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COMPRESSIBLE GAS PROPERTIES OF UF_6 FOR
ISENTROPIC, NORMAL SHOCK, AND
OBLIQUE SHOCK CONDITIONS

G. J. Harloff

Centrifuge Division

November 1984

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MARTIN MARIETTA ENERGY SYSTEMS, INC.
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DEPARTMENT OF ENERGY

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G. J. Harloff

Hydrodynamics and Thermal Management
Centrifuge Division

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Prepared by the
Oak Ridge Gaseous Diffusion Plant
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operated by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
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ABSTRACT

Isentropic, normal shock, and oblique shock tables are given for the real gas UF_6 for Mach numbers up to 22. An evaluation of the real gas effects is given. A computer program listing is included.

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NOMENCLATURE

A	Area
a	Speed of sound
β, δ	Ramp deflection angle relative to freestream
c_p	Specific heat at constant pressure
c_v	Specific heat at constant volume
γ	Ratio of specific heats
q	Dynamic pressure, $1/2 \rho u^2$
α, ξ	Shock angle relative to freestream
M	Mach number
μ	Mach angle
p	Pressure
R	Gas constant, 8314.5/Molecular Weight
S	Entropy
T	Temperature
U, v	Velocity
ν	Prandtl-Meyer angle
ρ	Density
ζ_1, ζ_2	Terms in equation (21)

Subscripts

n	normal
s	static
t	tangent
t	total
1	upstream of shock
2	downstream of shock

NOMENCLATURE (continued)

Superscript

* sonic

INTRODUCTION

In support of gas centrifuge development, compressible flow properties of UF_6 are presented for isentropic, normal, and oblique shock conditions. This report presents the theoretical development, tabulated data, plots of selected flow properties, and the computer program used to generate the data.

These relations are necessary to properly design and evaluate performance of the gas removal scoops in a centrifuge.

The isentropic relations are derived for a constant ratio of specific heats, γ . For the shock relations, real gas effects, e.g., variation of γ and enthalpy with temperature, are included. Mach numbers from 1 to 22 are covered, and upstream gas static temperatures of 290°, 300°, 310°, 320°, and 330°K are used. Results for air are also given.

Previous work by Gentry¹ and Fisher² gives equations for specific heats and enthalpy. Gentry published normal shock data over the same range as is presented herein. Graybeal³ presented an analysis procedure for normal and oblique shocks. The analysis procedure developed herein is unique. Good agreement with References 1 and 3 is obtained where overlapping conditions occur. The contribution of the present report is a comprehensive tabulation of isentropic, normal shock, and oblique shock data. Also, an analysis is presented of the real gas effects, and some quantification is given for the assumption of $h = C_p T$ vs $h = \int C_p dT$.

OBLIQUE SHOCK NOMENCLATURE

$$M_{1n} = M_1 \sin \xi$$

$$M_{1t} = M_1 \cos \xi$$

$$M_{2n} = M_2 \sin (\xi - \beta)$$

$$M_{2t} = M_2 \cos (\xi - \beta)$$

NOTE: in computer program

$$\xi = \alpha$$

$$\delta = \beta$$

ISENTROPIC RELATIONS

The following isentropic equations are based on the calorically perfect gas assumption that enthalpy, h , equals $C_p T$ which is not strictly valid for UF_6 , where real gas effects are important, e.g., $\gamma(T)$ and $h = \int C_p dT$. The equations are given as a first approximation and Tables 1, 2, 3, 4, and 5 are for γ of 1.056, 1.058, 1.063, 1.068, and 1.069, respectively. This range in γ covers a static temperature range from 290°K to ∞ . The tables cover a Mach number range from 0.1 to 20.0.

$$\frac{p_t}{p} = \left[1 + \left(\frac{\gamma - 1}{2} \right) M^2 \right]^{\frac{\gamma}{\gamma - 1}} \quad (1)$$

$$\frac{\rho_t}{\rho} = \left[1 + \left(\frac{\gamma - 1}{2} \right) M^2 \right]^{\frac{\gamma}{\gamma - 1}} \quad (2)$$

$$\frac{T_t}{T} = 1 + \left(\frac{\gamma - 1}{2} \right) M^2 \quad (3)$$

$$\frac{A}{A^*} = \frac{1}{M} \left[\frac{2}{\gamma + 1} \left(1 + \left(\frac{\gamma - 1}{2} \right) M^2 \right) \right]^{\frac{\gamma + 1}{2(\gamma - 1)}} \quad (4)$$

$$\frac{U}{a^*} = M^* = \left[\frac{\left(\frac{\gamma + 1}{2} \right) M^2}{1 + \left(\frac{\gamma - 1}{2} \right) M^2} \right]^{1/2} \quad (5)$$

$$q/p_t = \frac{\gamma}{2} M^2 \left(p/p_t \right) \quad (6)$$

$$v(M) = \sqrt{\frac{\gamma + 1}{\gamma - 1}} \tan^{-1} \left[\left(\frac{\gamma - 1}{\gamma + 1} \right) (M^2 - 1) \right]^{1/2} - \tan^{-1} (M^2 - 1)^{1/2} \quad (7)$$

$$\mu = \arcsin \left(\frac{1}{M} \right) \quad (8)$$

NORMAL AND OBLIQUE SHOCK RELATIONS - REAL GAS EFFECTS

Variable enthalpy, C_p , and γ effects are incorporated in the following analysis. Enthalpy is defined to be

$$h(T) = \int_0^T \frac{\partial h}{\partial T} \Big|_p dT = \int_0^T C_p dT . \quad (9)$$

Also

$$C_p - C_v = R , \quad (10)$$

and

$$C_p = \frac{\gamma R}{\gamma - 1} . \quad (11)$$

Static Temperature

Using a total energy balance across a shock:

$$h + \frac{U_n^2}{2} = h + \frac{\gamma RT}{2} \frac{U_n^2}{\gamma RT} \left(\frac{\gamma - 1}{\gamma} \right) = h + \frac{C_p T (\gamma - 1)}{2} M_n^2 = \text{constant} \quad (12)$$

results in

$$\frac{T_2}{T_1} = \frac{\frac{h_1}{T_1} + C_{p1} \left(\frac{\gamma_1 - 1}{2} \right) M_{1n}^2}{\frac{h_2}{T_2} + C_{p2} \left(\frac{\gamma_2 - 1}{2} \right) M_{2n}^2} . \quad (13)$$

Static Pressure

Equations of continuity, the perfect gas equation of state, and the definition of sound speed provide an equation for static pressure ratio across a shock.

$$\rho_1 v_{1n} = \rho_2 v_{2n} \quad (14)$$

$$\frac{p_1}{T_1} v_{1n} = \frac{p_2}{T_2} v_{2n} \quad (15)$$

$$\frac{T_2}{T_1} = \frac{p_2}{p_1} \frac{v_{2n}}{a_2} \frac{a_2}{a_1} \frac{a_1}{v_{1n}} = \frac{p_2}{p_1} \frac{M_{2n}}{M_{1n}} \sqrt{\frac{\gamma_2 T_2}{\gamma_1 T_1}} \quad (16)$$

$$\frac{T_2}{T_1} = \left(\frac{p_2}{p_1} \right)^2 \left(\frac{M_{2n}}{M_{1n}} \right)^2 \left(\frac{\gamma_2}{\gamma_1} \right) = \frac{\frac{h_1}{T_1} + C_{p1} \left(\frac{\gamma_1 - 1}{2} \right) M_{1n}^2}{\frac{h_2}{T_2} + C_{p2} \left(\frac{\gamma_2 - 1}{2} \right) M_{2n}^2} , \quad (17)$$

results in

$$\frac{p_2}{p_1} = \sqrt{\left(\frac{\gamma_1}{\gamma_2}\right)} \left(\frac{M_{1n}}{M_{2n}}\right) \frac{\sqrt{\frac{h_1}{T_1} + C_{p1} \left(\frac{\gamma_1 - 1}{2}\right) M_{1n}^2}}{\sqrt{\frac{h_2}{T_2} + C_{p2} \left(\frac{\gamma_2 - 1}{2}\right) M_{2n}^2}}, \quad (18)$$

Using conservation of linear momentum,

$$p_1 + \rho_1 v_{1n}^2 = p_2 + \rho_2 v_{2n}^2 = p + p M_n^2 \gamma = p(1 + \gamma M_n^2) \quad (19)$$

$$\frac{p_2}{p_1} = \frac{1 + \gamma_1 M_{1n}^2}{1 + \gamma_2 M_{2n}^2}. \quad (20)$$

Equations (18) and (20) are equated and solved for M_{2n} . Squaring both sides results in:

$$\begin{aligned} & [1 + 2\gamma_2 M_{2n}^2 + \gamma_2^2 M_{2n}^4] \underbrace{\gamma_1 M_{1n}^2 \left[\frac{h_1}{T_1} + C_{p1} \left(\frac{\gamma_1 - 1}{2} \right) M_{1n}^2 \right]}_{\zeta_1} \\ &= \underbrace{[1 + 2\gamma_1 M_{1n}^2 + \gamma_1^2 M_{1n}^4] \gamma_2 M_{2n}^2}_{\zeta_2} \left[\frac{h_2}{T_2} + C_{p2} \left(\frac{\gamma_2 - 1}{2} \right) M_{2n}^2 \right] \end{aligned} \quad (21)$$

or

$$M_{2n}^4 \underbrace{\left[\gamma_2^2 \zeta_1 - C_{p2} \zeta_2 \left(\frac{\gamma_2 - 1}{2} \right) \right]}_A + M_{2n}^2 \underbrace{\left[2\gamma_2 \zeta_1 - \zeta_2 \frac{h_2}{T_2} \right]}_B + \underbrace{\zeta_1}_C = 0, \quad (22)$$

which is solved by the quadratic formula for M_2 , e.g.,

$$M_{2n} = \sqrt{\frac{-B - \sqrt{B^2 - 4AC}}{2A}} \quad . \quad (23)$$

During the iterative solution, the discriminant is set to zero if it goes negative.

Turning Angle

Using continuity,

$$\rho_1 v_{1n} = \rho_1 v_{1t} \tan \xi = \rho_2 v_{2n} = \rho_2 v_{2t} \tan (\xi - \delta) , \quad (24)$$

where $v_{1t} = v_{2t}$,

$$\frac{\rho_1}{\rho_2} = \frac{\tan (\xi - \delta)}{\tan (\xi)} = \frac{\tan (\xi) - \tan \delta}{[1 + \tan \xi \tan \delta] \tan \xi} \quad . \quad (25)$$

Solving for the turning ramp angle δ yields

$$\delta = \tan^{-1} \left[\frac{\tan \xi (1 - \rho_1/\rho_2)}{1 + \frac{\rho_1}{\rho_2} \tan^2 \xi} \right] \quad . \quad (26)$$

SYSTEM OF EQUATIONS

The equations are such that the unknowns are ρ_2 , T_2 , δ , M_{2n} , and p_2 . They are solved iteratively by a Newton-Raphson technique to determine T_2 such that the total enthalpy balances across the shock, e.g.,

$$h_1 + \frac{u_{1n}^2}{2} = h_2 + \frac{u_{2n}^2}{2} = h_t = \text{constant} \quad . \quad (27)$$

Total Pressure Ratio

After the above solution for M_{2n} , δ , p_2/p_1 , T_2/T_1 , etc., is obtained, the total pressure ratio across the shock can be determined. The change in entropy, S , is

$$dS = \frac{dh}{T} - \frac{1}{T_p} dp = \frac{dh}{T} - \frac{R}{p} dp \quad (28)$$

$$\frac{dS}{R} = \frac{dh}{RT} - \frac{dp}{p} \quad (29)$$

$$\frac{\Delta S}{R} = \frac{1}{R} \int \frac{dh}{T} - \ln(p) \quad (30)$$

$$dh = C_p dT$$

$$\Delta S_s = \int_1^2 \frac{C_p dT}{T} - R \ln(p_2/p_1) = \langle C_{ps} \rangle \ln(T_2/T_1) - R \ln(p_2/p_1) \quad (31)$$

$$\begin{aligned} \Delta S_t &= \int_1^2 \frac{C_p dT}{T} - R \ln(p_{t2}/p_{t1}) = \langle C_{pt} \rangle \ln(T_{t2}/T_{t1}) \\ &\quad - R \ln(p_{t2}/p_{t1}) . \end{aligned} \quad (32)$$

Equating $\Delta S_s = \Delta S_t$ and solving for (p_{t2}/p_{t1}) ,

$$\ln(p_{t2}/p_{t1}) = \ln(p_2/p_1) - \frac{\langle C_{ps} \rangle}{R} \ln \frac{T_2}{T_1} + \frac{\langle C_{pt} \rangle}{R} \ln (T_{t2}/T_{t1}) , \quad (33)$$

$$\text{where } \frac{\langle C_p \rangle}{R} = \left\langle \frac{\gamma}{\gamma - 1} \right\rangle ; \quad \langle \gamma \rangle = (\gamma_1 + \gamma_2)/2 \quad (34)$$

$$\frac{p_{t2}}{p_{t1}} = \left(\frac{T_1}{T_2} \right)^{\left\langle \frac{\gamma_s}{\gamma_s - 1} \right\rangle} \left(\frac{p_2}{p_1} \right)^{\left\langle \frac{\gamma_t}{\gamma_t - 1} \right\rangle} \left(\frac{T_{t2}}{T_{t1}} \right) , \quad (35)$$

where T_t is solved by a Newton-Raphson procedure using the relation between H and T , i.e., from $H_t(T_t)$. The total pressure ratio across the shock, as well as the downstream total temperature, is included in the tabulated results.

RATIO OF SPECIFIC HEATS AND ENTHALPY MODEL

The ratio of specific heats, gamma, model is taken from Gentry.¹

$$\gamma = 1 + \frac{1}{3. + \sum_{i=1}^6 \frac{g_i x_i^2 e^{-x_i}}{(1 - e^{-x_i})^2}}, \quad (36)$$

where $x_i = \theta_i/T$

and

i	g_i	θ_i (°K)
	degeneracy of the i^{th} vibrational mode	
1	1.	959.
2	2.	768.
3	3.	900.
4	3.	267.
5	3.	288.
6	3.	205.

A plot of γ vs T is given in Fig. 1. In the high temperature limit, $\gamma \rightarrow 1.0555$.

Also shown for reference is an average γ calculated from C_p , e.g.,

$$\gamma = \frac{1}{1 - R/C_p(T)}. \quad (37)$$

The two γ 's are considerably different. This is a direct result of the real gas properties of UF_6 .

Similarly, the enthalpy model is given by Gentry¹ as

$$h = RT \left[4. + \sum_{i=1}^6 \frac{g_i x_i^2 e^{-x_i}}{(1 - e^{-x_i})} \right], \quad (38)$$

where $R = 8314.5/352$.

The specific heat at constant pressure, C_p , is shown in Fig. 2 vs temperature. Also shown is

$$\frac{h}{T} = \frac{\int C_p dT}{T} \quad (39)$$

and a large difference is evident. Thus, errors are expected in using $h = C_p T$.

RESULTS

The oblique shock angle vs deflection angle is given in Fig. 3 for M_1 from 1.05 to 20. The maximum deflection angle is $\sim 70^\circ$, which is significantly higher than the corresponding value of $\sim 45^\circ$ for air. The downstream sonic limit line is also given. The smaller values of shock wave angle, ξ , correspond to the weak shock solutions, $M_2 > 1$, and the larger ξ values correspond to the strong shock solutions, $M_2 < 1$. Figure 4 shows a chart of M_2 vs M_1 .

Total pressure ratio across a single shock is given in Fig. 5 vs upstream Mach number. For a normal shock, the total pressure recovery is nearly zero for Mach numbers above 4, and as the shock angle is decreased, the total pressure recovery increases over the normal shock case. Results are shown for 90° , 60° , and 30° shock angles.

Prandtl-Meyer angle, $\nu(M)$, vs Mach number is shown in Fig. 6 for several values of γ . The UF_6 data show much higher turning angles, ν , at the same Mach number than for air with $\gamma = 1.4$.

To evaluate the real gas effect of $h \neq C_p T$ an analysis with this assumption and with $h = \int C_p dT$ was performed with $C_p = C_p(T)$. For normal shocks, the result was a lower predicted downstream static temperature of $30^\circ K$ to $75^\circ K$ for M_1 of 4, and M_1 of 10, respectively, see Fig. 7. Figure 8 shows a similar underprediction of T_2 for M_1 of 3.0 and a T_1 of $320^\circ K$, for oblique shocks. The error increases with shock angle. The downstream static temperature effect on downstream Mach number is small, as shown in Fig. 9.

Isentropic flow properties for $\gamma = 1.056, 1.058, 1.063, 1.068, 1.069$ and 1.4 are given in Tables 1, 2, 3, 4, 5, and 6, respectively. Normal and oblique shock tables are given for upstream static temperatures for $290^\circ, 300^\circ, 310^\circ, 320^\circ$, and $330^\circ K$ in Tables 7, 8, 9, 10, and 11, respectively. Normal and oblique shock tables for air, $\gamma = 1.4$, are given in Table 12. This isentropic analysis should be redone with real gas effects of $h(T)$, $\gamma(T)$, and $H_t = \text{constant}$ accounted for.

COMPUTER PROGRAM

The computer program listing is given in Table 13. The data were generated using an IBM PC-type computer.

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Fig.1. Ratio of Specific Heats (UF6) vs Temperature.

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SPECIFIC HEAT AT CONSTANT PRESSURE (JOULES/KG DEG. K)

Fig.2. Specific Heat of UF6 at Constant Pressure vs Temperature.

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Fig.3. Shock Wave Angle vs Deflection Angle (UF6) $T=290$ deg. K

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Fig.4a. M_2 vs M_1 for UF_6 ; $T=290^\circ K$.

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Fig. 4b. M_2 vs M_1 for UF_6 ; $T=290^\circ K$.

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Fig.5. Total Pressure Ratio vs Upstream Mach Number
For Three Shock Angles; $T=290$ deg.K

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Fig.6. Prandtl-Meyer Angle vs Mach Number;UF6

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Fig.7. Downstream Static Temp. vs M_1 for Two Enthalpy Models; $T_1 = 300^\circ \text{K}$; Normal Shock

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Fig.8. Downstream Static Temp. vs Shock Angle for Two Enthalpy Models; $M_1=3.0$; $T_1=320^\circ\text{K}$

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Fig.9. Downstream Mach Number vs Upstream Mach Number
for Two Enthalpy Models; $T_1=320^\circ\text{K}$; Normal Shock

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Table 1. Isentropic flow properties.

$$\gamma = 1.056$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.995E+00	.995E+00	.100E+01	.605E+01	.101E+00	.525E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.207E-01		
.30	.954E+00	.956E+00	.997E+00	.210E+01	.304E+00	.453E-01		
.40	.919E+00	.923E+00	.996E+00	.163E+01	.405E+00	.777E-01		
.50	.877E+00	.883E+00	.993E+00	.137E+01	.505E+00	.116E+00		
.60	.828E+00	.836E+00	.990E+00	.121E+01	.605E+00	.157E+00		
.70	.773E+00	.784E+00	.986E+00	.111E+01	.705E+00	.200E+00		
.80	.715E+00	.728E+00	.982E+00	.104E+01	.804E+00	.242E+00		
.90	.655E+00	.670E+00	.978E+00	.101E+01	.902E+00	.280E+00		
1.00	.594E+00	.611E+00	.973E+00	.100E+01	.100E+01	.314E+00	.411E-08	.900E+02
1.10	.534E+00	.552E+00	.967E+00	.101E+01	.110E+01	.341E+00	.159E+01	.654E+02
1.20	.475E+00	.494E+00	.961E+00	.104E+01	.119E+01	.361E+00	.430E+01	.564E+02
1.30	.418E+00	.438E+00	.955E+00	.108E+01	.129E+01	.373E+00	.758E+01	.503E+02
1.40	.365E+00	.385E+00	.948E+00	.115E+01	.138E+01	.378E+00	.112E+02	.456E+02
1.50	.316E+00	.336E+00	.941E+00	.123E+01	.148E+01	.375E+00	.152E+02	.418E+02
1.60	.271E+00	.290E+00	.933E+00	.134E+01	.157E+01	.366E+00	.193E+02	.387E+02
1.70	.231E+00	.249E+00	.925E+00	.148E+01	.166E+01	.352E+00	.235E+02	.360E+02
1.80	.194E+00	.212E+00	.917E+00	.165E+01	.175E+01	.333E+00	.278E+02	.337E+02
1.90	.163E+00	.179E+00	.908E+00	.186E+01	.184E+01	.310E+00	.322E+02	.318E+02
2.00	.135E+00	.150E+00	.899E+00	.211E+01	.192E+01	.285E+00	.367E+02	.300E+02
2.10	.111E+00	.125E+00	.890E+00	.243E+01	.201E+01	.259E+00	.411E+02	.284E+02
2.20	.910E-01	.103E+00	.881E+00	.282E+01	.209E+01	.233E+00	.456E+02	.270E+02
2.30	.739E-01	.849E-01	.871E+00	.331E+01	.218E+01	.206E+00	.501E+02	.258E+02
2.40	.596E-01	.692E-01	.861E+00	.391E+01	.226E+01	.181E+00	.546E+02	.246E+02
2.50	.478E-01	.561E-01	.851E+00	.465E+01	.234E+01	.158E+00	.591E+02	.236E+02
2.60	.381E-01	.453E-01	.841E+00	.558E+01	.242E+01	.136E+00	.635E+02	.226E+02
2.70	.301E-01	.363E-01	.830E+00	.675E+01	.249E+01	.116E+00	.680E+02	.217E+02
2.80	.237E-01	.289E-01	.820E+00	.822E+01	.257E+01	.981E-01	.724E+02	.209E+02
2.90	.185E-01	.229E-01	.809E+00	.101E+02	.265E+01	.824E-01	.768E+02	.202E+02
3.00	.144E-01	.181E-01	.799E+00	.124E+02	.272E+01	.686E-01	.811E+02	.195E+02
3.10	.112E-01	.142E-01	.788E+00	.154E+02	.279E+01	.567E-01	.854E+02	.188E+02
3.20	.862E-02	.111E-01	.777E+00	.193E+02	.286E+01	.466E-01	.896E+02	.182E+02
3.30	.661E-02	.863E-02	.766E+00	.242E+02	.293E+01	.380E-01	.938E+02	.176E+02
3.40	.505E-02	.669E-02	.755E+00	.305E+02	.300E+01	.308E-01	.980E+02	.171E+02
3.50	.384E-02	.516E-02	.745E+00	.386E+02	.306E+01	.249E-01	.102E+03	.166E+02
3.60	.291E-02	.397E-02	.734E+00	.492E+02	.313E+01	.199E-01	.106E+03	.161E+02
3.70	.220E-02	.304E-02	.723E+00	.629E+02	.319E+01	.159E-01	.110E+03	.157E+02
3.80	.166E-02	.233E-02	.712E+00	.807E+02	.325E+01	.126E-01	.114E+03	.153E+02
3.90	.124E-02	.177E-02	.701E+00	.104E+03	.331E+01	.998E-02	.118E+03	.149E+02
4.00	.930E-03	.135E-02	.691E+00	.135E+03	.337E+01	.785E-02	.122E+03	.145E+02
4.10	.694E-03	.102E-02	.680E+00	.175E+03	.343E+01	.616E-02	.126E+03	.141E+02
4.20	.516E-03	.771E-03	.669E+00	.227E+03	.348E+01	.481E-02	.129E+03	.138E+02
4.30	.383E-03	.581E-03	.659E+00	.297E+03	.354E+01	.374E-02	.133E+03	.134E+02
4.40	.284E-03	.437E-03	.648E+00	.389E+03	.359E+01	.290E-02	.137E+03	.131E+02
4.50	.210E-03	.329E-03	.638E+00	.510E+03	.364E+01	.224E-02	.140E+03	.128E+02
4.60	.155E-03	.246E-03	.628E+00	.671E+03	.370E+01	.173E-02	.144E+03	.126E+02
4.70	.114E-03	.184E-03	.618E+00	.884E+03	.375E+01	.133E-02	.147E+03	.123E+02
4.80	.838E-04	.138E-03	.608E+00	.117E+04	.379E+01	.102E-02	.151E+03	.120E+02
4.90	.615E-04	.103E-03	.598E+00	.155E+04	.384E+01	.780E-03	.154E+03	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.451E-04	.767E-04	.588E+00	.205E+04	.389E+01	.596E-03	.158E+03	.115E+02
5.10	.331E-04	.571E-04	.579E+00	.272E+04	.393E+01	.454E-03	.161E+03	.113E+02
5.20	.242E-04	.425E-04	.569E+00	.361E+04	.398E+01	.345E-03	.164E+03	.111E+02
5.30	.177E-04	.316E-04	.560E+00	.481E+04	.402E+01	.262E-03	.167E+03	.109E+02
5.40	.129E-04	.235E-04	.551E+00	.640E+04	.406E+01	.199E-03	.170E+03	.107E+02
5.50	.944E-05	.174E-04	.541E+00	.853E+04	.410E+01	.151E-03	.173E+03	.105E+02
5.60	.690E-05	.129E-04	.532E+00	.114E+05	.414E+01	.114E-03	.176E+03	.103E+02
5.70	.503E-05	.961E-05	.524E+00	.152E+05	.418E+01	.863E-04	.179E+03	.101E+02
5.80	.367E-05	.713E-05	.515E+00	.203E+05	.422E+01	.652E-04	.182E+03	.993E+01
5.90	.268E-05	.529E-05	.506E+00	.271E+05	.426E+01	.492E-04	.185E+03	.976E+01
6.00	.195E-05	.392E-05	.498E+00	.363E+05	.429E+01	.371E-04	.188E+03	.959E+01
6.10	.142E-05	.291E-05	.490E+00	.485E+05	.433E+01	.280E-04	.191E+03	.944E+01
6.20	.104E-05	.216E-05	.482E+00	.649E+05	.436E+01	.211E-04	.194E+03	.928E+01
6.30	.758E-06	.160E-05	.474E+00	.868E+05	.440E+01	.159E-04	.196E+03	.913E+01
6.40	.553E-06	.119E-05	.466E+00	.116E+06	.443E+01	.120E-04	.199E+03	.899E+01
6.50	.404E-06	.882E-06	.458E+00	.155E+06	.446E+01	.901E-05	.202E+03	.885E+01
6.60	.295E-06	.655E-06	.451E+00	.208E+06	.449E+01	.679E-05	.204E+03	.871E+01
6.70	.216E-06	.487E-06	.443E+00	.278E+06	.452E+01	.511E-05	.207E+03	.858E+01
6.80	.158E-06	.362E-06	.436E+00	.371E+06	.455E+01	.385E-05	.209E+03	.846E+01
6.90	.115E-06	.269E-06	.429E+00	.496E+06	.458E+01	.290E-05	.212E+03	.833E+01
7.00	.844E-07	.200E-06	.422E+00	.662E+06	.461E+01	.218E-05	.214E+03	.821E+01
7.10	.618E-07	.149E-06	.415E+00	.884E+06	.464E+01	.165E-05	.216E+03	.810E+01
7.20	.453E-07	.111E-06	.408E+00	.118E+07	.466E+01	.124E-05	.219E+03	.798E+01
7.30	.333E-07	.829E-07	.401E+00	.157E+07	.469E+01	.936E-06	.221E+03	.787E+01
7.40	.244E-07	.619E-07	.395E+00	.209E+07	.471E+01	.706E-06	.223E+03	.777E+01
7.50	.179E-07	.462E-07	.388E+00	.279E+07	.474E+01	.533E-06	.226E+03	.766E+01
7.60	.132E-07	.345E-07	.382E+00	.371E+07	.476E+01	.403E-06	.228E+03	.756E+01
7.70	.972E-08	.259E-07	.376E+00	.494E+07	.479E+01	.304E-06	.230E+03	.746E+01
7.80	.716E-08	.194E-07	.370E+00	.656E+07	.481E+01	.230E-06	.232E+03	.737E+01
7.90	.528E-08	.145E-07	.364E+00	.871E+07	.483E+01	.174E-06	.234E+03	.727E+01
8.00	.390E-08	.109E-07	.358E+00	.115E+08	.485E+01	.132E-06	.236E+03	.718E+01
8.10	.288E-08	.818E-08	.352E+00	.153E+08	.488E+01	.999E-07	.238E+03	.709E+01
8.20	.214E-08	.616E-08	.347E+00	.203E+08	.490E+01	.758E-07	.240E+03	.700E+01
8.30	.158E-08	.463E-08	.341E+00	.268E+08	.492E+01	.575E-07	.242E+03	.692E+01
8.40	.117E-08	.349E-08	.336E+00	.354E+08	.494E+01	.437E-07	.244E+03	.684E+01
8.50	.872E-09	.263E-08	.331E+00	.468E+08	.496E+01	.332E-07	.246E+03	.676E+01
8.60	.648E-09	.199E-08	.326E+00	.617E+08	.498E+01	.253E-07	.248E+03	.668E+01
8.70	.482E-09	.150E-08	.321E+00	.813E+08	.499E+01	.193E-07	.250E+03	.660E+01
8.80	.360E-09	.114E-08	.316E+00	.107E+09	.501E+01	.147E-07	.251E+03	.652E+01
8.90	.268E-09	.863E-09	.311E+00	.141E+09	.503E+01	.112E-07	.253E+03	.645E+01
9.00	.200E-09	.655E-09	.306E+00	.185E+09	.505E+01	.857E-08	.255E+03	.638E+01
9.10	.150E-09	.498E-09	.301E+00	.242E+09	.506E+01	.656E-08	.257E+03	.631E+01
9.20	.112E-09	.379E-09	.297E+00	.317E+09	.508E+01	.502E-08	.258E+03	.624E+01
9.30	.843E-10	.288E-09	.292E+00	.415E+09	.510E+01	.385E-08	.260E+03	.617E+01
9.40	.633E-10	.220E-09	.288E+00	.543E+09	.511E+01	.295E-08	.262E+03	.611E+01
9.50	.476E-10	.168E-09	.284E+00	.709E+09	.513E+01	.227E-08	.263E+03	.604E+01
9.60	.358E-10	.128E-09	.279E+00	.925E+09	.514E+01	.174E-08	.265E+03	.598E+01
9.70	.270E-10	.982E-10	.275E+00	.121E+10	.516E+01	.134E-08	.267E+03	.592E+01
9.80	.204E-10	.752E-10	.271E+00	.157E+10	.517E+01	.103E-08	.268E+03	.586E+01
9.90	.154E-10	.577E-10	.267E+00	.204E+10	.519E+01	.798E-09	.270E+03	.580E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	au
10.00	.117E-10	.443E-10	.263E+00	.265E+10	.520E+01	.616E-09	.271E+03	.574E+01
10.10	.884E-11	.341E-10	.259E+00	.343E+10	.521E+01	.476E-09	.273E+03	.568E+01
10.20	.671E-11	.263E-10	.256E+00	.445E+10	.523E+01	.369E-09	.274E+03	.563E+01
10.30	.510E-11	.202E-10	.252E+00	.576E+10	.524E+01	.286E-09	.276E+03	.557E+01
10.40	.388E-11	.156E-10	.248E+00	.744E+10	.525E+01	.222E-09	.277E+03	.552E+01
10.50	.296E-11	.121E-10	.245E+00	.960E+10	.527E+01	.172E-09	.278E+03	.547E+01
10.60	.225E-11	.935E-11	.241E+00	.124E+11	.528E+01	.134E-09	.280E+03	.541E+01
10.70	.172E-11	.724E-11	.238E+00	.159E+11	.529E+01	.104E-09	.281E+03	.536E+01
10.80	.132E-11	.562E-11	.234E+00	.205E+11	.530E+01	.811E-10	.283E+03	.531E+01
10.90	.101E-11	.437E-11	.231E+00	.263E+11	.531E+01	.633E-10	.284E+03	.526E+01
11.00	.774E-12	.340E-11	.228E+00	.338E+11	.532E+01	.494E-10	.285E+03	.522E+01
11.10	.594E-12	.264E-11	.225E+00	.433E+11	.534E+01	.387E-10	.286E+03	.517E+01
11.20	.457E-12	.206E-11	.222E+00	.554E+11	.535E+01	.303E-10	.288E+03	.512E+01
11.30	.352E-12	.161E-11	.219E+00	.708E+11	.536E+01	.237E-10	.289E+03	.508E+01
11.40	.271E-12	.126E-11	.216E+00	.904E+11	.537E+01	.186E-10	.290E+03	.503E+01
11.50	.209E-12	.985E-12	.213E+00	.115E+12	.538E+01	.146E-10	.291E+03	.499E+01
11.60	.162E-12	.772E-12	.210E+00	.147E+12	.539E+01	.115E-10	.293E+03	.495E+01
11.70	.125E-12	.605E-12	.207E+00	.187E+12	.540E+01	.905E-11	.294E+03	.490E+01
11.80	.971E-13	.475E-12	.204E+00	.238E+12	.541E+01	.714E-11	.295E+03	.486E+01
11.90	.753E-13	.374E-12	.201E+00	.302E+12	.541E+01	.563E-11	.296E+03	.482E+01
12.00	.585E-13	.294E-12	.199E+00	.382E+12	.542E+01	.445E-11	.297E+03	.478E+01
12.10	.455E-13	.232E-12	.196E+00	.484E+12	.543E+01	.352E-11	.298E+03	.474E+01
12.20	.354E-13	.183E-12	.194E+00	.613E+12	.544E+01	.279E-11	.300E+03	.470E+01
12.30	.276E-13	.145E-12	.191E+00	.774E+12	.545E+01	.221E-11	.301E+03	.466E+01
12.40	.216E-13	.114E-12	.188E+00	.977E+12	.546E+01	.175E-11	.302E+03	.463E+01
12.50	.169E-13	.907E-13	.186E+00	.123E+13	.547E+01	.139E-11	.303E+03	.459E+01
12.60	.132E-13	.719E-13	.184E+00	.155E+13	.547E+01	.111E-11	.304E+03	.455E+01
12.70	.103E-13	.571E-13	.181E+00	.195E+13	.548E+01	.881E-12	.305E+03	.452E+01
12.80	.812E-14	.454E-13	.179E+00	.245E+13	.549E+01	.702E-12	.306E+03	.448E+01
12.90	.638E-14	.361E-13	.177E+00	.308E+13	.550E+01	.561E-12	.307E+03	.445E+01
13.00	.502E-14	.288E-13	.174E+00	.386E+13	.551E+01	.448E-12	.308E+03	.441E+01
13.10	.395E-14	.229E-13	.172E+00	.483E+13	.551E+01	.358E-12	.309E+03	.438E+01
13.20	.312E-14	.183E-13	.170E+00	.604E+13	.552E+01	.287E-12	.310E+03	.434E+01
13.30	.246E-14	.146E-13	.168E+00	.755E+13	.553E+01	.230E-12	.311E+03	.431E+01
13.40	.194E-14	.117E-13	.166E+00	.942E+13	.553E+01	.184E-12	.312E+03	.428E+01
13.50	.154E-14	.938E-14	.164E+00	.117E+14	.554E+01	.148E-12	.313E+03	.425E+01
13.60	.122E-14	.753E-14	.162E+00	.146E+14	.555E+01	.119E-12	.314E+03	.422E+01
13.70	.966E-15	.604E-14	.160E+00	.182E+14	.555E+01	.957E-13	.315E+03	.419E+01
13.80	.767E-15	.486E-14	.158E+00	.226E+14	.556E+01	.771E-13	.316E+03	.416E+01
13.90	.610E-15	.391E-14	.156E+00	.281E+14	.557E+01	.622E-13	.316E+03	.413E+01
14.00	.485E-15	.315E-14	.154E+00	.348E+14	.557E+01	.502E-13	.317E+03	.410E+01
14.10	.387E-15	.254E-14	.152E+00	.431E+14	.558E+01	.406E-13	.318E+03	.407E+01
14.20	.308E-15	.205E-14	.150E+00	.534E+14	.558E+01	.328E-13	.319E+03	.404E+01
14.30	.246E-15	.166E-14	.149E+00	.660E+14	.559E+01	.266E-13	.320E+03	.401E+01
14.40	.197E-15	.134E-14	.147E+00	.815E+14	.560E+01	.215E-13	.321E+03	.398E+01
14.50	.157E-15	.108E-14	.145E+00	.101E+15	.560E+01	.175E-13	.322E+03	.395E+01
14.60	.126E-15	.879E-15	.144E+00	.124E+15	.561E+01	.142E-13	.322E+03	.393E+01
14.70	.101E-15	.713E-15	.142E+00	.153E+15	.561E+01	.115E-13	.323E+03	.390E+01
14.80	.812E-16	.579E-15	.140E+00	.188E+15	.562E+01	.939E-14	.324E+03	.387E+01
14.90	.653E-16	.471E-15	.139E+00	.231E+15	.562E+01	.765E-14	.325E+03	.385E+01

