+00	3.4275E+00
GAME	6.9553E-01	7.1247E-01	7.1512E-01
U	4.2141E+01	6.3116E+00	6.2711E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0481E-01	6.9047E-01	7.0824E-01
A	1.8054E-04	4.7090E-06	2.0149E-06
A+	1.8534E-01	5.2806E-03	2.3889E-03
A++	2.0956E-01	2.2763E-01	1.6282E-01
A+++	1.1873E-04	7.6503E-02	1.2596E-01
A++++	1.1217E-11	1.0460E-04	5.8421E-04
AV	2.1841E-22	6.1468E-10	1.6917E-08
AVI	4.2646E-37	8.6203E-18	1.7367E-15
AVII	7.6855E-58	4.9220E-29	1.4478E-25
AVIII	2.1330E-83	1.9074E-43	1.3123E-38

P1 = 5.00E+00 N/SQ-M. US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6125E+03	5.0806E+04	6.7192E+04
T	8.2047E+01	1.3424E+02	1.4552E+02
RHO	1.6339E+01	1.1057E+02	1.2687E+02
H	7.6756E+02	1.4307E+03	1.6460E+03
A	1.2482E+01	1.8115E+01	1.9583E+01
S	2.1739E+00	2.4303E+00	2.5307E+00
Z	2.6947E+00	3.4230E+00	3.6395E+00
GAME	7.0470E-01	7.1413E-01	7.2410E-01
U	4.5101E+01	6.6752E+00	6.6668E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.2890E-01	7.0786E-01	7.2524E-01
A	8.4481E-05	1.8222E-06	6.5434E-07
A+	1.1354E-01	2.3395E-03	9.1800E-04
A++	2.5705E-01	1.6443E-01	9.9685E-02
A+++	4.1933E-04	1.2483E-01	1.7168E-01
A++++	1.7835E-10	5.4037E-04	2.4802E-03
AV	2.3674E-20	1.3916E-08	3.0785E-07
AVI	4.8656E-34	1.2067E-15	1.9067E-13
AVII	2.1896E-53	7.7777E-26	1.6992E-22
AVIII	2.5772E-77	5.1223E-39	2.4666E-34

P1 = 5.00E+00 N/SQ-M. US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3817E+03	4.7211E+04	6.2505E+04
T	7.9760E+01	1.2997E+02	1.4041E+02
RHO	1.6234E+01	1.0923E+02	1.2599E+02
H	7.1886E+02	1.3392E+03	1.5412E+03
A	1.2069E+01	1.7547E+01	1.8885E+01
S	2.1268E+00	2.3783E+00	2.4755E+00
Z	2.6117E+00	3.3256E+00	3.5331E+00
GAME	6.9925E-01	7.1232E-01	7.1888E-01
U	4.3626E+01	6.4946E+00	6.4624E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.1710E-01	6.9930E-01	7.1696E-01
A	1.2739E-04	2.9282E-06	1.1863E-06
A+	1.4965E-01	3.5145E-03	1.5175E-03
A++	2.3389E-01	1.9601E-01	1.3033E-01
A+++	2.1977E-04	1.0092E-01	1.4997E-01
A++++	4.2732E-11	2.5217E-04	1.2232E-03
AV	2.0872E-21	3.2104E-09	7.3083E-08
AVI	1.2502E-35	1.1675E-16	1.8361E-14
AVII	1.0132E-55	2.3736E-27	4.9995E-24
AVIII	1.4424E-80	4.0564E-41	1.8135E-36

P1 = 5.00E+00 N/SQ-M. US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8496E+03	5.4292E+04	7.1770E+04
T	8.4692E+01	1.3856E+02	1.5116E+02
RHO	1.6374E+01	1.1125E+02	1.2678E+02
H	8.1782E+02	1.5247E+03	1.7544E+03
A	1.2944E+01	1.8711E+01	2.0327E+01
S	2.2202E+00	2.4826E+00	2.5861E+00
Z	2.7759E+00	3.5218E+00	3.7449E+00
GAME	7.1272E-01	7.1745E-01	7.2993E-01
U	4.6561E+01	6.8634E+00	6.8915E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3976E-01	7.1606E-01	7.3297E-01
A	5.1682E-05	1.1038E-06	3.2931E-07
A+	8.1453E-02	1.5262E-03	5.1827E-04
A++	2.7790E-01	1.3380E-01	7.2055E-02
A+++	8.3868E-04	1.4754E-01	1.8947E-01
A++++	8.4691E-10	1.0823E-03	4.9792E-03
AV	3.3654E-19	5.4746E-08	1.3242E-06
AVI	2.6288E-32	1.0913E-14	2.0971E-12
AVII	7.1697E-51	2.1141E-24	6.3583E-21
AVIII	6.6198E-74	5.0471E-37	3.8643E-32

TABLE I.- Continued

$p_1 = 5\ N/m^2$

P1 = 5.00E+00 N/SQ-M. US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0924E+03	5.7408E+04	7.5897E+04
T	8.8026E+01	1.4304E+02	1.5734E+02
RHO	1.6282E+01	1.1085E+02	1.2539E+02
H	8.6963E+02	1.6209E+03	1.8658E+03
A	1.3497E+01	1.9337E+01	2.1076E+01
S	2.2667E+00	2.5351E+00	2.6420E+00
Z	2.8554E+00	3.6204E+00	3.8470E+00
GAME	7.2475E-01	7.2203E-01	7.3384E-01
U	4.7998E+01	7.0635E+00	7.1318E+00

SPECIES	MOLE FRACTIONS		
E-	6.4979E-01	7.2379E-01	7.4006E-01
A	2.7349E-05	6.3486E-07	1.5006E-07
A+	5.2454E-02	9.5930E-04	2.7206E-04
A++	2.9585E-01	1.0501E-01	4.9076E-02
A+++	1.8806E-03	1.6816E-01	2.0076E-01
A++++	5.3659E-09	2.0842E-03	9.8342E-03
AV	7.9571E-18	2.0570E-07	5.7593E-06
AVI	3.1128E-30	9.3343E-14	2.4080E-11
AVII	7.6429E-48	5.3267E-23	2.5640E-19
AVIII	9.3488E-70	4.4968E-35	6.8173E-30

P1 = 5.00E+00 N/SQ-M. US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5935E+03	6.2366E+04	8.2594E+04
T	9.7356E+01	1.5317E+02	1.7008E+02
RHO	1.5764E+01	1.0677E+02	1.2020E+02
H	9.7786E+02	1.8192E+03	2.0969E+03
A	1.4604E+01	2.0679E+01	2.2370E+01
S	2.3574E+00	2.6420E+00	2.7545E+00
Z	2.9930E+00	3.8136E+00	4.0403E+00
GAME	7.3192E-01	7.3203E-01	7.2823E-01
U	5.0798E+01	7.5119E+00	7.6438E+00

SPECIES	MOLE FRACTIONS		
E-	6.6588E-01	7.3778E-01	7.5250E-01
A	4.8333E-06	1.6331E-07	2.8530E-08
A+	1.5072E-02	3.1446E-04	7.0873E-05
A++	3.0631E-01	5.5756E-02	2.0905E-02
A+++	1.2731E-02	1.9863E-01	1.9558E-01
A++++	4.8235E-07	7.5100E-03	3.0869E-02
AV	1.8580E-14	3.0380E-06	7.9135E-05
AVI	3.7902E-25	7.7745E-12	2.0288E-09
AVII	1.8874E-40	4.1921E-20	2.2020E-16
AVIII	1.0665E-59	4.8885E-31	8.8811E-26

P1 = 5.00E+00 N/SQ-M. US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3400E+03	5.9995E+04	7.9385E+04
T	9.2358E+01	1.4792E+02	1.6379E+02
RHO	1.6046E+01	1.0904E+02	1.2287E+02
H	9.2297E+02	1.7189E+03	1.9801E+03
A	1.4119E+01	2.0006E+01	2.1760E+01
S	2.3126E+00	2.5893E+00	2.6982E+00
Z	2.9285E+00	3.7196E+00	3.9448E+00
GAME	7.3707E-01	7.2747E-01	7.3281E-01
U	4.9405E+01	7.2830E+00	7.3924E+00

SPECIES	MOLE FRACTIONS		
E-	6.5853E-01	7.3115E-01	7.4650E-01
A	1.1992E-05	3.3325E-07	6.4673E-08
A+	2.9258E-02	5.6358E-04	1.3745E-04
A++	3.0734E-01	7.8269E-02	3.2108E-02
A+++	4.8632E-03	1.8602E-01	2.0289E-01
A++++	4.8851E-08	4.0001E-03	1.8344E-02
AV	3.5292E-16	7.9342E-07	2.3290E-05
AVI	9.3779E-28	8.4778E-13	2.5180E-10
AVII	2.9699E-44	1.4762E-21	9.0767E-18
AVIII	6.6162E-65	4.5928E-33	1.0059E-27

P1 = 5.00E+00 N/SQ-M. US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8565E+03	6.5240E+04	8.6525E+04
T	1.0181E+02	1.5909E+02	1.7597E+02
RHO	1.5615E+01	1.0499E+02	1.1892E+02
H	1.0344E+03	1.9230E+03	2.2176E+03
A	1.4928E+01	2.1344E+01	2.2952E+01
S	2.4012E+00	2.6948E+00	2.8087E+00
Z	3.0547E+00	3.9061E+00	4.1346E+00
GAME	7.1656E-01	7.3312E-01	7.2402E-01
U	5.2215E+01	7.7793E+00	7.8834E+00

SPECIES	MOLE FRACTIONS		
E-	6.7264E-01	7.4399E-01	7.5814E-01
A	2.2785E-06	7.4378E-08	1.3757E-08
A+	8.5058E-03	1.6534E-04	3.9057E-05
A++	2.9244E-01	3.7655E-02	1.3953E-02
A+++	2.6413E-02	2.0424E-01	1.8149E-01
A++++	2.9104E-06	1.3935E-02	4.6158E-02
AV	4.3052E-13	1.1887E-05	2.1659E-04
AVI	4.4950E-23	7.6025E-11	1.1710E-08
AVII	1.9860E-37	1.3355E-18	3.2895E-15
AVIII	1.3820E-55	6.2073E-29	4.0558E-24

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4669E+01	2.5554E+02
T	1.2892E+01	1.6278E+01	2.6180E+01
RHO	3.7155E+00	5.2013E+00	9.6822E+00
H	1.2892E+01	1.6280E+01	2.8378E+01
A	3.5905E+00	4.0322E+00	4.5382E+00
S	1.0906E+00	1.0911E+00	1.1022E+00
Z	1.0000E+00	1.0000E+00	1.0081E+00
GAME	9.9999E-01	9.9878E-01	7.8033E-01
U	4.5391E+00	3.2309E+00	2.8482E+00

SPECIES	MOLE FRACTIONS		
E-	4.6605E-08	6.5346E-06	8.0787E-03
A	1.0000E+00	9.9999E-01	9.8384E-01
A+	4.6605E-08	6.5346E-06	8.0787E-03
A++	3.6146E-31	1.9769E-24	3.8617E-13
A+++	4.1535E-70	9.3057E-55	1.9267E-32
A++++	0.	0.	2.7649E-63
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9096E+01	1.3484E+02	3.5342E+02
T	1.8168E+01	2.3297E+01	2.9592E+01
RHO	3.8029E+00	5.7745E+00	1.1585E+01
H	1.8184E+01	2.3910E+01	3.8036E+01
A	4.2442E+00	4.5024E+00	4.6617E+00
S	1.1083E+00	1.1091E+00	1.1212E+00
Z	1.0001E+00	1.0023E+00	1.0309E+00
GAME	9.9142E-01	8.6817E-01	7.1238E-01
U	5.4921E+00	3.6036E+00	2.6759E+00

SPECIES	MOLE FRACTIONS		
E-	5.8505E-05	2.2900E-03	2.9958E-02
A	9.9988E-01	9.9542E-01	9.4008E-01
A+	5.8505E-05	2.2900E-03	2.9958E-02
A++	7.4238E-21	3.4089E-15	4.2979E-11
A+++	7.5647E-49	4.3670E-37	5.9971E-28
A++++	0.	2.7580E-72	5.7073E-55
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8004E+01	1.0560E+02	3.0259E+02
T	1.5416E+01	1.9664E+01	2.8102E+01
RHO	3.7626E+00	5.3694E+00	1.0576E+01
H	1.5416E+01	1.9713E+01	3.3033E+01
A	3.9252E+00	4.3846E+00	4.5831E+00
S	1.0998E+00	1.1003E+00	1.1114E+00
Z	1.0000E+00	1.0002E+00	1.0181E+00
GAME	9.9946E-01	9.7751E-01	7.3414E-01
U	5.0155E+00	3.5022E+00	2.7608E+00

SPECIES	MOLE FRACTIONS		
E-	2.6043E-06	1.8725E-04	1.7811E-02
A	9.9999E-01	9.9963E-01	9.6438E-01
A+	2.6043E-06	1.8725E-04	1.7811E-02
A++	1.7275E-25	5.8811E-19	6.4164E-12
A+++	1.4374E-59	3.3132E-45	8.4106E-30
A++++	0.	5.5193E-87	3.9715E-59
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1378E+01	1.8110E+02	4.1198E+02
T	2.1045E+01	2.6397E+01	3.0862E+01
RHO	3.8644E+00	6.7875E+00	1.2762E+01
H	2.1215E+01	2.9305E+01	4.3499E+01
A	4.4495E+00	4.5027E+00	4.7562E+00
S	1.1163E+00	1.1178E+00	1.1318E+00
Z	1.0006E+00	1.0108E+00	1.0460E+00
GAME	9.4017E-01	7.5986E-01	7.0073E-01
U	5.9841E+00	3.3968E+00	2.5937E+00

SPECIES	MOLE FRACTIONS		
E-	6.4179E-04	1.0648E-02	4.4007E-02
A	9.9872E-01	9.7870E-01	9.1199E-01
A+	6.4179E-04	1.0648E-02	4.4007E-02
A++	3.3069E-17	7.7576E-13	1.8257E-10
A+++	1.9040E-41	6.0791E-32	1.4936E-26
A++++	5.1892E-80	1.4730E-62	2.2561E-52
AV	0.	0.	6.4170E-87
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5333E+01	2.4234E+02	4.9111E+02
T	2.3652E+01	2.8601E+01	3.2075E+01
RHO	4.0171E+00	8.2661E+00	1.4388E+01
H	2.4557E+01	3.5416E+01	4.5789E+01
A	4.4581E+00	4.5888E+00	4.8665E+00
S	1.1240E+00	1.1271E+00	1.1430E+00
Z	1.0034E+00	1.0250E+00	1.0642E+00
GAME	8.3747E-01	7.1825E-01	6.9382E-01
U	6.5214E+00	3.1546E+00	2.5430E+00

SPECIES	MOLE FRACTIONS		
E-	3.3742E-03	2.4407E-02	6.0328E-02
A	9.9325E-01	9.5119E-01	8.7934E-01
A+	3.3742E-03	2.4407E-02	6.0328E-02
A++	9.8725E-15	1.6430E-11	6.2923E-10
A+++	2.1556E-36	6.1013E-29	2.3956E-25
A++++	2.0539E-69	7.5648E-57	3.7561E-50
AV	0.	0.	9.2761E-84
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3017E+02	4.3163E+02	7.5705E+02
T	2.7230E+01	3.1928E+01	3.4528E+01
RHO	4.6924E+00	1.2691E+01	1.9737E+01
H	3.2318E+01	4.9904E+01	6.5403E+01
A	4.4916E+00	4.8544E+00	5.1347E+00
S	1.1399E+00	1.1483E+00	1.1682E+00
Z	1.0188E+00	1.0652E+00	1.1109E+00
GAME	7.2722E-01	6.9288E-01	6.8735E-01
U	7.8138E+00	2.8807E+00	2.4444E+00

SPECIES	MOLE FRACTIONS		
E-	1.8428E-02	6.1194E-02	9.9824E-02
A	9.6314E-01	8.7761E-01	8.0035E-01
A+	1.8428E-02	6.1194E-02	9.9824E-02
A++	4.0792E-12	6.0709E-10	5.3204E-09
A+++	2.0683E-30	2.0572E-25	3.2622E-23
A++++	1.0284E-59	2.7505E-50	4.6030E-46
AV	0.	1.0745E-83	9.7557E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1170E+02	3.2399E+02	6.0547E+02
T	2.5685E+01	3.0374E+01	3.3304E+01
RHO	4.3076E+00	1.0223E+01	1.6741E+01
H	2.8274E+01	4.2275E+01	5.7118E+01
A	4.4501E+00	4.7136E+00	4.9943E+00
S	1.1318E+00	1.1372E+00	1.1551E+00
Z	1.0096E+00	1.0434E+00	1.0859E+00
GAME	7.6368E-01	7.0106E-01	6.8968E-01
U	7.1429E+00	3.0031E+00	2.4857E+00

SPECIES	MOLE FRACTIONS		
E-	9.5185E-03	4.1599E-02	7.9119E-02
A	9.8096E-01	9.1680E-01	8.4176E-01
A+	9.5185E-03	4.1599E-02	7.9119E-02
A++	3.8432E-13	1.2760E-10	1.9344E-09
A+++	1.1821E-32	6.0867E-27	3.1546E-24
A++++	7.5462E-64	4.0583E-53	5.4823E-48
AV	0.	4.3481E-88	7.7445E-80
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5007E+02	5.6275E+02	9.3966E+02
T	2.8459E+01	3.3309E+01	3.5697E+01
RHO	5.1196E+00	1.5511E+01	2.3130E+01
H	3.6619E+01	5.8036E+01	7.4303E+01
A	4.5579E+00	4.9985E+00	5.2799E+00
S	1.1485E+00	1.1604E+00	1.1822E+00
Z	1.0300E+00	1.0892E+00	1.1381E+00
GAME	7.0875E-01	6.8877E-01	6.8620E-01
U	8.4866E+00	2.7878E+00	2.4172E+00

SPECIES	MOLE FRACTIONS		
E-	2.9098E-02	8.1906E-02	1.2132E-01
A	9.4180E-01	8.3619E-01	7.5737E-01
A+	2.9098E-02	8.1906E-02	1.2132E-01
A++	2.1557E-11	2.0905E-09	1.2918E-08
A+++	6.9886E-29	3.5572E-24	2.5362E-22
A++++	3.3305E-57	6.3702E-48	2.0540E-44
AV	0.	8.8649E-80	2.3034E-74
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7136E+02	7.1805E+02	1.1547E+03
T	2.9498E+01	3.4568E+01	3.6823E+01
RHO	5.5713E+00	1.8627E+01	2.6863E+01
H	4.1175E+01	6.6656E+01	8.3804E+01
A	4.6344E+00	5.1449E+00	5.4294E+00
S	1.1577E+00	1.1735E+00	1.1972E+00
Z	1.0427E+00	1.1151E+00	1.1673E+00
GAME	6.9827E-01	6.8669E-01	6.8580E-01
U	9.1603E+00	2.7332E+00	2.4003E+00

SPECIES	MOLE FRACTIONS		
E-	4.0976E-02	1.0325E-01	1.4334E-01
A	9.1805E-01	7.9350E-01	7.1332E-01
A+	4.0976E-02	1.0325E-01	1.4334E-01
A++	7.8375E-11	5.8293E-09	2.8590E-08
A+++	1.4003E-27	3.8293E-23	1.6536E-21
A++++	1.7153E-54	5.7690E-46	8.0473E-43
AV	0.	1.2496E-76	1.6774E-71
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1789E+02	1.1108E+03	1.6850E+03
T	3.1229E+01	3.6877E+01	3.8971E+01
RHO	6.5084E+00	2.5684E+01	3.5110E+01
H	5.1036E+01	8.5411E+01	1.0448E+02
A	4.7986E+00	5.4448E+00	5.7393E+00
S	1.1777E+00	1.2027E+00	1.2299E+00
Z	1.0720E+00	1.1728E+00	1.2315E+00
GAME	6.8781E-01	6.8544E-01	6.8636E-01
U	1.0496E+01	2.6528E+00	2.3899E+00

SPECIES	MOLE FRACTIONS		
E-	6.7175E-02	1.4736E-01	1.8797E-01
A	8.6565E-01	7.0529E-01	6.2407E-01
A+	6.7175E-02	1.4736E-01	1.8796E-01
A++	5.3595E-10	3.1122E-08	1.1306E-07
A+++	1.0508E-25	1.9383E-21	4.2089E-20
A++++	5.5691E-51	1.0291E-42	3.6075E-40
AV	8.2523E-85	2.3324E-71	2.4129E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9399E+02	9.0120E+02	1.4028E+03
T	3.0409E+01	3.5756E+01	3.7912E+01
RHO	6.0365E+00	2.2047E+01	3.0873E+01
H	4.5982E+01	7.5801E+01	9.3868E+01
A	4.7154E+00	5.2943E+00	5.5826E+00
S	1.1674E+00	1.1877E+00	1.2131E+00
Z	1.0569E+00	1.1432E+00	1.1985E+00
GAME	6.9190E-01	6.8572E-01	6.8590E-01
U	9.8305E+00	2.6800E+00	2.3915E+00

SPECIES	MOLE FRACTIONS		
E-	5.3738E-02	1.2525E-01	1.6562E-01
A	8.9252E-01	7.4950E-01	6.6876E-01
A+	5.3738E-02	1.2525E-01	1.6562E-01
A++	2.2257E-10	1.4221E-08	5.8599E-08
A+++	1.4645E-26	3.0604E-22	8.9342E-21
A++++	1.4248E-52	2.9167E-44	1.9666E-41
AV	2.4775E-87	5.8100E-74	2.8204E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4305E+02	1.3478E+03	2.0008E+03
T	3.1983E+01	3.7948E+01	4.0000E+01
RHO	6.9828E+00	2.9496E+01	3.9512E+01
H	5.6338E+01	9.5487E+01	1.1554E+02
A	4.8833E+00	5.5971E+00	5.8985E+00
S	1.1885E+00	1.2186E+00	1.2473E+00
Z	1.0883E+00	1.2041E+00	1.2659E+00
GAME	6.8510E-01	6.8562E-01	6.8709E-01
U	1.1156E+01	2.6468E+00	2.3831E+00

SPECIES	MOLE FRACTIONS		
E-	8.1140E-02	1.6949E-01	2.1007E-01
A	8.3772E-01	6.6102E-01	5.7987E-01
A+	8.1140E-02	1.6949E-01	2.1006E-01
A++	1.1482E-09	6.2835E-08	2.0703E-07
A+++	5.8575E-25	1.0178E-20	1.7720E-19
A++++	1.3942E-49	2.4309E-41	5.5122E-39
AV	1.4583E-82	3.8433E-69	1.6526E-65
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6963E+02	1.6182E+03	2.3581E+03
T	3.2688E+01	3.8995E+01	4.1030E+01
RHO	7.4603E+00	3.3541E+01	4.4122E+01
H	6.1899E+01	1.0613E+02	1.2733E+02
A	4.9693E+00	5.7534E+00	6.0641E+00
S	1.1999E+00	1.2355E+00	1.2659E+00
Z	1.1056E+00	1.2372E+00	1.3026E+00
GAME	6.8327E-01	6.8613E-01	6.8804E-01
U	1.1818E+01	2.6402E+00	2.3958E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	9.5543E-02	1.9172E-01	2.3232E-01
A	8.0891E-01	6.1656E-01	5.3536E-01
A+	9.5543E-02	1.9172E-01	2.3232E-01
A++	2.2563E-09	1.1997E-07	3.6804E-07
A+++	2.6966E-24	4.6991E-20	7.0262E-19
A++++	2.4313E-48	4.3945E-40	7.8855E-38
AV	1.4694E-80	3.7716E-67	1.5917E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2608E+02	2.2486E+03	3.1774E+03
T	3.3981E+01	4.1004E+01	4.3048E+01
RHO	8.3945E+00	4.1935E+01	5.3470E+01
H	7.3747E+01	1.2873E+02	1.5232E+02
A	5.1442E+00	6.0731E+00	6.4056E+00
S	1.2241E+00	1.2712E+00	1.3049E+00
Z	1.1431E+00	1.3077E+00	1.3804E+00
GAME	6.8123E-01	6.8785E-01	6.9051E-01
U	1.3110E+01	2.6279E+00	2.4360E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.2521E-01	2.3529E-01	2.7557E-01
A	7.4959E-01	5.2942E-01	4.4887E-01
A+	1.2521E-01	2.3529E-01	2.7556E-01
A++	7.1813E-09	3.7897E-07	1.0559E-06
A+++	3.6207E-23	7.2909E-19	8.8463E-18
A++++	2.2779E-46	8.1424E-38	1.0162E-35
AV	1.8971E-77	1.6722E-63	4.9305E-60
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9723E+02	1.9185E+03	2.7486E+03
T	3.3351E+01	4.0010E+01	4.2040E+01
RHO	7.9298E+00	3.7705E+01	4.8766E+01
H	6.7697E+01	1.1720E+02	1.3955E+02
A	5.0562E+00	5.9119E+00	6.2325E+00
S	1.2117E+00	1.2530E+00	1.2850E+00
Z	1.1239E+00	1.2717E+00	1.3407E+00
GAME	6.8204E-01	6.8689E-01	6.8918E-01
U	1.2466E+01	2.6248E+00	2.4137E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.1025E-01	2.1366E-01	2.5412E-01
A	7.7950E-01	5.7269E-01	4.9176E-01
A+	1.1025E-01	2.1366E-01	2.5412E-01
A++	4.1349E-09	2.1760E-07	6.3105E-07
A+++	1.0531E-23	1.9496E-19	2.5664E-18
A++++	2.8997E-47	6.8438E-39	9.5907E-37
AV	6.4750E-79	3.6034E-65	1.0761E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5617E+02	2.6106E+03	3.6452E+03
T	3.4587E+01	4.1986E+01	4.4060E+01
RHO	8.8526E+00	4.6224E+01	5.8195E+01
H	8.0048E+01	1.4075E+02	1.6564E+02
A	5.2334E+00	6.2379E+00	6.5839E+00
S	1.2369E+00	1.2901E+00	1.3254E+00
Z	1.1633E+00	1.3452E+00	1.4217E+00
GAME	6.8074E-01	6.8899E-01	6.9204E-01
U	1.3750E+01	2.6373E+00	2.4627E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4035E-01	2.5659E-01	2.9660E-01
A	7.1929E-01	4.8682E-01	4.0680E-01
A+	1.4035E-01	2.5659E-01	2.9660E-01
A++	1.1958E-08	6.4058E-07	1.7343E-06
A+++	1.1632E-22	2.5787E-18	2.9234E-17
A++++	1.8121E-45	9.3701E-37	9.8720E-35
AV	1.9379E-75	1.0198E-61	1.9396E-58
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8749E+02	3.0049E+03	4.1529E+03
T	3.5171E+01	4.2962E+01	4.5084E+01
RHO	9.3025E+00	5.0536E+01	6.2898E+01
H	8.6601E+01	1.5325E+02	1.7951E+02
A	5.3239E+00	6.4067E+00	6.7680E+00
S	1.2503E+00	1.3096E+00	1.3466E+00
Z	1.1843E+00	1.3841E+00	1.4645E+00
GAME	6.8047E-01	6.9029E-01	6.9378E-01
U	1.4387E+01	2.6525E+00	2.4938E+00

SPECIES	MOLE FRACTIONS		
E-	1.5563E-01	2.7748E-01	3.1717E-01
A	6.8874E-01	4.4504E-01	3.6567E-01
A+	1.5563E-01	2.7748E-01	3.1716E-01
A++	1.9248E-08	1.0560E-06	2.8115E-06
A+++	3.6185E-22	8.5225E-18	9.3824E-17
A++++	2.3509E-44	8.8042E-36	9.0187E-34
AV	3.2167E-74	3.2540E-60	6.8397E-57
AVI	0.	0.	1.4890E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5375E+02	3.8901E+03	5.2887E+03
T	3.6288E+01	4.4922E+01	4.7204E+01
RHO	1.0174E+01	5.9075E+01	7.2074E+01
H	1.0046E+02	1.7967E+02	2.0893E+02
A	5.5090E+00	6.7575E+00	7.1572E+00
S	1.2782E+00	1.3503E+00	1.3907E+00
Z	1.2291E+00	1.4659E+00	1.5545E+00
GAME	6.8048E-01	6.9346E-01	6.9809E-01
U	1.5649E+01	2.6995E+00	2.5714E+00

SPECIES	MOLE FRACTIONS		
E-	1.8637E-01	3.1782E-01	3.5672E-01
A	6.2726E-01	3.6437E-01	2.8658E-01
A+	1.8637E-01	3.1781E-01	3.5670E-01
A++	4.5524E-08	2.7268E-06	7.2544E-06
A+++	2.5575E-21	8.3929E-17	9.2939E-16
A++++	7.2429E-43	6.7973E-34	6.8466E-32
AV	4.0978E-72	3.6842E-57	7.0541E-54
AVI	0.	3.2370E-87	3.8011E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2015E+02	3.4347E+03	4.7044E+03
T	3.5738E+01	4.3943E+01	4.6133E+01
RHO	9.7461E+00	5.4871E+01	6.7579E+01
H	9.3412E+01	1.6628E+02	1.9400E+02
A	5.4159E+00	6.5805E+00	6.9596E+00
S	1.2640E+00	1.3298E+00	1.3685E+00
Z	1.2063E+00	1.4245E+00	1.5090E+00
GAME	6.8043E-01	6.9179E-01	6.9578E-01
U	1.5025E+01	2.6731E+00	2.5295E+00

SPECIES	MOLE FRACTIONS		
E-	1.7100E-01	2.9799E-01	3.3729E-01
A	6.5801E-01	4.0402E-01	3.2542E-01
A+	1.7100E-01	2.9799E-01	3.3729E-01
A++	3.0007E-08	1.7132E-06	4.5308E-06
A+++	1.0021E-21	2.7480E-17	2.9749E-16
A++++	1.5802E-43	8.4250E-35	8.0031E-33
AV	7.0311E-73	1.4448E-58	2.2779E-55
AVI	0.	0.	2.5347E-84
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8857E+02	4.3776E+03	5.9134E+03
T	3.6827E+01	4.5916E+01	4.8319E+01
RHO	1.0590E+01	6.3198E+01	7.6423E+01
H	1.0777E+02	1.9354E+02	2.2441E+02
A	5.6038E+00	6.9403E+00	7.3640E+00
S	1.2929E+00	1.3715E+00	1.4135E+00
Z	1.2527E+00	1.5086E+00	1.6014E+00
GAME	6.8068E-01	6.9537E-01	7.0082E-01
U	1.6272E+01	2.7313E+00	2.6162E+00

SPECIES	MOLE FRACTIONS		
E-	2.0174E-01	3.3712E-01	3.7554E-01
A	5.9653E-01	3.2576E-01	2.4893E-01
A+	2.0173E-01	3.3712E-01	3.7552E-01
A++	6.7804E-08	4.3082E-06	1.1655E-05
A+++	6.6031E-21	2.5496E-16	2.9244E-15
A++++	5.3460E-42	5.7406E-33	5.7789E-31
AV	1.7891E-70	1.2856E-55	1.8709E-52
AVI	0.	1.0612E-84	1.1201E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.2505E+02	4.9087E+03	6.5941E+03
T	3.7359E+01	4.6952E+01	4.9518E+01
RHO	1.1003E+01	6.7320E+01	8.0699E+01
H	1.1534E+02	2.0807E+02	2.4069E+02
A	5.7005E+00	7.1320E+00	7.5855E+00
S	1.3080E+00	1.3933E+00	1.4370E+00
Z	1.2773E+00	1.5530E+00	1.6501E+00
GAME	6.8100E-01	6.9760E-01	7.0419E-01
U	1.6907E+01	2.7678E+00	2.6681E+00

SPECIES	MOLE FRACTIONS		
E-	2.1708E-01	3.5608E-01	3.9399E-01
A	5.6583E-01	2.8785E-01	2.1204E-01
A+	2.1708E-01	3.5607E-01	3.9395E-01
A++	9.9213E-08	6.8187E-06	1.9083E-05
A+++	1.6143E-20	7.7342E-16	9.6642E-15
A++++	3.0021E-41	4.8093E-32	5.3588E-30
AV	3.2335E-69	3.4948E-54	5.9523E-51
AVI	0.	1.2087E-82	2.2740E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.0117E+02	6.0495E+03	8.0641E+03
T	3.8406E+01	4.9130E+01	5.2221E+01
RHO	1.1776E+01	7.4880E+01	8.8234E+01
H	1.3123E+02	2.3834E+02	2.7490E+02
A	5.9002E+00	7.5378E+00	8.0777E+00
S	1.3396E+00	1.4379E+00	1.4852E+00
Z	1.3292E+00	1.6444E+00	1.7502E+00
GAME	6.8190E-01	7.0329E-01	7.1393E-01
U	1.8152E+01	2.8593E+00	2.7955E+00

SPECIES	MOLE FRACTIONS		
E-	2.4769E-01	3.9188E-01	4.2863E-01
A	5.0462E-01	2.1625E-01	1.4280E-01
A+	2.4769E-01	3.9185E-01	4.2852E-01
A++	2.0359E-07	1.7178E-05	5.5148E-05
A+++	8.5806E-20	7.3063E-15	1.2930E-13
A++++	6.6345E-40	3.1964E-30	7.2605E-28
AV	4.0297E-67	3.2175E-51	1.9642E-47
AVI	0.	2.8894E-78	1.0596E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.6251E+02	5.4651E+03	7.3095E+03
T	3.7882E+01	4.8015E+01	5.0802E+01
RHO	1.1399E+01	7.1217E+01	8.4652E+01
H	1.2316E+02	2.2297E+02	2.5748E+02
A	5.7987E+00	7.3302E+00	7.8210E+00
S	1.3234E+00	1.4154E+00	1.4609E+00
Z	1.3026E+00	1.5982E+00	1.6997E+00
GAME	6.8140E-01	7.0019E-01	7.0839E-01
U	1.7531E+01	2.8105E+00	2.7273E+00

SPECIES	MOLE FRACTIONS		
E-	2.3233E-01	3.7430E-01	4.1166E-01
A	5.3535E-01	2.5141E-01	1.7672E-01
A+	2.3233E-01	3.7428E-01	4.1159E-01
A++	1.4256E-07	1.0776E-05	3.1848E-05
A+++	3.6735E-20	2.3440E-15	3.3728E-14
A++++	1.1937E-40	3.6859E-31	5.7212E-29
AV	6.9947E-69	9.2361E-53	3.0809E-49
AVI	0.	1.0255E-80	1.7089E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.4106E+02	6.6684E+03	8.8735E+03
T	3.8915E+01	5.0321E+01	5.3860E+01
RHO	1.2150E+01	7.8347E+01	9.1450E+01
H	1.3956E+02	2.5419E+02	2.9313E+02
A	6.0008E+00	7.7580E+00	8.3684E+00
S	1.3555E+00	1.4606E+00	1.5099E+00
Z	1.3559E+00	1.6914E+00	1.8015E+00
GAME	6.8248E-01	7.0712E-01	7.2172E-01
U	1.8772E+01	2.9157E+00	2.8852E+00

SPECIES	MOLE FRACTIONS		
E-	2.6246E-01	4.0879E-01	4.4492E-01
A	4.7509E-01	1.8246E-01	1.1027E-01
A+	2.6246E-01	4.0873E-01	4.4471E-01
A++	2.8490E-07	2.7834E-05	1.0159E-04
A+++	1.9056E-19	2.3643E-14	5.7100E-13
A++++	3.1104E-39	2.8933E-29	1.1300E-26
AV	5.4157E-66	1.0905E-49	1.4582E-45
AVI	0.	5.0277E-76	4.9201E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.8216E+02	7.3130E+03	9.7178E+03
T	3.9428E+01	5.1615E+01	5.5808E+01
RHO	1.2504E+01	8.1472E+01	9.4020E+01
H	1.4814E+02	2.7050E+02	3.1187E+02
A	6.1048E+00	7.9944E+00	8.7060E+00
S	1.3721E+00	1.4837E+00	1.5347E+00
Z	1.3837E+00	1.7390E+00	1.8521E+00
GAME	6.8314E-01	7.1201E-01	7.3330E-01
U	1.9390E+01	2.9805E+00	2.9707E+00

SPECIES	MOLE FRACTIONS		
E-	2.7728E-01	4.2497E-01	4.6006E-01
A	4.4544E-01	1.5011E-01	8.0076E-02
A+	2.7728E-01	4.2488E-01	4.5966E-01
A++	3.9601E-07	4.6333E-05	2.0413E-04
A+++	4.0475E-19	8.1729E-14	3.1340E-12
A++++	1.1067E-38	2.9345E-28	2.6559E-25
AV	1.3666E-65	4.3605E-48	2.1888E-43
AVI	0.	1.0819E-73	7.3494E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.6799E+02	8.6747E+03	1.1580E+04
T	4.0458E+01	5.4736E+01	6.1933E+01
RHO	1.3167E+01	8.6399E+01	9.6029E+01
H	1.6607E+02	3.0450E+02	3.5279E+02
A	6.3196E+00	8.5488E+00	9.7004E+00
S	1.4064E+00	1.5302E+00	1.5855E+00
Z	1.4417E+00	1.8343E+00	1.9470E+00
GAME	6.8472E-01	7.2789E-01	7.8032E-01
U	2.0620E+01	3.1470E+00	3.2732E+00

SPECIES	MOLE FRACTIONS		
E-	3.0636E-01	4.5483E-01	4.8640E-01
A	3.8729E-01	9.0495E-02	2.8702E-02
A+	3.0636E-01	4.5453E-01	4.8339E-01
A++	7.5342E-07	1.4917E-04	1.5039E-03
A+++	1.8880E-18	1.4094E-12	4.1068E-10
A++++	2.3047E-37	5.7922E-26	2.0761E-21
AV	5.2529E-63	1.8913E-44	2.9598E-37
AVI	0.	2.0513E-68	5.2773E-58
AVII	0.	0.	1.3650E-86
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.2447E+02	7.9829E+03	1.0619E+04
T	3.9942E+01	5.3048E+01	5.8355E+01
RHO	1.2843E+01	8.4244E+01	9.5689E+01
H	1.5698E+02	2.8728E+02	3.3175E+02
A	6.2111E+00	8.2513E+00	9.1374E+00
S	1.3891E+00	1.5066E+00	1.5600E+00
Z	1.4123E+00	1.7863E+00	1.9018E+00
GAME	6.8388E-01	7.1849E-01	7.5232E-01
U	2.0006E+01	3.0560E+00	3.1008E+00

SPECIES	MOLE FRACTIONS		
E-	2.9192E-01	4.4019E-01	4.7418E-01
A	4.1615E-01	1.1971E-01	5.2125E-02
A+	2.9192E-01	4.4003E-01	4.7321E-01
A++	5.4796E-07	7.9965E-05	4.8614E-04
A+++	8.8481E-19	3.0835E-13	2.6040E-11
A++++	5.4018E-38	3.4512E-27	1.3178E-23
AV	4.7329E-64	2.1477E-46	1.0404E-40
AVI	0.	3.0109E-71	5.5266E-63
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1271E+02	9.3833E+03	1.2600E+04
T	4.0979E+01	5.6770E+01	6.6660E+01
RHO	1.3475E+01	8.7905E+01	9.5286E+01
H	1.7541E+02	3.2214E+02	3.7505E+02
A	6.4307E+00	8.8994E+00	1.0176E+01
S	1.4240E+00	1.5534E+00	1.6106E+00
Z	1.4718E+00	1.8803E+00	1.9838E+00
GAME	6.8565E-01	7.4196E-01	7.8303E-01
U	2.1233E+01	3.2593E+00	3.4873E+00

SPECIES	MOLE FRACTIONS		
E-	3.2056E-01	4.6817E-01	4.9591E-01
A	3.5888E-01	6.3969E-02	1.3822E-02
A+	3.2056E-01	4.6756E-01	4.8463E-01
A++	1.0298E-06	3.0631E-04	5.6411E-03
A+++	3.8859E-18	8.1440E-12	1.0556E-08
A++++	7.8762E-37	1.4785E-24	7.9284E-19
AV	1.6208E-62	3.1653E-42	3.3569E-33
AVI	0.	3.4202E-65	3.6848E-52
AVII	0.	0.	2.5279E-78
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.5863E+02	1.0100E+04	1.3650E+04
T	4.1508E+01	5.9383E+01	7.0923E+01
RHO	1.3766E+01	8.8443E+01	9.5485E+01
H	1.8501E+02	3.4019E+02	3.9763E+02
A	6.5446E+00	9.3375E+00	1.0347E+01
S	1.4420E+00	1.5763E+00	1.6342E+00
Z	1.5027E+00	1.9230E+00	2.0156E+00
GAME	6.8670E-01	7.6352E-01	7.4897E-01
U	2.1843E+01	3.4043E+00	3.6794E+00

SPECIES	MOLE FRACTIONS		
E-	3.3453E-01	4.7998E-01	5.0386E-01
A	3.3095E-01	4.0767E-02	7.7751E-03
A+	3.3453E-01	4.7851E-01	4.7286E-01
A++	1.4084E-06	7.3519E-04	1.5504E-02
A+++	8.2936E-18	6.8833E-11	1.3184E-07
A++++	3.6060E-36	7.4549E-23	8.2327E-17
AV	3.9089E-61	1.5062E-39	4.9995E-30
AVI	0.	2.4763E-61	1.3913E-47
AVII	0.	0.	7.5315E-72
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5405E+02	1.1532E+04	1.5773E+04
T	4.2599E+01	6.6895E+01	7.6524E+01
RHO	1.4296E+01	8.6681E+01	9.8955E+01
H	2.0497E+02	3.7739E+02	4.4233E+02
A	6.7818E+00	1.0182E+01	1.0687E+01
S	1.4788E+00	1.6201E+00	1.6780E+00
Z	1.5666E+00	1.9888E+00	2.0829E+00
GAME	6.8919E-01	7.7926E-01	7.1656E-01
U	2.3060E+01	3.8079E+00	3.9099E+00

SPECIES	MOLE FRACTIONS		
E-	3.6167E-01	4.9718E-01	5.1990E-01
A	2.7666E-01	1.2194E-02	4.1413E-03
A+	3.6167E-01	4.8407E-01	4.3203E-01
A++	2.6280E-06	6.5584E-03	4.3931E-02
A+++	3.6408E-17	1.4687E-08	2.0086E-06
A++++	5.4929E-35	1.3671E-18	1.3397E-14
AV	2.3855E-59	7.3965E-33	1.6288E-26
AVI	0.	1.0695E-51	1.7500E-42
AVII	0.	1.0250E-77	1.3533E-64
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.0575E+02	1.0814E+04	1.4692E+04
T	4.2047E+01	6.2845E+01	7.4002E+01
RHO	1.4040E+01	8.7813E+01	9.6963E+01
H	1.9486E+02	3.5859E+02	4.1959E+02
A	6.6615E+00	9.8461E+00	1.0500E+01
S	1.4602E+00	1.5986E+00	1.6558E+00
Z	1.5343E+00	1.9595E+00	2.0475E+00
GAME	6.8787E-01	7.8724E-01	7.2763E-01
U	2.2453E+01	3.5941E+00	3.7876E+00

SPECIES	MOLE FRACTIONS		
E-	3.4824E-01	4.8967E-01	5.1160E-01
A	3.0353E-01	2.2810E-02	5.4144E-03
A+	3.4823E-01	4.8537E-01	4.5436E-01
A++	1.9244E-06	2.1467E-03	2.8619E-02
A+++	1.7549E-17	9.4351E-10	6.3902E-07
A++++	1.5131E-35	9.0206E-21	1.5489E-15
AV	4.1938E-60	2.8199E-36	5.2169E-28
AVI	0.	1.2973E-56	1.1695E-44
AVII	0.	1.2063E-84	1.0734E-67
AVIII	0.	0.	0.

P1 = 1.00E+01 N/SQ-M. US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0035E+03	1.2285E+04	1.6843E+04
T	4.3168E+01	7.0488E+01	7.8553E+01
RHO	1.4533E+01	8.6448E+01	1.0123E+02
H	2.1533E+02	3.9672E+02	4.6458E+02
A	6.9060E+00	1.0314E+01	1.0877E+01
S	1.4976E+00	1.6408E+00	1.6988E+00
Z	1.5996E+00	2.0161E+00	2.1180E+00
GAME	6.9069E-01	7.4854E-01	7.1112E-01
U	2.3665E+01	3.9842E+00	3.9662E+00

SPECIES	MOLE FRACTIONS		
E-	3.7482E-01	5.0400E-01	5.2786E-01
A	2.5036E-01	7.4488E-03	3.3956E-03
A+	3.7482E-01	4.7311E-01	4.0962E-01
A++	3.6063E-06	1.5442E-02	5.9113E-02
A+++	7.7235E-17	1.2483E-07	4.5950E-06
A++++	2.1267E-34	6.9912E-17	6.5143E-14
AV	9.2503E-59	3.6124E-30	2.0685E-25
AVI	3.6034E-88	8.0956E-48	7.1941E-41
AVII	0.	3.1637E-72	2.7580E-62
AVIII	0.	0.	1.8195E-88

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0542E+03	1.3082E+04	1.7937E+04
T	4.3761E+01	7.3307E+01	8.0378E+01
RHO	1.4750E+01	8.7247E+01	1.0357E+02
H	2.2594E+02	4.1664E+02	4.8746E+02
A	7.0347E+00	1.0449E+01	1.1075E+01
S	1.5167E+00	1.6610E+00	1.7198E+00
Z	1.6331E+00	2.0454E+00	2.1548E+00
GAME	6.9243E-01	7.2822E-01	7.0813E-01
U	2.4269E+01	4.1094E+00	4.0293E+00

SPECIES	MOLE FRACTIONS		
E-	3.8768E-01	5.1109E-01	5.3592E-01
A	2.2464E-01	5.2851E-03	2.8654E-03
A+	3.8767E-01	4.5617E-01	3.8651E-01
A++	4.9912E-06	2.7459E-02	7.4691E-02
A+++	1.7143E-16	5.4716E-07	9.0775E-06
A++++	1.0650E-33	1.0853E-15	2.4339E-13
AV	3.5482E-57	2.7516E-28	1.7419E-24
AVI	2.1107E-87	4.2067E-45	1.6362E-39
AVII	0.	2.0981E-68	2.4145E-60
AVIII	0.	0.	7.4826E-86

P1 = 1.00E+01 N/SQ-M. US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1589E+03	1.4760E+04	2.0162E+04
T	4.5042E+01	7.7538E+01	8.3630E+01
RHO	1.5118E+01	9.0221E+01	1.0804E+02
H	2.4793E+02	4.5807E+02	5.3450E+02
A	7.3091E+00	1.0789E+01	1.1477E+01
S	1.5555E+00	1.7013E+00	1.7620E+00
Z	1.7019E+00	2.1099E+00	2.2315E+00
GAME	6.9689E-01	7.1145E-01	7.0587E-01
U	2.5470E+01	4.2752E+00	4.1425E+00

SPECIES	MOLE FRACTIONS		
E-	4.1244E-01	5.2605E-01	5.5187E-01
A	1.7513E-01	3.3587E-03	2.1415E-03
A+	4.1242E-01	4.1515E-01	3.4013E-01
A++	9.8275E-06	5.5444E-02	1.0583E-01
A+++	8.6978E-16	3.6478E-06	2.6867E-05
A++++	2.1623E-32	3.9168E-14	2.0685E-12
AV	4.1133E-55	8.4748E-26	5.7148E-23
AVI	2.1865E-84	1.7844E-41	2.8170E-37
AVII	0.	3.2046E-63	3.9931E-57
AVIII	0.	0.	1.6816E-81

P1 = 1.00E+01 N/SQ-M. US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1060E+03	1.3939E+04	1.9046E+04
T	4.4383E+01	7.5590E+01	8.2027E+01
RHO	1.4946E+01	8.8604E+01	1.0593E+02
H	2.3681E+02	4.3710E+02	5.1075E+02
A	7.1687E+00	1.0612E+01	1.1271E+01
S	1.5360E+00	1.6812E+00	1.7403E+00
Z	1.6673E+00	2.0768E+00	2.1919E+00
GAME	6.9447E-01	7.1737E-01	7.0659E-01
U	2.4870E+01	4.2034E+00	4.0873E+00

SPECIES	MOLE FRACTIONS		
E-	4.0022E-01	5.1849E-01	5.4377E-01
A	1.9956E-01	4.1050E-03	2.4723E-03
A+	4.0021E-01	4.3633E-01	3.6376E-01
A++	6.9600E-06	4.1074E-02	8.9981E-02
A+++	3.8122E-16	1.5948E-06	1.6013E-05
A++++	4.7604E-33	8.1158E-15	7.4149E-13
AV	3.9503E-56	6.8224E-27	1.0697E-23
AVI	8.1118E-86	4.5728E-43	2.3847E-38
AVII	0.	1.7981E-65	1.1596E-58
AVIII	0.	0.	1.4716E-83

P1 = 1.00E+01 N/SQ-M. US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2130E+03	1.5621E+04	2.1280E+04
T	4.5750E+01	7.9273E+01	8.5139E+01
RHO	1.5263E+01	9.1891E+01	1.1005E+02
H	2.5930E+02	4.7951E+02	5.5870E+02
A	7.4576E+00	1.0972E+01	1.1682E+01
S	1.5751E+00	1.7215E+00	1.7834E+00
Z	1.7370E+00	2.1444E+00	2.2712E+00
GAME	6.9984E-01	7.0812E-01	7.0578E-01
U	2.6066E+01	4.3371E+00	4.1961E+00

SPECIES	MOLE FRACTIONS		
E-	4.2431E-01	5.3368E-01	5.5971E-01
A	1.5140E-01	2.8324E-03	1.8731E-03
A+	4.2428E-01	3.9330E-01	3.1717E-01
A++	1.4135E-05	7.0178E-02	1.2121E-01
A+++	2.0802E-15	7.1764E-06	4.2372E-05
A++++	1.0697E-31	1.4454E-13	5.1659E-12
AV	4.7349E-54	7.0101E-25	2.5816E-22
AVI	5.0570E-83	4.0243E-40	2.6571E-36
AVII	0.	2.9749E-61	1.0539E-55
AVIII	0.	4.2108E-87	1.5476E-79

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2681E+03	1.6483E+04	2.2389E+04
T	4.6522E+01	8.0862E+01	8.6600E+01
RHO	1.5379E+01	5.3502E+01	1.1183E+02
H	2.7092E+02	5.0140E+02	5.8336E+02
A	7.6166E+00	1.1158E+01	1.1890E+01
S	1.5950E+00	1.7419E+00	1.8050E+00
Z	1.7724E+00	2.1801E+00	2.3118E+00
GAME	7.0356E-01	7.0626E-01	7.0612E-01
U	2.6659E+01	4.3925E+00	4.2494E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3580E-01	5.4131E-01	5.6743E-01
A	1.2842E-01	2.4338E-03	1.6427E-03
A+	4.3576E-01	3.7120E-01	2.9449E-01
A++	2.0855E-05	8.5037E-02	1.3637E-01
A+++	5.3215E-15	1.2751E-05	6.4303E-05
A++++	6.1164E-31	4.4285E-13	1.2032E-11
AV	7.4796E-53	4.2888E-24	1.0397E-21
AVI	2.7217E-81	5.6831E-39	2.0868E-35
AVII	0.	1.2719E-59	2.0318E-54
AVIII	0.	5.9157E-85	8.1733E-78

P1 = 1.00E+01 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3814E+03	1.8158E+04	2.4519E+04
T	4.8366E+01	8.3751E+01	8.9438E+01
RHO	1.5495E+01	9.6176E+01	1.1446E+02
H	2.9493E+02	5.4643E+02	6.3399E+02
A	7.9839E+00	1.1537E+01	1.2313E+01
S	1.6349E+00	1.7833E+00	1.8490E+00
Z	1.8433E+00	2.2543E+00	2.3950E+00
GAME	7.1499E-01	7.0498E-01	7.0781E-01
U	2.7833E+01	4.4919E+00	4.3567E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5750E-01	5.5641E-01	5.8246E-01
A	8.5057E-02	1.8499E-03	1.2595E-03
A+	4.5739E-01	3.2710E-01	2.5024E-01
A++	5.1145E-05	1.1461E-01	1.6590E-01
A+++	4.7138E-14	3.3071E-05	1.3663E-04
A++++	3.6213E-29	2.9302E-12	5.6768E-11
AV	5.4397E-50	9.4519E-23	1.3673E-20
AVI	6.2134E-77	5.5541E-37	9.7197E-34
AVII	0.	9.8733E-57	5.3946E-52
AVIII	0.	5.6246E-81	1.6890E-74

P1 = 1.00E+01 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3243E+03	1.7335E+04	2.3475E+04
T	4.7383E+01	8.2346E+01	8.8030E+01
RHO	1.5459E+01	9.4961E+01	1.1333E+02
H	2.8280E+02	5.2372E+02	6.0846E+02
A	7.7900E+00	1.1347E+01	1.2100E+01
S	1.6149E+00	1.7624E+00	1.8269E+00
Z	1.8079E+00	2.2168E+00	2.3530E+00
GAME	7.0840E-01	7.0532E-01	7.0682E-01
U	2.7249E+01	4.4436E+00	4.3027E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4688E-01	5.4890E-01	5.7502E-01
A	1.0627E-01	2.1150E-03	1.4403E-03
A+	4.4682E-01	3.4908E-01	2.7216E-01
A++	3.1873E-05	9.9879E-02	1.5129E-01
A+++	1.4917E-14	2.1087E-05	9.4790E-05
A++++	4.2366E-30	1.1941E-12	2.6646E-11
AV	1.7642E-51	2.1616E-23	3.8829E-21
AVI	4.0911E-79	6.1742E-38	1.4823E-34
AVII	0.	3.9511E-58	3.4760E-53
AVIII	0.	6.2385E-83	3.8685E-76

P1 = 1.00E+01 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4394E+03	1.8931E+04	2.5488E+04
T	4.9528E+01	8.5092E+01	9.0830E+01
RHO	1.5474E+01	9.7041E+01	1.1512E+02
H	3.0730E+02	5.6948E+02	6.5989E+02
A	8.2089E+00	1.1728E+01	1.2529E+01
S	1.6548E+00	1.8044E+00	1.8714E+00
Z	1.8781E+00	2.2926E+00	2.4374E+00
GAME	7.2444E-01	7.0508E-01	7.0908E-01
U	2.8411E+01	4.5381E+00	4.4108E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6755E-01	5.6381E-01	5.8973E-01
A	6.4980E-02	1.6226E-03	1.0961E-03
A+	4.6738E-01	3.0537E-01	2.2881E-01
A++	8.7779E-05	1.2914E-01	1.8017E-01
A+++	1.7250E-13	4.9786E-05	1.9348E-04
A++++	3.7188E-28	6.6649E-12	1.1723E-10
AV	1.6456E-48	3.6414E-22	4.5781E-20
AVI	3.8525E-76	4.0757E-36	5.8935E-33
AVII	0.	1.7374E-55	7.3594E-51
AVIII	0.	2.7086E-79	5.9240E-73

TABLE I.- Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4980E+03	1.9614E+04	2.6332E+04
T	5.0965E+01	8.6373E+01	9.2206E+01
RHO	1.5376E+01	9.7402E+01	1.1514E+02
H	3.1991E+02	5.9281E+02	6.8607E+02
A	8.4847E+00	1.1919E+01	1.2748E+01
S	1.6746E+00	1.8259E+00	1.8942E+00
Z	1.9117E+00	2.3314E+00	2.4802E+00
GAME	7.3890E-01	7.0551E-01	7.1060E-01
U	2.8978E+01	4.5823E+00	4.4653E+00

SPECIES	MOLE FRACTIONS		
E-	4.7689E-01	5.7107E-01	5.9681E-01
A	4.6383E-02	1.4228E-03	9.4689E-04
A+	4.7656E-01	2.8401E-01	2.0793E-01
A++	1.6755E-04	1.4342E-01	1.9404E-01
A+++	8.3047E-13	7.2548E-05	2.7013E-04
A++++	6.7344E-27	1.4280E-11	2.3614E-10
AV	1.5652E-46	1.2753E-21	1.4723E-19
AVI	1.2277E-72	2.6015E-35	3.3617E-32
AVII	0.	2.5002E-54	9.1444E-50
AVIII	0.	9.9118E-78	1.8161E-71

P1 = 1.00E+01 N/SQ-M. US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6160E+03	2.0473E+04	2.7342E+04
T	5.5383E+01	8.8731E+01	9.4890E+01
RHO	1.4819E+01	9.5739E+01	1.1226E+02
H	3.4582E+02	6.3976E+02	7.3904E+02
A	9.2944E+00	1.2296E+01	1.3191E+01
S	1.7133E+00	1.8703E+00	1.9416E+00
Z	1.9689E+00	2.4100E+00	2.5667E+00
GAME	7.9220E-01	7.0705E-01	7.1440E-01
U	3.0059E+01	4.6591E+00	4.5931E+00

SPECIES	MOLE FRACTIONS		
E-	4.9212E-01	5.8506E-01	6.1039E-01
A	1.6805E-02	1.0807E-03	6.8224E-04
A+	4.9005E-01	2.4281E-01	1.6798E-01
A++	1.0349E-03	1.7091E-01	2.2044E-01
A+++	7.0497E-11	1.4238E-04	5.1057E-04
A++++	2.4363E-23	5.6438E-11	9.0600E-10
AV	7.7114E-41	1.2268E-20	1.3829E-18
AVI	9.4694E-64	7.4199E-34	9.3629E-31
AVII	0.	3.1180E-52	1.0902E-47
AVIII	0.	6.8478E-75	1.1284E-68

P1 = 1.00E+01 N/SQ-M. US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5570E+03	2.0150E+04	2.6975E+04
T	5.2841E+01	8.7590E+01	9.3578E+01
RHO	1.5168E+01	9.7042E+01	1.1421E+02
H	3.3275E+02	6.1629E+02	7.1237E+02
A	8.8429E+00	1.2109E+01	1.2971E+01
S	1.6942E+00	1.8478E+00	1.9179E+00
Z	1.9426E+00	2.3706E+00	2.5240E+00
GAME	7.6178E-01	7.0618E-01	7.1239E-01
U	2.9529E+01	4.6235E+00	4.5183E+00

SPECIES	MOLE FRACTIONS		
E-	4.8523E-01	5.7817E-01	6.0380E-01
A	2.9917E-02	1.2436E-03	8.0742E-04
A+	4.3448E-01	2.6311E-01	1.8737E-01
A++	3.7447E-04	1.5737E-01	2.0765E-01
A+++	5.9125E-12	1.0286E-04	3.7452E-04
A++++	2.5811E-25	2.9051E-11	4.7027E-10
AV	6.0362E-44	4.1020E-21	4.6422E-19
AVI	3.0879E-68	1.4575E-34	1.8554E-31
AVII	0.	2.9181E-53	1.0737E-48
AVIII	0.	2.5316E-76	5.0918E-70

P1 = 1.00E+01 N/SQ-M. US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6750E+03	2.0631E+04	2.7471E+04
T	5.8549E+01	8.9820E+01	9.6186E+01
RHO	1.4380E+01	9.3773E+01	1.0946E+02
H	3.5911E+02	6.6325E+02	7.6516E+02
A	9.6407E+00	1.2482E+01	1.3411E+01
S	1.7317E+00	1.8933E+00	1.9657E+00
Z	1.9894E+00	2.4495E+00	2.6091E+00
GAME	7.9794E-01	7.0811E-01	7.1668E-01
U	3.0569E+01	4.6952E+00	4.6404E+00

SPECIES	MOLE FRACTIONS		
E-	4.9735E-01	5.9175E-01	6.1672E-01
A	8.5764E-03	9.3331E-04	5.6880E-04
A+	4.9081E-01	2.2308E-01	1.4938E-01
A++	3.2680E-03	1.8404E-01	2.3263E-01
A+++	1.1701E-09	1.9356E-04	6.9144E-04
A++++	4.1328E-21	1.0591E-10	1.7268E-09
AV	2.3803E-37	3.4565E-20	4.0507E-18
AVI	9.7187E-59	3.4263E-33	4.6209E-30
AVII	0.	2.8022E-51	1.0856E-46
AVIII	0.	1.3301E-73	2.5518E-67

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M. US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7357E+03	2.0921E+04	2.7787E+04
T	6.1539E+01	9.0975E+01	9.7624E+01
RHO	1.4049E+01	9.2368E+01	1.0732E+02
H	3.7266E+02	6.8739E+02	7.9219E+02
A	9.7106E+00	1.2677E+01	1.3648E+01
S	1.7494E+00	1.9160E+00	1.9897E+00
Z	2.0076E+00	2.4897E+00	2.6521E+00
GAME	7.6325E-01	7.0947E-01	7.1944E-01
U	3.1091E+01	4.7365E+00	4.6952E+00

SPECIES	MOLE FRACTIONS		
E-	5.0189E-01	5.9834E-01	6.2294E-01
A	4.8034E-03	8.0418E-04	4.6879E-04
A+	4.8473E-01	2.0363E-01	1.3119E-01
A++	8.5781E-03	1.9696E-01	2.4446E-01
A+++	1.2625E-08	2.6230E-04	9.4629E-04
A++++	3.2191E-19	1.9926E-10	3.4009E-09
AV	2.2005E-34	9.8487E-20	1.2643E-17
AVI	1.8064E-54	1.6178E-32	2.5326E-29
AVII	1.9997E-82	2.6132E-50	1.2802E-45
AVIII	0.	2.7171E-72	7.4758E-66

P1 = 1.00E+01 N/SQ-M. US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9665E+03	2.3572E+04	3.1204E+04
T	6.7747E+01	9.5963E+01	1.0456E+02
RHO	1.3930E+01	9.3155E+01	1.0631E+02
H	4.2237E+02	7.7902E+02	8.9709E+02
A	9.9780E+00	1.3473E+01	1.4674E+01
S	1.8088E+00	1.9931E+00	2.0716E+00
Z	2.0838E+00	2.6368E+00	2.8073E+00
GAME	7.0525E-01	7.1733E-01	7.3356E-01
U	3.3083E+01	4.9549E+00	4.9823E+00

SPECIES	MOLE FRACTIONS		
E-	5.2010E-01	6.2075E-01	6.4378E-01
A	1.7113E-03	4.5868E-04	2.0532E-04
A+	4.3627E-01	1.3761E-01	7.1596E-02
A++	4.1918E-02	2.4039E-01	2.8107E-01
A+++	7.3558E-07	7.9087E-04	3.3508E-03
A++++	6.0981E-16	2.1527E-09	5.7587E-08
AV	3.3112E-29	5.4265E-18	1.5604E-15
AVI	5.4870E-47	6.5636E-30	3.5320E-26
AVII	7.9174E-72	1.5973E-46	4.6760E-41
AVIII	0.	3.8794E-67	1.2024E-59

P1 = 1.00E+01 N/SQ-M. US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7990E+03	2.1478E+04	2.8478E+04
T	6.3852E+01	9.2286E+01	9.9299E+01
RHO	1.3898E+01	9.1923E+01	1.0637E+02
H	3.8651E+02	7.1256E+02	8.2065E+02
A	9.7472E+00	1.2891E+01	1.3911E+01
S	1.7666E+00	1.9389E+00	2.0133E+00
Z	2.0272E+00	2.5319E+00	2.6961E+00
GAME	7.3398E-01	7.1126E-01	7.2282E-01
U	3.1640E+01	4.7881E+00	4.7619E+00

SPECIES	MOLE FRACTIONS		
E-	5.0671E-01	6.0504E-01	6.2910E-01
A	3.1866E-03	6.8867E-04	3.8100E-04
A+	4.7350E-01	1.8387E-01	1.1327E-01
A++	1.6606E-02	2.1004E-01	2.5593E-01
A+++	6.6057E-08	3.5978E-04	1.3221E-03
A++++	6.7741E-18	3.8924E-10	7.0934E-09
AV	2.6468E-32	3.0185E-19	4.3827E-17
AVI	1.7924E-51	8.6097E-32	1.6319E-28
AVII	3.4158E-78	2.9484E-49	1.9022E-44
AVIII	0.	7.3813E-71	2.9253E-64

P1 = 1.00E+01 N/SQ-M. US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1439E+03	2.6138E+04	3.4671E+04
T	7.0483E+01	1.0041E+02	1.1149E+02
RHO	1.4167E+01	9.4884E+01	1.0671E+02
H	4.5988E+02	8.4925E+02	9.7997E+02
A	1.0271E+01	1.4145E+01	1.5511E+01
S	1.8510E+00	2.0474E+00	2.1304E+00
Z	2.1470E+00	2.7434E+00	2.9142E+00
GAME	6.9709E-01	7.2628E-01	7.4047E-01
U	3.4566E+01	5.1688E+00	5.2860E+00

SPECIES	MOLE FRACTIONS		
E-	5.3423E-01	6.3549E-01	6.5685E-01
A	1.1513E-03	2.7823E-04	9.1764E-05
A+	3.9500E-01	9.4815E-02	3.8823E-02
A++	6.9613E-02	2.6758E-01	2.9469E-01
A+++	3.0362E-06	1.8372E-03	9.5484E-03
A++++	9.1476E-15	1.4080E-08	6.5530E-07
AV	2.5150E-27	1.3305E-16	1.0276E-13
AVI	2.8930E-44	8.1259E-28	1.9816E-23
AVII	4.9306E-68	1.7755E-43	4.6344E-37
AVIII	0.	5.5273E-63	3.3337E-54

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3297E+03	2.8942E+04	3.8509E+04
T	7.2761E+01	1.0590E+02	1.1883E+02
RHO	1.4459E+01	9.6034E+01	1.0770E+02
H	4.9902E+02	9.2264E+02	1.0664E+03
A	1.0578E+01	1.4902E+01	1.6178E+01
S	1.8935E+00	2.1011E+00	2.1860E+00
Z	2.2145E+00	2.8459E+00	3.0091E+00
GAME	6.9441E-01	7.3685E-01	7.3200E-01
U	3.6062E+01	5.4379E+00	5.5713E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4843E-01	6.4862E-01	6.6767E-01
A	8.3943E-04	1.4685E-04	4.0745E-05
A+	3.5303E-01	5.8471E-02	2.0651E-02
A++	9.7690E-02	2.8815E-01	2.8788E-01
A+++	8.4742E-06	4.6182E-03	2.3745E-02
A++++	6.8358E-14	1.1538E-07	5.9373E-06
AV	6.6180E-26	4.8989E-15	4.7995E-12
AVI	3.6043E-42	1.8774E-25	6.8618E-21
AVII	5.4561E-65	4.8710E-40	2.3275E-33
AVIII	0.	2.6794E-58	3.7469E-49

P1 = 1.00E+01 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7250E+03	3.5042E+04	4.6915E+04
T	7.6801E+01	1.1910E+02	1.3102E+02
RHO	1.5040E+01	9.7244E+01	1.1191E+02
H	5.8210E+02	1.0784E+03	1.2489E+03
A	1.1219E+01	1.6215E+01	1.7348E+01
S	1.9803E+00	2.2053E+00	2.2949E+00
Z	2.3592E+00	3.0257E+00	3.1996E+00
GAME	6.9467E-01	7.2959E-01	7.1791E-01
U	3.9058E+01	6.0494E+00	6.0777E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.7613E-01	6.6950E-01	6.8746E-01
A	4.8123E-04	3.2457E-05	1.1913E-05
A+	2.7068E-01	1.8222E-02	7.6007E-03
A++	1.5266E-01	2.8547E-01	2.3504E-01
A+++	3.9696E-05	2.6768E-02	6.9789E-02
A++++	1.5514E-12	7.7038E-06	1.0472E-04
AV	1.1315E-23	7.2542E-12	8.3246E-10
AVI	7.3947E-39	1.2233E-20	1.9701E-17
AVII	3.4803E-60	5.0055E-33	2.8014E-28
AVIII	1.8877E-86	9.8612E-49	3.5166E-42

P1 = 1.00E+01 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5235E+03	3.1909E+04	4.2619E+04
T	7.4827E+01	1.1247E+02	1.2535E+02
RHO	1.4757E+01	9.6524E+01	1.0958E+02
H	5.3976E+02	9.9900E+02	1.1563E+03
A	1.0894E+01	1.5635E+01	1.6759E+01
S	1.9366E+00	2.1538E+00	2.2407E+00
Z	2.2854E+00	2.9394E+00	3.1027E+00
GAME	6.9393E-01	7.3945E-01	7.2220E-01
U	3.7560E+01	5.7507E+00	5.8432E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.6244E-01	6.5979E-01	6.7770E-01
A	6.3238E-04	6.8117E-05	2.0786E-05
A+	3.1142E-01	3.2504E-02	1.2034E-02
A++	1.2548E-01	2.9563E-01	2.6509E-01
A+++	1.9407E-05	1.2007E-02	4.5122E-02
A++++	3.6015E-13	1.0861E-06	3.0956E-05
AV	1.0210E-24	2.3561E-13	9.0446E-11
AVI	2.1368E-40	6.6099E-23	6.2453E-19
AVII	2.2612E-62	2.4697E-36	1.7251E-30
AVIII	0.	3.0096E-53	3.1938E-45

P1 = 1.00E+01 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9341E+03	3.8344E+04	5.1353E+04
T	7.8763E+01	1.2491E+02	1.3618E+02
RHO	1.5295E+01	9.8640E+01	1.1431E+02
H	6.2603E+02	1.1610E+03	1.3441E+03
A	1.1557E+01	1.6741E+01	1.7953E+01
S	2.0247E+00	2.2560E+00	2.3483E+00
Z	2.4355E+00	3.1120E+00	3.2988E+00
GAME	6.9632E-01	7.2097E-01	7.1741E-01
U	4.0553E+01	6.3005E+00	6.2834E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8941E-01	6.7866E-01	6.9686E-01
A	3.6438E-04	1.7645E-05	7.2473E-06
A+	2.3111E-01	1.1156E-02	5.0075E-03
A++	1.7904E-01	2.6303E-01	2.0278E-01
A+++	7.6088E-05	4.7103E-02	9.5065E-02
A++++	6.0368E-12	3.3386E-05	2.7262E-04
AV	1.0987E-22	9.9026E-11	4.9755E-09
AVI	2.2543E-37	6.8143E-19	3.2851E-16
AVII	5.4157E-58	1.8150E-30	1.8229E-26
AVIII	2.3718E-83	3.1694E-45	1.1255E-39

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1504E+03	4.1777E+04	5.5898E+04
T	8.0778E+01	1.3000E+02	1.4119E+02
RHO	1.5513E+01	1.0040E+02	1.1642E+02
H	6.7156E+02	1.2466E+03	1.4424E+03
A	1.1913E+01	1.7275E+01	1.8583E+01
S	2.0696E+00	2.3060E+00	2.4017E+00
Z	2.5140E+00	3.2007E+00	3.4008E+00
GAME	6.9886E-01	7.1718E-01	7.1923E-01
U	4.2043E+01	6.5098E+00	6.4810E+00

SPECIES	MOLE FRACTIONS		
E-	6.0223E-01	6.8757E-01	7.0595E-01
A	2.7118E-04	1.0599E-05	4.4487E-06
A+	1.9291E-01	7.3193E-03	3.3194E-03
A++	2.0445E-01	2.3516E-01	1.7015E-01
A+++	1.4085E-04	6.9840E-02	1.1995E-01
A++++	2.2288E-11	1.0078E-04	6.1532E-04
AV	9.7655E-22	7.4181E-10	2.3703E-08
AVI	5.8237E-36	1.5616E-17	3.9422E-15
AVII	5.8410E-56	1.8414E-28	7.4256E-25
AVIII	1.2564E-80	1.8270E-42	1.9213E-37

P1 = 1.00E+01 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6042E+03	4.8746E+04	6.5082E+04
T	8.5284E+01	1.3935E+02	1.5163E+02
RHO	1.5797E+01	1.0319E+02	1.1890E+02
H	7.6735E+02	1.4265E+03	1.6491E+03
A	1.2706E+01	1.8417E+01	1.9956E+01
S	2.1607E+00	2.4082E+00	2.5094E+00
Z	2.6753E+00	3.3900E+00	3.6098E+00
GAME	7.0759E-01	7.1803E-01	7.2759E-01
U	4.4998E+01	6.8942E+00	6.8944E+00

SPECIES	MOLE FRACTIONS		
E-	6.2621E-01	7.0501E-01	7.2298E-01
A	1.3438E-04	4.1410E-06	1.5141E-06
A+	1.2157E-01	3.3282E-03	1.3534E-03
A++	2.5160E-01	1.7382E-01	1.0794E-01
A+++	4.8146E-04	1.1730E-01	1.6516E-01
A++++	3.2517E-10	5.4100E-04	2.5617E-03
AV	9.0734E-20	1.7654E-08	4.0744E-07
AVI	5.2159E-33	2.3336E-15	3.9151E-13
AVII	1.1358E-51	3.1389E-25	7.3703E-22
AVIII	8.2871E-75	5.3726E-38	2.8432E-33

P1 = 1.00E+01 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3739E+03	4.5266E+04	6.0500E+04
T	8.2920E+01	1.3474E+02	1.4622E+02
RHO	1.5685E+01	1.0199E+02	1.1810E+02
H	7.1866E+02	1.3352E+03	1.5440E+03
A	1.2293E+01	1.7833E+01	1.9242E+01
S	2.1150E+00	2.3568E+00	2.4547E+00
Z	2.5942E+00	3.2937E+00	3.5036E+00
GAME	7.0247E-01	7.1656E-01	7.2271E-01
U	4.3526E+01	6.7073E+00	6.6820E+00

SPECIES	MOLE FRACTIONS		
E-	6.1452E-01	6.9639E-01	7.1458E-01
A	1.9563E-04	6.6097E-06	2.6831E-06
A+	1.5631E-01	4.9280E-03	2.1725E-03
A++	2.2872E-01	2.0480E-01	1.3859E-01
A+++	2.5837E-04	9.3622E-02	1.4338E-01
A++++	8.2717E-11	2.4855E-04	1.2723E-03
AV	8.9098E-21	3.9959E-09	9.9039E-08
AVI	1.5954E-34	2.2043E-16	3.9344E-14
AVII	7.0627E-54	9.3379E-27	2.3326E-23
AVIII	7.9436E-78	4.1354E-40	2.3183E-35

P1 = 1.00E+01 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8411E+03	5.2091E+04	6.9524E+04
T	8.8016E+01	1.4391E+02	1.5737E+02
RHO	1.5832E+01	1.0380E+02	1.1898E+02
H	8.1760E+02	1.5202E+03	1.7576E+03
A	1.3170E+01	1.9022E+01	2.0694E+01
S	2.2066E+00	2.4595E+00	2.5631E+00
Z	2.7564E+00	3.4870E+00	3.7130E+00
GAME	7.1497E-01	7.2102E-01	7.3287E-01
U	4.6457E+01	7.0968E+00	7.1237E+00

SPECIES	MOLE FRACTIONS		
E-	6.3721E-01	7.1322E-01	7.3068E-01
A	8.5620E-05	2.5563E-06	8.0459E-07
A+	8.9135E-02	2.2255E-03	8.0736E-04
A++	2.7263E-01	1.4374E-01	8.0654E-02
A+++	9.3909E-04	1.3973E-01	1.8289E-01
A++++	1.4507E-09	1.0817E-03	4.9711E-03
AV	1.1637E-18	6.8493E-08	1.6168E-06
AVI	2.4598E-31	2.0522E-14	3.7577E-12
AVII	3.2566E-49	8.1061E-24	2.2275E-20
AVIII	2.1447E-71	4.9032E-36	3.3007E-31

TABLE I. - Continued

$p_1 = 10\ N/m^2$

P1 = 1.00E+01 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0837E+03	5.5128E+04	7.3573E+04
T	9.1398E+01	1.4861E+02	1.6376E+02
RHO	1.5750E+01	1.0348E+02	1.1771E+02
H	8.6941E+02	1.6163E+03	1.8695E+03
A	1.3716E+01	1.9655E+01	2.1460E+01
S	2.2532E+00	2.5113E+00	2.6190E+00
Z	2.8368E+00	3.5847E+00	3.8168E+00
GAME	7.2564E-01	7.2521E-01	7.3675E-01
U	4.7896E+01	7.2969E+00	7.3743E+00

SPECIES	MOLE FRACTIONS		
E-	6.4749E-01	7.2104E-01	7.3800E-01
A	4.8151E-05	1.5098E-06	3.8442E-07
A+	5.9458E-02	1.4424E-03	4.4547E-04
A++	2.9099E-01	1.1503E-01	5.6720E-02
A+++	2.0161E-03	1.6042E-01	1.9522E-01
A++++	8.2381E-09	2.0684E-03	9.6076E-03
AV	2.2612E-17	2.5100E-07	6.6355E-06
AVI	2.1339E-29	1.6767E-13	3.9001E-11
AVII	2.1190E-46	1.8898E-22	7.6362E-19
AVIII	1.4197E-67	3.8926E-34	4.5947E-29

P1 = 1.00E+01 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5850E+03	6.0268E+04	8.0554E+04
T	1.0043E+02	1.5895E+02	1.7676E+02
RHO	1.5344E+01	1.0041E+02	1.1366E+02
H	9.7764E+02	1.8145E+03	2.1012E+03
A	1.4823E+01	2.0996E+01	2.2795E+01
S	2.3418E+00	2.6153E+00	2.7281E+00
Z	2.9753E+00	3.7761E+00	4.0096E+00
GAME	7.3534E-01	7.3450E-01	7.3314E-01
U	5.0704E+01	7.7592E+00	7.8858E+00

SPECIES	MOLE FRACTIONS		
E-	6.6390E-01	7.3518E-01	7.5060E-01
A	1.0606E-05	4.3491E-07	8.2982E-08
A+	1.9745E-02	5.2711E-04	1.3101E-04
A++	3.0488E-01	6.5301E-02	2.6208E-02
A+++	1.1466E-02	1.9192E-01	1.9428E-01
A++++	4.8203E-07	7.0676E-03	2.8707E-02
AV	2.5035E-14	3.2426E-06	7.9564E-05
AVI	8.4290E-25	1.1111E-11	2.5878E-09
AVII	1.0228E-39	1.0397E-19	4.4886E-16
AVIII	1.7876E-58	2.5630E-30	3.4906E-25

P1 = 1.00E+01 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3314E+03	5.7849E+04	7.7255E+04
T	9.5533E+01	1.5358E+02	1.7031E+02
RHO	1.5585E+01	1.0231E+02	1.1588E+02
H	9.2275E+02	1.7143E+03	1.9840E+03
A	1.4307E+01	2.0318E+01	2.2160E+01
S	2.2976E+00	2.5632E+00	2.6735E+00
Z	2.9092E+00	3.6815E+00	3.9144E+00
GAME	7.3649E-01	7.3009E-01	7.3663E-01
U	4.9308E+01	7.5221E+00	7.6304E+00

SPECIES	MOLE FRACTIONS		
E-	6.5627E-01	7.2837E-01	7.4453E-01
A	2.3832E-05	8.3985E-07	1.7815E-07
A+	3.5851E-02	8.9522E-04	2.4088E-04
A++	3.0315E-01	8.8588E-02	3.8774E-02
A+++	4.7045E-03	1.7829E-01	1.9908E-01
A++++	5.8576E-08	3.8546E-03	1.7347E-02
AV	6.5553E-16	9.0172E-07	2.4678E-05
AVI	3.4066E-27	1.3511E-12	3.5315E-10
AVII	3.3318E-43	4.3508E-21	2.1577E-17
AVIII	3.0770E-63	3.0759E-32	4.9342E-27

P1 = 1.00E+01 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8472E+03	6.3014E+04	8.4336E+04
T	1.0508E+02	1.6481E+02	1.8300E+02
RHO	1.5187E+01	9.8846E+01	1.1227E+02
H	1.0342E+03	1.9180E+03	2.2224E+03
A	1.5184E+01	2.1667E+01	2.3405E+01
S	2.3852E+00	2.6666E+00	2.7821E+00
Z	3.0374E+00	3.8680E+00	4.1047E+00
GAME	7.2238E-01	7.3637E-01	7.2926E-01
U	5.2114E+01	8.0188E+00	8.1450E+00

SPECIES	MOLE FRACTIONS		
E-	6.7077E-01	7.4147E-01	7.5638E-01
A	5.1541E-06	2.1345E-07	4.0724E-08
A+	1.1391E-02	2.9747E-04	7.3967E-05
A++	2.9414E-01	4.6201E-02	1.7857E-02
A+++	2.3693E-02	1.9937E-01	1.8238E-01
A++++	2.8370E-06	1.2652E-02	4.3091E-02
AV	5.5168E-13	1.1555E-05	2.1641E-04
AVI	9.2426E-23	9.2323E-11	1.4670E-08
AVII	9.6076E-37	2.5622E-18	6.4556E-15
AVIII	2.0143E-54	2.2589E-28	1.4999E-23

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4660E+01	2.5674E+02
T	1.2892E+01	1.6278E+01	2.6601E+01
RHO	3.7155E+00	5.2009E+00	9.5839E+00
H	1.2892E+01	1.6279E+01	2.8508E+01
A	3.5905E+00	4.0329E+00	4.6158E+00
S	1.0929E+00	1.0934E+00	1.1049E+00
Z	1.0000E+00	1.0000E+00	1.0071E+00
GAME	9.9999E-01	9.9914E-01	7.9533E-01
U	4.5391E+00	3.2312E+00	2.8910E+00

SPECIES	MOLE FRACTIONS		
E-	3.2955E-08	4.6197E-06	7.0009E-03
A	1.0000E+00	9.9999E-01	9.8600E-01
A+	3.2955E-08	4.6197E-06	7.0009E-03
A++	1.8110E-31	9.8504E-25	3.8198E-13
A+++	1.4697E-70	3.2917E-55	2.8202E-32
A++++	0.	0.	5.9508E-63
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9088E+01	1.3292E+02	3.5561E+02
T	1.8172E+01	2.3331E+01	3.0339E+01
RHO	3.8017E+00	5.6876E+00	1.1391E+01
H	1.8183E+01	2.3777E+01	3.8277E+01
A	4.2499E+00	4.5697E+00	4.7373E+00
S	1.1111E+00	1.1118E+00	1.1241E+00
Z	1.0000E+00	1.0017E+00	1.0290E+00
GAME	9.9387E-01	8.9355E-01	7.1890E-01
U	5.4915E+00	3.6571E+00	2.7429E+00

SPECIES	MOLE FRACTIONS		
E-	4.1517E-05	1.6669E-03	2.8136E-02
A	9.9992E-01	9.9667E-01	9.4373E-01
A+	4.1517E-05	1.6669E-03	2.8136E-02
A++	3.7069E-21	1.8490E-15	5.5540E-11
A+++	3.1574E-49	1.6656E-37	1.5843E-27
A++++	0.	3.2994E-72	4.3193E-54
AV	0.	0.	2.1264E-89
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0538E+02	3.0451E+02
T	1.5416E+01	1.9662E+01	2.8719E+01
RHO	3.7626E+00	5.3588E+00	1.0430E+01
H	1.5416E+01	1.9696E+01	3.3237E+01
A	3.9256E+00	4.3984E+00	4.6584E+00
S	1.1023E+00	1.1029E+00	1.1142E+00
Z	1.0000E+00	1.0001E+00	1.0166E+00
GAME	9.9962E-01	9.8381E-01	7.4330E-01
U	5.0155E+00	3.5093E+00	2.8221E+00

SPECIES	MOLE FRACTIONS		
E-	1.8419E-06	1.3230E-04	1.6308E-02
A	1.0000E+00	9.9974E-01	9.6738E-01
A+	1.8419E-06	1.3230E-04	1.6308E-02
A++	8.6473E-26	2.9283E-19	7.6519E-12
A+++	5.1340E-60	1.1609E-45	1.9361E-29
A++++	0.	1.2698E-87	3.2564E-58
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1303E+01	1.7652E+02	4.1321E+02
T	2.1083E+01	2.6667E+01	3.1702E+01
RHO	3.8545E+00	6.5619E+00	1.2489E+01
H	2.1207E+01	2.9039E+01	4.3737E+01
A	4.4871E+00	4.5737E+00	4.8330E+00
S	1.1193E+00	1.1206E+00	1.1345E+00
Z	1.0005E+00	1.0088E+00	1.0437E+00
GAME	9.5452E-01	7.7764E-01	7.0596E-01
U	5.9785E+00	3.4993E+00	2.6634E+00

SPECIES	MOLE FRACTIONS		
E-	4.6738E-04	8.6958E-03	4.1844E-02
A	9.9907E-01	9.8261E-01	9.1631E-01
A+	4.6738E-04	8.6958E-03	4.1844E-02
A++	1.8259E-17	6.1834E-13	2.4495E-10
A+++	8.1735E-42	6.4027E-32	4.3467E-26
A++++	1.6799E-80	2.7540E-62	2.4710E-51
AV	0.	0.	2.3675E-85
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5036E+01	2.3422E+02	4.8806E+02
T	2.3819E+01	2.9076E+01	3.2983E+01
RHO	3.9794E+00	7.8829E+00	1.3943E+01
H	2.4527E+01	3.5044E+01	4.9946E+01
A	4.5320E+00	4.6510E+00	4.9440E+00
S	1.1271E+00	1.1298E+00	1.1458E+00
Z	1.0026E+00	1.0219E+00	1.0613E+00
GAME	8.6003E-01	7.2805E-01	6.9830E-01
U	6.5009E+00	3.2729E+00	2.6146E+00

SPECIES	MOLE FRACTIONS		
E-	2.6408E-03	2.1400E-02	5.7729E-02
A	9.9472E-01	9.5720E-01	8.8454E-01
A+	2.6408E-03	2.1400E-02	5.7729E-02
A++	6.8840E-15	1.6260E-11	8.5513E-10
A+++	1.6141E-36	8.3441E-29	7.2596E-25
A++++	1.0157E-69	1.7289E-57	5.2338E-49
AV	0.	0.	2.4614E-81
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2941E+02	4.1438E+02	7.4055E+02
T	2.7728E+01	3.2688E+01	3.5572E+01
RHO	4.5907E+00	1.1953E+01	1.8812E+01
H	3.2253E+01	4.9419E+01	6.5391E+01
A	4.5594E+00	4.9181E+00	5.2157E+00
S	1.1430E+00	1.1507E+00	1.1705E+00
Z	1.0167E+00	1.0605E+00	1.1067E+00
GAME	7.3743E-01	6.9773E-01	6.9104E-01
U	7.7676E+00	2.9728E+00	2.5155E+00

SPECIES	MOLE FRACTIONS		
E-	1.6389E-02	5.7044E-02	9.6392E-02
A	9.6722E-01	8.8591E-01	8.0722E-01
A+	1.6389E-02	5.7044E-02	9.6392E-02
A++	4.3264E-12	7.3368E-10	7.3087E-09
A+++	3.1213E-30	4.6825E-25	9.7200E-23
A++++	1.2603E-59	2.0372E-49	4.9872E-45
AV	0.	4.6379E-82	3.4664E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1113E+02	3.1204E+02	5.9575E+02
T	2.6031E+01	3.1009E+01	3.4275E+01
RHO	4.2348E+00	9.6811E+00	1.6060E+01
H	2.8221E+01	4.1849E+01	5.7165E+01
A	4.5231E+00	4.7752E+00	5.0727E+00
S	1.1349E+00	1.1398E+00	1.1576E+00
Z	1.0081E+00	1.0394E+00	1.0823E+00
GAME	7.7962E-01	7.0744E-01	6.9369E-01
U	7.1059E+00	3.1001E+00	2.5568E+00

SPECIES	MOLE FRACTIONS		
E-	8.0506E-03	3.7942E-02	7.6026E-02
A	9.8390E-01	9.2412E-01	8.4795E-01
A+	8.0506E-03	3.7942E-02	7.6026E-02
A++	3.4272E-13	1.4347E-10	2.6338E-09
A+++	1.0322E-32	1.0792E-26	9.2749E-24
A++++	4.2685E-63	1.2991E-54	5.8258E-47
AV	0.	6.8528E-86	2.5694E-78
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4917E+02	5.3834E+02	9.1612E+02
T	2.9075E+01	3.4167E+01	3.6818E+01
RHO	4.9937E+00	1.4537E+01	2.1955E+01
H	3.6948E+01	5.7479E+01	7.4263E+01
A	4.6244E+00	5.0654E+00	5.3646E+00
S	1.1516E+00	1.1625E+00	1.1843E+00
Z	1.0274E+00	1.0838E+00	1.1333E+00
GAME	7.1590E-01	6.9288E-01	6.8969E-01
U	8.4354E+00	2.8922E+00	2.4889E+00

SPECIES	MOLE FRACTIONS		
E-	2.6655E-02	7.7347E-02	1.1765E-01
A	9.4669E-01	8.4531E-01	7.6469E-01
A+	2.6655E-02	7.7347E-02	1.1765E-01
A++	2.5517E-11	2.6205E-09	1.7929E-08
A+++	1.6892E-28	8.6357E-24	7.8787E-22
A++++	2.1238E-56	4.8861E-47	2.8625E-43
AV	0.	2.4927E-78	4.3435E-72
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7037E+02	6.8787E+02	1.1237E+03
T	3.0206E+01	3.5530E+01	3.8021E+01
RHO	5.4246E+00	1.7452E+01	2.5432E+01
H	4.1103E+01	6.6094E+01	8.3759E+01
A	4.7017E+00	5.2164E+00	5.5183E+00
S	1.1607E+00	1.1754E+00	1.1991E+00
Z	1.0398E+00	1.1094E+00	1.1621E+00
GAME	7.0388E-01	6.9037E-01	6.8917E-01
U	9.1067E+00	2.8212E+00	2.4727E+00

SPECIES	MOLE FRACTIONS		
E-	3.8247E-02	9.8580E-02	1.3952E-01
A	9.2351E-01	8.0284E-01	7.2096E-01
A+	3.8247E-02	9.8580E-02	1.3952E-01
A++	9.8088E-11	7.5675E-09	3.9952E-08
A+++	3.4425E-27	1.0052E-22	5.0916E-21
A++++	1.2763E-53	5.2158E-45	9.3482E-42
AV	3.1137E-89	5.2134E-75	7.7852E-70
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1675E+02	1.0636E+03	1.6368E+03
T	3.2081E+01	3.8004E+01	4.0320E+01
RHO	6.3235E+00	2.4006E+01	3.3127E+01
H	5.0965E+01	8.4790E+01	1.0446E+02
A	4.8701E+00	5.5243E+00	5.8373E+00
S	1.1805E+00	1.2039E+00	1.2312E+00
Z	1.0684E+00	1.1659E+00	1.2254E+00
GAME	6.9195E-01	6.8876E-01	6.8963E-01
U	1.0440E+01	2.7437E+00	2.4649E+00

SPECIES	MOLE FRACTIONS		
E-	6.4055E-02	1.4227E-01	1.8395E-01
A	8.7189E-01	7.1545E-01	6.3209E-01
A+	6.4055E-02	1.4227E-01	1.8395E-01
A++	7.1851E-10	4.1653E-08	1.5988E-07
A+++	3.0288E-25	5.4424E-21	1.3481E-19
A++++	6.1266E-50	1.0855E-41	5.0855E-39
AV	5.2466E-83	1.4935E-69	3.2100E-65
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9291E+02	8.6200E+02	1.3637E+03
T	3.1194E+01	3.6798E+01	3.9186E+01
RHO	5.8702E+00	2.0608E+01	2.9173E+01
H	4.5909E+01	7.5188E+01	9.3830E+01
A	4.7845E+00	5.3691E+00	5.6759E+00
S	1.1703E+00	1.1892E+00	1.2147E+00
Z	1.0535E+00	1.1367E+00	1.1929E+00
GAME	6.9659E-01	6.8917E-01	6.8921E-01
U	9.7757E+00	2.7800E+00	2.4651E+00

SPECIES	MOLE FRACTIONS		
E-	5.0789E-02	1.2027E-01	1.6169E-01
A	8.9842E-01	7.5945E-01	6.7662E-01
A+	5.0789E-02	1.2027E-01	1.6169E-01
A++	2.9026E-10	1.8739E-08	8.2474E-08
A+++	4.0049E-26	8.3459E-22	2.8285E-20
A++++	1.4698E-51	3.0152E-43	2.6330E-40
AV	1.5272E-85	4.3825E-72	2.7436E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4185E+02	1.2904E+03	1.9424E+03
T	3.2895E+01	3.9152E+01	4.1422E+01
RHO	6.7796E+00	2.7544E+01	3.7233E+01
H	5.6268E+01	9.4836E+01	1.1553E+02
A	4.9572E+00	5.6808E+00	6.0011E+00
S	1.1911E+00	1.2195E+00	1.2483E+00
Z	1.0845E+00	1.1966E+00	1.2594E+00
GAME	6.8888E-01	6.8886E-01	6.9035E-01
U	1.1100E+01	2.7402E+00	2.4580E+00

SPECIES	MOLE FRACTIONS		
E-	7.7881E-02	1.6429E-01	2.0597E-01
A	8.4424E-01	6.7143E-01	5.8806E-01
A+	7.7881E-02	1.6429E-01	2.0597E-01
A++	1.5705E-09	8.4871E-08	2.9346E-07
A+++	1.7537E-24	2.8903E-20	5.6733E-19
A++++	1.6048E-48	2.5002E-40	7.6146E-38
AV	9.4028E-81	1.9450E-67	2.2363E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6839E+02	1.5510E+03	2.2890E+03
T	3.3655E+01	4.0277E+01	4.2527E+01
RHO	7.2397E+00	3.1327E+01	4.1541E+01
H	6.1832E+01	1.0548E+02	1.2735E+02
A	5.0459E+00	5.8420E+00	6.1719E+00
S	1.2023E+00	1.2359E+00	1.2665E+00
Z	1.1015E+00	1.2292E+00	1.2957E+00
GAME	6.8680E-01	6.8933E-01	6.9131E-01
U	1.1763E+01	2.7269E+00	2.4726E+00

SPECIES	MOLE FRACTIONS		
E-	9.2173E-02	1.8647E-01	2.2820E-01
A	8.1565E-01	6.2706E-01	5.4360E-01
A+	9.2173E-02	1.8647E-01	2.2820E-01
A++	3.1360E-09	1.6357E-07	5.2291E-07
A+++	8.4049E-24	1.3730E-19	2.2418E-18
A++++	3.0564E-47	5.0539E-39	1.0201E-36
AV	1.0784E-78	3.0486E-65	1.2838E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9594E+02	1.8362E+03	2.6669E+03
T	3.4368E+01	4.1360E+01	4.3610E+01
RHO	7.6912E+00	3.5150E+01	4.5868E+01
H	6.7631E+01	1.1649E+02	1.3960E+02
A	5.1354E+00	6.0041E+00	6.3452E+00
S	1.2140E+00	1.2530E+00	1.2853E+00
Z	1.1195E+00	1.2631E+00	1.3332E+00
GAME	6.8540E-01	6.9007E-01	6.9247E-01
U	1.2411E+01	2.7290E+00	2.4924E+00

SPECIES	MOLE FRACTIONS		
E-	1.0678E-01	2.0827E-01	2.4995E-01
A	7.8644E-01	5.8345E-01	5.0010E-01
A+	1.0678E-01	2.0827E-01	2.4995E-01
A++	5.8214E-09	2.9733E-07	8.9695E-07
A+++	3.4412E-23	5.6662E-19	8.1416E-18
A++++	4.4028E-46	7.4206E-38	1.1812E-35
AV	8.2246E-77	2.2163E-63	6.3839E-60
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2472E+02	2.1547E+03	3.0819E+03
T	3.5047E+01	4.2428E+01	4.4690E+01
RHO	8.1381E+00	3.9110E+01	5.0248E+01
H	7.3681E+01	1.2802E+02	1.5239E+02
A	5.2261E+00	6.1701E+00	6.5234E+00
S	1.2262E+00	1.2708E+00	1.3047E+00
Z	1.1385E+00	1.2985E+00	1.3724E+00
GAME	6.8448E-01	6.9102E-01	6.9382E-01
U	1.3055E+01	2.7198E+00	2.5167E+00

SPECIES	MOLE FRACTIONS		
E-	1.2166E-01	2.2988E-01	2.7136E-01
A	7.5669E-01	5.4023E-01	4.5729E-01
A+	1.2166E-01	2.2988E-01	2.7135E-01
A++	1.0213E-08	5.2047E-07	1.5003E-06
A+++	1.2386E-22	2.1545E-18	2.7984E-17
A++++	4.9059E-45	9.4768E-37	1.2430E-34
AV	4.1171E-75	1.3950E-61	2.9782E-58
AVI	0.	0.	1.2997E-88
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5475E+02	2.5017E+03	3.5348E+03
T	3.5697E+01	4.3479E+01	4.5775E+01
RHO	8.5789E+00	4.3089E+01	5.4645E+01
H	7.9983E+01	1.4001E+02	1.6574E+02
A	5.3179E+00	6.3393E+00	6.7069E+00
S	1.2389E+00	1.2893E+00	1.3249E+00
Z	1.1584E+00	1.3353E+00	1.4131E+00
GAME	6.8391E-01	6.9216E-01	6.9537E-01
U	1.3695E+01	2.7304E+00	2.5455E+00

SPECIES	MOLE FRACTIONS		
E-	1.3673E-01	2.5113E-01	2.9236E-01
A	7.2653E-01	4.9774E-01	4.1528E-01
A+	1.3673E-01	2.5113E-01	2.9235E-01
A++	1.7115E-08	8.8090E-07	2.4614E-06
A+++	3.9918E-22	7.5931E-18	9.2113E-17
A++++	4.1889E-44	1.0468E-35	1.2020E-33
AV	1.1371E-73	6.8612E-60	1.2229E-56
AVI	0.	0.	1.0118E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8601E+02	2.8798E+03	4.0263E+03
T	3.6324E+01	4.4523E+01	4.6873E+01
RHO	9.0121E+00	4.7089E+01	5.9020E+01
H	8.6537E+01	1.5249E+02	1.7964E+02
A	5.4111E+00	6.5124E+00	6.8963E+00
S	1.2520E+00	1.3084E+00	1.3456E+00
Z	1.1792E+00	1.3736E+00	1.4554E+00
GAME	6.8360E-01	6.9348E-01	6.9715E-01
U	1.4332E+01	2.7470E+00	2.5789E+00

SPECIES	MOLE FRACTIONS		
E-	1.5195E-01	2.7198E-01	3.1290E-01
A	6.9610E-01	4.5604E-01	3.7421E-01
A+	1.5195E-01	2.7198E-01	3.1289E-01
A++	2.7625E-08	1.4531E-06	3.9817E-06
A+++	1.1771E-21	2.5181E-17	2.9371E-16
A++++	2.7338E-43	1.0137E-34	1.0840E-32
AV	7.1056E-74	2.6121E-58	4.2909E-55
AVI	0.	1.4603E-88	6.8593E-85
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5227E+02	3.7311E+03	5.1287E+03
T	3.7525E+01	4.6623E+01	4.9147E+01
RHO	9.8516E+00	5.5032E+01	6.7574E+01
H	1.0040E+02	1.7890E+02	2.0917E+02
A	5.6018E+00	6.8727E+00	7.2970E+00
S	1.2796E+00	1.3482E+00	1.3889E+00
Z	1.2234E+00	1.4542E+00	1.5443E+00
GAME	6.8355E-01	6.9669E-01	7.0155E-01
U	1.5599E+01	2.7968E+00	2.6600E+00

SPECIES	MOLE FRACTIONS		
E-	1.8261E-01	3.1232E-01	3.5246E-01
A	6.3479E-01	3.7535E-01	2.9509E-01
A+	1.8261E-01	3.1232E-01	3.5244E-01
A++	6.6128E-08	3.7483E-06	1.0211E-05
A+++	9.0492E-21	2.4675E-16	2.8595E-15
A++++	1.5189E-41	7.7265E-33	7.9170E-31
AV	1.4910E-69	2.8715E-55	4.0732E-52
AVI	0.	4.6945E-84	4.9667E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1849E+02	3.2890E+03	4.5568E+03
T	3.6932E+01	4.5568E+01	4.7992E+01
RHO	9.4363E+00	5.1075E+01	6.3337E+01
H	9.3343E+01	1.6544E+02	1.9411E+02
A	5.5057E+00	6.6899E+00	7.0924E+00
S	1.2656E+00	1.3280E+00	1.3670E+00
Z	1.2009E+00	1.4132E+00	1.4991E+00
GAME	6.8349E-01	6.9499E-01	6.9919E-01
U	1.4965E+01	2.7692E+00	2.6170E+00

SPECIES	MOLE FRACTIONS		
E-	1.6726E-01	2.9238E-01	3.3293E-01
A	6.6549E-01	4.1524E-01	3.3414E-01
A+	1.6726E-01	2.9238E-01	3.3292E-01
A++	4.3206E-08	2.3501E-06	6.3839E-06
A+++	3.3017E-21	8.0119E-17	9.1817E-16
A++++	1.7738E-42	9.1791E-34	9.3188E-32
AV	4.9242E-71	9.3138E-57	1.3344E-53
AVI	0.	3.0369E-86	2.7407E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8703E+02	4.1982E+03	5.7333E+03
T	3.8103E+01	4.7684E+01	5.0339E+01
RHO	1.0252E+01	5.8847E+01	7.1609E+01
H	1.0771E+02	1.9274E+02	2.2470E+02
A	5.6993E+00	7.0597E+00	7.5095E+00
S	1.2940E+00	1.3689E+00	1.4112E+00
Z	1.2468E+00	1.4961E+00	1.5905E+00
GAME	6.8374E-01	6.9862E-01	7.0433E-01
U	1.6221E+01	2.8305E+00	2.7086E+00

SPECIES	MOLE FRACTIONS		
E-	1.9793E-01	3.3160E-01	3.7128E-01
A	6.0413E-01	3.3681E-01	2.5746E-01
A+	1.9793E-01	3.3159E-01	3.7124E-01
A++	9.8614E-08	5.8965E-06	1.6316E-05
A+++	2.2806E-20	7.3520E-16	8.9100E-15
A++++	8.6531E-41	6.0044E-32	6.7570E-30
AV	2.5295E-68	7.2398E-54	1.3273E-50
AVI	0.	3.7209E-82	5.7966E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 20 N/m^2

P1 = 2.00E+01 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.2331E+02	4.7035E+03	6.3875E+03
T	3.8673E+01	4.8781E+01	5.1610E+01
RHO	1.0646E+01	6.2629E+01	7.5540E+01
H	1.1528E+02	2.0718E+02	2.4096E+02
A	5.7987E+00	7.2550E+00	7.7357E+00
S	1.3088E+00	1.3901E+00	1.4342E+00
Z	1.2710E+00	1.5396E+00	1.6384E+00
GAME	6.8405E-01	7.0085E-01	7.0771E-01
U	1.6850E+01	2.8689E+00	2.7632E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.1324E-01	3.5047E-01	3.8964E-01
A	5.7352E-01	2.9907E-01	2.2075E-01
A+	2.1324E-01	3.5045E-01	3.8959E-01
A++	1.4432E-07	9.2730E-06	2.6451E-05
A+++	5.4316E-20	2.2072E-15	2.8882E-14
A++++	3.9087E-40	4.8895E-31	6.2661E-29
AV	1.2633E-67	2.2991E-52	5.2158E-49
AVI	0.	8.9366E-80	5.5880E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.9928E+02	5.7978E+03	7.8114E+03
T	3.9790E+01	5.1090E+01	5.4468E+01
RHO	1.1392E+01	6.9649E+01	8.2568E+01
H	1.3117E+02	2.3738E+02	2.7525E+02
A	6.0026E+00	7.6690E+00	8.2381E+00
S	1.3396E+00	1.4336E+00	1.4812E+00
Z	1.3220E+00	1.6293E+00	1.7369E+00
GAME	6.8497E-01	7.0653E-01	7.1736E-01
U	1.8095E+01	2.9645E+00	2.8959E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.4357E-01	3.8625E-01	4.2426E-01
A	5.1285E-01	2.2752E-01	1.5156E-01
A+	2.4357E-01	3.8621E-01	4.2411E-01
A++	2.9615E-07	2.2964E-05	7.4266E-05
A+++	2.9691E-19	1.9820E-14	3.5705E-13
A++++	1.0847E-38	2.9675E-29	7.0094E-27
AV	5.7636E-65	1.5132E-49	1.0320E-45
AVI	0.	8.4671E-76	4.7222E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.6069E+02	5.2361E+03	7.0788E+03
T	3.9235E+01	4.9910E+01	5.2971E+01
RHO	1.1026E+01	6.6233E+01	7.9205E+01
H	1.2310E+02	2.2205E+02	2.5778E+02
A	5.8997E+00	7.4573E+00	7.9765E+00
S	1.3240E+00	1.4116E+00	1.4575E+00
Z	1.2961E+00	1.5840E+00	1.6872E+00
GAME	6.8446E-01	7.0345E-01	7.1191E-01
U	1.7474E+01	2.9136E+00	2.8251E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2846E-01	3.6867E-01	4.0729E-01
A	5.4308E-01	2.6266E-01	1.8545E-01
A+	2.2846E-01	3.6865E-01	4.0721E-01
A++	2.0804E-07	1.4549E-05	4.3629E-05
A+++	1.2757E-19	6.5573E-15	9.7729E-14
A++++	1.9194E-39	3.7501E-30	6.2157E-28
AV	5.1476E-67	5.7764E-51	2.1387E-47
AVI	0.	8.9850E-78	1.5743E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.3910E+02	6.3888E+03	8.5910E+03
T	4.0342E+01	5.2343E+01	5.6181E+01
RHO	1.1746E+01	7.2846E+01	8.5544E+01
H	1.3950E+02	2.5320E+02	2.9355E+02
A	6.1075E+00	7.8926E+00	8.5322E+00
S	1.3556E+00	1.4558E+00	1.5055E+00
Z	1.3487E+00	1.6755E+00	1.7876E+00
GAME	6.8556E-01	7.1029E-01	7.2487E-01
U	1.8714E+01	3.0206E+00	2.9905E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.5855E-01	4.0317E-01	4.4059E-01
A	4.8291E-01	1.9370E-01	1.1896E-01
A+	2.5855E-01	4.0310E-01	4.4032E-01
A++	4.1596E-07	3.6736E-05	1.3358E-04
A+++	6.5212E-19	6.2158E-14	1.4913E-12
A++++	4.5516E-38	2.5466E-28	9.9806E-26
AV	5.0986E-64	4.8638E-48	6.9879E-44
AVI	0.	1.6070E-73	2.1574E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.8012E+02	7.0056E+03	9.4055E+03
T	4.0892E+01	5.3696E+01	5.8177E+01
RHO	1.2086E+01	7.5753E+01	8.7987E+01
H	1.4608E+02	2.6947E+02	3.1229E+02
A	6.2144E+00	8.1317E+00	8.8674E+00
S	1.3719E+00	1.4783E+00	1.5297E+00
Z	1.3762E+00	1.7223E+00	1.8374E+00
GAME	6.8625E-01	7.1501E-01	7.3557E-01
U	1.9332E+01	3.0873E+00	3.0760E+00

SPECIES	MOLE FRACTIONS		
E-	2.7336E-01	4.1937E-01	4.5576E-01
A	4.5328E-01	1.6132E-01	8.8740E-02
A+	2.7336E-01	4.1925E-01	4.5524E-01
A++	5.7866E-07	6.0062E-05	2.5761E-04
A+++	1.3985E-18	2.0546E-13	7.3944E-12
A++++	1.6997E-37	2.3745E-27	1.9348E-24
AV	7.5469E-64	1.7093E-46	7.6539E-42
AVI	0.	2.9204E-71	1.9705E-64
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.6578E+02	8.3084E+03	1.1196E+04
T	4.1995E+01	5.6894E+01	6.4128E+01
RHO	1.2720E+01	8.0413E+01	9.0334E+01
H	1.6600E+02	3.0338E+02	3.5305E+02
A	6.4351E+00	8.6830E+00	9.8033E+00
S	1.4056E+00	1.5237E+00	1.5793E+00
Z	1.4335E+00	1.8160E+00	1.9326E+00
GAME	6.8788E-01	7.2969E-01	7.7544E-01
U	2.0561E+01	3.2573E+00	3.3662E+00

SPECIES	MOLE FRACTIONS		
E-	3.0241E-01	4.4935E-01	4.8257E-01
A	3.9517E-01	1.0148E-01	3.6408E-02
A+	3.0241E-01	4.4899E-01	4.7948E-01
A++	1.0993E-06	1.8144E-04	1.5430E-03
A+++	6.4777E-16	3.0371E-12	5.8346E-10
A++++	3.5018E-36	3.5669E-25	5.9374E-21
AV	5.8963E-61	5.0635E-43	2.3775E-36
AVI	0.	3.7248E-66	1.6891E-56
AVII	0.	0.	3.5042E-84
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.2235E+02	7.6458E+03	1.0266E+04
T	4.1442E+01	5.5191E+01	6.0680E+01
RHO	1.2410E+01	7.8300E+01	8.9702E+01
H	1.5691E+02	2.8620E+02	3.3190E+02
A	6.3236E+00	8.3919E+00	9.2765E+00
S	1.3886E+00	1.5010E+00	1.5540E+00
Z	1.4045E+00	1.7693E+00	1.8861E+00
GAME	6.8701E-01	7.2120E-01	7.5188E-01
U	1.9947E+01	3.1664E+00	3.1851E+00

SPECIES	MOLE FRACTIONS		
E-	2.8799E-01	4.3480E-01	4.6982E-01
A	4.2402E-01	1.3051E-01	6.0933E-02
A+	2.8799E-01	4.3459E-01	4.6869E-01
A++	8.0359E-07	1.0163E-04	5.6383E-04
A+++	3.0648E-18	7.3808E-13	4.9954E-11
A++++	8.5676E-37	2.5493E-26	6.5403E-23
AV	6.0201E-62	7.2864E-45	1.9816E-39
AVI	0.	6.4288E-69	6.1192E-61
AVII	0.	0.	9.3970E-91
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1042E+02	8.9880E+03	1.2176E+04
T	4.2553E+01	5.8912E+01	6.8584E+01
RHO	1.3015E+01	8.1949E+01	9.0058E+01
H	1.7534E+02	3.2099E+02	3.7521E+02
A	6.5492E+00	9.0205E+00	1.0296E+01
S	1.4229E+00	1.5464E+00	1.6040E+00
Z	1.4633E+00	1.8617E+00	1.9713E+00
GAME	6.8884E-01	7.4189E-01	7.8410E-01
U	2.1173E+01	3.3674E+00	3.5738E+00

SPECIES	MOLE FRACTIONS		
E-	3.1661E-01	4.6286E-01	4.9272E-01
A	3.6677E-01	7.4629E-02	1.9515E-02
A+	3.1661E-01	4.6216E-01	4.8281E-01
A++	1.5012E-06	3.5068E-04	4.9571E-03
A+++	1.3370E-17	1.5113E-11	1.0225E-08
A++++	1.2511E-35	6.8832E-24	1.1221E-18
AV	2.8587E-60	5.4123E-41	8.9324E-33
AVI	0.	3.2024E-63	2.3919E-51
AVII	0.	0.	6.7026E-77
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.5625E+02	9.6772E+03	1.3187E+04
T	4.3118E+01	6.1416E+01	7.2993E+01
RHO	1.3294E+01	8.2720E+01	9.0145E+01
H	1.8494E+02	3.3900E+02	3.9781E+02
A	6.6662E+00	9.4267E+00	1.0528E+01
S	1.4405E+00	1.5689E+00	1.6275E+00
Z	1.4938E+00	1.9048E+00	2.0042E+00
GAME	6.8991E-01	7.5960E-01	7.5769E-01
U	2.1783E+01	3.5056E+00	3.7676E+00

SPECIES	MOLE FRACTIONS		
E-	3.3057E-01	4.7502E-01	5.0105E-01
A	3.3865E-01	5.0723E-02	1.1313E-02
A+	3.3357E-01	4.7349E-01	4.7423E-01
A++	2.0475E-06	7.6261E-04	1.3408E-02
A+++	2.8024E-17	1.0021E-10	1.2162E-07
A++++	5.0627E-35	2.2068E-22	1.0570E-16
AV	2.6746E-59	1.2310E-38	1.1368E-29
AVI	1.7760E-89	7.2290E-60	7.1859E-47
AVII	0.	3.0922E-89	1.4420E-70
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.5147E+02	1.1060E+04	1.5239E+04
T	4.4283E+01	6.8500E+01	7.9116E+01
RHO	1.3800E+01	8.1751E+01	9.3044E+01
H	2.0489E+02	3.7615E+02	4.4273E+02
A	6.9096E+00	1.0295E+01	1.0880E+01
S	1.4767E+00	1.6123E+00	1.6709E+00
Z	1.5569E+00	1.9750E+00	2.0702E+00
GAME	6.9247E-01	7.8337E-01	7.2272E-01
U	2.2998E+01	3.8880E+00	4.0137E+00

SPECIES	MOLE FRACTIONS		
E-	3.5772E-01	4.9366E-01	5.1696E-01
A	2.8457E-01	1.7999E-02	6.0474E-03
A+	3.5771E-01	4.8301E-01	4.3703E-01
A++	3.8044E-06	5.3275E-03	3.9959E-02
A+++	1.2351E-16	1.1694E-08	2.0658E-06
A++++	8.6564E-34	1.3498E-18	2.0670E-14
AV	3.7635E-57	1.1195E-32	4.8894E-26
AVI	3.7447E-87	3.0989E-51	1.3371E-41
AVII	0.	8.8631E-77	4.4652E-63
AVIII	0.	0.	2.2969E-89

P1 = 2.00E+01 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.0327E+02	1.0368E+04	1.4206E+04
T	4.3694E+01	6.4623E+01	7.6412E+01
RHO	1.3556E+01	8.2571E+01	9.1288E+01
H	1.9479E+02	3.5739E+02	4.2019E+02
A	6.7862E+00	9.8998E+00	1.0694E+01
S	1.4585E+00	1.5909E+00	1.6495E+00
Z	1.5250E+00	1.9431E+00	2.0365E+00
GAME	6.9112E-01	7.8048E-01	7.3494E-01
U	2.2391E+01	3.6804E+00	3.9046E+00

SPECIES	MOLE FRACTIONS		
E-	3.4428E-01	4.8536E-01	5.0896E-01
A	3.1144E-01	3.1208E-02	7.8335E-03
A+	3.4428E-01	4.8150E-01	4.5747E-01
A++	2.7922E-06	1.9299E-03	2.5744E-02
A+++	5.9356E-17	9.6880E-10	6.4480E-07
A++++	2.2387E-34	1.4224E-20	2.3268E-15
AV	4.5150E-58	8.8928E-36	1.5137E-27
AVI	1.5239E-88	1.0796E-55	8.6109E-44
AVII	0.	4.6152E-83	3.4567E-66
AVIII	0.	0.	0.

P1 = 2.00E+01 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0039E+03	1.1776E+04	1.6280E+04
T	4.4889E+01	7.2244E+01	8.1366E+01
RHO	1.4027E+01	8.1386E+01	9.5055E+01
H	2.1525E+02	3.9541E+02	4.6527E+02
A	7.0370E+00	1.0483E+01	1.1076E+01
S	1.4951E+00	1.6328E+00	1.6916E+00
Z	1.5895E+00	2.0028E+00	2.1049E+00
GAME	6.9401E-01	7.5950E-01	7.1627E-01
U	2.3602E+01	4.0747E+00	4.0882E+00

SPECIES	MOLE FRACTIONS		
E-	3.7087E-01	5.0071E-01	5.2493E-01
A	2.5826E-01	1.1179E-02	4.9638E-03
A+	3.7086E-01	4.7553E-01	4.1530E-01
A++	5.1968E-06	1.2550E-02	5.4804E-02
A+++	2.5782E-16	9.9162E-08	4.9332E-06
A++++	3.2300E-33	6.8117E-17	1.0829E-13
AV	2.2743E-56	5.3224E-30	6.9764E-25
AVI	2.4713E-86	2.2453E-47	6.5334E-40
AVII	0.	2.5559E-71	1.1835E-60
AVIII	0.	0.	5.2280E-86

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0514E+03	1.2531E+04	1.7337E+04
T	4.5519E+01	7.5391E+01	8.3359E+01
RHO	1.4234E+01	8.1801E+01	9.7145E+01
H	2.2586E+02	4.1524E+02	4.8820E+02
A	7.1688E+00	1.0627E+01	1.1278E+01
S	1.5138E+00	1.6533E+00	1.7124E+00
Z	1.6227E+00	2.0319E+00	2.1409E+00
GAME	6.9578E-01	7.3722E-01	7.1271E-01
U	2.4205E+01	4.2150E+00	4.1545E+00

SPECIES	MOLE FRACTIONS		
E-	3.8373E-01	5.0784E-01	5.3291E-01
A	2.3255E-01	7.8351E-03	4.2097E-03
A+	3.8372E-01	4.6081E-01	3.9287E-01
A++	7.1420E-06	2.3514E-02	7.0004E-02
A+++	5.5119E-16	4.8578E-07	9.9664E-06
A++++	1.3083E-32	1.2853E-15	4.1959E-13
AV	1.6409E-55	5.4994E-28	6.1985E-24
AVI	3.2309E-84	1.8349E-44	1.6006E-38
AVII	0.	3.4367E-67	1.1489E-58
AVIII	0.	0.	2.4764E-83

P1 = 2.00E+01 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1559E+03	1.4125E+04	1.9486E+04
T	4.6875E+01	8.0046E+01	8.6900E+01
RHO	1.4586E+01	8.4272E+01	1.0119E+02
H	2.4785E+02	4.5650E+02	5.3541E+02
A	7.4494E+00	1.0965E+01	1.1692E+01
S	1.5519E+00	1.6926E+00	1.7540E+00
Z	1.6906E+00	2.0939E+00	2.2161E+00
GAME	7.0026E-01	7.1730E-01	7.0986E-01
U	2.5404E+01	4.4043E+00	4.2773E+00

SPECIES	MOLE FRACTIONS		
E-	4.0850E-01	5.2242E-01	5.4876E-01
A	1.8301E-01	4.9761E-03	3.1840E-03
A+	4.0847E-01	4.2278E-01	3.4740E-01
A++	1.3893E-05	4.9817E-02	1.0063E-01
A+++	2.7640E-15	3.5910E-06	3.0331E-05
A++++	2.8808E-31	5.5175E-14	3.7242E-12
AV	3.9291E-53	2.1888E-25	2.1654E-22
AVI	2.6340E-81	1.0967E-40	3.0035E-36
AVII	0.	7.9317E-62	2.1312E-55
AVIII	0.	1.0940E-87	6.4630E-79

P1 = 2.00E+01 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1031E+03	1.3317E+04	1.8406E+04
T	4.6178E+01	7.7926E+01	8.5183E+01
RHO	1.4421E+01	8.2860E+01	9.9210E+01
H	2.3673E+02	4.3561E+02	5.1154E+02
A	7.3059E+00	1.0790E+01	1.1483E+01
S	1.5327E+00	1.6732E+00	1.7331E+00
Z	1.6564E+00	2.0624E+00	2.1779E+00
GAME	6.9783E-01	7.2438E-01	7.1079E-01
U	2.4806E+01	4.3208E+00	4.2148E+00

SPECIES	MOLE FRACTIONS		
E-	3.9628E-01	5.1512E-01	5.4085E-01
A	2.0745E-01	6.0600E-03	3.6407E-03
A+	3.9626E-01	4.4251E-01	3.7019E-01
A++	9.9067E-06	3.6302E-02	8.5304E-02
A+++	1.2218E-15	1.5185E-06	1.8041E-05
A++++	6.2208E-32	1.0826E-14	1.3358E-12
AV	3.3399E-54	1.6239E-26	4.0673E-23
AVI	6.9333E-83	2.5005E-42	2.5566E-37
AVII	0.	3.7321E-64	6.2135E-57
AVIII	0.	0.	5.5712E-81

P1 = 2.00E+01 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2099E+03	1.4946E+04	2.0568E+04
T	4.7619E+01	8.1956E+01	8.8536E+01
RHO	1.4726E+01	8.5718E+01	1.0302E+02
H	2.5922E+02	4.7787E+02	5.5969E+02
A	7.6007E+00	1.1151E+01	1.1903E+01
S	1.5712E+00	1.7125E+00	1.7750E+00
Z	1.7253E+00	2.1275E+00	2.2551E+00
GAME	7.0319E-01	7.1314E-01	7.0961E-01
U	2.6000E+01	4.4747E+00	4.3352E+00

SPECIES	MOLE FRACTIONS		
E-	4.2038E-01	5.2995E-01	5.5655E-01
A	1.5926E-01	4.2045E-03	2.8041E-03
A+	4.2034E-01	4.0174E-01	3.2478E-01
A++	1.9788E-05	6.4098E-02	1.1581E-01
A+++	6.4830E-15	7.3156E-06	4.8219E-05
A++++	1.4086E-30	2.1559E-13	9.3986E-12
AV	4.9128E-52	1.9602E-24	9.8896E-22
AVI	1.0518E-79	2.7083E-39	2.8475E-35
AVII	0.	7.7590E-60	5.5074E-54
AVIII	0.	5.1415E-85	5.4359E-77

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2649E+03	1.5770E+04	2.1642E+04
T	4.8426E+01	8.3697E+01	9.0121E+01
RHO	1.4839E+01	8.7145E+01	1.0464E+02
H	2.7084E+02	4.9969E+02	5.8442E+02
A	7.7621E+00	1.1341E+01	1.2117E+01
S	1.5906E+00	1.7325E+00	1.7964E+00
Z	1.7602E+00	2.1622E+00	2.2950E+00
GAME	7.0683E-01	7.1075E-01	7.0985E-01
U	2.6592E+01	4.5358E+00	4.3922E+00

SPECIES	MOLE FRACTIONS		
E-	4.3189E-01	5.3750E-01	5.6427E-01
A	1.3625E-01	3.6260E-03	2.4756E-03
A+	4.3183E-01	3.8025E-01	3.0232E-01
A++	2.8800E-05	7.8608E-02	1.3087E-01
A+++	1.6023E-14	1.3328E-05	7.3693E-05
A++++	7.5270E-30	6.9017E-13	2.2122E-11
AV	6.9346E-51	1.2942E-23	4.0541E-21
AVI	4.8290E-78	4.3944E-38	2.3126E-34
AVII	0.	4.4631E-58	1.1428E-52
AVIII	0.	1.4445E-82	3.3854E-75

P1 = 2.00E+01 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3780E+03	1.7383E+04	2.3719E+04
T	5.0324E+01	8.6845E+01	9.3179E+01
RHO	1.4960E+01	8.9578E+01	1.0711E+02
H	2.9484E+02	5.4460E+02	6.3521E+02
A	8.1301E+00	1.1729E+01	1.2551E+01
S	1.6297E+00	1.7731E+00	1.8394E+00
Z	1.8303E+00	2.2345E+00	2.3765E+00
GAME	7.1761E-01	7.0889E-01	7.1141E-01
U	2.7765E+01	4.6449E+00	4.5064E+00

SPECIES	MOLE FRACTIONS		
E-	4.5365E-01	5.5248E-01	5.7922E-01
A	9.2767E-02	2.7867E-03	1.9300E-03
A+	4.5352E-01	3.3703E-01	2.5865E-01
A++	6.7369E-05	1.0767E-01	1.6005E-01
A+++	1.2386E-13	3.5650E-05	1.5718E-04
A++++	3.1491E-28	4.7856E-12	1.0433E-10
AV	2.0959E-48	3.0292E-22	5.2935E-20
AVI	5.4394E-75	4.5571E-36	1.0567E-32
AVII	0.	3.4906E-55	2.8897E-50
AVIII	0.	1.1530E-78	6.2765E-72

P1 = 2.00E+01 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3209E+03	1.6586E+04	2.2697E+04
T	4.9316E+01	8.5315E+01	9.1659E+01
RHO	1.4919E+01	8.8455E+01	1.0603E+02
H	2.8271E+02	5.2193E+02	6.0958E+02
A	7.9367E+00	1.1534E+01	1.2332E+01
S	1.6101E+00	1.7527E+00	1.8177E+00
Z	1.7953E+00	2.1979E+00	2.3353E+00
GAME	7.1146E-01	7.0946E-01	7.1047E-01
U	2.7180E+01	4.5921E+00	4.4492E+00

SPECIES	MOLE FRACTIONS		
E-	4.4299E-01	5.4502E-01	5.7179E-01
A	1.1407E-01	3.1672E-03	2.1889E-03
A+	4.4290E-01	3.5863E-01	2.8035E-01
A++	4.3141E-05	9.3161E-02	1.4556E-01
A+++	4.2369E-14	2.2430E-05	1.0882E-04
A++++	4.4865E-29	1.9141E-12	4.8979E-11
AV	1.1279E-49	6.8007E-23	1.5110E-20
AVI	2.5920E-76	5.0629E-37	1.6388E-33
AVII	0.	1.5038E-56	1.9568E-51
AVIII	0.	1.6947E-80	1.6310E-73

P1 = 2.00E+01 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4359E+03	1.8138E+04	2.4678E+04
T	5.1495E+01	8.8301E+01	9.4679E+01
RHO	1.4953E+01	9.0413E+01	1.0778E+02
H	3.0721E+02	5.6761E+02	6.6120E+02
A	8.3508E+00	1.1925E+01	1.2773E+01
S	1.6493E+00	1.7938E+00	1.8614E+00
Z	1.8649E+00	2.2719E+00	2.4182E+00
GAME	7.2617E-01	7.0882E-01	7.1262E-01
U	2.8342E+01	4.6953E+00	4.5642E+00

SPECIES	MOLE FRACTIONS		
E-	4.6377E-01	5.5984E-01	5.8648E-01
A	7.2566E-02	2.4608E-03	1.6946E-03
A+	4.6355E-01	3.1562E-01	2.3741E-01
A++	1.1169E-04	1.2203E-01	1.7420E-01
A+++	4.2606E-13	5.4201E-05	2.2272E-04
A++++	3.2304E-27	1.1060E-11	2.1492E-10
AV	1.0308E-46	1.1989E-21	1.7602E-19
AVI	5.1311E-72	3.5083E-35	6.3184E-32
AVII	0.	6.7426E-54	3.8292E-49
AVIII	0.	6.6360E-77	2.0836E-70

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4946E+03	1.8822E+04	2.5538E+04
T	5.2907E+01	8.9694E+01	9.6164E+01
RHO	1.4880E+01	9.0850E+01	1.0794E+02
H	3.1982E+02	5.9092E+02	6.8751E+02
A	8.6132E+00	1.2121E+01	1.2998E+01
S	1.6688E+00	1.8148E+00	1.8837E+00
Z	1.8984E+00	2.3099E+00	2.4604E+00
GAME	7.3864E-01	7.0913E-01	7.1410E-01
U	2.8911E+01	4.7434E+00	4.6223E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7324E-01	5.6707E-01	5.9356E-01
A	5.3727E-02	2.1744E-03	1.4784E-03
A+	4.7283E-01	2.9451E-01	2.1668E-01
A++	2.0091E-04	1.3616E-01	1.8797E-01
A+++	1.7687E-12	7.9575E-05	3.1082E-04
A++++	4.4066E-26	2.3950E-11	4.3126E-10
AV	6.0690E-45	4.2599E-21	5.6171E-19
AVI	1.9198E-69	2.2800E-34	3.5606E-31
AVII	0.	9.8923E-53	4.6688E-48
AVIII	0.	2.4718E-75	6.2206E-69

P1 = 2.00E+01 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6130E+03	1.9802E+04	2.6734E+04
T	5.7020E+01	9.2282E+01	9.9089E+01
RHO	1.4450E+01	8.9893E+01	1.0597E+02
H	3.4574E+02	6.3802E+02	7.4106E+02
A	9.3463E+00	1.2511E+01	1.3457E+01
S	1.7069E+00	1.8580E+00	1.9300E+00
Z	1.9576E+00	2.3870E+00	2.5459E+00
GAME	7.8256E-01	7.1054E-01	7.1782E-01
U	3.0003E+01	4.8310E+00	4.7625E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8918E-01	5.8107E-01	6.0720E-01
A	2.2618E-02	1.6823E-03	1.0903E-03
A+	4.8723E-01	2.5359E-01	1.7679E-01
A++	9.7683E-04	1.6350E-01	2.1432E-01
A+++	8.2827E-11	1.5804E-04	5.8703E-04
A++++	5.0662E-23	9.6447E-11	1.6470E-09
AV	3.8352E-40	4.2167E-20	5.2520E-18
AVI	1.5352E-62	6.7732E-33	9.9572E-30
AVII	0.	1.3021E-50	5.7620E-46
AVIII	0.	1.8188E-72	4.3397E-66

P1 = 2.00E+01 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5537E+03	1.9394E+04	2.6240E+04
T	5.4689E+01	9.1006E+01	9.7627E+01
RHO	1.4721E+01	9.0772E+01	1.0739E+02
H	3.3267E+02	6.1443E+02	7.1402E+02
A	8.9403E+00	1.2314E+01	1.3225E+01
S	1.6880E+00	1.8358E+00	1.9064E+00
Z	1.9298E+00	2.3477E+00	2.5027E+00
GAME	7.5733E-01	7.0971E-01	7.1583E-01
U	2.9466E+01	4.7892E+00	4.6802E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8182E-01	5.7405E-01	6.0044E-01
A	3.6766E-02	1.9212E-03	1.2785E-03
A+	4.8100E-01	2.7411E-01	1.9656E-01
A++	4.0819E-04	1.4980E-01	2.0129E-01
A+++	9.9050E-12	1.1295E-04	4.2828E-04
A++++	1.0387E-24	4.8712E-11	8.4615E-10
AV	8.6274E-43	1.3707E-20	1.7291E-18
AVI	2.3644E-66	1.2865E-33	1.9033E-30
AVII	0.	1.1977E-51	5.2808E-47
AVIII	0.	7.2576E-74	1.6885E-67

P1 = 2.00E+01 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6724E+03	2.0050E+04	2.6988E+04
T	5.9960E+01	9.3483E+01	1.0050E+02
RHO	1.4085E+01	8.8412E+01	1.0377E+02
H	3.5904E+02	6.6164E+02	7.6750E+02
A	9.7275E+00	1.2703E+01	1.3684E+01
S	1.7252E+00	1.8803E+00	1.9535E+00
Z	1.9803E+00	2.4259E+00	2.5879E+00
GAME	7.9692E-01	7.1156E-01	7.2002E-01
U	3.0521E+01	4.8702E+00	4.8138E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9502E-01	5.8779E-01	6.1358E-01
A	1.2642E-02	1.4678E-03	9.2131E-04
A+	4.8965E-01	2.3392E-01	1.5821E-01
A++	2.6890E-03	1.7661E-01	2.2650E-01
A+++	9.8074E-10	2.1572E-04	7.9277E-04
A++++	4.6381E-21	1.8216E-10	3.1159E-09
AV	4.5547E-37	1.2012E-19	1.5199E-17
AVI	4.1119E-58	3.1859E-32	4.8319E-29
AVII	2.9566E-87	1.2077E-49	5.5939E-45
AVIII	0.	3.7260E-71	9.4004E-65

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7328E+03	2.0325E+04	2.7285E+04
T	6.3011E+01	9.4707E+01	1.0198E+02
RHO	1.3755E+01	8.7050E+01	1.0175E+02
H	3.7258E+02	6.8569E+02	7.9451E+02
A	9.8823E+00	1.2901E+01	1.3919E+01
S	1.7429E+00	1.9026E+00	1.9766E+00
Z	1.9994E+00	2.4653E+00	2.6295E+00
GAME	7.7519E-01	7.1283E-01	7.2254E-01
U	3.1040E+01	4.9121E+00	4.8696E+00

SPECIES	MOLE FRACTIONS		
E-	4.9984E-01	5.9437E-01	6.1970E-01
A	7.2449E-03	1.2765E-03	7.7231E-04
A+	4.8600E-01	2.1462E-01	1.4043E-01
A++	6.9208E-03	1.8944E-01	2.3803E-01
A+++	1.0011E-08	2.9184E-04	1.0691E-03
A++++	3.2381E-19	3.4002E-10	5.9179E-09
AV	3.5084E-34	3.3688E-19	4.4423E-17
AVI	5.7388E-54	1.4659E-31	2.3806E-28
AVII	2.0043E-81	1.0814E-48	5.5273E-44
AVIII	0.	7.1846E-70	2.0650E-63

P1 = 2.00E+01 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9621E+03	2.2719E+04	3.0373E+04
T	6.9913E+01	9.9873E+01	1.0899E+02
RHO	1.3534E+01	8.7185E+01	1.0016E+02
H	4.2224E+02	7.7665E+02	8.9871E+02
A	1.0157E+01	1.3698E+01	1.4929E+01
S	1.8020E+00	1.9784E+00	2.0574E+00
Z	2.0736E+00	2.6091E+00	2.7823E+00
GAME	7.1163E-01	7.2007E-01	7.3498E-01
U	3.3009E+01	5.1321E+00	5.1479E+00

SPECIES	MOLE FRACTIONS		
E-	5.1774E-01	6.1672E-01	6.4058E-01
A	2.4801E-03	7.6034E-04	3.6555E-04
A+	4.4183E-01	1.4916E-01	8.1053E-02
A++	3.7950E-02	2.3250E-01	2.7448E-01
A+++	7.5868E-07	8.5569E-04	3.5233E-03
A++++	9.7116E-16	3.3957E-09	8.3860E-08
AV	1.0650E-28	1.6080E-17	4.0104E-15
AVI	4.6613E-46	4.7602E-29	2.0623E-25
AVII	2.9772E-70	4.7340E-45	1.0001E-39
AVIII	0.	6.4812E-65	1.2709E-57

P1 = 2.00E+01 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7956E+03	2.0805E+04	2.7875E+04
T	6.5556E+01	9.6041E+01	1.0371E+02
RHO	1.3569E+01	8.6457E+01	1.0055E+02
H	3.8641E+02	7.1064E+02	8.2277E+02
A	9.9327E+00	1.3112E+01	1.4183E+01
S	1.7601E+00	1.9246E+00	2.0002E+00
Z	2.0186E+00	2.5056E+00	2.6732E+00
GAME	7.4553E-01	7.1444E-01	7.2563E-01
U	3.1580E+01	4.9643E+00	4.9358E+00

SPECIES	MOLE FRACTIONS		
E-	5.0461E-01	6.0089E-01	6.2592E-01
A	4.7372E-03	1.1084E-03	6.3626E-04
A+	4.7669E-01	1.9552E-01	1.2245E-01
A++	1.3958E-02	2.0209E-01	2.4952E-01
A+++	5.7495E-08	3.9524E-04	1.4770E-03
A++++	8.0382E-18	6.4310E-10	1.1977E-08
AV	5.4724E-32	9.7453E-19	1.4571E-16
AVI	8.3267E-51	7.1320E-31	1.4043E-27
AVII	5.8829E-77	1.0646E-47	7.1423E-43
AVIII	0.	1.6069E-68	6.5583E-62

P1 = 2.00E+01 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1388E+03	2.5136E+04	3.3632E+04
T	7.2933E+01	1.0441E+02	1.1572E+02
RHO	1.3733E+01	8.8711E+01	1.0066E+02
H	4.5973E+02	8.4657E+02	9.8067E+02
A	1.0454E+01	1.4363E+01	1.5740E+01
S	1.8436E+00	2.0315E+00	2.1139E+00
Z	2.1354E+00	2.7138E+00	2.8872E+00
GAME	7.0177E-01	7.2803E-01	7.4153E-01
U	3.4483E+01	5.3462E+00	5.4188E+00

SPECIES	MOLE FRACTIONS		
E-	5.3170E-01	6.3151E-01	6.5364E-01
A	1.6617E-03	4.8578E-04	1.8254E-04
A+	4.0159E-01	1.0641E-01	4.7774E-02
A++	6.5047E-02	2.5968E-01	2.8934E-01
A+++	3.3602E-06	1.9098E-03	9.0634E-03
A++++	1.6490E-14	2.0068E-08	7.4345E-07
AV	9.9037E-27	3.2954E-16	1.7109E-13
AVI	3.4221E-43	4.4756E-27	6.0013E-23
AVII	3.4985E-66	3.4841E-42	3.8020E-36
AVIII	0.	5.1758E-61	9.5700E-53

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3240E+03	2.7805E+04	3.7313E+04
T	7.5419E+01	1.0986E+02	1.2319E+02
RHO	1.3996E+01	8.9893E+01	1.0150E+02
H	4.9886E+02	9.1973E+02	1.0674E+03
A	1.0769E+01	1.5101E+01	1.6449E+01
S	1.8855E+00	2.0842E+00	2.1696E+00
Z	2.2016E+00	2.8155E+00	2.9842E+00
GAME	6.9844E-01	7.3727E-01	7.3606E-01
U	3.5973E+01	5.6088E+00	5.7213E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4579E-01	6.4482E-01	6.6490E-01
A	1.2168E-03	2.7773E-04	8.6334E-05
A+	3.6020E-01	6.9474E-02	2.6830E-02
A++	9.2781E-02	2.8094E-01	2.8649E-01
A+++	9.7002E-06	4.4899E-03	2.1686E-02
A++++	1.3030E-13	1.3943E-07	6.0393E-06
AV	2.8384E-25	9.1032E-15	6.5582E-12
AVI	4.8348E-41	6.6991E-25	1.5337E-20
AVII	4.6458E-63	5.0789E-39	1.2154E-32
AVIII	0.	1.0669E-56	5.7798E-48

P1 = 2.00E+01 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7183E+03	3.3623E+04	4.5404E+04
T	7.9783E+01	1.2305E+02	1.3612E+02
RHO	1.4536E+01	9.1173E+01	1.0516E+02
H	5.8192E+02	1.0750E+03	1.2505E+03
A	1.1427E+01	1.6458E+01	1.7664E+01
S	1.9708E+00	2.1867E+00	2.2764E+00
Z	2.3440E+00	2.9969E+00	3.1719E+00
GAME	6.9828E-01	7.3452E-01	7.2273E-01
U	3.8962E+01	6.2209E+00	6.2602E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.7337E-01	6.6632E-01	6.8473E-01
A	7.1129E-04	7.1372E-05	2.6120E-05
A+	2.7850E-01	2.4437E-02	1.0362E-02
A++	1.4737E-01	2.8562E-01	2.4038E-01
A+++	4.6658E-05	2.3537E-02	6.4398E-02
A++++	3.0642E-12	7.0946E-06	1.0528E-04
AV	5.0638E-23	8.2916E-12	1.0929E-09
AVI	1.0269E-37	2.0743E-20	4.0944E-17
AVII	2.8107E-58	1.7387E-32	1.2842E-27
AVIII	1.3212E-83	8.6745E-48	4.4721E-41

P1 = 2.00E+01 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5173E+03	3.0637E+04	4.1265E+04
T	7.7656E+01	1.1630E+02	1.3012E+02
RHO	1.4272E+01	9.0530E+01	1.0303E+02
H	5.3959E+02	9.9587E+02	1.1576E+03
A	1.1093E+01	1.5838E+01	1.7066E+01
S	1.9279E+00	2.1360E+00	2.2241E+00
Z	2.2714E+00	2.9098E+00	3.0783E+00
GAME	6.9768E-01	7.4124E-01	7.2714E-01
U	3.7468E+01	5.9152E+00	6.0099E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.5973E-01	6.5634E-01	6.7514E-01
A	9.2440E-04	1.4177E-04	4.4764E-05
A+	3.1897E-01	4.1536E-02	1.6000E-02
A++	1.2035E-01	2.9115E-01	2.6732E-01
A+++	2.2604E-05	1.0830E-02	4.1459E-02
A++++	7.0206E-13	1.0850E-06	3.1379E-05
AV	4.4512E-24	3.1339E-13	1.2166E-10
AVI	2.7912E-39	1.4201E-22	1.3551E-18
AVII	1.5572E-60	1.2259E-35	8.5208E-30
AVIII	1.2499E-86	4.3575E-52	4.5325E-44

P1 = 2.00E+01 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9268E+03	3.6762E+04	4.9688E+04
T	8.1885E+01	1.2923E+02	1.4175E+02
RHO	1.4775E+01	9.2298E+01	1.0717E+02
H	6.2584E+02	1.1573E+03	1.3463E+03
A	1.1774E+01	1.7009E+01	1.8295E+01
S	2.0144E+00	2.2366E+00	2.3298E+00
Z	2.4191E+00	3.0822E+00	3.2709E+00
GAME	6.9986E-01	7.2633E-01	7.2191E-01
U	4.0453E+01	6.4887E+00	6.4870E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8662E-01	6.7556E-01	6.9427E-01
A	5.4617E-04	3.9326E-05	1.5832E-05
A+	2.3912E-01	1.5268E-02	6.8895E-03
A++	1.7362E-01	2.6715E-01	2.0937E-01
A+++	8.9673E-05	4.1958E-02	8.9171E-02
A++++	1.1895E-11	3.1062E-05	2.8161E-04
AV	4.8647E-22	1.1392E-10	6.7997E-09
AVI	3.0502E-36	1.1584E-18	7.2276E-16
AVII	4.1171E-56	6.2499E-30	8.9887E-26
AVIII	1.4557E-80	2.7343E-44	1.5728E-38

TABLE I. - Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1427E+03	4.0028E+04	5.4075E+04
T	8.4032E+01	1.3476E+02	1.4712E+02
RHO	1.4981E+01	9.3691E+01	1.0903E+02
H	6.7135E+02	1.2426E+03	1.4449E+03
A	1.2138E+01	1.7563E+01	1.8943E+01
S	2.0585E+00	2.2865E+00	2.3824E+00
Z	2.4964E+00	3.1702E+00	3.3711E+00
GAME	7.0232E-01	7.2203E-01	7.2353E-01
U	4.1940E+01	6.7169E+00	6.6979E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.9942E-01	6.8457E-01	7.0336E-01
A	4.1358E-04	2.3519E-05	9.8013E-06
A+	2.0108E-01	1.0093E-02	4.6516E-03
A++	1.9892E-01	2.4157E-01	1.7785E-01
A+++	1.6560E-04	6.3645E-02	1.1349E-01
A++++	4.3436E-11	9.7446E-05	6.3913E-04
AV	4.2453E-21	9.0400E-10	3.2435E-08
AVI	7.7336E-35	2.8790E-17	8.6467E-15
AVII	4.4572E-54	7.0443E-28	3.6062E-24
AVIII	8.4316E-78	1.8008E-41	2.6103E-36

P1 = 2.00E+01 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5956E+03	4.6687E+04	6.2965E+04
T	8.8769E+01	1.4474E+02	1.5818E+02
RHO	1.5254E+01	9.6163E+01	1.1128E+02
H	7.6713E+02	1.4219E+03	1.6522E+03
A	1.2943E+01	1.8724E+01	2.0342E+01
S	2.1478E+00	2.3860E+00	2.4880E+00
Z	2.6553E+00	3.3542E+00	3.5770E+00
GAME	7.1065E-01	7.2214E-01	7.3134E-01
U	4.4890E+01	7.1321E+00	7.1312E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.2340E-01	7.0187E-01	7.2044E-01
A	2.1578E-04	9.3811E-06	3.4763E-06
A+	1.2992E-01	4.7641E-03	2.0062E-03
A++	2.4591E-01	1.8351E-01	1.1686E-01
A+++	5.5236E-04	1.0932E-01	1.5807E-01
A++++	5.9254E-10	5.3276E-04	2.6222E-03
AV	3.5011E-19	2.1787E-08	5.3145E-07
AVI	5.7947E-32	4.3345E-15	7.8748E-13
AVII	6.7698E-50	1.1903E-24	3.0832E-21
AVIII	4.2240E-72	5.1811E-37	3.1009E-32

P1 = 2.00E+01 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3657E+03	4.3359E+04	5.8526E+04
T	8.6297E+01	1.3986E+02	1.5254E+02
RHO	1.5144E+01	9.5072E+01	1.1046E+02
H	7.1845E+02	1.3309E+03	1.5470E+03
A	1.2524E+01	1.8133E+01	1.9624E+01
S	2.1030E+00	2.3361E+00	2.4351E+00
Z	2.5753E+00	3.2609E+00	3.4736E+00
GAME	7.0581E-01	7.2100E-01	7.2683E-01
U	4.3420E+01	6.9271E+00	6.9127E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.1170E-01	6.9334E-01	7.1211E-01
A	3.0502E-04	1.4758E-05	5.9595E-06
A+	1.6459E-01	6.9013E-03	3.1005E-03
A++	2.2310E-01	2.1303E-01	1.4666E-01
A+++	3.0124E-04	8.6465E-02	1.3679E-01
A++++	1.5721E-10	2.4409E-04	1.3288E-03
AV	3.6984E-20	4.9576E-09	1.3574E-07
AVI	1.9737E-33	4.1525E-16	8.6084E-14
AVII	4.8930E-52	3.6485E-26	1.1166E-22
AVIII	4.9541E-75	4.1705E-39	3.0635E-34

P1 = 2.00E+01 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8320E+03	4.9928E+04	6.7300E+04
T	9.1579E+01	1.4953E+02	1.6415E+02
RHO	1.5297E+01	9.6842E+01	1.1144E+02
H	8.1737E+02	1.5155E+03	1.7610E+03
A	1.3406E+01	1.9331E+01	2.1086E+01
S	2.1928E+00	2.4353E+00	2.5406E+00
Z	2.7354E+00	3.4479E+00	3.6791E+00
GAME	7.1740E-01	7.2478E-01	7.3621E-01
U	4.6347E+01	7.3364E+00	7.3655E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3442E-01	7.0997E-01	7.2820E-01
A	1.4338E-04	5.9384E-06	1.9213E-06
A+	9.7493E-02	3.2819E-03	1.2491E-03
A++	2.6689E-01	1.5461E-01	8.9692E-02
A+++	1.0465E-03	1.3108E-01	1.7587E-01
A++++	2.4531E-09	1.0569E-03	4.9827E-03
AV	3.9060E-18	8.2362E-08	1.9995E-06
AVI	2.1550E-30	3.6364E-14	6.8982E-12
AVII	1.2602E-47	2.8382E-23	8.0502E-20
AVIII	4.8109E-69	4.2053E-35	2.9220E-30

TABLE I.- Continued

$p_1 = 20\ N/m^2$

P1 = 2.00E+01 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0744E+03	5.2957E+04	7.1395E+04
T	9.4917E+01	1.5454E+02	1.7067E+02
RHO	1.5255E+01	9.6658E+01	1.1061E+02
H	8.6917E+02	1.6113E+03	1.8732E+03
A	1.3930E+01	1.9980E+01	2.1855E+01
S	2.2377E+00	2.4866E+00	2.5948E+00
Z	2.8138E+00	3.5453E+00	3.7819E+00
GAME	7.2653E-01	7.2864E-01	7.3997E-01
U	4.7787E+01	7.5538E+00	7.6214E+00

SPECIES	MOLE FRACTIONS		
E-	6.4461E-01	7.1793E-01	7.3558E-01
A	8.6903E-05	3.5794E-06	9.7689E-07
A+	6.8100E-02	2.1831E-03	7.3189E-04
A++	2.8509E-01	1.2592E-01	6.5532E-02
A+++	2.1101E-03	1.5194E-01	1.8882E-01
A++++	1.1994E-08	2.0254E-03	9.3198E-03
AV	5.8841E-17	2.9978E-07	7.5718E-06
AVI	1.2881E-28	2.9223E-13	6.2435E-11
AVII	4.9344E-45	6.3964E-22	2.2272E-18
AVIII	1.7411E-65	3.1763E-33	3.0049E-28

P1 = 2.00E+01 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5759E+03	5.8090E+04	7.8416E+04
T	1.0387E+02	1.6517E+02	1.8409E+02
RHO	1.4901E+01	9.4158E+01	1.0712E+02
H	9.7740E+02	1.8095E+03	2.1060E+03
A	1.5051E+01	2.1328E+01	2.3244E+01
S	2.3268E+00	2.5884E+00	2.7024E+00
Z	2.9566E+00	3.7351E+00	3.9766E+00
GAME	7.3763E-01	7.3731E-01	7.3800E-01
U	5.0603E+01	8.0199E+00	8.1540E+00

SPECIES	MOLE FRACTIONS		
E-	6.6177E-01	7.3227E-01	7.4853E-01
A	2.2589E-05	1.1292E-06	2.3275E-07
A+	2.5250E-02	8.7445E-04	2.3753E-04
A++	3.0235E-01	7.5821E-02	3.2457E-02
A+++	1.0607E-02	1.8437E-01	1.9180E-01
A++++	5.1474E-07	6.6565E-03	2.6894E-02
AV	3.7853E-14	3.4878E-06	8.1868E-05
AVI	2.2307E-24	1.6138E-11	3.4443E-09
AVII	7.1028E-39	2.6296E-19	9.7196E-16
AVIII	4.1760E-57	1.3756E-29	1.4892E-24

P1 = 2.00E+01 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3222E+03	5.5674E+04	7.5082E+04
T	9.9005E+01	1.5970E+02	1.7732E+02
RHO	1.5117E+01	9.5751E+01	1.0915E+02
H	9.2251E+02	1.7093E+03	1.9879E+03
A	1.4509E+01	2.0646E+01	2.2570E+01
S	2.2822E+00	2.5374E+00	2.6478E+00
Z	2.8880E+00	3.6409E+00	3.8793E+00
GAME	7.3625E-01	7.3312E-01	7.4055E-01
U	4.9203E+01	7.7794E+00	7.8769E+00

SPECIES	MOLE FRACTIONS		
E-	6.5374E-01	7.2534E-01	7.4222E-01
A	4.6719E-05	2.0702E-06	4.8266E-07
A+	4.3317E-02	1.4112E-03	4.2068E-04
A++	2.9828E-01	9.9517E-02	4.6678E-02
A+++	4.6186E-03	1.7001E-01	1.9431E-01
A++++	7.2855E-08	3.7162E-03	1.6344E-02
AV	1.2995E-15	1.0315E-06	2.6083E-05
AVI	1.3713E-26	2.1831E-12	4.9482E-10
AVII	4.3752E-42	1.3025E-20	5.0989E-17
AVIII	1.8073E-61	2.0974E-31	2.3920E-26

P1 = 2.00E+01 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8373E+03	6.0807E+04	8.2173E+04
T	1.0854E+02	1.7110E+02	1.9057E+02
RHO	1.4767E+01	9.2865E+01	1.0592E+02
H	1.0339E+03	1.9127E+03	2.2271E+03
A	1.5441E+01	2.2007E+01	2.3874E+01
S	2.3687E+00	2.6386E+00	2.7548E+00
Z	3.0180E+00	3.8270E+00	4.0710E+00
GAME	7.2787E-01	7.3965E-01	7.3466E-01
U	5.2008E+01	8.2822E+00	8.4097E+00

SPECIES	MOLE FRACTIONS		
E-	6.6865E-01	7.3870E-01	7.5436E-01
A	1.1648E-05	5.8944E-07	1.1872E-07
A+	1.5223E-02	5.2339E-04	1.3952E-04
A++	2.9492E-01	5.5794E-02	2.2812E-02
A+++	2.1191E-02	1.9337E-01	1.8237E-01
A++++	2.7546E-06	1.1604E-02	4.0103E-02
AV	7.0259E-13	1.1571E-05	2.1590E-04
AVI	1.8800E-22	1.1833E-10	1.8395E-08
AVII	4.5281E-36	5.3153E-18	1.2643E-14
AVIII	2.7758E-53	9.1404E-28	5.5236E-23

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4652E+01	2.5825E+02
T	1.2892E+01	1.6278E+01	2.7128E+01
RHO	3.7155E+00	5.2004E+00	9.4658E+00
H	1.2892E+01	1.6279E+01	2.8670E+01
A	3.5905E+00	4.0335E+00	4.7225E+00
S	1.0961E+00	1.0967E+00	1.1087E+00
Z	1.0000E+00	1.0000E+00	1.0057E+00
GAME	9.9999E-01	9.9945E-01	8.1744E-01
U	4.5391E+00	3.2315E+00	2.9446E+00

SPECIES	MOLE FRACTIONS		
E-	2.0843E-08	2.9212E-06	5.6588E-03
A	1.0000E+00	9.9999E-01	9.8868E-01
A+	2.0843E-08	2.9212E-06	5.6588E-03
A++	7.2471E-32	3.9281E-25	3.4917E-13
A+++	3.7177E-71	8.3316E-56	4.2118E-32
A++++	0.	0.	2.3304E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9081E+01	1.3098E+02	3.5866E+02
T	1.8175E+01	2.3353E+01	3.1359E+01
RHO	3.8007E+00	5.6026E+00	1.1144E+01
H	1.8182E+01	2.3641E+01	3.8608E+01
A	4.2550E+00	4.6458E+00	4.8424E+00
S	1.1149E+00	1.1157E+00	1.1281E+00
Z	1.0000E+00	1.0011E+00	1.0263E+00
GAME	9.9609E-01	9.2323E-01	7.2855E-01
U	5.4910E+00	3.7115E+00	2.8344E+00

SPECIES	MOLE FRACTIONS		
E-	2.6341E-05	1.0767E-03	2.5660E-02
A	9.9995E-01	9.9785E-01	9.4868E-01
A+	2.6341E-05	1.0767E-03	2.5660E-02
A++	1.4814E-21	7.8301E-16	7.5922E-11
A+++	9.0622E-50	4.5597E-38	5.8975E-27
A++++	0.	7.5797E-73	1.3792E-52
AV	0.	0.	1.0478E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0524E+02	3.0707E+02
T	1.5416E+01	1.9664E+01	2.9539E+01
RHO	3.7625E+00	5.3513E+00	1.0246E+01
H	1.5416E+01	1.9686E+01	3.3510E+01
A	3.9259E+00	4.4114E+00	4.7631E+00
S	1.1059E+00	1.1065E+00	1.1182E+00
Z	1.0000E+00	1.0001E+00	1.0145E+00
GAME	9.9976E-01	9.8956E-01	7.5704E-01
U	5.0154E+00	3.5137E+00	2.9036E+00

SPECIES	MOLE FRACTIONS		
E-	1.1652E-06	8.3900E-05	1.4314E-02
A	1.0000E+00	9.9983E-01	9.7137E-01
A+	1.1652E-06	8.3900E-05	1.4314E-02
A++	3.4628E-26	1.1808E-19	9.2227E-12
A+++	1.3105E-60	2.9825E-46	5.4978E-29
A++++	0.	0.	1.8269E-56
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1232E+01	1.7093E+02	4.1553E+02
T	2.1119E+01	2.6954E+01	3.2871E+01
RHO	3.8452E+00	6.3010E+00	1.2148E+01
H	2.1200E+01	2.8701E+01	4.4082E+01
A	4.5248E+00	4.6741E+00	4.9404E+00
S	1.1234E+00	1.1246E+00	1.1386E+00
Z	1.0003E+00	1.0065E+00	1.0406E+00
GAME	9.6917E-01	8.0536E-01	7.1357E-01
U	5.9732E+00	3.6299E+00	2.7597E+00

SPECIES	MOLE FRACTIONS		
E-	3.0381E-04	6.4105E-03	3.8978E-02
A	9.9939E-01	9.8718E-01	9.2204E-01
A+	3.0381E-04	6.4105E-03	3.8978E-02
A++	7.9898E-18	4.0444E-13	3.5627E-10
A+++	2.4396E-42	4.7490E-32	1.7649E-25
A++++	3.3178E-81	3.7143E-62	6.8034E-50
AV	0.	0.	1.5720E-82
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4716E+01	2.2501E+02	4.8494E+02
T	2.3997E+01	2.9686E+01	3.4235E+01
RHO	3.9397E+00	7.4462E+00	1.3400E+01
H	2.4495E+01	3.4597E+01	5.0123E+01
A	4.6249E+00	4.7394E+00	5.0509E+00
S	1.1315E+00	1.1338E+00	1.1495E+00
Z	1.0019E+00	1.0180E+00	1.0571E+00
GAME	8.8972E-01	7.4331E-01	7.0493E-01
U	6.4788E+00	3.4159E+00	2.6942E+00