m	p/pt	ra/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.525E-16	.383E-15	.137E+00	.283E+15	.563E+01	.624E-14	.326E+03	.382E+01
15.10	.423E-16	.312E-15	.135E+00	.347E+15	.563E+01	.509E-14	.326E+03	.380E+01
15.20	.341E-16	.255E-15	.134E+00	.425E+15	.564E+01	.416E-14	.327E+03	.377E+01
15.30	.275E-16	.208E-15	.132E+00	.521E+15	.564E+01	.340E-14	.328E+03	.375E+01
15.40	.222E-16	.170E-15	.131E+00	.637E+15	.565E+01	.278E-14	.329E+03	.372E+01
15.50	.180E-16	.139E-15	.129E+00	.778E+15	.565E+01	.228E-14	.329E+03	.370E+01
15.60	.145E-16	.114E-15	.128E+00	.949E+15	.566E+01	.187E-14	.330E+03	.368E+01
15.70	.118E-16	.932E-16	.127E+00	.116E+16	.566E+01	.153E-14	.331E+03	.365E+01
15.80	.956E-17	.764E-16	.125E+00	.141E+16	.567E+01	.126E-14	.332E+03	.363E+01
15.90	.776E-17	.627E-16	.124E+00	.172E+16	.567E+01	.104E-14	.332E+03	.361E+01
16.00	.631E-17	.515E-16	.122E+00	.209E+16	.568E+01	.853E-15	.333E+03	.358E+01
16.10	.513E-17	.424E-16	.121E+00	.254E+16	.568E+01	.703E-15	.334E+03	.356E+01
16.20	.418E-17	.349E-16	.120E+00	.308E+16	.568E+01	.579E-15	.334E+03	.354E+01
16.30	.341E-17	.288E-16	.118E+00	.373E+16	.569E+01	.478E-15	.335E+03	.352E+01
16.40	.278E-17	.237E-16	.117E+00	.452E+16	.569E+01	.395E-15	.336E+03	.350E+01
16.50	.227E-17	.196E-16	.116E+00	.548E+16	.570E+01	.326E-15	.336E+03	.347E+01
16.60	.186E-17	.162E-16	.115E+00	.662E+16	.570E+01	.270E-15	.337E+03	.345E+01
16.70	.152E-17	.134E-16	.114E+00	.800E+16	.570E+01	.224E-15	.338E+03	.343E+01
16.80	.124E-17	.111E-16	.112E+00	.966E+16	.571E+01	.185E-15	.338E+03	.341E+01
16.90	.102E-17	.917E-17	.111E+00	.117E+17	.571E+01	.154E-15	.339E+03	.339E+01
17.00	.836E-18	.760E-17	.110E+00	.140E+17	.572E+01	.128E-15	.340E+03	.337E+01
17.10	.687E-18	.631E-17	.109E+00	.169E+17	.572E+01	.106E-15	.340E+03	.335E+01
17.20	.565E-18	.524E-17	.108E+00	.204E+17	.572E+01	.882E-16	.341E+03	.333E+01
17.30	.464E-18	.436E-17	.107E+00	.245E+17	.573E+01	.734E-16	.342E+03	.331E+01
17.40	.382E-18	.362E-17	.106E+00	.294E+17	.573E+01	.611E-16	.342E+03	.329E+01
17.50	.315E-18	.302E-17	.104E+00	.353E+17	.573E+01	.510E-16	.343E+03	.328E+01
17.60	.260E-18	.251E-17	.103E+00	.423E+17	.574E+01	.425E-16	.343E+03	.326E+01
17.70	.215E-18	.210E-17	.102E+00	.507E+17	.574E+01	.355E-16	.344E+03	.324E+01
17.80	.177E-18	.175E-17	.101E+00	.607E+17	.574E+01	.297E-16	.344E+03	.322E+01
17.90	.147E-18	.146E-17	.100E+00	.727E+17	.575E+01	.248E-16	.345E+03	.320E+01
18.00	.121E-18	.122E-17	.993E-01	.869E+17	.575E+01	.208E-16	.346E+03	.318E+01
18.10	.101E-18	.102E-17	.983E-01	.104E+18	.575E+01	.174E-16	.346E+03	.317E+01
18.20	.833E-19	.856E-18	.973E-01	.124E+18	.576E+01	.146E-16	.347E+03	.315E+01
18.30	.692E-19	.718E-18	.964E-01	.148E+18	.576E+01	.122E-16	.347E+03	.313E+01
18.40	.574E-19	.602E-18	.954E-01	.176E+18	.576E+01	.103E-16	.348E+03	.312E+01
18.50	.477E-19	.505E-18	.945E-01	.210E+18	.577E+01	.862E-17	.348E+03	.310E+01
18.60	.397E-19	.424E-18	.936E-01	.250E+18	.577E+01	.725E-17	.349E+03	.308E+01
18.70	.330E-19	.357E-18	.927E-01	.297E+18	.577E+01	.610E-17	.349E+03	.307E+01
18.80	.275E-19	.300E-18	.918E-01	.353E+18	.577E+01	.514E-17	.350E+03	.305E+01
18.90	.230E-19	.253E-18	.909E-01	.419E+18	.578E+01	.433E-17	.351E+03	.303E+01
19.00	.192E-19	.213E-18	.900E-01	.497E+18	.578E+01	.365E-17	.351E+03	.302E+01
19.10	.160E-19	.179E-18	.892E-01	.589E+18	.578E+01	.308E-17	.352E+03	.300E+01
19.20	.134E-19	.151E-18	.883E-01	.697E+18	.579E+01	.260E-17	.352E+03	.299E+01
19.30	.112E-19	.128E-18	.875E-01	.826E+18	.579E+01	.220E-17	.353E+03	.297E+01
19.40	.936E-20	.108E-18	.867E-01	.977E+18	.579E+01	.186E-17	.353E+03	.295E+01
19.50	.784E-20	.913E-19	.859E-01	.115E+19	.579E+01	.157E-17	.354E+03	.294E+01
19.60	.657E-20	.772E-19	.851E-01	.136E+19	.580E+01	.133E-17	.354E+03	.292E+01
19.70	.551E-20	.654E-19	.843E-01	.161E+19	.580E+01	.113E-17	.355E+03	.291E+01
19.80	.463E-20	.554E-19	.835E-01	.190E+19	.580E+01	.958E-18	.355E+03	.289E+01
19.90	.389E-20	.470E-19	.827E-01	.224E+19	.580E+01	.813E-18	.355E+03	.288E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
20.00	.327E-20	.399E-19	.820E-01	.264E+19	.581E+01	.690E-18	.356E+03	.287E+01

Table 2. Isentropic flow properties.

$$\gamma = 1.058$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.995E+00	.995E+00	.100E+01	.605E+01	.101E+00	.526E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.207E-01		
.30	.954E+00	.956E+00	.997E+00	.210E+01	.304E+00	.454E-01		
.40	.919E+00	.923E+00	.995E+00	.163E+01	.405E+00	.778E-01		
.50	.877E+00	.883E+00	.993E+00	.137E+01	.505E+00	.116E+00		
.60	.827E+00	.836E+00	.990E+00	.121E+01	.605E+00	.158E+00		
.70	.773E+00	.784E+00	.986E+00	.110E+01	.705E+00	.200E+00		
.80	.715E+00	.728E+00	.982E+00	.104E+01	.804E+00	.242E+00		
.90	.655E+00	.670E+00	.977E+00	.101E+01	.902E+00	.281E+00		
1.00	.594E+00	.611E+00	.972E+00	.100E+01	.100E+01	.314E+00	.295E-08	.900E+02
1.10	.533E+00	.552E+00	.966E+00	.101E+01	.110E+01	.341E+00	.158E+01	.654E+02
1.20	.474E+00	.494E+00	.960E+00	.104E+01	.119E+01	.361E+00	.429E+01	.564E+02
1.30	.418E+00	.438E+00	.953E+00	.108E+01	.129E+01	.374E+00	.757E+01	.503E+02
1.40	.365E+00	.386E+00	.946E+00	.115E+01	.138E+01	.378E+00	.112E+02	.456E+02
1.50	.316E+00	.336E+00	.939E+00	.123E+01	.147E+01	.376E+00	.151E+02	.418E+02
1.60	.271E+00	.291E+00	.931E+00	.134E+01	.157E+01	.367E+00	.192E+02	.387E+02
1.70	.230E+00	.250E+00	.923E+00	.148E+01	.166E+01	.352E+00	.234E+02	.360E+02
1.80	.1^C							

B>gary

enter gma=

1.058

Gamma= 1.0580

enter mach no increment =(0.1 is suggested)

.1

dxm= .1000

enter output spacing in i3 format(ex. 50)

50

nprr= 50

enter 1 for isentropic and 2 for shock,i1 format

1

i normal shock(ins)= 1

enter 0 for ufb and 1 for air,i1 format

0

iair(0 for ufb and 1 for air)= 0

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.995E+00	.995E+00	.100E+01	.605E+01	.101E+00	.526E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.207E-01		
.30	.954E+00	.956E+00	.997E+00	.210E+01	.304E+00	.454E-01		
.40	.919E+00	.923E+00	.995E+00	.163E+01	.405E+00	.778E-01		
.50	.877E+00	.883E+00	.993E+00	.137E+01	.505E+00	.116E+00		
.60	.827E+00	.836E+00	.990E+00	.121E+01	.605E+00	.158E+00		
.70	.773E+00	.784E+00	.986E+00	.110E+01	.705E+00	.200E+00		
.80	.715E+00	.728E+00	.982E+00	.104E+01	.804E+00	.242E+00		
.90	.655E+00	.670E+00	.977E+00	.101E+01	.902E+00	.281E+00		
1.00	.594E+00	.611E+00	.972E+00	.100E+01	.100E+01	.314E+00	.295E-08	.900E+02
1.10	.533E+00	.552E+00	.966E+00	.101E+01	.110E+01	.341E+00	.158E+01	.654E+02
1.20	.474E+00	.494E+00	.960E+00	.104E+01	.119E+01	.361E+00	.429E+01	.564E+02
1.30	.418E+00	.438E+00	.953E+00	.108E+01	.129E+01	.374E+00	.757E+01	.503E+02
1.40	.365E+00	.386E+00	.946E+00	.115E+01	.138E+01	.378E+00	.112E+02	.456E+02
1.50	.316E+00	.336E+00	.939E+00	.123E+01	.147E+01	.376E+00	.151E+02	.418E+02
1.60	.271E+00	.291E+00	.931E+00	.134E+01	.157E+01	.367E+00	.192E+02	.387E+02
1.70	.230E+00	.250E+00	.923E+00	.148E+01	.166E+01	.352E+00	.234E+02	.360E+02
1.80	.194E+00	.213E+00	.914E+00	.165E+01	.175E+01	.333E+00	.278E+02	.337E+02
1.90	.163E+00	.180E+00	.905E+00	.185E+01	.183E+01	.311E+00	.321E+02	.318E+02
2.00	.135E+00	.151E+00	.896E+00	.211E+01	.192E+01	.286E+00	.366E+02	.300E+02
2.10	.111E+00	.126E+00	.887E+00	.243E+01	.201E+01	.260E+00	.410E+02	.284E+02
2.20	.911E-01	.104E+00	.877E+00	.281E+01	.209E+01	.233E+00	.455E+02	.270E+02
2.30	.740E-01	.854E-01	.867E+00	.329E+01	.217E+01	.207E+00	.500E+02	.258E+02
2.40	.597E-01	.697E-01	.857E+00	.389E+01	.225E+01	.182E+00	.545E+02	.246E+02
2.50	.479E-01	.566E-01	.847E+00	.463E+01	.233E+01	.158E+00	.589E+02	.236E+02
2.60	.382E-01	.457E-01	.836E+00	.555E+01	.241E+01	.137E+00	.633E+02	.226E+02
2.70	.302E-01	.366E-01	.825E+00	.670E+01	.249E+01	.117E+00	.677E+02	.217E+02
2.80	.238E-01	.292E-01	.815E+00	.815E+01	.256E+01	.988E-01	.721E+02	.209E+02
2.90	.187E-01	.232E-01	.804E+00	.997E+01	.264E+01	.830E-01	.765E+02	.202E+02
3.00	.145E-01	.183E-01	.793E+00	.123E+02	.271E+01	.693E-01	.808E+02	.195E+02
3.10	.113E-01	.144E-01	.782E+00	.152E+02	.278E+01	.574E-01	.850E+02	.188E+02
3.20	.871E-02	.113E-01	.771E+00	.190E+02	.285E+01	.472E-01	.893E+02	.182E+02
3.30	.670E-02	.881E-02	.760E+00	.238E+02	.292E+01	.386E-01	.934E+02	.176E+02
3.40	.512E-02	.684E-02	.749E+00	.299E+02	.298E+01	.313E-01	.976E+02	.171E+02
3.50	.391E-02	.529E-02	.738E+00	.378E+02	.305E+01	.253E-01	.102E+03	.166E+02
3.60	.297E-02	.408E-02	.727E+00	.481E+02	.311E+01	.203E-01	.106E+03	.161E+02
3.70	.225E-02	.314E-02	.716E+00	.613E+02	.318E+01	.163E-01	.110E+03	.157E+02
3.80	.169E-02	.240E-02	.705E+00	.785E+02	.324E+01	.129E-01	.114E+03	.153E+02
3.90	.127E-02	.184E-02	.694E+00	.101E+03	.330E+01	.103E-01	.117E+03	.149E+02
4.00	.956E-03	.140E-02	.683E+00	.130E+03	.335E+01	.809E-02	.121E+03	.145E+02
4.10	.715E-03	.106E-02	.672E+00	.168E+03	.341E+01	.636E-02	.125E+03	.141E+02
4.20	.533E-03	.806E-03	.662E+00	.219E+03	.347E+01	.498E-02	.129E+03	.138E+02
4.30	.397E-03	.610E-03	.651E+00	.285E+03	.352E+01	.388E-02	.132E+03	.134E+02
4.40	.295E-03	.461E-03	.640E+00	.371E+03	.357E+01	.302E-02	.136E+03	.131E+02
4.50	.219E-03	.347E-03	.630E+00	.486E+03	.362E+01	.234E-02	.140E+03	.128E+02
4.60	.162E-03	.261E-03	.620E+00	.636E+03	.367E+01	.181E-02	.143E+03	.126E+02
4.70	.120E-03	.196E-03	.610E+00	.836E+03	.372E+01	.140E-02	.146E+03	.123E+02
4.80	.883E-04	.147E-03	.599E+00	.110E+04	.377E+01	.108E-02	.150E+03	.120E+02
4.90	.651E-04	.110E-03	.590E+00	.145E+04	.382E+01	.827E-03	.153E+03	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.479E-04	.827E-04	.580E+00	.191E+04	.386E+01	.634E-03	.156E+03	.115E+02
5.10	.353E-04	.619E-04	.570E+00	.253E+04	.391E+01	.485E-03	.160E+03	.113E+02
5.20	.259E-04	.462E-04	.560E+00	.335E+04	.395E+01	.371E-03	.163E+03	.111E+02
5.30	.190E-04	.345E-04	.551E+00	.443E+04	.399E+01	.283E-03	.166E+03	.109E+02
5.40	.140E-04	.258E-04	.542E+00	.588E+04	.403E+01	.215E-03	.169E+03	.107E+02
5.50	.102E-04	.192E-04	.533E+00	.780E+04	.407E+01	.164E-03	.172E+03	.105E+02
5.60	.751E-05	.143E-04	.524E+00	.104E+05	.411E+01	.125E-03	.175E+03	.103E+02
5.70	.551E-05	.107E-04	.515E+00	.138E+05	.415E+01	.947E-04	.178E+03	.101E+02
5.80	.404E-05	.798E-05	.506E+00	.183E+05	.419E+01	.719E-04	.181E+03	.993E+01
5.90	.296E-05	.595E-05	.498E+00	.243E+05	.422E+01	.545E-04	.184E+03	.976E+01
6.00	.217E-05	.443E-05	.489E+00	.324E+05	.426E+01	.413E-04	.186E+03	.959E+01
6.10	.159E-05	.331E-05	.481E+00	.430E+05	.429E+01	.313E-04	.189E+03	.944E+01
6.20	.117E-05	.247E-05	.473E+00	.573E+05	.432E+01	.237E-04	.192E+03	.928E+01
6.30	.855E-06	.184E-05	.465E+00	.762E+05	.436E+01	.180E-04	.195E+03	.913E+01
6.40	.628E-06	.137E-05	.457E+00	.101E+06	.439E+01	.136E-04	.197E+03	.899E+01
6.50	.461E-06	.102E-05	.449E+00	.135E+06	.442E+01	.103E-04	.200E+03	.885E+01
6.60	.338E-06	.766E-06	.442E+00	.179E+06	.445E+01	.779E-05	.202E+03	.871E+01
6.70	.249E-06	.572E-06	.434E+00	.238E+06	.448E+01	.590E-05	.205E+03	.858E+01
6.80	.183E-06	.428E-06	.427E+00	.317E+06	.451E+01	.447E-05	.207E+03	.846E+01
6.90	.134E-06	.320E-06	.420E+00	.421E+06	.454E+01	.339E-05	.210E+03	.833E+01
7.00	.989E-07	.240E-06	.413E+00	.559E+06	.456E+01	.256E-05	.212E+03	.821E+01
7.10	.729E-07	.179E-06	.406E+00	.742E+06	.459E+01	.194E-05	.214E+03	.810E+01
7.20	.538E-07	.135E-06	.399E+00	.983E+06	.462E+01	.147E-05	.217E+03	.798E+01
7.30	.397E-07	.101E-06	.393E+00	.130E+07	.464E+01	.112E-05	.219E+03	.787E+01
7.40	.293E-07	.758E-07	.386E+00	.173E+07	.467E+01	.849E-06	.221E+03	.777E+01
7.50	.217E-07	.570E-07	.380E+00	.229E+07	.469E+01	.645E-06	.223E+03	.766E+01
7.60	.160E-07	.429E-07	.374E+00	.302E+07	.471E+01	.490E-06	.225E+03	.756E+01
7.70	.119E-07	.323E-07	.368E+00	.399E+07	.474E+01	.372E-06	.227E+03	.746E+01
7.80	.880E-08	.243E-07	.362E+00	.527E+07	.476E+01	.283E-06	.230E+03	.737E+01
7.90	.654E-08	.184E-07	.356E+00	.696E+07	.478E+01	.216E-06	.232E+03	.727E+01
8.00	.486E-08	.139E-07	.350E+00	.917E+07	.480E+01	.164E-06	.234E+03	.718E+01
8.10	.361E-08	.105E-07	.345E+00	.121E+08	.482E+01	.125E-06	.236E+03	.709E+01
8.20	.269E-08	.794E-08	.339E+00	.159E+08	.484E+01	.957E-07	.237E+03	.700E+01
8.30	.201E-08	.602E-08	.334E+00	.209E+08	.486E+01	.731E-07	.239E+03	.692E+01
8.40	.150E-08	.456E-08	.328E+00	.274E+08	.488E+01	.559E-07	.241E+03	.684E+01
8.50	.112E-08	.347E-08	.323E+00	.360E+08	.490E+01	.428E-07	.243E+03	.676E+01
8.60	.838E-09	.263E-08	.318E+00	.471E+08	.492E+01	.328E-07	.245E+03	.668E+01
8.70	.628E-09	.201E-08	.313E+00	.617E+08	.494E+01	.251E-07	.247E+03	.660E+01
8.80	.471E-09	.153E-08	.308E+00	.807E+08	.495E+01	.193E-07	.249E+03	.652E+01
8.90	.354E-09	.117E-08	.303E+00	.105E+09	.497E+01	.148E-07	.250E+03	.645E+01
9.00	.266E-09	.891E-09	.299E+00	.137E+09	.499E+01	.114E-07	.252E+03	.638E+01
9.10	.200E-09	.681E-09	.294E+00	.179E+09	.501E+01	.877E-08	.254E+03	.631E+01
9.20	.151E-09	.522E-09	.289E+00	.233E+09	.502E+01	.676E-08	.255E+03	.624E+01
9.30	.114E-09	.400E-09	.285E+00	.303E+09	.504E+01	.522E-08	.257E+03	.617E+01
9.40	.862E-10	.307E-09	.281E+00	.394E+09	.505E+01	.403E-08	.259E+03	.611E+01
9.50	.652E-10	.236E-09	.276E+00	.511E+09	.507E+01	.311E-08	.260E+03	.604E+01
9.60	.494E-10	.182E-09	.272E+00	.662E+09	.508E+01	.241E-08	.262E+03	.598E+01
9.70	.375E-10	.140E-09	.268E+00	.857E+09	.510E+01	.187E-08	.263E+03	.592E+01
9.80	.285E-10	.108E-09	.264E+00	.111E+10	.511E+01	.145E-08	.265E+03	.586E+01
9.90	.217E-10	.833E-10	.260E+00	.143E+10	.512E+01	.112E-08	.266E+03	.580E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
10.00	.165E-10	.645E-10	.256E+00	.185E+10	.514E+01	.874E-09	.268E+03	.574E+01
10.10	.126E-10	.499E-10	.253E+00	.238E+10	.515E+01	.680E-09	.269E+03	.568E+01
10.20	.963E-11	.387E-10	.249E+00	.306E+10	.516E+01	.530E-09	.271E+03	.563E+01
10.30	.737E-11	.300E-10	.245E+00	.393E+10	.517E+01	.413E-09	.272E+03	.557E+01
10.40	.564E-11	.233E-10	.242E+00	.505E+10	.519E+01	.323E-09	.273E+03	.552E+01
10.50	.433E-11	.182E-10	.238E+00	.647E+10	.520E+01	.252E-09	.275E+03	.547E+01
10.60	.332E-11	.142E-10	.235E+00	.828E+10	.521E+01	.198E-09	.276E+03	.541E+01
10.70	.256E-11	.110E-10	.231E+00	.106E+11	.522E+01	.155E-09	.277E+03	.536E+01
10.80	.197E-11	.862E-11	.228E+00	.135E+11	.523E+01	.121E-09	.279E+03	.531E+01
10.90	.152E-11	.674E-11	.225E+00	.173E+11	.524E+01	.954E-10	.280E+03	.526E+01
11.00	.117E-11	.528E-11	.222E+00	.220E+11	.525E+01	.750E-10	.281E+03	.522E+01
11.10	.905E-12	.414E-11	.219E+00	.280E+11	.527E+01	.590E-10	.283E+03	.517E+01
11.20	.701E-12	.325E-11	.216E+00	.356E+11	.528E+01	.465E-10	.284E+03	.512E+01
11.30	.543E-12	.255E-11	.213E+00	.452E+11	.529E+01	.367E-10	.285E+03	.508E+01
11.40	.422E-12	.201E-11	.210E+00	.574E+11	.530E+01	.290E-10	.286E+03	.503E+01
11.50	.328E-12	.158E-11	.207E+00	.727E+11	.531E+01	.229E-10	.287E+03	.499E+01
11.60	.255E-12	.125E-11	.204E+00	.920E+11	.531E+01	.181E-10	.289E+03	.495E+01
11.70	.199E-12	.987E-12	.201E+00	.116E+12	.532E+01	.144E-10	.290E+03	.490E+01
11.80	.155E-12	.780E-12	.198E+00	.147E+12	.533E+01	.114E-10	.291E+03	.486E+01
11.90	.121E-12	.618E-12	.196E+00	.185E+12	.534E+01	.906E-11	.292E+03	.482E+01
12.00	.946E-13	.489E-12	.193E+00	.233E+12	.535E+01	.720E-11	.293E+03	.478E+01
12.10	.740E-13	.388E-12	.191E+00	.293E+12	.536E+01	.573E-11	.294E+03	.474E+01
12.20	.580E-13	.309E-12	.188E+00	.369E+12	.537E+01	.457E-11	.295E+03	.470E+01
12.30	.456E-13	.245E-12	.186E+00	.463E+12	.538E+01	.365E-11	.296E+03	.466E+01
12.40	.358E-13	.195E-12	.183E+00	.580E+12	.538E+01	.291E-11	.297E+03	.463E+01
12.50	.282E-13	.156E-12	.181E+00	.727E+12	.539E+01	.233E-11	.298E+03	.459E+01
12.60	.222E-13	.124E-12	.178E+00	.910E+12	.540E+01	.186E-11	.300E+03	.455E+01
12.70	.175E-13	.994E-13	.176E+00	.114E+13	.541E+01	.149E-11	.301E+03	.452E+01
12.80	.138E-13	.795E-13	.174E+00	.142E+13	.541E+01	.120E-11	.302E+03	.448E+01
12.90	.109E-13	.637E-13	.172E+00	.177E+13	.542E+01	.962E-12	.303E+03	.445E+01
13.00	.865E-14	.511E-13	.169E+00	.220E+13	.543E+01	.774E-12	.303E+03	.441E+01
13.10	.686E-14	.410E-13	.167E+00	.274E+13	.544E+01	.623E-12	.304E+03	.438E+01
13.20	.544E-14	.329E-13	.165E+00	.341E+13	.544E+01	.502E-12	.305E+03	.434E+01
13.30	.432E-14	.265E-13	.163E+00	.423E+13	.545E+01	.405E-12	.306E+03	.431E+01
13.40	.344E-14	.213E-13	.161E+00	.525E+13	.546E+01	.327E-12	.307E+03	.428E+01
13.50	.274E-14	.172E-13	.159E+00	.650E+13	.546E+01	.264E-12	.308E+03	.425E+01
13.60	.218E-14	.139E-13	.157E+00	.804E+13	.547E+01	.214E-12	.309E+03	.422E+01
13.70	.174E-14	.112E-13	.155E+00	.994E+13	.547E+01	.173E-12	.310E+03	.419E+01
13.80	.139E-14	.908E-14	.153E+00	.123E+14	.548E+01	.140E-12	.311E+03	.416E+01
13.90	.111E-14	.735E-14	.151E+00	.151E+14	.549E+01	.114E-12	.312E+03	.413E+01
14.00	.892E-15	.596E-14	.150E+00	.187E+14	.549E+01	.924E-13	.313E+03	.410E+01
14.10	.715E-15	.484E-14	.148E+00	.230E+14	.550E+01	.752E-13	.313E+03	.407E+01
14.20	.574E-15	.393E-14	.146E+00	.283E+14	.550E+01	.612E-13	.314E+03	.404E+01
14.30	.461E-15	.319E-14	.144E+00	.347E+14	.551E+01	.499E-13	.315E+03	.401E+01
14.40	.371E-15	.260E-14	.143E+00	.426E+14	.552E+01	.407E-13	.316E+03	.398E+01
14.50	.298E-15	.212E-14	.141E+00	.522E+14	.552E+01	.332E-13	.317E+03	.395E+01
14.60	.241E-15	.173E-14	.139E+00	.640E+14	.553E+01	.271E-13	.318E+03	.393E+01
14.70	.194E-15	.141E-14	.138E+00	.783E+14	.553E+01	.222E-13	.318E+03	.390E+01
14.80	.157E-15	.115E-14	.136E+00	.957E+14	.554E+01	.182E-13	.319E+03	.387E+01
14.90	.127E-15	.943E-15	.134E+00	.117E+15	.554E+01	.149E-13	.320E+03	.385E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.103E-15	.772E-15	.133E+00	.143E+15	.555E+01	.122E-13	.321E+03	.382E+01
15.10	.832E-16	.633E-15	.131E+00	.174E+15	.555E+01	.100E-13	.321E+03	.380E+01
15.20	.675E-16	.519E-15	.130E+00	.212E+15	.556E+01	.824E-14	.322E+03	.377E+01
15.30	.548E-16	.427E-15	.128E+00	.258E+15	.556E+01	.678E-14	.323E+03	.375E+01
15.40	.445E-16	.351E-15	.127E+00	.313E+15	.557E+01	.558E-14	.324E+03	.372E+01
15.50	.362E-16	.289E-15	.126E+00	.380E+15	.557E+01	.460E-14	.324E+03	.370E+01
15.60	.295E-16	.238E-15	.124E+00	.461E+15	.557E+01	.380E-14	.325E+03	.368E+01
15.70	.240E-16	.196E-15	.123E+00	.559E+15	.558E+01	.313E-14	.326E+03	.365E+01
15.80	.196E-16	.162E-15	.121E+00	.677E+15	.558E+01	.259E-14	.326E+03	.363E+01
15.90	.160E-16	.133E-15	.120E+00	.819E+15	.559E+01	.214E-14	.327E+03	.361E+01
16.00	.131E-16	.110E-15	.119E+00	.990E+15	.559E+01	.177E-14	.328E+03	.358E+01
16.10	.107E-16	.913E-16	.117E+00	.120E+16	.560E+01	.147E-14	.329E+03	.356E+01
16.20	.878E-17	.756E-16	.116E+00	.144E+16	.560E+01	.122E-14	.329E+03	.354E+01
16.30	.720E-17	.627E-16	.115E+00	.174E+16	.560E+01	.101E-14	.330E+03	.352E+01
16.40	.591E-17	.520E-16	.114E+00	.210E+16	.561E+01	.841E-15	.330E+03	.350E+01
16.50	.485E-17	.432E-16	.112E+00	.252E+16	.561E+01	.699E-15	.331E+03	.347E+01
16.60	.399E-17	.359E-16	.111E+00	.303E+16	.562E+01	.582E-15	.332E+03	.345E+01
16.70	.328E-17	.298E-16	.110E+00	.364E+16	.562E+01	.484E-15	.332E+03	.343E+01
16.80	.270E-17	.248E-16	.109E+00	.437E+16	.562E+01	.404E-15	.333E+03	.341E+01
16.90	.223E-17	.207E-16	.108E+00	.524E+16	.563E+01	.337E-15	.334E+03	.339E+01
17.00	.184E-17	.173E-16	.107E+00	.629E+16	.563E+01	.281E-15	.334E+03	.337E+01
17.10	.152E-17	.144E-16	.105E+00	.753E+16	.563E+01	.235E-15	.335E+03	.335E+01
17.20	.126E-17	.120E-16	.104E+00	.901E+16	.564E+01	.197E-15	.335E+03	.333E+01
17.30	.104E-17	.101E-16	.103E+00	.108E+17	.564E+01	.165E-15	.336E+03	.331E+01
17.40	.861E-18	.842E-17	.102E+00	.129E+17	.564E+01	.138E-15	.337E+03	.329E+01
17.50	.713E-18	.705E-17	.101E+00	.153E+17	.565E+01	.116E-15	.337E+03	.328E+01
17.60	.592E-18	.591E-17	.100E+00	.183E+17	.565E+01	.969E-16	.338E+03	.326E+01
17.70	.491E-18	.495E-17	.992E-01	.218E+17	.565E+01	.814E-16	.338E+03	.324E+01
17.80	.408E-18	.416E-17	.982E-01	.260E+17	.566E+01	.684E-16	.339E+03	.322E+01
17.90	.339E-18	.349E-17	.972E-01	.309E+17	.566E+01	.575E-16	.340E+03	.320E+01
18.00	.282E-18	.294E-17	.962E-01	.367E+17	.566E+01	.484E-16	.340E+03	.318E+01
18.10	.235E-18	.247E-17	.952E-01	.436E+17	.567E+01	.408E-16	.341E+03	.317E+01
18.20	.196E-18	.208E-17	.943E-01	.518E+17	.567E+01	.344E-16	.341E+03	.315E+01
18.30	.164E-18	.175E-17	.934E-01	.614E+17	.567E+01	.290E-16	.342E+03	.313E+01
18.40	.137E-18	.148E-17	.924E-01	.728E+17	.567E+01	.245E-16	.342E+03	.312E+01
18.50	.114E-18	.125E-17	.915E-01	.863E+17	.568E+01	.207E-16	.343E+03	.310E+01
18.60	.955E-19	.105E-17	.906E-01	.102E+18	.568E+01	.175E-16	.343E+03	.308E+01
18.70	.799E-19	.890E-18	.898E-01	.121E+18	.568E+01	.148E-16	.344E+03	.307E+01
18.80	.669E-19	.753E-18	.889E-01	.143E+18	.569E+01	.125E-16	.344E+03	.305E+01
18.90	.561E-19	.637E-18	.880E-01	.168E+18	.569E+01	.106E-16	.345E+03	.303E+01
19.00	.471E-19	.540E-18	.872E-01	.199E+18	.569E+01	.899E-17	.345E+03	.302E+01
19.10	.395E-19	.458E-18	.864E-01	.234E+18	.569E+01	.763E-17	.346E+03	.300E+01
19.20	.332E-19	.388E-18	.855E-01	.276E+18	.570E+01	.647E-17	.346E+03	.299E+01
19.30	.279E-19	.329E-18	.847E-01	.325E+18	.570E+01	.550E-17	.347E+03	.297E+01
19.40	.235E-19	.280E-18	.839E-01	.383E+18	.570E+01	.468E-17	.347E+03	.295E+01
19.50	.198E-19	.238E-18	.831E-01	.450E+18	.570E+01	.398E-17	.348E+03	.294E+01
19.60	.167E-19	.202E-18	.824E-01	.529E+18	.571E+01	.339E-17	.348E+03	.292E+01
19.70	.141E-19	.172E-18	.816E-01	.621E+18	.571E+01	.289E-17	.349E+03	.291E+01
19.80	.119E-19	.147E-18	.808E-01	.729E+18	.571E+01	.246E-17	.349E+03	.289E+01
19.90	.100E-19	.125E-18	.801E-01	.855E+18	.571E+01	.210E-17	.350E+03	.288E+01
20.00	.847E-20	.107E-18	.794E-01	.100E+19	.572E+01	.179E-17	.350E+03	.287E+01

Table 3. Isentropic flow properties.

$$\gamma = 1.063$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.995E+00	.995E+00	.100E+01	.605E+01	.102E+00	.529E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.208E-01		
.30	.953E+00	.956E+00	.997E+00	.210E+01	.304E+00	.456E-01		
.40	.919E+00	.923E+00	.995E+00	.163E+01	.405E+00	.781E-01		
.50	.876E+00	.883E+00	.992E+00	.137E+01	.506E+00	.116E+00		
.60	.827E+00	.836E+00	.989E+00	.121E+01	.606E+00	.158E+00		
.70	.772E+00	.784E+00	.985E+00	.110E+01	.706E+00	.201E+00		
.80	.714E+00	.728E+00	.980E+00	.104E+01	.804E+00	.243E+00		
.90	.654E+00	.670E+00	.975E+00	.101E+01	.903E+00	.281E+00		
1.00	.593E+00	.611E+00	.969E+00	.100E+01	.100E+01	.315E+00	.242E-08	.900E+02
1.10	.532E+00	.552E+00	.963E+00	.101E+01	.110E+01	.342E+00	.158E+01	.654E+02
1.20	.473E+00	.495E+00	.957E+00	.104E+01	.119E+01	.362E+00	.428E+01	.564E+02
1.30	.417E+00	.439E+00	.949E+00	.108E+01	.129E+01	.374E+00	.755E+01	.503E+02
1.40	.364E+00	.386E+00	.942E+00	.115E+01	.138E+01	.379E+00	.112E+02	.456E+02
1.50	.315E+00	.337E+00	.934E+00	.123E+01	.147E+01	.377E+00	.151E+02	.418E+02
1.60	.270E+00	.292E+00	.925E+00	.134E+01	.156E+01	.368E+00	.191E+02	.387E+02
1.70	.230E+00	.251E+00	.917E+00	.147E+01	.165E+01	.353E+00	.233E+02	.360E+02
1.80	.194E+00	.214E+00	.907E+00	.164E+01	.174E+01	.334E+00	.276E+02	.337E+02
1.90	.162E+00	.181E+00	.898E+00	.185E+01	.183E+01	.312E+00	.320E+02	.318E+02
2.00	.135E+00	.152E+00	.888E+00	.210E+01	.191E+01	.287E+00	.364E+02	.300E+02
2.10	.111E+00	.127E+00	.878E+00	.241E+01	.200E+01	.261E+00	.408E+02	.284E+02
2.20	.912E-01	.105E+00	.868E+00	.279E+01	.208E+01	.235E+00	.452E+02	.270E+02
2.30	.742E-01	.866E-01	.857E+00	.326E+01	.216E+01	.209E+00	.496E+02	.258E+02
2.40	.600E-01	.709E-01	.846E+00	.384E+01	.224E+01	.184E+00	.541E+02	.246E+02
2.50	.482E-01	.577E-01	.836E+00	.456E+01	.232E+01	.160E+00	.584E+02	.236E+02
2.60	.385E-01	.467E-01	.824E+00	.546E+01	.240E+01	.138E+00	.628E+02	.226E+02
2.70	.306E-01	.376E-01	.813E+00	.658E+01	.247E+01	.118E+00	.672E+02	.217E+02
2.80	.241E-01	.301E-01	.802E+00	.797E+01	.255E+01	.101E+00	.715E+02	.209E+02
2.90	.190E-01	.240E-01	.791E+00	.973E+01	.262E+01	.848E-01	.758E+02	.202E+02
3.00	.148E-01	.190E-01	.779E+00	.119E+02	.269E+01	.709E-01	.800E+02	.195E+02
3.10	.115E-01	.150E-01	.768E+00	.147E+02	.276E+01	.589E-01	.842E+02	.188E+02
3.20	.894E-02	.118E-01	.756E+00	.183E+02	.283E+01	.487E-01	.883E+02	.182E+02
3.30	.690E-02	.927E-02	.745E+00	.228E+02	.289E+01	.399E-01	.924E+02	.176E+02
3.40	.530E-02	.723E-02	.733E+00	.286E+02	.296E+01	.326E-01	.964E+02	.171E+02
3.50	.406E-02	.563E-02	.722E+00	.360E+02	.302E+01	.264E-01	.100E+03	.166E+02
3.60	.310E-02	.437E-02	.710E+00	.454E+02	.308E+01	.214E-01	.104E+03	.161E+02
3.70	.236E-02	.338E-02	.699E+00	.576E+02	.314E+01	.172E-01	.108E+03	.157E+02
3.80	.179E-02	.260E-02	.687E+00	.734E+02	.320E+01	.137E-01	.112E+03	.153E+02
3.90	.135E-02	.200E-02	.676E+00	.937E+02	.326E+01	.109E-01	.116E+03	.149E+02
4.00	.102E-02	.154E-02	.665E+00	.120E+03	.331E+01	.869E-02	.120E+03	.145E+02
4.10	.769E-03	.118E-02	.654E+00	.154E+03	.337E+01	.687E-02	.123E+03	.141E+02
4.20	.578E-03	.899E-03	.643E+00	.199E+03	.342E+01	.542E-02	.127E+03	.138E+02
4.30	.433E-03	.686E-03	.632E+00	.257E+03	.347E+01	.426E-02	.130E+03	.134E+02
4.40	.324E-03	.522E-03	.621E+00	.332E+03	.352E+01	.334E-02	.134E+03	.131E+02
4.50	.242E-03	.397E-03	.611E+00	.431E+03	.357E+01	.261E-02	.137E+03	.128E+02
4.60	.181E-03	.301E-03	.600E+00	.560E+03	.362E+01	.203E-02	.141E+03	.126E+02
4.70	.135E-03	.229E-03	.590E+00	.730E+03	.367E+01	.158E-02	.144E+03	.123E+02
4.80	.100E-03	.173E-03	.579E+00	.951E+03	.371E+01	.123E-02	.147E+03	.120E+02
4.90	.746E-04	.131E-03	.569E+00	.124E+04	.376E+01	.952E-03	.151E+03	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.554E-04	.991E-04	.559E+00	.162E+04	.380E+01	.737E-03	.154E+03	.115E+02
5.10	.412E-04	.749E-04	.550E+00	.213E+04	.384E+01	.569E-03	.157E+03	.113E+02
5.20	.306E-04	.566E-04	.540E+00	.278E+04	.388E+01	.439E-03	.160E+03	.111E+02
5.30	.227E-04	.427E-04	.531E+00	.365E+04	.392E+01	.338E-03	.163E+03	.109E+02
5.40	.168E-04	.322E-04	.521E+00	.479E+04	.396E+01	.260E-03	.166E+03	.107E+02
5.50	.125E-04	.243E-04	.512E+00	.629E+04	.400E+01	.200E-03	.169E+03	.105E+02
5.60	.923E-05	.184E-04	.503E+00	.825E+04	.403E+01	.154E-03	.172E+03	.103E+02
5.70	.684E-05	.138E-04	.494E+00	.108E+05	.407E+01	.118E-03	.174E+03	.101E+02
5.80	.507E-05	.105E-04	.486E+00	.143E+05	.410E+01	.907E-04	.177E+03	.993E+01
5.90	.376E-05	.789E-05	.477E+00	.187E+05	.414E+01	.696E-04	.180E+03	.976E+01
6.00	.279E-05	.595E-05	.469E+00	.246E+05	.417E+01	.534E-04	.183E+03	.959E+01
6.10	.207E-05	.449E-05	.460E+00	.324E+05	.420E+01	.409E-04	.185E+03	.944E+01
6.20	.154E-05	.339E-05	.452E+00	.425E+05	.423E+01	.314E-04	.188E+03	.928E+01
6.30	.114E-05	.256E-05	.444E+00	.559E+05	.427E+01	.240E-04	.190E+03	.913E+01
6.40	.847E-06	.194E-05	.437E+00	.734E+05	.430E+01	.184E-04	.193E+03	.899E+01
6.50	.629E-06	.147E-05	.429E+00	.964E+05	.432E+01	.141E-04	.195E+03	.885E+01
6.60	.468E-06	.111E-05	.422E+00	.127E+06	.435E+01	.108E-04	.198E+03	.871E+01
6.70	.348E-06	.841E-06	.414E+00	.166E+06	.438E+01	.831E-05	.200E+03	.858E+01
6.80	.259E-06	.637E-06	.407E+00	.218E+06	.441E+01	.638E-05	.202E+03	.846E+01
6.90	.193E-06	.483E-06	.400E+00	.285E+06	.443E+01	.489E-05	.205E+03	.833E+01
7.00	.144E-06	.367E-06	.393E+00	.374E+06	.446E+01	.376E-05	.207E+03	.821E+01
7.10	.108E-06	.279E-06	.386E+00	.489E+06	.448E+01	.289E-05	.209E+03	.810E+01
7.20	.805E-07	.212E-06	.380E+00	.640E+06	.451E+01	.222E-05	.211E+03	.798E+01
7.30	.602E-07	.161E-06	.373E+00	.836E+06	.453E+01	.171E-05	.213E+03	.787E+01
7.40	.451E-07	.123E-06	.367E+00	.109E+07	.455E+01	.131E-05	.216E+03	.777E+01
7.50	.338E-07	.937E-07	.361E+00	.143E+07	.458E+01	.101E-05	.218E+03	.766E+01
7.60	.254E-07	.715E-07	.355E+00	.186E+07	.460E+01	.779E-06	.220E+03	.756E+01
7.70	.191E-07	.547E-07	.349E+00	.242E+07	.462E+01	.601E-06	.222E+03	.746E+01
7.80	.143E-07	.418E-07	.343E+00	.315E+07	.464E+01	.464E-06	.224E+03	.737E+01
7.90	.108E-07	.320E-07	.337E+00	.410E+07	.466E+01	.358E-06	.225E+03	.727E+01
8.00	.814E-08	.245E-07	.332E+00	.532E+07	.468E+01	.277E-06	.227E+03	.718E+01
8.10	.614E-08	.188E-07	.326E+00	.691E+07	.470E+01	.214E-06	.229E+03	.709E+01
8.20	.464E-08	.145E-07	.321E+00	.895E+07	.472E+01	.166E-06	.231E+03	.700E+01
8.30	.351E-08	.111E-07	.315E+00	.116E+08	.473E+01	.129E-06	.233E+03	.692E+01
8.40	.266E-08	.857E-08	.310E+00	.150E+08	.475E+01	.998E-07	.235E+03	.684E+01
8.50	.202E-08	.661E-08	.305E+00	.194E+08	.477E+01	.775E-07	.236E+03	.676E+01
8.60	.153E-08	.510E-08	.300E+00	.250E+08	.479E+01	.602E-07	.238E+03	.668E+01
8.70	.117E-08	.394E-08	.295E+00	.323E+08	.480E+01	.469E-07	.240E+03	.660E+01
8.80	.887E-09	.305E-08	.291E+00	.416E+08	.482E+01	.365E-07	.242E+03	.652E+01
8.90	.676E-09	.236E-08	.286E+00	.535E+08	.483E+01	.285E-07	.243E+03	.645E+01
9.00	.516E-09	.183E-08	.282E+00	.687E+08	.485E+01	.222E-07	.245E+03	.638E+01
9.10	.395E-09	.142E-08	.277E+00	.882E+08	.487E+01	.174E-07	.246E+03	.631E+01
9.20	.302E-09	.111E-08	.273E+00	.113E+09	.488E+01	.136E-07	.248E+03	.624E+01
9.30	.231E-09	.862E-09	.268E+00	.145E+09	.489E+01	.106E-07	.249E+03	.617E+01
9.40	.178E-09	.672E-09	.264E+00	.185E+09	.491E+01	.834E-08	.251E+03	.611E+01
9.50	.136E-09	.524E-09	.260E+00	.237E+09	.492E+01	.655E-08	.252E+03	.604E+01
9.60	.105E-09	.410E-09	.256E+00	.302E+09	.494E+01	.514E-08	.254E+03	.598E+01
9.70	.809E-10	.321E-09	.252E+00	.385E+09	.495E+01	.405E-08	.255E+03	.592E+01
9.80	.624E-10	.251E-09	.248E+00	.490E+09	.496E+01	.319E-08	.257E+03	.586E+01
9.90	.482E-10	.197E-09	.245E+00	.624E+09	.497E+01	.251E-08	.258E+03	.580E+01

m	p/pt	ra/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
10.00	.373E-10	.155E-09	.241E+00	.792E+09	.499E+01	.198E-08	.260E+03	.574E+01
10.10	.289E-10	.122E-09	.237E+00	.100E+10	.500E+01	.157E-08	.261E+03	.568E+01
10.20	.224E-10	.958E-10	.234E+00	.127E+10	.501E+01	.124E-08	.262E+03	.563E+01
10.30	.174E-10	.755E-10	.230E+00	.161E+10	.502E+01	.981E-09	.264E+03	.557E+01
10.40	.135E-10	.596E-10	.227E+00	.204E+10	.503E+01	.778E-09	.265E+03	.552E+01
10.50	.105E-10	.471E-10	.224E+00	.257E+10	.504E+01	.617E-09	.266E+03	.547E+01
10.60	.821E-11	.373E-10	.220E+00	.324E+10	.505E+01	.491E-09	.268E+03	.541E+01
10.70	.641E-11	.295E-10	.217E+00	.409E+10	.506E+01	.390E-09	.269E+03	.536E+01
10.80	.501E-11	.234E-10	.214E+00	.514E+10	.507E+01	.311E-09	.270E+03	.531E+01
10.90	.392E-11	.186E-10	.211E+00	.646E+10	.508E+01	.248E-09	.271E+03	.526E+01
11.00	.308E-11	.148E-10	.208E+00	.811E+10	.509E+01	.198E-09	.272E+03	.522E+01
11.10	.241E-11	.118E-10	.205E+00	.102E+11	.510E+01	.158E-09	.274E+03	.517E+01
11.20	.190E-11	.939E-11	.202E+00	.127E+11	.511E+01	.126E-09	.275E+03	.512E+01
11.30	.149E-11	.749E-11	.199E+00	.159E+11	.512E+01	.101E-09	.276E+03	.508E+01
11.40	.118E-11	.599E-11	.196E+00	.199E+11	.513E+01	.812E-10	.277E+03	.503E+01
11.50	.927E-12	.479E-11	.194E+00	.248E+11	.514E+01	.652E-10	.278E+03	.499E+01
11.60	.732E-12	.384E-11	.191E+00	.310E+11	.515E+01	.524E-10	.279E+03	.495E+01
11.70	.579E-12	.308E-11	.188E+00	.385E+11	.516E+01	.421E-10	.280E+03	.490E+01
11.80	.458E-12	.247E-11	.186E+00	.479E+11	.516E+01	.339E-10	.281E+03	.486E+01
11.90	.363E-12	.198E-11	.183E+00	.596E+11	.517E+01	.274E-10	.282E+03	.482E+01
12.00	.288E-12	.160E-11	.181E+00	.739E+11	.518E+01	.221E-10	.283E+03	.478E+01
12.10	.229E-12	.129E-11	.178E+00	.916E+11	.519E+01	.178E-10	.284E+03	.474E+01
12.20	.182E-12	.104E-11	.176E+00	.113E+12	.520E+01	.144E-10	.285E+03	.470E+01
12.30	.145E-12	.838E-12	.173E+00	.140E+12	.520E+01	.117E-10	.286E+03	.466E+01
12.40	.116E-12	.677E-12	.171E+00	.173E+12	.521E+01	.947E-11	.287E+03	.463E+01
12.50	.925E-13	.548E-12	.169E+00	.214E+12	.522E+01	.768E-11	.288E+03	.459E+01
12.60	.740E-13	.444E-12	.167E+00	.264E+12	.522E+01	.624E-11	.289E+03	.455E+01
12.70	.592E-13	.360E-12	.164E+00	.325E+12	.523E+01	.508E-11	.290E+03	.452E+01
12.80	.474E-13	.292E-12	.162E+00	.399E+12	.524E+01	.413E-11	.291E+03	.448E+01
12.90	.381E-13	.238E-12	.160E+00	.491E+12	.524E+01	.337E-11	.292E+03	.445E+01
13.00	.306E-13	.193E-12	.158E+00	.602E+12	.525E+01	.275E-11	.293E+03	.441E+01
13.10	.246E-13	.158E-12	.156E+00	.738E+12	.526E+01	.224E-11	.294E+03	.438E+01
13.20	.198E-13	.128E-12	.154E+00	.904E+12	.526E+01	.183E-11	.295E+03	.434E+01
13.30	.160E-13	.105E-12	.152E+00	.111E+13	.527E+01	.150E-11	.296E+03	.431E+01
13.40	.129E-13	.857E-13	.150E+00	.135E+13	.528E+01	.123E-11	.297E+03	.428E+01
13.50	.104E-13	.701E-13	.148E+00	.165E+13	.528E+01	.101E-11	.297E+03	.425E+01
13.60	.841E-14	.574E-13	.146E+00	.201E+13	.529E+01	.827E-12	.298E+03	.422E+01
13.70	.681E-14	.471E-13	.145E+00	.245E+13	.529E+01	.679E-12	.299E+03	.419E+01
13.80	.552E-14	.386E-13	.143E+00	.299E+13	.530E+01	.559E-12	.300E+03	.416E+01
13.90	.448E-14	.317E-13	.141E+00	.363E+13	.530E+01	.460E-12	.301E+03	.413E+01
14.00	.364E-14	.261E-13	.139E+00	.441E+13	.531E+01	.379E-12	.302E+03	.410E+01
14.10	.296E-14	.215E-13	.138E+00	.536E+13	.531E+01	.312E-12	.302E+03	.407E+01
14.20	.241E-14	.177E-13	.136E+00	.649E+13	.532E+01	.258E-12	.303E+03	.404E+01
14.30	.196E-14	.146E-13	.134E+00	.787E+13	.532E+01	.213E-12	.304E+03	.401E+01
14.40	.160E-14	.120E-13	.133E+00	.952E+13	.533E+01	.176E-12	.305E+03	.398E+01
14.50	.131E-14	.996E-14	.131E+00	.115E+14	.533E+01	.146E-12	.305E+03	.395E+01
14.60	.107E-14	.824E-14	.130E+00	.139E+14	.534E+01	.121E-12	.306E+03	.393E+01
14.70	.873E-15	.682E-14	.128E+00	.168E+14	.534E+01	.100E-12	.307E+03	.390E+01
14.80	.715E-15	.565E-14	.127E+00	.202E+14	.535E+01	.833E-13	.308E+03	.387E+01
14.90	.586E-15	.469E-14	.125E+00	.244E+14	.535E+01	.692E-13	.308E+03	.385E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.481E-15	.389E-14	.124E+00	.293E+14	.536E+01	.576E-13	.309E+03	.382E+01
15.10	.395E-15	.324E-14	.122E+00	.352E+14	.536E+01	.479E-13	.310E+03	.380E+01
15.20	.325E-15	.269E-14	.121E+00	.423E+14	.537E+01	.399E-13	.311E+03	.377E+01
15.30	.268E-15	.224E-14	.119E+00	.508E+14	.537E+01	.333E-13	.311E+03	.375E+01
15.40	.220E-15	.187E-14	.118E+00	.609E+14	.537E+01	.278E-13	.312E+03	.372E+01
15.50	.182E-15	.156E-14	.117E+00	.730E+14	.538E+01	.232E-13	.313E+03	.370E+01
15.60	.150E-15	.130E-14	.115E+00	.873E+14	.538E+01	.194E-13	.313E+03	.368E+01
15.70	.124E-15	.109E-14	.114E+00	.104E+15	.539E+01	.162E-13	.314E+03	.365E+01
15.80	.103E-15	.909E-15	.113E+00	.125E+15	.539E+01	.136E-13	.315E+03	.363E+01
15.90	.849E-16	.761E-15	.112E+00	.149E+15	.539E+01	.114E-13	.315E+03	.361E+01
16.00	.703E-16	.637E-15	.110E+00	.178E+15	.540E+01	.957E-14	.316E+03	.358E+01
16.10	.583E-16	.534E-15	.109E+00	.212E+15	.540E+01	.803E-14	.316E+03	.356E+01
16.20	.484E-16	.449E-15	.108E+00	.252E+15	.540E+01	.675E-14	.317E+03	.354E+01
16.30	.402E-16	.377E-15	.107E+00	.300E+15	.541E+01	.568E-14	.318E+03	.352E+01
16.40	.334E-16	.317E-15	.106E+00	.357E+15	.541E+01	.478E-14	.318E+03	.350E+01
16.50	.278E-16	.267E-15	.104E+00	.424E+15	.542E+01	.403E-14	.319E+03	.347E+01
16.60	.232E-16	.224E-15	.103E+00	.503E+15	.542E+01	.340E-14	.319E+03	.345E+01
16.70	.193E-16	.189E-15	.102E+00	.596E+15	.542E+01	.287E-14	.320E+03	.343E+01
16.80	.161E-16	.160E-15	.101E+00	.706E+15	.543E+01	.242E-14	.321E+03	.341E+01
16.90	.135E-16	.135E-15	.100E+00	.836E+15	.543E+01	.204E-14	.321E+03	.339E+01
17.00	.113E-16	.114E-15	.990E-01	.989E+15	.543E+01	.173E-14	.322E+03	.337E+01
17.10	.942E-17	.962E-16	.979E-01	.117E+16	.543E+01	.146E-14	.322E+03	.335E+01
17.20	.789E-17	.814E-16	.969E-01	.138E+16	.544E+01	.124E-14	.323E+03	.333E+01
17.30	.661E-17	.689E-16	.959E-01	.163E+16	.544E+01	.105E-14	.323E+03	.331E+01
17.40	.554E-17	.584E-16	.949E-01	.192E+16	.544E+01	.892E-15	.324E+03	.329E+01
17.50	.465E-17	.495E-16	.939E-01	.227E+16	.545E+01	.757E-15	.325E+03	.328E+01
17.60	.391E-17	.420E-16	.930E-01	.267E+16	.545E+01	.643E-15	.325E+03	.326E+01
17.70	.329E-17	.357E-16	.920E-01	.314E+16	.545E+01	.547E-15	.326E+03	.324E+01
17.80	.276E-17	.304E-16	.911E-01	.369E+16	.546E+01	.465E-15	.326E+03	.322E+01
17.90	.233E-17	.258E-16	.901E-01	.434E+16	.546E+01	.396E-15	.327E+03	.320E+01
18.00	.196E-17	.220E-16	.892E-01	.509E+16	.546E+01	.338E-15	.327E+03	.318E+01
18.10	.165E-17	.187E-16	.883E-01	.597E+16	.546E+01	.288E-15	.328E+03	.317E+01
18.20	.140E-17	.160E-16	.875E-01	.700E+16	.547E+01	.246E-15	.328E+03	.315E+01
18.30	.118E-17	.136E-16	.866E-01	.821E+16	.547E+01	.210E-15	.329E+03	.313E+01
18.40	.997E-18	.116E-16	.857E-01	.961E+16	.547E+01	.179E-15	.329E+03	.312E+01
18.50	.843E-18	.993E-17	.849E-01	.112E+17	.547E+01	.153E-15	.330E+03	.310E+01
18.60	.714E-18	.849E-17	.840E-01	.131E+17	.548E+01	.131E-15	.330E+03	.308E+01
18.70	.605E-18	.727E-17	.832E-01	.154E+17	.548E+01	.112E-15	.331E+03	.307E+01
18.80	.513E-18	.622E-17	.824E-01	.179E+17	.548E+01	.963E-16	.331E+03	.305E+01
18.90	.435E-18	.533E-17	.816E-01	.209E+17	.548E+01	.826E-16	.332E+03	.303E+01
19.00	.369E-18	.457E-17	.808E-01	.244E+17	.549E+01	.709E-16	.332E+03	.302E+01
19.10	.314E-18	.392E-17	.801E-01	.284E+17	.549E+01	.609E-16	.332E+03	.300E+01
19.20	.267E-18	.337E-17	.793E-01	.331E+17	.549E+01	.523E-16	.333E+03	.299E+01
19.30	.227E-18	.289E-17	.785E-01	.385E+17	.549E+01	.450E-16	.333E+03	.297E+01
19.40	.193E-18	.249E-17	.778E-01	.447E+17	.550E+01	.387E-16	.334E+03	.295E+01
19.50	.165E-18	.214E-17	.771E-01	.520E+17	.550E+01	.333E-16	.334E+03	.294E+01
19.60	.140E-18	.184E-17	.763E-01	.604E+17	.550E+01	.287E-16	.335E+03	.292E+01
19.70	.120E-18	.159E-17	.756E-01	.701E+17	.550E+01	.247E-16	.335E+03	.291E+01
19.80	.102E-18	.137E-17	.749E-01	.813E+17	.550E+01	.213E-16	.336E+03	.289E+01
19.90	.875E-19	.118E-17	.742E-01	.942E+17	.551E+01	.184E-16	.336E+03	.288E+01
20.00	.748E-19	.102E-17	.735E-01	.109E+18	.551E+01	.159E-16	.336E+03	.287E+01

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Table 4. Isentropic flow properties.