SPECIES	MOLE FRACTIONS		
E-	1.8579E-03	1.7639E-02	5.4023E-02
A	9.9628E-01	9.6472E-01	8.9195E-01
A+	1.8579E-03	1.7639E-02	5.4023E-02
A++	4.0248E-15	1.5275E-11	1.2448E-09
A+++	1.5522E-36	1.3801E-28	2.8790E-24
A++++	1.3537E-70	1.0003E-55	1.2023E-47
AV	0.	0.	4.7051E-79
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2842E+02	3.9260E+02	7.2041E+02
T	2.8369E+01	3.3710E+01	3.7033E+01
RHO	4.4645E+00	1.1047E+01	1.7670E+01
H	3.2165E+01	4.8762E+01	6.5403E+01
A	4.6544E+00	5.0054E+00	5.3282E+00
S	1.1475E+00	1.1542E+00	1.1741E+00
Z	1.0139E+00	1.0542E+00	1.1009E+00
GAME	7.5314E-01	7.0501E-01	6.9635E-01
U	7.7075E+00	3.1010E+00	2.6149E+00

SPECIES	MOLE FRACTIONS		
E-	1.3757E-02	5.1421E-02	9.1659E-02
A	9.7249E-01	8.9716E-01	8.1668E-01
A+	1.3757E-02	5.1421E-02	9.1658E-02
A++	4.4258E-12	9.0700E-10	1.0972E-08
A+++	5.8135E-30	1.2738E-24	4.1196E-22
A++++	2.0522E-58	2.3514E-48	1.4508E-43
AV	0.	3.4599E-80	2.3901E-72
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1043E+02	2.9719E+02	5.8487E+02
T	2.6448E+01	3.1846E+01	3.5628E+01
RHO	4.1492E+00	9.0233E+00	1.5238E+01
H	2.8154E+01	4.1282E+01	5.7275E+01
A	4.6249E+00	4.8603E+00	5.1816E+00
S	1.1394E+00	1.1436E+00	1.1613E+00
Z	1.0063E+00	1.0342E+00	1.0773E+00
GAME	8.0367E-01	7.1722E-01	6.9952E-01
U	7.0607E+00	3.2356E+00	2.6563E+00

SPECIES	MOLE FRACTIONS		
E-	6.2744E-03	3.3087E-02	7.1759E-02
A	9.8745E-01	9.3383E-01	8.5648E-01
A+	6.2744E-03	3.3087E-02	7.1759E-02
A++	2.7916E-13	1.6073E-10	3.8986E-09
A+++	1.6555E-32	2.5840E-26	3.8306E-23
A++++	4.4988E-63	1.6583E-51	1.6064E-45
AV	0.	4.2046E-85	1.6049E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4796E+02	5.0844E+02	8.8648E+02
T	2.9891E+01	3.5343E+01	3.8387E+01
RHO	4.8343E+00	1.3362E+01	2.0494E+01
H	3.6450E+01	5.6746E+01	7.4223E+01
A	4.7167E+00	5.1570E+00	5.4817E+00
S	1.1560E+00	1.1657E+00	1.1875E+00
Z	1.0240E+00	1.0766E+00	1.1268E+00
GAME	7.2688E-01	6.9892E-01	6.9468E-01
U	8.3668E+00	3.0194E+00	2.5884E+00

SPECIES	MOLE FRACTIONS		
E-	2.3404E-02	7.1162E-02	1.1254E-01
A	9.5319E-01	8.5768E-01	7.7493E-01
A+	2.3404E-02	7.1162E-02	1.1254E-01
A++	3.0191E-11	3.4450E-09	2.7199E-08
A+++	4.2250E-28	2.6933E-23	3.3368E-21
A++++	2.6590E-56	7.7523E-46	7.2040E-42
AV	1.1346E-89	4.8586E-76	9.6979E-70
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6901E+02	6.4909E+02	1.0841E+03
T	3.1162E+01	3.6847E+01	3.9703E+01
RHO	5.2362E+00	1.5995E+01	2.3643E+01
H	4.1001E+01	6.5314E+01	8.3705E+01
A	4.7948E+00	5.3135E+00	5.6410E+00
S	1.1650E+00	1.1782E+00	1.2019E+00
Z	1.0358E+00	1.1013E+00	1.1549E+00
GAME	7.1229E-01	6.9573E-01	6.9396E-01
U	9.0336E+00	2.9439E+00	2.5741E+00

SPECIES	MOLE FRACTIONS		
E-	3.4542E-02	9.2006E-02	1.3415E-01
A	9.3092E-01	8.1599E-01	7.3171E-01
A+	3.4542E-02	9.2006E-02	1.3415E-01
A++	1.2761E-10	1.0379E-08	6.1311E-08
A+++	1.1185E-26	3.4175E-22	2.2276E-20
A++++	2.5564E-52	9.4980E-44	2.7448E-40
AV	1.6654E-86	1.1278E-72	4.4793E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1516E+02	1.0037E+03	1.5743E+03
T	3.3253E+01	3.9572E+01	4.2223E+01
RHO	6.0840E+00	2.1935E+01	3.0640E+01
H	5.0863E+01	8.3938E+01	1.0442E+02
A	4.9686E+00	5.6331E+00	5.9724E+00
S	1.1845E+00	1.2059E+00	1.2332E+00
Z	1.0635E+00	1.1563E+00	1.2169E+00
GAME	6.9804E-01	6.9349E-01	6.9421E-01
U	1.0364E+01	2.8604E+00	2.5698E+00

SPECIES	MOLE FRACTIONS		
E-	5.9743E-02	1.3517E-01	1.7823E-01
A	8.8051E-01	7.2966E-01	6.4355E-01
A+	5.9743E-02	1.3517E-01	1.7823E-01
A++	1.0307E-09	6.0023E-08	2.4897E-07
A+++	1.1326E-24	2.0205E-20	6.0103E-19
A++++	1.0724E-48	2.1011E-40	1.4383E-37
AV	4.1234E-82	2.3313E-67	1.1053E-62
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9143E+02	8.1293E+02	1.3133E+03
T	3.2265E+01	3.8243E+01	4.0979E+01
RHO	5.6558E+00	1.8847E+01	2.7044E+01
H	4.5807E+01	7.4362E+01	9.3781E+01
A	4.8809E+00	5.4718E+00	5.8047E+00
S	1.1745E+00	1.1916E+00	1.2172E+00
Z	1.0490E+00	1.1279E+00	1.1850E+00
GAME	7.0358E-01	6.9414E-01	6.9387E-01
U	9.7004E+00	2.9035E+00	2.5681E+00

SPECIES	MOLE FRACTIONS		
E-	4.6747E-02	1.1339E-01	1.5612E-01
A	9.0651E-01	7.7322E-01	6.8776E-01
A+	4.6747E-02	1.1339E-01	1.5612E-01
A++	3.9872E-10	2.6438E-08	1.2754E-07
A+++	1.3168E-25	2.9927E-21	1.2324E-19
A++++	9.8074E-51	5.8056E-42	6.6969E-39
AV	9.0715E-83	8.5084E-70	5.6212E-65
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4017E+02	1.2183E+03	1.8664E+03
T	3.4157E+01	4.0835E+01	4.3432E+01
RHO	6.5157E+00	2.5151E+01	3.4374E+01
H	5.6167E+01	9.3958E+01	1.1550E+02
A	5.0592E+00	5.7958E+00	6.1424E+00
S	1.1950E+00	1.2210E+00	1.2499E+00
Z	1.0792E+00	1.1862E+00	1.2501E+00
GAME	6.9438E-01	6.9344E-01	6.9487E-01
U	1.1023E+01	2.8511E+00	2.5628E+00

SPECIES	MOLE FRACTIONS		
E-	7.3349E-02	1.5700E-01	2.0008E-01
A	8.5330E-01	6.8599E-01	5.9983E-01
A+	7.3349E-02	1.5700E-01	2.0008E-01
A++	2.3256E-09	1.2425E-07	4.5874E-07
A+++	7.2171E-24	1.1195E-19	2.5584E-18
A++++	4.1236E-47	5.5962E-39	2.2732E-36
AV	3.0802E-78	5.4971E-65	9.8159E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6643E+02	1.4583E+03	2.1942E+03
T	3.4996E+01	4.2053E+01	4.4636E+01
RHO	6.9475E+00	2.8478E+01	3.8242E+01
H	6.1721E+01	1.0444E+02	1.2726E+02
A	5.1512E+00	5.9606E+00	6.3184E+00
S	1.2060E+00	1.2368E+00	1.2675E+00
Z	1.0958E+00	1.2177E+00	1.2854E+00
GAME	6.9192E-01	6.9380E-01	6.9580E-01
U	1.1677E+01	2.8619E+00	2.5804E+00

SPECIES	MOLE FRACTIONS		
E-	8.7434E-02	1.7879E-01	2.2205E-01
A	8.2513E-01	6.4242E-01	5.5590E-01
A+	8.7434E-02	1.7879E-01	2.2205E-01
A++	4.7443E-09	2.3992E-07	8.1611E-07
A+++	3.6288E-23	5.2911E-19	1.0044E-17
A++++	8.7021E-46	1.0776E-37	3.0292E-35
AV	4.3027E-76	6.6303E-63	6.3137E-59
AVI	0.	0.	1.3881E-89
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2282E+02	2.0305E+03	2.9576E+03
T	3.6537E+01	4.4424E+01	4.7025E+01
RHO	7.8046E+00	3.5555E+01	4.6214E+01
H	7.3586E+01	1.2700E+02	1.5248E+02
A	5.3390E+00	6.3018E+00	6.6850E+00
S	1.2294E+00	1.2708E+00	1.3049E+00
Z	1.1321E+00	1.2855E+00	1.3609E+00
GAME	6.8916E-01	6.9539E-01	6.9831E-01
U	1.2978E+01	2.8624E+00	2.6296E+00

SPECIES	MOLE FRACTIONS		
E-	1.1666E-01	2.2210E-01	2.6521E-01
A	7.6668E-01	5.5579E-01	4.6959E-01
A+	1.1666E-01	2.2210E-01	2.6520E-01
A++	1.5955E-08	7.7670E-07	2.3551E-06
A+++	5.6867E-22	8.6071E-18	1.2592E-16
A++++	1.4891E-43	2.1671E-35	3.5983E-33
AV	1.5734E-72	3.5163E-59	1.3005E-55
AVI	0.	0.	1.9646E-84
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9412E+02	1.7329E+03	2.5606E+03
T	3.5788E+01	4.3258E+01	4.5838E+01
RHO	7.3809E+00	3.2021E+01	4.2237E+01
H	6.7535E+01	1.1554E+02	1.3965E+02
A	5.2447E+00	6.1306E+00	6.5002E+00
S	1.2175E+00	1.2535E+00	1.2859E+00
Z	1.1135E+00	1.2511E+00	1.3226E+00
GAME	6.9026E-01	6.9448E-01	6.9696E-01
U	1.2335E+01	2.8521E+00	2.6025E+00

SPECIES	MOLE FRACTIONS		
E-	1.0192E-01	2.0067E-01	2.4389E-01
A	7.9617E-01	5.9865E-01	5.1222E-01
A+	1.0192E-01	2.0067E-01	2.4389E-01
A++	8.9739E-09	4.4256E-07	1.4087E-06
A+++	1.5394E-22	2.2513E-18	3.6866E-17
A++++	1.3023E-44	1.6606E-36	3.5335E-34
AV	3.2535E-74	5.1492E-61	3.1941E-57
AVI	0.	0.	9.7286E-87
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5276E+02	2.3602E+03	3.3907E+03
T	3.7255E+01	4.5581E+01	4.8217E+01
RHO	8.2224E+00	3.9183E+01	5.0202E+01
H	7.9888E+01	1.3897E+02	1.6586E+02
A	5.4347E+00	6.4772E+00	6.8753E+00
S	1.2418E+00	1.2886E+00	1.3245E+00
Z	1.1516E+00	1.3215E+00	1.4008E+00
GAME	6.8846E-01	6.9651E-01	6.9986E-01
U	1.3618E+01	2.8610E+00	2.6614E+00

SPECIES	MOLE FRACTIONS		
E-	1.3163E-01	2.4328E-01	2.8612E-01
A	7.3675E-01	5.1345E-01	4.2776E-01
A+	1.3163E-01	2.4327E-01	2.8611E-01
A++	2.7030E-08	1.3194E-06	3.8567E-06
A+++	1.8853E-21	3.0362E-17	4.1094E-16
A++++	1.3685E-42	2.3207E-34	3.3631E-32
AV	5.0416E-71	1.4831E-57	4.6459E-54
AVI	0.	2.3902E-87	3.2816E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8392E+02	2.7168E+03	3.8607E+03
T	3.7946E+01	4.6725E+01	4.9422E+01
RHO	8.6330E+00	4.2792E+01	5.4168E+01
H	8.6442E+01	1.5141E+02	1.7981E+02
A	5.5316E+00	6.6560E+00	7.0717E+00
S	1.2547E+00	1.3071E+00	1.3447E+00
Z	1.1720E+00	1.3587E+00	1.4421E+00
GAME	6.8805E-01	6.9781E-01	7.0165E-01
U	1.4254E+01	2.8795E+00	2.6978E+00

SPECIES	MOLE FRACTIONS		
E-	1.4674E-01	2.6403E-01	3.0658E-01
A	7.0651E-01	4.7195E-01	3.8685E-01
A+	1.4674E-01	2.6402E-01	3.0657E-01
A++	4.4017E-08	2.1785E-06	6.2196E-06
A+++	5.7178E-21	1.0120E-16	1.2976E-15
A++++	1.0360E-41	3.3278E-33	2.9582E-31
AV	9.4273E-70	6.6468E-56	1.5365E-52
AVI	0.	8.8457E-85	5.5868E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4994E+02	3.5183E+03	4.9127E+03
T	3.9269E+01	4.9020E+01	5.1912E+01
RHO	9.4273E+00	4.9941E+01	6.1895E+01
H	1.0031E+02	1.7771E+02	2.0939E+02
A	5.7299E+00	7.0274E+00	7.4862E+00
S	1.2817E+00	1.3457E+00	1.3867E+00
Z	1.2154E+00	1.4371E+00	1.5290E+00
GAME	6.8790E-01	7.0099E-01	7.0608E-01
U	1.5518E+01	2.9337E+00	2.7855E+00

SPECIES	MOLE FRACTIONS		
E-	1.7723E-01	3.0417E-01	3.4596E-01
A	6.4553E-01	3.9166E-01	3.0809E-01
A+	1.7723E-01	3.0416E-01	3.4593E-01
A++	1.0642E-07	5.5920E-06	1.5770E-05
A+++	4.3416E-20	9.7370E-16	1.2283E-14
A++++	4.3088E-40	1.6872E-31	2.0743E-29
AV	1.0096E-68	6.5313E-53	1.4893E-49
AVI	0.	2.1834E-80	1.7301E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1632E+02	3.1029E+03	4.3679E+03
T	3.8616E+01	4.7869E+01	5.0650E+01
RHO	9.0349E+00	4.6388E+01	5.8077E+01
H	9.3249E+01	1.6432E+02	1.9431E+02
A	5.6300E+00	6.8392E+00	7.2749E+00
S	1.2680E+00	1.3261E+00	1.3654E+00
Z	1.1933E+00	1.3973E+00	1.4849E+00
GAME	6.8788E-01	6.9930E-01	7.0370E-01
U	1.4888E+01	2.9037E+00	2.7391E+00

SPECIES	MOLE FRACTIONS		
E-	1.6196E-01	2.8434E-01	3.2654E-01
A	6.7607E-01	4.3132E-01	3.4693E-01
A+	1.6196E-01	2.8433E-01	3.2652E-01
A++	6.9373E-08	3.5184E-06	9.9286E-06
A+++	1.6152E-20	3.1855E-16	4.0105E-15
A++++	6.7382E-41	2.0064E-32	2.4994E-30
AV	4.1124E-69	2.0033E-54	4.8314E-51
AVI	0.	1.0739E-82	9.8156E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8488E+02	3.9651E+03	5.4983E+03
T	3.9908E+01	5.0189E+01	5.3228E+01
RHO	9.8108E+00	5.3443E+01	6.5608E+01
H	1.0762E+02	1.9161E+02	2.2510E+02
A	5.8314E+00	7.2216E+00	7.7078E+00
S	1.2958E+00	1.3658E+00	1.4085E+00
Z	1.2384E+00	1.4783E+00	1.5745E+00
GAME	6.8806E-01	7.0292E-01	7.0890E-01
U	1.6149E+01	2.9691E+00	2.8374E+00

SPECIES	MOLE FRACTIONS		
E-	1.9252E-01	3.2353E-01	3.6486E-01
A	6.1497E-01	3.5296E-01	2.7031E-01
A+	1.9252E-01	3.2351E-01	3.6481E-01
A++	1.5967E-07	8.7921E-06	2.5094E-05
A+++	1.1289E-19	2.8946E-15	3.7858E-14
A++++	2.9993E-39	1.3129E-30	1.7294E-28
AV	1.1493E-65	1.7410E-51	4.5327E-48
AVI	0.	2.6238E-78	2.7268E-73
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.2076E+02	4.4343E+03	6.1143E+03
T	4.0533E+01	5.1372E+01	5.4600E+01
RHO	1.0179E+01	5.6781E+01	6.9092E+01
H	1.1518E+02	2.0588E+02	2.4127E+02
A	5.9345E+00	7.4206E+00	7.9392E+00
S	1.3103E+00	1.3862E+00	1.4306E+00
Z	1.2622E+00	1.5202E+00	1.6208E+00
GAME	6.8836E-01	7.0512E-01	7.1226E-01
U	1.6768E+01	3.0104E+00	2.8956E+00

SPECIES	MOLE FRACTIONS		
E-	2.0775E-01	3.4218E-01	3.8302E-01
A	5.8451E-01	3.1565E-01	2.3401E-01
A+	2.0775E-01	3.4216E-01	3.8294E-01
A++	2.3450E-07	1.3673E-05	4.0051E-05
A+++	2.7632E-19	8.3922E-15	1.1760E-13
A++++	1.6417E-38	9.6534E-30	1.4479E-27
AV	1.8617E-64	4.0673E-50	1.3577E-46
AVI	0.	2.0807E-76	3.9604E-71
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.9662E+02	5.4677E+03	7.4767E+03
T	4.1763E+01	5.3877E+01	5.7690E+01
RHO	1.0886E+01	6.3131E+01	7.5480E+01
H	1.3107E+02	2.3602E+02	2.7570E+02
A	6.1463E+00	7.8457E+00	8.4553E+00
S	1.3404E+00	1.4283E+00	1.4763E+00
Z	1.3123E+00	1.6075E+00	1.7170E+00
GAME	6.8928E-01	7.1072E-01	7.2174E-01
U	1.8015E+01	3.1112E+00	3.0355E+00

SPECIES	MOLE FRACTIONS		
E-	2.3799E-01	3.7793E-01	4.1760E-01
A	5.2402E-01	2.4417E-01	1.6491E-01
A+	2.3799E-01	3.7786E-01	4.1738E-01
A++	4.8201E-07	3.3218E-05	1.0854E-04
A+++	1.4578E-18	7.2153E-14	1.3254E-12
A++++	3.3685E-37	5.5724E-28	1.3307E-25
AV	1.3877E-62	2.8676E-47	1.8306E-43
AVI	0.	4.0660E-72	1.4541E-66
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.5786E+02	4.9316E+03	6.7689E+03
T	4.1150E+01	5.2590E+01	5.6067E+01
RHO	1.0535E+01	5.9990E+01	7.2371E+01
H	1.2299E+02	2.2063E+02	2.5806E+02
A	6.0393E+00	7.6273E+00	8.1857E+00
S	1.3252E+00	1.4069E+00	1.4531E+00
Z	1.2868E+00	1.5632E+00	1.6682E+00
GAME	6.8877E-01	7.0767E-01	7.1640E-01
U	1.7386E+01	3.0579E+00	2.9610E+00

SPECIES	MOLE FRACTIONS		
E-	2.2291E-01	3.6027E-01	4.0055E-01
A	5.5419E-01	2.7949E-01	1.9896E-01
A+	2.2291E-01	3.6023E-01	4.0042E-01
A++	3.3846E-07	2.1227E-05	6.4900E-05
A+++	6.4486E-19	2.4398E-14	3.7991E-13
A++++	7.8232E-38	7.3137E-29	1.3014E-26
AV	2.1153E-63	1.1228E-48	4.5721E-45
AVI	0.	3.6046E-74	6.9470E-69
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.3632E+02	6.0235E+03	8.2219E+03
T	4.2369E+01	5.5222E+01	5.9514E+01
RHO	1.1220E+01	6.6012E+01	7.8198E+01
H	1.3940E+02	2.5178E+02	2.9410E+02
A	6.2551E+00	8.0737E+00	8.7542E+00
S	1.3560E+00	1.4498E+00	1.4999E+00
Z	1.3386E+00	1.6524E+00	1.7667E+00
GAME	6.8989E-01	7.1436E-01	7.2887E-01
U	1.8633E+01	3.1719E+00	3.1374E+00

SPECIES	MOLE FRACTIONS		
E-	2.5293E-01	3.9482E-01	4.3396E-01
A	4.9414E-01	2.1041E-01	1.3226E-01
A+	2.5293E-01	3.9472E-01	4.3358E-01
A++	6.7815E-07	5.2265E-05	1.8947E-04
A+++	3.2440E-18	2.1637E-13	5.1410E-12
A++++	1.5048E-36	4.3207E-27	1.6488E-24
AV	1.2264E-61	7.3885E-46	9.9717E-42
AVI	0.	4.3957E-70	4.8690E-64
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 50 N/ m^2

P1 = 5.00E+01 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.7723E+02	6.6043E+03	8.9986E+03
T	4.2974E+01	5.6662E+01	6.1595E+01
RHO	1.1540E+01	6.8648E+01	8.0473E+01
H	1.4798E+02	2.6799E+02	3.1290E+02
A	6.3661E+00	8.3161E+00	9.0878E+00
S	1.3720E+00	1.4715E+00	1.5233E+00
Z	1.3656E+00	1.6979E+00	1.8155E+00
GAME	6.9059E-01	7.1887E-01	7.3857E-01
U	1.9250E+01	3.2409E+00	3.2262E+00

SPECIES	MOLE FRACTIONS		
E-	2.6771E-01	4.1103E-01	4.4917E-01
A	4.6457E-01	1.7803E-01	1.0200E-01
A+	2.6771E-01	4.1086E-01	4.4848E-01
A++	9.4522E-07	8.3594E-05	3.4839E-04
A+++	7.1636E-18	6.7671E-13	2.2658E-11
A++++	7.3005E-36	3.6212E-26	2.5627E-23
AV	3.1221E-60	2.1790E-44	7.6930E-40
AVI	0.	6.0393E-68	2.6770E-61
AVII	0.	0.	5.0136E-91
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.6267E+02	7.8327E+03	1.0696E+04
T	4.4186E+01	5.9990E+01	6.7384E+01
RHO	1.2139E+01	7.2970E+01	8.3122E+01
H	1.6590E+02	3.0179E+02	3.5345E+02
A	6.5950E+00	8.8652E+00	9.9580E+00
S	1.4048E+00	1.5154E+00	1.5712E+00
Z	1.4219E+00	1.7893E+00	1.9097E+00
GAME	6.9228E-01	7.3217E-01	7.7061E-01
U	2.0477E+01	3.4115E+00	3.5002E+00

SPECIES	MOLE FRACTIONS		
E-	2.9672E-01	4.4113E-01	4.7635E-01
A	4.0657E-01	1.1798E-01	4.8954E-02
A+	2.9671E-01	4.4066E-01	4.7305E-01
A++	1.7892E-06	2.3437E-04	1.6519E-03
A+++	3.1940E-17	8.3135E-12	1.0099E-09
A++++	1.1551E-34	3.8379E-24	2.7609E-20
AV	2.2579E-58	3.6721E-41	4.6870E-35
AVI	1.0322E-88	3.1920E-63	2.2804E-54
AVII	0.	0.	8.4527E-81
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.1935E+02	7.2082E+03	9.8160E+03
T	4.3579E+01	5.8233E+01	6.4106E+01
RHO	1.1847E+01	7.0990E+01	8.2181E+01
H	1.5681E+02	2.8467E+02	3.3243E+02
A	6.4794E+00	8.6776E+00	9.4790E+00
S	1.3882E+00	1.4934E+00	1.5469E+00
Z	1.3934E+00	1.7436E+00	1.8632E+00
GAME	6.9139E-01	7.2461E-01	7.5225E-01
U	1.9864E+01	3.3199E+00	3.3292E+00

SPECIES	MOLE FRACTIONS		
E-	2.8232E-01	4.2649E-01	4.6330E-01
A	4.3537E-01	1.4716E-01	7.4105E-02
A+	2.8231E-01	4.2621E-01	4.6190E-01
A++	1.3052E-06	1.3725E-04	7.0151E-04
A+++	1.5293E-17	2.2609E-12	1.2487E-10
A++++	3.0295E-35	3.4298E-25	5.9655E-22
AV	3.0985E-59	7.9271E-43	1.1207E-37
AVI	0.	1.2008E-65	3.7413E-58
AVII	0.	0.	3.6634E-86
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.0718E+02	8.4739E+03	1.1620E+04
T	4.4797E+01	6.2015E+01	7.1462E+01
RHO	1.2417E+01	7.4496E+01	8.3388E+01
H	1.7524E+02	3.1934E+02	3.7534E+02
A	6.7133E+00	9.1898E+00	1.0437E+01
S	1.4217E+00	1.5374E+00	1.5948E+00
Z	1.4512E+00	1.8342E+00	1.9499E+00
GAME	6.9327E-01	7.4244E-01	7.8176E-01
U	2.1088E+01	3.5198E+00	3.6891E+00

SPECIES	MOLE FRACTIONS		
E-	3.1090E-01	4.5482E-01	4.8716E-01
A	3.7821E-01	9.0794E-02	3.0030E-02
A+	3.1089E-01	4.5397E-01	4.7845E-01
A++	2.4410E-06	4.2381E-04	4.3594E-03
A+++	6.6203E-17	3.5139E-11	1.0903E-08
A++++	4.3236E-34	5.4845E-23	2.1497E-18
AV	1.2940E-57	2.4604E-39	4.3975E-32
AVI	3.2455E-87	1.4185E-60	4.4104E-50
AVII	0.	1.2764E-89	9.8145E-75
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.5288E+02	9.1252E+03	1.2578E+04
T	4.5420E+01	6.4429E+01	7.5868E+01
RHO	1.2676E+01	7.5441E+01	8.3533E+01
H	1.8483E+02	3.3731E+02	3.9791E+02
A	6.8353E+00	9.5651E+00	1.0747E+01
S	1.4390E+00	1.5593E+00	1.6180E+00
Z	1.4814E+00	1.8774E+00	1.9847E+00
GAME	6.9439E-01	7.5639E-01	7.6698E-01
U	2.1697E+01	3.6506E+00	3.8824E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2494E-01	4.6734E-01	4.9615E-01
A	3.5012E-01	6.6156E-02	1.8675E-02
A+	3.2494E-01	4.6567E-01	4.7420E-01
A++	3.3284E-06	8.3148E-04	1.0974E-02
A+++	1.3925E-16	1.8148E-10	1.0750E-07
A++++	1.8571E-33	1.1238E-21	1.4255E-16
AV	2.0914E-56	2.8865E-37	3.2161E-29
AVI	7.1761E-86	1.4006E-57	5.9669E-46
AVII	0.	2.2567E-85	6.9065E-69
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4784E+02	1.0447E+04	1.4540E+04
T	4.6690E+01	7.0950E+01	8.2718E+01
RHO	1.3155E+01	7.5445E+01	8.5726E+01
H	2.0478E+02	3.7440E+02	4.4310E+02
A	7.0866E+00	1.0407E+01	1.1136E+01
S	1.4741E+00	1.6018E+00	1.6614E+00
Z	1.5431E+00	1.9516E+00	2.0504E+00
GAME	6.9702E-01	7.8224E-01	7.3115E-01
U	2.2910E+01	3.9996E+00	4.1489E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.5197E-01	4.8760E-01	5.1230E-01
A	2.9607E-01	2.9061E-02	1.0143E-02
A+	3.5196E-01	4.7906E-01	4.4283E-01
A++	6.1251E-06	4.2699E-03	3.4730E-02
A+++	5.9607E-16	9.8938E-09	2.0701E-06
A++++	2.8626E-32	1.6843E-18	3.4340E-14
AV	1.7296E-54	2.7692E-32	1.8904E-25
AVI	5.0792E-83	2.0321E-50	1.7192E-40
AVII	0.	2.5960E-75	3.8973E-61
AVIII	0.	0.	2.5117E-86

P1 = 5.00E+01 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.9977E+02	9.7854E+03	1.3556E+04
T	4.6046E+01	6.7392E+01	7.9683E+01
RHO	1.2925E+01	7.5743E+01	8.4321E+01
H	1.9468E+02	3.5567E+02	4.2054E+02
A	6.9588E+00	9.9935E+00	1.0944E+01
S	1.4564E+00	1.5808E+00	1.6404E+00
Z	1.5118E+00	1.9171E+00	2.0176E+00
GAME	6.9563E-01	7.7303E-01	7.4497E-01
U	2.2304E+01	3.8110E+00	4.0374E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3854E-01	4.7837E-01	5.0437E-01
A	3.2292E-01	4.5078E-02	1.3041E-02
A+	3.3853E-01	4.7475E-01	4.6080E-01
A++	4.5126E-06	1.8087E-03	2.1787E-02
A+++	2.8841E-16	1.2083E-09	6.1126E-07
A++++	7.4024E-33	3.6221E-20	3.5241E-15
AV	2.0023E-55	6.7899E-35	5.0851E-27
AVI	2.1357E-84	3.6975E-54	9.0329E-43
AVII	0.	1.5845E-80	2.2332E-64
AVIII	0.	0.	0.

P1 = 5.00E+01 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.9708E+02	1.1119E+04	1.5551E+04
T	4.7351E+01	7.4727E+01	8.5322E+01
RHO	1.3369E+01	7.5093E+01	8.7420E+01
H	2.1514E+02	3.9357E+02	4.6632E+02
A	7.2183E+00	1.0680E+01	1.1342E+01
S	1.4921E+00	1.6222E+00	1.6824E+00
Z	1.5751E+00	1.9815E+00	2.0849E+00
GAME	6.9860E-01	7.7037E-01	7.2321E-01
U	2.3513E+01	4.1928E+00	4.2668E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6512E-01	4.9534E-01	5.2037E-01
A	2.6978E-01	1.8988E-02	8.3402E-03
A+	3.6510E-01	4.7601E-01	4.2222E-01
A++	8.3268E-06	9.6631E-03	4.9067E-02
A+++	1.2353E-15	7.4569E-08	5.2876E-06
A++++	1.0936E-31	6.8148E-17	2.0204E-13
AV	1.3770E-53	9.3728E-30	3.2136E-24
AVI	8.9826E-82	9.3253E-47	1.0698E-38
AVII	0.	4.4849E-70	1.4161E-58
AVIII	0.	0.	7.0664E-83

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0475E+03	1.1824E+04	1.6551E+04
T	4.8036E+01	7.8143E+01	8.7543E+01
RHO	1.3564E+01	7.5278E+01	8.9204E+01
H	2.2575E+02	4.1329E+02	4.8910E+02
A	7.3545E+00	1.0853E+01	1.1549E+01
S	1.5103E+00	1.6421E+00	1.7025E+00
Z	1.6076E+00	2.0100E+00	2.1194E+00
GAME	7.0040E-01	7.4991E-01	7.1886E-01
U	2.4115E+01	4.3473E+00	4.3234E+00

SPECIES	MOLE FRACTIONS		
E-	3.7797E-01	5.0249E-01	5.2817E-01
A	2.4407E-01	1.3481E-02	7.1415E-03
A+	3.7795E-01	4.6557E-01	4.0123E-01
A++	1.1365E-05	1.8461E-02	6.3454E-02
A+++	2.5896E-15	3.8040E-07	1.0930E-05
A++++	4.2546E-31	1.3662E-15	8.1038E-13
AV	1.0855E-52	1.0502E-27	2.9949E-23
AVI	1.0240E-80	8.3541E-44	2.7823E-37
AVII	0.	6.3640E-66	1.4631E-56
AVIII	0.	0.	3.4674E-80

P1 = 5.00E+01 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1517E+03	1.3307E+04	1.8604E+04
T	4.9500E+01	8.3532E+01	9.1518E+01
RHO	1.3896E+01	7.6928E+01	9.2723E+01
H	2.4773E+02	4.5430E+02	5.3654E+02
A	7.6435E+00	1.1202E+01	1.1978E+01
S	1.5473E+00	1.6817E+00	1.7434E+00
Z	1.6743E+00	2.0708E+00	2.1923E+00
GAME	7.0490E-01	7.2549E-01	7.1507E-01
U	2.5311E+01	4.5756E+00	4.4604E+00

SPECIES	MOLE FRACTIONS		
E-	4.0275E-01	5.1710E-01	5.4387E-01
A	1.9453E-01	8.4802E-03	5.4927E-03
A+	4.0270E-01	4.3176E-01	3.5745E-01
A++	2.1660E-05	4.2665E-02	9.3156E-02
A+++	1.2137E-14	3.4140E-06	3.4637E-05
A++++	7.4350E-30	8.2123E-14	7.6643E-12
AV	9.3949E-51	7.0414E-25	1.1477E-21
AVI	1.6598E-79	1.0735E-39	5.9408E-35
AVII	0.	4.7107E-60	3.2539E-53
AVIII	0.	6.3720E-85	1.1802E-75

P1 = 5.00E+01 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0990E+03	1.2553E+04	1.7573E+04
T	4.8750E+01	8.1026E+01	8.9598E+01
RHO	1.3740E+01	7.5965E+01	9.0996E+01
H	2.3661E+02	4.3353E+02	5.1261E+02
A	7.4959E+00	1.1019E+01	1.1762E+01
S	1.5287E+00	1.6617E+00	1.7229E+00
Z	1.6407E+00	2.0394E+00	2.1554E+00
GAME	7.0247E-01	7.3483E-01	7.1636E-01
U	2.4714E+01	4.4768E+00	4.3942E+00

SPECIES	MOLE FRACTIONS		
E-	3.9052E-01	5.0965E-01	5.3605E-01
A	2.1897E-01	1.0412E-02	6.2246E-03
A+	3.9049E-01	4.5023E-01	3.7943E-01
A++	1.5615E-05	2.9711E-02	7.8281E-02
A+++	5.5342E-15	1.3007E-06	2.0282E-05
A++++	1.7289E-30	1.3411E-14	2.6851E-12
AV	9.3781E-52	3.9190E-26	2.0848E-22
AVI	3.9841E-80	1.5976E-41	4.8300E-36
AVII	0.	1.1509E-62	8.9175E-55
AVIII	0.	1.8390E-88	9.3555E-78

P1 = 5.00E+01 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2055E+03	1.4075E+04	1.9637E+04
T	5.0298E+01	8.5664E+01	9.3344E+01
RHO	1.4029E+01	7.8153E+01	9.4333E+01
H	2.5910E+02	4.7556E+02	5.6093E+02
A	7.7986E+00	1.1388E+01	1.2196E+01
S	1.5661E+00	1.7007E+00	1.7640E+00
Z	1.7083E+00	2.1023E+00	2.2302E+00
GAME	7.0780E-01	7.2017E-01	7.1456E-01
U	2.5905E+01	4.6594E+00	4.5242E+00

SPECIES	MOLE FRACTIONS		
E-	4.1464E-01	5.2433E-01	5.5160E-01
A	1.7076E-01	7.2206E-03	4.8812E-03
A+	4.1457E-01	4.1258E-01	3.3549E-01
A++	3.0443E-05	5.5865E-02	1.0797E-01
A+++	2.7537E-14	7.1943E-06	5.5729E-05
A++++	3.4209E-29	3.3864E-13	1.9682E-11
AV	1.0982E-49	6.8218E-24	5.3761E-21
AVI	1.0734E-76	2.9560E-38	5.8476E-34
AVII	0.	5.3680E-58	8.9193E-52
AVIII	0.	3.7674E-82	1.0954E-73

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2604E+03	1.4851E+04	2.0667E+04
T	5.1157E+01	8.7636E+01	9.5099E+01
RHO	1.4138E+01	7.9348E+01	9.5794E+01
H	2.7071E+02	4.9729E+02	5.8576E+02
A	7.9632E+00	1.1584E+01	1.2417E+01
S	1.5850E+00	1.7202E+00	1.7846E+00
Z	1.7427E+00	2.1357E+00	2.2686E+00
GAME	7.1132E-01	7.1692E-01	7.1462E-01
U	2.6497E+01	4.7287E+00	4.5867E+00

SPECIES	MOLE FRACTIONS		
E-	4.2616E-01	5.3176E-01	5.5920E-01
A	1.4772E-01	6.2604E-03	4.3552E-03
A+	4.2607E-01	3.9221E-01	3.1377E-01
A++	4.3565E-05	6.9755E-02	1.2259E-01
A+++	6.5452E-14	1.3603E-05	8.5624E-05
A++++	1.7292E-28	1.1518E-12	4.6531E-11
AV	1.5639E-48	4.9126E-23	2.2094E-20
AVI	1.5336E-74	5.3491E-37	4.7409E-33
AVII	0.	3.4278E-56	1.8239E-50
AVIII	0.	1.0525E-79	6.5530E-72

P1 = 5.00E+01 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3732E+03	1.6380E+04	2.2670E+04
T	5.3140E+01	9.1176E+01	9.8502E+01
RHO	1.4264E+01	8.1464E+01	9.8013E+01
H	2.9470E+02	5.4202E+02	6.3676E+02
A	8.3334E+00	1.1982E+01	1.2869E+01
S	1.6230E+00	1.7598E+00	1.8268E+00
Z	1.8116E+00	2.2053E+00	2.3482E+00
GAME	7.2138E-01	7.1408E-01	7.1595E-01
U	2.7668E+01	4.8526E+00	4.7111E+00

SPECIES	MOLE FRACTIONS		
E-	4.4800E-01	5.4655E-01	5.7413E-01
A	1.0410E-01	4.8820E-03	3.4606E-03
A+	4.4780E-01	3.5064E-01	2.7086E-01
A++	9.6761E-05	9.7897E-02	1.5136E-01
A+++	4.5232E-13	3.8135E-05	1.8481E-04
A++++	6.3253E-27	8.6145E-12	2.2225E-10
AV	5.0913E-46	1.2879E-21	2.9233E-19
AVI	9.6421E-71	6.5311E-35	2.1934E-31
AVII	0.	3.4005E-53	4.6276E-48
AVIII	0.	1.1864E-75	1.1971E-68

P1 = 5.00E+01 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3163E+03	1.5623E+04	2.1682E+04
T	5.2095E+01	8.9460E+01	9.6819E+01
RHO	1.4218E+01	8.0475E+01	9.7025E+01
H	2.8258E+02	5.1945E+02	6.1105E+02
A	8.1401E+00	1.1782E+01	1.2642E+01
S	1.6040E+00	1.7399E+00	1.8056E+00
Z	1.7771E+00	2.1700E+00	2.3081E+00
GAME	7.1572E-01	7.1505E-01	7.1511E-01
U	2.7084E+01	4.7930E+00	4.6489E+00

SPECIES	MOLE FRACTIONS		
E-	4.3730E-01	5.3918E-01	5.6675E-01
A	1.2547E-01	5.5051E-03	3.8841E-03
A+	4.3717E-01	3.7148E-01	2.9211E-01
A++	6.3888E-05	8.3811E-02	1.3713E-01
A+++	1.6570E-13	2.3526E-05	1.2757E-04
A++++	9.8891E-28	3.3382E-12	1.0427E-10
AV	2.7177E-47	2.7525E-22	8.3658E-20
AVI	1.4085E-72	6.7200E-36	3.4265E-32
AVII	0.	1.2898E-54	3.1915E-49
AVIII	0.	1.4059E-77	3.2285E-70

P1 = 5.00E+01 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4310E+03	1.7107E+04	2.3612E+04
T	5.4331E+01	9.2806E+01	1.0016E+02
RHO	1.4270E+01	8.2242E+01	9.8684E+01
H	3.0707E+02	5.6496E+02	6.6289E+02
A	8.5495E+00	1.2185E+01	1.3099E+01
S	1.6421E+00	1.7798E+00	1.8481E+00
Z	1.8457E+00	2.2413E+00	2.3887E+00
GAME	7.2891E-01	7.1373E-01	7.1709E-01
U	2.8245E+01	4.9091E+00	4.7737E+00

SPECIES	MOLE FRACTIONS		
E-	4.5820E-01	5.5384E-01	5.8137E-01
A	8.3754E-02	4.3492E-03	3.0725E-03
A+	4.5789E-01	3.2985E-01	2.5000E-01
A++	1.5316E-04	1.1191E-01	1.6529E-01
A+++	1.3702E-12	5.8852E-05	2.6223E-04
A++++	4.8076E-26	2.0339E-11	4.5692E-10
AV	1.1998E-44	5.2319E-21	9.6611E-19
AVI	8.4225E-69	5.1490E-34	1.2969E-30
AVII	0.	6.5723E-52	6.0045E-47
AVIII	0.	6.4367E-74	3.8329E-67

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4896E+03	1.7784E+04	2.4479E+04
T	5.5728E+01	9.4366E+01	1.0181E+02
RHO	1.4225E+01	8.2729E+01	9.8956E+01
H	3.1968E+02	5.8823E+02	6.8936E+02
A	8.7986E+00	1.2388E+01	1.3332E+01
S	1.6611E+00	1.8002E+00	1.8698E+00
Z	1.8790E+00	2.2780E+00	2.4298E+00
GAME	7.3930E-01	7.1383E-01	7.1850E-01
U	2.8815E+01	4.9630E+00	4.8368E+00

SPECIES	MOLE FRACTIONS		
E-	4.6781E-01	5.6103E-01	5.8844E-01
A	6.4642E-02	3.8803E-03	2.7130E-03
A+	4.6729E-01	3.0925E-01	2.2961E-01
A++	2.5803E-04	1.2576E-01	1.7887E-01
A+++	4.8396E-12	8.7409E-05	3.6590E-04
A++++	4.8177E-25	4.4828E-11	9.1259E-10
AV	4.2141E-43	1.9133E-20	3.0525E-18
AVI	9.7233E-67	3.4923E-33	7.1919E-30
AVII	0.	1.0350E-50	7.1301E-46
AVIII	0.	2.6977E-72	1.1001E-65

P1 = 5.00E+01 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6085E+03	1.8866E+04	2.5827E+04
T	5.9546E+01	9.7288E+01	1.0504E+02
RHO	1.3924E+01	8.2415E+01	9.7855E+01
H	3.4561E+02	6.3544E+02	7.4297E+02
A	9.4504E+00	1.2793E+01	1.3805E+01
S	1.6985E+00	1.8419E+00	1.9141E+00
Z	1.9399E+00	2.3530E+00	2.5127E+00
GAME	7.7315E-01	7.1500E-01	7.2203E-01
U	2.9919E+01	5.0631E+00	4.9630E+00

SPECIES	MOLE FRACTIONS		
E-	4.8452E-01	5.7500E-01	6.0202E-01
A	3.1938E-02	3.0719E-03	2.0650E-03
A+	4.8257E-01	2.6903E-01	1.9049E-01
A++	9.7614E-04	1.5272E-01	2.0474E-01
A+++	1.2295E-10	1.7660E-04	6.8502E-04
A++++	1.8217E-22	1.8527E-10	3.3983E-09
AV	4.8909E-39	1.9656E-19	2.7295E-17
AVI	8.7129E-61	1.0967E-31	1.8800E-28
AVII	0.	1.4708E-48	7.9453E-44
AVIII	0.	2.1982E-69	6.6581E-63

P1 = 5.00E+01 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5488E+03	1.8382E+04	2.5233E+04
T	5.7425E+01	9.5860E+01	1.0343E+02
RHO	1.4115E+01	8.2822E+01	9.8719E+01
H	3.3253E+02	6.1175E+02	7.1609E+02
A	9.0952E+00	1.2591E+01	1.3567E+01
S	1.6799E+00	1.8209E+00	1.8918E+00
Z	1.9108E+00	2.3153E+00	2.4712E+00
GAME	7.5389E-01	7.1428E-01	7.2015E-01
U	2.9374E+01	5.0145E+00	4.9001E+00

SPECIES	MOLE FRACTIONS		
E-	4.7666E-01	5.6809E-01	5.9534E-01
A	4.7151E-02	3.4582E-03	2.3780E-03
A+	4.7571E-01	2.8894E-01	2.0974E-01
A++	4.7417E-04	1.3939E-01	1.9204E-01
A+++	2.1258E-11	1.2586E-04	5.0358E-04
A++++	7.3830E-24	9.3353E-11	1.7793E-09
AV	3.2982E-41	6.3719E-20	9.2823E-18
AVI	7.7167E-64	2.0748E-32	3.7705E-29
AVII	0.	1.3459E-49	7.8089E-45
AVIII	0.	8.7100E-71	2.8415E-64

P1 = 5.00E+01 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6683E+03	1.9223E+04	2.6261E+04
T	6.2185E+01	9.8657E+01	1.0666E+02
RHO	1.3652E+01	8.1496E+01	9.6366E+01
H	3.5892E+02	6.5923E+02	7.7045E+02
A	9.8244E+00	1.2995E+01	1.4048E+01
S	1.7166E+00	1.8634E+00	1.9373E+00
Z	1.9651E+00	2.3909E+00	2.5550E+00
GAME	7.8985E-01	7.1594E-01	7.2416E-01
U	3.0447E+01	5.1077E+00	5.0509E+00

SPECIES	MOLE FRACTIONS		
E-	4.9111E-01	5.8175E-01	6.0860E-01
A	2.0028E-02	2.7158E-03	1.7693E-03
A+	4.8660E-01	2.4956E-01	1.7158E-01
A++	2.2568E-03	1.6573E-01	2.1712E-01
A+++	9.5105E-10	2.4261E-04	9.2858E-04
A++++	7.7590E-21	3.5344E-10	6.4675E-09
AV	1.8589E-36	5.6884E-19	7.9871E-17
AVI	5.8217E-57	5.2790E-31	9.3112E-28
AVII	2.8979E-85	1.4070E-47	8.0073E-43
AVIII	0.	4.6668E-68	1.5469E-61

TABLE 1. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7289E+03	1.9531E+04	2.6608E+04
T	6.5143E+01	1.0001E+02	1.0828E+02
RHO	1.3362E+01	8.0392E+01	9.4651E+01
H	3.7246E+02	6.8328E+02	7.9756E+02
A	1.0075E+01	1.3199E+01	1.4291E+01
S	1.7342E+00	1.8850E+00	1.9600E+00
Z	1.9862E+00	2.4292E+00	2.5962E+00
GAME	7.8455E-01	7.1712E-01	7.2650E-01
U	3.0968E+01	5.1555E+00	5.1060E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9653E-01	5.8835E-01	6.1483E-01
A	1.2273E-02	2.3913E-03	1.5056E-03
A+	4.8588E-01	2.3051E-01	1.5375E-01
A++	5.3244E-03	1.7842E-01	2.2867E-01
A+++	7.7890E-09	3.2859E-04	1.2452E-03
A++++	3.5954E-19	6.5822E-10	1.2089E-08
AV	7.4335E-34	1.5864E-18	2.2709E-16
AVI	3.0151E-53	2.4099E-30	4.4091E-27
AVII	3.8071E-80	1.2489E-46	7.4937E-42
AVIII	0.	8.9820E-67	3.1832E-60

P1 = 5.00E+01 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9560E+03	2.1631E+04	2.9328E+04
T	7.2909E+01	1.0546E+02	1.1544E+02
RHO	1.3031E+01	7.9864E+01	9.2568E+01
H	4.2205E+02	7.7338E+02	9.0131E+02
A	1.0404E+01	1.3999E+01	1.5281E+01
S	1.7927E+00	1.9588E+00	2.0386E+00
Z	2.0588E+00	2.5683E+00	2.7446E+00
GAME	7.2118E-01	7.2359E-01	7.3698E-01
U	3.2907E+01	5.3776E+00	5.3922E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1428E-01	6.1063E-01	6.3565E-01
A	4.1211E-03	1.4982E-03	7.8055E-04
A+	4.4891E-01	1.6604E-01	9.5244E-02
A++	3.2688E-02	2.2089E-01	2.6457E-01
A+++	7.5725E-07	9.3475E-04	3.7537E-03
A++++	1.6610E-15	6.0119E-09	1.3755E-07
AV	4.4408E-28	6.4127E-17	1.3953E-14
AVI	6.7842E-45	6.0187E-28	2.1268E-24
AVII	2.9946E-68	3.6430E-43	5.7024E-38
AVIII	0.	4.5306E-62	5.9663E-55

P1 = 5.00E+01 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7911E+03	1.9946E+04	2.7116E+04
T	6.7899E+01	1.0143E+02	1.1007E+02
RHO	1.3152E+01	7.9671E+01	9.3368E+01
H	3.8628E+02	7.0800E+02	8.2576E+02
A	1.0178E+01	1.3413E+01	1.4552E+01
S	1.7513E+00	1.9064E+00	1.9829E+00
Z	2.0058E+00	2.4682E+00	2.6385E+00
GAME	7.6062E-01	7.1857E-01	7.2919E-01
U	3.1501E+01	5.2083E+00	5.1768E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0144E-01	5.9484E-01	6.2100E-01
A	8.0650E-03	2.1015E-03	1.2662E-03
A+	4.7956E-01	2.1172E-01	1.3615E-01
A++	1.0938E-02	1.9089E-01	2.3989E-01
A+++	4.6382E-08	4.4285E-04	1.6873E-03
A++++	9.5071E-18	1.2236E-09	2.3320E-08
AV	1.3033E-31	4.4364E-18	6.8501E-16
AVI	5.5645E-50	1.1089E-29	2.2942E-26
AVII	2.1414E-75	1.1223E-45	8.0883E-41
AVIII	0.	1.7455E-65	8.0148E-59

P1 = 5.00E+01 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1317E+03	2.3851E+04	3.2335E+04
T	7.6363E+01	1.1015E+02	1.2209E+02
RHO	1.3176E+01	8.1095E+01	9.2989E+01
H	4.5952E+02	8.4284E+02	9.8269E+02
A	1.0707E+01	1.4657E+01	1.6071E+01
S	1.8337E+00	2.0105E+00	2.0935E+00
Z	2.1186E+00	2.6700E+00	2.8482E+00
GAME	7.0855E-01	7.3044E-01	7.4279E-01
U	3.4369E+01	5.5925E+00	5.6485E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2799E-01	6.2547E-01	6.4890E-01
A	2.7512E-03	1.0143E-03	4.3402E-04
A+	4.1052E-01	1.2356E-01	6.1180E-02
A++	5.8733E-02	2.4796E-01	2.8076E-01
A+++	3.7234E-06	1.9941E-03	8.7335E-03
A++++	3.3850E-14	3.1654E-08	9.5306E-07
AV	5.5355E-26	1.0726E-15	3.8728E-13
AVI	7.9242E-42	4.1639E-26	3.2286E-22
AVII	8.0479E-64	1.7177E-40	8.3571E-35
AVIII	0.	2.0059E-58	1.2249E-50

TABLE I.- Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3161E+03	2.6334E+04	3.5811E+04
T	7.9167E+01	1.1566E+02	1.2963E+02
RHO	1.3401E+01	8.2176E+01	9.3759E+01
H	4.9862E+02	9.1561E+02	1.0699E+03
A	1.1032E+01	1.5381E+01	1.6815E+01
S	1.8747E+00	2.0621E+00	2.1483E+00
Z	2.1831E+00	2.7707E+00	2.9464E+00
GAME	7.0417E-01	7.3822E-01	7.4031E-01
U	3.5851E+01	5.8566E+00	5.9784E+00

SPECIES	MOLE FRACTIONS		
E-	5.4193E-01	6.3908E-01	6.6061E-01
A	2.0294E-03	6.2958E-04	2.2517E-04
A+	3.7017E-01	8.5870E-02	3.7252E-02
A++	8.5859E-02	2.7004E-01	2.8240E-01
A+++	1.1308E-05	4.3798E-03	1.9512E-02
A++++	2.8965E-13	1.8545E-07	6.4557E-06
AV	1.7584E-24	2.1964E-14	1.0744E-11
AVI	1.2316E-39	3.9526E-24	5.0378E-20
AVII	1.0366E-60	1.2773E-37	1.2893E-31
AVIII	1.4598E-86	1.6336E-54	2.7274E-46

P1 = 5.00E+01 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7089E+03	3.1801E+04	4.3456E+04
T	8.4022E+01	1.2877E+02	1.4352E+02
RHO	1.3885E+01	8.3639E+01	9.6657E+01
H	5.8165E+02	1.0703E+03	1.2529E+03
A	1.1713E+01	1.6771E+01	1.8105E+01
S	1.9582E+00	2.1619E+00	2.2533E+00
Z	2.3219E+00	2.9528E+00	3.1327E+00
GAME	7.0328E-01	7.3974E-01	7.2907E-01
U	3.8827E+01	6.4506E+00	6.5193E+00

SPECIES	MOLE FRACTIONS		
E-	5.6932E-01	6.6134E-01	6.8078E-01
A	1.2205E-03	1.9686E-04	7.1949E-05
A+	2.8966E-01	3.5501E-02	1.5520E-02
A++	1.3974E-01	2.8305E-01	2.4572E-01
A+++	5.6687E-05	1.9907E-02	5.7801E-02
A++++	7.2379E-12	6.4808E-06	1.0689E-04
AV	3.4398E-22	1.0270E-11	1.5971E-09
AVI	3.0428E-36	4.4280E-20	1.1147E-16
AVII	8.4894E-56	9.7959E-32	1.0042E-26
AVIII	7.7484E-80	1.7151E-46	1.3655E-39

P1 = 5.00E+01 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5086E+03	2.9001E+04	3.9527E+04
T	8.1665E+01	1.2196E+02	1.3695E+02
RHO	1.3647E+01	8.3011E+01	9.4929E+01
H	5.3934E+02	9.9148E+02	1.1597E+03
A	1.1367E+01	1.6109E+01	1.7474E+01
S	1.9162E+00	2.1122E+00	2.2020E+00
Z	2.2510E+00	2.8647E+00	3.0404E+00
GAME	7.0292E-01	7.4280E-01	7.3335E-01
U	3.7338E+01	6.1427E+00	6.2516E+00

SPECIES	MOLE FRACTIONS		
E-	5.5576E-01	6.5092E-01	6.7110E-01
A	1.5610E-03	3.6006E-04	1.2176E-04
A+	3.2964E-01	5.6127E-02	2.3320E-02
A++	1.1302E-01	2.8297E-01	2.6863E-01
A+++	2.7080E-05	9.6181E-03	3.6800E-02
A++++	1.6295E-12	1.1402E-06	3.1692E-05
AV	2.9560E-23	5.0044E-13	1.7830E-10
AVI	8.0098E-38	4.4776E-22	3.7317E-18
AVII	4.4281E-58	1.2289E-34	6.8849E-29
AVIII	6.1482E-83	1.8907E-50	1.4621E-42

P1 = 5.00E+01 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9167E+03	3.4733E+04	4.7530E+04
T	8.6334E+01	1.3534E+02	1.4971E+02
RHO	1.4104E+01	8.4480E+01	9.8320E+01
H	6.2556E+02	1.1521E+03	1.3490E+03
A	1.2072E+01	1.7361E+01	1.8760E+01
S	2.0007E+00	2.2109E+00	2.3054E+00
Z	2.3953E+00	3.0378E+00	3.2290E+00
GAME	7.0471E-01	7.3311E-01	7.2806E-01
U	4.0314E+01	6.7409E+00	6.7625E+00

SPECIES	MOLE FRACTIONS		
E-	5.8251E-01	6.7081E-01	6.9031E-01
A	9.5543E-04	1.1184E-04	4.4066E-05
A+	2.5065E-01	2.3046E-02	1.0588E-02
A++	1.6577E-01	2.7036E-01	2.1775E-01
A+++	1.0950E-04	3.5641E-02	8.1025E-02
A++++	2.8054E-11	2.7887E-05	2.8834E-04
AV	3.2523E-21	1.3492E-10	9.9676E-09
AVI	8.5941E-35	2.2905E-18	1.9631E-15
AVII	1.0669E-53	3.1031E-29	6.8951E-25
AVIII	5.4854E-77	4.5167E-43	4.6279E-37

TABLE I. - Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1319E+03	3.7788E+04	5.1712E+04
T	8.8678E+01	1.4133E+02	1.5560E+02
RHO	1.4294E+01	8.5633E+01	9.9913E+01
H	6.7106E+02	1.2371E+03	1.4482E+03
A	1.2447E+01	1.7932E+01	1.9430E+01
S	2.0436E+00	2.2587E+00	2.3564E+00
Z	2.4708E+00	3.1223E+00	3.3263E+00
GAME	7.0705E-01	7.2867E-01	7.2945E-01
U	4.1796E+01	6.9912E+00	6.9929E+00

SPECIES	MOLE FRACTIONS		
E-	5.9527E-01	6.7972E-01	6.9936E-01
A	7.4038E-04	6.8146E-05	2.7666E-05
A+	2.1290E-01	1.5702E-02	7.3511E-03
A++	1.9089E-01	2.4959E-01	1.8842E-01
A+++	2.0181E-04	5.4828E-02	1.0419E-01
A++++	1.0109E-10	8.8059E-05	6.5633E-04
AV	2.7662E-20	1.0670E-09	4.7225E-08
AVI	2.0990E-33	5.6100E-17	2.3083E-14
AVII	1.1004E-51	3.3691E-27	2.6593E-23
AVIII	3.0178E-74	2.7974E-40	7.2147E-35

P1 = 5.00E+01 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5834E+03	4.4071E+04	6.0251E+04
T	9.3736E+01	1.5232E+02	1.6761E+02
RHO	1.4561E+01	8.7664E+01	1.0190E+02
H	7.6680E+02	1.4155E+03	1.6564E+03
A	1.3263E+01	1.9129E+01	2.0871E+01
S	2.1301E+00	2.3555E+00	2.4592E+00
Z	2.6255E+00	3.3004E+00	3.5276E+00
GAME	7.1479E-01	7.2784E-01	7.3670E-01
U	4.4738E+01	7.4466E+00	7.4562E+00

SPECIES	MOLE FRACTIONS		
E-	6.1912E-01	6.9701E-01	7.1652E-01
A	4.1383E-04	2.7684E-05	1.0297E-05
A+	1.4246E-01	7.7596E-03	3.4018E-03
A++	2.3736E-01	1.9686E-01	1.2974E-01
A+++	6.5004E-04	9.7836E-02	1.4767E-01
A++++	1.2541E-09	5.0314E-04	2.6610E-03
AV	1.9233E-18	2.7047E-08	7.3662E-07
AVI	1.2083E-30	8.9679E-15	1.9173E-12
AVII	1.1243E-47	6.0201E-24	1.9295E-20
AVIII	8.6918E-69	8.4857E-36	6.7126E-31

P1 = 5.00E+01 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3542E+03	4.0909E+04	5.5960E+04
T	9.1124E+01	1.4701E+02	1.6152E+02
RHO	1.4446E+01	8.6651E+01	1.0112E+02
H	7.1814E+02	1.3249E+03	1.5506E+03
A	1.2843E+01	1.8528E+01	2.0134E+01
S	2.0870E+00	2.3079E+00	2.4077E+00
Z	2.5480E+00	3.2114E+00	3.4263E+00
GAME	7.1036E-01	7.2712E-01	7.3252E-01
U	4.3271E+01	7.2254E+00	7.2218E+00

SPECIES	MOLE FRACTIONS		
E-	6.0754E-01	6.8861E-01	7.0814E-01
A	5.6182E-04	4.2736E-05	1.7131E-05
A+	1.7663E-01	1.0912E-02	5.0541E-03
A++	2.1491E-01	2.2384E-01	1.5864E-01
A+++	3.6359E-04	7.6365E-02	1.2678E-01
A++++	3.5524E-10	2.2912E-04	1.3631E-03
AV	2.2871E-19	6.1737E-09	1.9474E-07
AVI	4.9702E-32	8.7075E-16	2.2294E-13
AVII	1.0983E-49	1.9100E-25	7.7618E-22
AVIII	1.6165E-71	7.2397E-38	7.7327E-33

P1 = 5.00E+01 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8193E+03	4.7128E+04	6.4415E+04
T	9.6694E+01	1.5766E+02	1.7401E+02
RHO	1.4603E+01	8.8071E+01	1.0200E+02
H	8.1703E+02	1.5087E+03	1.7656E+03
A	1.3730E+01	1.9767E+01	2.1636E+01
S	2.1744E+00	2.4050E+00	2.5110E+00
Z	2.7048E+00	3.3941E+00	3.6294E+00
GAME	7.2081E-01	7.3017E-01	7.4121E-01
U	4.6193E+01	7.6712E+00	7.7048E+00

SPECIES	MOLE FRACTIONS		
E-	6.3029E-01	7.0537E-01	7.2447E-01
A	2.8802E-04	1.7579E-05	5.9048E-06
A+	1.0976E-01	5.4431E-03	2.2146E-03
A++	2.5847E-01	1.6861E-01	1.0266E-01
A+++	1.1973E-03	1.1953E-01	1.6567E-01
A++++	4.8320E-09	1.0241E-03	4.9802E-03
AV	1.8990E-17	1.0578E-07	2.6498E-06
AVI	3.7801E-29	7.8721E-14	1.5509E-11
AVII	1.6853E-45	1.5136E-22	4.4135E-19
AVIII	8.0891E-66	7.3504E-34	5.2206E-29

TABLE I.- Continued

$p_1 = 50\ N/m^2$

P1 = 5.00E+01 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0613E+03	5.0071E+04	6.8442E+04
T	1.0008E+02	1.6299E+02	1.8076E+02
RHO	1.4586E+01	8.8084E+01	1.0151E+02
H	8.6882E+02	1.6043E+03	1.8781E+03
A	1.4242E+01	2.0421E+01	2.2409E+01
S	2.2181E+00	2.4539E+00	2.5629E+00
Z	2.7822E+00	3.4876E+00	3.7301E+00
GAME	7.2847E-01	7.3360E-01	7.4478E-01
U	4.7633E+01	7.8992E+00	7.9658E+00

SPECIES	MOLE FRACTIONS		
E-	6.4057E-01	7.1327E-01	7.3191E-01
A	1.8766E-04	1.1010E-05	3.2227E-06
A+	8.0207E-02	3.7826E-03	1.3911E-03
A++	2.7676E-01	1.4127E-01	7.8553E-02
A+++	2.2808E-03	1.3973E-01	1.7917E-01
A++++	2.0533E-08	1.9357E-03	8.9667E-03
AV	2.2308E-16	3.6937E-07	9.1279E-06
AVI	1.5295E-27	5.8765E-13	1.1938E-10
AVII	3.5690E-43	3.0195E-21	9.4639E-18
AVIII	1.1312E-62	4.6535E-32	3.7413E-27

P1 = 5.00E+01 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5628E+03	5.5329E+04	7.5725E+04
T	1.0872E+02	1.7412E+02	1.9479E+02
RHO	1.4348E+01	8.6515E+01	9.9027E+01
H	9.7704E+02	1.8023E+03	2.1123E+03
A	1.5338E+01	2.1777E+01	2.3861E+01
S	2.3045E+00	2.5514E+00	2.6672E+00
Z	2.9251E+00	3.6730E+00	3.9257E+00
GAME	7.3980E-01	7.4154E-01	7.4457E-01
U	5.0458E+01	8.3851E+00	8.5186E+00

SPECIES	MOLE FRACTIONS		
E-	6.5813E-01	7.2774E-01	7.4527E-01
A	6.1570E-05	3.8961E-06	8.7937E-07
A+	3.4942E-02	1.6994E-03	5.1431E-04
A++	2.9739E-01	9.1715E-02	4.2726E-02
A+++	9.4671E-03	1.7276E-01	1.8676E-01
A++++	5.5037E-07	6.0782E-03	2.4648E-02
AV	6.3321E-14	3.7939E-06	8.5769E-05
AVI	7.7019E-24	2.6120E-11	5.1364E-09
AVII	8.5369E-38	8.7765E-19	2.7751E-15
AVIII	2.4040E-55	1.2297E-28	1.0504E-23

P1 = 5.00E+01 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3091E+03	5.2794E+04	7.2192E+04
T	1.0408E+02	1.6847E+02	1.8777E+02
RHO	1.4494E+01	8.7502E+01	1.0041E+02
H	9.2216E+02	1.7022E+03	1.9934E+03
A	1.4798E+01	2.1097E+01	2.3159E+01
S	2.2616E+00	2.5031E+00	2.6152E+00
Z	2.8563E+00	3.5813E+00	3.8291E+00
GAME	7.3654E-01	7.3766E-01	7.4597E-01
U	4.9054E+01	8.1377E+00	8.2316E+00

SPECIES	MOLE FRACTIONS		
E-	6.4990E-01	7.2077E-01	7.3884E-01
A	1.1186E-04	6.6573E-06	1.6896E-06
A+	5.4670E-02	2.5651E-03	8.4862E-04
A++	2.9074E-01	1.1525E-01	5.8383E-02
A+++	4.5813E-03	1.5790E-01	1.8651E-01
A++++	1.0115E-07	3.5017E-03	1.5385E-02
AV	3.4238E-15	1.2165E-06	2.9523E-05
AVI	9.3868E-26	4.0598E-12	8.4634E-10
AVII	1.4153E-40	5.4063E-20	1.8104E-16
AVIII	3.9390E-59	2.5505E-30	2.3023E-25

P1 = 5.00E+01 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8237E+03	5.7904E+04	7.9324E+04
T	1.1355E+02	1.8026E+02	2.0167E+02
RHO	1.4212E+01	8.5295E+01	9.7824E+01
H	1.0335E+03	1.9051E+03	2.2337E+03
A	1.5784E+01	2.2478E+01	2.4529E+01
S	2.3466E+00	2.6011E+00	2.7187E+00
Z	2.9890E+00	3.7660E+00	4.0208E+00
GAME	7.3402E-01	7.4427E-01	7.4198E-01
U	5.1863E+01	8.6540E+00	8.7823E+00

SPECIES	MOLE FRACTIONS		
E-	6.6544E-01	7.3446E-01	7.5129E-01
A	3.3616E-05	2.1542E-06	4.6770E-07
A+	2.2031E-02	1.0787E-03	3.1583E-04
A++	2.9407E-01	7.0397E-02	3.1172E-02
A+++	1.8422E-02	1.8366E-01	1.8045E-01
A++++	2.7156E-06	1.0391E-02	3.6546E-02
AV	1.0126E-12	1.1841E-05	2.1882E-04
AVI	5.1619E-22	1.7146E-10	2.5678E-08
AVII	3.8856E-35	1.4817E-17	3.2219E-14
AVIII	1.0187E-51	6.3026E-27	3.2908E-22

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4646E+01	2.5931E+02
T	1.2892E+01	1.6278E+01	2.7507E+01
RHO	3.7155E+00	5.2002E+00	9.3824E+00
H	1.2892E+01	1.6278E+01	2.8784E+01
A	3.5905E+00	4.0338E+00	4.8050E+00
S	1.0987E+00	1.0993E+00	1.1118E+00
Z	1.0000E+00	1.0000E+00	1.0048E+00
GAME	1.0000E+00	9.9961E-01	8.3537E-01
U	4.5391E+00	3.2317E+00	2.9823E+00

SPECIES	MOLE FRACTIONS		
E-	1.4738E-08	2.0652E-06	4.7471E-03
A	1.0000E+00	1.0000E+00	9.9051E-01
A+	1.4738E-08	2.0652E-06	4.7471E-03
A++	3.6390E-32	1.9593E-25	3.1132E-13
A+++	1.3149E-71	2.9459E-56	5.3723E-32
A++++	0.	0.	9.5472E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9078E+01	1.2990E+02	3.6106E+02
T	1.8177E+01	2.3359E+01	3.2150E+01
RHO	3.8002E+00	5.5567E+00	1.0964E+01
H	1.8182E+01	2.3564E+01	3.8866E+01
A	4.2576E+00	4.6919E+00	4.9259E+00
S	1.1181E+00	1.1188E+00	1.1314E+00
Z	1.0000E+00	1.0008E+00	1.0243E+00
GAME	9.9722E-01	9.4169E-01	7.3680E-01
U	5.4907E+00	3.7418E+00	2.9054E+00

SPECIES	MOLE FRACTIONS		
E-	1.8656E-05	7.6760E-04	2.3745E-02
A	9.9996E-01	9.9846E-01	9.5251E-01
A+	1.8656E-05	7.6760E-04	2.3745E-02
A++	7.4045E-22	3.9951E-16	9.3300E-11
A+++	3.3942E-50	1.6604E-38	1.4325E-26
A++++	0.	2.0848E-73	1.1554E-51
AV	0.	0.	4.6877E-85
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0513E+02	3.0899E+02
T	1.5416E+01	1.9663E+01	3.0158E+01
RHO	3.7625E+00	5.3465E+00	1.0115E+01
H	1.5416E+01	1.9678E+01	3.3715E+01
A	3.9260E+00	4.4179E+00	4.8464E+00
S	1.1087E+00	1.1094E+00	1.1215E+00
Z	1.0000E+00	1.0001E+00	1.0130E+00
GAME	9.9983E-01	9.9256E-01	7.6885E-01
U	5.0154E+00	3.5169E+00	2.9650E+00

SPECIES	MOLE FRACTIONS		
E-	8.2399E-07	5.9294E-05	1.2814E-02
A	1.0000E+00	9.9988E-01	9.7437E-01
A+	8.2399E-07	5.9294E-05	1.2814E-02
A++	1.7323E-26	5.8893E-20	1.0169E-11
A+++	4.6543E-61	1.0489E-46	1.0537E-28
A++++	0.	0.	9.0500E-56
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1194E+01	1.6721E+02	4.1770E+02
T	2.1138E+01	2.7118E+01	3.3787E+01
RHO	3.8403E+00	6.1356E+00	1.1909E+01
H	2.1196E+01	2.8466E+01	4.4364E+01
A	4.5458E+00	4.7533E+00	5.0254E+00
S	1.1268E+00	1.1278E+00	1.1419E+00
Z	1.0002E+00	1.0050E+00	1.0381E+00
GAME	9.7737E-01	8.2904E-01	7.2005E-01
U	5.9704E+00	3.7194E+00	2.8355E+00

SPECIES	MOLE FRACTIONS		
E-	2.1793E-04	4.9526E-03	3.6674E-02
A	9.9956E-01	9.9009E-01	9.2665E-01
A+	2.1793E-04	4.9526E-03	3.6674E-02
A++	4.1824E-18	2.6524E-13	4.6108E-10
A+++	9.3552E-43	2.6974E-32	4.7989E-25
A++++	9.1739E-82	6.0396E-64	7.1355E-49
AV	0.	0.	1.0641E-80
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 100 N/m^2

P1 = 1.00E+02 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4527E+01	2.1857E+02	4.8442E+02
T	2.4101E+01	3.0111E+01	3.5246E+01
RHO	3.9166E+00	7.1503E+00	1.3038E+01
H	2.4476E+01	3.4265E+01	5.0360E+01
A	4.6883E+00	4.8109E+00	5.1374E+00
S	1.1350E+00	1.1370E+00	1.1528E+00
Z	1.0014E+00	1.0152E+00	1.0541E+00
GAME	9.1075E-01	7.5718E-01	7.1039E-01
U	6.4657E+00	3.5268E+00	2.7721E+00

SPECIES	MOLE FRACTIONS		
E-	1.3976E-03	1.4935E-02	5.1324E-02
A	9.9720E-01	9.7013E-01	8.9735E-01
A+	1.3976E-03	1.4935E-02	5.1324E-02
A++	2.5026E-15	1.3575E-11	1.6513E-09
A+++	9.5812E-37	1.6182E-28	8.1839E-24
A++++	1.2863E-70	2.0035E-55	1.3344E-46
AV	0.	0.	3.2456E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2769E+02	3.7606E+02	7.0665E+02
T	2.8831E+01	3.4481E+01	3.8203E+01
RHO	4.3764E+00	1.0393E+01	1.6871E+01
H	3.2100E+01	4.8219E+01	6.5441E+01
A	4.7306E+00	5.0733E+00	5.4176E+00
S	1.1512E+00	1.1572E+00	1.1770E+00
Z	1.0120E+00	1.0493E+00	1.0964E+00
GAME	7.6700E-01	7.1135E-01	7.0072E-01
U	7.6634E+00	3.2200E+00	2.6944E+00

SPECIES	MOLE FRACTIONS		
E-	1.1845E-02	4.7006E-02	8.7929E-02
A	9.7631E-01	9.0599E-01	8.2414E-01
A+	1.1845E-02	4.7006E-02	8.7929E-02
A++	4.2890E-12	1.0229E-09	1.4721E-08
A+++	9.9710E-30	2.4975E-24	1.1726E-21
A++++	9.6001E-58	1.3341E-47	1.5113E-42
AV	0.	9.9936E-79	1.2459E-70
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0996E+02	2.8681E+02	5.7851E+02
T	2.6717E+01	3.2470E+01	3.6721E+01
RHO	4.0948E+00	8.5728E+00	1.4674E+01
H	2.8108E+01	4.0855E+01	5.7405E+01
A	4.7048E+00	4.9281E+00	5.2695E+00
S	1.1430E+00	1.1467E+00	1.1646E+00
Z	1.0051E+00	1.0303E+00	1.0736E+00
GAME	8.2432E-01	7.2592E-01	7.0432E-01
U	7.0301E+00	3.3441E+00	2.7360E+00

SPECIES	MOLE FRACTIONS		
E-	5.0639E-03	2.9439E-02	6.8581E-02
A	9.8987E-01	9.4112E-01	8.6284E-01
A+	5.0639E-03	2.9439E-02	6.8581E-02
A++	2.1517E-13	1.6721E-10	5.2216E-09
A+++	1.3920E-32	4.2656E-26	1.1078E-22
A++++	4.2182E-63	6.5750E-51	1.8678E-44
AV	0.	5.1062E-84	1.2923E-73
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4704E+02	4.8672E+02	8.6540E+02
T	3.0504E+01	3.6255E+01	3.9647E+01
RHO	4.7196E+00	1.2535E+01	1.9460E+01
H	3.6374E+01	5.6171E+01	7.4213E+01
A	4.7903E+00	5.2286E+00	5.5744E+00
S	1.1596E+00	1.1685E+00	1.1903E+00
Z	1.0214E+00	1.0710E+00	1.1217E+00
GAME	7.3650E-01	7.0405E-01	6.9875E-01
U	8.3146E+00	3.1210E+00	2.6691E+00

SPECIES	MOLE FRACTIONS		
E-	2.0947E-02	6.6318E-02	1.0846E-01
A	9.5811E-01	8.6736E-01	7.8307E-01
A+	2.0947E-02	6.6318E-02	1.0846E-01
A++	3.3050E-11	4.1230E-09	3.6835E-08
A+++	8.6765E-28	5.9285E-23	9.7552E-21
A++++	3.4708E-54	5.0414E-45	8.4869E-41
AV	2.2717E-89	1.1814E-74	9.3776E-68
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6795E+02	6.1948E+02	1.0553E+03
T	3.1895E+01	3.7876E+01	4.1054E+01
RHO	5.0989E+00	1.4935E+01	2.2369E+01
H	4.0920E+01	6.4664E+01	8.3672E+01
A	4.8685E+00	5.3890E+00	5.7378E+00
S	1.1685E+00	1.1808E+00	1.2044E+00
Z	1.0327E+00	1.0951E+00	1.1492E+00
GAME	7.1958E-01	7.0019E-01	6.9782E-01
U	8.9769E+00	3.0582E+00	2.6552E+00

SPECIES	MOLE FRACTIONS		
E-	3.1685E-02	8.6830E-02	1.2981E-01
A	9.3663E-01	8.2634E-01	7.4038E-01
A+	3.1685E-02	8.6830E-02	1.2981E-01
A++	1.5042E-10	1.2882E-08	8.3670E-08
A+++	2.4534E-26	8.1238E-22	6.5789E-20
A++++	1.7502E-51	7.2372E-43	3.1737E-39
AV	5.4772E-85	4.0863E-71	3.2962E-65
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1391E+02	9.5731E+02	1.5281E+03
T	3.4174E+01	4.0806E+01	4.3759E+01
RHO	5.9068E+00	2.0425E+01	2.8862E+01
H	5.0779E+01	8.3216E+01	1.0439E+02
A	5.0462E+00	5.7170E+00	6.0784E+00
S	1.1878E+00	1.2077E+00	1.2351E+00
Z	1.0597E+00	1.1486E+00	1.2099E+00
GAME	7.0316E-01	6.9732E-01	6.9783E-01
U	1.0303E+01	2.9739E+00	2.6536E+00

SPECIES	MOLE FRACTIONS		
E-	5.6336E-02	1.2938E-01	1.7352E-01
A	8.8733E-01	7.4124E-01	6.5296E-01
A+	5.6336E-02	1.2938E-01	1.7352E-01
A++	1.3289E-09	7.7442E-08	3.4345E-07
A+++	3.0985E-24	5.2224E-20	1.7925E-18
A++++	1.3606E-47	1.9133E-39	1.5972E-36
AV	8.1013E-79	1.3198E-65	6.0772E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9027E+02	7.7679E+02	1.2762E+03
T	3.3099E+01	3.9382E+01	4.2423E+01
RHO	5.4979E+00	1.7597E+01	2.5522E+01
H	4.5724E+01	7.3704E+01	9.3744E+01
A	4.9553E+00	5.5518E+00	5.9060E+00
S	1.1779E+00	1.1938E+00	1.2194E+00
Z	1.0456E+00	1.1209E+00	1.1787E+00
GAME	7.0953E-01	6.9822E-01	6.9758E-01
U	9.6412E+00	3.0021E+00	2.6505E+00

SPECIES	MOLE FRACTIONS		
E-	4.3584E-02	1.0789E-01	1.5158E-01
A	9.1283E-01	7.8422E-01	6.9684E-01
A+	4.3584E-02	1.0789E-01	1.5158E-01
A++	4.9533E-10	3.3608E-08	1.7523E-07
A+++	3.2609E-25	7.4556E-21	3.7022E-19
A++++	1.0724E-49	4.6870E-41	8.3409E-38
AV	2.7473E-81	2.9308E-68	6.3934E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3884E+02	1.1643E+03	1.8119E+03
T	3.5155E+01	4.2174E+01	4.5069E+01
RHO	6.3200E+00	2.3436E+01	3.2346E+01
H	5.6084E+01	9.3242E+01	1.1560E+02
A	5.1395E+00	5.8849E+00	6.2549E+00
S	1.1982E+00	1.2224E+00	1.2516E+00
Z	1.0750E+00	1.1780E+00	1.2429E+00
GAME	6.9898E-01	6.9711E-01	6.9842E-01
U	1.0961E+01	2.9456E+00	2.6635E+00

SPECIES	MOLE FRACTIONS		
E-	6.9745E-02	1.5109E-01	1.9545E-01
A	8.6051E-01	6.9782E-01	6.0910E-01
A+	6.9745E-02	1.5109E-01	1.9545E-01
A++	3.0751E-09	1.6286E-07	6.3850E-07
A+++	2.0470E-23	2.9902E-19	7.7878E-18
A++++	4.6771E-46	5.3416E-38	2.6637E-35
AV	2.2541E-76	3.0364E-63	6.6584E-59
AVI	0.	0.	3.4579E-89
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 100 N/m^2

P1 = 1.00E+02 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6502E+02	1.3960E+03	2.1263E+03
T	3.6068E+01	4.3490E+01	4.6351E+01
RHO	6.7322E+00	2.6553E+01	3.5916E+01
H	6.1639E+01	1.0373E+02	1.2726E+02
A	5.2350E+00	6.0550E+00	6.4341E+00
S	1.2091E+00	1.2379E+00	1.2687E+00
Z	1.0914E+00	1.2089E+00	1.2772E+00
GAME	6.9616E-01	6.9736E-01	6.9928E-01
U	1.1615E+01	2.9370E+00	2.6667E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.3766E-02	1.7277E-01	2.1705E-01
A	8.3247E-01	6.5446E-01	5.6589E-01
A+	8.3766E-02	1.7277E-01	2.1705E-01
A++	6.4134E-09	3.1795E-07	1.1318E-06
A+++	1.0585E-22	1.4371E-18	3.0401E-17
A++++	9.5421E-45	1.0192E-36	3.5975E-34
AV	2.5057E-74	3.1071E-61	4.8095E-57
AVI	0.	0.	2.7134E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2130E+02	1.9407E+03	2.8649E+03
T	3.7730E+01	4.6032E+01	4.8923E+01
RHO	7.5566E+00	3.3064E+01	4.3335E+01
H	7.3507E+01	1.2620E+02	1.5254E+02
A	5.4282E+00	6.4043E+00	6.8109E+00
S	1.2321E+00	1.2710E+00	1.3053E+00
Z	1.1269E+00	1.2751E+00	1.3513E+00
GAME	6.9300E-01	6.9878E-01	7.0168E-01
U	1.2917E+01	2.9622E+00	2.7196E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.1264E-01	2.1574E-01	2.5999E-01
A	7.7472E-01	5.6852E-01	4.8032E-01
A+	1.1264E-01	2.1574E-01	2.5998E-01
A++	2.2032E-08	1.0370E-06	3.2702E-06
A+++	1.7101E-21	2.3654E-17	3.8192E-16
A++++	1.4620E-42	2.0872E-34	4.3449E-32
AV	4.3905E-71	1.7418E-57	1.1009E-53
AVI	0.	3.8204E-87	2.4614E-81
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9268E+02	1.6564E+03	2.4814E+03
T	3.6920E+01	4.4780E+01	4.7646E+01
RHO	7.1503E+00	2.9797E+01	3.9644E+01
H	6.7456E+01	1.1477E+02	1.3968E+02
A	5.3309E+00	6.2288E+00	6.6211E+00
S	1.2203E+00	1.2542E+00	1.2868E+00
Z	1.1087E+00	1.2414E+00	1.3137E+00
GAME	6.9428E-01	6.9795E-01	7.0038E-01
U	1.2274E+01	2.9501E+00	2.6902E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	9.8016E-02	1.9445E-01	2.3879E-01
A	8.0397E-01	6.1109E-01	5.2242E-01
A+	9.8016E-02	1.9445E-01	2.3879E-01
A++	1.2252E-08	5.8898E-07	1.9569E-06
A+++	4.5118E-22	6.1975E-18	1.1205E-16
A++++	1.1993E-43	1.6767E-35	4.2716E-33
AV	1.0917E-72	3.2420E-59	2.6259E-55
AVI	0.	0.	1.0062E-83
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5116E+02	2.2525E+03	3.2833E+03
T	3.8505E+01	4.7268E+01	5.0204E+01
RHO	7.9572E+00	3.6373E+01	4.7035E+01
H	7.9809E+01	1.3810E+02	1.6595E+02
A	5.5269E+00	6.5832E+00	7.0062E+00
S	1.2443E+00	1.2885E+00	1.3245E+00
Z	1.1461E+00	1.3102E+00	1.3904E+00
GAME	6.9217E-01	6.9983E-01	7.0320E-01
U	1.3556E+01	2.9800E+00	2.7536E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.2750E-01	2.3673E-01	2.8079E-01
A	7.4501E-01	5.2654E-01	4.3843E-01
A+	1.2750E-01	2.3673E-01	2.8078E-01
A++	3.7672E-08	1.7624E-06	5.3475E-06
A+++	5.8219E-21	8.3813E-17	1.2402E-15
A++++	1.4923E-41	2.3332E-33	4.0215E-31
AV	7.8174E-70	9.2394E-56	3.9431E-52
AVI	0.	1.9700E-84	4.7132E-79
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8225E+02	2.5958E+03	3.7371E+03
T	3.9251E+01	4.8501E+01	5.1500E+01
RHO	8.3507E+00	3.9744E+01	5.0713E+01
H	8.6364E+01	1.5053E+02	1.7992E+02
A	5.6268E+00	6.7668E+00	7.2075E+00
S	1.2570E+00	1.3065E+00	1.3442E+00
Z	1.1662E+00	1.3466E+00	1.4309E+00
GAME	6.9167E-01	7.0108E-01	7.0495E-01
U	1.4192E+01	2.9854E+00	2.7923E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4252E-01	2.5741E-01	3.0114E-01
A	7.1496E-01	4.8519E-01	3.9773E-01
A+	1.4252E-01	2.5740E-01	3.0112E-01
A++	6.1813E-08	2.9153E-06	8.6024E-06
A+++	1.8149E-20	2.7837E-16	3.8853E-15
A++++	1.3119E-40	2.2356E-32	3.4700E-30
AV	1.4919E-68	3.3106E-54	1.2591E-50
AVI	0.	2.8163E-82	7.5993E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4812E+02	3.3614E+03	4.7526E+03
T	4.0678E+01	5.0961E+01	5.4174E+01
RHO	9.1120E+00	4.6347E+01	5.7874E+01
H	1.0023E+02	1.7676E+02	2.0957E+02
A	5.8312E+00	7.1463E+00	7.6322E+00
S	1.2836E+00	1.3441E+00	1.3853E+00
Z	1.2090E+00	1.4232E+00	1.5159E+00
GAME	6.9140E-01	7.0416E-01	7.0932E-01
U	1.5455E+01	3.0427E+00	2.8848E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.7285E-01	2.9734E-01	3.4032E-01
A	6.5429E-01	4.0533E-01	3.1939E-01
A+	1.7285E-01	2.9733E-01	3.4027E-01
A++	1.5109E-07	7.4625E-06	2.1621E-05
A+++	1.4377E-19	2.6507E-15	3.5771E-14
A++++	7.2118E-39	1.5807E-30	2.2478E-28
AV	6.9169E-65	3.1328E-51	9.8792E-48
AVI	0.	6.7534E-78	1.2369E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1457E+02	2.9646E+03	4.2267E+03
T	3.9974E+01	4.9728E+01	5.2819E+01
RHO	8.7360E+00	4.3066E+01	5.4336E+01
H	9.3170E+01	1.6341E+02	1.9446E+02
A	5.7282E+00	6.9542E+00	7.4158E+00
S	1.2701E+00	1.3250E+00	1.3645E+00
Z	1.1872E+00	1.3843E+00	1.4727E+00
GAME	6.9144E-01	7.0252E-01	7.0697E-01
U	1.4825E+01	3.0112E+00	2.8359E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.5766E-01	2.7761E-01	3.2100E-01
A	6.8469E-01	4.4478E-01	3.5802E-01
A+	1.5766E-01	2.7760E-01	3.2097E-01
A++	9.8035E-08	4.7068E-06	1.3680E-05
A+++	5.2773E-20	8.7903E-16	1.1848E-14
A++++	1.0616E-39	1.9997E-31	2.8080E-29
AV	2.6536E-66	1.2108E-52	3.4937E-49
AVI	0.	7.6974E-80	9.0670E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8315E+02	3.7922E+03	5.3229E+03
T	4.1368E+01	5.2221E+01	5.5593E+01
RHO	9.4826E+00	4.9621E+01	6.1354E+01
H	1.0755E+02	1.9070E+02	2.2539E+02
A	5.9359E+00	7.3457E+00	7.8601E+00
S	1.2974E+00	1.3637E+00	1.4067E+00
Z	1.2317E+00	1.4635E+00	1.5606E+00
GAME	6.9154E-01	7.0605E-01	7.1212E-01
U	1.6091E+01	3.0795E+00	2.9392E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.8808E-01	3.1670E-01	3.5922E-01
A	6.2383E-01	3.6662E-01	2.8160E-01
A+	1.8808E-01	3.1667E-01	3.5915E-01
A++	2.2742E-07	1.1728E-05	3.4272E-05
A+++	3.7069E-19	7.8967E-15	1.0903E-13
A++++	4.3152E-38	1.2634E-29	1.8259E-27
AV	1.2617E-63	9.5532E-50	2.8536E-46
AVI	0.	1.3883E-75	1.7407E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.1895E+02	4.2403E+03	5.9174E+03
T	4.2042E+01	5.3484E+01	5.7059E+01
RHO	9.8347E+00	5.2702E+01	6.4579E+01
H	1.1511E+02	2.0493E+02	2.4160E+02
A	6.0420E+00	7.5485E+00	8.0966E+00
S	1.3117E+00	1.3836E+00	1.4283E+00
Z	1.2551E+00	1.5043E+00	1.6059E+00
GAME	6.9182E-01	7.0820E-01	7.1544E-01
U	1.6710E+01	3.1228E+00	3.0001E+00

SPECIES	MOLE FRACTIONS		
E-	2.0325E-01	3.3526E-01	3.7728E-01
A	5.9349E-01	3.2950E-01	2.4549E-01
A+	2.0325E-01	3.3522E-01	3.7717E-01
A++	3.3476E-07	1.8147E-05	5.4241E-05
A+++	9.0666E-19	2.2574E-14	3.3150E-13
A++++	2.3033E-37	9.0307E-29	1.4663E-26
AV	1.8603E-62	2.1748E-48	8.0077E-45
AVI	0.	1.2537E-73	2.2981E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.9421E+02	5.2163E+03	7.2181E+03
T	4.3364E+01	5.6132E+01	6.0319E+01
RHO	1.0505E+01	5.8483E+01	7.0419E+01
H	1.3098E+02	2.3481E+02	2.7590E+02
A	6.2597E+00	7.9780E+00	8.6186E+00
S	1.3413E+00	1.4244E+00	1.4727E+00
Z	1.3044E+00	1.5890E+00	1.6994E+00
GAME	6.9272E-01	7.1361E-01	7.2466E-01
U	1.7942E+01	3.2277E+00	3.1451E+00

SPECIES	MOLE FRACTIONS		
E-	2.3337E-01	3.7067E-01	4.1154E-01
A	5.3326E-01	2.5869E-01	1.7706E-01
A+	2.3337E-01	3.7059E-01	4.1126E-01
A++	6.8982E-07	4.3184E-05	1.4226E-04
A+++	4.8258E-18	1.8386E-13	3.4405E-12
A++++	4.9756E-36	4.6600E-27	1.1498E-24
AV	1.9709E-60	1.2349E-45	8.3809E-42
AVI	0.	1.4493E-69	5.8497E-64
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.5597E+02	4.7152E+03	6.5490E+03
T	4.2707E+01	5.4783E+01	5.8622E+01
RHO	1.0176E+01	5.5665E+01	6.7617E+01
H	1.2292E+02	2.1963E+02	2.5843E+02
A	6.1498E+00	7.7588E+00	8.3479E+00
S	1.3263E+00	1.4038E+00	1.4503E+00
Z	1.2794E+00	1.5462E+00	1.6522E+00
GAME	6.9221E-01	7.1068E-01	7.1951E-01
U	1.7327E+01	3.1722E+00	3.0682E+00

SPECIES	MOLE FRACTIONS		
E-	2.1836E-01	3.5326E-01	3.9474E-01
A	5.6328E-01	2.9350E-01	2.1062E-01
A+	2.1836E-01	3.5321E-01	3.9456E-01
A++	4.8414E-07	2.7977E-05	8.6899E-05
A+++	2.1272E-18	6.4171E-14	1.0388E-12
A++++	1.1141E-36	6.3951E-28	1.2327E-25
AV	2.1820E-61	4.8866E-47	2.3635E-43
AVI	0.	1.0566E-71	3.1072E-66
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.3409E+02	5.7535E+03	7.9395E+03
T	4.4019E+01	5.7567E+01	6.2228E+01
RHO	1.0828E+01	6.1203E+01	7.3005E+01
H	1.3932E+02	2.5063E+02	2.9426E+02
A	6.3718E+00	8.2109E+00	8.9189E+00
S	1.3566E+00	1.4455E+00	1.4956E+00
Z	1.3303E+00	1.6330E+00	1.7476E+00
GAME	6.9333E-01	7.1717E-01	7.3144E-01
U	1.8568E+01	3.2900E+00	3.2334E+00

SPECIES	MOLE FRACTIONS		
E-	2.4829E-01	3.8763E-01	4.2780E-01
A	5.0343E-01	2.2481E-01	1.4464E-01
A+	2.4828E-01	3.8750E-01	4.2732E-01
A++	9.7160E-07	6.7404E-05	2.4234E-04
A+++	1.0713E-17	5.4079E-13	1.2559E-11
A++++	2.1544E-35	3.5022E-26	1.2690E-23
AV	1.5552E-59	3.0991E-44	3.7851E-40
AVI	2.4925E-89	1.6178E-67	1.4811E-61
AVII	0.	0.	9.2449E-91
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.7491E+02	6.3079E+03	8.6945E+03
T	4.4670E+01	5.9081E+01	6.4408E+01
RHO	1.1135E+01	6.3653E+01	7.5161E+01
H	1.4790E+02	2.6680E+02	3.1332E+02
A	6.4860E+00	8.4556E+00	9.2554E+00
S	1.3722E+00	1.4667E+00	1.5187E+00
Z	1.3569E+00	1.6773E+00	1.7960E+00
GAME	6.9404E-01	7.2149E-01	7.4053E-01
U	1.9183E+01	3.3608E+00	3.3431E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6303E-01	4.0380E-01	4.4322E-01
A	4.7394E-01	1.9250E-01	1.1400E-01
A+	2.6303E-01	4.0359E-01	4.4235E-01
A++	1.3537E-06	1.0618E-04	4.3417E-04
A+++	2.3424E-17	1.6279E-12	5.1907E-11
A++++	9.7017E-35	2.7284E-25	1.7493E-22
AV	2.2963E-58	8.1466E-43	2.4210E-38
AVI	4.0857E-89	1.8958E-65	6.2321E-59
AVII	0.	0.	5.1625E-87
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.6015E+02	7.4813E+03	1.0324E+04
T	4.5974E+01	6.2531E+01	7.0154E+01
RHO	1.1707E+01	6.7724E+01	7.7907E+01
H	1.6581E+02	3.0050E+02	3.5375E+02
A	6.7213E+00	9.0038E+00	1.0088E+01
S	1.4045E+00	1.5095E+00	1.5653E+00
Z	1.4124E+00	1.7666E+00	1.8890E+00
GAME	6.9575E-01	7.3387E-01	7.6790E-01
U	2.0409E+01	3.5312E+00	3.6080E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9197E-01	4.3394E-01	4.7062E-01
A	4.1606E-01	1.3240E-01	6.0544E-02
A+	2.9197E-01	4.3337E-01	4.6705E-01
A++	2.5630E-06	2.8315E-04	1.7842E-03
A+++	1.0590E-16	1.7604E-11	1.6281E-09
A++++	1.7148E-33	2.2414E-23	9.8316E-20
AV	2.8837E-56	8.7084E-40	5.2452E-34
AVI	1.9104E-85	4.4386E-61	1.1560E-52
AVII	0.	3.0288E-90	4.0074E-78
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.1693E+02	6.8842E+03	9.4816E+03
T	4.5321E+01	6.0720E+01	6.6955E+01
RHO	1.1428E+01	6.5842E+01	7.6837E+01
H	1.5673E+02	2.8343E+02	3.3287E+02
A	6.6024E+00	8.7180E+00	9.6370E+00
S	1.3882E+00	1.4880E+00	1.5417E+00
Z	1.3843E+00	1.7219E+00	1.8430E+00
GAME	6.9484E-01	7.2691E-01	7.5262E-01
U	1.9797E+01	3.4411E+00	3.4471E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7760E-01	4.1926E-01	4.5741E-01
A	4.4480E-01	1.6165E-01	8.6008E-02
A+	2.7760E-01	4.1892E-01	4.5575E-01
A++	1.8699E-06	1.7074E-04	8.3001E-04
A+++	5.0370E-17	5.1588E-12	2.5156E-10
A++++	4.2474E-34	2.3277E-24	3.1940E-21
AV	3.0364E-57	2.4653E-41	2.3668E-36
AVI	6.7296E-87	2.7180E-63	4.6736E-56
AVII	0.	0.	5.9677E-83
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.0457E+02	8.0933E+03	1.1207E+04
T	4.6631E+01	6.4580E+01	7.4065E+01
RHO	1.1972E+01	6.9213E+01	7.8383E+01
H	1.7515E+02	3.1801E+02	3.7544E+02
A	6.8429E+00	9.3209E+00	1.0551E+01
S	1.4211E+00	1.5309E+00	1.5887E+00
Z	1.4412E+00	1.8107E+00	1.9305E+00
GAME	6.9676E-01	7.4298E-01	7.7859E-01
U	2.1020E+01	3.6409E+00	3.7832E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0613E-01	4.4772E-01	4.8199E-01
A	3.8775E-01	1.0505E-01	4.0236E-02
A+	3.0612E-01	4.4674E-01	4.7357E-01
A++	3.4925E-06	4.9092E-04	4.2112E-03
A+++	2.1926E-16	6.7195E-11	1.3354E-08
A++++	6.6080E-33	2.6715E-22	4.6291E-18
AV	2.4162E-55	4.4963E-38	2.2408E-31
AVI	4.0891E-84	1.4615E-58	7.2351E-49
AVII	0.	1.6568E-86	9.5533E-73
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.5017E+02	8.7187E+03	1.2130E+04
T	4.7296E+01	6.6964E+01	7.8386E+01
RHO	1.2222E+01	7.0248E+01	7.8681E+01
H	1.8475E+02	3.3593E+02	3.9798E+02
A	6.9674E+00	9.6790E+00	1.0898E+01
S	1.4379E+00	1.5523E+00	1.6116E+00
Z	1.4707E+00	1.8534E+00	1.9668E+00
GAME	6.9789E-01	7.5482E-01	7.7032E-01
U	2.1628E+01	3.7681E+00	3.9746E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2005E-01	4.6046E-01	4.9155E-01
A	3.5990E-01	7.9994E-02	2.6713E-02
A+	3.2004E-01	4.5865E-01	4.7193E-01
A++	4.7397E-06	9.0492E-04	9.8092E-03
A+++	4.4988E-16	2.9771E-10	1.0823E-07
A++++	2.4760E-32	4.1225E-21	2.1380E-16
AV	1.8233E-54	3.3680E-36	9.2843E-29
AVI	5.5869E-83	7.5173E-56	4.3151E-45
AVII	0.	1.1701E-82	2.0943E-67
AVIII	0.	0.	0.

P1 = 1.00E+02 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4491E+02	9.9890E+03	1.4017E+04
T	4.8661E+01	7.3160E+01	8.5596E+01
RHO	1.2677E+01	7.0757E+01	8.0584E+01
H	2.0469E+02	3.7297E+02	4.4326E+02
A	7.2261E+00	1.0485E+01	1.1325E+01
S	1.4724E+00	1.5941E+00	1.6542E+00
Z	1.5317E+00	1.9296E+00	2.0321E+00
GAME	7.0057E-01	7.7874E-01	7.3733E-01
U	2.2839E+01	4.0970E+00	4.2494E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.4714E-01	4.8177E-01	5.0789E-01
A	3.0574E-01	4.0296E-02	1.5147E-02
A+	3.4712E-01	4.7411E-01	4.4603E-01
A++	8.6842E-06	3.8297E-03	3.0928E-02
A+++	1.8891E-15	1.0088E-08	2.0293E-06
A++++	3.5200E-31	2.5930E-18	4.8357E-14
AV	1.0675E-52	8.3379E-32	4.8975E-25
AVI	9.4250E-81	1.5674E-49	1.0568E-39
AVII	0.	8.7680E-74	9.3334E-60
AVIII	0.	0.	3.0678E-84

P1 = 1.00E+02 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.9695E+02	9.3517E+03	1.3071E+04
T	4.7972E+01	6.9803E+01	8.2322E+01
RHO	1.2458E+01	7.0752E+01	7.9396E+01
H	1.9459E+02	3.5426E+02	4.2069E+02
A	7.0950E+00	1.0080E+01	1.1123E+01
S	1.4550E+00	1.5734E+00	1.6334E+00
Z	1.5009E+00	1.8935E+00	1.9998E+00
GAME	6.9915E-01	7.6870E-01	7.5158E-01
U	2.2234E+01	3.9199E+00	4.1362E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3373E-01	4.7189E-01	4.9995E-01
A	3.3256E-01	5.8019E-02	1.9252E-02
A+	3.3371E-01	4.6829E-01	4.6165E-01
A++	6.4174E-06	1.7999E-03	1.9147E-02
A+++	9.2056E-16	1.5900E-09	5.8487E-07
A++++	9.2428E-32	8.8320E-20	4.7823E-15
AV	1.3276E-53	4.1031E-34	1.2491E-26
AVI	1.3600E-82	7.2421E-53	5.1599E-42
AVII	0.	1.5138E-78	4.8364E-63
AVIII	0.	0.	1.1767E-88

P1 = 1.00E+02 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.9403E+02	1.0635E+04	1.4995E+04
T	4.9369E+01	7.6838E+01	8.8454E+01
RHO	1.2881E+01	7.0568E+01	8.2054E+01
H	2.1505E+02	3.9210E+02	4.6666E+02
A	7.3612E+00	1.0802E+01	1.1537E+01
S	1.4900E+00	1.6143E+00	1.6751E+00
Z	1.5632E+00	1.9613E+00	2.0660E+00
GAME	7.0217E-01	7.7423E-01	7.2842E-01
U	2.3441E+01	4.2841E+00	4.3796E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6027E-01	4.9013E-01	5.1596E-01
A	2.7947E-01	2.7853E-02	1.2538E-02
A+	3.6025E-01	4.7390E-01	4.2704E-01
A++	1.1766E-05	8.1152E-03	4.4452E-02
A+++	3.9043E-15	6.4305E-08	5.3721E-06
A++++	1.3831E-30	7.7081E-17	3.0200E-13
AV	1.0296E-51	1.7446E-29	9.1192E-24
AVI	1.4198E-79	3.6323E-46	7.5107E-38
AVII	0.	5.9180E-69	4.1395E-57
AVIII	0.	0.	1.1748E-80

TABLE I.- Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0443E+03	1.1303E+04	1.5966E+04
T	5.0096E+01	8.0378E+01	9.0901E+01
RHO	1.3070E+01	7.0648E+01	8.3650E+01
H	2.2565E+02	4.1171E+02	4.8966E+02
A	7.4998E+00	1.1012E+01	1.1750E+01
S	1.5077E+00	1.6340E+00	1.6951E+00
Z	1.5950E+00	1.9904E+00	2.0997E+00
GAME	7.0397E-01	7.5795E-01	7.2335E-01
U	2.4041E+01	4.4536E+00	4.4513E+00

SPECIES	MOLE FRACTIONS		
E-	3.7302E-01	4.9759E-01	5.2375E-01
A	2.5397E-01	2.0242E-02	1.0797E-02
A+	3.7299E-01	4.6675E-01	4.0717E-01
A++	1.5958E-05	1.5419E-02	5.8275E-02
A+++	8.1130E-15	3.2040E-07	1.1428E-05
A++++	5.5401E-30	1.4709E-15	1.2710E-12
AV	1.0838E-50	1.8102E-27	9.1483E-23
AVI	2.3648E-77	2.9543E-43	2.1768E-36
AVII	0.	7.7940E-65	5.0443E-55
AVIII	0.	0.	7.4989E-78

P1 = 1.00E+02 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0957E+03	1.1994E+04	1.6950E+04
T	5.0860E+01	8.3501E+01	9.3150E+01
RHO	1.3235E+01	7.1132E+01	8.5236E+01
H	2.3651E+02	4.3188E+02	5.1328E+02
A	7.6455E+00	1.1190E+01	1.1969E+01
S	1.5258E+00	1.6534E+00	1.7152E+00
Z	1.6276E+00	2.0194E+00	2.1348E+00
GAME	7.0607E-01	7.4256E-01	7.2037E-01
U	2.4640E+01	4.5890E+00	4.5283E+00

SPECIES	MOLE FRACTIONS		
E-	3.8566E-01	5.0481E-01	5.3158E-01
A	2.2870E-01	1.5741E-02	9.4713E-03
A+	3.8562E-01	4.5410E-01	3.8634E-01
A++	2.1842E-05	2.5350E-02	7.2586E-02
A+++	1.7200E-14	1.1431E-06	2.1605E-05
A++++	2.2458E-29	1.5440E-14	4.3372E-12
AV	1.0084E-49	7.3923E-26	6.6445E-22
AVI	6.1413E-76	6.2210E-41	3.9994E-35
AVII	0.	1.4500E-61	3.2909E-53
AVIII	0.	9.3664E-87	2.1518E-75

P1 = 1.00E+02 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1483E+03	1.2708E+04	1.7946E+04
T	5.1654E+01	8.6206E+01	9.5246E+01
RHO	1.3386E+01	7.1935E+01	8.6797E+01
H	2.4763E+02	4.5253E+02	5.3730E+02
A	7.7958E+00	1.1373E+01	1.2190E+01
S	1.5440E+00	1.6726E+00	1.7354E+00
Z	1.6607E+00	2.0493E+00	2.1708E+00
GAME	7.0849E-01	7.3212E-01	7.1875E-01
U	2.5236E+01	4.7029E+00	4.6001E+00

SPECIES	MOLE FRACTIONS		
E-	3.9783E-01	5.1203E-01	5.3934E-01
A	2.0436E-01	1.2925E-02	8.4137E-03
A+	3.9777E-01	4.3805E-01	3.6520E-01
A++	3.0030E-05	3.6985E-02	8.7014E-02
A+++	3.6882E-14	3.0902E-06	3.7394E-05
A++++	9.2455E-29	9.9084E-14	1.2633E-11
AV	9.5098E-49	1.4254E-24	3.7634E-21
AVI	1.5974E-74	4.6443E-39	5.1083E-34
AVII	0.	7.0338E-59	1.2600E-51
AVIII	0.	4.4252E-83	2.8854E-73

P1 = 1.00E+02 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2020E+03	1.3437E+04	1.8943E+04
T	5.2500E+01	8.8594E+01	9.7236E+01
RHO	1.3513E+01	7.2908E+01	8.8248E+01
H	2.5899E+02	4.7371E+02	5.6178E+02
A	7.9545E+00	1.1564E+01	1.2415E+01
S	1.5624E+00	1.6917E+00	1.7556E+00
Z	1.6943E+00	2.0804E+00	2.2076E+00
GAME	7.1136E-01	7.2561E-01	7.1802E-01
U	2.5830E+01	4.7964E+00	4.6687E+00

SPECIES	MOLE FRACTIONS		
E-	4.0977E-01	5.1931E-01	5.4703E-01
A	1.8050E-01	1.1005E-02	7.5258E-03
A+	4.0969E-01	4.2005E-01	3.4393E-01
A++	4.1835E-05	4.9619E-02	1.0146E-01
A+++	8.1502E-14	6.8715E-06	6.0781E-05
A++++	3.9357E-28	4.4773E-13	3.2917E-11
AV	8.4576E-48	1.5831E-23	1.7969E-20
AVI	1.6908E-73	1.5413E-37	5.1420E-33
AVII	0.	1.0223E-56	3.5165E-50
AVIII	0.	3.5140E-80	2.6754E-71

TABLE I.- Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2567E+03	1.4177E+04	1.9942E+04
T	5.3403E+01	9.0766E+01	9.9156E+01
RHO	1.3618E+01	7.3929E+01	8.9569E+01
H	2.7061E+02	4.9536E+02	5.8677E+02
A	8.1217E+00	1.1763E+01	1.2643E+01
S	1.5809E+00	1.7110E+00	1.7760E+00
Z	1.7280E+00	2.1127E+00	2.2454E+00
GAME	7.1480E-01	7.2159E-01	7.1792E-01
U	2.6420E+01	4.8744E+00	4.7400E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.2130E-01	5.2667E-01	5.5464E-01
A	1.5745E-01	9.5820E-03	6.7540E-03
A+	4.2119E-01	4.0084E-01	3.2267E-01
A++	5.9111E-05	6.2855E-02	1.1585E-01
A+++	1.8712E-13	1.3401E-05	9.4327E-05
A++++	1.8302E-27	1.6025E-12	7.9025E-11
AV	9.7081E-47	1.2281E-22	7.5562E-20
AVI	7.2371E-72	3.0821E-36	4.3145E-32
AVII	0.	7.4004E-55	7.5797E-49
AVIII	0.	1.1323E-77	1.7395E-69

P1 = 1.00E+02 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3693E+03	1.5642E+04	2.1887E+04
T	5.5461E+01	9.4642E+01	1.0284E+02
RHO	1.3747E+01	7.5812E+01	9.1633E+01
H	2.9459E+02	5.3995E+02	6.3786E+02
A	8.4940E+00	1.2170E+01	1.3105E+01
S	1.6181E+00	1.7498E+00	1.8172E+00
Z	1.7959E+00	2.1801E+00	2.3226E+00
GAME	7.2435E-01	7.1786E-01	7.1905E-01
U	2.7589E+01	5.0105E+00	4.8683E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4319E-01	5.4130E-01	5.6945E-01
A	1.1376E-01	7.5555E-03	5.4480E-03
A+	4.4293E-01	3.6103E-01	2.8095E-01
A++	1.2644E-04	9.0077E-02	1.4395E-01
A+++	1.1790E-12	3.9071E-05	2.0464E-04
A++++	5.6571E-26	1.2757E-11	3.7799E-10
AV	2.5025E-44	3.5268E-21	9.9534E-19
AVI	4.2917E-68	4.2638E-34	1.9674E-30
AVII	0.	8.6686E-52	1.8474E-46
AVIII	0.	1.5812E-73	2.9079E-66

P1 = 1.00E+02 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3125E+03	1.4914E+04	2.0924E+04
T	5.4382E+01	9.2766E+01	1.0101E+02
RHO	1.3698E+01	7.4920E+01	9.0709E+01
H	2.8248E+02	5.1744E+02	6.1206E+02
A	8.3004E+00	1.1965E+01	1.2872E+01
S	1.5995E+00	1.7303E+00	1.7965E+00
Z	1.7620E+00	2.1459E+00	2.2836E+00
GAME	7.1903E-01	7.1919E-01	7.1830E-01
U	2.7007E+01	4.9456E+00	4.8021E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3245E-01	5.3400E-01	5.6210E-01
A	1.3518E-01	8.4734E-03	6.0708E-03
A+	4.3228E-01	3.8108E-01	3.0171E-01
A++	8.5291E-05	7.6427E-02	1.2998E-01
A+++	4.5476E-13	2.3698E-05	1.4082E-04
A++++	9.6831E-27	4.8136E-12	1.7694E-10
AV	1.5114E-45	7.2535E-22	2.8439E-19
AVI	7.1190E-70	4.1654E-35	3.0694E-31
AVII	0.	3.0762E-53	1.2755E-47
AVIII	0.	1.7283E-75	7.9073E-68

P1 = 1.00E+02 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4270E+03	1.6346E+04	2.2812E+04
T	5.6675E+01	9.6422E+01	1.0463E+02
RHO	1.3762E+01	7.6536E+01	9.2293E+01
H	3.0696E+02	5.6283E+02	6.6407E+02
A	8.7077E+00	1.2377E+01	1.3341E+01
S	1.6368E+00	1.7694E+00	1.8381E+00
Z	1.8296E+00	2.2150E+00	2.3622E+00
GAME	7.3123E-01	7.1724E-01	7.2012E-01
U	2.8166E+01	5.0727E+00	4.9349E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5344E-01	5.4853E-01	5.7667E-01
A	9.3310E-02	6.7734E-03	4.8747E-03
A+	4.5305E-01	3.4091E-01	2.6055E-01
A++	1.9432E-04	1.0372E-01	1.5762E-01
A+++	3.3233E-12	6.1079E-05	2.9072E-04
A++++	3.7699E-25	3.0738E-11	7.7639E-10
AV	4.8331E-43	1.4782E-20	3.2828E-18
AVI	2.8873E-66	3.5266E-33	1.1643E-29
AVII	0.	1.8086E-50	2.4341E-45
AVIII	0.	9.6947E-72	9.9218E-65

TABLE I. - Continued

p_1 = 100 N/m^2

P1 = 1.00E+02 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4856E+03	1.7012E+04	2.3678E+04
T	5.8073E+01	9.8124E+01	1.0642E+02
RHO	1.3733E+01	7.7031E+01	9.2618E+01
H	3.1957E+02	5.8605E+02	6.9068E+02
A	8.9491E+00	1.2585E+01	1.3581E+01
S	1.6554E+00	1.7893E+00	1.8594E+00
Z	1.8627E+00	2.2506E+00	2.4024E+00
GAME	7.4036E-01	7.1716E-01	7.2147E-01
U	2.8737E+01	5.1321E+00	5.0030E+00

SPECIES	MOLE FRACTIONS		
E-	4.6314E-01	5.5568E-01	5.8375E-01
A	7.4024E-02	6.0846E-03	4.3390E-03
A+	4.6252E-01	3.2088E-01	2.4049E-01
A++	3.1385E-04	1.1726E-01	1.7102E-01
A+++	1.0591E-11	9.1620E-05	4.0603E-04
A++++	3.1346E-24	6.8740E-11	1.5484E-09
AV	1.2918E-41	5.5067E-20	1.0333E-17
AVI	2.6406E-64	2.4548E-32	6.4236E-29
AVII	0.	2.9346E-49	2.8733E-44
AVIII	0.	4.1848E-70	2.8456E-63

P1 = 1.00E+02 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6046E+03	1.8119E+04	2.5082E+04
T	6.1785E+01	1.0132E+02	1.0995E+02
RHO	1.3492E+01	7.6963E+01	9.1821E+01
H	3.4550E+02	6.3329E+02	7.4461E+02
A	9.5617E+00	1.3002E+01	1.4072E+01
S	1.6926E+00	1.8300E+00	1.9032E+00
Z	1.9250E+00	2.3236E+00	2.4845E+00
GAME	7.6870E-01	7.1809E-01	7.2490E-01
U	2.9847E+01	5.2406E+00	5.1345E+00

SPECIES	MOLE FRACTIONS		
E-	4.8051E-01	5.6963E-01	5.9751E-01
A	4.0013E-02	4.8905E-03	3.3544E-03
A+	4.7844E-01	2.8151E-01	2.0154E-01
A++	1.0364E-03	1.4378E-01	1.9684E-01
A+++	1.9308E-10	1.8778E-04	7.6295E-04
A++++	6.4853E-22	2.9008E-10	5.7729E-09
AV	5.9987E-38	5.8421E-19	9.2247E-17
AVI	6.7643E-59	8.0640E-31	1.6695E-27
AVII	1.0483E-87	4.4608E-47	3.1415E-42
AVIII	0.	3.7862E-67	1.6484E-60

P1 = 1.00E+02 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5448E+03	1.7617E+04	2.4457E+04
T	5.9728E+01	9.9757E+01	1.0818E+02
RHO	1.3652E+01	7.7224E+01	9.2541E+01
H	3.3241E+02	6.0956E+02	7.1760E+02
A	9.2285E+00	1.2794E+01	1.3824E+01
S	1.6739E+00	1.8095E+00	1.8808E+00
Z	1.8945E+00	2.2868E+00	2.4429E+00
GAME	7.5263E-01	7.1747E-01	7.2306E-01
U	2.9298E+01	5.1878E+00	5.0721E+00

SPECIES	MOLE FRACTIONS		
E-	4.7217E-01	5.6272E-01	5.9065E-01
A	5.6205E-02	5.4636E-03	3.8375E-03
A+	4.7108E-01	3.0106E-01	2.2092E-01
A++	5.4209E-04	1.3063E-01	1.8403E-01
A+++	3.9927E-11	1.3297E-04	5.5860E-04
A++++	3.6008E-23	1.4483E-10	3.0071E-09
AV	6.2305E-40	1.8687E-19	3.1162E-17
AVI	8.5203E-62	1.4958E-31	3.3210E-28
AVII	0.	3.9623E-48	3.0695E-43
AVIII	0.	1.4312E-68	7.0567E-62

P1 = 1.00E+02 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6649E+03	1.8580E+04	2.5679E+04
T	6.4123E+01	1.0285E+02	1.1171E+02
RHO	1.3313E+01	7.6532E+01	9.1027E+01
H	3.5882E+02	6.5721E+02	7.7259E+02
A	9.8976E+00	1.3212E+01	1.4320E+01
S	1.7095E+00	1.8507E+00	1.9250E+00
Z	1.9503E+00	2.3606E+00	2.5253E+00
GAME	7.8334E-01	7.1897E-01	7.2693E-01
U	3.0385E+01	5.2943E+00	5.2344E+00

SPECIES	MOLE FRACTIONS		
E-	4.8725E-01	5.7638E-01	6.0401E-01
A	2.7567E-02	4.3697E-03	2.9210E-03
A+	4.8312E-01	2.6237E-01	1.8316E-01
A++	2.0674E-03	1.5662E-01	2.0888E-01
A+++	1.0389E-09	2.5954E-04	1.0272E-03
A++++	1.4037E-20	5.5925E-10	1.0820E-08
AV	7.4567E-36	1.7202E-18	2.6325E-16
AVI	7.0220E-56	3.9832E-30	7.9647E-27
AVII	1.9252E-83	4.4204E-46	2.9830E-41
AVIII	0.	8.3859E-66	3.4784E-59

TABLE I.- Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7255E+03	1.8912E+04	2.6066E+04
T	6.6989E+01	1.0431E+02	1.1344E+02
RHO	1.3051E+01	7.5604E+01	8.9545E+01
H	3.7236E+02	6.8129E+02	7.9995E+02
A	1.0194E+01	1.3421E+01	1.4569E+01
S	1.7275E+00	1.8717E+00	1.9473E+00
Z	1.9737E+00	2.3981E+00	2.5660E+00
GAME	7.8602E-01	7.2007E-01	7.2913E-01
U	3.0909E+01	5.3438E+00	5.2966E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9335E-01	5.8300E-01	6.1029E-01
A	1.7840E-02	3.8806E-03	2.5141E-03
A+	4.8428E-01	2.4360E-01	1.6548E-01
A++	4.5365E-03	1.6917E-01	2.2035E-01
A+++	7.1070E-09	3.5228E-04	1.3703E-03
A++++	4.7079E-19	1.0422E-09	1.9943E-08
AV	1.8507E-33	4.7930E-18	7.3035E-16
AVI	2.0045E-52	1.8131E-29	3.6384E-26
AVII	1.5399E-78	3.8934E-45	2.6525E-40
AVIII	0.	1.5886E-64	6.7098E-58

P1 = 1.00E+02 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9514E+03	2.0846E+04	2.8566E+04
T	7.5279E+01	1.1004E+02	1.2079E+02
RHO	1.2667E+01	7.4782E+01	8.7215E+01
H	4.2191E+02	7.7082E+02	9.0310E+02
A	1.0599E+01	1.4226E+01	1.5552E+01
S	1.7857E+00	1.9441E+00	2.0246E+00
Z	2.0464E+00	2.5333E+00	2.7115E+00
GAME	7.2917E-01	7.2603E-01	7.3843E-01
U	3.2829E+01	5.5663E+00	5.5719E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1134E-01	6.0526E-01	6.3120E-01
A	6.1309E-03	2.5146E-03	1.3781E-03
A+	4.5373E-01	1.8017E-01	1.0755E-01
A++	2.8800E-02	2.1107E-01	2.5595E-01
A+++	7.3220E-07	9.8553E-04	3.9147E-03
A++++	2.3498E-15	9.0262E-09	1.9840E-07
AV	1.1983E-27	1.7535E-16	3.5432E-14
AVI	4.6318E-44	3.8749E-27	1.2250E-23
AVII	9.2567E-67	8.9678E-42	1.1839E-36
AVIII	0.	5.7978E-60	6.0452E-53

P1 = 1.00E+02 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7876E+03	1.9313E+04	2.6555E+04
T	6.9795E+01	1.0583E+02	1.1529E+02
RHO	1.2843E+01	7.4913E+01	8.8360E+01
H	3.8617E+02	7.0593E+02	8.2808E+02
A	1.0352E+01	1.3638E+01	1.4827E+01
S	1.7445E+00	1.8927E+00	1.9694E+00
Z	1.9942E+00	2.4360E+00	2.6068E+00
GAME	7.6986E-01	7.2143E-01	7.3155E-01
U	3.1439E+01	5.3962E+00	5.3648E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9855E-01	5.8949E-01	6.1638E-01
A	1.2032E-02	3.4400E-03	2.1484E-03
A+	4.8030E-01	2.2512E-01	1.4838E-01
A++	9.1228E-03	1.8148E-01	2.3126E-01
A+++	3.9801E-08	4.7418E-04	1.8287E-03
A++++	1.0914E-17	1.9239E-09	3.7079E-08
AV	2.5053E-31	1.3217E-17	2.0665E-15
AVI	2.2009E-49	8.1651E-29	1.7184E-25
AVII	2.4301E-74	3.3916E-44	2.4809E-39
AVIII	0.	2.9754E-63	1.3872E-56

P1 = 1.00E+02 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1261E+03	2.2915E+04	3.1392E+04
T	7.9109E+01	1.1487E+02	1.2743E+02
RHO	1.2770E+01	7.5774E+01	8.7566E+01
H	4.5935E+02	8.3989E+02	9.8435E+02
A	1.0904E+01	1.4880E+01	1.6328E+01
S	1.8261E+00	1.9947E+00	2.0781E+00
Z	2.1046E+00	2.6325E+00	2.8133E+00
GAME	7.1415E-01	7.3218E-01	7.4367E-01
U	3.4280E+01	5.7857E+00	5.8328E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2485E-01	6.2014E-01	6.4455E-01
A	4.0925E-03	1.7657E-03	8.2056E-04
A+	4.1726E-01	1.3810E-01	7.3233E-02
A++	5.3788E-02	2.3796E-01	2.7287E-01
A+++	3.9176E-06	2.0425E-03	8.5206E-03
A++++	5.5138E-14	4.4056E-08	1.1675E-06
AV	1.8271E-25	2.5621E-15	7.3968E-13
AVI	6.9191E-41	2.1790E-25	1.2080E-21
AVII	3.0642E-62	3.1018E-39	9.2079E-34
AVIII	2.1140E-88	1.6717E-56	5.2201E-49

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3099E+03	2.5266E+04	3.4669E+04
T	8.2190E+01	1.2041E+02	1.3491E+02
RHO	1.2956E+01	7.6841E+01	8.8283E+01
H	4.9843E+02	9.1238E+02	1.0706E+03
A	1.1237E+01	1.5588E+01	1.7080E+01
S	1.8666E+00	2.0448E+00	2.1313E+00
Z	2.1675E+00	2.7308E+00	2.9108E+00
GAME	7.0876E-01	7.3897E-01	7.4287E-01
U	3.5754E+01	6.0419E+00	6.1280E+00

SPECIES	MOLE FRACTIONS		
E-	5.3864E-01	6.3380E-01	6.5645E-01
A	3.0393E-03	1.1611E-03	4.5855E-04
A+	3.7802E-01	1.0053E-01	4.7640E-02
A++	8.0292E-02	2.6024E-01	2.7755E-01
A+++	1.2429E-05	4.2613E-03	1.7895E-02
A++++	5.0816E-13	2.2730E-07	6.7423E-06
AV	6.5438E-24	4.2022E-14	1.5474E-11
AVI	1.3069E-38	1.4781E-23	1.2263E-19
AVII	5.6193E-59	1.4087E-36	7.5424E-31
AVIII	5.6185E-84	6.9497E-53	4.8849E-45

P1 = 1.00E+02 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5018E+03	2.7792E+04	3.8241E+04
T	8.4915E+01	1.2671E+02	1.4245E+02
RHO	1.3188E+01	7.7638E+01	8.9360E+01
H	5.3913E+02	9.8792E+02	1.1609E+03
A	1.1581E+01	1.6315E+01	1.7768E+01
S	1.9074E+00	2.0943E+00	2.1837E+00
Z	2.2340E+00	2.8251E+00	3.0041E+00
GAME	7.0705E-01	7.4363E-01	7.3771E-01
U	3.7236E+01	6.3366E+00	6.4306E+00

SPECIES	MOLE FRACTIONS		
E-	5.5237E-01	6.4603E-01	6.6713E-01
A	2.3622E-03	7.0835E-04	2.5901E-04
A+	3.3821E-01	6.9389E-02	3.1229E-02
A++	1.0703E-01	2.7499E-01	2.6829E-01
A+++	3.0474E-05	8.8826E-03	3.3066E-02
A++++	2.9659E-12	1.2230E-06	3.0932E-05
AV	1.1618E-22	7.5703E-13	2.2617E-10
AVI	9.2041E-37	1.1725E-21	7.4540E-18
AVII	2.7141E-56	8.0402E-34	2.9886E-28
AVIII	2.9138E-80	3.9558E-49	1.7326E-41

P1 = 1.00E+02 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7015E+03	3.0459E+04	4.2015E+04
T	8.7470E+01	1.3353E+02	1.4953E+02
RHO	1.3408E+01	7.8286E+01	9.0736E+01
H	5.8143E+02	1.0665E+03	1.2545E+03
A	1.1936E+01	1.6998E+01	1.8433E+01
S	1.9486E+00	2.1431E+00	2.2352E+00
Z	2.3034E+00	2.9137E+00	3.0968E+00
GAME	7.0717E-01	7.4263E-01	7.3382E-01
U	3.8720E+01	6.6413E+00	6.7137E+00

SPECIES	MOLE FRACTIONS		
E-	5.6586E-01	6.5679E-01	6.7708E-01
A	1.8704E-03	4.1260E-04	1.5402E-04
A+	2.9876E-01	4.6432E-02	2.1208E-02
A++	1.3345E-01	2.7874E-01	2.4890E-01
A+++	6.4599E-05	1.7619E-02	5.2554E-02
A++++	1.3385E-11	6.1862E-06	1.0552E-04
AV	1.3773E-21	1.2602E-11	2.0471E-09
AVI	3.5608E-35	8.4158E-20	2.2495E-16
AVII	5.2405E-54	3.9898E-31	4.3671E-26
AVIII	3.5931E-77	1.8715E-45	1.6083E-38

P1 = 1.00E+02 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9087E+03	3.3249E+04	4.5936E+04
T	8.9964E+01	1.4034E+02	1.5615E+02
RHO	1.3612E+01	7.9011E+01	9.2193E+01
H	6.2533E+02	1.1480E+03	1.3510E+03
A	1.2304E+01	1.7619E+01	1.9108E+01
S	1.9902E+00	2.1912E+00	2.2860E+00
Z	2.3753E+00	2.9985E+00	3.1908E+00
GAME	7.0845E-01	7.3769E-01	7.3279E-01
U	4.0203E+01	6.9362E+00	6.9741E+00

SPECIES	MOLE FRACTIONS		
E-	5.7900E-01	6.6651E-01	6.8660E-01
A	1.4858E-03	2.4271E-04	9.5446E-05
A+	2.6015E-01	3.1315E-02	1.4812E-02
A++	1.5923E-01	2.7065E-01	2.2397E-01
A+++	1.2545E-04	3.1264E-02	7.4239E-02
A++++	5.1991E-11	2.5538E-05	2.8487E-04
AV	1.2970E-20	1.5246E-10	1.2669E-08
AVI	9.8832E-34	3.8178E-18	3.8888E-15
AVII	6.2262E-52	1.0321E-28	2.8843E-24
AVIII	2.1825E-74	3.7076E-42	5.1324E-36

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1233E+03	3.6153E+04	4.9964E+04
T	9.2475E+01	1.4677E+02	1.6254E+02
RHO	1.3789E+01	7.9898E+01	9.3521E+01
H	6.7081E+02	1.2326E+03	1.4505E+03
A	1.2687E+01	1.8219E+01	1.9804E+01
S	2.0323E+00	2.2389E+00	2.3364E+00
Z	2.4493E+00	3.0830E+00	3.2869E+00
GAME	7.1068E-01	7.3354E-01	7.3410E-01
U	4.1681E+01	7.1994E+00	7.2182E+00

SPECIES	MOLE FRACTIONS		
E-	5.9172E-01	6.7564E-01	6.9577E-01
A	1.1713E-03	1.4890E-04	6.0168E-05
A+	2.2272E-01	2.1743E-02	1.0463E-02
A++	1.8416E-01	2.5356E-01	1.9649E-01
A+++	2.3110E-04	4.8807E-02	9.6565E-02
A++++	1.8579E-10	8.1989E-05	6.5653E-04
AV	1.0843E-19	1.2281E-09	6.0813E-08
AVI	2.3547E-32	9.5528E-17	4.6401E-14
AVII	6.2615E-50	1.1406E-26	1.1226E-22
AVIII	1.2163E-71	2.3289E-39	8.0295E-34

P1 = 1.00E+02 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5737E+03	4.2115E+04	5.8194E+04
T	9.7853E+01	1.5857E+02	1.7541E+02
RHO	1.4037E+01	8.1537E+01	9.5193E+01
H	7.6653E+02	1.4104E+03	1.6595E+03
A	1.3521E+01	1.9449E+01	2.1285E+01
S	2.1175E+00	2.3339E+00	2.4375E+00
Z	2.6019E+00	3.2573E+00	3.4852E+00
GAME	7.1803E-01	7.3236E-01	7.4108E-01
U	4.4617E+01	7.6922E+00	7.7122E+00

SPECIES	MOLE FRACTIONS		
E-	6.1566E-01	6.9299E-01	7.1307E-01
A	6.8307E-04	6.1397E-05	2.3039E-05
A+	1.5238E-01	1.1158E-02	5.0782E-03
A++	2.3054E-01	2.0601E-01	1.4014E-01
A+++	7.3413E-04	8.9299E-02	1.3902E-01
A++++	2.2035E-09	4.7995E-04	2.6591E-03
AV	6.9321E-18	3.1833E-08	9.2732E-07
AVI	1.1884E-29	1.5604E-14	3.6769E-12
AVII	5.2283E-46	2.0547E-23	7.4326E-20
AVIII	2.6311E-66	7.0368E-35	6.4927E-30

P1 = 1.00E+02 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3450E+03	3.9119E+04	5.4068E+04
T	9.5078E+01	1.5280E+02	1.6890E+02
RHO	1.3933E+01	8.0786E+01	9.4565E+01
H	7.1788E+02	1.3201E+03	1.5533E+03
A	1.3091E+01	1.8825E+01	2.0528E+01
S	2.0747E+00	2.2864E+00	2.3868E+00
Z	2.5250E+00	3.1691E+00	3.3852E+00
GAME	7.1383E-01	7.3186E-01	7.3706E-01
U	4.3153E+01	7.4541E+00	7.4637E+00

SPECIES	MOLE FRACTIONS		
E-	6.0397E-01	6.8445E-01	7.0460E-01
A	9.0721E-04	9.4750E-05	3.7693E-05
A+	1.8670E-01	1.5481E-02	7.3545E-03
A++	2.0801E-01	2.3117E-01	1.6816E-01
A+++	4.1379E-04	6.8592E-02	1.1849E-01
A++++	6.3969E-10	2.1362E-04	1.3665E-03
AV	8.6379E-19	7.0463E-09	2.4930E-07
AVI	5.2768E-31	1.4544E-15	4.4174E-13
AVII	5.8008E-48	6.2190E-25	3.1747E-21
AVIII	6.0093E-69	5.6828E-37	8.1946E-32

P1 = 1.00E+02 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8091E+03	4.5075E+04	6.2286E+04
T	1.0090E+02	1.6423E+02	1.8215E+02
RHO	1.4091E+01	8.1993E+01	9.5373E+01
H	8.1675E+02	1.5033E+03	1.7692E+03
A	1.3985E+01	2.0094E+01	2.2063E+01
S	2.1603E+00	2.3814E+00	2.4880E+00
Z	2.6790E+00	3.3474E+00	3.5854E+00
GAME	7.2348E-01	7.3445E-01	7.4538E-01
U	4.6070E+01	7.9301E+00	7.9776E+00

SPECIES	MOLE FRACTIONS		
E-	6.2673E-01	7.0126E-01	7.2109E-01
A	4.9355E-04	3.9785E-05	1.3621E-05
A+	1.2013E-01	8.0418E-03	3.4229E-03
A++	2.5133E-01	1.7974E-01	1.1366E-01
A+++	1.3141E-03	1.0994E-01	1.5690E-01
A++++	7.9111E-09	9.7377E-04	4.9115E-03
AV	6.0451E-17	1.2240E-07	3.2143E-06
AVI	3.0720E-28	1.3254E-13	2.7871E-11
AVII	5.8793E-44	4.8693E-22	1.5289E-18
AVIII	1.6297E-63	5.5752E-33	4.3357E-28

TABLE I. - Continued

$p_1 = 100\ N/m^2$

P1 = 1.00E+02 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0507E+03	4.7936E+04	6.6245E+04
T	1.0435E+02	1.6990E+02	1.8918E+02
RHO	1.4089E+01	8.2046E+01	9.5023E+01
H	8.6853E+02	1.5986E+03	1.8819E+03
A	1.4489E+01	2.0760E+01	2.2849E+01
S	2.2032E+00	2.4291E+00	2.5386E+00
Z	2.7554E+00	3.4389E+00	3.6851E+00
GAME	7.3019E-01	7.3766E-01	7.4888E-01
U	4.7509E+01	8.1704E+00	8.2410E+00

SPECIES	MOLE FRACTIONS		
E-	6.3707E-01	7.0921E-01	7.2864E-01
A	3.3695E-04	2.5398E-05	7.7448E-06
A+	9.0520E-02	5.7351E-03	2.2422E-03
A++	2.6966E-01	1.5348E-01	8.9629E-02
A+++	2.4130E-03	1.2972E-01	1.7079E-01
A++++	3.0743E-08	1.8414E-03	8.6760E-03
AV	6.1038E-16	4.2291E-07	1.0521E-05
AVI	1.0005E-26	9.6711E-13	1.9624E-10
AVII	9.3844E-42	9.3027E-21	2.8417E-17
AVIII	1.6905E-60	3.3080E-31	2.5309E-26

P1 = 1.00E+02 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5521E+03	5.3182E+04	7.3607E+04
T	1.1287E+02	1.8165E+02	2.0375E+02
RHO	1.3914E+01	8.0812E+01	9.3091E+01
H	9.7674E+02	1.7963E+03	2.1173E+03
A	1.5569E+01	2.2146E+01	2.4348E+01
S	2.2880E+00	2.5249E+00	2.6403E+00
Z	2.8986E+00	3.6228E+00	3.8807E+00
GAME	7.4092E-01	7.4526E-01	7.4972E-01
U	5.0340E+01	8.6820E+00	8.8150E+00

SPECIES	MOLE FRACTIONS		
E-	6.5501E-01	7.2397E-01	7.4231E-01
A	1.2728E-04	9.5061E-06	2.3220E-06
A+	4.3633E-02	2.7445E-03	9.0698E-04
A++	2.9232E-01	1.0433E-01	5.2172E-02
A+++	8.9108E-03	1.6322E-01	1.8145E-01
A++++	6.1765E-07	5.7230E-03	2.3062E-02
AV	1.0478E-13	4.1548E-06	8.9583E-05
AVI	2.3493E-23	3.9529E-11	7.0830E-09
AVII	7.3075E-37	2.3434E-18	6.2871E-15
AVIII	7.6287E-54	7.0894E-28	4.7456E-23

P1 = 1.00E+02 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2984E+03	5.0640E+04	7.0015E+04
T	1.0833E+02	1.7561E+02	1.9646E+02
RHO	1.4025E+01	8.1699E+01	9.4178E+01
H	9.2186E+02	1.6964E+03	1.9980E+03
A	1.5031E+01	2.1438E+01	2.3620E+01
S	2.2458E+00	2.4762E+00	2.5897E+00
Z	2.8292E+00	3.5296E+00	3.7841E+00
GAME	7.3716E-01	7.4143E-01	7.5042E-01
U	4.8932E+01	8.4174E+00	8.5215E+00

SPECIES	MOLE FRACTIONS		
E-	6.4654E-01	7.1669E-01	7.3573E-01
A	2.1426E-04	1.5914E-05	4.2538E-06
A+	6.4544E-02	4.0366E-03	1.4308E-03
A++	2.8411E-01	1.2843E-01	6.8872E-02
A+++	4.5899E-03	1.4755E-01	1.7931E-01
A++++	1.3259E-07	3.2851E-03	1.4616E-02
AV	7.4345E-15	1.3392E-06	3.2320E-05
AVI	4.3268E-25	6.2374E-12	1.2704E-09
AVII	2.2238E-39	1.4912E-19	4.7008E-16
AVIII	2.8840E-57	1.5492E-29	1.2650E-24

P1 = 1.00E+02 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8128E+03	5.5730E+04	7.7201E+04
T	1.1771E+02	1.8791E+02	2.1101E+02
RHO	1.3797E+01	7.9859E+01	9.1990E+01
H	1.0332E+03	1.8990E+03	2.2393E+03
A	1.6042E+01	2.2849E+01	2.5050E+01
S	2.3295E+00	2.5725E+00	2.6913E+00
Z	2.9634E+00	3.7138E+00	3.9772E+00
GAME	7.3772E-01	7.4810E-01	7.4771E-01
U	5.1745E+01	8.9537E+00	9.0909E+00

SPECIES	MOLE FRACTIONS		
E-	6.6256E-01	7.3073E-01	7.4856E-01
A	7.3786E-05	5.5463E-06	1.2736E-06
A+	2.8847E-02	1.8320E-03	5.7493E-04
A++	2.9187E-01	8.2959E-02	3.9129E-02
A+++	1.6655E-02	1.7491E-01	1.7741E-01
A++++	2.7357E-06	9.5521E-03	3.4092E-02
AV	1.3819E-12	1.2168E-05	2.2371E-04
AVI	1.1719E-21	2.3222E-10	3.3908E-08
AVII	2.1447E-34	3.3205E-17	6.7725E-14
AVIII	1.7544E-50	2.8323E-26	1.3298E-21

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4644E+01	2.6029E+02
T	1.2892E+01	1.6278E+01	2.7833E+01
RHO	3.7155E+00	5.2000E+00	9.3156E+00
H	1.2892E+01	1.6278E+01	2.8890E+01
A	3.5905E+00	4.0340E+00	4.8877E+00
S	1.1015E+00	1.1020E+00	1.1149E+00
Z	1.0000E+00	1.0000E+00	1.0039E+00
GAME	1.0000E+00	9.9973E-01	8.5500E-01
U	4.5391E+00	3.2318E+00	3.0171E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.0421E-08	1.4602E-06	3.8743E-03
A	1.0000E+00	1.0000E+00	9.9225E-01
A+	1.0421E-08	1.4602E-06	3.8743E-03
A++	1.8068E-32	9.7870E-26	2.5257E-13
A+++	4.6451E-72	1.0424E-56	5.4497E-32
A++++	0.	0.	1.7678E-61
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9075E+01	1.2909E+02	3.6353E+02
T	1.8178E+01	2.3361E+01	3.2955E+01
RHO	3.7999E+00	5.5231E+00	1.0790E+01
H	1.8182E+01	2.3506E+01	3.9129E+01
A	4.2594E+00	4.7284E+00	5.0131E+00
S	1.1213E+00	1.1221E+00	1.1350E+00
Z	1.0000E+00	1.0005E+00	1.0223E+00
GAME	9.9803E-01	9.5653E-01	7.4595E-01
U	5.4905E+00	3.7644E+00	2.9776E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.3207E-05	5.4517E-04	2.1799E-02
A	9.9997E-01	9.9891E-01	9.5640E-01
A+	1.3207E-05	5.4517E-04	2.1799E-02
A++	3.7015E-22	2.0166E-16	1.1158E-10
A+++	1.2474E-50	5.9445E-39	3.2858E-26
A++++	0.	5.4311E-74	8.7360E-51
AV	0.	0.	1.7741E-83
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0505E+02	3.1160E+02
T	1.5416E+01	1.9661E+01	3.0804E+01
RHO	3.7625E+00	5.3428E+00	9.9995E+00
H	1.5416E+01	1.9672E+01	3.3992E+01
A	3.9261E+00	4.4224E+00	4.9340E+00
S	1.1118E+00	1.1124E+00	1.1251E+00
Z	1.0000E+00	1.0000E+00	1.0116E+00
GAME	9.9988E-01	9.9471E-01	7.8124E-01
U	5.0154E+00	3.5195E+00	3.0478E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8269E-07	4.1890E-05	1.1468E-02
A	1.0000E+00	9.9992E-01	9.7706E-01
A+	5.8269E-07	4.1890E-05	1.1468E-02
A++	8.6647E-27	2.9343E-20	1.1229E-11
A+++	1.6508E-61	3.6816E-47	2.0477E-28
A++++	0.	0.	5.1527E-55
AV	0.	0.	2.9489E-90
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1167E+01	1.6391E+02	4.2015E+02
T	2.1152E+01	2.7235E+01	3.4738E+01
RHO	3.8368E+00	5.9957E+00	1.1679E+01
H	2.1193E+01	2.8252E+01	4.4660E+01
A	4.5615E+00	4.8324E+00	5.1144E+00
S	1.1303E+00	1.1313E+00	1.1454E+00
Z	1.0002E+00	1.0038E+00	1.0356E+00
GAME	9.8356E-01	8.5420E-01	7.2713E-01
U	5.9684E+00	3.8004E+00	2.9137E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.5570E-04	3.7378E-03	3.4351E-02
A	9.9969E-01	9.9252E-01	9.3130E-01
A+	1.5570E-04	3.7378E-03	3.4351E-02
A++	2.1607E-18	1.6173E-13	5.8715E-10
A+++	3.5004E-43	1.3769E-32	1.2510E-24
A++++	2.4584E-82	3.7352E-63	6.5965E-48
AV	0.	0.	4.8036E-79
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 200 N/ m^2

P1 = 2.00E+02 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4537E+01	2.1364E+02	4.8648E+02
T	2.4197E+01	3.0531E+01	3.6325E+01
RHO	3.9029E+00	6.9101E+00	1.2740E+01
H	2.4477E+01	3.4011E+01	5.0708E+01
A	4.7443E+00	4.8879E+00	5.2298E+00
S	1.1387E+00	1.1405E+00	1.1564E+00
Z	1.0010E+00	1.0127E+00	1.0513E+00
GAME	9.2924E-01	7.7276E-01	7.1624E-01
U	6.4664E+00	3.6347E+00	2.8517E+00

SPECIES	MOLE FRACTIONS		
E-	1.0446E-03	1.2522E-02	4.8753E-02
A	9.9791E-01	9.7496E-01	9.0249E-01
A+	1.0446E-03	1.2522E-02	4.8753E-02
A++	1.5131E-15	1.1715E-11	2.1955E-09
A+++	5.1127E-37	1.7496E-28	2.3441E-23
A++++	6.2320E-71	2.7105E-55	1.5088E-45
AV	0.	4.0733E-90	2.4823E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2699E+02	3.6113E+02	6.9441E+02
T	2.9266E+01	3.5261E+01	3.9433E+01
RHO	4.2957E+00	9.8051E+00	1.6129E+01
H	3.2036E+01	4.7700E+01	6.5511E+01
A	4.8106E+00	5.1442E+00	5.5109E+00
S	1.1551E+00	1.1605E+00	1.1803E+00
Z	1.0101E+00	1.0445E+00	1.0918E+00
GAME	7.8280E-01	7.1850E-01	7.0540E-01
U	7.6213E+00	3.3302E+00	2.7777E+00

SPECIES	MOLE FRACTIONS		
E-	1.0037E-02	4.2616E-02	8.4074E-02
A	9.7993E-01	9.1477E-01	8.3185E-01
A+	1.0037E-02	4.2616E-02	8.4074E-02
A++	3.8659E-12	1.1231E-09	1.9543E-08
A+++	1.0917E-29	4.5909E-24	3.3043E-21
A++++	9.1885E-59	6.2824E-47	1.6700E-41
AV	0.	1.4164E-77	9.9529E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0954E+02	2.7706E+02	5.7330E+02
T	2.6968E+01	3.3079E+01	3.7863E+01
RHO	4.0453E+00	8.1592E+00	1.4153E+01
H	2.8067E+01	4.0436E+01	5.7576E+01
A	4.7854E+00	4.9991E+00	5.3610E+00
S	1.1469E+00	1.1502E+00	1.1680E+00
Z	1.0041E+00	1.0265E+00	1.0696E+00
GAME	8.4574E-01	7.3595E-01	7.0953E-01
U	7.0031E+00	3.4551E+00	2.8188E+00

SPECIES	MOLE FRACTIONS		
E-	4.0414E-03	2.5861E-02	6.5265E-02
A	9.9192E-01	9.4828E-01	8.6947E-01
A+	4.0414E-03	2.5861E-02	6.5265E-02
A++	1.5947E-13	1.6672E-10	6.8886E-09
A+++	1.0001E-32	6.4239E-26	3.0796E-22
A++++	2.8469E-63	2.2134E-50	1.9432E-43
AV	0.	5.1179E-83	7.8746E-72
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4613E+02	4.6587E+02	8.4561E+02
T	3.1106E+01	3.7182E+01	4.0972E+01
RHO	4.6139E+00	1.1761E+01	1.8488E+01
H	3.6296E+01	5.5582E+01	7.4218E+01
A	4.8674E+00	5.3022E+00	5.6707E+00
S	1.1635E+00	1.1716E+00	1.1934E+00
Z	1.0189E+00	1.0654E+00	1.1163E+00
GAME	7.4752E-01	7.0974E-01	7.0306E-01
U	8.2627E+00	3.2273E+00	2.7531E+00

SPECIES	MOLE FRACTIONS		
E-	1.8522E-02	6.1347E-02	1.0421E-01
A	9.6296E-01	8.7731E-01	7.9158E-01
A+	1.8522E-02	6.1347E-02	1.0421E-01
A++	3.4527E-11	4.8104E-09	4.9296E-08
A+++	1.4763E-27	1.2449E-22	2.7686E-20
A++++	1.5646E-53	3.1964E-44	9.1346E-40
AV	4.6968E-88	3.8944E-73	6.1899E-66
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 200 N/m^2

P1 = 2.00E+02 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6688E+02	5.9175E+02	1.0277E+03
T	3.2633E+01	3.8926E+01	4.2477E+01
RHO	4.9666E+00	1.3966E+01	2.1165E+01
H	4.0835E+01	6.4015E+01	8.3647E+01
A	4.9453E+00	5.4658E+00	5.8379E+00
S	1.1724E+00	1.1835E+00	1.2072E+00
Z	1.0297E+00	1.0885E+00	1.1431E+00
GAME	7.2783E-01	7.0508E-01	7.0187E-01
U	8.9193E+00	3.1648E+00	2.7401E+00

SPECIES	MOLE FRACTIONS		
E-	2.8797E-02	8.1307E-02	1.2521E-01
A	9.4241E-01	8.3739E-01	7.4958E-01
A+	2.8797E-02	8.1307E-02	1.2521E-01
A++	1.7175E-10	1.5553E-08	1.1270E-07
A+++	5.0198E-26	1.8199E-21	1.8762E-19
A++++	1.0424E-50	4.9267E-42	3.3243E-38
AV	1.3866E-83	1.1952E-69	1.8494E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1261E+02	9.1349E+02	1.4830E+03
T	3.5123E+01	4.2094E+01	4.5381E+01
RHO	5.7337E+00	1.9025E+01	2.7174E+01
H	5.0690E+01	8.2487E+01	1.0436E+02
A	5.1267E+00	5.8032E+00	6.1874E+00
S	1.1914E+00	1.2099E+00	1.2373E+00
Z	1.0558E+00	1.1407E+00	1.2025E+00
GAME	7.0881E-01	7.0138E-01	7.0152E-01
U	1.0240E+01	3.0780E+00	2.7413E+00

SPECIES	MOLE FRACTIONS		
E-	5.2811E-02	1.2333E-01	1.6843E-01
A	8.9438E-01	7.5335E-01	6.6314E-01
A+	5.2811E-02	1.2333E-01	1.6843E-01
A++	1.6762E-09	9.8411E-08	4.6806E-07
A+++	7.9347E-24	1.3066E-19	5.2687E-18
A++++	1.2742E-46	1.6342E-38	1.8804E-35
AV	4.3360E-77	6.3382E-64	5.7398E-59
AVI	0.	0.	5.6261E-89
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8907E+02	7.4164E+02	1.2402E+03
T	3.3950E+01	4.0559E+01	4.3946E+01
RHO	5.3445E+00	1.6418E+01	2.4080E+01
H	4.5636E+01	7.3016E+01	9.3709E+01
A	5.0335E+00	5.6337E+00	6.0105E+00
S	1.1817E+00	1.1963E+00	1.2219E+00
Z	1.0420E+00	1.1137E+00	1.1719E+00
GAME	7.1616E-01	7.0260E-01	7.0144E-01
U	9.5803E+00	3.1052E+00	2.7368E+00

SPECIES	MOLE FRACTIONS		
E-	4.0341E-02	1.0213E-01	1.4672E-01
A	9.1932E-01	7.9574E-01	7.0657E-01
A+	4.0341E-02	1.0213E-01	1.4672E-01
A++	6.0009E-10	4.1916E-08	2.3763E-07
A+++	7.7115E-25	1.7957E-20	1.0747E-18
A++++	1.1430E-48	3.7717E-40	9.2961E-37
AV	4.0379E-80	1.3859E-66	4.4767E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3745E+02	1.1097E+03	1.7568E+03
T	3.6188E+01	4.3563E+01	4.6790E+01
RHO	6.1284E+00	2.1786E+01	3.0406E+01
H	5.5995E+01	9.2456E+01	1.1558E+02
A	5.2228E+00	5.9752E+00	6.3686E+00
S	1.2017E+00	1.2242E+00	1.2535E+00
Z	1.0707E+00	1.1692E+00	1.2348E+00
GAME	7.0402E-01	7.0094E-01	7.0198E-01
U	1.0897E+01	3.0610E+00	2.7528E+00

SPECIES	MOLE FRACTIONS		
E-	6.5993E-02	1.4475E-01	1.9016E-01
A	8.6801E-01	7.1050E-01	6.1969E-01
A+	6.5993E-02	1.4475E-01	1.9016E-01
A++	3.9817E-09	2.0932E-07	8.7254E-07
A+++	5.3107E-23	7.5959E-19	2.2785E-17
A++++	3.2182E-45	4.4936E-37	2.9289E-34
AV	9.9457E-75	1.2314E-61	4.3029E-57
AVI	0.	0.	1.9396E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 200 N/m^2

P1 = 2.00E+02 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6355E+02	1.3317E+03	2.0602E+03
T	3.7176E+01	4.4984E+01	4.8169E+01
RHO	6.5242E+00	2.4683E+01	3.3724E+01
H	6.1550E+01	1.0293E+02	1.2724E+02
A	5.3206E+00	6.1499E+00	6.5521E+00
S	1.2124E+00	1.2393E+00	1.2702E+00
Z	1.0866E+00	1.1994E+00	1.2683E+00
GAME	7.0079E-01	7.0101E-01	7.0272E-01
U	1.1550E+01	3.0454E+00	2.7552E+00

SPECIES	MOLE FRACTIONS		
E-	7.9720E-02	1.6624E-01	2.1154E-01
A	8.4056E-01	6.6753E-01	5.7693E-01
A+	7.9720E-02	1.6624E-01	2.1153E-01
A++	8.4592E-09	4.1325E-07	1.5478E-06
A+++	2.9380E-22	3.7544E-18	8.8461E-17
A++++	9.6538E-44	9.3203E-36	3.7828E-33
AV	1.1814E-72	1.6978E-59	2.4774E-55
AVI	0.	2.3553E-90	1.4450E-84
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1970E+02	1.8526E+03	2.7734E+03
T	3.8982E+01	4.7723E+01	5.0939E+01
RHO	7.3123E+00	3.0712E+01	4.0608E+01
H	7.3421E+01	1.2535E+02	1.5258E+02
A	5.5207E+00	6.5081E+00	6.9385E+00
S	1.2351E+00	1.2716E+00	1.3060E+00
Z	1.1216E+00	1.2640E+00	1.3407E+00
GAME	6.9710E-01	7.0216E-01	7.0490E-01
U	1.2852E+01	3.0660E+00	2.8129E+00

SPECIES	MOLE FRACTIONS		
E-	1.0838E-01	2.0885E-01	2.5415E-01
A	7.8323E-01	5.8229E-01	4.9171E-01
A+	1.0838E-01	2.0885E-01	2.5414E-01
A++	3.0083E-08	1.3642E-06	4.4770E-06
A+++	5.2625E-21	6.3077E-17	1.1147E-15
A++++	2.3151E-41	1.9425E-33	4.7144E-31
AV	1.1005E-68	9.1751E-56	7.0290E-52
AVI	0.	2.2830E-84	1.4643E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9090E+02	1.5778E+03	2.3981E+03
T	3.8102E+01	4.6362E+01	4.9550E+01
RHO	6.9181E+00	2.7649E+01	3.7124E+01
H	6.7355E+01	1.1386E+02	1.3958E+02
A	5.4199E+00	6.3269E+00	6.7421E+00
S	1.2235E+00	1.2551E+00	1.2877E+00
Z	1.1036E+00	1.2309E+00	1.3037E+00
GAME	6.9859E-01	7.0145E-01	7.0370E-01
U	1.2199E+01	3.0498E+00	2.7818E+00

SPECIES	MOLE FRACTIONS		
E-	9.3874E-02	1.8758E-01	2.3293E-01
A	8.1225E-01	6.2483E-01	5.3414E-01
A+	9.3874E-02	1.8758E-01	2.3293E-01
A++	1.6489E-08	7.6744E-07	2.6659E-06
A+++	1.3426E-21	1.6196E-17	3.2298E-16
A++++	1.7865E-42	1.5020E-34	4.4759E-32
AV	1.8183E-70	1.5575E-57	1.4977E-53
AVI	0.	6.7013E-87	3.8615E-81
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4949E+02	2.1501E+03	3.1770E+03
T	3.9821E+01	4.9051E+01	5.2318E+01
RHO	7.6959E+00	3.3767E+01	4.4039E+01
H	7.9724E+01	1.3722E+02	1.6601E+02
A	5.6224E+00	6.6910E+00	7.1381E+00
S	1.2472E+00	1.2886E+00	1.3248E+00
Z	1.1404E+00	1.2981E+00	1.3789E+00
GAME	6.9611E-01	7.0309E-01	7.0631E-01
U	1.3491E+01	3.0856E+00	2.8485E+00

SPECIES	MOLE FRACTIONS		
E-	1.2311E-01	2.2966E-01	2.7476E-01
A	7.5378E-01	5.4068E-01	4.5049E-01
A+	1.2311E-01	2.2966E-01	2.7475E-01
A++	5.1929E-08	2.3236E-06	7.3075E-06
A+++	1.8209E-20	2.2419E-16	3.6013E-15
A++++	2.3437E-40	2.1749E-32	4.3280E-30
AV	4.3747E-67	4.7687E-54	2.5140E-50
AVI	0.	9.1830E-82	2.8625E-76
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8050E+02	2.4743E+03	3.6148E+03
T	4.0628E+01	5.0370E+01	5.3712E+01
RHO	8.0728E+00	3.6837E+01	4.7450E+01
H	8.6278E+01	1.4957E+02	1.8002E+02
A	5.7255E+00	6.8777E+00	7.3440E+00
S	1.2596E+00	1.3062E+00	1.3441E+00
Z	1.1601E+00	1.3335E+00	1.4183E+00
GAME	6.9551E-01	7.0422E-01	7.0796E-01
U	1.4127E+01	3.1106E+00	2.8900E+00

SPECIES	MOLE FRACTIONS		
E-	1.3802E-01	2.5011E-01	2.9495E-01
A	7.2396E-01	4.9978E-01	4.1012E-01
A+	1.3802E-01	2.5010E-01	2.9492E-01
A++	8.5838E-08	3.8386E-06	1.1723E-05
A+++	5.7313E-20	7.3989E-16	1.1175E-14
A++++	1.9917E-39	2.0500E-31	3.6380E-29
AV	1.3274E-65	1.6863E-52	7.6050E-49
AVI	0.	1.4981E-79	4.1911E-74
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4620E+02	3.2077E+03	4.5939E+03
T	4.2169E+01	5.3016E+01	5.6585E+01
RHO	8.8018E+00	4.2972E+01	5.4089E+01
H	1.0014E+02	1.7576E+02	2.0970E+02
A	5.9361E+00	7.2651E+00	7.7771E+00
S	1.2857E+00	1.3428E+00	1.3842E+00
Z	1.2022E+00	1.4080E+00	1.5010E+00
GAME	6.9509E-01	7.0709E-01	7.1213E-01
U	1.5389E+01	3.1559E+00	2.9848E+00

SPECIES	MOLE FRACTIONS		
E-	1.6816E-01	2.8977E-01	3.3377E-01
A	6.6368E-01	4.2048E-01	3.3250E-01
A+	1.6816E-01	2.8975E-01	3.3371E-01
A++	2.1192E-07	9.8172E-06	2.9193E-05
A+++	4.5587E-19	7.0141E-15	1.0046E-13
A++++	9.6560E-36	1.4409E-29	2.2624E-27
AV	6.6628E-63	1.6257E-49	5.7544E-46
AVI	0.	4.0408E-75	6.9955E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1274E+02	2.8290E+03	4.0872E+03
T	4.1409E+01	5.1693E+01	5.5131E+01
RHO	8.4417E+00	3.9940E+01	5.0810E+01
H	9.3085E+01	1.6244E+02	1.9458E+02
A	5.8300E+00	7.0693E+00	7.5567E+00
S	1.2725E+00	1.3243E+00	1.3639E+00
Z	1.1807E+00	1.3702E+00	1.4591E+00
GAME	6.9519E-01	7.0556E-01	7.0988E-01
U	1.4759E+01	3.1230E+00	2.9358E+00

SPECIES	MOLE FRACTIONS		
E-	1.5306E-01	2.7019E-01	3.1463E-01
A	6.9389E-01	4.5962E-01	3.7075E-01
A+	1.5306E-01	2.7018E-01	3.1460E-01
A++	1.3691E-07	6.2033E-06	1.8575E-05
A+++	1.6696E-19	2.3370E-15	3.3798E-14
A++++	1.4712E-36	1.8232E-30	2.9219E-28
AV	3.2563E-64	5.9487E-51	2.1602E-47
AVI	0.	3.2573E-77	5.6985E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8088E+02	3.6129E+03	5.1369E+03
T	4.2913E+01	5.4353E+01	5.8095E+01
RHO	9.1521E+00	4.5943E+01	5.7262E+01
H	1.0745E+02	1.8955E+02	2.2545E+02
A	6.0437E+00	7.4662E+00	8.0079E+00
S	1.2994E+00	1.3618E+00	1.4049E+00
Z	1.2244E+00	1.4468E+00	1.5442E+00
GAME	6.9518E-01	7.0885E-01	7.1482E-01
U	1.6015E+01	3.1946E+00	3.0438E+00

SPECIES	MOLE FRACTIONS		
E-	1.8328E-01	3.0883E-01	3.5240E-01
A	6.3343E-01	3.8235E-01	2.9524E-01
A+	1.8328E-01	3.0880E-01	3.5231E-01
A++	3.1985E-07	1.5315E-05	4.5822E-05
A+++	1.1779E-18	2.0404E-14	2.9830E-13
A++++	5.7186E-37	1.0718E-28	1.7360E-26
AV	1.1590E-61	3.9958E-48	1.4927E-44
AVI	0.	3.9951E-73	8.0483E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.1706E+02	4.0507E+03	5.7229E+03
T	4.3644E+01	5.5727E+01	5.9691E+01
RHO	9.4965E+00	4.8863E+01	6.0348E+01
H	1.1503E+02	2.0393E+02	2.4191E+02
A	6.1533E+00	7.6753E+00	8.2521E+00
S	1.3134E+00	1.3814E+00	1.4262E+00
Z	1.2475E+00	1.4870E+00	1.5887E+00
GAME	6.9542E-01	7.1092E-01	7.1809E-01
U	1.6649E+01	3.2389E+00	3.1071E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.9841E-01	3.2749E-01	3.7056E-01
A	6.0318E-01	3.4504E-01	2.5896E-01
A+	1.9841E-01	3.2745E-01	3.7041E-01
A++	4.7286E-07	2.3746E-05	7.2382E-05
A+++	2.9089E-18	5.8791E-14	9.0160E-13
A++++	3.1061E-36	7.9319E-28	1.3740E-25
AV	1.7477E-60	1.0379E-46	4.0773E-43
AVI	0.	5.5848E-71	1.0161E-65
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.9213E+02	4.9817E+03	6.9766E+03
T	4.5071E+01	5.8550E+01	6.3160E+01
RHO	1.0137E+01	5.4228E+01	6.5770E+01
H	1.3090E+02	2.3372E+02	2.7627E+02
A	6.3773E+00	8.1107E+00	8.7818E+00
S	1.3424E+00	1.4211E+00	1.4695E+00
Z	1.2960E+00	1.5690E+00	1.6795E+00
GAME	6.9628E-01	7.1609E-01	7.2703E-01
U	1.7879E+01	3.3470E+00	3.2570E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2839E-01	3.6266E-01	4.0457E-01
A	5.4322E-01	2.7474E-01	1.9104E-01
A+	2.2839E-01	3.6255E-01	4.0420E-01
A++	9.7816E-07	5.5661E-05	1.8503E-04
A+++	1.5686E-17	4.5829E-13	8.7689E-12
A++++	7.1675E-35	3.6708E-26	9.4977E-24
AV	2.5630E-58	4.5758E-44	3.4839E-40
AVI	2.6822E-88	3.5027E-67	1.9175E-61
AVII	0.	0.	2.1483E-90
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.5399E+02	4.5038E+03	6.3317E+03
T	4.4362E+01	5.7114E+01	6.1359E+01
RHO	9.8225E+00	5.1622E+01	6.3165E+01
H	1.2284E+02	2.1859E+02	2.5877E+02
A	6.2644E+00	7.8887E+00	8.5076E+00
S	1.3277E+00	1.4011E+00	1.4477E+00
Z	1.2714E+00	1.5276E+00	1.6337E+00
GAME	6.9579E-01	7.1329E-01	7.2205E-01
U	1.7265E+01	3.2898E+00	3.1777E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.1344E-01	3.4536E-01	3.8788E-01
A	5.7311E-01	3.0931E-01	2.2435E-01
A+	2.1344E-01	3.4529E-01	3.8765E-01
A++	6.8541E-07	3.6372E-05	1.1472E-04
A+++	6.8726E-18	1.6409E-13	2.7522E-12
A++++	1.5455E-35	5.3909E-27	1.1043E-24
AV	2.2629E-59	2.1725E-45	1.1442E-41
AVI	0.	4.4455E-69	1.3558E-63
AVII	0.	0.	1.0219E-93
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.3149E+02	5.4834E+03	7.6575E+03
T	4.5775E+01	6.0052E+01	6.5166E+01
RHO	1.0440E+01	5.6673E+01	6.8062E+01
H	1.3922E+02	2.4932E+02	2.9444E+02
A	6.4924E+00	8.3433E+00	9.0843E+00
S	1.3574E+00	1.4414E+00	1.4920E+00
Z	1.3214E+00	1.6112E+00	1.7265E+00
GAME	6.9687E-01	7.1945E-01	7.3350E-01
U	1.8491E+01	3.4114E+00	3.3455E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.4322E-01	3.7934E-01	4.2079E-01
A	5.1357E-01	2.4140E-01	1.5873E-01
A+	2.4322E-01	3.7917E-01	4.2017E-01
A++	1.3776E-06	8.5522E-05	3.0873E-04
A+++	3.4773E-17	1.2974E-12	3.0393E-11
A++++	3.1320E-34	2.5863E-25	9.5210E-23
AV	2.5647E-57	1.0749E-42	1.3635E-38
AVI	6.4761E-87	4.0711E-65	4.0555E-59
AVII	0.	0.	4.8278E-87
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.7246E+02	6.0183E+03	8.3939E+03
T	4.6479E+01	6.1662E+01	6.7431E+01
RHO	1.0737E+01	5.8996E+01	7.0200E+01
H	1.4781E+02	2.6554E+02	3.1370E+02
A	6.6099E+00	8.5915E+00	9.4185E+00
S	1.3728E+00	1.4621E+00	1.5144E+00
Z	1.3476E+00	1.6544E+00	1.7733E+00
GAME	6.9757E-01	7.2358E-01	7.4188E-01
U	1.9114E+01	3.4835E+00	3.4623E+00

SPECIES	MOLE FRACTIONS		
E-	2.5792E-01	3.9554E-01	4.3607E-01
A	4.8416E-01	2.0905E-01	1.2840E-01
A+	2.5792E-01	3.9528E-01	4.3500E-01
A++	1.9200E-06	1.3324E-04	5.3551E-04
A+++	7.5441E-17	3.7999E-12	1.1605E-10
A++++	1.3129E-33	1.9165E-24	1.1321E-21
AV	2.3443E-56	2.6267E-41	6.8975E-37
AVI	9.6046E-86	4.3470E-63	1.2108E-56
AVII	0.	0.	1.6369E-83
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.5750E+02	7.1370E+03	9.9584E+03
T	4.7884E+01	6.5254E+01	7.3192E+01
RHO	1.1283E+01	6.2821E+01	7.2977E+01
H	1.6572E+02	2.9914E+02	3.5402E+02
A	6.8518E+00	9.1386E+00	1.0220E+01
S	1.4044E+00	1.5038E+00	1.5597E+00
Z	1.4021E+00	1.7410E+00	1.8644E+00
GAME	6.9928E-01	7.3510E-01	7.6541E-01
U	2.0338E+01	3.6581E+00	3.7188E+00

SPECIES	MOLE FRACTIONS		
E-	2.8677E-01	4.2563E-01	4.6364E-01
A	4.2647E-01	1.4908E-01	7.4670E-02
A+	2.8676E-01	4.2495E-01	4.5974E-01
A++	3.6292E-06	3.3981E-04	1.9499E-03
A+++	3.3592E-16	3.6763E-11	2.7066E-09
A++++	2.1119E-32	1.2758E-22	3.6890E-19
AV	1.7736E-54	2.0069E-38	6.3634E-33
AVI	3.6900E-83	6.2092E-59	6.6035E-51
AVII	0.	5.5565E-87	2.2810E-75
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.1438E+02	6.5682E+03	9.1516E+03
T	4.7180E+01	6.3398E+01	7.0034E+01
RHO	1.1016E+01	6.1002E+01	7.1828E+01
H	1.5664E+02	2.8212E+02	3.3327E+02
A	6.7296E+00	8.8581E+00	9.7924E+00
S	1.3885E+00	1.4833E+00	1.5368E+00
Z	1.3745E+00	1.6983E+00	1.8193E+00
GAME	6.9837E-01	7.2876E-01	7.5252E-01
U	1.9727E+01	3.5651E+00	3.5673E+00

SPECIES	MOLE FRACTIONS		
E-	2.7244E-01	4.1119E-01	4.5033E-01
A	4.5512E-01	1.7764E-01	1.0033E-01
A+	2.7243E-01	4.1076E-01	4.4837E-01
A++	2.6498E-06	2.1155E-04	9.7908E-04
A+++	1.6034E-16	1.1644E-11	5.0410E-10
A++++	5.3101E-33	1.5275E-23	1.6891E-20
AV	2.0117E-55	7.0746E-40	4.9220E-35
AVI	1.5733E-85	5.1871E-61	5.8185E-54
AVII	0.	8.8403E-90	1.0393E-79
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.0181E+02	7.7222E+03	1.0805E+04
T	4.8592E+01	6.7345E+01	7.6960E+01
RHO	1.1536E+01	6.4273E+01	7.3649E+01
H	1.7506E+02	3.1660E+02	3.7563E+02
A	6.9766E+00	9.4498E+00	1.0662E+01
S	1.4206E+00	1.5247E+00	1.5825E+00
Z	1.4304E+00	1.7841E+00	1.9062E+00
GAME	7.0029E-01	7.4325E-01	7.7491E-01
U	2.0947E+01	3.7650E+00	3.8884E+00

SPECIES	MOLE FRACTIONS		
E-	3.0388E-01	4.3948E-01	4.7541E-01
A	3.9824E-01	1.2161E-01	5.3355E-02
A+	3.0087E-01	4.3834E-01	4.6707E-01
A++	4.9409E-06	5.6844E-04	4.1667E-03
A+++	6.9661E-16	1.2856E-10	1.7391E-08
A++++	8.3678E-32	1.2964E-21	1.1128E-17
AV	1.7382E-53	8.1348E-37	1.3600E-30
AVI	4.5559E-82	1.4767E-56	1.5446E-47
AVII	0.	2.0939E-83	1.3966E-70
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 200 N/m^2

P1 = 2.00E+02 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.4730E+02	8.3165E+03	1.1680E+04
T	4.9316E+01	6.9725E+01	8.1133E+01
RHO	1.1769E+01	6.5318E+01	7.4072E+01
H	1.8465E+02	3.3448E+02	3.9796E+02
A	7.1063E+00	9.7944E+00	1.1027E+01
S	1.4375E+00	1.5456E+00	1.6049E+00
Z	1.4598E+00	1.8261E+00	1.9435E+00
GAME	7.0145E-01	7.5344E-01	7.7115E-01
U	2.1555E+01	3.8889E+00	4.0666E+00

SPECIES	MOLE FRACTIONS		
E-	3.1500E-01	4.5238E-01	4.8547E-01
A	3.7001E-01	9.6241E-02	3.7943E-02
A+	3.1498E-01	4.5039E-01	4.6769E-01
A++	6.7265E-06	9.9499E-04	8.8902E-03
A+++	1.4483E-15	5.0124E-10	1.1310E-07
A++++	3.3624E-31	1.5764E-20	3.4259E-16
AV	1.8532E-52	4.1589E-35	2.9736E-28
AVI	9.3368E-80	4.3018E-54	3.6474E-44
AVII	0.	6.3292E-80	8.1202E-66
AVIII	0.	0.	0.