$$\gamma = 1.068$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	au
.10	.995E+00	.995E+00	.100E+01	.605E+01	.102E+00	.531E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.209E-01		
.30	.953E+00	.956E+00	.997E+00	.210E+01	.305E+00	.458E-01		
.40	.918E+00	.923E+00	.995E+00	.163E+01	.406E+00	.785E-01		
.50	.876E+00	.883E+00	.992E+00	.137E+01	.506E+00	.117E+00		
.60	.826E+00	.836E+00	.988E+00	.121E+01	.606E+00	.159E+00		
.70	.771E+00	.784E+00	.984E+00	.110E+01	.706E+00	.202E+00		
.80	.713E+00	.729E+00	.979E+00	.104E+01	.805E+00	.244E+00		
.90	.653E+00	.671E+00	.973E+00	.101E+01	.903E+00	.282E+00		
1.00	.591E+00	.612E+00	.967E+00	.100E+01	.100E+01	.316E+00	.297E-08	.900E+02
1.10	.531E+00	.553E+00	.960E+00	.101E+01	.110E+01	.343E+00	.158E+01	.654E+02
1.20	.472E+00	.495E+00	.953E+00	.104E+01	.119E+01	.363E+00	.427E+01	.564E+02
1.30	.416E+00	.440E+00	.946E+00	.108E+01	.129E+01	.375E+00	.752E+01	.503E+02
1.40	.363E+00	.387E+00	.938E+00	.115E+01	.138E+01	.380E+00	.111E+02	.456E+02
1.50	.314E+00	.338E+00	.929E+00	.123E+01	.147E+01	.377E+00	.150E+02	.418E+02
1.60	.270E+00	.293E+00	.920E+00	.134E+01	.156E+01	.369E+00	.191E+02	.387E+02
1.70	.229E+00	.252E+00	.911E+00	.147E+01	.165E+01	.354E+00	.232E+02	.360E+02
1.80	.194E+00	.215E+00	.901E+00	.164E+01	.174E+01	.335E+00	.275E+02	.337E+02
1.90	.162E+00	.182E+00	.891E+00	.184E+01	.182E+01	.313E+00	.318E+02	.318E+02
2.00	.135E+00	.153E+00	.880E+00	.209E+01	.191E+01	.288E+00	.362E+02	.300E+02
2.10	.111E+00	.128E+00	.870E+00	.240E+01	.199E+01	.262E+00	.405E+02	.284E+02
2.20	.914E-01	.106E+00	.859E+00	.277E+01	.207E+01	.236E+00	.449E+02	.270E+02
2.30	.744E-01	.878E-01	.848E+00	.323E+01	.215E+01	.210E+00	.493E+02	.258E+02
2.40	.603E-01	.721E-01	.836E+00	.380E+01	.223E+01	.185E+00	.537E+02	.246E+02
2.50	.485E-01	.588E-01	.825E+00	.451E+01	.231E+01	.162E+00	.580E+02	.236E+02
2.60	.388E-01	.477E-01	.813E+00	.538E+01	.238E+01	.140E+00	.623E+02	.226E+02
2.70	.309E-01	.385E-01	.801E+00	.646E+01	.246E+01	.120E+00	.666E+02	.217E+02
2.80	.244E-01	.310E-01	.790E+00	.781E+01	.253E+01	.102E+00	.708E+02	.209E+02
2.90	.193E-01	.248E-01	.778E+00	.950E+01	.260E+01	.865E-01	.751E+02	.202E+02
3.00	.151E-01	.197E-01	.766E+00	.116E+02	.267E+01	.726E-01	.792E+02	.195E+02
3.10	.118E-01	.156E-01	.754E+00	.143E+02	.274E+01	.605E-01	.833E+02	.188E+02
3.20	.917E-02	.124E-01	.742E+00	.177E+02	.280E+01	.501E-01	.874E+02	.182E+02
3.30	.710E-02	.973E-02	.730E+00	.219E+02	.287E+01	.413E-01	.914E+02	.176E+02
3.40	.548E-02	.764E-02	.718E+00	.273E+02	.293E+01	.338E-01	.954E+02	.171E+02
3.50	.422E-02	.597E-02	.706E+00	.342E+02	.299E+01	.276E-01	.993E+02	.166E+02
3.60	.323E-02	.466E-02	.694E+00	.430E+02	.305E+01	.224E-01	.103E+03	.161E+02
3.70	.247E-02	.362E-02	.682E+00	.543E+02	.311E+01	.181E-01	.107E+03	.157E+02
3.80	.189E-02	.281E-02	.671E+00	.687E+02	.316E+01	.145E-01	.111E+03	.153E+02
3.90	.143E-02	.218E-02	.659E+00	.873E+02	.322E+01	.117E-01	.114E+03	.149E+02
4.00	.109E-02	.168E-02	.648E+00	.111E+03	.327E+01	.931E-02	.118E+03	.145E+02
4.10	.825E-03	.130E-02	.636E+00	.142E+03	.333E+01	.741E-02	.121E+03	.141E+02
4.20	.624E-03	.998E-03	.625E+00	.181E+03	.338E+01	.588E-02	.125E+03	.138E+02
4.30	.471E-03	.767E-03	.614E+00	.233E+03	.343E+01	.465E-02	.128E+03	.134E+02
4.40	.355E-03	.589E-03	.603E+00	.299E+03	.347E+01	.367E-02	.132E+03	.131E+02
4.50	.267E-03	.451E-03	.592E+00	.385E+03	.352E+01	.289E-02	.135E+03	.128E+02
4.60	.201E-03	.345E-03	.582E+00	.496E+03	.357E+01	.227E-02	.138E+03	.126E+02
4.70	.151E-03	.264E-03	.571E+00	.641E+03	.361E+01	.178E-02	.142E+03	.123E+02
4.80	.113E-03	.202E-03	.561E+00	.828E+03	.365E+01	.139E-02	.145E+03	.120E+02
4.90	.849E-04	.154E-03	.551E+00	.107E+04	.370E+01	.109E-02	.148E+03	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.637E-04	.118E-03	.541E+00	.139E+04	.374E+01	.850E-03	.151E+03	.115E+02
5.10	.477E-04	.899E-04	.531E+00	.180E+04	.378E+01	.662E-03	.154E+03	.113E+02
5.20	.357E-04	.685E-04	.521E+00	.234E+04	.382E+01	.516E-03	.157E+03	.111E+02
5.30	.267E-04	.523E-04	.511E+00	.304E+04	.385E+01	.401E-03	.160E+03	.109E+02
5.40	.200E-04	.399E-04	.502E+00	.394E+04	.389E+01	.312E-03	.163E+03	.107E+02
5.50	.150E-04	.304E-04	.493E+00	.513E+04	.393E+01	.242E-03	.166E+03	.105E+02
5.60	.112E-04	.232E-04	.484E+00	.666E+04	.396E+01	.188E-03	.168E+03	.103E+02
5.70	.840E-05	.177E-04	.475E+00	.866E+04	.400E+01	.146E-03	.171E+03	.101E+02
5.80	.629E-05	.135E-04	.466E+00	.113E+05	.403E+01	.113E-03	.174E+03	.993E+01
5.90	.471E-05	.103E-04	.458E+00	.146E+05	.406E+01	.876E-04	.176E+03	.976E+01
6.00	.353E-05	.785E-05	.450E+00	.190E+05	.409E+01	.679E-04	.179E+03	.959E+01
6.10	.265E-05	.600E-05	.441E+00	.247E+05	.412E+01	.526E-04	.181E+03	.944E+01
6.20	.199E-05	.458E-05	.433E+00	.321E+05	.415E+01	.408E-04	.184E+03	.928E+01
6.30	.149E-05	.350E-05	.426E+00	.418E+05	.418E+01	.316E-04	.186E+03	.913E+01
6.40	.112E-05	.268E-05	.418E+00	.542E+05	.421E+01	.245E-04	.189E+03	.899E+01
6.50	.842E-06	.205E-05	.410E+00	.704E+05	.423E+01	.190E-04	.191E+03	.885E+01
6.60	.634E-06	.157E-05	.403E+00	.913E+05	.426E+01	.147E-04	.193E+03	.871E+01
6.70	.477E-06	.121E-05	.396E+00	.118E+06	.429E+01	.114E-04	.196E+03	.858E+01
6.80	.360E-06	.925E-06	.389E+00	.153E+06	.431E+01	.888E-05	.198E+03	.846E+01
6.90	.271E-06	.711E-06	.382E+00	.199E+06	.434E+01	.690E-05	.200E+03	.833E+01
7.00	.205E-06	.546E-06	.375E+00	.257E+06	.436E+01	.536E-05	.202E+03	.821E+01
7.10	.155E-06	.420E-06	.368E+00	.332E+06	.438E+01	.417E-05	.204E+03	.810E+01
7.20	.117E-06	.324E-06	.362E+00	.429E+06	.440E+01	.324E-05	.206E+03	.798E+01
7.30	.887E-07	.250E-06	.356E+00	.554E+06	.443E+01	.253E-05	.208E+03	.787E+01
7.40	.673E-07	.193E-06	.349E+00	.714E+06	.445E+01	.197E-05	.210E+03	.777E+01
7.50	.511E-07	.149E-06	.343E+00	.920E+06	.447E+01	.153E-05	.212E+03	.766E+01
7.60	.388E-07	.115E-06	.337E+00	.118E+07	.449E+01	.120E-05	.214E+03	.756E+01
7.70	.295E-07	.891E-07	.332E+00	.152E+07	.451E+01	.935E-06	.216E+03	.746E+01
7.80	.225E-07	.691E-07	.326E+00	.196E+07	.453E+01	.731E-06	.218E+03	.737E+01
7.90	.172E-07	.536E-07	.320E+00	.251E+07	.455E+01	.572E-06	.220E+03	.727E+01
8.00	.131E-07	.416E-07	.315E+00	.322E+07	.456E+01	.448E-06	.222E+03	.718E+01
8.10	.100E-07	.324E-07	.310E+00	.412E+07	.458E+01	.351E-06	.223E+03	.709E+01
8.20	.767E-08	.252E-07	.304E+00	.527E+07	.460E+01	.275E-06	.225E+03	.700E+01
8.30	.588E-08	.197E-07	.299E+00	.674E+07	.462E+01	.216E-06	.227E+03	.692E+01
8.40	.451E-08	.153E-07	.294E+00	.860E+07	.463E+01	.170E-06	.229E+03	.684E+01
8.50	.347E-08	.120E-07	.289E+00	.110E+08	.465E+01	.134E-06	.230E+03	.676E+01
8.60	.267E-08	.938E-08	.285E+00	.140E+08	.466E+01	.105E-06	.232E+03	.668E+01
8.70	.206E-08	.735E-08	.280E+00	.178E+08	.468E+01	.831E-07	.233E+03	.660E+01
8.80	.159E-08	.577E-08	.275E+00	.226E+08	.469E+01	.656E-07	.235E+03	.652E+01
8.90	.123E-08	.453E-08	.271E+00	.287E+08	.471E+01	.519E-07	.237E+03	.645E+01
9.00	.949E-09	.356E-08	.266E+00	.364E+08	.472E+01	.410E-07	.238E+03	.638E+01
9.10	.735E-09	.280E-08	.262E+00	.461E+08	.474E+01	.325E-07	.240E+03	.631E+01
9.20	.570E-09	.221E-08	.258E+00	.583E+08	.475E+01	.258E-07	.241E+03	.624E+01
9.30	.443E-09	.174E-08	.254E+00	.736E+08	.476E+01	.204E-07	.243E+03	.617E+01
9.40	.344E-09	.138E-08	.250E+00	.929E+08	.478E+01	.162E-07	.244E+03	.611E+01
9.50	.268E-09	.109E-08	.246E+00	.117E+09	.479E+01	.129E-07	.245E+03	.604E+01
9.60	.209E-09	.864E-09	.242E+00	.147E+09	.480E+01	.103E-07	.247E+03	.598E+01
9.70	.163E-09	.685E-09	.238E+00	.185E+09	.481E+01	.820E-08	.248E+03	.592E+01
9.80	.128E-09	.544E-09	.234E+00	.233E+09	.483E+01	.655E-08	.250E+03	.586E+01
9.90	.999E-10	.433E-09	.231E+00	.292E+09	.484E+01	.523E-08	.251E+03	.580E+01

m	p/pt	ra/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
10.00	.783E-10	.345E-09	.227E+00	.366E+09	.485E+01	.418E-08	.252E+03	.574E+01
10.10	.615E-10	.275E-09	.224E+00	.458E+09	.486E+01	.335E-08	.253E+03	.568E+01
10.20	.483E-10	.219E-09	.220E+00	.573E+09	.487E+01	.269E-08	.255E+03	.563E+01
10.30	.380E-10	.175E-09	.217E+00	.715E+09	.488E+01	.216E-08	.256E+03	.557E+01
10.40	.300E-10	.140E-09	.214E+00	.892E+09	.489E+01	.173E-08	.257E+03	.552E+01
10.50	.237E-10	.112E-09	.211E+00	.111E+10	.490E+01	.139E-08	.258E+03	.547E+01
10.60	.187E-10	.901E-10	.207E+00	.138E+10	.491E+01	.112E-08	.260E+03	.541E+01
10.70	.148E-10	.724E-10	.204E+00	.172E+10	.492E+01	.904E-09	.261E+03	.536E+01
10.80	.117E-10	.582E-10	.201E+00	.213E+10	.493E+01	.730E-09	.262E+03	.531E+01
10.90	.930E-11	.469E-10	.198E+00	.264E+10	.494E+01	.590E-09	.263E+03	.526E+01
11.00	.738E-11	.378E-10	.196E+00	.327E+10	.495E+01	.477E-09	.264E+03	.522E+01
11.10	.587E-11	.305E-10	.193E+00	.405E+10	.495E+01	.386E-09	.265E+03	.517E+01
11.20	.468E-11	.246E-10	.190E+00	.501E+10	.496E+01	.313E-09	.266E+03	.512E+01
11.30	.373E-11	.199E-10	.187E+00	.618E+10	.497E+01	.254E-09	.267E+03	.508E+01
11.40	.298E-11	.161E-10	.185E+00	.762E+10	.498E+01	.207E-09	.269E+03	.503E+01
11.50	.238E-11	.131E-10	.182E+00	.938E+10	.499E+01	.168E-09	.270E+03	.499E+01
11.60	.190E-11	.106E-10	.179E+00	.115E+11	.500E+01	.137E-09	.271E+03	.495E+01
11.70	.152E-11	.862E-11	.177E+00	.142E+11	.500E+01	.111E-09	.272E+03	.490E+01
11.80	.122E-11	.701E-11	.174E+00	.174E+11	.501E+01	.910E-10	.273E+03	.486E+01
11.90	.983E-12	.571E-11	.172E+00	.213E+11	.502E+01	.743E-10	.274E+03	.482E+01
12.00	.790E-12	.466E-11	.170E+00	.261E+11	.503E+01	.608E-10	.275E+03	.478E+01
12.10	.636E-12	.380E-11	.167E+00	.320E+11	.503E+01	.497E-10	.276E+03	.474E+01
12.20	.513E-12	.311E-11	.165E+00	.391E+11	.504E+01	.408E-10	.276E+03	.470E+01
12.30	.414E-12	.254E-11	.163E+00	.477E+11	.505E+01	.334E-10	.277E+03	.466E+01
12.40	.334E-12	.208E-11	.161E+00	.581E+11	.505E+01	.275E-10	.278E+03	.463E+01
12.50	.270E-12	.171E-11	.158E+00	.708E+11	.506E+01	.226E-10	.279E+03	.459E+01
12.60	.219E-12	.140E-11	.156E+00	.862E+11	.507E+01	.186E-10	.280E+03	.455E+01
12.70	.178E-12	.115E-11	.154E+00	.105E+12	.507E+01	.153E-10	.281E+03	.452E+01
12.80	.144E-12	.947E-12	.152E+00	.127E+12	.508E+01	.126E-10	.282E+03	.448E+01
12.90	.117E-12	.780E-12	.150E+00	.154E+12	.508E+01	.104E-10	.283E+03	.445E+01
13.00	.953E-13	.643E-12	.148E+00	.187E+12	.509E+01	.860E-11	.284E+03	.441E+01
13.10	.776E-13	.530E-12	.146E+00	.226E+12	.510E+01	.711E-11	.284E+03	.438E+01
13.20	.633E-13	.438E-12	.144E+00	.274E+12	.510E+01	.589E-11	.285E+03	.434E+01
13.30	.517E-13	.362E-12	.143E+00	.331E+12	.511E+01	.488E-11	.286E+03	.431E+01
13.40	.422E-13	.300E-12	.141E+00	.399E+12	.511E+01	.405E-11	.287E+03	.428E+01
13.50	.345E-13	.248E-12	.139E+00	.481E+12	.512E+01	.336E-11	.288E+03	.425E+01
13.60	.283E-13	.206E-12	.137E+00	.579E+12	.512E+01	.279E-11	.289E+03	.422E+01
13.70	.232E-13	.171E-12	.135E+00	.697E+12	.513E+01	.232E-11	.289E+03	.419E+01
13.80	.190E-13	.142E-12	.134E+00	.838E+12	.513E+01	.193E-11	.290E+03	.416E+01
13.90	.156E-13	.118E-12	.132E+00	.101E+13	.514E+01	.161E-11	.291E+03	.413E+01
14.00	.128E-13	.985E-13	.130E+00	.121E+13	.514E+01	.134E-11	.292E+03	.410E+01
14.10	.106E-13	.821E-13	.129E+00	.145E+13	.515E+01	.112E-11	.292E+03	.407E+01
14.20	.871E-14	.685E-13	.127E+00	.173E+13	.515E+01	.938E-12	.293E+03	.404E+01
14.30	.719E-14	.572E-13	.126E+00	.207E+13	.516E+01	.785E-12	.294E+03	.401E+01
14.40	.594E-14	.478E-13	.124E+00	.248E+13	.516E+01	.657E-12	.294E+03	.398E+01
14.50	.491E-14	.400E-13	.123E+00	.296E+13	.517E+01	.551E-12	.295E+03	.395E+01
14.60	.406E-14	.335E-13	.121E+00	.353E+13	.517E+01	.462E-12	.296E+03	.393E+01
14.70	.336E-14	.281E-13	.120E+00	.421E+13	.517E+01	.388E-12	.297E+03	.390E+01
14.80	.279E-14	.235E-13	.118E+00	.502E+13	.518E+01	.326E-12	.297E+03	.387E+01
14.90	.231E-14	.198E-13	.117E+00	.597E+13	.518E+01	.274E-12	.298E+03	.385E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.192E-14	.166E-13	.116E+00	.710E+13	.519E+01	.231E-12	.299E+03	.382E+01
15.10	.160E-14	.140E-13	.114E+00	.843E+13	.519E+01	.194E-12	.299E+03	.380E+01
15.20	.133E-14	.118E-13	.113E+00	.100E+14	.519E+01	.164E-12	.300E+03	.377E+01
15.30	.111E-14	.991E-14	.112E+00	.119E+14	.520E+01	.138E-12	.301E+03	.375E+01
15.40	.922E-15	.836E-14	.110E+00	.141E+14	.520E+01	.117E-12	.301E+03	.372E+01
15.50	.770E-15	.706E-14	.109E+00	.167E+14	.521E+01	.987E-13	.302E+03	.370E+01
15.60	.643E-15	.596E-14	.108E+00	.197E+14	.521E+01	.835E-13	.302E+03	.368E+01
15.70	.537E-15	.504E-14	.107E+00	.233E+14	.521E+01	.707E-13	.303E+03	.365E+01
15.80	.450E-15	.427E-14	.105E+00	.275E+14	.522E+01	.599E-13	.304E+03	.363E+01
15.90	.376E-15	.361E-14	.104E+00	.324E+14	.522E+01	.508E-13	.304E+03	.361E+01
16.00	.316E-15	.306E-14	.103E+00	.382E+14	.522E+01	.431E-13	.305E+03	.358E+01
16.10	.265E-15	.260E-14	.102E+00	.451E+14	.523E+01	.366E-13	.305E+03	.356E+01
16.20	.222E-15	.221E-14	.101E+00	.530E+14	.523E+01	.311E-13	.306E+03	.354E+01
16.30	.187E-15	.187E-14	.997E-01	.624E+14	.523E+01	.265E-13	.307E+03	.352E+01
16.40	.157E-15	.159E-14	.986E-01	.733E+14	.524E+01	.226E-13	.307E+03	.350E+01
16.50	.132E-15	.136E-14	.975E-01	.861E+14	.524E+01	.192E-13	.308E+03	.347E+01
16.60	.111E-15	.116E-14	.964E-01	.101E+15	.524E+01	.164E-13	.308E+03	.345E+01
16.70	.939E-16	.985E-15	.954E-01	.118E+15	.525E+01	.140E-13	.309E+03	.343E+01
16.80	.793E-16	.840E-15	.944E-01	.139E+15	.525E+01	.119E-13	.309E+03	.341E+01
16.90	.669E-16	.717E-15	.934E-01	.162E+15	.525E+01	.102E-13	.310E+03	.339E+01
17.00	.566E-16	.613E-15	.924E-01	.190E+15	.525E+01	.873E-14	.310E+03	.337E+01
17.10	.479E-16	.524E-15	.914E-01	.222E+15	.526E+01	.748E-14	.311E+03	.335E+01
17.20	.405E-16	.448E-15	.904E-01	.259E+15	.526E+01	.640E-14	.311E+03	.333E+01
17.30	.343E-16	.384E-15	.895E-01	.303E+15	.526E+01	.549E-14	.312E+03	.331E+01
17.40	.291E-16	.329E-15	.885E-01	.353E+15	.526E+01	.471E-14	.312E+03	.329E+01
17.50	.247E-16	.282E-15	.876E-01	.412E+15	.527E+01	.404E-14	.313E+03	.328E+01
17.60	.210E-16	.242E-15	.867E-01	.480E+15	.527E+01	.347E-14	.313E+03	.326E+01
17.70	.178E-16	.208E-15	.858E-01	.558E+15	.527E+01	.298E-14	.314E+03	.324E+01
17.80	.152E-16	.179E-15	.849E-01	.649E+15	.528E+01	.257E-14	.314E+03	.322E+01
17.90	.129E-16	.154E-15	.841E-01	.754E+15	.528E+01	.221E-14	.315E+03	.320E+01
18.00	.110E-16	.132E-15	.832E-01	.876E+15	.528E+01	.190E-14	.315E+03	.318E+01
18.10	.938E-17	.114E-15	.824E-01	.102E+16	.528E+01	.164E-14	.316E+03	.317E+01
18.20	.800E-17	.981E-16	.816E-01	.118E+16	.529E+01	.141E-14	.316E+03	.315E+01
18.30	.683E-17	.846E-16	.807E-01	.137E+16	.529E+01	.122E-14	.317E+03	.313E+01
18.40	.583E-17	.730E-16	.799E-01	.158E+16	.529E+01	.105E-14	.317E+03	.312E+01
18.50	.499E-17	.630E-16	.791E-01	.183E+16	.529E+01	.912E-15	.318E+03	.310E+01
18.60	.427E-17	.545E-16	.784E-01	.212E+16	.529E+01	.788E-15	.318E+03	.308E+01
18.70	.365E-17	.471E-16	.776E-01	.245E+16	.530E+01	.682E-15	.319E+03	.307E+01
18.80	.313E-17	.407E-16	.768E-01	.283E+16	.530E+01	.591E-15	.319E+03	.305E+01
18.90	.268E-17	.353E-16	.761E-01	.327E+16	.530E+01	.512E-15	.320E+03	.303E+01
19.00	.230E-17	.306E-16	.753E-01	.377E+16	.530E+01	.444E-15	.320E+03	.302E+01
19.10	.198E-17	.265E-16	.746E-01	.435E+16	.530E+01	.385E-15	.320E+03	.300E+01
19.20	.170E-17	.230E-16	.739E-01	.501E+16	.531E+01	.334E-15	.321E+03	.299E+01
19.30	.146E-17	.200E-16	.732E-01	.577E+16	.531E+01	.290E-15	.321E+03	.297E+01
19.40	.126E-17	.173E-16	.725E-01	.665E+16	.531E+01	.252E-15	.322E+03	.295E+01
19.50	.108E-17	.151E-16	.718E-01	.764E+16	.531E+01	.220E-15	.322E+03	.294E+01
19.60	.931E-18	.131E-16	.711E-01	.879E+16	.531E+01	.191E-15	.322E+03	.292E+01
19.70	.803E-18	.114E-16	.704E-01	.101E+17	.532E+01	.166E-15	.323E+03	.291E+01
19.80	.692E-18	.992E-17	.698E-01	.116E+17	.532E+01	.145E-15	.323E+03	.289E+01
19.90	.598E-18	.864E-17	.691E-01	.133E+17	.532E+01	.126E-15	.324E+03	.288E+01
20.00	.516E-18	.754E-17	.685E-01	.152E+17	.532E+01	.110E-15	.324E+03	.287E+01

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Table 5. Isentropic flow properties.

$$\gamma = 1.069$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.995E+00	.995E+00	.100E+01	.604E+01	.102E+00	.532E-02		
.20	.979E+00	.980E+00	.999E+00	.307E+01	.203E+00	.209E-01		
.30	.953E+00	.956E+00	.997E+00	.210E+01	.305E+00	.458E-01		
.40	.918E+00	.923E+00	.995E+00	.163E+01	.406E+00	.785E-01		
.50	.875E+00	.883E+00	.991E+00	.137E+01	.506E+00	.117E+00		
.60	.826E+00	.836E+00	.988E+00	.121E+01	.607E+00	.159E+00		
.70	.771E+00	.784E+00	.983E+00	.110E+01	.706E+00	.202E+00		
.80	.713E+00	.729E+00	.978E+00	.104E+01	.805E+00	.244E+00		
.90	.652E+00	.671E+00	.973E+00	.101E+01	.903E+00	.282E+00		
1.00	.591E+00	.612E+00	.967E+00	.100E+01	.100E+01	.316E+00	.274E-08	.900E+02
1.10	.531E+00	.553E+00	.960E+00	.101E+01	.110E+01	.343E+00	.158E+01	.654E+02
1.20	.472E+00	.495E+00	.953E+00	.104E+01	.119E+01	.363E+00	.426E+01	.564E+02
1.30	.416E+00	.440E+00	.945E+00	.108E+01	.129E+01	.375E+00	.752E+01	.503E+02
1.40	.363E+00	.387E+00	.937E+00	.115E+01	.138E+01	.380E+00	.111E+02	.456E+02
1.50	.314E+00	.338E+00	.928E+00	.123E+01	.147E+01	.378E+00	.150E+02	.418E+02
1.60	.269E+00	.293E+00	.919E+00	.134E+01	.156E+01	.369E+00	.190E+02	.387E+02
1.70	.229E+00	.252E+00	.909E+00	.147E+01	.165E+01	.354E+00	.232E+02	.360E+02
1.80	.194E+00	.215E+00	.899E+00	.164E+01	.174E+01	.335E+00	.275E+02	.337E+02
1.90	.162E+00	.182E+00	.889E+00	.184E+01	.182E+01	.313E+00	.318E+02	.318E+02
2.00	.135E+00	.154E+00	.879E+00	.209E+01	.191E+01	.289E+00	.361E+02	.300E+02
2.10	.111E+00	.128E+00	.868E+00	.239E+01	.199E+01	.263E+00	.405E+02	.284E+02
2.20	.914E-01	.107E+00	.857E+00	.277E+01	.207E+01	.236E+00	.449E+02	.270E+02
2.30	.745E-01	.881E-01	.846E+00	.323E+01	.215E+01	.211E+00	.492E+02	.258E+02
2.40	.603E-01	.723E-01	.834E+00	.379E+01	.223E+01	.186E+00	.536E+02	.246E+02
2.50	.486E-01	.590E-01	.823E+00	.449E+01	.231E+01	.162E+00	.579E+02	.236E+02
2.60	.389E-01	.479E-01	.811E+00	.536E+01	.238E+01	.140E+00	.622E+02	.226E+02
2.70	.309E-01	.387E-01	.799E+00	.644E+01	.245E+01	.121E+00	.665E+02	.217E+02
2.80	.245E-01	.311E-01	.787E+00	.778E+01	.253E+01	.103E+00	.707E+02	.209E+02
2.90	.193E-01	.249E-01	.775E+00	.945E+01	.260E+01	.868E-01	.749E+02	.202E+02
3.00	.152E-01	.199E-01	.763E+00	.116E+02	.267E+01	.729E-01	.791E+02	.195E+02
3.10	.118E-01	.158E-01	.751E+00	.142E+02	.273E+01	.608E-01	.832E+02	.188E+02
3.20	.921E-02	.125E-01	.739E+00	.175E+02	.280E+01	.504E-01	.872E+02	.182E+02
3.30	.714E-02	.983E-02	.727E+00	.218E+02	.286E+01	.416E-01	.912E+02	.176E+02
3.40	.552E-02	.772E-02	.715E+00	.271E+02	.292E+01	.341E-01	.951E+02	.171E+02
3.50	.425E-02	.604E-02	.703E+00	.339E+02	.298E+01	.278E-01	.990E+02	.166E+02
3.60	.326E-02	.472E-02	.691E+00	.426E+02	.304E+01	.226E-01	.103E+03	.161E+02
3.70	.250E-02	.367E-02	.679E+00	.537E+02	.310E+01	.183E-01	.107E+03	.157E+02
3.80	.191E-02	.285E-02	.667E+00	.679E+02	.316E+01	.147E-01	.110E+03	.153E+02
3.90	.145E-02	.221E-02	.656E+00	.860E+02	.321E+01	.118E-01	.114E+03	.149E+02
4.00	.110E-02	.171E-02	.644E+00	.109E+03	.327E+01	.943E-02	.118E+03	.145E+02
4.10	.837E-03	.132E-02	.633E+00	.139E+03	.332E+01	.752E-02	.121E+03	.141E+02
4.20	.633E-03	.102E-02	.622E+00	.178E+03	.337E+01	.597E-02	.125E+03	.138E+02
4.30	.479E-03	.784E-03	.611E+00	.228E+03	.342E+01	.473E-02	.128E+03	.134E+02
4.40	.361E-03	.603E-03	.600E+00	.293E+03	.347E+01	.374E-02	.131E+03	.131E+02
4.50	.272E-03	.463E-03	.589E+00	.376E+03	.351E+01	.295E-02	.135E+03	.128E+02
4.60	.205E-03	.355E-03	.578E+00	.485E+03	.356E+01	.232E-02	.138E+03	.126E+02
4.70	.154E-03	.272E-03	.568E+00	.625E+03	.360E+01	.182E-02	.141E+03	.123E+02
4.80	.116E-03	.208E-03	.557E+00	.806E+03	.364E+01	.143E-02	.144E+03	.120E+02
4.90	.871E-04	.159E-03	.547E+00	.104E+04	.369E+01	.112E-02	.147E+03	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.654E-04	.122E-03	.537E+00	.135E+04	.373E+01	.874E-03	.151E+03	.115E+02
5.10	.491E-04	.931E-04	.527E+00	.174E+04	.377E+01	.682E-03	.154E+03	.113E+02
5.20	.368E-04	.711E-04	.517E+00	.226E+04	.380E+01	.532E-03	.156E+03	.111E+02
5.30	.276E-04	.544E-04	.508E+00	.293E+04	.384E+01	.414E-03	.159E+03	.109E+02
5.40	.207E-04	.415E-04	.498E+00	.380E+04	.388E+01	.323E-03	.162E+03	.107E+02
5.50	.155E-04	.317E-04	.489E+00	.493E+04	.391E+01	.251E-03	.165E+03	.105E+02
5.60	.116E-04	.242E-04	.480E+00	.639E+04	.395E+01	.195E-03	.168E+03	.103E+02
5.70	.874E-05	.185E-04	.471E+00	.829E+04	.398E+01	.152E-03	.170E+03	.101E+02
5.80	.656E-05	.142E-04	.463E+00	.108E+05	.401E+01	.118E-03	.173E+03	.993E+01
5.90	.492E-05	.108E-04	.454E+00	.140E+05	.404E+01	.916E-04	.176E+03	.976E+01
6.00	.370E-05	.829E-05	.446E+00	.181E+05	.408E+01	.711E-04	.178E+03	.959E+01
6.10	.278E-05	.634E-05	.438E+00	.235E+05	.411E+01	.552E-04	.181E+03	.944E+01
6.20	.209E-05	.486E-05	.430E+00	.305E+05	.413E+01	.429E-04	.183E+03	.928E+01
6.30	.157E-05	.372E-05	.422E+00	.395E+05	.416E+01	.333E-04	.185E+03	.913E+01
6.40	.118E-05	.285E-05	.414E+00	.512E+05	.419E+01	.259E-04	.188E+03	.899E+01
6.50	.891E-06	.219E-05	.407E+00	.662E+05	.422E+01	.201E-04	.190E+03	.885E+01
6.60	.672E-06	.168E-05	.400E+00	.857E+05	.424E+01	.156E-04	.192E+03	.871E+01
6.70	.507E-06	.129E-05	.392E+00	.111E+06	.427E+01	.122E-04	.195E+03	.858E+01
6.80	.383E-06	.994E-06	.385E+00	.143E+06	.429E+01	.946E-05	.197E+03	.846E+01
6.90	.290E-06	.765E-06	.378E+00	.185E+06	.432E+01	.737E-05	.199E+03	.833E+01
7.00	.219E-06	.590E-06	.372E+00	.239E+06	.434E+01	.574E-05	.201E+03	.821E+01
7.10	.166E-06	.455E-06	.365E+00	.308E+06	.436E+01	.447E-05	.203E+03	.810E+01
7.20	.126E-06	.351E-06	.359E+00	.397E+06	.439E+01	.349E-05	.205E+03	.798E+01
7.30	.956E-07	.271E-06	.352E+00	.512E+06	.441E+01	.272E-05	.207E+03	.787E+01
7.40	.727E-07	.210E-06	.346E+00	.658E+06	.443E+01	.213E-05	.209E+03	.777E+01
7.50	.553E-07	.163E-06	.340E+00	.846E+06	.445E+01	.166E-05	.211E+03	.766E+01
7.60	.421E-07	.126E-06	.334E+00	.109E+07	.447E+01	.130E-05	.213E+03	.756E+01
7.70	.321E-07	.978E-07	.328E+00	.139E+07	.449E+01	.102E-05	.215E+03	.746E+01
7.80	.245E-07	.760E-07	.323E+00	.179E+07	.451E+01	.798E-06	.217E+03	.737E+01
7.90	.188E-07	.591E-07	.317E+00	.229E+07	.453E+01	.626E-06	.219E+03	.727E+01
8.00	.144E-07	.461E-07	.312E+00	.292E+07	.454E+01	.491E-06	.221E+03	.718E+01
8.10	.110E-07	.359E-07	.306E+00	.373E+07	.456E+01	.386E-06	.222E+03	.709E+01
8.20	.844E-08	.280E-07	.301E+00	.477E+07	.458E+01	.304E-06	.224E+03	.700E+01
8.30	.649E-08	.219E-07	.296E+00	.608E+07	.459E+01	.239E-06	.226E+03	.692E+01
8.40	.499E-08	.171E-07	.291E+00	.774E+07	.461E+01	.188E-06	.227E+03	.684E+01
8.50	.385E-08	.134E-07	.286E+00	.984E+07	.463E+01	.149E-06	.229E+03	.676E+01
8.60	.297E-08	.105E-07	.282E+00	.125E+08	.464E+01	.117E-06	.231E+03	.668E+01
8.70	.229E-08	.828E-08	.277E+00	.159E+08	.466E+01	.927E-07	.232E+03	.660E+01
8.80	.177E-08	.651E-08	.272E+00	.201E+08	.467E+01	.734E-07	.234E+03	.652E+01
8.90	.137E-08	.513E-08	.268E+00	.255E+08	.469E+01	.581E-07	.235E+03	.645E+01
9.00	.106E-08	.404E-08	.264E+00	.322E+08	.470E+01	.461E-07	.237E+03	.638E+01
9.10	.827E-09	.319E-08	.259E+00	.407E+08	.471E+01	.366E-07	.238E+03	.631E+01
9.20	.643E-09	.252E-08	.255E+00	.513E+08	.473E+01	.291E-07	.240E+03	.624E+01
9.30	.501E-09	.199E-08	.251E+00	.647E+08	.474E+01	.231E-07	.241E+03	.617E+01
9.40	.390E-09	.158E-08	.247E+00	.815E+08	.475E+01	.184E-07	.243E+03	.611E+01
9.50	.305E-09	.125E-08	.243E+00	.102E+09	.476E+01	.147E-07	.244E+03	.604E+01
9.60	.238E-09	.996E-09	.239E+00	.129E+09	.478E+01	.117E-07	.245E+03	.598E+01
9.70	.187E-09	.792E-09	.236E+00	.161E+09	.479E+01	.938E-08	.247E+03	.592E+01
9.80	.146E-09	.631E-09	.232E+00	.202E+09	.480E+01	.750E-08	.248E+03	.586E+01
9.90	.115E-09	.503E-09	.228E+00	.253E+09	.481E+01	.601E-08	.249E+03	.580E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
10.00	.902E-10	.401E-09	.225E+00	.316E+09	.482E+01	.482E-08	.251E+03	.574E+01
10.10	.710E-10	.321E-09	.221E+00	.395E+09	.483E+01	.387E-08	.252E+03	.568E+01
10.20	.559E-10	.257E-09	.218E+00	.492E+09	.484E+01	.311E-08	.253E+03	.563E+01
10.30	.441E-10	.206E-09	.215E+00	.613E+09	.485E+01	.250E-08	.254E+03	.557E+01
10.40	.349E-10	.165E-09	.211E+00	.762E+09	.486E+01	.202E-08	.256E+03	.552E+01
10.50	.276E-10	.132E-09	.208E+00	.947E+09	.487E+01	.163E-08	.257E+03	.547E+01
10.60	.218E-10	.107E-09	.205E+00	.118E+10	.488E+01	.131E-08	.258E+03	.541E+01
10.70	.173E-10	.858E-10	.202E+00	.146E+10	.489E+01	.106E-08	.259E+03	.536E+01
10.80	.138E-10	.691E-10	.199E+00	.181E+10	.490E+01	.858E-09	.260E+03	.531E+01
10.90	.109E-10	.558E-10	.196E+00	.223E+10	.491E+01	.695E-09	.261E+03	.526E+01
11.00	.871E-11	.451E-10	.193E+00	.276E+10	.492E+01	.564E-09	.263E+03	.522E+01
11.10	.695E-11	.365E-10	.190E+00	.340E+10	.493E+01	.457E-09	.264E+03	.517E+01
11.20	.555E-11	.295E-10	.188E+00	.420E+10	.494E+01	.372E-09	.265E+03	.512E+01
11.30	.443E-11	.240E-10	.185E+00	.516E+10	.494E+01	.302E-09	.266E+03	.508E+01
11.40	.355E-11	.194E-10	.182E+00	.635E+10	.495E+01	.246E-09	.267E+03	.503E+01
11.50	.284E-11	.158E-10	.180E+00	.780E+10	.496E+01	.201E-09	.268E+03	.499E+01
11.60	.228E-11	.129E-10	.177E+00	.957E+10	.497E+01	.164E-09	.269E+03	.495E+01
11.70	.183E-11	.105E-10	.175E+00	.117E+11	.497E+01	.134E-09	.270E+03	.490E+01
11.80	.147E-11	.855E-11	.172E+00	.144E+11	.498E+01	.110E-09	.271E+03	.486E+01
11.90	.119E-11	.698E-11	.170E+00	.176E+11	.499E+01	.897E-10	.272E+03	.482E+01
12.00	.956E-12	.570E-11	.168E+00	.215E+11	.500E+01	.735E-10	.273E+03	.478E+01
12.10	.771E-12	.467E-11	.165E+00	.262E+11	.500E+01	.604E-10	.274E+03	.474E+01
12.20	.623E-12	.382E-11	.163E+00	.319E+11	.501E+01	.496E-10	.275E+03	.470E+01
12.30	.504E-12	.314E-11	.161E+00	.389E+11	.502E+01	.408E-10	.276E+03	.466E+01
12.40	.408E-12	.257E-11	.159E+00	.473E+11	.502E+01	.336E-10	.277E+03	.463E+01
12.50	.331E-12	.212E-11	.156E+00	.575E+11	.503E+01	.276E-10	.278E+03	.459E+01
12.60	.269E-12	.174E-11	.154E+00	.698E+11	.504E+01	.228E-10	.278E+03	.455E+01
12.70	.218E-12	.143E-11	.152E+00	.846E+11	.504E+01	.188E-10	.279E+03	.452E+01
12.80	.178E-12	.118E-11	.150E+00	.103E+12	.505E+01	.156E-10	.280E+03	.448E+01
12.90	.145E-12	.976E-12	.148E+00	.124E+12	.505E+01	.129E-10	.281E+03	.445E+01
13.00	.118E-12	.806E-12	.146E+00	.150E+12	.506E+01	.107E-10	.282E+03	.441E+01
13.10	.964E-13	.667E-12	.144E+00	.181E+12	.506E+01	.884E-11	.283E+03	.438E+01
13.20	.788E-13	.552E-12	.143E+00	.218E+12	.507E+01	.733E-11	.283E+03	.434E+01
13.30	.644E-13	.458E-12	.141E+00	.263E+12	.508E+01	.609E-11	.284E+03	.431E+01
13.40	.528E-13	.380E-12	.139E+00	.317E+12	.508E+01	.506E-11	.285E+03	.428E+01
13.50	.433E-13	.315E-12	.137E+00	.381E+12	.509E+01	.421E-11	.286E+03	.425E+01
13.60	.355E-13	.262E-12	.135E+00	.458E+12	.509E+01	.351E-11	.287E+03	.422E+01
13.70	.292E-13	.218E-12	.134E+00	.550E+12	.510E+01	.293E-11	.287E+03	.419E+01
13.80	.240E-13	.182E-12	.132E+00	.660E+12	.510E+01	.244E-11	.288E+03	.416E+01
13.90	.198E-13	.151E-12	.130E+00	.791E+12	.511E+01	.204E-11	.289E+03	.413E+01
14.00	.163E-13	.126E-12	.129E+00	.947E+12	.511E+01	.171E-11	.290E+03	.410E+01
14.10	.134E-13	.106E-12	.127E+00	.113E+13	.512E+01	.143E-11	.290E+03	.407E+01
14.20	.111E-13	.883E-13	.126E+00	.135E+13	.512E+01	.120E-11	.291E+03	.404E+01
14.30	.918E-14	.739E-13	.124E+00	.161E+13	.512E+01	.100E-11	.292E+03	.401E+01
14.40	.759E-14	.619E-13	.123E+00	.193E+13	.513E+01	.842E-12	.293E+03	.398E+01
14.50	.629E-14	.519E-13	.121E+00	.230E+13	.513E+01	.707E-12	.293E+03	.395E+01
14.60	.522E-14	.436E-13	.120E+00	.273E+13	.514E+01	.594E-12	.294E+03	.393E+01
14.70	.433E-14	.366E-13	.118E+00	.325E+13	.514E+01	.500E-12	.295E+03	.390E+01
14.80	.360E-14	.308E-13	.117E+00	.386E+13	.515E+01	.421E-12	.295E+03	.387E+01
14.90	.299E-14	.259E-13	.115E+00	.459E+13	.515E+01	.355E-12	.296E+03	.385E+01

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m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.249E-14	.218E-13	.114E+00	.544E+13	.515E+01	.299E-12	.297E+03	.382E+01
15.10	.207E-14	.184E-13	.113E+00	.645E+13	.516E+01	.253E-12	.297E+03	.380E+01
15.20	.173E-14	.155E-13	.111E+00	.764E+13	.516E+01	.214E-12	.298E+03	.377E+01
15.30	.144E-14	.131E-13	.110E+00	.904E+13	.517E+01	.181E-12	.299E+03	.375E+01
15.40	.121E-14	.111E-13	.109E+00	.107E+14	.517E+01	.153E-12	.299E+03	.372E+01
15.50	.101E-14	.937E-14	.108E+00	.126E+14	.517E+01	.130E-12	.300E+03	.370E+01
15.60	.844E-15	.793E-14	.106E+00	.149E+14	.518E+01	.110E-12	.300E+03	.368E+01
15.70	.707E-15	.672E-14	.105E+00	.176E+14	.518E+01	.932E-13	.301E+03	.365E+01
15.80	.593E-15	.570E-14	.104E+00	.207E+14	.518E+01	.791E-13	.302E+03	.363E+01
15.90	.498E-15	.484E-14	.103E+00	.244E+14	.519E+01	.673E-13	.302E+03	.361E+01
16.00	.418E-15	.411E-14	.102E+00	.287E+14	.519E+01	.572E-13	.303E+03	.358E+01
16.10	.351E-15	.349E-14	.101E+00	.337E+14	.519E+01	.487E-13	.303E+03	.356E+01
16.20	.296E-15	.297E-14	.995E-01	.396E+14	.520E+01	.415E-13	.304E+03	.354E+01
16.30	.249E-15	.253E-14	.984E-01	.465E+14	.520E+01	.354E-13	.304E+03	.352E+01
16.40	.210E-15	.216E-14	.973E-01	.545E+14	.520E+01	.302E-13	.305E+03	.350E+01
16.50	.177E-15	.184E-14	.962E-01	.639E+14	.521E+01	.258E-13	.306E+03	.347E+01
16.60	.149E-15	.157E-14	.952E-01	.748E+14	.521E+01	.220E-13	.306E+03	.345E+01
16.70	.126E-15	.134E-14	.941E-01	.875E+14	.521E+01	.188E-13	.307E+03	.343E+01
16.80	.107E-15	.115E-14	.931E-01	.102E+15	.521E+01	.161E-13	.307E+03	.341E+01
16.90	.904E-16	.981E-15	.921E-01	.119E+15	.522E+01	.138E-13	.308E+03	.339E+01
17.00	.766E-16	.840E-15	.912E-01	.140E+15	.522E+01	.118E-13	.308E+03	.337E+01
17.10	.649E-16	.720E-15	.902E-01	.163E+15	.522E+01	.101E-13	.309E+03	.335E+01
17.20	.551E-16	.617E-15	.892E-01	.190E+15	.523E+01	.871E-14	.309E+03	.333E+01
17.30	.467E-16	.529E-15	.883E-01	.221E+15	.523E+01	.748E-14	.310E+03	.331E+01
17.40	.397E-16	.455E-15	.874E-01	.257E+15	.523E+01	.643E-14	.310E+03	.329E+01
17.50	.338E-16	.391E-15	.865E-01	.299E+15	.523E+01	.553E-14	.311E+03	.328E+01
17.60	.287E-16	.336E-15	.856E-01	.348E+15	.524E+01	.476E-14	.311E+03	.326E+01
17.70	.245E-16	.289E-15	.847E-01	.404E+15	.524E+01	.410E-14	.312E+03	.324E+01
17.80	.209E-16	.249E-15	.838E-01	.469E+15	.524E+01	.353E-14	.312E+03	.322E+01
17.90	.178E-16	.214E-15	.830E-01	.544E+15	.524E+01	.305E-14	.313E+03	.320E+01
18.00	.152E-16	.185E-15	.821E-01	.630E+15	.525E+01	.263E-14	.313E+03	.318E+01
18.10	.130E-16	.160E-15	.813E-01	.730E+15	.525E+01	.227E-14	.314E+03	.317E+01
18.20	.111E-16	.138E-15	.805E-01	.845E+15	.525E+01	.196E-14	.314E+03	.315E+01
18.30	.948E-17	.119E-15	.797E-01	.978E+15	.525E+01	.170E-14	.315E+03	.313E+01
18.40	.812E-17	.103E-15	.789E-01	.113E+16	.526E+01	.147E-14	.315E+03	.312E+01
18.50	.695E-17	.891E-16	.781E-01	.131E+16	.526E+01	.127E-14	.316E+03	.310E+01
18.60	.596E-17	.771E-16	.773E-01	.151E+16	.526E+01	.110E-14	.316E+03	.308E+01
18.70	.511E-17	.668E-16	.765E-01	.174E+16	.526E+01	.956E-15	.316E+03	.307E+01
18.80	.439E-17	.579E-16	.758E-01	.201E+16	.526E+01	.829E-15	.317E+03	.305E+01
18.90	.377E-17	.502E-16	.751E-01	.231E+16	.527E+01	.720E-15	.317E+03	.303E+01
19.00	.324E-17	.436E-16	.743E-01	.266E+16	.527E+01	.625E-15	.318E+03	.302E+01
19.10	.279E-17	.379E-16	.736E-01	.306E+16	.527E+01	.544E-15	.318E+03	.300E+01
19.20	.240E-17	.329E-16	.729E-01	.352E+16	.527E+01	.473E-15	.319E+03	.299E+01
19.30	.207E-17	.286E-16	.722E-01	.405E+16	.527E+01	.412E-15	.319E+03	.297E+01
19.40	.178E-17	.249E-16	.715E-01	.465E+16	.528E+01	.358E-15	.319E+03	.295E+01
19.50	.154E-17	.217E-16	.708E-01	.534E+16	.528E+01	.312E-15	.320E+03	.294E+01
19.60	.133E-17	.189E-16	.702E-01	.613E+16	.528E+01	.272E-15	.320E+03	.292E+01
19.70	.115E-17	.165E-16	.695E-01	.703E+16	.528E+01	.238E-15	.321E+03	.291E+01
19.80	.990E-18	.144E-16	.688E-01	.805E+16	.528E+01	.207E-15	.321E+03	.289E+01
19.90	.856E-18	.125E-16	.682E-01	.922E+16	.529E+01	.181E-15	.321E+03	.288E+01
20.00	.740E-18	.110E-16	.676E-01	.106E+17	.529E+01	.158E-15	.322E+03	.287E+01

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Table 6. Isentropic flow properties.

$$\gamma = 1.4$$

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
.10	.993E+00	.995E+00	.998E+00	.582E+01	.109E+00	.695E-02		
.20	.972E+00	.980E+00	.992E+00	.296E+01	.218E+00	.272E-01		
.30	.939E+00	.956E+00	.982E+00	.204E+01	.326E+00	.592E-01		
.40	.896E+00	.924E+00	.969E+00	.159E+01	.431E+00	.100E+00		
.50	.843E+00	.885E+00	.952E+00	.134E+01	.535E+00	.148E+00		
.60	.784E+00	.840E+00	.933E+00	.119E+01	.635E+00	.198E+00		
.70	.721E+00	.792E+00	.911E+00	.109E+01	.732E+00	.247E+00		
.80	.656E+00	.740E+00	.887E+00	.104E+01	.825E+00	.294E+00		
.90	.591E+00	.687E+00	.861E+00	.101E+01	.915E+00	.335E+00		
1.00	.528E+00	.634E+00	.833E+00	.100E+01	.100E+01	.370E+00	.370E-08	.900E+02
1.10	.468E+00	.582E+00	.805E+00	.101E+01	.108E+01	.397E+00	.134E+01	.654E+02
1.20	.412E+00	.531E+00	.776E+00	.103E+01	.116E+01	.416E+00	.356E+01	.564E+02
1.30	.361E+00	.483E+00	.747E+00	.107E+01	.123E+01	.427E+00	.617E+01	.503E+02
1.40	.314E+00	.437E+00	.718E+00	.111E+01	.130E+01	.431E+00	.899E+01	.456E+02
1.50	.272E+00	.395E+00	.690E+00	.118E+01	.136E+01	.429E+00	.119E+02	.418E+02
1.60	.235E+00	.356E+00	.661E+00	.125E+01	.143E+01	.422E+00	.149E+02	.387E+02
1.70	.203E+00	.320E+00	.634E+00	.134E+01	.148E+01	.410E+00	.178E+02	.360E+02
1.80	.174E+00	.287E+00	.607E+00	.144E+01	.154E+01	.395E+00	.207E+02	.337E+02
1.90	.149E+00	.257E+00	.581E+00	.156E+01	.159E+01	.377E+00	.236E+02	.318E+02
2.00	.128E+00	.230E+00	.556E+00	.169E+01	.163E+01	.358E+00	.264E+02	.300E+02
2.10	.109E+00	.206E+00	.531E+00	.184E+01	.168E+01	.338E+00	.291E+02	.284E+02
2.20	.935E-01	.184E+00	.508E+00	.200E+01	.172E+01	.317E+00	.317E+02	.270E+02
2.30	.800E-01	.165E+00	.486E+00	.219E+01	.176E+01	.296E+00	.343E+02	.258E+02
2.40	.684E-01	.147E+00	.465E+00	.240E+01	.179E+01	.276E+00	.367E+02	.246E+02
2.50	.585E-01	.132E+00	.444E+00	.264E+01	.183E+01	.256E+00	.391E+02	.236E+02
2.60	.501E-01	.118E+00	.425E+00	.290E+01	.186E+01	.237E+00	.414E+02	.226E+02
2.70	.430E-01	.106E+00	.407E+00	.318E+01	.189E+01	.219E+00	.436E+02	.217E+02
2.80	.368E-01	.946E-01	.389E+00	.350E+01	.191E+01	.202E+00	.457E+02	.209E+02
2.90	.317E-01	.849E-01	.373E+00	.385E+01	.194E+01	.186E+00	.478E+02	.202E+02
3.00	.272E-01	.762E-01	.357E+00	.423E+01	.196E+01	.172E+00	.498E+02	.195E+02
3.10	.234E-01	.685E-01	.342E+00	.466E+01	.199E+01	.158E+00	.516E+02	.188E+02
3.20	.202E-01	.617E-01	.328E+00	.512E+01	.201E+01	.145E+00	.535E+02	.182E+02
3.30	.175E-01	.555E-01	.315E+00	.563E+01	.203E+01	.133E+00	.552E+02	.176E+02
3.40	.151E-01	.501E-01	.302E+00	.618E+01	.205E+01	.122E+00	.569E+02	.171E+02
3.50	.131E-01	.452E-01	.290E+00	.679E+01	.206E+01	.112E+00	.585E+02	.166E+02
3.60	.114E-01	.409E-01	.278E+00	.745E+01	.208E+01	.103E+00	.601E+02	.161E+02
3.70	.990E-02	.370E-01	.268E+00	.817E+01	.210E+01	.949E-01	.616E+02	.157E+02
3.80	.863E-02	.335E-01	.257E+00	.895E+01	.211E+01	.872E-01	.630E+02	.153E+02
3.90	.753E-02	.304E-01	.247E+00	.980E+01	.212E+01	.802E-01	.644E+02	.149E+02
4.00	.659E-02	.277E-01	.238E+00	.107E+02	.214E+01	.738E-01	.658E+02	.145E+02
4.10	.577E-02	.252E-01	.229E+00	.117E+02	.215E+01	.679E-01	.671E+02	.141E+02
4.20	.506E-02	.229E-01	.221E+00	.128E+02	.216E+01	.625E-01	.683E+02	.138E+02
4.30	.445E-02	.209E-01	.213E+00	.140E+02	.217E+01	.576E-01	.695E+02	.134E+02
4.40	.392E-02	.191E-01	.205E+00	.152E+02	.218E+01	.531E-01	.707E+02	.131E+02
4.50	.346E-02	.174E-01	.198E+00	.166E+02	.219E+01	.490E-01	.718E+02	.128E+02
4.60	.305E-02	.160E-01	.191E+00	.180E+02	.220E+01	.452E-01	.729E+02	.126E+02
4.70	.270E-02	.146E-01	.185E+00	.196E+02	.221E+01	.418E-01	.740E+02	.123E+02
4.80	.239E-02	.134E-01	.178E+00	.213E+02	.222E+01	.386E-01	.750E+02	.120E+02
4.90	.213E-02	.123E-01	.172E+00	.231E+02	.223E+01	.357E-01	.760E+02	.118E+02

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
5.00	.189E-02	.113E-01	.167E+00	.250E+02	.224E+01	.331E-01	.769E+02	.115E+02
5.10	.168E-02	.104E-01	.161E+00	.271E+02	.224E+01	.306E-01	.778E+02	.113E+02
5.20	.150E-02	.962E-02	.156E+00	.293E+02	.225E+01	.284E-01	.787E+02	.111E+02
5.30	.134E-02	.888E-02	.151E+00	.316E+02	.226E+01	.264E-01	.796E+02	.109E+02
5.40	.120E-02	.820E-02	.146E+00	.342E+02	.226E+01	.245E-01	.804E+02	.107E+02
5.50	.107E-02	.758E-02	.142E+00	.369E+02	.227E+01	.228E-01	.812E+02	.105E+02
5.60	.964E-03	.701E-02	.138E+00	.397E+02	.227E+01	.212E-01	.820E+02	.103E+02
5.70	.866E-03	.650E-02	.133E+00	.428E+02	.228E+01	.197E-01	.828E+02	.101E+02
5.80	.779E-03	.602E-02	.129E+00	.460E+02	.229E+01	.184E-01	.835E+02	.993E+01
5.90	.702E-03	.559E-02	.126E+00	.495E+02	.229E+01	.171E-01	.843E+02	.976E+01
6.00	.633E-03	.519E-02	.122E+00	.532E+02	.230E+01	.160E-01	.850E+02	.959E+01
6.10	.572E-03	.483E-02	.118E+00	.571E+02	.230E+01	.149E-01	.856E+02	.944E+01
6.20	.517E-03	.449E-02	.115E+00	.612E+02	.230E+01	.139E-01	.863E+02	.928E+01
6.30	.468E-03	.419E-02	.112E+00	.656E+02	.231E+01	.130E-01	.869E+02	.913E+01
6.40	.425E-03	.390E-02	.109E+00	.702E+02	.231E+01	.122E-01	.876E+02	.899E+01
6.50	.385E-03	.364E-02	.106E+00	.751E+02	.232E+01	.114E-01	.882E+02	.885E+01
6.60	.350E-03	.340E-02	.103E+00	.803E+02	.232E+01	.107E-01	.888E+02	.871E+01
6.70	.319E-03	.318E-02	.100E+00	.858E+02	.232E+01	.100E-01	.893E+02	.858E+01
6.80	.290E-03	.297E-02	.976E-01	.916E+02	.233E+01	.939E-02	.899E+02	.846E+01
6.90	.265E-03	.278E-02	.950E-01	.977E+02	.233E+01	.882E-02	.904E+02	.833E+01
7.00	.242E-03	.261E-02	.926E-01	.104E+03	.233E+01	.829E-02	.910E+02	.821E+01
7.10	.221E-03	.245E-02	.902E-01	.111E+03	.234E+01	.779E-02	.915E+02	.810E+01
7.20	.202E-03	.230E-02	.880E-01	.118E+03	.234E+01	.733E-02	.920E+02	.798E+01
7.30	.185E-03	.215E-02	.858E-01	.126E+03	.234E+01	.690E-02	.925E+02	.787E+01
7.40	.169E-03	.202E-02	.837E-01	.134E+03	.234E+01	.649E-02	.930E+02	.777E+01
7.50	.155E-03	.190E-02	.816E-01	.142E+03	.235E+01	.612E-02	.934E+02	.766E+01
7.60	.143E-03	.179E-02	.797E-01	.151E+03	.235E+01	.577E-02	.939E+02	.756E+01
7.70	.131E-03	.169E-02	.778E-01	.160E+03	.235E+01	.544E-02	.943E+02	.746E+01
7.80	.121E-03	.159E-02	.759E-01	.169E+03	.235E+01	.514E-02	.948E+02	.737E+01
7.90	.111E-03	.150E-02	.742E-01	.180E+03	.236E+01	.486E-02	.952E+02	.727E+01
8.00	.102E-03	.141E-02	.725E-01	.190E+03	.236E+01	.459E-02	.956E+02	.718E+01
8.10	.945E-04	.133E-02	.708E-01	.201E+03	.236E+01	.434E-02	.960E+02	.709E+01
8.20	.872E-04	.126E-02	.692E-01	.213E+03	.236E+01	.411E-02	.964E+02	.700E+01
8.30	.806E-04	.119E-02	.677E-01	.225E+03	.237E+01	.389E-02	.968E+02	.692E+01
8.40	.745E-04	.113E-02	.662E-01	.238E+03	.237E+01	.368E-02	.972E+02	.684E+01
8.50	.690E-04	.107E-02	.647E-01	.251E+03	.237E+01	.349E-02	.976E+02	.676E+01
8.60	.639E-04	.101E-02	.633E-01	.265E+03	.237E+01	.331E-02	.979E+02	.668E+01
8.70	.592E-04	.956E-03	.620E-01	.280E+03	.237E+01	.314E-02	.983E+02	.660E+01
8.80	.549E-04	.906E-03	.607E-01	.295E+03	.237E+01	.298E-02	.986E+02	.652E+01
8.90	.510E-04	.859E-03	.594E-01	.311E+03	.238E+01	.283E-02	.990E+02	.645E+01
9.00	.474E-04	.815E-03	.581E-01	.327E+03	.238E+01	.269E-02	.993E+02	.638E+01
9.10	.441E-04	.774E-03	.569E-01	.344E+03	.238E+01	.255E-02	.996E+02	.631E+01
9.20	.410E-04	.735E-03	.558E-01	.362E+03	.238E+01	.243E-02	.100E+03	.624E+01
9.30	.382E-04	.698E-03	.547E-01	.381E+03	.238E+01	.231E-02	.100E+03	.617E+01
9.40	.355E-04	.664E-03	.536E-01	.401E+03	.238E+01	.220E-02	.101E+03	.611E+01
9.50	.331E-04	.631E-03	.525E-01	.421E+03	.238E+01	.209E-02	.101E+03	.604E+01
9.60	.309E-04	.601E-03	.515E-01	.442E+03	.239E+01	.199E-02	.101E+03	.598E+01
9.70	.289E-04	.572E-03	.505E-01	.464E+03	.239E+01	.190E-02	.101E+03	.592E+01
9.80	.270E-04	.545E-03	.495E-01	.487E+03	.239E+01	.181E-02	.102E+03	.586E+01
9.90	.252E-04	.519E-03	.485E-01	.511E+03	.239E+01	.173E-02	.102E+03	.580E+01

m	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
10.00	.236E-04	.495E-03	.476E-01	.536E+03	.239E+01	.165E-02	.102E+03	.574E+01
10.10	.221E-04	.472E-03	.467E-01	.562E+03	.239E+01	.157E-02	.103E+03	.568E+01
10.20	.206E-04	.450E-03	.459E-01	.588E+03	.239E+01	.150E-02	.103E+03	.563E+01
10.30	.193E-04	.430E-03	.450E-01	.616E+03	.239E+01	.144E-02	.103E+03	.557E+01
10.40	.181E-04	.410E-03	.442E-01	.645E+03	.239E+01	.137E-02	.103E+03	.552E+01
10.50	.170E-04	.392E-03	.434E-01	.675E+03	.240E+01	.131E-02	.104E+03	.547E+01
10.60	.160E-04	.375E-03	.426E-01	.706E+03	.240E+01	.126E-02	.104E+03	.541E+01
10.70	.150E-04	.358E-03	.418E-01	.738E+03	.240E+01	.120E-02	.104E+03	.536E+01
10.80	.141E-04	.343E-03	.411E-01	.772E+03	.240E+01	.115E-02	.104E+03	.531E+01
10.90	.132E-04	.328E-03	.404E-01	.806E+03	.240E+01	.110E-02	.105E+03	.526E+01
11.00	.124E-04	.314E-03	.397E-01	.842E+03	.240E+01	.105E-02	.105E+03	.522E+01
11.10	.117E-04	.300E-03	.390E-01	.879E+03	.240E+01	.101E-02	.105E+03	.517E+01
11.20	.110E-04	.288E-03	.383E-01	.917E+03	.240E+01	.968E-03	.105E+03	.512E+01
11.30	.104E-04	.276E-03	.377E-01	.957E+03	.240E+01	.928E-03	.105E+03	.508E+01
11.40	.979E-05	.264E-03	.370E-01	.998E+03	.240E+01	.890E-03	.106E+03	.503E+01
11.50	.923E-05	.253E-03	.364E-01	.104E+04	.240E+01	.854E-03	.106E+03	.499E+01
11.60	.870E-05	.243E-03	.358E-01	.108E+04	.241E+01	.820E-03	.106E+03	.495E+01
11.70	.821E-05	.233E-03	.352E-01	.113E+04	.241E+01	.787E-03	.106E+03	.490E+01
11.80	.776E-05	.224E-03	.347E-01	.118E+04	.241E+01	.756E-03	.106E+03	.486E+01
11.90	.733E-05	.215E-03	.341E-01	.123E+04	.241E+01	.726E-03	.107E+03	.482E+01
12.00	.692E-05	.206E-03	.336E-01	.128E+04	.241E+01	.698E-03	.107E+03	.478E+01
12.10	.654E-05	.198E-03	.330E-01	.133E+04	.241E+01	.671E-03	.107E+03	.474E+01
12.20	.619E-05	.190E-03	.325E-01	.138E+04	.241E+01	.645E-03	.107E+03	.470E+01
12.30	.586E-05	.183E-03	.320E-01	.144E+04	.241E+01	.620E-03	.107E+03	.466E+01
12.40	.554E-05	.176E-03	.315E-01	.149E+04	.241E+01	.597E-03	.108E+03	.463E+01
12.50	.525E-05	.169E-03	.310E-01	.155E+04	.241E+01	.574E-03	.108E+03	.459E+01
12.60	.497E-05	.163E-03	.305E-01	.161E+04	.241E+01	.553E-03	.108E+03	.455E+01
12.70	.471E-05	.157E-03	.301E-01	.168E+04	.241E+01	.532E-03	.108E+03	.452E+01
12.80	.447E-05	.151E-03	.296E-01	.174E+04	.241E+01	.513E-03	.108E+03	.448E+01
12.90	.424E-05	.145E-03	.292E-01	.181E+04	.241E+01	.494E-03	.108E+03	.445E+01
13.00	.402E-05	.140E-03	.287E-01	.188E+04	.241E+01	.476E-03	.109E+03	.441E+01
13.10	.382E-05	.135E-03	.283E-01	.195E+04	.241E+01	.459E-03	.109E+03	.438E+01
13.20	.363E-05	.130E-03	.279E-01	.202E+04	.242E+01	.442E-03	.109E+03	.434E+01
13.30	.344E-05	.125E-03	.275E-01	.209E+04	.242E+01	.426E-03	.109E+03	.431E+01
13.40	.327E-05	.121E-03	.271E-01	.217E+04	.242E+01	.411E-03	.109E+03	.428E+01
13.50	.311E-05	.117E-03	.267E-01	.225E+04	.242E+01	.397E-03	.109E+03	.425E+01
13.60	.296E-05	.112E-03	.263E-01	.233E+04	.242E+01	.383E-03	.110E+03	.422E+01
13.70	.281E-05	.108E-03	.259E-01	.242E+04	.242E+01	.370E-03	.110E+03	.419E+01
13.80	.268E-05	.105E-03	.256E-01	.250E+04	.242E+01	.357E-03	.110E+03	.416E+01
13.90	.255E-05	.101E-03	.252E-01	.259E+04	.242E+01	.345E-03	.110E+03	.413E+01
14.00	.243E-05	.976E-04	.249E-01	.269E+04	.242E+01	.333E-03	.110E+03	.410E+01
14.10	.231E-05	.943E-04	.245E-01	.278E+04	.242E+01	.322E-03	.110E+03	.407E+01
14.20	.220E-05	.911E-04	.242E-01	.288E+04	.242E+01	.311E-03	.110E+03	.404E+01
14.30	.210E-05	.880E-04	.239E-01	.298E+04	.242E+01	.301E-03	.111E+03	.401E+01
14.40	.200E-05	.851E-04	.235E-01	.308E+04	.242E+01	.291E-03	.111E+03	.398E+01
14.50	.191E-05	.822E-04	.232E-01	.318E+04	.242E+01	.281E-03	.111E+03	.395E+01
14.60	.182E-05	.795E-04	.229E-01	.329E+04	.242E+01	.272E-03	.111E+03	.393E+01
14.70	.174E-05	.769E-04	.226E-01	.340E+04	.242E+01	.263E-03	.111E+03	.390E+01
14.80	.166E-05	.744E-04	.223E-01	.352E+04	.242E+01	.255E-03	.111E+03	.387E+01
14.90	.159E-05	.720E-04	.220E-01	.363E+04	.242E+01	.246E-03	.111E+03	.385E+01