P1 = 2.00E+02 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4182E+02	9.5403E+03	1.3500E+04
T	5.0774E+01	7.5694E+01	8.8639E+01
RHO	1.2209E+01	6.6229E+01	7.5795E+01
H	2.0459E+02	3.7144E+02	4.4330E+02
A	7.3700E+00	1.0563E+01	1.1501E+01
S	1.4709E+00	1.5865E+00	1.6470E+00
Z	1.5193E+00	1.9031E+00	2.0094E+00
GAME	7.0413E-01	7.7451E-01	7.4270E-01
U	2.2764E+01	4.2017E+00	4.3469E+00

SPECIES	MOLE FRACTIONS		
E-	3.4179E-01	4.7453E-01	5.0235E-01
A	3.1644E-01	5.4524E-02	2.2713E-02
A+	3.4176E-01	4.6736E-01	4.4754E-01
A++	1.2208E-05	3.5859E-03	2.7402E-02
A+++	5.9696E-15	1.1456E-08	1.9730E-06
A++++	4.7671E-30	4.8493E-18	6.7066E-14
AV	1.3063E-50	3.4166E-31	1.2397E-24
AVI	4.8923E-77	1.9243E-48	6.3097E-39
AVII	0.	6.3239E-72	2.1762E-58
AVIII	0.	0.	3.7950E-82

P1 = 2.00E+02 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.9398E+02	8.9273E+03	1.2592E+04
T	5.0034E+01	7.2491E+01	8.5168E+01
RHO	1.2000E+01	6.5993E+01	7.4771E+01
H	1.9450E+02	3.5276E+02	4.2076E+02
A	7.2354E+00	1.0173E+01	1.1286E+01
S	1.4539E+00	1.5662E+00	1.6266E+00
Z	1.4890E+00	1.8661E+00	1.9774E+00
GAME	7.0270E-01	7.6506E-01	7.5637E-01
U	2.2160E+01	4.0346E+00	4.2352E+00

SPECIES	MOLE FRACTIONS		
E-	3.2841E-01	4.6412E-01	4.9429E-01
A	3.4319E-01	7.3592E-02	2.8349E-02
A+	3.2839E-01	4.6044E-01	4.6044E-01
A++	9.0487E-06	1.8415E-03	1.6924E-02
A+++	2.9303E-15	2.2482E-09	5.7035E-07
A++++	1.2620E-30	2.4762E-19	6.7214E-15
AV	1.5574E-51	3.2121E-33	3.2547E-26
AVI	2.1596E-78	2.3469E-51	3.2534E-41
AVII	0.	5.0539E-76	1.2586E-61
AVIII	0.	0.	1.8049E-86

P1 = 2.00E+02 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.9082E+02	1.0161E+04	1.4445E+04
T	5.1533E+01	7.9238E+01	9.1749E+01
RHO	1.2403E+01	6.6226E+01	7.7071E+01
H	2.1495E+02	3.9053E+02	4.6684E+02
A	7.5084E+00	1.0901E+01	1.1722E+01
S	1.4881E+00	1.6065E+00	1.6678E+00
Z	1.5501E+00	1.9362E+00	2.0428E+00
GAME	7.0574E-01	7.7450E-01	7.3315E-01
U	2.3366E+01	4.3815E+00	4.4878E+00

SPECIES	MOLE FRACTIONS		
E-	3.5490E-01	4.8353E-01	5.1047E-01
A	2.9022E-01	3.9992E-02	1.8985E-02
A+	3.5486E-01	4.6942E-01	4.3064E-01
A++	1.6473E-05	7.0557E-03	3.9906E-02
A+++	1.2180E-14	6.0584E-08	5.3560E-06
A++++	1.7998E-29	1.0194E-16	4.3577E-13
AV	1.0871E-49	4.0981E-29	2.4456E-23
AVI	1.0824E-75	1.9228E-45	4.8552E-37
AVII	0.	1.1193E-67	1.0738E-55
AVIII	0.	0.	1.6674E-78

TABLE I. - Continued

p_1 = 200 N/m^2

P1 = 2.00E+02 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0410E+03	1.0796E+04	1.5383E+04
T	5.2315E+01	8.2810E+01	9.4438E+01
RHO	1.2581E+01	6.6297E+01	7.8468E+01
H	2.2555E+02	4.1008E+02	4.9010E+02
A	7.6514E+00	1.1149E+01	1.1942E+01
S	1.5056E+00	1.6260E+00	1.6877E+00
Z	1.5816E+00	1.9664E+00	2.0759E+00
GAME	7.0756E-01	7.6335E-01	7.2740E-01
U	2.3965E+01	4.5538E+00	4.5757E+00

SPECIES	MOLE FRACTIONS		
E-	3.6772E-01	4.9146E-01	5.1829E-01
A	2.6458E-01	3.0115E-02	1.6458E-02
A+	3.6767E-01	4.6539E-01	4.1224E-01
A++	2.2273E-05	1.3033E-02	5.3007E-02
A+++	2.5002E-14	2.7934E-07	1.1702E-05
A++++	6.8531E-29	1.6706E-15	1.9162E-12
AV	9.1158E-49	3.3584E-27	2.6210E-22
AVI	2.3954E-74	1.1050E-42	1.5468E-35
AVII	0.	8.8272E-64	1.4968E-53
AVIII	0.	1.8097E-89	1.2832E-75

P1 = 2.00E+02 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1447E+03	1.2132E+04	1.7296E+04
T	5.3974E+01	8.9044E+01	9.9189E+01
RHO	1.2885E+01	6.7286E+01	8.1293E+01
H	2.4752E+02	4.5074E+02	5.3793E+02
A	7.9535E+00	1.1537E+01	1.2394E+01
S	1.5410E+00	1.6641E+00	1.7274E+00
Z	1.6460E+00	2.0248E+00	2.1450E+00
GAME	7.1206E-01	7.3823E-01	7.2197E-01
U	2.5157E+01	4.8211E+00	4.7372E+00

SPECIES	MOLE FRACTIONS		
E-	3.9245E-01	5.0613E-01	5.3379E-01
A	2.1514E-01	1.9707E-02	1.2999E-02
A+	3.9237E-01	4.4219E-01	3.7267E-01
A++	4.1307E-05	3.1968E-02	8.0501E-02
A+++	1.0934E-13	2.7949E-06	3.9509E-05
A++++	1.0521E-27	1.1932E-13	1.9988E-11
AV	6.8558E-47	2.8622E-24	1.1553E-20
AVI	1.2417E-71	1.9591E-38	3.9863E-33
AVII	0.	9.7855E-58	4.2215E-50
AVIII	0.	2.6286E-81	5.7877E-71

P1 = 2.00E+02 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0923E+03	1.1452E+04	1.6336E+04
T	5.3126E+01	8.6107E+01	9.6898E+01
RHO	1.2742E+01	6.6650E+01	7.9897E+01
H	2.3641E+02	4.3014E+02	5.1381E+02
A	7.7995E+00	1.1347E+01	1.2166E+01
S	1.5232E+00	1.6452E+00	1.7076E+00
Z	1.6135E+00	1.9955E+00	2.1100E+00
GAME	7.0965E-01	7.4930E-01	7.2394E-01
U	2.4562E+01	4.7022E+00	4.6596E+00

SPECIES	MOLE FRACTIONS		
E-	3.8024E-01	4.9887E-01	5.2607E-01
A	2.3955E-01	2.3807E-02	1.4539E-02
A+	3.8018E-01	4.5578E-01	3.9273E-01
A++	3.0236E-05	2.1541E-02	6.6639E-02
A+++	5.1878E-14	1.0004E-06	2.2512E-05
A++++	2.6937E-28	1.7677E-14	6.7190E-12
AV	7.7994E-48	1.3905E-25	1.9788E-21
AVI	5.3931E-73	2.4585E-40	2.9920E-34
AVII	0.	1.9918E-60	1.0399E-51
AVIII	0.	6.6663E-85	3.9498E-73

P1 = 2.00E+02 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1982E+03	1.2823E+04	1.8260E+04
T	5.4867E+01	9.1661E+01	1.0136E+02
RHO	1.3009E+01	6.8075E+01	8.2610E+01
H	2.5888E+02	4.7180E+02	5.6249E+02
A	8.1147E+00	1.1733E+01	1.2624E+01
S	1.5589E+00	1.6830E+00	1.7473E+00
Z	1.6788E+00	2.0550E+00	2.1807E+00
GAME	7.1468E-01	7.3079E-01	7.2099E-01
U	2.5750E+01	4.9277E+00	4.8111E+00

SPECIES	MOLE FRACTIONS		
E-	4.0433E-01	5.1338E-01	5.4143E-01
A	1.9139E-01	1.6874E-02	1.1702E-02
A+	4.0422E-01	4.2611E-01	3.5237E-01
A++	5.6942E-05	4.3627E-02	9.4436E-02
A+++	2.3531E-13	6.4324E-06	6.4864E-05
A++++	4.2630E-27	5.7091E-13	5.2827E-11
AV	5.7396E-46	3.4710E-23	5.6213E-20
AVI	1.6154E-70	7.4066E-37	4.1070E-32
AVII	0.	1.7322E-55	1.2058E-48
AVIII	0.	2.8059E-78	5.4267E-69

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2529E+03	1.3525E+04	1.9223E+04
T	5.5819E+01	9.4036E+01	1.0345E+02
RHO	1.3111E+01	6.8946E+01	8.3810E+01
H	2.7049E+02	4.9336E+02	5.8748E+02
A	8.2845E+00	1.1934E+01	1.2857E+01
S	1.5770E+00	1.7020E+00	1.7673E+00
Z	1.7119E+00	2.0861E+00	2.2172E+00
GAME	7.1824E-01	7.2602E-01	7.2072E-01
U	2.6339E+01	5.0162E+00	4.8830E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1587E-01	5.2065E-01	5.4898E-01
A	1.6835E-01	1.4779E-02	1.0571E-02
A+	4.1571E-01	4.0851E-01	3.3201E-01
A++	7.9534E-05	5.6047E-02	1.0833E-01
A+++	5.2576E-13	1.2877E-05	1.0130E-04
A++++	1.9004E-26	2.1307E-12	1.2779E-10
AV	6.4175E-45	2.8627E-22	2.3857E-19
AVI	7.6271E-69	1.6108E-35	3.4854E-31
AVII	0.	1.4022E-53	2.6325E-47
AVIII	0.	1.0423E-75	3.5873E-67

P1 = 2.00E+02 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3652E+03	1.4927E+04	2.1114E+04
T	5.7963E+01	9.8265E+01	1.0746E+02
RHO	1.3242E+01	7.0625E+01	8.5708E+01
H	2.9447E+02	5.3778E+02	6.3881E+02
A	8.6593E+00	1.2347E+01	1.3333E+01
S	1.6134E+00	1.7398E+00	1.8079E+00
Z	1.7787E+00	2.1508E+00	2.2925E+00
GAME	7.2731E-01	7.2131E-01	7.2165E-01
U	2.7507E+01	5.1677E+00	5.0244E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3778E-01	5.3506E-01	5.6379E-01
A	1.2460E-01	1.1800E-02	8.6304E-03
A+	4.3745E-01	3.7126E-01	2.9159E-01
A++	1.6416E-04	8.1844E-02	1.3577E-01
A+++	3.0140E-12	3.8892E-05	2.2230E-04
A++++	4.7604E-25	1.7916E-11	6.2003E-10
AV	1.0331E-42	8.8947E-21	3.2021E-18
AVI	1.0911E-65	2.4820E-33	1.6329E-29
AVII	0.	1.8945E-50	6.6873E-45
AVIII	0.	1.7505E-71	6.4851E-64

P1 = 2.00E+02 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3085E+03	1.4229E+04	2.0177E+04
T	5.6843E+01	9.6228E+01	1.0547E+02
RHO	1.3190E+01	6.9810E+01	8.4857E+01
H	2.8236E+02	5.1536E+02	6.1293E+02
A	8.4651E+00	1.2140E+01	1.3093E+01
S	1.5952E+00	1.7209E+00	1.7875E+00
Z	1.7453E+00	2.1182E+00	2.2544E+00
GAME	7.2230E-01	7.2305E-01	7.2098E-01
U	2.6925E+01	5.0949E+00	4.9538E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.2703E-01	5.2791E-01	5.5643E-01
A	1.4606E-01	1.3136E-02	9.5588E-03
A+	4.2680E-01	3.9003E-01	3.1174E-01
A++	1.1304E-04	6.8902E-02	1.2212E-01
A+++	1.2304E-12	2.3290E-05	1.5224E-04
A++++	9.3141E-26	6.6366E-12	2.8860E-10
AV	8.4876E-44	1.7838E-21	9.0741E-19
AVI	4.0157E-67	2.3467E-34	2.5386E-30
AVII	0.	6.4644E-52	4.4597E-46
AVIII	0.	1.8315E-73	1.6158E-65

P1 = 2.00E+02 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4228E+03	1.5608E+04	2.2020E+04
T	5.9207E+01	1.0023E+02	1.0940E+02
RHO	1.3263E+01	7.1271E+01	8.6351E+01
H	3.0683E+02	5.6059E+02	6.6512E+02
A	8.8713E+00	1.2560E+01	1.3575E+01
S	1.6316E+00	1.7592E+00	1.8283E+00
Z	1.8119E+00	2.1849E+00	2.3309E+00
GAME	7.3363E-01	7.2039E-01	7.2266E-01
U	2.8084E+01	5.2344E+00	5.0952E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4808E-01	5.4231E-01	5.7098E-01
A	1.0408E-01	1.0628E-02	7.7772E-03
A+	4.4759E-01	3.5187E-01	2.7184E-01
A++	2.4586E-04	9.5130E-02	1.4910E-01
A+++	8.0264E-12	6.1941E-05	3.1620E-04
A++++	2.9440E-24	4.4496E-11	1.2715E-09
AV	1.9781E-41	3.8987E-20	1.0497E-17
AVI	1.0712E-63	2.1845E-32	9.5322E-29
AVII	0.	4.2945E-49	8.5167E-44
AVIII	0.	1.1933E-69	2.0491E-62

TABLE I.- Continued

p_1 = 200 N/m^2

P1 = 2.00E+02 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4813E+03	1.6259E+04	2.2880E+04
T	6.0616E+01	1.0209E+02	1.1133E+02
RHO	1.3248E+01	7.1759E+01	8.6714E+01
H	3.1944E+02	5.8377E+02	6.9182E+02
A	9.1067E+00	1.2773E+01	1.3821E+01
S	1.6498E+00	1.7787E+00	1.8490E+00
Z	1.8446E+00	2.2193E+00	2.3699E+00
GAME	7.4172E-01	7.2009E-01	7.2395E-01
U	2.8654E+01	5.2985E+00	5.1664E+00

SPECIES	MOLE FRACTIONS		
E-	4.5787E-01	5.4942E-01	5.7304E-01
A	8.4644E-02	9.6078E-03	6.9756E-03
A+	4.5710E-01	3.3263E-01	2.5236E-01
A++	3.8273E-04	1.0825E-01	1.6218E-01
A+++	2.3376E-11	9.3924E-05	4.4163E-04
A++++	2.0820E-23	1.0114E-10	2.5263E-09
AV	4.2307E-40	1.4871E-19	3.2756E-17
AVI	8.5968E-62	1.5722E-31	5.1787E-28
AVII	6.1188E-94	7.3021E-48	9.7705E-43
AVIII	0.	5.5084E-68	5.6069E-61

P1 = 2.00E+02 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6006E+03	1.7409E+04	2.4373E+04
T	6.4176E+01	1.0560E+02	1.1515E+02
RHO	1.3082E+01	7.1986E+01	8.6420E+01
H	3.4538E+02	6.3104E+02	7.4622E+02
A	9.6744E+00	1.3202E+01	1.4321E+01
S	1.6859E+00	1.8182E+00	1.8912E+00
Z	1.9064E+00	2.2901E+00	2.4493E+00
GAME	7.6500E-01	7.2076E-01	7.2724E-01
U	2.9772E+01	5.4190E+00	5.3102E+00

SPECIES	MOLE FRACTIONS		
E-	4.7545E-01	5.6333E-01	5.9172E-01
A	5.0189E-02	7.8393E-03	5.5083E-03
A+	4.7326E-01	2.9452E-01	2.1466E-01
A++	1.0968E-03	1.3412E-01	1.8729E-01
A+++	3.0022E-10	1.9565E-04	8.2404E-04
A++++	2.2167E-21	4.3737E-10	9.2340E-09
AV	6.3510E-37	1.6348E-18	2.8257E-16
AVI	3.0111E-57	5.4267E-30	1.2811E-26
AVII	2.5533E-85	1.1836E-45	9.9531E-41
AVIII	0.	5.3923E-65	2.9669E-58

P1 = 2.00E+02 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5406E+03	1.6864E+04	2.3671E+04
T	6.2248E+01	1.0338E+02	1.1325E+02
RHO	1.3190E+01	7.2012E+01	8.6751E+01
H	3.3229E+02	6.0725E+02	7.1885E+02
A	9.3726E+00	1.2987E+01	1.4070E+01
S	1.6679E+00	1.7983E+00	1.8699E+00
Z	1.8763E+00	2.2544E+00	2.4094E+00
GAME	7.5213E-01	7.2025E-01	7.2548E-01
U	2.9217E+01	5.3599E+00	5.2381E+00

SPECIES	MOLE FRACTIONS		
E-	4.6704E-01	5.5643E-01	5.8496E-01
A	6.6550E-02	8.6867E-03	6.2210E-03
A+	4.6578E-01	3.1349E-01	2.3329E-01
A++	6.2741E-04	1.2126E-01	1.7492E-01
A+++	7.7498E-11	1.3748E-04	6.0710E-04
A++++	1.8786E-22	2.1574E-10	4.8828E-09
AV	1.3601E-38	5.1329E-19	9.7877E-17
AVI	1.3208E-59	9.7936E-31	2.6417E-27
AVII	2.1624E-88	1.0112E-46	1.0235E-41
AVIII	0.	1.9315E-66	1.3573E-59

P1 = 2.00E+02 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6608E+03	1.7871E+04	2.4959E+04
T	6.6461E+01	1.0726E+02	1.1703E+02
RHO	1.2922E+01	7.1632E+01	8.5679E+01
H	3.5869E+02	6.5493E+02	7.7369E+02
A	1.0000E+01	1.3417E+01	1.4575E+01
S	1.7035E+00	1.8384E+00	1.9126E+00
Z	1.9339E+00	2.3261E+00	2.4892E+00
GAME	7.7810E-01	7.2155E-01	7.2917E-01
U	3.0310E+01	5.4761E+00	5.3825E+00

SPECIES	MOLE FRACTIONS		
E-	4.8292E-01	5.7009E-01	5.9826E-01
A	3.6219E-02	7.0545E-03	4.8397E-03
A+	4.7881E-01	2.7590E-01	1.9664E-01
A++	2.0525E-03	1.4669E-01	1.9915E-01
A+++	1.3811E-09	2.7154E-04	1.1049E-03
A++++	3.6171E-20	8.4671E-10	1.7090E-08
AV	5.1896E-35	4.8361E-18	7.8802E-16
AVI	1.8698E-54	2.6973E-29	5.9014E-26
AVII	3.9424E-81	1.1832E-44	8.9701E-40
AVIII	0.	1.2136E-63	5.8410E-57

TABLE I. - Continued

p_1 = 200 N/ m^2

P1 = 2.00E+02 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7218E+03	1.8274E+04	2.5474E+04
T	6.9106E+01	1.0868E+02	1.1897E+02
RHO	1.2722E+01	7.1038E+01	8.4637E+01
H	3.7225E+02	6.7913E+02	8.0198E+02
A	1.0302E+01	1.3634E+01	1.4836E+01
S	1.7208E+00	1.8588E+00	1.9347E+00
Z	1.9585E+00	2.3625E+00	2.5300E+00
GAME	7.8412E-01	7.2259E-01	7.3130E-01
U	3.0842E+01	5.5320E+00	5.4789E+00

SPECIES	MOLE FRACTIONS		
E-	4.8939E-01	5.7673E-01	6.0475E-01
A	2.5251E-02	6.3231E-03	4.2050E-03
A+	4.8131E-01	2.5754E-01	1.7883E-01
A++	4.0398E-03	1.5904E-01	2.1074E-01
A+++	7.2197E-09	3.7028E-04	1.4781E-03
A++++	7.3780E-19	1.5889E-09	3.1632E-08
AV	5.8157E-33	1.3623E-17	2.2021E-15
AVI	1.6296E-51	1.2488E-28	2.7289E-25
AVII	5.2101E-77	1.0684E-43	8.1196E-39
AVIII	0.	2.3830E-62	1.1556E-55

P1 = 2.00E+02 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9467E+03	2.0092E+04	2.7844E+04
T	7.7752E+01	1.1494E+02	1.2655E+02
RHO	1.2319E+01	7.0094E+01	8.2350E+01
H	4.2176E+02	7.6819E+02	9.0511E+02
A	1.0795E+01	1.4447E+01	1.5814E+01
S	1.7786E+00	1.9296E+00	2.0100E+00
Z	2.0323E+00	2.4939E+00	2.6718E+00
GAME	7.3752E-01	7.2813E-01	7.3963E-01
U	3.2750E+01	5.7646E+00	5.7636E+00

SPECIES	MOLE FRACTIONS		
E-	5.0795E-01	5.9902E-01	6.2572E-01
A	9.2102E-03	4.2233E-03	2.4311E-03
A+	4.5772E-01	1.9553E-01	1.2198E-01
A++	2.5113E-02	2.0021E-01	2.4585E-01
A+++	6.9186E-07	1.0242E-03	4.0136E-03
A++++	3.1874E-15	1.3207E-08	2.7747E-07
AV	3.0355E-27	4.6042E-16	8.5700E-14
AVI	2.9117E-43	2.3526E-26	6.5799E-23
AVII	2.6056E-65	2.0184E-40	2.2112E-35
AVIII	0.	6.5456E-58	5.2929E-51

P1 = 2.00E+02 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7837E+03	1.8664E+04	2.5960E+04
T	7.1916E+01	1.1051E+02	1.2092E+02
RHO	1.2523E+01	7.0390E+01	8.3525E+01
H	3.8605E+02	7.0366E+02	8.3022E+02
A	1.0509E+01	1.3854E+01	1.5099E+01
S	1.7381E+00	1.8793E+00	1.9564E+00
Z	1.9806E+00	2.3994E+00	2.5702E+00
GAME	7.7542E-01	7.2386E-01	7.3355E-01
U	3.1370E+01	5.5897E+00	5.5533E+00

SPECIES	MOLE FRACTIONS		
E-	4.9509E-01	5.8323E-01	6.1093E-01
A	1.7646E-02	5.6498E-03	3.6315E-03
A+	4.7944E-01	2.3951E-01	1.6190E-01
A++	7.8256E-03	1.7111E-01	2.2158E-01
A+++	3.6746E-08	4.9817E-04	1.9593E-03
A++++	1.4428E-17	2.9171E-09	5.7736E-08
AV	6.2012E-31	3.7129E-17	6.0279E-15
AVI	1.3824E-48	5.5178E-28	1.2252E-24
AVII	7.6760E-73	9.0280E-43	7.0313E-38
AVIII	0.	4.2769E-61	2.1444E-54

P1 = 2.00E+02 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1205E+03	2.2018E+04	3.0485E+04
T	8.1990E+01	1.1996E+02	1.3320E+02
RHO	1.2380E+01	7.0859E+01	8.2580E+01
H	4.5917E+02	8.3685E+02	9.8600E+02
A	1.1105E+01	1.5099E+01	1.6577E+01
S	1.8186E+00	1.9791E+00	2.0621E+00
Z	2.0890E+00	2.5903E+00	2.7715E+00
GAME	7.2007E-01	7.3369E-01	7.4440E-01
U	3.4188E+01	5.9829E+00	6.0202E+00

SPECIES	MOLE FRACTIONS		
E-	5.2130E-01	6.1394E-01	6.3919E-01
A	6.1698E-03	3.0589E-03	1.5348E-03
A+	4.2377E-01	1.5413E-01	8.7603E-02
A++	4.8758E-02	2.2680E-01	2.6343E-01
A+++	4.0242E-06	2.0713E-03	8.2397E-03
A++++	8.6149E-14	6.0372E-08	1.4138E-06
AV	5.7340E-25	5.9784E-15	1.3907E-12
AVI	5.8940E-40	1.1026E-24	4.4286E-21
AVII	1.3208E-60	5.2975E-38	9.7972E-33
AVIII	7.7570E-86	1.2809E-54	2.1140E-47

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3034E+03	2.4234E+04	3.3590E+04
T	8.5383E+01	1.2561E+02	1.4078E+02
RHO	1.2546E+01	7.1821E+01	8.3148E+01
H	4.9823E+02	9.0900E+02	1.0720E+03
A	1.1445E+01	1.5799E+01	1.7346E+01
S	1.8584E+00	2.0280E+00	2.1148E+00
Z	2.1502E+00	2.6864E+00	2.8697E+00
GAME	7.1350E-01	7.3972E-01	7.4481E-01
U	3.5654E+01	6.2379E+00	6.3113E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3493E-01	6.2775E-01	6.5153E-01
A	4.6197E-03	2.1030E-03	9.0709E-04
A+	3.8598E-01	1.1669E-01	6.0164E-02
A++	7.4455E-02	2.4929E-01	2.7085E-01
A+++	1.3378E-05	4.1574E-03	1.6541E-02
A++++	8.5609E-13	2.8244E-07	7.2501E-06
AV	2.2838E-23	8.2556E-14	2.3554E-11
AVI	1.2689E-37	5.7630E-23	3.2584E-19
AVII	2.7428E-57	1.6390E-35	4.9885E-30
AVIII	2.0809E-81	3.1577E-51	1.0324E-43

P1 = 2.00E+02 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6937E+03	2.9168E+04	4.0615E+04
T	9.1143E+01	1.3885E+02	1.5592E+02
RHO	1.2947E+01	7.3203E+01	8.5300E+01
H	5.8120E+02	1.0625E+03	1.2559E+03
A	1.2163E+01	1.7225E+01	1.8750E+01
S	1.9390E+00	2.1251E+00	2.2162E+00
Z	2.2828E+00	2.8696E+00	3.0537E+00
GAME	7.1106E-01	7.4467E-01	7.3838E-01
U	3.8609E+01	6.8313E+00	6.9090E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.6194E-01	6.5152E-01	6.7253E-01
A	2.9111E-03	8.3406E-04	3.2709E-04
A+	3.0842E-01	5.9577E-02	2.9079E-02
A++	1.2666E-01	2.7225E-01	2.5084E-01
A+++	7.2411E-05	1.5805E-02	4.7119E-02
A++++	2.3941E-11	6.1648E-06	1.0178E-04
AV	5.2236E-21	1.6739E-11	2.5324E-09
AVI	3.8529E-34	1.8095E-19	4.3200E-16
AVII	2.8989E-52	1.9342E-30	1.7621E-25
AVIII	1.4558E-74	2.5800E-44	1.7106E-37

P1 = 2.00E+02 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4947E+03	2.6636E+04	3.6998E+04
T	8.8364E+01	1.3186E+02	1.4852E+02
RHO	1.2745E+01	7.2705E+01	8.4078E+01
H	5.3891E+02	9.8428E+02	1.1622E+03
A	1.1799E+01	1.6512E+01	1.8063E+01
S	1.8985E+00	2.0758E+00	2.1662E+00
Z	2.2150E+00	2.7785E+00	2.9629E+00
GAME	7.1124E-01	7.4420E-01	7.4144E-01
U	3.7130E+01	6.5220E+00	6.6152E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4854E-01	6.4009E-01	6.6249E-01
A	3.6301E-03	1.3695E-03	5.3517E-04
A+	3.4715E-01	8.5165E-02	4.1328E-02
A++	1.0065E-01	2.6519E-01	2.6580E-01
A+++	3.3666E-05	8.1783E-03	2.9810E-02
A++++	5.1953E-12	1.3157E-06	3.0820E-05
AV	4.2641E-22	1.1563E-12	2.9910E-10
AVI	9.3994E-36	3.1250E-21	1.5935E-17
AVII	1.3303E-54	5.3685E-33	1.4267E-27
AVIII	8.9571E-78	8.4618E-48	2.3364E-40

P1 = 2.00E+02 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9003E+03	3.1820E+04	4.4385E+04
T	9.3839E+01	1.4575E+02	1.6306E+02
RHO	1.3135E+01	7.3920E+01	8.6504E+01
H	6.2508E+02	1.1438E+03	1.3528E+03
A	1.2540E+01	1.7867E+01	1.9453E+01
S	1.9798E+00	2.1716E+00	2.2663E+00
Z	2.3531E+00	2.9534E+00	3.1467E+00
GAME	7.1217E-01	7.4157E-01	7.3753E-01
U	4.0087E+01	7.1333E+00	7.1849E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.7503E-01	6.6141E-01	6.8220E-01
A	2.3461E-03	5.1490E-04	2.0444E-04
A+	2.7037E-01	4.2145E-02	2.0758E-02
A++	1.5212E-01	2.6857E-01	2.2933E-01
A+++	1.4157E-04	2.7344E-02	6.7227E-02
A++++	9.3481E-11	2.3525E-05	2.7651E-04
AV	4.9350E-20	1.7511E-10	1.5692E-08
AVI	1.0703E-32	6.5531E-18	7.4386E-15
AVII	3.4338E-50	3.5727E-28	1.1421E-23
AVIII	8.8667E-72	3.2107E-41	5.2713E-35

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1143E+03	3.4572E+04	4.8268E+04
T	9.6538E+01	1.5252E+02	1.6999E+02
RHO	1.3301E+01	7.4637E+01	8.7592E+01
H	6.7055E+02	1.2280E+03	1.4527E+03
A	1.2932E+01	1.8491E+01	2.0178E+01
S	2.0210E+00	2.2184E+00	2.3163E+00
Z	2.4255E+00	3.0370E+00	3.2417E+00
GAME	7.1425E-01	7.3813E-01	7.3887E-01
U	4.1561E+01	7.4172E+00	7.4484E+00

SPECIES	MOLE FRACTIONS		
E-	5.8771E-01	6.7073E-01	6.9152E-01
A	1.8799E-03	3.2253E-04	1.2951E-04
A+	2.3338E-01	3.0137E-02	1.4935E-02
A++	1.7678E-01	2.5592E-01	2.0431E-01
A+++	2.6098E-04	4.2821E-02	8.8463E-02
A++++	3.3197E-10	7.4577E-05	6.4477E-04
AV	4.0676E-19	1.3649E-09	7.6184E-08
AVI	2.4948E-31	1.5496E-16	8.9828E-14
AVII	3.3486E-49	3.5933E-26	4.4700E-22
AVIII	4.7645E-69	1.7597E-38	8.2465E-33

P1 = 2.00E+02 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5636E+03	4.0251E+04	5.6221E+04
T	1.0225E+02	1.6517E+02	1.8380E+02
RHO	1.3536E+01	7.5974E+01	8.9012E+01
H	7.6623E+02	1.4050E+03	1.6625E+03
A	1.3779E+01	1.9760E+01	2.1703E+01
S	2.1043E+00	2.3114E+00	2.4152E+00
Z	2.5748E+00	3.2076E+00	3.4364E+00
GAME	7.2117E-01	7.3697E-01	7.4575E-01
U	4.4491E+01	7.9385E+00	7.9716E+00

SPECIES	MOLE FRACTIONS		
E-	6.1162E-01	6.8824E-01	7.0900E-01
A	1.1441E-03	1.3568E-04	5.1023E-05
A+	1.6368E-01	1.6134E-02	7.5998E-03
A++	2.2274E-01	2.1483E-01	1.5128E-01
A+++	8.1508E-04	8.0223E-02	1.2946E-01
A++++	3.7390E-09	4.4482E-04	2.6114E-03
AV	2.3650E-17	3.5797E-08	1.1371E-06
AVI	1.0872E-28	2.5443E-14	6.8006E-12
AVII	2.2416E-44	6.3702E-23	2.7047E-19
AVIII	7.6153E-64	5.1229E-34	5.7984E-29

P1 = 2.00E+02 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3355E+03	3.7396E+04	5.2227E+04
T	9.9315E+01	1.5897E+02	1.7685E+02
RHO	1.3436E+01	7.5363E+01	8.8461E+01
H	7.1760E+02	1.3151E+03	1.5559E+03
A	1.3344E+01	1.9118E+01	2.0928E+01
S	2.0625E+00	2.2649E+00	2.3658E+00
Z	2.4995E+00	3.1214E+00	3.3384E+00
GAME	7.1724E-01	7.3659E-01	7.4181E-01
U	4.3030E+01	7.6831E+00	7.7082E+00

SPECIES	MOLE FRACTIONS		
E-	5.9993E-01	6.7963E-01	7.0045E-01
A	1.4843E-03	2.0750E-04	8.1942E-05
A+	1.9772E-01	2.1938E-02	1.0721E-02
A++	2.0041E-01	2.3716E-01	1.7785E-01
A+++	4.6482E-04	6.0864E-02	1.0955E-01
A++++	1.1203E-09	1.9584E-04	1.3479E-03
AV	3.1071E-18	7.8552E-09	3.1164E-07
AVI	5.1738E-30	2.3549E-15	8.4728E-13
AVII	2.6640E-46	1.9299E-24	1.2321E-20
AVIII	1.7548E-66	4.1706E-36	8.0546E-31

P1 = 2.00E+02 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7983E+03	4.3086E+04	6.0191E+04
T	1.0543E+02	1.7132E+02	1.9094E+02
RHO	1.3593E+01	7.6288E+01	8.9175E+01
H	8.1643E+02	1.4976E+03	1.7724E+03
A	1.4244E+01	2.0429E+01	2.2499E+01
S	2.1463E+00	2.3585E+00	2.4645E+00
Z	2.6505E+00	3.2967E+00	3.5350E+00
GAME	7.2613E-01	7.3895E-01	7.4993E-01
U	4.5940E+01	8.1911E+00	8.2433E+00

SPECIES	MOLE FRACTIONS		
E-	6.2271E-01	6.9667E-01	7.1711E-01
A	8.5198E-04	8.8351E-05	3.0968E-05
A+	1.3160E-01	1.1822E-02	5.2840E-03
A++	2.4341E-01	1.9035E-01	1.2567E-01
A+++	1.4295E-03	1.0016E-01	1.4712E-01
A++++	1.2734E-08	9.1769E-04	4.7763E-03
AV	1.8781E-16	1.4038E-07	3.8214E-06
AVI	2.4344E-27	2.2141E-13	4.8744E-11
AVII	2.0322E-42	1.5458E-21	5.0660E-18
AVIII	3.4964E-61	4.1576E-32	3.3757E-27

TABLE I. - Continued

$p_1 = 200\ N/m^2$

P1 = 2.00E+02 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0397E+03	4.5859E+04	6.4095E+04
T	1.0896E+02	1.7731E+02	1.9836E+02
RHO	1.3603E+01	7.6412E+01	8.8913E+01
H	8.6821E+02	1.5927E+03	1.8858E+03
A	1.4744E+01	2.1102E+01	2.3305E+01
S	2.1882E+00	2.4043E+00	2.5142E+00
Z	2.7256E+00	3.3949E+00	3.6341E+00
GAME	7.3203E-01	7.4198E-01	7.5343E-01
U	4.7380E+01	8.4481E+00	8.5276E+00

SPECIES	MOLE FRACTIONS		
E-	6.3310E-01	7.0457E-01	7.2483E-01
A	6.0581E-04	5.7734E-05	1.8185E-05
A+	1.0202E-01	8.6754E-03	3.5827E-03
A++	2.6173E-01	1.6594E-01	1.0183E-01
A+++	2.5409E-03	1.1904E-01	1.6139E-01
A++++	4.5645E-08	1.7249E-03	8.3416E-03
AV	1.6446E-15	4.7412E-07	1.2075E-05
AVI	6.3603E-26	1.5486E-12	3.2215E-10
AVII	2.3126E-40	2.7464E-20	8.4841E-17
AVIII	2.2015E-58	2.2167E-30	1.6943E-25

P1 = 2.00E+02 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5408E+03	5.1058E+04	7.1467E+04
T	1.1743E+02	1.8973E+02	2.1359E+02
RHO	1.3480E+01	7.5473E+01	8.7394E+01
H	9.7641E+02	1.7900E+03	2.1218E+03
A	1.5808E+01	2.2515E+01	2.4851E+01
S	2.2713E+00	2.4975E+00	2.6132E+00
Z	2.8684E+00	3.5656E+00	3.8291E+00
GAME	7.4186E-01	7.4934E-01	7.5514E-01
U	5.0215E+01	8.9826E+00	9.1068E+00

SPECIES	MOLE FRACTIONS		
E-	6.5138E-01	7.1955E-01	7.3884E-01
A	2.5824E-04	2.2835E-05	5.9336E-06
A+	5.3831E-02	4.4153E-03	1.5713E-03
A++	2.8606E-01	1.1824E-01	6.3202E-02
A+++	8.4734E-03	1.5247E-01	1.7473E-01
A++++	7.1317E-07	5.3068E-03	2.1551E-02
AV	1.8222E-13	4.4538E-06	9.4235E-05
AVI	7.7062E-23	5.8147E-11	9.9370E-09
AVII	6.8446E-36	5.9838E-18	1.4568E-14
AVIII	2.6587E-52	3.8370E-27	2.2054E-22

P1 = 2.00E+02 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2872E+03	4.8519E+04	6.7853E+04
T	1.1295E+02	1.8344E+02	2.0600E+02
RHO	1.3562E+01	7.6108E+01	8.8239E+01
H	9.2153E+02	1.6902E+03	2.0024E+03
A	1.5274E+01	2.1802E+01	2.4099E+01
S	2.2300E+00	2.4509E+00	2.5641E+00
Z	2.7987E+00	3.4752E+00	3.7329E+00
GAME	7.3807E-01	7.4565E-01	7.5526E-01
U	4.8804E+01	8.7095E+00	8.8173E+00

SPECIES	MOLE FRACTIONS		
E-	6.4270E-01	7.1224E-01	7.3211E-01
A	4.0691E-04	3.6760E-05	1.0393E-05
A+	7.5713E-02	6.2467E-03	2.3772E-03
A++	2.7657E-01	1.4152E-01	8.0697E-02
A+++	4.6126E-03	1.3686E-01	1.7091E-01
A++++	1.7560E-07	3.0934E-03	1.3856E-02
AV	1.6424E-14	1.4990E-06	3.5558E-05
AVI	2.0391E-24	9.8999E-12	1.9331E-09
AVII	3.5415E-38	4.3014E-19	1.2415E-15
AVIII	2.0782E-55	9.9831E-29	7.0978E-24

P1 = 2.00E+02 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.8012E+03	5.3572E+04	7.5086E+04
T	1.2225E+02	1.9627E+02	2.2122E+02
RHO	1.3386E+01	7.4654E+01	8.6448E+01
H	1.0329E+03	1.8924E+03	2.2449E+03
A	1.6299E+01	2.3235E+01	2.5586E+01
S	2.3122E+00	2.5442E+00	2.6630E+00
Z	2.9340E+00	3.6562E+00	3.9262E+00
GAME	7.4060E-01	7.5231E-01	7.5370E-01
U	5.1620E+01	9.2708E+00	9.4108E+00

SPECIES	MOLE FRACTIONS		
E-	6.5917E-01	7.2649E-01	7.4530E-01
A	1.5886E-04	1.3800E-05	3.3751E-06
A+	3.7346E-02	3.0546E-03	1.0314E-03
A++	2.8815E-01	9.6676E-02	4.8852E-02
A+++	1.5171E-02	1.6497E-01	1.7291E-01
A++++	2.8222E-06	8.7768E-03	3.1671E-02
AV	1.9687E-12	1.2626E-05	2.2882E-04
AVI	2.8387E-21	3.2164E-10	4.5050E-08
AVII	1.2886E-33	7.6764E-17	1.4326E-13
AVIII	3.3464E-49	1.3266E-25	5.4059E-21

TABLE I. - Continued

p_1 = 500 N/m^2

P1 = 5.00E+02 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4641E+01	2.6143E+02
T	1.2892E+01	1.6278E+01	2.8222E+01
RHO	3.7155E+00	5.1999E+00	9.2365E+00
H	1.2892E+01	1.6278E+01	2.9013E+01
A	3.5905E+00	4.0342E+00	4.9940E+00
S	1.1054E+00	1.1059E+00	1.1195E+00
Z	1.0000E+00	1.0000E+00	1.0029E+00
GAME	1.0000E+00	9.9983E-01	8.9114E-01
U	4.5391E+00	3.2319E+00	3.0578E+00

SPECIES	MOLE FRACTIONS		
E-	6.5910E-09	9.2347E-07	2.8961E-03
A	1.0000E+00	1.0000E+00	9.9421E-01
A+	6.5910E-09	9.2347E-07	2.8961E-03
A++	7.2501E-33	3.9115E-26	1.7668E-13
A+++	1.1756E-72	2.6351E-57	4.3934E-32
A++++	0.	0.	1.6223E-61
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9073E+01	1.2835E+02	3.6684E+02
T	1.8179E+01	2.3363E+01	3.4032E+01
RHO	3.7995E+00	5.4924E+00	1.0572E+01
H	1.8181E+01	2.3453E+01	3.9481E+01
A	4.2611E+00	4.7638E+00	5.1340E+00
S	1.1260E+00	1.1267E+00	1.1401E+00
Z	1.0000E+00	1.0003E+00	1.0196E+00
GAME	9.9875E-01	9.7114E-01	7.5963E-01
U	5.4903E+00	3.7854E+00	3.0741E+00

SPECIES	MOLE FRACTIONS		
E-	8.3611E-06	3.4577E-04	1.9199E-02
A	9.9998E-01	9.9931E-01	9.6160E-01
A+	8.3611E-06	3.4577E-04	1.9199E-02
A++	1.4804E-22	8.1043E-17	1.3433E-10
A+++	3.2616E-51	1.5107E-39	8.4673E-26
A++++	0.	8.8504E-75	6.4287E-50
AV	0.	0.	2.0316E-81
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0498E+02	3.1385E+02
T	1.5416E+01	1.9660E+01	3.1580E+01
RHO	3.7624E+00	5.3396E+00	9.8436E+00
H	1.5416E+01	1.9667E+01	3.4232E+01
A	3.9262E+00	4.4266E+00	5.0532E+00
S	1.1161E+00	1.1167E+00	1.1300E+00
Z	1.0000E+00	1.0000E+00	1.0096E+00
GAME	9.9992E-01	9.9664E-01	8.0087E-01
U	5.0154E+00	3.5217E+00	3.1195E+00

SPECIES	MOLE FRACTIONS		
E-	3.6855E-07	2.6477E-05	9.5256E-03
A	1.0000E+00	9.9995E-01	9.8095E-01
A+	3.6855E-07	2.6477E-05	9.5256E-03
A++	3.4538E-27	1.1707E-20	1.1207E-11
A+++	4.1879E-62	9.2640E-48	3.7925E-28
A++++	0.	0.	4.0911E-54
AV	0.	0.	1.3292E-88
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1142E+01	1.5958E+02	4.2374E+02
T	2.1164E+01	2.7294E+01	3.6036E+01
RHO	3.8336E+00	5.8323E+00	1.1392E+01
H	2.1190E+01	2.7963E+01	4.5071E+01
A	4.5761E+00	4.9301E+00	5.2379E+00
S	1.1353E+00	1.1362E+00	1.1505E+00
Z	1.0001E+00	1.0025E+00	1.0322E+00
GAME	9.8934E-01	8.8833E-01	7.3760E-01
U	5.9665E+00	3.9090E+00	3.0204E+00

SPECIES	MOLE FRACTIONS		
E-	9.9393E-05	2.4636E-03	3.1172E-02
A	9.9980E-01	9.9507E-01	9.3766E-01
A+	9.9393E-05	2.4636E-03	3.1172E-02
A++	8.8987E-19	7.2603E-14	7.7945E-10
A+++	9.3074E-44	4.4565E-33	4.1486E-24
A++++	4.1784E-83	1.1832E-64	1.1848E-46
AV	0.	0.	9.7142E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 500 N/m^2

P1 = 5.00E+02 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4389E+01	2.0541E+02	4.8820E+02
T	2.4276E+01	3.0935E+01	3.7795E+01
RHO	3.8854E+00	6.5775E+00	1.2336E+01
H	2.4462E+01	3.3540E+01	5.1111E+01
A	4.8040E+00	4.9932E+00	5.3561E+00
S	1.1440E+00	1.1456E+00	1.1615E+00
Z	1.0007E+00	1.0095E+00	1.0471E+00
GAME	9.5007E-01	7.9836E-01	7.2488E-01
U	6.4560E+00	3.8005E+00	2.9638E+00

SPECIES	MOLE FRACTIONS		
E-	6.9201E-04	9.3850E-03	4.5002E-02
A	9.9862E-01	9.8123E-01	9.1000E-01
A+	6.9201E-04	9.3850E-03	4.5002E-02
A++	7.0428E-16	9.0202E-12	3.0598E-09
A+++	1.7326E-37	1.4445E-28	9.5558E-23
A++++	1.4991E-71	5.6465E-55	3.1382E-44
AV	0.	4.7280E-90	5.7717E-73
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2594E+02	3.4114E+02	6.7843E+02
T	2.9781E+01	3.6255E+01	4.1134E+01
RHO	4.1059E+00	9.0649E+00	1.5198E+01
H	3.1937E+01	4.6926E+01	6.5565E+01
A	4.9212E+00	5.2401E+00	5.6382E+00
S	1.1607E+00	1.1653E+00	1.1850E+00
Z	1.0079E+00	1.0380E+00	1.0853E+00
GAME	9.0685E-01	7.2964E-01	7.1211E-01
U	7.5579E+00	3.4964E+00	2.8952E+00

SPECIES	MOLE FRACTIONS		
E-	7.8150E-03	3.6619E-02	7.8559E-02
A	9.8437E-01	9.2676E-01	8.4288E-01
A+	7.8150E-03	3.6619E-02	7.8559E-02
A++	3.0923E-12	1.1769E-09	2.7518E-08
A+++	1.3460E-29	8.7987E-24	1.2040E-20
A++++	4.8196E-57	4.0054E-46	3.3334E-40
AV	0.	5.8889E-76	2.0324E-66
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0937E+02	2.6424E+02	5.6893E+02
T	2.7233E+01	3.3821E+01	3.9462E+01
RHO	3.9936E+00	7.6474E+00	1.3541E+01
H	2.8021E+01	3.9837E+01	5.7872E+01
A	4.8894E+00	5.0972E+00	5.4887E+00
S	1.1524E+00	1.1552E+00	1.1730E+00
Z	1.0029E+00	1.0216E+00	1.0647E+00
GAME	8.7530E-01	7.5194E-01	7.1702E-01
U	6.9733E+00	3.6302E+00	2.9345E+00

SPECIES	MOLE FRACTIONS		
E-	2.8975E-03	2.1179E-02	6.0768E-02
A	9.9420E-01	9.5764E-01	8.7846E-01
A+	2.8975E-03	2.1179E-02	6.0769E-02
A++	9.8147E-14	1.5083E-10	9.7542E-09
A+++	7.6701E-33	9.0086E-26	1.1521E-21
A++++	5.9526E-62	7.7558E-50	4.1608E-42
AV	0.	6.5433E-82	1.8316E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4495E+02	4.3979E+02	8.2173E+02
T	3.1875E+01	3.8422E+01	4.2826E+01
RHO	4.4775E+00	1.0821E+01	1.7303E+01
H	3.6193E+01	5.4785E+01	7.4263E+01
A	4.9749E+00	5.4029E+00	5.8030E+00
S	1.1691E+00	1.1761E+00	1.1979E+00
Z	1.0156E+00	1.0578E+00	1.1089E+00
GAME	7.6451E-01	7.1825E-01	7.0911E-01
U	8.1956E+00	3.3749E+00	2.8700E+00

SPECIES	MOLE FRACTIONS		
E-	1.5409E-02	5.4619E-02	9.8200E-02
A	9.6918E-01	8.9076E-01	8.0360E-01
A+	1.5409E-02	5.4619E-02	9.8200E-02
A++	3.4060E-11	5.6352E-09	7.0771E-08
A+++	2.5557E-27	2.9875E-22	1.0477E-19
A++++	8.2093E-53	2.8512E-43	1.9571E-38
AV	1.1425E-86	1.8600E-71	1.4555E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6546E+02	5.5670E+02	9.9329E+02
T	3.3607E+01	4.0357E+01	4.4472E+01
RHO	4.8004E+00	1.2775E+01	1.9685E+01
H	4.0719E+01	6.3125E+01	8.3634E+01
A	5.0518E+00	5.5709E+00	5.9747E+00
S	1.1779E+00	1.1877E+00	1.2114E+00
Z	1.0256E+00	1.0797E+00	1.1346E+00
GAME	7.4043E-01	7.1221E-01	7.0744E-01
U	8.8427E+00	3.3127E+00	2.8583E+00

SPECIES	MOLE FRACTIONS		
E-	2.4968E-02	7.3851E-02	1.1866E-01
A	9.5006E-01	8.5230E-01	7.6267E-01
A+	2.4968E-02	7.3851E-02	1.1866E-01
A++	1.9380E-10	1.9318E-08	1.6340E-07
A+++	1.1648E-25	4.9626E-21	7.2065E-19
A++++	9.3977E-50	5.8018E-41	7.2790E-37
AV	7.4645E-82	1.1442E-67	4.7007E-61
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1083E+02	8.5746E+02	1.4251E+03
T	3.6413E+01	4.3866E+01	4.7664E+01
RHO	5.5122E+00	1.7303E+01	2.5086E+01
H	5.0564E+01	8.1471E+01	1.0431E+02
A	5.2377E+00	5.9193E+00	6.3347E+00
S	1.1967E+00	1.2132E+00	1.2407E+00
Z	1.0504E+00	1.1297E+00	1.1919E+00
GAME	7.1724E-01	7.0705E-01	7.0636E-01
U	1.0154E+01	3.2226E+00	2.8627E+00

SPECIES	MOLE FRACTIONS		
E-	4.7983E-02	1.1481E-01	1.6099E-01
A	9.0403E-01	7.7038E-01	6.7802E-01
A+	4.7983E-02	1.1481E-01	1.6099E-01
A++	2.1901E-09	1.3085E-07	6.8761E-07
A+++	2.4535E-23	4.0596E-19	2.0488E-17
A++++	1.7510E-45	2.2823E-37	3.9476E-34
AV	3.5582E-75	6.3237E-62	1.0639E-56
AVI	0.	0.	6.2785E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8745E+02	6.9532E+02	1.1944E+03
T	3.5095E+01	4.2159E+01	4.6084E+01
RHO	5.1492E+00	1.4942E+01	2.2298E+01
H	4.5512E+01	7.2024E+01	9.3668E+01
A	5.1415E+00	5.7434E+00	6.1524E+00
S	1.1871E+00	1.2001E+00	1.2257E+00
Z	1.0373E+00	1.1038E+00	1.1624E+00
GAME	7.2615E-01	7.0886E-01	7.0661E-01
U	9.4077E+00	3.2669E+00	2.8564E+00

SPECIES	MOLE FRACTIONS		
E-	3.5953E-02	9.4028E-02	1.3970E-01
A	9.2809E-01	8.1194E-01	7.2060E-01
A+	3.5953E-02	9.4028E-02	1.3970E-01
A++	7.4089E-10	5.3992E-08	3.4710E-07
A+++	2.2518E-24	5.2547E-20	4.1506E-18
A++++	2.2931E-47	4.9306E-39	1.9726E-35
AV	4.9546E-78	1.4511E-64	9.4667E-59
AVI	0.	0.	1.6426E-88
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3551E+02	1.0408E+03	1.6853E+03
T	3.7609E+01	4.5488E+01	4.9215E+01
RHO	5.8814E+00	1.9775E+01	2.8001E+01
H	5.5866E+01	9.1377E+01	1.1553E+02
A	5.3373E+00	6.0966E+00	6.5209E+00
S	1.2068E+00	1.2271E+00	1.2565E+00
Z	1.0647E+00	1.1571E+00	1.2229E+00
GAME	7.1141E-01	7.0616E-01	7.0650E-01
U	1.0808E+01	3.2070E+00	2.8762E+00

SPECIES	MOLE FRACTIONS		
E-	6.0793E-02	1.3577E-01	1.8230E-01
A	8.7841E-01	7.2846E-01	6.3541E-01
A+	6.0793E-02	1.3577E-01	1.8229E-01
A++	5.4432E-09	2.8364E-07	1.2864E-06
A+++	1.8853E-22	2.4594E-18	8.9764E-17
A++++	8.1227E-44	6.9160E-36	6.6340E-33
AV	2.0101E-72	1.6376E-59	1.1670E-54
AVI	0.	1.0782E-89	1.9180E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6151E+02	1.2482E+03	1.9742E+03
T	3.8713E+01	4.7055E+01	5.0733E+01
RHO	6.2537E+00	2.2366E+01	3.1004E+01
H	6.1422E+01	1.0179E+02	1.2719E+02
A	5.4392E+00	6.2764E+00	6.7094E+00
S	1.2173E+00	1.2418E+00	1.2726E+00
Z	1.0802E+00	1.1860E+00	1.2551E+00
GAME	7.0749E-01	7.0587E-01	7.0694E-01
U	1.1460E+01	3.2001E+00	2.8777E+00

SPECIES	MOLE FRACTIONS		
E-	7.4213E-02	1.5684E-01	2.0327E-01
A	8.5157E-01	6.8632E-01	5.9347E-01
A+	7.4213E-02	1.5684E-01	2.0326E-01
A++	1.1925E-08	5.6739E-07	2.2845E-06
A+++	1.0856E-21	1.2489E-17	3.4808E-16
A++++	2.0053E-42	1.5115E-34	8.5315E-32
AV	2.5373E-70	2.4816E-57	7.0856E-53
AVI	0.	2.0894E-86	8.0403E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1722E+02	1.7359E+03	2.6492E+03
T	4.0726E+01	5.0072E+01	5.3775E+01
RHO	6.9920E+00	2.7782E+01	3.7196E+01
H	7.3283E+01	1.2406E+02	1.5249E+02
A	5.6473E+00	6.6436E+00	7.1037E+00
S	1.2396E+00	1.2729E+00	1.3074E+00
Z	1.1140E+00	1.2479E+00	1.3244E+00
GAME	7.0295E-01	7.0640E-01	7.0853E-01
U	1.2752E+01	3.2053E+00	2.9404E+00

SPECIES	MOLE FRACTIONS		
E-	1.0234E-01	1.9862E-01	2.4496E-01
A	7.9532E-01	6.0275E-01	5.1008E-01
A+	1.0234E-01	1.9862E-01	2.4495E-01
A++	4.4158E-08	1.8981E-06	6.5704E-06
A+++	2.0990E-20	2.1473E-16	4.2742E-15
A++++	5.3032E-40	3.2610E-32	9.6363E-30
AV	2.5455E-66	1.4351E-53	1.4121E-49
AVI	0.	7.2656E-81	5.5234E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8874E+02	1.4805E+03	2.2960E+03
T	3.9747E+01	4.8582E+01	5.2256E+01
RHO	6.6244E+00	2.5054E+01	3.4083E+01
H	6.7227E+01	1.1270E+02	1.3956E+02
A	5.5426E+00	6.4589E+00	6.9043E+00
S	1.2282E+00	1.2570E+00	1.2897E+00
Z	1.0966E+00	1.2163E+00	1.2891E+00
GAME	7.0479E-01	7.0599E-01	7.0763E-01
U	1.2109E+01	3.1935E+00	2.9067E+00

SPECIES	MOLE FRACTIONS		
E-	8.8096E-02	1.7785E-01	2.2428E-01
A	8.2381E-01	6.4430E-01	5.5144E-01
A+	8.8096E-02	1.7785E-01	2.2427E-01
A++	2.3808E-08	1.0651E-06	3.9341E-06
A+++	5.2230E-21	5.4719E-17	1.2600E-15
A++++	4.0828E-41	2.4162E-33	9.5588E-31
AV	4.5855E-68	1.9960E-55	3.3301E-51
AVI	0.	9.6575E-84	2.0408E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4715E+02	2.0187E+03	3.0390E+03
T	4.1663E+01	5.1550E+01	5.5313E+01
RHO	7.3585E+00	3.0575E+01	4.0362E+01
H	7.9600E+01	1.3598E+02	1.6607E+02
A	5.7536E+00	6.8325E+00	7.3099E+00
S	1.2514E+00	1.2894E+00	1.3257E+00
Z	1.1324E+00	1.2808E+00	1.3613E+00
GAME	7.0171E-01	7.0705E-01	7.0966E-01
U	1.3401E+01	3.2301E+00	2.9786E+00

SPECIES	MOLE FRACTIONS		
E-	1.1689E-01	2.1923E-01	2.6539E-01
A	7.6623E-01	5.6153E-01	4.6924E-01
A+	1.1689E-01	2.1923E-01	2.6536E-01
A++	7.7407E-08	3.2578E-06	1.0747E-05
A+++	7.4278E-22	7.7030E-16	1.3835E-14
A++++	5.1422E-39	3.5777E-31	8.8069E-29
AV	4.4893E-65	6.3503E-52	4.9546E-48
AVI	0.	1.4601E-78	1.0271E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7805E+02	2.3229E+03	3.4559E+03
T	4.2560E+01	5.3001E+01	5.6850E+01
RHO	7.7137E+00	3.3338E+01	4.3453E+01
H	8.6154E+01	1.4828E+02	1.8009E+02
A	5.8610E+00	7.0231E+00	7.5198E+00
S	1.2636E+00	1.3064E+00	1.3444E+00
Z	1.1515E+00	1.3146E+00	1.3990E+00
GAME	7.0090E-01	7.0789E-01	7.1102E-01
U	1.4035E+01	3.2571E+00	3.0218E+00

SPECIES	MOLE FRACTIONS		
E-	1.3160E-01	2.3933E-01	2.8518E-01
A	7.3680E-01	5.2135E-01	4.2965E-01
A+	1.3160E-01	2.3932E-01	2.8515E-01
A++	1.2941E-07	5.3883E-06	1.7166E-05
A+++	2.4032E-19	2.5548E-15	4.2440E-14
A++++	4.7920E-39	3.4948E-30	7.2543E-28
AV	2.6581E-63	2.6718E-50	1.4672E-46
AVI	0.	4.7006E-76	1.4855E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4351E+02	3.0105E+03	4.3883E+03
T	4.4274E+01	5.5909E+01	6.0016E+01
RHO	8.4008E+00	3.8861E+01	4.9479E+01
H	1.0002E+02	1.7435E+02	2.0986E+02
A	6.0799E+00	7.4173E+00	7.9613E+00
S	1.2891E+00	1.3418E+00	1.3832E+00
Z	1.1924E+00	1.3856E+00	1.4778E+00
GAME	7.0019E-01	7.1019E-01	7.1466E-01
U	1.5296E+01	3.3100E+00	3.1235E+00

SPECIES	MOLE FRACTIONS		
E-	1.6139E-01	2.7829E-01	3.2330E-01
A	6.7722E-01	4.4343E-01	3.5345E-01
A+	1.6139E-01	2.7826E-01	3.2321E-01
A++	3.2467E-07	1.3724E-05	4.2231E-05
A+++	1.9872E-18	2.3825E-14	3.6911E-13
A++++	2.6070E-36	2.3450E-28	4.2081E-26
AV	2.0934E-60	2.3144E-47	9.9333E-44
AVI	0.	9.6966E-72	2.1231E-66
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1017E+02	2.6523E+03	3.9055E+03
T	4.3429E+01	5.4449E+01	5.8413E+01
RHO	8.0614E+00	3.6094E+01	4.6501E+01
H	9.2960E+01	1.6106E+02	1.9469E+02
A	5.9697E+00	7.2176E+00	7.7366E+00
S	1.2762E+00	1.3238E+00	1.3636E+00
Z	1.1716E+00	1.3496E+00	1.4378E+00
GAME	7.0041E-01	7.0893E-01	7.1267E-01
U	1.4667E+01	3.2895E+00	3.0700E+00

SPECIES	MOLE FRACTIONS		
E-	1.4645E-01	2.5901E-01	3.0450E-01
A	7.0709E-01	4.8198E-01	3.9103E-01
A+	1.4645E-01	2.5900E-01	3.0444E-01
A++	2.0827E-07	8.6802E-06	2.7046E-05
A+++	7.1606E-19	7.9442E-15	1.2635E-13
A++++	3.8069E-37	2.9229E-29	5.6337E-27
AV	8.9815E-62	7.7095E-49	3.9450E-45
AVI	0.	5.4282E-74	1.8660E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7808E+02	3.3909E+03	4.9045E+03
T	4.5099E+01	5.7377E+01	6.1674E+01
RHO	8.7311E+00	4.1545E+01	5.2361E+01
H	1.0733E+02	1.8809E+02	2.2561E+02
A	6.1918E+00	7.6215E+00	8.1955E+00
S	1.3024E+00	1.3601E+00	1.4033E+00
Z	1.2141E+00	1.4225E+00	1.5187E+00
GAME	7.0016E-01	7.1168E-01	7.1708E-01
U	1.5922E+01	3.3500E+00	3.1827E+00

SPECIES	MOLE FRACTIONS		
E-	1.7636E-01	2.9703E-01	3.4156E-01
A	6.4728E-01	4.0595E-01	3.1694E-01
A+	1.7636E-01	2.9699E-01	3.4143E-01
A++	4.9270E-07	2.1317E-05	6.5670E-05
A+++	5.1945E-18	6.8361E-14	1.0699E-12
A++++	1.5818E-35	1.6885E-27	3.0845E-25
AV	3.8398E-59	5.3878E-46	2.4141E-42
AVI	1.2558E-89	9.2917E-70	2.2767E-64
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.1385E+02	3.7959E+03	5.4544E+03
T	4.5909E+01	5.8867E+01	6.3406E+01
RHO	9.0515E+00	4.4153E+01	5.5118E+01
H	1.1489E+02	2.0230E+02	2.4197E+02
A	6.3053E+00	7.8316E+00	8.4415E+00
S	1.3161E+00	1.3789E+00	1.4238E+00
Z	1.2366E+00	1.4604E+00	1.5607E+00
GAME	7.0031E-01	7.1344E-01	7.2008E-01
U	1.6545E+01	3.3963E+00	3.2484E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.9132E-01	3.1526E-01	3.5927E-01
A	6.1736E-01	3.6952E-01	2.8157E-01
A+	1.9132E-01	3.1519E-01	3.5906E-01
A++	7.3086E-07	3.2727E-05	1.0220E-04
A+++	1.2911E-17	1.9140E-13	3.1120E-12
A++++	8.6950E-35	1.1634E-26	2.2600E-24
AV	5.9151E-58	1.1778E-44	5.7877E-41
AVI	1.5496E-87	8.0884E-68	2.3327E-62
AVII	0.	0.	2.1305E-91
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8924E+02	4.6824E+03	6.6616E+03
T	4.7496E+01	6.1978E+01	6.7216E+01
RHO	9.6634E+00	4.9098E+01	6.0161E+01
H	1.3079E+02	2.3220E+02	2.7663E+02
A	6.5381E+00	8.2756E+00	8.9815E+00
S	1.3444E+00	1.4174E+00	1.4659E+00
Z	1.2838E+00	1.5388E+00	1.6474E+00
GAME	7.0103E-01	7.1810E-01	7.2851E-01
U	1.7791E+01	3.5063E+00	3.4010E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2107E-01	3.5012E-01	3.9297E-01
A	5.5785E-01	2.9983E-01	2.1432E-01
A+	2.2107E-01	3.4997E-01	3.9246E-01
A++	1.5222E-06	7.5904E-05	2.5470E-04
A+++	7.0740E-17	1.4540E-12	2.8381E-11
A++++	2.0883E-33	5.1987E-25	1.3800E-22
AV	9.5756E-56	5.2830E-42	4.0784E-38
AVI	2.6542E-84	6.7778E-64	3.3798E-58
AVII	0.	0.	2.0448E-85
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.5084E+02	4.2252E+03	6.0383E+03
T	4.6706E+01	6.0394E+01	6.5239E+01
RHO	9.3615E+00	4.6668E+01	5.7718E+01
H	1.2271E+02	2.1697E+02	2.5895E+02
A	6.4206E+00	8.0483E+00	8.7018E+00
S	1.3301E+00	1.3979E+00	1.4447E+00
Z	1.2598E+00	1.4991E+00	1.6036E+00
GAME	7.0061E-01	7.1555E-01	7.2380E-01
U	1.7166E+01	3.4480E+00	3.3215E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.0623E-01	3.3293E-01	3.7639E-01
A	5.8754E-01	3.3419E-01	2.4737E-01
A+	2.0623E-01	3.3283E-01	3.7607E-01
A++	1.0633E-06	4.9875E-05	1.6012E-04
A+++	3.0753E-17	5.2858E-13	9.2172E-12
A++++	4.4041E-34	7.8723E-26	1.7072E-23
AV	7.9433E-57	2.6080E-43	1.4581E-39
AVI	6.9513E-86	8.5021E-66	2.6031E-60
AVII	0.	0.	1.8746E-88
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.2879E+02	5.1614E+03	7.3201E+03
T	4.8279E+01	6.3625E+01	6.9379E+01
RHO	9.9530E+00	5.1374E+01	6.2364E+01
H	1.3911E+02	2.4786E+02	2.9503E+02
A	6.6575E+00	8.5121E+00	9.2852E+00
S	1.3591E+00	1.4371E+00	1.4874E+00
Z	1.3086E+00	1.5790E+00	1.6918E+00
GAME	7.0157E-01	7.2120E-01	7.3451E-01
U	1.8412E+01	3.5719E+00	3.4960E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.3580E-01	3.6670E-01	4.0892E-01
A	5.2840E-01	2.6672E-01	1.8257E-01
A+	2.3579E-01	3.6647E-01	4.0810E-01
A++	2.1483E-06	1.1553E-04	4.1422E-04
A+++	1.5772E-16	4.0064E-12	9.2316E-11
A++++	9.3331E-33	3.4262E-24	1.2254E-21
AV	1.0485E-54	1.0557E-40	1.3099E-36
AVI	8.7897E-83	5.1259E-62	5.2774E-56
AVII	0.	5.2577E-91	2.8077E-82
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.6889E+02	5.6461E+03	7.9989E+03
T	4.9054E+01	6.5324E+01	7.1765E+01
RHO	1.0222E+01	5.3379E+01	6.4191E+01
H	1.4767E+02	2.6372E+02	3.1401E+02
A	6.7786E+00	8.7566E+00	9.6160E+00
S	1.3740E+00	1.4568E+00	1.5092E+00
Z	1.3339E+00	1.6192E+00	1.7364E+00
GAME	7.0222E-01	7.2492E-01	7.4205E-01
U	1.9012E+01	3.6458E+00	3.6181E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.5035E-01	3.8242E-01	4.2409E-01
A	4.9931E-01	2.3533E-01	1.5252E-01
A+	2.5034E-01	3.8207E-01	4.2270E-01
A++	2.9913E-06	1.7550E-04	6.9237E-04
A+++	3.4138E-16	1.1003E-11	3.2124E-10
A++++	3.9413E-32	2.2379E-23	1.2228E-20
AV	1.0464E-53	2.0856E-39	5.0120E-35
AVI	2.5370E-81	3.8703E-60	1.0491E-53
AVII	0.	2.1459E-88	5.3144E-79
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.5379E+02	6.7002E+03	9.4774E+03
T	5.0610E+01	6.9150E+01	7.7592E+01
RHO	1.0739E+01	5.6942E+01	6.6990E+01
H	1.6559E+02	2.9725E+02	3.5400E+02
A	7.0289E+00	9.3020E+00	1.0379E+01
S	1.4048E+00	1.4971E+00	1.5526E+00
Z	1.3869E+00	1.7016E+00	1.8233E+00
GAME	7.0385E-01	7.3535E-01	7.6137E-01
U	2.0238E+01	3.8219E+00	3.8451E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7899E-01	4.1233E-01	4.5155E-01
A	4.4202E-01	1.7577E-01	9.9099E-02
A+	2.7898E-01	4.1147E-01	4.4716E-01
A++	5.6493E-06	4.2624E-04	2.1918E-03
A+++	1.5143E-15	9.4493E-11	5.3179E-09
A++++	6.3451E-31	1.2064E-21	2.1193E-18
AV	8.8451E-52	1.1987E-36	1.7159E-31
AVI	1.6595E-78	4.2993E-56	1.3723E-48
AVII	0.	1.8437E-82	9.8259E-72
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.1051E+02	6.1583E+03	8.7126E+03
T	4.9830E+01	6.7151E+01	7.4449E+01
RHO	1.0484E+01	5.5242E+01	6.5743E+01
H	1.5649E+02	2.8017E+02	3.3349E+02
A	6.9023E+00	9.0183E+00	9.9776E+00
S	1.3893E+00	1.4768E+00	1.5308E+00
Z	1.3601E+00	1.6601E+00	1.7801E+00
GAME	7.0298E-01	7.2955E-01	7.5119E-01
U	1.9620E+01	3.7286E+00	3.7222E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6475E-01	3.9764E-01	4.3823E-01
A	4.7050E-01	2.0499E-01	1.2473E-01
A+	2.6474E-01	3.9710E-01	4.3584E-01
A++	4.1264E-06	2.7051E-04	1.1979E-03
A+++	7.2458E-16	3.1362E-11	1.2189E-09
A++++	1.6044E-31	1.5624E-22	1.4221E-19
AV	9.8460E-53	4.6010E-38	2.4272E-33
AVI	6.7127E-90	3.5537E-58	2.9154E-51
AVII	0.	1.5111E-85	1.6052E-75
AVIII	0.	0.	0.

P1 = 5.00E+02 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.9796E+02	7.2505E+03	1.0283E+04
T	5.1394E+01	7.1325E+01	8.1283E+01
RHO	1.0977E+01	5.8332E+01	6.7830E+01
H	1.7492E+02	3.1464E+02	3.7570E+02
A	7.1580E+00	9.6064E+00	1.0799E+01
S	1.4206E+00	1.5173E+00	1.5749E+00
Z	1.4145E+00	1.7427E+00	1.8651E+00
GAME	7.0484E-01	7.4245E-01	7.6921E-01
U	2.0847E+01	3.9281E+00	4.0237E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9301E-01	4.2617E-01	4.6384E-01
A	4.1398E-01	1.4834E-01	7.6560E-02
A+	2.9300E-01	4.2480E-01	4.5536E-01
A++	7.6773E-06	6.8535E-04	4.2378E-03
A+++	3.1156E-15	2.9937E-10	2.6720E-08
A++++	2.4350E-30	1.0151E-20	4.0734E-17
AV	7.5657E-51	3.5354E-35	1.8065E-29
AVI	3.8142E-77	6.0071E-54	1.1526E-45
AVII	0.	2.2557E-79	1.3919E-67
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.4330E+02	7.8139E+03	1.1116E+04
T	5.2184E+01	7.3746E+01	8.5310E+01
RHO	1.1202E+01	5.9422E+01	6.8467E+01
H	1.8451E+02	3.3246E+02	3.9791E+02
A	7.2901E+00	9.9373E+00	1.1170E+01
S	1.4366E+00	1.5374E+00	1.5966E+00
Z	1.4426E+00	1.7831E+00	1.9031E+00
GAME	7.0595E-01	7.5096E-01	7.6851E-01
U	2.1453E+01	4.0494E+00	4.1948E+00

SPECIES	MOLE FRACTIONS		
E-	3.0691E-01	4.3918E-01	4.7455E-01
A	3.8639E-01	1.2277E-01	5.9062E-02
A+	3.0679E-01	4.3691E-01	4.5824E-01
A++	1.0378E-05	1.1360E-03	8.1527E-03
A+++	6.3423E-15	1.0209E-09	1.3438E-07
A++++	9.1551E-30	9.6458E-20	7.8437E-16
AV	6.2591E-50	1.2274E-33	1.9023E-27
AVI	8.3420E-76	1.0021E-51	9.6265E-43
AVII	0.	3.0909E-76	1.9228E-63
AVIII	0.	0.	1.4309E-88

P1 = 5.00E+02 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.3751E+02	8.9683E+03	1.2848E+04
T	5.3802E+01	7.9558E+01	9.3085E+01
RHO	1.1611E+01	6.0628E+01	7.0041E+01
H	2.0445E+02	3.6931E+02	4.4362E+02
A	7.5641E+00	1.0661E+01	1.1706E+01
S	1.4694E+00	1.5772E+00	1.6384E+00
Z	1.5008E+00	1.8593E+00	1.9706E+00
GAME	7.0861E-01	7.6834E-01	7.4702E-01
U	2.2660E+01	4.3453E+00	4.5026E+00

SPECIES	MOLE FRACTIONS		
E-	3.3368E-01	4.6217E-01	4.9255E-01
A	3.3266E-01	7.9119E-02	3.8506E-02
A+	3.3364E-01	4.5525E-01	4.4535E-01
A++	1.8777E-05	3.4621E-03	2.3594E-02
A+++	2.5803E-14	1.5457E-08	1.9720E-06
A++++	1.2469E-28	1.3992E-17	1.1057E-13
AV	4.0172E-48	3.1278E-30	4.7018E-24
AVI	3.6000E-73	8.4703E-47	7.7836E-38
AVII	0.	3.0789E-69	1.7218E-56
AVIII	0.	0.	2.9210E-79

P1 = 5.00E+02 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.8982E+02	8.3874E+03	1.1974E+04
T	5.2986E+01	7.6478E+01	8.9413E+01
RHO	1.1413E+01	6.0184E+01	6.9082E+01
H	1.9435E+02	3.5068E+02	4.2063E+02
A	7.4253E+00	1.0294E+01	1.1467E+01
S	1.4529E+00	1.5574E+00	1.6183E+00
Z	1.4714E+00	1.8223E+00	1.9385E+00
GAME	7.0720E-01	7.6031E-01	7.5861E-01
U	2.2057E+01	4.1882E+00	4.3591E+00

SPECIES	MOLE FRACTIONS		
E-	3.2037E-01	4.5123E-01	4.8413E-01
A	3.5927E-01	9.9487E-02	4.6520E-02
A+	3.2034E-01	4.4733E-01	4.5456E-01
A++	1.3976E-05	1.9512E-03	1.4788E-02
A+++	1.2817E-14	3.8091E-09	5.9661E-07
A++++	3.3932E-29	1.0772E-18	1.2116E-14
AV	5.0551E-49	5.4971E-32	1.4229E-25
AVI	1.7576E-74	2.4322E-49	4.9167E-40
AVII	0.	7.3211E-73	1.3179E-59
AVIII	0.	0.	1.9807E-83

P1 = 5.00E+02 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.8635E+02	9.5570E+03	1.3733E+04
T	5.4636E+01	8.2947E+01	9.6417E+01
RHO	1.1794E+01	6.0845E+01	7.1122E+01
H	2.1480E+02	3.8835E+02	4.6678E+02
A	7.7069E+00	1.1004E+01	1.1935E+01
S	1.4861E+00	1.5967E+00	1.6584E+00
Z	1.5307E+00	1.8936E+00	2.0027E+00
GAME	7.1019E-01	7.7099E-01	7.3774E-01
U	2.3260E+01	4.5141E+00	4.6199E+00

SPECIES	MOLE FRACTIONS		
E-	3.4672E-01	4.7191E-01	5.0067E-01
A	3.0658E-01	6.2389E-02	3.2930E-02
A+	3.4667E-01	4.5949E-01	4.3213E-01
A++	2.5208E-05	6.2131E-03	3.4262E-02
A+++	5.1915E-14	6.5004E-08	5.2564E-06
A++++	4.5670E-28	1.9339E-16	6.8862E-13
AV	3.1602E-47	1.9464E-28	8.6061E-23
AVI	7.2035E-72	3.2959E-44	5.3153E-36
AVII	0.	1.4387E-65	6.9748E-54
AVIII	0.	1.5282E-91	9.3313E-76

TABLE 1. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0363E+03	1.0157E+04	1.4642E+04
T	5.5494E+01	8.6471E+01	9.9469E+01
RHO	1.1961E+01	6.1013E+01	7.2318E+01
H	2.2540E+02	4.0783E+02	4.9066E+02
A	7.8541E+00	1.1288E+01	1.2169E+01
S	1.5030E+00	1.6159E+00	1.6784E+00
Z	1.5612E+00	1.9252E+00	2.0355E+00
GAME	7.1200E-01	7.6534E-01	7.3137E-01
U	2.3858E+01	4.6826E+00	4.7480E+00

SPECIES	MOLE FRACTIONS		
E-	3.5948E-01	4.8056E-01	5.0873E-01
A	2.8107E-01	4.9694E-02	2.8829E-02
A+	3.5942E-01	4.5892E-01	4.1617E-01
A++	3.3868E-05	1.0819E-02	4.6262E-02
A+++	1.0474E-13	2.5730E-07	1.1870E-05
A++++	1.6745E-27	2.4019E-15	3.1991E-12
AV	2.4699E-46	1.0259E-26	1.0036E-21
AVI	1.4094E-70	1.0103E-41	1.9193E-34
AVII	0.	4.7785E-62	1.1753E-51
AVIII	0.	9.4733E-87	9.6461E-73

P1 = 5.00E+02 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1397E+03	1.1405E+04	1.6457E+04
T	5.7305E+01	9.3121E+01	1.0476E+02
RHO	1.2249E+01	6.1711E+01	7.4756E+01
H	2.4736E+02	4.4824E+02	5.3843E+02
A	8.1646E+00	1.1728E+01	1.2634E+01
S	1.5374E+00	1.6539E+00	1.7172E+00
Z	1.6237E+00	1.9846E+00	2.1014E+00
GAME	7.1643E-01	7.4425E-01	7.2505E-01
U	2.5048E+01	4.9736E+00	4.9072E+00

SPECIES	MOLE FRACTIONS		
E-	3.8412E-01	4.9612E-01	5.2413E-01
A	2.3182E-01	3.4185E-02	2.3237E-02
A+	3.8400E-01	4.4328E-01	3.8118E-01
A++	6.1741E-05	2.6412E-02	7.1414E-02
A+++	4.3766E-13	2.4885E-06	4.1057E-05
A++++	2.3296E-26	1.5777E-13	3.4441E-11
AV	1.5161E-44	7.6131E-24	4.6102E-20
AVI	4.4017E-68	1.4392E-37	5.2234E-32
AVII	0.	3.6842E-56	3.5524E-48
AVIII	0.	7.4312E-79	4.7843E-68

P1 = 5.00E+02 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0875E+03	1.0772E+04	1.5541E+04
T	5.6382E+01	8.9858E+01	1.0219E+02
RHO	1.2114E+01	6.1337E+01	7.3544E+01
H	2.3625E+02	4.2779E+02	5.1419E+02
A	8.0065E+00	1.1515E+01	1.2398E+01
S	1.5201E+00	1.6345E+00	1.6977E+00
Z	1.5922E+00	1.9545E+00	2.0679E+00
GAME	7.1406E-01	7.5497E-01	7.2744E-01
U	2.4454E+01	4.8376E+00	4.8213E+00

SPECIES	MOLE FRACTIONS		
E-	3.7196E-01	4.8836E-01	5.1642E-01
A	2.5614E-01	4.0757E-02	2.5769E-02
A+	3.7186E-01	4.5341E-01	3.9922E-01
A++	4.5617E-05	1.7470E-02	5.8568E-02
A+++	2.1251E-13	8.6031E-07	2.3029E-05
A++++	6.1338E-27	2.2111E-14	1.1304E-11
AV	1.8341E-45	3.4097E-25	7.6131E-21
AVI	2.0361E-69	1.5945E-39	3.6991E-33
AVII	0.	6.2174E-59	7.9190E-50
AVIII	0.	1.4180E-82	2.7180E-70

P1 = 5.00E+02 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1931E+03	1.2052E+04	1.7378E+04
T	5.8274E+01	9.5965E+01	1.0720E+02
RHO	1.2367E+01	6.2382E+01	7.5907E+01
H	2.5872E+02	4.6920E+02	5.6310E+02
A	8.3297E+00	1.1928E+01	1.2872E+01
S	1.5548E+00	1.6719E+00	1.7366E+00
Z	1.6556E+00	2.0132E+00	2.1356E+00
GAME	7.1918E-01	7.3642E-01	7.2378E-01
U	2.5639E+01	5.0894E+00	4.9885E+00

SPECIES	MOLE FRACTIONS		
E-	3.9597E-01	5.0328E-01	5.3175E-01
A	2.0814E-01	2.9749E-02	2.1084E-02
A+	3.9580E-01	4.3066E-01	3.6265E-01
A++	8.4181E-05	3.6305E-02	8.4450E-02
A+++	9.2144E-13	5.7649E-06	6.8269E-05
A++++	9.3564E-26	7.5758E-13	9.2667E-11
AV	1.4537E-43	9.2269E-23	2.2979E-19
AVI	1.4808E-66	5.4012E-36	5.5524E-31
AVII	0.	6.3912E-54	1.0518E-46
AVIII	0.	7.6141E-76	4.6641E-66

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2475E+03	1.2710E+04	1.8298E+04
T	5.9299E+01	9.8622E+01	1.0951E+02
RHO	1.2465E+01	6.3078E+01	7.7009E+01
H	2.7033E+02	4.9063E+02	5.8820E+02
A	8.5029E+00	1.2135E+01	1.3110E+01
S	1.5723E+00	1.6904E+00	1.7558E+00
Z	1.6877E+00	2.0431E+00	2.1699E+00
GAME	7.2242E-01	7.3085E-01	7.2331E-01
U	2.6227E+01	5.1901E+00	5.0672E+00

SPECIES	MOLE FRACTIONS		
E-	4.0748E-01	5.1054E-01	5.3915E-01
A	1.8515E-01	2.6304E-02	1.9231E-02
A+	4.0725E-01	4.1578E-01	3.4421E-01
A++	1.1590E-04	4.7365E-02	9.7309E-02
A+++	1.9874E-12	1.1871E-05	1.0689E-04
A++++	3.8960E-25	2.9543E-12	2.2382E-10
AV	1.4184E-42	8.1076E-22	9.6733E-19
AVI	4.2039E-65	1.2812E-34	4.6232E-30
AVII	0.	5.8035E-52	2.1964E-45
AVIII	0.	3.2792E-73	2.8278E-64

P1 = 5.00E+02 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3595E+03	1.4030E+04	2.0116E+04
T	6.1576E+01	1.0343E+02	1.1403E+02
RHO	1.2598E+01	6.4426E+01	7.8673E+01
H	2.9430E+02	5.3482E+02	6.3975E+02
A	8.8813E+00	1.2564E+01	1.3606E+01
S	1.6075E+00	1.7279E+00	1.7956E+00
Z	1.7526E+00	2.1056E+00	2.2424E+00
GAME	7.3091E-01	7.2486E-01	7.2401E-01
U	2.7392E+01	5.3608E+00	5.2212E+00

SPECIES	MOLE FRACTIONS		
E-	4.2941E-01	5.2507E-01	5.5406E-01
A	1.4141E-01	2.1263E-02	1.5906E-02
A+	4.2895E-01	3.8230E-01	3.0625E-01
A++	2.3938E-04	7.1325E-02	1.2355E-01
A+++	1.0261E-11	3.8099E-05	2.3899E-04
A++++	8.0181E-24	2.7419E-11	1.1140E-09
AV	1.6922E-40	2.9152E-20	1.3439E-17
AVI	4.3182E-62	2.4190E-32	2.2711E-28
AVII	1.5130E-91	1.0312E-48	5.9287E-43
AVIII	0.	7.8652E-69	5.5541E-61

P1 = 5.00E+02 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3030E+03	1.3371E+04	1.9214E+04
T	6.0393E+01	1.0108E+02	1.1182E+02
RHO	1.2543E+01	6.3788E+01	7.7883E+01
H	2.8219E+02	5.1251E+02	6.1375E+02
A	8.6860E+00	1.2346E+01	1.3359E+01
S	1.5899E+00	1.7090E+00	1.7759E+00
Z	1.7201E+00	2.0737E+00	2.2063E+00
GAME	7.2627E-01	7.2719E-01	7.2343E-01
U	2.6811E+01	5.2800E+00	5.1444E+00

SPECIES	MOLE FRACTIONS		
E-	4.1864E-01	5.1776E-01	5.4676E-01
A	1.6288E-01	2.3572E-02	1.7470E-02
A+	4.1832E-01	3.9960E-01	3.2495E-01
A++	1.6158E-04	5.9049E-02	1.1066E-01
A+++	4.4001E-12	2.2030E-05	1.6329E-04
A++++	1.6580E-24	9.5766E-12	5.1900E-10
AV	1.3183E-41	5.3493E-21	3.8307E-18
AVI	8.6208E-64	2.0160E-33	3.5364E-29
AVII	0.	2.9519E-50	4.0864E-44
AVIII	0.	6.4839E-71	1.4819E-62

P1 = 5.00E+02 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4170E+03	1.4676E+04	2.0997E+04
T	6.2871E+01	1.0560E+02	1.1621E+02
RHO	1.2627E+01	6.5018E+01	7.9269E+01
H	3.0665E+02	5.5753E+02	6.6618E+02
A	9.0917E+00	1.2780E+01	1.3857E+01
S	1.6252E+00	1.7465E+00	1.8156E+00
Z	1.7849E+00	2.1374E+00	2.2794E+00
GAME	7.3657E-01	7.2358E-01	7.2496E-01
U	2.7968E+01	5.4408E+00	5.2980E+00

SPECIES	MOLE FRACTIONS		
E-	4.3976E-01	5.3215E-01	5.6128E-01
A	1.2082E-01	1.9336E-02	1.4440E-02
A+	4.3909E-01	3.6494E-01	2.8762E-01
A++	3.3275E-04	8.3512E-02	1.3632E-01
A+++	2.5110E-11	6.1236E-05	3.4141E-04
A++++	4.1133E-23	6.8818E-11	2.2923E-09
AV	2.1688E-39	1.2934E-19	4.4171E-17
AVI	1.6066E-60	2.1586E-31	1.3287E-27
AVII	2.0359E-89	2.3664E-47	7.5439E-42
AVIII	0.	5.4133E-67	1.7471E-59

TABLE I.- Continued

p_1 = 500 N/m^2

P1 = 5.00E+02 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4754E+03	1.5306E+04	2.1843E+04
T	6.4311E+01	1.0768E+02	1.1836E+02
RHO	1.2626E+01	6.5510E+01	7.9651E+01
H	3.1925E+02	5.8063E+02	6.9301E+02
A	9.3211E+00	1.2997E+01	1.4112E+01
S	1.6429E+00	1.7651E+00	1.8357E+00
Z	1.8170E+00	2.1698E+00	2.3169E+00
GAME	7.4353E-01	7.2300E-01	7.2622E-01
U	2.8539E+01	5.5087E+00	5.3751E+00

SPECIES	MOLE FRACTIONS		
E-	4.4963E-01	5.3914E-01	5.6838E-01
A	1.0123E-01	1.7638E-02	1.3060E-02
A+	4.4864E-01	3.4740E-01	2.6922E-01
A++	4.9687E-04	9.5727E-02	1.4886E-01
A+++	6.6091E-11	9.3781E-05	4.7753E-04
A++++	2.4191E-22	1.5846E-10	4.5455E-09
AV	3.4840E-38	5.0165E-19	1.3700E-16
AVI	8.3802E-59	1.5872E-30	7.1443E-27
AVII	3.6935E-87	4.1248E-46	8.4892E-41
AVIII	0.	2.5704E-65	4.6584E-58

P1 = 5.00E+02 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5945E+03	1.6457E+04	2.3373E+04
T	6.7801E+01	1.1164E+02	1.2262E+02
RHO	1.2520E+01	6.5889E+01	7.9643E+01
H	3.4519E+02	6.2779E+02	7.4777E+02
A	9.8520E+00	1.3441E+01	1.4631E+01
S	1.6780E+00	1.8033E+00	1.8765E+00
Z	1.8785E+00	2.2373E+00	2.3933E+00
GAME	7.6210E-01	7.2332E-01	7.2943E-01
U	2.9659E+01	5.6439E+00	5.5312E+00

SPECIES	MOLE FRACTIONS		
E-	4.6765E-01	5.5303E-01	5.8216E-01
A	6.5950E-02	1.4636E-02	1.0520E-02
A+	4.6516E-01	3.1185E-01	2.3337E-01
A++	1.2446E-03	1.2029E-01	1.7306E-01
A+++	6.1252E-10	1.9942E-04	8.8908E-04
A++++	1.4380E-20	7.0552E-10	1.6400E-08
AV	2.2336E-35	5.7457E-18	1.1520E-15
AVI	1.0708E-54	5.8004E-29	1.6996E-25
AVII	4.5601E-81	7.2096E-44	8.1198E-39
AVIII	0.	2.7859E-62	2.2569E-55

P1 = 5.00E+02 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5346E+03	1.5903E+04	2.2640E+04
T	6.5938E+01	1.0972E+02	1.2050E+02
RHO	1.2593E+01	6.5763E+01	7.9786E+01
H	3.3210E+02	6.0406E+02	7.2023E+02
A	9.5737E+00	1.3222E+01	1.4370E+01
S	1.6605E+00	1.7845E+00	1.8560E+00
Z	1.8483E+00	2.2039E+00	2.3548E+00
GAME	7.5206E-01	7.2295E-01	7.2772E-01
U	2.9103E+01	5.5775E+00	5.4528E+00

SPECIES	MOLE FRACTIONS		
E-	4.5896E-01	5.4626E-01	5.7534E-01
A	8.2846E-02	1.6042E-02	1.1756E-02
A+	4.5742E-01	3.2927E-01	2.5112E-01
A++	7.6937E-04	1.0829E-01	1.6113E-01
A+++	1.9047E-10	1.3983E-04	6.5637E-04
A++++	1.6853E-21	3.4828E-10	8.7444E-09
AV	7.4792E-37	1.8110E-18	4.0529E-16
AVI	7.3737E-57	1.0538E-29	3.5877E-26
AVII	2.9990E-84	6.2324E-45	8.6624E-40
AVIII	0.	1.0132E-63	1.0865E-56

P1 = 5.00E+02 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6551E+03	1.6959E+04	2.4029E+04
T	6.9951E+01	1.1352E+02	1.2474E+02
RHO	1.2409E+01	6.5756E+01	7.9212E+01
H	3.5851E+02	6.5178E+02	7.7562E+02
A	1.0150E+01	1.3665E+01	1.4894E+01
S	1.6952E+00	1.8228E+00	1.8972E+00
Z	1.9068E+00	2.2718E+00	2.4320E+00
GAME	7.7244E-01	7.2401E-01	7.3130E-01
U	3.0206E+01	5.7086E+00	5.6103E+00

SPECIES	MOLE FRACTIONS		
E-	4.7557E-01	5.5982E-01	5.8881E-01
A	5.0973E-02	1.3294E-02	9.3511E-03
A+	4.7135E-01	2.9423E-01	2.1604E-01
A++	2.1101E-03	1.3238E-01	1.8460E-01
A+++	2.2076E-09	2.7915E-04	1.1897E-03
A++++	1.4870E-19	1.3832E-09	3.0120E-08
AV	8.6373E-34	1.7316E-17	3.1683E-15
AVI	2.0235E-52	2.9617E-28	7.6723E-25
AVII	7.1270E-78	7.4745E-43	7.0914E-38
AVIII	0.	6.5855E-61	4.2545E-54

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7164E+03	1.7410E+04	2.4637E+04
T	7.2393E+01	1.1538E+02	1.2691E+02
RHO	1.2267E+01	6.5406E+01	7.8540E+01
H	3.7207E+02	6.7603E+02	8.0442E+02
A	1.0443E+01	1.3892E+01	1.5167E+01
S	1.7122E+00	1.8426E+00	1.9185E+00
Z	1.9328E+00	2.3071E+00	2.4718E+00
GAME	7.7937E-01	7.2499E-01	7.3335E-01
U	3.0745E+01	5.7766E+00	5.7210E+00

SPECIES	MOLE FRACTIONS		
E-	4.8263E-01	5.6656E-01	5.9544E-01
A	3.8461E-02	1.2026E-02	8.2314E-03
A+	4.7520E-01	2.7665E-01	1.9880E-01
A++	3.7137E-03	1.4438E-01	1.9594E-01
A+++	8.7696E-09	3.8380E-04	1.5861E-03
A++++	1.8434E-18	2.6274E-09	5.5164E-08
AV	4.5037E-32	4.9652E-17	8.6921E-15
AVI	6.1042E-50	1.4061E-27	3.4550E-24
AVII	2.3671E-74	6.9707E-42	6.1688E-37
AVIII	0.	1.3454E-59	7.9802E-53

P1 = 5.00E+02 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9403E+03	1.9146E+04	2.6916E+04
T	8.1268E+01	1.2198E+02	1.3493E+02
RHO	1.1877E+01	6.4523E+01	7.6468E+01
H	4.2155E+02	7.6465E+02	9.0753E+02
A	1.1053E+01	1.4719E+01	1.6148E+01
S	1.7696E+00	1.9110E+00	1.9912E+00
Z	2.0102E+00	2.4327E+00	2.6087E+00
GAME	7.4779E-01	7.3014E-01	7.4082E-01
U	3.2642E+01	6.0131E+00	6.0117E+00

SPECIES	MOLE FRACTIONS		
E-	5.0253E-01	5.8893E-01	6.1667E-01
A	1.5858E-02	8.3300E-03	5.0505E-03
A+	4.6070E-01	2.1761E-01	1.4396E-01
A++	2.0911E-02	1.8408E-01	2.3024E-01
A+++	6.4227E-07	1.0510E-03	4.0771E-03
A++++	4.7624E-15	2.0952E-08	4.2213E-07
AV	1.0260E-26	1.5481E-15	2.6637E-13
AVI	3.1764E-42	2.3344E-25	5.8073E-22
AVII	1.8577E-63	1.0822E-38	9.8374E-34
AVIII	2.6008E-89	2.8168E-55	1.7564E-48

P1 = 5.00E+02 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7785E+03	1.7848E+04	2.5195E+04
T	7.5033E+01	1.1719E+02	1.2906E+02
RHO	1.2116E+01	6.5021E+01	7.7756E+01
H	3.8588E+02	7.0064E+02	8.3287E+02
A	1.0685E+01	1.4119E+01	1.5437E+01
S	1.7289E+00	1.8621E+00	1.9394E+00
Z	1.9564E+00	2.3422E+00	2.5108E+00
GAME	7.7774E-01	7.2619E-01	7.3545E-01
U	3.1279E+01	5.8369E+00	5.7962E+00

SPECIES	MOLE FRACTIONS		
E-	4.8885E-01	5.7305E-01	6.0172E-01
A	2.8852E-02	1.0871E-02	7.2177E-03
A+	4.7574E-01	2.5962E-01	1.8249E-01
A++	6.5581E-03	1.5594E-01	2.0649E-01
A+++	3.5384E-08	5.1671E-04	2.0838E-03
A++++	2.3446E-17	4.8100E-09	9.8468E-08
AV	2.4172E-30	1.3448E-16	2.2904E-14
AVI	1.8666E-47	6.1560E-27	1.4674E-23
AVII	7.4656E-71	5.8055E-41	4.9171E-36
AVIII	0.	2.3704E-58	1.3331E-51

P1 = 5.00E+02 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1129E+03	2.0907E+04	2.9355E+04
T	8.6025E+01	1.2730E+02	1.4189E+02
RHO	1.1896E+01	6.5039E+01	7.6388E+01
H	4.5892E+02	8.3278E+02	9.8811E+02
A	1.1372E+01	1.5373E+01	1.6923E+01
S	1.8087E+00	1.9590E+00	2.0432E+00
Z	2.0647E+00	2.5251E+00	2.7085E+00
GAME	7.2808E-01	7.3515E-01	7.4526E-01
U	3.4066E+01	6.2397E+00	6.2682E+00

SPECIES	MOLE FRACTIONS		
E-	5.1567E-01	6.0398E-01	6.3079E-01
A	1.0816E-02	6.2397E-03	3.3442E-03
A+	4.3136E-01	1.7766E-01	1.0896E-01
A++	4.2148E-02	2.1005E-01	2.4890E-01
A+++	4.0216E-06	2.0714E-03	8.0049E-03
A++++	1.4473E-13	8.9193E-08	1.9177E-06
AV	2.2914E-24	1.7671E-14	3.5276E-12
AVI	7.9894E-39	8.9761E-24	2.8697E-20
AVII	1.2069E-58	2.1074E-36	2.7519E-31
AVIII	6.7282E-83	3.6523E-52	3.7318E-45

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2949E+03	2.2955E+04	3.2241E+04
T	8.9882E+01	1.3318E+02	1.4945E+02
RHO	1.2023E+01	6.5837E+01	7.6952E+01
H	4.9795E+02	9.0448E+02	1.0737E+03
A	1.1721E+01	1.6068E+01	1.7688E+01
S	1.8478E+00	2.0065E+00	2.0932E+00
Z	2.1236E+00	2.6180E+00	2.8034E+00
GAME	7.1979E-01	7.4048E-01	7.4675E-01
U	3.5522E+01	6.4959E+00	6.5503E+00

SPECIES	MOLE FRACTIONS		
E-	5.2911E-01	6.1802E-01	6.4329E-01
A	8.2074E-03	4.4963E-03	2.1433E-03
A+	3.9626E-01	1.4093E-01	8.0757E-02
A++	6.6402E-02	2.3256E-01	2.5890E-01
A+++	1.4244E-05	3.9898E-03	1.4899E-02
A++++	1.5972E-12	3.7527E-07	8.1342E-06
AV	1.0724E-22	2.0227E-13	4.2822E-11
AVI	2.1914E-36	3.5280E-22	1.2741E-18
AVII	3.6894E-55	4.2735E-34	6.6757E-29
AVIII	3.5119E-78	5.0513E-49	6.6226E-42

P1 = 5.00E+02 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6832E+03	2.7552E+04	3.8850E+04
T	9.6366E+01	1.4654E+02	1.6541E+02
RHO	1.2367E+01	6.7213E+01	7.8613E+01
H	5.8086E+02	1.0571E+03	1.2576E+03
A	1.2463E+01	1.7493E+01	1.9174E+01
S	1.9264E+00	2.1000E+00	2.1927E+00
Z	2.2514E+00	2.7973E+00	2.9877E+00
GAME	7.1599E-01	7.4649E-01	7.4392E-01
U	3.8458E+01	7.0861E+00	7.1661E+00

SPECIES	MOLE FRACTIONS		
E-	5.5583E-01	6.4252E-01	6.6530E-01
A	5.3372E-03	2.0480E-03	8.4272E-04
A+	3.2192E-01	8.1887E-02	4.3293E-02
A++	1.1683E-01	2.6001E-01	2.4980E-01
A+++	8.1798E-05	1.3527E-02	4.0670E-02
A++++	4.8734E-11	6.0975E-06	9.8933E-05
AV	2.7613E-20	2.4345E-11	3.5122E-09
AVI	7.7119E-33	5.0124E-19	1.1078E-15
AVII	4.5591E-50	1.5669E-29	1.2417E-24
AVIII	2.7589E-71	8.3200E-43	4.4992E-36

P1 = 5.00E+02 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4850E+03	2.5184E+04	3.5432E+04
T	9.3249E+01	1.3961E+02	1.5737E+02
RHO	1.2191E+01	6.6581E+01	7.7765E+01
H	5.3860E+02	9.7928E+02	1.1637E+03
A	1.2087E+01	1.6784E+01	1.8431E+01
S	1.8859E+00	2.0534E+00	2.1427E+00
Z	2.1861E+00	2.7092E+00	2.8953E+00
GAME	7.1664E-01	7.4477E-01	7.4554E-01
U	3.6987E+01	6.7814E+00	6.8564E+00

SPECIES	MOLE FRACTIONS		
E-	5.4255E-01	6.3088E-01	6.5462E-01
A	6.5470E-03	3.0959E-03	1.3479E-03
A+	3.5928E-01	1.0866E-01	5.9227E-02
A++	9.1582E-02	2.4987E-01	2.5906E-01
A+++	3.7215E-05	7.4931E-03	2.5716E-02
A++++	1.0271E-11	1.5501E-06	3.0591E-05
AV	2.1753E-21	2.2891E-12	4.3534E-10
AVI	1.8160E-34	1.3827E-20	4.4264E-17
AVII	2.0773E-52	8.6442E-32	1.1474E-26
AVIII	1.8592E-74	6.9692E-46	7.4336E-39

P1 = 5.00E+02 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8889E+03	3.0029E+04	4.2425E+04
T	9.9369E+01	1.5371E+02	1.7326E+02
RHO	1.2536E+01	6.7778E+01	7.9497E+01
H	6.2472E+02	1.1379E+03	1.3548E+03
A	1.2853E+01	1.8174E+01	1.9923E+01
S	1.9661E+00	2.1459E+00	2.2422E+00
Z	2.3192E+00	2.8823E+00	3.0802E+00
GAME	7.1681E-01	7.4551E-01	7.4377E-01
U	3.9930E+01	7.3981E+00	7.4614E+00

SPECIES	MOLE FRACTIONS		
E-	5.6882E-01	6.5305E-01	6.7534E-01
A	4.3788E-03	1.3282E-03	5.3482E-04
A+	2.8495E-01	6.1104E-02	3.1901E-02
A++	1.4169E-01	2.6163E-01	2.3349E-01
A+++	1.6170E-04	2.2870E-02	5.8467E-02
A++++	1.9246E-10	2.1556E-05	2.6766E-04
AV	2.6447E-19	2.2060E-10	2.1340E-08
AVI	2.1899E-31	1.4513E-17	1.8385E-14
AVII	5.6493E-48	2.0637E-27	7.5048E-23
AVIII	1.8770E-68	6.4711E-40	1.2470E-33

TABLE I. - Continued

p_1 = 500 N/m^2

P1 = 5.00E+02 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1022E+03	3.2606E+04	4.6124E+04
T	1.0235E+02	1.6087E+02	1.8080E+02
RHO	1.2686E+01	6.8349E+01	8.0432E+01
H	6.7017E+02	1.2219E+03	1.4553E+03
A	1.3257E+01	1.8935E+01	2.0675E+01
S	2.0062E+00	2.1916E+00	2.2899E+00
Z	2.3891E+00	2.9654E+00	3.1717E+00
GAME	7.1868E-01	7.4362E-01	7.4542E-01
U	4.1400E+01	7.6950E+00	7.7480E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8144E-01	6.6277E-01	6.8471E-01
A	3.5791E-03	8.6261E-04	3.4655E-04
A+	2.4883E-01	4.5689E-02	2.3763E-02
A++	1.6585E-01	2.5500E-01	2.1321E-01
A+++	2.9892E-04	3.5607E-02	7.7351E-02
A++++	6.7958E-10	6.5724E-05	6.1642E-04
AV	2.1416E-18	1.5864E-09	1.0001E-07
AVI	4.9242E-30	3.0150E-16	2.0867E-13
AVII	5.1028E-46	1.6964E-25	2.6423E-21
AVIII	8.6353E-66	2.6739E-37	1.6697E-31

P1 = 5.00E+02 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5497E+03	3.7929E+04	5.3747E+04
T	1.0854E+02	1.7469E+02	1.9605E+02
RHO	1.2911E+01	6.9314E+01	8.1553E+01
H	7.6581E+02	1.3977E+03	1.6662E+03
A	1.4118E+01	2.0166E+01	2.2270E+01
S	2.0867E+00	2.2922E+00	2.3860E+00
Z	2.5329E+00	3.1325E+00	3.3617E+00
GAME	7.2499E-01	7.4318E-01	7.5251E-01
U	4.4318E+01	8.2681E+00	8.3180E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0520E-01	6.8077E-01	7.0253E-01
A	2.2962E-03	3.7573E-04	1.4160E-04
A+	1.8073E-01	2.6022E-02	1.2839E-02
A++	2.1087E-01	2.2416E-01	1.6629E-01
A+++	9.1246E-04	6.8284E-02	1.1570E-01
A++++	7.1431E-09	3.9403E-04	2.4979E-03
AV	1.0973E-16	4.0831E-08	1.4526E-06
AVI	1.7682E-27	4.7300E-14	1.4896E-11
AVII	2.5648E-42	2.7266E-22	1.4232E-18
AVIII	9.4688E-61	6.6584E-33	9.7987E-28

P1 = 5.00E+02 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3224E+03	3.5220E+04	4.9864E+04
T	1.0543E+02	1.6784E+02	1.8837E+02
RHO	1.2802E+01	6.8840E+01	8.1055E+01
H	7.1720E+02	1.3083E+03	1.5590E+03
A	1.3683E+01	1.9492E+01	2.1459E+01
S	2.0471E+00	2.2369E+00	2.3381E+00
Z	2.4616E+00	3.0482E+00	3.2659E+00
GAME	7.2147E-01	7.4263E-01	7.4850E-01
U	4.2861E+01	7.9820E+00	8.0306E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.9377E-01	6.7194E-01	6.9381E-01
A	2.8816E-03	5.6688E-04	2.2270E-04
A+	2.1347E-01	3.4417E-02	1.7559E-02
A++	1.8935E-01	2.4188E-01	1.9029E-01
A+++	5.3329E-04	5.1026E-02	9.6838E-02
A++++	2.2783E-09	1.7144E-04	1.2899E-03
AV	1.6115E-17	8.8957E-09	4.0415E-07
AVI	1.0018E-28	4.3657E-15	1.9154E-12
AVII	4.0106E-44	8.3571E-24	6.8896E-20
AVIII	3.3092E-63	5.5705E-35	1.4950E-29

P1 = 5.00E+02 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7838E+03	4.0596E+04	5.7555E+04
T	1.1195E+02	1.8133E+02	2.0387E+02
RHO	1.2965E+01	6.9589E+01	8.1626E+01
H	8.1600E+02	1.4898E+03	1.7768E+03
A	1.4590E+01	2.0849E+01	2.3099E+01
S	2.1278E+00	2.3269E+00	2.4340E+00
Z	2.6070E+00	3.2172E+00	3.4587E+00
GAME	7.2941E-01	7.4512E-01	7.5671E-01
U	4.5765E+01	8.5388E+00	8.6107E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.1642E-01	6.8917E-01	7.1087E-01
A	1.7657E-03	2.5084E-04	8.8208E-05
A+	1.4879E-01	1.9733E-02	9.2317E-03
A++	2.3146E-01	2.0391E-01	1.4234E-01
A+++	1.5701E-03	8.6130E-02	1.3292E-01
A++++	2.3097E-08	8.0915E-04	4.5460E-03
AV	7.9409E-16	1.5638E-07	4.7605E-06
AVI	3.4355E-26	3.9322E-13	1.0167E-10
AVII	1.8799E-40	6.0996E-21	2.4437E-17
AVIII	3.2377E-58	4.7881E-31	5.0050E-26

TABLE I. - Continued

$p_1 = 500\ N/m^2$

P1 = 5.00E+02 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0248E+03	4.3250E+04	6.1371E+04
T	1.1563E+02	1.8790E+02	2.1192E+02
RHO	1.2987E+01	6.9697E+01	8.1427E+01
H	8.6776E+02	1.5846E+03	1.8913E+03
A	1.5087E+01	2.1546E+01	2.3938E+01
S	2.1685E+00	2.3711E+00	2.4821E+00
Z	2.6802E+00	3.3026E+00	3.5565E+00
GAME	7.3442E-01	7.4810E-01	7.6028E-01
U	4.7204E+01	8.8130E+00	8.9227E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.2690E-01	6.9720E-01	7.1883E-01
A	1.3136E-03	1.6724E-04	5.3752E-05
A+	1.1937E-01	1.4916E-02	6.5151E-03
A++	2.4972E-01	1.8238E-01	1.1938E-01
A+++	2.6911E-03	1.0380E-01	1.4736E-01
A++++	7.5599E-08	1.5300E-03	7.8503E-03
AV	5.9305E-15	5.2592E-07	1.4471E-05
AVI	7.0518E-25	2.7080E-12	6.2569E-10
AVII	1.4970E-38	1.0443E-19	3.6328E-16
AVIII	1.2464E-55	2.4018E-29	2.1097E-24

P1 = 5.00E+02 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5250E+03	4.8329E+04	6.8795E+04
T	1.2413E+02	2.0147E+02	2.2836E+02
RHO	1.2922E+01	6.8934E+01	8.0301E+01
H	9.7593E+02	1.7812E+03	2.1308E+03
A	1.6130E+01	2.3014E+01	2.5566E+01
S	2.2491E+00	2.4616E+00	2.5782E+00
Z	2.8211E+00	3.4799E+00	3.7516E+00
GAME	7.4298E-01	7.5544E-01	7.6294E-01
U	5.0040E+01	9.3926E+00	9.5974E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.4553E-01	7.1264E-01	7.3345E-01
A	6.4099E-04	6.9863E-05	1.9194E-05
A+	7.0120E-02	8.1175E-03	3.1196E-03
A++	2.7573E-01	1.3775E-01	7.9920E-02
A+++	7.9821E-03	1.3670E-01	1.6358E-01
A++++	8.8495E-07	4.7261E-03	1.9804E-02
AV	3.9770E-13	4.8153E-06	1.0384E-04
AVI	4.0094E-22	9.5804E-11	1.6518E-08
AVII	1.4734E-34	2.0285E-17	4.8286E-14
AVIII	3.4105E-50	3.4818E-26	1.8910E-21

P1 = 5.00E+02 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2716E+03	4.5813E+04	6.5071E+04
T	1.1969E+02	1.9467E+02	2.2005E+02
RHO	1.2968E+01	6.9389E+01	8.0938E+01
H	9.2106E+02	1.6816E+03	2.0082E+03
A	1.5606E+01	2.2278E+01	2.4758E+01
S	2.2091E+00	2.4168E+00	2.5299E+00
Z	2.7521E+00	3.3916E+00	3.6536E+00
GAME	7.3943E-01	7.5175E-01	7.6244E-01
U	4.8626E+01	9.1001E+00	9.2238E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3664E-01	7.0515E-01	7.2630E-01
A	9.3654E-04	1.0858E-04	3.2344E-05
A+	9.2837E-02	1.1053E-02	4.5407E-03
A++	2.6494E-01	1.5973E-01	9.8508E-02
A+++	4.6394E-03	1.2119E-01	1.5779E-01
A++++	2.5610E-07	2.7685E-03	1.2789E-02
AV	4.7456E-14	1.6640E-06	4.0235E-05
AVI	1.6168E-23	1.7169E-11	3.3869E-09
AVII	1.4010E-36	1.5930E-18	4.5038E-15
AVIII	6.0051E-53	1.0325E-27	6.9612E-23

P1 = 5.00E+02 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7851E+03	5.0790E+04	7.2331E+04
T	1.2895E+02	2.0842E+02	2.3624E+02
RHO	1.2850E+01	6.8290E+01	7.9632E+01
H	1.0324E+03	1.8833E+03	2.2527E+03
A	1.6637E+01	2.3752E+01	2.6312E+01
S	2.2893E+00	2.5063E+00	2.6242E+00
Z	2.8877E+00	3.5684E+00	3.8449E+00
GAME	7.4334E-01	7.5856E-01	7.6223E-01
U	5.1447E+01	9.6934E+00	9.8564E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.5371E-01	7.1976E-01	7.3991E-01
A	4.2269E-04	4.4173E-05	1.1705E-05
A+	5.1602E-02	5.8736E-03	2.1754E-03
A++	2.8070E-01	1.1682E-01	6.4848E-02
A+++	1.3565E-02	1.4976E-01	1.6439E-01
A++++	3.0569E-06	7.7229E-03	2.8422E-02
AV	3.3767E-12	1.3083E-05	2.3452E-04
AVI	1.0222E-20	4.8983E-10	6.5636E-08
AVII	1.6076E-32	2.2861E-16	3.8505E-13
AVIII	2.0149E-47	9.9717E-25	3.4304E-20

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4640E+01	2.6164E+02
T	1.2892E+01	1.6278E+01	2.8425E+01
RHO	3.7155E+00	5.1998E+00	9.1839E+00
H	1.2892E+01	1.6278E+01	2.9035E+01
A	3.5905E+00	4.0343E+00	5.0681E+00
S	1.1085E+00	1.1091E+00	1.1230E+00
Z	1.0000E+00	1.0000E+00	1.0022E+00
GAME	1.0000E+00	9.9988E-01	9.0161E-01
U	4.5391E+00	3.2319E+00	3.0652E+00

SPECIES	MOLE FRACTIONS		
E-	4.6606E-09	6.5298E-07	2.2328E-03
A	1.0000E+00	1.0000E+00	9.9553E-01
A+	4.6606E-09	6.5298E-07	2.2328E-03
A++	3.6237E-33	1.9549E-26	1.1850E-13
A+++	4.1563E-73	9.3196E-58	3.0627E-32
A++++	0.	0.	2.0850E-61
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9072E+01	1.2796E+02	3.6936E+02
T	1.8180E+01	2.3359E+01	3.4849E+01
RHO	3.7994E+00	5.4765E+00	1.0416E+01
H	1.8181E+01	2.3424E+01	3.9748E+01
A	4.2619E+00	4.7829E+00	5.2297E+00
S	1.1297E+00	1.1305E+00	1.1442E+00
Z	1.0000E+00	1.0002E+00	1.0175E+00
GAME	9.9912E-01	9.7908E-01	7.7127E-01
U	5.4902E+00	3.7965E+00	3.1473E+00

SPECIES	MOLE FRACTIONS		
E-	5.9152E-06	2.4469E-04	1.7226E-02
A	9.9999E-01	9.9951E-01	9.6555E-01
A+	5.9152E-06	2.4469E-04	1.7226E-02
A++	7.4015E-23	4.0532E-17	1.4847E-10
A+++	1.1720E-51	5.3357E-40	1.6333E-25
A++++	0.	2.2111E-75	3.4507E-49
AV	0.	0.	4.7082E-80
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0494E+02	3.1547E+02
T	1.5416E+01	1.9659E+01	3.2138E+01
RHO	3.7624E+00	5.3380E+00	9.7364E+00
H	1.5416E+01	1.9664E+01	3.4404E+01
A	3.9262E+00	4.4286E+00	5.1462E+00
S	1.1195E+00	1.1202E+00	1.1340E+00
Z	1.0000E+00	1.0000E+00	1.0082E+00
GAME	9.9995E-01	9.9762E-01	8.1737E-01
U	5.0154E+00	3.5228E+00	3.1712E+00

SPECIES	MOLE FRACTIONS		
E-	2.6061E-07	1.8716E-05	8.1308E-03
A	1.0000E+00	9.9996E-01	9.8374E-01
A+	2.6061E-07	1.8716E-05	8.1308E-03
A++	1.7337E-27	5.8455E-21	1.0503E-11
A+++	1.4827E-62	3.2661E-48	5.0693E-28
A++++	0.	0.	9.9643E-54
AV	0.	0.	3.2736E-89
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1129E+01	1.5745E+02	4.2664E+02
T	2.1170E+01	2.7333E+01	3.7049E+01
RHO	3.8319E+00	5.7501E+00	1.1185E+01
H	2.1189E+01	2.7819E+01	4.5393E+01
A	4.5837E+00	4.9956E+00	5.3358E+00
S	1.1393E+00	1.1402E+00	1.1548E+00
Z	1.0001E+00	1.0018E+00	1.0296E+00
GAME	9.9236E-01	9.1143E-01	7.4639E-01
U	5.9656E+00	3.9624E+00	3.1032E+00

SPECIES	MOLE FRACTIONS		
E-	7.0616E-05	1.7862E-03	2.8731E-02
A	9.9986E-01	9.9643E-01	9.4254E-01
A+	7.0616E-05	1.7862E-03	2.8731E-02
A++	4.5154E-19	3.9124E-14	9.3886E-10
A+++	3.3737E-44	1.8595E-33	9.6128E-24
A++++	1.0744E-83	1.7955E-64	8.9194E-46
AV	0.	0.	3.2935E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4315E+01	2.0034E+02	4.9036E+02
T	2.4320E+01	3.1191E+01	3.8958E+01
RHO	3.8762E+00	6.3755E+00	1.2057E+01
H	2.4454E+01	3.3238E+01	5.1451E+01
A	4.8391E+00	5.0769E+00	5.4564E+00
S	1.1483E+00	1.1497E+00	1.1657E+00
Z	1.0005E+00	1.0074E+00	1.0439E+00
GAME	9.6241E-01	8.2026E-01	7.3205E-01
U	6.4510E+00	3.9070E+00	3.0519E+00

SPECIES	MOLE FRACTIONS		
E-	5.0185E-04	7.3772E-03	4.2083E-02
A	9.9900E-01	9.8525E-01	9.1583E-01
A+	5.0185E-04	7.3772E-03	4.2083E-02
A++	3.8150E-16	5.5601E-12	3.8485E-09
A+++	7.0789E-38	9.5507E-29	2.1874E-22
A++++	4.5305E-72	2.3310E-55	3.0105E-43
AV	0.	1.5845E-89	4.1895E-71
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2536E+02	3.2826E+02	6.7009E+02
T	3.0131E+01	3.7006E+01	4.2509E+01
RHO	4.1340E+00	8.5842E+00	1.4591E+01
H	3.1881E+01	4.6405E+01	6.5726E+01
A	5.0077E+00	5.3173E+00	5.7403E+00
S	1.1652E+00	1.1693E+00	1.1891E+00
Z	1.0064E+00	1.0333E+00	1.0803E+00
GAME	8.2698E-01	7.3939E-01	7.1749E-01
U	7.5224E+00	3.6076E+00	2.9877E+00

SPECIES	MOLE FRACTIONS		
E-	6.3407E-03	3.2269E-02	7.4372E-02
A	9.8732E-01	9.3546E-01	8.5126E-01
A+	6.3407E-03	3.2269E-02	7.4372E-02
A++	2.4219E-12	1.1760E-09	3.5319E-08
A+++	1.1754E-29	1.3268E-23	3.1488E-20
A++++	3.9444E-57	1.3663E-45	3.1281E-39
AV	0.	6.3547E-75	1.1118E-64
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0879E+02	2.5591E+02	5.6730E+02
T	2.7393E+01	3.4348E+01	4.0735E+01
RHO	3.9629E+00	7.3172E+00	1.3130E+01
H	2.7993E+01	3.9423E+01	5.8149E+01
A	4.9626E+00	5.1765E+00	5.5899E+00
S	1.1568E+00	1.1593E+00	1.1771E+00
Z	1.0022E+00	1.0182E+00	1.0607E+00
GAME	8.9706E-01	7.6619E-01	7.2319E-01
U	6.9551E+00	3.7527E+00	3.0260E+00

SPECIES	MOLE FRACTIONS		
E-	2.2072E-03	1.7877E-02	5.7212E-02
A	9.9559E-01	9.6425E-01	8.8558E-01
A+	2.2072E-03	1.7877E-02	5.7212E-02
A++	6.2815E-14	1.3137E-10	1.2424E-08
A+++	4.5447E-33	1.0251E-25	2.9764E-21
A++++	3.4207E-63	1.5486E-49	3.7853E-41
AV	0.	2.5595E-81	9.0907E-68
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4410E+02	4.2009E+02	8.0563E+02
T	3.2426E+01	3.9348E+01	4.4309E+01
RHO	4.3855E+00	1.0149E+01	1.6484E+01
H	3.6116E+01	5.4128E+01	7.4331E+01
A	5.0606E+00	5.4803E+00	5.9067E+00
S	1.1737E+00	1.1800E+00	1.2017E+00
Z	1.0133E+00	1.0519E+00	1.1030E+00
GAME	7.7940E-01	7.2562E-01	7.1388E-01
U	8.1468E+00	3.5119E+00	2.9629E+00

SPECIES	MOLE FRACTIONS		
E-	1.3165E-02	4.9351E-02	9.3389E-02
A	9.7367E-01	9.0130E-01	8.1322E-01
A+	1.3165E-02	4.9351E-02	9.3389E-02
A++	3.1614E-11	6.0578E-09	9.1292E-08
A+++	3.2125E-27	5.2638E-22	2.7356E-19
A++++	1.3091E-52	1.3238E-42	1.7592E-37
AV	7.8348E-86	3.8882E-70	6.7146E-62
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6438E+02	5.3145E+02	9.6896E+02
T	3.4331E+01	4.1459E+01	4.6068E+01
RHO	4.6822E+00	1.1947E+01	1.8650E+01
H	4.0628E+01	6.2433E+01	8.3640E+01
A	5.1364E+00	5.6522E+00	6.0808E+00
S	1.1825E+00	1.1914E+00	1.2150E+00
Z	1.0226E+00	1.0730E+00	1.1278E+00
GAME	7.5147E-01	7.1817E-01	7.1170E-01
U	8.7847E+00	3.4302E+00	2.9519E+00

SPECIES	MOLE FRACTIONS		
E-	2.2097E-02	6.8007E-02	1.1331E-01
A	9.5581E-01	8.6399E-01	7.7338E-01
A+	2.2097E-02	6.8007E-02	1.1331E-01
A++	2.0224E-10	2.1992E-08	2.1201E-07
A+++	1.9776E-25	9.7634E-21	1.9039E-18
A++++	4.1218E-49	3.0675E-40	6.8056E-36
AV	1.2596E-80	2.1701E-66	2.5029E-59
AVI	0.	0.	3.5553E-89
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0944E+02	8.1666E+02	1.3829E+03
T	3.7413E+01	4.5255E+01	4.9494E+01
RHO	5.3507E+00	1.6098E+01	2.3619E+01
H	5.0462E+01	8.0667E+01	1.0427E+02
A	5.3250E+00	6.0080E+00	6.4465E+00
S	1.2011E+00	1.2163E+00	1.2438E+00
Z	1.0463E+00	1.1210E+00	1.1830E+00
GAME	7.2441E-01	7.1151E-01	7.0977E-01
U	1.0087E+01	3.3368E+00	2.9581E+00

SPECIES	MOLE FRACTIONS		
E-	4.4213E-02	1.0795E-01	1.5468E-01
A	9.1157E-01	7.8411E-01	6.9063E-01
A+	4.4213E-02	1.0795E-01	1.5468E-01
A++	2.6006E-09	1.5793E-07	8.9952E-07
A+++	5.5543E-23	9.0440E-19	5.4776E-17
A++++	1.3915E-44	1.5519E-36	3.7851E-33
AV	2.0360E-73	2.1010E-60	6.4954E-55
AVI	0.	3.4929E-91	1.0720E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8621E+02	6.6260E+02	1.1615E+03
T	3.5967E+01	4.3407E+01	4.7797E+01
RHO	5.0084E+00	1.3927E+01	2.1048E+01
H	4.5414E+01	7.1263E+01	9.3642E+01
A	5.2268E+00	5.8281E+00	6.2613E+00
S	1.1916E+00	1.2034E+00	1.2290E+00
Z	1.0337E+00	1.0960E+00	1.1545E+00
GAME	7.3482E-01	7.1395E-01	7.1043E-01
U	9.4342E+00	3.3847E+00	2.9509E+00

SPECIES	MOLE FRACTIONS		
E-	3.2586E-02	8.7632E-02	1.3386E-01
A	9.3483E-01	8.2474E-01	7.3229E-01
A+	3.2586E-02	8.7632E-02	1.3385E-01
A++	8.3408E-10	6.3584E-08	4.5254E-07
A+++	4.4672E-24	1.1080E-19	1.1041E-17
A++++	1.2861E-46	2.9441E-38	1.8595E-34
AV	1.1062E-76	3.3327E-63	5.1122E-57
AVI	0.	0.	8.6698E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3402E+02	9.9096E+02	1.6333E+03
T	3.8720E+01	4.7007E+01	5.1162E+01
RHO	5.7013E+00	1.8373E+01	2.6319E+01
H	5.5764E+01	9.0533E+01	1.1549E+02
A	5.4274E+00	6.1889E+00	6.6356E+00
S	1.2111E+00	1.2298E+00	1.2592E+00
Z	1.0601E+00	1.1474E+00	1.2129E+00
GAME	7.1762E-01	7.1013E-01	7.0953E-01
U	1.0739E+01	3.3220E+00	2.9724E+00

SPECIES	MOLE FRACTIONS		
E-	5.6692E-02	1.2849E-01	1.7556E-01
A	8.8662E-01	7.4304E-01	6.4888E-01
A+	5.6692E-02	1.2848E-01	1.7556E-01
A++	6.6982E-09	3.4804E-07	1.6859E-06
A+++	4.4967E-22	5.6731E-18	2.3829E-16
A++++	6.1738E-43	4.9990E-35	5.9150E-32
AV	6.0294E-71	5.9041E-58	4.8671E-53
AVI	0.	3.5447E-87	2.9632E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

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TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5989E+02	1.1878E+03	1.9129E+03
T	3.9925E+01	4.8696E+01	5.2811E+01
RHO	6.0549E+00	2.0755E+01	2.9112E+01
H	6.1318E+01	1.0089E+02	1.2728E+02
A	5.5322E+00	6.3718E+00	6.8284E+00
S	1.2215E+00	1.2441E+00	1.2752E+00
Z	1.0751E+00	1.1753E+00	1.2443E+00
GAME	7.1304E-01	7.0942E-01	7.0959E-01
U	1.1389E+01	3.3159E+00	2.9930E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.9821E-02	1.4912E-01	1.9632E-01
A	8.6036E-01	7.0177E-01	6.0737E-01
A+	6.9821E-02	1.4912E-01	1.9631E-01
A++	1.5088E-08	7.0330E-07	3.0126E-06
A+++	2.7914E-21	2.9205E-17	9.3919E-16
A++++	1.9450E-41	1.0838E-33	8.0385E-31
AV	1.9482E-68	7.8993E-56	3.6596E-51
AVI	0.	3.7628E-84	3.5927E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8703E+02	1.4097E+03	2.2203E+03
T	4.1052E+01	5.0345E+01	5.4432E+01
RHO	6.4084E+00	2.3248E+01	3.1955E+01
H	6.7122E+01	1.1177E+02	1.3950E+02
A	5.6387E+00	6.5575E+00	7.0231E+00
S	1.2323E+00	1.2589E+00	1.2916E+00
Z	1.0911E+00	1.2044E+00	1.2765E+00
GAME	7.0989E-01	7.0915E-01	7.0988E-01
U	1.2036E+01	3.3028E+00	3.0027E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.3453E-02	1.6974E-01	2.1661E-01
A	8.3309E-01	6.6052E-01	5.6679E-01
A+	8.3453E-02	1.6974E-01	2.1660E-01
A++	3.0700E-08	1.3316E-06	5.1485E-06
A+++	1.3677E-20	1.3068E-16	3.3368E-15
A++++	3.5853E-40	1.9440E-32	8.7397E-30
AV	1.7019E-66	7.8922E-54	1.6964E-49
AVI	0.	3.9918E-81	1.0064E-74
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1541E+02	1.6522E+03	2.5602E+03
T	4.2117E+01	5.1947E+01	5.6067E+01
RHO	6.7590E+00	2.5759E+01	3.4849E+01
H	7.3177E+01	1.2309E+02	1.5244E+02
A	5.7467E+00	6.7444E+00	7.2243E+00
S	1.2435E+00	1.2744E+00	1.3089E+00
Z	1.1080E+00	1.2347E+00	1.3103E+00
GAME	7.0769E-01	7.0919E-01	7.1040E-01
U	1.2679E+01	3.3198E+00	3.0375E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	9.7470E-02	1.9009E-01	2.3683E-01
A	8.0506E-01	6.1981E-01	5.2634E-01
A+	9.7469E-02	1.9009E-01	2.3682E-01
A++	5.7880E-08	2.3819E-06	8.5803E-06
A+++	5.7776E-20	5.1431E-16	1.1220E-14
A++++	5.5730E-39	2.4513E-31	8.5577E-29
AV	1.7394E-64	5.1492E-52	6.6292E-48
AVI	0.	1.9134E-78	2.1673E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4529E+02	1.9242E+03	2.9364E+03
T	4.3135E+01	5.3547E+01	5.7725E+01
RHO	7.1098E+00	2.8375E+01	3.7804E+01
H	7.9498E+01	1.3502E+02	1.6605E+02
A	5.8563E+00	6.9362E+00	7.4322E+00
S	1.2551E+00	1.2905E+00	1.3268E+00
Z	1.1259E+00	1.2664E+00	1.3456E+00
GAME	7.0618E-01	7.0947E-01	7.1115E-01
U	1.3329E+01	3.3322E+00	3.0766E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.1181E-01	2.1037E-01	2.5683E-01
A	7.7638E-01	5.7927E-01	4.8636E-01
A+	1.1181E-01	2.1036E-01	2.5680E-01
A++	1.0271E-07	4.1077E-06	1.4003E-05
A+++	2.0971E-19	1.8652E-15	3.6058E-14
A++++	5.7438E-38	2.7699E-30	7.6929E-28
AV	4.8468E-63	2.5229E-50	2.2650E-46
AVI	0.	5.6708E-76	3.8784E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7609E+02	2.2124E+03	3.3375E+03
T	4.4110E+01	5.5104E+01	5.9378E+01
RHO	7.4491E+00	3.0915E+01	4.0685E+01
H	8.6052E+01	1.4725E+02	1.8009E+02
A	5.9667E+00	7.1280E+00	7.6432E+00
S	1.2670E+00	1.3071E+00	1.3451E+00
Z	1.1446E+00	1.2987E+00	1.3815E+00
GAME	7.0515E-01	7.0995E-01	7.1214E-01
U	1.3963E+01	3.3694E+00	3.1208E+00

SPECIES	MOLE FRACTIONS		
E-	1.2633E-01	2.3002E-01	2.7616E-01
A	7.4734E-01	5.3996E-01	4.4769E-01
A+	1.2633E-01	2.3001E-01	2.7612E-01
A++	1.7327E-07	6.7884E-06	2.2276E-05
A+++	6.8839E-19	6.1453E-15	1.0937E-13
A++++	5.3048E-37	2.6279E-29	6.1877E-27
AV	1.9475E-61	9.5610E-49	6.4641E-45
AVI	0.	1.2327E-73	5.3527E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4137E+02	2.8645E+03	4.2346E+03
T	4.5970E+01	5.8222E+01	6.2783E+01
RHO	8.1058E+00	3.6006E+01	4.6311E+01
H	9.9915E+01	1.7321E+02	2.0987E+02
A	6.1919E+00	7.5236E+00	8.0861E+00
S	1.2921E+00	1.3415E+00	1.3830E+00
Z	1.1845E+00	1.3664E+00	1.4564E+00
GAME	7.0411E-01	7.1152E-01	7.1507E-01
U	1.5222E+01	3.4388E+00	3.2241E+00

SPECIES	MOLE FRACTIONS		
E-	1.5576E-01	2.6815E-01	3.1339E-01
A	6.8848E-01	4.6372E-01	3.7327E-01
A+	1.5576E-01	2.6812E-01	3.1329E-01
A++	4.4038E-07	1.7208E-05	5.4215E-05
A+++	5.8490E-18	5.6349E-14	9.2387E-13
A++++	3.0319E-35	1.6870E-27	3.3744E-25
AV	1.6230E-58	7.5241E-46	3.9432E-42
AVI	3.4035E-88	2.0305E-69	6.5142E-64
AVII	0.	0.	1.1901E-93
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0812E+02	2.5263E+03	3.7701E+03
T	4.5053E+01	5.6660E+01	6.1060E+01
RHO	7.7814E+00	3.3470E+01	4.3528E+01
H	9.2857E+01	1.5999E+02	1.9469E+02
A	6.0786E+00	7.3237E+00	7.8608E+00
S	1.2794E+00	1.3241E+00	1.3638E+00
Z	1.1641E+00	1.3321E+00	1.4185E+00
GAME	7.0449E-01	7.1063E-01	7.1342E-01
U	1.4594E+01	3.4023E+00	3.1698E+00

SPECIES	MOLE FRACTIONS		
E-	1.4100E-01	2.4931E-01	2.9503E-01
A	7.1800E-01	5.0139E-01	4.0998E-01
A+	1.4100E-01	2.4929E-01	2.9496E-01
A++	2.8090E-07	1.0926E-05	3.4924E-05
A+++	2.0844E-18	1.9068E-14	3.2126E-13
A++++	4.3646E-36	2.2087E-28	4.6698E-26
AV	7.0392E-60	2.9180E-47	1.6571E-43
AVI	6.0648E-91	1.8525E-71	6.2569E-66
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7584E+02	3.2259E+03	4.7313E+03
T	4.6865E+01	5.9796E+01	6.4564E+01
RHO	8.4216E+00	3.8492E+01	4.9007E+01
H	1.0722E+02	1.8689E+02	2.2563E+02
A	6.3068E+00	7.7282E+00	8.3210E+00
S	1.3052E+00	1.3594E+00	1.4026E+00
Z	1.2056E+00	1.4015E+00	1.4953E+00
GAME	7.0396E-01	7.1266E-01	7.1718E-01
U	1.5847E+01	3.4837E+00	3.2841E+00

SPECIES	MOLE FRACTIONS		
E-	1.7057E-01	2.8650E-01	3.3124E-01
A	6.5887E-01	4.2702E-01	3.3760E-01
A+	1.7057E-01	2.8645E-01	3.3107E-01
A++	6.7116E-07	2.6637E-05	8.3726E-05
A+++	1.5384E-17	1.6051E-13	2.6299E-12
A++++	1.8352E-34	1.2134E-26	2.3848E-24
AV	2.8492E-57	1.8445E-44	9.0417E-41
AVI	2.1693E-86	2.4831E-67	6.4527E-62
AVII	0.	0.	1.4989E-90
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.1150E+02	3.6154E+03	5.2597E+03
T	4.7742E+01	6.1402E+01	6.6422E+01
RHO	8.7277E+00	4.0959E+01	5.1586E+01
H	1.1479E+02	2.0109E+02	2.4199E+02
A	6.4233E+00	7.9392E+00	8.5672E+00
S	1.3186E+00	1.3776E+00	1.4225E+00
Z	1.2275E+00	1.4376E+00	1.5350E+00
GAME	7.0399E-01	7.1408E-01	7.1987E-01
U	1.6469E+01	3.5132E+00	3.3507E+00

SPECIES	MOLE FRACTIONS		
E-	1.8537E-01	3.0438E-01	3.4855E-01
A	6.2926E-01	3.9128E-01	3.0304E-01
A+	1.8537E-01	3.0430E-01	3.4829E-01
A++	9.9861E-07	4.0758E-05	1.2920E-04
A+++	3.8329E-17	4.4470E-13	7.4892E-12
A++++	9.9666E-34	8.1264E-26	1.6806E-23
AV	4.1518E-56	3.7788E-43	2.0580E-39
AVI	1.0430E-84	1.8971E-65	6.3160E-60
AVII	0.	0.	1.1325E-87
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8651E+02	4.4570E+03	6.4167E+03
T	4.9461E+01	6.4722E+01	7.0485E+01
RHO	9.3107E+00	4.5554E+01	5.6302E+01
H	1.3067E+02	2.3083E+02	2.7661E+02
A	6.6618E+00	8.3820E+00	9.1069E+00
S	1.3464E+00	1.4151E+00	1.4635E+00
Z	1.2736E+00	1.5117E+00	1.6169E+00
GAME	7.0451E-01	7.1808E-01	7.2771E-01
U	1.7709E+01	3.6239E+00	3.5074E+00

SPECIES	MOLE FRACTIONS		
E-	2.1482E-01	3.3850E-01	3.8154E-01
A	5.7037E-01	3.2309E-01	2.3723E-01
A+	2.1481E-01	3.3831E-01	3.8091E-01
A++	2.0870E-06	9.3146E-05	3.1419E-04
A+++	2.1005E-16	3.2526E-12	6.4158E-11
A++++	2.3125E-32	3.3782E-24	9.0713E-22
AV	5.4608E-54	1.5190E-40	1.1820E-36
AVI	3.3452E-82	1.3518E-61	6.6665E-56
AVII	0.	4.3966E-90	6.5190E-82
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.4841E+02	4.0249E+03	5.8221E+03
T	4.8607E+01	6.3037E+01	6.8405E+01
RHO	9.0246E+00	4.3308E+01	5.3998E+01
H	1.2260E+02	2.1573E+02	2.5899E+02
A	6.5416E+00	8.1566E+00	8.8314E+00
S	1.3323E+00	1.3962E+00	1.4432E+00
Z	1.2502E+00	1.4743E+00	1.5762E+00
GAME	7.0418E-01	7.1586E-01	7.2336E-01
U	1.7091E+01	3.5666E+00	3.4247E+00

SPECIES	MOLE FRACTIONS		
E-	2.0013E-01	3.2171E-01	3.6556E-01
A	5.9974E-01	3.5663E-01	2.6909E-01
A+	2.0013E-01	3.2159E-01	3.6515E-01
A++	1.4561E-06	6.1767E-05	2.0148E-04
A+++	9.1295E-17	1.2088E-12	2.1889E-11
A++++	4.9035E-33	5.3039E-25	1.2337E-22
AV	4.5975E-55	7.7801E-42	4.9357E-38
AVI	7.3080E-84	1.7061E-63	6.5064E-58
AVII	0.	7.7535E-93	8.6383E-85
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.2607E+02	4.9164E+03	7.0524E+03
T	5.0310E+01	6.6485E+01	7.2783E+01
RHO	9.5894E+00	4.7709E+01	5.8403E+01
H	1.3900E+02	2.4649E+02	2.9504E+02
A	6.7842E+00	8.6189E+00	9.4102E+00
S	1.3607E+00	1.4343E+00	1.4845E+00
Z	1.2977E+00	1.5500E+00	1.6591E+00
GAME	7.0496E-01	7.2087E-01	7.3333E-01
U	1.8332E+01	3.6895E+00	3.6007E+00

SPECIES	MOLE FRACTIONS		
E-	2.2941E-01	3.5482E-01	3.9726E-01
A	5.4118E-01	2.9050E-01	2.0599E-01
A+	2.2940E-01	3.5454E-01	3.9625E-01
A++	2.9491E-06	1.4072E-04	5.0270E-04
A+++	4.6945E-16	8.7947E-12	2.0034E-10
A++++	1.0432E-31	2.1506E-23	7.4475E-21
AV	6.3682E-53	2.9032E-39	3.3404E-35
AVI	2.7259E-80	9.9774E-60	8.5512E-54
AVII	0.	2.0775E-87	6.5015E-79
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.6639E+02	5.3864E+03	7.7093E+03
T	5.1151E+01	6.8309E+01	7.5273E+01
RHO	9.8511E+00	4.9646E+01	6.0215E+01
H	1.4757E+02	2.6244E+02	3.1396E+02
A	6.9084E+00	8.8648E+00	9.7350E+00
S	1.3754E+00	1.4536E+00	1.5054E+00
Z	1.3225E+00	1.5883E+00	1.7009E+00
GAME	7.0552E-01	7.2431E-01	7.4022E-01
U	1.8941E+01	3.7633E+00	3.7063E+00

SPECIES	MOLE FRACTIONS		
E-	2.4384E-01	3.7041E-01	4.1207E-01
A	5.1232E-01	2.5940E-01	1.7668E-01
A+	2.4384E-01	3.6998E-01	4.1043E-01
A++	4.1110E-06	2.1222E-04	8.1722E-04
A+++	1.0188E-15	2.3704E-11	6.5149E-10
A++++	4.4589E-31	1.3538E-22	6.5609E-20
AV	6.7940E-52	5.4092E-38	1.0550E-33
AVI	1.2224E-78	6.9923E-58	1.3056E-51
AVII	0.	8.7233E-85	8.8342E-76
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.5062E+02	6.3819E+03	9.1224E+03
T	5.2833E+01	7.2315E+01	8.1265E+01
RHO	1.0340E+01	5.2968E+01	6.2905E+01
H	1.6547E+02	2.9568E+02	3.5394E+02
A	7.1641E+00	9.4031E+00	1.0479E+01
S	1.4055E+00	1.4926E+00	1.5480E+00
Z	1.3740E+00	1.6661E+00	1.7845E+00
GAME	7.0700E-01	7.3386E-01	7.5720E-01
U	2.0153E+01	3.9392E+00	3.9516E+00

SPECIES	MOLE FRACTIONS		
E-	2.7222E-01	3.9979E-01	4.3962E-01
A	4.5557E-01	2.0091E-01	1.2315E-01
A+	2.7220E-01	3.9880E-01	4.3483E-01
A++	7.7511E-06	4.9654E-04	2.3980E-03
A+++	4.5001E-15	1.8534E-10	8.9477E-09
A++++	7.1974E-30	6.0978E-21	8.0606E-18
AV	6.1301E-50	2.3109E-35	2.1111E-30
AVI	1.1286E-75	4.8147E-54	7.9597E-47
AVII	0.	2.8240E-79	5.6968E-69
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.0791E+02	5.8754E+03	8.4023E+03
T	5.1991E+01	7.0242E+01	7.8108E+01
RHO	1.0101E+01	5.1408E+01	6.1701E+01
H	1.5639E+02	2.7883E+02	3.3370E+02
A	7.0350E+00	9.1253E+00	1.0097E+01
S	1.3903E+00	1.4731E+00	1.5269E+00
Z	1.3479E+00	1.6271E+00	1.7435E+00
GAME	7.0620E-01	7.2858E-01	7.4857E-01
U	1.9548E+01	3.8461E+00	3.8320E+00

SPECIES	MOLE FRACTIONS		
E-	2.5812E-01	3.8541E-01	4.2643E-01
A	4.8377E-01	2.2951E-01	1.4853E-01
A+	2.5811E-01	3.8476E-01	4.2366E-01
A++	5.6701E-06	3.2257E-04	1.3827E-03
A+++	2.1616E-15	6.5222E-11	2.3377E-09
A++++	1.8252E-30	8.8324E-22	6.8649E-19
AV	6.6872E-51	1.0686E-36	4.3076E-32
AVI	4.0775E-77	5.4048E-56	2.8059E-49
AVII	0.	4.4051E-82	1.7927E-72
AVIII	0.	0.	0.