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#	p/pt	ro/rt	t/tt	a/a*	v/v*	q/pt	nu	mu
15.00	.151E-05	.697E-04	.217E-01	.376E+04	.242E+01	.239E-03	.112E+03	.382E+01
15.10	.145E-05	.675E-04	.215E-01	.388E+04	.242E+01	.231E-03	.112E+03	.380E+01
15.20	.138E-05	.653E-04	.212E-01	.401E+04	.242E+01	.224E-03	.112E+03	.377E+01
15.30	.132E-05	.632E-04	.209E-01	.414E+04	.242E+01	.217E-03	.112E+03	.375E+01
15.40	.126E-05	.613E-04	.206E-01	.427E+04	.242E+01	.210E-03	.112E+03	.372E+01
15.50	.121E-05	.593E-04	.204E-01	.441E+04	.242E+01	.203E-03	.112E+03	.370E+01
15.60	.116E-05	.575E-04	.201E-01	.455E+04	.242E+01	.197E-03	.112E+03	.368E+01
15.70	.111E-05	.557E-04	.199E-01	.469E+04	.243E+01	.191E-03	.112E+03	.365E+01
15.80	.106E-05	.540E-04	.196E-01	.484E+04	.243E+01	.185E-03	.112E+03	.363E+01
15.90	.102E-05	.524E-04	.194E-01	.499E+04	.243E+01	.180E-03	.113E+03	.361E+01
16.00	.973E-06	.508E-04	.192E-01	.514E+04	.243E+01	.174E-03	.113E+03	.358E+01
16.10	.932E-06	.493E-04	.189E-01	.530E+04	.243E+01	.169E-03	.113E+03	.356E+01
16.20	.894E-06	.478E-04	.187E-01	.547E+04	.243E+01	.164E-03	.113E+03	.354E+01
16.30	.857E-06	.464E-04	.185E-01	.563E+04	.243E+01	.159E-03	.113E+03	.352E+01
16.40	.821E-06	.450E-04	.183E-01	.580E+04	.243E+01	.155E-03	.113E+03	.350E+01
16.50	.788E-06	.437E-04	.180E-01	.598E+04	.243E+01	.150E-03	.113E+03	.347E+01
16.60	.756E-06	.424E-04	.178E-01	.616E+04	.243E+01	.146E-03	.113E+03	.345E+01
16.70	.725E-06	.412E-04	.176E-01	.634E+04	.243E+01	.142E-03	.113E+03	.343E+01
16.80	.696E-06	.400E-04	.174E-01	.653E+04	.243E+01	.137E-03	.114E+03	.341E+01
16.90	.668E-06	.388E-04	.172E-01	.672E+04	.243E+01	.134E-03	.114E+03	.339E+01
17.00	.641E-06	.377E-04	.170E-01	.692E+04	.243E+01	.130E-03	.114E+03	.337E+01
17.10	.616E-06	.366E-04	.168E-01	.712E+04	.243E+01	.126E-03	.114E+03	.335E+01
17.20	.592E-06	.356E-04	.166E-01	.733E+04	.243E+01	.123E-03	.114E+03	.333E+01
17.30	.569E-06	.346E-04	.164E-01	.754E+04	.243E+01	.119E-03	.114E+03	.331E+01
17.40	.547E-06	.336E-04	.162E-01	.776E+04	.243E+01	.116E-03	.114E+03	.329E+01
17.50	.525E-06	.327E-04	.161E-01	.798E+04	.243E+01	.113E-03	.114E+03	.328E+01
17.60	.505E-06	.318E-04	.159E-01	.820E+04	.243E+01	.110E-03	.114E+03	.326E+01
17.70	.486E-06	.309E-04	.157E-01	.843E+04	.243E+01	.107E-03	.114E+03	.324E+01
17.80	.467E-06	.301E-04	.155E-01	.867E+04	.243E+01	.104E-03	.114E+03	.322E+01
17.90	.450E-06	.293E-04	.154E-01	.891E+04	.243E+01	.101E-03	.115E+03	.320E+01
18.00	.433E-06	.285E-04	.152E-01	.916E+04	.243E+01	.981E-04	.115E+03	.318E+01
18.10	.417E-06	.277E-04	.150E-01	.941E+04	.243E+01	.955E-04	.115E+03	.317E+01
18.20	.401E-06	.270E-04	.149E-01	.967E+04	.243E+01	.930E-04	.115E+03	.315E+01
18.30	.386E-06	.262E-04	.147E-01	.993E+04	.243E+01	.905E-04	.115E+03	.313E+01
18.40	.372E-06	.256E-04	.146E-01	.102E+05	.243E+01	.881E-04	.115E+03	.312E+01
18.50	.358E-06	.249E-04	.144E-01	.105E+05	.243E+01	.858E-04	.115E+03	.310E+01
18.60	.345E-06	.242E-04	.142E-01	.108E+05	.243E+01	.836E-04	.115E+03	.308E+01
18.70	.333E-06	.236E-04	.141E-01	.110E+05	.243E+01	.814E-04	.115E+03	.307E+01
18.80	.321E-06	.230E-04	.139E-01	.113E+05	.243E+01	.793E-04	.115E+03	.305E+01
18.90	.309E-06	.224E-04	.138E-01	.116E+05	.243E+01	.773E-04	.115E+03	.303E+01
19.00	.298E-06	.218E-04	.137E-01	.119E+05	.243E+01	.753E-04	.115E+03	.302E+01
19.10	.287E-06	.213E-04	.135E-01	.123E+05	.243E+01	.734E-04	.116E+03	.300E+01
19.20	.277E-06	.207E-04	.134E-01	.126E+05	.243E+01	.715E-04	.116E+03	.299E+01
19.30	.267E-06	.202E-04	.132E-01	.129E+05	.243E+01	.697E-04	.116E+03	.297E+01
19.40	.258E-06	.197E-04	.131E-01	.132E+05	.243E+01	.680E-04	.116E+03	.295E+01
19.50	.249E-06	.192E-04	.130E-01	.136E+05	.243E+01	.663E-04	.116E+03	.294E+01
19.60	.240E-06	.187E-04	.128E-01	.139E+05	.243E+01	.646E-04	.116E+03	.292E+01
19.70	.232E-06	.182E-04	.127E-01	.143E+05	.243E+01	.631E-04	.116E+03	.291E+01
19.80	.224E-06	.178E-04	.126E-01	.146E+05	.243E+01	.615E-04	.116E+03	.289E+01
19.90	.216E-06	.174E-04	.125E-01	.150E+05	.243E+01	.600E-04	.116E+03	.288E+01
20.00	.209E-06	.169E-04	.123E-01	.154E+05	.243E+01	.585E-04	.116E+03	.287E+01

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Table 7. Normal and oblique shock properties.

$T = 290^{\circ}\text{K}$

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.002	90.000	.674E-07	.100E+01	1.069	1.069	.100E+01	.998E+00	.999E+00	.290E+03	.300E+03
1.05	.953	90.000	.517E-05	.100E+01	1.069	1.069	.101E+01	.111E+01	.110E+01	.292E+03	.301E+03
1.10	.910	90.000	.105E-04	.999E+00	1.069	1.069	.101E+01	.122E+01	.120E+01	.294E+03	.302E+03
1.15	.871	90.000	.161E-04	.997E+00	1.069	1.069	.102E+01	.133E+01	.131E+01	.296E+03	.303E+03
1.20	.835	90.000	.219E-04	.992E+00	1.069	1.069	.103E+01	.145E+01	.142E+01	.297E+03	.304E+03
1.25	.803	90.000	.279E-04	.986E+00	1.069	1.069	.103E+01	.158E+01	.153E+01	.299E+03	.306E+03
1.30	.773	90.000	.340E-04	.976E+00	1.069	1.068	.104E+01	.171E+01	.165E+01	.301E+03	.307E+03
1.35	.745	90.000	.404E-04	.965E+00	1.069	1.068	.104E+01	.185E+01	.177E+01	.302E+03	.308E+03
1.40	.720	90.000	.469E-04	.951E+00	1.069	1.068	.105E+01	.199E+01	.190E+01	.304E+03	.309E+03
1.45	.696	90.000	.537E-04	.935E+00	1.069	1.068	.105E+01	.214E+01	.203E+01	.306E+03	.311E+03
1.50	.674	90.000	.606E-04	.916E+00	1.069	1.068	.106E+01	.229E+01	.216E+01	.308E+03	.312E+03
1.60	.635	90.000	.749E-04	.871E+00	1.069	1.068	.107E+01	.261E+01	.244E+01	.311E+03	.315E+03
1.70	.600	90.000	.898E-04	.820E+00	1.069	1.067	.109E+01	.295E+01	.272E+01	.315E+03	.319E+03
1.80	.569	90.000	.105E-03	.763E+00	1.069	1.067	.110E+01	.332E+01	.302E+01	.319E+03	.322E+03
1.90	.542	90.000	.121E-03	.701E+00	1.069	1.067	.111E+01	.370E+01	.333E+01	.322E+03	.326E+03
2.00	.518	90.000	.138E-03	.638E+00	1.069	1.067	.113E+01	.410E+01	.365E+01	.326E+03	.329E+03
2.20	.476	90.000	.172E-03	.512E+00	1.069	1.066	.115E+01	.497E+01	.431E+01	.335E+03	.337E+03
2.40	.442	90.000	.208E-03	.396E+00	1.069	1.066	.119E+01	.593E+01	.499E+01	.344E+03	.346E+03
2.60	.413	90.000	.245E-03	.296E+00	1.069	1.065	.122E+01	.696E+01	.571E+01	.354E+03	.356E+03
2.80	.389	90.000	.283E-03	.214E+00	1.069	1.065	.126E+01	.808E+01	.643E+01	.364E+03	.366E+03
3.00	.369	90.000	.322E-03	.151E+00	1.069	1.064	.129E+01	.928E+01	.717E+01	.375E+03	.377E+03
3.20	.351	90.000	.361E-03	.104E+00	1.069	1.064	.133E+01	.106E+02	.792E+01	.387E+03	.388E+03
3.40	.335	90.000	.400E-03	.697E-01	1.069	1.063	.138E+01	.119E+02	.867E+01	.399E+03	.401E+03
3.60	.322	90.000	.439E-03	.460E-01	1.069	1.063	.142E+01	.134E+02	.942E+01	.412E+03	.413E+03
3.80	.310	90.000	.478E-03	.298E-01	1.069	1.062	.147E+01	.149E+02	.102E+02	.426E+03	.427E+03
4.00	.299	90.000	.516E-03	.190E-01	1.069	1.062	.152E+01	.165E+02	.109E+02	.440E+03	.441E+03
4.50	.277	90.000	.610E-03	.589E-02	1.069	1.061	.165E+01	.209E+02	.127E+02	.478E+03	.479E+03
5.00	.260	90.000	.700E-03	.173E-02	1.069	1.060	.179E+01	.259E+02	.144E+02	.520E+03	.521E+03
6.00	.236	90.000	.863E-03	.137E-03	1.069	1.059	.212E+01	.373E+02	.176E+02	.616E+03	.617E+03
7.00	.219	90.000	.100E-02	.107E-04	1.069	1.058	.251E+01	.508E+02	.203E+02	.727E+03	.728E+03
8.00	.208	90.000	.112E-02	.873E-06	1.069	1.057	.294E+01	.664E+02	.225E+02	.854E+03	.855E+03
9.00	.200	90.000	.122E-02	.773E-07	1.069	1.057	.344E+01	.841E+02	.245E+02	.996E+03	.997E+03
10.00	.193	90.000	.131E-02	.754E-08	1.069	1.057	.398E+01	.104E+03	.261E+02	.115E+04	.116E+04
11.00	.188	90.000	.138E-02	.815E-09	1.069	1.056	.458E+01	.126E+03	.274E+02	.133E+04	.133E+04
12.00	.185	90.000	.144E-02	.976E-10	1.069	1.056	.523E+01	.150E+03	.286E+02	.152E+04	.152E+04
13.00	.182	90.000	.149E-02	.129E-10	1.069	1.056	.594E+01	.176E+03	.296E+02	.172E+04	.172E+04
14.00	.179	90.000	.153E-02	.188E-11	1.069	1.056	.671E+01	.204E+03	.304E+02	.194E+04	.195E+04
15.00	.177	90.000	.157E-02	.299E-12	1.069	1.056	.753E+01	.234E+03	.311E+02	.218E+04	.218E+04
16.00	.175	90.000	.160E-02	.516E-13	1.069	1.056	.840E+01	.266E+03	.317E+02	.244E+04	.244E+04
17.00	.174	90.000	.163E-02	.965E-14	1.069	1.056	.933E+01	.300E+03	.322E+02	.271E+04	.271E+04
more than 99 iterations											
18.00	.173	90.000	.165E-02	.194E-14	1.069	1.056	.103E+02	.337E+03	.326E+02	.299E+04	.300E+04
19.00	.172	90.000	.167E-02	.417E-15	1.069	1.056	.114E+02	.375E+03	.330E+02	.329E+04	.330E+04
20.00	.171	90.000	.169E-02	.955E-16	1.069	1.056	.125E+02	.416E+03	.334E+02	.361E+04	.362E+04
more than 99 iterations											
21.00	.170	90.000	.170E-02	.232E-16	1.069	1.056	.136E+02	.459E+03	.337E+02	.395E+04	.395E+04
more than 99 iterations											
22.00	.169	90.000	.172E-02	.594E-17	1.069	1.056	.148E+02	.503E+03	.339E+02	.430E+04	.430E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	85.000	.487E-02	.100E+01	1.069	1.069	.100E+01	.999E+00	.999E+00	.290E+03	.300E+03
1.05	.961	85.000	.453E+00	.100E+01	1.069	1.069	.101E+01	.110E+01	.109E+01	.292E+03	.301E+03
1.10	.918	85.000	.959E+00	.999E+00	1.069	1.069	.101E+01	.121E+01	.119E+01	.294E+03	.302E+03
1.15	.880	85.000	.149E+01	.997E+00	1.069	1.069	.102E+01	.132E+01	.130E+01	.295E+03	.303E+03
1.20	.845	85.000	.203E+01	.993E+00	1.069	1.069	.102E+01	.144E+01	.141E+01	.297E+03	.304E+03
1.25	.813	85.000	.259E+01	.986E+00	1.069	1.069	.103E+01	.157E+01	.152E+01	.299E+03	.305E+03
1.30	.784	85.000	.317E+01	.978E+00	1.069	1.068	.104E+01	.170E+01	.164E+01	.301E+03	.307E+03
1.35	.757	85.000	.376E+01	.967E+00	1.069	1.068	.104E+01	.184E+01	.176E+01	.302E+03	.308E+03
1.40	.732	85.000	.437E+01	.953E+00	1.069	1.068	.105E+01	.198E+01	.189E+01	.304E+03	.309E+03
1.45	.709	85.000	.500E+01	.937E+00	1.069	1.068	.105E+01	.212E+01	.201E+01	.306E+03	.311E+03
1.50	.688	85.000	.564E+01	.918E+00	1.069	1.068	.106E+01	.228E+01	.215E+01	.307E+03	.312E+03
1.60	.651	85.000	.695E+01	.874E+00	1.069	1.068	.107E+01	.259E+01	.242E+01	.311E+03	.315E+03
1.70	.619	85.000	.831E+01	.823E+00	1.069	1.067	.108E+01	.293E+01	.270E+01	.315E+03	.318E+03
1.80	.591	85.000	.970E+01	.767E+00	1.069	1.067	.110E+01	.329E+01	.300E+01	.318E+03	.322E+03
1.90	.566	85.000	.111E+02	.706E+00	1.069	1.067	.111E+01	.367E+01	.331E+01	.322E+03	.325E+03
2.00	.545	85.000	.126E+02	.643E+00	1.069	1.067	.112E+01	.407E+01	.362E+01	.326E+03	.329E+03
2.20	.510	85.000	.155E+02	.518E+00	1.069	1.066	.115E+01	.494E+01	.428E+01	.335E+03	.337E+03
2.40	.483	85.000	.185E+02	.401E+00	1.069	1.066	.118E+01	.588E+01	.496E+01	.344E+03	.346E+03
2.60	.463	85.000	.214E+02	.300E+00	1.069	1.065	.122E+01	.691E+01	.567E+01	.353E+03	.355E+03
2.80	.447	85.000	.242E+02	.218E+00	1.069	1.065	.125E+01	.802E+01	.639E+01	.364E+03	.365E+03
3.00	.436	85.000	.270E+02	.154E+00	1.069	1.064	.129E+01	.921E+01	.713E+01	.375E+03	.376E+03
3.20	.427	85.000	.296E+02	.106E+00	1.069	1.064	.133E+01	.105E+02	.788E+01	.386E+03	.388E+03
3.40	.421	85.000	.320E+02	.716E-01	1.069	1.063	.137E+01	.118E+02	.862E+01	.398E+03	.400E+03
3.60	.417	85.000	.343E+02	.473E-01	1.069	1.063	.142E+01	.133E+02	.937E+01	.411E+03	.413E+03
3.80	.414	85.000	.365E+02	.308E-01	1.069	1.062	.146E+01	.148E+02	.101E+02	.425E+03	.426E+03
4.00	.413	85.000	.385E+02	.197E-01	1.069	1.062	.151E+01	.164E+02	.108E+02	.439E+03	.440E+03
4.50	.414	85.000	.429E+02	.614E-02	1.069	1.061	.164E+01	.208E+02	.126E+02	.477E+03	.478E+03
5.00	.418	85.000	.465E+02	.181E-02	1.069	1.060	.179E+01	.257E+02	.144E+02	.519E+03	.520E+03
6.00	.432	85.000	.518E+02	.145E-03	1.069	1.059	.212E+01	.370E+02	.175E+02	.614E+03	.615E+03
7.00	.446	85.000	.555E+02	.114E-04	1.069	1.058	.250E+01	.504E+02	.202E+02	.724E+03	.725E+03
8.00	.459	85.000	.581E+02	.941E-06	1.069	1.057	.293E+01	.659E+02	.225E+02	.850E+03	.851E+03
9.00	.471	85.000	.599E+02	.839E-07	1.069	1.057	.342E+01	.834E+02	.244E+02	.991E+03	.992E+03
10.00	.481	85.000	.613E+02	.822E-08	1.069	1.057	.396E+01	.103E+03	.260E+02	.115E+04	.115E+04
11.00	.490	85.000	.623E+02	.892E-09	1.069	1.056	.455E+01	.125E+03	.274E+02	.132E+04	.132E+04
12.00	.497	85.000	.632E+02	.107E-09	1.069	1.056	.520E+01	.148E+03	.285E+02	.151E+04	.151E+04
13.00	.503	85.000	.638E+02	.142E-10	1.069	1.056	.591E+01	.174E+03	.295E+02	.171E+04	.171E+04
14.00	.508	85.000	.644E+02	.208E-11	1.069	1.056	.666E+01	.202E+03	.303E+02	.193E+04	.193E+04
15.00	.513	85.000	.648E+02	.331E-12	1.069	1.056	.748E+01	.232E+03	.310E+02	.217E+04	.217E+04
more than 99 iterations											
16.00	.517	85.000	.651E+02	.573E-13	1.069	1.056	.835E+01	.264E+03	.316E+02	.242E+04	.242E+04
17.00	.520	85.000	.654E+02	.107E-13	1.069	1.056	.927E+01	.298E+03	.322E+02	.269E+04	.269E+04
18.00	.523	85.000	.657E+02	.216E-14	1.069	1.056	.102E+02	.334E+03	.326E+02	.297E+04	.297E+04
more than 99 iterations											
19.00	.525	85.000	.659E+02	.465E-15	1.069	1.056	.113E+02	.372E+03	.330E+02	.327E+04	.328E+04
20.00	.527	85.000	.661E+02	.107E-15	1.069	1.056	.124E+02	.413E+03	.334E+02	.359E+04	.359E+04
more than 99 iterations											
21.00	.529	85.000	.662E+02	.259E-16	1.069	1.056	.135E+02	.455E+03	.337E+02	.392E+04	.392E+04
more than 99 iterations											
22.00	.531	85.000	.664E+02	.665E-17	1.069	1.056	.147E+02	.499E+03	.339E+02	.427E+04	.427E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	80.000	.643E-02	.100E+01	1.069	1.069	.100E+01	.999E+00	.999E+00	.290E+03	.300E+03
1.05	.985	80.000	.658E+00	.100E+01	1.069	1.069	.100E+01	.107E+01	.107E+01	.291E+03	.301E+03
1.10	.943	80.000	.163E+01	.100E+01	1.069	1.069	.101E+01	.118E+01	.117E+01	.293E+03	.302E+03
1.15	.906	80.000	.263E+01	.998E+00	1.069	1.069	.102E+01	.129E+01	.127E+01	.295E+03	.303E+03
1.20	.873	80.000	.366E+01	.994E+00	1.069	1.069	.102E+01	.141E+01	.138E+01	.297E+03	.304E+03
1.25	.842	80.000	.472E+01	.988E+00	1.069	1.069	.103E+01	.153E+01	.149E+01	.298E+03	.305E+03
1.30	.815	80.000	.581E+01	.980E+00	1.069	1.068	.103E+01	.166E+01	.161E+01	.300E+03	.306E+03
1.35	.791	80.000	.691E+01	.970E+00	1.069	1.068	.104E+01	.179E+01	.172E+01	.302E+03	.308E+03
1.40	.768	80.000	.804E+01	.957E+00	1.069	1.068	.105E+01	.193E+01	.185E+01	.303E+03	.309E+03
1.45	.748	80.000	.917E+01	.942E+00	1.069	1.068	.105E+01	.207E+01	.197E+01	.305E+03	.310E+03
1.50	.729	80.000	.103E+02	.925E+00	1.069	1.068	.106E+01	.222E+01	.210E+01	.307E+03	.312E+03
1.60	.698	80.000	.127E+02	.883E+00	1.069	1.068	.107E+01	.253E+01	.237E+01	.310E+03	.315E+03
1.70	.671	80.000	.150E+02	.834E+00	1.069	1.067	.108E+01	.286E+01	.265E+01	.314E+03	.318E+03
1.80	.650	80.000	.174E+02	.779E+00	1.069	1.067	.109E+01	.322E+01	.294E+01	.317E+03	.321E+03
1.90	.633	80.000	.197E+02	.719E+00	1.069	1.067	.111E+01	.359E+01	.324E+01	.321E+03	.325E+03
2.00	.619	80.000	.220E+02	.657E+00	1.069	1.067	.112E+01	.398E+01	.355E+01	.325E+03	.328E+03
2.20	.600	80.000	.265E+02	.533E+00	1.069	1.066	.115E+01	.482E+01	.419E+01	.333E+03	.336E+03
2.40	.590	80.000	.306E+02	.416E+00	1.069	1.066	.118E+01	.575E+01	.487E+01	.342E+03	.345E+03
2.60	.586	80.000	.345E+02	.314E+00	1.069	1.065	.121E+01	.675E+01	.556E+01	.352E+03	.354E+03
2.80	.588	80.000	.379E+02	.230E+00	1.069	1.065	.125E+01	.783E+01	.628E+01	.362E+03	.364E+03
3.00	.593	80.000	.410E+02	.164E+00	1.069	1.064	.128E+01	.900E+01	.700E+01	.373E+03	.374E+03
3.20	.600	80.000	.438E+02	.114E+00	1.069	1.064	.132E+01	.102E+02	.774E+01	.384E+03	.386E+03
3.40	.610	80.000	.462E+02	.774E-01	1.069	1.063	.137E+01	.116E+02	.848E+01	.396E+03	.397E+03
3.60	.620	80.000	.484E+02	.516E-01	1.069	1.063	.141E+01	.130E+02	.922E+01	.409E+03	.410E+03
3.80	.632	80.000	.503E+02	.338E-01	1.069	1.063	.145E+01	.145E+02	.995E+01	.422E+03	.423E+03
4.00	.644	80.000	.520E+02	.218E-01	1.069	1.062	.150E+01	.160E+02	.107E+02	.436E+03	.437E+03
4.50	.675	80.000	.555E+02	.694E-02	1.069	1.061	.163E+01	.203E+02	.125E+02	.473E+03	.474E+03
5.00	.706	80.000	.582E+02	.209E-02	1.069	1.060	.177E+01	.251E+02	.142E+02	.514E+03	.515E+03
6.00	.762	80.000	.618E+02	.173E-03	1.069	1.059	.209E+01	.362E+02	.173E+02	.607E+03	.608E+03
7.00	.809	80.000	.642E+02	.140E-04	1.069	1.058	.246E+01	.493E+02	.200E+02	.715E+03	.716E+03
8.00	.848	80.000	.657E+02	.118E-05	1.069	1.057	.289E+01	.644E+02	.223E+02	.838E+03	.839E+03
9.00	.880	80.000	.668E+02	.107E-06	1.069	1.057	.337E+01	.815E+02	.242E+02	.976E+03	.977E+03
10.00	.906	80.000	.676E+02	.107E-07	1.069	1.057	.389E+01	.101E+03	.259E+02	.113E+04	.113E+04
11.00	.928	80.000	.682E+02	.117E-08	1.069	1.056	.448E+01	.122E+03	.272E+02	.130E+04	.130E+04
12.00	.946	80.000	.687E+02	.143E-09	1.069	1.056	.511E+01	.145E+03	.284E+02	.148E+04	.148E+04
13.00	.961	80.000	.691E+02	.191E-10	1.069	1.056	.580E+01	.170E+03	.294E+02	.168E+04	.168E+04
14.00	.973	80.000	.694E+02	.281E-11	1.069	1.056	.654E+01	.198E+03	.302E+02	.190E+04	.190E+04
15.00	.984	80.000	.696E+02	.450E-12	1.069	1.056	.733E+01	.227E+03	.309E+02	.213E+04	.213E+04
more than 99 iterations											
16.00	.993	80.000	.698E+02	.785E-13	1.069	1.056	.818E+01	.258E+03	.315E+02	.237E+04	.238E+04
more than 99 iterations											
17.00	1.001	80.000	.700E+02	.148E-13	1.069	1.056	.909E+01	.291E+03	.321E+02	.264E+04	.264E+04
18.00	1.008	80.000	.701E+02	.299E-14	1.069	1.056	.100E+02	.327E+03	.325E+02	.291E+04	.292E+04
more than 99 iterations											
19.00	1.013	80.000	.702E+02	.645E-15	1.069	1.056	.111E+02	.364E+03	.329E+02	.321E+04	.321E+04
more than 99 iterations											
20.00	1.018	80.000	.703E+02	.148E-15	1.069	1.056	.121E+02	.403E+03	.333E+02	.351E+04	.352E+04
more than 99 iterations											
21.00	1.023	80.000	.704E+02	.362E-16	1.069	1.056	.132E+02	.445E+03	.336E+02	.384E+04	.384E+04
22.00	1.027	80.000	.705E+02	.931E-17	1.069	1.056	.144E+02	.488E+03	.339E+02	.418E+04	.418E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	75.000	.566E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.05	1.024	75.000	.406E+00	.100E+01	1.069	1.069	.100E+01	.103E+01	.103E+01	.291E+03	.300E+03
1.10	.984	75.000	.177E+01	.100E+01	1.069	1.069	.101E+01	.113E+01	.112E+01	.292E+03	.301E+03
1.15	.948	75.000	.317E+01	.999E+00	1.069	1.069	.101E+01	.124E+01	.122E+01	.294E+03	.302E+03
1.20	.917	75.000	.460E+01	.996E+00	1.069	1.069	.102E+01	.136E+01	.133E+01	.296E+03	.303E+03
1.25	.890	75.000	.605E+01	.991E+00	1.069	1.069	.103E+01	.147E+01	.144E+01	.298E+03	.305E+03
1.30	.865	75.000	.752E+01	.985E+00	1.069	1.069	.103E+01	.160E+01	.155E+01	.299E+03	.306E+03
1.35	.844	75.000	.901E+01	.976E+00	1.069	1.068	.104E+01	.172E+01	.166E+01	.301E+03	.307E+03
1.40	.824	75.000	.105E+02	.965E+00	1.069	1.068	.104E+01	.186E+01	.178E+01	.302E+03	.308E+03
1.45	.808	75.000	.120E+02	.951E+00	1.069	1.068	.105E+01	.199E+01	.190E+01	.304E+03	.309E+03
1.50	.793	75.000	.135E+02	.935E+00	1.069	1.068	.105E+01	.214E+01	.203E+01	.306E+03	.311E+03
1.60	.769	75.000	.165E+02	.897E+00	1.069	1.068	.107E+01	.244E+01	.228E+01	.309E+03	.314E+03
1.70	.751	75.000	.194E+02	.850E+00	1.069	1.068	.108E+01	.275E+01	.256E+01	.313E+03	.317E+03
1.80	.738	75.000	.222E+02	.798E+00	1.069	1.067	.109E+01	.309E+01	.284E+01	.316E+03	.320E+03
1.90	.730	75.000	.250E+02	.741E+00	1.069	1.067	.110E+01	.345E+01	.313E+01	.320E+03	.323E+03
2.00	.725	75.000	.276E+02	.681E+00	1.069	1.067	.112E+01	.383E+01	.343E+01	.324E+03	.327E+03
2.20	.725	75.000	.324E+02	.559E+00	1.069	1.066	.114E+01	.464E+01	.405E+01	.332E+03	.334E+03
2.40	.733	75.000	.366E+02	.442E+00	1.069	1.066	.117E+01	.553E+01	.471E+01	.340E+03	.343E+03
2.60	.747	75.000	.403E+02	.338E+00	1.069	1.065	.120E+01	.649E+01	.539E+01	.349E+03	.351E+03
2.80	.766	75.000	.435E+02	.251E+00	1.069	1.065	.124E+01	.754E+01	.608E+01	.359E+03	.361E+03
3.00	.787	75.000	.462E+02	.181E+00	1.069	1.064	.127E+01	.866E+01	.679E+01	.369E+03	.371E+03
3.20	.809	75.000	.486E+02	.128E+00	1.069	1.064	.131E+01	.986E+01	.751E+01	.380E+03	.382E+03
3.40	.833	75.000	.506E+02	.880E-01	1.069	1.064	.135E+01	.111E+02	.824E+01	.392E+03	.393E+03
3.60	.858	75.000	.524E+02	.595E-01	1.069	1.063	.139E+01	.125E+02	.896E+01	.404E+03	.405E+03
3.80	.882	75.000	.539E+02	.395E-01	1.069	1.063	.144E+01	.139E+02	.968E+01	.417E+03	.418E+03
4.00	.906	75.000	.553E+02	.259E-01	1.069	1.062	.148E+01	.154E+02	.104E+02	.430E+03	.431E+03
4.50	.965	75.000	.579E+02	.850E-02	1.069	1.061	.161E+01	.195E+02	.122E+02	.466E+03	.467E+03
5.00	1.019	75.000	.599E+02	.264E-02	1.069	1.060	.174E+01	.241E+02	.138E+02	.505E+03	.507E+03
6.00	1.115	75.000	.626E+02	.231E-03	1.069	1.059	.205E+01	.348E+02	.170E+02	.595E+03	.596E+03
7.00	1.194	75.000	.642E+02	.196E-04	1.069	1.058	.241E+01	.474E+02	.197E+02	.699E+03	.700E+03
8.00	1.258	75.000	.654E+02	.172E-05	1.069	1.057	.282E+01	.619E+02	.220E+02	.818E+03	.819E+03
9.00	1.310	75.000	.661E+02	.161E-06	1.069	1.057	.328E+01	.784E+02	.239E+02	.951E+03	.952E+03
10.00	1.352	75.000	.667E+02	.165E-07	1.069	1.057	.379E+01	.969E+02	.256E+02	.110E+04	.110E+04
11.00	1.387	75.000	.671E+02	.185E-08	1.069	1.056	.435E+01	.117E+03	.270E+02	.126E+04	.126E+04
12.00	1.416	75.000	.674E+02	.230E-09	1.069	1.056	.496E+01	.140E+03	.281E+02	.144E+04	.144E+04
13.00	1.440	75.000	.677E+02	.312E-10	1.069	1.056	.562E+01	.164E+03	.291E+02	.163E+04	.163E+04
14.00	1.460	75.000	.679E+02	.466E-11	1.069	1.056	.633E+01	.190E+03	.300E+02	.184E+04	.184E+04
15.00	1.477	75.000	.681E+02	.756E-12	1.069	1.056	.710E+01	.218E+03	.307E+02	.206E+04	.206E+04
more than 99 iterations											
16.00	1.492	75.000	.682E+02	.133E-12	1.069	1.056	.792E+01	.248E+03	.314E+02	.230E+04	.230E+04
more than 99 iterations											
17.00	1.504	75.000	.683E+02	.253E-13	1.069	1.056	.879E+01	.280E+03	.319E+02	.255E+04	.255E+04
more than 99 iterations											
18.00	1.515	75.000	.684E+02	.514E-14	1.069	1.056	.971E+01	.314E+03	.324E+02	.282E+04	.282E+04
19.00	1.524	75.000	.685E+02	.112E-14	1.069	1.056	.107E+02	.350E+03	.328E+02	.310E+04	.310E+04
more than 99 iterations											
20.00	1.533	75.000	.686E+02	.259E-15	1.069	1.056	.117E+02	.388E+03	.331E+02	.339E+04	.340E+04
21.00	1.540	75.000	.686E+02	.635E-16	1.069	1.056	.128E+02	.428E+03	.335E+02	.371E+04	.371E+04
more than 99 iterations											
22.00	1.545	75.000	.687E+02	.164E-16	1.069	1.056	.139E+02	.470E+03	.337E+02	.403E+04	.404E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.464E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.05	1.051	70.000	.127E-01	.100E+01	1.069	1.069	.100E+01	.999E+00	.999E+00	.290E+03	.300E+03
1.10	1.038	70.000	.122E+01	.100E+01	1.069	1.069	.100E+01	.107E+01	.107E+01	.291E+03	.301E+03
1.15	1.005	70.000	.292E+01	.100E+01	1.069	1.069	.101E+01	.117E+01	.116E+01	.293E+03	.302E+03
1.20	.977	70.000	.465E+01	.998E+00	1.069	1.069	.102E+01	.128E+01	.126E+01	.295E+03	.303E+03
1.25	.952	70.000	.638E+01	.995E+00	1.069	1.069	.102E+01	.139E+01	.136E+01	.296E+03	.304E+03
1.30	.931	70.000	.813E+01	.990E+00	1.069	1.069	.103E+01	.151E+01	.147E+01	.298E+03	.305E+03
1.35	.913	70.000	.987E+01	.983E+00	1.069	1.068	.103E+01	.163E+01	.158E+01	.300E+03	.306E+03
1.40	.897	70.000	.116E+02	.973E+00	1.069	1.068	.104E+01	.176E+01	.169E+01	.301E+03	.307E+03
1.45	.884	70.000	.133E+02	.962E+00	1.069	1.068	.104E+01	.189E+01	.181E+01	.303E+03	.308E+03
1.50	.873	70.000	.150E+02	.948E+00	1.069	1.068	.105E+01	.202E+01	.192E+01	.304E+03	.310E+03
1.60	.857	70.000	.183E+02	.914E+00	1.069	1.068	.106E+01	.230E+01	.217E+01	.308E+03	.312E+03
1.70	.848	70.000	.215E+02	.873E+00	1.069	1.068	.107E+01	.261E+01	.243E+01	.311E+03	.315E+03
1.80	.845	70.000	.245E+02	.825E+00	1.069	1.067	.108E+01	.292E+01	.270E+01	.314E+03	.318E+03
1.90	.845	70.000	.273E+02	.771E+00	1.069	1.067	.110E+01	.326E+01	.298E+01	.318E+03	.321E+03
2.00	.850	70.000	.299E+02	.714E+00	1.069	1.067	.111E+01	.362E+01	.326E+01	.322E+03	.325E+03
2.20	.868	70.000	.346E+02	.595E+00	1.069	1.066	.114E+01	.439E+01	.386E+01	.329E+03	.332E+03
2.40	.893	70.000	.386E+02	.479E+00	1.069	1.066	.116E+01	.523E+01	.449E+01	.337E+03	.340E+03
2.60	.924	70.000	.419E+02	.373E+00	1.069	1.066	.119E+01	.614E+01	.515E+01	.346E+03	.348E+03
2.80	.959	70.000	.447E+02	.282E+00	1.069	1.065	.123E+01	.713E+01	.582E+01	.355E+03	.357E+03
3.00	.995	70.000	.471E+02	.208E+00	1.069	1.065	.126E+01	.819E+01	.650E+01	.365E+03	.367E+03
3.20	1.032	70.000	.491E+02	.149E+00	1.069	1.064	.130E+01	.933E+01	.720E+01	.376E+03	.377E+03
3.40	1.069	70.000	.508E+02	.105E+00	1.069	1.064	.133E+01	.105E+02	.790E+01	.387E+03	.388E+03
3.60	1.106	70.000	.523E+02	.722E-01	1.069	1.063	.137E+01	.118E+02	.861E+01	.398E+03	.400E+03
3.80	1.143	70.000	.536E+02	.489E-01	1.069	1.063	.141E+01	.132E+02	.931E+01	.410E+03	.412E+03
4.00	1.179	70.000	.547E+02	.326E-01	1.069	1.062	.146E+01	.146E+02	.100E+02	.423E+03	.424E+03
4.50	1.264	70.000	.568E+02	.112E-01	1.069	1.062	.158E+01	.185E+02	.117E+02	.457E+03	.458E+03
5.00	1.342	70.000	.584E+02	.364E-02	1.069	1.061	.170E+01	.228E+02	.134E+02	.494E+03	.495E+03
6.00	1.478	70.000	.605E+02	.346E-03	1.069	1.059	.200E+01	.329E+02	.165E+02	.580E+03	.581E+03
7.00	1.589	70.000	.618E+02	.313E-04	1.069	1.058	.234E+01	.449E+02	.192E+02	.678E+03	.679E+03
8.00	1.679	70.000	.627E+02	.290E-05	1.069	1.058	.273E+01	.586E+02	.215E+02	.791E+03	.792E+03
9.00	1.753	70.000	.633E+02	.285E-06	1.069	1.057	.316E+01	.742E+02	.235E+02	.917E+03	.918E+03
10.00	1.813	70.000	.638E+02	.303E-07	1.069	1.057	.365E+01	.917E+02	.251E+02	.106E+04	.106E+04
11.00	1.862	70.000	.641E+02	.352E-08	1.069	1.056	.418E+01	.111E+03	.266E+02	.121E+04	.121E+04
12.00	1.903	70.000	.644E+02	.449E-09	1.069	1.056	.475E+01	.132E+03	.278E+02	.138E+04	.138E+04
13.00	1.937	70.000	.646E+02	.625E-10	1.069	1.056	.538E+01	.155E+03	.288E+02	.156E+04	.156E+04
14.00	1.966	70.000	.647E+02	.950E-11	1.069	1.056	.606E+01	.180E+03	.297E+02	.176E+04	.176E+04
15.00	1.991	70.000	.648E+02	.157E-11	1.069	1.056	.678E+01	.206E+03	.304E+02	.197E+04	.197E+04
16.00	2.011	70.000	.650E+02	.280E-12	1.069	1.056	.756E+01	.235E+03	.311E+02	.219E+04	.219E+04
17.00	2.029	70.000	.650E+02	.539E-13	1.069	1.056	.838E+01	.265E+03	.317E+02	.243E+04	.243E+04
18.00	2.045	70.000	.651E+02	.111E-13	1.069	1.056	.925E+01	.297E+03	.321E+02	.268E+04	.268E+04
more than 99 iterations											
19.00	2.058	70.000	.652E+02	.244E-14	1.069	1.056	.102E+02	.331E+03	.326E+02	.295E+04	.295E+04
more than 99 iterations											
20.00	2.069	70.000	.652E+02	.569E-15	1.069	1.056	.111E+02	.367E+03	.330E+02	.323E+04	.323E+04
21.00	2.079	70.000	.653E+02	.141E-15	1.069	1.056	.122E+02	.405E+03	.333E+02	.353E+04	.353E+04
22.00	2.088	70.000	.653E+02	.366E-16	1.069	1.056	.132E+02	.444E+03	.336E+02	.384E+04	.384E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.357E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.05	1.050	65.000	.702E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.10	1.117	65.000	-.402E+00	.100E+01	1.069	1.069	.999E+00	.981E+00	.982E+00	.290E+03	.300E+03
1.15	1.076	65.000	.181E+01	.100E+01	1.069	1.069	.101E+01	.109E+01	.108E+01	.292E+03	.301E+03
1.20	1.049	65.000	.374E+01	.100E+01	1.069	1.069	.101E+01	.119E+01	.118E+01	.293E+03	.302E+03
1.25	1.028	65.000	.567E+01	.998E+00	1.069	1.069	.102E+01	.129E+01	.127E+01	.295E+03	.303E+03
1.30	1.009	65.000	.759E+01	.994E+00	1.069	1.069	.102E+01	.140E+01	.137E+01	.296E+03	.304E+03
1.35	.994	65.000	.949E+01	.989E+00	1.069	1.069	.103E+01	.151E+01	.147E+01	.298E+03	.305E+03
1.40	.982	65.000	.114E+02	.982E+00	1.069	1.068	.103E+01	.163E+01	.158E+01	.300E+03	.306E+03
1.45	.973	65.000	.132E+02	.973E+00	1.069	1.068	.104E+01	.175E+01	.169E+01	.301E+03	.307E+03
1.50	.966	65.000	.150E+02	.963E+00	1.069	1.068	.104E+01	.188E+01	.180E+01	.303E+03	.308E+03
1.60	.959	65.000	.184E+02	.935E+00	1.069	1.068	.105E+01	.214E+01	.203E+01	.306E+03	.311E+03
1.70	.958	65.000	.217E+02	.899E+00	1.069	1.068	.107E+01	.242E+01	.227E+01	.309E+03	.314E+03
1.80	.963	65.000	.247E+02	.856E+00	1.069	1.068	.108E+01	.272E+01	.252E+01	.312E+03	.316E+03
1.90	.972	65.000	.274E+02	.808E+00	1.069	1.067	.109E+01	.303E+01	.279E+01	.316E+03	.319E+03
2.00	.985	65.000	.300E+02	.755E+00	1.069	1.067	.110E+01	.336E+01	.306E+01	.319E+03	.322E+03
2.20	1.020	65.000	.344E+02	.642E+00	1.069	1.067	.112E+01	.408E+01	.363E+01	.326E+03	.329E+03
2.40	1.062	65.000	.381E+02	.528E+00	1.069	1.066	.115E+01	.486E+01	.422E+01	.334E+03	.336E+03
2.60	1.108	65.000	.411E+02	.420E+00	1.069	1.066	.118E+01	.571E+01	.484E+01	.342E+03	.344E+03
2.80	1.158	65.000	.436E+02	.325E+00	1.069	1.065	.121E+01	.663E+01	.548E+01	.351E+03	.353E+03
3.00	1.208	65.000	.457E+02	.245E+00	1.069	1.065	.124E+01	.762E+01	.614E+01	.360E+03	.362E+03
3.20	1.259	65.000	.475E+02	.180E+00	1.069	1.064	.127E+01	.867E+01	.680E+01	.370E+03	.371E+03
3.40	1.309	65.000	.490E+02	.130E+00	1.069	1.064	.131E+01	.979E+01	.748E+01	.380E+03	.381E+03
3.60	1.359	65.000	.503E+02	.918E-01	1.069	1.064	.135E+01	.110E+02	.816E+01	.391E+03	.392E+03
3.80	1.408	65.000	.514E+02	.637E-01	1.069	1.063	.139E+01	.122E+02	.884E+01	.402E+03	.403E+03
4.00	1.455	65.000	.523E+02	.436E-01	1.069	1.063	.143E+01	.136E+02	.951E+01	.414E+03	.415E+03
4.50	1.568	65.000	.542E+02	.159E-01	1.069	1.062	.154E+01	.172E+02	.112E+02	.446E+03	.447E+03
5.00	1.671	65.000	.555E+02	.546E-02	1.069	1.061	.166E+01	.212E+02	.128E+02	.481E+03	.482E+03
6.00	1.849	65.000	.573E+02	.575E-03	1.069	1.060	.193E+01	.306E+02	.158E+02	.560E+03	.561E+03
7.00	1.995	65.000	.584E+02	.569E-04	1.069	1.059	.225E+01	.417E+02	.185E+02	.653E+03	.654E+03
8.00	2.114	65.000	.591E+02	.568E-05	1.069	1.058	.261E+01	.545E+02	.209E+02	.758E+03	.759E+03
9.00	2.212	65.000	.596E+02	.594E-06	1.069	1.057	.302E+01	.690E+02	.229E+02	.875E+03	.876E+03
10.00	2.291	65.000	.600E+02	.665E-07	1.069	1.057	.347E+01	.853E+02	.246E+02	.101E+04	.101E+04
11.00	2.357	65.000	.603E+02	.808E-08	1.069	1.057	.396E+01	.103E+03	.260E+02	.115E+04	.115E+04
12.00	2.412	65.000	.605E+02	.107E-08	1.069	1.056	.450E+01	.123E+03	.273E+02	.131E+04	.131E+04
13.00	2.458	65.000	.607E+02	.154E-09	1.069	1.056	.509E+01	.144E+03	.284E+02	.147E+04	.148E+04
14.00	2.497	65.000	.608E+02	.240E-10	1.069	1.056	.571E+01	.167E+03	.293E+02	.166E+04	.166E+04
15.00	2.530	65.000	.609E+02	.406E-11	1.069	1.056	.639E+01	.192E+03	.301E+02	.185E+04	.185E+04
16.00	2.558	65.000	.610E+02	.739E-12	1.069	1.056	.711E+01	.219E+03	.307E+02	.206E+04	.206E+04
17.00	2.583	65.000	.611E+02	.145E-12	1.069	1.056	.788E+01	.247E+03	.313E+02	.228E+04	.229E+04
18.00	2.603	65.000	.611E+02	.303E-13	1.069	1.056	.869E+01	.277E+03	.318E+02	.252E+04	.252E+04
19.00	2.622	65.000	.612E+02	.674E-14	1.069	1.056	.954E+01	.308E+03	.323E+02	.277E+04	.277E+04
more than 99 iterations											
20.00	2.637	65.000	.612E+02	.159E-14	1.069	1.056	.104E+02	.342E+03	.327E+02	.303E+04	.303E+04
21.00	2.651	65.000	.613E+02	.397E-15	1.069	1.056	.114E+02	.377E+03	.330E+02	.330E+04	.331E+04
more than 99 iterations											
22.00	2.663	65.000	.613E+02	.104E-15	1.069	1.056	.124E+02	.413E+03	.334E+02	.359E+04	.360E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.269E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.05	1.050	60.000	.444E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.10	1.101	60.000	.852E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.15	1.167	60.000	-.479E+00	.100E+01	1.069	1.069	.999E+00	.980E+00	.981E+00	.290E+03	.300E+03
1.20	1.134	60.000	.189E+01	.100E+01	1.069	1.069	.101E+01	.108E+01	.108E+01	.291E+03	.301E+03
1.25	1.114	60.000	.394E+01	.100E+01	1.069	1.069	.101E+01	.118E+01	.117E+01	.293E+03	.302E+03
1.30	1.099	60.000	.596E+01	.998E+00	1.069	1.069	.102E+01	.128E+01	.126E+01	.295E+03	.303E+03
1.35	1.087	60.000	.795E+01	.995E+00	1.069	1.069	.102E+01	.138E+01	.135E+01	.296E+03	.304E+03
1.40	1.078	60.000	.989E+01	.991E+00	1.069	1.069	.103E+01	.149E+01	.145E+01	.298E+03	.305E+03
1.45	1.072	60.000	.118E+02	.985E+00	1.069	1.069	.103E+01	.160E+01	.155E+01	.299E+03	.306E+03
1.50	1.068	60.000	.136E+02	.977E+00	1.069	1.068	.104E+01	.171E+01	.165E+01	.301E+03	.307E+03
1.60	1.068	60.000	.171E+02	.955E+00	1.069	1.068	.105E+01	.195E+01	.186E+01	.304E+03	.309E+03
1.70	1.075	60.000	.203E+02	.927E+00	1.069	1.068	.106E+01	.221E+01	.209E+01	.307E+03	.312E+03
1.80	1.087	60.000	.233E+02	.891E+00	1.069	1.068	.107E+01	.248E+01	.232E+01	.310E+03	.314E+03
1.90	1.105	60.000	.260E+02	.849E+00	1.069	1.068	.108E+01	.277E+01	.256E+01	.313E+03	.317E+03
2.00	1.126	60.000	.284E+02	.802E+00	1.069	1.067	.109E+01	.307E+01	.282E+01	.316E+03	.320E+03
2.20	1.176	60.000	.326E+02	.698E+00	1.069	1.067	.111E+01	.372E+01	.334E+01	.323E+03	.326E+03
2.40	1.233	60.000	.361E+02	.588E+00	1.069	1.066	.114E+01	.443E+01	.390E+01	.330E+03	.332E+03
2.60	1.294	60.000	.389E+02	.481E+00	1.069	1.066	.116E+01	.521E+01	.448E+01	.337E+03	.340E+03
2.80	1.358	60.000	.412E+02	.383E+00	1.069	1.066	.119E+01	.605E+01	.508E+01	.345E+03	.347E+03
3.00	1.422	60.000	.431E+02	.297E+00	1.069	1.065	.122E+01	.695E+01	.570E+01	.354E+03	.356E+03
3.20	1.487	60.000	.447E+02	.225E+00	1.069	1.065	.125E+01	.791E+01	.633E+01	.363E+03	.364E+03
3.40	1.550	60.000	.460E+02	.167E+00	1.069	1.064	.128E+01	.894E+01	.697E+01	.372E+03	.374E+03
3.60	1.613	60.000	.472E+02	.121E+00	1.069	1.064	.132E+01	.100E+02	.761E+01	.382E+03	.384E+03
3.80	1.674	60.000	.482E+02	.868E-01	1.069	1.064	.135E+01	.112E+02	.826E+01	.392E+03	.394E+03
4.00	1.733	60.000	.490E+02	.611E-01	1.069	1.063	.139E+01	.124E+02	.891E+01	.403E+03	.405E+03
4.50	1.874	60.000	.507E+02	.240E-01	1.069	1.062	.149E+01	.157E+02	.105E+02	.432E+03	.434E+03
5.00	2.003	60.000	.519E+02	.884E-02	1.069	1.061	.160E+01	.194E+02	.121E+02	.465E+03	.466E+03
6.00	2.227	60.000	.534E+02	.106E-02	1.069	1.060	.185E+01	.280E+02	.151E+02	.538E+03	.539E+03
7.00	2.412	60.000	.544E+02	.117E-03	1.069	1.059	.215E+01	.381E+02	.177E+02	.623E+03	.624E+03
8.00	2.564	60.000	.551E+02	.128E-04	1.069	1.058	.248E+01	.498E+02	.201E+02	.719E+03	.720E+03
9.00	2.688	60.000	.555E+02	.145E-05	1.069	1.057	.285E+01	.630E+02	.221E+02	.827E+03	.828E+03
10.00	2.791	60.000	.558E+02	.174E-06	1.069	1.057	.326E+01	.778E+02	.239E+02	.946E+03	.947E+03
11.00	2.877	60.000	.561E+02	.224E-07	1.069	1.057	.372E+01	.942E+02	.254E+02	.108E+04	.108E+04
12.00	2.949	60.000	.563E+02	.311E-08	1.069	1.056	.421E+01	.112E+03	.266E+02	.122E+04	.122E+04
more than 99 iterations											
13.00	3.009	60.000	.564E+02	.466E-09	1.069	1.056	.474E+01	.132E+03	.278E+02	.138E+04	.138E+04
14.00	3.060	60.000	.565E+02	.755E-10	1.069	1.056	.532E+01	.153E+03	.287E+02	.154E+04	.154E+04
15.00	3.103	60.000	.566E+02	.132E-10	1.069	1.056	.593E+01	.175E+03	.295E+02	.172E+04	.172E+04
16.00	3.140	60.000	.567E+02	.246E-11	1.069	1.056	.659E+01	.200E+03	.303E+02	.191E+04	.191E+04
17.00	3.172	60.000	.568E+02	.493E-12	1.069	1.056	.729E+01	.225E+03	.309E+02	.211E+04	.212E+04
18.00	3.200	60.000	.568E+02	.105E-12	1.069	1.056	.803E+01	.253E+03	.314E+02	.233E+04	.233E+04
19.00	3.224	60.000	.569E+02	.239E-13	1.069	1.056	.882E+01	.281E+03	.319E+02	.256E+04	.256E+04
more than 99 iterations											
20.00	3.245	60.000	.569E+02	.572E-14	1.069	1.056	.964E+01	.312E+03	.323E+02	.280E+04	.280E+04
21.00	3.264	60.000	.570E+02	.145E-14	1.069	1.056	.105E+02	.344E+03	.327E+02	.305E+04	.305E+04
more than 99 iterations											
22.00	3.281	60.000	.570E+02	.385E-15	1.069	1.056	.114E+02	.377E+03	.331E+02	.331E+04	.331E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.192E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.05	1.050	55.000	.297E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.10	1.100	55.000	.470E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.15	1.151	55.000	.820E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
more than 99 iterations											
1.20	1.228	55.000	-.863E+00	.100E+01	1.069	1.069	.998E+00	.966E+00	.968E+00	.289E+03	.300E+03
1.25	1.212	55.000	.126E+01	.100E+01	1.069	1.069	.100E+01	.105E+01	.105E+01	.291E+03	.300E+03
1.30	1.198	55.000	.334E+01	.100E+01	1.069	1.069	.101E+01	.114E+01	.113E+01	.292E+03	.301E+03
1.35	1.188	55.000	.537E+01	.999E+00	1.069	1.069	.101E+01	.123E+01	.121E+01	.294E+03	.302E+03
1.40	1.182	55.000	.735E+01	.997E+00	1.069	1.069	.102E+01	.133E+01	.130E+01	.295E+03	.303E+03
1.45	1.178	55.000	.927E+01	.993E+00	1.069	1.069	.102E+01	.142E+01	.139E+01	.297E+03	.304E+03
1.50	1.178	55.000	.111E+02	.989E+00	1.069	1.069	.103E+01	.153E+01	.148E+01	.298E+03	.305E+03
1.60	1.183	55.000	.146E+02	.974E+00	1.069	1.068	.104E+01	.174E+01	.168E+01	.301E+03	.307E+03
1.70	1.197	55.000	.178E+02	.953E+00	1.069	1.068	.105E+01	.197E+01	.188E+01	.304E+03	.309E+03
1.80	1.216	55.000	.207E+02	.926E+00	1.069	1.068	.106E+01	.221E+01	.209E+01	.307E+03	.312E+03
1.90	1.240	55.000	.233E+02	.892E+00	1.069	1.068	.107E+01	.247E+01	.231E+01	.310E+03	.314E+03
2.00	1.268	55.000	.257E+02	.852E+00	1.069	1.068	.108E+01	.274E+01	.254E+01	.313E+03	.317E+03
2.20	1.333	55.000	.297E+02	.761E+00	1.069	1.067	.110E+01	.333E+01	.303E+01	.319E+03	.322E+03
2.40	1.404	55.000	.330E+02	.659E+00	1.069	1.067	.112E+01	.396E+01	.354E+01	.325E+03	.328E+03
2.60	1.479	55.000	.357E+02	.556E+00	1.069	1.066	.114E+01	.466E+01	.407E+01	.332E+03	.335E+03
2.80	1.557	55.000	.378E+02	.456E+00	1.069	1.066	.117E+01	.541E+01	.462E+01	.339E+03	.341E+03
3.00	1.635	55.000	.396E+02	.365E+00	1.069	1.066	.120E+01	.621E+01	.520E+01	.347E+03	.349E+03
3.20	1.713	55.000	.411E+02	.286E+00	1.069	1.065	.122E+01	.708E+01	.578E+01	.355E+03	.357E+03
3.40	1.789	55.000	.424E+02	.220E+00	1.069	1.065	.125E+01	.799E+01	.638E+01	.363E+03	.365E+03
3.60	1.864	55.000	.434E+02	.165E+00	1.069	1.064	.128E+01	.897E+01	.698E+01	.372E+03	.374E+03
3.80	1.938	55.000	.443E+02	.123E+00	1.069	1.064	.132E+01	.100E+02	.759E+01	.382E+03	.383E+03
4.00	2.010	55.000	.451E+02	.893E-01	1.069	1.064	.135E+01	.111E+02	.821E+01	.391E+03	.393E+03
4.50	2.180	55.000	.467E+02	.382E-01	1.069	1.063	.144E+01	.140E+02	.974E+01	.418E+03	.419E+03
5.00	2.337	55.000	.478E+02	.153E-01	1.069	1.062	.154E+01	.173E+02	.113E+02	.447E+03	.448E+03
6.00	2.612	55.000	.492E+02	.214E-02	1.069	1.060	.177E+01	.250E+02	.141E+02	.513E+03	.514E+03
7.00	2.841	55.000	.501E+02	.271E-03	1.069	1.059	.203E+01	.341E+02	.168E+02	.589E+03	.590E+03
8.00	3.030	55.000	.507E+02	.334E-04	1.069	1.058	.233E+01	.445E+02	.191E+02	.676E+03	.677E+03
9.00	3.187	55.000	.511E+02	.417E-05	1.069	1.058	.266E+01	.564E+02	.212E+02	.773E+03	.774E+03
10.00	3.318	55.000	.514E+02	.545E-06	1.069	1.057	.303E+01	.696E+02	.229E+02	.880E+03	.881E+03
11.00	3.427	55.000	.517E+02	.754E-07	1.069	1.057	.344E+01	.843E+02	.245E+02	.998E+03	.999E+03
12.00	3.519	55.000	.518E+02	.111E-07	1.069	1.057	.388E+01	.100E+03	.258E+02	.113E+04	.113E+04
13.00	3.597	55.000	.520E+02	.176E-08	1.069	1.056	.436E+01	.118E+03	.270E+02	.127E+04	.127E+04
14.00	3.663	55.000	.521E+02	.298E-09	1.069	1.056	.488E+01	.137E+03	.280E+02	.141E+04	.142E+04
15.00	3.719	55.000	.522E+02	.540E-10	1.069	1.056	.543E+01	.157E+03	.289E+02	.157E+04	.158E+04
more than 99 iterations											
16.00	3.768	55.000	.522E+02	.105E-10	1.069	1.056	.602E+01	.178E+03	.296E+02	.175E+04	.175E+04
17.00	3.810	55.000	.523E+02	.216E-11	1.069	1.056	.665E+01	.202E+03	.303E+02	.193E+04	.193E+04
18.00	3.847	55.000	.524E+02	.473E-12	1.069	1.056	.731E+01	.226E+03	.309E+02	.212E+04	.212E+04
19.00	3.878	55.000	.524E+02	.110E-12	1.069	1.056	.801E+01	.252E+03	.314E+02	.232E+04	.233E+04
20.00	3.905	55.000	.524E+02	.269E-13	1.069	1.056	.875E+01	.279E+03	.319E+02	.254E+04	.254E+04
21.00	3.931	55.000	.525E+02	.693E-14	1.069	1.056	.953E+01	.308E+03	.323E+02	.276E+04	.277E+04
22.00	3.953	55.000	.525E+02	.188E-14	1.069	1.056	.103E+02	.338E+03	.326E+02	.300E+04	.300E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	.129E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.05	1.050	50.000	.193E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.10	1.100	50.000	.284E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.15	1.150	50.000	.420E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.20	1.200	50.000	.657E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.25	1.251	50.000	.113E-01	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.30	1.316	50.000	-.548E+00	.100E+01	1.069	1.069	.999E+00	.979E+00	.981E+00	.290E+03	.300E+03
1.35	1.299	50.000	.186E+01	.100E+01	1.069	1.069	.100E+01	.107E+01	.107E+01	.291E+03	.301E+03
1.40	1.294	50.000	.385E+01	.100E+01	1.069	1.069	.101E+01	.115E+01	.114E+01	.293E+03	.301E+03
1.45	1.292	50.000	.578E+01	.999E+00	1.069	1.069	.101E+01	.124E+01	.122E+01	.294E+03	.302E+03
1.50	1.293	50.000	.764E+01	.996E+00	1.069	1.069	.102E+01	.133E+01	.131E+01	.295E+03	.303E+03
1.60	1.304	50.000	.111E+02	.989E+00	1.069	1.069	.103E+01	.152E+01	.148E+01	.298E+03	.305E+03
1.70	1.322	50.000	.143E+02	.976E+00	1.069	1.068	.104E+01	.172E+01	.166E+01	.301E+03	.307E+03
1.80	1.347	50.000	.172E+02	.957E+00	1.069	1.068	.105E+01	.193E+01	.185E+01	.303E+03	.309E+03
1.90	1.377	50.000	.198E+02	.933E+00	1.069	1.068	.106E+01	.216E+01	.204E+01	.306E+03	.311E+03
2.00	1.411	50.000	.221E+02	.902E+00	1.069	1.068	.106E+01	.239E+01	.225E+01	.309E+03	.313E+03
2.20	1.488	50.000	.260E+02	.828E+00	1.069	1.067	.108E+01	.290E+01	.268E+01	.314E+03	.318E+03
2.40	1.573	50.000	.292E+02	.739E+00	1.069	1.067	.110E+01	.346E+01	.314E+01	.320E+03	.323E+03
2.60	1.661	50.000	.318E+02	.643E+00	1.069	1.067	.112E+01	.407E+01	.362E+01	.326E+03	.329E+03
2.80	1.752	50.000	.339E+02	.546E+00	1.069	1.066	.115E+01	.473E+01	.412E+01	.333E+03	.335E+03
3.00	1.844	50.000	.356E+02	.454E+00	1.069	1.066	.117E+01	.543E+01	.464E+01	.339E+03	.342E+03
3.20	1.935	50.000	.370E+02	.369E+00	1.069	1.066	.119E+01	.618E+01	.518E+01	.346E+03	.349E+03
3.40	2.024	50.000	.382E+02	.294E+00	1.069	1.065	.122E+01	.699E+01	.572E+01	.354E+03	.356E+03
3.60	2.113	50.000	.393E+02	.230E+00	1.069	1.065	.125E+01	.784E+01	.628E+01	.362E+03	.364E+03
3.80	2.200	50.000	.401E+02	.177E+00	1.069	1.064	.128E+01	.874E+01	.684E+01	.370E+03	.372E+03
4.00	2.284	50.000	.409E+02	.134E+00	1.069	1.064	.131E+01	.968E+01	.741E+01	.379E+03	.380E+03
4.50	2.486	50.000	.423E+02	.633E-01	1.069	1.063	.139E+01	.123E+02	.885E+01	.402E+03	.404E+03
5.00	2.673	50.000	.434E+02	.279E-01	1.069	1.062	.148E+01	.152E+02	.103E+02	.428E+03	.429E+03
6.00	3.004	50.000	.448E+02	.467E-02	1.069	1.061	.168E+01	.219E+02	.130E+02	.486E+03	.487E+03
7.00	3.282	50.000	.456E+02	.696E-03	1.069	1.060	.191E+01	.298E+02	.156E+02	.553E+03	.554E+03
8.00	3.515	50.000	.462E+02	.988E-04	1.069	1.059	.217E+01	.389E+02	.179E+02	.630E+03	.631E+03
9.00	3.711	50.000	.466E+02	.140E-04	1.069	1.058	.246E+01	.493E+02	.200E+02	.715E+03	.716E+03
10.00	3.875	50.000	.469E+02	.203E-05	1.069	1.058	.279E+01	.609E+02	.218E+02	.809E+03	.810E+03
11.00	4.014	50.000	.471E+02	.307E-06	1.069	1.057	.315E+01	.737E+02	.234E+02	.913E+03	.914E+03
12.00	4.131	50.000	.472E+02	.490E-07	1.069	1.057	.354E+01	.877E+02	.248E+02	.103E+04	.103E+04
13.00	4.231	50.000	.474E+02	.828E-08	1.069	1.057	.396E+01	.103E+03	.260E+02	.115E+04	.115E+04
14.00	4.316	50.000	.475E+02	.149E-08	1.069	1.056	.441E+01	.119E+03	.271E+02	.128E+04	.128E+04
15.00	4.390	50.000	.476E+02	.284E-09	1.069	1.056	.489E+01	.137E+03	.280E+02	.142E+04	.142E+04
16.00	4.453	50.000	.476E+02	.575E-10	1.069	1.056	.541E+01	.156E+03	.288E+02	.157E+04	.157E+04
17.00	4.508	50.000	.477E+02	.123E-10	1.069	1.056	.596E+01	.176E+03	.296E+02	.173E+04	.173E+04
18.00	4.556	50.000	.477E+02	.280E-11	1.069	1.056	.654E+01	.198E+03	.302E+02	.190E+04	.190E+04
19.00	4.598	50.000	.478E+02	.670E-12	1.069	1.056	.715E+01	.220E+03	.308E+02	.207E+04	.208E+04
20.00	4.635	50.000	.478E+02	.168E-12	1.069	1.056	.780E+01	.244E+03	.313E+02	.226E+04	.226E+04
21.00	4.669	50.000	.478E+02	.445E-13	1.069	1.056	.848E+01	.269E+03	.317E+02	.246E+04	.246E+04
more than 99 iterations											
22.00	4.699	50.000	.479E+02	.123E-13	1.069	1.056	.919E+01	.295E+03	.321E+02	.267E+04	.267E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.751E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.05	1.050	45.000	.115E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.10	1.100	45.000	.167E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.15	1.150	45.000	.237E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.20	1.200	45.000	.332E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.25	1.250	45.000	.474E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.30	1.300	45.000	.715E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.35	1.351	45.000	.113E-01	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
1.40	1.419	45.000	-.724E+00	.100E+01	1.069	1.069	.998E+00	.973E+00	.975E+00	.289E+03	.300E+03
1.45	1.415	45.000	.140E+01	.100E+01	1.069	1.069	.100E+01	.105E+01	.105E+01	.291E+03	.301E+03
1.50	1.417	45.000	.326E+01	.100E+01	1.069	1.069	.101E+01	.113E+01	.112E+01	.292E+03	.301E+03
1.60	1.429	45.000	.675E+01	.998E+00	1.069	1.069	.102E+01	.129E+01	.127E+01	.295E+03	.303E+03
1.70	1.451	45.000	.993E+01	.992E+00	1.069	1.069	.103E+01	.146E+01	.142E+01	.297E+03	.304E+03
1.80	1.480	45.000	.128E+02	.982E+00	1.069	1.068	.103E+01	.164E+01	.159E+01	.300E+03	.306E+03
1.90	1.515	45.000	.154E+02	.967E+00	1.069	1.068	.104E+01	.183E+01	.176E+01	.302E+03	.308E+03
2.00	1.554	45.000	.177E+02	.947E+00	1.069	1.068	.105E+01	.203E+01	.194E+01	.305E+03	.310E+03
2.20	1.642	45.000	.216E+02	.892E+00	1.069	1.068	.107E+01	.247E+01	.231E+01	.310E+03	.314E+03
2.40	1.738	45.000	.248E+02	.822E+00	1.069	1.067	.109E+01	.294E+01	.271E+01	.315E+03	.318E+03
2.60	1.839	45.000	.273E+02	.739E+00	1.069	1.067	.110E+01	.346E+01	.314E+01	.320E+03	.323E+03
2.80	1.942	45.000	.294E+02	.651E+00	1.069	1.067	.112E+01	.402E+01	.358E+01	.326E+03	.329E+03
3.00	2.047	45.000	.311E+02	.561E+00	1.069	1.066	.114E+01	.462E+01	.404E+01	.332E+03	.334E+03
3.20	2.151	45.000	.325E+02	.475E+00	1.069	1.066	.116E+01	.526E+01	.452E+01	.338E+03	.340E+03
3.40	2.254	45.000	.337E+02	.394E+00	1.069	1.066	.119E+01	.595E+01	.501E+01	.344E+03	.346E+03
3.60	2.356	45.000	.347E+02	.321E+00	1.069	1.065	.121E+01	.667E+01	.551E+01	.351E+03	.353E+03
3.80	2.456	45.000	.356E+02	.258E+00	1.069	1.065	.124E+01	.744E+01	.602E+01	.358E+03	.360E+03
4.00	2.554	45.000	.363E+02	.204E+00	1.069	1.065	.126E+01	.825E+01	.654E+01	.366E+03	.367E+03
4.50	2.788	45.000	.377E+02	.107E+00	1.069	1.064	.133E+01	.104E+02	.785E+01	.386E+03	.387E+03
5.00	3.008	45.000	.388E+02	.527E-01	1.069	1.063	.141E+01	.129E+02	.918E+01	.408E+03	.409E+03
6.00	3.401	45.000	.402E+02	.109E-01	1.069	1.062	.158E+01	.186E+02	.118E+02	.458E+03	.459E+03
7.00	3.736	45.000	.410E+02	.196E-02	1.069	1.060	.178E+01	.254E+02	.143E+02	.516E+03	.517E+03
8.00	4.021	45.000	.415E+02	.329E-03	1.069	1.059	.201E+01	.331E+02	.165E+02	.581E+03	.582E+03
9.00	4.263	45.000	.419E+02	.541E-04	1.069	1.059	.226E+01	.420E+02	.186E+02	.655E+03	.656E+03
10.00	4.468	45.000	.422E+02	.893E-05	1.069	1.058	.254E+01	.518E+02	.204E+02	.736E+03	.737E+03
11.00	4.643	45.000	.424E+02	.151E-05	1.069	1.057	.284E+01	.628E+02	.221E+02	.825E+03	.826E+03
12.00	4.793	45.000	.426E+02	.266E-06	1.069	1.057	.318E+01	.747E+02	.235E+02	.921E+03	.922E+03
13.00	4.921	45.000	.427E+02	.490E-07	1.069	1.057	.354E+01	.877E+02	.248E+02	.103E+04	.103E+04
14.00	5.032	45.000	.428E+02	.948E-08	1.069	1.057	.392E+01	.102E+03	.259E+02	.114E+04	.114E+04
15.00	5.128	45.000	.429E+02	.193E-08	1.069	1.056	.434E+01	.117E+03	.269E+02	.126E+04	.126E+04
16.00	5.211	45.000	.429E+02	.414E-09	1.069	1.056	.478E+01	.133E+03	.278E+02	.139E+04	.139E+04
17.00	5.284	45.000	.430E+02	.935E-10	1.069	1.056	.525E+01	.150E+03	.286E+02	.152E+04	.152E+04
18.00	5.347	45.000	.430E+02	.222E-10	1.069	1.056	.574E+01	.168E+03	.293E+02	.167E+04	.167E+04
19.00	5.404	45.000	.431E+02	.552E-11	1.069	1.056	.627E+01	.188E+03	.299E+02	.182E+04	.182E+04
20.00	5.452	45.000	.431E+02	.144E-11	1.069	1.056	.682E+01	.208E+03	.305E+02	.198E+04	.198E+04
21.00	5.497	45.000	.432E+02	.392E-12	1.069	1.056	.740E+01	.229E+03	.310E+02	.215E+04	.215E+04
22.00	5.535	45.000	.432E+02	.111E-12	1.069	1.056	.801E+01	.252E+03	.314E+02	.232E+04	.232E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
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m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.308E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.05	1.050	30.000	-.198E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.10	1.100	30.000	-.799E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.15	1.150	30.000	.473E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.20	1.200	30.000	.160E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.25	1.250	30.000	.314E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.30	1.300	30.000	.485E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.35	1.350	30.000	.695E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.40	1.400	30.000	.914E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.45	1.450	30.000	.118E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.50	1.500	30.000	.150E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.60	1.600	30.000	.231E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.70	1.700	30.000	.356E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
1.80	1.801	30.000	.577E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
1.90	1.901	30.000	.101E-01	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
2.00	2.009	30.000	-.385E+00	.100E+01	1.069	1.069	.999E+00	.984E+00	.985E+00	.290E+03	.300E+03
2.20	2.101	30.000	.434E+01	.999E+00	1.069	1.069	.101E+01	.122E+01	.120E+01	.294E+03	.302E+03
2.40	2.217	30.000	.787E+01	.992E+00	1.069	1.069	.103E+01	.145E+01	.142E+01	.297E+03	.304E+03
2.60	2.344	30.000	.107E+02	.976E+00	1.069	1.068	.104E+01	.171E+01	.165E+01	.301E+03	.307E+03
2.80	2.476	30.000	.131E+02	.951E+00	1.069	1.068	.105E+01	.199E+01	.190E+01	.304E+03	.309E+03
3.00	2.613	30.000	.150E+02	.916E+00	1.069	1.068	.106E+01	.229E+01	.216E+01	.308E+03	.312E+03
3.20	2.752	30.000	.167E+02	.871E+00	1.069	1.068	.107E+01	.261E+01	.244E+01	.311E+03	.315E+03
3.40	2.892	30.000	.180E+02	.820E+00	1.069	1.067	.109E+01	.295E+01	.272E+01	.315E+03	.319E+03
3.60	3.032	30.000	.192E+02	.763E+00	1.069	1.067	.110E+01	.332E+01	.302E+01	.319E+03	.322E+03
3.80	3.171	30.000	.202E+02	.701E+00	1.069	1.067	.111E+01	.370E+01	.333E+01	.322E+03	.326E+03
4.00	3.310	30.000	.210E+02	.638E+00	1.069	1.067	.113E+01	.410E+01	.365E+01	.326E+03	.329E+03
4.50	3.650	30.000	.226E+02	.482E+00	1.069	1.066	.116E+01	.520E+01	.448E+01	.337E+03	.340E+03
5.00	3.978	30.000	.238E+02	.344E+00	1.069	1.065	.120E+01	.643E+01	.535E+01	.349E+03	.351E+03
6.00	4.594	30.000	.254E+02	.151E+00	1.069	1.064	.129E+01	.928E+01	.717E+01	.375E+03	.377E+03
7.00	5.152	30.000	.263E+02	.567E-01	1.069	1.063	.140E+01	.126E+02	.905E+01	.406E+03	.407E+03
8.00	5.653	30.000	.270E+02	.190E-01	1.069	1.062	.152E+01	.165E+02	.109E+02	.440E+03	.441E+03
9.00	6.100	30.000	.274E+02	.589E-02	1.069	1.061	.165E+01	.209E+02	.127E+02	.478E+03	.479E+03
10.00	6.499	30.000	.277E+02	.173E-02	1.069	1.060	.179E+01	.259E+02	.144E+02	.520E+03	.521E+03
11.00	6.853	30.000	.279E+02	.491E-03	1.069	1.060	.195E+01	.313E+02	.160E+02	.566E+03	.567E+03
12.00	7.169	30.000	.281E+02	.137E-03	1.069	1.059	.212E+01	.373E+02	.176E+02	.616E+03	.617E+03
13.00	7.450	30.000	.283E+02	.382E-04	1.069	1.058	.231E+01	.438E+02	.190E+02	.670E+03	.671E+03
14.00	7.700	30.000	.284E+02	.107E-04	1.069	1.058	.251E+01	.508E+02	.203E+02	.727E+03	.728E+03
15.00	7.923	30.000	.285E+02	.303E-05	1.069	1.058	.272E+01	.583E+02	.215E+02	.789E+03	.790E+03
16.00	8.123	30.000	.285E+02	.873E-06	1.069	1.057	.294E+01	.664E+02	.225E+02	.854E+03	.855E+03
17.00	8.302	30.000	.286E+02	.257E-06	1.069	1.057	.318E+01	.750E+02	.236E+02	.923E+03	.924E+03
18.00	8.462	30.000	.286E+02	.773E-07	1.069	1.057	.344E+01	.841E+02	.245E+02	.996E+03	.997E+03
19.00	8.606	30.000	.287E+02	.238E-07	1.069	1.057	.370E+01	.937E+02	.253E+02	.107E+04	.107E+04
20.00	8.736	30.000	.287E+02	.754E-08	1.069	1.057	.398E+01	.104E+03	.261E+02	.115E+04	.116E+04
21.00	8.854	30.000	.288E+02	.245E-08	1.069	1.056	.427E+01	.114E+03	.268E+02	.124E+04	.124E+04
22.00	8.960	30.000	.288E+02	.815E-09	1.069	1.056	.458E+01	.126E+03	.274E+02	.133E+04	.133E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/pi	rho2/1	t2	tt2
1.00	1.000	25.000	-.481E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.05	1.050	25.000	-.416E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.10	1.100	25.000	-.351E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.15	1.150	25.000	-.277E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.20	1.200	25.000	-.201E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.25	1.250	25.000	-.118E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.30	1.300	25.000	-.288E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.35	1.350	25.000	.497E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.40	1.400	25.000	.152E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.45	1.450	25.000	.267E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.50	1.500	25.000	.392E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.60	1.600	25.000	.693E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.70	1.700	25.000	.108E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
1.80	1.800	25.000	.154E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
1.90	1.900	25.000	.223E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
2.00	2.001	25.000	.316E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
2.20	2.201	25.000	.718E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
2.40	2.390	25.000	.624E+00	.100E+01	1.069	1.069	.100E+01	.103E+01	.103E+01	.291E+03	.300E+03
2.60	2.514	25.000	.376E+01	.999E+00	1.069	1.069	.101E+01	.121E+01	.120E+01	.294E+03	.302E+03
2.80	2.649	25.000	.636E+01	.994E+00	1.069	1.069	.102E+01	.141E+01	.138E+01	.297E+03	.304E+03
3.00	2.791	25.000	.852E+01	.983E+00	1.069	1.068	.103E+01	.163E+01	.158E+01	.300E+03	.306E+03
3.20	2.937	25.000	.103E+02	.965E+00	1.069	1.068	.104E+01	.186E+01	.178E+01	.302E+03	.308E+03
3.40	3.086	25.000	.118E+02	.939E+00	1.069	1.068	.105E+01	.210E+01	.200E+01	.305E+03	.311E+03
3.60	3.236	25.000	.131E+02	.907E+00	1.069	1.068	.106E+01	.236E+01	.222E+01	.308E+03	.313E+03
3.80	3.386	25.000	.142E+02	.869E+00	1.069	1.068	.107E+01	.263E+01	.245E+01	.311E+03	.316E+03
4.00	3.537	25.000	.152E+02	.825E+00	1.069	1.067	.108E+01	.292E+01	.269E+01	.314E+03	.318E+03
4.50	3.910	25.000	.170E+02	.700E+00	1.069	1.067	.111E+01	.371E+01	.333E+01	.322E+03	.326E+03
5.00	4.275	25.000	.184E+02	.566E+00	1.069	1.066	.114E+01	.458E+01	.401E+01	.331E+03	.334E+03
6.00	4.973	25.000	.201E+02	.326E+00	1.069	1.065	.121E+01	.662E+01	.548E+01	.351E+03	.353E+03
7.00	5.621	25.000	.212E+02	.163E+00	1.069	1.064	.129E+01	.902E+01	.702E+01	.373E+03	.375E+03
8.00	6.216	25.000	.219E+02	.725E-01	1.069	1.063	.137E+01	.118E+02	.860E+01	.398E+03	.399E+03
9.00	6.760	25.000	.224E+02	.296E-01	1.069	1.062	.147E+01	.149E+02	.102E+02	.426E+03	.427E+03
10.00	7.254	25.000	.227E+02	.113E-01	1.069	1.062	.157E+01	.185E+02	.117E+02	.457E+03	.458E+03
11.00	7.703	25.000	.230E+02	.411E-02	1.069	1.061	.169E+01	.224E+02	.132E+02	.490E+03	.491E+03
12.00	8.110	25.000	.232E+02	.145E-02	1.069	1.060	.182E+01	.266E+02	.147E+02	.527E+03	.528E+03
13.00	8.478	25.000	.233E+02	.498E-03	1.069	1.060	.195E+01	.313E+02	.160E+02	.566E+03	.567E+03
14.00	8.812	25.000	.235E+02	.170E-03	1.069	1.059	.209E+01	.363E+02	.173E+02	.608E+03	.609E+03
15.00	9.115	25.000	.236E+02	.576E-04	1.069	1.059	.225E+01	.416E+02	.185E+02	.652E+03	.653E+03
16.00	9.389	25.000	.236E+02	.196E-04	1.069	1.058	.241E+01	.474E+02	.197E+02	.699E+03	.700E+03
17.00	9.638	25.000	.237E+02	.670E-05	1.069	1.058	.258E+01	.535E+02	.207E+02	.750E+03	.751E+03
18.00	9.864	25.000	.238E+02	.232E-05	1.069	1.058	.277E+01	.600E+02	.217E+02	.802E+03	.803E+03
19.00	10.070	25.000	.238E+02	.811E-06	1.069	1.057	.296E+01	.669E+02	.226E+02	.858E+03	.859E+03
20.00	10.258	25.000	.239E+02	.288E-06	1.069	1.057	.316E+01	.741E+02	.235E+02	.916E+03	.917E+03
21.00	10.428	25.000	.239E+02	.104E-06	1.069	1.057	.337E+01	.817E+02	.242E+02	.978E+03	.979E+03
22.00	10.584	25.000	.239E+02	.383E-07	1.069	1.057	.359E+01	.897E+02	.250E+02	.104E+04	.104E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	-.551E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.05	1.050	20.000	-.511E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.10	1.100	20.000	-.483E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.15	1.150	20.000	-.448E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.20	1.200	20.000	-.415E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.25	1.250	20.000	-.373E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.30	1.300	20.000	-.323E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.35	1.350	20.000	-.279E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.40	1.400	20.000	-.233E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.45	1.450	20.000	-.173E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.50	1.500	20.000	-.121E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.60	1.600	20.000	.110E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.70	1.700	20.000	.121E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
1.80	1.800	20.000	.279E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
1.90	1.900	20.000	.472E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
2.00	2.000	20.000	.691E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
2.20	2.200	20.000	.130E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
2.40	2.401	20.000	.227E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
2.60	2.601	20.000	.412E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
2.80	2.802	20.000	.866E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
3.00	2.982	20.000	.915E+00	.100E+01	1.069	1.069	.100E+01	.105E+01	.105E+01	.291E+03	.301E+03
3.20	3.127	20.000	.300E+01	.999E+00	1.069	1.069	.101E+01	.120E+01	.119E+01	.294E+03	.302E+03
3.40	3.279	20.000	.477E+01	.995E+00	1.069	1.069	.102E+01	.136E+01	.134E+01	.296E+03	.303E+03
3.60	3.435	20.000	.628E+01	.988E+00	1.069	1.069	.103E+01	.153E+01	.149E+01	.298E+03	.305E+03
3.80	3.593	20.000	.758E+01	.977E+00	1.069	1.068	.104E+01	.171E+01	.165E+01	.301E+03	.307E+03
4.00	3.752	20.000	.869E+01	.960E+00	1.069	1.068	.104E+01	.190E+01	.182E+01	.303E+03	.309E+03
4.50	4.153	20.000	.109E+02	.899E+00	1.069	1.068	.107E+01	.242E+01	.227E+01	.309E+03	.313E+03
5.00	4.551	20.000	.125E+02	.814E+00	1.069	1.067	.109E+01	.299E+01	.275E+01	.315E+03	.319E+03
6.00	5.328	20.000	.145E+02	.605E+00	1.069	1.067	.113E+01	.432E+01	.381E+01	.329E+03	.331E+03
7.00	6.068	20.000	.158E+02	.399E+00	1.069	1.066	.119E+01	.590E+01	.497E+01	.344E+03	.346E+03
8.00	6.766	20.000	.166E+02	.238E+00	1.069	1.065	.124E+01	.771E+01	.620E+01	.361E+03	.363E+03
9.00	7.419	20.000	.172E+02	.131E+00	1.069	1.064	.131E+01	.977E+01	.747E+01	.380E+03	.381E+03
10.00	8.027	20.000	.176E+02	.669E-01	1.069	1.063	.138E+01	.121E+02	.875E+01	.400E+03	.402E+03
11.00	8.591	20.000	.179E+02	.324E-01	1.069	1.062	.146E+01	.146E+02	.100E+02	.423E+03	.424E+03
12.00	9.114	20.000	.182E+02	.150E-01	1.069	1.062	.154E+01	.174E+02	.113E+02	.448E+03	.449E+03
13.00	9.598	20.000	.183E+02	.670E-02	1.069	1.061	.163E+01	.204E+02	.125E+02	.474E+03	.475E+03
14.00	10.045	20.000	.185E+02	.292E-02	1.069	1.061	.173E+01	.237E+02	.137E+02	.502E+03	.503E+03
15.00	10.457	20.000	.186E+02	.125E-02	1.069	1.060	.183E+01	.272E+02	.149E+02	.532E+03	.533E+03
16.00	10.837	20.000	.187E+02	.527E-03	1.069	1.060	.194E+01	.310E+02	.160E+02	.564E+03	.565E+03
17.00	11.189	20.000	.188E+02	.221E-03	1.069	1.059	.206E+01	.350E+02	.170E+02	.597E+03	.598E+03
18.00	11.513	20.000	.188E+02	.920E-04	1.069	1.059	.218E+01	.393E+02	.180E+02	.632E+03	.633E+03
19.00	11.812	20.000	.189E+02	.384E-04	1.069	1.058	.231E+01	.438E+02	.190E+02	.670E+03	.671E+03
20.00	12.089	20.000	.189E+02	.160E-04	1.069	1.058	.244E+01	.485E+02	.199E+02	.709E+03	.710E+03
21.00	12.345	20.000	.190E+02	.674E-05	1.069	1.058	.258E+01	.535E+02	.207E+02	.749E+03	.750E+03
22.00	12.582	20.000	.190E+02	.285E-05	1.069	1.058	.273E+01	.587E+02	.215E+02	.792E+03	.793E+03