P1 = 1.00E+03 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.9452E+02	6.9037E+03	9.8874E+03
T	5.3679E+01	7.4566E+01	8.4901E+01
RHO	1.0566E+01	5.4300E+01	6.3816E+01
H	1.7479E+02	3.1296E+02	3.7539E+02
A	7.2959E+00	9.7015E+00	1.0879E+01
S	1.4209E+00	1.5122E+00	1.5695E+00
Z	1.4008E+00	1.7051E+00	1.8249E+00
GAME	7.0792E-01	7.4028E-01	7.6381E-01
U	2.0757E+01	4.0443E+00	4.1180E+00

SPECIES	MOLE FRACTIONS		
E-	2.8612E-01	4.1351E-01	4.5203E-01
A	4.2778E-01	1.7375E-01	1.0028E-01
A+	2.8610E-01	4.1196E-01	4.4337E-01
A++	1.0519E-05	7.7781E-04	4.3275E-03
A+++	9.2241E-15	5.4980E-10	3.7955E-08
A++++	2.7509E-29	4.5169E-20	1.1354E-16
AV	5.2903E-49	5.4923E-34	1.3614E-28
AVI	2.7344E-74	4.7523E-52	3.2733E-44
AVII	0.	1.9254E-76	2.8629E-65
AVIII	0.	0.	8.7408E-91

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.4014E+02	7.4520E+03	1.0699E+04
T	5.4536E+01	7.7076E+01	8.8902E+01
RHO	1.0786E+01	5.5436E+01	6.4597E+01
H	1.8440E+02	3.3088E+02	3.9774E+02
A	7.4311E+00	1.0027E+01	1.1250E+01
S	1.4366E+00	1.5320E+00	1.5909E+00
Z	1.4282E+00	1.7441E+00	1.8630E+00
GAME	7.0897E-01	7.4788E-01	7.6415E-01
U	2.1372E+01	4.1637E+00	4.2869E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9982E-01	4.2663E-01	4.6323E-01
A	4.0037E-01	1.4799E-01	8.1364E-02
A+	2.9979E-01	4.2413E-01	4.4757E-01
A++	1.4203E-05	1.2532E-03	7.8324E-03
A+++	1.8720E-14	1.7504E-09	1.6413E-07
A++++	1.0295E-28	3.7953E-19	1.6593E-15
AV	4.3731E-48	1.5890E-32	9.3107E-27
AVI	6.0477E-73	6.2465E-50	1.4690E-41
AVII	0.	1.9943E-73	1.6354E-61
AVIII	0.	0.	9.3684E-86

P1 = 1.00E+03 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.3411E+02	8.5596E+03	1.2361E+04
T	5.6282E+01	8.2881E+01	9.6753E+01
RHO	1.1178E+01	5.6799E+01	6.6170E+01
H	2.0433E+02	3.6765E+02	4.4332E+02
A	7.7109E+00	1.0723E+01	1.1819E+01
S	1.4687E+00	1.5709E+00	1.6319E+00
Z	1.4848E+00	1.8183E+00	1.9308E+00
GAME	7.1152E-01	7.6293E-01	7.4774E-01
U	2.2577E+01	4.4485E+00	4.5891E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2649E-01	4.5003E-01	4.8207E-01
A	3.4704E-01	1.0341E-01	5.6950E-02
A+	3.2644E-01	4.4310E-01	4.3988E-01
A++	2.5557E-05	3.4640E-03	2.1094E-02
A+++	7.4925E-14	2.0845E-08	1.9967E-06
A++++	1.3489E-27	3.5448E-17	1.6531E-13
AV	2.6012E-46	2.0282E-29	1.3376E-23
AVI	2.2700E-70	1.9430E-45	5.5004E-37
AVII	0.	4.7570E-67	5.0960E-55
AVIII	0.	0.	5.0796E-77

P1 = 1.00E+03 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.8654E+02	8.0015E+03	1.1520E+04
T	5.5402E+01	7.9830E+01	9.2918E+01
RHO	1.0989E+01	5.6250E+01	6.5326E+01
H	1.9424E+02	3.4906E+02	4.2032E+02
A	7.5692E+00	1.0370E+01	1.1557E+01
S	1.4526E+00	1.5515E+00	1.6117E+00
Z	1.4562E+00	1.7819E+00	1.8979E+00
GAME	7.1016E-01	7.5595E-01	7.5740E-01
U	2.1976E+01	4.2984E+00	4.4434E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1328E-01	4.3881E-01	4.7309E-01
A	3.7346E-01	1.2445E-01	6.7202E-02
A+	3.1324E-01	4.3468E-01	4.4632E-01
A++	1.9081E-05	2.0612E-03	1.3387E-02
A+++	3.7573E-14	5.9719E-09	6.2685E-07
A++++	3.7582E-28	3.4891E-18	1.9447E-14
AV	3.4375E-47	5.2584E-31	4.5229E-25
AVI	1.2153E-71	9.8806E-48	4.0494E-39
AVII	0.	2.6456E-70	4.7482E-58
AVIII	0.	0.	4.2514E-81

P1 = 1.00E+03 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.8282E+02	9.1241E+03	1.3212E+04
T	5.7181E+01	8.6218E+01	1.0026E+02
RHO	1.1354E+01	5.7117E+01	6.7149E+01
H	2.1468E+02	3.8663E+02	4.6646E+02
A	7.8565E+00	1.1062E+01	1.2060E+01
S	1.4850E+00	1.5902E+00	1.6516E+00
Z	1.5139E+00	1.8528E+00	1.9625E+00
GAME	7.1306E-01	7.6605E-01	7.3923E-01
U	2.3177E+01	4.6135E+00	4.7069E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3944E-01	4.6028E-01	4.9044E-01
A	3.2115E-01	8.5328E-02	4.9581E-02
A+	3.3938E-01	4.4852E-01	4.2952E-01
A++	3.4176E-05	5.8796E-03	3.0451E-02
A+++	1.4884E-13	7.6337E-08	5.2073E-06
A++++	4.7565E-27	3.8048E-16	9.8393E-13
AV	1.8279E-45	8.4984E-28	2.2691E-22
AVI	3.0619E-69	4.2834E-43	3.3427E-35
AVII	0.	9.9434E-64	1.7186E-52
AVIII	0.	9.4417E-89	1.2294E-73

TABLE I.- Continued

p_1 = 1 kN/m^2

P1 = 1.00E+03 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0327E+03	9.7015E+03	1.4090E+04
T	5.8103E+01	8.9677E+01	1.0354E+02
RHO	1.1515E+01	5.7403E+01	6.8223E+01
H	2.2527E+02	4.0603E+02	4.9047E+02
A	8.0066E+00	1.1357E+01	1.2303E+01
S	1.5015E+00	1.6089E+00	1.6715E+00
Z	1.5435E+00	1.8846E+00	1.9948E+00
GAME	7.1481E-01	7.6314E-01	7.3287E-01
U	2.3774E+01	4.7745E+00	4.8448E+00

SPECIES	MOLE FRACTIONS		
E-	3.5213E-01	4.6939E-01	4.9868E-01
A	2.9579E-01	7.0951E-02	4.3908E-02
A+	3.5203E-01	4.4994E-01	4.1614E-01
A++	4.5712E-05	9.7251E-03	4.1254E-02
A+++	2.9696E-13	2.6539E-07	1.1777E-05
A++++	1.7116E-26	3.7251E-15	4.5588E-12
AV	1.4093E-44	3.0861E-26	2.6216E-21
AVI	6.3871E-68	7.6854E-41	1.1818E-33
AVII	0.	1.5487E-60	2.7533E-50
AVIII	0.	1.7969E-84	1.1395E-70

P1 = 1.00E+03 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1358E+03	1.0894E+04	1.5844E+04
T	6.0044E+01	9.6430E+01	1.0929E+02
RHO	1.1792E+01	5.8113E+01	7.0419E+01
H	2.4723E+02	4.4635E+02	5.3846E+02
A	8.3227E+00	1.1830E+01	1.2782E+01
S	1.5351E+00	1.6458E+00	1.7097E+00
Z	1.6042E+00	1.9439E+00	2.0588E+00
GAME	7.1913E-01	7.4657E-01	7.2620E-01
U	2.4962E+01	5.0711E+00	5.0196E+00

SPECIES	MOLE FRACTIONS		
E-	3.7663E-01	4.8558E-01	5.1427E-01
A	2.4682E-01	5.1564E-02	3.5919E-02
A+	3.7647E-01	4.4013E-01	3.8539E-01
A++	8.2377E-05	2.2723E-02	6.4380E-02
A+++	1.2123E-12	2.2719E-06	4.1348E-05
A++++	2.3515E-25	1.9421E-13	5.0036E-11
AV	9.6043E-43	1.5871E-23	1.2361E-19
AVI	3.6496E-65	6.4365E-37	3.3415E-31
AVII	0.	5.6134E-55	8.8090E-47
AVIII	0.	5.1147E-77	6.2246E-66

P1 = 1.00E+03 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0837E+03	1.0290E+04	1.4959E+04
T	5.9056E+01	9.3197E+01	1.0649E+02
RHO	1.1661E+01	5.7642E+01	6.9326E+01
H	2.3613E+02	4.2597E+02	5.1413E+02
A	8.1618E+00	1.1612E+01	1.2540E+01
S	1.5182E+00	1.6279E+00	1.6905E+00
Z	1.5736E+00	1.9155E+00	2.0263E+00
GAME	7.1682E-01	7.5531E-01	7.2877E-01
U	2.4369E+01	4.9306E+00	4.9274E+00

SPECIES	MOLE FRACTIONS		
E-	3.6453E-01	4.7794E-01	5.0650E-01
A	2.7101E-01	5.9621E-02	3.9566E-02
A+	3.6440E-01	4.4695E-01	4.0140E-01
A++	6.1257E-05	1.5495E-02	5.2511E-02
A+++	5.9722E-13	8.5357E-07	2.3017E-05
A++++	6.3087E-26	3.1829E-14	1.6272E-11
AV	1.1694E-43	9.0777E-25	2.0215E-20
AVI	1.6435E-66	1.0196E-38	2.3499E-32
AVII	0.	1.5696E-57	1.9830E-48
AVIII	0.	1.9113E-80	3.7298E-68

P1 = 1.00E+03 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1890E+03	1.1510E+04	1.6734E+04
T	6.1078E+01	9.9506E+01	1.1194E+02
RHO	1.1906E+01	5.8635E+01	7.1461E+01
H	2.5858E+02	4.6722E+02	5.6321E+02
A	8.4904E+00	1.2043E+01	1.3028E+01
S	1.5521E+00	1.6641E+00	1.7289E+00
Z	1.6351E+00	1.9728E+00	2.0918E+00
GAME	7.2181E-01	7.3887E-01	7.2478E-01
U	2.5552E+01	5.1947E+00	5.1069E+00

SPECIES	MOLE FRACTIONS		
E-	3.8843E-01	4.9311E-01	5.2195E-01
A	2.2326E-01	4.5309E-02	3.2777E-02
A+	3.8820E-01	4.3005E-01	3.6868E-01
A++	1.1134E-04	3.1522E-02	7.6529E-02
A+++	2.4845E-12	5.3441E-06	6.9249E-05
A++++	8.7343E-25	9.5366E-13	1.3586E-10
AV	7.3266E-42	1.9842E-22	6.2294E-19
AVI	5.8999E-64	2.5184E-35	3.5964E-30
AVII	1.2677E-93	1.0241E-52	2.6313E-45
AVIII	0.	5.5572E-74	6.0901E-64

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2433E+03	1.2137E+04	1.7625E+04
T	6.2166E+01	1.0236E+02	1.1452E+02
RHO	1.2002E+01	5.9228E+01	7.2394E+01
H	2.7019E+02	4.8856E+02	5.8839E+02
A	8.6659E+00	1.2257E+01	1.3278E+01
S	1.5691E+00	1.6823E+00	1.7484E+00
Z	1.6664E+00	2.0019E+00	2.1259E+00
GAME	7.2494E-01	7.3311E-01	7.2422E-01
U	2.6139E+01	5.3037E+00	5.1911E+00

SPECIES	MOLE FRACTIONS		
E-	3.9990E-01	5.0048E-01	5.2961E-01
A	2.0036E-01	4.0443E-02	2.9948E-02
A+	3.9959E-01	4.1768E-01	3.5138E-01
A++	1.5174E-04	4.1384E-02	8.8948E-02
A+++	5.2208E-12	1.1094E-05	1.1039E-04
A++++	3.4624E-24	3.7545E-12	3.3827E-10
AV	6.7046E-41	1.7636E-21	2.7474E-18
AVI	1.6803E-62	6.0605E-34	3.2045E-29
AVII	6.5151E-92	9.4583E-51	6.0477E-44
AVIII	0.	2.4474E-71	4.2236E-62

P1 = 1.00E+03 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3551E+03	1.3400E+04	1.9390E+04
T	6.4562E+01	1.0755E+02	1.1941E+02
RHO	1.2136E+01	6.0434E+01	7.3964E+01
H	2.9415E+02	5.3257E+02	6.4010E+02
A	9.0468E+00	1.2692E+01	1.3785E+01
S	1.6036E+00	1.7188E+00	1.7871E+00
Z	1.7295E+00	2.0617E+00	2.1953E+00
GAME	7.3300E-01	7.2652E-01	7.2489E-01
U	2.7302E+01	5.4907E+00	5.3555E+00

SPECIES	MOLE FRACTIONS		
E-	4.2179E-01	5.1497E-01	5.4448E-01
A	1.5671E-01	3.3210E-02	2.5068E-02
A+	4.2121E-01	3.8871E-01	3.1667E-01
A++	2.9186E-04	6.3077E-02	1.1353E-01
A+++	2.5126E-11	3.6152E-05	2.4690E-04
A++++	6.2576E-23	3.5471E-11	1.6722E-09
AV	6.5635E-39	6.4735E-20	3.7577E-17
AVI	1.3196E-59	1.1718E-31	1.5347E-27
AVII	9.1185E-88	1.7170E-47	1.5624E-41
AVIII	0.	5.9740E-67	7.7938E-59

P1 = 1.00E+03 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2987E+03	1.2760E+04	1.8498E+04
T	6.3344E+01	1.0503E+02	1.1697E+02
RHO	1.2070E+01	5.9803E+01	7.3220E+01
H	2.8205E+02	5.1035E+02	6.1401E+02
A	8.8547E+00	1.2473E+01	1.3527E+01
S	1.5868E+00	1.7006E+00	1.7675E+00
Z	1.6986E+00	2.0316E+00	2.1599E+00
GAME	7.2871E-01	7.2912E-01	7.2430E-01
U	2.6722E+01	5.4011E+00	5.2728E+00

SPECIES	MOLE FRACTIONS		
E-	4.1128E-01	5.0777E-01	5.3702E-01
A	1.7765E-01	3.6495E-02	2.7435E-02
A+	4.1086E-01	4.0372E-01	3.3424E-01
A++	2.1042E-04	5.1993E-02	1.0114E-01
A+++	1.1435E-11	2.0832E-05	1.6717E-04
A++++	1.4676E-23	1.2370E-11	7.6802E-10
AV	6.5951E-40	1.1889E-20	1.0488E-17
AVI	4.6519E-61	9.8060E-33	2.3197E-28
AVII	7.4967E-90	4.9748E-49	1.0360E-42
AVIII	0.	5.0419E-69	1.9773E-60

P1 = 1.00E+03 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4124E+03	1.4025E+04	2.0250E+04
T	6.5906E+01	1.0994E+02	1.2177E+02
RHO	1.2169E+01	6.0963E+01	7.4550E+01
H	3.0650E+02	5.5522E+02	6.6662E+02
A	9.2565E+00	1.2914E+01	1.4041E+01
S	1.6208E+00	1.7371E+00	1.8063E+00
Z	1.7610E+00	2.0926E+00	2.2306E+00
GAME	7.3824E-01	7.2498E-01	7.2585E-01
U	2.7878E+01	5.5726E+00	5.4372E+00

SPECIES	MOLE FRACTIONS		
E-	4.3215E-01	5.2212E-01	5.5168E-01
A	1.3611E-01	3.0348E-02	2.2898E-02
A+	4.3132E-01	3.7300E-01	2.9950E-01
A++	4.1483E-04	7.4473E-02	1.2556E-01
A+++	5.8495E-11	5.8978E-05	3.5227E-04
A++++	2.9320E-22	9.1127E-11	3.4200E-09
AV	7.3202E-38	2.9718E-19	1.2201E-16
AVI	4.0011E-58	1.0971E-30	8.8049E-27
AVII	8.3776E-86	4.2065E-46	1.9232E-40
AVIII	0.	4.4950E-65	2.3380E-57

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4707E+03	1.4634E+04	2.1083E+04
T	6.7383E+01	1.1222E+02	1.2414E+02
RHO	1.2177E+01	6.1390E+01	7.4917E+01
H	3.1910E+02	5.7824E+02	6.9356E+02
A	9.4825E+00	1.3139E+01	1.4305E+01
S	1.6381E+00	1.7555E+00	1.8261E+00
Z	1.7924E+00	2.1241E+00	2.2670E+00
GAME	7.4450E-01	7.2421E-01	7.2713E-01
U	2.8449E+01	5.6509E+00	5.5195E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4208E-01	5.2921E-01	5.5890E-01
A	1.1645E-01	2.7797E-02	2.0807E-02
A+	4.4087E-01	3.5687E-01	2.8219E-01
A++	6.0304E-04	8.6033E-02	1.3761E-01
A+++	1.4422E-10	9.1591E-05	4.9418E-04
A++++	1.5328E-21	2.1447E-10	6.7984E-09
AV	9.9017E-37	1.1900E-18	3.7921E-16
AVI	1.7107E-56	8.4313E-30	4.7464E-26
AVII	1.5714E-83	7.7689E-45	2.1667E-39
AVIII	0.	2.2978E-63	6.2321E-56

P1 = 1.00E+03 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5898E+03	1.5774E+04	2.2626E+04
T	7.0869E+01	1.1655E+02	1.2877E+02
RHO	1.2106E+01	6.1826E+01	7.5061E+01
H	3.4503E+02	6.2531E+02	7.4861E+02
A	9.9925E+00	1.3594E+01	1.4838E+01
S	1.6723E+00	1.7928E+00	1.8658E+00
Z	1.8531E+00	2.1890E+00	2.3409E+00
GAME	7.6035E-01	7.2434E-01	7.3039E-01
U	2.9571E+01	5.7985E+00	5.6858E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6035E-01	5.4316E-01	5.7282E-01
A	8.0685E-02	2.3326E-02	1.6982E-02
A+	4.5757E-01	3.2406E-01	2.4850E-01
A++	1.3906E-03	1.0926E-01	1.6078E-01
A+++	1.0904E-09	1.9763E-04	9.1771E-04
A++++	6.2465E-20	9.7434E-10	2.4249E-08
AV	3.4772E-34	1.4010E-17	3.1196E-15
AVI	8.9189E-53	3.1977E-28	1.0926E-24
AVII	4.5270E-78	1.4206E-42	1.9663E-37
AVIII	0.	2.6322E-60	2.8088E-53

P1 = 1.00E+03 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5299E+03	1.5220E+04	2.1882E+04
T	6.9024E+01	1.1442E+02	1.2646E+02
RHO	1.2157E+01	6.1687E+01	7.5108E+01
H	3.3195E+02	6.0161E+02	7.2099E+02
A	9.7274E+00	1.3366E+01	1.4570E+01
S	1.6553E+00	1.7741E+00	1.8459E+00
Z	1.8232E+00	2.1562E+00	2.3037E+00
GAME	7.5192E-01	7.2405E-01	7.2866E-01
U	2.9013E+01	5.7259E+00	5.6065E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5150E-01	5.3623E-01	5.6592E-01
A	9.7893E-02	2.5474E-02	1.8846E-02
A+	4.4970E-01	3.4051E-01	2.6521E-01
A++	9.0108E-04	9.7654E-02	1.4934E-01
A+++	3.8075E-10	1.3673E-04	6.7877E-04
A++++	9.0738E-21	4.7047E-10	1.3018E-08
AV	1.6385E-35	4.2707E-18	1.1116E-15
AVI	1.0164E-54	5.5388E-29	2.3507E-25
AVII	6.2892E-81	1.1508E-43	2.1618E-38
AVIII	0.	8.7743E-62	1.4098E-54

P1 = 1.00E+03 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6505E+03	1.6290E+04	2.3316E+04
T	7.2951E+01	1.1863E+02	1.3107E+02
RHO	1.2024E+01	6.1795E+01	7.4787E+01
H	3.5836E+02	6.4931E+02	7.7667E+02
A	1.0273E+01	1.3825E+01	1.5110E+01
S	1.6893E+00	1.8117E+00	1.8860E+00
Z	1.8816E+00	2.2223E+00	2.3786E+00
GAME	7.6891E-01	7.2500E-01	7.3228E-01
U	3.0122E+01	5.8694E+00	5.7703E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6454E-01	5.5001E-01	5.7959E-01
A	6.5142E-02	2.1318E-02	1.5210E-02
A+	4.6410E-01	3.0762E-01	2.3205E-01
A++	2.2199E-03	1.2078E-01	1.7193E-01
A+++	3.3911E-09	2.7817E-04	1.2256E-03
A++++	4.9272E-19	1.9243E-09	4.4239E-08
AV	8.7638E-33	4.2643E-17	8.4766E-15
AVI	8.9620E-51	1.6548E-27	4.8456E-24
AVII	2.7113E-75	1.4954E-41	1.6706E-36
AVIII	0.	6.3221E-59	5.0987E-52

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7119E+03	1.6770E+04	2.3973E+04
T	7.5282E+01	1.2065E+02	1.3346E+02
RHO	1.1916E+01	6.1610E+01	7.4292E+01
H	3.7193E+02	6.7361E+02	8.0573E+02
A	1.0554E+01	1.4057E+01	1.5394E+01
S	1.7060E+00	1.8307E+00	1.9070E+00
Z	1.9083E+00	2.2561E+00	2.4179E+00
GAME	7.7531E-01	7.2596E-01	7.3434E-01
U	3.0665E+01	5.9394E+00	5.8876E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7598E-01	5.5675E-01	5.8641E-01
A	5.1693E-02	1.9433E-02	1.3487E-02
A+	4.6869E-01	2.9127E-01	2.1542E-01
A++	3.6456E-03	1.3216E-01	1.8305E-01
A+++	1.1358E-08	3.8312E-04	1.6334E-03
A++++	4.4655E-18	3.6567E-09	8.0742E-08
AV	2.7869E-31	1.2221E-16	2.3097E-14
AVI	1.3151E-48	7.8528E-27	2.1604E-23
AVII	3.1838E-72	1.3926E-40	1.4282E-35
AVIII	0.	1.2917E-57	9.3191E-51

P1 = 1.00E+03 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9357E+03	1.8504E+04	2.6292E+04
T	8.4094E+01	1.2781E+02	1.4200E+02
RHO	1.1579E+01	6.0889E+01	7.2561E+01
H	4.2139E+02	7.6207E+02	9.0931E+02
A	1.1229E+01	1.4905E+01	1.6392E+01
S	1.7624E+00	1.8975E+00	1.9779E+00
Z	1.9880E+00	2.3777E+00	2.5517E+00
GAME	7.5423E-01	7.3103E-01	7.4153E-01
U	3.2565E+01	6.2012E+00	6.1918E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9699E-01	5.7943E-01	6.0810E-01
A	2.4074E-02	1.3772E-02	8.5845E-03
A+	4.6088E-01	2.3523E-01	1.6260E-01
A++	1.8057E-02	1.7052E-01	2.1663E-01
A+++	5.9817E-07	1.0513E-03	4.0787E-03
A++++	6.2813E-15	2.8878E-08	5.7418E-07
AV	2.4735E-26	3.7223E-15	6.2285E-13
AVI	1.8298E-41	1.2562E-24	2.9990E-21
AVII	4.3553E-62	2.0337E-37	1.7125E-32
AVIII	3.4566E-87	2.4941E-53	1.3883E-46

P1 = 1.00E+03 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7742E+03	1.7231E+04	2.4580E+04
T	7.7811E+01	1.2266E+02	1.3577E+02
RHO	1.1797E+01	6.1335E+01	7.3725E+01
H	3.8574E+02	6.9825E+02	8.3447E+02
A	1.0805E+01	1.4292E+01	1.5669E+01
S	1.7224E+00	1.8499E+00	1.9271E+00
Z	1.9329E+00	2.2903E+00	2.4556E+00
GAME	7.7618E-01	7.2716E-01	7.3638E-01
U	3.1204E+01	6.0099E+00	5.9693E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8265E-01	5.6338E-01	5.9277E-01
A	4.0738E-02	1.7667E-02	1.1953E-02
A+	4.7058E-01	2.7505E-01	1.9993E-01
A++	6.0364E-03	1.4339E-01	1.9322E-01
A+++	3.9086E-08	5.1861E-04	2.1305E-03
A++++	4.2621E-17	6.7455E-09	1.4159E-07
AV	9.6821E-30	3.3468E-16	5.9039E-14
AVI	2.2391E-46	3.4947E-26	8.7722E-23
AVII	4.9513E-69	1.1866E-39	1.0675E-34
AVIII	0.	2.3543E-56	1.4198E-49

P1 = 1.00E+03 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1073E+03	2.0136E+04	2.8561E+04
T	8.9277E+01	1.3340E+02	1.4905E+02
RHO	1.1558E+01	6.1184E+01	7.2369E+01
H	4.5873E+02	8.2973E+02	9.8947E+02
A	1.1567E+01	1.5562E+01	1.7156E+01
S	1.8014E+00	1.9445E+00	2.0279E+00
Z	2.0422E+00	2.4670E+00	2.6479E+00
GAME	7.3380E-01	7.3582E-01	7.4581E-01
U	3.3975E+01	6.4276E+00	6.4445E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1033E-01	5.9466E-01	6.2234E-01
A	1.6707E-02	1.0527E-02	5.9372E-03
A+	4.3560E-01	1.9702E-01	1.2874E-01
A++	3.7360E-02	1.9576E-01	2.3535E-01
A+++	3.9370E-06	2.0386E-03	7.6272E-03
A++++	2.0641E-13	1.1736E-07	2.3161E-06
AV	6.1799E-24	3.9017E-14	6.7036E-12
AVI	5.3522E-38	4.2309E-23	1.0829E-19
AVII	3.4504E-57	3.2277E-35	3.0189E-30
AVIII	1.1721E-80	2.4194E-50	1.5698E-43

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2882E+03	2.2053E+04	3.1291E+04
T	9.3513E+01	1.3954E+02	1.5683E+02
RHO	1.1655E+01	6.1791E+01	7.2744E+01
H	4.9773E+02	9.0096E+02	1.0749E+03
A	1.1924E+01	1.6261E+01	1.7938E+01
S	1.8399E+00	1.9912E+00	2.0774E+00
Z	2.0994E+00	2.5577E+00	2.7428E+00
GAME	7.2425E-01	7.4088E-01	7.4802E-01
U	3.5419E+01	6.6920E+00	6.7350E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2368E-01	6.0903E-01	6.3541E-01
A	1.2840E-02	7.7855E-03	3.9558E-03
A+	4.0330E-01	1.6119E-01	9.9599E-02
A++	6.0166E-02	2.1816E-01	2.4730E-01
A+++	1.4549E-05	3.9402E-03	1.3724E-02
A++++	2.4395E-12	4.6510E-07	8.9893E-06
AV	3.2021E-22	4.0109E-13	6.9462E-11
AVI	1.6991E-35	1.4109E-21	3.7766E-18
AVII	1.3026E-53	5.1103E-33	5.1116E-28
AVIII	8.2341E-76	2.3775E-47	1.6974E-40

P1 = 1.00E+03 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6752E+03	2.6417E+04	3.7602E+04
T	1.0062E+02	1.5317E+02	1.7328E+02
RHO	1.1959E+01	6.3094E+01	7.4175E+01
H	5.8060E+02	1.0530E+03	1.2587E+03
A	1.2685E+01	1.7691E+01	1.9471E+01
S	1.9171E+00	2.0821E+00	2.1741E+00
Z	2.2232E+00	2.7336E+00	2.9255E+00
GAME	7.1930E-01	7.4746E-01	7.4789E-01
U	3.8343E+01	7.2775E+00	7.3577E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.5019E-01	6.3419E-01	6.5818E-01
A	8.5487E-03	3.8537E-03	1.6800E-03
A+	3.3243E-01	1.0187E-01	5.8055E-02
A++	1.0875E-01	2.4796E-01	2.4624E-01
A+++	8.7544E-05	1.2124E-02	3.5756E-02
A++++	7.9734E-11	6.2899E-06	9.4985E-05
AV	9.0778E-20	3.4912E-11	4.3973E-09
AVI	6.7850E-32	1.2260E-18	2.2011E-15
AVII	1.8727E-48	9.0745E-29	5.2255E-24
AVIII	7.5633E-69	1.4542E-41	5.0538E-35

P1 = 1.00E+03 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4777E+03	2.4169E+04	3.4337E+04
T	9.7210E+01	1.4612E+02	1.6504E+02
RHO	1.1801E+01	6.2505E+01	7.3371E+01
H	5.3836E+02	9.7549E+02	1.1649E+03
A	1.2298E+01	1.6974E+01	1.8712E+01
S	1.8784E+00	2.0367E+00	2.1264E+00
Z	2.1599E+00	2.6464E+00	2.8355E+00
GAME	7.2036E-01	7.4508E-01	7.4820E-01
U	3.6878E+01	6.9714E+00	7.0462E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3701E-01	6.2213E-01	6.4733E-01
A	1.0364E-02	5.5784E-03	2.5763E-03
A+	3.6829E-01	1.2942E-01	7.6042E-02
A++	8.4303E-02	2.3592E-01	2.5088E-01
A+++	3.9128E-05	6.9522E-03	2.3136E-02
A++++	1.6387E-11	1.7514E-06	3.1569E-05
AV	6.9045E-21	3.8586E-12	6.2325E-10
AVI	1.5218E-33	4.3234E-20	1.0829E-16
AVII	7.9791E-51	7.1881E-31	6.5930E-26
AVIII	4.6345E-72	1.9944E-44	1.2835E-37

P1 = 1.00E+03 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8802E+03	2.8783E+04	4.1051E+04
T	1.0387E+02	1.6050E+02	1.8159E+02
RHO	1.2118E+01	6.3632E+01	7.4941E+01
H	6.2444E+02	1.1335E+03	1.3562E+03
A	1.3081E+01	1.8392E+01	2.0249E+01
S	1.9557E+00	2.1271E+00	2.2222E+00
Z	2.2884E+00	2.8183E+00	3.0166E+00
GAME	7.1987E-01	7.4782E-01	7.4854E-01
U	3.9809E+01	7.5912E+00	7.6668E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.6301E-01	6.4517E-01	6.6850E-01
A	7.1122E-03	2.6045E-03	1.0916E-03
A+	2.9692E-01	7.9292E-02	4.4124E-02
A++	1.3278E-01	2.5293E-01	2.3472E-01
A+++	1.7397E-04	1.9982E-02	5.1312E-02
A++++	3.1533E-10	2.0656E-05	2.5101E-04
AV	8.6606E-19	2.7668E-10	2.5388E-08
AVI	1.9061E-30	2.8898E-17	3.3602E-14
AVII	2.2667E-46	8.8063E-27	2.7653E-22
AVIII	4.9774E-66	7.4417E-39	1.1593E-32

TABLE I.- Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0927E+03	3.1222E+04	4.4591E+04
T	1.0712E+02	1.6792E+02	1.8982E+02
RHO	1.2251E+01	6.4089E+01	7.5566E+01
H	6.6987E+02	1.2169E+03	1.4570E+03
A	1.3497E+01	1.9079E+01	2.1046E+01
S	1.9952E+00	2.1717E+00	2.2701E+00
Z	2.3567E+00	2.9011E+00	3.1088E+00
GAME	7.2158E-01	7.4721E-01	7.5065E-01
U	4.1273E+01	7.8943E+00	7.9704E+00

SPECIES	MOLE FRACTIONS		
E-	5.7568E-01	6.5531E-01	6.7833E-01
A	5.8814E-03	1.7459E-03	7.1026E-04
A+	2.6153E-01	6.1460E-02	3.3447E-02
A++	1.5659E-01	2.5068E-01	2.1824E-01
A+++	3.2413E-04	3.0751E-02	6.8684E-02
A++++	1.1210E-09	6.0202E-05	5.8457E-04
AV	7.0419E-18	1.8233E-09	1.2016E-07
AVI	4.2754E-29	5.2327E-16	3.8489E-13
AVII	1.9967E-44	5.8726E-25	9.7422E-21
AVIII	2.1250E-63	2.2988E-36	1.5399E-30

P1 = 1.00E+03 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5390E+03	3.6272E+04	5.1939E+04
T	1.1377E+02	1.8252E+02	2.0628E+02
RHO	1.2458E+01	6.4823E+01	7.6393E+01
H	7.6548E+02	1.3921E+03	1.6688E+03
A	1.4376E+01	2.0458E+01	2.2705E+01
S	2.0743E+00	2.2600E+00	2.3642E+00
Z	2.4970E+00	3.0658E+00	3.2959E+00
GAME	7.2752E-01	7.4796E-01	7.5820E-01
U	4.4184E+01	8.5025E+00	8.5758E+00

SPECIES	MOLE FRACTIONS		
E-	5.9952E-01	6.7382E-01	6.9659E-01
A	3.8901E-03	7.9156E-04	2.9789E-04
A+	1.9464E-01	3.6972E-02	1.8860E-02
A++	2.0097E-01	2.2877E-01	1.7738E-01
A+++	9.8360E-04	5.9299E-02	1.0449E-01
A++++	1.1455E-08	3.5158E-04	2.3703E-03
AV	3.4121E-16	4.3894E-08	1.7094E-06
AVI	1.4071E-26	7.3195E-14	2.6249E-11
AVII	8.7784E-41	7.8089E-22	4.7927E-18
AVIII	1.9459E-58	4.3468E-32	7.8365E-27

P1 = 1.00E+03 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3123E+03	3.3724E+04	4.8233E+04
T	1.1039E+02	1.7527E+02	1.9800E+02
RHO	1.2368E+01	6.4497E+01	7.6090E+01
H	7.1688E+02	1.3031E+03	1.5611E+03
A	1.3927E+01	1.9763E+01	2.1862E+01
S	2.0347E+00	2.2160E+00	2.3172E+00
Z	2.4262E+00	2.9832E+00	3.2015E+00
GAME	7.2417E-01	7.4702E-01	7.5402E-01
U	4.2731E+01	8.2049E+00	8.2677E+00

SPECIES	MOLE FRACTIONS		
E-	5.8784E-01	6.6479E-01	6.8765E-01
A	4.8231E-03	1.1733E-03	4.6251E-04
A+	2.2742E-01	4.7665E-02	2.5260E-02
A++	1.7935E-01	2.4214E-01	1.9873E-01
A+++	5.7315E-04	4.4079E-02	8.6677E-02
A++++	3.6602E-09	1.5421E-04	1.2234E-03
AV	5.0475E-17	9.8079E-09	4.8068E-07
AVI	8.0644E-28	7.0701E-15	3.4567E-12
AVII	1.3962E-42	2.5865E-23	2.4321E-19
AVIII	6.8911E-61	4.0736E-34	1.2874E-28

P1 = 1.00E+03 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7725E+03	3.8832E+04	5.5663E+04
T	1.1734E+02	1.8976E+02	2.1468E+02
RHO	1.2517E+01	6.4955E+01	7.6458E+01
H	8.1564E+02	1.4838E+03	1.7799E+03
A	1.4849E+01	2.1177E+01	2.3561E+01
S	2.1140E+00	2.3045E+00	2.4108E+00
Z	2.5685E+00	3.1504E+00	3.3911E+00
GAME	7.3155E-01	7.5014E-01	7.6251E-01
U	4.5628E+01	8.7972E+00	8.8848E+00

SPECIES	MOLE FRACTIONS		
E-	6.1067E-01	6.8258E-01	7.0511E-01
A	3.0664E-03	5.3131E-04	1.8951E-04
A+	1.6351E-01	2.8504E-02	1.3906E-02
A++	2.2109E-01	2.1181E-01	1.5547E-01
A+++	1.6595E-03	7.5838E-02	1.2102E-01
A++++	3.5235E-08	7.3338E-04	4.2945E-03
AV	2.2607E-15	1.7110E-07	5.4890E-06
AVI	2.3885E-25	6.2132E-13	1.7227E-10
AVII	5.2470E-39	1.7799E-20	7.6863E-17
AVIII	4.9944E-56	3.1792E-30	3.6149E-25

TABLE I. - Continued

$p_1 = 1\ kN/m^2$

P1 = 1.00E+03 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0127E+03	4.1371E+04	5.9440E+04
T	1.2117E+02	1.9689E+02	2.2344E+02
RHO	1.2544E+01	6.4952E+01	7.6236E+01
H	8.6738E+02	1.5781E+03	1.8965E+03
A	1.5344E+01	2.1904E+01	2.4443E+01
S	2.1538E+00	2.3482E+00	2.4585E+00
Z	2.6401E+00	3.2350E+00	3.4894E+00
GAME	7.3602E-01	7.5326E-01	7.6627E-01
U	4.7063E+01	9.0947E+00	9.2684E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.2122E-01	6.9088E-01	7.1342E-01
A	2.3474E-03	3.5718E-04	1.1739E-04
A+	1.3442E-01	2.1924E-02	1.0024E-02
A++	2.3923E-01	1.9295E-01	1.3339E-01
A+++	2.7786E-03	9.2488E-02	1.3559E-01
A++++	1.0871E-07	1.4010E-03	7.4384E-03
AV	1.5222E-14	5.7990E-07	1.6581E-05
AVI	4.1916E-24	4.3019E-12	1.0421E-09
AVII	3.3161E-37	3.0373E-19	1.1024E-15
AVIII	1.4048E-53	1.5745E-28	1.4385E-23

P1 = 1.00E+03 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5125E+03	4.6317E+04	6.6767E+04
T	1.2982E+02	2.1127E+02	2.4079E+02
RHO	1.2506E+01	6.4357E+01	7.5318E+01
H	9.7554E+02	1.7742E+03	2.1367E+03
A	1.6382E+01	2.3398E+01	2.6119E+01
S	2.2329E+00	2.4349E+00	2.5510E+00
Z	2.7795E+00	3.4065E+00	3.6814E+00
GAME	7.4374E-01	7.6068E-01	7.6956E-01
U	4.9902E+01	9.7101E+00	9.9512E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.4022E-01	7.0644E-01	7.2837E-01
A	1.2397E-03	1.5711E-04	4.5031E-05
A+	8.4548E-02	1.2614E-02	5.1312E-03
A++	2.6629E-01	1.5280E-01	9.4695E-02
A+++	7.6989E-03	1.2371E-01	1.5332E-01
A++++	1.0737E-06	4.2669E-03	1.8336E-02
AV	7.5848E-13	5.0444E-06	1.1041E-04
AVI	1.5203E-21	1.3836E-10	2.3974E-08
AVII	1.6827E-33	5.0280E-17	1.1719E-13
AVIII	1.5484E-48	1.8052E-25	9.3166E-21

P1 = 1.00E+03 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2594E+03	4.3868E+04	6.3133E+04
T	1.2531E+02	2.0400E+02	2.3209E+02
RHO	1.2539E+01	6.4771E+01	7.5876E+01
H	9.2068E+02	1.6749E+03	2.0151E+03
A	1.5859E+01	2.2642E+01	2.5290E+01
S	2.1935E+00	2.3914E+00	2.5046E+00
Z	2.7107E+00	3.3199E+00	3.5851E+00
GAME	7.4041E-01	7.5691E-01	7.6866E-01
U	4.8487E+01	9.3983E+00	9.6139E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3109E-01	6.9879E-01	7.2107E-01
A	1.7364E-03	2.3892E-04	7.2976E-05
A+	1.0789E-01	1.6753E-02	7.2084E-03
A++	2.5464E-01	1.7314E-01	1.1318E-01
A+++	4.6382E-03	1.0858E-01	1.4643E-01
A++++	3.4004E-07	2.5014E-03	1.1995E-02
AV	1.0603E-13	1.7682E-06	4.4591E-05
AVI	7.8029E-23	2.5557E-11	5.3061E-09
AVII	2.2918E-35	4.1709E-18	1.2365E-14
AVIII	4.5059E-51	5.8180E-27	4.1007E-22

P1 = 1.00E+03 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7724E+03	4.8750E+04	7.0377E+04
T	1.3463E+02	2.1877E+02	2.4953E+02
RHO	1.2457E+01	6.3758E+01	7.4635E+01
H	1.0320E+03	1.8760E+03	2.2610E+03
A	1.6892E+01	2.4170E+01	2.6932E+01
S	2.2720E+00	2.4792E+00	2.5979E+00
Z	2.8458E+00	3.4950E+00	3.7790E+00
GAME	7.4479E-01	7.6401E-01	7.6923E-01
U	5.1310E+01	1.0027E+01	1.0276E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.4860E-01	7.1388E-01	7.3538E-01
A	8.6009E-04	1.0123E-04	2.7710E-05
A+	6.5034E-02	9.3331E-03	3.6258E-03
A++	2.7295E-01	1.3254E-01	7.8251E-02
A+++	1.2548E-02	1.3713E-01	1.5587E-01
A++++	3.3359E-06	7.0038E-03	2.6596E-02
AV	5.3482E-12	1.3645E-05	2.5184E-04
AVI	2.9291E-20	6.9713E-10	9.6157E-08
AVII	1.2224E-31	5.4897E-16	9.3937E-13
AVIII	5.3039E-46	4.9107E-24	1.6896E-19

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4639E+01	2.6241E+02
T	1.2892E+01	1.6278E+01	2.8646E+01
RHO	3.7155E+00	5.1998E+00	9.1448E+00
H	1.2892E+01	1.6278E+01	2.9118E+01
A	3.5905E+00	4.0344E+00	5.1368E+00
S	1.1119E+00	1.1125E+00	1.1269E+00
Z	1.0000E+00	1.0000E+00	1.0017E+00
GAME	1.0000E+00	9.9991E-01	9.1953E-01
U	4.5391E+00	3.2319E+00	3.0928E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2955E-09	4.6172E-07	1.7296E-03
A	1.0000E+00	1.0000E+00	9.9654E-01
A+	3.2955E-09	4.6172E-07	1.7296E-03
A++	1.8126E-33	9.7716E-27	8.0245E-14
A+++	1.4703E-73	3.2951E-58	1.9847E-32
A++++	0.	0.	9.8073E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9071E+01	1.2768E+02	3.7261E+02
T	1.8180E+01	2.3358E+01	3.5696E+01
RHO	3.7993E+00	5.4652E+00	1.0278E+01
H	1.8181E+01	2.3404E+01	4.0092E+01
A	4.2625E+00	4.7969E+00	5.3300E+00
S	1.1337E+00	1.1345E+00	1.1488E+00
Z	1.0000E+00	1.0002E+00	1.0156E+00
GAME	9.9937E-01	9.8494E-01	7.8359E-01
U	5.4902E+00	3.8044E+00	3.2413E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1842E-06	1.7310E-04	1.5408E-02
A	9.9999E-01	9.9965E-01	9.6918E-01
A+	4.1842E-06	1.7310E-04	1.5408E-02
A++	3.7006E-23	2.0259E-17	1.6261E-10
A+++	4.1907E-52	1.8838E-40	3.1053E-25
A++++	0.	5.5011E-76	1.9577E-48
AV	0.	0.	6.8560E-79
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0492E+02	3.1711E+02
T	1.5416E+01	1.9659E+01	3.2669E+01
RHO	3.7624E+00	5.3369E+00	9.6403E+00
H	1.5416E+01	1.9662E+01	3.4578E+01
A	3.9263E+00	4.4301E+00	5.2408E+00
S	1.1232E+00	1.1239E+00	1.1382E+00
Z	1.0000E+00	1.0000E+00	1.0069E+00
GAME	9.9996E-01	9.9831E-01	8.3499E-01
U	5.0154E+00	3.5236E+00	3.2231E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.8428E-07	1.3231E-05	6.8375E-03
A	1.0000E+00	9.9997E-01	9.8633E-01
A+	1.8428E-07	1.3231E-05	6.8375E-03
A++	8.6701E-28	2.9199E-21	9.3710E-12
A+++	5.2474E-63	1.1524E-48	6.1451E-28
A++++	0.	0.	1.9842E-53
AV	0.	0.	9.7399E-87
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1120E+01	1.5579E+02	4.2966E+02
T	2.1175E+01	2.7355E+01	3.8077E+01
RHO	3.8308E+00	5.6879E+00	1.0988E+01
H	2.1188E+01	2.7704E+01	4.5722E+01
A	4.5892E+00	5.0513E+00	5.4372E+00
S	1.1436E+00	1.1445E+00	1.1593E+00
Z	1.0001E+00	1.0013E+00	1.0269E+00
GAME	9.9455E-01	9.3155E-01	7.5604E-01
U	5.9649E+00	4.0042E+00	3.1872E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0102E-05	1.2833E-03	2.6226E-02
A	9.9990E-01	9.9743E-01	9.4755E-01
A+	5.0102E-05	1.2833E-03	2.6226E-02
A++	2.2815E-19	2.0464E-14	1.0939E-09
A+++	1.2139E-44	7.2602E-34	2.0786E-23
A++++	2.7143E-84	8.5942E-65	6.0504E-45
AV	0.	0.	1.1098E-73
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4246E+01	1.9574E+02	4.9283E+02
T	2.4350E+01	3.1384E+01	4.0156E+01
RHO	3.8690E+00	6.2016E+00	1.1794E+01
H	2.4447E+01	3.2953E+01	5.1803E+01
A	4.8663E+00	5.1615E+00	5.5600E+00
S	1.1528E+00	1.1541E+00	1.1702E+00
Z	1.0004E+00	1.0057E+00	1.0406E+00
GAME	9.7218E-01	8.4405E-01	7.3979E-01
U	6.4462E+00	4.0045E+00	3.1425E+00

SPECIES	MOLE FRACTIONS		
E-	3.6121E-04	5.6571E-03	3.9054E-02
A	9.9928E-01	9.8869E-01	9.2189E-01
A+	3.6121E-04	5.6571E-03	3.9054E-02
A++	2.0153E-16	3.5632E-12	4.7113E-09
A+++	2.7546E-38	5.4986E-29	5.2298E-22
A++++	1.2805E-72	9.2592E-56	2.4079E-42
AV	0.	2.1758E-89	1.7284E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2484E+02	3.1633E+02	6.6360E+02
T	3.0438E+01	3.7730E+01	4.3949E+01
RHO	4.0807E+00	8.1492E+00	1.4042E+01
H	3.1831E+01	4.5892E+01	6.5936E+01
A	5.0946E+00	5.3977E+00	5.8456E+00
S	1.1701E+00	1.1737E+00	1.1935E+00
Z	1.0051E+00	1.0288E+00	1.0753E+00
GAME	8.4840E-01	7.5056E-01	7.2306E-01
U	7.4911E+00	3.7325E+00	3.0837E+00

SPECIES	MOLE FRACTIONS		
E-	5.0447E-03	2.8018E-02	7.0017E-02
A	9.8991E-01	9.4396E-01	8.5997E-01
A+	5.0447E-03	2.8018E-02	7.0017E-02
A++	1.7986E-12	1.1194E-09	4.4503E-08
A+++	1.0383E-29	1.7995E-23	7.9078E-20
A++++	9.0022E-57	3.7342E-45	2.6976E-38
AV	0.	4.2916E-74	5.1851E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0875E+02	2.4947E+02	5.6886E+02
T	2.7535E+01	3.4849E+01	4.2098E+01
RHO	3.9428E+00	7.0522E+00	1.2785E+01
H	2.7988E+01	3.9102E+01	5.8556E+01
A	5.0289E+00	5.2609E+00	5.6974E+00
S	1.1616E+00	1.1637E+00	1.1818E+00
Z	1.0017E+00	1.0151E+00	1.0569E+00
GAME	9.1693E-01	7.8239E-01	7.2957E-01
U	6.9521E+00	3.8718E+00	3.1194E+00

SPECIES	MOLE FRACTIONS		
E-	1.6652E-03	1.4857E-02	5.3829E-02
A	9.9667E-01	9.7029E-01	8.9234E-01
A+	1.6652E-03	1.4857E-02	5.3829E-02
A++	3.6513E-14	1.1007E-10	1.5841E-08
A+++	2.1330E-33	1.0693E-25	7.7292E-21
A++++	1.5476E-63	2.8201E-49	3.4574E-40
AV	0.	1.2263E-80	4.3007E-66
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4307E+02	4.0069E+02	7.8879E+02
T	3.2930E+01	4.0246E+01	4.5836E+01
RHO	4.2967E+00	9.5188E+00	1.5693E+01
H	3.6021E+01	5.3410E+01	7.4328E+01
A	5.1492E+00	5.5585E+00	6.0104E+00
S	1.1787E+00	1.1842E+00	1.2059E+00
Z	1.0111E+00	1.0460E+00	1.0966E+00
GAME	7.9630E-01	7.3397E-01	7.1871E-01
U	8.0881E+00	3.6401E+00	3.0603E+00

SPECIES	MOLE FRACTIONS		
E-	1.1023E-02	4.3940E-02	8.8079E-02
A	9.7795E-01	9.1212E-01	8.2384E-01
A+	1.1023E-02	4.3940E-02	8.8079E-02
A++	2.7573E-11	6.1856E-09	1.1416E-07
A+++	3.8607E-27	8.2131E-22	6.6812E-19
A++++	4.4381E-52	4.5804E-42	1.4007E-36
AV	3.2193E-85	3.6412E-69	2.4761E-60
AVI	0.	0.	7.4353E-92
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6332E+02	5.0750E+02	9.4641E+02
T	3.5037E+01	4.2568E+01	4.7737E+01
RHO	4.5714E+00	1.1183E+01	1.7694E+01
H	4.0537E+01	6.1723E+01	8.3666E+01
A	5.2245E+00	5.7347E+00	6.1878E+00
S	1.1875E+00	1.1954E+00	1.2190E+00
Z	1.0197E+00	1.0661E+00	1.1205E+00
GAME	7.6401E-01	7.2466E-01	7.1582E-01
U	8.7278E+00	3.5519E+00	3.0485E+00

SPECIES	MOLE FRACTIONS		
E-	1.9285E-02	6.2019E-02	1.0753E-01
A	9.6143E-01	8.7596E-01	7.8493E-01
A+	1.9285E-02	6.2019E-02	1.0753E-01
A++	2.0132E-10	2.4235E-08	2.6907E-07
A+++	3.0230E-25	1.8065E-20	4.7744E-18
A++++	1.4704E-48	1.5295E-39	5.5919E-35
AV	1.5050E-79	4.6850E-65	9.3115E-58
AVI	0.	0.	3.8193E-87
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0803E+02	7.7571E+02	1.3422E+03
T	3.8425E+01	4.6665E+01	5.1407E+01
RHO	5.1954E+00	1.4950E+01	2.2255E+01
H	5.0355E+01	7.9787E+01	1.0422E+02
A	5.4153E+00	6.0953E+00	6.5562E+00
S	1.2060E+00	1.2198E+00	1.2472E+00
Z	1.0421E+00	1.1119E+00	1.1732E+00
GAME	7.3239E-01	7.1604E-01	7.1269E-01
U	1.0019E+01	3.4748E+00	3.0555E+00

SPECIES	MOLE FRACTIONS		
E-	4.0363E-02	1.0062E-01	1.4765E-01
A	9.1927E-01	7.9876E-01	7.0470E-01
A+	4.0363E-02	1.0062E-01	1.4765E-01
A++	2.9845E-09	1.8451E-07	1.1479E-06
A+++	1.1342E-22	1.8767E-18	1.3833E-16
A++++	7.6446E-44	9.2647E-36	3.1946E-32
AV	2.6898E-72	5.5883E-59	2.8729E-53
AVI	0.	1.5526E-88	3.9983E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8495E+02	6.3115E+02	1.1298E+03
T	3.6848E+01	4.4677E+01	4.9586E+01
RHO	4.8723E+00	1.2983E+01	1.9881E+01
H	4.5313E+01	7.0482E+01	9.3618E+01
A	5.3159E+00	5.9134E+00	6.3696E+00
S	1.1966E+00	1.2073E+00	1.2328E+00
Z	1.0302E+00	1.0881E+00	1.1461E+00
GAME	7.4446E-01	7.1931E-01	7.1394E-01
U	9.3702E+00	3.5062E+00	3.0476E+00

SPECIES	MOLE FRACTIONS		
E-	2.9280E-02	8.0977E-02	1.2744E-01
A	9.4144E-01	8.3805E-01	7.4512E-01
A+	2.9280E-02	8.0977E-02	1.2744E-01
A++	9.1124E-10	7.2699E-08	5.7616E-07
A+++	8.2589E-24	2.2071E-19	2.7807E-17
A++++	6.2329E-46	1.6591E-37	1.5595E-33
AV	1.9336E-75	8.6124E-62	2.2008E-55
AVI	0.	0.	2.9758E-83
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3247E+02	9.4269E+02	1.5824E+03
T	3.9858E+01	4.8576E+01	5.3198E+01
RHO	5.5266E+00	1.7062E+01	2.4751E+01
H	5.5653E+01	8.9643E+01	1.1542E+02
A	5.5201E+00	6.2807E+00	6.7463E+00
S	1.2158E+00	1.2331E+00	1.2623E+00
Z	1.0553E+00	1.1374E+00	1.2018E+00
GAME	7.2442E-01	7.1397E-01	7.1187E-01
U	1.0668E+01	3.4402E+00	3.0700E+00

SPECIES	MOLE FRACTIONS		
E-	5.2447E-02	1.2080E-01	1.6790E-01
A	8.9511E-01	7.5839E-01	6.6419E-01
A+	5.2447E-02	1.2080E-01	1.6790E-01
A++	8.0230E-09	4.1707E-07	2.1525E-06
A+++	1.0314E-21	1.2362E-17	6.0271E-16
A++++	4.9166E-42	3.1847E-34	5.1095E-31
AV	3.3919E-69	1.6206E-56	2.5279E-51
AVI	0.	6.2018E-85	3.0303E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5822E+02	1.1296E+03	1.8510E+03
T	4.1175E+01	5.0390E+01	5.4968E+01
RHO	5.8622E+00	1.9262E+01	2.7342E+01
H	6.1206E+01	9.9957E+01	1.2720E+02
A	5.6278E+00	6.4648E+00	6.9395E+00
S	1.2260E+00	1.2469E+00	1.2780E+00
Z	1.0698E+00	1.1638E+00	1.2316E+00
GAME	7.1903E-01	7.1267E-01	7.1136E-01
U	1.1316E+01	3.4343E+00	3.0906E+00

SPECIES	MOLE FRACTIONS		
E-	6.5233E-02	1.4076E-01	1.8803E-01
A	8.6953E-01	7.1848E-01	6.2395E-01
A+	6.5233E-02	1.4076E-01	1.8802E-01
A++	1.8604E-08	8.4897E-07	3.8415E-06
A+++	6.7157E-21	6.4577E-17	2.3512E-15
A++++	1.5696E-40	7.0981E-33	6.5855E-30
AV	8.4079E-67	2.3217E-54	1.5258E-49
AVI	0.	8.1333E-82	1.2173E-74
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1353E+02	1.5721E+03	2.4727E+03
T	4.3565E+01	5.3896E+01	5.6463E+01
RHO	6.5325E+00	2.3900E+01	3.2685E+01
H	7.3064E+01	1.2209E+02	1.5233E+02
A	5.8484E+00	6.8403E+00	7.3343E+00
S	1.2477E+00	1.2765E+00	1.3109E+00
Z	1.1017E+00	1.2205E+00	1.2940E+00
GAME	7.1265E-01	7.1132E-01	7.1104E-01
U	1.2603E+01	3.4307E+00	3.1326E+00

SPECIES	MOLE FRACTIONS		
E-	9.2292E-02	1.8066E-01	2.2722E-01
A	8.1542E-01	6.3869E-01	5.4557E-01
A+	9.2292E-02	1.8065E-01	2.2720E-01
A++	7.4208E-08	2.9114E-06	1.0874E-05
A+++	1.5045E-19	1.1611E-15	2.7581E-14
A++++	5.1036E-38	1.6347E-30	6.7454E-28
AV	8.8087E-63	1.4695E-50	2.6152E-46
AVI	0.	3.0541E-76	6.9169E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8525E+02	1.3387E+03	2.1460E+03
T	4.2404E+01	5.2159E+01	5.6707E+01
RHO	6.1984E+00	2.1538E+01	2.9986E+01
H	6.7009E+01	1.1076E+02	1.3940E+02
A	5.7374E+00	6.6514E+00	7.1338E+00
S	1.2367E+00	1.2614E+00	1.2940E+00
Z	1.0853E+00	1.1916E+00	1.2621E+00
GAME	7.1529E-01	7.1183E-01	7.1109E-01
U	1.1961E+01	3.4361E+00	3.0978E+00

SPECIES	MOLE FRACTIONS		
E-	7.8557E-02	1.6078E-01	2.0765E-01
A	8.4289E-01	6.7844E-01	5.8471E-01
A+	7.8557E-02	1.6078E-01	2.0763E-01
A++	3.8706E-08	1.6159E-06	6.5453E-06
A+++	3.4386E-20	2.9169E-16	8.2758E-15
A++++	3.0150E-39	1.2306E-31	7.0058E-29
AV	5.1142E-65	2.4202E-52	6.7925E-48
AVI	0.	9.0411E-79	3.1504E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4305E+02	1.8256E+03	2.8291E+03
T	4.4671E+01	5.5594E+01	6.0226E+01
RHO	6.8628E+00	2.6265E+01	3.5401E+01
H	7.9370E+01	1.3384E+02	1.6582E+02
A	5.9606E+00	7.0302E+00	7.5391E+00
S	1.2591E+00	1.2921E+00	1.3283E+00
Z	1.1190E+00	1.2503E+00	1.3269E+00
GAME	7.1078E-01	7.1105E-01	7.1123E-01
U	1.3242E+01	3.4533E+00	3.1719E+00

SPECIES	MOLE FRACTIONS		
E-	1.0634E-01	2.0017E-01	2.4638E-01
A	7.8732E-01	5.9966E-01	5.0725E-01
A+	1.0634E-01	2.0016E-01	2.4635E-01
A++	1.3323E-07	5.0006E-06	1.7593E-05
A+++	5.6167E-19	4.1689E-15	8.6656E-14
A++++	5.6985E-37	1.8366E-29	5.7941E-27
AV	3.4246E-61	7.6299E-49	8.3139E-45
AVI	0.	1.2656E-73	1.1224E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7406E+02	2.1078E+03	3.2211E+03
T	4.5736E+01	5.7298E+01	6.2025E+01
RHO	7.1920E+00	2.8712E+01	3.8157E+01
H	8.5941E+01	1.4621E+02	1.8000E+02
A	6.0745E+00	7.2247E+00	7.7510E+00
S	1.2709E+00	1.3083E+00	1.3463E+00
Z	1.1372E+00	1.2812E+00	1.3610E+00
GAME	7.0946E-01	7.1100E-01	7.1168E-01
U	1.3887E+01	3.4718E+00	3.2165E+00

SPECIES	MOLE FRACTIONS		
E-	1.2065E-01	2.1950E-01	2.6526E-01
A	7.5871E-01	5.6100E-01	4.6950E-01
A+	1.2065E-01	2.1949E-01	2.6521E-01
A++	2.2742E-07	8.3276E-06	2.8004E-05
A+++	1.8903E-18	1.3931E-14	2.6287E-13
A++++	5.4944E-36	1.7571E-28	4.6455E-26
AV	1.3906E-59	2.7595E-47	2.3538E-43
AVI	8.7918E-90	2.0950E-71	1.5217E-65
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3915E+02	2.7276E+03	4.0832E+03
T	4.7758E+01	6.0643E+01	6.5680E+01
RHO	7.8193E+00	3.3443E+01	4.3443E+01
H	9.9803E+01	1.7206E+02	2.0976E+02
A	6.3056E+00	7.6179E+00	8.1898E+00
S	1.2956E+00	1.3419E+00	1.3833E+00
Z	1.1760E+00	1.3449E+00	1.4310E+00
GAME	7.0796E-01	7.1152E-01	7.1362E-01
U	1.5145E+01	3.5502E+00	3.3181E+00

SPECIES	MOLE FRACTIONS		
E-	1.4964E-01	2.5646E-01	3.0119E-01
A	7.0072E-01	4.8709E-01	3.9768E-01
A+	1.4964E-01	2.5642E-01	3.0106E-01
A++	5.8625E-07	2.1004E-05	6.7324E-05
A+++	1.6413E-17	1.2587E-13	2.1500E-12
A++++	3.1207E-34	1.0990E-26	2.3715E-24
AV	9.5020E-57	2.1509E-44	1.2893E-40
AVI	1.7409E-85	3.9259E-67	1.5802E-61
AVII	0.	0.	9.1582E-90
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0599E+02	2.4055E+03	3.6368E+03
T	4.6761E+01	5.8967E+01	6.3829E+01
RHO	7.5096E+00	3.1077E+01	4.0827E+01
H	9.2746E+01	1.5888E+02	1.9459E+02
A	6.1892E+00	7.4193E+00	7.9665E+00
S	1.2831E+00	1.3249E+00	1.3645E+00
Z	1.1562E+00	1.3127E+00	1.3956E+00
GAME	7.0855E-01	7.1115E-01	7.1245E-01
U	1.4517E+01	3.5128E+00	3.2640E+00

SPECIES	MOLE FRACTIONS		
E-	1.3508E-01	2.3819E-01	2.8346E-01
A	7.2985E-01	5.2363E-01	4.3313E-01
A+	1.3508E-01	2.3817E-01	2.8337E-01
A++	3.7154E-07	1.3374E-05	4.3642E-05
A+++	5.8093E-18	4.3012E-14	7.6002E-13
A++++	4.5830E-35	1.4789E-27	3.3931E-25
AV	4.6263E-58	8.8889E-46	5.7172E-42
AVI	2.2893E-87	4.0849E-69	1.6408E-63
AVII	0.	0.	1.3088E-92
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7352E+02	3.0730E+03	4.5609E+03
T	4.8728E+01	6.2333E+01	6.7592E+01
RHO	8.1221E+00	3.5778E+01	4.5990E+01
H	1.0711E+02	1.8571E+02	2.2551E+02
A	6.4229E+00	7.8209E+00	8.4224E+00
S	1.3084E+00	1.3593E+00	1.4024E+00
Z	1.1964E+00	1.3779E+00	1.4672E+00
GAME	7.0761E-01	7.1216E-01	7.1530E-01
U	1.5770E+01	3.5929E+00	3.3773E+00

SPECIES	MOLE FRACTIONS		
E-	1.8419E-01	2.7426E-01	3.1843E-01
A	6.7162E-01	4.5151E-01	3.6324E-01
A+	1.6419E-01	2.7420E-01	3.1822E-01
A++	8.9661E-07	3.2404E-05	1.0322E-04
A+++	4.3302E-17	3.5523E-13	6.0067E-12
A++++	1.8527E-33	7.7560E-26	1.6126E-23
AV	1.4356E-55	5.1198E-43	2.7666E-39
AVI	3.3080E-84	4.5736E-65	1.4032E-59
AVII	0.	0.	5.7763E-87
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.0910E+02	3.4408E+03	5.0695E+03
T	4.9681E+01	6.4048E+01	6.9587E+01
RHO	8.4154E+00	3.8058E+01	4.8433E+01
H	1.1467E+02	1.9982E+02	2.4187E+02
A	6.5421E+00	8.3294E+00	8.6667E+00
S	1.3215E+00	1.3771E+00	1.4218E+00
Z	1.2177E+00	1.4116E+00	1.5042E+00
GAME	7.0746E-01	7.1311E-01	7.1761E-01
U	1.6392E+01	3.6408E+00	3.4434E+00

SPECIES	MOLE FRACTIONS		
E-	1.7878E-01	2.9157E-01	3.3518E-01
A	6.4245E-01	4.1691E-01	3.2980E-01
A+	1.7877E-01	2.9147E-01	3.3486E-01
A++	1.3391E-06	4.9296E-05	1.5804E-04
A+++	1.0923E-16	9.6964E-13	1.6752E-11
A++++	1.0626E-32	5.0661E-25	1.0868E-22
AV	2.6538E-54	1.0298E-41	5.7956E-38
AVI	6.4485E-82	3.6733E-63	1.1797E-57
AVII	0.	3.7480E-92	3.1879E-84
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8389E+02	4.2481E+03	6.1813E+03
T	5.1546E+01	6.7612E+01	7.3938E+01
RHO	8.9737E+00	4.2428E+01	5.2901E+01
H	1.3056E+02	2.2951E+02	2.7646E+02
A	6.7856E+00	8.4683E+00	9.2026E+00
S	1.3488E+00	1.4136E+00	1.4618E+00
Z	1.2623E+00	1.4808E+00	1.5803E+00
GAME	7.0764E-01	7.1624E-01	7.2478E-01
U	1.7630E+01	3.7328E+00	3.5993E+00

SPECIES	MOLE FRACTIONS		
E-	2.0781E-01	3.2471E-01	3.6722E-01
A	5.8439E-01	3.5069E-01	2.6593E-01
A+	2.0780E-01	3.2449E-01	3.6647E-01
A++	2.8111E-06	1.1143E-04	3.7650E-04
A+++	6.0670E-16	6.8812E-12	1.3625E-10
A++++	2.6193E-31	1.9674E-23	5.3112E-21
AV	4.6167E-52	3.6090E-39	2.8562E-35
AVI	1.3381E-78	1.9665E-59	1.0146E-53
AVII	0.	8.7724E-87	1.4539E-78
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.4590E+02	3.8355E+03	5.6096E+03
T	5.0619E+01	6.5809E+01	7.1690E+01
RHO	8.6995E+00	4.0307E+01	5.0748E+01
H	1.2249E+02	2.1446E+02	2.5885E+02
A	6.6629E+00	8.2452E+00	8.9255E+00
S	1.3350E+00	1.3952E+00	1.4417E+00
Z	1.2397E+00	1.4459E+00	1.5419E+00
GAME	7.0748E-01	7.1444E-01	7.2070E-01
U	1.7012E+01	3.6754E+00	3.5169E+00

SPECIES	MOLE FRACTIONS		
E-	1.9333E-01	3.0841E-01	3.5143E-01
A	6.1335E-01	3.8325E-01	2.9738E-01
A+	1.9332E-01	3.0826E-01	3.5095E-01
A++	1.9580E-06	7.4380E-05	2.4280E-04
A+++	2.6291E-16	2.6008E-12	4.7211E-11
A++++	5.5273E-32	3.1850E-24	7.4552E-22
AV	3.8685E-53	1.9148E-40	1.2549E-36
AVI	3.6429E-80	2.4636E-61	1.0655E-55
AVII	0.	1.0819E-89	2.1322E-81
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.2309E+02	4.6815E+03	6.7853E+03
T	5.2464E+01	6.9482E+01	7.6360E+01
RHO	9.2378E+00	4.4435E+01	5.4877E+01
H	1.3888E+02	2.4503E+02	2.9474E+02
A	6.9102E+00	8.7011E+00	9.5005E+00
S	1.3629E+00	1.4322E+00	1.4821E+00
Z	1.2856E+00	1.5163E+00	1.6192E+00
GAME	7.0794E-01	7.1862E-01	7.2999E-01
U	1.8245E+01	3.7974E+00	3.6920E+00

SPECIES	MOLE FRACTIONS		
E-	2.2218E-01	3.4049E-01	3.8243E-01
A	5.5564E-01	3.1919E-01	2.3574E-01
A+	2.2218E-01	3.4016E-01	3.8124E-01
A++	3.9728E-06	1.6654E-04	5.9098E-04
A+++	1.3494E-15	1.8118E-11	4.0581E-10
A++++	1.1418E-30	1.1937E-22	3.9920E-20
AV	4.5586E-51	6.4529E-38	7.0469E-34
AVI	2.9369E-77	1.3477E-57	1.0833E-51
AVII	0.	3.9138E-84	1.1667E-75
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.6384E+02	5.1424E+03	7.4319E+03
T	5.3380E+01	7.1459E+01	7.9046E+01
RHO	9.4955E+00	4.6354E+01	5.6672E+01
H	1.4746E+02	2.6114E+02	3.1390E+02
A	7.0372E+00	8.9480E+00	9.8278E+00
S	1.3772E+00	1.4512E+00	1.5028E+00
Z	1.3097E+00	1.5525E+00	1.6590E+00
GAME	7.0837E-01	7.2173E-01	7.3652E-01
U	1.8868E+01	3.8697E+00	3.7974E+00

SPECIES	MOLE FRACTIONS		
E-	2.3645E-01	3.5586E-01	3.9723E-01
A	5.2710E-01	2.8853E-01	2.0650E-01
A+	2.3644E-01	3.5536E-01	3.9532E-01
A++	5.5454E-06	2.5021E-04	9.5088E-04
A+++	2.9272E-15	4.8336E-11	1.2855E-09
A++++	4.7849E-30	7.3565E-22	3.3404E-19
AV	4.3391E-50	1.1601E-36	2.0411E-32
AVI	6.6333E-76	8.9457E-56	1.4376E-49
AVII	0.	1.5241E-81	1.2356E-72
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.4812E+02	6.1014E+03	8.7985E+03
T	5.5204E+01	7.5724E+01	8.5263E+01
RHO	9.9679E+00	4.9577E+01	5.9389E+01
H	1.6537E+02	2.9440E+02	3.5394E+02
A	7.2976E+00	9.4820E+00	1.0552E+01
S	1.4067E+00	1.4893E+00	1.5442E+00
Z	1.3596E+00	1.6252E+00	1.7376E+00
GAME	7.0957E-01	7.3055E-01	7.5162E-01
U	2.0086E+01	4.0435E+00	4.0392E+00

SPECIES	MOLE FRACTIONS		
E-	2.6446E-01	3.8470E-01	4.2448E-01
A	4.7108E-01	2.3117E-01	1.5364E-01
A+	2.6444E-01	3.8356E-01	4.1926E-01
A++	1.0450E-05	5.7147E-04	2.6122E-03
A+++	1.2888E-14	3.5561E-10	1.5028E-08
A++++	7.6863E-29	2.9463E-20	3.0500E-17
AV	3.9931E-48	4.0918E-34	2.5643E-29
AVI	7.6018E-73	4.6031E-52	4.4886E-45
AVII	0.	3.1369E-76	3.0903E-66
AVIII	0.	0.	7.9525E-92

P1 = 2.00E+03 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.0525E+02	5.6104E+03	8.1000E+03
T	5.4291E+01	7.3515E+01	8.2004E+01
RHO	9.7357E+00	4.8040E+01	5.8146E+01
H	1.5628E+02	2.7750E+02	3.3369E+02
A	7.1661E+00	9.2057E+00	1.0181E+01
S	1.3918E+00	1.4701E+00	1.5237E+00
Z	1.3343E+00	1.5886E+00	1.6988E+00
GAME	7.0891E-01	7.2564E-01	7.4408E-01
U	1.9474E+01	3.9515E+00	3.9272E+00

SPECIES	MOLE FRACTIONS		
E-	2.5054E-01	3.7052E-01	4.1133E-01
A	4.9893E-01	2.5934E-01	1.7889E-01
A+	2.5052E-01	3.6976E-01	4.0821E-01
A++	7.6463E-06	3.7584E-04	1.5626E-03
A+++	6.1983E-15	1.2909E-10	4.2957E-09
A++++	1.9503E-29	4.5333E-21	3.0671E-18
AV	4.3018E-49	2.0925E-35	6.8150E-31
AVI	2.5694E-74	6.0566E-54	2.3403E-47
AVII	0.	6.3581E-79	1.7557E-69
AVIII	0.	0.	0.

P1 = 2.00E+03 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.9165E+02	6.5955E+03	9.5246E+03
T	5.6118E+01	7.8039E+01	8.8904E+01
RHO	1.0183E+01	5.0884E+01	6.0325E+01
H	1.7468E+02	3.1153E+02	3.7516E+02
A	7.4315E+00	9.7692E+00	1.0934E+01
S	1.4218E+00	1.5079E+00	1.5651E+00
Z	1.3854E+00	1.6609E+00	1.7759E+00
GAME	7.1036E-01	7.3631E-01	7.5724E-01
U	2.0682E+01	4.1459E+00	4.1994E+00

SPECIES	MOLE FRACTIONS		
E-	2.7817E-01	3.9793E-01	4.3691E-01
A	4.4367E-01	2.0502E-01	1.3064E-01
A+	2.7815E-01	3.9619E-01	4.2799E-01
A++	1.4155E-05	8.6998E-04	4.4616E-03
A+++	2.6269E-14	9.8384E-10	5.5703E-08
A++++	2.8994E-28	1.9198E-19	3.3569E-16
AV	3.3598E-47	7.9731E-33	1.1242E-27
AVI	1.7479E-71	3.4395E-50	1.0619E-42
AVII	0.	1.4726E-73	7.1562E-63
AVIII	0.	0.	2.5584E-87

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.3662E+02	7.1079E+03	1.0285E+04
T	5.7042E+01	8.0661E+01	9.2824E+01
RHO	1.0389E+01	5.1886E+01	6.1130E+01
H	1.8426E+02	3.2919E+02	3.9706E+02
A	7.5685E+00	1.0091E+01	1.1293E+01
S	1.4371E+00	1.5277E+00	1.5857E+00
Z	1.4118E+00	1.6984E+00	1.8125E+00
GAME	7.1129E-01	7.4327E-01	7.5810E-01
U	2.1283E+01	4.2640E+00	4.3565E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9169E-01	4.1120E-01	4.4827E-01
A	4.1664E-01	1.7898E-01	1.1103E-01
A+	2.9165E-01	4.0845E-01	4.3313E-01
A++	1.9061E-05	1.3729E-03	7.5695E-03
A+++	5.2821E-14	2.9710E-09	2.0530E-07
A++++	1.0580E-27	1.4604E-18	3.6650E-15
AV	2.6207E-46	1.9708E-31	4.8798E-26
AVI	3.4240E-70	3.6028E-48	2.4933E-40
AVII	0.	1.1068E-70	1.6616E-59
AVIII	0.	0.	8.5531E-83

P1 = 2.00E+03 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.3064E+02	8.1784E+03	1.1893E+04
T	5.8931E+01	8.6555E+01	1.0079E+02
RHO	1.0769E+01	5.3410E+01	6.2765E+01
H	2.0420E+02	3.6598E+02	4.4272E+02
A	7.8529E+00	1.0763E+01	1.1889E+01
S	1.4685E+00	1.5655E+00	1.6261E+00
Z	1.4664E+00	1.7691E+00	1.8800E+00
GAME	7.1362E-01	7.5650E-01	7.4592E-01
U	2.2494E+01	4.5420E+00	4.6586E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1806E-01	4.3474E-01	4.6807E-01
A	3.6391E-01	1.3403E-01	8.2877E-02
A+	3.1799E-01	4.2772E-01	4.3003E-01
A++	3.4129E-05	3.5110E-03	1.9021E-02
A+++	2.0821E-13	2.9251E-08	2.0903E-06
A++++	1.3342E-26	9.6360E-17	2.6270E-13
AV	1.4337E-44	1.4626E-28	4.1669E-23
AVI	1.0555E-67	5.1566E-44	4.3769E-36
AVII	0.	8.8631E-65	1.7235E-53
AVIII	0.	6.4499E-90	9.9508E-75

P1 = 2.00E+03 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.8276E+02	7.6316E+03	1.1070E+04
T	5.7977E+01	8.3443E+01	9.6856E+01
RHO	1.0582E+01	5.2751E+01	6.1872E+01
H	1.9409E+02	3.4726E+02	4.1953E+02
A	7.7087E+00	1.0419E+01	1.1611E+01
S	1.4527E+00	1.5464E+00	1.6062E+00
Z	1.4388E+00	1.7338E+00	1.8472E+00
GAME	7.1237E-01	7.5029E-01	7.5348E-01
U	2.1882E+01	4.3955E+00	4.5125E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0498E-01	4.2323E-01	4.5863E-01
A	3.9006E-01	1.5572E-01	9.5124E-02
A+	3.0493E-01	4.1889E-01	4.3385E-01
A++	2.5537E-05	2.1688E-03	1.2389E-02
A+++	1.0494E-13	9.0299E-09	7.0257E-07
A++++	3.7314E-27	1.1206E-17	3.5089E-14
AV	1.8490E-45	4.9142E-30	1.7231E-24
AVI	4.7540E-69	3.7932E-46	4.3234E-38
AVII	0.	8.2425E-68	2.4678E-56
AVIII	0.	0.	1.5223E-78

P1 = 2.00E+03 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.7925E+02	8.7240E+03	1.2712E+04
T	5.9901E+01	8.9852E+01	1.0445E+02
RHO	1.0939E+01	5.3866E+01	6.3681E+01
H	2.1455E+02	3.8495E+02	4.6585E+02
A	8.0008E+00	1.1092E+01	1.2143E+01
S	1.4844E+00	1.5841E+00	1.6455E+00
Z	1.4945E+00	1.8025E+00	1.9113E+00
GAME	7.1506E-01	7.5966E-01	7.3862E-01
U	2.3092E+01	4.6962E+00	4.7774E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3087E-01	4.4521E-01	4.7680E-01
A	3.3830E-01	1.1524E-01	7.3530E-02
A+	3.3078E-01	4.3390E-01	4.2255E-01
A++	4.5492E-05	5.6552E-03	2.7118E-02
A+++	4.1172E-13	9.4162E-08	5.2541E-06
A++++	4.7655E-26	8.1786E-16	1.4573E-12
AV	1.1268E-43	4.2488E-27	6.3261E-22
AVI	2.3960E-66	6.7255E-42	2.2724E-34
AVII	0.	8.8449E-62	4.6753E-51
AVIII	0.	6.7992E-86	1.8193E-71

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0290E+03	9.2809E+03	1.3558E+04
T	6.0896E+01	9.3320E+01	1.0792E+02
RHO	1.1094E+01	5.4215E+01	6.4662E+01
H	2.2514E+02	4.0436E+02	4.8981E+02
A	8.1532E+00	1.1394E+01	1.2395E+01
S	1.5006E+00	1.6027E+00	1.6650E+00
Z	1.5231E+00	1.8344E+00	1.9429E+00
GAME	7.1672E-01	7.5835E-01	7.3278E-01
U	2.3689E+01	4.8499E+00	4.9142E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.4343E-01	4.5487E-01	4.8530E-01
A	3.1321E-01	9.9252E-02	6.6001E-02
A+	3.4331E-01	4.3689E-01	4.1210E-01
A++	6.0592E-05	8.9865E-03	3.6582E-02
A+++	8.1279E-13	2.9598E-07	1.1682E-05
A++++	1.6812E-25	6.6571E-15	6.5201E-12
AV	8.3888E-43	1.1553E-25	6.9068E-21
AVI	4.4733E-65	7.9561E-40	7.4128E-33
AVII	0.	7.6177E-59	6.7065E-49
AVIII	0.	5.7883E-82	1.4807E-68

P1 = 2.00E+03 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0799E+03	9.8461E+03	1.4413E+04
T	6.1920E+01	9.6750E+01	1.1116E+02
RHO	1.1236E+01	5.4592E+01	6.5671E+01
H	2.3599E+02	4.2419E+02	5.1410E+02
A	8.3106E+00	1.1655E+01	1.2647E+01
S	1.5169E+00	1.6206E+00	1.6842E+00
Z	1.5521E+00	1.8641E+00	1.9744E+00
GAME	7.1864E-01	7.5312E-01	7.2873E-01
U	2.4283E+01	5.0060E+00	5.0375E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.5571E-01	4.6356E-01	4.9353E-01
A	2.8867E-01	8.6534E-02	5.9874E-02
A+	3.5555E-01	4.3625E-01	3.9970E-01
A++	8.0745E-05	1.3652E-02	4.6880E-02
A+++	1.6043E-12	8.4323E-07	2.3110E-05
A++++	5.8394E-25	4.5532E-14	2.3718E-11
AV	5.7956E-42	2.4006E-24	5.4710E-20
AVI	6.3888E-64	6.4200E-38	1.5261E-31
AVII	2.5324E-93	3.8512E-56	5.0064E-47
AVIII	0.	2.4752E-78	4.9460E-66

P1 = 2.00E+03 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1319E+03	1.0424E+04	1.5256E+04
T	6.2981E+01	1.0018E+02	1.1418E+02
RHO	1.1363E+01	5.4942E+01	6.6608E+01
H	2.4709E+02	4.4450E+02	5.3805E+02
A	8.4737E+00	1.1896E+01	1.2897E+01
S	1.5333E+00	1.6391E+00	1.7032E+00
Z	1.5815E+00	1.8938E+00	2.0060E+00
GAME	7.2086E-01	7.4592E-01	7.2621E-01
U	2.4875E+01	5.1505E+00	5.1078E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6771E-01	4.7197E-01	5.0150E-01
A	2.6469E-01	7.6043E-02	5.4714E-02
A+	3.6749E-01	4.3202E-01	3.8613E-01
A++	1.0791E-04	1.9969E-02	5.7623E-02
A+++	3.2054E-12	2.2169E-06	4.1523E-05
A++++	2.1166E-24	2.7069E-13	7.2656E-11
AV	4.6469E-41	4.0193E-23	3.3152E-19
AVI	1.5225E-62	3.8044E-36	2.1358E-30
AVII	1.0368E-91	1.2556E-53	2.1577E-45
AVIII	0.	5.8344E-75	7.9046E-64

P1 = 2.00E+03 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1849E+03	1.1014E+04	1.6120E+04
T	6.4087E+01	1.0340E+02	1.1698E+02
RHO	1.1474E+01	5.5410E+01	6.7659E+01
H	2.5844E+02	4.6529E+02	5.6293E+02
A	8.6434E+00	1.2121E+01	1.3141E+01
S	1.5499E+00	1.6571E+00	1.7212E+00
Z	1.6114E+00	1.9224E+00	2.0366E+00
GAME	7.2344E-01	7.3914E-01	7.2487E-01
U	2.5464E+01	5.2794E+00	5.2044E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.7941E-01	4.7982E-01	5.0899E-01
A	2.4132E-01	6.7887E-02	5.0439E-02
A+	3.7912E-01	4.2477E-01	3.7222E-01
A++	1.4480E-04	2.7520E-02	6.8280E-02
A+++	6.4665E-12	5.0973E-06	6.8461E-05
A++++	7.7304E-24	1.2699E-12	1.9093E-10
AV	3.6262E-40	4.6660E-22	1.5837E-18
AVI	3.0155E-61	1.3358E-34	2.1285E-29
AVII	7.3099E-90	1.9584E-51	5.7823E-44
AVIII	0.	5.1254E-72	6.7112E-62

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2391E+03	1.1614E+04	1.6984E+04
T	6.5247E+01	1.0644E+02	1.1982E+02
RHO	1.1569E+01	5.5930E+01	6.8479E+01
H	2.7035E+02	4.8655E+02	5.8820E+02
A	8.8207E+00	1.2343E+01	1.3403E+01
S	1.5665E+00	1.6750E+00	1.7406E+00
Z	1.6415E+00	1.9510E+00	2.0699E+00
GAME	7.2644E-01	7.3367E-01	7.2433E-01
U	2.6050E+01	5.3949E+00	5.2947E+00

SPECIES	MOLE FRACTIONS		
E-	3.9081E-01	4.8743E-01	5.1690E-01
A	2.1858E-01	6.1291E-02	4.6257E-02
A+	3.9042E-01	4.1514E-01	3.5691E-01
A++	1.9549E-04	3.6132E-02	7.9827E-02
A+++	1.3244E-11	1.0510E-05	1.1015E-04
A++++	2.8879E-23	4.9163E-12	4.8202E-10
AV	2.6988E-39	4.0285E-21	7.1236E-18
AVI	6.0420E-60	3.0772E-33	1.9493E-28
AVII	4.9547E-88	1.6935E-49	1.3753E-42
AVIII	0.	2.0631E-69	4.8585E-60

P1 = 2.00E+03 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3506E+03	1.2825E+04	1.8700E+04
T	6.7780E+01	1.1202E+02	1.2517E+02
RHO	1.1704E+01	5.6990E+01	6.9913E+01
H	2.9400E+02	5.3040E+02	6.4008E+02
A	9.2037E+00	1.2791E+01	1.3927E+01
S	1.6001E+00	1.7108E+00	1.7786E+00
Z	1.7024E+00	2.0090E+00	2.1370E+00
GAME	7.3409E-01	7.2700E-01	7.2513E-01
U	2.7212E+01	5.5959E+00	5.4707E+00

SPECIES	MOLE FRACTIONS		
E-	4.1261E-01	5.0223E-01	5.3205E-01
A	1.7515E-01	5.1114E-02	3.9056E-02
A+	4.1187E-01	3.9112E-01	3.2599E-01
A++	3.6651E-04	5.5504E-02	1.0266E-01
A+++	5.9826E-11	3.4464E-05	2.4801E-04
A++++	4.6417E-22	4.6588E-11	2.3968E-09
AV	2.3738E-37	1.4778E-19	9.7926E-17
AVI	3.7314E-57	5.9275E-31	9.3837E-27
AVII	5.1730E-84	3.0375E-46	3.5467E-40
AVIII	0.	4.9510E-65	8.9116E-57

P1 = 2.00E+03 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2944E+03	1.2224E+04	1.7853E+04
T	6.6461E+01	1.0931E+02	1.2252E+02
RHO	1.1651E+01	5.6469E+01	6.9281E+01
H	2.8190E+02	5.0826E+02	6.1393E+02
A	9.0049E+00	1.2566E+01	1.3663E+01
S	1.5830E+00	1.6928E+00	1.7596E+00
Z	1.6715E+00	1.9797E+00	2.1031E+00
GAME	7.2992E-01	7.2968E-01	7.2447E-01
U	2.6633E+01	5.5001E+00	5.3834E+00

SPECIES	MOLE FRACTIONS		
E-	4.0175E-01	4.9488E-01	5.2451E-01
A	1.9677E-01	5.5820E-02	4.2539E-02
A+	4.0122E-01	4.0375E-01	3.4155E-01
A++	2.6527E-04	4.5534E-02	9.1231E-02
A+++	2.7530E-11	1.9763E-05	1.6816E-04
A++++	1.1121E-22	1.6179E-11	1.1083E-09
AV	2.4609E-38	2.7056E-20	2.7705E-17
AVI	1.3676E-58	4.9501E-32	1.4486E-27
AVII	4.4473E-86	8.8233E-48	2.4317E-41
AVIII	0.	4.2061E-67	2.3631E-58

P1 = 2.00E+03 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4078E+03	1.3427E+04	1.9541E+04
T	6.9185E+01	1.1459E+02	1.2771E+02
RHO	1.1742E+01	5.7489E+01	7.0494E+01
H	3.0635E+02	5.5296E+02	6.6670E+02
A	9.4126E+00	1.3016E+01	1.4188E+01
S	1.6169E+00	1.7284E+00	1.7972E+00
Z	1.7330E+00	2.0383E+00	2.1705E+00
GAME	7.3895E-01	7.2537E-01	7.2617E-01
U	2.7788E+01	5.6855E+00	5.5581E+00

SPECIES	MOLE FRACTIONS		
E-	4.2296E-01	5.0939E-01	5.3928E-01
A	1.5459E-01	4.7053E-02	3.5888E-02
A+	4.2194E-01	3.7779E-01	3.1074E-01
A++	5.1165E-04	6.5711E-02	1.1374E-01
A+++	1.3332E-10	5.6208E-05	3.5278E-04
A++++	2.0126E-21	1.1912E-10	4.8572E-09
AV	2.3826E-36	6.7132E-19	3.1266E-16
AVI	1.0313E-55	5.4518E-30	5.2491E-26
AVII	5.5323E-82	7.2097E-45	4.1933E-39
AVIII	0.	3.5428E-63	2.5296E-55

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4660E+03	1.4016E+04	2.0362E+04
T	7.0711E+01	1.1712E+02	1.3033E+02
RHO	1.1757E+01	5.7836E+01	7.0801E+01
H	3.1895E+02	5.7589E+02	6.9375E+02
A	9.6358E+00	1.3251E+01	1.4465E+01
S	1.6337E+00	1.7468E+00	1.8170E+00
Z	1.7634E+00	2.0692E+00	2.2065E+00
GAME	7.4462E-01	7.2453E-01	7.2758E-01
U	2.8358E+01	5.7741E+00	5.6459E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3291E-01	5.1672E-01	5.4680E-01
A	1.3491E-01	4.3239E-02	3.2691E-02
A+	4.3146E-01	3.6344E-01	2.9472E-01
A++	7.2674E-04	7.6506E-02	1.2529E-01
A+++	3.1039E-10	8.8537E-05	4.9854E-04
A++++	9.4556E-21	2.8680E-10	9.7633E-09
AV	2.7237E-35	2.7801E-18	9.8752E-16
AVI	3.4784E-54	4.3949E-29	2.8945E-25
AVII	8.0370E-80	1.4208E-43	4.8638E-38
AVIII	0.	1.9781E-61	6.9875E-54

P1 = 2.00E+03 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5849E+03	1.5130E+04	2.1892E+04
T	7.4254E+01	1.2182E+02	1.3540E+02
RHO	1.1707E+01	5.8271E+01	7.0968E+01
H	3.4487E+02	6.2283E+02	7.4901E+02
A	1.0133E+01	1.3717E+01	1.5017E+01
S	1.6675E+00	1.7831E+00	1.8559E+00
Z	1.8232E+00	2.1313E+00	2.2784E+00
GAME	7.5839E-01	7.2463E-01	7.3104E-01
U	2.9480E+01	5.9332E+00	5.8234E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5150E-01	5.3081E-01	5.6109E-01
A	9.8563E-02	3.6689E-02	2.6945E-02
A+	4.4836E-01	3.3439E-01	2.6377E-01
A++	1.5719E-03	9.7919E-02	1.4727E-01
A+++	2.0018E-09	1.9227E-04	9.2567E-04
A++++	2.8530E-19	1.3092E-09	3.4598E-08
AV	5.8097E-33	3.2824E-17	8.0094E-15
AVI	8.1068E-51	1.6686E-27	6.5165E-24
AVII	4.9087E-75	2.5775E-41	4.2422E-36
AVIII	0.	2.2223E-58	2.9679E-51

P1 = 2.00E+03 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5251E+03	1.4591E+04	2.1153E+04
T	7.2384E+01	1.1951E+02	1.3288E+02
RHO	1.1748E+01	5.8138E+01	7.0997E+01
H	3.3179E+02	5.9922E+02	7.2121E+02
A	9.8746E+00	1.3483E+01	1.4740E+01
S	1.6505E+00	1.7649E+00	1.8364E+00
Z	1.7934E+00	2.1000E+00	2.2422E+00
GAME	7.5114E-01	7.2434E-01	7.2922E-01
U	2.8923E+01	5.8523E+00	5.7344E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4240E-01	5.2380E-01	5.5401E-01
A	1.1625E-01	3.9852E-02	2.9748E-02
A+	4.4030E-01	3.4902E-01	2.7916E-01
A++	1.0538E-03	8.7194E-02	1.3639E-01
A+++	7.6139E-10	1.3268E-04	6.8520E-04
A++++	4.8908E-20	6.3148E-10	1.8662E-08
AV	3.6459E-34	1.0014E-17	2.8808E-15
AVI	1.5051E-52	2.8981E-28	1.4223E-24
AVII	1.7730E-77	2.1049E-42	4.7765E-37
AVIII	0.	7.4954E-60	1.5415E-52

P1 = 2.00E+03 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6458E+03	1.5663E+04	2.2620E+04
T	7.6282E+01	1.2411E+02	1.3793E+02
RHO	1.1655E+01	5.8328E+01	7.0840E+01
H	3.5820E+02	6.4686E+02	7.7733E+02
A	1.0396E+01	1.3956E+01	1.5299E+01
S	1.6838E+00	1.8015E+00	1.8755E+00
Z	1.8511E+00	2.1636E+00	2.3150E+00
GAME	7.6541E-01	7.2532E-01	7.3301E-01
U	3.0035E+01	6.0101E+00	5.9142E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5979E-01	5.3780E-01	5.6804E-01
A	8.2798E-02	3.3705E-02	2.4295E-02
A+	4.5503E-01	3.1946E-01	2.4852E-01
A++	2.3780E-03	1.0876E-01	1.5791E-01
A+++	5.4664E-09	2.7242E-04	1.2346E-03
A++++	1.7852E-18	2.6114E-09	6.2807E-08
AV	1.0391E-31	1.0139E-16	2.1570E-14
AVI	5.2389E-49	8.8228E-27	2.8540E-23
AVII	1.8341E-72	2.7920E-40	3.5298E-35
AVIII	0.	5.5498E-57	5.2414E-50

TABLE I.- Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7073E+03	1.6159E+04	2.3311E+04
T	7.8540E+01	1.2634E+02	1.4051E+02
RHO	1.1575E+01	5.8237E+01	7.0511E+01
H	3.7177E+02	6.7118E+02	8.0659E+02
A	1.0664E+01	1.4196E+01	1.5589E+01
S	1.7002E+00	1.8201E+00	1.8957E+00
Z	1.8781E+00	2.1962E+00	2.3529E+00
GAME	7.7098E-01	7.2632E-01	7.3510E-01
U	3.0582E+01	6.0864E+00	6.0362E+00

SPECIES	MOLE FRACTIONS		
E-	4.6754E-01	5.4466E-01	5.7499E-01
A	6.8598E-02	3.0903E-02	2.1737E-02
A+	4.6017E-01	3.0459E-01	2.3320E-01
A++	3.6879E-03	1.1947E-01	1.6844E-01
A+++	1.5901E-08	3.7649E-04	1.6353E-03
A++++	1.2487E-17	4.9815E-09	1.1289E-07
AV	2.1937E-30	2.9206E-16	5.7266E-14
AVI	4.2168E-47	4.2197E-26	1.2253E-22
AVII	8.9200E-70	2.6262E-39	2.8558E-34
AVIII	0.	1.1534E-55	8.8973E-49

P1 = 2.00E+03 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9311E+03	1.7900E+04	2.5680E+04
T	8.7242E+01	1.3412E+02	1.4969E+02
RHO	1.1291E+01	5.7685E+01	6.9064E+01
H	4.2123E+02	7.5952E+02	9.1073E+02
A	1.1385E+01	1.5067E+01	1.6614E+01
S	1.7559E+00	1.8850E+00	1.9649E+00
Z	1.9603E+00	2.3137E+00	2.4840E+00
GAME	7.5787E-01	7.3155E-01	7.4233E-01
U	3.2487E+01	6.3678E+00	6.3579E+00

SPECIES	MOLE FRACTIONS		
E-	4.8983E-01	5.6779E-01	5.9743E-01
A	3.6142E-02	2.2368E-02	1.4269E-02
A+	4.5807E-01	2.5294E-01	1.8317E-01
A++	1.5902E-02	1.5587E-01	2.0114E-01
A+++	5.8865E-07	1.0331E-03	3.9939E-03
A++++	9.1500E-15	3.8861E-08	7.5791E-07
AV	6.9422E-26	8.6605E-15	1.3962E-12
AVI	1.3018E-40	6.4709E-24	1.4643E-20
AVII	1.3460E-60	3.5676E-36	2.7353E-31
AVIII	6.4383E-85	2.0334E-51	9.7530E-45

P1 = 2.00E+03 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7697E+03	1.6638E+04	2.3956E+04
T	8.0976E+01	1.2854E+02	1.4304E+02
RHO	1.1482E+01	5.8062E+01	7.0072E+01
H	3.8558E+02	6.9584E+02	8.3557E+02
A	1.0914E+01	1.4439E+01	1.5876E+01
S	1.7164E+00	1.8386E+00	1.9155E+00
Z	1.9034E+00	2.2292E+00	2.3901E+00
GAME	7.7285E-01	7.2758E-01	7.3719E-01
U	3.1125E+01	6.1635E+00	6.1239E+00

SPECIES	MOLE FRACTIONS		
E-	4.7462E-01	5.5142E-01	5.8160E-01
A	5.6519E-02	2.8263E-02	1.9397E-02
A+	4.6313E-01	2.8973E-01	2.1853E-01
A++	5.7630E-03	1.3007E-01	1.7834E-01
A+++	4.7399E-08	5.1075E-04	2.1293E-03
A++++	9.1489E-17	9.2007E-09	1.9677E-07
AV	5.0053E-29	7.9987E-16	1.4480E-13
AVI	3.8455E-45	1.8750E-25	4.8994E-22
AVII	5.3401E-67	2.2194E-38	2.0850E-33
AVIII	0.	2.0571E-54	1.3146E-47

P1 = 2.00E+03 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.1018E+03	1.9440E+04	2.7842E+04
T	9.2751E+01	1.4006E+02	1.5703E+02
RHO	1.1250E+01	5.7832E+01	6.8760E+01
H	4.5854E+02	8.2660E+02	9.9093E+02
A	1.1746E+01	1.5732E+01	1.7388E+01
S	1.7944E+00	1.9308E+00	2.0139E+00
Z	2.0143E+00	2.4000E+00	2.5785E+00
GAME	7.3851E-01	7.3632E-01	7.4669E-01
U	3.3688E+01	6.6014E+00	6.6222E+00

SPECIES	MOLE FRACTIONS		
E-	5.0354E-01	5.8333E-01	6.1218E-01
A	2.5879E-02	1.7396E-02	1.0170E-02
A+	4.3763E-01	2.1719E-01	1.5037E-01
A++	3.2949E-02	1.8011E-01	2.2004E-01
A+++	3.8320E-06	1.9773E-03	7.2388E-03
A++++	2.9174E-13	1.5204E-07	2.8270E-06
AV	1.6486E-23	8.4653E-14	1.3095E-11
AVI	3.5568E-37	1.9571E-22	4.2933E-19
AVII	9.9492E-56	4.7997E-34	3.5369E-29
AVIII	2.1460E-78	1.5424E-48	7.2026E-42

TABLE I. - Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2819E+03	2.1248E+04	3.0432E+04
T	9.7370E+01	1.4646E+02	1.6508E+02
RHO	1.1322E+01	5.8326E+01	6.8974E+01
H	4.9751E+02	8.9766E+02	1.0762E+03
A	1.2114E+01	1.6433E+01	1.8185E+01
S	1.8323E+00	1.9760E+00	2.0625E+00
Z	2.0700E+00	2.4873E+00	2.6727E+00
GAME	7.2804E-01	7.4126E-01	7.4955E-01
U	3.5321E+01	6.8652E+00	6.9146E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1690E-01	5.9796E-01	6.2584E-01
A	2.0210E-02	1.3201E-02	7.0198E-03
A+	4.0889E-01	1.8336E-01	1.2106E-01
A++	5.3981E-02	2.0185E-01	2.3347E-01
A+++	1.4587E-05	3.6315E-03	1.2599E-02
A++++	3.5970E-12	5.6466E-07	1.0070E-05
AV	9.0285E-22	7.7579E-13	1.1656E-10
AVI	1.2016E-34	5.4818E-21	1.1886E-17
AVII	3.9137E-52	5.8547E-32	4.2529E-27
AVIII	1.4492E-73	1.0583E-45	4.8713E-39

P1 = 2.00E+03 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6673E+03	2.5379E+04	3.6458E+04
T	1.0515E+02	1.6055E+02	1.8221E+02
RHO	1.1585E+01	5.9417E+01	7.0075E+01
H	5.8033E+02	1.0490E+03	1.2598E+03
A	1.2893E+01	1.7880E+01	1.9779E+01
S	1.9082E+00	2.0651E+00	2.1574E+00
Z	2.1895E+00	2.6604E+00	2.8554E+00
GAME	7.2196E-01	7.4850E-01	7.5196E-01
U	3.8230E+01	7.4627E+00	7.5457E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4328E-01	6.2412E-01	6.4978E-01
A	1.3773E-02	6.9688E-03	3.1817E-03
A+	3.4271E-01	1.2457E-01	7.5933E-02
A++	1.0015E-01	2.3348E-01	2.3955E-01
A+++	9.1644E-05	1.0853E-02	3.1459E-02
A++++	1.2521E-10	6.6098E-06	9.3811E-05
AV	2.7907E-19	5.2222E-11	5.8555E-09
AVI	5.3860E-31	3.2208E-18	4.8488E-15
AVII	6.5146E-47	5.8043E-28	2.5449E-23
AVIII	1.6018E-66	2.9021E-40	6.9155E-34

P1 = 2.00E+03 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4706E+03	2.3245E+04	3.3330E+04
T	1.0142E+02	1.5331E+02	1.7344E+02
RHO	1.1445E+01	5.8894E+01	6.9539E+01
H	5.3811E+02	9.7178E+02	1.1659E+03
A	1.2497E+01	1.7154E+01	1.8972E+01
S	1.8702E+00	2.0208E+00	2.1095E+00
Z	2.1284E+00	2.5745E+00	2.7634E+00
GAME	7.2343E-01	7.4556E-01	7.5096E-01
U	3.6772E+01	7.1551E+00	7.2235E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3017E-01	6.1157E-01	6.3813E-01
A	1.6512E-02	9.7277E-03	4.7802E-03
A+	3.7651E-01	1.5225E-01	9.6599E-02
A++	7.6769E-02	2.2003E-01	2.3997E-01
A+++	4.0253E-05	6.4147E-03	2.0486E-02
A++++	2.5130E-11	1.9926E-06	3.2121E-05
AV	2.0594E-20	6.6473E-12	8.8076E-10
AVI	1.1655E-32	1.4085E-19	2.6213E-16
AVII	2.6844E-49	6.3301E-30	3.7206E-25
AVIII	9.6024E-70	6.1845E-43	2.1611E-36

P1 = 2.00E+03 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8717E+03	2.7618E+04	3.9755E+04
T	1.0872E+02	1.6817E+02	1.9097E+02
RHO	1.1724E+01	5.9808E+01	7.0667E+01
H	6.2415E+02	1.1291E+03	1.3574E+03
A	1.3301E+01	1.8610E+01	2.0590E+01
S	1.9463E+00	2.1098E+00	2.2043E+00
Z	2.2530E+00	2.7459E+00	2.9458E+00
GAME	7.2231E-01	7.4998E-01	7.5359E-01
U	3.9691E+01	7.7820E+00	7.8675E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.5615E-01	6.3581E-01	6.6054E-01
A	1.1567E-02	4.8574E-03	2.1190E-03
A+	3.0861E-01	1.0043E-01	5.9481E-02
A++	1.2349E-01	2.4132E-01	2.3276E-01
A+++	1.8484E-04	1.7551E-02	4.4856E-02
A++++	5.0526E-10	2.0505E-05	2.3988E-04
AV	2.7336E-18	3.7277E-10	3.1630E-08
AVI	1.5636E-29	6.4628E-17	6.6530E-14
AVII	8.1520E-45	4.4236E-26	1.1411E-21
AVIII	1.0800E-63	1.0642E-37	1.2556E-31

TABLE I. - Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0834E+03	2.9935E+04	4.3181E+04
T	1.1223E+02	1.7579E+02	1.9976E+02
RHO	1.1850E+01	6.0222E+01	7.1184E+01
H	6.6956E+02	1.2120E+03	1.4586E+03
A	1.3724E+01	1.9316E+01	2.1420E+01
S	1.9847E+00	2.1529E+00	2.2507E+00
Z	2.3185E+00	2.8276E+00	3.0367E+00
GAME	7.2386E-01	7.5062E-01	7.5634E-01
U	4.1149E+01	8.1096E+00	8.1890E+00

SPECIES	MOLE FRACTIONS		
E-	5.6869E-01	6.4634E-01	6.7069E-01
A	9.6944E-03	3.3774E-03	1.4073E-03
A+	2.7488E-01	8.0812E-02	4.6295E-02
A++	1.4639E-01	2.4293E-01	2.2096E-01
A+++	3.4433E-04	2.6481E-02	6.0096E-02
A++++	1.7820E-09	5.6188E-05	5.4917E-04
AV	2.1870E-17	2.1914E-09	1.4383E-07
AVI	3.4332E-28	9.8062E-16	7.1259E-13
AVII	7.0391E-43	2.2663E-24	3.6058E-20
AVIII	4.6679E-61	2.2874E-35	1.4257E-29

P1 = 2.00E+03 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5284E+03	3.4743E+04	5.0289E+04
T	1.1938E+02	1.9120E+02	2.1758E+02
RHO	1.2042E+01	6.0753E+01	7.1743E+01
H	7.6513E+02	1.3865E+03	1.6715E+03
A	1.4620E+01	2.0751E+01	2.3151E+01
S	2.0620E+00	2.2391E+00	2.3427E+00
Z	2.4543E+00	2.9910E+00	3.2217E+00
GAME	7.2949E-01	7.5297E-01	7.6461E-01
U	4.4051E+01	8.7450E+00	8.8386E+00

SPECIES	MOLE FRACTIONS		
E-	5.9256E-01	6.6567E-01	6.8961E-01
A	6.5980E-03	1.6010E-03	6.0750E-04
A+	2.1016E-01	5.1374E-02	2.7236E-02
A++	1.8964E-01	2.3009E-01	1.8750E-01
A+++	1.0367E-03	5.0953E-02	9.2833E-02
A++++	1.7622E-08	3.1471E-04	2.2173E-03
AV	9.9269E-16	4.8123E-08	1.9869E-06
AVI	1.0153E-25	1.1793E-13	4.5813E-11
AVII	2.5842E-39	2.3709E-21	1.5908E-17
AVIII	3.2237E-56	3.0745E-31	6.1415E-26

P1 = 2.00E+03 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3024E+03	3.2325E+04	4.6702E+04
T	1.1576E+02	1.8348E+02	2.0861E+02
RHO	1.1958E+01	6.0564E+01	7.1557E+01
H	7.1655E+02	1.2979E+03	1.5633E+03
A	1.4163E+01	2.0026E+01	2.2274E+01
S	2.0232E+00	2.1959E+00	2.2968E+00
Z	2.3858E+00	2.9089E+00	3.1286E+00
GAME	7.2631E-01	7.5140E-01	7.6015E-01
U	4.2603E+01	8.4217E+00	8.5116E+00

SPECIES	MOLE FRACTIONS		
E-	5.8085E-01	6.5623E-01	6.8037E-01
A	8.0549E-03	2.3327E-03	9.2904E-04
A+	2.4195E-01	6.4650E-02	3.5713E-02
A++	1.6854E-01	2.3893E-01	2.0547E-01
A+++	6.0815E-04	3.7720E-02	7.6377E-02
A++++	5.7558E-09	1.3930E-04	1.1464E-03
AV	1.5302E-16	1.1038E-08	5.6682E-07
AVI	6.2039E-27	1.1928E-14	6.2139E-12
AVII	4.5409E-41	8.4897E-23	8.5250E-19
AVIII	1.3129E-58	3.2308E-33	1.0969E-27

P1 = 2.00E+03 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7613E+03	3.7197E+04	5.3914E+04
T	1.2317E+02	1.9884E+02	2.2662E+02
RHO	1.2100E+01	6.0878E+01	7.1762E+01
H	8.1528E+02	1.4778E+03	1.7833E+03
A	1.5097E+01	2.1485E+01	2.4038E+01
S	2.1007E+00	2.2816E+00	2.3879E+00
Z	2.5238E+00	3.0729E+00	3.3151E+00
GAME	7.3323E-01	7.5550E-01	7.6911E-01
U	4.5492E+01	9.0474E+00	9.1737E+00

SPECIES	MOLE FRACTIONS		
E-	6.0377E-01	6.7457E-01	6.9835E-01
A	5.3011E-03	1.1010E-03	3.9436E-04
A+	1.7982E-01	4.0713E-02	2.0560E-02
A++	2.0938E-01	2.1762E-01	1.6830E-01
A+++	1.7267E-03	6.5346E-02	1.0839E-01
A++++	5.2345E-08	6.4647E-04	3.9989E-03
AV	6.1834E-15	1.8054E-07	6.2493E-06
AVI	1.5725E-24	9.3752E-13	2.8882E-10
AVII	1.3547E-37	4.8623E-20	2.3795E-16
AVIII	7.0129E-54	1.9320E-29	2.5518E-24

TABLE I. - Continued

$p_1 = 2\ kN/m^2$

P1 = 2.00E+03 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0009E+03	3.9626E+04	5.7616E+04
T	1.2717E+02	2.0650E+02	2.3623E+02
RHO	1.2131E+01	6.0802E+01	7.1438E+01
H	8.6699E+02	1.5717E+03	1.9009E+03
A	1.5594E+01	2.2239E+01	2.4971E+01
S	2.1396E+00	2.3242E+00	2.4354E+00
Z	2.5934E+00	3.1561E+00	3.4142E+00
GAME	7.3729E-01	7.5885E-01	7.7313E-01
U	4.6924E+01	9.3735E+00	9.5891E+00

SPECIES	MOLE FRACTIONS		
E-	6.1441E-01	6.8315E-01	7.0710E-01
A	4.1577E-03	7.5150E-04	2.4729E-04
A+	1.5129E-01	3.1988E-02	1.5089E-02
A++	2.2731E-01	2.0241E-01	1.4767E-01
A+++	2.8343E-03	8.0462E-02	1.2289E-01
A++++	1.5347E-07	1.2371E-03	6.9731E-03
AV	3.8051E-14	6.0674E-07	1.8881E-05
AVI	2.4072E-23	6.3603E-12	1.7337E-09
AVII	6.9812E-36	7.9659E-19	3.3363E-15
AVIII	1.4884E-51	8.9728E-28	9.7479E-23

P1 = 2.00E+03 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4999E+03	4.4422E+04	6.4847E+04
T	1.3604E+02	2.2212E+02	2.5487E+02
RHO	1.2115E+01	6.0118E+01	7.0578E+01
H	9.7513E+02	1.7670E+03	2.1423E+03
A	1.6628E+01	2.3801E+01	2.6719E+01
S	2.2168E+00	2.4097E+00	2.5255E+00
Z	2.7304E+00	3.3266E+00	3.6049E+00
GAME	7.4434E-01	7.6667E-01	7.7698E-01
U	4.9762E+01	1.0029E+01	1.0300E+01

SPECIES	MOLE FRACTIONS		
E-	6.3376E-01	6.9939E-01	7.2260E-01
A	2.3513E-03	3.3888E-04	9.9932E-05
A+	1.0141E-01	1.9093E-02	8.1298E-03
A++	2.5509E-01	1.6708E-01	1.1030E-01
A+++	7.3896E-03	1.1026E-01	1.4172E-01
A++++	1.3027E-06	3.8303E-03	1.7027E-02
AV	1.4540E-12	5.3124E-06	1.2014E-04
AVI	5.8384E-21	2.0359E-10	3.6462E-08
AVII	1.9508E-32	1.2816E-16	3.0467E-13
AVIII	7.1940E-47	9.7255E-25	5.0345E-20

P1 = 2.00E+03 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2471E+03	4.2040E+04	6.1256E+04
T	1.3145E+02	2.1413E+02	2.4555E+02
RHO	1.2134E+01	6.0617E+01	7.1086E+01
H	9.2028E+02	1.6681E+03	2.0204E+03
A	1.6107E+01	2.2999E+01	2.5855E+01
S	2.1783E+00	2.3659E+00	2.4804E+00
Z	2.6626E+00	3.2389E+00	3.5093E+00
GAME	7.4123E-01	7.6265E-01	7.7576E-01
U	4.8348E+01	9.6951E+00	9.9573E+00

SPECIES	MOLE FRACTIONS		
E-	6.2442E-01	6.9126E-01	7.1505E-01
A	3.1718E-03	5.1207E-04	1.5736E-04
A+	1.2499E-01	2.4998E-02	1.1115E-02
A++	2.4281E-01	1.8565E-01	1.2842E-01
A+++	4.6028E-03	9.5370E-02	1.3401E-01
A++++	4.4826E-07	2.2091E-03	1.1205E-02
AV	2.3496E-13	1.8284E-06	4.9785E-05
AVI	3.7279E-22	3.6819E-11	8.4344E-09
AVII	3.6566E-34	1.0422E-17	3.4947E-14
AVIII	3.2251E-49	3.0773E-26	2.5076E-21

P1 = 2.00E+03 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7594E+03	4.6794E+04	6.8468E+04
T	1.4090E+02	2.2991E+02	2.6416E+02
RHO	1.2080E+01	5.9679E+01	7.0028E+01
H	1.0315E+03	1.8685E+03	2.2683E+03
A	1.7143E+01	2.4573E+01	2.7563E+01
S	2.2552E+00	2.4509E+00	2.5705E+00
Z	2.7964E+00	3.4104E+00	3.7012E+00
GAME	7.4585E-01	7.7011E-01	7.7702E-01
U	5.1171E+01	1.0369E+01	1.0670E+01

SPECIES	MOLE FRACTIONS		
E-	6.4240E-01	7.0678E-01	7.2982E-01
A	1.7004E-03	2.2712E-04	6.3679E-05
A+	8.1060E-02	1.4633E-02	5.9255E-03
A++	2.6320E-01	1.4913E-01	9.3735E-02
A+++	1.1639E-02	1.2304E-01	1.4568E-01
A++++	3.7089E-06	6.1773E-03	2.4513E-02
AV	8.7934E-12	1.3698E-05	2.6594E-04
AVI	8.9135E-20	9.4251E-10	1.3802E-07
AVII	1.0068E-30	1.2241E-15	2.2215E-12
AVIII	1.5451E-44	2.1845E-23	7.9459E-19

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4638E+01	2.6321E+02
T	1.2892E+01	1.6278E+01	2.8875E+01
RHO	3.7155E+00	5.1997E+00	9.1044E+00
H	1.2892E+01	1.6278E+01	2.9204E+01
A	3.5905E+00	4.0344E+00	5.2146E+00
S	1.1166E+00	1.1172E+00	1.1324E+00
Z	1.0000E+00	1.0000E+00	1.0012E+00
GAME	1.0000E+00	9.9995E-01	9.4059E-01
U	4.5391E+00	3.2320E+00	3.1210E+00

SPECIES	MOLE FRACTIONS		
E-	2.0843E-09	2.9201E-07	1.2011E-03
A	1.0000E+00	1.0000E+00	9.9760E-01
A+	2.0843E-09	2.9201E-07	1.2011E-03
A++	7.2339E-34	3.9076E-27	4.4063E-14
A+++	3.7188E-74	8.3352E-59	1.0229E-32
A++++	0.	0.	8.6399E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9070E+01	1.2742E+02	3.7566E+02
T	1.8180E+01	2.3356E+01	3.6733E+01
RHO	3.7992E+00	5.4550E+00	1.0095E+01
H	1.8181E+01	2.3386E+01	4.0413E+01
A	4.2630E+00	4.8097E+00	5.4646E+00
S	1.1394E+00	1.1402E+00	1.1552E+00
Z	1.0000E+00	1.0001E+00	1.0130E+00
GAME	9.9960E-01	9.9032E-01	8.0250E-01
U	5.4901E+00	3.6115E+00	3.3292E+00

SPECIES	MOLE FRACTIONS		
E-	2.6472E-06	1.0950E-04	1.2833E-02
A	9.9999E-01	9.9978E-01	9.7433E-01
A+	2.6472E-06	1.0950E-04	1.2833E-02
A++	1.4802E-23	8.0970E-18	1.6261E-10
A+++	1.0707E-52	4.7565E-41	5.7532E-25
A++++	0.	8.7267E-77	1.6066E-47
AV	0.	0.	1.8017E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0490E+02	3.1897E+02
T	1.5416E+01	1.9659E+01	3.3299E+01
RHO	3.7624E+00	5.3359E+00	9.5286E+00
H	1.5416E+01	1.9661E+01	3.4776E+01
A	3.9263E+00	4.4314E+00	5.3650E+00
S	1.1284E+00	1.1291E+00	1.1442E+00
Z	1.0000E+00	1.0000E+00	1.0053E+00
GAME	9.9998E-01	9.9893E-01	8.5987E-01
U	5.0154E+00	3.5243E+00	3.2824E+00

SPECIES	MOLE FRACTIONS		
E-	1.1655E-07	8.3660E-06	5.2762E-03
A	1.0000E+00	9.9998E-01	9.8945E-01
A+	1.1655E-07	8.3660E-06	5.2762E-03
A++	3.4684E-28	1.1669E-21	7.2877E-12
A+++	1.3257E-63	2.9101E-49	6.5090E-28
A++++	0.	0.	4.6418E-53
AV	0.	0.	4.5820E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1084E+01	1.5403E+02	4.3437E+02
T	2.1176E+01	2.7357E+01	3.9481E+01
RHO	3.8289E+00	5.6256E+00	1.0749E+01
H	2.1184E+01	2.7579E+01	4.6242E+01
A	4.5938E+00	5.1082E+00	5.5774E+00
S	1.1497E+00	1.1506E+00	1.1660E+00
Z	1.0000E+00	1.0008E+00	1.0236E+00
GAME	9.9653E-01	9.5304E-01	7.6977E-01
U	5.9622E+00	4.0451E+00	3.3231E+00

SPECIES	MOLE FRACTIONS		
E-	3.1722E-05	8.1749E-04	2.3016E-02
A	9.9994E-01	9.9837E-01	9.5397E-01
A+	3.1722E-05	8.1749E-04	2.3016E-02
A++	9.1541E-20	6.3077E-15	1.2954E-09
A+++	3.0866E-45	1.8806E-34	5.3731E-23
A++++	0.	1.4244E-65	6.7009E-44
AV	0.	0.	9.4515E-72
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4190E+01	1.9071E+02	4.9780E+02
T	2.4379E+01	3.1561E+01	4.1822E+01
RHO	3.8627E+00	6.0194E+00	1.1485E+01
H	2.4441E+01	3.2631E+01	5.2403E+01
A	4.8925E+00	5.2694E+00	5.7037E+00
S	1.1593E+00	1.1605E+00	1.1770E+00
Z	1.0002E+00	1.0039E+00	1.0364E+00
GAME	9.8163E-01	8.7639E-01	7.5056E-01
U	6.4424E+00	4.1151E+00	3.2891E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.3226E-04	3.8607E-03	3.5128E-02
A	9.9954E-01	9.9228E-01	9.2974E-01
A+	2.3226E-04	3.8607E-03	3.5128E-02
A++	8.4784E-17	1.8009E-12	6.0156E-09
A+++	7.5930E-39	2.3493E-29	1.5760E-21
A++++	2.2819E-73	8.3858E-56	3.3967E-41
AV	0.	0.	1.8821E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2447E+02	3.0230E+02	6.6007E+02
T	3.0789E+01	3.8636E+01	4.5974E+01
RHO	4.0279E+00	7.6465E+00	1.3436E+01
H	3.1794E+01	4.5260E+01	6.6389E+01
A	5.2063E+00	5.5091E+00	5.9901E+00
S	1.1772E+00	1.1802E+00	1.2001E+00
Z	1.0037E+00	1.0232E+00	1.0685E+00
GAME	8.7715E-01	7.6771E-01	7.3040E-01
U	7.4687E+00	3.9220E+00	3.2137E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6384E-03	2.2694E-02	6.4145E-02
A	9.9272E-01	9.5461E-01	8.7171E-01
A+	3.6384E-03	2.2694E-02	6.4145E-02
A++	1.1005E-12	9.7127E-10	5.9024E-08
A+++	5.8363E-30	2.3027E-23	2.5387E-19
A++++	6.1522E-58	1.1001E-44	4.1163E-37
AV	0.	4.1975E-73	6.0356E-61
AVI	0.	0.	5.6725E-91
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0852E+02	2.3927E+02	5.7301E+02
T	2.7661E+01	3.5368E+01	4.3935E+01
RHO	3.9187E+00	6.6898E+00	1.2341E+01
H	2.7965E+01	3.8536E+01	5.9030E+01
A	5.1021E+00	5.3747E+00	5.8405E+00
S	1.1684E+00	1.1703E+00	1.1883E+00
Z	1.0011E+00	1.0113E+00	1.0513E+00
GAME	9.4003E-01	8.0767E-01	7.3850E-01
U	6.9372E+00	4.0513E+00	3.2485E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.1157E-03	1.1153E-02	4.8812E-02
A	9.9777E-01	9.7769E-01	9.0238E-01
A+	1.1157E-03	1.1153E-02	4.8812E-02
A++	1.8535E-14	7.4926E-11	2.0534E-08
A+++	7.3906E-34	8.2109E-26	2.3955E-20
A++++	7.8135E-64	3.3504E-49	5.2094E-39
AV	0.	2.9706E-80	5.8631E-64
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4230E+02	3.8106E+02	7.7567E+02
T	3.3555E+01	4.1473E+01	4.8010E+01
RHO	4.2046E+00	8.8456E+00	1.4847E+01
H	3.5949E+01	5.2684E+01	7.4632E+01
A	5.2712E+00	5.6699E+00	6.1533E+00
S	1.1858E+00	1.1906E+00	1.2123E+00
Z	1.0086E+00	1.0387E+00	1.0882E+00
GAME	8.2099E-01	7.4625E-01	7.2473E-01
U	8.0445E+00	3.8093E+00	3.1907E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.5254E-03	3.7282E-02	8.1049E-02
A	9.8295E-01	9.2544E-01	8.3790E-01
A+	8.5254E-03	3.7282E-02	8.1048E-02
A++	2.1397E-11	6.1948E-09	1.5148E-07
A+++	4.0771E-27	1.4196E-21	2.1377E-18
A++++	1.0258E-51	2.3185E-41	2.1820E-35
AV	2.5717E-84	8.5165E-68	3.5868E-58
AVI	0.	0.	2.9138E-87
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6197E+02	4.7663E+02	9.1961E+02
T	3.5925E+01	4.4012E+01	5.0045E+01
RHO	4.4377E+00	1.0246E+01	1.6554E+01
H	4.0417E+01	6.0726E+01	8.3739E+01
A	5.3461E+00	5.8437E+00	6.3271E+00
S	1.1946E+00	1.2015E+00	1.2251E+00
Z	1.0160E+00	1.0569E+00	1.1100E+00
GAME	7.8307E-01	7.3412E-01	7.2064E-01
U	8.6552E+00	3.7397E+00	3.1803E+00

SPECIES	MOLE FRACTIONS		
E-	1.5724E-02	5.3847E-02	9.9135E-02
A	9.6855E-01	8.9231E-01	8.0173E-01
A+	1.5724E-02	5.3847E-02	9.9134E-02
A++	1.8466E-10	2.5749E-08	3.5362E-07
A+++	4.4736E-25	3.4885E-20	1.4803E-17
A++++	5.7557E-48	9.1143E-39	8.0894E-34
AV	2.2277E-78	1.2946E-63	1.1635E-55
AVI	0.	0.	1.1822E-83
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0613E+02	7.2623E+02	1.2909E+03
T	3.9768E+01	4.8573E+01	5.4042E+01
RHO	5.0009E+00	1.3599E+01	2.0617E+01
H	5.0206E+01	7.8635E+01	1.0413E+02
A	5.5388E+00	6.2090E+00	6.6921E+00
S	1.2130E+00	1.2252E+00	1.2526E+00
Z	1.0365E+00	1.0994E+00	1.1587E+00
GAME	7.4427E-01	7.2190E-01	7.1520E-01
U	9.9269E+00	3.6409E+00	3.1843E+00

SPECIES	MOLE FRACTIONS		
E-	3.5190E-02	9.0426E-02	1.3694E-01
A	9.2962E-01	8.1915E-01	7.2612E-01
A+	3.5190E-02	9.0426E-02	1.3694E-01
A++	3.3880E-09	2.1621E-07	1.5074E-06
A+++	2.6665E-22	4.4276E-18	4.2260E-16
A++++	7.5449E-43	7.7788E-35	4.3962E-31
AV	3.0769E-70	2.5526E-57	3.1872E-51
AVI	0.	4.8369E-86	6.7588E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8330E+02	5.9228E+02	1.0915E+03
T	3.7968E+01	4.6371E+01	5.2057E+01
RHO	4.7081E+00	1.1855E+01	1.8496E+01
H	4.5176E+01	6.9422E+01	9.3593E+01
A	5.4372E+00	6.0254E+00	6.5075E+00
S	1.2037E+00	1.2130E+00	1.2385E+00
Z	1.0254E+00	1.0774E+00	1.1336E+00
GAME	7.5934E-01	7.2671E-01	7.1759E-01
U	9.2861E+00	3.6735E+00	3.1779E+00

SPECIES	MOLE FRACTIONS		
E-	2.4767E-02	7.1797E-02	1.1789E-01
A	9.5047E-01	8.5641E-01	7.6423E-01
A+	2.4767E-02	7.1797E-02	1.1788E-01
A++	9.3886E-10	8.2176E-08	7.5737E-07
A+++	1.5572E-23	4.8462E-19	8.5396E-17
A++++	3.7113E-45	1.2343E-36	2.1450E-32
AV	5.0721E-74	3.2517E-60	2.2457E-53
AVI	0.	2.4800E-90	2.8871E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.3037E+02	8.8034E+02	1.5176E+03
T	4.1389E+01	5.0669E+01	5.5998E+01
RHO	5.3064E+00	1.5473E+01	2.2873E+01
H	5.5499E+01	8.8383E+01	1.1528E+02
A	5.6464E+00	6.3939E+00	6.8793E+00
S	1.2227E+00	1.2380E+00	1.2672E+00
Z	1.0489E+00	1.1229E+00	1.1849E+00
GAME	7.3436E-01	7.1855E-01	7.1327E-01
U	1.0571E+01	3.6189E+00	3.1973E+00

SPECIES	MOLE FRACTIONS		
E-	4.6641E-02	1.0944E-01	1.5601E-01
A	9.0672E-01	7.8112E-01	6.8798E-01
A+	4.6641E-02	1.0944E-01	1.5601E-01
A++	9.6764E-09	4.9721E-07	2.8188E-06
A+++	2.7208E-21	3.0166E-17	1.8175E-15
A++++	5.4888E-41	2.8579E-33	6.7373E-30
AV	2.7760E-67	8.6533E-55	2.5096E-49
AVI	0.	3.0903E-82	3.9193E-74
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5594E+02	1.0566E+03	1.7715E+03
T	4.2875E+01	5.2692E+01	5.7932E+01
RHO	5.6181E+00	1.7473E+01	2.5230E+01
H	6.1047E+01	9.8676E+01	1.2702E+02
A	5.7573E+00	6.5802E+00	7.0688E+00
S	1.2328E+00	1.2514E+00	1.2825E+00
Z	1.0625E+00	1.1476E+00	1.2120E+00
GAME	7.2760E-01	7.1605E-01	7.1165E-01
U	1.1216E+01	3.5920E+00	3.2158E+00

SPECIES	MOLE FRACTIONS		
E-	5.8865E-02	1.2861E-01	1.7492E-01
A	8.8227E-01	7.4278E-01	6.5017E-01
A+	5.8865E-02	1.2861E-01	1.7491E-01
A++	2.3460E-08	1.0360E-06	5.0083E-06
A+++	1.9512E-20	1.6582E-16	6.9995E-15
A++++	2.1064E-39	7.0866E-32	8.4776E-29
AV	9.4008E-65	1.5814E-52	1.4837E-47
AVI	0.	7.5569E-79	1.6107E-71
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.1094E+02	1.4689E+03	2.3597E+03
T	4.5561E+01	5.6544E+01	6.1747E+01
RHO	6.2451E+00	2.1655E+01	3.0131E+01
H	7.2902E+01	1.2066E+02	1.5205E+02
A	5.9849E+00	6.9521E+00	7.4526E+00
S	1.2541E+00	1.2801E+00	1.3144E+00
Z	1.0928E+00	1.1996E+00	1.2683E+00
GAME	7.1941E-01	7.1252E-01	7.0922E-01
U	1.2499E+01	3.5980E+00	3.2490E+00

SPECIES	MOLE FRACTIONS		
E-	8.4931E-02	1.6641E-01	2.1155E-01
A	8.3014E-01	6.6718E-01	5.7692E-01
A+	8.4931E-02	1.6641E-01	2.1152E-01
A++	9.9006E-08	3.5949E-06	1.3979E-05
A+++	4.8578E-19	3.0327E-15	7.9039E-14
A++++	7.6480E-37	1.6532E-29	8.0096E-27
AV	8.2572E-61	9.9884E-49	2.2275E-44
AVI	1.4744E-90	2.7771E-73	7.5460E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8281E+02	1.2520E+03	2.0529E+03
T	4.4258E+01	5.4631E+01	5.9851E+01
RHO	5.9320E+00	1.9538E+01	2.7662E+01
H	6.6849E+01	1.0942E+02	1.3933E+02
A	5.8704E+00	6.7647E+00	7.2605E+00
S	1.2433E+00	1.2653E+00	1.2983E+00
Z	1.0772E+00	1.1730E+00	1.2400E+00
GAME	7.2284E-01	7.1412E-01	7.1030E-01
U	1.1859E+01	3.5918E+00	3.2395E+00

SPECIES	MOLE FRACTIONS		
E-	7.1676E-02	1.4747E-01	1.9353E-01
A	8.5665E-01	7.0506E-01	6.1295E-01
A+	7.1676E-02	1.4747E-01	1.9351E-01
A++	5.0434E-08	1.9814E-06	8.5337E-06
A+++	1.0747E-19	7.5177E-16	2.4565E-14
A++++	4.8646E-38	1.2069E-30	8.9224E-28
AV	1.3268E-62	1.4938E-50	6.4832E-46
AVI	0.	5.8850E-76	4.0667E-69
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4032E+02	1.7099E+03	2.6975E+03
T	4.6800E+01	5.8423E+01	6.3674E+01
RHO	6.5554E+00	2.3854E+01	3.2644E+01
H	7.9207E+01	1.3242E+02	1.6551E+02
A	6.1006E+00	7.1399E+00	7.6509E+00
S	1.2653E+00	1.2952E+00	1.3313E+00
Z	1.1093E+00	1.2269E+00	1.2977E+00
GAME	7.1688E-01	7.1121E-01	7.0839E-01
U	1.3136E+01	3.5942E+00	3.2867E+00

SPECIES	MOLE FRACTIONS		
E-	9.8518E-02	1.8493E-01	2.2943E-01
A	8.0296E-01	6.3014E-01	5.4115E-01
A+	9.8518E-02	1.8492E-01	2.2939E-01
A++	1.8120E-07	6.2014E-06	2.2449E-05
A+++	1.9124E-18	1.0961E-14	2.4343E-13
A++++	1.0312E-35	1.8579E-28	6.5911E-26
AV	7.1717E-59	4.9884E-47	6.5724E-43
AVI	2.4499E-88	9.1732E-71	1.0861E-64
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7094E+02	1.9697E+03	3.0634E+03
T	4.7988E+01	6.0270E+01	6.5618E+01
RHO	6.8614E+00	2.6047E+01	3.5161E+01
H	8.5764E+01	1.4461E+02	1.7951E+02
A	6.2173E+00	7.3281E+00	7.8533E+00
S	1.2768E+00	1.3108E+00	1.3486E+00
Z	1.1266E+00	1.2547E+00	1.3277E+00
GAME	7.1501E-01	7.1013E-01	7.0789E-01
U	1.3771E+01	3.6193E+00	3.3261E+00

SPECIES	MOLE FRACTIONS		
E-	1.1235E-01	2.0300E-01	2.4685E-01
A	7.7530E-01	5.9401E-01	5.0634E-01
A+	1.1235E-01	2.0298E-01	2.4678E-01
A++	3.1316E-07	1.0260E-05	3.5264E-05
A+++	6.5509E-18	3.5971E-14	7.1399E-13
A++++	9.7604E-35	1.7186E-27	4.9386E-25
AV	2.2237E-57	1.7494E-45	1.6628E-41
AVI	1.6662E-86	1.6200E-68	1.2397E-62
AVII	0.	0.	4.1896E-91
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3611E+02	2.5570E+03	3.8880E+03
T	5.0251E+01	6.3958E+01	6.9644E+01
RHO	7.4594E+00	3.0468E+01	4.0170E+01
H	9.9644E+01	1.7049E+02	2.0935E+02
A	6.4544E+00	7.7124E+00	8.2791E+00
S	1.3009E+00	1.3435E+00	1.3846E+00
Z	1.1634E+00	1.3122E+00	1.3898E+00
GAME	7.1256E-01	7.0873E-01	7.0817E-01
U	1.5040E+01	3.6966E+00	3.4215E+00

SPECIES	MOLE FRACTIONS		
E-	1.4048E-01	2.3792E-01	2.8045E-01
A	7.1904E-01	5.2418E-01	4.3918E-01
A+	1.4048E-01	2.3787E-01	2.8028E-01
A++	8.2312E-07	2.5821E-05	8.3679E-05
A+++	5.8999E-17	3.2214E-13	5.6464E-12
A++++	5.8007E-33	1.0506E-25	2.3523E-23
AV	1.5230E-54	1.3105E-42	8.1371E-39
AVI	2.2216E-82	2.8010E-64	1.0919E-58
AVII	0.	3.4012E-94	2.0401E-85
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0308E+02	2.2576E+03	3.4644E+03
T	4.9139E+01	6.2133E+01	6.7618E+01
RHO	7.1662E+00	2.8313E+01	3.7711E+01
H	9.2588E+01	1.5742E+02	1.9422E+02
A	6.3355E+00	7.5205E+00	8.0636E+00
S	1.2887E+00	1.3270E+00	1.3664E+00
Z	1.1447E+00	1.2834E+00	1.3586E+00
GAME	7.1360E-01	7.0929E-01	7.0778E-01
U	1.4413E+01	3.6395E+00	3.3711E+00

SPECIES	MOLE FRACTIONS		
E-	1.2638E-01	2.2080E-01	2.6396E-01
A	7.4724E-01	5.5841E-01	4.7214E-01
A+	1.2638E-01	2.2077E-01	2.6385E-01
A++	5.1799E-07	1.6548E-05	5.4758E-05
A+++	2.0656E-17	1.1193E-13	2.0443E-12
A++++	8.5425E-34	1.4545E-26	3.5302E-24
AV	8.2792E-56	5.5243E-44	3.8955E-40
AVI	7.4062E-84	2.7339E-66	1.2646E-60
AVII	0.	0.	3.2751E-88
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7035E+02	2.8854E+03	4.3410E+03
T	5.1335E+01	6.5819E+01	7.1738E+01
RHO	7.7455E+00	3.2674E+01	4.2569E+01
H	1.0695E+02	1.8413E+02	2.2506E+02
A	6.5745E+00	7.9397E+00	8.5040E+00
S	1.3134E+00	1.3604E+00	1.4031E+00
Z	1.1829E+00	1.3417E+00	1.4215E+00
GAME	7.1160E-01	7.0848E-01	7.0917E-01
U	1.5664E+01	3.7211E+00	3.4776E+00

SPECIES	MOLE FRACTIONS		
E-	1.5464E-01	2.5466E-01	2.9652E-01
A	6.9073E-01	4.9072E-01	4.0709E-01
A+	1.5463E-01	2.5458E-01	2.9626E-01
A++	1.2681E-06	3.9667E-05	1.2706E-04
A+++	1.5934E-16	8.9718E-13	1.5392E-11
A++++	3.7665E-32	7.1354E-25	1.5242E-22
AV	3.4652E-53	2.8130E-41	1.6194E-37
AVI	5.0248E-80	2.4366E-62	8.7484E-57
AVII	0.	8.2393E-91	1.1334E-82
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.0581E+02	3.2328E+03	4.8238E+03
T	5.2398E+01	6.7699E+01	7.3924E+01
RHO	8.0238E+00	3.4816E+01	4.4883E+01
H	1.1451E+02	1.9820E+02	2.4136E+02
A	6.6960E+00	8.1115E+00	8.7410E+00
S	1.3262E+00	1.3776E+00	1.4220E+00
Z	1.2031E+00	1.3716E+00	1.4538E+00
GAME	7.1125E-01	7.0861E-01	7.1091E-01
U	1.6286E+01	3.7651E+00	3.5404E+00

SPECIES	MOLE FRACTIONS		
E-	1.6880E-01	2.7091E-01	3.1217E-01
A	6.6240E-01	4.5825E-01	3.7585E-01
A+	1.6879E-01	2.7079E-01	3.1178E-01
A++	1.9019E-06	5.9982E-05	1.9254E-04
A+++	4.0271E-16	2.4141E-12	4.1838E-11
A++++	2.1118E-31	4.5622E-24	9.7829E-22
AV	5.3906E-52	5.6208E-40	3.1570E-36
AVI	2.7028E-78	2.1047E-60	6.7460E-55
AVII	0.	6.8059E-88	5.8530E-80
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8036E+02	3.9912E+03	5.8802E+03
T	5.4476E+01	7.1594E+01	7.8685E+01
RHO	8.5548E+00	3.8911E+01	4.9151E+01
H	1.3040E+02	2.2775E+02	2.7585E+02
A	6.9437E+00	8.5360E+00	9.2633E+00
S	1.3528E+00	1.4130E+00	1.4606E+00
Z	1.2453E+00	1.4327E+00	1.5204E+00
GAME	7.1071E-01	7.1035E-01	7.1725E-01
U	1.7523E+01	3.8705E+00	3.6903E+00

SPECIES	MOLE FRACTIONS		
E-	1.9700E-01	3.0203E-01	3.4229E-01
A	6.0601E-01	3.9608E-01	3.1586E-01
A+	1.9699E-01	3.0176E-01	3.4140E-01
A++	4.0117E-06	1.3337E-04	4.4728E-04
A+++	2.2472E-15	1.6400E-11	3.1931E-10
A++++	5.1650E-30	1.6167E-22	4.2186E-20
AV	9.0077E-50	1.6771E-37	1.2666E-33
AVI	5.0107E-75	8.6381E-57	4.2365E-51
AVII	0.	1.0111E-82	1.6194E-74
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.4248E+02	3.6016E+03	5.3368E+03
T	5.3444E+01	6.9619E+01	7.6229E+01
RHO	8.2938E+00	3.6902E+01	4.7087E+01
H	1.2233E+02	2.1274E+02	2.5829E+02
A	6.8190E+00	8.3197E+00	8.9929E+00
S	1.3394E+00	1.3951E+00	1.4412E+00
Z	1.2239E+00	1.4019E+00	1.4868E+00
GAME	7.1090E-01	7.0920E-01	7.1355E-01
U	1.6905E+01	3.8147E+00	3.6107E+00

SPECIES	MOLE FRACTIONS		
E-	1.8293E-01	2.8669E-01	3.2742E-01
A	6.3414E-01	4.2671E-01	3.4545E-01
A+	1.8292E-01	2.8651E-01	3.2684E-01
A++	2.7885E-06	8.9742E-05	2.9246E-04
A+++	9.6840E-16	6.3365E-12	1.1450E-10
A++++	1.0619E-30	2.7543E-23	6.3191E-21
AV	6.6931E-51	9.9287E-39	6.1462E-35
AVI	8.4268E-77	1.3899E-58	5.0750E-53
AVII	0.	2.7247E-85	2.7532E-77
AVIII	0.	0.	0.

P1 = 5.00E+03 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.1944E+02	4.4064E+03	6.4545E+03
T	5.5499E+01	7.3653E+01	8.1332E+01
RHO	8.8066E+00	4.0865E+01	5.1046E+01
H	1.3871E+02	2.4327E+02	2.9409E+02
A	7.0701E+00	8.7630E+00	9.5557E+00
S	1.3665E+00	1.4311E+00	1.4803E+00
Z	1.2674E+00	1.4640E+00	1.5547E+00
GAME	7.1066E-01	7.1216E-01	7.2214E-01
U	1.8138E+01	3.9128E+00	3.7804E+00

SPECIES	MOLE FRACTIONS		
E-	2.1097E-01	3.1694E-01	3.5679E-01
A	5.7808E-01	3.6632E-01	2.8712E-01
A+	2.1095E-01	3.1654E-01	3.5540E-01
A++	5.6762E-06	1.9788E-04	6.9159E-04
A+++	5.0143E-15	4.2378E-11	9.1532E-10
A++++	2.2898E-29	9.4443E-22	2.9414E-19
AV	9.6416E-49	2.8148E-36	2.7569E-32
AVI	1.5689E-73	5.3691E-55	3.7154E-49
AVII	0.	3.8818E-80	9.4059E-72
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.5971E+02	4.8362E+03	7.0601E+03
T	5.6516E+01	7.5794E+01	8.4214E+01
RHO	9.0488E+00	4.2663E+01	5.2742E+01
H	1.4729E+02	2.5920E+02	3.1302E+02
A	7.1985E+00	9.0014E+00	9.8731E+00
S	1.3805E+00	1.4493E+00	1.5003E+00
Z	1.2900E+00	1.4956E+00	1.5895E+00
GAME	7.1075E-01	7.1477E-01	7.2821E-01
U	1.8751E+01	3.9814E+00	3.8828E+00

SPECIES	MOLE FRACTIONS		
E-	2.2481E-01	3.3139E-01	3.7088E-01
A	5.5038E-01	3.3752E-01	2.5932E-01
A+	2.2480E-01	3.3080E-01	3.6871E-01
A++	7.9179E-06	2.9323E-04	1.0852E-03
A+++	1.0826E-14	1.0927E-10	2.7248E-09
A++++	9.4283E-29	5.4658E-21	2.1909E-18
AV	8.7321E-48	4.6185E-35	6.6536E-31
AVI	3.1672E-72	3.1878E-53	3.8053E-47
AVII	0.	1.3560E-77	6.9716E-69
AVIII	0.	0.	2.0580E-95

P1 = 5.00E+03 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.4420E+02	5.7565E+03	8.3768E+03
T	5.8549E+01	8.0471E+01	9.0891E+01
RHO	9.5066E+00	4.5849E+01	5.5505E+01
H	1.6521E+02	2.9255E+02	3.5328E+02
A	7.4622E+00	9.5264E+00	1.0582E+01
S	1.4091E+00	1.4864E+00	1.5406E+00
Z	1.3370E+00	1.5603E+00	1.6604E+00
GAME	7.1133E-01	7.2281E-01	7.4196E-01
U	1.9981E+01	4.1477E+00	4.1291E+00

SPECIES	MOLE FRACTIONS		
E-	2.5207E-01	3.5908E-01	3.9775E-01
A	4.9587E-01	2.8250E-01	2.0731E-01
A+	2.5204E-01	3.5777E-01	3.9213E-01
A++	1.4907E-05	6.5502E-04	2.8128E-03
A+++	4.7396E-14	7.6011E-10	2.7624E-08
A++++	1.4845E-27	1.9655E-19	1.5369E-16
AV	7.5622E-46	1.3710E-32	5.5237E-28
AVI	2.7217E-69	1.2726E-49	6.5386E-43
AVII	0.	1.9168E-72	7.4578E-63
AVIII	0.	0.	5.3386E-87

P1 = 5.00E+03 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.0117E+02	5.2839E+03	7.7027E+03
T	5.7530E+01	7.8049E+01	8.7416E+01
RHO	9.2808E+00	4.4316E+01	5.4217E+01
H	1.5611E+02	2.7557E+02	3.3292E+02
A	7.3295E+00	9.2543E+00	1.0220E+01
S	1.3947E+00	1.4677E+00	1.5206E+00
Z	1.3132E+00	1.5277E+00	1.6252E+00
GAME	7.1097E-01	7.1823E-01	7.3521E-01
U	1.9361E+01	4.0594E+00	4.0175E+00

SPECIES	MOLE FRACTIONS		
E-	2.3852E-01	3.4540E-01	3.8471E-01
A	5.2298E-01	3.0963E-01	2.3233E-01
A+	2.3849E-01	3.4453E-01	3.8123E-01
A++	1.0916E-05	4.3602E-04	1.7407E-03
A+++	2.2894E-14	2.8443E-10	8.5792E-09
A++++	3.8339E-28	3.2055E-20	1.8001E-17
AV	8.6468E-47	7.7000E-34	1.8630E-29
AVI	1.1269E-70	1.9258E-51	4.7929E-45
AVII	0.	4.8067E-75	6.8251E-66
AVIII	0.	0.	4.3092E-91

P1 = 5.00E+03 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.8787E+02	6.2321E+03	9.0659E+03
T	5.9568E+01	8.3023E+01	9.4618E+01
RHO	9.7158E+00	4.7129E+01	5.6529E+01
H	1.7453E+02	3.0973E+02	3.7413E+02
A	7.5976E+00	9.8134E+00	1.0944E+01
S	1.4238E+00	1.5049E+00	1.5605E+00
Z	1.3613E+00	1.5927E+00	1.6950E+00
GAME	7.1183E-01	7.2827E-01	7.4683E-01
U	2.0583E+01	4.2481E+00	4.2545E+00

SPECIES	MOLE FRACTIONS		
E-	2.6542E-01	3.7215E-01	4.1003E-01
A	4.6917E-01	2.5668E-01	1.8448E-01
A+	2.6538E-01	3.7018E-01	4.0095E-01
A++	2.0160E-05	9.8728E-04	4.5409E-03
A+++	9.5760E-14	2.0495E-09	8.9272E-08
A++++	5.3982E-27	1.2186E-18	1.3188E-15
AV	5.6314E-45	2.4682E-31	1.6469E-26
AVI	4.2543E-68	8.4737E-48	8.9783E-41
AVII	0.	7.6122E-70	8.2049E-60
AVIII	0.	0.	6.7164E-83

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.3271E+02	6.7203E+03	9.7947E+03
T	6.0595E+01	8.5770E+01	9.8655E+01
RHO	9.9139E+00	4.8207E+01	5.7405E+01
H	1.8411E+02	3.2734E+02	3.9613E+02
A	7.7359E+00	1.0119E+01	1.1299E+01
S	1.4387E+00	1.5234E+00	1.5807E+00
Z	1.3862E+00	1.6253E+00	1.7295E+00
GAME	7.1248E-01	7.3446E-01	7.4819E-01
U	2.1183E+01	4.3620E+00	4.4216E+00

SPECIES	MOLE FRACTIONS		
E-	2.7858E-01	3.8475E-01	4.2180E-01
A	4.4287E-01	2.3201E-01	1.6371E-01
A+	2.7853E-01	3.8174E-01	4.0717E-01
A++	2.7082E-05	1.5031E-03	7.3172E-03
A+++	1.9148E-13	5.6725E-09	2.8986E-07
A++++	1.9650E-26	7.8969E-18	1.1429E-14
AV	4.5718E-44	4.7433E-30	4.9833E-25
AVI	1.0520E-66	6.1731E-46	1.2556E-38
AVII	0.	3.4081E-67	9.1406E-57
AVIII	0.	7.2557E-93	8.3702E-79

P1 = 5.00E+03 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.2590E+02	7.7300E+03	1.1300E+04
T	6.2688E+01	9.1917E+01	1.0669E+02
RHO	1.0276E+01	4.9765E+01	5.9057E+01
H	2.0402E+02	3.6383E+02	4.4092E+02
A	8.0225E+00	1.0766E+01	1.1905E+01
S	1.4692E+00	1.5602E+00	1.6194E+00
Z	1.4373E+00	1.6899E+00	1.7934E+00
GAME	7.1430E-01	7.4625E-01	7.4070E-01
U	2.2379E+01	4.6262E+00	4.6890E+00

SPECIES	MOLE FRACTIONS		
E-	3.0426E-01	4.0825E-01	4.4241E-01
A	3.9153E-01	1.8706E-01	1.3179E-01
A+	3.0416E-01	4.0112E-01	4.0918E-01
A++	4.8128E-05	3.5653E-03	1.6613E-02
A+++	7.3975E-13	4.6401E-08	2.2831E-06
A++++	2.3854E-25	3.7081E-16	5.1188E-13
AV	2.3758E-42	2.0685E-27	2.0382E-22
AVI	3.0426E-64	4.1305E-42	7.6726E-35
AVII	3.1793E-95	9.3972E-62	2.1365E-51
AVIII	0.	1.5174E-85	1.3377E-71

P1 = 5.00E+03 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.7872E+02	7.2204E+03	1.0542E+04
T	6.1633E+01	8.8734E+01	1.0274E+02
RHO	1.0101E+01	4.9083E+01	5.8223E+01
H	1.9394E+02	3.4538E+02	4.1847E+02
A	7.8774E+00	1.0439E+01	1.1619E+01
S	1.4538E+00	1.5418E+00	1.6004E+00
Z	1.4115E+00	1.6578E+00	1.7624E+00
GAME	7.1330E-01	7.4081E-01	7.4559E-01
U	2.1782E+01	4.4876E+00	4.5716E+00

SPECIES	MOLE FRACTIONS		
E-	2.9153E-01	3.9680E-01	4.3259E-01
A	4.1698E-01	2.0870E-01	1.4615E-01
A+	2.9146E-01	3.9218E-01	4.0991E-01
A++	3.6182E-05	2.3096E-03	1.1340E-02
A+++	3.7861E-13	1.6100E-08	8.6605E-07
A++++	6.9815E-26	5.3413E-17	8.5459E-14
AV	3.4986E-43	9.7163E-29	1.1972E-23
AVI	2.1278E-65	4.9159E-44	1.2566E-36
AVII	0.	1.7256E-64	6.2745E-54
AVIII	0.	3.1572E-89	5.3632E-75

P1 = 5.00E+03 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.7423E+02	8.2489E+03	1.2090E+04
T	6.3763E+01	9.5291E+01	1.1061E+02
RHO	1.0439E+01	5.0291E+01	5.9903E+01
H	2.1436E+02	3.8269E+02	4.6434E+02
A	8.1716E+00	1.1087E+01	1.2181E+01
S	1.4846E+00	1.5784E+00	1.6388E+00
Z	1.4636E+00	1.7213E+00	1.8247E+00
GAME	7.1551E-01	7.4941E-01	7.3524E-01
U	2.2974E+01	4.7740E+00	4.8350E+00

SPECIES	MOLE FRACTIONS		
E-	3.1676E-01	4.1904E-01	4.5195E-01
A	3.6654E-01	1.6741E-01	1.1943E-01
A+	3.1664E-01	4.0807E-01	4.0528E-01
A++	6.3856E-05	5.4807E-03	2.3328E-02
A+++	1.4438E-12	1.3313E-07	5.4987E-06
A++++	8.2771E-25	2.5505E-15	2.6208E-12
AV	1.7740E-41	4.3241E-26	2.7290E-21
AVI	6.4169E-63	3.3549E-40	3.3347E-33
AVII	6.1708E-92	4.7778E-59	4.5276E-49
AVIII	0.	6.4196E-82	1.7880E-68

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0237E+03	8.7656E+03	1.2894E+04
T	6.4864E+01	9.8816E+01	1.1432E+02
RHO	1.0590E+01	5.0626E+01	6.0800E+01
H	2.2495E+02	4.0190E+02	4.8821E+02
A	8.3252E+00	1.1391E+01	1.2448E+01
S	1.5003E+00	1.5967E+00	1.6577E+00
Z	1.4904E+00	1.7522E+00	1.8552E+00
GAME	7.1696E-01	7.4935E-01	7.3067E-01
U	2.3567E+01	4.9540E+00	4.9727E+00

SPECIES	MOLE FRACTIONS		
E-	3.2903E-01	4.2928E-01	4.6098E-01
A	3.4203E-01	1.4975E-01	1.0914E-01
A+	3.2886E-01	4.1264E-01	3.9881E-01
A++	8.4593E-05	8.3203E-03	3.1067E-02
A+++	2.8083E-12	3.7319E-07	1.1758E-05
A++++	2.8308E-24	1.6835E-14	1.0879E-11
AV	1.2533E-40	8.4772E-25	2.6426E-20
AVI	1.1075E-61	2.4886E-38	9.1277E-32
AVII	3.6173E-90	2.1444E-56	5.0106E-47
AVIII	0.	2.3364E-78	1.0065E-65

P1 = 5.00E+03 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1268E+03	9.8845E+03	1.4563E+04
T	6.7170E+01	1.0589E+02	1.2127E+02
RHO	1.0857E+01	5.1577E+01	6.2646E+01
H	2.4691E+02	4.4224E+02	5.3753E+02
A	8.6488E+00	1.1920E+01	1.2984E+01
S	1.5320E+00	1.6320E+00	1.6955E+00
Z	1.5452E+00	1.8099E+00	1.9168E+00
GAME	7.2072E-01	7.4140E-01	7.2527E-01
U	2.4763E+01	5.2180E+00	5.2224E+00

SPECIES	MOLE FRACTIONS		
E-	3.5282E-01	4.4749E-01	4.7830E-01
A	2.9451E-01	1.2227E-01	9.2407E-02
A+	3.5252E-01	4.1299E-01	3.8033E-01
A++	1.4875E-04	1.7249E-02	4.8920E-02
A+++	1.0722E-11	2.3416E-06	4.1250E-05
A++++	3.3538E-23	4.9523E-13	1.1773E-10
AV	6.3564E-39	1.7796E-22	1.2086E-18
AVI	3.3745E-59	5.7750E-35	2.4543E-29
AVII	1.3050E-86	1.2713E-51	1.4484E-43
AVIII	0.	5.9658E-72	4.6307E-61

P1 = 5.00E+03 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0749E+03	9.3317E+03	1.3732E+04
T	6.6000E+01	1.0239E+02	1.1789E+02
RHO	1.0732E+01	5.1165E+01	6.1756E+01
H	2.3581E+02	4.2199E+02	5.1277E+02
A	8.4843E+00	1.1666E+01	1.2717E+01
S	1.5161E+00	1.6143E+00	1.6768E+00
Z	1.5176E+00	1.7813E+00	1.8860E+00
GAME	7.1868E-01	7.4622E-01	7.2733E-01
U	2.4172E+01	5.0757E+00	5.1007E+00

SPECIES	MOLE FRACTIONS		
E-	3.4106E-01	4.3862E-01	4.6978E-01
A	3.1800E-01	1.3497E-01	1.0022E-01
A+	3.4083E-01	4.1419E-01	3.9024E-01
A++	1.1213E-04	1.2215E-02	3.9735E-02
A+++	5.4744E-12	9.7575E-07	2.3004E-05
A++++	9.6732E-24	9.8533E-14	3.8670E-11
AV	8.7287E-40	1.3627E-23	2.0156E-19
AVI	1.8171E-60	1.4211E-36	1.7784E-30
AVII	1.8166E-88	6.6463E-54	3.4365E-45
AVIII	0.	5.1605E-75	2.9881E-63

P1 = 5.00E+03 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1797E+03	1.0447E+04	1.5395E+04
T	6.8366E+01	1.0927E+02	1.2455E+02
RHO	1.0966E+01	5.2017E+01	6.3440E+01
H	2.5826E+02	4.6295E+02	5.6251E+02
A	8.8199E+00	1.2161E+01	1.3257E+01
S	1.5480E+00	1.6496E+00	1.7145E+00
Z	1.5731E+00	1.8380E+00	1.9484E+00
GAME	7.2311E-01	7.3632E-01	7.2426E-01
U	2.5352E+01	5.3508E+00	5.3260E+00

SPECIES	MOLE FRACTIONS		
E-	3.6431E-01	4.5592E-01	4.8676E-01
A	2.7158E-01	1.1152E-01	8.5257E-02
A+	3.6392E-01	4.0919E-01	3.6928E-01
A++	1.9784E-04	2.3359E-02	5.8634E-02
A+++	2.1129E-11	5.1240E-06	6.9688E-05
A++++	1.1668E-22	2.1163E-12	3.2282E-10
AV	4.5542E-38	1.7825E-21	6.1657E-18
AVI	5.8169E-58	1.6397E-33	2.6895E-28
AVII	7.3441E-85	1.4647E-49	4.4154E-42
AVIII	0.	3.4948E-69	4.6645E-59

TABLE I.- Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2337E+03	1.1019E+04	1.6214E+04
T	6.9656E+01	1.1253E+02	1.2755E+02
RHO	1.1061E+01	5.2480E+01	6.4256E+01
H	2.6986E+02	4.8412E+02	5.8734E+02
A	8.9984E+00	1.2396E+01	1.3517E+01
S	1.5642E+00	1.6671E+00	1.7321E+00
Z	1.6013E+00	1.8658E+00	1.9783E+00
GAME	7.2592E-01	7.3190E-01	7.2408E-01
U	2.5937E+01	5.4727E+00	5.3923E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.7552E-01	4.6404E-01	4.9452E-01
A	2.4922E-01	1.0234E-01	7.9175E-02
A+	3.7500E-01	4.0321E-01	3.5819E-01
A++	2.6430E-04	3.0398E-02	6.8004E-02
A+++	4.2136E-11	1.0263E-05	1.0869E-04
A++++	4.1417E-22	7.7427E-12	7.6598E-10
AV	3.3476E-37	1.4055E-20	2.5073E-17
AVI	1.0122E-56	3.3129E-32	2.1257E-27
AVII	3.5547E-83	1.0482E-47	8.4745E-41
AVIII	0.	1.0896E-66	2.5279E-57

P1 = 5.00E+03 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3449E+03	1.2173E+04	1.7880E+04
T	7.2404E+01	1.1863E+02	1.3358E+02
RHO	1.1200E+01	5.3395E+01	6.5523E+01
H	2.9380E+02	5.2778E+02	6.3960E+02
A	9.3823E+00	1.2867E+01	1.4071E+01
S	1.5966E+00	1.7020E+00	1.7693E+00
Z	1.6585E+00	1.9219E+00	2.0429E+00
GAME	7.3305E-01	7.2619E-01	7.2552E-01
U	2.7098E+01	5.6907E+00	5.5921E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9706E-01	4.7968E-01	5.1051E-01
A	2.0636E-01	8.7269E-02	6.7535E-02
A+	3.9610E-01	3.8646E-01	3.3364E-01
A++	4.8146E-04	4.6563E-02	8.8068E-02
A+++	1.7704E-10	3.2913E-05	2.4516E-04
A++++	5.8032E-21	6.9882E-11	3.7971E-09
AV	2.2138E-35	4.7545E-19	3.4178E-16
AVI	4.6925E-54	5.6685E-30	1.0104E-25
AVII	2.8579E-79	1.5768E-44	2.1202E-38
AVIII	0.	2.0599E-62	4.4482E-54

P1 = 5.00E+03 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2888E+03	1.1595E+04	1.7048E+04
T	7.0991E+01	1.1564E+02	1.3059E+02
RHO	1.1139E+01	5.2948E+01	6.4942E+01
H	2.8171E+02	5.0573E+02	6.1319E+02
A	9.1855E+00	1.2631E+01	1.3791E+01
S	1.5804E+00	1.6846E+00	1.7506E+00
Z	1.6298E+00	1.8937E+00	2.0103E+00
GAME	7.2922E-01	7.2852E-01	7.2454E-01
U	2.6519E+01	5.5857E+00	5.4897E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.8645E-01	4.7194E-01	5.0255E-01
A	2.2746E-01	9.4350E-02	7.3192E-02
A+	3.8574E-01	3.9550E-01	3.4612E-01
A++	3.5533E-04	3.8190E-02	7.7967E-02
A+++	8.5564E-11	1.9006E-05	1.6593E-04
A++++	1.5302E-21	2.4674E-11	1.7549E-09
AV	2.6991E-36	8.9530E-20	9.6759E-17
AVI	2.2258E-55	4.9322E-31	1.5613E-26
AVII	3.7269E-81	4.8723E-46	1.4689E-39
AVIII	0.	1.8987E-64	1.1955E-55

P1 = 5.00E+03 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4020E+03	1.2749E+04	1.8698E+04
T	7.3910E+01	1.2150E+02	1.3650E+02
RHO	1.1242E+01	5.3798E+01	6.5983E+01
H	3.0615E+02	5.5024E+02	6.6625E+02
A	9.5901E+00	1.3106E+01	1.4352E+01
S	1.6129E+00	1.7195E+00	1.7878E+00
Z	1.6873E+00	1.9505E+00	2.0760E+00
GAME	7.3748E-01	7.2478E-01	7.2688E-01
U	2.7673E+01	5.7899E+00	5.6827E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.0734E-01	4.8730E-01	5.1830E-01
A	1.8597E-01	8.0873E-02	6.2214E-02
A+	4.0602E-01	3.7640E-01	3.2101E-01
A++	6.5892E-04	5.5369E-02	9.8120E-02
A+++	3.7572E-10	5.3887E-05	3.5106E-04
A++++	2.3014E-20	1.7927E-10	7.7704E-09
AV	1.9426E-34	2.1657E-18	1.1064E-15
AVI	1.0847E-52	5.2270E-29	5.7647E-25
AVII	2.4585E-77	3.7329E-43	2.5707E-37
AVIII	0.	1.4613E-60	1.2959E-52

TABLE I.- Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4601E+03	1.3317E+04	1.9503E+04
T	7.5525E+01	1.2427E+02	1.3940E+02
RHO	1.1266E+01	5.4136E+01	6.6313E+01
H	3.1874E+02	5.7310E+02	6.9346E+02
A	9.8099E+00	1.3347E+01	1.4638E+01
S	1.6292E+00	1.7370E+00	1.8065E+00
Z	1.7161E+00	1.9795E+00	2.1098E+00
GAME	7.4252E-01	7.2415E-01	7.2856E-01
U	2.8243E+01	5.8847E+00	5.7796E+00

SPECIES	MOLE FRACTIONS		
E-	4.1727E-01	4.9483E-01	5.2602E-01
A	1.6637E-01	7.5000E-02	5.7128E-02
A+	4.1544E-01	3.6560E-01	3.0817E-01
A++	9.1267E-04	6.4486E-02	1.0819E-01
A+++	8.2224E-10	8.4208E-05	4.9161E-04
A++++	9.6492E-20	4.2362E-10	1.5295E-08
AV	1.8642E-33	8.6884E-18	3.3727E-15
AVI	2.8730E-51	4.0224E-28	3.0186E-24
AVII	2.6119E-75	6.8624E-42	2.7562E-36
AVIII	0.	7.4318E-59	3.2220E-51

P1 = 5.00E+03 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5790E+03	1.4414E+04	2.1064E+04
T	7.9162E+01	1.2958E+02	1.4519E+02
RHO	1.1251E+01	5.4549E+01	6.6550E+01
H	3.4466E+02	6.1992E+02	7.4983E+02
A	1.0287E+01	1.3837E+01	1.5227E+01
S	1.6617E+00	1.7723E+00	1.8447E+00
Z	1.7728E+00	2.0392E+00	2.1800E+00
GAME	7.5401E-01	7.2463E-01	7.3258E-01
U	2.9370E+01	6.0654E+00	6.0085E+00

SPECIES	MOLE FRACTIONS		
E-	4.3591E-01	5.0962E-01	5.4128E-01
A	1.3001E-01	6.4409E-02	4.7561E-02
A+	4.3225E-01	3.4251E-01	2.8196E-01
A++	1.8264E-03	8.3279E-02	1.2828E-01
A+++	4.3788E-09	1.8419E-04	9.1576E-04
A++++	2.0391E-18	1.9467E-09	5.4257E-08
AV	2.2460E-31	1.0328E-16	2.7342E-14
AVI	2.8435E-48	1.5408E-26	6.8006E-23
AVII	4.2784E-71	1.2482E-39	2.3903E-34
AVIII	0.	8.3586E-56	1.3515E-48

P1 = 5.00E+03 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5191E+03	1.3873E+04	2.0287E+04
T	7.7270E+01	1.2696E+02	1.4227E+02
RHO	1.1269E+01	5.4390E+01	6.6502E+01
H	3.3158E+02	5.9633E+02	7.2111E+02
A	1.0042E+01	1.3591E+01	1.4928E+01
S	1.6455E+00	1.7546E+00	1.8253E+00
Z	1.7446E+00	2.0091E+00	2.1442E+00
GAME	7.4811E-01	7.2414E-01	7.3046E-01
U	2.8809E+01	5.9761E+00	5.8772E+00

SPECIES	MOLE FRACTIONS		
E-	4.2681E-01	5.0227E-01	5.3363E-01
A	1.4767E-01	6.9538E-02	5.2279E-02
A+	4.2424E-01	3.5425E-01	2.9523E-01
A++	1.2816E-03	7.3816E-02	1.1818E-01
A+++	1.8629E-09	1.2658E-04	6.7462E-04
A++++	4.2999E-19	9.3454E-10	2.9053E-08
AV	1.9603E-32	3.1319E-17	9.7242E-15
AVI	8.6122E-50	2.6527E-27	1.4581E-23
AVII	3.2397E-73	1.0109E-40	2.6328E-35
AVIII	0.	2.7976E-57	6.8284E-50

P1 = 5.00E+03 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6397E+03	1.4924E+04	2.1770E+04
T	8.1268E+01	1.3213E+02	1.4801E+02
RHO	1.1203E+01	5.4567E+01	6.6389E+01
H	3.5799E+02	6.4389E+02	7.7824E+02
A	1.0546E+01	1.4087E+01	1.5522E+01
S	1.6783E+00	1.7902E+00	1.8637E+00
Z	1.8010E+00	2.0700E+00	2.2154E+00
GAME	7.5983E-01	7.2552E-01	7.3474E-01
U	2.9925E+01	6.1488E+00	6.1026E+00

SPECIES	MOLE FRACTIONS		
E-	4.4477E-01	5.1691E-01	5.4862E-01
A	1.1313E-01	5.9529E-02	4.3169E-02
A+	4.3943E-01	3.3046E-01	2.6902E-01
A++	2.6666E-03	9.2833E-02	1.3798E-01
A+++	1.0950E-08	2.6088E-04	1.2148E-03
A++++	1.0856E-17	3.8642E-09	9.7058E-08
AV	3.1268E-30	3.1575E-16	7.1729E-14
AVI	1.2942E-46	8.0162E-26	2.8641E-22
AVII	1.0119E-68	1.3141E-38	1.8725E-33
AVIII	0.	2.0057E-54	2.1962E-47

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7014E+03	1.5441E+04	2.2494E+04
T	8.3436E+01	1.3465E+02	1.5086E+02
RHO	1.1162E+01	5.4579E+01	6.6233E+01
H	3.7156E+02	6.6816E+02	8.0710E+02
A	1.0793E+01	1.4339E+01	1.5820E+01
S	1.6937E+00	1.8079E+00	1.8827E+00
Z	1.8269E+00	2.1011E+00	2.2511E+00
GAME	7.6417E-01	7.2671E-01	7.3697E-01
U	3.0475E+01	6.2404E+00	6.1993E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5261E-01	5.2406E-01	5.5578E-01
A	9.8638E-02	5.4969E-02	3.9062E-02
A+	4.4489E-01	3.1825E-01	2.5614E-01
A++	3.8596E-03	1.0236E-01	1.4743E-01
A+++	2.6921E-08	3.6094E-04	1.5908E-03
A++++	5.6003E-17	7.3662E-09	1.7002E-07
AV	4.1293E-29	9.0743E-16	1.8238E-13
AVI	5.3973E-45	3.8226E-25	1.1546E-21
AVII	2.0229E-66	1.2294E-37	1.3797E-32
AVIII	1.6822E-92	4.1190E-53	3.2800E-46

P1 = 5.00E+03 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9253E+03	1.7201E+04	2.4950E+04
T	9.1994E+01	1.4339E+02	1.6102E+02
RHO	1.0953E+01	5.4191E+01	6.5162E+01
H	4.2102E+02	7.5640E+02	9.1220E+02
A	1.1542E+01	1.5248E+01	1.6884E+01
S	1.7482E+00	1.8705E+00	1.9490E+00
Z	1.9108E+00	2.2137E+00	2.3780E+00
GAME	7.5781E-01	7.3254E-01	7.4454E-01
U	3.2390E+01	6.5547E+00	6.5518E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7667E-01	5.4826E-01	5.7947E-01
A	6.0552E-02	4.0769E-02	2.6657E-02
A+	4.4889E-01	2.7466E-01	2.1203E-01
A++	1.3886E-02	1.3532E-01	1.7809E-01
A+++	6.3217E-07	9.8642E-04	3.7566E-03
A++++	1.7786E-14	5.6285E-08	1.0516E-06
AV	3.5170E-25	2.5847E-14	3.8631E-12
AVI	2.5107E-39	5.5206E-23	1.1220E-19
AVII	2.0785E-58	1.5111E-34	9.7080E-30
AVIII	1.2412E-81	6.2074E-49	2.3629E-42

P1 = 5.00E+03 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7639E+03	1.5935E+04	2.3179E+04
T	8.5803E+01	1.3714E+02	1.5372E+02
RHO	1.1099E+01	5.4480E+01	6.5926E+01
H	3.8538E+02	6.9283E+02	8.3640E+02
A	1.1036E+01	1.4594E+01	1.6121E+01
S	1.7095E+00	1.8258E+00	1.9017E+00
Z	1.8523E+00	2.1328E+00	2.2873E+00
GAME	7.6627E-01	7.2815E-01	7.3920E-01
U	3.1023E+01	6.3278E+00	6.2967E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6013E-01	5.3112E-01	5.6280E-01
A	8.5393E-02	5.0617E-02	3.5176E-02
A+	4.4881E-01	3.0588E-01	2.4331E-01
A++	5.6621E-03	1.1189E-01	1.5665E-01
A+++	6.8646E-08	4.8997E-04	2.0595E-03
A++++	3.0824E-16	1.3580E-08	2.9202E-07
AV	6.0062E-28	2.4749E-15	4.4965E-13
AVI	2.5597E-43	1.6896E-24	4.4517E-21
AVII	4.7324E-64	1.0274E-36	9.5286E-32
AVIII	3.4828E-89	7.2762E-52	4.4987E-45

P1 = 5.00E+03 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0953E+03	1.8655E+04	2.7021E+04
T	9.7805E+01	1.4990E+02	1.6896E+02
RHO	1.0902E+01	5.4191E+01	6.4716E+01
H	4.5830E+02	8.2329E+02	9.9241E+02
A	1.1941E+01	1.5934E+01	1.7687E+01
S	1.7860E+00	1.9148E+00	1.9968E+00
Z	1.9651E+00	2.2965E+00	2.4711E+00
GAME	7.4184E-01	7.3758E-01	7.4928E-01
U	3.3783E+01	6.8046E+00	6.8240E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9112E-01	5.6455E-01	5.9533E-01
A	4.5742E-02	3.2328E-02	1.9594E-02
A+	4.3517E-01	2.4355E-01	1.8144E-01
A++	2.7969E-02	1.5771E-01	1.9703E-01
A+++	3.7734E-06	1.8587E-03	6.6034E-03
A++++	4.7825E-13	2.1070E-07	3.6282E-06
AV	6.3323E-23	2.3326E-13	3.1578E-11
AVI	4.5513E-36	1.4795E-21	2.6733E-18
AVII	9.3238E-54	1.6882E-32	9.1965E-28
AVIII	1.7218E-75	3.6964E-46	1.1386E-39

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2744E+03	2.0335E+04	2.9465E+04
T	1.0290E+02	1.5676E+02	1.7745E+02
RHO	1.0945E+01	5.4506E+01	6.4771E+01
H	4.9724E+02	8.9363E+02	1.0778E+03
A	1.2326E+01	1.6645E+01	1.8508E+01
S	1.8233E+00	1.9581E+00	2.0436E+00
Z	2.0193E+00	2.3799E+00	2.5635E+00
GAME	7.3117E-01	7.4267E-01	7.5298E-01
U	3.5204E+01	7.0816E+00	7.1346E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0478E-01	5.7981E-01	6.0991E-01
A	3.6699E-02	2.5198E-02	1.4103E-02
A+	4.1227E-01	2.1350E-01	1.5311E-01
A++	4.6235E-02	1.7818E-01	2.1184E-01
A+++	1.4438E-05	3.3173E-03	1.1028E-02
A++++	5.8839E-12	7.2753E-07	1.1638E-05
AV	3.4376E-21	1.8791E-12	2.3365E-10
AVI	1.5205E-33	3.4087E-20	5.5928E-17
AVII	3.2643E-50	1.5351E-30	7.3023E-26
AVIII	1.2156E-70	1.6929E-43	4.3547E-37

P1 = 5.00E+03 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6576E+03	2.4177E+04	3.5145E+04
T	1.1166E+02	1.7170E+02	1.9569E+02
RHO	1.1154E+01	5.5242E+01	6.5380E+01
H	5.7999E+02	1.0439E+03	1.2614E+03
A	1.3135E+01	1.8129E+01	2.0191E+01
S	1.8976E+00	2.0445E+00	2.1362E+00
Z	2.1339E+00	2.5490E+00	2.7469E+00
GAME	7.2406E-01	7.5092E-01	7.5840E-01
U	3.8091E+01	7.7001E+00	7.7903E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3137E-01	6.0768E-01	6.3596E-01
A	2.5786E-02	1.4252E-02	6.9022E-03
A+	3.5443E-01	1.5777E-01	1.0464E-01
A++	8.8327E-02	2.1098E-01	2.2627E-01
A+++	9.4701E-05	9.3057E-03	2.6132E-02
A++++	2.1694E-10	7.2159E-06	9.2924E-05
AV	1.1451E-18	9.4212E-11	8.8479E-09
AVI	7.4990E-30	1.2801E-17	1.4754E-14
AVII	6.0543E-45	7.8050E-27	2.2715E-22
AVIII	1.5193E-63	1.8536E-38	2.5000E-32

P1 = 5.00E+03 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4620E+03	2.2191E+04	3.2200E+04
T	1.0744E+02	1.6410E+02	1.8635E+02
RHO	1.1041E+01	5.4852E+01	6.5093E+01
H	5.3781E+02	9.6721E+02	1.1676E+03
A	1.2723E+01	1.7387E+01	1.9336E+01
S	1.8604E+00	2.0019E+00	2.0896E+00
Z	2.0753E+00	2.4652E+00	2.6546E+00
GAME	7.2594E-01	7.4730E-01	7.5580E-01
U	3.6644E+01	7.3873E+00	7.4568E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1815E-01	5.9436E-01	6.2329E-01
A	3.0514E-02	1.9113E-02	9.9807E-03
A+	3.8457E-01	1.8441E-01	1.2763E-01
A++	6.6729E-02	1.9641E-01	2.2166E-01
A+++	4.0689E-05	5.7059E-03	1.7401E-02
A++++	4.2237E-11	2.3920E-06	3.4147E-05
AV	8.1142E-20	1.4189E-11	1.5182E-09
AVI	1.5392E-31	7.2272E-19	9.7887E-16
AVII	2.3457E-47	1.2430E-28	4.5193E-24
AVIII	8.4838E-67	6.6400E-41	1.1997E-34

P1 = 5.00E+03 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8611E+03	2.6281E+04	3.8325E+04
T	1.1565E+02	1.7960E+02	2.0521E+02
RHO	1.1276E+01	5.5592E+01	6.5812E+01
H	6.2378E+02	1.1235E+03	1.3606E+03
A	1.3556E+01	1.8875E+01	2.1057E+01
S	1.9346E+00	2.0869E+00	2.1818E+00
Z	2.1939E+00	2.6322E+00	2.8378E+00
GAME	7.2421E-01	7.5361E-01	7.6141E-01
U	3.9544E+01	8.0309E+00	8.1757E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4419E-01	6.2008E-01	6.4761E-01
A	2.1961E-02	1.0423E-02	4.7462E-03
A+	3.2369E-01	1.3344E-01	8.5031E-02
A++	1.0996E-01	2.2153E-01	2.2548E-01
A+++	1.9261E-04	1.4498E-02	3.6903E-02
A++++	8.8044E-10	2.0256E-05	2.2748E-04
AV	1.1249E-17	5.6252E-10	4.3849E-08
AVI	2.1807E-28	1.9559E-16	1.7659E-13
AVII	7.5595E-43	3.9755E-25	8.2543E-21
AVIII	1.0284E-60	3.9092E-36	3.3809E-30

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0719E+03	2.8455E+04	4.1603E+04
T	1.1958E+02	1.8778E+02	2.1480E+02
RHO	1.1386E+01	5.5804E+01	6.6148E+01
H	6.6916E+02	1.2060E+03	1.4626E+03
A	1.3992E+01	1.9631E+01	2.1937E+01
S	1.9718E+00	2.1297E+00	2.2266E+00
Z	2.2563E+00	2.7155E+00	2.9280E+00
GAME	7.2567E-01	7.5574E-01	7.6517E-01
U	4.0995E+01	8.3653E+00	8.5362E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.5679E-01	6.3175E-01	6.5847E-01
A	1.8649E-02	7.4797E-03	3.2443E-03
A+	2.9270E-01	1.1149E-01	6.8437E-02
A++	1.3151E-01	2.2764E-01	2.2003E-01
A+++	3.6089E-04	2.1587E-02	4.9319E-02
A++++	3.1069E-09	5.2864E-05	5.0518E-04
AV	8.9357E-17	3.0121E-09	1.8670E-07
AVI	4.7012E-27	2.5643E-15	1.6976E-12
AVII	6.2312E-41	1.6293E-23	2.1998E-19
AVIII	4.0553E-58	6.1553E-34	3.0115E-28

P1 = 5.00E+03 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5150E+03	3.2911E+04	4.8427E+04
T	1.2750E+02	2.0420E+02	2.3466E+02
RHO	1.1555E+01	5.5998E+01	6.6306E+01
H	7.6467E+02	1.3790E+03	1.6775E+03
A	1.4913E+01	2.1140E+01	2.3786E+01
S	2.0467E+00	2.2130E+00	2.3163E+00
Z	2.3858E+00	2.8781E+00	3.1123E+00
GAME	7.3114E-01	7.6042E-01	7.7469E-01
U	4.3883E+01	9.1004E+00	9.2591E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8085E-01	6.5255E-01	6.7870E-01
A	1.3097E-02	3.7864E-03	1.4582E-03
A+	2.3233E-01	7.6216E-02	4.2487E-02
A++	1.7264E-01	2.2629E-01	1.9787E-01
A+++	1.0783E-03	4.0885E-02	7.7469E-02
A++++	2.9643E-08	2.7248E-04	2.0112E-03
AV	3.7781E-15	5.5897E-08	2.4454E-06
AVI	1.2444E-24	2.3530E-13	9.8682E-11
AVII	1.9202E-37	1.1235E-20	8.1374E-17
AVIII	2.2038E-53	4.6038E-30	9.9449E-25

P1 = 5.00E+03 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2899E+03	3.0683E+04	4.4974E+04
T	1.2351E+02	1.9587E+02	2.2466E+02
RHO	1.1480E+01	5.6031E+01	6.6286E+01
H	7.1613E+02	1.2913E+03	1.5681E+03
A	1.4445E+01	2.0371E+01	2.2853E+01
S	2.0092E+00	2.1708E+00	2.2718E+00
Z	2.3203E+00	2.7957E+00	3.0200E+00
GAME	7.2806E-01	7.5783E-01	7.6971E-01
U	4.2442E+01	8.7088E+00	8.8892E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.6903E-01	6.4231E-01	6.6888E-01
A	1.5721E-02	5.3720E-03	2.1838E-03
A+	2.6212E-01	9.2850E-02	5.4236E-02
A++	1.5250E-01	2.2907E-01	2.1051E-01
A+++	6.3707E-04	3.0274E-02	6.3142E-02
A++++	9.9252E-09	1.2367E-04	1.0458E-03
AV	6.1076E-16	1.3569E-08	7.1526E-07
AVI	8.1996E-26	2.6164E-14	1.4049E-11
AVII	3.8135E-39	4.6791E-22	4.7492E-18
AVIII	1.0757E-55	6.0062E-32	2.0223E-26

P1 = 5.00E+03 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7470E+03	3.5253E+04	5.1935E+04
T	1.3163E+02	2.1249E+02	2.4486E+02
RHO	1.1608E+01	5.6083E+01	6.6168E+01
H	8.1479E+02	1.4700E+03	1.7907E+03
A	1.5399E+01	2.1909E+01	2.4736E+01
S	2.0843E+00	2.2535E+00	2.3606E+00
Z	2.4522E+00	2.9582E+00	3.2055E+00
GAME	7.3468E-01	7.6364E-01	7.7958E-01
U	4.5319E+01	9.3852E+00	9.6410E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.9221E-01	6.6196E-01	6.8804E-01
A	1.0743E-02	2.6817E-03	9.6374E-04
A+	2.0365E-01	6.2400E-02	3.2850E-02
A++	1.9162E-01	2.1986E-01	1.8290E-01
A+++	1.7708E-03	5.2549E-02	9.1604E-02
A++++	8.4638E-08	5.4822E-04	3.6336E-03
AV	2.1918E-14	1.9957E-07	7.5991E-06
AVI	1.7308E-23	1.7202E-12	6.0425E-10
AVII	8.5632E-36	2.0150E-19	1.1496E-15
AVIII	3.8515E-51	2.3869E-28	3.7727E-23

TABLE I. - Continued

$p_1 = 5\ kN/m^2$

P1 = 5.00E+03 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9857E+03	3.7537E+04	5.5476E+04
T	1.3593E+02	2.2089E+02	2.5524E+02
RHO	1.1639E+01	5.5896E+01	6.5866E+01
H	8.6648E+02	1.5632E+03	1.9076E+03
A	1.5902E+01	2.2702E+01	2.5693E+01
S	2.1218E+00	2.2947E+00	2.4048E+00
Z	2.5192E+00	3.0402E+00	3.2998E+00
GAME	7.3842E-01	7.6747E-01	7.8379E-01
U	4.6747E+01	9.7468E+00	1.0035E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0305E-01	6.7107E-01	6.9695E-01
A	8.6487E-03	1.8731E-03	6.3079E-04
A+	1.7639E-01	5.0432E-02	2.5078E-02
A++	2.0906E-01	2.1028E-01	1.6639E-01
A+++	2.8434E-03	6.5303E-02	1.0473E-01
A++++	2.3445E-07	1.0428E-03	6.2002E-03
AV	1.2197E-13	6.5397E-07	2.1639E-05
AVI	2.2741E-22	1.1118E-11	3.2626E-09
AVII	3.5049E-34	3.0342E-18	1.3610E-14
AVIII	5.9332E-49	9.7687E-27	1.1281E-21

P1 = 5.00E+03 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4836E+03	4.2141E+04	6.2624E+04
T	1.4517E+02	2.3795E+02	2.7620E+02
RHO	1.1649E+01	5.5261E+01	6.4960E+01
H	9.7458E+02	1.7576E+03	2.1516E+03
A	1.6933E+01	2.4324E+01	2.7569E+01
S	2.1961E+00	2.3758E+00	2.4926E+00
Z	2.6514E+00	3.2048E+00	3.4904E+00
GAME	7.4495E-01	7.7587E-01	7.8842E-01
U	4.9582E+01	1.0462E+01	1.0816E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.2283E-01	6.8797E-01	7.1350E-01
A	5.2850E-03	8.9711E-04	2.6839E-04
A+	1.2783E-01	3.2065E-02	1.4264E-02
A++	2.3715E-01	1.8450E-01	1.3214E-01
A+++	6.8987E-03	9.1382E-02	1.2449E-01
A++++	1.6646E-06	3.1814E-03	1.5202E-02
AV	3.4139E-12	5.3948E-06	1.3393E-04
AVI	3.4537E-20	3.1760E-10	6.4110E-08
AVII	4.9327E-31	4.0274E-16	1.0952E-12
AVIII	1.1344E-44	7.9609E-24	4.7754E-19

P1 = 5.00E+03 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2309E+03	3.9754E+04	5.8983E+04
T	1.4049E+02	2.2940E+02	2.6564E+02
RHO	1.1642E+01	5.5483E+01	6.5417E+01
H	9.1973E+02	1.6586E+03	2.0277E+03
A	1.6422E+01	2.3514E+01	2.6634E+01
S	2.1597E+00	2.3362E+00	2.4486E+00
Z	2.5867E+00	3.1234E+00	3.3943E+00
GAME	7.4203E-01	7.7167E-01	7.8678E-01
U	4.8163E+01	1.0151E+01	1.0424E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.1341E-01	6.7983E-01	7.0538E-01
A	6.8013E-03	1.2930E-03	4.1205E-04
A+	1.5067E-01	4.0266E-02	1.8995E-02
A++	2.2462E-01	1.9813E-01	1.4931E-01
A+++	4.4993E-03	7.8591E-02	1.1588E-01
A++++	6.4062E-07	1.8795E-03	9.9611E-03
AV	6.6992E-13	1.9727E-06	5.5997E-05
AVI	2.9539E-21	6.3772E-11	1.5306E-08
AVII	1.4180E-32	3.8576E-17	1.3210E-13
AVIII	9.0954E-47	3.1802E-25	2.5790E-20

P1 = 5.00E+03 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7423E+03	4.4390E+04	6.6141E+04
T	1.5023E+02	2.4662E+02	2.8626E+02
RHO	1.1617E+01	5.4742E+01	6.4480E+01
H	1.0310E+03	1.8585E+03	2.2786E+03
A	1.7462E+01	2.5144E+01	2.8446E+01
S	2.2338E+00	2.4161E+00	2.5347E+00
Z	2.7174E+00	3.2881E+00	3.5833E+00
GAME	7.4692E-01	7.7967E-01	7.8886E-01
U	5.0987E+01	1.0824E+01	1.1209E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3201E-01	6.9587E-01	7.2093E-01
A	3.9805E-03	6.1354E-04	1.7888E-04
A+	1.0655E-01	2.5186E-02	1.0811E-02
A++	2.4694E-01	1.6950E-01	1.1633E-01
A+++	1.0521E-02	1.0365E-01	1.2982E-01
A++++	4.3554E-06	5.1709E-03	2.1643E-02
AV	1.7774E-11	1.3870E-05	2.8411E-04
AVI	4.1988E-19	1.4464E-09	2.2351E-07
AVII	1.8148E-29	3.7027E-15	6.9849E-12
AVIII	1.5275E-42	1.6761E-22	6.1916E-18

TABLE I.- Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4638E+01	2.6365E+02
T	1.2892E+01	1.6278E+01	2.9006E+01
RHO	3.7155E+00	5.1997E+00	9.0813E+00
H	1.2892E+01	1.6278E+01	2.9252E+01
A	3.5905E+00	4.0345E+00	5.2627E+00
S	1.1205E+00	1.1211E+00	1.1369E+00
Z	1.0000E+00	1.0000E+00	1.0009E+00
GAME	1.0000E+00	9.9996E-01	9.5398E-01
U	4.5391E+00	3.2320E+00	3.1368E+00

SPECIES	MOLE FRACTIONS		
E-	1.4738E-09	2.0648E-07	8.9546E-04
A	1.0000E+00	1.0000E+00	9.9821E-01
A+	1.4738E-09	2.0648E-07	8.9546E-04
A++	3.6113E-34	1.9531E-27	2.6385E-14
A+++	1.3147E-74	2.9472E-59	5.4224E-33
A++++	0.	0.	4.8802E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9070E+01	1.2796E+02	3.7785E+02
T	1.8181E+01	2.3403E+01	3.7481E+01
RHO	3.7991E+00	5.4670E+00	9.9705E+00
H	1.8181E+01	2.3425E+01	4.0645E+01
A	4.2633E+00	4.8208E+00	5.5682E+00
S	1.1440E+00	1.1448E+00	1.1604E+00
Z	1.0000E+00	1.0001E+00	1.0111E+00
GAME	9.9972E-01	9.9294E-01	8.1815E-01
U	5.4901E+00	3.7961E+00	3.3925E+00

SPECIES	MOLE FRACTIONS		
E-	1.8721E-06	7.9511E-05	1.0970E-02
A	1.0000E+00	9.9984E-01	9.7806E-01
A+	1.8721E-06	7.9511E-05	1.0970E-02
A++	7.4009E-24	4.4335E-18	1.5244E-10
A+++	3.8044E-53	2.0257E-41	7.7249E-25
A++++	0.	2.7761E-77	4.1883E-47
AV	0.	0.	7.0455E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0489E+02	3.2038E+02
T	1.5416E+01	1.9658E+01	3.3706E+01
RHO	3.7624E+00	5.3354E+00	9.4560E+00
H	1.5416E+01	1.9660E+01	3.4894E+01
A	3.9263E+00	4.4321E+00	5.4554E+00
S	1.1327E+00	1.1334E+00	1.1491E+00
Z	1.0000E+00	1.0000E+00	1.0042E+00
GAME	9.9998E-01	9.9924E-01	8.7922E-01
U	5.0154E+00	3.5247E+00	3.3177E+00

SPECIES	MOLE FRACTIONS		
E-	8.2417E-08	5.9150E-06	4.2285E-03
A	1.0000E+00	9.9999E-01	9.9154E-01
A+	8.2417E-08	5.9150E-06	4.2285E-03
A++	1.7343E-28	5.8320E-22	5.5494E-12
A+++	4.6978E-64	1.0279E-49	5.8788E-28
A++++	0.	0.	8.8438E-53
AV	0.	0.	1.3949E-85
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1083E+01	1.5319E+02	4.3740E+02
T	2.1178E+01	2.7363E+01	4.0510E+01
RHO	3.8285E+00	5.5954E+00	1.0577E+01
H	2.1184E+01	2.7521E+01	4.6563E+01
A	4.5964E+00	5.1407E+00	5.6845E+00
S	1.1546E+00	1.1555E+00	1.1714E+00
Z	1.0000E+00	1.0006E+00	1.0209E+00
GAME	9.9754E-01	9.6525E-01	7.8136E-01
U	5.9621E+00	4.0666E+00	3.4040E+00

SPECIES	MOLE FRACTIONS		
E-	2.2469E-05	5.8119E-04	2.0430E-02
A	9.9996E-01	9.9884E-01	9.5914E-01
A+	2.2469E-05	5.8119E-04	2.0430E-02
A++	4.6014E-20	4.2115E-15	1.3724E-09
A+++	1.1010E-45	6.8311E-35	9.4850E-23
A++++	0.	3.9063E-66	3.1643E-43
AV	0.	0.	1.8509E-70
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4161E+01	1.8766E+02	5.0133E+02
T	2.4379E+01	3.1641E+01	4.3078E+01
RHO	3.8618E+00	5.9141E+00	1.1267E+01
H	2.4438E+01	3.2427E+01	5.2787E+01
A	4.9052E+00	5.3436E+00	5.8127E+00
S	1.1645E+00	1.1657E+00	1.1825E+00
Z	1.0002E+00	1.0028E+00	1.0329E+00
GAME	9.8680E-01	8.9988E-01	7.5932E-01
U	6.4404E+00	4.1848E+00	3.3823E+00

SPECIES	MOLE FRACTIONS		
E-	1.6427E-04	2.8323E-03	3.1871E-02
A	9.9967E-01	9.9434E-01	9.3626E-01
A+	1.6427E-04	2.8323E-03	3.1871E-02
A++	4.2405E-17	1.0062E-12	6.8219E-09
A+++	2.6856E-39	1.0658E-29	3.2084E-21
A++++	5.7075E-74	3.8643E-56	2.0607E-40
AV	0.	3.1929E-91	5.4415E-66
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2411E+02	2.9226E+02	6.5755E+02
T	3.0992E+01	3.9224E+01	4.7540E+01
RHO	3.9935E+00	7.3111E+00	1.3012E+01
H	3.1759E+01	4.4765E+01	6.6703E+01
A	5.2843E+00	5.5952E+00	6.0973E+00
S	1.1829E+00	1.1855E+00	1.2055E+00
Z	1.0028E+00	1.0192E+00	1.0630E+00
GAME	8.9850E-01	7.8313E-01	7.3569E-01
U	7.4470E+00	4.0546E+00	3.3151E+00

SPECIES	MOLE FRACTIONS		
E-	2.7737E-03	1.8792E-02	5.9243E-02
A	9.9445E-01	9.6242E-01	8.8151E-01
A+	2.7737E-03	1.8792E-02	5.9243E-02
A++	7.0816E-13	7.9212E-10	6.9813E-08
A+++	3.8062E-30	2.2635E-23	5.5964E-19
A++++	4.0674E-57	1.7493E-44	2.8580E-36
AV	0.	1.4621E-72	2.2300E-59
AVI	0.	0.	1.0110E-88
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0839E+02	2.3299E+02	5.7190E+02
T	2.7730E+01	3.5683E+01	4.5366E+01
RHO	3.9056E+00	6.4723E+00	1.2041E+01
H	2.7952E+01	3.8169E+01	5.9420E+01
A	5.1463E+00	5.4634E+00	5.9496E+00
S	1.1739E+00	1.1756E+00	1.1938E+00
Z	1.0008E+00	1.0088E+00	1.0469E+00
GAME	9.5428E-01	8.2919E-01	7.4530E-01
U	6.9291E+00	4.1666E+00	3.3476E+00

SPECIES	MOLE FRACTIONS		
E-	8.1410E-04	8.7410E-03	4.4821E-02
A	9.9837E-01	9.8252E-01	9.1036E-01
A+	8.1410E-04	8.7410E-03	4.4821E-02
A++	1.0306E-14	5.1438E-11	2.4056E-08
A+++	3.4700E-34	5.5823E-26	5.1937E-20
A++++	1.1220E-64	2.6237E-49	3.4653E-38
AV	0.	2.8127E-80	1.8035E-62
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4164E+02	3.6632E+02	7.6622E+02
T	3.3901E+01	4.2336E+01	4.9695E+01
RHO	4.1422E+00	8.3738E+00	1.4261E+01
H	3.5886E+01	5.2076E+01	7.4828E+01
A	5.3641E+00	5.7543E+00	6.2572E+00
S	1.1917E+00	1.1959E+00	1.2176E+00
Z	1.0069E+00	1.0333E+00	1.0812E+00
GAME	8.4146E-01	7.5691E-01	7.2869E-01
U	8.0070E+00	3.9426E+00	3.2916E+00

SPECIES	MOLE FRACTIONS		
E-	6.8477E-03	3.2220E-02	7.5103E-02
A	9.8630E-01	9.3556E-01	8.4979E-01
A+	6.8477E-03	3.2220E-02	7.5103E-02
A++	1.6169E-11	5.7653E-09	1.7912E-07
A+++	3.3054E-27	1.8411E-21	4.6579E-18
A++++	7.8413E-52	6.0918E-41	1.4342E-34
AV	4.2140E-84	6.7416E-67	1.0819E-56
AVI	0.	0.	6.2465E-85
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6101E+02	4.5586E+02	9.0168E+02
T	3.6549E+01	4.5091E+01	5.1845E+01
RHO	4.3471E+00	9.6279E+00	1.5791E+01
H	4.0330E+01	6.0003E+01	8.3809E+01
A	5.4415E+00	5.9267E+00	6.4269E+00
S	1.2006E+00	1.2067E+00	1.2302E+00
Z	1.0134E+00	1.0501E+00	1.1014E+00
GAME	7.9945E-01	7.4187E-01	7.2335E-01
U	8.6035E+00	3.8732E+00	3.2788E+00

SPECIES	MOLE FRACTIONS		
E-	1.3203E-02	4.7673E-02	9.2063E-02
A	9.7359E-01	9.0465E-01	8.1587E-01
A+	1.3203E-02	4.7673E-02	9.2062E-02
A++	1.6161E-10	2.5709E-08	4.1682E-07
A+++	5.1840E-25	5.2129E-20	3.1909E-17
A++++	1.2329E-47	3.0167E-38	5.2752E-33
AV	1.1925E-77	1.3479E-62	3.8000E-54
AVI	0.	0.	4.8251E-81
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0470E+02	6.9128E+02	1.2543E+03
T	4.0775E+01	5.0023E+01	5.6084E+01
RHO	4.8633E+00	1.2682E+01	1.9513E+01
H	5.0090E+01	7.7749E+01	1.0403E+02
A	5.6349E+00	6.2906E+00	6.7821E+00
S	1.2189E+00	1.2299E+00	1.2572E+00
Z	1.0323E+00	1.0897E+00	1.1462E+00
GAME	7.5436E-01	7.2598E-01	7.1555E-01
U	9.8576E+00	3.7679E+00	3.2788E+00

SPECIES	MOLE FRACTIONS		
E-	3.1260E-02	8.2277E-02	1.2754E-01
A	9.3748E-01	8.3545E-01	7.4492E-01
A+	3.1260E-02	8.2276E-02	1.2754E-01
A++	3.5431E-09	2.3283E-07	1.7630E-06
A+++	4.4669E-22	7.7130E-18	8.8212E-16
A++++	2.9159E-42	3.3657E-34	2.5845E-30
AV	2.5602E-69	4.1442E-56	7.7213E-50
AVI	0.	5.6220E-84	9.7881E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8208E+02	5.6489E+02	1.0645E+03
T	3.8795E+01	4.7647E+01	5.3978E+01
RHO	4.5925E+00	1.1089E+01	1.7559E+01
H	4.5071E+01	6.6613E+01	9.3571E+01
A	5.5326E+00	6.1080E+00	6.6028E+00
S	1.2096E+00	1.2180E+00	1.2434E+00
Z	1.0220E+00	1.0691E+00	1.1232E+00
GAME	7.7205E-01	7.3239E-01	7.1910E-01
U	9.2240E+00	3.8019E+00	3.2751E+00

SPECIES	MOLE FRACTIONS		
E-	2.1491E-02	6.4623E-02	1.0968E-01
A	9.5702E-01	8.7075E-01	7.8065E-01
A+	2.1491E-02	6.4623E-02	1.0967E-01
A++	9.1308E-10	8.5989E-08	8.8998E-07
A+++	2.2748E-23	7.9781E-19	1.8188E-16
A++++	1.2526E-44	4.8797E-36	1.3595E-31
AV	6.3096E-73	4.7043E-59	6.9814E-52
AVI	0.	2.7304E-88	1.0233E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2876E+02	8.3718E+02	1.4706E+03
T	4.2555E+01	5.2280E+01	5.8161E+01
RHO	5.1492E+00	1.4407E+01	2.1610E+01
H	5.5376E+01	8.7435E+01	1.1512E+02
A	5.7439E+00	6.4740E+00	6.9634E+00
S	1.2286E+00	1.2425E+00	1.2716E+00
Z	1.0440E+00	1.1115E+00	1.1701E+00
GAME	7.4260E-01	7.2126E-01	7.1249E-01
U	1.0497E+01	3.7433E+00	3.2885E+00

SPECIES	MOLE FRACTIONS		
E-	4.2133E-02	1.0032E-01	1.4538E-01
A	9.1573E-01	7.9937E-01	7.0924E-01
A+	4.2133E-02	1.0032E-01	1.4538E-01
A++	1.0659E-08	5.4533E-07	3.2788E-06
A+++	5.0857E-21	5.4470E-17	3.7391E-15
A++++	2.6022E-40	1.3090E-32	3.8626E-29
AV	3.7082E-66	1.5000E-53	5.9621E-48
AVI	0.	3.3402E-80	5.8427E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5419E+02	1.0049E+03	1.7134E+03
T	4.4185E+01	5.4457E+01	6.0214E+01
RHO	5.4431E+00	1.6266E+01	2.3817E+01
H	6.0920E+01	9.7690E+01	1.2680E+02
A	5.8566E+00	6.6579E+00	7.1458E+00
S	1.2385E+00	1.2556E+00	1.2866E+00
Z	1.0569E+00	1.1344E+00	1.1948E+00
GAME	7.3450E-01	7.1753E-01	7.0979E-01
U	1.1138E+01	3.7087E+00	3.3032E+00

SPECIES	MOLE FRACTIONS		
E-	5.3832E-02	1.1851E-01	1.6301E-01
A	8.9234E-01	7.6299E-01	6.7399E-01
A+	5.3832E-02	1.1850E-01	1.6299E-01
A++	2.6829E-08	1.1496E-06	5.7869E-06
A+++	3.9611E-20	3.0571E-16	1.4143E-14
A++++	1.1897E-38	3.3169E-31	4.6752E-28
AV	1.9648E-63	2.7049E-51	3.2969E-46
AVI	0.	6.8877E-77	2.1630E-69
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0894E+02	1.3977E+03	2.2792E+03
T	4.7121E+01	5.8585E+01	6.4286E+01
RHO	6.0388E+00	2.0178E+01	2.8463E+01
H	7.2772E+01	1.1959E+02	1.5188E+02
A	6.0879E+00	7.0214E+00	7.5155E+00
S	1.2595E+00	1.2836E+00	1.3180E+00
Z	1.0857E+00	1.1823E+00	1.2456E+00
GAME	7.2446E-01	7.1174E-01	7.0535E-01
U	1.2418E+01	3.7071E+00	3.3463E+00

SPECIES	MOLE FRACTIONS		
E-	7.8932E-02	1.5419E-01	1.9720E-01
A	8.4214E-01	6.9161E-01	6.0561E-01
A+	7.8932E-02	1.5419E-01	1.9717E-01
A++	1.1873E-07	4.0202E-06	1.5995E-05
A+++	1.0970E-18	5.6617E-15	1.5558E-13
A++++	5.4655E-36	7.8885E-29	4.1780E-26
AV	3.0786E-59	1.7879E-47	4.5138E-43
AVI	8.6593E-90	2.8601E-71	8.8445E-65
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8092E+02	1.1909E+03	1.9829E+03
T	4.5698E+01	5.6547E+01	6.2252E+01
RHO	5.7407E+00	1.8185E+01	2.6109E+01
H	6.6720E+01	1.0839E+02	1.3906E+02
A	5.9716E+00	6.8399E+00	7.3297E+00
S	1.2489E+00	1.2694E+00	1.3020E+00
Z	1.0708E+00	1.1581E+00	1.2200E+00
GAME	7.2872E-01	7.1443E-01	7.0741E-01
U	1.1779E+01	3.7051E+00	3.3226E+00

SPECIES	MOLE FRACTIONS		
E-	6.6150E-02	1.3648E-01	1.8030E-01
A	8.6770E-01	7.2704E-01	6.3940E-01
A+	6.6150E-02	1.3648E-01	1.8028E-01
A++	5.9274E-08	2.2199E-06	9.7878E-06
A+++	2.3180E-19	1.4098E-15	4.8727E-14
A++++	3.1073E-37	5.7595E-30	4.7526E-27
AV	3.4560E-61	2.5495E-49	1.3763E-44
AVI	2.0214E-91	4.7116E-74	5.2704E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3821E+02	1.6258E+03	2.6002E+03
T	4.8472E+01	6.0590E+01	6.6306E+01
RHO	6.3351E+00	2.2229E+01	3.0844E+01
H	7.9076E+01	1.3129E+02	1.6509E+02
A	6.2052E+00	7.2031E+00	7.7020E+00
S	1.2706E+00	1.2985E+00	1.3343E+00
Z	1.1014E+00	1.2071E+00	1.2714E+00
GAME	7.2124E-01	7.0938E-01	7.0366E-01
U	1.3055E+01	3.7131E+00	3.3560E+00

SPECIES	MOLE FRACTIONS		
E-	9.2058E-02	1.7160E-01	2.1348E-01
A	8.1589E-01	6.5681E-01	5.7307E-01
A+	9.2057E-02	1.7158E-01	2.1343E-01
A++	2.2049E-07	6.9259E-06	2.5305E-05
A+++	4.4379E-18	2.0320E-14	4.6220E-13
A++++	7.5810E-35	8.6527E-28	3.2068E-25
AV	2.5311E-57	8.3719E-46	1.1898E-41
AVI	6.3346E-86	8.0664E-69	1.0747E-62
AVII	0.	0.	5.2554E-91
AVIII	0.	0.	0.

TABLE I.-Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6873E+02	1.8774E+03	2.9517E+03
T	4.9766E+01	6.2574E+01	6.8375E+01
RHO	6.6282E+00	2.4347E+01	3.3259E+01
H	8.5633E+01	1.4350E+02	1.7905E+02
A	6.3234E+00	7.3853E+00	7.8951E+00
S	1.2819E+00	1.3137E+00	1.3512E+00
Z	1.1179E+00	1.2323E+00	1.2980E+00
GAME	7.1876E-01	7.0732E-01	7.0236E-01
U	1.3689E+01	3.7120E+00	3.3919E+00

SPECIES	MOLE FRACTIONS		
E-	1.0543E-01	1.8853E-01	2.2956E-01
A	7.8914E-01	6.2295E-01	5.4092E-01
A+	1.0543E-01	1.8851E-01	2.2948E-01
A++	3.8541E-07	1.1450E-05	3.9446E-05
A+++	1.5642E-17	6.6595E-14	1.3306E-12
A++++	7.8200E-34	8.0138E-27	2.3195E-24
AV	1.0533E-55	2.9965E-44	2.8629E-40
AVI	1.5194E-83	1.5454E-66	1.1630E-60
AVII	0.	0.	4.7533E-88
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3377E+02	2.4452E+03	3.7450E+03
T	5.2226E+01	6.6529E+01	7.2665E+01
RHO	7.2039E+00	2.8625E+01	3.8108E+01
H	9.9517E+01	1.6940E+02	2.0879E+02
A	6.5627E+00	7.7555E+00	8.3020E+00
S	1.3056E+00	1.3458E+00	1.3865E+00
Z	1.1529E+00	1.2840E+00	1.3524E+00
GAME	7.1527E-01	7.0412E-01	7.0134E-01
U	1.4959E+01	3.7599E+00	3.4772E+00

SPECIES	MOLE FRACTIONS		
E-	1.3265E-01	2.2118E-01	2.6058E-01
A	7.3471E-01	5.5768E-01	4.7893E-01
A+	1.3264E-01	2.2112E-01	2.6040E-01
A++	1.0277E-06	2.8659E-05	9.2204E-05
A+++	1.4494E-16	5.8786E-13	1.0139E-11
A++++	4.8754E-32	4.7449E-25	1.0263E-22
AV	7.8194E-53	2.1210E-41	1.2430E-37
AVI	2.4537E-79	2.4142E-62	8.5843E-57
AVII	0.	1.6597E-90	1.7869E-82
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.0049E+02	2.1475E+03	3.3310E+03
T	5.1013E+01	6.4537E+01	7.0480E+01
RHO	6.9168E+00	2.6453E+01	3.5673E+01
H	9.2441E+01	1.5614E+02	1.9356E+02
A	6.4424E+00	7.5682E+00	8.0938E+00
S	1.2936E+00	1.3295E+00	1.3686E+00
Z	1.1350E+00	1.2579E+00	1.3249E+00
GAME	7.1682E-01	7.0556E-01	7.0155E-01
U	1.4320E+01	3.7375E+00	3.4321E+00

SPECIES	MOLE FRACTIONS		
E-	1.1897E-01	2.0501E-01	2.4521E-01
A	7.6205E-01	5.8999E-01	5.0963E-01
A+	1.1897E-01	2.0498E-01	2.4509E-01
A++	6.4154E-07	1.8303E-05	6.0521E-05
A+++	4.9432E-17	2.0238E-13	3.6985E-12
A++++	6.4390E-33	6.4429E-26	1.5654E-23
AV	2.7064E-54	8.5849E-43	6.1176E-39
AVI	8.6770E-82	2.1689E-64	1.0398E-58
AVII	0.	0.	3.1046E-85
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6793E+02	2.7539E+03	4.1808E+03
T	5.3404E+01	6.8496E+01	7.4904E+01
RHO	7.4800E+00	3.0689E+01	4.0440E+01
H	1.0683E+02	1.8292E+02	2.2443E+02
A	6.6834E+00	7.9433E+00	8.5183E+00
S	1.3179E+00	1.3623E+00	1.4047E+00
Z	1.1714E+00	1.3101E+00	1.3802E+00
GAME	7.1403E-01	7.0312E-01	7.0186E-01
U	1.5583E+01	3.8164E+00	3.5284E+00

SPECIES	MOLE FRACTIONS		
E-	1.4634E-01	2.3670E-01	2.7547E-01
A	7.0733E-01	5.2665E-01	4.4919E-01
A+	1.4633E-01	2.3661E-01	2.7519E-01
A++	1.5892E-06	4.3672E-05	1.3907E-04
A+++	3.9027E-16	1.6033E-12	2.7169E-11
A++++	2.9925E-31	3.0922E-24	6.4199E-22
AV	1.2953E-51	4.2759E-40	2.3275E-36
AVI	1.0384E-77	1.9635E-60	6.2283E-55
AVII	0.	9.1650E-88	8.3867E-80
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.0331E+02	3.0920E+03	4.6456E+03
T	5.4557E+01	7.0517E+01	7.7238E+01
RHO	7.7491E+00	3.2805E+01	4.2706E+01
H	1.1439E+02	1.9702E+02	2.4067E+02
A	6.8053E+00	8.1376E+00	8.7464E+00
S	1.3305E+00	1.3792E+00	1.4231E+00
Z	1.1905E+00	1.3366E+00	1.4084E+00
GAME	7.1303E-01	7.0257E-01	7.0325E-01
U	1.6205E+01	3.8367E+00	3.5864E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.6004E-01	2.5184E-01	2.8996E-01
A	6.7993E-01	4.9638E-01	4.2029E-01
A+	1.6003E-01	2.5171E-01	2.8954E-01
A++	2.3910E-06	6.5802E-05	2.0906E-04
A+++	9.9709E-16	4.2731E-12	7.2390E-11
A++++	1.7417E-30	1.9297E-23	3.9578E-21
AV	2.3554E-50	8.0640E-39	4.2350E-35
AVI	1.0378E-75	1.4652E-58	4.2937E-53
AVII	0.	4.6605E-85	3.5630E-77
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.7771E+02	3.8238E+03	5.6640E+03
T	5.6810E+01	7.4690E+01	8.2340E+01
RHO	8.2645E+00	3.6818E+01	4.6903E+01
H	1.3027E+02	2.2653E+02	2.7503E+02
A	7.0530E+00	8.5463E+00	9.2548E+00
S	1.3566E+00	1.4139E+00	1.4610E+00
Z	1.2305E+00	1.3905E+00	1.4666E+00
GAME	7.1163E-01	7.0326E-01	7.0928E-01
U	1.7442E+01	3.9313E+00	3.7280E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.8730E-01	2.8086E-01	3.1815E-01
A	6.2540E-01	4.3843E-01	3.6417E-01
A+	1.8729E-01	2.8057E-01	3.1720E-01
A++	5.0572E-06	1.4482E-04	4.7864E-04
A+++	5.5754E-15	2.8315E-11	5.3269E-10
A++++	4.2299E-29	6.5254E-22	1.5898E-19
AV	3.8124E-48	2.2515E-36	1.5188E-32
AVI	1.7524E-72	5.5805E-55	2.3018E-49
AVII	0.	6.5717E-80	7.9714E-72
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.3991E+02	3.4476E+03	5.1399E+03
T	5.5690E+01	7.2572E+01	7.9706E+01
RHO	8.0108E+00	3.4843E+01	4.4870E+01
H	1.2220E+02	2.1154E+02	2.5753E+02
A	6.9284E+00	8.3377E+00	8.9909E+00
S	1.3434E+00	1.3964E+00	1.4419E+00
Z	1.2102E+00	1.3634E+00	1.4372E+00
GAME	7.1224E-01	7.0258E-01	7.0567E-01
U	1.6825E+01	3.8808E+00	3.6525E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.7370E-01	2.6655E-01	3.0419E-01
A	6.5260E-01	4.6700E-01	3.9194E-01
A+	1.7369E-01	2.6635E-01	3.0355E-01
A++	3.5119E-06	9.7953E-05	3.1532E-04
A+++	2.4023E-15	1.1081E-11	1.9475E-10
A++++	8.7341E-30	1.1403E-22	2.4777E-20
AV	2.8665E-49	1.3880E-37	7.9077E-34
AVI	2.9696E-74	9.5116E-57	3.1144E-51
AVII	0.	1.9145E-82	1.7154E-74
AVIII	0.	0.	0.

P1 = 1.00E+04 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.1671E+02	4.2199E+03	6.2186E+03
T	5.7918E+01	7.6887E+01	8.5178E+01
RHO	8.5098E+00	3.8706E+01	4.8777E+01
H	1.3859E+02	2.4198E+02	2.9321E+02
A	7.1791E+00	8.7655E+00	9.5418E+00
S	1.3700E+00	1.4316E+00	1.4803E+00
Z	1.2513E+00	1.4180E+00	1.4967E+00
GAME	7.1118E-01	7.0472E-01	7.1415E-01
U	1.8058E+01	3.9890E+00	3.8146E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.0081E-01	2.9479E-01	3.3188E-01
A	5.9840E-01	4.1063E-01	3.3698E-01
A+	2.0079E-01	2.9437E-01	3.3041E-01
A++	7.1569E-06	2.1343E-04	7.3386E-04
A+++	1.2415E-14	7.1913E-11	1.4955E-09
A++++	1.8524E-28	3.6826E-21	1.0669E-18
AV	3.9058E-47	3.5710E-35	3.1307E-31
AVI	4.7123E-71	3.1858E-53	1.8989E-47
AVII	0.	2.2173E-77	4.4697E-69
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.5691E+02	4.6407E+03	6.8039E+03
T	5.9020E+01	7.9197E+01	8.8264E+01
RHO	8.7462E+00	4.0526E+01	5.0463E+01
H	1.4716E+02	2.5794E+02	3.1208E+02
A	7.3070E+00	8.9983E+00	9.8544E+00
S	1.3837E+00	1.4496E+00	1.4998E+00
Z	1.2726E+00	1.4459E+00	1.5276E+00
GAME	7.1088E-01	7.0707E-01	7.2024E-01
U	1.8671E+01	4.0338E+00	3.9139E+00

SPECIES	MOLE FRACTIONS		
E-	2.1419E-01	3.0839E-01	3.4536E-01
A	5.7162E-01	3.8353E-01	3.1041E-01
A+	2.1417E-01	3.0776E-01	3.4308E-01
A++	9.9820E-06	3.1499E-04	1.1392E-03
A+++	2.6830E-14	1.8357E-10	4.3341E-09
A++++	7.7476E-28	2.0898E-20	7.5468E-18
AV	3.8814E-46	5.6818E-34	6.9471E-30
AVI	1.4431E-69	1.8112E-51	1.7137E-45
AVII	0.	7.2933E-75	2.7295E-66
AVIII	0.	0.	2.1798E-91

P1 = 1.00E+04 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.4088E+02	5.5246E+03	8.0690E+03
T	6.1220E+01	8.4177E+01	9.5319E+01
RHO	9.1911E+00	4.3678E+01	5.3204E+01
H	1.6506E+02	2.9110E+02	3.5210E+02
A	7.5691E+00	9.5086E+00	1.0549E+01
S	1.4119E+00	1.4856E+00	1.5392E+00
Z	1.3167E+00	1.5026E+00	1.5911E+00
GAME	7.1073E-01	7.1482E-01	7.3379E-01
U	1.9891E+01	4.1920E+00	4.1585E+00

SPECIES	MOLE FRACTIONS		
E-	2.4054E-01	3.3448E-01	3.7150E-01
A	5.1894E-01	3.3174E-01	2.5984E-01
A+	2.4050E-01	3.3310E-01	3.6581E-01
A++	1.8738E-05	6.8991E-04	2.8442E-03
A+++	1.1592E-13	1.2158E-09	4.0064E-08
A++++	1.1610E-26	6.8408E-19	4.4618E-16
AV	2.8601E-44	1.4514E-31	4.4101E-27
AVI	7.2248E-67	5.8062E-48	2.0037E-41
AVII	0.	7.5059E-70	1.6889E-60
AVIII	0.	0.	1.3633E-83

P1 = 1.00E+04 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9830E+02	5.0745E+03	7.4271E+03
T	6.0120E+01	8.1620E+01	9.1685E+01
RHO	8.9734E+00	4.2174E+01	5.1941E+01
H	1.5599E+02	2.7430E+02	3.3199E+02
A	7.4369E+00	9.2456E+00	1.0197E+01
S	1.3977E+00	1.4676E+00	1.5197E+00
Z	1.2944E+00	1.4742E+00	1.5596E+00
GAME	7.1072E-01	7.1044E-01	7.2722E-01
U	1.9282E+01	4.1073E+00	4.0506E+00

SPECIES	MOLE FRACTIONS		
E-	2.2744E-01	3.2165E-01	3.5880E-01
A	5.4513E-01	3.5716E-01	2.8421E-01
A+	2.2742E-01	3.2072E-01	3.5519E-01
A++	1.3750E-05	4.6557E-04	1.8035E-03
A+++	5.6501E-14	4.7063E-10	1.3208E-08
A++++	3.0976E-27	1.1898E-19	5.8343E-17
AV	3.6038E-45	9.0342E-33	1.7685E-28
AVI	3.9148E-68	1.0213E-49	1.8852E-43
AVII	0.	2.3417E-72	2.2112E-63
AVIII	0.	0.	1.8017E-87

P1 = 1.00E+04 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.8464E+02	5.9895E+03	8.7413E+03
T	6.2325E+01	8.6939E+01	9.9235E+01
RHO	9.3986E+00	4.4974E+01	5.4280E+01
H	1.7440E+02	3.0833E+02	3.7296E+02
A	7.7038E+00	9.7942E+00	1.0907E+01
S	1.4263E+00	1.5040E+00	1.5587E+00
Z	1.3395E+00	1.5319E+00	1.6228E+00
GAME	7.1089E-01	7.2029E-01	7.3869E-01
U	2.0498E+01	4.2887E+00	4.2813E+00

SPECIES	MOLE FRACTIONS		
E-	2.5346E-01	3.4720E-01	3.8378E-01
A	4.9310E-01	3.0664E-01	2.3692E-01
A+	2.5341E-01	3.4513E-01	3.7482E-01
A++	2.5316E-05	1.0350E-03	4.4840E-03
A+++	2.3435E-13	3.2382E-09	1.2221E-07
A++++	4.3170E-26	4.1424E-18	3.4450E-15
AV	2.4070E-43	2.5198E-30	1.1141E-25
AVI	1.8270E-65	3.6796E-46	2.1630E-39
AVII	0.	2.7962E-67	1.3059E-57
AVIII	0.	9.3694E-93	1.0378E-79

TABLE I. - Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2992E+02	6.4752E+03	9.4522E+03
T	6.3442E+01	8.9909E+01	1.0340E+02
RHO	9.5991E+00	4.6126E+01	5.5254E+01
H	1.8399E+02	3.2612E+02	3.9471E+02
A	7.8416E+00	1.0099E+01	1.1256E+01
S	1.4409E+00	1.5222E+00	1.5782E+00
Z	1.3628E+00	1.5614E+00	1.6545E+00
GAME	7.1122E-01	7.2647E-01	7.4058E-01
U	2.1112E+01	4.3987E+00	4.4152E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6622E-01	3.5953E-01	3.9559E-01
A	4.6760E-01	2.8250E-01	2.1581E-01
A+	2.6615E-01	3.5640E-01	3.8162E-01
A++	3.3962E-05	1.5643E-03	6.9852E-03
A+++	4.6540E-13	8.8053E-09	3.6545E-07
A++++	1.5231E-25	2.5971E-17	2.5715E-14
AV	1.7343E-42	4.6004E-29	2.6700E-24
AVI	2.9133E-64	2.4925E-44	2.1626E-37
AVII	1.9923E-93	1.1297E-64	9.0007E-55
AVIII	0.	2.9964E-89	6.7310E-76

P1 = 1.00E+04 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.2337E+02	7.4670E+03	1.0936E+04
T	6.5712E+01	9.6427E+01	1.1183E+02
RHO	9.9611E+00	4.7790E+01	5.6981E+01
H	2.0392E+02	3.6272E+02	4.3995E+02
A	8.1267E+00	1.0738E+01	1.1884E+01
S	1.4706E+00	1.5584E+00	1.6166E+00
Z	1.4137E+00	1.6203E+00	1.7161E+00
GAME	7.1246E-01	7.3800E-01	7.3593E-01
U	2.2318E+01	4.6569E+00	4.7045E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9112E-01	3.8284E-01	4.1730E-01
A	4.1783E-01	2.3790E-01	1.8060E-01
A+	2.9100E-01	3.7567E-01	3.8691E-01
A++	6.0995E-05	3.5872E-03	1.5190E-02
A+++	1.7783E-12	6.6324E-08	2.5860E-06
A++++	1.8214E-24	1.0483E-15	9.4914E-13
AV	9.1387E-41	1.5841E-26	8.0995E-22
AVI	1.0037E-61	1.1883E-40	8.6599E-34
AVII	4.4885E-90	1.9185E-59	1.1634E-49
AVIII	0.	3.2415E-82	4.9276E-69

P1 = 1.00E+04 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.7587E+02	6.9613E+03	1.0176E+04
T	6.4567E+01	9.3050E+01	1.0760E+02
RHO	9.7838E+00	4.7029E+01	5.6107E+01
H	1.9382E+02	3.4413E+02	4.1692E+02
A	7.9822E+00	1.0414E+01	1.1579E+01
S	1.4557E+00	1.5403E+00	1.5974E+00
Z	1.3865E+00	1.5908E+00	1.6855E+00
GAME	7.1174E-01	7.3268E-01	7.3929E-01
U	2.1711E+01	4.5219E+00	4.5581E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7876E-01	3.7138E-01	4.0670E-01
A	4.4252E-01	2.5961E-01	1.9710E-01
A+	2.7867E-01	3.6665E-01	3.8569E-01
A++	4.5269E-05	2.3648E-03	1.0504E-02
A+++	9.1409E-13	2.4011E-08	1.0133E-06
A++++	5.3428E-25	1.6316E-16	1.6787E-13
AV	1.3154E-41	8.3952E-28	5.1900E-23
AVI	6.2071E-63	1.6818E-42	1.5972E-35
AVII	1.0364E-91	4.5189E-62	4.0075E-52
AVIII	0.	9.4903E-86	2.4026E-72

P1 = 1.00E+04 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.7123E+02	7.9638E+03	1.1691E+04
T	6.6872E+01	9.9905E+01	1.1587E+02
RHO	1.0120E+01	4.8333E+01	5.7790E+01
H	2.1424E+02	3.8141E+02	4.6312E+02
A	8.2748E+00	1.1052E+01	1.2170E+01
S	1.4858E+00	1.5761E+00	1.6354E+00
Z	1.4352E+00	1.6493E+00	1.7460E+00
GAME	7.1343E-01	7.4126E-01	7.3210E-01
U	2.2903E+01	4.8009E+00	4.8479E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0324E-01	3.9367E-01	4.2725E-01
A	3.9360E-01	2.1802E-01	1.6636E-01
A+	3.0308E-01	3.8295E-01	3.8553E-01
A++	7.9443E-05	5.3576E-03	2.0851E-02
A+++	3.4332E-12	1.7729E-07	5.8704E-06
A++++	6.1494E-24	6.3371E-15	4.3589E-12
AV	6.3917E-40	2.7065E-25	9.1431E-21
AVI	1.7762E-60	7.2291E-39	2.9447E-32
AVII	3.2854E-88	6.4822E-57	1.7363E-47
AVIII	0.	7.9506E-79	4.3957E-66

TABLE I. - Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0206E+03	8.4799E+03	1.2475E+04
T	6.8063E+01	1.0353E+02	1.1973E+02
RHO	1.0269E+01	4.8817E+01	5.8695E+01
H	2.2483E+02	4.0069E+02	4.8695E+02
A	8.4277E+00	1.1352E+01	1.2446E+01
S	1.5011E+00	1.5937E+00	1.6536E+00
Z	1.4602E+00	1.6779E+00	1.7751E+00
GAME	7.1465E-01	7.4188E-01	7.2882E-01
U	2.3496E+01	4.9481E+00	4.9857E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1516E-01	4.0402E-01	4.3664E-01
A	3.6979E-01	1.9985E-01	1.5407E-01
A+	3.1495E-01	3.8825E-01	3.8195E-01
A++	1.0487E-04	7.8826E-03	2.7328E-02
A+++	6.6103E-12	4.6058E-07	1.2022E-05
A++++	2.0532E-23	3.6479E-14	1.6709E-11
AV	4.2919E-39	4.2937E-24	7.8143E-20
AVI	2.7380E-59	3.9699E-37	6.7403E-31
AVII	1.3855E-86	1.9099E-54	1.4885E-45
AVIII	0.	1.6597E-75	1.6392E-63

P1 = 1.00E+04 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1228E+03	9.5414E+03	1.4078E+04
T	7.0551E+01	1.1079E+02	1.2720E+02
RHO	1.0531E+01	4.9684E+01	6.0295E+01
H	2.4676E+02	4.4058E+02	5.3591E+02
A	8.7497E+00	1.1895E+01	1.3011E+01
S	1.5321E+00	1.6284E+00	1.6911E+00
Z	1.5113E+00	1.7334E+00	1.8357E+00
GAME	7.1802E-01	7.3680E-01	7.2504E-01
U	2.4676E+01	5.2376E+00	5.2386E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3832E-01	4.2311E-01	4.5523E-01
A	3.2354E-01	1.6936E-01	1.3232E-01
A+	3.3795E-01	3.9197E-01	3.6971E-01
A++	1.8265E-04	1.5565E-02	4.2702E-02
A+++	2.4596E-11	2.5524E-06	4.0972E-05
A++++	2.3064E-22	8.5434E-13	1.7092E-10
AV	1.9876E-37	6.3048E-22	3.2677E-18
AVI	7.2339E-57	5.5121E-34	1.5951E-28
AVII	4.0421E-83	5.4506E-50	3.5720E-42
AVIII	0.	1.5857E-69	5.8791E-59

P1 = 1.00E+04 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0712E+03	9.0050E+03	1.3272E+04
T	6.9287E+01	1.0718E+02	1.2351E+02
RHO	1.0407E+01	4.9250E+01	5.9537E+01
H	2.3507E+02	4.2041E+02	5.1122E+02
A	8.5858E+00	1.1633E+01	1.2725E+01
S	1.5165E+00	1.6112E+00	1.6722E+00
Z	1.4856E+00	1.7060E+00	1.8049E+00
GAME	7.1617E-01	7.4007E-01	7.2643E-01
U	2.4087E+01	5.0967E+00	5.1159E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2685E-01	4.1382E-01	4.4595E-01
A	3.4643E-01	1.8364E-01	1.4280E-01
A+	3.2658E-01	3.9127E-01	3.7657E-01
A++	1.3837E-04	1.1273E-02	3.4652E-02
A+++	1.2746E-11	1.1263E-06	2.2896E-05
A++++	6.9121E-23	1.8873E-13	5.6424E-11
AV	2.9930E-38	5.7675E-23	5.4941E-19
AVI	4.8595E-58	1.7132E-35	1.1682E-29
AVII	1.0356E-84	3.9666E-52	8.6277E-44
AVIII	0.	2.1343E-72	3.8867E-61

P1 = 1.00E+04 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1762E+03	1.0102E+04	1.4912E+04
T	7.1866E+01	1.1438E+02	1.3073E+02
RHO	1.0645E+01	5.0154E+01	6.1127E+01
H	2.5813E+02	4.6146E+02	5.6131E+02
A	8.9208E+00	1.2151E+01	1.3295E+01
S	1.5478E+00	1.6459E+00	1.7094E+00
Z	1.5374E+00	1.7610E+00	1.8660E+00
GAME	7.2026E-01	7.3305E-01	7.2459E-01
U	2.5275E+01	5.3706E+00	5.3550E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.4956E-01	4.3215E-01	4.6410E-01
A	3.0112E-01	1.5655E-01	1.2296E-01
A+	3.4908E-01	3.9046E-01	3.6185E-01
A++	2.4180E-04	2.0838E-02	5.1025E-02
A+++	4.7951E-11	5.4184E-06	6.8356E-05
A++++	7.9083E-22	3.4552E-12	4.5771E-10
AV	1.4229E-36	5.8017E-21	1.6066E-17
AVI	1.3259E-55	1.3898E-32	1.6603E-27
AVII	3.0697E-81	5.3232E-48	1.0097E-40
AVIII	0.	7.4951E-67	5.3620E-57

TABLE I. - Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2301E+03	1.0658E+04	1.5733E+04
T	7.3233E+01	1.1786E+02	1.3414E+02
RHO	1.0741E+01	5.0553E+01	6.1834E+01
H	2.6972E+02	4.8258E+02	5.8689E+02
A	9.0990E+00	1.2403E+01	1.3581E+01
S	1.5635E+00	1.6635E+00	1.7276E+00
Z	1.5638E+00	1.7888E+00	1.8968E+00
GAME	7.2292E-01	7.2970E-01	7.2489E-01
U	2.5861E+01	5.4964E+00	5.4662E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6054E-01	4.4097E-01	4.7280E-01
A	2.7924E-01	1.4503E-01	1.1422E-01
A+	3.5990E-01	3.8703E-01	3.5327E-01
A++	3.2098E-04	2.6955E-02	5.9604E-02
A+++	9.4126E-11	1.0658E-05	1.0826E-04
A++++	2.7313E-21	1.2216E-11	1.1171E-09
AV	1.0150E-35	4.3343E-20	6.8352E-17
AVI	2.3173E-54	2.5986E-31	1.4033E-26
AVII	1.8562E-79	3.4003E-46	2.1292E-39
AVIII	0.	1.9988E-64	3.2894E-55

P1 = 1.00E+04 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3411E+03	1.1781E+04	1.7372E+04
T	7.6177E+01	1.2430E+02	1.4074E+02
RHO	1.0885E+01	5.1425E+01	6.2973E+01
H	2.9367E+02	5.2613E+02	6.3936E+02
A	9.4818E+00	1.2892E+01	1.4163E+01
S	1.5953E+00	1.6973E+00	1.7641E+00
Z	1.6174E+00	1.8429E+00	1.9600E+00
GAME	7.2970E-01	7.2549E-01	7.2717E-01
U	2.7022E+01	5.7263E+00	5.6789E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.8172E-01	4.5739E-01	4.8981E-01
A	2.3713E-01	1.2596E-01	9.8160E-02
A+	3.8057E-01	3.7595E-01	3.3450E-01
A++	5.7456E-04	4.0670E-02	7.7289E-02
A+++	3.7776E-10	3.2620E-05	2.4197E-04
A++++	3.4818E-20	1.0094E-10	5.4302E-09
AV	5.6353E-34	1.2755E-18	9.0224E-16
AVI	7.7403E-52	3.6439E-29	6.3747E-25
AVII	7.0432E-76	3.8474E-43	4.9725E-37
AVIII	0.	2.5825E-60	5.2340E-52

P1 = 1.00E+04 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2851E+03	1.1219E+04	1.6555E+04
T	7.4666E+01	1.2111E+02	1.3753E+02
RHO	1.0821E+01	5.1024E+01	6.2406E+01
H	2.8157E+02	5.0414E+02	6.1291E+02
A	9.2856E+00	1.2645E+01	1.3876E+01
S	1.5794E+00	1.6802E+00	1.7463E+00
Z	1.5905E+00	1.8154E+00	1.9289E+00
GAME	7.2605E-01	7.2720E-01	7.2582E-01
U	2.6443E+01	5.6144E+00	5.5738E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.7127E-01	4.4917E-01	4.8156E-01
A	2.5790E-01	1.3518E-01	1.0577E-01
A+	3.7041E-01	3.8214E-01	3.4393E-01
A++	4.2810E-04	3.3484E-02	6.8566E-02
A+++	1.8702E-10	1.9106E-05	1.6588E-04
A++++	9.6097E-21	3.6639E-11	2.5750E-09
AV	7.3893E-35	2.5101E-19	2.6627E-16
AVI	4.0914E-53	3.3779E-30	1.0459E-25
AVII	1.0871E-77	1.3050E-44	3.7515E-38
AVIII	0.	2.7102E-62	1.5880E-53

P1 = 1.00E+04 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3982E+03	1.2341E+04	1.8181E+04
T	7.7777E+01	1.2739E+02	1.4396E+02
RHO	1.0932E+01	5.1781E+01	6.3381E+01
H	3.0601E+02	5.4853E+02	6.6625E+02
A	9.6883E+00	1.3141E+01	1.4460E+01
S	1.6112E+00	1.7145E+00	1.7824E+00
Z	1.6444E+00	1.8708E+00	1.9925E+00
GAME	7.3388E-01	7.2458E-01	7.2891E-01
U	2.7597E+01	5.8326E+00	5.7826E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9188E-01	4.6547E-01	4.9813E-01
A	2.1701E-01	1.1744E-01	9.0708E-02
A+	3.9033E-01	3.6876E-01	3.2455E-01
A++	7.7706E-04	4.8275E-02	8.6269E-02
A+++	7.7850E-10	5.2896E-05	3.4577E-04
A++++	1.3082E-19	2.5401E-10	1.1055E-08
AV	4.5594E-33	5.6332E-18	2.8958E-15
AVI	1.6080E-50	3.2163E-28	3.5967E-24
AVII	5.3490E-74	8.5476E-42	5.8929E-36
AVIII	0.	1.6877E-58	1.4926E-50

TABLE I.-Continued

p_1 = 10 kN/m^2

P1 = 1.00E+04 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4562E+03	1.2894E+04	1.8978E+04
T	7.9482E+01	1.3040E+02	1.4715E+02
RHO	1.0960E+01	5.2061E+01	6.3669E+01
H	3.1860E+02	5.7131E+02	6.9358E+02
A	9.9057E+00	1.3394E+01	1.4760E+01
S	1.6271E+00	1.7317E+00	1.8007E+00
Z	1.6715E+00	1.8992E+00	2.0256E+00
GAME	7.3857E-01	7.2435E-01	7.3091E-01
U	2.8167E+01	5.9387E+00	5.8855E+00

SPECIES	MOLE FRACTIONS		
E-	4.0174E-01	4.7347E-01	5.0633E-01
A	1.9758E-01	1.0945E-01	8.3591E-02
A+	3.9962E-01	3.6077E-01	3.1432E-01
A++	1.0604E-03	5.6229E-02	9.5277E-02
A+++	1.6419E-09	8.2230E-05	4.8237E-04
A++++	5.1221E-19	5.9337E-10	2.1570E-08
AV	3.9335E-32	2.2169E-17	8.6975E-15
AVI	3.6654E-49	2.4064E-27	1.8435E-23
AVII	4.6303E-72	1.4998E-40	6.1189E-35
AVIII	0.	8.0496E-57	3.5252E-49

P1 = 1.00E+04 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5749E+03	1.3973E+04	2.0515E+04
T	8.3263E+01	1.3617E+02	1.5348E+02
RHO	1.0963E+01	5.2429E+01	6.3826E+01
H	3.4452E+02	6.1804E+02	7.4949E+02
A	1.0372E+01	1.3905E+01	1.5375E+01
S	1.6587E+00	1.7661E+00	1.8378E+00
Z	1.7253E+00	1.9572E+00	2.0942E+00
GAME	7.4888E-01	7.2549E-01	7.3545E-01
U	2.9295E+01	6.1328E+00	6.0890E+00

SPECIES	MOLE FRACTIONS		
E-	4.2040E-01	4.8908E-01	5.2249E-01
A	1.6124E-01	9.4893E-02	7.0181E-02
A+	4.1633E-01	3.4316E-01	2.9306E-01
A++	2.0339E-03	7.2692E-02	1.1338E-01
A+++	7.8810E-09	1.7816E-04	8.8947E-04
A++++	8.9534E-18	2.6696E-09	7.4732E-08
AV	3.5446E-30	2.5443E-16	6.7750E-14
AVI	2.4403E-46	8.7667E-26	3.9216E-22
AVII	4.6363E-68	2.5353E-38	4.8537E-33
AVIII	0.	8.1524E-54	1.3141E-46

P1 = 1.00E+04 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5152E+03	1.3452E+04	1.9777E+04
T	8.1268E+01	1.3333E+02	1.5028E+02
RHO	1.0981E+01	5.2332E+01	6.3925E+01
H	3.3144E+02	5.9452E+02	7.2141E+02
A	1.0129E+01	1.3648E+01	1.5060E+01
S	1.6425E+00	1.7488E+00	1.8186E+00
Z	1.6978E+00	1.9279E+00	2.0587E+00
GAME	7.4353E-01	7.2469E-01	7.3308E-01
U	2.8735E+01	6.0390E+00	5.9890E+00

SPECIES	MOLE FRACTIONS		
E-	4.1101E-01	4.8130E-01	5.1425E-01
A	1.7944E-01	1.0202E-01	7.6940E-02
A+	4.0811E-01	3.5219E-01	3.0402E-01
A++	1.4501E-03	6.4374E-02	1.0413E-01
A+++	3.4867E-09	1.2299E-04	6.5677E-04
A++++	2.0240E-18	1.2954E-09	4.3313E-08
AV	3.4135E-31	7.8599E-17	2.4430E-14
AVI	8.2731E-48	1.5517E-26	8.5846E-23
AVII	3.7877E-70	2.1469E-39	5.5339E-34
AVIII	0.	2.9149E-55	6.9518E-48

P1 = 1.00E+04 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6357E+03	1.4492E+04	2.1254E+04
T	8.5361E+01	1.3897E+02	1.5656E+02
RHO	1.0939E+01	5.2482E+01	6.3789E+01
H	3.5784E+02	6.4195E+02	7.7817E+02
A	1.0616E+01	1.4165E+01	1.5679E+01
S	1.6745E+00	1.7834E+00	1.8559E+00
Z	1.7517E+00	1.9871E+00	2.1282E+00
GAME	7.5377E-01	7.2665E-01	7.3779E-01
U	2.9851E+01	6.2288E+00	6.1954E+00

SPECIES	MOLE FRACTIONS		
E-	4.2912E-01	4.9675E-01	5.3013E-01
A	1.4461E-01	8.8137E-02	6.4156E-02
A+	4.2341E-01	3.3372E-01	2.8248E-01
A++	2.8563E-03	8.1138E-02	1.2207E-01
A+++	1.7915E-08	2.5161E-04	1.1699E-03
A++++	3.9923E-17	5.2633E-09	1.3131E-07
AV	3.6977E-29	7.6935E-16	1.7266E-13
AVI	7.1014E-45	4.4951E-25	1.5853E-21
AVII	5.2439E-66	2.6133E-37	3.5816E-32
AVIII	1.3260E-91	1.9046E-52	1.9681E-45

TABLE I. - Continued

$p_1 = 10\ kN/m^2$

P1 = 1.00E+04 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6974E+03	1.4999E+04	2.1969E+04
T	8.7598E+01	1.4166E+02	1.5967E+02
RHO	1.0901E+01	5.2507E+01	6.3598E+01
H	3.7141E+02	6.6622E+02	8.0711E+02
A	1.0861E+01	1.4422E+01	1.5990E+01
S	1.6901E+00	1.8002E+00	1.8745E+00
Z	1.7775E+00	2.0165E+00	2.1634E+00
GAME	7.5761E-01	7.2807E-01	7.4019E-01
U	3.0404E+01	6.3236E+00	6.2934E+00

SPECIES	MOLE FRACTIONS		
E-	4.3740E-01	5.0410E-01	5.3776E-01
A	1.2924E-01	8.1903E-02	5.8327E-02
A+	4.2933E-01	3.2424E-01	2.7160E-01
A++	4.0349E-03	8.9415E-02	1.3079E-01
A+++	4.1459E-08	3.4457E-04	1.5248E-03
A++++	1.8414E-16	9.8173E-09	2.2732E-07
AV	4.0883E-28	2.1326E-15	4.3007E-13
AVI	2.2824E-43	2.0332E-24	6.2007E-21
AVII	7.1657E-64	2.2516E-36	2.5179E-31
AVIII	9.7124E-89	3.5089E-51	2.7559E-44

P1 = 1.00E+04 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9217E+03	1.6785E+04	2.4522E+04
T	9.6074E+01	1.5130E+02	1.7085E+02
RHO	1.0752E+01	5.2158E+01	6.2704E+01
H	4.2089E+02	7.5443E+02	9.1330E+02
A	1.1611E+01	1.5376E+01	1.7106E+01
S	1.7432E+00	1.8615E+00	1.9394E+00
Z	1.8603E+00	2.1270E+00	2.2890E+00
GAME	7.5432E-01	7.3469E-01	7.4827E-01
U	3.2329E+01	6.6722E+00	6.6828E+00

SPECIES	MOLE FRACTIONS		
E-	4.6246E-01	5.2985E-01	5.6313E-01
A	8.7858E-02	6.1614E-02	4.0637E-02
A+	4.3692E-01	2.8817E-01	2.3289E-01
A++	1.2767E-02	1.1943E-01	1.5980E-01
A+++	7.0727E-07	9.4016E-04	3.5438E-03
A++++	3.2674E-14	7.4285E-08	1.3522E-06
AV	1.4090E-24	5.9639E-14	8.5262E-12
AVI	2.9408E-38	2.8642E-22	5.4799E-19
AVII	1.2574E-56	2.6525E-33	1.5333E-28
AVIII	5.4481E-79	4.9740E-47	1.6304E-40

P1 = 1.00E+04 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7600E+03	1.5497E+04	2.2680E+04
T	8.9958E+01	1.4445E+02	1.6282E+02
RHO	1.0855E+01	5.2377E+01	6.3343E+01
H	3.8523E+02	6.9086E+02	8.3675E+02
A	1.1098E+01	1.4694E+01	1.6306E+01
S	1.7056E+00	1.8181E+00	1.8931E+00
Z	1.8024E+00	2.0483E+00	2.1990E+00
GAME	7.5960E-01	7.2979E-01	7.4258E-01
U	3.0954E+01	6.4225E+00	6.4036E+00

SPECIES	MOLE FRACTIONS		
E-	4.4519E-01	5.1178E-01	5.4525E-01
A	1.1531E-01	7.5573E-02	5.2817E-02
A+	4.3379E-01	3.1399E-01	2.6057E-01
A++	5.7019E-03	9.8191E-02	1.3939E-01
A+++	9.6420E-08	4.7043E-04	1.9660E-03
A++++	8.5715E-16	1.8266E-08	3.8653E-07
AV	4.5819E-27	5.8987E-15	1.0424E-12
AVI	7.4686E-42	9.1782E-24	2.3334E-20
AVII	1.0019E-61	1.9401E-35	1.6753E-30
AVIII	7.4025E-86	6.4219E-50	3.5880E-43

P1 = 1.00E+04 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0912E+03	1.8181E+04	2.6543E+04
T	1.0210E+02	1.5832E+02	1.7929E+02
RHO	1.0693E+01	5.2015E+01	6.2201E+01
H	4.5815E+02	8.2102E+02	9.9393E+02
A	1.2041E+01	1.6083E+01	1.7929E+01
S	1.7809E+00	1.9046E+00	1.9856E+00
Z	1.9154E+00	2.2077E+00	2.3802E+00
GAME	7.4142E-01	7.4008E-01	7.5330E-01
U	3.3716E+01	6.9392E+00	6.9781E+00

SPECIES	MOLE FRACTIONS		
E-	4.7792E-01	5.4703E-01	5.7987E-01
A	6.9115E-02	4.9475E-02	3.0589E-02
A+	4.2802E-01	2.6170E-01	2.0528E-01
A++	2.4941E-02	1.4005E-01	1.7820E-01
A+++	3.8776E-06	1.7474E-03	6.0565E-03
A++++	7.4899E-13	2.6846E-07	4.3610E-06
AV	1.9783E-22	5.0574E-13	6.2015E-11
AVI	3.7666E-35	6.9930E-21	1.0963E-17
AVII	3.1685E-52	2.5702E-31	1.1212E-26
AVIII	4.3609E-73	2.4329E-44	5.4995E-38

TABLE I.- Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2696E+03	1.9784E+04	2.8904E+04
T	1.0751E+02	1.6570E+02	1.8827E+02
RHO	1.0722E+01	5.2148E+01	6.2113E+01
H	4.9706E+02	8.9102E+02	1.0793E+03
A	1.2444E+01	1.6817E+01	1.8776E+01
S	1.8176E+00	1.9471E+00	2.0312E+00
Z	1.9689E+00	2.2896E+00	2.4717E+00
GAME	7.3159E-01	7.4545E-01	7.5758E-01
U	3.5131E+01	7.2315E+00	7.2960E+00

SPECIES	MOLE FRACTIONS		
E-	4.9210E-01	5.6324E-01	5.9542E-01
A	5.6798E-02	3.9099E-02	2.2585E-02
A+	4.1012E-01	2.3515E-01	1.7844E-01
A++	4.0966E-02	1.5943E-01	1.9368E-01
A+++	1.4430E-05	3.0730E-03	9.8539E-03
A++++	8.6871E-12	8.9177E-07	1.3092E-05
AV	9.7178E-21	3.8024E-12	4.0840E-10
AVI	1.0781E-32	1.4514E-19	1.9230E-16
AVII	9.6931E-49	1.9911E-29	6.8515E-25
AVIII	2.0818E-68	8.9093E-42	1.4685E-35

P1 = 1.00E+04 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6515E+03	2.3442E+04	3.4425E+04
T	1.1700E+02	1.8145E+02	2.0757E+02
RHO	1.0897E+01	5.2617E+01	6.2471E+01
H	5.7977E+02	1.0405E+03	1.2647E+03
A	1.3277E+01	1.8334E+01	2.0531E+01
S	1.8905E+00	2.0310E+00	2.1215E+00
Z	2.0796E+00	2.4554E+00	2.6549E+00
GAME	7.2447E-01	7.5449E-01	7.6489E-01
U	3.8003E+01	7.8813E+00	8.0320E+00

SPECIES	MOLE FRACTIONS		
E-	5.1914E-01	5.9273E-01	6.2334E-01
A	4.0969E-02	2.3123E-02	1.1683E-02
A+	3.6074E-01	1.8381E-01	1.2923E-01
A++	7.9055E-02	1.9210E-01	2.1323E-01
A+++	9.4785E-05	8.2271E-03	2.2422E-02
A++++	3.1646E-10	7.8585E-06	9.3195E-05
AV	3.1467E-18	1.5478E-10	1.2560E-08
AVI	5.0791E-29	3.9773E-17	3.6860E-14
AVII	1.6632E-43	6.3275E-26	1.3225E-21
AVIII	2.3374E-61	5.1098E-37	4.3618E-31

P1 = 1.00E+04 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4564E+03	2.1547E+04	3.1529E+04
T	1.1244E+02	1.7340E+02	1.9764E+02
RHO	1.0796E+01	5.2380E+01	6.2259E+01
H	5.3760E+02	9.6421E+02	1.1692E+03
A	1.2856E+01	1.7568E+01	1.9635E+01
S	1.8542E+00	1.9891E+00	2.0760E+00
Z	2.0236E+00	2.3722E+00	2.5624E+00
GAME	7.2638E-01	7.5034E-01	7.6126E-01
U	3.6561E+01	7.5431E+00	7.6313E+00

SPECIES	MOLE FRACTIONS		
E-	5.0582E-01	5.7845E-01	6.0974E-01
A	4.7892E-02	3.0354E-02	1.6428E-02
A+	3.8680E-01	2.0908E-01	1.5318E-01
A++	5.9450E-02	1.7697E-01	2.0543E-01
A+++	4.0756E-05	5.1424E-03	1.5186E-02
A++++	6.2145E-11	2.7419E-06	3.6046E-05
AV	2.2699E-19	2.5544E-11	2.3674E-09
AVI	1.0712E-30	2.5805E-18	2.8263E-15
AVII	6.7219E-46	1.2415E-27	3.2675E-23
AVIII	1.3750E-64	2.4417E-39	2.8238E-33

P1 = 1.00E+04 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8541E+03	2.5437E+04	3.7454E+04
T	1.2138E+02	1.8966E+02	2.1776E+02
RHO	1.0999E+01	5.2865E+01	6.2609E+01
H	6.2353E+02	1.1197E+03	1.3631E+03
A	1.3713E+01	1.9096E+01	2.1446E+01
S	1.9269E+00	2.0719E+00	2.1666E+00
Z	2.1378E+00	2.5370E+00	2.7472E+00
GAME	7.2464E-01	7.5789E-01	7.6885E-01
U	3.9448E+01	8.2197E+00	8.3985E+00

SPECIES	MOLE FRACTIONS		
E-	5.3222E-01	6.0584E-01	6.3600E-01
A	3.5164E-02	1.7414E-02	8.1965E-03
A+	3.3321E-01	1.6020E-01	1.0751E-01
A++	9.9214E-02	2.0403E-01	2.1662E-01
A+++	1.9452E-04	1.2497E-02	3.1454E-02
A++++	1.2972E-09	2.0627E-05	2.2110E-04
AV	3.1257E-17	8.1989E-10	5.8455E-08
AVI	1.4971E-27	5.0620E-16	3.9879E-13
AVII	2.1017E-41	2.4586E-24	4.1117E-20
AVIII	1.6064E-58	7.4282E-35	4.7283E-29

TABLE I. - Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0640E+03	2.7491E+04	4.0597E+04
T	1.2569E+02	1.9812E+02	2.2797E+02
RHO	1.1090E+01	5.2981E+01	6.2767E+01
H	6.6888E+02	1.2017E+03	1.4654E+03
A	1.4165E+01	1.9870E+01	2.2364E+01
S	1.9636E+00	2.1129E+00	2.2101E+00
Z	2.1982E+00	2.6191E+00	2.8371E+00
GAME	7.2621E-01	7.6090E-01	7.7330E-01
U	4.0889E+01	8.5682E+00	8.7736E+00

SPECIES	MOLE FRACTIONS		
E-	5.4508E-01	6.1818E-01	6.4753E-01
A	3.0077E-02	1.2899E-02	5.7400E-03
A+	3.0498E-01	1.3797E-01	8.8680E-02
A++	1.1950E-01	2.1269E-01	2.1577E-01
A+++	3.6668E-04	1.8212E-02	4.1805E-02
A++++	4.5991E-09	5.0597E-05	4.7570E-04
AV	2.4904E-16	3.9210E-09	2.3331E-07
AVI	3.2329E-26	5.5743E-15	3.4520E-12
AVII	1.7223E-39	7.7615E-23	9.3240E-19
AVIII	6.2560E-56	8.1706E-33	3.3530E-27

P1 = 1.00E+04 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5057E+03	3.1784E+04	4.7238E+04
T	1.3426E+02	2.1555E+02	2.4929E+02
RHO	1.1243E+01	5.2999E+01	6.2767E+01
H	7.6435E+02	1.3741E+03	1.6818E+03
A	1.5106E+01	2.1451E+01	2.4285E+01
S	2.0365E+00	2.1944E+00	2.2966E+00
Z	2.3225E+00	2.7823E+00	3.0189E+00
GAME	7.3185E-01	7.6725E-01	7.8366E-01
U	4.3767E+01	9.2860E+00	9.5582E+00

SPECIES	MOLE FRACTIONS		
E-	5.6943E-01	6.4058E-01	6.6876E-01
A	2.1572E-02	6.8476E-03	2.7096E-03
A+	2.4965E-01	9.9123E-02	5.7779E-02
A++	1.5826E-01	2.1914E-01	2.0311E-01
A+++	1.0846E-03	3.4066E-02	6.5820E-02
A++++	4.2405E-08	2.4557E-04	1.8200E-03
AV	9.8709E-15	6.4551E-08	2.7859E-06
AVI	7.7427E-24	4.2257E-13	1.7144E-10
AVII	4.5156E-36	4.0019E-20	2.6907E-16
AVIII	2.7010E-51	4.0597E-29	7.7499E-24

P1 = 1.00E+04 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2814E+03	2.9632E+04	4.3880E+04
T	1.2994E+02	2.0674E+02	2.3868E+02
RHO	1.1177E+01	5.3077E+01	6.2753E+01
H	7.1583E+02	1.2867E+03	1.5715E+03
A	1.4627E+01	2.0651E+01	2.3330E+01
S	1.9999E+00	2.1535E+00	2.2545E+00
Z	2.2595E+00	2.7003E+00	2.9297E+00
GAME	7.2870E-01	7.6391E-01	7.7841E-01
U	4.2332E+01	8.9161E+00	9.1520E+00

SPECIES	MOLE FRACTIONS		
E-	5.5742E-01	6.2967E-01	6.5867E-01
A	2.5616E-02	9.4625E-03	3.9343E-03
A+	2.7715E-01	1.1767E-01	7.1754E-02
A++	1.3917E-01	2.1769E-01	2.1100E-01
A+++	6.4444E-04	2.5385E-02	5.3674E-02
A++++	1.4464E-08	1.1506E-04	9.7198E-04
AV	1.6520E-15	1.6701E-08	8.6467E-07
AVI	5.3824E-25	5.2028E-14	2.6967E-11
AVII	9.7770E-38	1.9470E-21	1.8323E-17
AVIII	1.4889E-53	6.5849E-31	1.9618E-25

P1 = 1.00E+04 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7370E+03	3.3922E+04	5.0646E+04
T	1.3670E+02	2.2430E+02	2.6336E+02
RHO	1.1288E+01	5.2832E+01	6.2526E+01
H	8.1444E+02	1.4640E+03	1.7957E+03
A	1.5603E+01	2.2249E+01	2.5278E+01
S	2.0732E+00	2.2342E+00	2.3397E+00
Z	2.3868E+00	2.8625E+00	3.1111E+00
GAME	7.3540E-01	7.7099E-01	7.8883E-01
U	4.5198E+01	9.7013E+00	9.9670E+00

SPECIES	MOLE FRACTIONS		
E-	5.8104E-01	6.5065E-01	6.7857E-01
A	1.7916E-02	4.9447E-03	1.8276E-03
A+	2.2282E-01	8.2931E-02	4.5639E-02
A++	1.7646E-01	2.1718E-01	1.9223E-01
A+++	1.7660E-03	4.3805E-02	7.8454E-02
A++++	1.1813E-07	4.8462E-04	3.2674E-03
AV	5.4745E-14	2.2034E-07	8.4502E-06
AVI	1.0050E-22	2.8616E-12	1.0019E-09
AVII	1.8093E-34	6.3545E-19	3.5125E-15
AVIII	4.0445E-49	1.7662E-27	2.6120E-22

TABLE I. - Continued

p_1 = 10 kN/ m^2

P1 = 1.00E+04 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9751E+03	3.6115E+04	5.4096E+04
T	1.4328E+02	2.3321E+02	2.7168E+02
RHO	1.1315E+01	5.2625E+01	6.2137E+01
H	8.6611E+02	1.5569E+03	1.9134E+03
A	1.6113E+01	2.3065E+01	2.6280E+01
S	2.1098E+00	2.2736E+00	2.3828E+00
Z	2.4518E+00	2.9427E+00	3.2045E+00
GAME	7.3909E-01	7.7518E-01	7.9331E-01
U	4.6621E+01	1.0067E+01	1.0385E+01

SPECIES	MOLE FRACTIONS		
E-	5.9213E-01	6.6018E-01	6.8794E-01
A	1.4655E-02	3.5433E-03	1.2199E-03
A+	1.9710E-01	6.8691E-02	3.5567E-02
A++	1.9332E-01	2.1219E-01	1.7906E-01
A+++	2.7961E-03	5.4494E-02	9.0628E-02
A++++	3.1553E-07	9.0422E-04	5.5643E-03
AV	2.8567E-13	6.9038E-07	2.3653E-05
AVI	1.1991E-21	1.7143E-11	5.2146E-09
AVII	6.4162E-33	8.4937E-18	3.8985E-14
AVIII	5.1379E-47	6.0970E-26	7.0732E-21

P1 = 1.00E+04 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4717E+03	4.0516E+04	6.1132E+04
T	1.5296E+02	2.5155E+02	2.9463E+02
RHO	1.1328E+01	5.1867E+01	6.1142E+01
H	9.7416E+02	1.7501E+03	2.1597E+03
A	1.7156E+01	2.4749E+01	2.8256E+01
S	2.1821E+00	2.3524E+00	2.4684E+00
Z	2.5807E+00	3.1053E+00	3.3936E+00
GAME	7.4558E-01	7.8413E-01	7.9850E-01
U	4.9451E+01	1.0845E+01	1.1237E+01

SPECIES	MOLE FRACTIONS		
E-	6.1250E-01	6.7797E-01	7.0532E-01
A	9.3580E-03	1.7649E-03	5.4033E-04
A+	1.5029E-01	4.5526E-02	2.1069E-02
A++	2.2134E-01	1.9451E-01	1.4890E-01
A+++	6.5088E-03	7.7488E-02	1.1035E-01
A++++	2.0188E-06	2.7343E-03	1.3673E-02
AV	6.6612E-12	5.4720E-06	1.4290E-04
AVI	1.3820E-19	4.5264E-10	9.6615E-08
AVII	5.9835E-30	9.8539E-16	2.8188E-12
AVIII	5.5647E-43	4.0596E-23	2.5313E-18

P1 = 1.00E+04 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2199E+03	3.8294E+04	5.7585E+04
T	1.4806E+02	2.4233E+02	2.8331E+02
RHO	1.1324E+01	5.2254E+01	6.1582E+01
H	9.1935E+02	1.6521E+03	2.0351E+03
A	1.6635E+01	2.3904E+01	2.7293E+01
S	2.1463E+00	2.3134E+00	2.4266E+00
Z	2.5169E+00	3.0242E+00	3.3006E+00
GAME	7.4260E-01	7.7967E-01	7.9662E-01
U	4.8038E+01	1.0456E+01	1.0821E+01

SPECIES	MOLE FRACTIONS		
E-	6.0268E-01	6.6934E-01	6.9702E-01
A	1.1786E-02	2.5059E-03	8.0420E-04
A+	1.7270E-01	5.6153E-02	2.7306E-02
A++	2.0850E-01	2.0445E-01	1.6406E-01
A+++	4.3264E-03	6.5942E-02	1.0171E-01
A++++	8.1584E-07	1.6132E-03	9.0436E-03
AV	1.4249E-12	2.0222E-06	6.1753E-05
AVI	1.3468E-20	9.3272E-11	2.4574E-08
AVII	2.0904E-31	9.9126E-17	3.7681E-13
AVIII	5.8370E-45	1.7523E-24	1.5904E-19

P1 = 1.00E+04 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7299E+03	4.2667E+04	6.4589E+04
T	1.5820E+02	2.6078E+02	3.0568E+02
RHO	1.1300E+01	5.1351E+01	6.0604E+01
H	1.0305E+03	1.8504E+03	2.2875E+03
A	1.7693E+01	2.5590E+01	2.9184E+01
S	2.2190E+00	2.3910E+00	2.5097E+00
Z	2.6459E+00	3.1861E+00	3.4864E+00
GAME	7.4786E-01	7.8814E-01	7.9917E-01
U	5.0853E+01	1.1240E+01	1.1650E+01

SPECIES	MOLE FRACTIONS		
E-	6.2206E-01	6.8614E-01	7.1317E-01
A	7.2461E-03	1.2381E-03	3.6660E-04
A+	1.2903E-01	3.6627E-02	1.6259E-02
A++	2.3197E-01	1.8291E-01	1.3383E-01
A+++	9.6899E-03	8.8655E-02	1.1653E-01
A++++	4.9667E-06	4.4143E-03	1.9538E-02
AV	3.1120E-11	1.3707E-05	3.0108E-04
AVI	1.4264E-18	1.9608E-09	3.2979E-07
AVII	1.7295E-28	8.3390E-15	1.7259E-11
AVIII	5.3919E-41	7.5621E-22	3.0717E-17

TABLE I.- Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4638E+01	2.6399E+02
T	1.2892E+01	1.6278E+01	2.9107E+01
RHO	3.7155E+00	5.1997E+00	9.0636E+00
H	1.2892E+01	1.6278E+01	2.9288E+01
A	3.5905E+00	4.0345E+00	5.3017E+00
S	1.1246E+00	1.1253E+00	1.1417E+00
Z	1.0000E+00	1.0000E+00	1.0007E+00
GAME	1.0000E+00	9.9997E-01	9.6503E-01
U	4.5391E+00	3.2320E+00	3.1488E+00

SPECIES	MOLE FRACTIONS		
E-	1.0421E-09	1.4600E-07	6.5924E-04
A	1.0000E+00	1.0000E+00	9.9868E-01
A+	1.0421E-09	1.4600E-07	6.5924E-04
A++	1.8126E-34	9.7663E-28	1.5096E-14
A+++	4.6496E-75	1.0421E-59	2.5391E-33
A++++	0.	0.	1.9532E-62
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9070E+01	1.2786E+02	3.7991E+02
T	1.8181E+01	2.3403E+01	3.8184E+01
RHO	3.7991E+00	5.4632E+00	9.8579E+00
H	1.8181E+01	2.3418E+01	4.0862E+01
A	4.2635E+00	4.8256E+00	5.6717E+00
S	1.1469E+00	1.1498E+00	1.1660E+00
Z	1.0000E+00	1.0001E+00	1.0093E+00
GAME	9.9980E-01	9.9498E-01	8.3470E-01
U	5.4901E+00	3.7988E+00	3.4519E+00

SPECIES	MOLE FRACTIONS		
E-	1.3239E-06	5.6222E-05	9.2110E-03
A	1.0000E+00	9.9989E-01	9.8158E-01
A+	1.3239E-06	5.6222E-05	9.2110E-03
A++	3.7004E-24	2.2153E-18	1.3466E-10
A+++	1.3498E-53	7.1412E-42	9.1870E-25
A++++	0.	6.9720E-78	8.9967E-47
AV	0.	0.	4.6312E-77
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0488E+02	3.2848E+02
T	1.5416E+01	1.9658E+01	3.4012E+01
RHO	3.7624E+00	5.3350E+00	9.3918E+00
H	1.5416E+01	1.9659E+01	3.4937E+01
A	3.9263E+00	4.4326E+00	5.5386E+00
S	1.1372E+00	1.1380E+00	1.1542E+00
Z	1.0000E+00	1.0000E+00	1.0033E+00
GAME	9.9999E-01	9.9946E-01	8.9898E-01
U	5.0154E+00	3.5250E+00	3.3305E+00

SPECIES	MOLE FRACTIONS		
E-	5.8278E-08	4.1822E-06	3.2806E-03
A	1.0000E+00	9.9999E-01	9.9344E-01
A+	5.8278E-08	4.1822E-06	3.2806E-03
A++	8.6718E-29	2.9151E-22	3.7629E-12
A+++	1.6621E-64	3.6318E-50	3.8523E-28
A++++	0.	0.	5.1517E-53
AV	0.	0.	7.2328E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1082E+01	1.5335E+02	4.4034E+02
T	2.1180E+01	2.7418E+01	4.1516E+01
RHO	3.8282E+00	5.5908E+00	1.0417E+01
H	2.1184E+01	2.7532E+01	4.6874E+01
A	4.5982E+00	5.1692E+00	5.7920E+00
S	1.1599E+00	1.1608E+00	1.1772E+00
Z	1.0000E+00	1.0004E+00	1.0182E+00
GAME	9.9825E-01	9.7417E-01	7.9363E-01
U	5.9620E+00	4.0622E+00	3.4824E+00

SPECIES	MOLE FRACTIONS		
E-	1.5907E-05	4.2116E-04	1.7861E-02
A	9.9997E-01	9.9916E-01	9.6428E-01
A+	1.5907E-05	4.2116E-04	1.7861E-02
A++	2.3094E-20	2.2934E-15	1.3808E-09
A+++	3.9171E-46	3.0069E-35	1.4952E-22
A++++	0.	2.8964E-66	1.1962E-42
AV	0.	0.	2.3887E-69
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ kN/m^2$

P1 = 2.00E+04 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4141E+01	1.8525E+02	5.0442E+02
T	2.4405E+01	3.1698E+01	4.4329E+01
RHO	3.8570E+00	5.8321E+00	1.1054E+01
H	2.4436E+01	3.2270E+01	5.3165E+01
A	4.9167E+00	5.4087E+00	5.9209E+00
S	1.1702E+00	1.1713E+00	1.1884E+00
Z	1.0001E+00	1.0021E+00	1.0294E+00
GAME	9.9044E-01	9.2098E-01	7.6826E-01
U	6.4389E+00	4.2379E+00	3.4732E+00

SPECIES	MOLE FRACTIONS		
E-	1.1785E-04	2.0572E-03	2.8524E-02
A	9.9976E-01	9.9589E-01	9.4295E-01
A+	1.1785E-04	2.0572E-03	2.8524E-02
A++	2.2023E-17	5.4455E-13	7.3819E-09
A+++	7.9452E-40	4.4483E-30	5.9003E-21
A++++	8.4746E-74	1.3313E-56	1.0325E-39
AV	0.	7.2989E-92	1.1260E-64
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2383E+02	2.8331E+02	6.5662E+02
T	3.1155E+01	3.9778E+01	4.9135E+01
RHO	3.9666E+00	7.0128E+00	1.2641E+01
H	3.1731E+01	4.4299E+01	6.7056E+01
A	5.3542E+00	5.6847E+00	6.2012E+00
S	1.1891E+00	1.1915E+00	1.2115E+00
Z	1.0021E+00	1.0156E+00	1.0571E+00
GAME	9.1826E-01	7.9992E-01	7.4033E-01
U	7.4303E+00	4.1838E+00	3.4162E+00

SPECIES	MOLE FRACTIONS		
E-	2.0820E-03	1.5359E-02	5.4055E-02
A	9.9584E-01	9.6928E-01	8.9189E-01
A+	2.0820E-03	1.5359E-02	5.4055E-02
A++	4.3266E-13	6.2051E-10	7.9327E-08
A+++	2.1328E-30	2.0444E-23	1.1297E-18
A++++	2.7407E-57	2.3710E-44	1.6525E-35
AV	0.	3.7659E-72	5.5349E-58
AVI	0.	0.	1.6394E-86
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0830E+02	2.2748E+02	5.7440E+02
T	2.7782E+01	3.5926E+01	4.6830E+01
RHO	3.8958E+00	6.2895E+00	1.1766E+01
H	2.7942E+01	3.7836E+01	5.9824E+01
A	5.1813E+00	5.5513E+00	6.0579E+00
S	1.1799E+00	1.1814E+00	1.1999E+00
Z	1.0006E+00	1.0067E+00	1.0425E+00
GAME	9.6574E-01	8.5205E-01	7.5171E-01
U	6.9230E+00	4.2716E+00	3.4463E+00

SPECIES	MOLE FRACTIONS		
E-	5.8924E-04	6.6973E-03	4.0751E-02
A	9.9882E-01	9.8661E-01	9.1850E-01
A+	5.8924E-04	6.6973E-03	4.0751E-02
A++	5.5825E-15	3.2870E-11	2.7271E-08
A+++	1.5319E-34	3.2959E-26	1.0513E-19
A++++	6.1588E-66	1.6897E-49	2.0582E-37
AV	0.	2.4445E-80	5.0426E-61
AVI	0.	0.	5.7205E-91
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4107E+02	3.5167E+02	7.5879E+02
T	3.4310E+01	4.3119E+01	5.1406E+01
RHO	4.0893E+00	7.9337E+00	1.3747E+01
H	3.5830E+01	5.1426E+01	7.5058E+01
A	5.4553E+00	5.8380E+00	6.3551E+00
S	1.1981E+00	1.2018E+00	1.2235E+00
Z	1.0054E+00	1.0280E+00	1.0738E+00
GAME	8.6272E-01	7.6888E-01	7.3169E-01
U	7.9742E+00	4.0991E+00	3.3918E+00

SPECIES	MOLE FRACTIONS		
E-	5.3927E-03	2.7251E-02	6.8698E-02
A	9.8921E-01	9.4550E-01	8.6260E-01
A+	5.3927E-03	2.7251E-02	6.8697E-02
A++	1.1549E-11	4.9895E-09	2.0295E-07
A+++	2.6220E-27	2.0294E-21	9.2794E-18
A++++	1.2583E-51	1.1433E-40	8.0581E-34
AV	8.8678E-84	2.6682E-66	2.6414E-55
AVI	0.	0.	1.2098E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6012E+02	4.3677E+02	8.8600E+02
T	3.7120E+01	4.6133E+01	5.3666E+01
RHO	4.2666E+00	9.0743E+00	1.5118E+01
H	4.0248E+01	5.9291E+01	8.3902E+01
A	5.5385E+00	6.0086E+00	6.5176E+00
S	1.2070E+00	1.2125E+00	1.2360E+00
Z	1.0110E+00	1.0433E+00	1.0921E+00
GAME	8.1739E-01	7.5009E-01	7.2481E-01
U	8.5555E+00	4.0081E+00	3.3760E+00

SPECIES	MOLE FRACTIONS		
E-	1.0878E-02	4.1544E-02	8.4314E-02
A	9.7824E-01	9.1691E-01	8.3137E-01
A+	1.0878E-02	4.1544E-02	8.4314E-02
A++	1.3272E-10	2.4384E-08	4.6902E-07
A+++	5.1564E-25	6.9755E-20	6.2083E-17
A++++	1.7434E-47	8.0950E-38	2.7874E-32
AV	1.1615E-77	9.7665E-62	8.0618E-53
AVI	0.	0.	6.2640E-79
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0329E+02	6.5879E+02	1.2197E+03
T	4.1759E+01	5.1456E+01	5.8125E+01
RHO	4.7350E+00	1.1858E+01	1.8531E+01
H	4.9973E+01	7.6865E+01	1.0389E+02
A	5.7325E+00	6.3662E+00	6.8560E+00
S	1.2254E+00	1.2353E+00	1.2626E+00
Z	1.0281E+00	1.0797E+00	1.1323E+00
GAME	7.6540E-01	7.2950E-01	7.1416E-01
U	9.7894E+00	3.8933E+00	3.3671E+00

SPECIES	MOLE FRACTIONS		
E-	2.7362E-02	7.3799E-02	1.1688E-01
A	9.4528E-01	8.5240E-01	7.6625E-01
A+	2.7362E-02	7.3799E-02	1.1687E-01
A++	3.5293E-09	2.3919E-07	1.9513E-06
A+++	6.8023E-22	1.2142E-17	1.6383E-15
A++++	1.0107E-41	1.2003E-33	1.2373E-29
AV	2.9021E-68	4.7130E-55	1.3884E-48
AVI	0.	2.9470E-82	9.8503E-73
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.8091E+02	5.3802E+02	1.0397E+03
T	3.9583E+01	4.8877E+01	5.5909E+01
RHO	4.4865E+00	1.0378E+01	1.6727E+01
H	4.4968E+01	6.7754E+01	9.3540E+01
A	5.6302E+00	6.1857E+00	6.6855E+00
S	1.2161E+00	1.2236E+00	1.2496E+00
Z	1.0187E+00	1.0607E+00	1.1117E+00
GAME	7.8613E-01	7.3803E-01	7.1909E-01
U	9.1642E+00	3.9527E+00	3.3683E+00

SPECIES	MOLE FRACTIONS		
E-	1.8339E-02	5.7225E-02	1.0050E-01
A	9.6332E-01	8.8555E-01	7.9900E-01
A+	1.8339E-02	5.7225E-02	1.0050E-01
A++	8.3979E-10	8.5102E-08	9.9344E-07
A+++	2.9381E-23	1.1601E-18	3.4526E-16
A++++	3.2897E-44	1.4965E-35	6.7686E-31
AV	4.6165E-72	4.0428E-58	1.3132E-50
AVI	0.	8.2445E-87	1.0545E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2716E+02	7.9707E+02	1.4257E+03
T	4.3715E+01	5.3879E+01	6.0312E+01
RHO	5.0013E+00	1.3453E+01	2.0491E+01
H	5.5250E+01	8.6489E+01	1.1489E+02
A	5.8420E+00	6.5452E+00	7.0275E+00
S	1.2350E+00	1.2476E+00	1.2767E+00
Z	1.0390E+00	1.0997E+00	1.1536E+00
GAME	7.5140E-01	7.2303E-01	7.0980E-01
U	1.0423E+01	3.8639E+00	3.3712E+00

SPECIES	MOLE FRACTIONS		
E-	3.7561E-02	9.0647E-02	1.3316E-01
A	9.2488E-01	8.1871E-01	7.3368E-01
A+	3.7561E-02	9.0646E-02	1.3315E-01
A++	1.1246E-08	5.7035E-07	3.5955E-06
A+++	8.8543E-21	8.8732E-17	6.7790E-15
A++++	1.2376E-39	4.9172E-32	1.7601E-28
AV	9.1933E-65	1.8205E-52	9.8901E-47
AVI	0.	1.8579E-78	5.2254E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5242E+02	9.5471E+02	1.6574E+03
T	4.5500E+01	5.6196E+01	6.2474E+01
RHO	5.2779E+00	1.5162E+01	2.2573E+01
H	6.0789E+01	9.6647E+01	1.2649E+02
A	5.9556E+00	6.7226E+00	7.1995E+00
S	1.2449E+00	1.2605E+00	1.2913E+00
Z	1.0511E+00	1.1205E+00	1.1753E+00
GAME	7.4162E-01	7.1775E-01	7.0591E-01
U	1.1061E+01	3.8426E+00	3.3799E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8632E-02	1.0752E-01	1.4917E-01
A	9.0274E-01	7.8496E-01	7.0167E-01
A+	4.8632E-02	1.0752E-01	1.4916E-01
A++	2.9444E-08	1.2097E-06	6.2828E-06
A+++	7.3974E-20	5.0183E-16	2.4999E-14
A++++	5.8773E-38	1.2464E-30	2.0219E-27
AV	3.2274E-62	3.1891E-50	4.9954E-45
AVI	0.	3.3641E-75	1.6654E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0692E+02	1.3320E+03	2.1990E+03
T	4.8708E+01	6.0617E+01	6.6761E+01
RHO	5.8441E+00	1.8885E+01	2.7008E+01
H	7.2636E+01	1.1854E+02	1.5141E+02
A	6.1883E+00	7.0727E+00	7.5462E+00
S	1.2656E+00	1.2880E+00	1.3222E+00
Z	1.0782E+00	1.1636E+00	1.2196E+00
GAME	7.2919E-01	7.0921E-01	6.9940E-01
U	1.2337E+01	3.8055E+00	3.4093E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	7.2540E-02	1.4061E-01	1.8004E-01
A	8.5492E-01	7.1879E-01	6.3994E-01
A+	7.2539E-02	1.4060E-01	1.8000E-01
A++	1.3694E-07	4.2647E-06	1.7011E-05
A+++	2.2767E-18	9.4435E-15	2.6155E-13
A++++	3.3357E-35	3.0589E-28	1.6389E-25
AV	8.8059E-58	2.2809E-46	5.8672E-42
AVI	6.5567E-87	1.7355E-69	5.5191E-63
AVII	0.	0.	3.3283E-91
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7902E+02	1.1343E+03	1.9151E+03
T	4.7155E+01	5.8445E+01	6.4619E+01
RHO	5.5600E+00	1.6996E+01	2.4752E+01
H	6.6585E+01	1.0737E+02	1.3867E+02
A	6.0713E+00	6.8990E+00	7.3721E+00
S	1.2551E+00	1.2740E+00	1.3065E+00
Z	1.0642E+00	1.1419E+00	1.1973E+00
GAME	7.3452E-01	7.1320E-01	7.0244E-01
U	1.1699E+01	3.8102E+00	3.3926E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0349E-02	1.2426E-01	1.6481E-01
A	8.7930E-01	7.5148E-01	6.7038E-01
A+	6.0349E-02	1.2426E-01	1.6479E-01
A++	6.6955E-08	2.3548E-06	1.0517E-05
A+++	4.6003E-19	2.3563E-15	8.3967E-14
A++++	1.7262E-36	2.2529E-29	1.9537E-26
AV	7.5376E-60	3.3371E-48	1.9197E-43
AVI	1.7135E-90	3.1550E-72	3.5991E-65
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3609E+02	1.5507E+03	2.5093E+03
T	5.0180E+01	6.2747E+01	6.8913E+01
RHO	6.1279E+00	2.0844E+01	2.9318E+01
H	7.8940E+01	1.3021E+02	1.6470E+02
A	6.3061E+00	7.2454E+00	7.7228E+00
S	1.2765E+00	1.3026E+00	1.3384E+00
Z	1.0930E+00	1.1856E+00	1.2420E+00
GAME	7.2506E-01	7.0566E-01	6.9684E-01
U	1.2973E+01	3.8053E+00	3.4300E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.5075E-02	1.5655E-01	1.9483E-01
A	8.2985E-01	6.8691E-01	6.1036E-01
A+	8.5074E-02	1.5653E-01	1.9478E-01
A++	2.5810E-07	7.3209E-06	2.6779E-05
A+++	9.4455E-18	3.3554E-14	7.6761E-13
A++++	4.6658E-34	3.2751E-27	1.2273E-24
AV	6.1201E-56	1.0150E-44	1.4880E-40
AVI	4.5757E-84	4.3669E-67	6.3779E-61
AVII	0.	0.	3.1734E-88
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 20\ kN/m^2$

P1 = 2.00E+04 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6652E+02	1.7905E+03	2.8439E+03
T	5.1586E+01	6.4850E+01	7.1068E+01
RHO	6.4097E+00	2.2860E+01	3.1651E+01
H	8.5497E+01	1.4237E+02	1.7839E+02
A	6.4243E+00	7.4178E+00	7.9014E+00
S	1.2877E+00	1.3176E+00	1.3548E+00
Z	1.1085E+00	1.2078E+00	1.2643E+00
GAME	7.2177E-01	7.0251E-01	6.9484E-01
U	1.3606E+01	3.8096E+00	3.4372E+00

SPECIES	MOLE FRACTIONS		
E-	9.7851E-02	1.7204E-01	2.0904E-01
A	8.0430E-01	6.5594E-01	5.8197E-01
A+	9.7850E-02	1.7201E-01	2.0895E-01
A++	4.5617E-07	1.2049E-05	4.1095E-05
A+++	3.4179E-17	1.0868E-13	2.1283E-12
A++++	5.1630E-33	2.9638E-26	8.2442E-24
AV	3.1916E-54	3.5211E-43	3.1521E-39
AVI	3.2371E-81	8.2175E-65	5.5838E-59
AVII	0.	1.4399E-94	1.9473E-85
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.3146E+02	2.3410E+03	3.6086E+03
T	5.4256E+01	6.9069E+01	7.5615E+01
RHO	6.9674E+00	2.7056E+01	3.6418E+01
H	9.9388E+01	1.6830E+02	2.0799E+02
A	6.6626E+00	7.7685E+00	8.2852E+00
S	1.3110E+00	1.3491E+00	1.3895E+00
Z	1.1414E+00	1.2528E+00	1.3104E+00
GAME	7.1684E-01	6.9747E-01	6.9278E-01
U	1.4879E+01	3.8276E+00	3.5084E+00

SPECIES	MOLE FRACTIONS		
E-	1.2385E-01	2.0176E-01	2.3688E-01
A	7.5231E-01	5.9651E-01	5.2633E-01
A+	1.2385E-01	2.0170E-01	2.3669E-01
A++	1.2324E-06	2.9905E-05	9.4508E-05
A+++	3.2372E-16	9.4056E-13	1.5598E-11
A++++	3.2703E-31	1.6865E-24	3.3814E-22
AV	2.2841E-51	2.3383E-40	1.2113E-36
AVI	4.1509E-77	1.1691E-60	3.4428E-55
AVII	0.	7.0530E-88	5.6285E-80
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9820E+02	2.0538E+03	3.2087E+03
T	5.2940E+01	6.6951E+01	7.3295E+01
RHO	6.6883E+00	2.4937E+01	3.4013E+01
H	9.2306E+01	1.5505E+02	1.9282E+02
A	6.5430E+00	7.5916E+00	8.0882E+00
S	1.2992E+00	1.3331E+00	1.3719E+00
Z	1.1246E+00	1.2301E+00	1.2871E+00
GAME	7.1908E-01	6.9977E-01	6.9345E-01
U	1.4238E+01	3.8062E+00	3.4704E+00

SPECIES	MOLE FRACTIONS		
E-	1.1079E-01	1.8708E-01	2.2307E-01
A	7.7843E-01	6.2585E-01	5.5392E-01
A+	1.1079E-01	1.8704E-01	2.2295E-01
A++	7.6535E-07	1.9205E-05	6.2495E-05
A+++	1.1010E-16	3.2819E-13	5.7919E-12
A++++	4.5057E-32	2.3540E-25	5.3385E-23
AV	1.0214E-52	9.9215E-42	6.2983E-38
AVI	5.3114E-79	1.1333E-62	4.5162E-57
AVII	0.	8.8281E-91	1.0930E-82
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6559E+02	2.6441E+03	4.0295E+03
T	5.5532E+01	7.1177E+01	7.7993E+01
RHO	7.2363E+00	2.9130E+01	3.8734E+01
H	1.0670E+02	1.8188E+02	2.2356E+02
A	6.7824E+00	7.9469E+00	8.4907E+00
S	1.3231E+00	1.3654E+00	1.4073E+00
Z	1.1586E+00	1.2753E+00	1.3338E+00
GAME	7.1495E-01	6.9574E-01	6.9300E-01
U	1.5505E+01	3.8553E+00	3.5529E+00

SPECIES	MOLE FRACTIONS		
E-	1.3692E-01	2.1587E-01	2.5027E-01
A	7.2617E-01	5.6831E-01	4.9960E-01
A+	1.3691E-01	2.1578E-01	2.4999E-01
A++	1.9133E-06	4.5415E-05	1.4148E-04
A+++	8.8248E-16	2.5464E-12	4.1062E-11
A++++	2.1156E-30	1.0839E-23	2.0447E-21
AV	4.6843E-50	4.6229E-39	2.1520E-35
AVI	4.0032E-75	9.3070E-59	2.3271E-53
AVII	0.	3.8549E-85	2.4245E-77
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 20 kN/m^2

P1 = 2.00E+04 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.0088E+02	2.9685E+03	4.4775E+03
T	5.6780E+01	7.3319E+01	8.0482E+01
RHO	7.4984E+00	3.1193E+01	4.0980E+01
H	1.1426E+02	1.9592E+02	2.3971E+02
A	6.9028E+00	8.1303E+00	8.7095E+00
S	1.3356E+00	1.3821E+00	1.4255E+00
Z	1.1764E+00	1.2980E+00	1.3576E+00
GAME	7.1333E-01	6.9460E-01	6.9424E-01
U	1.6127E+01	3.8829E+00	3.6047E+00

SPECIES	MOLE FRACTIONS		
E-	1.4998E-01	2.2956E-01	2.6341E-01
A	7.0005E-01	5.4095E-01	4.7340E-01
A+	1.4997E-01	2.2942E-01	2.6298E-01
A++	2.8838E-06	6.7940E-05	2.1145E-04
A+++	2.2527E-15	6.6685E-12	1.0785E-10
A++++	1.2019E-29	6.5320E-23	1.2271E-20
AV	7.5511E-49	8.2251E-38	3.7686E-34
AVI	2.3905E-73	6.3429E-57	1.5403E-51
AVII	0.	1.6909E-82	1.0213E-74
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.7517E+02	3.6805E+03	5.4634E+03
T	5.9216E+01	7.7782E+01	8.5950E+01
RHO	8.0040E+00	3.5209E+01	4.5179E+01
H	1.3014E+02	2.2544E+02	2.7391E+02
A	7.1468E+00	8.5206E+00	9.2034E+00
S	1.3612E+00	1.4163E+00	1.4627E+00
Z	1.2135E+00	1.3439E+00	1.4070E+00
GAME	7.1078E-01	6.9452E-01	7.0044E-01
U	1.7366E+01	3.9610E+00	3.7356E+00

SPECIES	MOLE FRACTIONS		
E-	1.7595E-01	2.5591E-01	2.8925E-01
A	6.4810E-01	4.8833E-01	4.2199E-01
A+	1.7594E-01	2.5561E-01	2.8829E-01
A++	6.1078E-06	1.4815E-04	4.7920E-04
A+++	1.2609E-14	4.3223E-11	7.7358E-10
A++++	2.9232E-28	2.1151E-21	4.6802E-19
AV	1.2382E-46	2.1443E-35	1.2397E-31
AVI	4.2076E-70	2.1918E-53	7.2201E-48
AVII	0.	2.0883E-77	1.8347E-69
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.3742E+02	3.3140E+03	4.9556E+03
T	5.8006E+01	7.5514E+01	8.3123E+01
RHO	7.7547E+00	3.3226E+01	4.3140E+01
H	1.2208E+02	2.1045E+02	2.5649E+02
A	7.0243E+00	8.3208E+00	8.9458E+00
S	1.3482E+00	1.3991E+00	1.4440E+00
Z	1.1947E+00	1.3208E+00	1.3819E+00
GAME	7.1196E-01	6.9416E-01	6.9667E-01
U	1.6747E+01	3.9195E+00	3.6651E+00

SPECIES	MOLE FRACTIONS		
E-	1.6300E-01	2.4289E-01	2.7638E-01
A	6.7401E-01	5.1432E-01	4.4755E-01
A+	1.6299E-01	2.4269E-01	2.7575E-01
A++	4.2405E-06	1.0063E-04	3.1720E-04
A+++	5.4398E-15	1.7090E-11	2.8627E-10
A++++	6.0816E-29	3.7716E-22	7.4754E-20
AV	9.5682E-48	1.3647E-36	6.7190E-33
AVI	8.0630E-72	3.9095E-55	1.0368E-49
AVII	0.	6.4861E-80	4.3006E-72
AVIII	0.	0.	0.

P1 = 2.00E+04 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.1413E+02	4.0662E+03	6.0016E+03
T	6.0414E+01	8.0139E+01	8.8982E+01
RHO	8.2459E+00	3.7108E+01	4.7086E+01
H	1.3847E+02	2.4088E+02	2.9202E+02
A	7.2707E+00	8.7317E+00	9.4832E+00
S	1.3744E+00	1.4338E+00	1.4815E+00
Z	1.2328E+00	1.3673E+00	1.4324E+00
GAME	7.0979E-01	6.9581E-01	7.0555E-01
U	1.7982E+01	4.0137E+00	3.8180E+00

SPECIES	MOLE FRACTIONS		
E-	1.8881E-01	2.6864E-01	3.0189E-01
A	6.2239E-01	4.6293E-01	3.9694E-01
A+	1.8879E-01	2.6821E-01	3.0044E-01
A++	8.6398E-06	2.1747E-04	7.2860E-04
A+++	2.7990E-14	1.0872E-10	2.1277E-09
A++++	1.2653E-27	1.1708E-20	3.0189E-18
AV	1.2298E-45	3.2971E-34	2.3960E-30
AVI	1.0504E-68	1.1965E-51	5.4040E-46
AVII	0.	6.6156E-75	8.8331E-67
AVIII	0.	0.	7.7685E-92

TABLE I. - Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.5429E+02	4.4767E+03	6.5709E+03
T	6.1606E+01	8.2625E+01	9.2329E+01
RHO	8.4800E+00	3.8948E+01	4.8765E+01
H	1.4704E+02	2.5684E+02	3.1085E+02
A	7.3961E+00	8.9579E+00	9.7955E+00
S	1.3879E+00	1.4515E+00	1.5009E+00
Z	1.2524E+00	1.3911E+00	1.4594E+00
GAME	7.0897E-01	6.9813E-01	7.1209E-01
U	1.8596E+01	4.0531E+00	3.9145E+00

SPECIES	MOLE FRACTIONS		
E-	2.0156E-01	2.8115E-01	3.1479E-01
A	5.9690E-01	4.3803E-01	3.7155E-01
A+	2.0153E-01	2.8051E-01	3.1253E-01
A++	1.2040E-05	3.1982E-04	1.1290E-03
A+++	6.0393E-14	2.7511E-10	6.1329E-09
A++++	5.3102E-27	6.5270E-20	2.1120E-17
AV	1.2630E-44	5.0952E-33	5.2345E-29
AVI	3.6316E-67	6.5111E-50	4.7972E-44
AVII	0.	2.0357E-72	5.3381E-64
AVIII	0.	0.	4.3916E-88

P1 = 2.00E+04 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.3820E+02	5.3419E+03	7.8044E+03
T	6.3983E+01	8.8020E+01	9.9951E+01
RHO	8.9226E+00	4.2145E+01	5.1508E+01
H	1.6495E+02	2.9000E+02	3.5079E+02
A	7.6528E+00	9.4615E+00	1.0492E+01
S	1.4155E+00	1.4871E+00	1.5399E+00
Z	1.2931E+00	1.4400E+00	1.5159E+00
GAME	7.0787E-01	7.0627E-01	7.2653E-01
U	1.9819E+01	4.1991E+00	4.1558E+00

SPECIES	MOLE FRACTIONS		
E-	2.2664E-01	3.0556E-01	3.4033E-01
A	5.4675E-01	3.8958E-01	3.2212E-01
A+	2.2659E-01	3.0417E-01	3.3477E-01
A++	2.2536E-05	6.9799E-04	2.7809E-03
A+++	2.5869E-13	1.8042E-09	5.4780E-08
A++++	7.8268E-26	2.0908E-18	1.1693E-15
AV	9.1960E-43	1.2559E-30	2.9918E-26
AVI	1.9049E-64	1.9792E-46	4.8065E-40
AVII	0.	1.9284E-67	2.6147E-58
AVIII	0.	9.1167E-93	1.9645E-80

P1 = 2.00E+04 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9565E+02	4.9008E+03	7.1709E+03
T	6.2794E+01	8.5239E+01	9.5952E+01
RHO	8.7057E+00	4.0623E+01	5.0261E+01
H	1.5587E+02	2.7320E+02	3.3039E+02
A	7.5234E+00	9.2001E+00	1.0131E+01
S	1.4016E+00	1.4693E+00	1.5201E+00
Z	1.2725E+00	1.4153E+00	1.4869E+00
GAME	7.0833E-01	7.0161E-01	7.1937E-01
U	1.9209E+01	4.1211E+00	4.0240E+00

SPECIES	MOLE FRACTIONS		
E-	2.1417E-01	2.9344E-01	3.2747E-01
A	5.7168E-01	4.1359E-01	3.4681E-01
A+	2.1413E-01	2.9250E-01	3.2395E-01
A++	1.6561E-05	4.7126E-04	1.7604E-03
A+++	1.2624E-13	6.9979E-10	1.8006E-08
A++++	2.0596E-26	3.6568E-19	1.5233E-16
AV	1.0638E-43	7.8959E-32	1.1941E-27
AVI	7.4664E-66	3.5379E-48	4.5010E-42
AVII	0.	6.1948E-70	3.4347E-61
AVIII	0.	0.	2.6482E-84

P1 = 2.00E+04 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.8193E+02	5.7969E+03	8.4607E+03
T	6.5178E+01	9.0987E+01	1.0408E+02
RHO	9.1302E+00	4.3481E+01	5.2643E+01
H	1.7428E+02	3.0723E+02	3.7160E+02
A	7.7846E+00	9.7428E+00	1.0845E+01
S	1.4296E+00	1.5050E+00	1.5588E+00
Z	1.3140E+00	1.4652E+00	1.5441E+00
GAME	7.0760E-01	7.1200E-01	7.3179E-01
U	2.0428E+01	4.2943E+00	4.2753E+00

SPECIES	MOLE FRACTIONS		
E-	2.3895E-01	3.1752E-01	3.5238E-01
A	5.2214E-01	3.6600E-01	2.9954E-01
A+	2.3889E-01	3.1544E-01	3.4379E-01
A++	3.0383E-05	1.0396E-03	4.2936E-03
A+++	5.1830E-13	4.7218E-09	1.5889E-07
A++++	2.8110E-25	1.2249E-17	8.2409E-15
AV	6.9114E-42	2.0712E-29	6.5583E-25
AVI	3.4316E-63	1.1677E-44	4.2373E-38
AVII	6.0737E-92	6.5265E-65	1.5164E-55
AVIII	0.	2.3801E-89	1.0177E-76

TABLE I. - Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2684E+02	6.2656E+03	9.1462E+03
T	6.6383E+01	9.4163E+01	1.0843E+02
RHO	9.3280E+00	4.4628E+01	5.3631E+01
H	1.8386E+02	3.2488E+02	3.9314E+02
A	7.9193E+00	1.0043E+01	1.1191E+01
S	1.4440E+00	1.5229E+00	1.5777E+00
Z	1.3353E+00	1.4910E+00	1.5728E+00
GAME	7.0753E-01	7.1846E-01	7.3444E-01
U	2.1034E+01	4.4014E+00	4.4075E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.5109E-01	3.2930E-01	3.6419E-01
A	4.9785E-01	3.4296E-01	2.7814E-01
A+	2.5101E-01	3.2619E-01	3.5115E-01
A++	4.0661E-05	1.5564E-03	6.5221E-03
A+++	1.0247E-12	1.2534E-08	4.4681E-07
A++++	9.9511E-25	7.3387E-17	5.5040E-14
AV	5.2628E-41	3.5199E-28	1.3230E-23
AVI	6.9744E-62	7.1362E-43	3.3181E-36
AVII	5.3908E-90	2.2785E-62	7.4199E-53
AVIII	0.	6.2837E-86	4.2057E-73

P1 = 2.00E+04 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.2044E+02	7.2450E+03	1.0605E+04
T	6.8842E+01	1.0111E+02	1.1736E+02
RHO	9.6952E+00	4.6432E+01	5.5399E+01
H	2.0380E+02	3.6156E+02	4.3838E+02
A	8.1990E+00	1.0676E+01	1.1842E+01
S	1.4732E+00	1.5581E+00	1.6157E+00
Z	1.3791E+00	1.5432E+00	1.6310E+00
GAME	7.0808E-01	7.3047E-01	7.3258E-01
U	2.2247E+01	4.6528E+00	4.6932E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7487E-01	3.5199E-01	3.8689E-01
A	4.5033E-01	2.9949E-01	2.3991E-01
A+	2.7473E-01	3.4505E-01	3.5952E-01
A++	7.1623E-05	3.4723E-03	1.3681E-02
A+++	3.8606E-12	8.8346E-08	2.8932E-06
A++++	1.1466E-23	2.6238E-15	1.7329E-12
AV	2.5380E-39	1.0031E-25	3.1415E-21
AVI	1.9138E-59	2.5933E-39	9.3989E-33
AVII	1.4489E-86	2.6179E-57	5.8780E-48
AVIII	0.	3.9868E-79	1.6055E-66

P1 = 2.00E+04 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.7336E+02	6.7562E+03	9.8720E+03
T	6.7606E+01	9.7591E+01	1.1293E+02
RHO	9.5198E+00	4.5626E+01	5.4570E+01
H	1.9372E+02	3.4313E+02	4.1560E+02
A	8.0575E+00	1.0361E+01	1.1526E+01
S	1.4585E+00	1.5408E+00	1.5968E+00
Z	1.3570E+00	1.5173E+00	1.6020E+00
GAME	7.0768E-01	7.2502E-01	7.3438E-01
U	2.1649E+01	4.5222E+00	4.5488E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6308E-01	3.4095E-01	3.7576E-01
A	4.7389E-01	3.2044E-01	2.5813E-01
A+	2.6297E-01	3.3626E-01	3.5646E-01
A++	5.4115E-05	2.3435E-03	9.6518E-03
A+++	2.0004E-12	3.3862E-08	1.1921E-06
A++++	3.4142E-24	4.5324E-16	3.3574E-13
AV	3.7187E-40	6.2615E-27	2.3207E-22
AVI	1.1907E-60	4.6504E-41	2.1263E-34
AVII	3.0409E-88	8.6737E-60	2.7182E-50
AVIII	0.	1.8620E-82	1.1708E-69

P1 = 2.00E+04 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.6867E+02	7.7424E+03	1.1358E+04
T	7.0102E+01	1.0489E+02	1.2166E+02
RHO	9.8593E+00	4.7008E+01	5.6259E+01
H	2.1414E+02	3.8040E+02	4.6172E+02
A	8.3447E+00	1.0997E+01	1.2142E+01
S	1.4881E+00	1.5759E+00	1.6340E+00
Z	1.4015E+00	1.5703E+00	1.6595E+00
GAME	7.0875E-01	7.3423E-01	7.3028E-01
U	2.2843E+01	4.7962E+00	4.8366E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.8648E-01	3.6318E-01	3.9742E-01
A	4.2713E-01	2.7878E-01	2.2368E-01
A+	2.8629E-01	3.5289E-01	3.6040E-01
A++	9.4484E-05	5.1482E-03	1.8501E-02
A+++	7.4113E-12	2.3199E-07	6.3252E-06
A++++	3.8298E-23	1.5365E-14	7.4443E-12
AV	1.7503E-38	1.6346E-24	3.2036E-20
AVI	3.3389E-58	1.4808E-37	2.7748E-31
AVII	1.0352E-84	8.1368E-55	7.2100E-46
AVIII	0.	8.8768E-76	1.0350E-63

TABLE I.-Continued

p_1 = 20 kN/m^2

P1 = 2.00E+04 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0179E+03	8.2479E+03	1.2123E+04
T	7.1391E+01	1.0876E+02	1.2578E+02
RHO	1.0011E+01	4.7473E+01	5.7104E+01
H	2.2472E+02	3.9963E+02	4.8542E+02
A	8.4950E+00	1.1305E+01	1.2435E+01
S	1.5031E+00	1.5936E+00	1.6521E+00
Z	1.4243E+00	1.5975E+00	1.6878E+00
GAME	7.0971E-01	7.3560E-01	7.2833E-01
U	2.3434E+01	4.9417E+00	4.9705E+00

SPECIES	MOLE FRACTIONS		
E-	2.9791E-01	3.7400E-01	4.0752E-01
A	4.0431E-01	2.5946E-01	2.0899E-01
A+	2.9766E-01	3.5906E-01	3.5948E-01
A++	1.2434E-04	7.4724E-03	2.3999E-02
A+++	1.4145E-11	5.8284E-07	1.2596E-05
A++++	1.2539E-22	8.3226E-14	2.7130E-11
AV	1.1350E-37	2.3588E-23	2.5326E-19
AVI	4.8889E-57	7.0971E-36	5.6914E-30
AVII	4.2626E-83	1.9659E-52	5.2870E-44
AVIII	0.	1.4058E-72	3.3651E-61

P1 = 2.00E+04 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1202E+03	9.2960E+03	1.3710E+04
T	7.4086E+01	1.1634E+02	1.3382E+02
RHO	1.0279E+01	4.8446E+01	5.8658E+01
H	2.4666E+02	4.3954E+02	5.3461E+02
A	8.8130E+00	1.1860E+01	1.3032E+01
S	1.5335E+00	1.6273E+00	1.6886E+00
Z	1.4710E+00	1.6494E+00	1.7466E+00
GAME	7.1269E-01	7.3299E-01	7.2661E-01
U	2.4617E+01	5.2303E+00	5.2369E+00

SPECIES	MOLE FRACTIONS		
E-	3.2019E-01	3.9370E-01	4.2746E-01
A	3.5984E-01	2.2672E-01	1.8212E-01
A+	3.1976E-01	3.6545E-01	3.5340E-01
A++	2.1516E-04	1.4121E-02	3.6970E-02
A+++	5.1757E-11	2.8996E-06	4.1148E-05
A++++	1.3677E-21	1.6060E-12	2.5712E-10
AV	5.0918E-36	2.5684E-21	9.4177E-18
AVI	1.2859E-54	6.4515E-33	1.1434E-27
AVII	1.3857E-79	3.0934E-48	1.0043E-40
AVIII	0.	6.1067E-67	8.8520E-57

P1 = 2.00E+04 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0686E+03	8.7744E+03	1.2925E+04
T	7.2695E+01	1.1255E+02	1.2992E+02
RHO	1.0159E+01	4.8030E+01	5.7930E+01
H	2.3557E+02	4.1940E+02	5.0995E+02
A	8.6479E+00	1.1587E+01	1.2736E+01
S	1.5179E+00	1.6103E+00	1.6706E+00
Z	1.4470E+00	1.6231E+00	1.7173E+00
GAME	7.1098E-01	7.3490E-01	7.2705E-01
U	2.4029E+01	5.0877E+00	5.1140E+00

SPECIES	MOLE FRACTIONS		
E-	3.0889E-01	3.8391E-01	4.1771E-01
A	3.8238E-01	2.4260E-01	1.9495E-01
A+	3.0857E-01	3.6308E-01	3.5701E-01
A++	1.6269E-04	1.0413E-02	3.0313E-02
A+++	2.6713E-11	1.3388E-06	2.3714E-05
A++++	4.0508E-22	3.8505E-13	8.9838E-11
AV	7.3623E-37	2.6669E-22	1.7305E-18
AVI	7.6302E-56	2.3988E-34	9.5001E-29
AVII	2.3797E-81	2.8952E-50	2.9039E-42
AVIII	0.	1.1436E-69	7.4372E-59

P1 = 2.00E+04 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1729E+03	9.8328E+03	1.4514E+04
T	7.5534E+01	1.2007E+02	1.3764E+02
RHO	1.0392E+01	4.8870E+01	5.9366E+01
H	2.5800E+02	4.6015E+02	5.5980E+02
A	8.9819E+00	1.2125E+01	1.3331E+01
S	1.5488E+00	1.6443E+00	1.7066E+00
Z	1.4948E+00	1.6757E+00	1.7763E+00
GAME	7.1478E-01	7.3068E-01	7.2692E-01
U	2.5204E+01	5.3652E+00	5.3597E+00

SPECIES	MOLE FRACTIONS		
E-	3.3103E-01	4.0322E-01	4.3704E-01
A	3.3822E-01	2.1214E-01	1.7006E-01
A+	3.3047E-01	3.6608E-01	3.4881E-01
A++	2.8344E-04	1.8561E-02	4.4018E-02
A+++	9.9489E-11	5.8691E-06	6.7667E-05
A++++	4.5356E-21	5.9545E-12	6.6996E-10
AV	3.3937E-35	2.0634E-20	4.4349E-17
AVI	2.0173E-53	1.3396E-31	1.1195E-26
AVII	7.0151E-78	2.2917E-46	2.5941E-39
AVIII	0.	1.9908E-64	7.1486E-55

TABLE I.-Continued

p_1 = 20 kN/m^2

P1 = 2.00E+04 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2267E+03	1.0376E+04	1.5324E+04
T	7.6981E+01	1.2370E+02	1.4136E+02
RHO	1.0490E+01	4.9285E+01	6.0002E+01
H	2.6959E+02	4.8120E+02	5.8545E+02
A	9.1586E+00	1.2385E+01	1.3634E+01
S	1.5643E+00	1.6612E+00	1.7245E+00
Z	1.5190E+00	1.7019E+00	1.8066E+00
GAME	7.1732E-01	7.2860E-01	7.2787E-01
U	2.5788E+01	5.4947E+00	5.4787E+00

SPECIES	MOLE FRACTIONS		
E-	3.4168E-01	4.1243E-01	4.4647E-01
A	3.1702E-01	1.9878E-01	1.5863E-01
A+	3.4093E-01	3.6515E-01	3.4345E-01
A++	3.7440E-04	2.3626E-02	5.1350E-02
A+++	1.9270E-10	1.1063E-05	1.3622E-04
A++++	1.5231E-20	1.9483E-11	1.6083E-09
AV	2.3009E-34	1.3668E-19	1.8391E-16
AVI	3.2272E-52	2.1122E-30	9.1370E-26
AVII	3.5942E-76	1.1519E-44	5.1882E-38
AVIII	0.	3.8751E-62	4.0925E-53

P1 = 2.00E+04 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3381E+03	1.1489E+04	1.6965E+04
T	8.0158E+01	1.3070E+02	1.4867E+02
RHO	1.0645E+01	5.0077E+01	6.1052E+01
H	2.9355E+02	5.2487E+02	6.3846E+02
A	9.5392E+00	1.2908E+01	1.4254E+01
S	1.5953E+00	1.6948E+00	1.7604E+00
Z	1.5682E+00	1.7555E+00	1.8691E+00
GAME	7.2390E-01	7.2619E-01	7.3122E-01
U	2.6960E+01	5.7374E+00	5.7095E+00

SPECIES	MOLE FRACTIONS		
E-	3.6232E-01	4.3035E-01	4.6498E-01
A	2.7602E-01	1.7476E-01	1.3720E-01
A+	3.6100E-01	3.5948E-01	3.3089E-01
A++	6.6198E-04	3.5384E-02	6.6694E-02
A+++	7.4970E-10	3.3047E-05	2.3551E-04
A++++	1.8331E-19	1.5406E-10	7.7017E-09
AV	1.1750E-32	3.7606E-18	2.3744E-15
AVI	9.7429E-50	2.6991E-28	4.0371E-24
AVII	1.2421E-72	1.1392E-41	1.1619E-35
AVIII	0.	4.1853E-58	6.1332E-50

P1 = 2.00E+04 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2815E+03	1.0911E+04	1.6135E+04
T	7.8527E+01	1.2720E+02	1.4498E+02
RHO	1.0573E+01	4.9627E+01	6.0592E+01
H	2.8143E+02	5.0258E+02	6.1161E+02
A	9.3439E+00	1.2643E+01	1.3936E+01
S	1.5798E+00	1.6779E+00	1.7421E+00
Z	1.5435E+00	1.7284E+00	1.8368E+00
GAME	7.2035E-01	7.2707E-01	7.2931E-01
U	2.6369E+01	5.6459E+00	5.5980E+00

SPECIES	MOLE FRACTIONS		
E-	3.5211E-01	4.2144E-01	4.5558E-01
A	2.9629E-01	1.8638E-01	1.4793E-01
A+	3.5111E-01	3.6294E-01	3.3755E-01
A++	4.9644E-04	2.9217E-02	5.8778E-02
A+++	3.7721E-10	1.9537E-05	1.5948E-04
A++++	5.2119E-20	5.6805E-11	3.5668E-09
AV	1.6082E-33	7.5683E-19	6.7408E-16
AVI	5.4172E-51	2.5741E-29	6.2440E-25
AVII	1.9967E-74	4.0151E-43	8.0798E-37
AVIII	0.	4.5970E-60	1.6712E-51

P1 = 2.00E+04 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3951E+03	1.2038E+04	1.7769E+04
T	8.1874E+01	1.3403E+02	1.5220E+02
RHO	1.0696E+01	5.0383E+01	6.1417E+01
H	3.0589E+02	5.4721E+02	6.6552E+02
A	9.7441E+00	1.3171E+01	1.4566E+01
S	1.6109E+00	1.7116E+00	1.7782E+00
Z	1.5931E+00	1.7827E+00	1.9009E+00
GAME	7.2794E-01	7.2597E-01	7.3337E-01
U	2.7535E+01	5.8521E+00	5.8228E+00

SPECIES	MOLE FRACTIONS		
E-	3.7230E-01	4.3905E-01	4.7393E-01
A	2.5630E-01	1.6385E-01	1.2727E-01
A+	3.7052E-01	3.5521E-01	3.2399E-01
A++	8.8737E-04	4.1839E-02	7.4469E-02
A+++	1.5107E-09	5.2839E-05	3.3408E-04
A++++	6.5994E-19	3.7758E-10	1.5453E-08
AV	8.8826E-32	1.5936E-17	7.4468E-15
AVI	1.8319E-48	2.2474E-27	2.2055E-23
AVII	8.1225E-71	2.3247E-40	1.3149E-34
AVIII	0.	2.4379E-56	1.6389E-48

TABLE I. - Continued

p_1 = 20 kN/m^2

P1 = 2.00E+04 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4530E+03	1.2565E+04	1.8562E+04
T	8.3691E+01	1.3731E+02	1.5573E+02
RHO	1.0729E+01	5.0529E+01	6.1636E+01
H	3.1848E+02	5.6982E+02	6.9301E+02
A	9.9594E+00	1.3439E+01	1.4885E+01
S	1.6264E+00	1.7288E+00	1.7962E+00
Z	1.6182E+00	1.8110E+00	1.9338E+00
GAME	7.3242E-01	7.2633E-01	7.3575E-01
U	2.8106E+01	5.9977E+00	5.9346E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.8201E-01	4.4783E-01	4.8288E-01
A	2.3717E-01	1.5321E-01	1.1760E-01
A+	3.7962E-01	3.5017E-01	3.1662E-01
A++	1.1972E-03	4.8711E-02	8.2431E-02
A+++	3.0946E-09	8.1596E-05	4.6479E-04
A++++	2.4382E-18	8.7014E-10	2.9973E-08
AV	6.9174E-31	6.1354E-17	2.2156E-14
AVI	3.5019E-47	1.6302E-26	1.1169E-22
AVII	5.0462E-69	3.8953E-39	1.3350E-33
AVIII	0.	1.0920E-54	3.7715E-47

P1 = 2.00E+04 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5718E+03	1.3643E+04	2.0105E+04
T	8.7675E+01	1.4357E+02	1.6269E+02
RHO	1.0746E+01	5.0891E+01	6.1766E+01
H	3.4440E+02	6.1657E+02	7.4940E+02
A	1.0418E+01	1.3974E+01	1.5529E+01
S	1.6574E+00	1.7620E+00	1.8322E+00
Z	1.6683E+00	1.8673E+00	2.0008E+00
GAME	7.4199E-01	7.2840E-01	7.4083E-01
U	2.9235E+01	6.1801E+00	6.1620E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.0059E-01	4.6447E-01	5.0021E-01
A	2.0105E-01	1.3417E-01	9.9645E-02
A+	3.9614E-01	3.3844E-01	3.0094E-01
A++	2.2236E-03	6.2753E-02	9.8367E-02
A+++	1.3719E-08	1.7320E-04	8.4474E-04
A++++	3.6824E-17	3.7650E-09	1.0076E-07
AV	4.9704E-29	6.6247E-16	1.6435E-13
AVI	1.6975E-44	5.4557E-25	2.2170E-21
AVII	3.3035E-65	5.8178E-37	9.5410E-32
AVIII	2.8163E-90	9.3916E-52	1.2197E-44

P1 = 2.00E+04 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5119E+03	1.3116E+04	1.9345E+04
T	8.5622E+01	1.4047E+02	1.5924E+02
RHO	1.0746E+01	5.0775E+01	6.1757E+01
H	3.3132E+02	5.9306E+02	7.2110E+02
A	1.0184E+01	1.3705E+01	1.5207E+01
S	1.6419E+00	1.7453E+00	1.8143E+00
Z	1.6433E+00	1.8388E+00	1.9672E+00
GAME	7.3720E-01	7.2717E-01	7.3826E-01
U	2.8673E+01	6.0766E+00	6.0544E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9146E-01	4.5617E-01	4.9166E-01
A	2.1872E-01	1.4352E-01	1.0838E-01
A+	3.8820E-01	3.4455E-01	3.0891E-01
A++	1.6265E-03	5.5632E-02	9.0425E-02
A+++	6.4621E-09	1.2061E-04	6.3308E-04
A++++	9.3529E-18	1.8573E-09	5.5990E-08
AV	5.7802E-30	2.0993E-16	6.2148E-14
AVI	7.6774E-46	9.9980E-26	5.1939E-22
AVII	4.2746E-67	5.1635E-38	1.2000E-32
AVIII	9.2786E-93	3.5802E-53	7.3716E-46

P1 = 2.00E+04 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6325E+03	1.4161E+04	2.0857E+04
T	8.9840E+01	1.4669E+02	1.6614E+02
RHO	1.0734E+01	5.0883E+01	6.1687E+01
H	3.5773E+02	6.4044E+02	7.7827E+02
A	1.0654E+01	1.4253E+01	1.5854E+01
S	1.6727E+00	1.7793E+00	1.8502E+00
Z	1.6930E+00	1.8972E+00	2.0351E+00
GAME	7.4633E-01	7.2997E-01	7.4343E-01
U	2.9794E+01	6.2871E+00	6.2762E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.0932E-01	4.7292E-01	5.0862E-01
A	1.8441E-01	1.2489E-01	9.1313E-02
A+	4.0322E-01	3.3172E-01	2.9263E-01
A++	3.0487E-03	7.0233E-02	1.0632E-01
A+++	2.9423E-08	2.4481E-04	1.1108E-03
A++++	1.4799E-16	7.4297E-09	1.7679E-07
AV	4.4477E-28	2.0061E-15	4.1775E-13
AVI	4.0691E-43	2.8064E-24	8.9385E-21
AVII	3.0872E-63	6.0060E-36	6.9912E-31
AVIII	1.3675E-87	2.1895E-50	1.8057E-43

TABLE I. - Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6933E+03	1.4632E+04	2.1541E+04
T	9.2178E+01	1.4959E+02	1.6951E+02
RHO	1.0692E+01	5.0787E+01	6.1407E+01
H	3.7126E+02	6.6430E+02	8.0714E+02
A	1.0897E+01	1.4519E+01	1.6176E+01
S	1.6884E+00	1.7957E+00	1.8682E+00
Z	1.7181E+00	1.9260E+00	2.0695E+00
GAME	7.4982E-01	7.3168E-01	7.4595E-01
U	3.0331E+01	6.3927E+00	6.3902E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1796E-01	4.8079E-01	5.1679E-01
A	1.6829E-01	1.1648E-01	8.3460E-02
A+	4.0952E-01	3.2500E-01	2.8416E-01
A++	4.2242E-03	7.7395E-02	1.1416E-01
A+++	6.4883E-08	3.3225E-04	1.4347E-03
A++++	6.2427E-16	1.3590E-08	2.9981E-07
AV	4.2717E-27	5.3810E-15	1.0047E-12
AVI	1.0664E-41	1.2095E-23	3.3202E-20
AVII	3.1457E-61	4.8214E-35	4.5500E-30
AVIII	6.7183E-85	3.6573E-49	2.2791E-42

P1 = 2.00E+04 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9177E+03	1.6420E+04	2.4147E+04
T	1.0075E+02	1.6009E+02	1.8179E+02
RHO	1.0583E+01	5.0450E+01	6.0550E+01
H	4.2074E+02	7.5237E+02	9.1401E+02
A	1.1645E+01	1.5510E+01	1.7346E+01
S	1.7405E+00	1.8546E+00	1.9315E+00
Z	1.7986E+00	2.0331E+00	2.1937E+00
GAME	7.4838E-01	7.3911E-01	7.5447E-01
U	3.2262E+01	6.7749E+00	6.8039E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4402E-01	5.0814E-01	5.4415E-01
A	1.2404E-01	8.9193E-02	5.9352E-02
A+	4.1986E-01	2.9808E-01	2.5210E-01
A++	1.2077E-02	1.0370E-01	1.4113E-01
A+++	8.6103E-07	8.8347E-04	3.2606E-03
A++++	7.0028E-14	9.7356E-08	1.6938E-06
AV	7.1719E-24	1.3757E-13	1.8226E-11
AVI	4.8543E-37	1.4983E-21	2.5890E-18
AVII	1.2277E-54	4.6760E-32	2.2959E-27
AVIII	4.5580E-76	3.9874E-45	1.0417E-38

P1 = 2.00E+04 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7570E+03	1.5173E+04	2.2326E+04
T	9.4516E+01	1.5266E+02	1.7306E+02
RHO	1.0676E+01	5.0805E+01	6.1292E+01
H	3.8512E+02	6.8932E+02	8.3748E+02
A	1.1122E+01	1.4803E+01	1.6513E+01
S	1.7030E+00	1.8126E+00	1.8864E+00
Z	1.7412E+00	1.9563E+00	2.1049E+00
GAME	7.5162E-01	7.3370E-01	7.4854E-01
U	3.0901E+01	6.5010E+00	6.5082E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.2569E-01	4.8884E-01	5.2491E-01
A	1.5437E-01	1.0818E-01	7.5962E-02
A+	4.1420E-01	3.1756E-01	2.7519E-01
A++	5.7421E-03	8.4964E-02	1.2209E-01
A+++	1.3732E-07	4.4985E-04	1.8447E-03
A++++	2.4494E-15	2.4899E-08	5.0703E-07
AV	3.6674E-26	1.4542E-14	2.4168E-12
AVI	2.3801E-40	5.2931E-23	1.2388E-19
AVII	2.5537E-59	3.9658E-34	2.9884E-29
AVIII	2.4349E-82	6.3174E-48	2.9150E-41

P1 = 2.00E+04 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0872E+03	1.7799E+04	2.6185E+04
T	1.0690E+02	1.6774E+02	1.9093E+02
RHO	1.0537E+01	5.0241E+01	6.0055E+01
H	4.5800E+02	8.1883E+02	9.9532E+02
A	1.2096E+01	1.6245E+01	1.8201E+01
S	1.7773E+00	1.8964E+00	1.9762E+00
Z	1.8530E+00	2.1121E+00	2.2837E+00
GAME	7.3865E-01	7.4489E-01	7.5980E-01
U	3.3651E+01	7.0647E+00	7.1255E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6032E-01	5.2653E-01	5.6212E-01
A	1.0184E-01	7.2512E-02	4.5578E-02
A+	4.1536E-01	2.7700E-01	2.2795E-01
A++	2.2474E-02	1.2234E-01	1.5890E-01
A+++	4.1591E-06	1.6177E-03	5.4502E-03
A++++	1.2709E-12	3.3976E-07	5.1826E-06
AV	6.9787E-22	1.0994E-12	1.2141E-10
AVI	3.6703E-34	3.3556E-20	4.5337E-17
AVII	1.4639E-50	3.9783E-30	1.3788E-25
AVIII	1.3350E-70	1.6359E-42	2.6879E-36

TABLE I. - Continued

$p_1 = 20\ kN/m^2$

P1 = 2.00E+04 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2650E+03	1.9337E+04	2.8519E+04
T	1.1260E+02	1.7567E+02	2.0066E+02
RHO	1.0555E+01	5.0212E+01	5.9828E+01
H	4.9689E+02	8.8845E+02	1.0821E+03
A	1.2519E+01	1.7001E+01	1.9091E+01
S	1.8135E+00	1.9377E+00	2.0212E+00
Z	1.9058E+00	2.1923E+00	2.3756E+00
GAME	7.3039E-01	7.5052E-01	7.6461E-01
U	3.5059E+01	7.3785E+00	7.5096E+00

SPECIES	MOLE FRACTIONS		
E-	4.7528E-01	5.4386E-01	5.7906E-01
A	8.5788E-02	5.8145E-02	3.4291E-02
A+	4.0260E-01	2.5494E-01	2.0299E-01
A++	3.6314E-02	1.4027E-01	1.7494E-01
A+++	1.4718E-05	2.7906E-03	8.7103E-03
A++++	1.3375E-11	1.0773E-06	1.4852E-05
AV	2.9332E-20	7.6195E-12	7.3658E-10
AVI	8.3664E-32	6.1727E-19	7.0273E-16
AVII	3.2070E-47	2.5698E-28	6.9798E-24
AVIII	4.0101E-66	4.6533E-40	5.5463E-34

P1 = 2.00E+04 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6465E+03	2.2824E+04	3.3878E+04
T	1.2285E+02	1.9244E+02	2.2121E+02
RHO	1.0698E+01	5.0350E+01	5.9866E+01
H	5.7958E+02	1.0373E+03	1.2677E+03
A	1.3385E+01	1.8564E+01	2.0920E+01
S	1.8851E+00	2.0193E+00	2.1089E+00
Z	2.0136E+00	2.3556E+00	2.5582E+00
GAME	7.2419E-01	7.6024E-01	7.7334E-01
U	3.7932E+01	8.0999E+00	8.2434E+00

SPECIES	MOLE FRACTIONS		
E-	5.0339E-01	5.7548E-01	6.0910E-01
A	6.3512E-02	3.5712E-02	1.8662E-02
A+	3.6291E-01	2.0932E-01	1.5460E-01
A++	7.0098E-02	1.7231E-01	1.9850E-01
A+++	9.4683E-05	7.1687E-03	1.9042E-02
A++++	4.6375E-10	8.5498E-06	9.4502E-05
AV	8.7318E-18	2.5805E-10	1.8495E-08
AVI	3.4868E-28	1.2795E-16	9.8609E-14
AVII	4.5865E-42	5.3806E-25	8.4890E-21
AVIII	3.5450E-59	1.5021E-35	8.6683E-30

P1 = 2.00E+04 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4511E+03	2.1020E+04	3.1068E+04
T	1.1789E+02	1.8389E+02	2.1071E+02
RHO	1.0611E+01	5.0281E+01	5.9770E+01
H	5.3740E+02	9.6126E+02	1.1725E+03
A	1.2948E+01	1.7774E+01	1.9992E+01
S	1.8495E+00	1.9785E+00	2.0652E+00
Z	1.9593E+00	2.2734E+00	2.4668E+00
GAME	7.2578E-01	7.5568E-01	7.6897E-01
U	3.6481E+01	7.7004E+00	7.8736E+00

SPECIES	MOLE FRACTIONS		
E-	4.8961E-01	5.6012E-01	5.9462E-01
A	7.3442E-02	4.5949E-02	2.5480E-02
A+	3.8432E-01	2.3231E-01	1.7844E-01
A++	5.2585E-02	1.5704E-01	1.8824E-01
A+++	4.0909E-05	4.5721E-03	1.3180E-02
A++++	9.2406E-11	3.1434E-06	3.8874E-05
AV	6.4714E-19	4.6547E-11	3.8978E-09
AVI	7.6706E-30	9.5583E-18	8.9821E-15
AVII	1.9904E-44	1.3028E-26	2.7092E-22
AVIII	2.3236E-62	9.5730E-38	7.9902E-32

P1 = 2.00E+04 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8484E+03	2.4747E+04	3.6817E+04
T	1.2763E+02	2.0115E+02	2.3200E+02
RHO	1.0782E+01	5.0492E+01	5.9895E+01
H	6.2332E+02	1.1163E+03	1.3668E+03
A	1.3836E+01	1.9354E+01	2.1868E+01
S	1.9208E+00	2.0590E+00	2.1522E+00
Z	2.0699E+00	2.4366E+00	2.6495E+00
GAME	7.2466E-01	7.6424E-01	7.7797E-01
U	3.9369E+01	8.4157E+00	8.6445E+00

SPECIES	MOLE FRACTIONS		
E-	5.1688E-01	5.8959E-01	6.2257E-01
A	5.4971E-02	2.7513E-02	1.3489E-02
A+	3.3960E-01	1.8693E-01	1.3203E-01
A++	8.8353E-02	1.8526E-01	2.0538E-01
A+++	1.9412E-04	1.0686E-02	2.6308E-02
A++++	1.8866E-09	2.1328E-05	2.1302E-04
AV	8.5436E-17	1.2480E-09	7.8194E-08
AVI	1.0054E-26	1.4177E-15	9.1761E-13
AVII	5.5902E-40	1.6939E-23	2.1058E-19
AVIII	2.3380E-56	1.6387E-33	6.8675E-28

TABLE I.-Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0577E+03	2.6709E+04	3.9883E+04
T	1.3231E+02	2.1005E+02	2.4309E+02
RHO	1.0861E+01	5.0504E+01	5.9863E+01
H	6.6865E+02	1.1979E+03	1.4699E+03
A	1.4302E+01	2.0152E+01	2.2841E+01
S	1.9565E+00	2.0987E+00	2.1951E+00
Z	2.1279E+00	2.5178E+00	2.7407E+00
GAME	7.2651E-01	7.6792E-01	7.8304E-01
U	4.0805E+01	8.7840E+00	9.0522E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.3005E-01	6.0282E-01	6.3513E-01
A	4.7435E-02	2.0920E-02	9.6308E-03
A+	3.1535E-01	1.6508E-01	1.1115E-01
A++	1.0680E-01	1.9584E-01	2.0875E-01
A+++	3.6422E-04	1.5290E-02	3.4897E-02
A++++	6.5903E-09	4.9627E-05	4.4833E-04
AV	6.6211E-16	5.4218E-09	2.9771E-07
AVI	2.0814E-25	1.3461E-14	7.3474E-12
AVII	4.2858E-38	4.3144E-22	4.2263E-18
AVIII	8.2647E-54	1.3342E-31	4.0888E-26

P1 = 2.00E+04 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4976E+03	3.0738E+04	4.6288E+04
T	1.4166E+02	2.2828E+02	2.6619E+02
RHO	1.0980E+01	5.0260E+01	5.9496E+01
H	7.6406E+02	1.3691E+03	1.6873E+03
A	1.5277E+01	2.1777E+01	2.4856E+01
S	2.0280E+00	2.1771E+00	2.2798E+00
Z	2.2485E+00	2.6790E+00	2.9227E+00
GAME	7.3268E-01	7.7547E-01	7.9412E-01
U	4.3667E+01	9.5791E+00	9.8792E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.5526E-01	6.2673E-01	6.5785E-01
A	3.4540E-02	1.1737E-02	4.7375E-03
A+	2.6620E-01	1.2468E-01	7.5449E-02
A++	1.4292E-01	2.0873E-01	2.0513E-01
A+++	1.0724E-03	2.7902E-02	5.5165E-02
A++++	5.9496E-08	2.2030E-04	1.6569E-03
AV	2.5168E-14	7.5264E-08	3.2717E-06
AVI	4.6731E-23	7.7923E-13	3.1601E-10
AVII	1.0070E-34	1.4807E-19	9.7016E-16
AVIII	3.0598E-49	3.7649E-28	6.7816E-23

P1 = 2.00E+04 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2741E+03	2.8689E+04	4.3041E+04
T	1.3696E+02	2.1906E+02	2.5446E+02
RHO	1.0928E+01	5.0400E+01	5.9737E+01
H	7.1556E+02	1.2820E+03	1.5765E+03
A	1.4782E+01	2.0957E+01	2.3835E+01
S	1.9922E+00	2.1381E+00	2.2375E+00
Z	2.1875E+00	2.5985E+00	2.8315E+00
GAME	7.2930E-01	7.7158E-01	7.8849E-01
U	4.2238E+01	9.2010E+00	9.4540E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.4285E-01	6.1516E-01	6.4683E-01
A	4.0665E-02	1.5747E-02	6.7999E-03
A+	2.9075E-01	1.4426E-01	9.2270E-02
A++	1.2509E-01	2.0370E-01	2.0862E-01
A+++	6.4042E-04	2.1022E-02	4.4591E-02
A++++	2.0622E-08	1.0771E-04	8.8519E-04
AV	4.3402E-15	2.1137E-08	1.0275E-06
AVI	3.3999E-24	1.0928E-13	5.1058E-11
AVII	2.3612E-36	8.7582E-21	6.9460E-17
AVIII	1.8682E-51	8.0158E-30	1.8586E-24

P1 = 2.00E+04 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7281E+03	3.2801E+04	4.9605E+04
T	1.4645E+02	2.3765E+02	2.7834E+02
RHO	1.1016E+01	5.0022E+01	5.9105E+01
H	8.1412E+02	1.4587E+03	1.8022E+03
A	1.5786E+01	2.2611E+01	2.5905E+01
S	2.0637E+00	2.2159E+00	2.3222E+00
Z	2.3107E+00	2.7593E+00	3.0153E+00
GAME	7.3639E-01	7.7968E-01	7.9956E-01
U	4.5090E+01	9.9724E+00	1.0325E+01
SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.6723E-01	6.3759E-01	6.6836E-01
A	2.9006E-02	8.6677E-03	3.2496E-03
A+	2.4201E-01	1.0659E-01	6.0685E-02
A++	1.6002E-01	2.1089E-01	1.9844E-01
A+++	1.7288E-03	3.5838E-02	6.6301E-02
A++++	1.6140E-07	4.2581E-04	2.9615E-03
AV	1.3313E-13	2.4554E-07	9.7277E-06
AVI	5.6472E-22	4.8954E-12	1.7738E-09
AVII	3.6211E-33	2.0922E-18	1.1818E-14
AVIII	3.9311E-47	1.3874E-26	2.0568E-21

TABLE I.- Continued

p_1 = 20 kN/ m^2

P1 = 2.00E+04 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9651E+03	3.4859E+04	5.2923E+04
T	1.5140E+02	2.4721E+02	2.9059E+02
RHO	1.1030E+01	4.9650E+01	5.8620E+01
H	8.6575E+02	1.5508E+03	1.9203E+03
A	1.6312E+01	2.3465E+01	2.6945E+01
S	2.0997E+00	2.2548E+00	2.3638E+00
Z	2.3743E+00	2.8400E+00	3.1069E+00
GAME	7.4020E-01	7.8423E-01	8.0420E-01
U	4.6504E+01	1.0367E+01	1.0763E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.7883E-01	6.4789E-01	6.7813E-01
A	2.4000E-02	6.3257E-03	2.2229E-03
A+	2.1824E-01	9.0008E-02	4.8366E-02
A++	1.7623E-01	2.1023E-01	1.8911E-01
A+++	2.7116E-03	4.4762E-02	7.7157E-02
A++++	4.2005E-07	7.8551E-04	4.9882E-03
AV	6.6305E-13	7.4600E-07	2.6324E-05
AVI	6.2799E-21	2.7755E-11	8.6658E-09
AVII	1.1524E-31	2.5567E-17	1.1836E-13
AVIII	4.2973E-45	4.2001E-25	4.7865E-20

P1 = 2.00E+04 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4603E+03	3.9046E+04	5.9774E+04
T	1.6168E+02	2.6675E+02	3.1523E+02
RHO	1.1032E+01	4.8802E+01	5.7660E+01
H	9.7375E+02	1.7430E+03	2.1684E+03
A	1.7378E+01	2.5197E+01	2.8975E+01
S	2.1704E+00	2.3305E+00	2.4447E+00
Z	2.5007E+00	2.9994E+00	3.2886E+00
GAME	7.4693E-01	7.9356E-01	8.0984E-01
U	4.9324E+01	1.1187E+01	1.1669E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0011E-01	6.6660E-01	6.9592E-01
A	1.5854E-02	3.3119E-03	1.0480E-03
A+	1.7407E-01	6.2430E-02	3.0217E-02
A++	2.0386E-01	2.0113E-01	1.6502E-01
A+++	6.1056E-03	6.4212E-02	9.5666E-02
A++++	2.4715E-06	2.3092E-03	1.1983E-02
AV	1.3347E-11	5.4892E-06	1.4794E-04
AVI	5.8021E-19	6.4216E-10	1.4005E-07
AVII	7.7208E-29	2.4040E-15	6.8724E-12
AVIII	2.9539E-41	2.0629E-22	1.2419E-17

P1 = 2.00E+04 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2094E+03	3.6958E+04	5.6351E+04
T	1.5644E+02	2.5687E+02	3.0302E+02
RHO	1.1040E+01	4.9283E+01	5.8140E+01
H	9.1897E+02	1.6457E+03	2.0427E+03
A	1.6840E+01	2.4323E+01	2.7979E+01
S	2.1350E+00	2.2926E+00	2.4049E+00
Z	2.4372E+00	2.9194E+00	3.1986E+00
GAME	7.4377E-01	7.8892E-01	8.0770E-01
U	4.7919E+01	1.0777E+01	1.1217E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8969E-01	6.5746E-01	6.8736E-01
A	1.9661E-02	4.6014E-03	1.5179E-03
A+	1.9572E-01	7.5402E-02	3.8229E-02
A++	1.9082E-01	2.0691E-01	1.7765E-01
A+++	4.1124E-03	5.4246E-02	8.7203E-02
A++++	1.0345E-06	1.3732E-03	7.9720E-03
AV	3.0391E-12	2.0841E-06	6.5643E-05
AVI	6.2132E-20	1.3929E-10	3.7583E-08
AVII	3.1087E-30	2.6319E-16	1.0038E-12
AVIII	3.7674E-43	1.0092E-23	8.9091E-19

P1 = 2.00E+04 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7184E+03	4.1147E+04	6.3252E+04
T	1.6709E+02	2.7675E+02	3.2763E+02
RHO	1.1014E+01	4.8289E+01	5.7088E+01
H	1.0301E+03	1.8430E+03	2.2981E+03
A	1.7919E+01	2.6074E+01	2.9972E+01
S	2.2057E+00	2.3678E+00	2.4855E+00
Z	2.5639E+00	3.0790E+00	3.3819E+00
GAME	7.4951E-01	7.9783E-01	8.1077E-01
U	5.0730E+01	1.1610E+01	1.2128E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.0997E-01	6.7521E-01	7.0430E-01
A	1.2616E-02	2.3732E-03	7.2061E-04
A+	1.5372E-01	5.1262E-02	2.3671E-02
A++	2.1484E-01	1.9324E-01	1.5120E-01
A+++	3.8452E-03	7.4173E-02	1.0250E-01
A++++	5.6878E-06	3.7199E-03	1.7290E-02
AV	5.5516E-11	1.3526E-05	3.1318E-04
AVI	5.0274E-18	2.6870E-09	4.7662E-07
AVII	1.7254E-27	1.9167E-14	4.1484E-11
AVIII	2.0136E-39	3.5106E-21	1.4622E-16

TABLE I. - Continued

$p_1 = 50\ kN/m^2$

P1 = 5.00E+04 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4638E+01	2.6431E+02
T	1.2892E+01	1.6278E+01	2.9203E+01
RHO	3.7155E+00	5.1997E+00	9.0468E+00
H	1.2892E+01	1.6278E+01	2.9322E+01
A	3.5905E+00	4.0345E+00	5.3405E+00
S	1.1305E+00	1.1312E+00	1.1484E+00
Z	1.0000E+00	1.0000E+00	1.0004E+00
GAME	1.0000E+00	9.9998E-01	9.7622E-01
U	4.5391E+00	3.2320E+00	3.1602E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.5910E-10	9.2341E-08	4.3312E-04
A	1.0000E+00	1.0000E+00	9.9913E-01
A+	6.5910E-10	9.2341E-08	4.3312E-04
A++	7.2307E-35	3.9016E-28	6.8394E-15
A+++	1.1755E-75	2.6358E-60	8.0773E-34
A++++	0.	0.	3.1550E-63
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9070E+01	1.2778E+02	3.8238E+02
T	1.8181E+01	2.3402E+01	3.9024E+01
RHO	3.7990E+00	5.4599E+00	9.7291E+00
H	1.8181E+01	2.3411E+01	4.1122E+01
A	4.2636E+00	4.8299E+00	5.8047E+00
S	1.1560E+00	1.1569E+00	1.1740E+00
Z	1.0000E+00	1.0000E+00	1.0072E+00
GAME	9.9987E-01	9.9680E-01	8.5732E-01
U	5.4900E+00	3.8012E+00	3.5231E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.3742E-07	3.5557E-05	7.0998E-03
A	1.0000E+00	9.9993E-01	9.8580E-01
A+	8.3742E-07	3.5557E-05	7.0998E-03
A++	1.4802E-24	8.8552E-19	1.0373E-10
A+++	3.4252E-54	1.8016E-42	9.5018E-25
A++++	0.	1.1199E-78	1.9796E-46
AV	0.	0.	2.3471E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0487E+02	3.2192E+02
T	1.5416E+01	1.9658E+01	3.4424E+01
RHO	3.7624E+00	5.3347E+00	9.3298E+00
H	1.5416E+01	1.9659E+01	3.5090E+01
A	3.9263E+00	4.4330E+00	5.6395E+00
S	1.1437E+00	1.1445E+00	1.1617E+00
Z	1.0000E+00	1.0000E+00	1.0023E+00
GAME	9.9999E-01	9.9966E-01	9.2173E-01
U	5.0154E+00	3.5252E+00	3.3762E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6859E-08	2.6449E-06	2.3416E-03
A	1.0000E+00	9.9999E-01	9.9532E-01
A+	3.6859E-08	2.6449E-06	2.3416E-03
A++	3.4688E-29	1.1657E-22	2.2617E-12
A+++	4.1945E-65	9.1823E-51	2.4149E-28
A++++	0.	0.	5.6534E-53
AV	0.	0.	1.9218E-85
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1081E+01	1.5278E+02	4.4403E+02
T	2.1181E+01	2.7419E+01	4.2781E+01
RHO	3.8279E+00	5.5706E+00	1.0228E+01
H	2.1184E+01	2.7492E+01	4.7263E+01
A	4.5998E+00	5.1927E+00	5.9317E+00
S	1.1675E+00	1.1684E+00	1.1855E+00
Z	1.0000E+00	1.0003E+00	1.0148E+00
GAME	9.9889E-01	9.8312E-01	8.1047E-01
U	5.9620E+00	4.0769E+00	3.5803E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.0072E-05	2.6709E-04	1.4558E-02
A	9.9998E-01	9.9947E-01	9.7088E-01
A+	1.0072E-05	2.6709E-04	1.4558E-02
A++	9.2684E-21	9.2288E-16	1.2725E-09
A+++	9.9647E-47	7.6826E-36	2.2468E-22
A++++	0.	4.6884E-67	4.8068E-42
AV	0.	0.	3.7532E-68
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 50 kN/m^2

P1 = 5.00E+04 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4122E+01	1.8286E+02	5.0885E+02
T	2.4414E+01	3.1738E+01	4.5945E+01
RHO	3.8549E+00	5.7540E+00	1.0809E+01
H	2.4434E+01	3.2108E+01	5.3653E+01
A	4.9261E+00	5.4779E+00	6.0591E+00
S	1.1782E+00	1.1793E+00	1.1970E+00
Z	1.0001E+00	1.0013E+00	1.0246E+00
GAME	9.9386E-01	9.4424E-01	7.7985E-01
U	6.4377E+00	4.2921E+00	3.5893E+00

SPECIES	MOLE FRACTIONS		
E-	7.4947E-05	1.3284E-03	2.4024E-02
A	9.9985E-01	9.9734E-01	9.5195E-01
A+	7.4947E-05	1.3284E-03	2.4024E-02
A++	8.9415E-18	2.3108E-13	7.5341E-09
A+++	1.8966E-40	1.2725E-30	1.1002E-20
A++++	1.8876E-74	2.6996E-57	6.1319E-39
AV	0.	1.4622E-92	3.3819E-63
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2355E+02	2.7172E+02	6.5703E+02
T	3.1315E+01	4.0316E+01	5.1230E+01
RHO	3.9400E+00	6.6641E+00	1.2226E+01
H	3.1703E+01	4.3657E+01	6.7544E+01
A	5.4315E+00	5.8010E+00	6.3264E+00
S	1.1980E+00	1.2001E+00	1.2202E+00
Z	1.0014E+00	1.0113E+00	1.0490E+00
GAME	9.4078E-01	8.2534E-01	7.4475E-01
U	7.4133E+00	4.3697E+00	3.5455E+00

SPECIES	MOLE FRACTIONS		
E-	1.3960E-03	1.1219E-02	4.6709E-02
A	9.9721E-01	9.7756E-01	9.0658E-01
A+	1.3960E-03	1.1219E-02	4.6708E-02
A++	2.0955E-13	3.8403E-10	8.6478E-08
A+++	8.0260E-31	1.2700E-23	2.3939E-18
A++++	8.4591E-58	1.8448E-44	1.2036E-34
AV	0.	4.2253E-72	2.1985E-56
AVI	0.	0.	5.2561E-84
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0821E+02	2.2146E+02	5.7825E+02
T	2.7829E+01	3.6148E+01	4.8702E+01
RHO	3.8867E+00	6.0984E+00	1.1459E+01
H	2.7933E+01	3.7459E+01	6.0357E+01
A	5.2155E+00	5.6610E+00	6.1903E+00
S	1.1884E+00	1.1898E+00	1.2085E+00
Z	1.0004E+00	1.0046E+00	1.0361E+00
GAME	9.7708E-01	8.8251E-01	7.5940E-01
U	6.9173E+00	4.3899E+00	3.5725E+00

SPECIES	MOLE FRACTIONS		
E-	3.8078E-04	4.5675E-03	3.4837E-02
A	9.9924E-01	9.9087E-01	9.3033E-01
A+	3.8078E-04	4.5675E-03	3.4837E-02
A++	2.4055E-15	1.6479E-11	2.8997E-08
A+++	4.7467E-35	1.3177E-26	2.1318E-19
A++++	8.3849E-66	5.8590E-50	1.4194E-36
AV	0.	6.8470E-81	1.9500E-59
AVI	0.	0.	2.1432E-88
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4044E+02	3.3569E+02	7.5183E+02
T	3.4686E+01	4.4069E+01	5.3652E+01
RHO	4.0334E+00	7.4556E+00	1.3179E+01
H	3.5769E+01	5.0670E+01	7.5396E+01
A	5.5686E+00	5.9501E+00	6.4684E+00
S	1.2073E+00	1.2104E+00	1.2322E+00
Z	1.0038E+00	1.0217E+00	1.0633E+00
GAME	8.9059E-01	7.8629E-01	7.3346E-01
U	7.9385E+00	4.2796E+00	3.5185E+00

SPECIES	MOLE FRACTIONS		
E-	3.8213E-03	2.1243E-02	5.9490E-02
A	9.9236E-01	9.5751E-01	8.8102E-01
A+	3.8213E-03	2.1243E-02	5.9489E-02
A++	6.6678E-12	3.7866E-09	2.1984E-07
A+++	1.3758E-27	1.9404E-21	1.9284E-17
A++++	4.8215E-52	1.9490E-40	5.7132E-33
AV	9.1205E-84	1.0605E-65	1.0816E-53
AVI	0.	0.	5.3933E-80
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5907E+02	4.1424E+02	8.6865E+02
T	3.7781E+01	4.7421E+01	5.6037E+01
RHO	4.1759E+00	8.4411E+00	1.4370E+01
H	4.0149E+01	5.8388E+01	8.4038E+01
A	5.6665E+00	6.1129E+00	6.6166E+00
S	1.2164E+00	1.2210E+00	1.2445E+00
Z	1.0082E+00	1.0349E+00	1.0787E+00
GAME	8.4293E-01	7.6146E-01	7.2422E-01
U	8.4992E+00	4.1856E+00	3.4963E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.1684E-03	3.3680E-02	7.2990E-02
A	9.8366E-01	9.3264E-01	8.5402E-01
A+	8.1684E-03	3.3680E-02	7.2989E-02
A++	9.2725E-11	2.0797E-08	5.0010E-07
A+++	4.2429E-25	8.4828E-20	1.2325E-16
A++++	2.1902E-47	2.1002E-37	1.7738E-31
AV	2.9662E-77	7.3810E-61	2.6359E-51
AVI	0.	1.2629E-90	1.7259E-76
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0151E+02	6.1864E+02	1.1774E+03
T	4.2999E+01	5.3262E+01	6.0733E+01
RHO	4.5815E+00	1.0893E+01	1.7431E+01
H	4.9820E+01	7.5673E+01	1.0364E+02
A	5.8621E+00	6.4517E+00	6.9225E+00
S	1.2349E+00	1.2436E+00	1.2707E+00
Z	1.0229E+00	1.0663E+00	1.1122E+00
GAME	7.8132E-01	7.3291E-01	7.0948E-01
U	9.7028E+00	4.0727E+00	3.4689E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2362E-02	6.2180E-02	1.0085E-01
A	9.5528E-01	8.7564E-01	7.9831E-01
A+	2.2362E-02	6.2180E-02	1.0084E-01
A++	3.2270E-09	2.2634E-07	2.0065E-06
A+++	1.0049E-21	1.8169E-17	2.9617E-15
A++++	4.2225E-41	4.4281E-33	6.5164E-29
AV	7.4186E-67	6.0944E-54	3.3375E-47
AVI	0.	1.7759E-80	1.7484E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7946E+02	5.0765E+02	1.0103E+03
T	4.0542E+01	5.0449E+01	5.8399E+01
RHO	4.3625E+00	9.5845E+00	1.5797E+01
H	4.4838E+01	6.6712E+01	9.3473E+01
A	5.7606E+00	6.2814E+00	6.7687E+00
S	1.2256E+00	1.2321E+00	1.2574E+00
Z	1.0147E+00	1.0499E+00	1.0952E+00
GAME	8.0669E-01	7.4493E-01	7.1635E-01
U	9.0905E+00	4.1250E+00	3.4800E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4453E-02	4.7528E-02	8.6886E-02
A	9.7109E-01	9.0494E-01	8.2623E-01
A+	1.4453E-02	4.7528E-02	8.6884E-02
A++	6.8508E-10	7.7705E-08	1.0404E-06
A+++	3.3978E-23	1.6249E-18	6.5384E-16
A++++	8.5060E-44	5.0515E-35	3.9119E-30
AV	4.0501E-71	4.9538E-57	3.6705E-49
AVI	0.	6.1004E-85	2.3259E-73
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2509E+02	7.4917E+02	1.3697E+03
T	4.5206E+01	5.5922E+01	6.3032E+01
RHO	4.8223E+00	1.2363E+01	1.9240E+01
H	5.5081E+01	8.5265E+01	1.1447E+02
A	5.9703E+00	6.6212E+00	7.0765E+00
S	1.2444E+00	1.2557E+00	1.2845E+00
Z	1.0325E+00	1.0836E+00	1.1294E+00
GAME	7.6366E-01	7.2348E-01	7.0342E-01
U	1.0328E+01	4.0136E+00	3.4620E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1511E-02	7.7154E-02	1.1459E-01
A	9.3698E-01	8.4569E-01	7.7082E-01
A+	3.1511E-02	7.7153E-02	1.1458E-01
A++	1.1139E-08	5.5425E-07	3.6256E-06
A+++	1.5290E-20	1.4014E-16	1.1681E-14
A++++	6.3308E-39	1.9904E-31	8.4310E-28
AV	2.1797E-63	2.7204E-51	2.0327E-45
AVI	0.	1.3650E-76	7.3207E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.5013E+02	8.9742E+02	1.5873E+03
T	4.7216E+01	5.8437E+01	6.5313E+01
RHO	5.0772E+00	1.3944E+01	2.1191E+01
H	6.0612E+01	9.5370E+01	1.2592E+02
A	6.0826E+00	6.7869E+00	7.2310E+00
S	1.2542E+00	1.2683E+00	1.2990E+00
Z	1.0434E+00	1.1013E+00	1.1469E+00
GAME	7.5102E-01	7.1571E-01	6.9805E-01
U	1.0960E+01	3.9802E+00	3.4590E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1576E-02	9.1992E-02	1.2806E-01
A	9.1685E-01	8.1602E-01	7.4389E-01
A+	4.1576E-02	9.1990E-02	1.2805E-01
A++	3.0874E-08	1.1872E-06	6.2284E-06
A+++	1.4413E-19	8.0791E-16	4.1346E-14
A++++	3.7730E-37	5.2367E-30	8.9453E-27
AV	1.2292E-60	5.2092E-49	9.0497E-44
AVI	1.0196E-90	3.1787E-73	1.9508E-65
AVII	0.	0.	1.4064E-94
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= [illegible]03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0429E+02	1.2554E+0[illegible]	2.0986E+03
T	5.0810E+01	6.3208E+01	6.9834E+01
RHO	5.6086E+00	1.7464E+01	2.5433E+01
H	7.2453E+01	1.1722E+02	1.5056E+02
A	6.3122E+00	7.1096E+00	7.5417E+00
S	1.2747E+00	1.2953E+00	1.3293E+00
Z	1.0678E+00	1.1372E+00	1.1816E+00
GAME	7.3440E-01	7.0318E-01	6.8930E-01
U	1.2231E+01	3.9117E+00	3.4638E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.3487E-02	1.2068E-01	1.5369E-01
A	8.7303E-01	7.5864E-01	6.9264E-01
A+	6.3486E-02	1.2067E-01	1.5366E-01
A++	1.5367E-07	4.1784E-06	1.6288E-05
A+++	5.1222E-18	1.5086E-14	3.9839E-13
A++++	2.8030E-34	1.2598E-27	6.1728E-25
AV	5.2612E-56	3.6335E-45	8.1228E-41
AVI	1.3437E-83	1.6351E-67	4.2365E-61
AVII	0.	0.	3.1962E-88
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7654E+02	1.0653E+03	1.8302E+03
T	4.9074E+01	6.0853E+01	6.7569E+01
RHO	5.3405E+00	1.5642E+01	2.3266E+01
H	6.6404E+01	1.0601E+02	1.3796E+02
A	6.1970E+00	6.9493E+00	7.3852E+00
S	1.2643E+00	1.2815E+00	1.3138E+00
Z	1.0552E+00	1.1192E+00	1.1642E+00
GAME	7.4163E-01	7.0905E-01	6.9335E-01
U	1.1595E+01	3.9516E+00	3.4596E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2297E-02	1.0653E-01	1.4104E-01
A	8.9541E-01	7.8694E-01	7.1793E-01
A+	5.2297E-02	1.0653E-01	1.4102E-01
A++	7.3082E-08	2.3086E-06	1.0228E-05
A+++	9.7937E-19	3.7735E-15	1.3269E-13
A++++	1.3342E-35	9.3657E-29	7.9098E-26
AV	4.1907E-58	5.4462E-47	2.9991E-42
AVI	1.2022E-86	3.1766E-70	3.3400E-63
AVII	0.	0.	2.9772E-91
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3334E+02	1.4642E+03	2.3940E+03
T	5.2434E+01	6.5495E+01	7.2110E+01
RHO	5.8816E+00	1.9353E+01	2.7692E+01
H	7.8758E+01	1.2887E+02	1.6372E+02
A	6.4265E+00	7.2672E+00	7.7006E+00
S	1.2853E+00	1.3096E+00	1.3452E+00
Z	1.0809E+00	1.1551E+00	1.1989E+00
GAME	7.2869E-01	6.9806E-01	6.8595E-01
U	1.2866E+01	3.9001E+00	3.4723E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	7.4851E-02	1.3429E-01	1.6587E-01
A	8.5030E-01	7.3143E-01	6.6828E-01
A+	7.4850E-02	1.3427E-01	1.6582E-01
A++	2.9313E-07	7.1210E-06	2.5243E-05
A+++	2.1703E-17	5.2726E-14	1.1278E-12
A++++	4.0033E-33	1.3104E-26	4.3220E-24
AV	3.5981E-54	1.5654E-43	1.8573E-39
AVI	6.3352E-81	4.1044E-65	4.2511E-59
AVII	0.	4.5599E-94	2.5589E-85
AVIII	0.	0.	0.

TABLE I.-Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6368E+02	1.6938E+03	2.7139E+03
T	5.4012E+01	6.7753E+01	7.4417E+01
RHO	6.1493E+00	2.1314E+01	2.9987E+01
H	8.5316E+01	1.4103E+02	1.7744E+02
A	6.5430E+00	7.4242E+00	7.8640E+00
S	1.2965E+00	1.3244E+00	1.3615E+00
Z	1.0950E+00	1.1729E+00	1.2161E+00
GAME	7.2388E-01	6.9360E-01	6.8335E-01
U	1.3501E+01	3.8874E+00	3.4848E+00

SPECIES	MOLE FRACTIONS		
E-	8.6724E-02	1.4742E-01	1.7771E-01
A	8.2655E-01	7.0517E-01	6.4463E-01
A+	8.6723E-02	1.4740E-01	1.7763E-01
A++	5.2850E-07	1.1622E-05	3.8375E-05
A+++	8.1453E-17	1.6744E-13	3.0595E-12
A++++	4.5797E-32	1.1389E-25	2.7847E-23
AV	1.7188E-52	5.0509E-42	3.6899E-38
AVI	1.6509E-78	6.7567E-63	3.4201E-57
AVII	0.	7.6359E-91	1.4351E-82
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2813E+02	2.2200E+03	3.4348E+03
T	5.6962E+01	7.2254E+01	7.9206E+01
RHO	6.6856E+00	2.5433E+01	3.4676E+01
H	9.9193E+01	1.6686E+02	2.0642E+02
A	6.7734E+00	7.7420E+00	8.2116E+00
S	1.3195E+00	1.3555E+00	1.3953E+00
Z	1.1242E+00	1.2081E+00	1.2506E+00
GAME	7.1643E-01	6.8666E-01	6.8073E-01
U	1.4764E+01	3.8721E+00	3.5120E+00

SPECIES	MOLE FRACTIONS		
E-	1.1050E-01	1.7225E-01	2.0038E-01
A	7.7901E-01	6.5552E-01	5.9933E-01
A+	1.1049E-01	1.7220E-01	2.0021E-01
A++	1.4458E-06	2.8184E-05	8.5374E-05
A+++	7.9196E-16	1.3737E-12	2.0743E-11
A++++	3.0874E-30	5.8447E-24	9.8464E-22
AV	1.4739E-49	2.8296E-39	1.1145E-35
AVI	3.6958E-74	7.3887E-59	1.4712E-53
AVII	0.	5.1836E-85	2.4124E-77
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9528E+02	1.9479E+03	3.0590E+03
T	5.5512E+01	7.0008E+01	7.6756E+01
RHO	6.4186E+00	2.3370E+01	3.2318E+01
H	9.2128E+01	1.5373E+02	1.9154E+02
A	6.6582E+00	7.5824E+00	8.0320E+00
S	1.3078E+00	1.3397E+00	1.3781E+00
Z	1.1094E+00	1.1906E+00	1.2332E+00
GAME	7.1988E-01	6.8977E-01	6.8159E-01
U	1.4133E+01	3.8641E+00	3.4845E+00

SPECIES	MOLE FRACTIONS		
E-	9.8578E-02	1.6007E-01	1.8907E-01
A	8.0284E-01	6.7987E-01	6.2192E-01
A+	9.8576E-02	1.6004E-01	1.8895E-01
A++	8.9434E-07	1.8356E-05	5.7299E-05
A+++	2.6694E-16	4.9513E-13	7.9787E-12
A++++	4.1273E-31	8.6693E-25	1.6629E-22
AV	5.8871E-51	1.3193E-40	6.4609E-37
AVI	3.2429E-76	8.1738E-61	2.2648E-55
AVII	0.	7.7696E-88	5.9240E-80
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6223E+02	2.5153E+03	3.8389E+03
T	5.8371E+01	7.4529E+01	8.1766E+01
RHO	6.9494E+00	2.7538E+01	3.7019E+01
H	1.0651E+02	1.8048E+02	2.2188E+02
A	6.8885E+00	7.9058E+00	8.4032E+00
S	1.3314E+00	1.3716E+00	1.4129E+00
Z	1.1395E+00	1.2256E+00	1.2683E+00
GAME	7.1342E-01	6.8427E-01	6.8094E-01
U	1.5393E+01	3.8775E+00	3.5463E+00

SPECIES	MOLE FRACTIONS		
E-	1.2243E-01	1.8404E-01	2.1152E-01
A	7.5515E-01	6.3196E-01	5.7709E-01
A+	1.2242E-01	1.8396E-01	2.1127E-01
A++	2.2509E-06	4.2476E-05	1.2680E-04
A+++	2.1634E-15	3.6583E-12	5.3615E-11
A++++	1.9736E-29	3.6442E-23	5.7485E-21
AV	2.8325E-48	5.3445E-38	1.8736E-34
AVI	2.7827E-72	5.5384E-57	9.1889E-52
AVII	0.	2.6450E-82	9.3089E-75
AVIII	0.	0.	0.

TABLE 1.- Continued

$p_1 = 50\ kN/m^2$

P1 = 5.00E+04 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.9791E+02	2.8357E+03	4.2785E+03
T	5.9752E+01	7.6868E+01	8.4493E+01
RHO	7.2134E+00	2.9676E+01	3.9364E+01
H	1.1410E+02	1.9469E+02	2.3808E+02
A	7.0043E+00	8.0767E+00	8.6122E+00
S	1.3436E+00	1.3882E+00	1.4310E+00
Z	1.1552E+00	1.2431E+00	1.2864E+00
GAME	7.1075E-01	6.8268E-01	6.8239E-01
U	1.6031E+01	3.9015E+00	3.5850E+00

SPECIES	MOLE FRACTIONS		
E-	1.3435E-01	1.9556E-01	2.2263E-01
A	7.3130E-01	6.0894E-01	5.5492E-01
A+	1.3434E-01	1.9544E-01	2.2226E-01
A++	3.4002E-06	6.3323E-05	1.8915E-04
A+++	5.5343E-15	9.5186E-12	1.4030E-10
A++++	1.1131E-28	2.1702E-22	3.4224E-20
AV	4.3737E-47	9.3538E-37	3.2386E-33
AVI	1.4264E-70	3.7037E-55	5.9595E-50
AVII	0.	1.1416E-79	3.7729E-72
AVIII	0.	0.	0.

P1 = 5.00E+04 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.7218E+02	3.5313E+03	5.2336E+03
T	6.2434E+01	8.1719E+01	9.0488E+01
RHO	7.7171E+00	3.3806E+01	4.3674E+01
H	1.2999E+02	2.2425E+02	2.7213E+02
A	7.2366E+00	8.4426E+00	9.0911E+00
S	1.3688E+00	1.4222E+00	1.4677E+00
Z	1.1876E+00	1.2783E+00	1.3243E+00
GAME	7.0629E-01	6.8236E-01	6.8969E-01
U	1.7275E+01	3.9575E+00	3.7038E+00

SPECIES	MOLE FRACTIONS		
E-	1.5795E-01	2.1768E-01	2.4489E-01
A	6.8410E-01	5.6477E-01	5.1065E-01
A+	1.5794E-01	2.1741E-01	2.4403E-01
A++	7.1881E-06	1.3659E-04	4.2693E-04
A+++	3.0764E-14	6.0231E-11	9.9580E-10
A++++	2.6692E-27	6.7053E-21	1.2754E-18
AV	7.1184E-45	2.2614E-34	1.0261E-30
AVI	2.6183E-67	1.1450E-51	2.6499E-46
AVII	0.	1.1944E-74	6.3026E-67
AVIII	0.	0.	9.3784E-92

P1 = 5.00E+04 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.3443E+02	3.1724E+03	4.7412E+03
T	6.1102E+01	7.9242E+01	8.7380E+01
RHO	7.4679E+00	3.1760E+01	4.1577E+01
H	1.2192E+02	2.0923E+02	2.5479E+02
A	7.1200E+00	8.2538E+00	8.8397E+00
S	1.3561E+00	1.4050E+00	1.4492E+00
Z	1.1712E+00	1.2605E+00	1.3050E+00
GAME	7.0839E-01	6.8202E-01	6.8526E-01
U	1.6654E+01	3.9279E+00	3.6403E+00

SPECIES	MOLE FRACTIONS		
E-	1.4619E-01	2.0668E-01	2.3372E-01
A	7.0762E-01	5.8672E-01	5.3284E-01
A+	1.4618E-01	2.0650E-01	2.3316E-01
A++	4.9980E-06	9.3104E-05	2.8298E-04
A+++	1.3348E-14	2.3993E-11	3.6977E-10
A++++	5.6518E-28	1.2131E-21	2.0511E-19
AV	5.7716E-46	1.4702E-35	5.5989E-32
AVI	5.8463E-69	2.0950E-53	3.7925E-48
AVII	0.	3.7893E-77	1.4188E-69
AVIII	0.	0.	7.5520E-96

P1 = 5.00E+04 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.1115E+02	3.9102E+03	5.7572E+03
T	6.3752E+01	8.4304E+01	9.3871E+01
RHO	7.9604E+00	3.5783E+01	4.5616E+01
H	1.3832E+02	2.3973E+02	2.9016E+02
A	7.3541E+00	8.6445E+00	9.3710E+00
S	1.3818E+00	1.4395E+00	1.4865E+00
Z	1.2043E+00	1.2962E+00	1.3445E+00
GAME	7.0444E-01	6.8384E-01	6.9578E-01
U	1.7895E+01	3.9989E+00	3.7808E+00

SPECIES	MOLE FRACTIONS		
E-	1.6961E-01	2.2851E-01	2.5624E-01
A	6.6078E-01	5.4317E-01	4.8818E-01
A+	1.6959E-01	2.2811E-01	2.5493E-01
A++	1.0147E-05	1.9998E-04	6.5170E-04
A+++	6.7962E-14	1.5061E-10	2.7612E-09
A++++	1.1515E-26	3.6633E-20	8.3212E-18
AV	7.2729E-44	3.3945E-33	2.0109E-29
AVI	7.7170E-66	5.9863E-50	2.0061E-44
AVII	0.	3.4675E-72	3.0033E-64
AVIII	0.	0.	3.7329E-88

TABLE I. - Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.5133E+02	4.3143E+03	6.3129E+03
T	6.5062E+01	8.7048E+01	9.7573E+01
RHO	8.1973E+00	3.7704E+01	4.7370E+01
H	1.4690E+02	2.5572E+02	3.0893E+02
A	7.4729E+00	8.8636E+00	9.6818E+00
S	1.3950E+00	1.4570E+00	1.5054E+00
Z	1.2212E+00	1.3145E+00	1.3658E+00
GAME	7.0282E-01	6.8659E-01	7.0338E-01
U	1.8512E+01	4.0291E+00	3.8729E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.8116E-01	2.3927E-01	2.6784E-01
A	6.3769E-01	5.2175E-01	4.6533E-01
A+	1.8114E-01	2.3868E-01	2.6582E-01
A++	1.4102E-05	2.9382E-04	1.0070E-03
A+++	1.4512E-13	3.8033E-10	7.9003E-09
A++++	4.6536E-26	2.0313E-19	5.7314E-17
AV	6.6092E-43	5.2002E-32	4.2798E-28
AVI	1.8123E-64	3.2183E-48	1.7094E-42
AVII	8.2435E-94	1.0483E-69	1.6909E-61
AVIII	0.	5.8439E-96	1.8759E-84

P1 = 5.00E+04 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.3530E+02	5.1676E+03	7.5231E+03
T	6.7680E+01	9.3060E+01	1.0604E+02
RHO	8.6492E+00	4.1044E+01	5.0242E+01
H	1.6481E+02	2.8893E+02	3.4883E+02
A	7.7159E+00	9.3627E+00	1.0385E+01
S	1.4222E+00	1.4923E+00	1.5435E+00
Z	1.2561E+00	1.3529E+00	1.4122E+00
GAME	7.0030E-01	6.9623E-01	7.2022E-01
U	1.9741E+01	4.1661E+00	4.1112E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.0389E-01	2.6087E-01	2.9187E-01
A	5.9224E-01	4.7890E-01	4.1872E-01
A+	2.0384E-01	2.5959E-01	2.8695E-01
A++	2.6243E-05	6.4318E-04	2.4573E-03
A+++	6.1230E-13	2.5104E-09	6.8918E-08
A++++	6.6782E-25	6.5627E-18	3.0371E-15
AV	4.7151E-41	1.3001E-29	2.2922E-25
AVI	9.9988E-62	1.0038E-44	1.5745E-38
AVII	1.7849E-89	1.0417E-64	7.4417E-56
AVIII	0.	8.4659E-89	7.5457E-77

P1 = 5.00E+04 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9272E+02	4.7327E+03	6.9009E+03
T	6.6370E+01	8.9952E+01	1.0162E+02
RHO	8.4271E+00	3.9458E+01	4.8913E+01
H	1.5573E+02	2.7211E+02	3.2845E+02
A	7.5934E+00	9.1019E+00	1.0022E+01
S	1.4085E+00	1.4746E+00	1.5244E+00
Z	1.2385E+00	1.3334E+00	1.3883E+00
GAME	7.0144E-01	6.9071E-01	7.1190E-01
U	1.9128E+01	4.0898E+00	3.9812E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.9259E-01	2.5003E-01	2.7971E-01
A	6.1483E-01	5.0037E-01	4.4215E-01
A+	1.9255E-01	2.4916E-01	2.7657E-01
A++	1.9345E-05	4.3328E-04	1.5706E-03
A+++	3.0188E-13	9.6904E-10	2.3187E-08
A++++	1.8121E-25	1.1397E-18	4.1256E-16
AV	5.9151E-42	8.0774E-31	9.7382E-27
AVI	4.8337E-63	1.7580E-46	1.6018E-40
AVII	2.3007E-91	3.2271E-67	1.0872E-58
AVIII	0.	3.4924E-92	1.1405E-80

P1 = 5.00E+04 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.7908E+02	5.6191E+03	8.1699E+03
T	6.8997E+01	9.6388E+01	1.1067E+02
RHO	8.8631E+00	4.2455E+01	5.1386E+01
H	1.7415E+02	3.0620E+02	3.6963E+02
A	7.8408E+00	9.6458E+00	1.0750E+01
S	1.4361E+00	1.5100E+00	1.5623E+00
Z	1.2740E+00	1.3732E+00	1.4367E+00
GAME	6.9941E-01	7.0297E-01	7.2679E-01
U	2.0353E+01	4.2541E+00	4.2304E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.1506E-01	2.7175E-01	3.0394E-01
A	5.6992E-01	4.5746E-01	3.9590E-01
A+	2.1499E-01	2.6983E-01	2.9638E-01
A++	3.5273E-05	9.5937E-04	3.7782E-03
A+++	1.2172E-12	6.5890E-09	1.9779E-07
A++++	2.3631E-24	3.8581E-17	2.1003E-14
AV	3.4752E-40	2.1541E-28	4.8875E-24
AVI	1.7627E-60	5.9548E-43	1.3390E-36
AVII	9.1379E-88	3.5251E-62	4.1004E-53
AVIII	0.	2.1778E-85	3.6667E-73

TABLE I. - Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2403E+02	6.0839E+03	8.8470E+03
T	7.0327E+01	9.9996E+01	1.1549E+02
RHO	9.0680E+00	4.3627E+01	5.2393E+01
H	1.8374E+02	3.2388E+02	3.9117E+02
A	7.9687E+00	9.9546E+00	1.1109E+01
S	1.4501E+00	1.5279E+00	1.5809E+00
Z	1.2921E+00	1.3946E+00	1.4621E+00
GAME	6.9878E-01	7.1060E-01	7.3087E-01
U	2.0962E+01	4.3594E+00	4.3621E+00

SPECIES	MOLE FRACTIONS		
E-	2.2609E-01	2.8294E-01	3.1603E-01
A	5.4786E-01	4.3556E-01	3.7362E-01
A+	2.2600E-01	2.8005E-01	3.0468E-01
A++	4.7060E-05	1.4443E-03	5.6746E-03
A+++	2.3856E-12	1.7708E-08	5.4116E-07
A++++	8.2035E-24	2.3594E-16	1.3366E-13
AV	2.5555E-39	3.7788E-27	9.1632E-23
AVI	3.3913E-59	3.8110E-41	9.4694E-35
AVII	7.5732E-86	1.3088E-59	1.7317E-50
AVIII	0.	6.2288E-82	1.2421E-69

P1 = 5.00E+04 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.1744E+02	7.0497E+03	1.0296E+04
T	7.3044E+01	1.0776E+02	1.2539E+02
RHO	9.4484E+00	4.5471E+01	5.4185E+01
H	2.0368E+02	3.6049E+02	4.3680E+02
A	8.2351E+00	1.0598E+01	1.1799E+01
S	1.4788E+00	1.5624E+00	1.6183E+00
Z	1.3294E+00	1.4387E+00	1.5154E+00
GAME	6.9841E-01	7.2451E-01	7.3271E-01
U	2.2174E+01	4.6128E+00	4.6829E+00

SPECIES	MOLE FRACTIONS		
E-	2.4775E-01	3.0492E-01	3.4010E-01
A	5.0457E-01	3.9335E-01	3.3137E-01
A+	2.4759E-01	2.9854E-01	3.1697E-01
A++	8.2383E-05	3.1876E-03	1.1557E-02
A+++	8.8397E-12	1.2150E-07	3.2611E-06
A++++	9.1453E-23	8.0243E-15	3.7150E-12
AV	1.1780E-37	9.9771E-25	1.8054E-20
AVI	8.9786E-57	1.2467E-37	2.0770E-31
AVII	2.2045E-82	1.2937E-54	9.5907E-46
AVIII	0.	3.2512E-75	2.9755E-63

P1 = 5.00E+04 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.7016E+02	6.5612E+03	9.5643E+03
T	7.1674E+01	1.0376E+02	1.2044E+02
RHO	9.2633E+00	4.4654E+01	5.3362E+01
H	1.9358E+02	3.4197E+02	4.1393E+02
A	8.0999E+00	1.0271E+01	1.1459E+01
S	1.4644E+00	1.5451E+00	1.5995E+00
Z	1.3106E+00	1.4161E+00	1.4882E+00
GAME	6.9844E-01	7.1801E-01	7.3256E-01
U	2.1569E+01	4.4796E+00	4.5386E+00

SPECIES	MOLE FRACTIONS		
E-	2.3699E-01	2.9383E-01	3.2805E-01
A	5.2608E-01	4.1449E-01	3.5216E-01
A+	2.3687E-01	2.8953E-01	3.1154E-01
A++	6.2410E-05	2.1496E-03	8.2520E-03
A+++	4.6153E-12	4.6490E-08	1.3840E-06
A++++	2.7704E-23	1.3818E-15	7.5705E-13
AV	1.7775E-38	6.1827E-26	1.4368E-21
AVI	5.8005E-58	2.2007E-39	5.1943E-33
AVII	4.5602E-84	4.1708E-57	5.0976E-48
AVIII	0.	1.4416E-78	2.5926E-66

P1 = 5.00E+04 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.6626E+02	7.5572E+03	1.1050E+04
T	7.4446E+01	1.1195E+02	1.3014E+02
RHO	9.6256E+00	4.6174E+01	5.5062E+01
H	2.1404E+02	3.7957E+02	4.6002E+02
A	8.3750E+00	1.0924E+01	1.2123E+01
S	1.4934E+00	1.5796E+00	1.6362E+00
Z	1.3484E+00	1.4620E+00	1.5420E+00
GAME	6.9872E-01	7.2918E-01	7.3236E-01
U	2.2786E+01	4.7553E+00	4.8004E+00

SPECIES	MOLE FRACTIONS		
E-	2.5839E-01	3.1600E-01	3.5151E-01
A	4.8333E-01	3.7266E-01	3.1240E-01
A+	2.5817E-01	3.0668E-01	3.2068E-01
A++	1.0844E-04	4.6589E-03	1.5404E-02
A+++	1.6848E-11	3.0859E-07	6.8758E-06
A++++	2.9913E-22	4.4329E-14	1.4994E-11
AV	7.6939E-37	1.4885E-23	1.6766E-19
AVI	1.3566E-55	6.2949E-36	5.3915E-30
AVII	9.9832E-81	3.3749E-52	9.8056E-44
AVIII	0.	5.7241E-72	1.5102E-60

TABLE I.-Continued

p_1 = 50 kN/m^2

P1 = 5.00E+04 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0157E+03	8.0523E+03	1.1819E+04
T	7.5878E+01	1.1619E+02	1.3486E+02
RHO	9.7863E+00	4.6634E+01	5.5817E+01
H	2.2463E+02	3.9876E+02	4.8395E+02
A	8.5199E+00	1.1240E+01	1.2451E+01
S	1.5081E+00	1.5970E+00	1.6544E+00
Z	1.3678E+00	1.4861E+00	1.5700E+00
GAME	6.9941E-01	7.3172E-01	7.3218E-01
U	2.3382E+01	4.9309E+00	4.9450E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6889E-01	3.2711E-01	3.6307E-01
A	4.6237E-01	3.5242E-01	2.9380E-01
A+	2.6860E-01	3.1383E-01	3.2322E-01
A++	1.4236E-04	6.6423E-03	1.9905E-07
A+++	3.1957E-11	7.4227E-07	1.3541E-05
A++++	9.7077E-22	2.2215E-13	5.3735E-11
AV	4.9961E-36	1.9064E-22	1.2967E-18
AVI	2.0819E-54	2.5512E-34	1.0785E-28
AVII	5.0679E-79	6.4305E-50	6.9408E-42
AVIII	0.	6.6170E-69	4.6948E-58

P1 = 5.00E+04 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1179E+03	9.1050E+03	1.3399E+04
T	7.8876E+01	1.2448E+02	1.4378E+02
RHO	1.0069E+01	4.7707E+01	5.7314E+01
H	2.4657E+02	4.3875E+02	5.3326E+02
A	8.8283E+00	1.1822E+01	1.3094E+01
S	1.5379E+00	1.6296E+00	1.6895E+00
Z	1.4075E+00	1.5332E+00	1.6259E+00
GAME	7.0205E-01	7.3226E-01	7.3341E-01
U	2.4567E+01	5.1936E+00	5.2214E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.8950E-01	3.4779E-01	3.8496E-01
A	4.2124E-01	3.1652E-01	2.6015E-01
A+	2.8901E-01	3.2360E-01	3.2486E-01
A++	2.4498E-04	1.2088E-02	2.9990E-02
A+++	1.1504E-10	3.3711E-06	4.1502E-05
A++++	1.0204E-20	3.6535E-12	4.5546E-10
AV	2.0967E-34	1.6279E-20	4.0727E-17
AVI	4.8956E-52	1.6517E-31	1.7165E-26
AVII	1.3568E-75	6.2751E-46	9.4765E-39
AVIII	0.	1.5286E-63	7.9848E-54

P1 = 5.00E+04 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0662E+03	8.5759E+03	1.2596E+04
T	7.7371E+01	1.2036E+02	1.3935E+02
RHO	9.9293E+00	4.7198E+01	5.6585E+01
H	2.3547E+02	4.1858E+02	5.0835E+02
A	8.6730E+00	1.1537E+01	1.2769E+01
S	1.5232E+00	1.6134E+00	1.6719E+00
Z	1.3878E+00	1.5096E+00	1.5975E+00
GAME	7.0054E-01	7.3249E-01	7.3250E-01
U	2.3975E+01	5.0467E+00	5.0857E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7944E-01	3.3756E-01	3.7402E-01
A	4.4131E-01	3.3399E-01	2.7674E-01
A+	2.7906E-01	3.1934E-01	3.2450E-01
A++	1.8747E-04	9.1078E-03	2.4724E-02
A+++	6.1129E-11	1.6398E-06	2.4340E-05
A++++	3.1966E-21	9.5975E-13	1.6377E-10
AV	3.3251E-35	1.9426E-21	7.7960E-18
AVI	3.3482E-53	7.4614E-33	1.5034E-27
AVII	2.9087E-77	7.7243E-48	2.9509E-40
AVIII	0.	4.1169E-66	7.3758E-56

P1 = 5.00E+04 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1706E+03	9.6307E+03	1.4196E+04
T	8.0488E+01	1.2862E+02	1.4812E+02
RHO	1.0182E+01	4.8043E+01	5.7907E+01
H	2.5791E+02	4.5934E+02	5.5867E+02
A	8.9973E+00	1.2111E+01	1.3422E+01
S	1.5534E+00	1.6465E+00	1.7071E+00
Z	1.4283E+00	1.5585E+00	1.6551E+00
GAME	7.0415E-01	7.3167E-01	7.3487E-01
U	2.5155E+01	5.3371E+00	5.3570E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9988E-01	3.5835E-01	3.9581E-01
A	4.0056E-01	2.9901E-01	2.4409E-01
A+	2.9924E-01	3.2692E-01	3.2445E-01
A++	3.2373E-04	1.5708E-02	3.5583E-02
A+++	2.2231E-10	6.6220E-06	6.7201E-05
A++++	3.4073E-20	1.2850E-11	1.1555E-09
AV	1.4106E-33	1.2074E-19	1.8435E-16
AVI	7.7779E-51	3.0706E-30	1.5944E-25
AVII	6.9691E-74	3.9714E-44	2.2707E-37
AVIII	0.	4.0482E-61	5.8199E-52

TABLE I. - Continued

p_1 = 50 kN/m^2

P1 = 5.00E+04 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2245E+03	1.0177E+04	1.5018E+04
T	8.2107E+01	1.3263E+02	1.5238E+02
RHO	1.0296E+01	4.8458E+01	5.8503E+01
H	2.6951E+02	4.8040E+02	5.8452E+02
A	9.1673E+00	1.2392E+01	1.3753E+01
S	1.5680E+00	1.6629E+00	1.7245E+00
Z	1.4485E+00	1.5834E+00	1.6847E+00
GAME	7.0664E-01	7.3121E-01	7.3680E-01
U	2.5742E+01	5.4754E+00	5.4847E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0962E-01	3.6845E-01	4.0642E-01
A	3.8119E-01	2.8285E-01	2.2877E-01
A+	3.0877E-01	3.2895E-01	3.2330E-01
A++	4.2371E-04	1.9735E-02	4.1404E-02
A+++	4.2091E-10	1.2066E-05	1.0404E-04
A++++	1.0955E-19	3.9633E-11	2.7098E-09
AV	8.9195E-33	7.3152E-19	7.3887E-16
AVI	1.1201E-49	4.2795E-29	1.2446E-24
AVII	3.0058E-72	1.6773E-42	4.2551E-36
AVIII	0.	6.2573E-59	3.0590E-50

P1 = 5.00E+04 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3351E+03	1.1257E+04	1.6644E+04
T	8.5640E+01	1.4034E+02	1.6070E+02
RHO	1.0458E+01	4.9072E+01	5.9314E+01
H	2.9344E+02	5.2368E+02	6.3775E+02
A	9.5433E+00	1.2954E+01	1.4426E+01
S	1.5984E+00	1.6955E+00	1.7594E+00
Z	1.4908E+00	1.6347E+00	1.7461E+00
GAME	7.1336E-01	7.3150E-01	7.4164E-01
U	2.6901E+01	5.7391E+00	5.7483E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2921E-01	3.8826E-01	4.2731E-01
A	3.4232E-01	2.5248E-01	1.9952E-01
A+	3.2773E-01	3.3028E-01	3.1926E-01
A++	7.4185E-04	2.8939E-02	5.3686E-02
A+++	1.5944E-09	3.3887E-05	2.2478E-04
A++++	1.2504E-18	2.8055E-10	1.2381E-08
AV	4.1939E-31	1.6974E-17	8.8786E-15
AVI	3.0289E-47	4.3072E-27	4.9902E-23
AVII	9.2068E-69	1.1796E-39	8.2449E-34
AVIII	3.5407E-95	4.2930E-55	3.7969E-47

P1 = 5.00E+04 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2793E+03	1.0716E+04	1.5832E+04
T	8.3830E+01	1.3653E+02	1.5657E+02
RHO	1.0385E+01	4.8788E+01	5.8955E+01
H	2.8135E+02	5.0182E+02	6.1091E+02
A	9.3503E+00	1.2672E+01	1.4088E+01
S	1.5832E+00	1.6792E+00	1.7420E+00
Z	1.4695E+00	1.6088E+00	1.7151E+00
GAME	7.0973E-01	7.3112E-01	7.3909E-01
U	2.6322E+01	5.6090E+00	5.6192E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1948E-01	3.7842E-01	4.1695E-01
A	3.6160E-01	2.6736E-01	2.1387E-01
A+	3.1836E-01	3.3004E-01	3.2156E-01
A++	5.5955E-04	2.4160E-02	4.7461E-02
A+++	8.1467E-10	2.0724E-05	1.5540E-04
A++++	3.6628E-19	1.1010E-10	5.9603E-09
AV	6.0048E-32	3.7668E-18	2.6787E-15
AVI	1.7821E-48	4.7214E-28	8.4087E-24
AVII	1.5580E-70	5.0827E-41	6.4974E-35
AVIII	0.	6.1836E-57	1.2206E-48

P1 = 5.00E+04 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3920E+03	1.1794E+04	1.7447E+04
T	8.7544E+01	1.4405E+02	1.6479E+02
RHO	1.0513E+01	4.9290E+01	5.9552E+01
H	3.0578E+02	5.4591E+02	6.6502E+02
A	9.7466E+00	1.3237E+01	1.4767E+01
S	1.6136E+00	1.7117E+00	1.7768E+00
Z	1.5124E+00	1.6611E+00	1.7779E+00
GAME	7.1749E-01	7.3233E-01	7.4437E-01
U	2.7474E+01	5.8663E+00	5.8767E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3880E-01	3.9798E-01	4.3754E-01
A	3.2339E-01	2.3816E-01	1.8564E-01
A+	3.3682E-01	3.2980E-01	3.1642E-01
A++	9.8762E-04	3.4009E-02	6.0082E-02
A+++	3.1542E-09	5.3027E-05	3.1675E-04
A++++	4.3363E-18	6.6140E-10	2.4540E-08
AV	2.9713E-30	6.7771E-17	2.7340E-14
AVI	5.1159E-46	3.3021E-26	2.6629E-22
AVII	4.9737E-67	2.1387E-38	8.9956E-33
AVIII	2.1536E-92	2.1367E-53	9.6353E-46

TABLE I. - Continued

p_1 = 50 kN/ m^2

P1 = 5.00E+04 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4499E+03	1.2330E+04	1.8246E+04
T	8.9554E+01	1.4770E+02	1.6882E+02
RHO	1.0552E+01	4.9455E+01	5.9712E+01
H	3.1837E+02	5.6862E+02	6.9285E+02
A	9.9602E+00	1.3524E+01	1.5110E+01
S	1.6287E+00	1.7280E+00	1.7942E+00
Z	1.5343E+00	1.6880E+00	1.8100E+00
GAME	7.2201E-01	7.3359E-01	7.4719E-01
U	2.8046E+01	5.9882E+00	6.0052E+00

SPECIES	MOLE FRACTIONS		
E-	3.4823E-01	4.0760E-01	4.4753E-01
A	3.0486E-01	2.2431E-01	1.7239E-01
A+	3.4559E-01	3.2867E-01	3.1308E-01
A++	1.3208E-03	3.9344E-02	6.6572E-02
A+++	6.3207E-09	8.0053E-05	4.3541E-04
A++++	1.5409E-17	1.4639E-09	4.6521E-08
AV	2.1991E-29	2.4535E-16	7.8492E-14
AVI	9.3654E-45	2.1997E-25	1.2838E-21
AVII	3.1872E-65	3.1771E-37	8.4927E-32
AVIII	6.2433E-90	8.1097E-52	2.0065E-44

P1 = 5.00E+04 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5686E+03	1.3354E+04	1.9804E+04
T	9.3908E+01	1.5480E+02	1.7682E+02
RHO	1.0581E+01	4.9460E+01	5.9693E+01
H	3.4428E+02	6.1492E+02	7.4989E+02
A	1.0412E+01	1.4107E+01	1.5805E+01
S	1.6590E+00	1.7609E+00	1.8290E+00
Z	1.5786E+00	1.7441E+00	1.8763E+00
GAME	7.3134E-01	7.3704E-01	7.5292E-01
U	2.9176E+01	6.2709E+00	6.2650E+00

SPECIES	MOLE FRACTIONS		
E-	3.6653E-01	4.2664E-01	4.6703E-01
A	2.6933E-01	1.9774E-01	1.4742E-01
A+	3.6176E-01	3.2476E-01	3.0486E-01
A++	2.3861E-03	5.0691E-02	7.9917E-02
A+++	2.6143E-08	1.6679E-04	7.7731E-04
A++++	2.0423E-16	6.1091E-09	1.5091E-07
AV	1.2811E-27	2.5021E-15	5.5004E-13
AVI	3.3150E-42	6.8015E-24	2.3573E-20
AVII	1.2792E-61	4.2021E-35	5.3968E-30
AVIII	3.9897E-85	5.9253E-49	5.5491E-42

P1 = 5.00E+04 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5088E+03	1.2854E+04	1.9030E+04
T	9.1674E+01	1.5127E+02	1.7282E+02
RHO	1.0575E+01	4.9532E+01	5.9752E+01
H	3.3120E+02	5.9164E+02	7.2105E+02
A	1.0183E+01	1.3812E+01	1.5456E+01
S	1.6439E+00	1.7443E+00	1.8115E+00
Z	1.5564E+00	1.7155E+00	1.8428E+00
GAME	7.2672E-01	7.3517E-01	7.5005E-01
U	2.8613E+01	6.1158E+00	6.1307E+00

SPECIES	MOLE FRACTIONS		
E-	3.5748E-01	4.1709E-01	4.5735E-01
A	2.8681E-01	2.1094E-01	1.5966E-01
A+	3.5394E-01	3.2698E-01	3.0923E-01
A++	1.7729E-03	4.4880E-02	7.3179E-02
A+++	1.2799E-08	1.1690E-04	5.8653E-04
A++++	5.5646E-17	3.0534E-09	8.5019E-08
AV	1.6561E-28	8.0953E-16	2.1264E-13
AVI	1.7240E-43	1.2823E-24	5.6874E-21
AVII	1.9455E-63	3.9081E-36	7.1010E-31
AVIII	1.4809E-87	2.4059E-50	3.5646E-43

P1 = 5.00E+04 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6293E+03	1.3879E+04	2.0563E+04
T	9.6253E+01	1.5825E+02	1.8078E+02
RHO	1.0574E+01	4.9493E+01	5.9548E+01
H	3.5761E+02	6.3886E+02	7.7910E+02
A	1.0646E+01	1.4397E+01	1.6154E+01
S	1.6740E+00	1.7768E+00	1.8465E+00
Z	1.6009E+00	1.7721E+00	1.9101E+00
GAME	7.3547E-01	7.3912E-01	7.5573E-01
U	2.9735E+01	6.3594E+00	6.3943E+00

SPECIES	MOLE FRACTIONS		
E-	3.7534E-01	4.3569E-01	4.7646E-01
A	2.5252E-01	1.8556E-01	1.3581E-01
A+	3.6892E-01	3.2205E-01	3.0001E-01
A++	3.2132E-03	5.6475E-02	8.6706E-02
A+++	5.3621E-08	2.3041E-04	1.0128E-03
A++++	7.5521E-16	1.1550E-08	2.5974E-07
AV	1.0030E-26	7.0854E-15	1.3557E-12
AVI	6.4980E-41	3.1834E-23	9.0966E-20
AVII	8.7063E-60	3.7890E-34	3.7026E-29
AVIII	1.1593E-82	1.1596E-47	7.5205E-41

TABLE I.- Continued

p_1 = 50 kN/m^2

P1 = 5.00E+04 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6911E+03	1.4381E+04	2.1312E+04
T	9.8697E+01	1.6167E+02	1.8474E+02
RHO	1.0556E+01	4.9387E+01	5.9335E+01
H	3.7118E+02	6.6304E+02	8.0880E+02
A	1.0878E+01	1.4693E+01	1.6505E+01
S	1.6889E+00	1.7931E+00	1.8639E+00
Z	1.6231E+00	1.8011E+00	1.9443E+00
GAME	7.3868E-01	7.4135E-01	7.5846E-01
U	3.0292E+01	6.4815E+00	6.5246E+00

SPECIES	MOLE FRACTIONS		
E-	3.8390E-01	4.4477E-01	4.8568E-01
A	2.3652E-01	1.7356E-01	1.2480E-01
A+	3.7526E-01	3.1887E-01	2.9467E-01
A++	4.3164E-03	6.2480E-02	9.3551E-02
A+++	1.0969E-07	3.1302E-04	1.3010E-03
A++++	2.7810E-15	2.1189E-08	4.3581E-07
AV	7.8040E-26	1.9134E-14	3.2086E-12
AVI	1.2640E-39	1.3908E-22	3.3111E-19
AVII	5.8804E-58	3.0957E-33	2.3363E-28
AVIII	3.3803E-80	1.9829E-46	9.0986E-40

P1 = 5.00E+04 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9157E+03	1.6135E+04	2.3977E+04
T	1.0776E+02	1.7355E+02	1.9883E+02
RHO	1.0459E+01	4.8782E+01	5.8318E+01
H	4.2066E+02	7.5093E+02	9.1819E+02
A	1.1638E+01	1.5748E+01	1.7762E+01
S	1.7406E+00	1.8499E+00	1.9255E+00
Z	1.6997E+00	1.9058E+00	2.0678E+00
GAME	7.3945E-01	7.4978E-01	7.6732E-01
U	3.2228E+01	6.9165E+00	7.0423E+00

SPECIES	MOLE FRACTIONS		
E-	4.1165E-01	4.7529E-01	5.1641E-01
A	1.8802E-01	1.3529E-01	9.0788E-02
A+	3.8900E-01	3.0436E-01	2.7208E-01
A++	1.1324E-02	8.4261E-02	1.1786E-01
A+++	1.1767E-06	8.0369E-04	2.8676E-03
A++++	2.1190E-13	1.4119E-07	2.2984E-06
AV	7.1822E-23	4.3479E-13	5.1995E-11
AVI	2.4454E-35	1.4571E-20	2.1868E-17
AVII	6.9069E-52	2.3376E-30	9.1754E-26
AVIII	4.7148E-72	1.5355E-42	2.9536E-36

P1 = 5.00E+04 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7539E+03	1.4879E+04	2.2058E+04
T	1.0122E+02	1.6508E+02	1.8870E+02
RHO	1.0532E+01	4.9241E+01	5.9074E+01
H	3.8500E+02	6.8762E+02	8.3900E+02
A	1.1106E+01	1.4991E+01	1.6858E+01
S	1.7037E+00	1.8093E+00	1.8814E+00
Z	1.6452E+00	1.8305E+00	1.9788E+00
GAME	7.4062E-01	7.4369E-01	7.6109E-01
U	3.0846E+01	6.6043E+00	6.6545E+00

SPECIES	MOLE FRACTIONS		
E-	3.9216E-01	4.5370E-01	4.9466E-01
A	2.2145E-01	1.6202E-01	1.1441E-01
A+	3.8063E-01	3.1526E-01	2.8886E-01
A++	5.7629E-03	6.8597E-02	1.0042E-01
A+++	2.2196E-07	4.1757E-04	1.6496E-03
A++++	1.0052E-14	3.7646E-08	7.1450E-07
AV	5.9025E-25	4.9146E-14	7.3223E-12
AVI	2.3633E-38	5.6523E-22	1.1432E-18
AVII	3.7576E-56	2.2813E-32	1.3660E-27
AVIII	9.1414E-78	2.9460E-45	9.9371E-39

P1 = 5.00E+04 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0853E+03	1.7483E+04	2.6072E+04
T	1.1413E+02	1.8214E+02	2.0913E+02
RHO	1.0431E+01	4.8411E+01	5.7822E+01
H	4.5792E+02	8.1705E+02	1.0010E+03
A	1.2109E+01	1.6522E+01	1.8668E+01
S	1.7761E+00	1.8899E+00	1.9682E+00
Z	1.7515E+00	1.9827E+00	2.1562E+00
GAME	7.3345E-01	7.5589E-01	7.7287E-01
U	3.3620E+01	7.2776E+00	7.4173E+00

SPECIES	MOLE FRACTIONS		
E-	4.2906E-01	4.9564E-01	5.3621E-01
A	1.6167E-01	1.1174E-01	7.1425E-02
A+	3.8948E-01	2.9103E-01	2.5318E-01
A++	1.9784E-02	1.0016E-01	1.3453E-01
A+++	4.8420E-06	1.4328E-03	4.6498E-03
A+++	2.8700E-12	4.6476E-07	6.5575E-06
AV	4.4235E-21	3.1510E-12	3.0703E-10
AVI	9.5883E-33	2.8305E-19	3.2158E-16
AVII	3.2295E-48	1.6091E-28	4.2603E-24
AVIII	3.8893E-67	4.7213E-40	5.3539E-34

TABLE I.-Continued

$p_1 = 50\ kN/m^2$

P1 = 5.00E+04 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2625E+03	1.8953E+04	2.8340E+04
T	1.2023E+02	1.9095E+02	2.1991E+02
RHO	1.0436E+01	4.8161E+01	5.7352E+01
H	4.9679E+02	8.8624E+02	1.0875E+03
A	1.2562E+01	1.7313E+01	1.9607E+01
S	1.8114E+00	1.9294E+00	2.0114E+00
Z	1.8031E+00	2.0609E+00	2.2470E+00
GAME	7.2791E-01	7.6170E-01	7.7800E-01
U	3.5020E+01	7.6212E+00	7.7889E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4540E-01	5.1478E-01	5.5496E-01
A	1.4027E-01	9.1246E-02	5.5188E-02
A+	3.8329E-01	2.7556E-01	2.3198E-01
A++	3.1029E-02	1.1600E-01	1.5064E-01
A+++	1.5770E-05	2.4038E-03	7.2120E-03
A++++	2.5899E-11	1.3816E-06	1.7424E-05
AV	1.4628E-19	1.9559E-11	1.6311E-09
AVI	1.5590E-30	4.4207E-18	4.0763E-15
AVII	4.4348E-45	8.1291E-27	1.6051E-22
AVIII	6.4613E-63	9.6033E-38	7.3277E-32

P1 = 5.00E+04 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6410E+03	2.2220E+04	3.3481E+04
T	1.3151E+02	2.0922E+02	2.4241E+02
RHO	1.0525E+01	4.7846E+01	5.6903E+01
H	5.7938E+02	1.0337E+03	1.2738E+03
A	1.3482E+01	1.8932E+01	2.1529E+01
S	1.8814E+00	2.0071E+00	2.0953E+00
Z	1.9080E+00	2.2197E+00	2.4272E+00
GAME	7.2442E-01	7.7181E-01	7.8776E-01
U	3.7853E+01	8.3670E+00	8.5927E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7589E-01	5.4949E-01	5.8801E-01
A	1.0733E-01	5.8881E-02	3.2007E-02
A+	3.5776E-01	2.3960E-01	1.8713E-01
A++	5.8923E-02	1.4621E-01	1.7779E-01
A+++	9.4907E-05	5.8101E-03	1.4973E-02
A++++	7.8716E-10	9.4388E-06	9.5776E-05
AV	3.5219E-17	5.0981E-10	3.1424E-08
AVI	4.7817E-27	6.1698E-16	3.7979E-13
AVII	4.0148E-40	9.4561E-24	1.0590E-19
AVIII	3.0658E-56	1.3790E-33	4.9179E-28

P1 = 5.00E+04 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4479E+03	2.0561E+04	3.0822E+04
T	1.2600E+02	2.0002E+02	2.3091E+02
RHO	1.0473E+01	4.8031E+01	5.7133E+01
H	5.3728E+02	9.5867E+02	1.1785E+03
A	1.3017E+01	1.8120E+01	2.0551E+01
S	1.8465E+00	1.9685E+00	2.0532E+00
Z	1.8550E+00	2.1401E+00	2.3363E+00
GAME	7.2494E-01	7.6704E-01	7.8284E-01
U	3.6434E+01	7.9519E+00	8.1840E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6092E-01	5.3274E-01	5.7197E-01
A	1.2255E-01	7.3676E-02	4.2372E-02
A+	3.7218E-01	2.5827E-01	2.1001E-01
A++	4.4305E-02	1.3148F-01	1.6502E-01
A+++	4.1816E-05	3.8299E-03	1.0585E-02
A++++	1.6342E-10	3.7692E-06	4.2080E-05
AV	2.7916E-18	1.0677E-10	7.4825E-09
AVI	1.1581E-28	5.7499E-17	4.1883E-14
AVII	2.0159E-42	3.1715E-25	4.5015E-21
AVIII	2.4253E-59	1.3832E-35	6.7320E-30

P1 = 5.00E+04 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8416E+03	2.3986E+04	3.6286E+04
T	1.3686E+02	2.1865E+02	2.5426E+02
RHO	1.0580E+01	4.7706E+01	5.6676E+01
H	6.2307E+02	1.1118E+03	1.3733E+03
A	1.3961E+01	1.9755E+01	2.2531E+01
S	1.9162E+00	2.0453E+00	2.1370E+00
Z	1.9624E+00	2.2995E+00	2.5181E+00
GAME	7.2573E-01	7.7622E-01	7.9290E-01
U	3.9275E+01	8.7459E+00	9.0141E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9042E-01	5.6512E-01	6.0287E-01
A	9.3883E-02	4.6599E-02	2.3901E-02
A+	3.4116E-01	2.1995E-01	1.6437E-01
A++	7.4341E-02	1.5986E-01	1.8828E-01
A+++	1.9204E-04	8.4539E-03	2.0370E-02
A++++	3.1085E-09	2.2022E-05	2.0401E-04
AV	3.2765E-16	2.1847E-09	1.1923E-07
AVI	1.2802E-25	5.6728E-15	2.9757E-12
AVII	4.3799E-38	2.2654E-22	2.0279E-18
AVIII	1.7155E-53	1.0253E-31	2.7110E-26

TABLE I. - Continued

$p_1 = 50\ kN/m^2$

P1 = 5.00E+04 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0496E+03	2.5804E+04	3.9209E+04
T	1.4212E+02	2.2817E+02	2.6646E+02
RHO	1.0631E+01	4.7552E+01	5.6408E+01
H	6.6835E+02	1.1926E+03	1.4768E+03
A	1.4454E+01	2.0578E+01	2.3557E+01
S	1.9509E+00	2.0828E+00	2.1782E+00
Z	2.0184E+00	2.3783E+00	2.6086E+00
GAME	7.2830E-01	7.8038E-01	7.9834E-01
U	4.0697E+01	9.1419E+00	9.4481E+00

SPECIES	MOLE FRACTIONS		
E-	5.0455E-01	5.7953E-01	6.1666E-01
A	8.1765E-02	3.6645E-02	1.7640E-02
A+	3.2317E-01	2.0000E-01	1.4234E-01
A++	9.0153E-02	1.7198E-01	1.9618E-01
A+++	3.5681E-04	1.1796E-02	2.6769E-02
A++++	1.0600E-08	4.7684E-05	4.0967E-04
AV	2.4357E-15	8.3283E-09	4.1328E-07
AVI	2.4938E-24	4.4005E-14	2.0455E-11
AVII	3.0391E-36	4.2586E-21	3.2286E-17
AVIII	5.3055E-51	5.4881E-30	1.1641E-24

P1 = 5.00E+04 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4887E+03	2.9606E+04	4.5392E+04
T	1.5264E+02	2.4804E+02	2.9207E+02
RHO	1.0707E+01	4.7018E+01	5.5730E+01
H	7.6373E+02	1.3631E+03	1.6969E+03
A	1.5482E+01	2.2288E+01	2.5683E+01
S	2.0201E+00	2.1582E+00	2.2594E+00
Z	2.1348E+00	2.5386E+00	2.7887E+00
GAME	7.3558E-01	7.8894E-01	8.0984E-01
U	4.3556E+01	9.9531E+00	1.0358E+01

SPECIES	MOLE FRACTIONS		
E-	5.3156E-01	6.0608E-01	6.4141E-01
A	6.0717E-02	2.1850E-02	9.2799E-03
A+	2.8490E-01	1.5947E-01	1.0231E-01
A++	1.2179E-01	1.9137E-01	2.0333E-01
A+++	1.0295E-03	2.1031E-02	4.2248E-02
A++++	9.0903E-08	1.9311E-04	1.4189E-03
AV	8.4638E-14	9.6831E-08	3.9374E-06
AVI	4.9074E-22	1.9218E-12	6.9082E-10
AVII	5.8488E-33	9.5552E-19	5.1027E-15
AVIII	1.4808E-46	8.5695E-27	1.1322E-21

P1 = 5.00E+04 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2664E+03	2.7710E+04	4.2288E+04
T	1.4737E+02	2.3814E+02	2.7917E+02
RHO	1.0677E+01	4.7309E+01	5.6115E+01
H	7.1528E+02	1.2768E+03	1.5852E+03
A	1.4961E+01	2.1438E+01	2.4616E+01
S	1.9855E+00	2.1211E+00	2.2193E+00
Z	2.0759E+00	2.4596E+00	2.6995E+00
GAME	7.3170E-01	7.8464E-01	8.0410E-01
U	4.2139E+01	9.5432E+00	9.8976E+00

SPECIES	MOLE FRACTIONS		
E-	5.1828E-01	5.9343E-01	6.2956E-01
A	7.0751E-02	2.8329E-02	1.2841E-02
A+	3.0429E-01	1.7931E-01	1.2139E-01
A++	1.0606E-01	1.8278E-01	2.0127E-01
A+++	6.2181E-04	1.6058E-02	3.4160E-02
A++++	3.2424E-08	9.9485E-05	7.8428E-04
AV	1.5347E-14	3.0087E-08	1.3338E-06
AVI	3.8466E-23	3.1668E-13	1.2696E-10
AVII	1.5284E-34	7.2006E-20	4.4546E-16
AVIII	1.0637E-48	2.5593E-28	4.1202E-23

P1 = 5.00E+04 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7179E+03	3.1525E+04	4.8562E+04
T	1.5798E+02	2.5822E+02	3.0569E+02
RHO	1.0723E+01	4.6629E+01	5.5150E+01
H	8.1375E+02	1.4520E+03	1.8126E+03
A	1.6015E+01	2.3162E+01	2.6796E+01
S	2.0547E+00	2.1955E+00	2.3006E+00
Z	2.1948E+00	2.6183E+00	2.8805E+00
GAME	7.3966E-01	7.9349E-01	8.1545E-01
U	4.4968E+01	1.0366E+01	1.0834E+01

SPECIES	MOLE FRACTIONS		
E-	5.4438E-01	6.1807E-01	6.5284E-01
A	5.1617E-02	1.6648E-02	6.5621E-03
A+	2.6525E-01	1.4009E-01	8.4581E-02
A++	1.3711E-01	1.9796E-01	2.0231E-01
A+++	1.6364E-03	2.6875E-02	5.1198E-02
A++++	2.3814E-07	3.5993E-04	2.4948E-03
AV	4.2117E-13	2.9298E-07	1.1173E-05
AVI	5.4142E-21	1.0668E-11	3.5572E-09
AVII	1.8222E-31	1.1175E-17	5.4107E-14
AVIII	1.5612E-44	2.4169E-25	2.7992E-20

TABLE I.-Continued

p_1 = 50 kN/m^2

P1 = 5.00E+04 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9540E+03	3.3447E+04	5.1784E+04
T	1.6342E+02	2.6854E+02	3.1927E+02
RHO	1.0726E+01	4.6180E+01	5.4633E+01
H	8.6535E+02	1.5433E+03	1.9322E+03
A	1.6558E+01	2.4044E+01	2.7883E+01
S	2.0891E+00	2.2322E+00	2.3398E+00
Z	2.2558E+00	2.6971E+00	2.9688E+00
GAME	7.4372E-01	7.9820E-01	8.2026E-01
U	4.6374E+01	1.0798E+01	1.1320E+01

SPECIES	MOLE FRACTIONS		
E-	5.5670E-01	6.2923E-01	6.6316E-01
A	4.3436E-02	1.2596E-02	4.6621E-03
A+	2.4555E-01	1.2186E-01	6.9580E-02
A++	1.5180E-01	2.0224E-01	1.9838E-01
A+++	2.5139E-03	3.3444E-02	6.0069E-02
A++++	5.8980E-07	6.4012E-04	4.1192E-03
AV	1.9259E-12	8.2374E-07	2.8649E-05
AVI	5.3033E-20	5.3184E-11	1.5754E-08
AVII	4.7977E-30	1.1225E-16	4.6410E-13
AVIII	1.3176E-42	5.5462E-24	5.1984E-19

P1 = 5.00E+04 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4465E+03	3.7320E+04	5.8365E+04
T	1.7468E+02	2.8999E+02	3.4728E+02
RHO	1.0699E+01	4.5080E+01	5.3395E+01
H	9.7325E+02	1.733TE+03	2.1831E+03
A	1.7667E+01	2.5861E+01	3.0059E+01
S	2.1576E+00	2.3054E+00	2.4182E+00
Z	2.3793E+00	2.8548E+00	3.1475E+00
GAME	7.5101E-01	8.0785E-01	8.2661E-01
U	4.9172E+01	1.1680E+01	1.2320E+01

SPECIES	MOLE FRACTIONS		
E-	5.7970E-01	6.4972E-01	6.8229E-01
A	2.9807E-02	6.9937E-03	2.3151E-03
A+	2.0673E-01	8.9110E-02	4.5691E-02
A++	1.7832E-01	2.0377E-01	1.8272E-01
A+++	5.4384E-03	4.8586E-02	7.6939E-02
A++++	3.1412E-06	1.8210E-03	9.8942E-03
AV	3.2575E-11	5.5439E-06	1.5490E-04
AVI	3.7761E-18	1.0472E-09	2.3211E-07
AVII	2.1779E-27	8.1583E-15	2.2898E-11
AVIII	5.3220E-39	1.8711E-21	1.0455E-16

P1 = 5.00E+04 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1969E+03	3.5381E+04	5.5049E+04
T	1.6898E+02	2.7922E+02	3.3321E+02
RHO	1.0717E+01	4.5634E+01	5.4022E+01
H	9.1851E+02	1.6373E+03	2.0556E+03
A	1.7110E+01	2.4953E+01	2.8978E+01
S	2.1234E+00	2.2693E+00	2.3791E+00
Z	2.3174E+00	2.7768E+00	3.0581E+00
GAME	7.4755E-01	8.0309E-01	8.2407E-01
U	4.7776E+01	1.1234E+01	1.1813E+01

SPECIES	MOLE FRACTIONS		
E-	5.6848E-01	6.3987E-01	6.7300E-01
A	3.6169E-02	9.4014E-03	3.2846E-03
A+	2.2598E-01	1.0461E-01	5.6569E-02
A++	1.6562E-01	2.0421E-01	1.9170E-01
A+++	3.7483E-03	4.0806E-02	6.8848E-02
A++++	1.3915E-06	1.1038E-03	6.5359E-03
AV	8.1876E-12	2.2128E-06	6.9134E-05
AVI	4.6887E-19	2.4840E-10	6.3870E-08
AVII	1.0924E-28	1.0281E-15	3.5186E-12
AVIII	9.1617E-41	1.1231E-22	8.1703E-18

P1 = 5.00E+04 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7008E+03	3.9217E+04	6.1628E+04
T	1.8049E+02	3.0070E+02	3.6103E+02
RHO	1.0669E+01	4.4502E+01	5.2754E+01
H	1.0295E+03	1.8318E+03	2.3123E+03
A	1.8227E+01	2.6753E+01	3.1098E+01
S	2.1916E+00	2.3403E+00	2.4564E+00
Z	2.4412E+00	2.9306E+00	3.2358E+00
GAME	7.5403E-01	8.1220E-01	8.2786E-01
U	5.0541E+01	1.2134E+01	1.2803E+01

SPECIES	MOLE FRACTIONS		
E-	5.9036E-01	6.5877E-01	6.9095E-01
A	2.4324E-02	5.2077E-03	1.6504E-03
A+	1.8798E-01	7.5529E-02	3.6928E-02
A++	1.8965E-01	2.0113E-01	1.7219E-01
A+++	7.6854E-03	5.6480E-02	8.3768E-02
A++++	6.7908E-06	2.8685E-03	1.4186E-02
AV	1.2140E-10	1.2890E-05	3.1714E-04
AVI	2.7717E-17	3.9497E-09	7.3658E-07
AVII	3.8028E-26	5.5284E-14	1.2310E-10
AVIII	2.5825E-37	2.5186E-20	1.0342E-15

TABLE I. - Continued

p_1 = 100 kN/m^2

P1 = 1.00E+05 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4637E+01	2.6448E+02
T	1.2892E+01	1.6278E+01	2.9254E+01
RHO	3.7155E+00	5.1997E+00	9.0378E+00
H	1.2892E+01	1.6278E+01	2.9340E+01
A	3.5905E+00	4.0345E+00	5.3619E+00
S	1.1353E+00	1.1361E+00	1.1540E+00
Z	1.0000E+00	1.0000E+00	1.0003E+00
GAME	1.0000E+00	9.9999E-01	9.8247E-01
U	4.5391E+00	3.2320E+00	3.1661E+00

SPECIES	MOLE FRACTIONS		
E-	4.6606E-10	6.5295E-08	3.1250E-04
A	1.0000E+00	1.0000E+00	9.9938E-01
A+	4.6606E-10	6.5295E-08	3.1250E-04
A++	3.6182E-35	1.9529E-28	3.6574E-15
A+++	4.1556E-76	9.3128E-61	3.2834E-34
A++++	0.	0.	9.9566E-64
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9069E+01	1.2773E+02	3.8402E+02
T	1.8181E+01	2.3402E+01	3.9579E+01
RHO	3.7990E+00	5.4582E+00	9.6473E+00
H	1.8181E+01	2.3408E+01	4.1295E+01
A	4.2637E+00	4.8321E+00	5.8993E+00
S	1.1618E+00	1.1627E+00	1.1806E+00
Z	1.0000E+00	1.0000E+00	1.0057E+00
GAME	9.9991E-01	9.9773E-01	8.7430E-01
U	5.4900E+00	3.8024E+00	3.5703E+00

SPECIES	MOLE FRACTIONS		
E-	5.9218E-07	2.5142E-05	5.6973E-03
A	1.0000E+00	9.9995E-01	9.8861E-01
A+	5.9218E-07	2.5142E-05	5.6972E-03
A++	7.4007E-25	4.4260E-19	7.8848E-11
A+++	1.2129E-54	6.3605E-43	8.2662E-25
A++++	0.	2.8053E-79	2.5905E-46
AV	0.	0.	5.2667E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0487E+02	3.2275E+02
T	1.5416E+01	1.9658E+01	3.4668E+01
RHO	3.7624E+00	5.3345E+00	9.2932E+00
H	1.5416E+01	1.9658E+01	3.5178E+01
A	3.9263E+00	4.4332E+00	5.7044E+00
S	1.1490E+00	1.1499E+00	1.1678E+00
Z	1.0000E+00	1.0000E+00	1.0018E+00
GAME	9.9999E-01	9.9976E-01	9.3696E-01
U	5.0154E+00	3.5253E+00	3.4025E+00

SPECIES	MOLE FRACTIONS		
E-	2.6063E-08	1.8701E-06	1.7765E-03
A	1.0000E+00	1.0000E+00	9.9645E-01
A+	2.6063E-08	1.8701E-06	1.7765E-03
A++	1.7344E-29	5.8276E-23	1.4262E-12
A+++	1.4865E-65	3.2454E-51	1.3614E-28
A++++	0.	0.	2.6092E-53
AV	0.	0.	4.5062E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1081E+01	1.5249E+02	4.4660E+02
T	2.1182E+01	2.7420E+01	4.3666E+01
RHO	3.8278E+00	5.5603E+00	1.0103E+01
H	2.1184E+01	2.7471E+01	4.7533E+01
A	4.6006E+00	5.2050E+00	6.0324E+00
S	1.1737E+00	1.1747E+00	1.1925E+00
Z	1.0000E+00	1.0002E+00	1.0123E+00
GAME	9.9921E-01	9.8784E-01	8.2320E-01
U	5.9619E+00	4.0845E+00	3.6483E+00

SPECIES	MOLE FRACTIONS		
E-	7.1256E-06	1.8909E-04	1.2192E-02
A	9.9999E-01	9.9962E-01	9.7562E-01
A+	7.1256E-06	1.8909E-04	1.2192E-02
A++	4.6420E-21	4.6259E-16	1.1092E-09
A+++	3.5329E-47	2.7260E-36	2.6036E-22
A++++	0.	1.1726E-67	1.0347E-41
AV	0.	0.	1.9794E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.-Continued

p_1 = 100 kN/m^2

P1 = 1.00E+05 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4113E+01	1.8156E+02	5.1205E+02
T	2.4419E+01	3.1753E+01	4.7104E+01
RHO	3.8539E+00	5.7124E+00	1.0646E+01
H	2.4433E+01	3.2019E+01	5.4000E+01
A	4.9309E+00	5.5181E+00	6.1560E+00
S	1.1849E+00	1.1860E+00	1.2041E+00
Z	1.0001E+00	1.0009E+00	1.0211E+00
GAME	9.9562E-01	9.5801E-01	7.8794E-01
U	6.4370E+00	4.3219E+00	3.6713E+00

SPECIES	MOLE FRACTIONS		
E-	5.3144E-05	9.4811E-04	2.0629E-02
A	9.9989E-01	9.9810E-01	9.5874E-01
A+	5.3144E-05	9.4811E-04	2.0629E-02
A++	4.5054E-18	1.1851E-13	7.0993E-09
A+++	6.5260E-41	4.7340E-31	1.5026E-20
A++++	5.3627E-75	7.4103E-58	1.7710E-38
AV	0.	0.	2.8521E-62
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2339E+02	2.6473E+02	6.5833E+02
T	3.1393E+01	4.0638E+01	5.2754E+01
RHO	3.9267E+00	6.4580E+00	1.1970E+01
H	3.1686E+01	4.3248E+01	6.7908E+01
A	5.4775E+00	5.8876E+00	6.4069E+00
S	1.2053E+00	1.2072E+00	1.2275E+00
Z	1.0010E+00	1.0087E+00	1.0426E+00
GAME	9.5475E-01	8.4563E-01	7.4633E-01
U	7.4036E+00	4.4866E+00	3.6368E+00

SPECIES	MOLE FRACTIONS		
E-	1.0152E-03	8.6414E-03	4.0839E-02
A	9.9797E-01	9.8272E-01	9.1832E-01
A+	1.0152E-03	8.6414E-03	4.0839E-02
A++	1.1457E-13	2.4857E-10	8.5392E-08
A+++	3.3712E-31	7.6678E-24	3.5894E-18
A++++	2.7278E-58	1.2143E-44	4.0923E-34
AV	0.	3.5765E-72	2.4713E-55
AVI	0.	0.	3.2459E-82
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0816E+02	2.1786E+02	5.8130E+02
T	2.7854E+01	3.6256E+01	5.0073E+01
RHO	3.8821E+00	5.9887E+00	1.1257E+01
H	2.7928E+01	3.7227E+01	6.0744E+01
A	5.2341E+00	5.7351E+00	6.2802E+00
S	1.1953E+00	1.1967E+00	1.2157E+00
Z	1.0003E+00	1.0034E+00	1.0313E+00
GAME	9.8328E-01	9.0414E-01	7.6381E-01
U	6.9143E+00	4.4622E+00	3.6620E+00

SPECIES	MOLE FRACTIONS		
E-	2.7228E-04	3.3561E-03	3.0303E-02
A	9.9946E-01	9.9329E-01	9.3939E-01
A+	2.7228E-04	3.3561E-03	3.0303E-02
A++	1.2502E-15	9.2250E-12	2.8354E-08
A+++	1.8598E-35	5.8664E-27	3.1395E-19
A++++	3.2835E-66	2.2145E-50	4.6559E-36
AV	0.	2.4243E-81	1.9888E-58
AVI	0.	0.	9.6684E-87
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4006E+02	3.2528E+02	7.4834E+02
T	3.4909E+01	4.4690E+01	5.5280E+01
RHO	4.0006E+00	7.1537E+00	1.2833E+01
H	3.5732E+01	5.0147E+01	7.5657E+01
A	5.6453E+00	6.0331E+00	6.5371E+00
S	1.2149E+00	1.2177E+00	1.2395E+00
Z	1.0029E+00	1.0175E+00	1.0549E+00
GAME	9.1032E-01	8.0050E-01	7.3281E-01
U	7.9170E+00	4.4083E+00	3.6060E+00

SPECIES	MOLE FRACTIONS		
E-	2.8871E-03	1.7163E-02	5.2044E-02
A	9.9423E-01	9.6567E-01	8.9591E-01
A+	2.8871E-03	1.7163E-02	5.2043E-02
A++	4.1502E-12	2.8427E-09	2.1536E-07
A+++	8.0325E-28	1.5972E-21	2.8150E-17
A++++	4.4083E-52	2.2285E-40	1.7981E-32
AV	4.2360E-84	2.1391E-65	9.8857E-53
AVI	0.	0.	1.8283E-78
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

p_1 = 100 kN/m^2

P1 = 1.00E+05 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5839E+02	3.9814E+02	8.5796E+02
T	3.8202E+01	4.8275E+01	5.7740E+01
RHO	4.1195E+00	8.0165E+00	1.3912E+01
H	4.0084E+01	5.7688E+01	8.4138E+01
A	5.7600E+00	6.1855E+00	6.6715E+00
S	1.2242E+00	1.2283E+00	1.2519E+00
Z	1.0065E+00	1.0288E+00	1.0681E+00
GAME	8.6287E-01	7.7038E-01	7.2172E-01
U	8.4628E+00	4.3366E+00	3.5771E+00

SPECIES	MOLE FRACTIONS		
E-	6.4267E-03	2.7988E-02	6.3741E-02
A	9.8715E-01	9.4402E-01	8.7252E-01
A+	6.4267E-03	2.7988E-02	6.3740E-02
A++	6.5725E-11	1.6925E-08	4.8196E-07
A+++	3.2418E-25	8.2269E-20	1.7267E-16
A++++	2.7769E-47	3.1923E-37	5.1666E-31
AV	1.9006E-76	2.2941E-60	2.1744E-50
AVI	0.	1.1681E-89	5.5724E-75
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0024E+02	5.9284E+02	1.1485E+03
T	4.3861E+01	5.4549E+01	6.2559E+01
RHO	4.4797E+00	1.0288E+01	1.6751E+01
H	4.9709E+01	7.4851E+01	1.0339E+02
A	5.9583E+00	6.5047E+00	6.9484E+00
S	1.2428E+00	1.2507E+00	1.2778E+00
Z	1.0191E+00	1.0564E+00	1.0960E+00
GAME	7.9422E-01	7.3424E-01	7.0416E-01
U	9.6417E+00	4.1880E+00	3.5311E+00

SPECIES	MOLE FRACTIONS		
E-	1.8760E-02	5.3393E-02	8.7586E-02
A	9.6248E-01	8.9321E-01	8.2483E-01
A+	1.8760E-02	5.3393E-02	8.7582E-02
A++	2.7934E-09	2.0233E-07	1.8631E-06
A+++	1.1329E-21	2.1352E-17	3.7874E-15
A++++	8.4369E-41	9.3797E-33	1.5889E-28
AV	3.3374E-66	3.1501E-53	2.0667E-46
AVI	0.	3.3751E-79	3.6985E-69
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7847E+02	4.8756E+02	9.9082E+02
T	4.1190E+01	5.1550E+01	6.0165E+01
RHO	4.2817E+00	9.0763E+00	1.5222E+01
H	4.4747E+01	6.5970E+01	9.3395E+01
A	5.8583E+00	6.3452E+00	6.8092E+00
S	1.2335E+00	1.2393E+00	1.2646E+00
Z	1.0119E+00	1.0421E+00	1.0819E+00
GAME	8.2337E-01	7.4949E-01	7.1231E-01
U	9.0402E+00	4.2489E+00	3.5520E+00

SPECIES	MOLE FRACTIONS		
E-	1.1797E-02	4.0363E-02	7.5680E-02
A	9.7641E-01	9.1927E-01	8.4864E-01
A+	1.1797E-02	4.0363E-02	7.5678E-02
A++	5.4420E-10	6.7470E-08	9.8412E-07
A+++	3.1951E-23	1.7959E-18	8.7481E-16
A++++	1.2272E-43	9.4279E-35	1.0432E-29
AV	1.0970E-70	1.9193E-56	2.6406E-48
AVI	0.	5.3799E-84	6.2123E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2360E+02	7.1764E+02	1.3308E+03
T	4.6277E+01	5.7372E+01	6.4921E+01
RHO	4.7013E+00	1.1675E+01	1.8464E+01
H	5.4957E+01	8.4401E+01	1.1407E+02
A	6.0639E+00	6.6631E+00	7.0881E+00
S	1.2524E+00	1.2627E+00	1.2916E+00
Z	1.0278E+00	1.0714E+00	1.1102E+00
GAME	7.7312E-01	7.2224E-01	6.9707E-01
U	1.0259E+01	4.1137E+00	3.5137E+00

SPECIES	MOLE FRACTIONS		
E-	2.7025E-02	6.6671E-02	9.9253E-02
A	9.4595E-01	8.6666E-01	8.0150E-01
A+	2.7025E-02	6.6670E-02	9.9246E-02
A++	1.0323E-08	5.0286E-07	3.3111E-06
A+++	1.9818E-20	1.6930E-16	1.4355E-14
A++++	1.5662E-38	4.3783E-31	1.9050E-27
AV	1.1056E-62	1.4507E-50	1.1165E-44
AVI	0.	2.5250E-75	1.3113E-66
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4846E+02	8.5974E+02	1.5382E+03
T	4.8467E+01	6.0024E+01	6.7259E+01
RHO	4.9409E+00	1.3182E+01	2.0342E+01
H	6.0479E+01	9.4469E+01	1.2539E+02
A	6.1729E+00	6.8168E+00	7.2282E+00
S	1.2622E+00	1.2753E+00	1.3059E+00
Z	1.0375E+00	1.0866E+00	1.1243E+00
GAME	7.5775E-01	7.1248E-01	6.9092E-01
U	1.0887E+01	4.0681E+00	3.4999E+00

SPECIES	MOLE FRACTIONS		
E-	3.6187E-02	7.9703E-02	1.1055E-01
A	9.2763E-01	8.4060E-01	7.7890E-01
A+	3.6187E-02	7.9701E-02	1.1054E-01
A++	2.9938E-08	1.0808E-06	5.5879E-06
A+++	2.0791E-19	9.8051E-16	4.8729E-14
A++++	1.2241E-36	1.1548E-29	1.8636E-26
AV	1.4079E-59	2.7536E-48	4.3371E-43
AVI	1.2140E-88	5.4971E-72	2.8148E-64
AVII	0.	0.	1.3003E-92
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0240E+02	1.2060E+03	2.0289E+03
T	5.2364E+01	6.5029E+01	7.1910E+01
RHO	5.4501E+00	1.6606E+01	2.4492E+01
H	7.2316E+01	1.1631E+02	1.4978E+02
A	6.3950E+00	7.1151E+00	7.5120E+00
S	1.2826E+00	1.3021E+00	1.3360E+00
Z	1.0596E+00	1.1167E+00	1.1520E+00
GAME	7.3707E-01	6.9710E-01	6.8121E-01
U	1.2154E+01	3.9702E+00	3.4833E+00

SPECIES	MOLE FRACTIONS		
E-	5.6244E-02	1.0454E-01	1.3192E-01
A	8.8751E-01	7.9092E-01	7.3618E-01
A+	5.6243E-02	1.0454E-01	1.3189E-01
A++	1.5666E-07	3.7719E-06	1.4186E-05
A+++	8.1498E-18	1.7926E-14	4.3870E-13
A++++	1.0430E-33	2.6517E-27	1.1334E-24
AV	6.4823E-55	1.7563E-44	3.2018E-40
AVI	7.9235E-82	2.3587E-66	4.6823E-60
AVII	0.	0.	1.6972E-86
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7475E+02	1.0216E+03	1.7708E+03
T	5.0484E+01	6.2562E+01	6.9584E+01
RHO	5.1919E+00	1.4821E+01	2.2358E+01
H	6.6267E+01	1.0509E+02	1.3730E+02
A	6.2837E+00	6.9671E+00	7.3692E+00
S	1.2722E+00	1.2884E+00	1.3207E+00
Z	1.0482E+00	1.1018E+00	1.1382E+00
GAME	7.4615E-01	7.0422E-01	6.8564E-01
U	1.1519E+01	4.0264E+00	3.4900E+00

SPECIES	MOLE FRACTIONS		
E-	4.5996E-02	9.2354E-02	1.2144E-01
A	9.0801E-01	8.1529E-01	7.5712E-01
A+	4.5995E-02	9.2350E-02	1.2142E-01
A++	7.3009E-08	2.0964E-06	9.0489E-06
A+++	1.4919E-18	4.5471E-15	1.5141E-13
A++++	4.5564E-35	2.0294E-28	1.5503E-25
AV	4.3676E-57	2.7723E-46	1.3058E-41
AVI	5.1435E-85	4.9888E-69	4.2080E-62
AVII	0.	0.	8.7346E-90
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.3138E+02	1.4088E+03	2.3130E+03
T	5.4133E+01	6.7420E+01	7.4258E+01
RHO	5.7129E+00	1.8469E+01	2.6724E+01
H	7.8623E+01	1.2797E+02	1.6284E+02
A	6.5061E+00	7.2604E+00	7.6583E+00
S	1.2932E+00	1.3163E+00	1.3518E+00
Z	1.0716E+00	1.1314E+00	1.1655E+00
GAME	7.2973E-01	6.9104E-01	6.7764E-01
U	1.2790E+01	3.9431E+00	3.4811E+00

SPECIES	MOLE FRACTIONS		
E-	6.6779E-02	1.1616E-01	1.4202E-01
A	8.6644E-01	7.6769E-01	7.1598E-01
A+	6.6778E-02	1.1615E-01	1.4198E-01
A++	3.0488E-07	6.3772E-06	2.1707E-05
A+++	3.5922E-17	6.1554E-14	1.2061E-12
A++++	1.5745E-32	2.6700E-26	7.5055E-24
AV	4.5421E-53	7.2177E-43	6.6818E-39
AVI	2.8498E-79	5.6041E-64	4.0846E-58
AVII	0.	3.3248E-92	1.0887E-83
AVIII	0.	0.	0.

TABLE I.- Continued

p_1 = 100 kN/ m^2

P1 = 1.00E+05 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6168E+02	1.6333E+03	2.6237E+03
T	5.5813E+01	6.9767E+01	7.6649E+01
RHO	5.9780E+00	2.0433E+01	2.9034E+01
H	8.5184E+01	1.4015F+02	1.7645E+02
A	6.6166E+00	7.4045E+00	7.8099E+00
S	1.3042E+00	1.3310E+00	1.3681E+00
Z	1.0840E+00	1.1457E+00	1.1790E+00
GAME	7.2361E-01	6.8591E-01	6.7497E-01
U	1.3426E+01	3.9200F+00	3.4838E+00

SPECIES	MOLE FRACTIONS		
E-	7.7488E-02	1.2718E-01	1.5180E-01
A	8.4503E-01	7.4564E-01	6.9642E-01
A+	7.7487E-02	1.2716E-01	1.5174E-01
A++	5.5017E-07	1.0285E-05	3.2639E-05
A+++	1.3501E-16	1.9058E-13	3.1929E-12
A++++	1.8177E-31	2.2178E-25	4.6224E-23
AV	2.3168E-51	2.1779E-41	1.2369E-37
AVI	1.0928E-76	8.4479E-62	2.9710E-56
AVII	0.	0.	5.3090E-81
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2611E+02	2.1503E+03	3.3251E+03
T	5.8974E+01	7.4481E+01	8.1635E+01
RHU	6.5093E+00	2.4595E+01	3.3782E+01
H	9.9071E+01	1.6603E+02	2.0524E+02
A	6.8360E+00	7.7002E+00	8.1363E+00
S	1.3270E+00	1.3621E+00	1.4017E+00
Z	1.1100E+00	1.1738E+00	1.2057E+00
GAME	7.1387E-01	6.7819E-01	6.7257E-01
U	1.4694E+01	3.8784E+00	3.4908E+00

SPECIES	MOLE FRACTIONS		
E-	9.9113E-02	1.4808E-01	1.7061E-01
A	8.0178E-01	7.0386E-01	6.5885E-01
A+	9.9110E-02	1.4803E-01	1.7047E-01
A++	1.5141E-06	2.4572E-05	7.1403E-05
A+++	1.3243E-15	1.5144E-12	2.0849E-11
A++++	1.2310E-29	1.0736E-23	1.5234E-21
AV	1.9567E-48	1.1158E-38	3.3403E-35
AVI	2.2402E-72	8.1700E-58	1.0855E-52
AVII	0.	2.7468E-83	7.0447E-76
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9326E+02	1.8798E+03	2.9586E+03
T	5.7422E+01	7.2120E+01	7.9075E+01
RHO	6.2439E+00	2.2471E+01	3.1384E+01
H	9.2001E+01	1.5283E+02	1.9044E+02
A	6.7266E+00	7.5512E+00	7.9667E+00
S	1.3154E+00	1.3464E+00	1.3845E+00
Z	1.0968E+00	1.1599E+00	1.1922E+00
GAME	7.1840E-01	6.8161E-01	6.7326E-01
U	1.4061E+01	3.9017E+00	3.4715E+00

SPECIES	MOLE FRACTIONS		
E-	8.8286E-02	1.3788E-01	1.6120E-01
A	8.2343E-01	7.2425E-01	6.7765E-01
A+	8.8284E-02	1.3785F-01	1.6110E-01
A++	9.3499E-07	1.6115E-05	4.8259E-05
A+++	4.4561E-16	5.5344E-13	8.1451E-12
A++++	1.6498E-30	1.6321E-24	2.6492E-22
AV	7.9245E-50	5.4021E-40	2.0289E-36
AVI	2.0447E-74	9.5298E-60	1.7894E-54
AVII	0.	4.4278F-86	1.9134E-78
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6022E+02	2.4421E+03	3.7203E+03
T	6.0479E+01	7.6867F+01	8.4325E+01
RHO	6.7731E+00	2.6753E+01	3.6180F+01
H	1.0639E+02	1.7970E+02	2.2063E+02
A	6.9452E+00	7.8536F+00	8.3194E+00
S	1.3388E+00	1.3783E+00	1.4193E+00
Z	1.1235E+00	1.1875E+00	1.2194E+00
GAME	7.0988E-01	6.7569E-01	6.7308E-01
U	1.5326E+01	3.8706E+00	3.5174E+00

SPECIES	MOLE FRACTIONS		
E-	1.0992E-01	1.5793E-01	1.7995E-01
A	7.8016E-01	6.8418E-01	6.4020E-01
A+	1.0992E-01	1.5785E-01	1.7974E-01
A++	2.3571E-06	3.6763E-05	1.0554E-04
A+++	3.6130E-15	3.9720F-12	5.3324E-11
A++++	7.8376E-29	6.5086E-23	8.7176E-21
AV	3.7279E-47	2.0160E-37	5.4391E-34
AVI	1.6363E-70	5.7369E-56	6.4719E-51
AVII	0.	1.2710E-80	2.5405E-73
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.9599E+02	2.7597E+03	4.1535E+03
T	6.1954E+01	7.9330E+01	8.7220E+01
RHO	7.0395E+00	2.8958E+01	3.8601E+01
H	1.1399E+02	1.9396E+02	2.3682E+02
A	7.0546E+00	8.0153E+00	8.5221E+00
S	1.3509E+00	1.3950E+00	1.4374E+00
Z	1.1373E+00	1.2013E+00	1.2336E+00
GAME	7.0633E-01	6.7413E-01	6.7497E-01
U	1.5969E+01	3.8866E+00	3.5524E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.2070E-01	1.6756E-01	1.8940E-01
A	7.5861E-01	6.6493E-01	6.2136E-01
A+	1.2069E-01	1.6746E-01	1.8908E-01
A++	3.5565E-06	5.4500E-05	1.5728E-04
A+++	9.2172E-15	1.0215E-11	1.3929E-10
A++++	4.4136E-28	3.7926E-22	5.1690E-20
AV	5.8479E-46	3.4058E-36	9.3407E-33
AVI	8.9885E-69	3.6328E-54	4.1581E-49
AVII	0.	5.0212E-78	1.0148E-70
AVIII	0.	0.	0.

P1 = 1.00E+05 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.7035E+02	3.4514E+03	5.0940E+03
T	6.4813E+01	8.4470E+01	9.3622E+01
RHO	7.5508E+00	3.3251E+01	4.3057E+01
H	1.2990E+02	2.2360E+02	2.7069E+02
A	7.2734E+00	8.3661E+00	8.9933E+00
S	1.3760E+00	1.4289E+00	1.4740E+00
Z	1.1654E+00	1.2288E+00	1.2637E+00
GAME	7.0036E-01	6.7431E-01	6.8364E-01
U	1.7220E+01	3.9255E+00	3.6543E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4196E-01	1.8619E-01	2.0865E-01
A	7.1608E-01	6.2773E-01	5.8306E-01
A+	1.4195E-01	1.8596E-01	2.0794E-01
A++	7.4811E-06	1.1680E-04	3.5550E-04
A+++	5.0567E-14	6.3831E-11	9.9197E-10
A++++	1.0302E-26	1.1445E-20	1.9341E-18
AV	9.1726E-44	7.9414E-34	2.9770E-30
AVI	1.6260E-65	1.0681E-50	1.8654E-45
AVII	0.	4.9066E-73	1.7126E-65
AVIII	0.	0.	1.3049E-89

P1 = 1.00E+05 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.3255E+02	3.0945E+03	4.6083E+03
T	6.3394E+01	8.1845E+01	9.0290E+01
RHO	7.2970E+00	3.1119E+01	4.0887E+01
H	1.2182E+02	2.0855E+02	2.5344E+02
A	7.1637E+00	8.1846E+00	8.7444E+00
S	1.3633E+00	1.4118E+00	1.4556E+00
Z	1.1512E+00	1.2150E+00	1.2483E+00
GAME	7.0318E-01	6.7365E-01	6.7842E-01
U	1.6595E+01	3.9018E+00	3.5987E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.3138E-01	1.7693E-01	1.9890E-01
A	7.3725E-01	6.4622E-01	6.0243E-01
A+	1.3136E-01	1.7677E-01	1.9843E-01
A++	5.2162E-06	7.9886E-05	2.3516E-04
A+++	2.2113E-14	2.5596E-11	3.6664E-10
A++++	2.2260E-27	2.0959E-21	3.0874E-19
AV	7.8080E-45	5.2540E-35	1.6052E-31
AVI	4.1352E-67	1.9958E-52	2.6218E-47
AVII	0.	1.5864E-75	3.7558E-68
AVIII	0.	0.	3.1685E-93

P1 = 1.00E+05 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.0938E+02	3.8297E+03	5.6137E+03
T	6.6217E+01	8.7235E+01	9.7294E+01
RHO	7.7998E+00	3.5321E+01	4.5072E+01
H	1.3823E+02	2.3913E+02	2.8874E+02
A	7.3840E+00	8.5629E+00	9.2754E+00
S	1.3888E+00	1.4463E+00	1.4927E+00
Z	1.1799E+00	1.2429E+00	1.2801E+00
GAME	6.9787E-01	6.7626E-01	6.9077E-01
U	1.7843E+01	3.9595E+00	3.7317E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.5245E-01	1.9544E-01	2.1883E-01
A	6.9512E-01	6.0929E-01	5.6289E-01
A+	1.5242E-01	1.9510E-01	2.1773E-01
A++	1.0529E-05	1.7100E-04	5.4619E-04
A+++	1.1091E-13	1.5973E-10	2.7919E-09
A++++	4.3914E-26	6.2586E-20	1.2955E-17
AV	9.2724E-43	1.1947E-32	6.0855E-29
AVI	4.8174E-64	5.6165E-49	1.5065E-43
AVII	1.4170E-92	1.4453E-70	9.0152E-63
AVIII	0.	0.	6.0722E-86

TABLE I. - Continued

p_1 = 100 kN/ m^2

P1 = 1.00E+05 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.4964E+02	4.2343E+03	6.1663E+03
T	6.7614E+01	9.0189E+01	1.0134E+02
RHO	8.0436E+00	3.7336E+01	4.6887E+01
H	1.4681E+02	2.5517E+02	3.0751E+02
A	7.4957E+00	8.7794E+00	9.5922E+00
S	1.4020E+00	1.4638E+00	1.5116E+00
Z	1.1945E+00	1.2575E+00	1.2978E+00
GAME	6.9568E-01	6.7965E-01	6.9962E-01
U	1.8464E+01	3.9824E+00	3.8227E+00

SPECIES	MOLE FRACTIONS		
E-	1.6282E-01	2.0475E-01	2.2946E-01
A	6.7437E-01	5.9076E-01	5.4193E-01
A+	1.6279E-01	2.0424E-01	2.2776E-01
A++	1.4587E-05	2.5180E-04	8.5040E-04
A+++	2.3503E-13	4.0570E-10	8.1274E-09
A++++	1.7510E-25	3.5042E-19	9.1975E-17
AV	8.3395E-42	1.8583E-31	1.3587E-27
AVI	1.1710E-62	3.0875E-47	1.3778E-41
AVII	1.3221E-90	4.5039E-68	5.6184E-60
AVIII	0.	3.9837E-93	3.5290E-82

P1 = 1.00E+05 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.3378E+02	5.0910E+03	7.3733E+03
T	7.0408E+01	9.6729E+01	1.1065E+02
RHO	8.5122E+00	4.0845E+01	4.9815E+01
H	1.6474E+02	2.8848E+02	3.4737E+02
A	7.7246E+00	9.2814E+00	1.0318E+01
S	1.4289E+00	1.4991E+00	1.5496E+00
Z	1.2243E+00	1.2886E+00	1.3376E+00
GAME	6.9220E-01	6.9113E-01	7.1933E-01
U	1.9700E+01	4.1108E+00	4.0553E+00

SPECIES	MOLE FRACTIONS		
E-	1.8324E-01	2.2394E-01	2.5241E-01
A	6.3355E-01	5.5268E-01	4.9728E-01
A+	1.8318E-01	2.2282E-01	2.4820E-01
A++	2.6976E-05	5.5670E-04	2.1074E-03
A+++	9.7511E-13	2.7417E-09	7.3428E-08
A++++	2.4117E-24	1.1789E-17	5.1856E-15
AV	5.4129E-40	4.9445E-29	8.0194E-25
AVI	5.1008E-60	1.0512E-43	1.4589E-37
AVII	7.4276E-87	5.0090E-63	2.9620E-54
AVIII	0.	2.5609E-86	1.7544E-74

P1 = 1.00E+05 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9111E+02	4.6536E+03	6.7593E+03
T	6.9009E+01	9.3338E+01	1.0586E+02
RHO	8.2814E+00	3.9177E+01	4.8476E+01
H	1.5565E+02	2.7160E+02	3.2736E+02
A	7.6091E+00	9.0178E+00	9.9478E+00
S	1.4153E+00	1.4815E+00	1.5309E+00
Z	1.2093E+00	1.2726E+00	1.3172E+00
GAME	6.9379E-01	6.8460E-01	7.0971E-01
U	1.9083E+01	4.0391E+00	3.9553E+00

SPECIES	MOLE FRACTIONS		
E-	1.7308E-01	2.1422E-01	2.4083E-01
A	6.5385E-01	5.7193E-01	5.1969E-01
A+	1.7304E-01	2.1348E-01	2.3814E-01
A++	1.9945E-05	3.7292E-04	1.3465E-03
A+++	4.8417E-13	1.0444E-09	2.4711E-08
A++++	6.6249E-25	1.9999E-18	7.0535E-16
AV	6.8831E-41	2.9585E-30	3.4167E-26
AVI	2.4779E-61	1.7386E-45	1.4933E-39
AVII	9.2899E-89	1.4231E-65	4.4228E-57
AVIII	0.	9.2551E-90	2.7964E-78

P1 = 1.00E+05 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.7765E+02	5.5443E+03	8.0234E+03
T	7.1816E+01	1.0043E+02	1.1573E+02
RHO	8.7355E+00	4.2280E+01	5.1009E+01
H	1.7409E+02	3.0578E+02	3.6830E+02
A	7.8426E+00	9.5752E+00	1.0695E+01
S	1.4427E+00	1.5170E+00	1.5681E+00
Z	1.2396E+00	1.3057E+00	1.3591E+00
GAME	6.9092E-01	6.9917E-01	7.2721E-01
U	2.0316E+01	4.1999E+00	4.1816E+00

SPECIES	MOLE FRACTIONS		
E-	1.9328E-01	2.3414E-01	2.6424E-01
A	6.1348E-01	5.3257E-01	4.7475E-01
A+	1.9321E-01	2.3245E-01	2.5776E-01
A++	3.6162E-05	8.4139E-04	3.2402E-03
A+++	1.9277E-12	7.4169E-09	2.1075E-07
A++++	8.4946E-24	7.3069E-17	3.5911E-14
AV	4.0649E-39	8.8883E-28	1.7174E-23
AVI	1.0040E-58	7.0012E-42	1.2524E-35
AVII	6.1304E-85	1.9814E-60	1.6507E-51
AVIII	0.	8.0338E-83	8.6482E-71

TABLE I.-Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2271E+02	6.0122E+03	8.7148E+03
T	7.3240E+01	1.0433E+02	1.2109E+02
RHO	8.9504E+00	4.3551E+01	5.2063E+01
H	1.8368E+02	3.2350E+02	3.9039E+02
A	7.9638E+00	9.8851E+00	1.1074E+01
S	1.4567E+00	1.5342E+00	1.5867E+00
Z	1.2550E+00	1.3232E+00	1.3823E+00
GAME	6.8997E-01	7.0784E-01	7.3266E-01
U	2.0929E+01	4.3061E+00	4.3508E+00

SPECIES	MOLE FRACTIONS		
E-	2.0322E-01	2.4428E-01	2.7657E-01
A	5.9361E-01	5.1270E-01	4.5174E-01
A+	2.0312E-01	2.4176E-01	2.6681E-01
A++	4.8125E-05	1.2621E-03	4.8801E-03
A+++	3.7510E-12	1.9770E-08	5.8083E-07
A++++	2.8944E-23	4.4024E-16	2.3216E-13
AV	2.8606E-38	1.5247E-26	3.3123E-22
AVI	1.7365E-57	4.3458E-40	9.2736E-34
AVII	3.6965E-83	7.0366E-58	7.4392E-49
AVIII	0.	2.1647E-79	3.2045E-67

P1 = 1.00E+05 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.1633E+02	6.9849E+03	1.0169E+04
T	7.6157E+01	1.1294E+02	1.3205E+02
RHO	9.3513E+00	4.5406E+01	5.3757E+01
H	2.0363E+02	3.6018E+02	4.3593E+02
A	8.2176E+00	1.0555E+01	1.1810E+01
S	1.4852E+00	1.5688E+00	1.6240E+00
Z	1.2867E+00	1.3620E+00	1.4326E+00
GAME	6.8914E-01	7.2416E-01	7.3729E-01
U	2.2147E+01	4.5666E+00	4.6593E+00

SPECIES	MOLE FRACTIONS		
E-	2.2280E-01	2.6581E-01	3.0199E-01
A	5.5448E-01	4.7119E-01	4.0593E-01
A+	2.2263E-01	2.6017E-01	2.8219E-01
A++	8.3925E-05	2.8194E-03	9.8947E-03
A+++	1.3753E-11	1.3947E-07	3.4601E-06
A++++	3.1519E-22	1.5743E-14	6.3575E-12
AV	1.2652E-36	4.3646E-24	6.4247E-20
AVI	4.2947E-55	1.6051E-36	2.0113E-30
AVII	9.5705E-80	8.2462E-53	4.0535E-44
AVIII	0.	1.4281E-72	7.5607E-61

P1 = 1.00E+05 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.6894E+02	6.4920E+03	9.4276E+03
T	7.4685E+01	1.0853E+02	1.2659E+02
RHO	9.1559E+00	4.4570E+01	5.2931E+01
H	1.9353E+02	3.4163E+02	4.1279E+02
A	8.0885E+00	1.0216E+01	1.1447E+01
S	1.4708E+00	1.5516E+00	1.6055E+00
Z	1.2707E+00	1.3422E+00	1.4070E+00
GAME	6.8937E-01	7.1657E-01	7.3573E-01
U	2.1539E+01	4.4314E+00	4.4998E+00

SPECIES	MOLE FRACTIONS		
E-	2.1306E-01	2.5494E-01	2.8929E-01
A	5.7395E-01	4.9203E-01	4.2853E-01
A+	2.1293E-01	2.5114E-01	2.7508E-01
A++	6.3686E-05	1.8981E-03	7.1044E-03
A+++	7.2126E-12	5.3160E-08	1.4883E-06
A++++	9.6299E-23	2.6911E-15	1.3222E-12
AV	1.9287E-37	2.6706E-25	5.2550E-21
AVI	2.7905E-56	2.7777E-38	5.1984E-32
AVII	1.9516E-81	2.5960E-55	2.2555E-46
AVIII	0.	6.1681E-76	6.9746E-64

P1 = 1.00E+05 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.6535E+02	7.4986E+03	1.0947E+04
T	7.7669E+01	1.1756E+02	1.3734E+02
RHO	9.5397E+00	4.6122E+01	5.4659E+01
H	2.1400E+02	3.7933E+02	4.5978E+02
A	8.3519E+00	1.0893E+01	1.2160E+01
S	1.4996E+00	1.5858E+00	1.6418E+00
Z	1.3029E+00	1.3830E+00	1.4582E+00
GAME	6.8931E-01	7.2985E-01	7.3834E-01
U	2.2764E+01	4.7140E+00	4.8126E+00

SPECIES	MOLE FRACTIONS		
E-	2.3246E-01	2.7693E-01	3.1424E-01
A	5.3518E-01	4.5026E-01	3.8466E-01
A+	2.3224E-01	2.6870E-01	2.8795E-01
A++	1.1033E-04	4.1154E-03	1.3133E-02
A+++	2.6122E-11	3.5323E-07	7.2212E-06
A++++	1.0240E-21	8.6652E-14	2.5306E-11
AV	8.2074E-36	6.4917E-23	5.8700E-19
AVI	6.5219E-54	8.1038E-35	5.1374E-29
AVII	4.6439E-78	2.1527E-50	4.0598E-42
AVIII	0.	2.5299E-69	3.7567E-58

TABLE I. - Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0149E+03	8.0088E+03	1.1723E+04
T	7.9216E+01	1.2217E+02	1.4247E+02
RHO	9.7103E+00	4.6674E+01	5.5423E+01
H	2.2460E+02	3.9865E+02	4.8376E+02
A	8.4916E+00	1.1218E+01	1.2506E+01
S	1.5142E+00	1.6025E+00	1.6593E+00
Z	1.3193E+00	1.4045E+00	1.4846E+00
GAME	6.8993E-01	7.3339E-01	7.3945E-01
U	2.3363E+01	4.8654E+00	4.9581E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.4205E-01	2.8801E-01	3.2642E-01
A	5.1605E-01	4.2978E-01	3.6397E-01
A+	2.4176E-01	2.7639E-01	2.9280E-01
A++	1.4472E-04	5.8099E-03	1.6793E-02
A+++	4.9395E-11	8.3058E-07	1.3828E-05
A++++	3.2961E-21	4.1801E-13	8.6486E-11
AV	5.2433E-35	7.8599F-22	4.2311E-18
AVI	9.7063E-53	3.0423E-33	9.3369E-28
AVII	2.2123E-76	3.6776E-48	2.5098E-40
AVIII	0.	2.5252E-66	9.7640E-56

P1 = 1.00E+05 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1171E+03	9.0537E+03	1.3327E+04
T	8.2466E+01	1.3131E+02	1.5242E+02
RHO	1.0010E+01	4.7567E+01	5.6794E+01
H	2.4654E+02	4.3851E+02	5.3353E+02
A	8.7917E+00	1.1838E+01	1.3203E+01
S	1.5438E+00	1.6353E+00	1.6940E+00
Z	1.3532E+00	1.4495E+00	1.5395E+00
GAME	6.9265E-01	7.3625E-01	7.4284E-01
U	2.4550E+01	5.1719E+00	5.2612E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6101E-01	3.1010E-01	3.5044E-01
A	4.7823E-01	3.9030E-01	3.2436E-01
A+	2.6051E-01	2.8909E-01	2.9999E-01
A++	2.4884E-04	1.0499E-02	2.5164E-02
A+++	1.7710E-10	3.7009E-06	4.1474E-05
A++++	3.4233E-20	6.6674E-12	7.0942E-10
AV	2.1465E-33	6.4331E-20	1.2719E-16
AVI	2.1711E-50	1.8695E-30	1.4108E-25
AVII	5.2212E-73	3.3316F-44	3.1832E-37
AVIII	0.	5.3181E-61	1.5132E-51

P1 = 1.00E+05 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0655E+03	8.5283E+03	1.2520E+04
T	8.0813E+01	1.2677E+02	1.4752E+02
RHO	9.8678E+00	4.7151E+01	5.6134E+01
H	2.3544E+02	4.1839E+02	5.0840E+02
A	8.6380E+00	1.1532E+01	1.2855E+01
S	1.5289E+00	1.6190E+00	1.6769E+00
Z	1.3361E+00	1.4267E+00	1.5119E+00
GAME	6.9103E-01	7.3530E-01	7.4093E-01
U	2.3959E+01	5.0197E+00	5.1097E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.5156E-01	2.9909E-01	3.3856E-01
A	4.9707E-01	4.0976E-01	3.4377E-01
A+	2.5118E-01	2.8320E-01	2.9680E-01
A++	1.8972E-04	7.9415E-03	2.0844E-02
A+++	9.3420E-11	1.8197E-06	2.4742E-05
A++++	1.0605E-20	1.7820E-12	2.6245E-10
AV	3.3469E-34	7.8661E-21	2.5384E-17
AVI	1.4462E-51	8.7142E-32	1.3062E-26
AVII	1.0674E-74	4.2977E-46	1.0704E-38
AVIII	0.	1.5276E-63	1.5546E-53

P1 = 1.00E+05 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1700E+03	9.5917E+03	1.4135E+04
T	8.4188E+01	1.3580E+02	1.5720E+02
RHO	1.0140E+01	4.7955E+01	5.7351E+01
H	2.5789E+02	4.5916E+02	5.5862E+02
A	8.9541E+00	1.2140E+01	1.3551E+01
S	1.5586E+00	1.6515E+00	1.7110E+00
Z	1.3706E+00	1.4729E+00	1.5678E+00
GAME	6.9483E-01	7.3688E-01	7.4512E-01
U	2.5143E+01	5.3218E+00	5.3701E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7040E-01	3.2107E-01	3.6216E-01
A	4.5952E-01	3.7134E-01	3.0554E-01
A+	2.6975E-01	2.9411E-01	3.0251E-01
A++	3.2698E-04	1.3472F-02	2.9727E-02
A+++	3.3757E-10	7.0463E-06	6.5985E-05
A++++	1.1148E-19	2.2234E-11	1.7470E-09
AV	1.3928E-32	4.4059F-19	5.5095E-16
AVI	3.3005E-49	3.1143E-29	1.2355E-24
AVII	2.5637E-71	1.8062F-42	7.0110E-36
AVIII	0.	1.1467E-58	9.8698E-50

TABLE I.- Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2239E+03	1.0132E+04	1.4962E+04
T	8.5986E+01	1.4017E+02	1.6198E+02
RHO	1.0252E+01	4.8288E+01	5.7832E+01
H	2.6949E+02	4.8020E+02	5.8483E+02
A	9.1258E+00	1.2440E+01	1.3909E+01
S	1.5736E+00	1.6676E+00	1.7282E+00
Z	1.3884E+00	1.4969E+00	1.5972E+00
GAME	6.9759E-01	7.3756E-01	7.4775E-01
U	2.5730E+01	5.4686E+00	5.5186E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7975E-01	3.3195E-01	3.7392E-01
A	4.4093E-01	3.5294E-01	2.8696E-01
A+	2.7889E-01	2.9830E-01	3.0442E-01
A++	4.3061E-04	1.6803E-02	3.4596E-02
A+++	6.4737E-10	1.2579E-05	1.0136E-04
A++++	3.6585E-19	6.6207E-11	4.0460E-09
AV	9.0726E-32	2.5330E-18	2.1706E-15
AVI	4.9502E-48	4.0413E-28	9.4507E-24
AVII	1.1732E-69	6.8926E-41	1.2757E-34
AVIII	5.1570E-96	1.5511E-56	4.9999E-48

P1 = 1.00E+05 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3347E+03	1.1213E+04	1.6611E+04
T	8.9840E+01	1.4862E+02	1.7127E+02
RHO	1.0426E+01	4.8781E+01	5.8510E+01
H	2.9342E+02	5.2346E+02	6.3846E+02
A	9.4996E+00	1.3040E+01	1.4627E+01
S	1.6035E+00	1.6995E+00	1.7622E+00
Z	1.4250E+00	1.5466E+00	1.6577E+00
GAME	7.0488E-01	7.3978E-01	7.5360E-01
U	2.6892E+01	5.7533E+00	5.7993E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9826E-01	3.5340E-01	3.9674E-01
A	4.0424E-01	3.1764E-01	2.5179E-01
A+	2.9675E-01	3.0454E-01	3.0641E-01
A++	7.5323E-04	2.4379E-02	4.4843E-02
A+++	2.4405E-09	3.4143E-05	2.1422E-04
A++++	4.1209E-18	4.4227E-10	1.7796E-08
AV	4.1579E-30	5.3944E-17	2.4654E-14
AVI	1.2771E-45	3.6245E-26	3.5172E-22
AVII	3.2528E-66	4.1149E-38	2.2171E-32
AVIII	4.8371E-91	8.5829E-53	5.3747E-45

P1 = 1.00E+05 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2788E+03	1.0661E+04	1.5785E+04
T	8.7868E+01	1.4441E+02	1.6665E+02
RHO	1.0347E+01	4.8520E+01	5.8211E+01
H	2.8133E+02	5.0153E+02	6.1135E+02
A	9.3076E+00	1.2738E+01	1.4267E+01
S	1.5886E+00	1.6836E+00	1.7453E+00
Z	1.4066E+00	1.5214E+00	1.6272E+00
GAME	7.0095E-01	7.3849E-01	7.5060E-01
U	2.6313E+01	5.6374E+00	5.6570E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.8905E-01	3.4272E-01	3.8544E-01
A	4.2248E-01	3.3504E-01	2.6906E-01
A+	2.8791E-01	3.0178E-01	3.0572E-01
A++	5.6881E-04	2.0439E-02	3.9635E-02
A+++	1.2524E-09	2.1181E-05	1.4970E-04
A++++	1.2206E-18	1.7767E-10	8.7295E-09
AV	6.0927E-31	1.2379E-17	7.6488E-15
AVI	7.8820E-47	4.1502E-27	6.1489E-23
AVII	6.1614E-68	1.8861E-39	1.8428E-33
AVIII	2.3129E-93	1.3383E-54	1.8514E-46

P1 = 1.00E+05 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3916E+03	1.1746E+04	1.7426E+04
T	9.1928E+01	1.5271E+02	1.7586E+02
RHO	1.0484E+01	4.8920E+01	5.8658E+01
H	3.0577E+02	5.4569E+02	6.6606E+02
A	9.7039E+00	1.3342E+01	1.4993E+01
S	1.6186E+00	1.7154E+00	1.7793E+00
Z	1.4440E+00	1.5723E+00	1.6892E+00
GAME	7.0936E-01	7.4139E-01	7.5668E-01
U	2.7468E+01	5.8923E+00	5.9413E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0749E-01	3.6400E-01	4.0802E-01
A	3.8602E-01	3.0066E-01	2.3486E-01
A+	3.0548E-01	3.0674E-01	3.0653E-01
A++	1.0030E-03	2.8552E-02	5.0294E-02
A+++	4.8262E-09	5.2677E-05	2.9971E-04
A++++	1.4277E-17	1.0175E-09	3.4827E-08
AV	2.9534E-29	2.0768E-16	7.4499E-14
AVI	2.1936E-44	2.6456E-25	1.8316E-21
AVII	1.8694E-64	6.9534E-37	2.3313E-31
AVIII	1.1419E-88	3.8904E-51	1.2988E-43

TABLE I. - Continued

p_1 = 100 kN/ m^2

P1 = 1.00E+05 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4495E+03	1.2277E+04	1.8252E+04
T	9.4121E+01	1.5673E+02	1.8051E+02
RHO	1.0525E+01	4.8999E+01	5.8717E+01
H	3.1835E+02	5.6832E+02	6.9487E+02
A	9.9180E+00	1.3647E+01	1.5369E+01
S	1.6336E+00	1.7313E+00	1.7968E+00
Z	1.4633E+00	1.5987E+00	1.7220E+00
GAME	7.1421E-01	7.4328E-01	7.5984E-01
U	2.8039E+01	6.0248E+00	6.1229E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1662E-01	3.7448E-01	4.1929E-01
A	3.6810E-01	2.8414E-01	2.1826E-01
A+	3.1394E-01	3.0836E-01	3.0601E-01
A++	1.3385E-03	3.2943E-02	5.6020E-02
A+++	9.6071E-09	7.8436E-05	4.1210E-04
A++++	4.9971E-17	2.1978E-09	6.6130E-08
AV	2.1226E-28	7.2458E-16	2.1472E-13
AVI	3.7977E-43	1.6759E-24	8.9148E-21
AVII	1.0623E-62	9.6051E-36	2.2254E-30
AVIII	2.5510E-86	1.3454E-49	2.7525E-42

P1 = 1.00E+05 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5682E+03	1.3305E+04	1.9831E+04
T	9.8848E+01	1.6449E+02	1.8955E+02
RHO	1.0557E+01	4.8948E+01	5.8500E+01
H	3.4427E+02	6.1465E+02	7.5265E+02
A	1.0371E+01	1.4256E+01	1.6113E+01
S	1.6633E+00	1.7627E+00	1.8312E+00
Z	1.5029E+00	1.6525E+00	1.7884E+00
GAME	7.2403E-01	7.4767E-01	7.6590E-01
U	2.9169E+01	6.3001E+00	6.4159E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3460E-01	3.9486E-01	4.4085E-01
A	3.3320E-01	2.5278E-01	1.8754E-01
A+	3.2981E-01	3.1001E-01	3.0311E-01
A++	2.3949E-03	4.2188E-02	6.7780E-02
A+++	3.8758E-08	1.5818E-04	7.2747E-04
A++++	6.3228E-16	8.6469E-09	2.0988E-07
AV	1.1541E-26	6.7498E-15	1.4552E-12
AVI	1.2319E-40	4.5705E-23	1.5638E-19
AVII	3.8843E-59	1.0610E-33	1.3179E-28
AVIII	1.5590E-81	7.7420E-47	6.8910E-40

P1 = 1.00E+05 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5084E+03	1.2794E+04	1.9048E+04
T	9.6428E+01	1.6066E+02	1.8501E+02
RHO	1.0548E+01	4.8987E+01	5.8677E+01
H	3.3119E+02	5.9129E+02	7.2352E+02
A	1.0141E+01	1.3953E+01	1.5737E+01
S	1.6485E+00	1.7471E+00	1.8138E+00
Z	1.4829E+00	1.6256E+00	1.7546E+00
GAME	7.1920E-01	7.4540E-01	7.6289E-01
U	2.8606E+01	6.1661E+00	6.2691E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2566E-01	3.8483E-01	4.3008E-01
A	3.5046E-01	2.6808E-01	2.0271E-01
A+	3.2208E-01	3.0946E-01	3.0489E-01
A++	1.7900E-03	3.7520E-02	6.1767E-02
A+++	1.9263E-08	1.1316E-04	5.5106E-04
A++++	1.7718E-16	4.4854E-09	1.1917E-07
AV	1.5570E-27	2.3127E-15	5.6888E-13
AVI	6.7822E-42	9.3362E-24	3.8350E-20
AVII	6.3317E-61	1.1061E-34	1.7804E-29
AVIII	6.1389E-84	3.6435E-48	4.5926E-41

P1 = 1.00E+05 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6290E+03	1.3790E+04	2.0603E+04
T	1.0137E+02	1.6833E+02	1.9397E+02
RHO	1.0551E+01	4.8736E+01	5.8302E+01
H	3.5759E+02	6.3826E+02	7.8229E+02
A	1.0604E+01	1.4569E+01	1.6482E+01
S	1.6781E+00	1.7788E+00	1.8482E+00
Z	1.5230E+00	1.6810E+00	1.8218E+00
GAME	7.2831E-01	7.5009E-01	7.6876E-01
U	2.9729E+01	6.4672E+00	6.5637E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.4340E-01	4.0511E-01	4.5109E-01
A	3.1641E-01	2.3739E-01	1.7347E-01
A+	3.3700E-01	3.1012E-01	3.0073E-01
A++	3.1977E-03	4.7167E-02	7.3770E-02
A+++	7.7825E-08	2.1797E-04	9.3907E-04
A++++	2.2484E-15	1.6247E-08	3.5451E-07
AV	8.5032E-26	1.8911E-14	3.4790E-12
AVI	2.2149E-39	2.1075E-22	5.7822E-19
AVII	2.3362E-57	9.3270E-33	8.4877E-28
AVIII	3.8188E-79	1.4576E-45	8.5679E-39

TABLE I.-Continued

p_1 = 100 kN/ m^2

P1 = 1.00E+05 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6908E+03	1.4287E+04	2.1368E+04
T	1.0399E+02	1.7212E+02	1.9834E+02
RHO	1.0536E+01	4.8557E+01	5.8077E+01
H	3.7117E+02	6.6240E+02	8.1247E+02
A	1.0836E+01	1.4881E+01	1.6848E+01
S	1.6928E+00	1.7946E+00	1.8648E+00
Z	1.5433E+00	1.7094E+00	1.8550E+00
GAME	7.3168E-01	7.5259E-01	7.7148E-01
U	3.0287E+01	6.6032E+00	6.7124E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.5202E-01	4.1501E-01	4.6093E-01
A	3.0020E-01	2.2279E-01	1.6032E-01
A+	3.4353E-01	3.0968E-01	2.9778E-01
A++	4.2481E-03	5.2224E-02	7.9786E-02
A+++	1.5488E-07	2.9338E-04	1.1916E-03
A++++	7.8664E-15	2.9284E-08	5.8012E-07
AV	6.0906E-25	4.9671E-14	7.9066E-12
AVI	3.7961E-38	8.8585E-22	1.9854E-18
AVII	1.2851E-55	7.1963E-32	4.9182E-27
AVIII	7.9428E-77	2.3010E-44	9.2344E-38

P1 = 1.00E+05 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9154E+03	1.6028E+04	2.4072E+04
T	1.1352E+02	1.8523E+02	2.1392E+02
RHO	1.0453E+01	4.7756E+01	5.6940E+01
H	4.2065E+02	7.5005E+02	9.2240E+02
A	1.1600E+01	1.5987E+01	1.8162E+01
S	1.7433E+00	1.8495E+00	1.9242E+00
Z	1.6143E+00	1.8119E+00	1.9762E+00
GAME	7.3433E-01	7.6149E-01	7.8023E-01
U	3.2224E+01	7.0848E+00	7.2441E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.8053E-01	4.4810E-01	4.9399E-01
A	2.4947E-01	1.7612E-01	1.1904E-01
A+	3.5947E-01	3.0418E-01	2.8250E-01
A++	1.0526E-02	7.0865E-02	1.0193E-01
A+++	1.4441E-06	7.3019E-04	2.5380E-03
A++++	4.6535E-13	1.8332E-07	2.8381E-06
AV	3.7854E-22	1.0188E-12	1.1307E-10
AVI	4.2007E-34	8.0547E-20	1.0924E-16
AVII	6.8523E-50	4.4077E-29	1.4775E-24
AVIII	3.8763E-69	1.3474E-40	2.0767E-34

P1 = 1.00E+05 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7536E+03	1.4779E+04	2.2131E+04
T	1.0667E+02	1.7584E+02	2.0279E+02
RHO	1.0514E+01	4.8358E+01	5.7754E+01
H	3.8499E+02	6.8690E+02	8.4323E+02
A	1.1064E+01	1.5191E+01	1.7223E+01
S	1.7074E+00	1.8102E+00	1.8820E+00
Z	1.5636E+00	1.7379E+00	1.8896E+00
GAME	7.3388E-01	7.5511E-01	7.7413E-01
U	3.0840E+01	6.7379E+00	6.8677E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6045E-01	4.2461E-01	4.7078E-01
A	2.8470E-01	2.0891E-01	1.4752E-01
A+	3.4926E-01	3.0874E-01	2.9413E-01
A++	5.5956E-03	5.7351E-02	8.6067E-02
A+++	3.0317E-07	3.8674E-04	1.5018E-03
A++++	2.6771E-14	5.0828E-08	9.3862E-07
AV	4.1956E-24	1.2292E-13	1.7659E-11
AVI	6.2151E-37	3.4146E-21	6.6455E-18
AVII	6.8117E-54	4.9072E-31	2.7460E-26
AVIII	1.6832E-74	3.0839E-43	9.4523E-37

P1 = 1.00E+05 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0846E+03	1.7356E+04	2.6162E+04
T	1.2023E+02	1.9467E+02	2.2534E+02
RHO	1.0418E+01	4.7243E+01	5.6243E+01
H	4.5790E+02	8.1598E+02	1.0058E+03
A	1.2092E+01	1.6793E+01	1.9118E+01
S	1.7783E+00	1.8882E+00	1.9661E+00
Z	1.6642E+00	1.8872E+00	2.0643E+00
GAME	7.3081E-01	7.6765E-01	7.8576E-01
U	3.3610E+01	7.4422E+00	7.6474E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9911E-01	4.7011E-01	5.1557E-01
A	2.1962E-01	1.4717E-01	9.4935E-02
A+	3.6345E-01	2.9659E-01	2.6748E-01
A++	1.7819E-02	8.4850E-02	1.1796E-01
A+++	5.4844E-06	1.2746E-03	4.0456E-03
A++++	5.4549E-12	5.7648E-07	7.7596E-06
AV	1.8659E-20	6.8597E-12	6.1999E-10
AVI	1.2043E-31	1.4015E-18	1.4371E-15
AVII	2.0748E-46	2.5748E-27	5.8031E-23
AVIII	1.8303E-64	3.3048E-38	2.9838E-32

TABLE I. - Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2619E+03	1.8781E+04	2.8406E+04
T	1.2675E+02	2.0428E+02	2.3712E+02
RHO	1.0407E+01	4.6811E+01	5.5620E+01
H	4.9677E+02	8.8503E+02	1.0931E+03
A	1.2574E+01	1.7615E+01	2.0098E+01
S	1.8134E+00	1.9265E+00	2.0080E+00
Z	1.7148E+00	1.9639E+00	2.1539E+00
GAME	7.2747E-01	7.7341E-01	7.9093E-01
U	3.5011E+01	7.8071E+00	8.0441E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1684E-01	4.9082E-01	5.3572E-01
A	1.9376E-01	1.2176E-01	7.4756E-02
A+	3.6198E-01	2.8612E-01	2.4952E-01
A++	2.7408E-02	9.9203E-02	1.3384E-01
A+++	1.6941E-05	2.0953E-03	6.1437E-03
A++++	4.4709E-11	1.6351E-06	1.9534E-05
AV	5.3119E-19	3.9324E-11	2.9957E-09
AVI	1.5811E-29	1.9433E-17	1.5770E-14
AVII	2.0873E-43	1.0909E-25	1.7648E-21
AVIII	1.9759E-60	5.2674E-36	3.0392E-30

P1 = 1.00E+05 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6392E+03	2.1895E+04	3.3426E+04
T	1.3894E+02	2.2399E+02	2.6141E+02
RHO	1.0450E+01	4.6120E+01	5.4867E+01
H	5.7931E+02	1.0316E+03	1.2808E+03
A	1.3548E+01	1.9285E+01	2.2089E+01
S	1.8822E+00	2.0015E+00	2.0885E+00
Z	1.8179E+00	2.1194E+00	2.3305E+00
GAME	7.2678E-01	7.8345E-01	8.0089E-01
U	3.7827E+01	8.5989E+00	8.9042E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.4990E-01	5.2817E-01	5.7091E-01
A	1.5149E-01	8.1219E-02	4.5426E-02
A+	3.4740E-01	2.5793E-01	2.0890E-01
A++	5.1106E-02	1.2781E-01	1.6239E-01
A+++	9.5786E-05	4.8630E-03	1.2280E-02
A++++	1.2098E-09	1.0091E-05	9.6336E-05
AV	1.0667E-16	8.5694E-10	4.7424E-08
AVI	3.7557E-26	2.0691E-15	1.0830E-12
AVII	1.3104E-38	8.4937E-23	7.3779E-19
AVIII	5.7578E-54	4.3411E-32	1.0900E-26

P1 = 1.00E+05 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4467E+03	2.0295E+04	3.0848E+04
T	1.3295E+02	2.1396E+02	2.4912E+02
RHO	1.0423E+01	4.6487E+01	5.5222E+01
H	5.3724E+02	9.5687E+02	1.1851E+03
A	1.3056E+01	1.8437E+01	2.1085E+01
S	1.8478E+00	1.9637E+00	2.0485E+00
Z	1.7657E+00	2.0405E+00	2.2423E+00
GAME	7.2612E-01	7.7862E-01	7.9590E-01
U	3.6417E+01	8.2027E+00	8.4777E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3365E-01	5.0992E-01	5.5403E-01
A	1.7143E-01	1.0011E-01	5.8527E-02
A+	3.5624E-01	2.7328E-01	2.2982E-01
A++	3.8642E-02	1.1343E-01	1.4872E-01
A+++	4.3207E-05	3.2506E-03	8.8637E-03
A++++	2.6257E-10	4.1868E-06	4.4951E-05
AV	9.0659E-18	1.9223E-10	1.2596E-08
AVI	1.0034E-27	2.1417E-16	1.4162E-13
AVII	7.5799E-41	3.3421E-24	4.0507E-20
AVIII	5.5105E-57	5.4259E-34	2.1196E-28

P1 = 1.00E+05 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8390E+03	2.3563E+04	3.6141E+04
T	1.4476E+02	2.3410E+02	2.7418E+02
RHO	1.0482E+01	4.5801E+01	5.4470E+01
H	6.2297E+02	1.1092E+03	1.3806E+03
A	1.4052E+01	2.0134E+01	2.3127E+01
S	1.9161E+00	2.0385E+00	2.1287E+00
Z	1.8711E+00	2.1977E+00	2.4199E+00
GAME	7.2898E-01	7.8792E-01	8.0610E-01
U	3.9240E+01	9.0065E+00	9.3418E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6557E-01	5.4498E-01	5.8676E-01
A	1.3354E-01	6.5531E-02	3.4773E-02
A+	3.3640E-01	2.4101E-01	1.8707E-01
A++	6.4298E-02	1.4151E-01	1.7469E-01
A+++	1.9014E-04	6.9548E-03	1.6508E-02
A++++	4.6017E-09	2.2438E-05	1.9637E-04
AV	9.3482E-16	3.3672E-09	1.6547E-07
AVI	9.2409E-25	1.6639E-14	7.4222E-12
AVII	1.2608E-36	1.6646E-21	1.1610E-17
AVIII	2.7264E-51	2.4435E-30	4.5383E-25

TABLE I.- Continued

p_1 = 100 kN/ m^2

P1 = 1.00E+05 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0461E+03	2.5276E+04	3.8961E+04
T	1.5051E+02	2.4434E+02	2.8740E+02
RHO	1.0508E+01	4.5450E+01	5.4017E+01
H	6.6822E+02	1.1894E+03	1.4846E+03
A	1.4570E+01	2.0990E+01	2.4194E+01
S	1.9501E+00	2.0750E+00	2.1687E+00
Z	1.9261E+00	2.2760E+00	2.5097E+00
GAME	7.3226E-01	7.9222E-01	8.1157E-01
U	4.0651E+01	9.4245E+00	9.7987E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8081E-01	5.6064E-01	6.0154E-01
A	1.1708E-01	5.2470E-02	2.6289E-02
A+	3.2377E-01	2.2284E-01	1.6512E-01
A++	7.7998E-02	1.5441E-01	1.8511E-01
A+++	3.4846E-04	9.5959E-03	2.1558E-02
A++++	1.5257E-08	4.6817E-05	3.8099E-04
AV	6.6388E-15	1.1974E-08	5.3529E-07
AVI	1.6871E-23	1.1566E-13	4.5556E-11
AVII	7.9584E-35	2.6530E-20	1.5580E-16
AVIII	7.3919E-49	1.0381E-28	1.5289E-23

P1 = 1.00E+05 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4814E+03	2.8801E+04	4.4854E+04
T	1.6201E+02	2.6532E+02	3.1500E+02
RHO	1.0533E+01	4.4629E+01	5.2993E+01
H	7.6345E+02	1.3579E+03	1.7050E+03
A	1.5645E+01	2.2734E+01	2.6392E+01
S	2.0176E+00	2.1473E+00	2.2473E+00
Z	2.0402E+00	2.4324E+00	2.6870E+00
GAME	7.4050E-01	8.0088E-01	8.2290E-01
U	4.3465E+01	1.0280E+01	1.0760E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0985E-01	5.8888E-01	6.2784E-01
A	8.8161E-02	3.2876E-02	1.4577E-02
A+	2.9512E-01	1.8465E-01	1.2371E-01
A++	1.0589E-01	1.7674E-01	1.9873E-01
A+++	9.8036E-04	1.6684E-02	3.3890E-02
A++++	1.2379E-07	1.7359E-04	1.2453E-03
AV	2.1025E-13	1.1775E-07	4.5032E-06
AVI	2.9009E-21	3.8701E-12	1.2464E-09
AVII	1.2428E-31	3.9997E-18	1.7785E-14
AVIII	1.5470E-44	9.3190E-26	9.3956E-21

P1 = 1.00E+05 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2604E+03	2.7034E+04	4.1887E+04
T	1.5625E+02	2.5476E+02	3.0106E+02
RHO	1.0526E+01	4.5071E+01	5.3528E+01
H	7.1505E+02	1.2725E+03	1.5932E+03
A	1.5101E+01	2.1857E+01	2.5288E+01
S	1.9839E+00	2.1113E+00	2.2085E+00
Z	1.9825E+00	2.3544E+00	2.5992E+00
GAME	7.3620E-01	7.9651E-01	8.1725E-01
U	4.2062E+01	9.8432E+00	1.0286E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9558E-01	5.7526E-01	6.1526E-01
A	1.0198E-01	4.1686E-02	1.9647E-02
A+	3.0992E-01	2.0388E-01	1.4374E-01
A++	9.1931E-02	1.6625E-01	1.9324E-01
A+++	5.9947E-04	1.2834E-02	2.7402E-02
A++++	4.5378E-08	9.2463E-05	7.0604E-04
AV	3.9910E-14	3.9079E-08	1.6141E-06
AVI	2.4290E-22	7.0952E-13	2.5239E-10
AVII	3.5853E-33	3.5411E-19	1.8080E-15
AVIII	1.2675E-46	3.4904E-27	4.2331E-22

P1 = 1.00E+05 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7114E+03	3.0644E+04	4.7975E+04
T	1.6785E+02	2.7621E+02	3.2968E+02
RHO	1.0534E+01	4.4189E+01	5.2422E+01
H	8.1351E+02	1.4469E+03	1.8227E+03
A	1.6200E+01	2.3634E+01	2.7535E+01
S	2.0512E+00	2.1831E+00	2.2864E+00
Z	2.0991E+00	2.5106E+00	2.7760E+00
GAME	7.4489E-01	8.0546E-01	8.2845E-01
U	4.4889E+01	1.0715E+01	1.1277E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2360E-01	6.0169E-01	6.3976E-01
A	7.5593E-02	2.5679E-02	1.0648E-02
A+	2.7957E-01	1.6540E-01	1.0482E-01
A++	1.1970E-01	1.8571E-01	2.0152E-01
A+++	1.5390E-03	2.1205E-02	4.1103E-02
A++++	3.1523E-07	3.1389E-04	2.1331E-03
AV	9.9733E-13	3.3526E-07	1.2051E-05
AVI	2.9847E-20	1.9457E-11	5.8031E-09
AVII	3.4836E-30	4.0307E-17	1.6231E-13
AVIII	1.4142E-42	2.1313E-24	1.8661E-19

TABLE I.-Continued

$p_1 = 100\ kN/m^2$

P1 = 1.00E+05 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9444E+03	3.2392E+04	5.1024E+04
T	1.7375E+02	2.8709E+02	3.4446E+02
RHO	1.0516E+01	4.3599E+01	5.1737E+01
H	8.6498E+02	1.5367E+03	1.9424E+03
A	1.6763E+01	2.4533E+01	2.8668E+01
S	2.0847E+00	2.2186E+00	2.3248E+00
Z	2.1588E+00	2.5878E+00	2.8631E+00
GAME	7.4916E-01	8.1008E-01	8.3334E-01
U	4.6262E+01	1.1176E+01	1.1803E+01

SPECIES	MOLE FRACTIONS		
E-	5.3678E-01	6.1357E-01	6.5072E-01
A	6.4266E-02	1.9934E-02	7.7460E-03
A+	2.6346E-01	1.4680E-01	8.8003E-02
A++	1.3316E-01	1.9284E-01	2.0140E-01
A+++	2.3293E-03	2.6304E-02	4.8612E-02
A++++	7.5411E-07	5.4220E-04	3.4840E-03
AV	4.2975E-12	8.8625E-07	2.9876E-05
AVI	2.6779E-19	8.7499E-11	2.4092E-08
AVII	8.0438E-29	3.4606E-16	1.2547E-12
AVIII	9.9540E-41	3.9158E-23	2.9702E-18

P1 = 1.00E+05 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4349E+03	3.6026E+04	5.7373E+04
T	1.8588E+02	3.0972E+02	3.7511E+02
RHO	1.0464E+01	4.2445E+01	5.0359E+01
H	9.7281E+02	1.7257E+03	2.1946E+03
A	1.7910E+01	2.6374E+01	3.0939E+01
S	2.1512E+00	2.2881E+00	2.4006E+00
Z	2.2801E+00	2.7404E+00	3.0372E+00
GAME	7.5684E-01	8.1952E-01	8.4021E-01
U	4.9044E+01	1.2111E+01	1.2848E+01

SPECIES	MOLE FRACTIONS		
E-	5.6142E-01	6.3509E-01	6.7074E-01
A	4.5280E-02	1.1747E-02	4.0410E-03
A+	2.3008E-01	1.1236E-01	6.0305E-02
A++	1.5834E-01	2.0116E-01	1.9287E-01
A+++	4.8809E-03	3.8175E-02	6.3617E-02
A++++	3.7209E-06	1.4656E-03	8.2716E-03
AV	6.3705E-11	5.3292E-06	1.5352E-04
AVI	1.5660E-17	1.4232E-09	3.1966E-07
AVII	2.7227E-26	1.8795E-14	5.2103E-11
AVIII	2.6828E-37	8.7483E-21	4.6082E-16

P1 = 1.00E+05 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1862E+03	3.4178E+04	5.4179E+04
T	1.7976E+02	2.9821E+02	3.5968E+02
RHO	1.0494E+01	4.3022E+01	5.1060E+01
H	9.1811E+02	1.6297E+03	2.0668E+03
A	1.7334E+01	2.5442E+01	2.9808E+01
S	2.1180E+00	2.2534E+00	2.3628E+00
Z	2.2192E+00	2.6641E+00	2.9501E+00
GAME	7.5317E-01	8.1479E-01	8.3736E-01
U	4.7654E+01	1.1668E+01	1.2331E+01

SPECIES	MOLE FRACTIONS		
E-	5.4939E-01	6.2463E-01	6.6103E-01
A	5.4170E-02	1.5377E-02	5.6000E-03
A+	2.4691E-01	1.2912E-01	7.3127E-02
A++	1.4611E-01	1.9801E-01	1.9845E-01
A+++	3.4196E-03	3.1956E-02	5.6244E-02
A++++	1.7150E-06	9.0337E-04	5.4801E-03
AV	1.7128E-11	2.2161E-06	6.9947E-05
AVI	2.1544E-18	3.6286E-10	9.2034E-08
AVII	1.5897E-27	2.6517E-15	8.6402E-12
AVIII	5.6929E-39	6.1683E-22	4.0459E-17

P1 = 1.00E+05 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6904E+03	3.7841E+04	6.0625E+04
T	1.9211E+02	3.2140E+02	3.9061E+02
RHO	1.0429E+01	4.1810E+01	4.9676E+01
H	1.0291E+03	1.8238E+03	2.3268E+03
A	1.8490E+01	2.7309E+01	3.2052E+01
S	2.1842E+00	2.3225E+00	2.4381E+00
Z	2.3411E+00	2.8160E+00	3.1244E+00
GAME	7.6015E-01	8.2400E-01	8.4182E-01
U	5.0429E+01	1.2607E+01	1.3387E+01

SPECIES	MOLE FRACTIONS		
E-	5.7285E-01	6.4488E-01	6.7993E-01
A	3.7551E-02	8.9189E-03	2.9257E-03
A+	2.1315E-01	9.6932E-02	4.9516E-02
A++	1.6966E-01	2.0217E-01	1.8504E-01
A+++	6.7861E-03	4.4783E-02	7.0317E-02
A++++	7.7263E-06	2.3021E-03	1.1953E-02
AV	2.2135E-10	1.2181E-05	3.1441E-04
AVI	1.0350E-16	5.1777E-09	1.0025E-06
AVII	4.0684E-25	1.1992E-13	2.7260E-10
AVIII	1.0537E-35	1.0736E-19	4.3382E-15

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4637E+01	2.6460E+02
T	1.2892E+01	1.6278E+01	2.9291E+01
RHO	3.7155E+00	5.1997E+00	9.0313E+00
H	1.2892E+01	1.6278E+01	2.9354E+01
A	3.5905E+00	4.0345E+00	5.3779E+00
S	1.1406E+00	1.1413E+00	1.1600E+00
Z	1.0000E+00	1.0000E+00	1.0002E+00
GAME	1.0000E+00	9.9999E-01	9.8716E-01
U	4.5391E+00	3.2320E+00	3.1705E+00

SPECIES	MOLE FRACTIONS		
E-	3.2955E-10	4.6170E-08	2.2423E-04
A	1.0000E+00	1.0000E+00	9.9955E-01
A+	3.2955E-10	4.6170E-08	2.2423E-04
A++	1.8127E-35	9.7295E-29	1.9216E-15
A+++	1.4677E-76	3.2956E-61	1.2972E-34
A++++	0.	0.	3.3553E-64
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9069E+01	1.2770E+02	3.8456E+02
T	1.8181E+01	2.3401E+01	3.9988E+01
RHO	3.7990E+00	5.4570E+00	9.5746E+00
H	1.8181E+01	2.3406E+01	4.1353E+01
A	4.2638E+00	4.8336E+00	5.9836E+00
S	1.1681E+00	1.1690E+00	1.1875E+00
Z	1.0000E+00	1.0000E+00	1.0044E+00
GAME	9.9994E-01	9.9839E-01	8.9140E-01
U	5.4900E+00	3.8032E+00	3.5860E+00

SPECIES	MOLE FRACTIONS		
E-	4.1875E-07	1.7778E-05	4.4171E-03
A	1.0000E+00	9.9996E-01	9.9117E-01
A+	4.1875E-07	1.7778E-05	4.4171E-03
A++	3.7004E-25	2.2124E-19	5.3388E-11
A+++	4.2996E-55	2.2464E-43	5.6390E-25
A++++	0.	7.0229E-80	2.3208E-46
AV	0.	0.	1.4536E-74
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0486E+02	3.2333E+02
T	1.5416E+01	1.9658E+01	3.4854E+01
RHO	3.7624E+00	5.3344E+00	9.2643E+00
H	1.5416E+01	1.9658E+01	3.5240E+01
A	3.9264E+00	4.4334E+00	5.7583E+00
S	1.1548E+00	1.1557E+00	1.1744E+00
Z	1.0000E+00	1.0000E+00	1.0013E+00
GAME	1.0000E+00	9.9983E-01	9.5008E-01
U	5.0154E+00	3.5254E+00	3.4211E+00

SPECIES	MOLE FRACTIONS		
E-	1.8429E-08	1.3224E-06	1.3251E-03
A	1.0000E+00	1.0000E+00	9.9735E-01
A+	1.8429E-08	1.3224E-06	1.3251E-03
A++	8.6713E-30	2.9135E-23	8.5328E-13
A+++	5.2530E-66	1.1472E-51	7.2081E-29
A++++	0.	0.	1.6398E-53
AV	0.	0.	5.8978E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1080E+01	1.5228E+02	4.4892E+02
T	2.1183E+01	2.7420E+01	4.4493E+01
RHO	3.8276E+00	5.5529E+00	9.9884E+00
H	2.1184E+01	2.7456E+01	4.7776E+01
A	4.6012E+00	5.2138E+00	6.1265E+00
S	1.1804E+00	1.1814E+00	1.2001E+00
Z	1.0000E+00	1.0001E+00	1.0101E+00
GAME	9.9944E-01	9.9127E-01	8.3512E-01
U	5.9619E+00	4.0899E+00	3.7096E+00

SPECIES	MOLE FRACTIONS		
E-	5.0405E-06	1.3381E-04	1.0042E-02
A	9.9999E-01	9.9973E-01	9.7992E-01
A+	5.0405E-06	1.3381E-04	1.0042E-02
A++	2.3238E-21	2.3164E-16	9.1537E-10
A+++	1.2515E-47	9.6554E-37	2.6870E-22
A++++	0.	2.9243E-68	1.8201E-41
AV	0.	0.	7.9320E-67
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4106E+01	1.8060E+02	5.1500E+02
T	2.4423E+01	3.1763E+01	4.8176E+01
RHO	3.8531E+00	5.6821E+00	1.0505E+01
H	2.4433E+01	3.1952E+01	5.4317E+01
A	4.9343E+00	5.5489E+00	6.2432E+00
S	1.1920E+00	1.1931E+00	1.2118E+00
Z	1.0000E+00	1.0007E+00	1.0176E+00
GAME	9.9688E-01	9.6874E-01	7.9504E-01
U	6.4365E+00	4.3440E+00	3.7462E+00

SPECIES	MOLE FRACTIONS		
E-	3.7653E-05	6.7448E-04	1.7328E-02
A	9.9992E-01	9.9865E-01	9.6534E-01
A+	3.7653E-05	6.7448E-04	1.7328E-02
A++	2.2652E-18	6.0200E-14	6.2185E-09
A+++	2.2657E-41	1.7265E-31	1.7544E-20
A++++	1.4517E-75	1.9580E-58	3.8341E-38
AV	0.	0.	1.5136E-61
AVI	0.	0.	4.2286E-91
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2328E+02	2.5900E+02	6.5965E+02
T	3.1468E+01	4.0892E+01	5.4172E+01
RHO	3.9146E+00	6.2924E+00	1.1753E+01
H	3.1675E+01	4.2906E+01	6.8246E+01
A	5.5149E+00	5.9699E+00	6.4719E+00
S	1.2132E+00	1.2150E+00	1.2355E+00
Z	1.0007E+00	1.0066E+00	1.0361E+00
GAME	9.6578E-01	8.6585E-01	7.4625E-01
U	7.3965E+00	4.5840E+00	3.7183E+00

SPECIES	MOLE FRACTIONS		
E-	7.3754E-04	6.5362E-03	3.4850E-02
A	9.9852E-01	9.8693E-01	9.3030E-01
A+	7.3754E-04	6.5362E-03	3.4850E-02
A++	6.2353E-14	1.5205E-10	7.7835E-08
A+++	1.3406E-31	4.0862E-24	4.5209E-18
A++++	1.6309E-59	6.1245E-45	9.9112E-34
AV	0.	1.6844E-72	1.4821E-54
AVI	0.	0.	5.7308E-81
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0813E+02	2.1495E+02	5.8431E+02
T	2.7872E+01	3.6324E+01	5.1350E+01
RHO	3.8788E+00	5.9031E+00	1.1086E+01
H	2.7926E+01	3.7036E+01	6.1104E+01
A	5.2479E+00	5.7987E+00	6.3572E+00
S	1.2029E+00	1.2042E+00	1.2236E+00
Z	1.0002E+00	1.0024E+00	1.0264E+00
GAME	9.8788E-01	9.2343E-01	7.6676E-01
U	6.9125E+00	4.5222E+00	3.7433E+00

SPECIES	MOLE FRACTIONS		
E-	1.9413E-04	2.4348E-03	2.5759E-02
A	9.9961E-01	9.9513E-01	9.4848E-01
A+	1.9413E-04	2.4348E-03	2.5759E-02
A++	6.4329E-16	4.9649E-12	2.5694E-08
A+++	7.0858E-36	2.4085E-27	3.9286E-19
A++++	1.0664E-66	7.2742E-51	1.1343E-35
AV	0.	6.9184E-82	1.2617E-57
AVI	0.	0.	2.1610E-85
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3976E+02	3.1606E+02	7.4602E+02
T	3.5084E+01	4.5207E+01	5.6790E+01
RHO	3.9751E+00	6.8967E+00	1.2553E+01
H	3.5702E+01	4.9660E+01	7.5904E+01
A	5.7121E+00	6.1125E+00	6.5887E+00
S	1.2231E+00	1.2256E+00	1.2476E+00
Z	1.0022E+00	1.0137E+00	1.0464E+00
GAME	9.2801E-01	8.1528E-01	7.3049E-01
U	7.8999E+00	4.5315E+00	3.6834E+00

SPECIES	MOLE FRACTIONS		
E-	2.1497E-03	1.3552E-02	4.4386E-02
A	9.9570E-01	9.7290E-01	9.1123E-01
A+	2.1497E-03	1.3552E-02	4.4386E-02
A++	2.4604E-12	1.9843E-09	1.9434E-07
A+++	4.1418E-28	1.1243E-21	3.4562E-17
A++++	2.3288E-52	1.8847E-40	4.1608E-32
AV	2.7779E-84	2.4945E-65	5.6533E-52
AVI	0.	0.	3.2808E-77
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5782E+02	3.8497E+02	8.4918E+02
T	3.8555E+01	4.9051E+01	5.9304E+01
RHO	4.0730E+00	7.6694E+00	1.3543E+01
H	4.0028E+01	5.7087E+01	8.4226E+01
A	5.8475E+00	6.2535E+00	6.7086E+00
S	1.2326E+00	1.2363E+00	1.2600E+00
Z	1.0050E+00	1.0233E+00	1.0573E+00
GAME	8.8247E-01	7.7907E-01	7.1776E-01
U	8.4320E+00	4.4635E+00	3.6464E+00

SPECIES	MOLE FRACTIONS		
E-	4.9613E-03	2.2803E-02	5.4207E-02
A	9.9008E-01	9.5439E-01	8.9159E-01
A+	4.9613E-03	2.2803E-02	5.4207E-02
A++	4.3580E-11	1.2976E-08	4.2664E-07
A+++	2.0316E-25	7.0279E-20	2.0201E-16
A++++	1.5999E-47	3.7899E-37	1.0832E-30
AV	1.7572E-77	4.4933E-60	1.0469E-49
AVI	0.	4.3863E-89	7.6245E-74
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9908E+02	5.7044E+02	1.1226E+03
T	4.4641E+01	5.5727E+01	6.4196E+01
RHO	4.3910E+00	9.7775E+00	1.6195E+01
H	4.9605E+01	7.4093E+01	1.0311E+02
A	6.0508E+00	6.5459E+00	6.9562E+00
S	1.2514E+00	1.2588E+00	1.2859E+00
Z	1.0156E+00	1.0469E+00	1.0798E+00
GAME	8.0751E-01	7.3445E-01	6.9803E-01
U	9.5857E+00	4.2920E+00	3.5795E+00

SPECIES	MOLE FRACTIONS		
E-	1.5404E-02	4.4824E-02	7.3933E-02
A	9.6919E-01	9.1035E-01	8.5214E-01
A+	1.5404E-02	4.4823E-02	7.3929E-02
A++	2.2551E-09	1.6864E-07	1.5804E-06
A+++	1.1050E-21	2.1649E-17	4.0045E-15
A++++	1.3166E-40	1.5113E-32	2.7618E-28
AV	1.0548E-65	1.0169E-52	7.5743E-46
AVI	0.	2.7757E-[illegible]	3.7296E-68
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7759E+02	4.7010E+02	9.7377E+02
T	4.1761E+01	5.2553E+01	6.1767E+01
RHO	4.2125E+00	8.6453E+00	1.4754E+01
H	4.4664E+01	6.5289E+01	9.3293E+01
A	5.9527E+00	6.4000E+00	6.8314E+00
S	1.2421E+00	1.2474E+00	1.2727E+00
Z	1.0095E+00	1.0347E+00	1.0685E+00
GAME	8.4051E-01	7.5327E-01	7.0710E-01
U	8.9954E+00	4.3639E+00	3.6112E+00

SPECIES	MOLE FRACTIONS		
E-	9.4336E-03	3.3539E-02	6.4127E-02
A	9.8113E-01	9.3292E-01	8.7175E-01
A+	9.4336E-03	3.3539E-02	6.4125E-02
A++	4.0423E-10	5.4763E-08	8.5251E-07
A+++	2.5879E-23	1.7295E-18	9.7232E-16
A++++	1.2758E-43	1.4040E-34	1.9942E-29
AV	1.2085E-70	5.7222E-56	1.1253E-47
AVI	0.	4.7456E-83	7.7540E-71
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2222E+02	6.9030E+02	1.2952E+03
T	4.7274E+01	5.8700E+01	6.6593E+01
RHO	4.5939E+00	1.1098E+01	1.7827E+01
H	5.4839E+01	8.3610E+01	1.1362E+02
A	6.1520E+00	6.6911E+00	7.0821E+00
S	1.2612E+00	1.2707E+00	1.2997E+00
Z	1.0232E+00	1.0596E+00	1.0911E+00
GAME	7.8241E-01	7.1979E-01	6.9031E-01
U	1.0195E+01	4.1992E+00	3.5504E+00

SPECIES	MOLE FRACTIONS		
E-	2.2716E-02	5.6264E-02	8.3478E-02
A	9.5457E-01	8.8747E-01	8.3305E-01
A+	2.2716E-02	5.6263E-02	8.3472E-02
A++	8.9614E-09	4.2404E-07	2.7547E-06
A+++	2.2551E-20	1.7560E-16	1.4498E-14
A++++	3.2693E-38	7.3412E-31	3.0315E-27
AV	6.2920E-62	5.0513E-50	3.5410E-44
AVI	4.6059E-92	2.4525E-74	1.0620E-65
AVII	0.	0.	1.9513E-94
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4691E+02	8.2730E+02	1.4934E+03
T	4.9648E+01	6.1472E+01	6.8969E+01
RHO	4.8197E+00	1.2552E+01	1.9646E+01
H	6.0352E+01	9.3652E+01	1.2479E+02
A	6.2553E+00	6.8318E+00	7.2093E+00
S	1.2710E+00	1.2833E+00	1.3139E+00
Z	1.0319E+00	1.0722E+00	1.1021E+00
GAME	7.6381E-01	7.0813E-01	6.8376E-01
U	1.0818E+01	4.1393E+00	3.5254E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.0870E-02	6.7361E-02	9.2654E-02
A	9.3826E-01	8.6528E-01	8.1470E-01
A+	3.0870E-02	6.7359E-02	9.2645E-02
A++	2.7163E-08	9.1153E-07	4.5676E-06
A+++	2.5830E-19	1.0148E-15	4.7240E-14
A++++	2.8913E-36	1.9159E-29	2.7451E-26
AV	8.1277E-59	9.2831E-48	1.2157E-42
AVI	2.0934E-87	4.8412E-71	1.9068E-63
AVII	0.	0.	2.7014E-92
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0065E+02	1.1621E+03	1.9662E+03
T	5.3845E+01	6.6659E+01	7.3712E+01
RHO	5.3111E+00	1.5897E+01	2.3744E+01
H	7.2186E+01	1.1544E+02	1.4895E+02
A	6.4649E+00	7.1048E+00	7.4698E+00
S	1.2914E+00	1.3101E+00	1.3440E+00
Z	1.0513E+00	1.0966E+00	1.1234E+00
GAME	7.3832E-01	6.9053E-01	6.7382E-01
U	1.2084E+01	4.0305E+00	3.4871E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8790E-02	8.8119E-02	1.0985E-01
A	9.0242E-01	8.2377E-01	7.8031E-01
A+	4.8790E-02	8.8113E-02	1.0983E-01
A++	1.4907E-07	3.1287E-06	1.1253E-05
A+++	1.1200E-17	1.7856E-14	3.9729E-13
A++++	2.9822E-33	4.0875E-27	1.4696E-24
AV	5.3100E-54	5.2653E-44	7.3104E-40
AVI	2.6272E-80	1.7511E-65	2.3371E-59
AVII	0.	3.5988E-94	2.8506E-85
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7307E+02	9.8429E+02	1.7168E+03
T	5.1825E+01	6.4114E+01	7.1337E+01
RHO	5.0602E+00	1.4155E+01	2.1625E+01
H	6.6137E+01	1.0427E+02	1.3657E+02
A	6.3600E+00	6.9695E+00	7.3382E+00
S	1.2810E+00	1.2964E+00	1.3287E+00
Z	1.0413E+00	1.0846E+00	1.1129E+00
GAME	7.4957E-01	6.9853E-01	6.7828E-01
U	1.1449E+01	4.0827E+00	3.5041E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9634E-02	7.8007E-02	1.0144E-01
A	9.2073E-01	8.4399E-01	7.9713E-01
A+	3.9634E-02	7.8004E-02	1.0142E-01
A++	6.8205E-08	1.7582E-06	7.2794E-06
A+++	1.9695E-18	4.6445E-15	1.4152E-13
A++++	1.1936E-34	3.2774E-28	2.1322E-25
AV	2.8612E-56	8.9013E-46	3.2757E-41
AVI	7.8690E-84	3.9836E-68	2.4136E-61
AVII	0.	0.	3.7558E-88
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2959E+02	1.3630E+03	2.2419E+03
T	5.5739E+01	6.9149E+01	7.6117E+01
RHO	5.5691E+00	1.7786E+01	2.5980E+01
H	7.8496E+01	1.2719E+02	1.6191E+02
A	6.5693E+00	7.2393E+00	7.6057E+00
S	1.3020E+00	1.3244E+00	1.3599E+00
Z	1.0618E+00	1.1083E+00	1.1337E+00
GAME	7.2919E-01	6.8385E-01	6.7034E-01
U	1.2721E+01	3.9685E+00	3.4750E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.8182E-02	9.7692E-02	1.1793E-01
A	8.8364E-01	8.0462E-01	7.6415E-01
A+	5.8181E-02	9.7682E-02	1.1790E-01
A++	2.9323E-07	5.2472E-06	1.7007E-05
A+++	5.0426E-17	6.0333E-14	1.0627E-12
A++++	4.6673E-32	4.0006E-26	9.2528E-24
AV	3.9739E-52	2.0736E-42	1.4091E-38
AVI	1.1456E-77	3.9232E-63	1.8187E-57
AVII	0.	3.5549E-92	1.5573E-82
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5988E+02	1.5839E+03	2.5448E+03
T	5.7532E+01	7.1587E+01	7.8574E+01
RHO	5.8318E+00	1.9764E+01	2.8315E+01
H	8.5063E+01	1.3940E+02	1.7544E+02
A	6.6729E+00	7.3733E+00	7.7476E+00
S	1.3129E+00	1.3392E+00	1.3762E+00
Z	1.0726E+00	1.1195E+00	1.1438E+00
GAME	7.2157E-01	6.7838E-01	6.6786E-01
U	1.3359E+01	3.9322E+00	3.4683E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	6.7694E-02	1.0673E-01	1.2576E-01
A	8.6461E-01	7.8654E-01	7.4851E-01
A+	6.7693E-02	1.0672E-01	1.2571E-01
A++	5.3207E-07	8.3936E-06	2.5308E-05
A+++	1.9167E-16	1.8356E-13	2.7494E-12
A++++	5.5139E-31	3.2151E-25	5.4597E-23
AV	2.1362E-50	5.9222E-41	2.4333E-37
AVI	4.7803E-75	5.4132E-61	1.1904E-55
AVII	0.	1.1235E-87	6.4462E-80
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2437E+02	2.0960E+03	3.2328E+03
T	6.0889E+01	7.6462E+01	8.3736E+01
RHO	6.3647E+00	2.4025E+01	3.3169E+01
H	9.8963E+01	1.6537E+02	2.0407E+02
A	6.8777E+00	7.6488E+00	8.0574E+00
S	1.3357E+00	1.3705E+00	1.4100E+00
Z	1.0950E+00	1.1409E+00	1.1639E+00
GAME	7.0945E-01	6.7062E-01	6.6612E-01
U	1.4634E+01	3.8661E+00	3.4569E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	8.6790E-02	1.2353E-01	1.4085E-01
A	8.2642E-01	7.5295E-01	7.1836E-01
A+	8.6787E-02	1.2350E-01	1.4074E-01
A++	1.4660E-06	1.9620E-05	5.4556E-05
A+++	1.8796E-15	1.3937E-12	1.7395E-11
A++++	3.7077E-29	1.4346E-23	1.6985E-21
AV	1.7600E-47	2.6767E-38	6.0072E-35
AVI	8.9059E-71	4.3923E-57	3.8284E-52
AVII	0.	5.1452E-82	7.1588E-75
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9148E+02	1.8276E+03	2.8758E+03
T	5.9243E+01	7.4014E+01	8.1113E+01
RHO	6.0975E+00	2.1845E+01	3.0724E+01
H	9.1885E+01	1.5212E+02	1.8955E+02
A	6.7757E+00	7.5092E+00	7.8979E+00
S	1.3241E+00	1.3546E+00	1.3930E+00
Z	1.0837E+00	1.1304E+00	1.1539E+00
GAME	7.1507E-01	6.7399E-01	6.6642E-01
U	1.3997E+01	3.9008E+00	3.4679E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	7.7249E-02	1.1533E-01	1.3340E-01
A	8.4550E-01	7.6936E-01	7.3324E-01
A+	7.7247E-02	1.1530E-01	1.3333E-01
A++	9.0591E-07	1.2986E-05	3.7311E-05
A+++	6.3430E-16	5.1909E-13	6.9766E-12
A++++	5.0132E-30	2.2563E-24	3.0994E-22
AV	7.2700E-49	1.3654E-39	3.9366E-36
AVI	8.4878E-73	5.5136E-59	7.0447E-54
AVII	0.	9.1704E-85	2.2763E-77
AVIII	0.	0.	0.

P1 = 2.00E+05 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5854E+02	2.3861E+03	3.6228E+03
T	6.2482E+01	7.8944E+01	8.6547E+01
RHO	6.6322E+00	2.6252E+01	3.5645E+01
H	1.0629E+02	1.7908E+02	2.1941E+02
A	6.9793E+00	7.7938E+00	8.2339E+00
S	1.3475E+00	1.3868E+00	1.4277E+00
Z	1.1065E+00	1.1513E+00	1.1743E+00
GAME	7.0453E-01	6.6831E-01	6.6708E-01
U	1.5270E+01	3.8498E+00	3.4769E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	9.6279E-02	1.3145E-01	1.4844E-01
A	8.0744E-01	7.3713E-01	7.0321E-01
A+	9.6274E-02	1.3139E-01	1.4828E-01
A++	2.2771E-06	2.9127E-05	8.0368E-05
A+++	5.0967E-15	3.5977E-12	4.4183E-11
A++++	2.3301E-28	8.4511E-23	9.5942E-21
AV	3.2908E-46	4.6250E-37	9.5812E-34
AVI	6.4273E-69	2.8920E-55	2.2136E-50
AVII	0.	2.1710E-79	2.4646E-72
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.9399E+02	2.6974E+03	4.0438E+03
T	6.4034E+01	8.1486E+01	8.9558E+01
RHO	6.8991E+00	2.8496E+01	3.8102E+01
H	1.1388E+02	1.9324E+02	2.3537E+02
A	7.0806E+00	7.9464E+00	8.4295E+00
S	1.3595E+00	1.4035E+00	1.4457E+00
Z	1.1182E+00	1.1617E+00	1.1850E+00
GAME	7.0018E-01	6.6708E-01	6.6952E-01
U	1.5904E+01	3.8560E+00	3.5065E+00

SPECIES	MOLE FRACTIONS		
E-	1.0569E-01	1.3916E-01	1.5615E-01
A	7.8862E-01	7.2171E-01	6.8782E-01
A+	1.0568E-01	1.3908E-01	1.5591E-01
A++	3.4204E-06	4.2768E-05	1.1919E-04
A+++	1.2858E-14	9.0591E-12	1.1413E-10
A++++	1.2835E-27	4.7352E-22	5.5683E-20
AV	5.0010E-45	7.3420E-36	1.5902E-32
AVI	3.4450E-67	1.6727E-53	1.3544E-48
AVII	0.	7.5282E-77	9.2038E-70
AVIII	0.	0.	3.5879E-95

P1 = 2.00E+05 N/SQ-M, US 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.6899E+02	3.3988E+03	4.9904E+03
T	6.7059E+01	8.6967E+01	9.4469E+01
RHO	7.4308E+00	3.3043E+01	4.2817E+01
H	1.2982E+02	2.2318E+02	2.6946E+02
A	7.2841E+00	8.2904E+00	8.9018E+00
S	1.3845E+00	1.4382E+00	1.4828E+00
Z	1.1419E+00	1.1828E+00	1.2085E+00
GAME	6.9292E-01	6.6820E-01	6.7988E-01
U	1.7179E+01	3.8779E+00	3.6032E+00

SPECIES	MOLE FRACTIONS		
E-	1.2424E-01	1.5452E-01	1.7252E-01
A	7.5153E-01	6.9105E-01	6.5524E-01
A+	1.2423E-01	1.5434E-01	1.7197E-01
A++	7.1444E-06	9.2073E-05	2.7332E-04
A+++	6.9275E-14	5.7424E-11	8.4208E-10
A++++	2.8681E-26	1.4677E-20	2.2211E-18
AV	7.1017E-43	1.7877E-33	5.6100E-30
AVI	4.8756E-64	5.2376E-50	7.0504E-45
AVII	2.4002E-92	8.0145E-72	1.9165E-64
AVIII	0.	0.	5.4804E-88

P1 = 2.00E+05 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.3109E+02	3.0400E+03	4.5051E+03
T	6.5561E+01	8.4164E+01	9.2863E+01
RHO	7.1689E+00	3.0817E+01	4.0549E+01
H	1.2174E+02	2.0806E+02	2.5218E+02
A	7.1823E+00	8.1114E+00	8.6518E+00
S	1.3719E+00	1.4206E+00	1.4642E+00
Z	1.1300E+00	1.1721E+00	1.1964E+00
GAME	6.9632E-01	6.6698E-01	6.7373E-01
U	1.6550E+01	3.8616E+00	3.5475E+00

SPECIES	MOLE FRACTIONS		
E-	1.1502E-01	1.4681E-01	1.6417E-01
A	7.6996E-01	7.0645E-01	6.7185E-01
A+	1.1501E-01	1.4668E-01	1.6381E-01
A++	5.0030E-06	6.2745E-05	1.7953E-04
A+++	3.0637E-14	2.2813E-11	3.0609E-10
A++++	6.3696E-27	2.6446E-21	3.4425E-19
AV	6.4428E-44	1.1539E-34	2.8889E-31
AVI	1.4535E-65	9.4652E-52	9.2752E-47
AVII	1.2547E-94	2.4897E-74	3.8415E-67
AVIII	0.	0.	1.1880E-91

P1 = 2.00E+05 N/SQ-M, US [illegible].60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.0813E+02	3.[illegible]48E+03	5.5098E+03
T	6.8541E+01	8.9898E+01	1.0041E+02
RHO	7.6893E+00	3.5280E+01	4.4918E+01
H	1.3816E+02	2.3882E+02	2.8746E+02
A	7.3868E+00	8.4830E+00	9.1878E+00
S	1.3974E+00	1.4555E+00	1.5016E+00
Z	1.1539E+00	1.1934E+00	1.2216E+00
GAME	6.8992E-01	6.7078E-01	6.8819E-01
U	1.7806E+01	3.8852E+00	3.6740E+00

SPECIES	MOLE FRACTIONS		
E-	1.3335E-01	1.6203E-01	1.8140E-01
A	7.3331E-01	6.7607E-01	6.3762E-01
A+	1.3333E-01	1.6176E-01	1.8056E-01
A++	1.0012E-05	1.3452E-04	4.2342E-04
A+++	1.5038E-13	1.4336E-10	2.4160E-09
A++++	1.1969E-25	8.0001E-20	1.5394E-17
AV	6.9181E-42	2.6808E-32	1.2107E-28
AVI	1.3581E-62	2.7496E-48	6.1698E-43
AVII	1.4640E-90	2.3653E-69	1.1322E-61
AVIII	0.	1.1987E-94	2.9934E-84

TABLE I.-Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.4851E+02	4.1889E+03	6.0656E+03
T	7.0017E+01	9.3056E+01	1.0489E+02
RHO	7.9436E+00	3.7368E+01	4.6774E+01
H	1.4676E+02	2.5487E+02	3.0629E+02
A	7.4907E+00	8.6987E+00	9.5187E+00
S	1.4105E+00	1.4731E+00	1.5209E+00
Z	1.1660E+00	1.2047E+00	1.2363E+00
GAME	6.8731E-01	6.7499E-01	6.9869E-01
U	1.8432E+01	3.9233E+00	3.7671E+00

SPECIES	MOLE FRACTIONS		
E-	1.4236E-01	1.6989E-01	1.9116E-01
A	7.1529E-01	6.6042E-01	6.1834E-01
A+	1.4234E-01	1.6949E-01	1.8982E-01
A++	1.3813E-05	1.9876E-04	6.7167E-04
A+++	3.1560E-13	3.6708E-10	7.3414E-09
A++++	4.6899E-25	4.5387E-19	1.1795E-16
AV	6.0801E-41	4.2492E-31	3.0439E-27
AVI	3.2337E-61	1.5477E-46	6.6893E-41
AVII	2.7307E-88	7.5377E-67	8.9167E-59
AVIII	0.	2.8443E-91	2.3594E-80

P1 = 2.00E+05 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.3292E+02	5.0568E+03	7.2854E+03
T	7.2972E+01	1.0017E+02	1.1515E+02
RHO	8.4357E+00	4.1060E+01	4.9817E+01
H	1.6470E+02	2.8830E+02	3.4634E+02
A	7.7045E+00	9.2099E+00	1.0274E+01
S	1.4375E+00	1.5086E+00	1.5586E+00
Z	1.1906E+00	1.2294E+00	1.2700E+00
GAME	6.8321E-01	6.8874E-01	7.2182E-01
U	1.9677E+01	4.0479E+00	4.0079E+00

SPECIES	MOLE FRACTIONS		
E-	1.6010E-01	1.8661E-01	2.1260E-01
A	6.7982E-01	6.2723E-01	5.7649E-01
A+	1.6005E-01	1.8572E-01	2.0920E-01
A++	2.5358E-05	4.4716E-04	1.6999E-03
A+++	1.2862E-12	2.5852E-09	6.9662E-08
A++++	6.2294E-24	1.6432E-17	7.2714E-15
AV	3.7151E-39	1.2699E-28	2.0730E-24
AVI	1.2889E-58	6.2567E-43	8.7573E-37
AVII	1.3721E-84	1.0753E-61	6.3422E-53
AVIII	0.	2.6054E-84	1.7633E-72

P1 = 2.00E+05 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9010E+02	4.6136E+03	6.6622E+03
T	7.1491E+01	9.6468E+01	1.0982E+02
RHO	8.1927E+00	3.9310E+01	4.8437E+01
H	1.5560E+02	2.7137E+02	3.2615E+02
A	7.5965E+00	8.9398E+00	9.8849E+00
S	1.4239E+00	1.4909E+00	1.5399E+00
Z	1.1782E+00	1.2166E+00	1.2524E+00
GAME	6.8507E-01	6.8096E-01	7.1041E-01
U	1.9056E+01	3.9765E+00	3.8970E+00

SPECIES	MOLE FRACTIONS		
E-	1.5128E-01	1.7805E-01	2.0154E-01
A	6.9746E-01	6.4420E-01	5.9799E-01
A+	1.5124E-01	1.7745E-01	1.9940E-01
A++	1.8814E-05	2.9658E-04	1.0721E-03
A+++	6.4430E-13	9.6209E-10	2.2740E-08
A++++	1.7452E-24	2.6759E-18	9.3511E-16
AV	4.9135E-40	7.1351E-30	8.0639E-26
AVI	6.7792E-60	9.4731E-45	7.8122E-39
AVII	2.0701E-86	2.7232E-64	7.7381E-56
AVIII	0.	8.2285E-88	2.1022E-76

P1 = 2.00E+05 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.7693E+02	5.5175E+03	7.9511E+03
T	7.4466E+01	1.0421E+02	1.2096E+02
RHO	8.6717E+00	4.2588E+01	5.0966E+01
H	1.7405E+02	3.0567E+02	3.6766E+02
A	7.8152E+00	9.5104E+00	1.0683E+01
S	1.4513E+00	1.5263E+00	1.5776E+00
Z	1.2031E+00	1.2433E+00	1.2898E+00
GAME	6.8172E-01	6.9813E-01	7.3158E-01
U	2.0297E+01	4.1361E+00	4.1599E+00

SPECIES	MOLE FRACTIONS		
E-	1.6884E-01	1.9567E-01	2.2467E-01
A	6.6235E-01	6.0935E-01	5.5334E-01
A+	1.6877E-01	1.9431E-01	2.1932E-01
A++	3.3889E-05	6.8020E-04	2.6733E-03
A+++	2.5222E-12	7.1008E-09	2.1084E-07
A++++	2.1511E-23	1.0464E-16	5.5507E-14
AV	2.6665E-38	2.3820E-27	5.1855E-23
AVI	2.2787E-57	4.4306E-41	9.4479E-35
AVII	8.2804E-83	4.6160E-59	4.8773E-50
AVIII	0.	9.0441E-81	1.3421E-68

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2213E+02	5.9916E+03	8.6497E+03
T	7.5980E+01	1.0863E+02	1.2700E+02
RHO	8.8996E+00	4.3824E+01	5.1943E+01
H	1.8366E+02	3.2343E+02	3.8968E+02
A	7.9293E+00	9.8429E+00	1.1090E+01
S	1.4652E+00	1.5442E+00	1.5964E+00
Z	1.2158E+00	1.2586E+00	1.3112E+00
GAME	6.8062E-01	7.0862E-01	7.3851E-01
U	2.0914E+01	4.2491E+00	4.3196E+00

SPECIES	MOLE FRACTIONS		
E-	1.7751E-01	2.0548E-01	2.3734E-01
A	6.4502E-01	5.9009E-01	5.2938E-01
A+	1.7742E-01	2.0339E-01	2.2921E-01
A++	4.4991E-05	1.0450E-03	4.0669E-03
A+++	4.8780E-12	1.9997E-08	5.9486E-07
A++++	7.2382E-23	6.9548E-16	3.7529E-13
AV	1.8374E-37	4.7675E-26	1.0766E-21
AVI	3.8104E-56	3.4445E-39	7.8225E-33
AVII	4.6974E-81	2.2599E-56	2.5708E-47
AVIII	0.	3.7947E-77	6.1496E-65

P1 = 2.00E+05 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.1605E+02	6.9794E+03	1.0137E+04
T	7.9095E+01	1.1816E+02	1.3914E+02
RHO	9.3268E+00	4.5714E+01	5.3659E+01
H	2.0362E+02	3.6020E+02	4.3567E+02
A	8.1704E+00	1.0540E+01	1.1870E+01
S	1.4937E+00	1.5782E+00	1.6330E+00
Z	1.2418E+00	1.2921E+00	1.3577E+00
GAME	6.7968E-01	7.2769E-01	7.4580E-01
U	2.2141E+01	4.5231E+00	4.6509E+00

SPECIES	MOLE FRACTIONS		
E-	1.9469E-01	2.2606E-01	2.6347E-01
A	6.1070E-01	5.5024E-01	4.8126E-01
A+	1.9453E-01	2.2134E-01	2.4708E-01
A++	7.8231E-05	2.3622E-03	8.1896E-03
A+++	1.7752E-11	1.4499E-07	3.4827E-06
A++++	7.7710E-22	2.6159E-14	1.0051E-11
AV	7.9964E-36	1.4807E-23	2.0386E-19
AVI	9.3910E-54	1.4357E-35	1.6630E-29
AVII	1.2867E-77	3.1136E-51	1.3646E-42
AVIII	0.	3.0754E-70	1.4143E-58

P1 = 2.00E+05 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.6851E+02	6.4789E+03	9.3801E+03
T	7.7520E+01	1.1325E+02	1.3303E+02
RHO	9.1184E+00	4.4882E+01	5.2878E+01
H	1.9351E+02	3.4161E+02	4.1240E+02
A	8.0475E+00	1.0186E+01	1.1480E+01
S	1.4794E+00	1.5612E+00	1.6146E+00
Z	1.2287E+00	1.2746E+00	1.3335E+00
GAME	6.7993E-01	7.1876E-01	7.4288E-01
U	2.1528E+01	4.3803E+00	4.4871E+00

SPECIES	MOLE FRACTIONS		
E-	1.8612E-01	2.1546E-01	2.5009E-01
A	6.2781E-01	5.7065E-01	5.0570E-01
A+	1.8600E-01	2.1230E-01	2.3833E-01
A++	5.9432E-05	1.5797E-03	5.8802E-03
A+++	9.3380E-12	5.4422E-08	1.4998E-06
A++++	2.3881E-22	4.3458E-15	2.0855E-12
AV	1.2264E-36	8.6521E-25	1.6524E-20
AVI	6.0882E-55	2.3204E-37	4.2108E-31
AVII	2.5203E-79	8.9438E-54	7.3707E-45
AVIII	0.	1.1820E-73	1.2482E-61

P1 = 2.00E+05 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.6523E+02	7.5017E+03	1.0934E+04
T	8.0717E+01	1.2330E+02	1.4505E+02
RHO	9.5282E+00	4.6413E+01	5.4539E+01
H	2.1400E+02	3.7940E+02	4.5979E+02
A	8.2992E+00	1.0896E+01	1.2247E+01
S	1.5081E+00	1.5951E+00	1.6505E+00
Z	1.2550E+00	1.3109E+00	1.3821E+00
GAME	6.7990E-01	7.3460E-01	7.4814E-01
U	2.2762E+01	4.6781E+00	4.8171E+00

SPECIES	MOLE FRACTIONS		
E-	2.0322E-01	2.3717E-01	2.7647E-01
A	5.9367E-01	5.2913E-01	4.5792E-01
A+	2.0301E-01	2.3024E-01	2.5477E-01
A++	1.0280E-04	3.4607E-03	1.0838E-02
A+++	3.3665E-11	3.7035E-07	7.2019E-06
A++++	2.5155E-21	1.4650E-13	3.9543E-11
AV	5.1678E-35	2.2699E-22	1.8390E-18
AVI	1.4311E-52	7.6102E-34	4.2025E-28
AVII	6.4964E-76	8.7185E-49	1.3475E-40
AVIII	0.	6.0275E-67	6.9274E-56

TABLE I.- Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0149E+03	8.0191E+03	1.1733E+04
T	8.2382E+01	1.2841E+02	1.5084E+02
RHO	9.7107E+00	4.6934E+01	5.5253E+01
H	2.2460E+02	3.9874E+02	4.8414E+02
A	8.4340E+00	1.1239E+01	1.2623E+01
S	1.5227E+00	1.6116E+00	1.6679E+00
Z	1.2686E+00	1.3306E+00	1.4077E+00
GAME	6.8063E-01	7.3924E-01	7.5043E-01
U	2.3363E+01	4.8392E+00	4.9817E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.1173E-01	2.4844E-01	2.8963E-01
A	5.7668E-01	5.0800E-01	4.3461E-01
A+	2.1146E-01	2.3867E-01	2.6190E-01
A++	1.3488E-04	4.8839E-03	1.3847E-02
A+++	6.3663E-11	8.6975E-07	1.3714E-05
A++++	8.0910E-21	7.0698E-13	1.3443E-10
AV	3.3044E-34	2.7600E-21	1.3217E-17
AVI	2.1501E-51	2.8911E-32	7.6646E-27
AVII	3.2309E-74	1.5169E-46	8.3769E-39
AVIII	0.	6.2067E-64	1.8230E-53

P1 = 2.00E+05 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1171E+03	9.0723E+03	1.3370E+04
T	8.5897E+01	1.3851E+02	1.6205E+02
RHO	1.0030E+01	4.7724E+01	5.6456E+01
H	2.4654E+02	4.3854E+02	5.3432E+02
A	8.7267E+00	1.1895E+01	1.3378E+01
S	1.5522E+00	1.6439E+00	1.7021E+00
Z	1.2966E+00	1.3725E+00	1.4615E+00
GAME	6.8378E-01	7.4432E-01	7.5573E-01
U	2.4550E+01	5.1644E+00	5.3090E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2875E-01	2.7139E-01	3.1576E-01
A	5.4272E-01	4.6598E-01	3.8927E-01
A+	2.2829E-01	2.5387E-01	2.7421E-01
A++	2.3252E-04	8.7533E-03	2.0713E-02
A+++	2.2914E-10	3.7893E-06	4.0407E-05
A++++	8.4297E-20	1.0892E-11	1.0760E-09
AV	1.3545E-32	2.1549E-19	3.8566E-16
AVI	4.7861E-49	1.6768E-29	1.1237E-24
AVII	7.4062E-71	1.2638E-42	1.0176E-35
AVIII	0.	1.1710E-58	2.6757E-49

P1 = 2.00E+05 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0656E+03	8.5481E+03	1.2548E+04
T	8.4107E+01	1.3352E+02	1.5651E+02
RHO	9.8793E+00	4.7383E+01	5.5906E+01
H	2.3545E+02	4.1852E+02	5.0899E+02
A	8.5762E+00	1.1572E+01	1.3000E+01
S	1.5374E+00	1.6279E+00	1.6851E+00
Z	1.2824E+00	1.3512E+00	1.4342E+00
GAME	6.8191E-01	7.4226E-01	7.5295E-01
U	2.3962E+01	4.9971E+00	5.1422E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.2024E-01	2.5989E-01	3.0274E-01
A	5.5971E-01	4.8687E-01	4.1173E-01
A+	2.1988E-01	2.4657E-01	2.6836E-01
A++	1.7701E-04	6.6580E-03	1.7151E-02
A+++	1.2061E-10	1.8921E-06	2.4272E-05
A++++	2.6083E-20	2.9852E-12	4.0167E-10
AV	2.1178E-33	2.7311E-20	7.7758E-17
AVI	3.2343E-50	8.1857E-31	1.0495E-25
AVII	1.5928E-72	1.7394E-44	3.4771E-37
AVIII	0.	3.6513E-61	2.7973E-51

P1 = 2.00E+05 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1704E+03	9.6205E+03	1.4220E+04
T	8.7774E+01	1.4350E+02	1.6754E+02
RHO	1.0170E+01	4.8068E+01	5.6976E+01
H	2.5790E+02	4.5928E+02	5.6034E+02
A	8.8870E+00	1.2220E+01	1.3762E+01
S	1.5671E+00	1.6599E+00	1.7191E+00
Z	1.3111E+00	1.3948E+00	1.4897E+00
GAME	6.8629E-01	7.4605E-01	7.5880E-01
U	2.5150E+01	5.3269E+00	5.4633E+00
SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.3729E-01	2.8304E-01	3.2871E-01
A	5.2572E-01	4.4514E-01	3.6723E-01
A+	2.3668E-01	2.6063E-01	2.7946E-01
A++	3.0629E-04	1.1193E-02	2.4529E-02
A+++	4.3879E-10	7.1379E-06	6.4140E-05
A++++	2.7591E-19	3.5757E-11	2.6502E-09
AV	8.8068E-32	1.4463E-18	1.6794E-15
AVI	7.2011E-48	2.7303E-28	9.9875E-24
AVII	3.4611E-69	6.6414E-41	2.2902E-34
AVIII	7.6915E-95	2.4334E-56	1.8042E-47

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2243E+03	1.0164E+04	1.5069E+04
T	8.9737E+01	1.4834E+02	1.7294E+02
RHO	1.0289E+01	4.8329E+01	5.7372E+01
H	2.6950E+02	4.8030E+02	5.8690E+02
A	9.0577E+00	1.2540E+01	1.4147E+01
S	1.5820E+00	1.6756E+00	1.7359E+00
Z	1.3260E+00	1.4177E+00	1.5187E+00
GAME	6.8946E-01	7.4774E-01	7.6202E-01
U	2.5739E+01	5.4851E+00	5.6279E+00

SPECIES	MOLE FRACTIONS		
E-	2.4587E-01	2.9463E-01	3.4154E-01
A	5.0867E-01	4.2466E-01	3.4567E-01
A+	2.4506E-01	2.6679E-01	2.8412E-01
A++	4.0454E-04	1.3901E-02	2.8567E-02
A+++	8.4666E-10	1.2560E-05	9.7553E-05
A++++	9.1623E-19	1.0404E-10	6.0426E-09
AV	5.8865E-31	8.0472E-18	6.4748E-15
AVI	1.1451E-46	3.3980E-27	7.4401E-23
AVII	1.8299E-67	2.3884E-39	4.0065E-33
AVIII	1.7069E-92	3.0527E-54	8.6876E-46

P1 = 2.00E+05 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2793E+03	1.0696E+04	1.5914E+04
T	9.1800E+01	1.5305E+02	1.7829E+02
RHO	1.0389E+01	4.8486E+01	5.7633E+01
H	2.8135E+02	5.0163E+02	6.1382E+02
A	9.2397E+00	1.2859E+01	1.4537E+01
S	1.5969E+00	1.6913E+00	1.7529E+00
Z	1.3414E+00	1.4413E+00	1.5487E+00
GAME	6.9331E-01	7.4956E-01	7.6535E-01
U	2.6323E+01	5.6645E+00	5.7837E+00

SPECIES	MOLE FRACTIONS		
E-	2.5449E-01	3.0620E-01	3.5430E-01
A	4.9156E-01	4.0450E-01	3.2452E-01
A+	2.5342E-01	2.7243E-01	2.8819E-01
A++	5.3609E-04	1.6854E-02	3.2843E-02
A+++	1.6480E-09	2.0872E-05	1.4344E-04
A++++	3.0828E-18	2.7331E-10	1.2958E-08
AV	3.9904E-30	3.8162E-17	2.2659E-14
AVI	1.8318E-45	3.3584E-26	4.8158E-22
AVII	9.4048E-66	6.1916E-38	5.7374E-32
AVIII	3.3851E-90	2.4582E-52	3.1939E-44

P1 = 2.00E+05 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3353E+03	1.1231E+04	1.6757E+04
T	9.3973E+01	1.5768E+02	1.8349E+02
RHO	1.0470E+01	4.8599E+01	5.7848E+01
H	2.9345E+02	5.2341E+02	6.4133E+02
A	9.4337E+00	1.3179E+01	1.4922E+01
S	1.6118E+00	1.7068E+00	1.7693E+00
Z	1.3571E+00	1.4657E+00	1.5787E+00
GAME	6.9780E-01	7.5161E-01	7.6866E-01
U	2.6904E+01	5.8249E+00	5.9442E+00

SPECIES	MOLE FRACTIONS		
E-	2.6316E-01	3.1771E-01	3.6655E-01
A	4.7440E-01	3.8468E-01	3.0451E-01
A+	2.6173E-01	2.7754E-01	2.9151E-01
A++	7.1294E-04	2.0038E-02	3.7216E-02
A+++	3.2391E-09	3.3123E-05	2.0298E-04
A++++	1.0544E-17	6.6196E-10	2.5902E-08
AV	2.7699E-29	1.5955E-16	7.0921E-14
AVI	3.0202E-44	2.7721E-25	2.6490E-21
AVII	4.9806E-64	1.2451E-36	6.5180E-31
AVIII	6.7698E-88	1.4126E-50	8.5774E-43

P1 = 2.00E+05 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3923E+03	1.1764E+04	1.7590E+04
T	9.6263E+01	1.6222E+02	1.8867E+02
RHO	1.0531E+01	4.8647E+01	5.7922E+01
H	3.0579E+02	5.4559E+02	6.6934E+02
A	9.6396E+00	1.3502E+01	1.5311E+01
S	1.6267E+00	1.7224E+00	1.7860E+00
Z	1.3734E+00	1.4906E+00	1.6097E+00
GAME	7.0285E-01	7.5386E-01	7.7196E-01
U	2.7480E+01	5.9764E+00	6.1050E+00

SPECIES	MOLE FRACTIONS		
E-	2.7187E-01	3.2915E-01	3.7876E-01
A	4.5720E-01	3.6523E-01	2.8489E-01
A+	2.6997E-01	2.8214E-01	2.9423E-01
A++	9.5121E-04	2.3431E-02	4.1839E-02
A+++	6.4257E-09	5.0487E-05	2.8095E-04
A++++	3.6663E-17	1.4920E-09	4.9716E-08
AV	1.9743E-28	5.9610E-16	2.0804E-13
AVI	5.1918E-43	1.9454E-24	1.3254E-20
AVII	2.8309E-62	1.9881E-35	6.4611E-30
AVIII	1.5400E-85	5.9528E-49	1.9136E-41

TABLE I. - Continued

p_1 = 200 kN/m^2

P1 = 2.00E+05 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4502E+03	1.2284E+04	1.8412E+04
T	9.8677E+01	1.6667E+02	1.9379E+02
RHO	1.0572E+01	4.8609E+01	5.7888E+01
H	3.1838E+02	5.6814E+02	6.9785E+02
A	9.8568E+00	1.3825E+01	1.5702E+01
S	1.6416E+00	1.7378E+00	1.8026E+00
Z	1.3901E+00	1.5163E+00	1.6412E+00
GAME	7.0828E-01	7.5628E-01	7.7517E-01
U	2.8051E+01	6.1313E+00	6.2660E+00

SPECIES	MOLE FRACTIONS		
E-	2.8063E-01	3.4048E-01	3.9071E-01
A	4.4001E-01	3.4619E-01	2.6600E-01
A+	2.7809E-01	2.8624E-01	2.9626E-01
A++	1.2721E-03	2.7010E-02	4.6651E-02
A+++	1.2842E-08	7.4274E-05	3.8001E-04
A++++	1.2914E-16	3.1548E-09	9.1432E-08
AV	1.4355E-27	2.0140E-15	5.6978E-13
AVI	9.1938E-42	1.1800E-23	5.9973E-20
AVII	1.6852E-60	2.5782E-34	5.5449E-29
AVIII	3.8012E-83	1.8898E-47	3.5118E-40

P1 = 2.00E+05 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5688E+03	1.3316E+04	2.0008E+04
T	1.0387E+02	1.7540E+02	2.0387E+02
RHO	1.0600E+01	4.8379E+01	5.7533E+01
H	3.4429E+02	6.1450E+02	7.5625E+02
A	1.0317E+01	1.4477E+01	1.6483E+01
S	1.6711E+00	1.7687E+00	1.8358E+00
Z	1.4249E+00	1.5693E+00	1.7058E+00
GAME	7.1915E-01	7.6146E-01	7.8122E-01
U	2.9181E+01	6.3949E+00	6.5856E+00

SPECIES	MOLE FRACTIONS		
E-	2.9821E-01	3.6276E-01	4.1377E-01
A	4.0586E-01	3.0948E-01	2.3058E-01
A+	2.9365E-01	2.9291E-01	2.9818E-01
A++	2.2760E-03	3.4706E-02	5.6811E-02
A+++	5.1680E-08	1.4778E-04	6.5550E-04
A++++	1.6234E-15	1.2130E-08	2.7705E-07
AV	7.7273E-26	1.8148E-14	3.5850E-12
AVI	2.9475E-39	3.0862E-22	9.4638E-19
AVII	6.0747E-57	2.6740E-32	2.8114E-27
AVIII	2.3118E-78	1.0001E-44	7.1180E-38

P1 = 2.00E+05 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5090E+03	1.2800E+04	1.9215E+04
T	1.0121E+02	1.7105E+02	1.9884E+02
RHO	1.0594E+01	4.8512E+01	5.7756E+01
H	3.3121E+02	5.9109E+02	7.2672E+02
A	1.0083E+01	1.4150E+01	1.6091E+01
S	1.6563E+00	1.7533E+00	1.8192E+00
Z	1.4073E+00	1.5425E+00	1.6732E+00
GAME	7.1383E-01	7.5882E-01	7.7825E-01
U	2.8618E+01	6.2748E+00	6.4212E+00

SPECIES	MOLE FRACTIONS		
E-	2.8942E-01	3.5169E-01	4.0235E-01
A	4.2287E-01	3.2760E-01	2.4794E-01
A+	2.8601E-01	2.8984E-01	2.9758E-01
A++	1.7027E-03	3.0769E-02	5.1627E-02
A+++	2.5771E-08	1.0608E-04	5.0317E-04
A++++	4.5830E-16	6.3255E-09	1.6157E-07
AV	1.0561E-26	6.2606E-15	1.4627E-12
AVI	1.6581E-40	6.3470E-23	2.4686E-19
AVII	1.0320E-58	2.8210E-33	4.1540E-28
AVIII	9.8137E-81	4.7806E-46	5.3595E-39

P1 = 2.00E+05 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6296E+03	1.3791E+04	2.0789E+04
T	1.0662E+02	1.7960E+02	2.0886E+02
RHO	1.0592E+01	4.8097E+01	5.7240E+01
H	3.5762E+02	6.3802E+02	7.8630E+02
A	1.0553E+01	1.4801E+01	1.6875E+01
S	1.6857E+00	1.7840E+00	1.8524E+00
Z	1.4429E+00	1.5965E+00	1.7388E+00
GAME	7.2386E-01	7.6406E-01	7.8405E-01
U	2.9740E+01	6.5776E+00	6.7512E+00

SPECIES	MOLE FRACTIONS		
E-	3.0695E-01	3.7362E-01	4.2491E-01
A	3.8912E-01	2.9193E-01	2.1404E-01
A+	3.0090E-01	2.9547E-01	2.9805E-01
A++	3.0284E-03	3.8776E-02	6.2167E-02
A+++	1.0282E-07	2.0058E-04	8.4056E-04
A++++	5.6729E-15	2.2145E-08	4.6129E-07
AV	5.5388E-25	4.8594E-14	8.3716E-12
AVI	5.0946E-38	1.3350E-21	3.3834E-18
AVII	3.4438E-55	2.1435E-31	1.7161E-26
AVIII	5.2187E-76	1.6646E-43	8.2489E-37

TABLE I.- Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6914E+03	1.4278E+04	2.1562E+04
T	1.0947E+02	1.8387E+02	2.1383E+02
RHO	1.0575E+01	4.7795E+01	5.6899E+01
H	3.7119E+02	6.6210E+02	8.1683E+02
A	1.0788E+01	1.5135E+01	1.7266E+01
S	1.7001E+00	1.7997E+00	1.8690E+00
Z	1.4612E+00	1.6248E+00	1.7722E+00
GAME	7.2763E-01	7.6675E-01	7.8673E-01
U	3.0298E+01	6.7259E+00	6.9141E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1564E-01	3.8453E-01	4.3572E-01
A	3.7272E-01	2.7458E-01	1.9836E-01
A+	3.0764E-01	2.9752E-01	2.9718E-01
A++	4.0003E-03	4.3102E-02	6.7676E-02
A+++	2.0171E-07	2.6881E-04	1.0624E-03
A++++	1.9344E-14	3.9576E-08	7.4764E-07
AV	3.8179E-24	1.2593E-13	1.8721E-11
AVI	8.2984E-37	5.5124E-21	1.1350E-17
AVII	1.7749E-53	1.6076E-30	9.6139E-26
AVIII	1.0124E-73	2.5311E-42	8.4497E-36

P1 = 2.00E+05 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9160E+03	1.5981E+04	2.4285E+04
T	1.1971E+02	1.9827E+02	2.3118E+02
RHO	1.0482E+01	4.6763E+01	5.5558E+01
H	4.2067E+02	7.4944E+02	9.2799E+02
A	1.1571E+01	1.6281E+01	1.8643E+01
S	1.7499E+00	1.8523E+00	1.9264E+00
Z	1.5269E+00	1.7236E+00	1.8908E+00
GAME	7.3242E-01	7.7570E-01	7.9513E-01
U	3.2233E+01	7.2549E+00	7.4926E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.4508E-01	4.1981E-01	4.7112E-01
A	3.1942E-01	2.2055E-01	1.5014E-01
A+	3.2591E-01	3.0010E-01	2.8856E-01
A++	9.5859E-03	5.8889E-02	8.7979E-02
A+++	1.7318E-06	6.4343E-04	2.1944E-03
A++++	9.8745E-13	2.2883E-07	3.4089E-06
AV	1.8921E-21	2.2697E-12	2.3765E-10
AVI	6.6743E-33	4.1643E-19	5.2352E-16
AVII	6.0032E-48	7.4963E-28	2.2244E-23
AVIII	2.6771E-66	1.0234E-38	1.3249E-32

P1 = 2.00E+05 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7542E+03	1.4777E+04	2.2328E+04
T	1.1237E+02	1.8801E+02	2.1877E+02
RHO	1.0550E+01	4.7566E+01	5.6519E+01
H	3.8501E+02	6.8665E+02	8.4783E+02
A	1.1020E+01	1.5460E+01	1.7658E+01
S	1.7145E+00	1.8146E+00	1.8855E+00
Z	1.4798E+00	1.6524E+00	1.8057E+00
GAME	7.3029E-01	7.6938E-01	7.8927E-01
U	3.0850E+01	6.8431E+00	7.0776E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.2422E-01	3.9480E-01	4.4621E-01
A	3.5678E-01	2.5851E-01	1.8355E-01
A+	3.1377E-01	2.9892E-01	2.9559E-01
A++	5.2275E-03	4.7413E-02	7.3320E-02
A+++	3.8716E-07	3.5079E-04	1.3250E-03
A++++	6.3541E-14	6.7380E-08	1.1821E-06
AV	2.4899E-23	3.0230E-13	4.0231E-11
AVI	1.2566E-35	2.0378E-20	3.5905E-17
AVII	8.3882E-52	1.0316E-29	4.9398E-25
AVIII	1.8232E-71	3.1224E-41	7.7137E-35

P1 = 2.00E+05 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0851E+03	1.7265E+04	2.6360E+04
T	1.2694E+02	2.0876E+02	2.4378E+02
RHO	1.0431E+01	4.6001E+01	5.4696E+01
H	4.5792E+02	8.1516E+02	1.0121E+03
A	1.2090E+01	1.7129E+01	1.9641E+01
S	1.7847E+00	1.8902E+00	1.9670E+00
Z	1.5748E+00	1.7979E+00	1.9769E+00
GAME	7.3116E-01	7.8174E-01	8.0046E-01
U	3.3618E+01	7.6442E+00	7.9186E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.6498E-01	4.4378E-01	4.9416E-01
A	2.8592E-01	1.8601E-01	1.2171E-01
A+	3.3322E-01	2.9774E-01	2.7754E-01
A++	1.5872E-02	7.1361E-02	1.0315E-01
A+++	6.2177E-06	1.1072E-03	3.4267E-03
A++++	1.0481E-11	6.9574E-07	8.8525E-06
AV	8.0157E-20	1.4434E-11	1.1913E-09
AVI	1.5492E-30	6.6566E-18	6.0121E-15
AVII	1.3495E-44	3.8533E-26	7.1449E-22
AVIII	8.5442E-62	2.0995E-36	1.4363E-30

TABLE I.- Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2618E+03	1.8632E+04	2.8590E+04
T	1.3391E+02	2.1918E+02	2.5671E+02
RHO	1.0404E+01	4.5420E+01	5.3956E+01
H	4.9677E+02	8.8376E+02	1.1004E+03
A	1.2598E+01	1.7970E+01	2.0660E+01
S	1.8190E+00	1.9267E+00	2.0071E+00
Z	1.6234E+00	1.8716E+00	2.0641E+00
GAME	7.3001E-01	7.8723E-01	8.0550E-01
U	3.5010E+01	8.0451E+00	8.3583E+00

SPECIES	MOLE FRACTIONS		
E-	3.8401E-01	4.6571E-01	5.1554E-01
A	2.5591E-01	1.5629E-01	9.7729E-02
A+	3.3617E-01	2.9207E-01	2.6307E-01
A++	2.3888E-02	8.4156E-02	1.1854E-01
A+++	1.8121E-05	1.7742E-03	5.0999E-03
A++++	7.7435E-11	1.8612E-06	2.1130E-05
AV	1.9461E-18	7.4893E-11	5.2395E-09
AVI	1.6270E-28	7.9537E-17	5.7107E-14
AVII	9.9050E-42	1.3123E-24	1.7558E-20
AVIII	6.0781E-58	2.4696E-34	1.0933E-28

P1 = 2.00E+05 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6379E+03	2.1589E+04	3.3478E+04
T	1.4715E+02	2.4057E+02	2.8328E+02
RHO	1.0397E+01	4.4359E+01	5.2813E+01
H	5.7926E+02	1.0294E+03	1.2893E+03
A	1.3631E+01	1.9694E+01	2.2734E+01
S	1.8864E+00	1.9992E+00	2.0852E+00
Z	1.7242E+00	2.0231E+00	2.2377E+00
GAME	7.3231E-01	7.9691E-01	8.1533E-01
U	3.7808E+01	8.8810E+00	9.2660E+00

SPECIES	MOLE FRACTIONS		
E-	4.2002E-01	5.0570E-01	5.5311E-01
A	2.0383E-01	1.0761E-01	6.1780E-02
A+	3.3236E-01	2.7167E-01	2.2722E-01
A++	4.3687E-02	1.1103E-01	1.4786E-01
A+++	9.5918E-05	3.9754E-03	9.9283E-03
A++++	1.8601E-09	1.0474E-05	9.5576E-05
AV	3.2529E-16	1.3858E-09	7.0639E-08
AVI	2.9908E-25	6.5933E-15	3.0417E-12
AVII	4.3081E-37	7.0377E-22	5.0325E-18
AVIII	1.0730E-51	1.2165E-30	2.3028E-25

P1 = 2.00E+05 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4463E+03	2.0083E+04	3.0974E+04
T	1.4063E+02	2.2984E+02	2.6987E+02
RHO	1.0397E+01	4.4872E+01	5.3354E+01
H	5.3722E+02	9.5528E+02	1.1929E+03
A	1.3109E+01	1.8831E+01	2.1690E+01
S	1.8528E+00	1.9632E+00	2.0465E+00
Z	1.6731E+00	1.9473E+00	2.1511E+00
GAME	7.3037E-01	7.9228E-01	8.1041E-01
U	3.6410E+01	8.4544E+00	8.8076E+00

SPECIES	MOLE FRACTIONS		
E-	4.0232E-01	4.8646E-01	5.3513E-01
A	2.2874E-01	1.3007E-01	7.7965E-02
A+	3.3563E-01	2.8322E-01	2.4604E-01
A++	3.3278E-02	9.7536E-02	1.3357E-01
A+++	4.4535E-05	2.7178E-03	7.2535E-03
A++++	4.2558E-10	4.6030E-06	4.6516E-05
AV	2.9996E-17	3.4404E-10	2.0309E-08
AVI	8.9529E-27	7.9709E-16	4.5124E-13
AVII	2.9284E-39	3.4819E-23	3.3268E-19
AVIII	1.2845E-54	2.0851E-32	5.8402E-27

P1 = 2.00E+05 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8368E+03	2.3153E+04	3.6102E+04
T	1.5354E+02	2.5144E+02	2.9714E+02
RHO	1.0399E+01	4.3864E+01	5.2258E+01
H	6.2288E+02	1.1064E+03	1.3900E+03
A	1.4165E+01	2.0565E+01	2.3808E+01
S	1.9197E+00	2.0347E+00	2.1238E+00
Z	1.7768E+00	2.0992E+00	2.3250E+00
GAME	7.3548E-01	8.0126E-01	8.2043E-01
U	3.9209E+01	9.3118E+00	9.7437E+00

SPECIES	MOLE FRACTIONS		
E-	4.3719E-01	5.2364E-01	5.6989E-01
A	1.8084E-01	8.8449E-02	4.8433E-02
A+	3.2696E-01	2.5784E-01	2.0703E-01
A++	5.4834E-02	1.2446E-01	1.6125E-01
A+++	1.8679E-04	5.5988E-03	1.3204E-02
A++++	6.8267E-09	2.2269E-05	1.8681E-04
AV	2.6966E-15	5.0174E-09	2.2742E-07
AVI	6.8138E-24	4.6666E-14	1.8309E-11
AVII	3.6932E-35	1.1405E-20	6.5005E-17
AVIII	4.3857E-49	5.2576E-29	7.3037E-24

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0430E+03	2.4759E+04	3.8812E+04
T	1.5986E+02	2.6244E+02	3.1150E+02
RHO	1.0397E+01	4.3364E+01	5.1634E+01
H	6.6810E+02	1.1861E+03	1.4946E+03
A	1.4712E+01	2.1445E+01	2.4914E+01
S	1.9528E+00	2.0700E+00	2.1626E+00
Z	1.8309E+00	2.1755E+00	2.4131E+00
GAME	7.3947E-01	8.0548E-01	8.2575E-01
U	4.0609E+01	9.7470E+00	1.0225E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5381E-01	5.4034E-01	5.8560E-01
A	1.5955E-01	7.2247E-02	3.7505E-02
A+	3.1981E-01	2.4220E-01	1.8603E-01
A++	6.6495E-02	1.3754E-01	1.7338E-01
A+++	3.3647E-04	7.6273E-03	1.7138E-02
A++++	2.1887E-08	4.4591E-05	3.5014E-04
AV	1.8155E-14	1.6527E-08	6.8638E-07
AVI	1.1539E-22	2.8749E-13	1.0022E-10
AVII	2.0827E-33	1.5155E-19	7.3512E-16
AVIII	1.0204E-46	1.7448E-27	1.9266E-22

P1 = 2.00E+05 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4759E+03	2.8026E+04	4.4480E+04
T	1.7245E+02	2.8494E+02	3.4151E+02
RHO	1.0377E+01	4.2237E+01	5.0339E+01
H	7.6324E+02	1.3529E+03	1.7160E+03
A	1.5834E+01	2.3240E+01	2.7190E+01
S	2.0182E+00	2.1400E+00	2.2388E+00
Z	1.9424E+00	2.3287E+00	2.5873E+00
GAME	7.4852E-01	8.1396E-01	8.3670E-01
U	4.3396E+01	1.0685E+01	1.1236E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8517E-01	5.7058E-01	6.1350E-01
A	1.2204E-01	4.7167E-02	2.1873E-02
A+	3.0132E-01	2.0729E-01	1.4479E-01
A++	9.0557E-02	1.6175E-01	1.9188E-01
A+++	9.1363E-04	1.3060E-02	2.6861E-02
A++++	1.6513E-07	1.5471E-04	1.0837E-03
AV	5.1074E-13	1.4270E-07	5.1361E-06
AVI	1.6740E-20	7.7908E-12	2.2464E-09
AVII	2.5275E-30	1.6661E-17	6.2168E-14
AVIII	1.5134E-42	9.9813E-25	7.6725E-20

P1 = 2.00E+05 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2561E+03	2.6386E+04	4.1589E+04
T	1.6621E+02	2.7357E+02	3.2616E+02
RHO	1.0383E+01	4.2831E+01	5.1005E+01
H	7.1488E+02	1.2685E+03	1.6035E+03
A	1.5274E+01	2.2334E+01	2.6033E+01
S	1.9861E+00	2.1049E+00	2.2006E+00
Z	1.8868E+00	2.2518E+00	2.5000E+00
GAME	7.4395E-01	8.0968E-01	8.3116E-01
U	4.2006E+01	1.0185E+01	1.0730E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.7000E-01	5.5592E-01	5.9999E-01
A	1.3973E-01	5.8632E-02	2.8835E-02
A+	3.1110E-01	2.2525E-01	1.6526E-01
A++	7.8594E-02	1.5002E-01	1.8362E-01
A+++	5.7191E-04	1.0096E-02	2.1659E-02
A++++	6.3513E-08	8.4752E-05	6.2544E-04
AV	1.0489E-13	5.0125E-08	1.9205E-06
AVI	1.5714E-21	1.5681E-12	4.9035E-10
AVII	8.6289E-32	1.7000E-18	7.0731E-15
AVIII	1.5700E-44	4.5689E-26	4.0962E-21

P1 = 2.00E+05 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.7031E+03	2.9695E+04	4.7375E+04
T	1.7888E+02	2.9627E+02	3.5696E+02
RHO	1.0346E+01	4.1706E+01	4.9675E+01
H	8.1319E+02	1.4405E+03	1.8330E+03
A	1.6419E+01	2.4138E+01	2.8337E+01
S	2.0513E+00	2.1737E+00	2.2756E+00
Z	2.0009E+00	2.4032E+00	2.6718E+00
GAME	7.5316E-01	8.1829E-01	8.4194E-01
U	4.4788E+01	1.1133E+01	1.1761E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.0023E-01	5.8389E-01	6.2571E-01
A	1.0534E-01	3.7929E-02	1.6560E-02
A+	2.9004E-01	1.8943E-01	1.2583E-01
A++	1.0297E-01	1.7207E-01	1.9762E-01
A+++	1.4189E-03	1.6418E-02	3.2476E-02
A++++	4.1023E-07	2.6763E-04	1.7890E-03
AV	2.3233E-12	3.7284E-07	1.2709E-05
AVI	1.6209E-19	3.4091E-11	9.1616E-09
AVII	6.4586E-29	1.3613E-16	4.6321E-13
AVIII	1.2209E-40	1.7119E-23	1.1498E-18

TABLE I. - Continued

$p_1 = 200\ kN/m^2$

P1 = 2.00E+05 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9369E+03	3.1423E+04	5.0359E+04
T	1.8533E+02	3.0809E+02	3.7314E+02
RHO	1.0314E+01	4.1145E+01	4.8952E+01
H	8.6469E+02	1.5309E+03	1.9544E+03
A	1.7005E+01	2.5068E+01	2.9516E+01
S	2.0838E+00	2.2078E+00	2.3127E+00
Z	2.0596E+00	2.4789E+00	2.7570E+00
GAME	7.5758E-01	8.2282E-01	8.4684E-01
U	4.6174E+01	1.1543E+01	1.2313E+01

SPECIES	MOLE FRACTIONS		
E-	5.1448E-01	5.9659E-01	6.3728E-01
A	9.0446E-02	3.0149E-02	1.2372E-02
A+	2.7780E-01	1.7118E-01	1.0790E-01
A++	1.1516E-01	1.8129E-01	2.0089E-01
A+++	2.1157E-03	2.0338E-02	3.8641E-02
A++++	9.4916E-07	4.5250E-04	2.8808E-03
AV	9.4318E-12	9.4213E-07	3.0331E-05
AVI	1.3395E-18	1.4219E-10	3.5459E-08
AVII	1.3186E-27	1.0466E-15	3.2082E-12
AVIII	7.2647E-39	2.6771E-22	1.5589E-17

P1 = 2.00E+05 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4250E+03	3.4788E+04	5.6473E+04
T	1.9849E+02	3.3217E+02	4.0648E+02
RHO	1.0232E+01	3.9859E+01	4.7504E+01
H	9.7242E+02	1.7181E+03	2.2089E+03
A	1.8195E+01	2.6945E+01	3.1866E+01
S	2.1482E+00	2.2748E+00	2.3854E+00
Z	2.1788E+00	2.6275E+00	2.9246E+00
GAME	7.6549E-01	8.3189E-01	8.5418E-01
U	4.8933E+01	1.2548E+01	1.3437E+01

SPECIES	MOLE FRACTIONS		
E-	5.4103E-01	6.1941E-01	6.5807E-01
A	6.5312E-02	1.8705E-02	6.8300E-03
A+	2.5059E-01	1.3626E-01	7.7391E-02
A++	1.3877E-01	1.9489E-01	1.9941E-01
A+++	4.2935E-03	2.9552E-02	5.1457E-02
A++++	4.3438E-06	1.1712E-03	6.6907E-03
AV	1.2333E-10	5.1369E-06	1.4551E-04
AVI	6.4681E-17	1.9538E-09	4.1229E-07
AVII	3.3574E-25	4.3968E-14	1.0803E-10
AVIII	1.3257E-35	4.1402E-20	1.7756E-15

P1 = 2.00E+05 N/SQ-M, US1= 1.70E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1775E+03	3.3098E+04	5.3362E+04
T	1.9193E+02	3.2013E+02	3.8974E+02
RHO	1.0268E+01	4.0471E+01	4.8180E+01
H	9.1777E+02	1.6234E+03	2.0799E+03
A	1.7604E+01	2.6013E+01	3.0701E+01
S	2.1165E+00	2.2420E+00	2.3496E+00
Z	2.1198E+00	2.5546E+00	2.8418E+00
GAME	7.6173E-01	8.2741E-01	8.5101E-01
U	4.7555E+01	1.2020E+01	1.2879E+01

SPECIES	MOLE FRACTIONS		
E-	5.2825E-01	6.0856E-01	6.4811E-01
A	7.6944E-02	2.3740E-02	9.1784E-03
A+	2.6442E-01	1.5313E-01	9.1589E-02
A++	1.2731E-01	1.8904E-01	2.0147E-01
A+++	3.0700E-03	2.4786E-02	4.5102E-02
A++++	2.0987E-06	7.4325E-04	4.4855E-03
AV	3.5934E-11	2.2741E-06	6.8729E-05
AVI	1.0033E-17	5.5366E-10	1.2711E-07
AVII	2.3368E-26	7.2613E-15	1.9956E-11
AVIII	3.5818E-37	3.6551E-21	1.8262E-16

P1 = 2.00E+05 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6790E+03	3.6512E+04	5.9590E+04
T	2.0518E+02	3.4463E+02	4.2318E+02
RHO	1.0187E+01	3.9230E+01	4.6840E+01
H	1.0286E+03	1.8155E+03	2.3412E+03
A	1.8793E+01	2.7899E+01	3.3004E+01
S	2.1799E+00	2.3076E+00	2.4204E+00
Z	2.2386E+00	2.7006E+00	3.0063E+00
GAME	7.6897E-01	8.3628E-01	8.5618E-01
U	5.0306E+01	1.3036E+01	1.3984E+01

SPECIES	MOLE FRACTIONS		
E-	5.5329E-01	6.2971E-01	6.6736E-01
A	5.5014E-02	1.4602E-02	5.1052E-03
A+	2.3600E-01	1.2008E-01	6.5192E-02
A++	1.4983E-01	1.9900E-01	1.9501E-01
A+++	5.8677E-03	3.4779E-02	5.7468E-02
A++++	8.6489E-06	1.8079E-03	9.5750E-03
AV	3.9842E-10	1.1257E-05	2.8818E-04
AVI	3.8319E-16	6.5982E-09	1.2107E-06
AVII	4.2720E-24	2.5006E-13	5.0902E-10
AVIII	4.1728E-34	4.3129E-19	1.4326E-14

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 2.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.7899E+01	8.4637E+01	2.6471E+02
T	1.2892E+01	1.6278E+01	2.9325E+01
RHO	3.7155E+00	5.1997E+00	9.0254E+00
H	1.2892E+01	1.6278E+01	2.9365E+01
A	3.5905E+00	4.0345E+00	5.3927E+00
S	1.1481E+00	1.1489E+00	1.1686E+00
Z	1.0000E+00	1.0000E+00	1.0001E+00
GAME	1.0000E+00	9.9999E-01	9.9154E-01
U	4.5391E+00	3.2320E+00	3.1744E+00

SPECIES	MOLE FRACTIONS		
E-	2.0843E-10	2.9200E-08	1.4372E-04
A	1.0000E+00	1.0000E+00	9.9971E-01
A+	2.0843E-10	2.9200E-08	1.4372E-04
A++	7.2507E-36	3.9044E-29	8.0426E-16
A+++	3.7169E-77	8.3372E-62	3.6439E-35
A++++	0.	0.	7.2046E-65
AV	0.	0.	0.
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 2.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.9069E+01	1.2768E+02	3.8652E+02
T	1.8181E+01	2.3401E+01	4.0535E+01
RHO	3.7990E+00	5.4559E+00	9.5055E+00
H	1.8181E+01	2.3404E+01	4.1559E+01
A	4.2638E+00	4.8350E+00	6.0836E+00
S	1.1771E+00	1.1781E+00	1.1978E+00
Z	1.0000E+00	1.0000E+00	1.0032E+00
GAME	9.9996E-01	9.9898E-01	9.1017E-01
U	5.4900E+00	3.8040E+00	3.6423E+00

SPECIES	MOLE FRACTIONS		
E-	2.6485E-07	1.1243E-05	3.1452E-03
A	1.0000E+00	9.9998E-01	9.9371E-01
A+	2.6485E-07	1.1243E-05	3.1452E-03
A++	1.4801E-25	8.8474E-20	3.1581E-11
A+++	1.0878E-55	5.6775E-44	3.2477E-25
A++++	0.	1.1250E-80	1.4839E-46
AV	0.	0.	5.5420E-75
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 2.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.8003E+01	1.0486E+02	3.2401E+02
T	1.5416E+01	1.9658E+01	3.5048E+01
RHO	3.7624E+00	5.3343E+00	9.2366E+00
H	1.5416E+01	1.9658E+01	3.5312E+01
A	3.9264E+00	4.4335E+00	5.8146E+00
S	1.1631E+00	1.1640E+00	1.1839E+00
Z	1.0000E+00	1.0000E+00	1.0009E+00
GAME	1.0000E+00	9.9989E-01	9.6381E-01
U	5.0154E+00	3.5254E+00	3.4428E+00

SPECIES	MOLE FRACTIONS		
E-	1.1656E-08	8.3631E-07	8.8513E-04
A	1.0000E+00	1.0000E+00	9.9823E-01
A+	1.1656E-08	8.3631E-07	8.8513E-04
A++	3.4690E-30	1.1653E-23	4.1026E-13
A+++	1.3304E-66	2.9016E-52	2.7401E-29
A++++	0.	0.	5.8438E-54
AV	0.	0.	2.4808E-86
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 2.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.1080E+01	1.5209E+02	4.5155E+02
T	2.1183E+01	2.7420E+01	4.5378E+01
RHO	3.8276E+00	5.5464E+00	9.8768E+00
H	2.1184E+01	2.7443E+01	4.8052E+01
A	4.6017E+00	5.2219E+00	6.2343E+00
S	1.1901E+00	1.1912E+00	1.2108E+00
Z	1.0000E+00	1.0001E+00	1.0075E+00
GAME	9.9965E-01	9.9438E-01	8.5013E-01
U	5.9619E+00	4.0947E+00	3.7790E+00

SPECIES	MOLE FRACTIONS		
E-	3.1890E-06	8.4684E-05	7.4362E-03
A	9.9999E-01	9.9983E-01	9.8513E-01
A+	3.1890E-06	8.4684E-05	7.4362E-03
A++	9.3049E-22	9.2759E-17	6.1367E-10
A+++	3.1717E-48	2.4454E-37	2.0479E-22
A++++	0.	4.6592E-69	2.1528E-41
AV	0.	0.	1.8994E-66
AVI	0.	0.	0.
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.- Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 2.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.4100E+01	1.7972E+02	5.1840E+02
T	2.4426E+01	3.1769E+01	4.9415E+01
RHO	3.8524E+00	5.6545E+00	1.0352E+01
H	2.4432E+01	3.1891E+01	5.4680E+01
A	4.9374E+00	5.5782E+00	6.3395E+00
S	1.2023E+00	1.2035E+00	1.2231E+00
Z	1.0000E+00	1.0004E+00	1.0134E+00
GAME	9.9801E-01	9.7905E-01	8.0252E-01
U	6.4361E+00	4.3643E+00	3.8315E+00

SPECIES	MOLE FRACTIONS		
E-	2.3856E-05	4.2866E-04	1.3259E-02
A	9.9995E-01	9.9914E-01	9.7348E-01
A+	2.3856E-05	4.2866E-04	1.3259E-02
A++	9.1055E-19	2.4376E-14	4.6183E-09
A+++	5.6446E-42	4.4706E-32	1.6565E-20
A++++	2.4773E-76	3.2609E-59	6.5909E-38
AV	0.	0.	6.3781E-61
AVI	0.	0.	5.7888E-90
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 3.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2317E+02	2.5288E+02	6.6176E+02
T	3.1529E+01	4.1116E+01	5.5818E+01
RHO	3.9046E+00	6.1234E+00	1.1534E+01
H	3.1663E+01	4.2527E+01	6.8634E+01
A	5.5508E+00	6.0662E+00	6.5332E+00
S	1.2246E+00	1.2263E+00	1.2473E+00
Z	1.0005E+00	1.0044E+00	1.0279E+00
GAME	9.7678E-01	8.9107E-01	7.4394E-01
U	7.3899E+00	4.6926E+00	3.8094E+00

SPECIES	MOLE FRACTIONS		
E-	4.7670E-04	4.3966E-03	2.7118E-02
A	9.9905E-01	9.9121E-01	9.4576E-01
A+	4.7670E-04	4.3966E-03	2.7118E-02
A++	2.6752E-14	7.2930E-11	6.0252E-08
A+++	3.8915E-32	1.5004E-24	4.6309E-18
A++++	2.2442E-60	1.9219E-45	1.9554E-33
AV	0.	5.2710E-73	7.8196E-54
AVI	0.	0.	1.1491E-79
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 3.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0810E+02	2.1231E+02	5.8774E+02
T	2.7888E+01	3.6388E+01	5.2835E+01
RHO	3.8756E+00	5.8253E+00	1.0902E+01
H	2.7922E+01	3.6860E+01	6.1508E+01
A	5.2604E+00	5.8663E+00	6.4363E+00
S	1.2138E+00	1.2151E+00	1.2352E+00
Z	1.0001E+00	1.0016E+00	1.0204E+00
GAME	9.9213E-01	9.4424E-01	7.6840E-01
U	6.9102E+00	4.5755E+00	3.8355E+00

SPECIES	MOLE FRACTIONS		
E-	1.2364E-04	1.5774E-03	1.9977E-02
A	9.9975E-01	9.9685E-01	9.6005E-01
A+	1.2364E-04	1.5774E-03	1.9977E-02
A++	2.6359E-16	2.1283E-12	1.9818E-08
A+++	1.9068E-36	7.0163E-28	4.0125E-19
A++++	2.0625E-67	1.5068E-51	2.2455E-35
AV	0.	1.0904E-82	6.7415E-57
AVI	0.	0.	4.4282E-84
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 3.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3947E+02	3.0491E+02	7.4415E+02
T	3.5254E+01	4.5720E+01	5.8529E+01
RHO	3.9504E+00	6.6050E+00	1.2276E+01
H	3.5672E+01	4.9037E+01	7.6185E+01
A	5.7836E+00	6.2081E+00	6.6322E+00
S	1.2350E+00	1.2373E+00	1.2596E+00
Z	1.0014E+00	1.0097E+00	1.0357E+00
GAME	9.4747E-01	8.3490E-01	7.2563E-01
U	7.8832E+00	4.6957E+00	3.7672E+00

SPECIES	MOLE FRACTIONS		
E-	1.4291E-03	9.5835E-03	3.4463E-02
A	9.9714E-01	9.8083E-01	9.3107E-01
A+	1.4291E-03	9.5835E-03	3.4462E-02
A++	1.1565E-12	1.1063E-09	1.4798E-07
A+++	1.4609E-28	5.6220E-22	3.4028E-17
A++++	6.4665E-53	1.0083E-40	7.6613E-32
AV	5.8798E-85	1.6637E-65	2.7858E-51
AVI	0.	0.	7.1182E-76
AVII	0.	0.	0.
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 3.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5722E+02	3.7062E+02	8.4011E+02
T	3.8921E+01	4.9912E+01	6.1085E+01
RHO	4.0255E+00	7.3006E+00	1.3177E+01
H	3.9969E+01	5.6394E+01	8.4308E+01
A	5.9499E+00	6.3324E+00	6.7341E+00
S	1.2449E+00	1.2482E+00	1.2721E+00
Z	1.0034E+00	1.0171E+00	1.0437E+00
GAME	9.0644E-01	7.8990E-01	7.1129E-01
U	8.3997E+00	4.6130E+00	3.7181E+00

SPECIES	MOLE FRACTIONS		
E-	3.4318E-03	1.6815E-02	4.1882E-02
A	9.9314E-01	9.6637E-01	9.1624E-01
A+	3.4318E-03	1.6815E-02	4.1882E-02
A++	2.3351E-11	8.2307E-09	3.1612E-07
A+++	9.8045E-26	4.6033E-20	1.8607E-16
A++++	1.0035E-47	3.2652E-37	1.7409E-30
AV	1.0875E-76	6.1724E-60	4.0114E-49
AVI	0.	1.0961E-88	1.0022E-72
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 4.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9775E+02	5.4597E+02	1.0925E+03
T	4.5567E+01	5.7081E+01	6.6004E+01
RHO	4.2896E+00	9.2368E+00	1.5616E+01
H	4.9483E+01	7.3231E+01	1.0270E+02
A	6.1647E+00	6.5833E+00	6.9478E+00
S	1.2644E+00	1.2709E+00	1.2983E+00
Z	1.0117E+00	1.0355E+00	1.0599E+00
GAME	8.2438E-01	7.3322E-01	6.9002E-01
U	9.5212E+00	4.4056E+00	3.6226E+00

SPECIES	MOLE FRACTIONS		
E-	1.1565E-02	3.4295E-02	5.6502E-02
A	9.7687E-01	9.3141E-01	8.8700E-01
A+	1.1565E-02	3.4295E-02	5.6500E-02
A++	1.5619E-09	1.1857E-07	1.1052E-06
A+++	8.8887E-22	1.7459E-17	3.2108E-15
A++++	1.6260E-40	1.8544E-32	3.3845E-28
AV	2.0534E-65	2.3665E-52	1.8343E-45
AVI	0.	1.4234E-77	2.3346E-67
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 3.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7662E+02	4.4961E+02	9.5501E+02
T	4.2387E+01	5.3646E+01	6.3565E+01
RHO	4.1384E+00	8.1695E+00	1.4284E+01
H	4.4571E+01	6.4433E+01	9.3132E+01
A	6.0680E+00	6.4559E+00	6.8394E+00
S	1.2547E+00	1.2592E+00	1.2850E+00
Z	1.0069E+00	1.0259E+00	1.0518E+00
GAME	8.6276E-01	7.5731E-01	6.9964E-01
U	8.9458E+00	4.5214E+00	3.6695E+00

SPECIES	MOLE FRACTIONS		
E-	6.8070E-03	2.5236E-02	4.9274E-02
A	9.8639E-01	9.4953E-01	9.0145E-01
A+	6.8070E-03	2.5236E-02	4.9272E-02
A++	2.4718E-10	3.6667E-08	6.1328E-07
A+++	1.6100E-23	1.2619E-18	8.3390E-16
A++++	1.0297E-43	1.4575E-34	2.7806E-29
AV	1.2925E-70	1.0614E-55	3.3609E-47
AVI	0.	1.9892E-82	6.6231E-70
AVII	0.	0.	0.
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 4.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2060E+02	6.5883E+02	1.2545E+03
T	4.8447E+01	6.0196E+01	6.8417E+01
RHO	4.4739E+00	1.0472E+01	1.7172E+01
H	5.4696E+01	8.2636E+01	1.1299E+02
A	6.2563E+00	6.7090E+00	7.0588E+00
S	1.2741E+00	1.2830E+00	1.3122E+00
Z	1.0178E+00	1.0452E+00	1.0678E+00
GAME	7.9383E-01	7.1542E-01	6.8205E-01
U	1.0121E+01	4.3134E+00	3.5794E+00

SPECIES	MOLE FRACTIONS		
E-	1.7462E-02	4.3204E-02	6.3466E-02
A	9.6508E-01	9.1359E-01	8.7307E-01
A+	1.7462E-02	4.3204E-02	6.3462E-02
A++	6.6731E-09	2.9923E-07	1.8783E-06
A+++	2.1317E-20	1.4232E-16	1.0959E-14
A++++	5.7466E-38	9.1326E-31	3.3212E-27
AV	3.0227E-61	1.2499E-49	7.1382E-44
AVI	1.1981E-90	1.5976E-73	5.0280E-65
AVII	0.	0.	3.4862E-93
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 4.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4508E+02	7.9248E+02	1.4420E+03
T	5.1054E+01	6.3120E+01	7.0818E+01
RHO	4.6842E+00	1.1905E+01	1.8934E+01
H	6.0199E+01	9.2729E+01	1.2397E+02
A	6.3483E+00	6.8341E+00	7.1725E+00
S	1.2840E+00	1.2956E+00	1.3266E+00
Z	1.0248E+00	1.0546E+00	1.0754E+00
GAME	7.7029E-01	7.0162E-01	6.7550E-01
U	1.0738E+01	4.2076E+00	3.5403E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.4177E-02	5.1789E-02	7.0106E-02
A	9.5165E-01	8.9642E-01	8.5979E-01
A+	2.4177E-02	5.1787E-02	7.0100E-02
A++	2.1377E-08	6.4394E-07	3.0457E-06
A+++	2.7237E-19	8.2426E-16	3.3940E-14
A++++	5.9430E-36	2.3879E-29	2.7373E-26
AV	4.2817E-58	2.2974E-47	2.1172E-42
AVI	2.7926E-86	3.1168E-70	7.3791E-63
AVII	0.	0.	3.8463E-91
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 4.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.9863E+02	1.1185E+03	1.8962E+03
T	5.5627E+01	6.8501E+01	7.5636E+01
RHO	5.1592E+00	1.5228E+01	2.3003E+01
H	7.2033E+01	1.1456E+02	1.4787E+02
A	6.5345E+00	7.0787E+00	7.4097E+00
S	1.3046E+00	1.3228E+00	1.3571E+00
Z	1.0405E+00	1.0722E+00	1.0898E+00
GAME	7.3770E-01	6.8222E-01	6.6607E-01
U	1.2002E+01	4.0588E+00	3.4766E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.8966E-02	6.7347E-02	8.2410E-02
A	9.2207E-01	8.6531E-01	8.3519E-01
A+	3.8965E-02	6.7343E-02	8.2396E-02
A++	1.2386E-07	2.1546E-06	7.2336E-06
A+++	1.3185E-17	1.3722E-14	2.6303E-13
A++++	7.3791E-33	4.5981E-27	1.2596E-24
AV	3.7259E-53	1.1082E-43	9.9925E-40
AVI	6.1553E-79	8.9320E-65	6.3164E-59
AVII	0.	7.4806E-93	2.3209E-84
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 4.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.7111E+02	9.4476E+02	1.6557E+03
T	5.3434E+01	6.5866E+01	7.3218E+01
RHO	4.9144E+00	1.3485E+01	2.0885E+01
H	6.5980E+01	1.0336E+02	1.3561E+02
A	6.4412E+00	6.9569E+00	7.2891E+00
S	1.2942E+00	1.3089E+00	1.3415E+00
Z	1.0324E+00	1.0636E+00	1.0827E+00
GAME	7.5207E-01	6.9083E-01	6.7021E-01
U	1.1366E+01	4.1303E+00	3.5061E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1418E-02	5.9837E-02	7.6413E-02
A	9.3716E-01	8.8033E-01	8.4718E-01
A+	3.1418E-02	5.9834E-02	7.6403E-02
A++	5.5573E-08	1.2284E-06	4.7600E-06
A+++	2.2359E-18	3.6841E-15	9.7309E-14
A++++	2.8362E-34	3.9261E-28	1.9600E-25
AV	2.0690E-55	2.1136E-45	5.0113E-41
AVI	3.0386E-82	2.6286E-67	7.7247E-61
AVII	0.	0.	3.9610E-87
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 5.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2757E+02	1.3163E+03	2.1642E+03
T	5.7670E+01	7.1074E+01	7.8096E+01
RHO	5.4151E+00	1.7143E+01	2.5269E+01
H	7.8349E+01	1.2636E+02	1.6073E+02
A	6.6275E+00	7.2010E+00	7.5355E+00
S	1.3153E+00	1.3373E+00	1.3732E+00
Z	1.0489E+00	1.0803E+00	1.0967E+00
GAME	7.2611E-01	6.7534E-01	6.6302E-01
U	1.2643E+01	3.9778E+00	3.4531E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6664E-02	7.4344E-02	8.8153E-02
A	9.0667E-01	8.5132E-01	8.2370E-01
A+	4.6663E-02	7.4337E-02	8.8132E-02
A++	2.4605E-07	3.5580E-06	1.0776E-05
A+++	6.0813E-17	4.4883E-14	6.8193E-13
A++++	1.2393E-31	4.2430E-26	7.4946E-24
AV	3.5190E-51	3.9767E-42	1.7646E-38
AVI	6.0296E-76	1.7450E-62	4.3512E-57
AVII	0.	0.	1.0841E-81
AVIII	0.	0.	0.

TABLE I.-Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 5.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.5790E+02	1.5349E+03	2.4607E+03
T	5.9592E+01	7.3592E+01	8.0623E+01
RHO	5.6791E+00	1.9170E+01	2.7660E+01
H	8.4926E+01	1.3862E+02	1.7419E+02
A	6.7200E+00	7.3241E+00	7.6685E+00
S	1.3263E+00	1.3524E+00	1.3898E+00
Z	1.0575E+00	1.0880E+00	1.1034E+00
GAME	7.1656E-01	6.6997E-01	6.6104E-01
U	1.3286E+01	3.9257E+00	3.4361E+00

SPECIES	MOLE FRACTIONS		
E-	5.4409E-02	8.0871E-02	9.3707E-02
A	8.9118E-01	8.3826E-01	8.1260E-01
A+	5.4408E-02	8.0860E-02	9.3675E-02
A++	4.4762E-07	5.6062E-06	1.5846E-05
A+++	2.3118E-16	1.3236E-13	1.7202E-12
A++++	1.4259E-30	3.2256E-25	4.2232E-23
AV	1.6453E-49	1.0424E-40	2.8308E-37
AVI	1.4241E-73	2.1320E-60	2.5471E-55
AVII	0.	1.6088E-86	3.7555E-79
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 5.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.2259E+02	2.0458E+03	3.1398E+03
T	6.3168E+01	7.8641E+01	8.5998E+01
RHO	6.2231E+00	2.3599E+01	3.2693E+01
H	9.8850E+01	1.6474E+02	2.0272E+02
A	6.9030E+00	7.5810E+00	7.9643E+00
S	1.3491E+00	1.3843E+00	1.4243E+00
Z	1.0750E+00	1.1024E+00	1.1167E+00
GAME	7.0171E-01	6.6296E-01	6.6047E-01
U	1.4573E+01	3.8329E+00	3.4054E+00

SPECIES	MOLE FRACTIONS		
E-	6.9790E-02	9.2850E-02	1.0454E-01
A	8.6042E-01	8.1431E-01	7.9095E-01
A+	6.9788E-02	9.2825E-02	1.0448E-01
A++	1.2259E-06	1.2769E-05	3.3728E-05
A+++	2.2339E-15	9.5342E-13	1.0613E-11
A++++	9.3606E-29	1.3103E-23	1.2574E-21
AV	1.3490E-46	4.0661E-38	6.5561E-35
AVI	3.0209E-69	1.3926E-56	7.5691E-52
AVII	0.	5.3281E-81	3.8776E-74
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 5.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.8958E+02	1.7774E+03	2.7866E+03
T	6.1418E+01	7.6102E+01	8.3222E+01
RHO	5.9490E+00	2.1323E+01	3.0168E+01
H	9.1760E+01	1.5141E+02	1.8826E+02
A	6.8118E+00	7.4501E+00	7.8088E+00
S	1.3376E+00	1.3681E+00	1.4066E+00
Z	1.0662E+00	1.0953E+00	1.1099E+00
GAME	7.0854E-01	6.6588E-01	6.6015E-01
U	1.3929E+01	3.8804E+00	3.4272E+00

SPECIES	MOLE FRACTIONS		
E-	6.2132E-02	8.7013E-02	9.9032E-02
A	8.7574E-01	8.2598E-01	8.0196E-01
A+	6.2130E-02	8.6996E-02	9.8985E-02
A++	7.6088E-07	8.5541E-06	2.3026E-05
A+++	7.6163E-16	3.6383E-13	4.2342E-12
A++++	1.2881E-29	2.1521E-24	2.2731E-22
AV	5.6717E-48	2.2212E-39	4.2324E-36
AVI	2.8797E-71	1.9368E-58	1.3618E-53
AVII	0.	1.1128E-83	1.1922E-76
AVIII	0.	0.	0.

P1 = 5.00E+05 N/SQ-M, US1= 5.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.5690E+02	2.3378E+03	3.5282E+03
T	6.4857E+01	8.1229E+01	8.8940E+01
RHO	6.4998E+00	2.5946E+01	3.5306E+01
H	1.0619E+02	1.7854E+02	2.1804E+02
A	6.9938E+00	7.7184E+00	8.1342E+00
S	1.3610E+00	1.4010E+00	1.4422E+00
Z	1.0838E+00	1.1092E+00	1.1236E+00
GAME	6.9584E-01	6.6119E-01	6.6211E-01
U	1.5215E+01	3.8038E+00	3.4185E+00

SPECIES	MOLE FRACTIONS		
E-	7.7361E-02	9.8476E-02	1.1000E-01
A	8.4528E-01	8.0307E-01	7.8005E-01
A+	7.7357E-02	9.8438E-02	1.0990E-01
A++	1.8925E-06	1.8781E-05	4.9424E-05
A+++	5.9696E-15	2.4168E-12	2.6684E-11
A++++	5.7107E-28	7.4774E-23	6.9720E-21
AV	2.3970E-45	6.6919E-37	1.0140E-33
AVI	2.0066E-67	8.5557E-55	4.1582E-50
AVII	0.	2.0374E-78	1.2099E-71
AVIII	0.	0.	0.

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 6.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.9251E+02	2.6518E+03	3.9494E+03
T	6.6499E+01	8.3894E+01	9.2138E+01
RHO	6.7779E+00	2.8322E+01	3.7904E+01
H	1.1379E+02	1.9278E+02	2.3399E+02
A	7.0847E+00	7.8645E+00	8.3262E+00
S	1.3732E+00	1.4181E+00	1.4606E+00
Z	1.0927E+00	1.1161E+00	1.1308E+00
GAME	6.9075E-01	6.6058E-01	6.6534E-01
U	1.5857E+01	3.8020E+00	3.4421E+00

SPECIES	MOLE FRACTIONS		
E-	8.4830E-02	1.0399E-01	1.1571E-01
A	8.3034E-01	7.9204E-01	7.6866E-01
A+	8.4824E-02	1.0394E-01	1.1556E-01
A++	2.8226E-06	2.7392E-05	7.3402E-05
A+++	1.4807E-14	6.0108E-12	6.9249E-11
A++++	3.0359E-27	4.1016E-22	4.0807E-20
AV	3.4036E-44	1.0296E-35	1.7059E-32
AVI	9.3945E-66	4.7489E-53	2.5963E-48
AVII	1.3529E-94	6.7248E-76	4.6535E-69
AVIII	0.	0.	6.0443E-94

P1 = 5.00E+05 N/SQ-M, US1= 6.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.6791E+02	3.3649E+03	4.9040E+03
T	6.9696E+01	8.9685E+01	9.9582E+01
RHO	7.3379E+00	3.3202E+01	4.2929E+01
H	1.2977E+02	2.2293E+02	2.6814E+02
A	7.2678E+00	8.1984E+00	8.8002E+00
S	1.3984E+00	1.4534E+00	1.4984E+00
Z	1.1104E+00	1.1300E+00	1.1471E+00
GAME	6.8249E-01	6.6322E-01	6.7793E-01
U	1.7146E+01	3.8079E+00	3.5321E+00

SPECIES	MOLE FRACTIONS		
E-	9.9462E-02	1.1505E-01	1.2826E-01
A	8.0108E-01	7.6995E-01	7.4364E-01
A+	9.9450E-02	1.1494E-01	1.2792E-01
A++	5.8091E-06	5.8521E-05	1.7095E-04
A+++	7.7102E-14	3.7642E-11	5.3070E-10
A++++	6.3482E-26	1.2463E-20	1.7428E-18
AV	4.3281E-42	2.4383E-33	6.7051E-30
AVI	1.1171E-62	1.4361E-49	1.5814E-44
AVII	0.	6.8687E-71	1.2062E-63
AVIII	0.	8.6146E-97	1.2350E-86

P1 = 5.00E+05 N/SQ-M, US1= 6.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	5.2938E+02	2.9926E+03	4.4048E+03
T	6.8107E+01	8.6690E+01	9.5650E+01
RHO	7.0562E+00	3.0741E+01	4.0444E+01
H	1.2164E+02	2.0754E+02	2.5062E+02
A	7.1758E+00	8.0228E+00	8.5453E+00
S	1.3857E+00	1.4355E+00	1.4794E+00
Z	1.1016E+00	1.1229E+00	1.1386E+00
GAME	6.8634E-01	6.6120E-01	6.7048E-01
U	1.6496E+01	3.7999E+00	3.4793E+00

SPECIES	MOLE FRACTIONS		
E-	9.2195E-02	1.0947E-01	1.2175E-01
A	8.1561E-01	7.8109E-01	7.5661E-01
A+	9.2187E-02	1.0939E-01	1.2153E-01
A++	4.0942E-06	3.9901E-05	1.1078E-04
A+++	3.4592E-14	1.4916E-11	1.8664E-10
A++++	1.4487E-26	2.2312E-21	2.5438E-19
AV	4.0997E-43	1.5554E-34	3.1409E-31
AVI	3.5414E-64	2.5496E-51	1.8159E-46
AVII	2.3872E-92	2.0881E-73	2.0074E-66
AVIII	0.	0.	1.1838E-90

P1 = 5.00E+05 N/SQ-M, US1= 6.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.0724E+02	3.7593E+03	5.4314E+03
T	7.1264E+01	9.2873E+01	1.0400E+02
RHO	7.6125E+00	3.5589E+01	4.5145E+01
H	1.3812E+02	2.3866E+02	2.8622E+02
A	7.3606E+00	8.3925E+00	9.0980E+00
S	1.4115E+00	1.4713E+00	1.5177E+00
Z	1.1194E+00	1.1374E+00	1.1568E+00
GAME	6.7919E-01	6.6680E-01	6.8801E-01
U	1.7780E+01	3.8078E+00	3.6045E+00

SPECIES	MOLE FRACTIONS		
E-	1.0663E-01	1.2077E-01	1.3555E-01
A	7.8676E-01	7.5855E-01	7.2917E-01
A+	1.0661E-01	1.2059E-01	1.3501E-01
A++	8.0840E-06	8.6256E-05	2.7040E-04
A+++	1.6473E-13	9.6047E-11	1.5979E-09
A++++	2.5720E-25	7.0647E-20	1.3165E-17
AV	4.0325E-41	3.8876E-32	1.6549E-28
AVI	2.9383E-61	8.2314E-48	1.6766E-42
AVII	4.0034E-88	2.2863E-68	9.2492E-61
AVIII	0.	4.9137E-93	9.3427E-83

TABLE I.- Continued

p_1 = 500 kN/m^2

P1 = 5.00E+05 N/SQ-M, US1= 6.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.4782E+02	4.1730E+03	5.9976E+03
T	7.2825E+01	9.6317E+01	1.0899E+02
RHO	7.8841E+00	3.7832E+01	4.7122E+01
H	1.4672E+02	2.5481E+02	3.0514E+02
A	7.4550E+00	8.6107E+00	9.4433E+00
S	1.4247E+00	1.4894E+00	1.5370E+00
Z	1.1283E+00	1.1452E+00	1.1678E+00
GAME	6.7638E-01	6.7218E-01	7.0064E-01
U	1.8412E+01	3.8421E+00	3.6992E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.1371E-01	1.2680E-01	1.4367E-01
A	7.7260E-01	7.4653E-01	7.1309E-01
A+	1.1368E-01	1.2654E-01	1.4280E-01
A++	1.1082E-05	1.2856E-04	4.3669E-04
A+++	3.4073E-13	2.5122E-10	5.0620E-09
A++++	9.8139E-25	4.1637E-19	1.0879E-16
AV	3.4117E-40	6.5437E-31	4.6985E-27
AVI	6.7006E-60	5.0563E-46	2.1824E-40
AVII	3.6795E-86	8.2389E-66	9.5658E-58
AVIII	0.	1.3771E-89	1.1004E-78

P1 = 5.00E+05 N/SQ-M, US1= 7.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.3267E+02	5.0639E+03	7.2448E+03
T	7.5965E+01	1.0424E+02	1.2081E+02
RHO	8.4136E+00	4.1765E+01	5.0185E+01
H	1.6469E+02	2.8842E+02	3.4532E+02
A	7.6505E+00	9.1413E+00	1.0262E+01
S	1.4520E+00	1.5256E+00	1.5753E+00
Z	1.1463E+00	1.1632E+00	1.1949E+00
GAME	6.7212E-01	6.8919E-01	7.2946E-01
U	1.9670E+01	3.9680E+00	3.9385E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.2766E-01	1.4030E-01	1.6314E-01
A	7.4470E-01	7.1970E-01	6.7489E-01
A+	1.2762E-01	1.3970E-01	1.6080E-01
A++	2.0130E-05	2.9834E-04	1.1693E-03
A+++	1.3557E-12	1.9029E-09	5.4685E-08
A++++	1.2475E-23	1.7168E-17	8.4806E-15
AV	1.9609E-38	2.3980E-28	4.6376E-24
AVI	2.5143E-57	2.7457E-42	4.9133E-36
AVII	1.9092E-82	1.7743E-60	1.4574E-51
AVIII	0.	2.1793E-82	2.2866E-70

P1 = 5.00E+05 N/SQ-M, US1= 7.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	6.8964E+02	4.6085E+03	6.6054E+03
T	7.4390E+01	1.0009E+02	1.1465E+02
RHO	8.1515E+00	3.9909E+01	4.8802E+01
H	1.5558E+02	2.7140E+02	3.2500E+02
A	7.5514E+00	8.8587E+00	9.8386E+00
S	1.4382E+00	1.5075E+00	1.5564E+00
Z	1.1373E+00	1.1538E+00	1.1805E+00
GAME	6.7403E-01	6.7960E-01	7.1517E-01
U	1.9043E+01	3.8948E+00	3.8237E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.2071E-01	1.3327E-01	1.5293E-01
A	7.5859E-01	7.3366E-01	6.9486E-01
A+	1.2068E-01	1.3288E-01	1.5149E-01
A++	1.5008E-05	1.9438E-04	7.1811E-04
A+++	6.8669E-13	6.7942E-10	1.6787E-08
A++++	3.5672E-24	2.5955E-18	9.7531E-16
AV	2.6689E-39	1.1980E-29	1.5112E-25
AVI	1.3600E-58	3.4981E-44	3.3843E-38
AVII	2.8408E-84	3.5040E-63	1.2409E-54
AVIII	0.	4.8584E-86	1.6959E-74

P1 = 5.00E+05 N/SQ-M, US1= 7.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	7.7690E+02	5.5368E+03	7.9385E+03
T	7.7559E+01	1.0881E+02	1.2767E+02
RHO	8.6691E+00	4.3353E+01	5.1302E+01
H	1.7405E+02	3.0586E+02	3.6719E+02
A	7.7527E+00	9.4604E+00	1.0716E+01
S	1.4659E+00	1.5435E+00	1.5947E+00
Z	1.1555E+00	1.1737E+00	1.2120E+00
GAME	6.7067E-01	7.0077E-01	7.4206E-01
U	2.0296E+01	4.0640E+00	4.1259E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.3456E-01	1.4803E-01	1.7492E-01
A	7.3090E-01	7.0441E-01	6.5206E-01
A+	1.3451E-01	1.4710E-01	1.7113E-01
A++	2.6799E-05	4.6353E-04	1.8952E-03
A+++	2.6346E-12	5.4884E-09	1.7756E-07
A++++	4.2343E-23	1.1931E-16	7.3725E-14
AV	1.3725E-37	5.1624E-27	1.4289E-22
AVI	4.3264E-56	2.3788E-40	7.2102E-34
AVII	1.1569E-80	1.0153E-57	1.7280E-48
AVIII	0.	1.1239E-78	3.1156E-66

TABLE I.- Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 7.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.2233E+02	6.0247E+03	8.6638E+03
T	7.9180E+01	1.1382E+02	1.3475E+02
RHO	8.9167E+00	4.4645E+01	5.2235E+01
H	1.8367E+02	3.2370E+02	3.8957E+02
A	7.8588E+00	9.8131E+00	1.1162E+01
S	1.4800E+00	1.5612E+00	1.6135E+00
Z	1.1647E+00	1.1856E+00	1.2308E+00
GAME	6.6967E-01	7.1359E-01	7.5122E-01
U	2.0919E+01	4.1843E+00	4.3049E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4144E-01	1.5656E-01	1.8755E-01
A	7.1716E-01	6.8761E-01	6.2784E-01
A+	1.4137E-01	1.5511E-01	1.8168E-01
A++	3.5480E-05	7.2419E-04	2.9316E-03
A+++	5.0615E-12	1.6064E-08	5.2048E-07
A++++	1.4060E-22	8.4989E-16	5.3685E-13
AV	9.2715E-37	1.1524E-25	3.3544E-21
AVI	7.0732E-55	2.1668E-38	7.1941E-32
AVII	6.5403E-79	6.1776E-55	1.1856E-45
AVIII	0.	6.2504E-75	2.0435E-62

P1 = 5.00E+05 N/SQ-M, US1= 8.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.1670E+02	7.0400E+03	1.0213E+04
T	8.2540E+01	1.2494E+02	1.4905E+02
RHO	9.3826E+00	4.6427E+01	5.3809E+01
H	2.0365E+02	3.6058E+02	4.3633E+02
A	8.0855E+00	1.0575E+01	1.2027E+01
S	1.5088E+00	1.5956E+00	1.6498E+00
Z	1.1837E+00	1.2137E+00	1.2734E+00
GAME	6.6914E-01	7.3743E-01	7.6212E-01
U	2.2156E+01	4.4828E+00	4.6750E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.5519E-01	1.7606E-01	2.1471E-01
A	6.8969E-01	6.4959E-01	5.7659E-01
A+	1.5506E-01	1.7263E-01	2.0269E-01
A++	6.1568E-05	1.7130E-03	6.0072E-03
A+++	1.8321E-11	1.2925E-07	3.1561E-06
A++++	1.4919E-21	3.8643E-14	1.5539E-11
AV	3.9714E-35	4.8411E-23	7.2914E-19
AVI	1.7216E-52	1.4091E-34	1.9097E-28
AVII	1.8105E-75	1.5923E-49	8.6313E-41
AVIII	0.	1.1831E-67	7.2766E-56

P1 = 5.00E+05 N/SQ-M, US1= 7.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	8.6893E+02	6.5267E+03	9.4230E+03
T	8.0837E+01	1.1923E+02	1.4190E+02
RHO	9.1550E+00	4.5660E+01	5.3073E+01
H	1.9353E+02	3.4194E+02	4.1263E+02
A	7.9694E+00	1.0189E+01	1.1597E+01
S	1.4944E+00	1.5786E+00	1.6318E+00
Z	1.1741E+00	1.1989E+00	1.2513E+00
GAME	6.6915E-01	7.2629E-01	7.5751E-01
U	2.1539E+01	4.3239E+00	4.4890E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.4831E-01	1.6591E-01	2.0081E-01
A	7.0343E-01	6.6931E-01	6.0267E-01
A+	1.4821E-01	1.6366E-01	1.9221E-01
A++	4.6791E-05	1.1244E-03	4.2991E-03
A+++	9.6497E-12	4.6488E-08	1.3542E-06
A++++	4.6000E-22	5.9349E-15	3.1784E-12
AV	6.1150E-36	2.4936E-24	5.7300E-20
AVI	1.1176E-53	1.8884E-36	4.5696E-30
AVII	3.5258E-77	3.5121E-52	4.2981E-43
AVIII	0.	3.1733E-71	5.7189E-59

P1 = 5.00E+05 N/SQ-M, US1= 8.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	9.6602E+02	7.5735E+03	1.1044E+04
T	8.4301E+01	1.3090E+02	1.5614E+02
RHO	9.6017E+00	4.7041E+01	5.4533E+01
H	2.1403E+02	3.7979E+02	4.6088E+02
A	8.2081E+00	1.0961E+01	1.2455E+01
S	1.5234E+00	1.6124E+00	1.6675E+00
Z	1.1935E+00	1.2300E+00	1.2970E+00
GAME	6.6965E-01	7.4619E-01	7.6600E-01
U	2.2780E+01	4.6549E+00	4.8639E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	1.6209E-01	1.8697E-01	2.2896E-01
A	6.7589E-01	6.2860E-01	5.5011E-01
A+	1.6193E-01	1.8189E-01	2.1289E-01
A++	8.0966E-05	2.5384E-03	8.0260E-03
A+++	3.4776E-11	3.3861E-07	6.6310E-06
A++++	4.8268E-21	2.2719E-13	6.3399E-11
AV	2.5575E-34	8.0398E-22	7.0236E-18
AVI	2.5917E-51	8.4313E-33	5.3688E-27
AVII	8.7405E-74	5.2711E-47	9.9118E-39
AVIII	0.	2.8954E-64	4.3890E-53

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 8.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0158E+03	8.1030E+03	1.1879E+04
T	8.6122E+01	1.3684E+02	1.6302E+02
RHO	9.8011E+00	4.7471E+01	5.5146E+01
H	2.2464E+02	3.9915E+02	4.8570E+02
A	8.3379E+00	1.1333E+01	1.2876E+01
S	1.5382E+00	1.6287E+00	1.6848E+00
Z	1.2035E+00	1.2474E+00	1.3214E+00
GAME	6.7076E-01	7.5240E-01	7.6962E-01
U	2.3386E+01	4.8333E+00	5.0519E+00

SPECIES	MOLE FRACTIONS		
E-	1.6906E-01	1.9833E-01	2.4324E-01
A	6.6198E-01	6.0694E-01	5.2383E-01
A+	1.6885E-01	1.9112E-01	2.2263E-01
A++	1.0647E-04	3.6062E-03	1.0288E-02
A+++	6.6016E-11	8.0611E-07	1.2601E-05
A++++	1.5568E-20	1.1283E-12	2.1630E-10
AV	1.6275E-33	1.0277E-20	5.1172E-17
AVI	3.7764E-50	3.4681E-31	1.0100E-25
AVII	3.8603E-72	1.0242E-44	6.4446E-37
AVIII	0.	3.4621E-61	1.2341E-50

P1 = 5.00E+05 N/SQ-M, US1= 8.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1188E+03	9.1849E+03	1.3603E+04
T	9.0008E+01	1.4860E+02	1.7639E+02
RHO	1.0152E+01	4.8075E+01	5.6153E+01
H	2.4660E+02	4.3910E+02	5.3700E+02
A	8.6243E+00	1.2052E+01	1.3719E+01
S	1.5679E+00	1.6605E+00	1.7184E+00
Z	1.2244E+00	1.2856E+00	1.3734E+00
GAME	6.7493E-01	7.6028E-01	7.7695E-01
U	2.4587E+01	5.1971E+00	5.4233E+00

SPECIES	MOLE FRACTIONS		
E-	1.8325E-01	2.2218E-01	2.7187E-01
A	6.3369E-01	5.6214E-01	4.7184E-01
A+	1.8288E-01	2.0918E-01	2.4074E-01
A++	1.8521E-04	6.4959E-03	1.5513E-02
A+++	2.4212E-10	3.5272E-06	3.6735E-05
A++++	1.6708E-19	1.7703E-11	1.7183E-09
AV	6.9613E-32	8.3603E-19	1.4959E-15
AVI	8.8894E-48	2.1731E-28	1.5150E-23
AVII	9.4551E-69	9.5278E-41	8.0819E-34
AVIII	5.6479E-94	7.6576E-56	1.9133E-46

P1 = 5.00E+05 N/SQ-M, US1= 8.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.0669E+03	8.6445E+03	1.2739E+04
T	8.8022E+01	1.4278E+02	1.6978E+02
RHO	9.9865E+00	4.7822E+01	5.5702E+01
H	2.3550E+02	4.1898E+02	5.1115E+02
A	8.4763E+00	1.1697E+01	1.3298E+01
S	1.5530E+00	1.6448E+00	1.7017E+00
Z	1.2137E+00	1.2660E+00	1.3470E+00
GAME	6.7250E-01	7.5687E-01	7.7327E-01
U	2.3992E+01	5.0152E+00	5.2383E+00

SPECIES	MOLE FRACTIONS		
E-	1.7610E-01	2.1014E-01	2.5761E-01
A	6.4793E-01	5.8466E-01	4.9762E-01
A+	1.7582E-01	2.0027E-01	2.3195E-01
A++	1.4025E-04	4.9331E-03	1.2797E-02
A+++	1.2606E-10	1.7624E-06	2.2234E-05
A++++	5.0841E-20	4.8313E-12	6.4692E-10
AV	1.0651E-32	1.0460E-19	3.0375E-16
AVI	5.8825E-49	1.0324E-29	1.4161E-24
AVII	2.0359E-70	1.2632E-42	2.7661E-35
AVIII	0.	2.2669E-58	1.9874E-48

P1 = 5.00E+05 N/SQ-M, US1= 9.00E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.1718E+03	9.7324E+03	1.4482E+04
T	9.2097E+01	1.5435E+02	1.8291E+02
RHO	1.0300E+01	4.8273E+01	5.6523E+01
H	2.5796E+02	4.5969E+02	5.6348E+02
A	8.7835E+00	1.2405E+01	1.4143E+01
S	1.5829E+00	1.6761E+00	1.7350E+00
Z	1.2354E+00	1.3062E+00	1.4007E+00
GAME	6.7811E-01	7.6323E-01	7.8068E-01
U	2.5182E+01	5.3779E+00	5.6084E+00

SPECIES	MOLE FRACTIONS		
E-	1.9051E-01	2.3445E-01	2.8608E-01
A	6.1922E-01	5.3941E-01	4.4640E-01
A+	1.9002E-01	2.1785E-01	2.4901E-01
A++	2.4549E-04	8.2895E-03	1.8451E-02
A+++	4.6983E-10	6.5609E-06	5.7733E-05
A++++	5.5998E-19	5.7043E-11	4.1703E-09
AV	4.7236E-31	5.4781E-18	6.3923E-15
AVI	1.4477E-46	3.4455E-27	1.3200E-22
AVII	5.2060E-67	4.8233E-39	1.7650E-32
AVIII	1.3549E-91	1.5223E-53	1.2438E-44

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 9.20E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2259E+03	1.0281E+04	1.5362E+04
T	9.4301E+01	1.5987E+02	1.8932E+02
RHO	1.0427E+01	4.8457E+01	5.6791E+01
H	2.6956E+02	4.8068E+02	5.9046E+02
A	8.9550E+00	1.2748E+01	1.4566E+01
S	1.5979E+00	1.6910E+00	1.7514E+00
Z	1.2468E+00	1.3272E+00	1.4288E+00
GAME	6.8207E-01	7.6598E-01	7.8438E-01
U	2.5772E+01	5.5538E+00	5.7910E+00

SPECIES	MOLE FRACTIONS		
E-	1.9793E-01	2.4651E-01	3.0011E-01
A	6.0447E-01	5.1725E-01	4.2154E-01
A+	1.9727E-01	2.2599E-01	2.5666E-01
A++	3.2673E-04	1.0243E-02	2.1595E-02
A+++	9.2129E-10	1.1300E-05	8.6850E-05
A++++	1.9084E-18	1.6027E-10	9.3420E-09
AV	3.2731E-30	2.8990E-17	2.4053E-14
AVI	2.4022E-45	4.0175E-26	9.5538E-22
AVII	2.8474E-65	1.5810E-37	2.9580E-31
AVIII	2.9771E-89	1.6890E-51	5.6521E-43

P1 = 5.00E+05 N/SQ-M, US1= 9.60E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3378E+03	1.1364E+04	1.7136E+04
T	9.9109E+01	1.7090E+02	2.0196E+02
RHO	1.0619E+01	4.8420E+01	5.7047E+01
H	2.9354E+02	5.2396E+02	6.4646E+02
A	9.3391E+00	1.3457E+01	1.5420E+01
S	1.6279E+00	1.7219E+00	1.7839E+00
Z	1.2711E+00	1.3732E+00	1.4873E+00
GAME	6.9235E-01	7.7161E-01	7.9157E-01
U	2.6954E+01	5.9368E+00	6.1635E+00

SPECIES	MOLE FRACTIONS		
E-	2.1326E-01	2.7180E-01	3.2765E-01
A	5.7406E-01	4.7135E-01	3.7360E-01
A+	2.1209E-01	2.4195E-01	2.7001E-01
A++	5.8672E-04	1.4879E-02	2.8553E-02
A+++	3.6713E-09	2.9609E-05	1.7787E-04
A++++	2.3565E-17	1.0152E-09	3.9001E-08
AV	1.7211E-28	5.7589E-16	2.5401E-13
AVI	7.4828E-43	3.3345E-24	3.2600E-20
AVII	9.9466E-62	8.4231E-35	4.5044E-29
AVIII	1.7194E-84	8.1027E-48	5.0977E-40

P1 = 5.00E+05 N/SQ-M, US1= 9.40E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.2810E+03	1.0825E+04	1.6242E+04
T	9.6632E+01	1.6548E+02	1.9555E+02
RHO	1.0532E+01	4.8457E+01	5.7007E+01
H	2.8142E+02	5.0206E+02	6.1804E+02
A	9.1398E+00	1.3105E+01	1.4984E+01
S	1.6129E+00	1.7067E+00	1.7672E+00
Z	1.2587E+00	1.3500E+00	1.4570E+00
GAME	6.8683E-01	7.6878E-01	7.8797E-01
U	2.6358E+01	5.7303E+00	5.9778E+00

SPECIES	MOLE FRACTIONS		
E-	2.0551E-01	2.5927E-01	3.1366E-01
A	5.8942E-01	4.9399E-01	3.9782E-01
A+	2.0463E-01	2.3424E-01	2.6352E-01
A++	4.3680E-04	1.2486E-02	2.4880E-02
A+++	1.8275E-09	1.8815E-05	1.2517E-04
A++++	6.6318E-18	4.2437E-10	1.9331E-08
AV	2.3340E-29	1.3991E-16	7.9743E-14
AVI	4.1422E-44	4.1056E-25	5.7453E-21
AVII	1.6328E-63	4.2917E-36	3.8080E-30
AVIII	6.8954E-87	1.4522E-49	1.7986E-41

P1 = 5.00E+05 N/SQ-M, US1= 9.80E+03 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.3946E+03	1.1890E+04	1.7995E+04
T	1.0173E+02	1.7618E+02	2.0820E+02
RHO	1.0678E+01	4.8309E+01	5.6933E+01
H	3.0589E+02	5.4609E+02	6.7504E+02
A	9.5520E+00	1.3806E+01	1.5851E+01
S	1.6428E+00	1.7369E+00	1.8004E+00
Z	1.2841E+00	1.3970E+00	1.5180E+00
GAME	6.9851E-01	7.7446E-01	7.9495E-01
U	2.7531E+01	6.1103E+00	6.3476E+00

SPECIES	MOLE FRACTIONS		
E-	2.2122E-01	2.8419E-01	3.4126E-01
A	5.5835E-01	4.4915E-01	3.5040E-01
A+	2.1964E-01	2.4919E-01	2.7568E-01
A++	7.9041E-04	1.7430E-02	3.2421E-02
A+++	7.4353E-09	4.4598E-05	2.4504E-04
A++++	8.4830E-17	2.2428E-09	7.4166E-08
AV	1.2915E-27	2.0902E-15	7.3479E-13
AVI	1.3779E-41	2.2557E-23	1.6035E-19
AVII	6.1265E-60	1.2739E-33	4.3399E-28
AVIII	4.2180E-82	3.1762E-46	1.0930E-38

TABLE I. - Continued

p_1 = 500 kN/m^2

P1 = 5.00E+05 N/SQ-M, US1= 1.00E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.4528E+03	1.2402E+04	1.8834E+04
T	1.0449E+02	1.8135E+02	2.1431E+02
RHO	1.0715E+01	4.8110E+01	5.6734E+01
H	3.1848E+02	5.6856E+02	7.0409E+02
A	9.7777E+00	1.4155E+01	1.6277E+01
S	1.6576E+00	1.7519E+00	1.8167E+00
Z	1.2976E+00	1.4214E+00	1.5490E+00
GAME	7.0509E-01	7.7731E-01	7.9813E-01
U	2.8102E+01	6.2856E+00	6.5311E+00

SPECIES	MOLE FRACTIONS		
E-	2.2938E-01	2.9647E-01	3.5442E-01
A	5.4232E-01	4.2733E-01	3.2830E-01
A+	2.2724E-01	2.5599E-01	2.8048E-01
A++	1.0668E-03	2.0147E-02	3.6473E-02
A+++	1.5156E-08	6.4846E-05	3.2877E-04
A++++	3.0922E-16	4.6447E-09	1.3411E-07
AV	9.9150E-27	6.8468E-15	1.9600E-12
AVI	2.6483E-40	1.3138E-22	6.9902E-19
AVII	4.1184E-58	1.5559E-32	3.5168E-27
AVIII	1.2438E-79	9.3254E-45	1.8527E-37

P1 = 5.00E+05 N/SQ-M, US1= 1.04E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5714E+03	1.3385E+04	2.0448E+04
T	1.1044E+02	1.9141E+02	2.2606E+02
RHO	1.0726E+01	4.7508E+01	5.6159E+01
H	3.4439E+02	6.1457E+02	7.6356E+02
A	1.0257E+01	1.4852E+01	1.7108E+01
S	1.6870E+00	1.7817E+00	1.8483E+00
Z	1.3266E+00	1.4719E+00	1.6106E+00
GAME	7.1810E-01	7.8294E-01	8.0384E-01
U	2.9230E+01	6.6208E+00	6.8962E+00

SPECIES	MOLE FRACTIONS		
E-	2.4622E-01	3.2061E-01	3.7913E-01
A	5.0950E-01	3.8510E-01	2.8785E-01
A+	2.4235E-01	2.6808E-01	2.8745E-01
A++	1.9343E-03	2.6076E-02	4.5009E-02
A+++	6.2713E-08	1.2589E-04	5.5171E-04
A++++	4.0744E-15	1.7032E-08	3.8336E-07
AV	5.7320E-25	5.7266E-14	1.1202E-11
AVI	9.3730E-38	3.0989E-21	9.6005E-18
AVII	1.6719E-54	1.3838E-30	1.4512E-25
AVIII	8.5566E-75	4.0059E-42	2.8244E-35

P1 = 5.00E+05 N/SQ-M, US1= 1.02E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.5117E+03	1.2900E+04	1.9651E+04
T	1.0740E+02	1.8643E+02	2.2017E+02
RHO	1.0729E+01	4.7842E+01	5.6518E+01
H	3.3131E+02	5.9139E+02	7.3360E+02
A	1.0014E+01	1.4504E+01	1.6689E+01
S	1.6724E+00	1.7668E+00	1.8323E+00
Z	1.3118E+00	1.4464E+00	1.5792E+00
GAME	7.1175E-01	7.8015E-01	8.0105E-01
U	2.8669E+01	6.4541E+00	6.7141E+00

SPECIES	MOLE FRACTIONS		
E-	2.3771E-01	3.0863E-01	3.6678E-01
A	5.2601E-01	4.0596E-01	3.0788E-01
A+	2.3484E-01	2.6229E-01	2.8432E-01
A++	1.4390E-03	2.3030E-02	4.0586E-02
A+++	3.0918E-08	9.1527E-05	4.2832E-04
A++++	1.1279E-15	9.1092E-09	2.2924E-07
AV	7.5948E-26	2.0570E-14	4.7707E-12
AVI	5.0344E-39	6.7471E-22	2.6615E-18
AVII	2.6651E-56	1.5893E-31	2.3510E-26
AVIII	3.3321E-77	2.1538E-43	2.4142E-36

P1 = 5.00E+05 N/SQ-M, US1= 1.06E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6321E+03	1.3857E+04	2.1227E+04
T	1.1359E+02	1.9632E+02	2.3200E+02
RHO	1.0707E+01	4.7122E+01	5.5686E+01
H	3.5771E+02	6.3810E+02	7.9402E+02
A	1.0503E+01	1.5200E+01	1.7534E+01
S	1.7015E+00	1.7965E+00	1.8647E+00
Z	1.3420E+00	1.4979E+00	1.6431E+00
GAME	7.2373E-01	7.8566E-01	8.0649E-01
U	2.9787E+01	6.7879E+00	7.0784E+00

SPECIES	MOLE FRACTIONS		
E-	2.5485E-01	3.3240E-01	3.9141E-01
A	4.9289E-01	3.6483E-01	2.6834E-01
A+	2.4968E-01	2.7332E-01	2.8981E-01
A++	2.5817E-03	2.9285E-02	4.9742E-02
A+++	1.2550E-07	1.6931E-04	7.0304E-04
A++++	1.4382E-14	3.0548E-08	6.2806E-07
AV	4.1767E-24	1.4916E-13	2.5435E-11
AVI	1.6620E-36	1.2909E-20	3.2929E-17
AVII	9.8073E-53	1.0480E-29	8.3361E-25
AVIII	2.0236E-72	6.1668E-41	2.9890E-34

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 1.08E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.6938E+03	1.4318E+04	2.1995E+04
T	1.1682E+02	2.0125E+02	2.3768E+02
RHO	1.0678E+01	4.6656E+01	5.5268E+01
H	3.7128E+02	6.6198E+02	8.2498E+02
A	1.0749E+01	1.5554E+01	1.7942E+01
S	1.7158E+00	1.8116E+00	1.8802E+00
Z	1.3579E+00	1.5249E+00	1.6744E+00
GAME	7.2834E-01	7.8834E-01	8.0892E-01
U	3.0340E+01	6.9583E+00	7.2608E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.6356E-01	3.4423E-01	4.0278E-01
A	4.7628E-01	3.4472E-01	2.5064E-01
A+	2.5674E-01	2.7809E-01	2.9125E-01
A++	3.4097E-03	3.2736E-02	5.4453E-02
A+++	2.4580E-07	2.2460E-04	8.7465E-04
A++++	4.8922E-14	5.3430E-08	9.8277E-07
AV	2.8756E-23	3.7322E-13	5.3612E-11
AVI	2.7195E-35	5.0696E-20	1.0116E-16
AVII	5.1337E-51	7.2893E-29	4.0938E-24
AVIII	4.1150E-70	8.4556E-40	2.5711E-33

P1 = 5.00E+05 N/SQ-M, US1= 1.15E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.9170E+03	1.5912E+04	2.4666E+04
T	1.2836E+02	2.1773E+02	2.5776E+02
RHO	1.0541E+01	4.5138E+01	5.3504E+01
H	4.2071E+02	7.4840E+02	9.3728E+02
A	1.1572E+01	1.6760E+01	1.9403E+01
S	1.7650E+00	1.8621E+00	1.9354E+00
Z	1.4168E+00	1.6190E+00	1.7886E+00
GAME	7.3630E-01	7.9685E-01	8.1657E-01
U	3.2250E+01	7.5500E+00	7.9012E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.9417E-01	3.8234E-01	4.4089E-01
A	4.1967E-01	2.8200E-01	1.9442E-01
A+	2.7814E-01	2.8949E-01	2.9025E-01
A++	8.0122E-03	4.5650E-02	7.2695E-02
A+++	2.0049E-06	5.1863E-04	1.7460E-03
A++++	2.2855E-12	2.8511E-07	4.1072E-06
AV	1.2488E-20	5.8937E-12	5.8447E-10
AVI	1.8269E-31	3.1426E-18	3.7010E-15
AVII	1.3331E-45	2.5309E-26	6.7026E-22
AVIII	7.5597E-63	2.2735E-36	2.4893E-30

P1 = 5.00E+05 N/SQ-M, US1= 1.10E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	1.7556E+03	1.4754E+04	2.2734E+04
T	1.2010E+02	2.0595E+02	2.4338E+02
RHO	1.0637E+01	4.6178E+01	5.4733E+01
H	3.8507E+02	6.8589E+02	8.5619E+02
A	1.0990E+01	1.5896E+01	1.8356E+01
S	1.7300E+00	1.8261E+00	1.8960E+00
Z	1.3742E+00	1.5514E+00	1.7067E+00
GAME	7.3181E-01	7.9084E-01	8.1121E-01
U	3.0875E+01	7.1270E+00	7.4512E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	2.7233E-01	3.5543E-01	4.1407E-01
A	4.5979E-01	3.2595E-01	2.3347E-01
A+	2.6344E-01	2.8210E-01	2.9194E-01
A++	4.4403E-03	3.6229E-02	5.9443E-02
A+++	4.6720E-07	2.9009E-04	1.0792E-03
A++++	1.5791E-13	8.8825E-08	1.5130E-06
AV	1.8252E-22	8.6025E-13	1.1000E-10
AVI	3.9593E-34	1.7634E-19	2.9830E-16
AVII	2.2706E-49	4.2656E-28	1.8935E-23
AVIII	6.6434E-68	9.1764E-39	2.0297E-32

P1 = 5.00E+05 N/SQ-M, US1= 1.20E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.0857E+03	1.7119E+04	2.6702E+04
T	1.3647E+02	2.2957E+02	2.7226E+02
RHO	1.0459E+01	4.4156E+01	5.2413E+01
H	4.5794E+02	8.1364E+02	1.0225E+03
A	1.2130E+01	1.7637E+01	2.0458E+01
S	1.7991E+00	1.8978E+00	1.9741E+00
Z	1.4613E+00	1.6888E+00	1.8713E+00
GAME	7.3778E-01	8.0238E-01	8.2149E-01
U	3.3627E+01	7.9797E+00	8.3700E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.1566E-01	4.0785E-01	4.6560E-01
A	3.8170E-01	2.4211E-01	1.6089E-01
A+	2.8963E-01	2.9309E-01	2.8410E-01
A++	1.3006E-02	5.6081E-02	8.6732E-02
A+++	6.8300E-06	8.6626E-04	2.6662E-03
A++++	2.2167E-11	8.0926E-07	1.0028E-05
AV	4.6247E-19	3.3250E-11	2.6251E-09
AVI	3.5286E-29	4.2183E-17	3.5859E-14
AVII	2.3060E-42	1.0043E-24	1.6696E-20
AVIII	1.7015E-58	3.2675E-34	1.9047E-28

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 1.25E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.2617E+03	1.8371E+04	2.8842E+04
T	1.4439E+02	2.4140E+02	2.8680E+02
RHO	1.0386E+01	4.3247E+01	5.1477E+01
H	4.9676E+02	8.8161E+02	1.1120E+03
A	1.2687E+01	1.8519E+01	2.1515E+01
S	1.8331E+00	1.9330E+00	2.0119E+00
Z	1.5081E+00	1.7597E+00	1.9536E+00
GAME	7.3920E-01	8.0738E-01	8.2614E-01
U	3.5007E+01	8.4241E+00	8.8561E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.3693E-01	4.3171E-01	4.8813E-01
A	3.4552E-01	2.0665E-01	1.3264E-01
A+	2.9819E-01	2.9293E-01	2.7426E-01
A++	1.9339E-02	6.7338E-02	1.0109E-01
A+++	1.9175E-05	1.3634E-03	3.8672E-03
A++++	1.5379E-10	2.0605E-06	2.2266E-05
AV	1.0238E-17	1.5790E-10	1.0141E-08
AVI	3.2773E-27	4.3986E-16	2.7818E-13
AVII	1.4203E-39	2.7841E-23	3.0443E-19
AVIII	9.6149E-55	2.8822E-32	9.5245E-27

P1 = 5.00E+05 N/SQ-M, US1= 1.35E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.6357E+03	2.1088E+04	3.3539E+04
T	1.5932E+02	2.6532E+02	3.1710E+02
RHO	1.0307E+01	4.1760E+01	4.9856E+01
H	5.7917E+02	1.0258E+03	1.3027E+03
A	1.3804E+01	2.0303E+01	2.3707E+01
S	1.8983E+00	2.0017E+00	2.0869E+00
Z	1.6050E+00	1.9033E+00	2.1215E+00
GAME	7.4514E-01	8.1626E-01	8.3548E-01
U	3.7778E+01	9.3439E+00	9.8415E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.7696E-01	4.7459E-01	5.2863E-01
A	2.8088E-01	1.4836E-01	8.8016E-02
A+	3.0746E-01	2.8246E-01	2.4560E-01
A++	3.4611E-02	9.1642E-02	1.3032E-01
A+++	9.3412E-05	2.9326E-03	7.3425E-03
A++++	3.1924E-09	1.0344E-05	9.1363E-05
AV	1.3723E-15	2.3787E-09	1.1355E-07
AVI	4.4511E-24	2.6507E-14	1.0977E-11
AVII	4.0043E-35	9.2814E-21	5.5662E-17
AVIII	9.5952E-49	7.3387E-29	1.0625E-23

P1 = 5.00E+05 N/SQ-M, US1= 1.30E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.4450E+03	1.9694E+04	3.1144E+04
T	1.5191E+02	2.5338E+02	3.0182E+02
RHO	1.0348E+01	4.2431E+01	5.0646E+01
H	5.3717E+02	9.5216E+02	1.2051E+03
A	1.3238E+01	1.9413E+01	2.2603E+01
S	1.8657E+00	1.9679E+00	2.0496E+00
Z	1.5554E+00	1.8318E+00	2.0375E+00
GAME	7.4163E-01	8.1199E-01	8.3080E-01
U	3.6391E+01	8.9080E+00	9.3361E+00

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.5708E-01	4.5409E-01	5.0920E-01
A	3.1246E-01	1.7528E-01	1.0839E-01
A+	3.0389E-01	2.8923E-01	2.6115E-01
A++	2.6526E-02	7.9347E-02	1.1580E-01
A+++	4.4798E-05	2.0476E-03	5.4197E-03
A++++	7.7333E-10	4.8223E-06	4.6528E-05
AV	1.3797E-16	6.5666E-10	3.5649E-08
AVI	1.4998E-25	3.7786E-15	1.8801E-12
AVII	3.2377E-37	5.8669E-22	4.5622E-18
AVIII	1.4465E-51	1.7625E-30	3.6609E-25

P1 = 5.00E+05 N/SQ-M, US1= 1.40E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	2.8333E+03	2.2514E+04	3.6007E+04
T	1.6662E+02	2.7740E+02	3.3248E+02
RHO	1.0267E+01	4.1078E+01	4.9139E+01
H	6.2275E+02	1.1020E+03	1.4040E+03
A	1.4381E+01	2.1203E+01	2.4813E+01
S	1.9307E+00	2.0355E+00	2.1230E+00
Z	1.6563E+00	1.9757E+00	2.2039E+00
GAME	7.4942E-01	8.2031E-01	8.4020E-01
U	3.9160E+01	9.7900E+00	1.0347E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	3.9624E-01	4.9385E-01	5.4627E-01
A	2.5122E-01	1.2481E-01	7.1274E-02
A+	3.0901E-01	2.7294E-01	2.2861E-01
A++	4.3348E-02	1.0431E-01	1.4406E-01
A+++	1.7697E-04	4.0652E-03	9.6230E-03
A++++	1.1144E-08	2.0896E-05	1.6858E-04
AV	1.0534E-14	7.8329E-09	3.2747E-07
AVI	9.1278E-23	1.6147E-13	5.5281E-11
AVII	2.9444E-33	1.2038E-19	5.5343E-16
AVIII	3.1859E-46	2.3209E-27	2.3235E-22

TABLE I. - Continued

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 1.45E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.0380E+03	2.3978E+04	3.8568E+04
T	1.7384E+02	2.8960E+02	3.4865E+02
RHO	1.0225E+01	4.0421E+01	4.8328E+01
H	6.6790E+02	1.1809E+03	1.5099E+03
A	1.4969E+01	2.2112E+01	2.5971E+01
S	1.9627E+00	2.0689E+00	2.1602E+00
Z	1.7091E+00	2.0483E+00	2.2890E+00
GAME	7.5417E-01	8.2427E-01	8.4516E-01
U	4.0542E+01	1.0234E+01	1.0883E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.1489E-01	5.1180E-01	5.6312E-01
A	2.2347E-01	1.0449E-01	5.6879E-02
A+	3.0871E-01	2.6116E-01	2.0989E-01
A++	5.2623E-02	1.1704E-01	1.5738E-01
A+++	3.1112E-04	5.4665E-03	1.2416E-02
A++++	3.4123E-08	3.9920E-05	3.0319E-04
AV	6.6012E-14	2.3603E-08	9.0878E-07
AVI	1.3994E-21	8.6274E-13	2.6295E-10
AVII	1.4347E-31	1.2939E-18	5.0527E-15
AVIII	6.0638E-44	5.7052E-26	4.5359E-21

P1 = 5.00E+05 N/SQ-M, US1= 1.55E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.4680E+03	2.6922E+04	4.3856E+04
T	1.8826E+02	3.1421E+02	3.8187E+02
RHO	1.0130E+01	3.9066E+01	4.6785E+01
H	7.6293E+02	1.3459E+03	1.7328E+03
A	1.6172E+01	2.3947E+01	2.8313E+01
S	2.0261E+00	2.1348E+00	2.2321E+00
Z	1.8185E+00	2.1933E+00	2.4547E+00
GAME	7.6395E-01	8.3212E-01	8.5519E-01
U	4.3297E+01	1.1212E+01	1.1953E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.5011E-01	5.4406E-01	5.9262E-01
A	1.7385E-01	7.2253E-02	3.5668E-02
A+	3.0279E-01	2.3273E-01	1.7183E-01
A++	7.2442E-02	1.4168E-01	1.7974E-01
A+++	8.1225E-04	9.1538E-03	1.9276E-02
A++++	2.3779E-07	1.2626E-04	8.6215E-04
AV	1.6286E-12	1.7043E-07	5.7053E-06
AVI	1.6947E-19	1.7501E-11	4.3850E-09
AVII	1.3295E-28	9.2244E-17	2.7359E-13
AVIII	6.2713E-40	1.7810E-23	9.6189E-19

P1 = 5.00E+05 N/SQ-M, US1= 1.50E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.2494E+03	2.5469E+04	4.1180E+04
T	1.8102E+02	3.0193E+02	3.6505E+02
RHO	1.0182E+01	3.9768E+01	4.7552E+01
H	7.1463E+02	1.2623E+03	1.6189E+03
A	1.5564E+01	2.3031E+01	2.7134E+01
S	1.9943E+00	2.1021E+00	2.1964E+00
Z	1.7629E+00	2.1212E+00	2.3723E+00
GAME	7.5906E-01	8.2821E-01	8.5017E-01
U	4.1920E+01	1.0686E+01	1.1398E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.3276E-01	5.2856E-01	5.7847E-01
A	1.9780E-01	8.7041E-02	4.5195E-02
A+	3.0663E-01	2.4755E-01	1.9086E-01
A++	6.2297E-02	1.2961E-01	1.6932E-01
A+++	5.1403E-04	7.1628E-03	1.5623E-02
A++++	9.3646E-08	7.2719E-05	5.2042E-04
AV	3.4847E-13	6.5945E-08	2.3412E-06
AVI	1.6789E-20	4.1203E-12	1.1192E-09
AVII	4.9373E-30	1.1892E-17	3.9364E-14
AVIII	7.2879E-42	1.1297E-24	7.1539E-20

P1 = 5.00E+05 N/SQ-M, US1= 1.60E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.6933E+03	2.8433E+04	4.6599E+04
T	1.9550E+02	3.2686E+02	3.9930E+02
RHO	1.0076E+01	3.8390E+01	4.6006E+01
H	8.1280E+02	1.4324E+03	1.8509E+03
A	1.6785E+01	2.4885E+01	2.9517E+01
S	2.0574E+00	2.1675E+00	2.2676E+00
Z	1.8749E+00	2.2659E+00	2.5367E+00
GAME	7.6864E-01	8.3617E-01	8.6015E-01
U	4.4670E+01	1.1692E+01	1.2525E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.6663E-01	5.5867E-01	6.0579E-01
A	1.5204E-01	5.9551E-02	2.7897E-02
A+	2.9728E-01	2.1682E-01	1.5306E-01
A++	8.2832E-02	1.5325E-01	1.8845E-01
A+++	1.2288E-03	1.1499E-02	2.3401E-02
A++++	5.5898E-07	2.1284E-04	1.3890E-03
AV	6.7862E-12	4.2089E-07	1.3322E-05
AVI	1.4377E-18	6.9548E-11	1.6123E-08
AVII	2.7985E-27	6.5326E-16	1.7411E-12
AVIII	3.8782E-38	2.4720E-22	1.1440E-17

TABLE I. - Concluded

$p_1 = 500\ kN/m^2$

P1 = 5.00E+05 N/SQ-M, US1= 1.65E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	3.9247E+03	2.9907E+04	4.9336E+04
T	2.0284E+02	3.3945E+02	4.1682E+02
RHO	1.0012E+01	3.7700E+01	4.5247E+01
H	8.6421E+02	1.5208E+03	1.9722E+03
A	1.7408E+01	2.5817E+01	3.0706E+01
S	2.0888E+00	2.1994E+00	2.3019E+00
Z	1.9325E+00	2.3369E+00	2.6159E+00
GAME	7.7306E-01	8.4022E-01	8.6474E-01
U	4.6030E+01	1.2205E+01	1.3089E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.8253E-01	5.7209E-01	6.1772E-01
A	1.3206E-01	4.8973E-02	2.1799E-02
A+	2.9008E-01	2.0062E-01	1.3546E-01
A++	9.3526E-02	1.6383E-01	1.9501E-01
A+++	1.7993E-03	1.4145E-02	2.7830E-02
A++++	1.2410E-06	3.4464E-04	2.1517E-03
AV	2.5784E-11	9.7381E-07	2.9199E-05
AVI	1.0725E-17	2.5055E-10	5.3920E-08
AVII	4.9017E-26	4.0081E-15	9.6760E-12
AVIII	1.8696E-36	2.8379E-21	1.1349E-16

P1 = 5.00E+05 N/SQ-M, US1= 1.75E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.4099E+03	3.2993E+04	5.5085E+04
T	2.1764E+02	3.6580E+02	4.5455E+02
RHO	9.8904E+00	3.6385E+01	4.3629E+01
H	9.7182E+02	1.7064E+03	2.2285E+03
A	1.8661E+01	2.7739E+01	3.3191E+01
S	2.1505E+00	2.2628E+00	2.3721E+00
Z	2.0486E+00	2.4789E+00	2.7777E+00
GAME	7.8097E-01	8.4860E-01	8.7251E-01
U	4.8767E+01	1.3211E+01	1.4271E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.1187E-01	5.9659E-01	6.3998E-01
A	9.8295E-02	3.2457E-02	1.2847E-02
A+	2.7131E-01	1.6756E-01	1.0247E-01
A++	1.1501E-01	1.8200E-01	2.0172E-01
A+++	3.5090E-03	2.0547E-02	3.7952E-02
A++++	5.1716E-06	8.4309E-04	4.8891E-03
AV	2.8624E-10	4.6918E-06	1.2992E-04
AVI	4.0808E-16	2.7861E-09	5.3991E-07
AVII	8.7732E-24	1.2258E-13	2.5647E-10
AVIII	2.0996E-33	2.7844E-19	9.0430E-15

P1 = 5.00E+05 N/SQ-M, US1= 1.70E+04 M/SEC

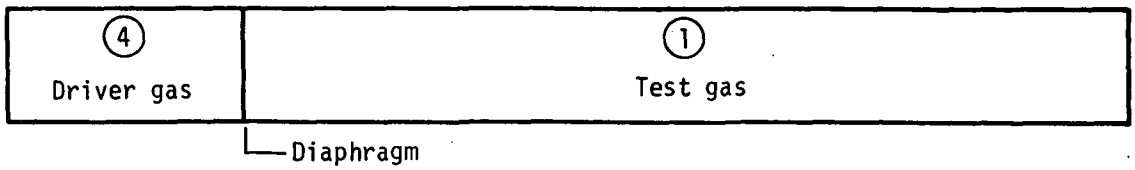
	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.1661E+03	3.1508E+04	5.2282E+04
T	2.1017E+02	3.5268E+02	4.3569E+02
RHO	9.9627E+00	3.7090E+01	4.4483E+01
H	9.1732E+02	1.6132E+03	2.0995E+03
A	1.8027E+01	2.6784E+01	3.1960E+01
S	2.1194E+00	2.2313E+00	2.3372E+00
Z	1.9897E+00	2.4087E+00	2.6976E+00
GAME	7.7715E-01	8.4447E-01	8.6906E-01
U	4.7425E+01	1.2704E+01	1.3677E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	4.9742E-01	5.8483E-01	6.2930E-01
A	1.1441E-01	3.9934E-02	1.6750E-02
A+	2.8148E-01	1.8393E-01	1.1819E-01
A++	1.0415E-01	1.7357E-01	1.9959E-01
A+++	2.5401E-03	1.7189E-02	3.2800E-02
A++++	2.5814E-06	5.4793E-04	3.3014E-03
AV	8.8458E-11	2.1964E-06	6.3395E-05
AVI	6.9024E-17	8.7101E-10	1.7823E-07
AVII	6.9730E-25	2.3524E-14	5.2990E-11
AVIII	6.8064E-35	3.0517E-20	1.1020E-15

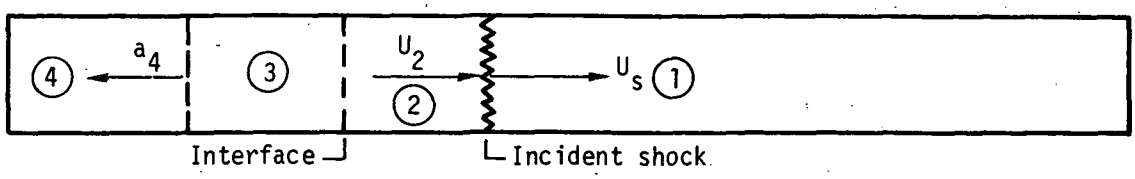
P1 = 5.00E+05 N/SQ-M, US1= 1.80E+04 M/SEC

	MOVING SHOCK	STANDING SHOCK	REFLECTED SHOCK
P	4.6625E+03	3.4566E+04	5.8061E+04
T	2.2507E+02	3.7936E+02	4.7339E+02
RHO	9.8354E+00	3.5755E+01	4.2972E+01
H	1.0280E+03	1.8027E+03	2.3620E+03
A	1.9284E+01	2.8712E+01	3.4385E+01
S	2.1805E+00	2.2938E+00	2.4050E+00
Z	2.1063E+00	2.5484E+00	2.8542E+00
GAME	7.8448E-01	8.5274E-01	8.7506E-01
U	5.0129E+01	1.3737E+01	1.4854E+01

SPECIES	---------- MOLE FRACTIONS ----------		
E-	5.2523E-01	6.0760E-01	6.4964E-01
A	8.4411E-02	2.6242E-02	9.9421E-03
A+	2.6019E-01	1.5154E-01	8.8787E-02
A++	1.2546E-01	1.8910E-01	2.0150E-01
A+++	4.6927E-03	2.4246E-02	4.2950E-02
A++++	9.7665E-06	1.2699E-03	6.9387E-03
AV	8.4376E-10	9.7123E-06	2.4880E-04
AVI	2.1063E-15	8.5180E-09	1.4810E-06
AVII	9.1154E-23	5.9911E-13	1.0828E-09
AVIII	5.0020E-32	2.3363E-18	6.1892E-14

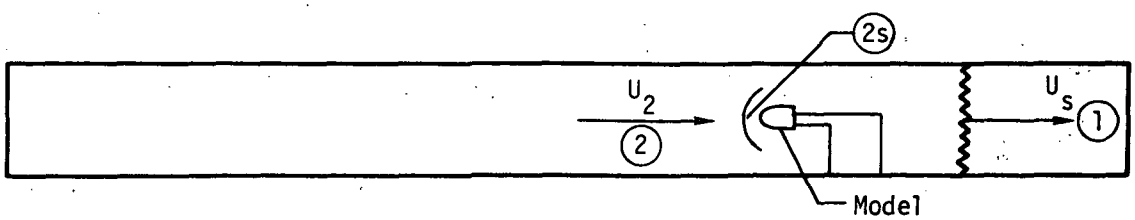


(a) Prior to diaphragm rupture.



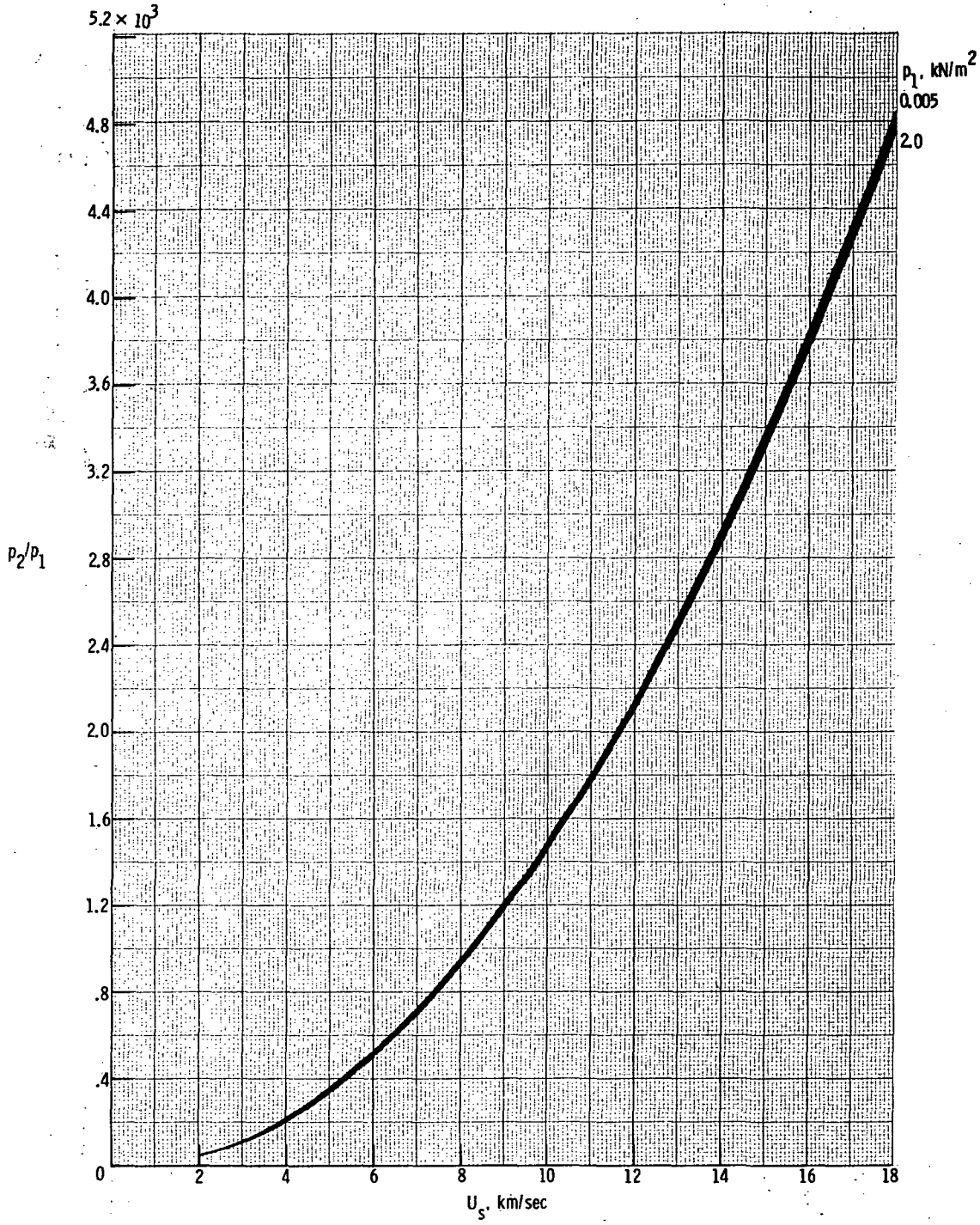
(b) Incident (moving) normal shock in test gas.

(c) Reflected normal shock from end wall.



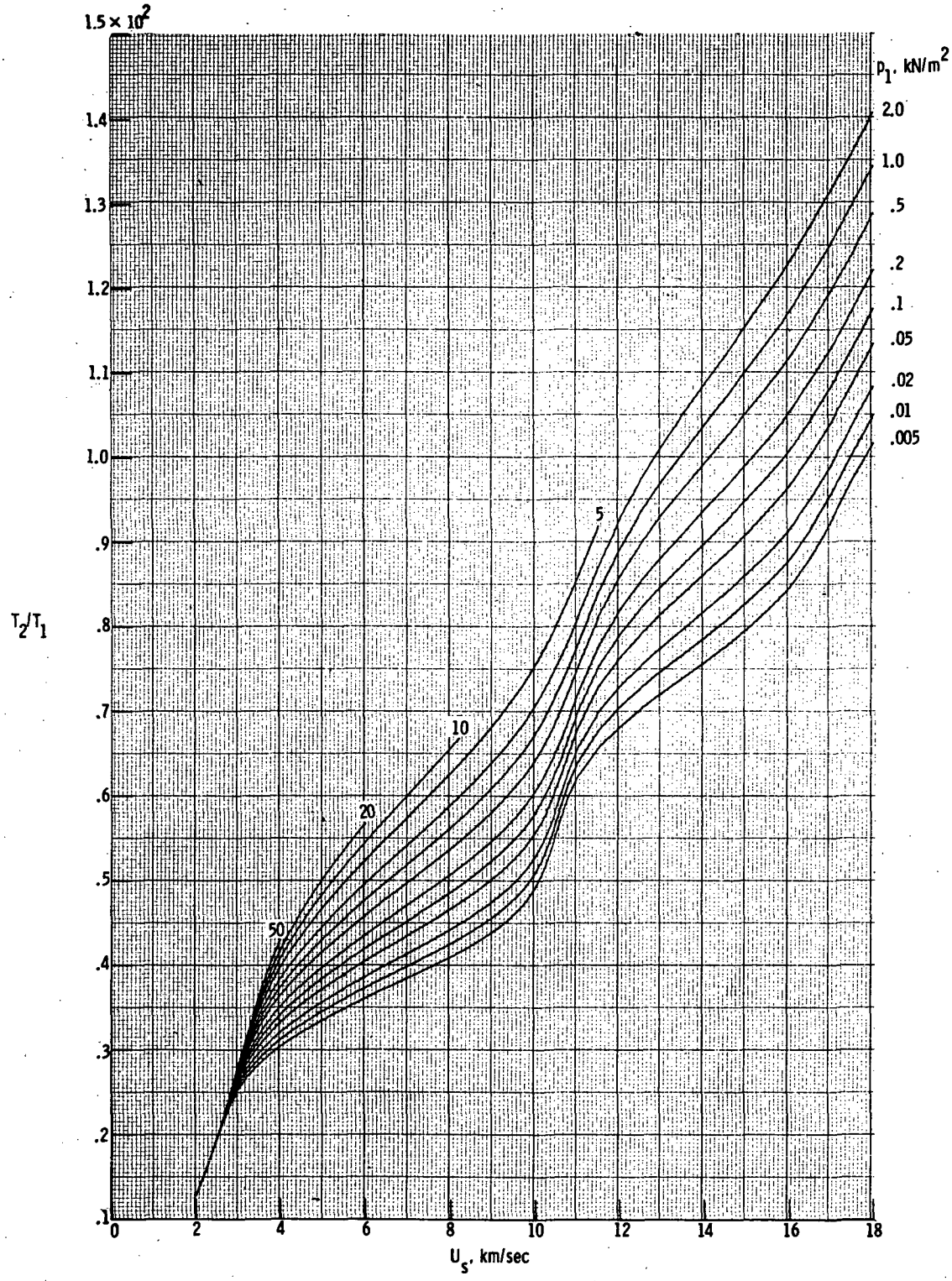
(d) Standing normal shock at test model.

Figure 1.- Sketches illustrating shock-tube regions of interest: regions 2, 2s, and 2r.



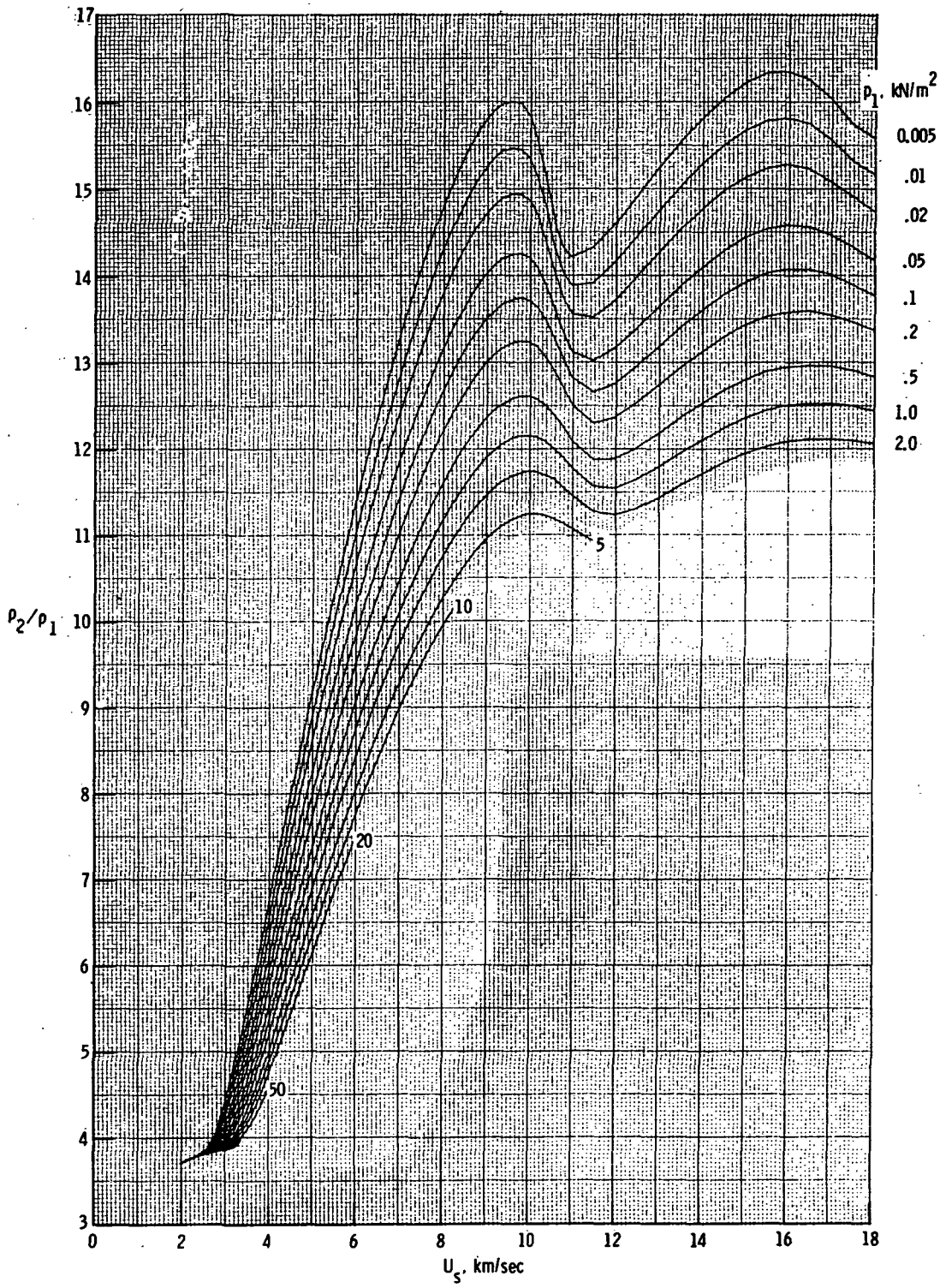
(a) Pressure p_2/p_1.

Figure 2.- Thermodynamic properties and flow velocity behind an incident normal shock into pure argon.



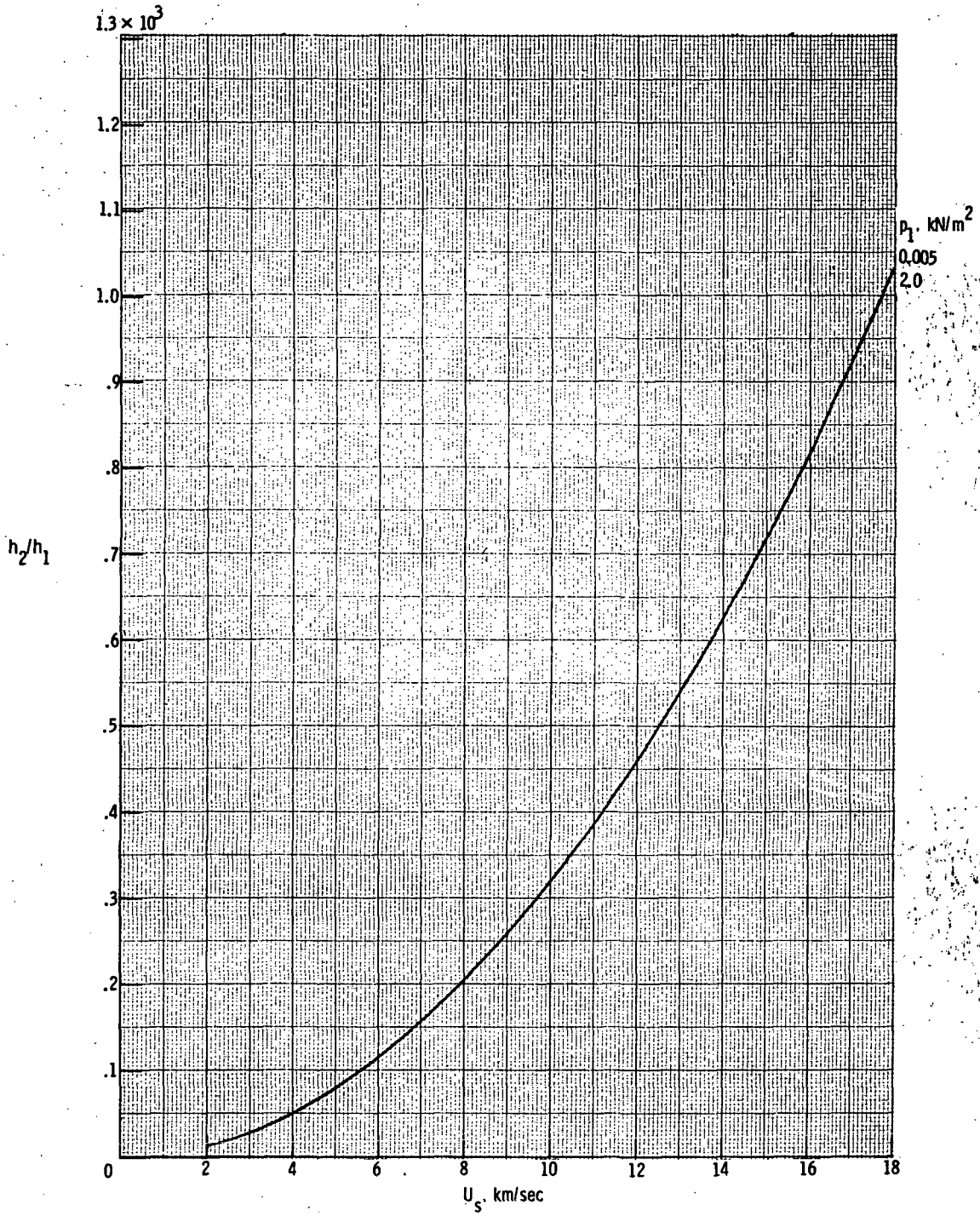
(b) Temperature T_2/T_1.

Figure. 2. - Continued.



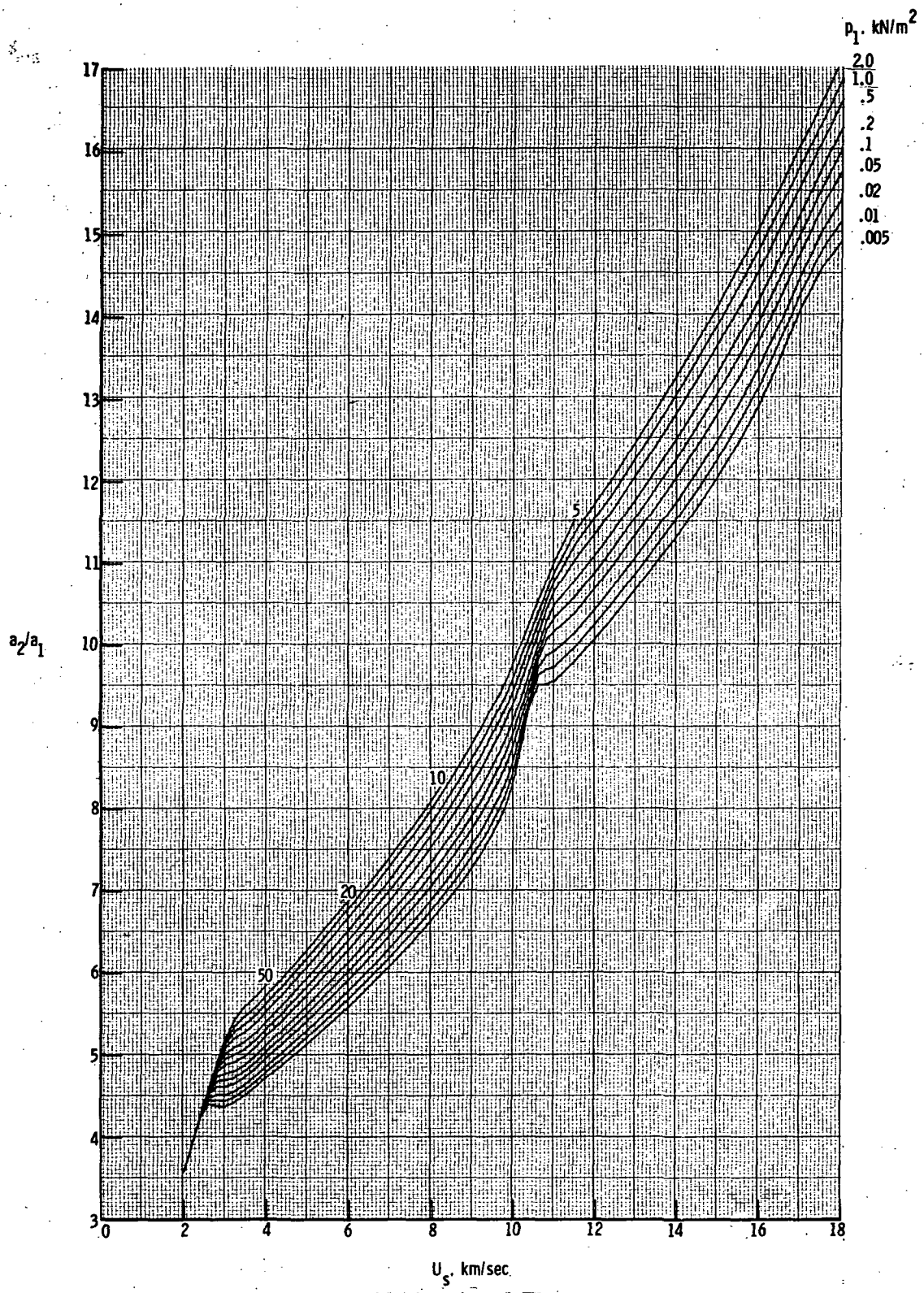
(c) Density ρ_2/ρ_1.

Figure 2.- Continued.



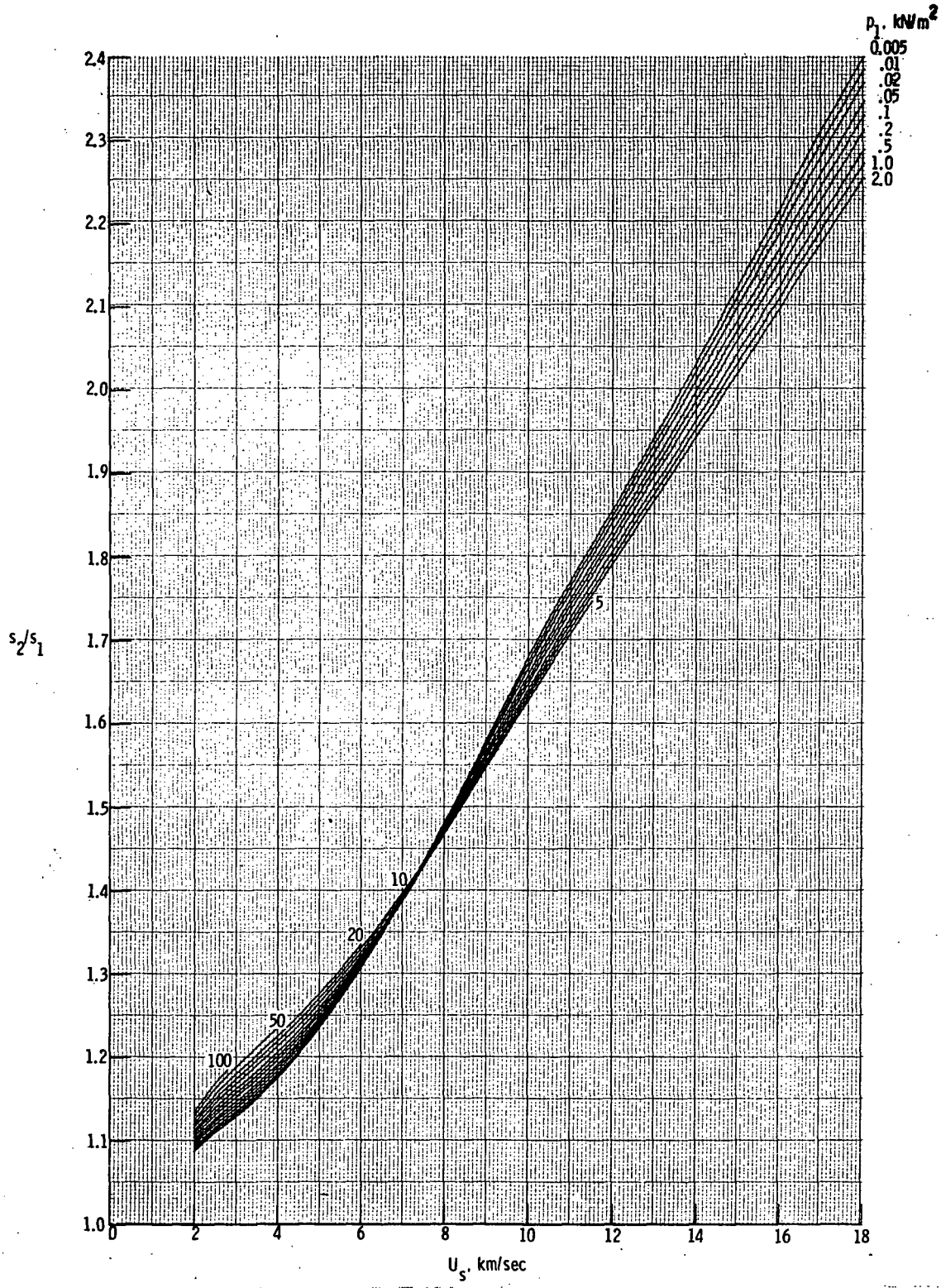
(d) Enthalpy h_2/h_1.

Figure 2.- Continued.



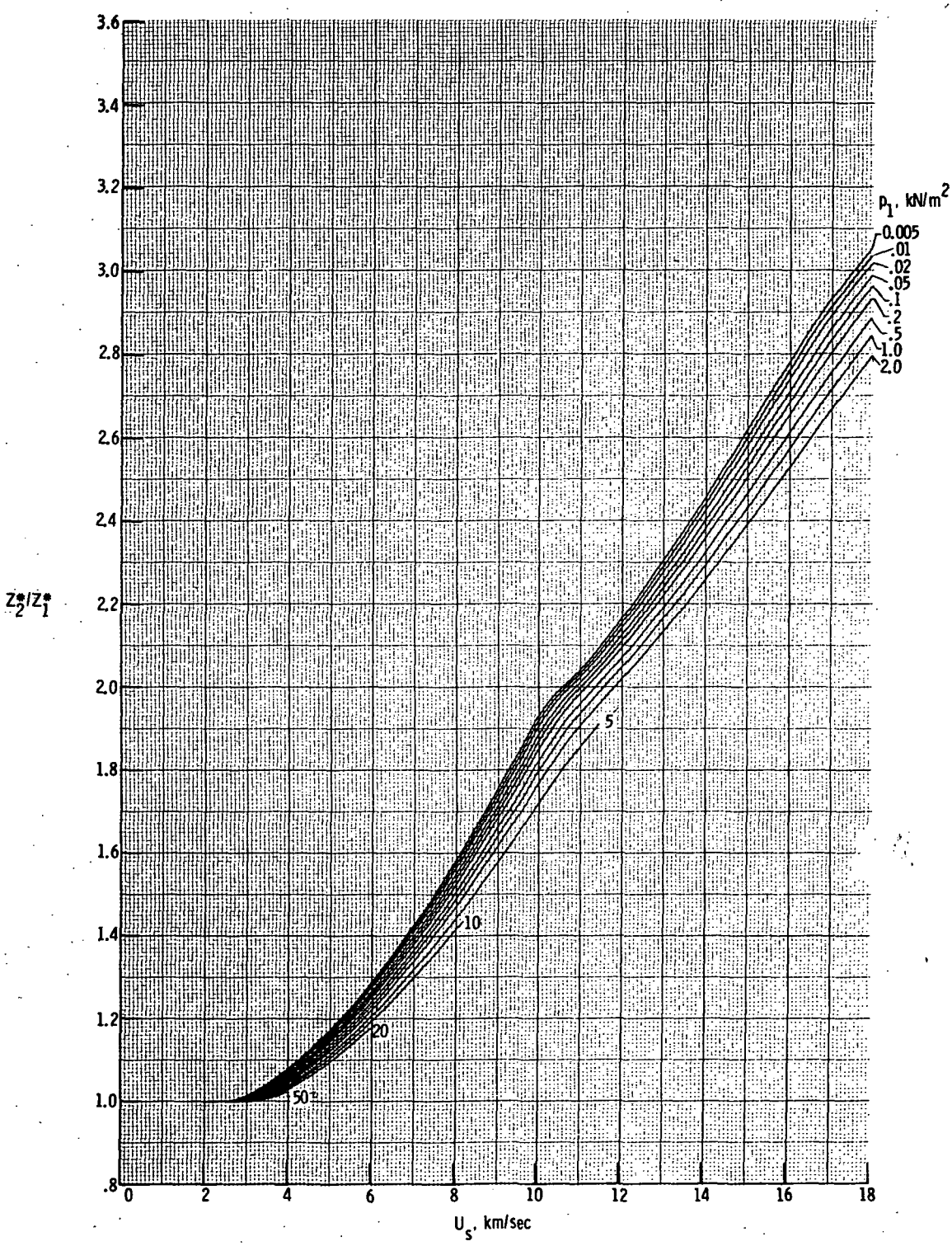
(e) Speed of sound a_2/a_1.

Figure 2.- Continued.



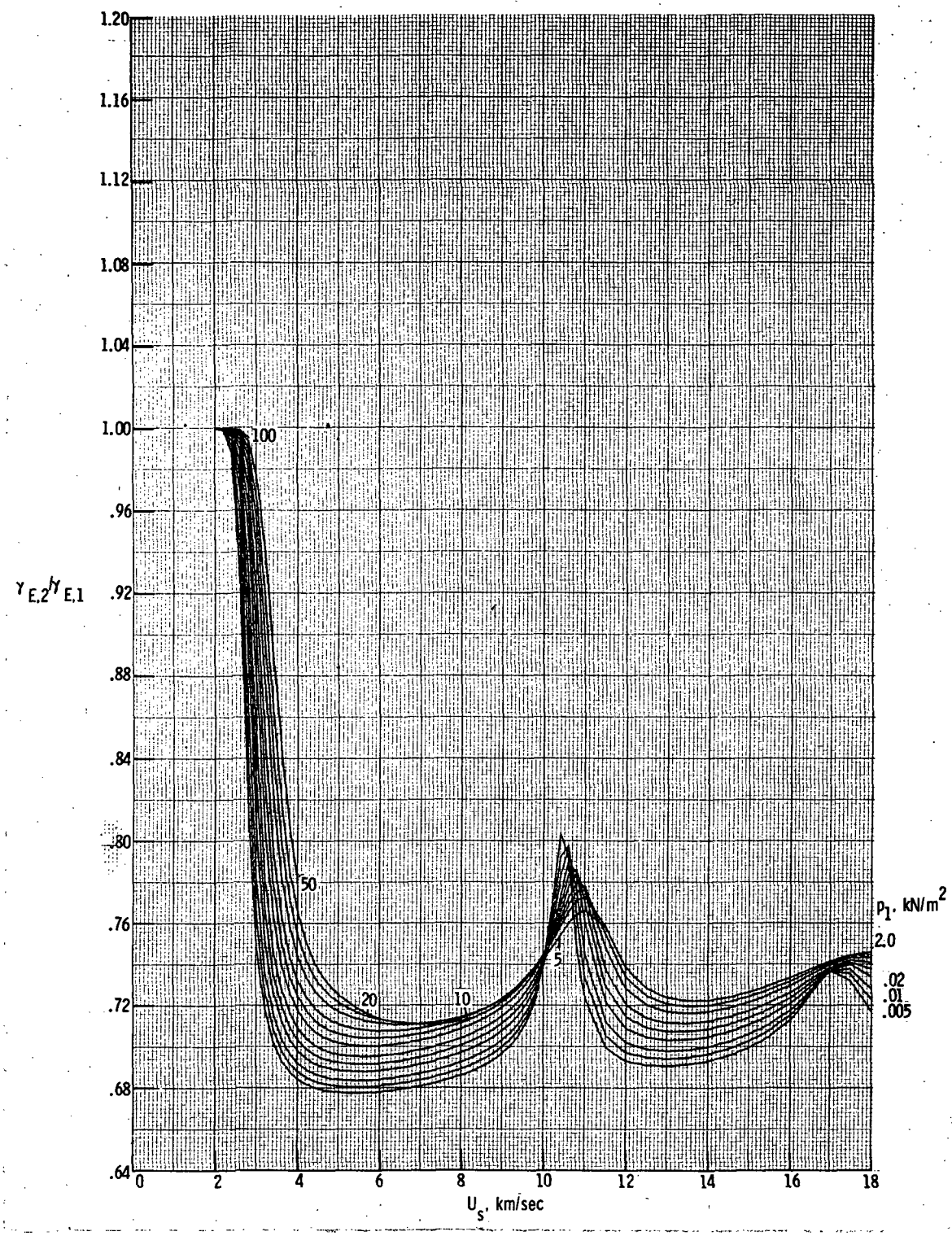
(f) Entropy s_2/s_1.

Figure 2.- Continued.



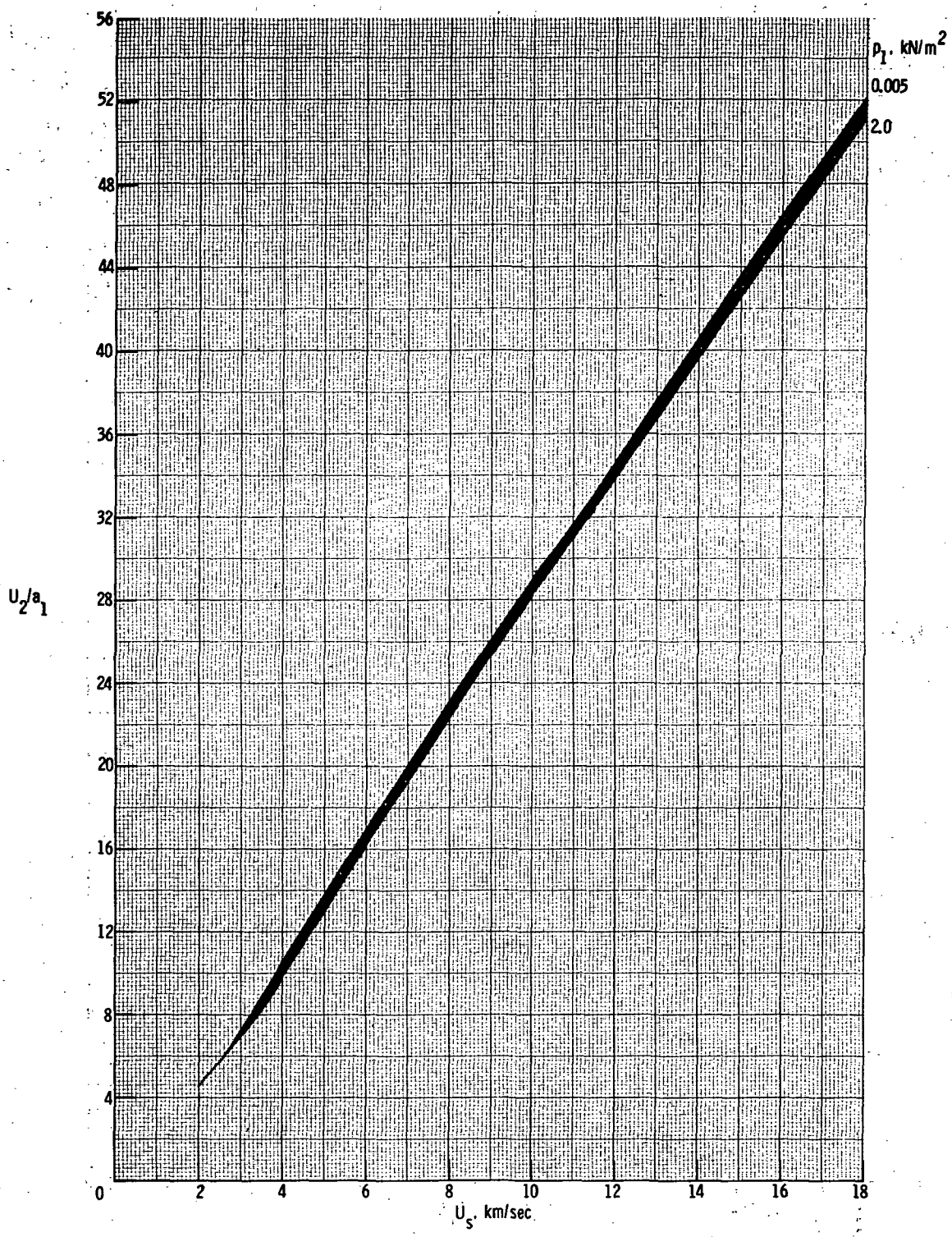
(g) Molecular-weight ratio Z_2^*/Z_1^*.

Figure 2.- Continued.



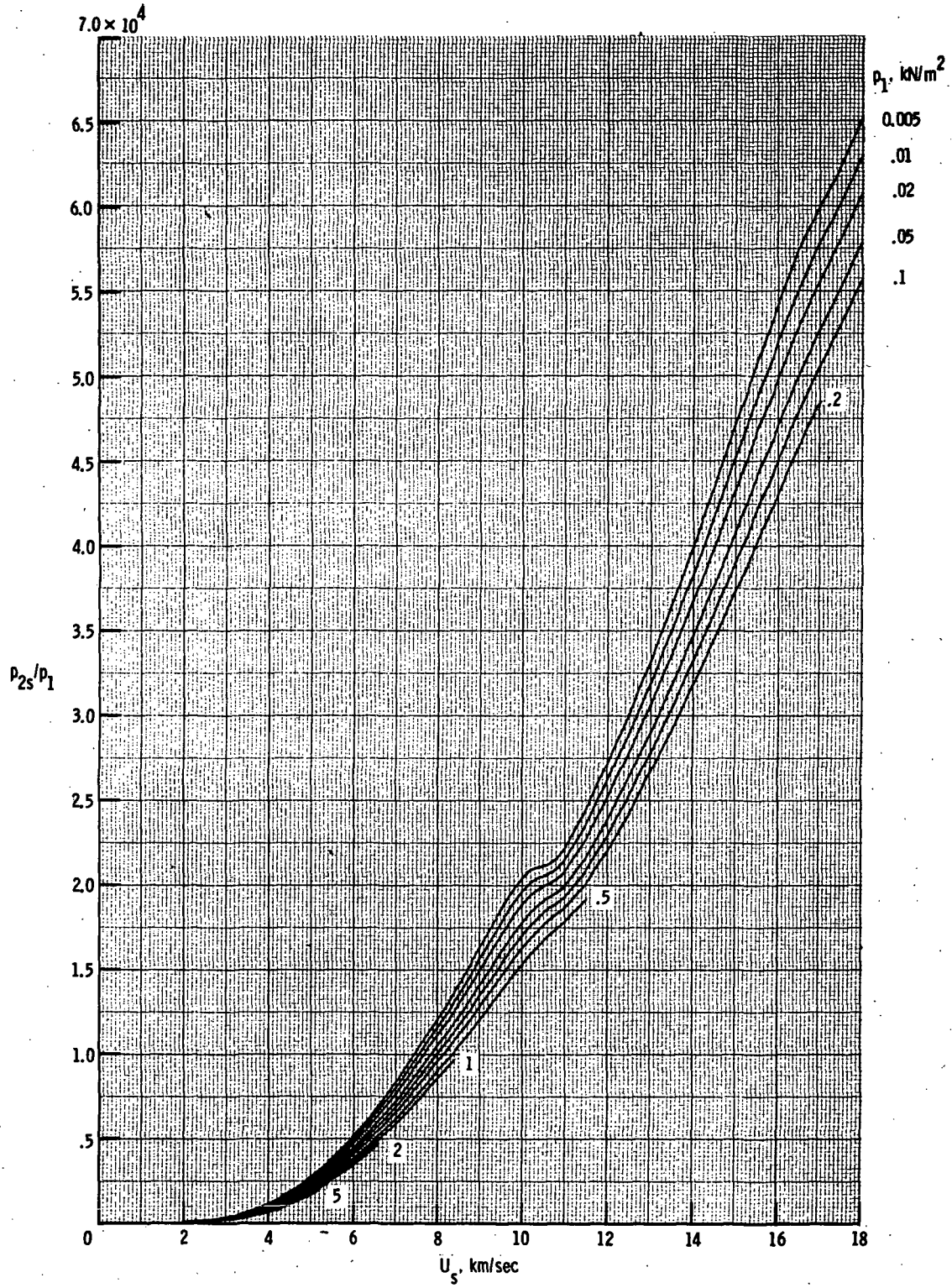
(h) Isentropic exponent $\gamma_{E,2}/\gamma_{E,1}$.

Figure 2.- Continued.



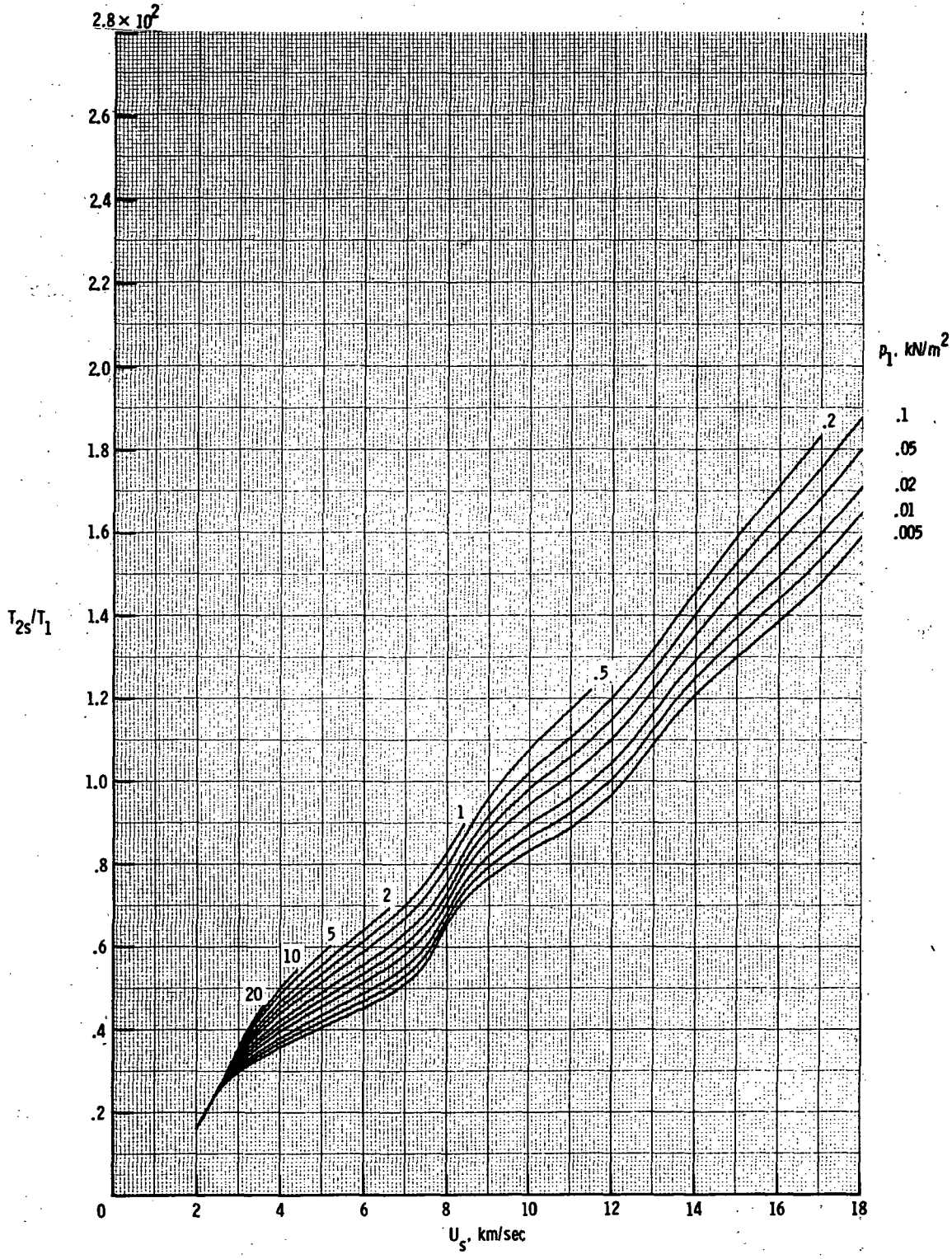
(i) Flow velocity U_2/a_1.

Figure 2.- Concluded.



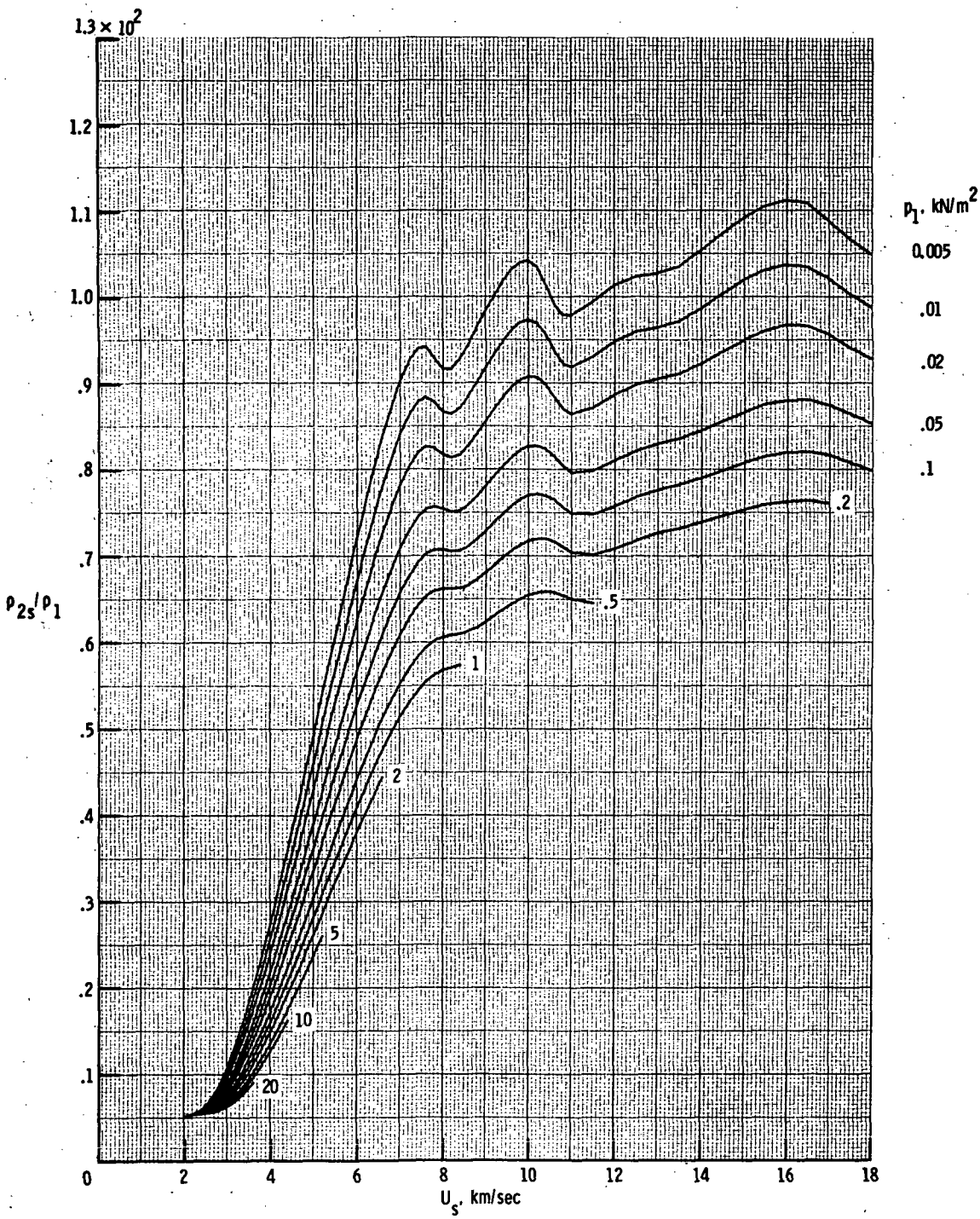
(a) Pressure p_{2s}/p_1.

Figure 3.- Thermodynamic properties and flow velocity behind a standing normal shock for pure argon.



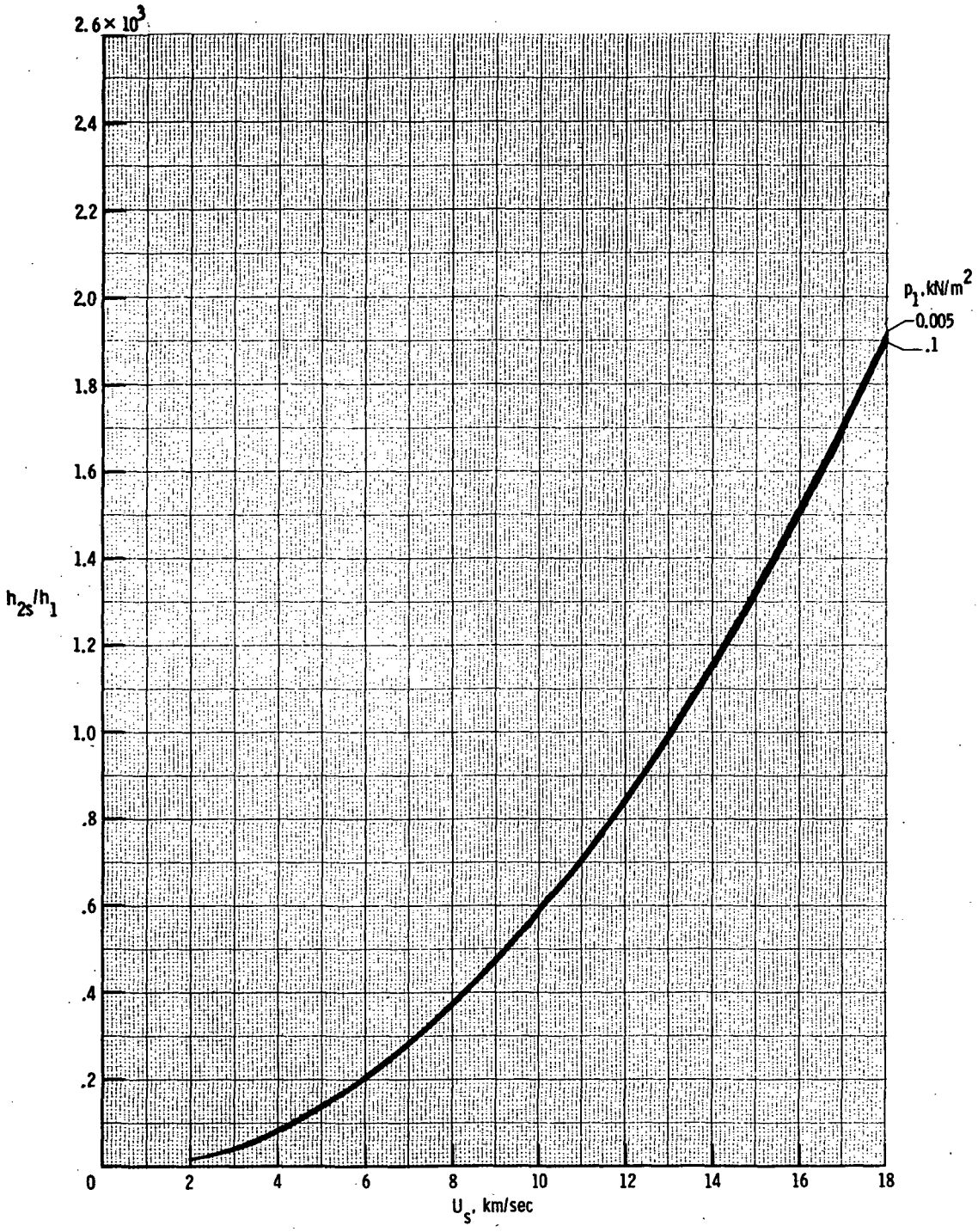
(b) Temperature T_{2s}/T_1.

Figure 3.- Continued.



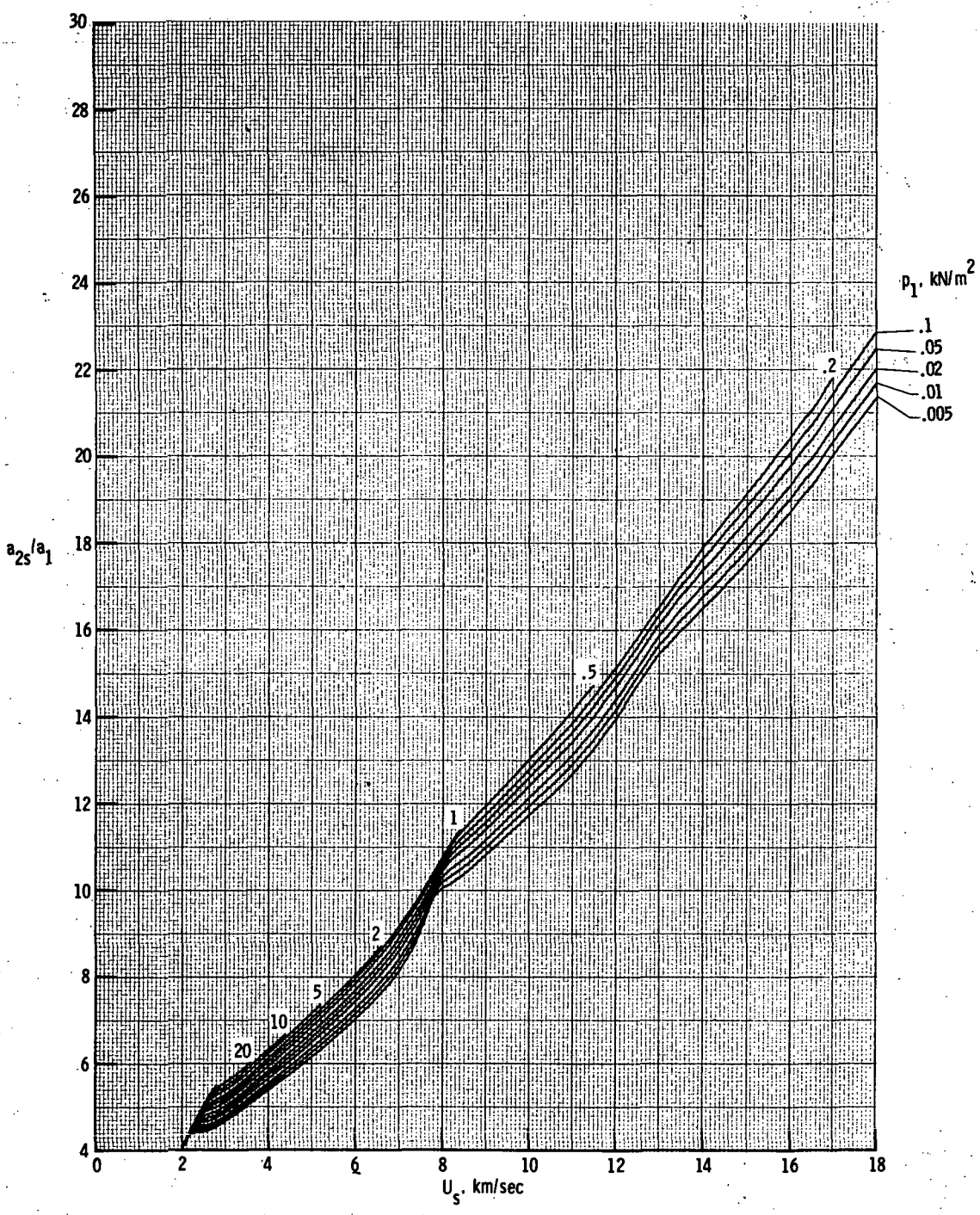
(c) Density ρ_{2s}/ρ_1.

Figure 3.- Continued.



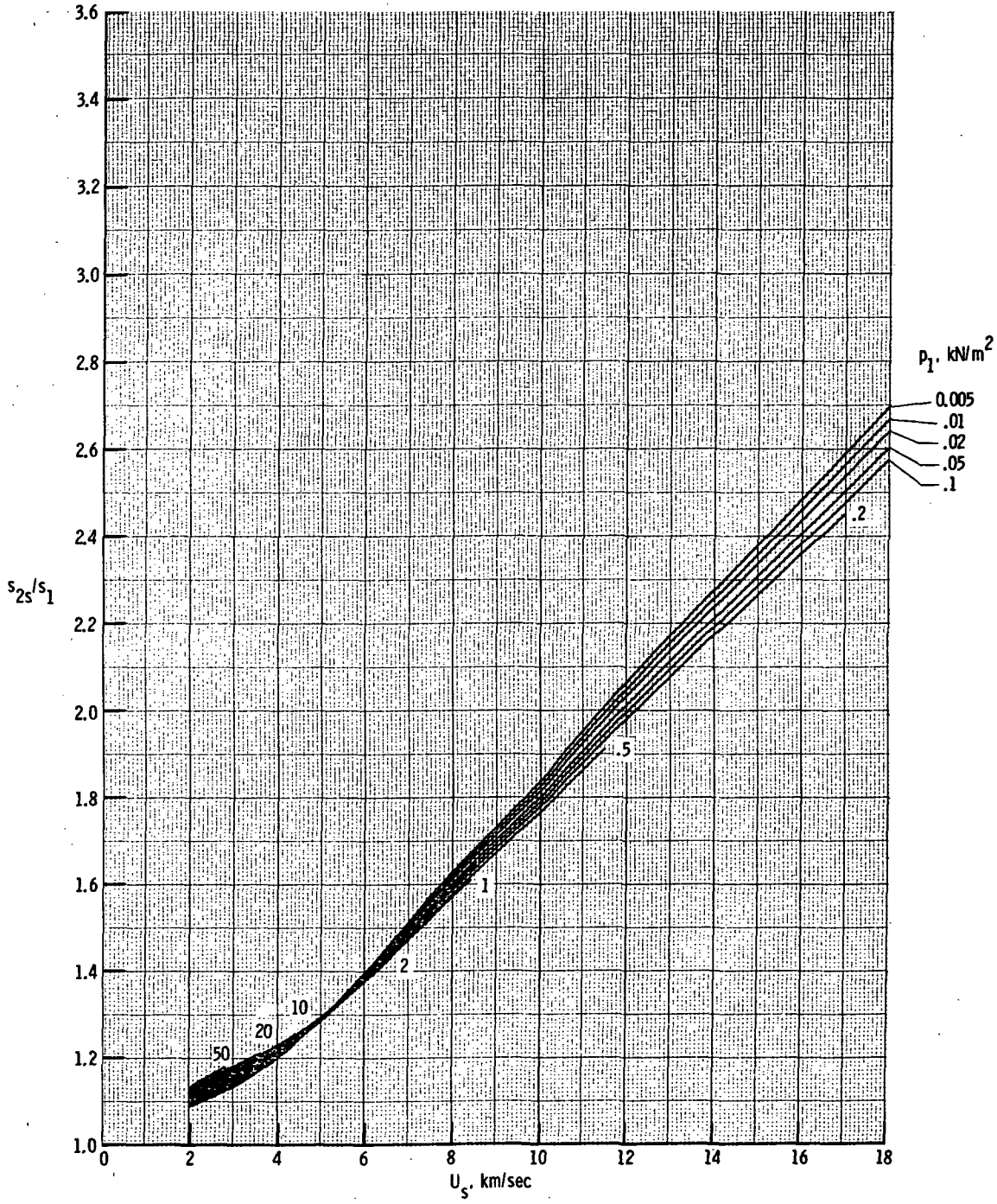
(d) Enthalpy h_{2s}/h_1.

Figure 3.- Continued.



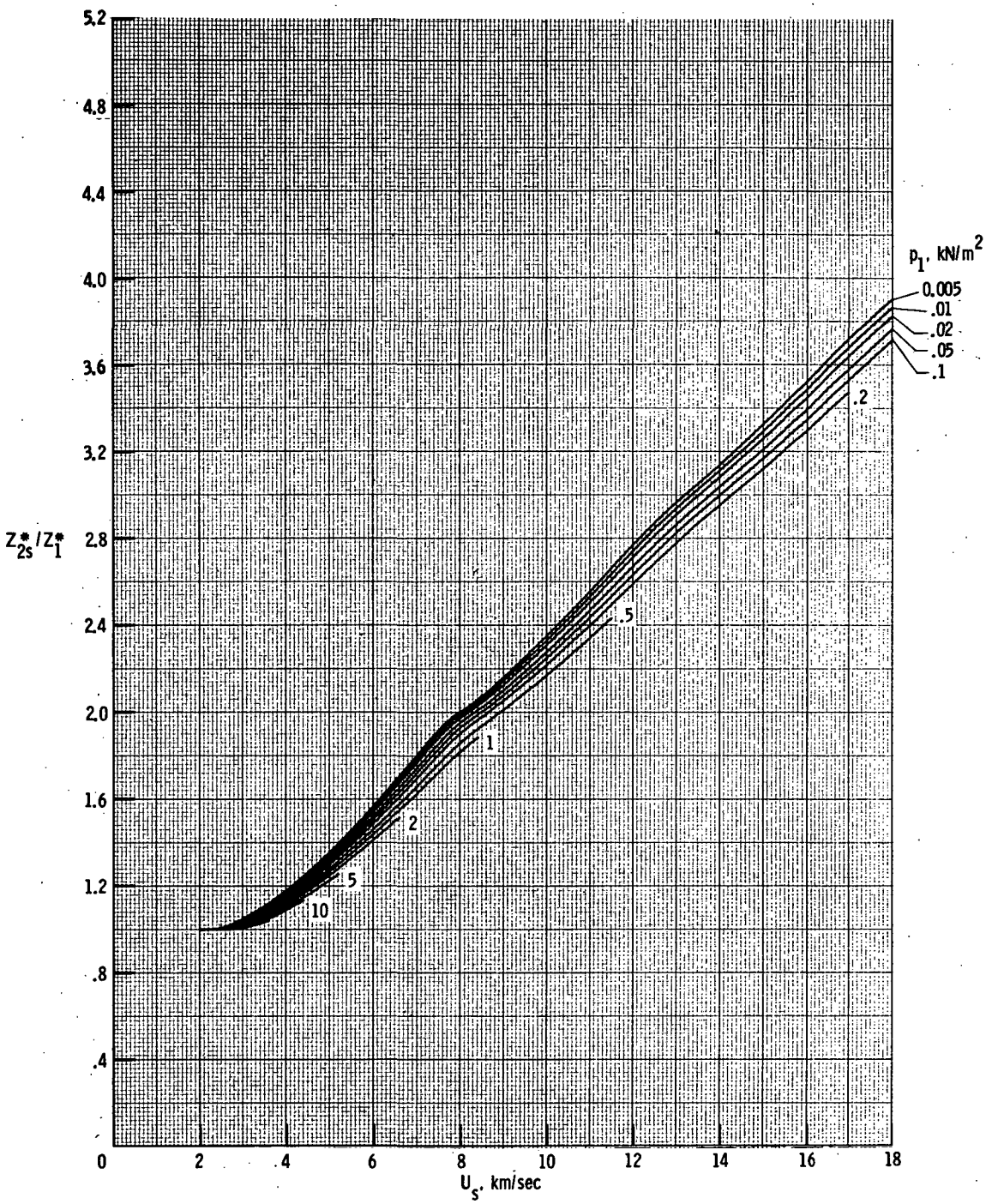
(e) Speed of sound a_{2s}/a_1.

Figure 3.- Continued.



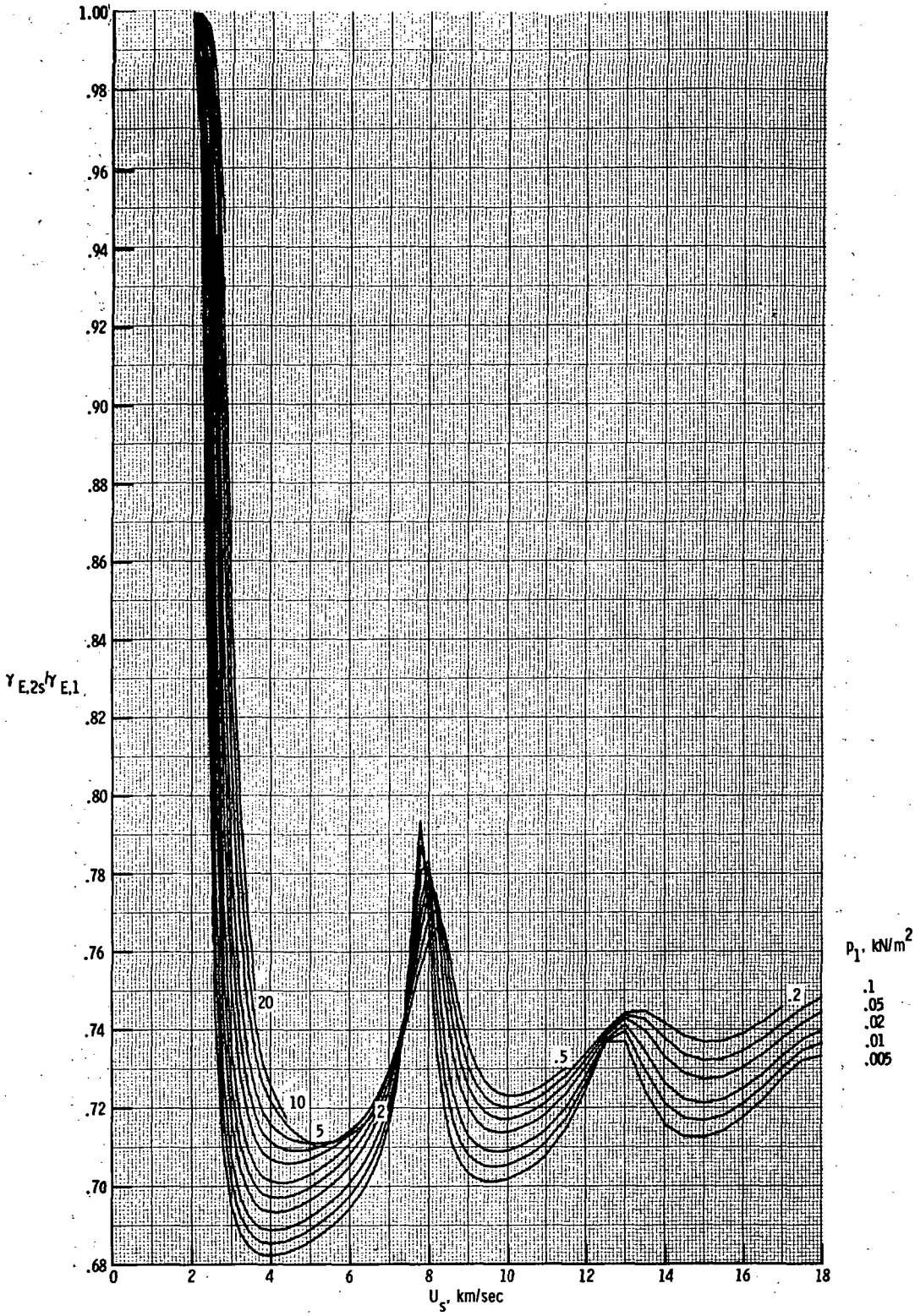
(f) Entropy s_{2s}/s_1.

Figure 3.- Continued.



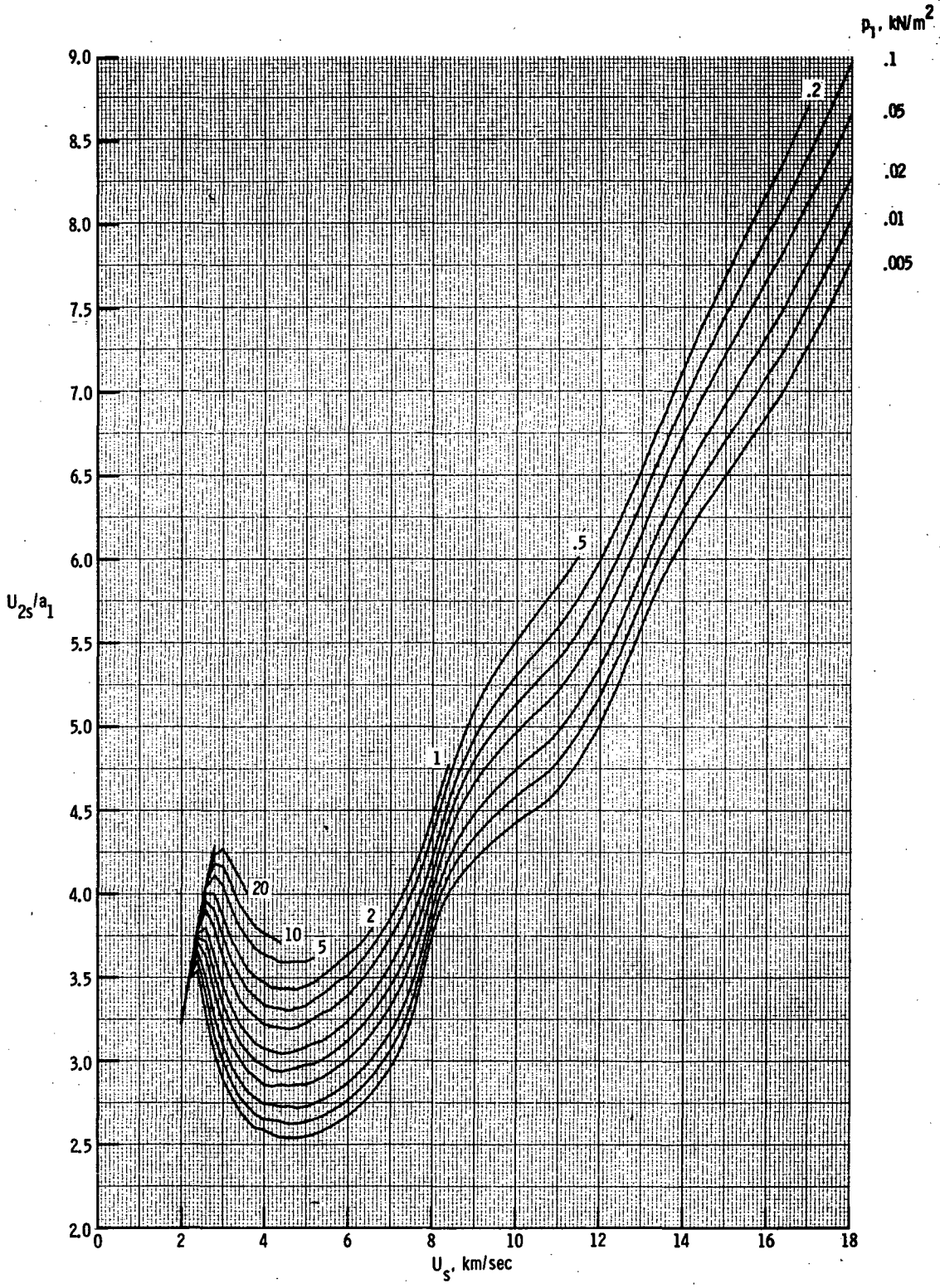
(g) Molecular-weight ratio Z_{2s}^*/Z_1^*.

Figure 3.- Continued.



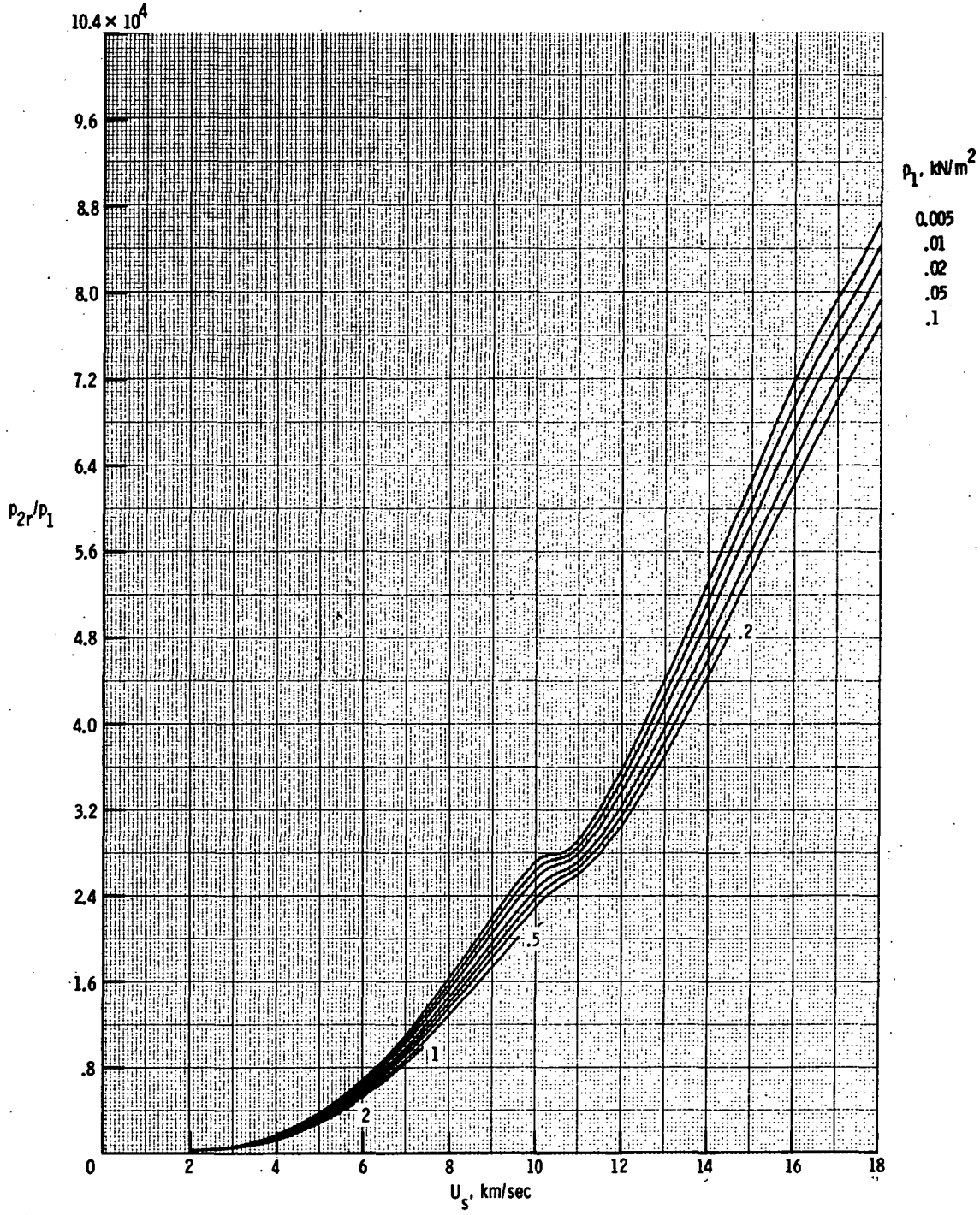
(h) Isentropic exponent $\gamma_{E,2s}/\gamma_{E,1}$.

Figure 3.- Continued.



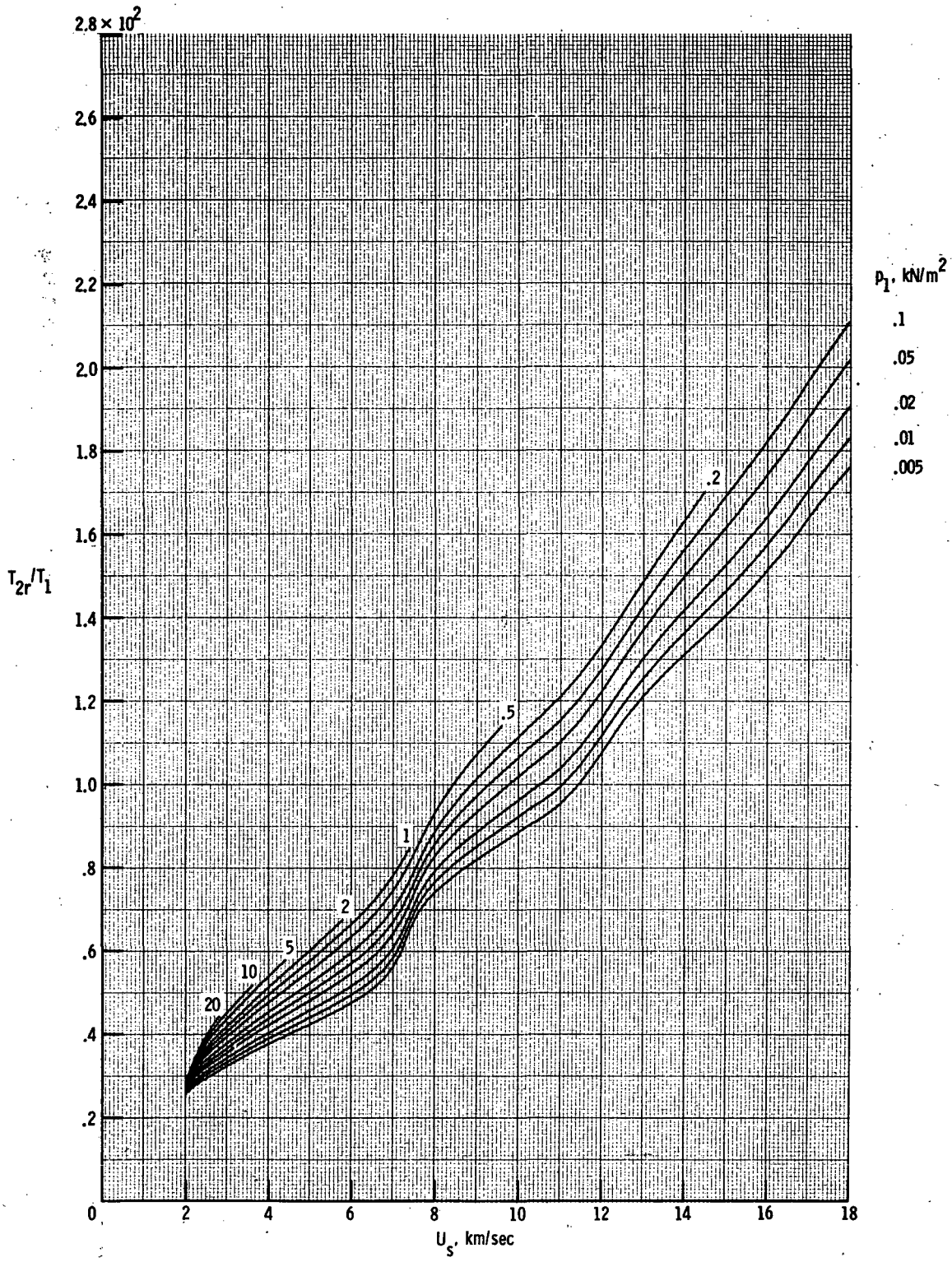
(i) Flow velocity U_{2s}/a_1.

Figure 3.- Concluded.



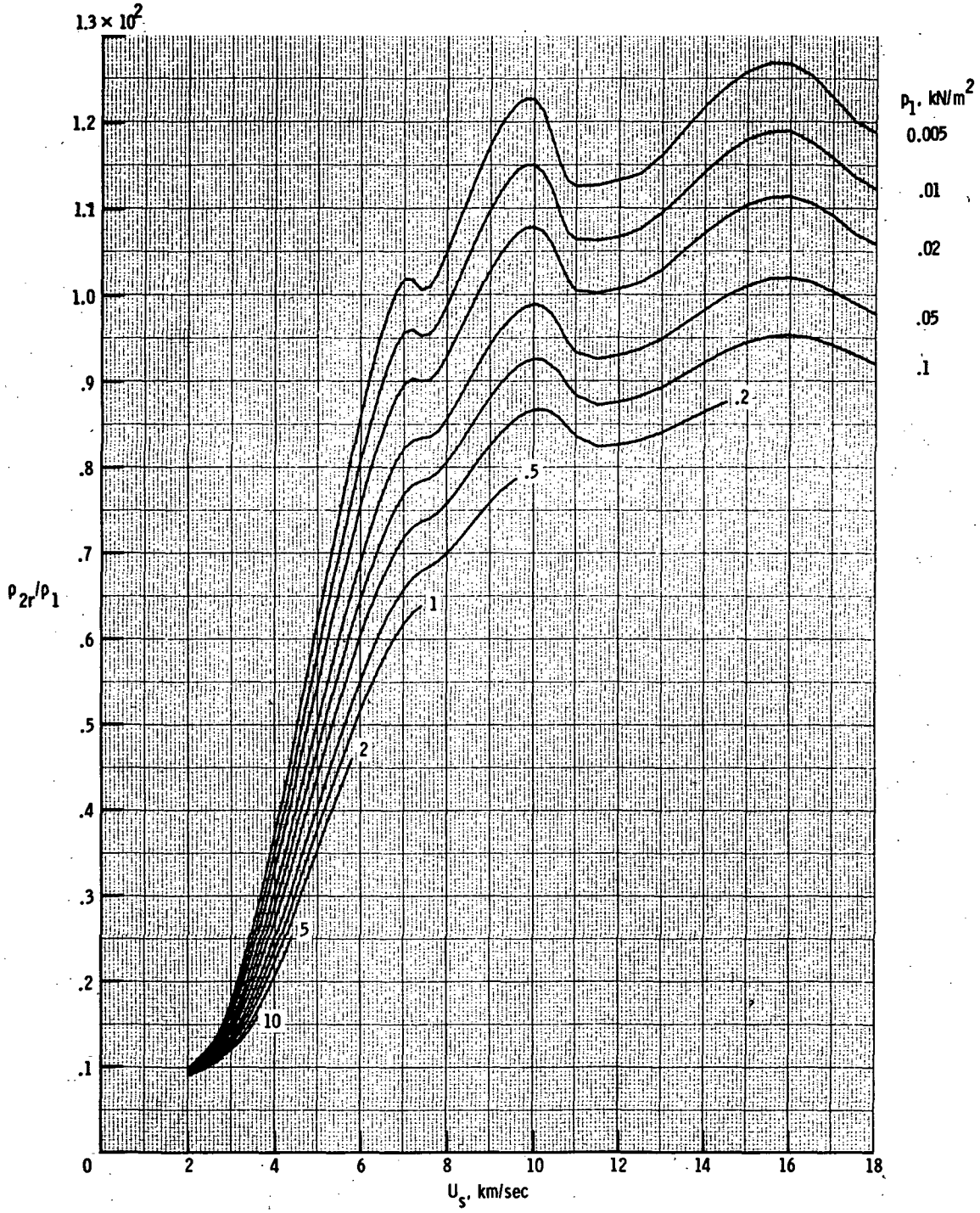
(a) Pressure p_{2r}/p_1.

Figure 4.- Thermodynamic properties behind a reflected normal shock and reflected shock velocity for pure argon.



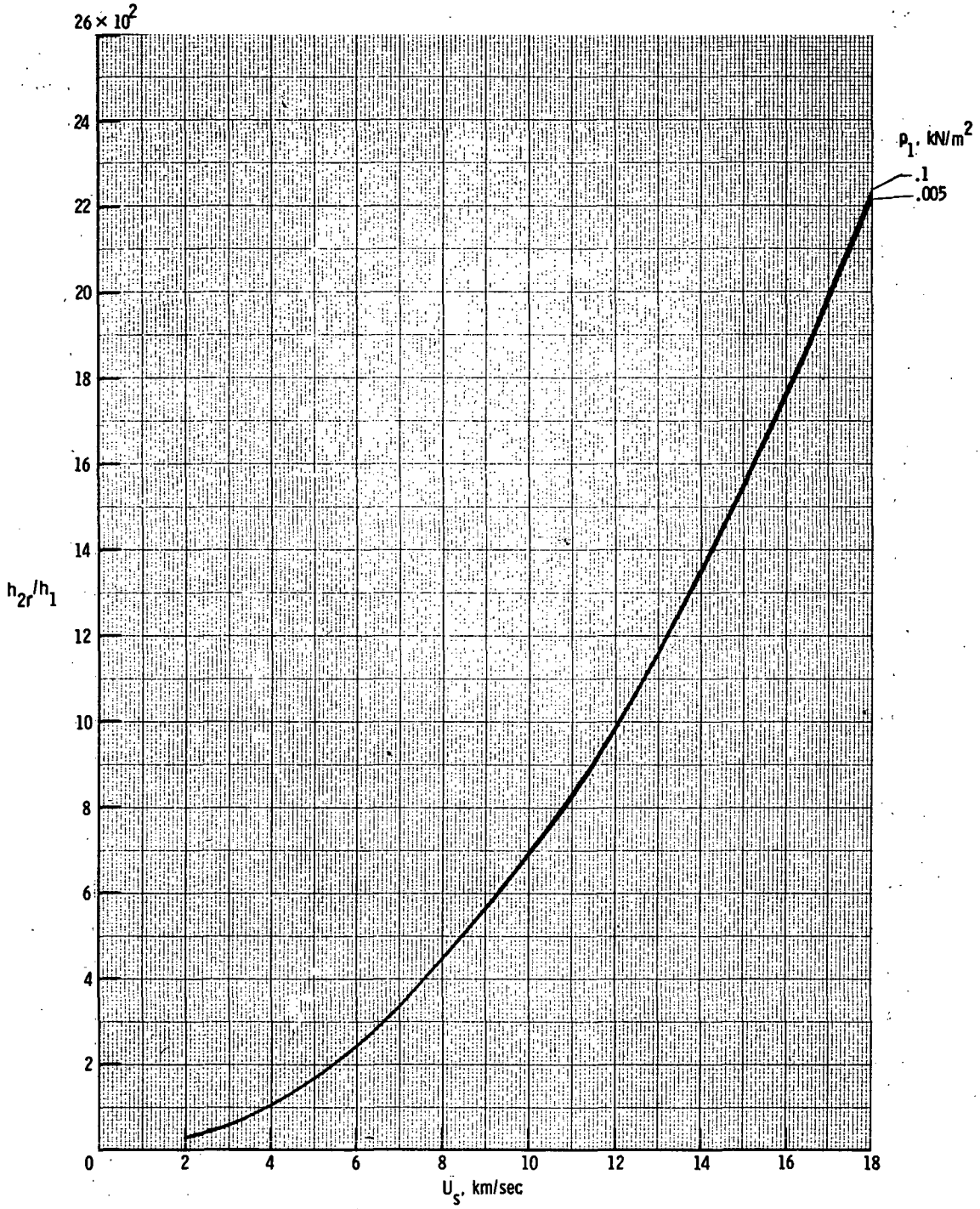
(b) Temperature T_{2r}/T_1.

Figure 4.- Continued.



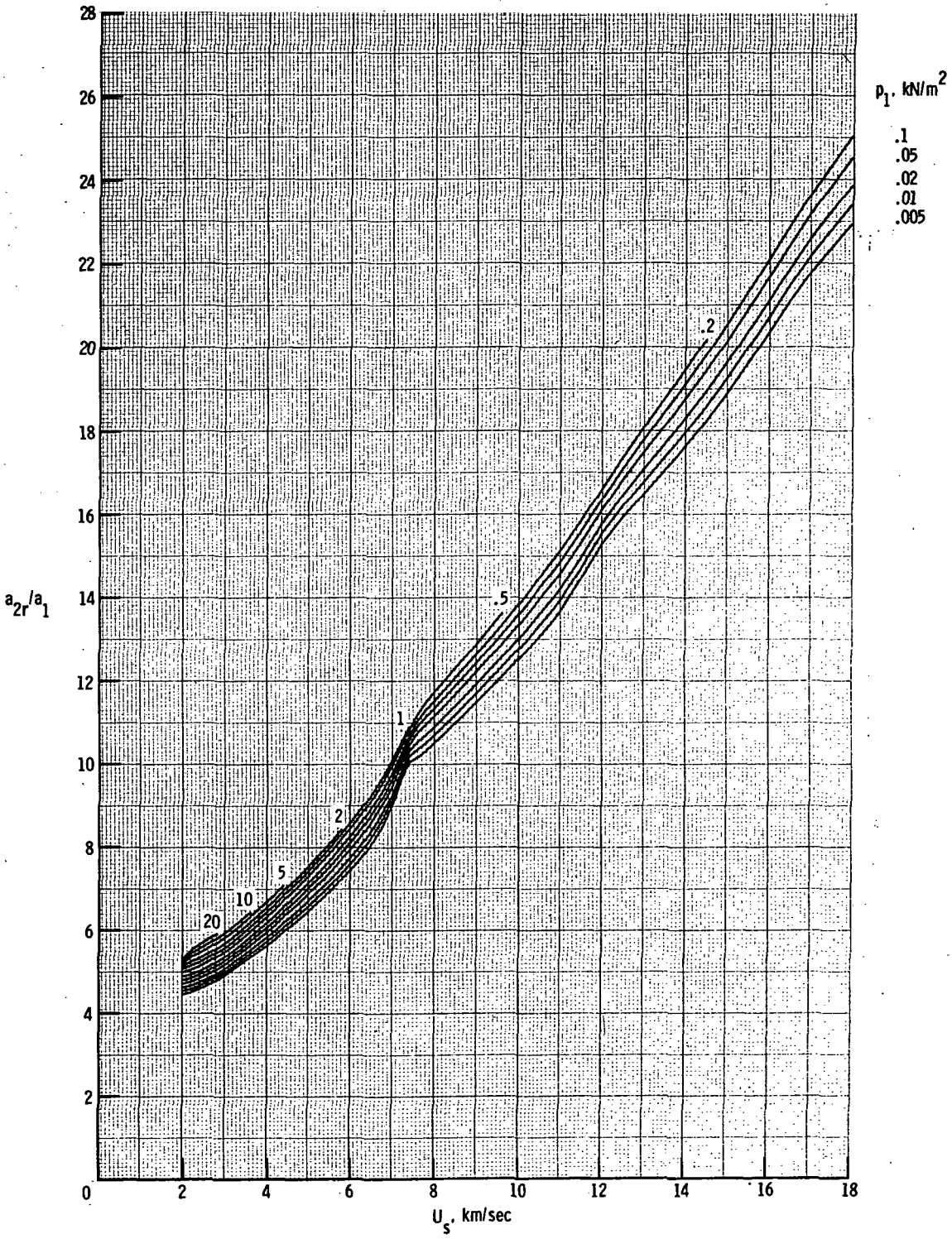
(c) Density ρ_{2r}/ρ_1.

Figure 4.- Continued.



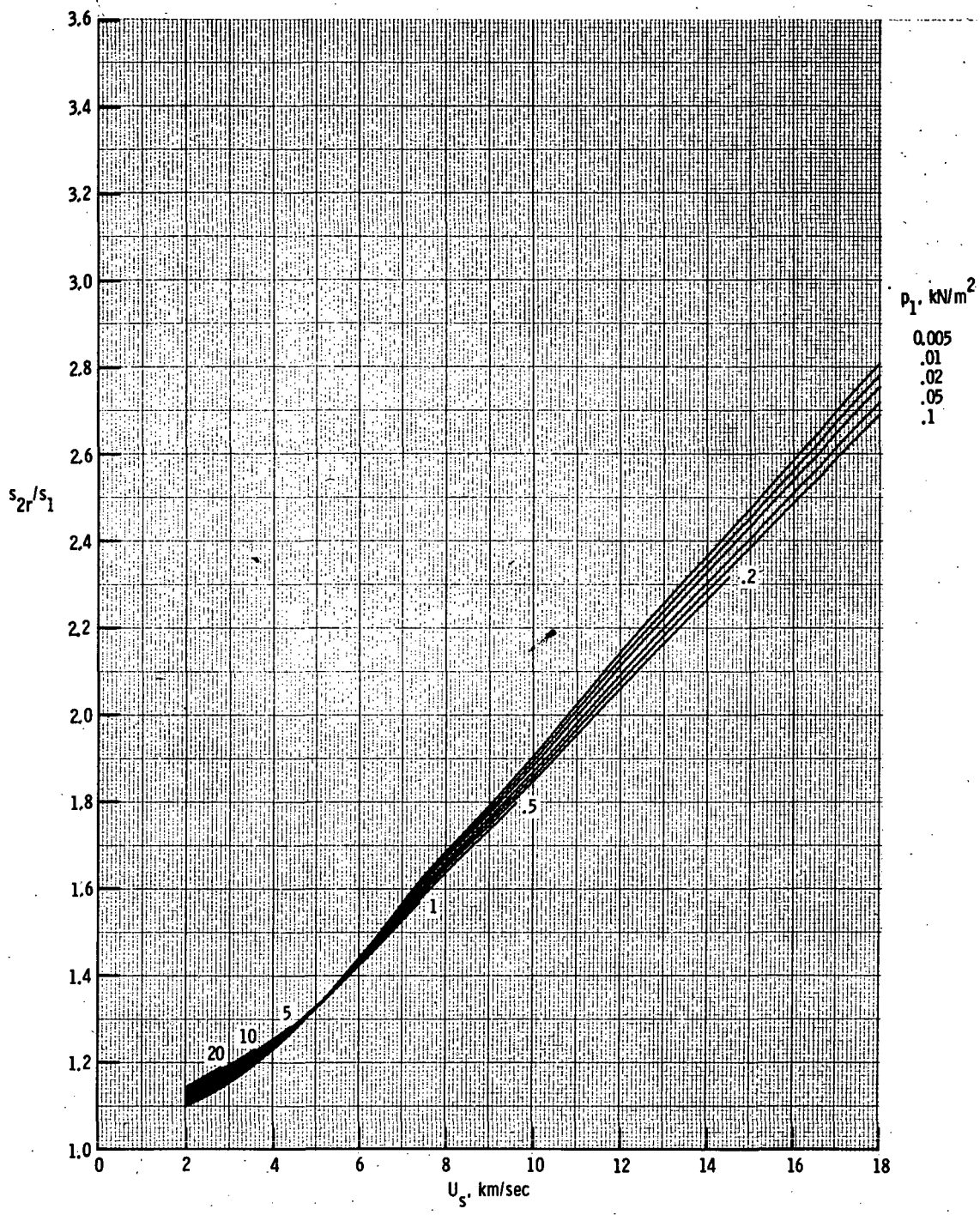
(d) Enthalpy h_{2r}/h_1.

Figure 4.- Continued.



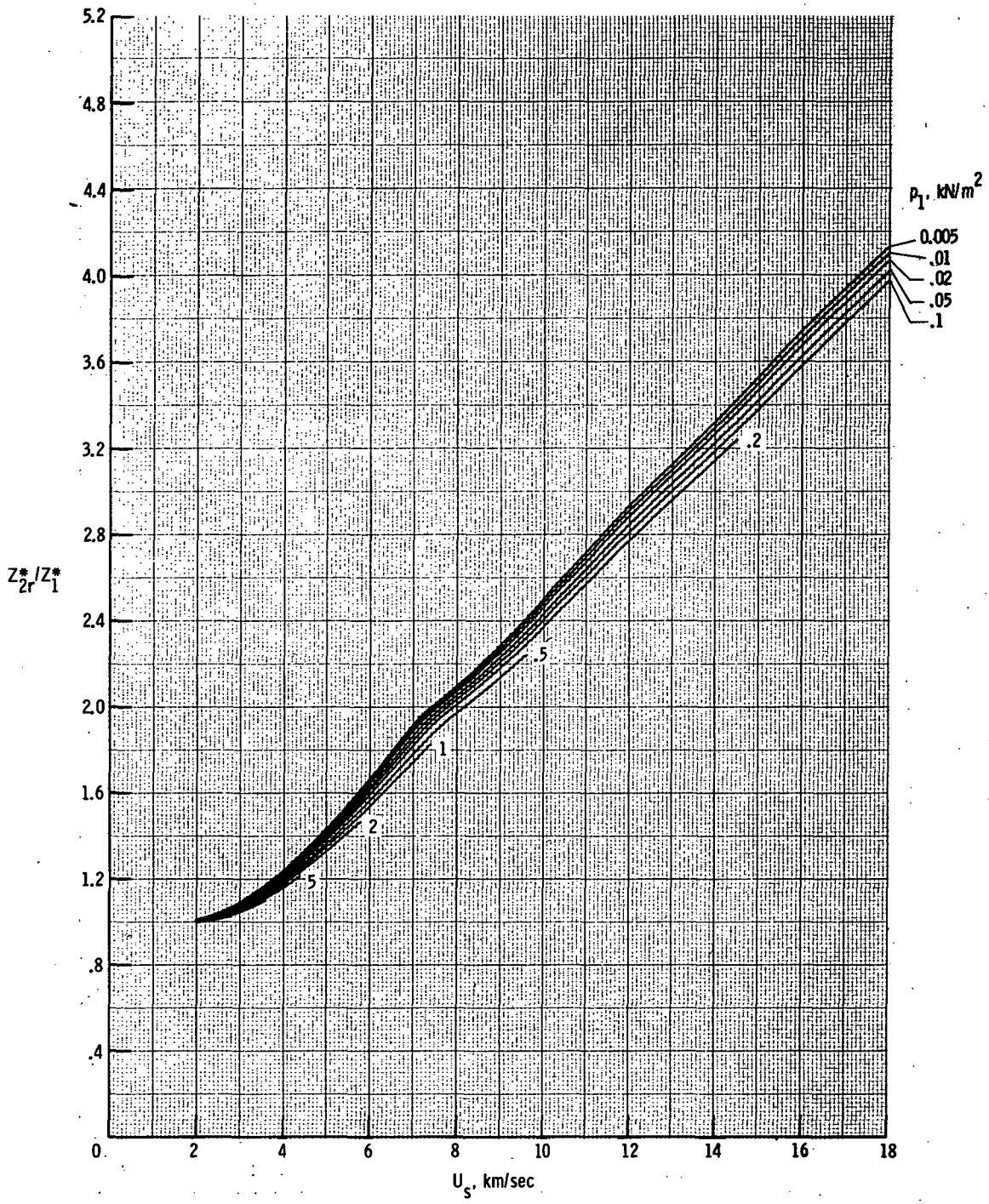
(e) Speed of sound a_{2r}/a_1.

Figure 4.- Continued.



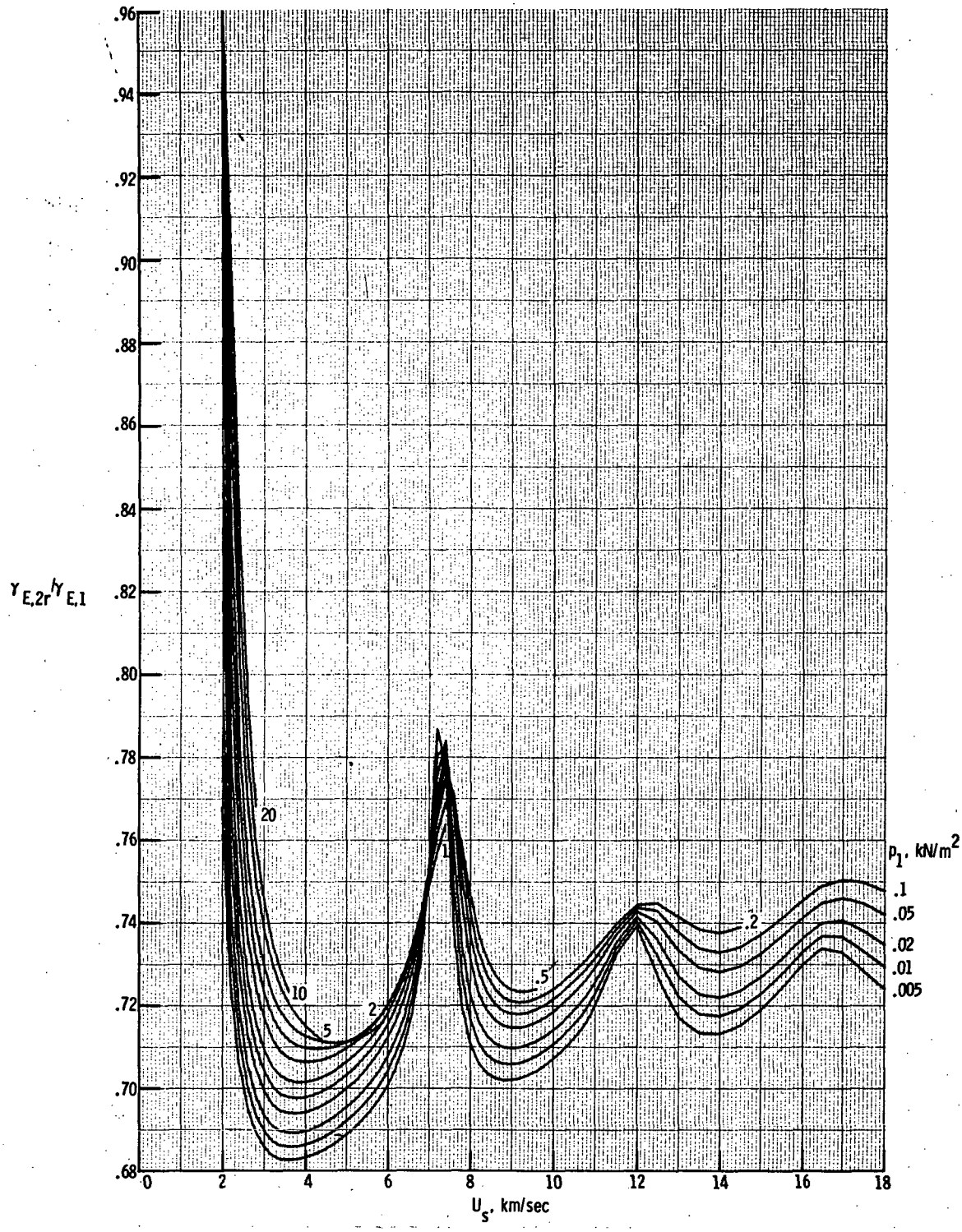
(f) Entropy s_{2r}/s_1.

Figure 4.- Continued.



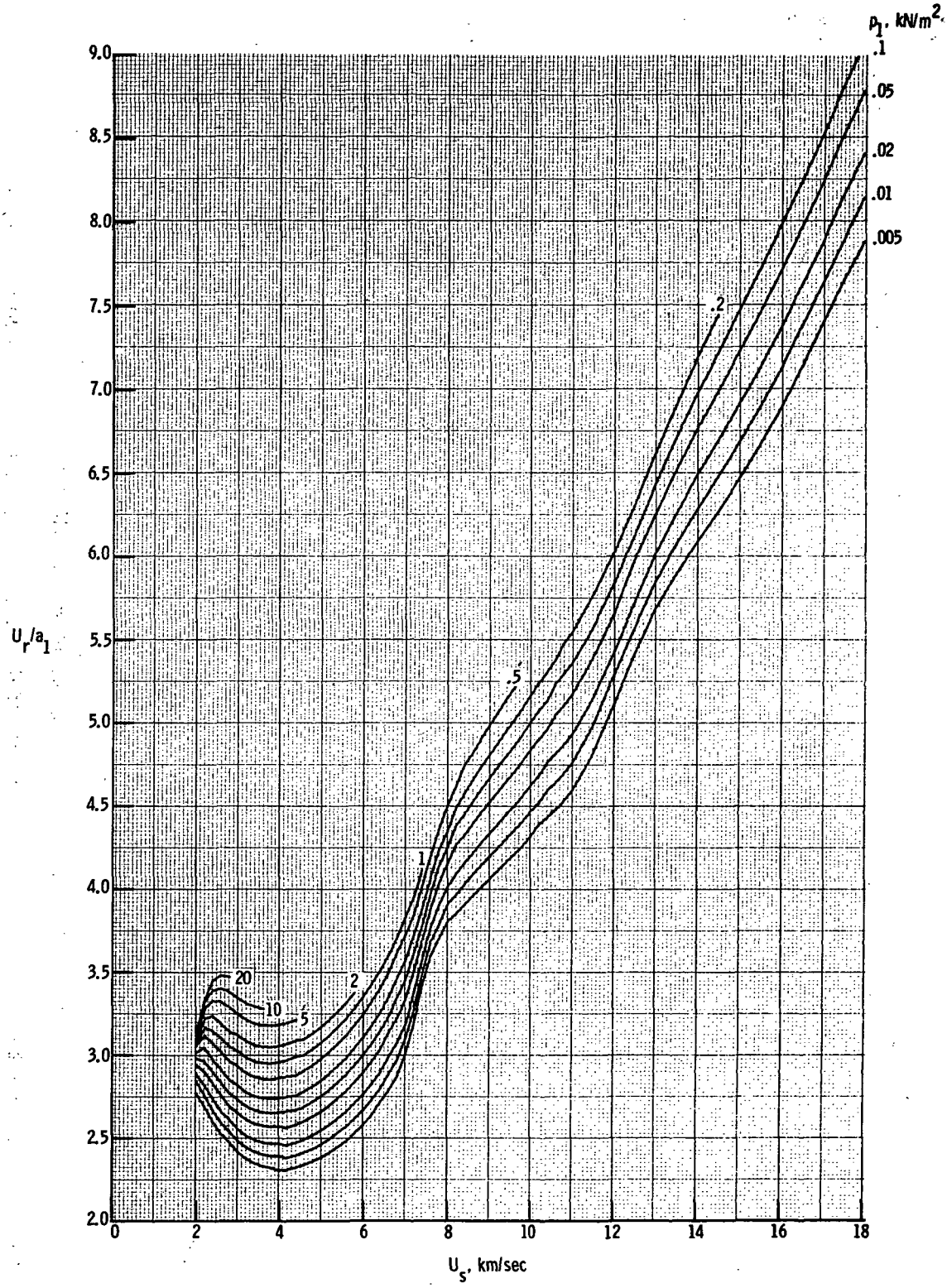
(g) Molecular-weight ratio Z^*_{2r}/Z^*_1.

Figure 4.- Continued.



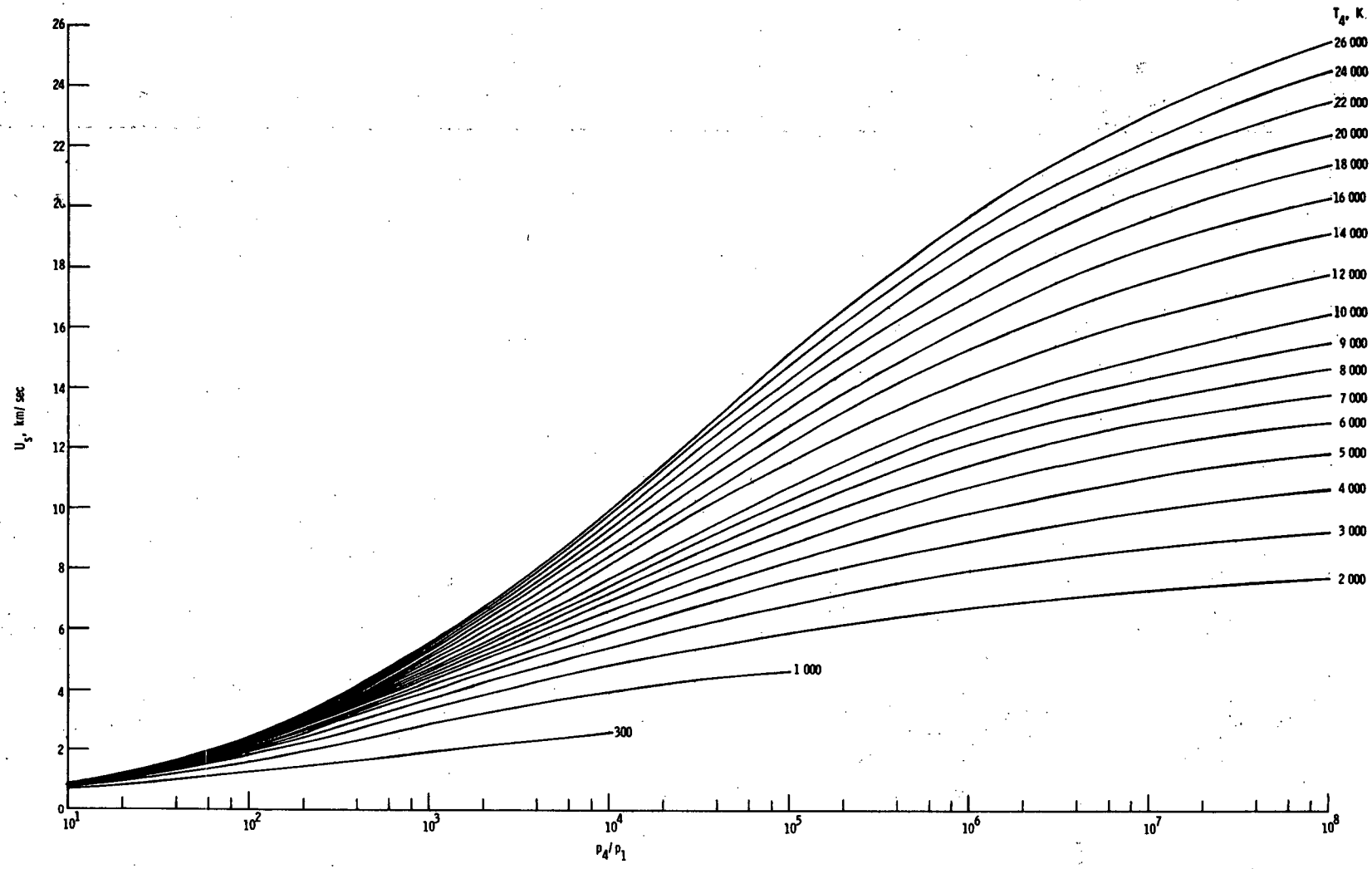
(h) Isentropic exponent $\gamma_{E,2r}/\gamma_{E,1}$.

Figure 4.- Continued.



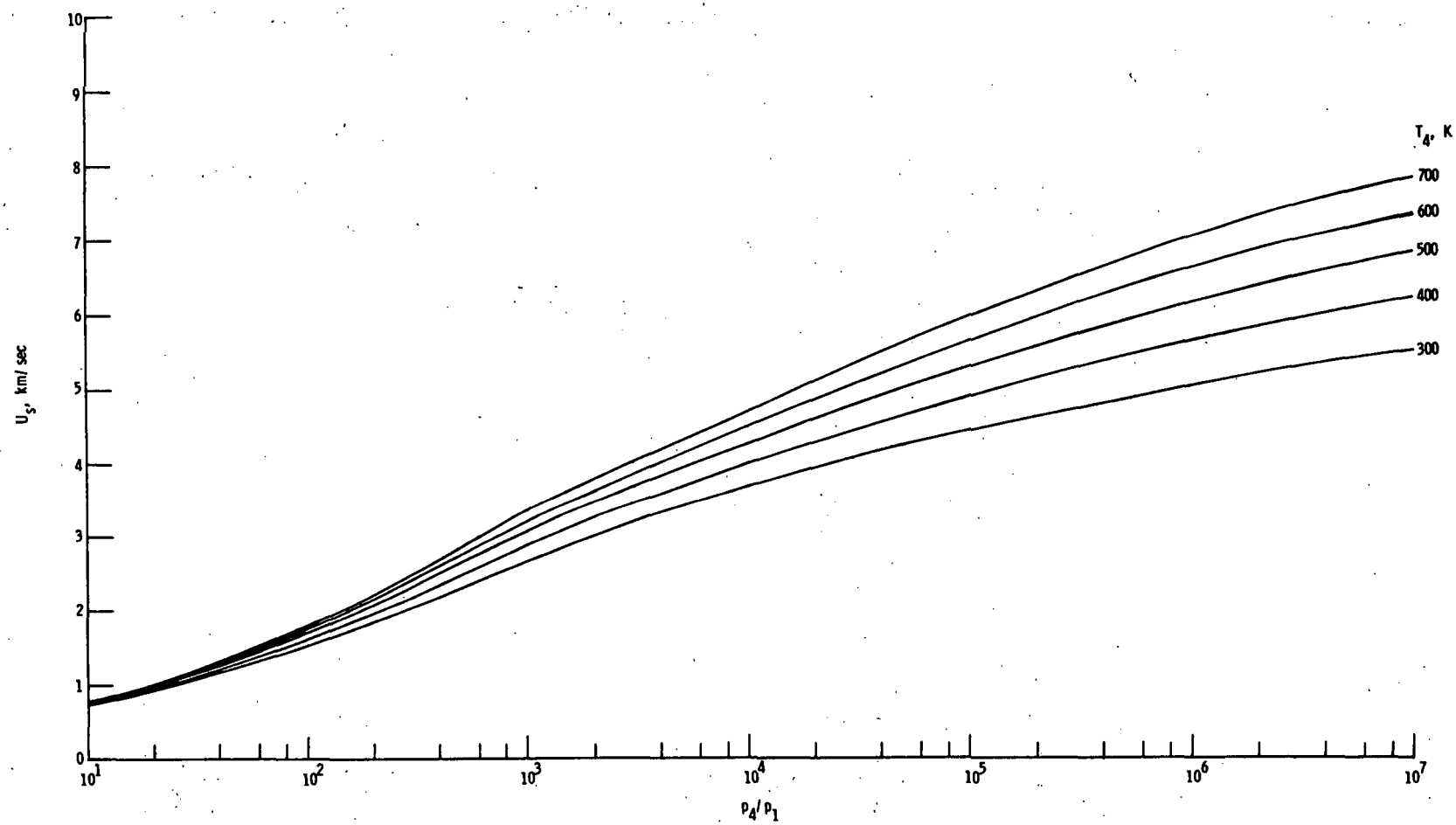
(i) Reflected shock velocity U_r/a_1.

Figure 4.- Concluded.



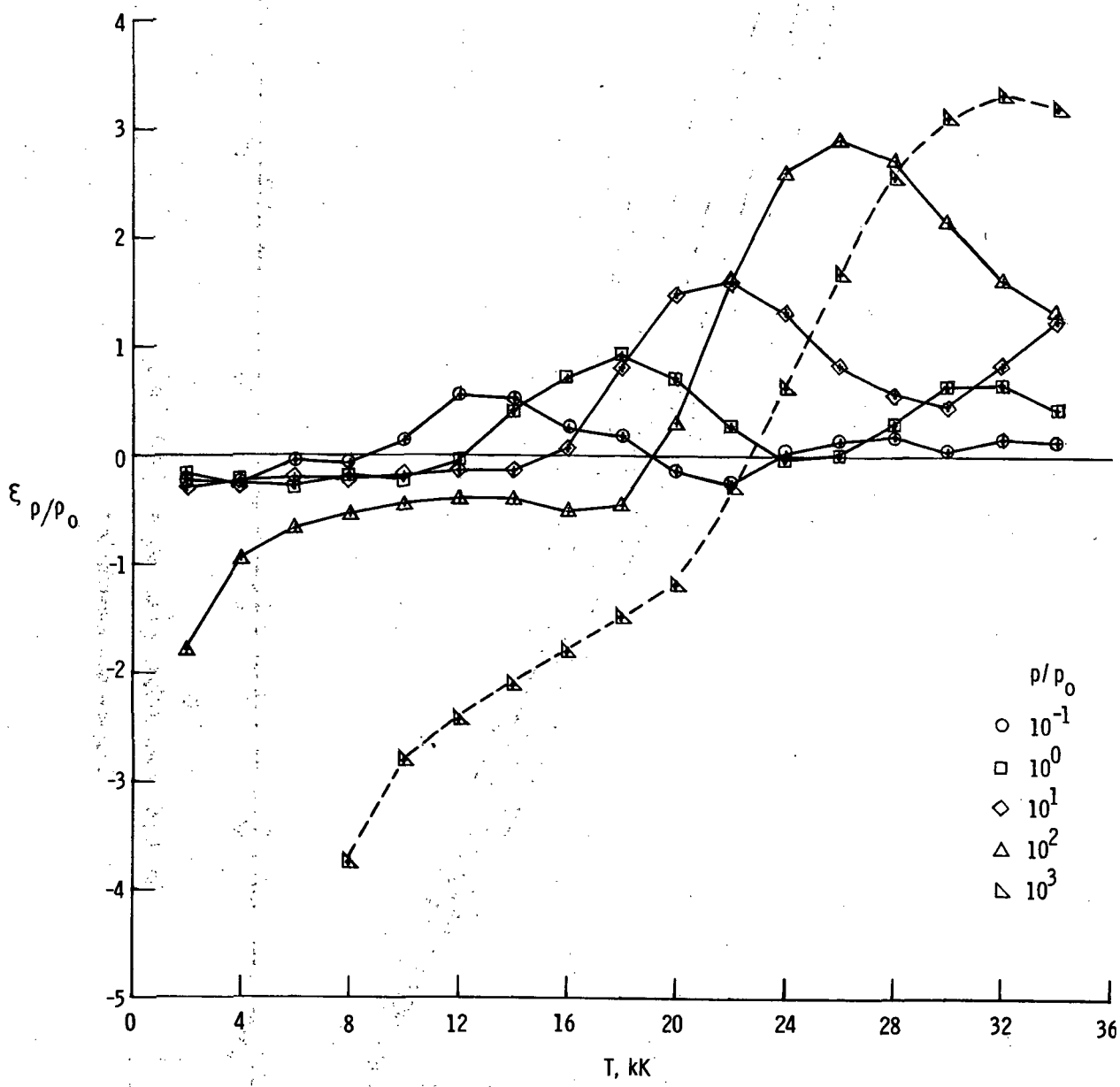
(a) Helium driver gas; $p_4 = 150\ MN/m^2$.

Figure 5.- Incident shock velocity as a function of the ratio of driver-gas pressure to argon test-gas pressure for helium and hydrogen driver gases.



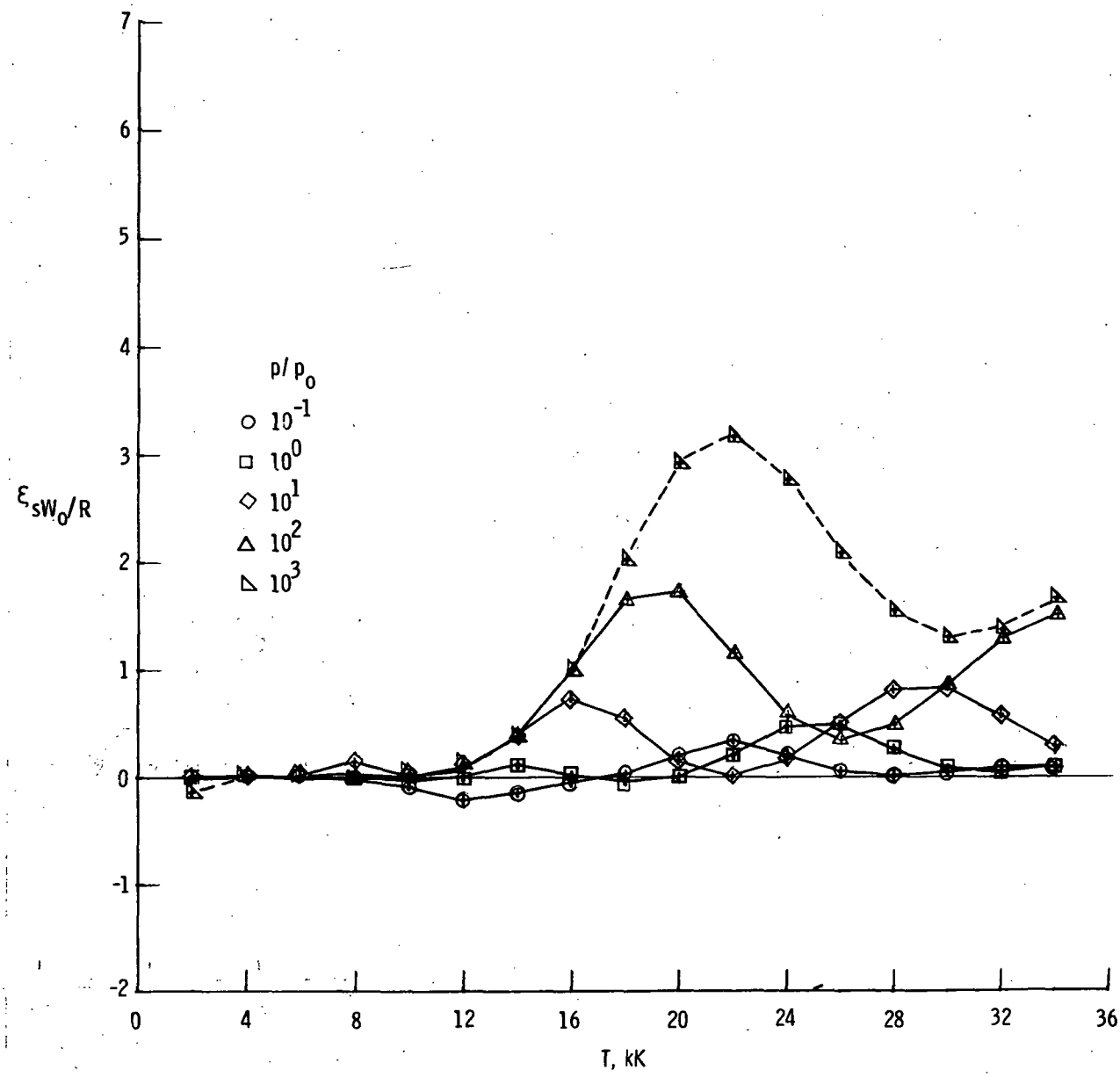
(b) Hydrogen driver gas; $p_4 = 15\ MN/m^2$.

Figure 5.- Concluded.



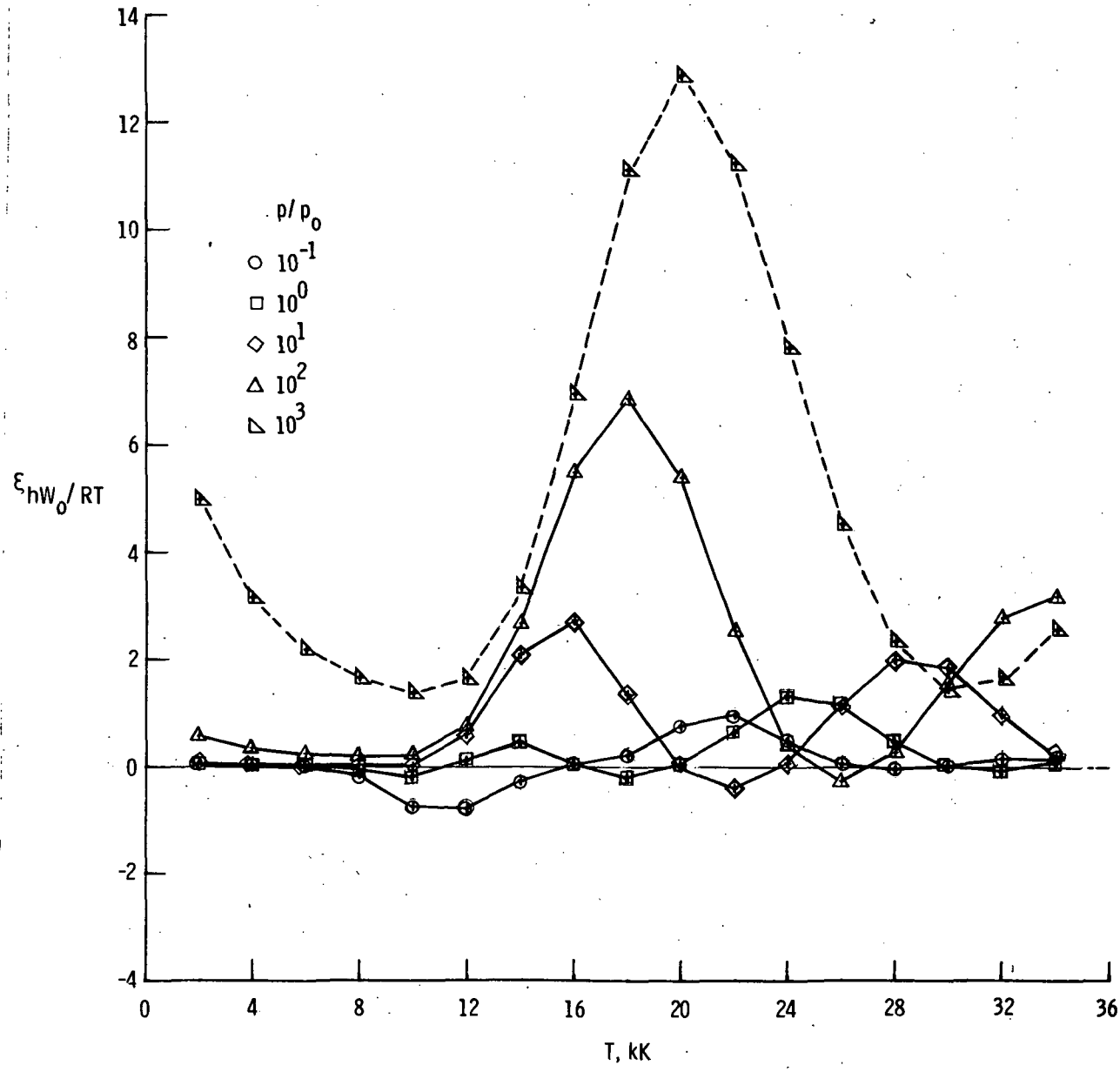
(a) Density ρ/ρ_0.

Figure 6.- Comparison of equilibrium thermodynamic properties for argon between method used herein and method of reference 9, where percent difference is plotted as a function of temperature for several pressures.



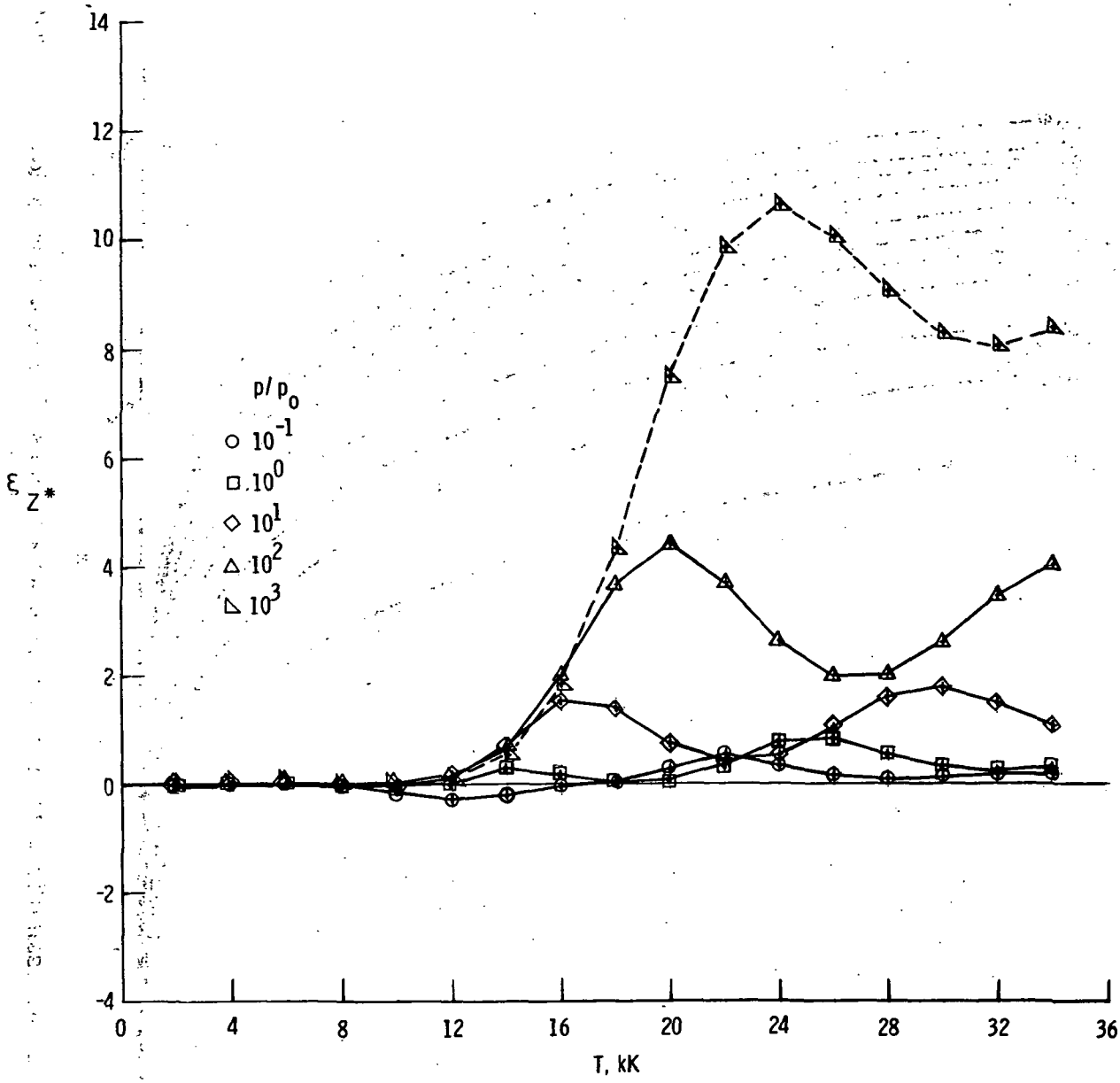
(b) Entropy sW_0/R.

Figure 6.- Continued.



(c) Enthalpy hW_o/RT.

Figure 6.- Continued.



(d) Molecular-weight ratio Z^*.

Figure 6.- Concluded.

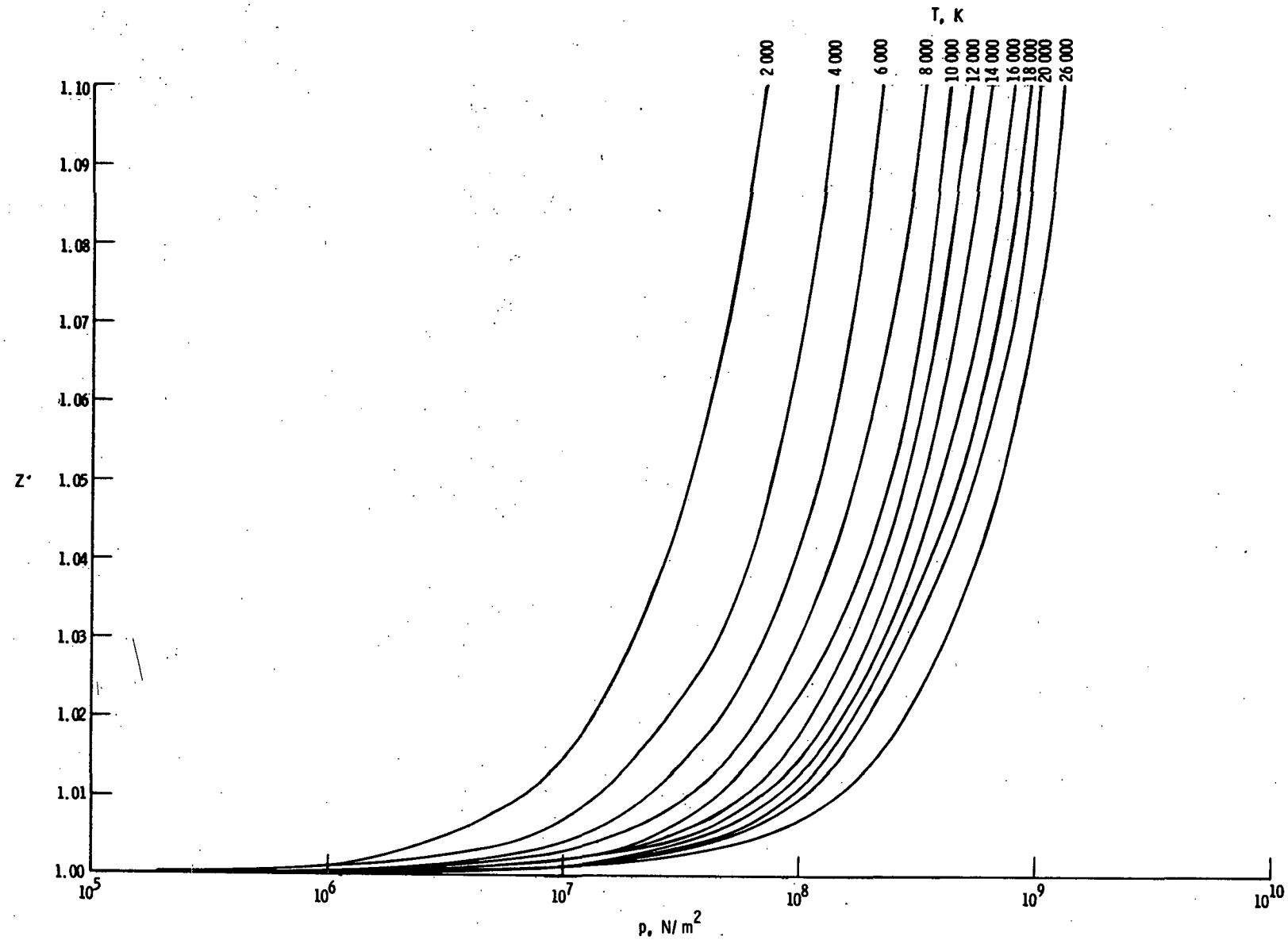
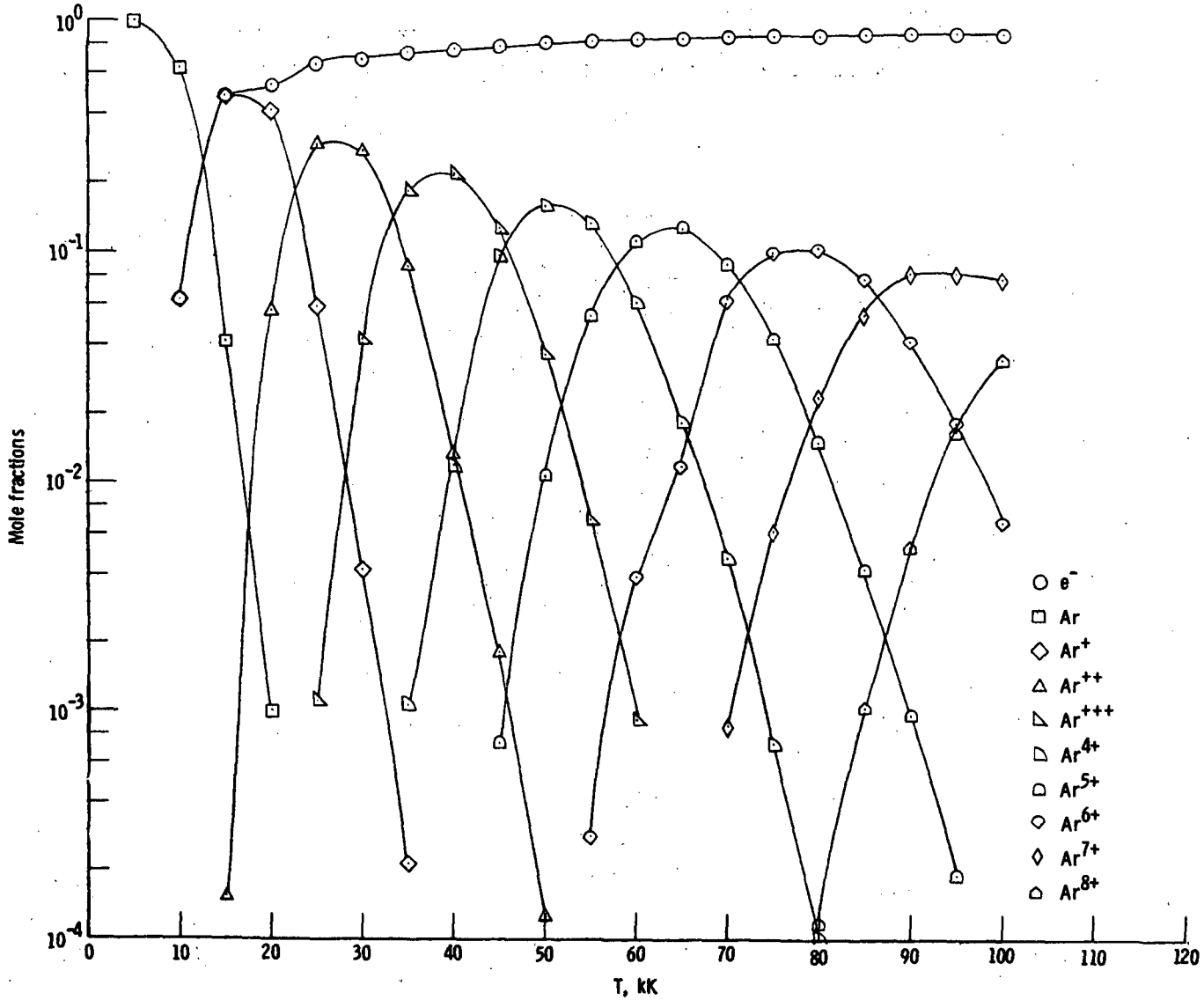
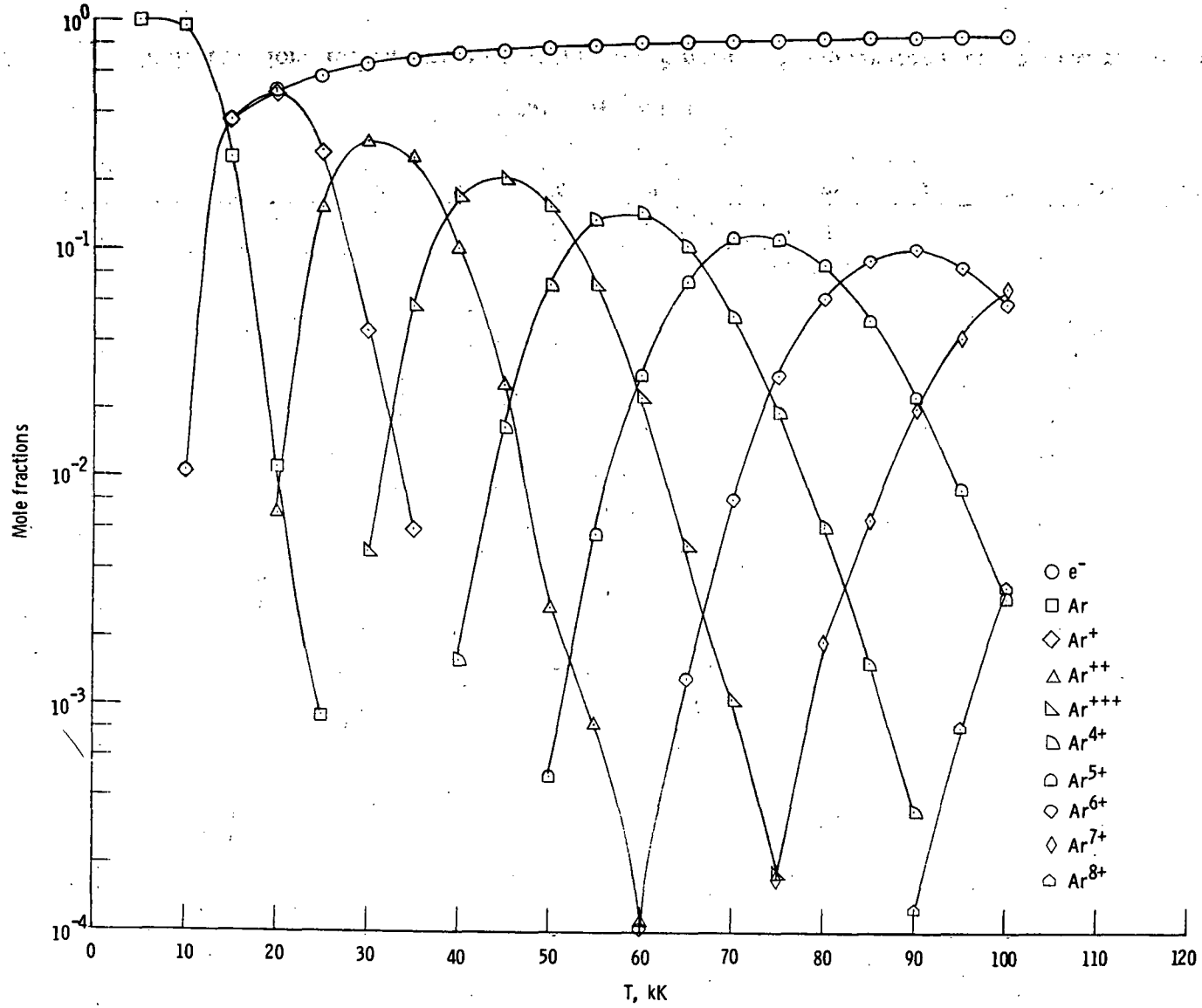


Figure 7.- Compressibility factor for real argon as a function of pressure for various temperatures.



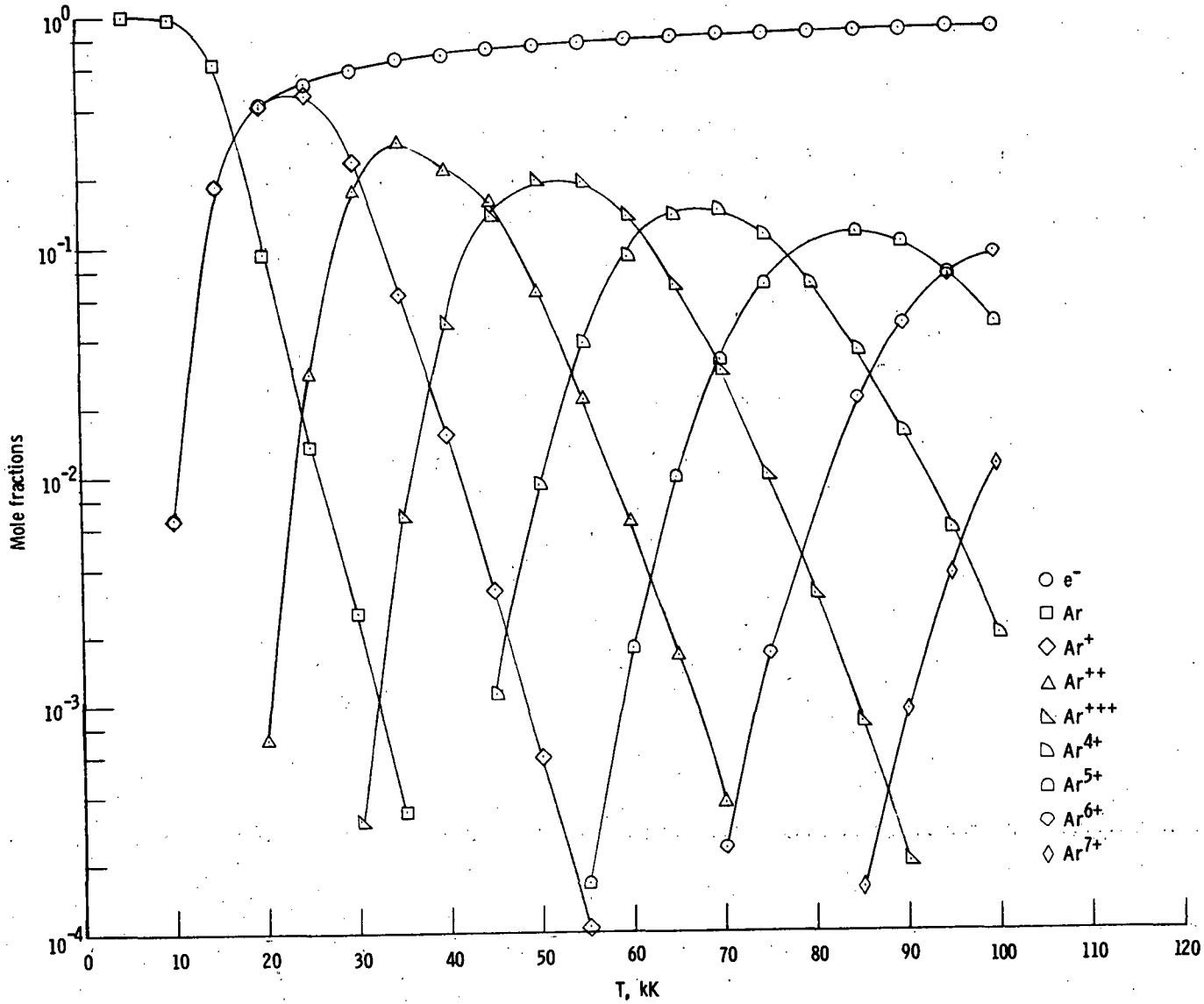
(a) $p/p_o = 0.1$.

Figure 8.- Mole fractions for equilibrium argon as a function of temperature for several pressures.



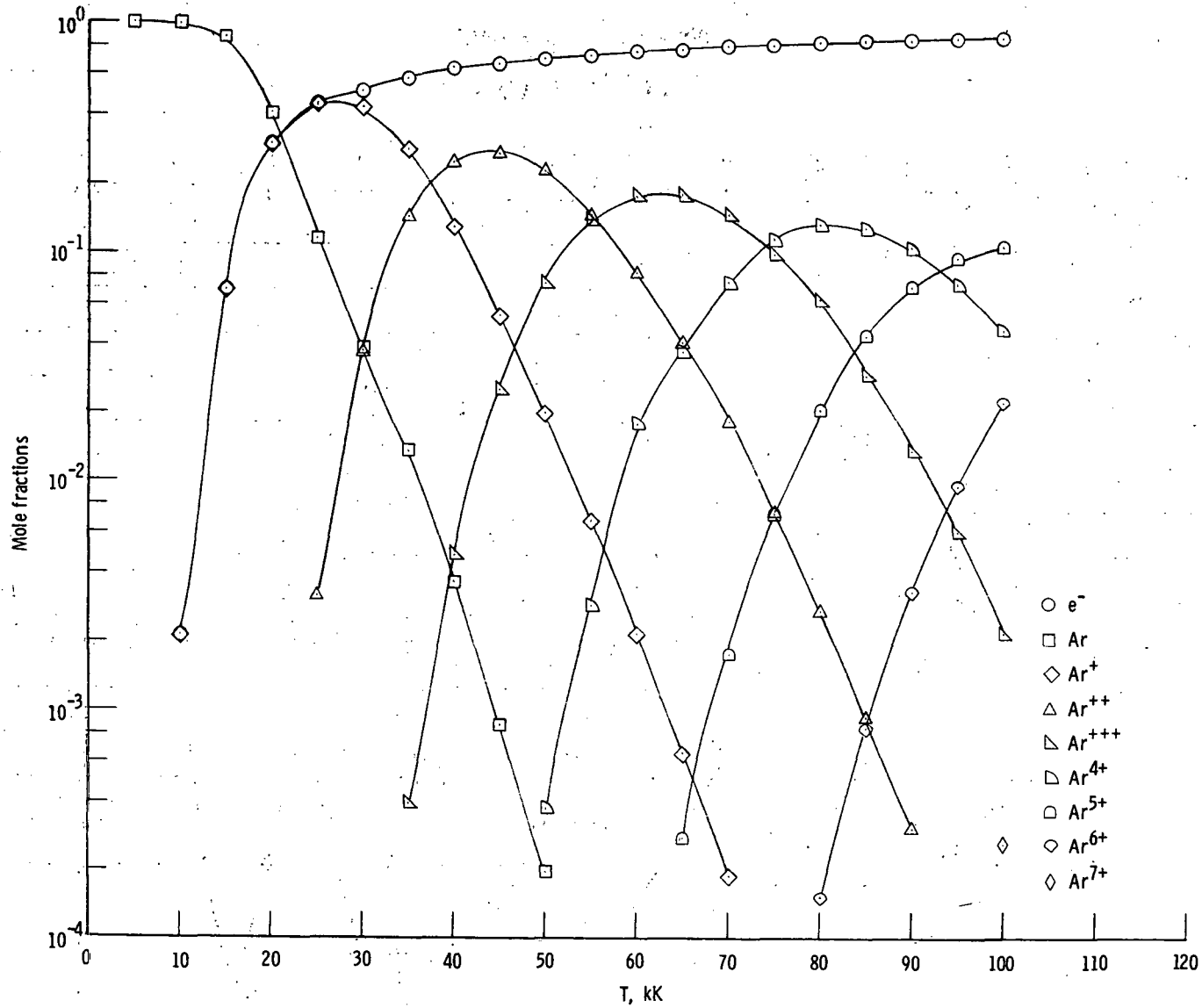
(b) $p/p_o = 1$.

Figure 8.- Continued.



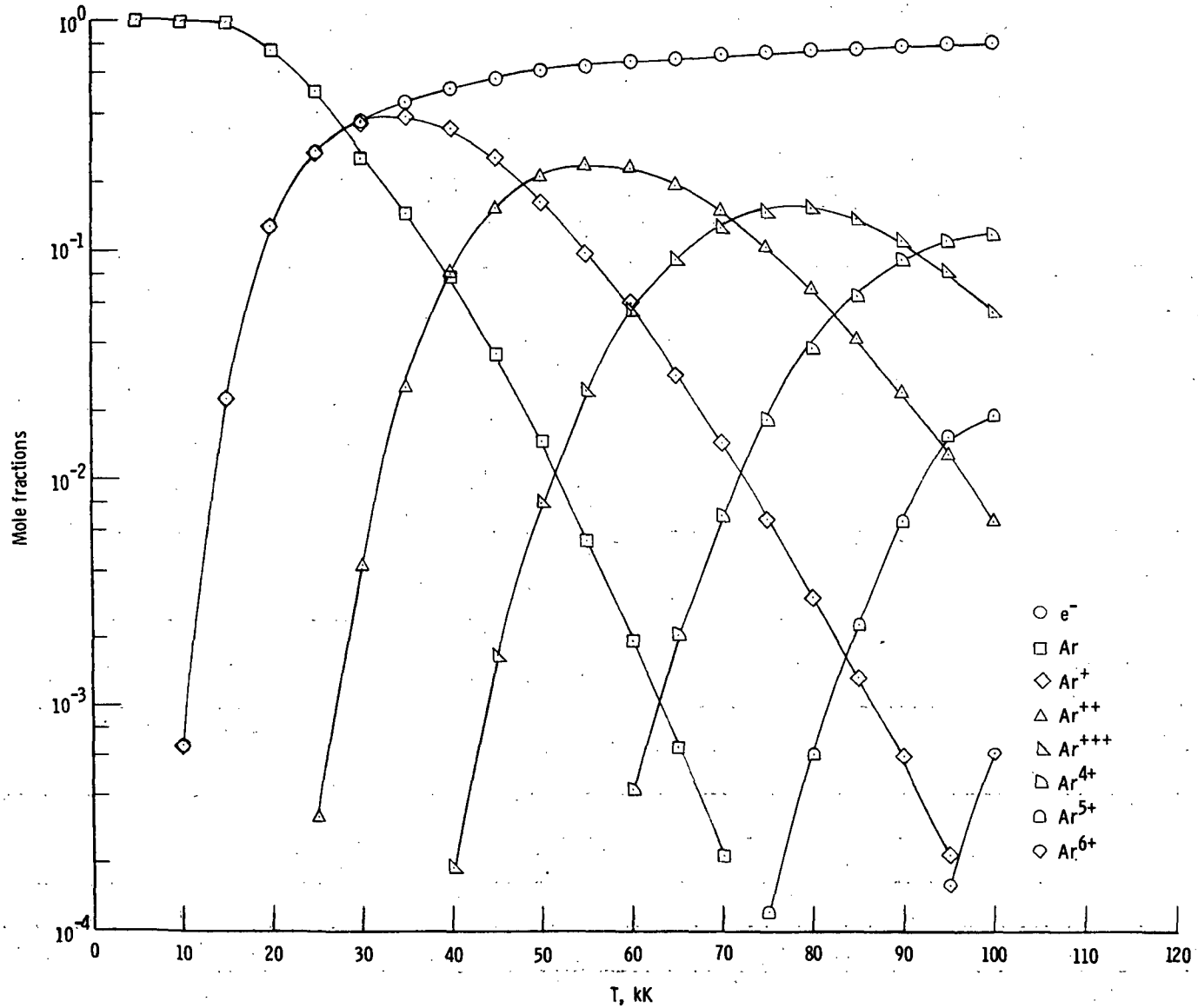
(c) $p/p_o = 10$.

Figure 8.- Continued.



(d) $p/p_o = 100.$

Figure 8.- Continued.



(e) $p/p_o = 1000$.

Figure 8.- Concluded.

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