m1	m2	zeta	delta	pt2/pt1	gam1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.504E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.05	1.050	15.000	-.516E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.10	1.100	15.000	-.495E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.15	1.150	15.000	-.475E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.20	1.200	15.000	-.468E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.25	1.250	15.000	-.446E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.30	1.300	15.000	-.434E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.35	1.350	15.000	-.408E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.40	1.400	15.000	-.389E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.45	1.450	15.000	-.369E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.50	1.500	15.000	-.347E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.60	1.600	15.000	-.301E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.70	1.700	15.000	-.251E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.80	1.800	15.000	-.190E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
1.90	1.900	15.000	-.133E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
2.00	2.000	15.000	-.563E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
2.20	2.200	15.000	.768E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
2.40	2.400	15.000	.268E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
2.60	2.600	15.000	.512E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
2.80	2.800	15.000	.833E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
3.00	3.001	15.000	.128E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
3.20	3.201	15.000	.193E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.297E+03
3.40	3.401	15.000	.304E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
3.60	3.602	15.000	.543E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.299E+03
more than 99 iterations											
3.80	3.811	15.000	-.460E+00	.100E+01	1.069	1.069	.998E+00	.967E+00	.969E+00	.289E+03	.300E+03
4.00	3.978	15.000	.943E+00	.100E+01	1.069	1.069	.100E+01	.107E+01	.107E+01	.291E+03	.301E+03
4.50	4.390	15.000	.370E+01	.995E+00	1.069	1.069	.102E+01	.137E+01	.134E+01	.296E+03	.304E+03
5.00	4.810	15.000	.571E+01	.978E+00	1.069	1.068	.104E+01	.170E+01	.164E+01	.300E+03	.307E+03
6.00	5.653	15.000	.837E+01	.893E+00	1.069	1.068	.107E+01	.246E+01	.231E+01	.309E+03	.314E+03
7.00	6.479	15.000	.999E+01	.756E+00	1.069	1.067	.110E+01	.336E+01	.306E+01	.319E+03	.322E+03
8.00	7.278	15.000	.110E+02	.593E+00	1.069	1.066	.114E+01	.440E+01	.387E+01	.329E+03	.332E+03
9.00	8.046	15.000	.118E+02	.436E+00	1.069	1.066	.118E+01	.558E+01	.475E+01	.341E+03	.343E+03
10.00	8.780	15.000	.123E+02	.301E+00	1.069	1.065	.122E+01	.690E+01	.566E+01	.353E+03	.355E+03
11.00	9.478	15.000	.127E+02	.198E+00	1.069	1.065	.126E+01	.835E+01	.661E+01	.367E+03	.368E+03
12.00	10.141	15.000	.130E+02	.124E+00	1.069	1.064	.131E+01	.995E+01	.757E+01	.381E+03	.383E+03
13.00	10.769	15.000	.132E+02	.749E-01	1.069	1.063	.137E+01	.117E+02	.854E+01	.397E+03	.398E+03
14.00	11.362	15.000	.134E+02	.437E-01	1.069	1.063	.143E+01	.136E+02	.951E+01	.414E+03	.415E+03
15.00	11.923	15.000	.135E+02	.248E-01	1.069	1.062	.149E+01	.156E+02	.105E+02	.431E+03	.433E+03
16.00	12.451	15.000	.137E+02	.138E-01	1.069	1.062	.155E+01	.177E+02	.114E+02	.450E+03	.451E+03
17.00	12.949	15.000	.138E+02	.749E-02	1.069	1.061	.162E+01	.200E+02	.124E+02	.470E+03	.471E+03
18.00	13.418	15.000	.138E+02	.401E-02	1.069	1.061	.169E+01	.225E+02	.133E+02	.491E+03	.492E+03
19.00	13.859	15.000	.139E+02	.212E-02	1.069	1.060	.177E+01	.250E+02	.141E+02	.513E+03	.514E+03
20.00	14.274	15.000	.140E+02	.111E-02	1.069	1.060	.185E+01	.277E+02	.150E+02	.536E+03	.537E+03
21.00	14.665	15.000	.140E+02	.579E-03	1.069	1.060	.193E+01	.306E+02	.158E+02	.560E+03	.561E+03
22.00	15.033	15.000	.141E+02	.300E-03	1.069	1.059	.202E+01	.336E+02	.166E+02	.585E+03	.586E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	10.000	-.424E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.05	1.050	10.000	-.413E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.10	1.100	10.000	-.385E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.15	1.150	10.000	-.348E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.20	1.200	10.000	-.346E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.25	1.250	10.000	-.440E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.30	1.300	10.000	-.475E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.35	1.350	10.000	-.362E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.40	1.400	10.000	-.385E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.45	1.450	10.000	-.353E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.50	1.500	10.000	-.336E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.60	1.600	10.000	-.343E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.70	1.700	10.000	-.334E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.80	1.800	10.000	-.310E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
1.90	1.900	10.000	-.298E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
2.00	2.000	10.000	-.277E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
2.20	2.200	10.000	-.239E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
2.40	2.400	10.000	-.195E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
2.60	2.600	10.000	-.142E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
2.80	2.800	10.000	-.911E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
3.00	3.000	10.000	-.245E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
3.20	3.200	10.000	.350E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
3.40	3.400	10.000	.116E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
3.60	3.600	10.000	.210E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
3.80	3.801	10.000	.319E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
4.00	4.001	10.000	.457E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
4.50	4.501	10.000	.933E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
5.00	5.002	10.000	.193E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
6.00	5.976	10.000	.755E+00	.100E+01	1.069	1.069	.101E+01	.109E+01	.108E+01	.292E+03	.301E+03
7.00	6.856	10.000	.309E+01	.990E+00	1.069	1.069	.103E+01	.149E+01	.145E+01	.298E+03	.305E+03
8.00	7.737	10.000	.462E+01	.954E+00	1.069	1.068	.105E+01	.196E+01	.187E+01	.304E+03	.309E+03
9.00	8.607	10.000	.568E+01	.889E+00	1.069	1.068	.107E+01	.249E+01	.233E+01	.310E+03	.314E+03
10.00	9.460	10.000	.643E+01	.800E+00	1.069	1.067	.109E+01	.308E+01	.283E+01	.316E+03	.320E+03
11.00	10.294	10.000	.700E+01	.695E+00	1.069	1.067	.111E+01	.374E+01	.336E+01	.323E+03	.326E+03
12.00	11.106	10.000	.742E+01	.584E+00	1.069	1.066	.114E+01	.446E+01	.392E+01	.330E+03	.333E+03
13.00	11.895	10.000	.776E+01	.477E+00	1.069	1.066	.116E+01	.524E+01	.450E+01	.337E+03	.340E+03
14.00	12.661	10.000	.802E+01	.379E+00	1.069	1.066	.119E+01	.608E+01	.510E+01	.346E+03	.348E+03
15.00	13.403	10.000	.824E+01	.294E+00	1.069	1.065	.122E+01	.699E+01	.572E+01	.354E+03	.356E+03
16.00	14.119	10.000	.841E+01	.222E+00	1.069	1.065	.125E+01	.795E+01	.635E+01	.363E+03	.365E+03
17.00	14.812	10.000	.856E+01	.164E+00	1.069	1.064	.128E+01	.899E+01	.700E+01	.372E+03	.374E+03
18.00	15.480	10.000	.868E+01	.120E+00	1.069	1.064	.132E+01	.101E+02	.764E+01	.382E+03	.384E+03
19.00	16.124	10.000	.878E+01	.854E-01	1.069	1.063	.135E+01	.112E+02	.829E+01	.393E+03	.394E+03
20.00	16.744	10.000	.887E+01	.600E-01	1.069	1.063	.139E+01	.125E+02	.894E+01	.404E+03	.405E+03
21.00	17.341	10.000	.895E+01	.416E-01	1.069	1.063	.143E+01	.137E+02	.959E+01	.415E+03	.417E+03
22.00	17.915	10.000	.901E+01	.285E-01	1.069	1.062	.147E+01	.151E+02	.102E+02	.427E+03	.428E+03

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m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	-.221E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.05	1.050	5.000	-.222E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.10	1.100	5.000	-.218E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.15	1.150	5.000	-.222E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.20	1.200	5.000	-.221E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.25	1.250	5.000	-.217E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.30	1.300	5.000	-.218E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.35	1.350	5.000	-.216E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.40	1.400	5.000	-.219E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.45	1.450	5.000	-.216E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.50	1.500	5.000	-.218E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.60	1.600	5.000	-.218E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.70	1.700	5.000	-.209E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.80	1.800	5.000	-.205E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
1.90	1.900	5.000	-.213E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
2.00	2.000	5.000	-.196E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
2.20	2.200	5.000	-.215E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
2.40	2.400	5.000	-.212E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.290E+03
2.60	2.600	5.000	-.209E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
2.80	2.800	5.000	-.187E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
3.00	3.000	5.000	-.183E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
3.20	3.200	5.000	-.171E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
3.40	3.400	5.000	-.162E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
3.60	3.600	5.000	-.154E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
3.80	3.800	5.000	-.149E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
4.00	4.000	5.000	-.139E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.291E+03
4.50	4.500	5.000	-.114E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
5.00	5.000	5.000	-.842E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.292E+03
6.00	6.001	5.000	-.652E-05	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.293E+03
7.00	7.001	5.000	.884E-04	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.294E+03
8.00	8.001	5.000	.241E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.295E+03
9.00	9.002	5.000	.496E-03	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.296E+03
10.00	10.003	5.000	.101E-02	.100E+01	1.069	1.069	.100E+01	.100E+01	.100E+01	.290E+03	.298E+03
11.00	11.009	5.000	.154E-02	.999E+00	1.069	1.069	.100E+01	.999E+00	.999E+00	.290E+03	.299E+03
12.00	11.967	5.000	.415E+00	.999E+00	1.069	1.069	.101E+01	.110E+01	.109E+01	.292E+03	.301E+03
13.00	12.880	5.000	.107E+01	.997E+00	1.069	1.069	.102E+01	.129E+01	.127E+01	.295E+03	.303E+03
14.00	13.791	5.000	.158E+01	.990E+00	1.069	1.069	.103E+01	.151E+01	.147E+01	.298E+03	.305E+03
15.00	14.697	5.000	.200E+01	.975E+00	1.069	1.068	.104E+01	.173E+01	.167E+01	.301E+03	.307E+03
16.00	15.597	5.000	.234E+01	.953E+00	1.069	1.068	.105E+01	.198E+01	.189E+01	.304E+03	.309E+03
17.00	16.487	5.000	.263E+01	.923E+00	1.069	1.068	.106E+01	.224E+01	.211E+01	.307E+03	.312E+03
18.00	17.369	5.000	.287E+01	.886E+00	1.069	1.068	.107E+01	.251E+01	.235E+01	.310E+03	.314E+03
19.00	18.242	5.000	.307E+01	.843E+00	1.069	1.068	.108E+01	.280E+01	.259E+01	.313E+03	.317E+03
20.00	19.104	5.000	.324E+01	.796E+00	1.069	1.067	.109E+01	.311E+01	.285E+01	.316E+03	.320E+03
21.00	19.955	5.000	.339E+01	.744E+00	1.069	1.067	.110E+01	.343E+01	.311E+01	.320E+03	.323E+03
22.00	20.795	5.000	.352E+01	.690E+00	1.069	1.067	.111E+01	.377E+01	.338E+01	.323E+03	.326E+03

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Table 8. Normal and Oblique shock properties.

$$T = 300^{\circ}\text{K}$$

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.002	90.000	.683E-07	.100E+01	1.068	1.068	.100E+01	.998E+00	.999E+00	.300E+03	.310E+03
1.05	.953	90.000	.517E-05	.100E+01	1.068	1.068	.101E+01	.111E+01	.110E+01	.302E+03	.311E+03
1.10	.910	90.000	.105E-04	.999E+00	1.068	1.068	.101E+01	.122E+01	.120E+01	.304E+03	.312E+03
1.15	.871	90.000	.161E-04	.997E+00	1.068	1.068	.102E+01	.133E+01	.131E+01	.306E+03	.313E+03
1.20	.835	90.000	.219E-04	.992E+00	1.068	1.068	.102E+01	.145E+01	.142E+01	.307E+03	.315E+03
1.25	.803	90.000	.279E-04	.986E+00	1.068	1.068	.103E+01	.158E+01	.153E+01	.309E+03	.316E+03
1.30	.773	90.000	.341E-04	.976E+00	1.068	1.068	.104E+01	.171E+01	.165E+01	.311E+03	.317E+03
1.35	.745	90.000	.404E-04	.965E+00	1.068	1.068	.104E+01	.185E+01	.178E+01	.313E+03	.319E+03
1.40	.720	90.000	.470E-04	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.314E+03	.320E+03
1.45	.696	90.000	.537E-04	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.316E+03	.321E+03
1.50	.674	90.000	.606E-04	.916E+00	1.068	1.067	.106E+01	.229E+01	.216E+01	.318E+03	.323E+03
1.60	.634	90.000	.749E-04	.871E+00	1.068	1.067	.107E+01	.261E+01	.244E+01	.322E+03	.326E+03
1.70	.600	90.000	.899E-04	.820E+00	1.068	1.067	.108E+01	.295E+01	.272E+01	.325E+03	.329E+03
1.80	.569	90.000	.105E-03	.762E+00	1.068	1.066	.110E+01	.332E+01	.302E+01	.329E+03	.333E+03
1.90	.542	90.000	.121E-03	.701E+00	1.068	1.066	.111E+01	.370E+01	.333E+01	.333E+03	.336E+03
2.00	.518	90.000	.138E-03	.638E+00	1.068	1.066	.112E+01	.410E+01	.365E+01	.337E+03	.340E+03
2.20	.476	90.000	.173E-03	.512E+00	1.068	1.066	.115E+01	.497E+01	.431E+01	.346E+03	.349E+03
2.40	.442	90.000	.209E-03	.396E+00	1.068	1.065	.118E+01	.592E+01	.500E+01	.355E+03	.358E+03
2.60	.413	90.000	.246E-03	.295E+00	1.068	1.065	.122E+01	.696E+01	.571E+01	.365E+03	.367E+03
2.80	.389	90.000	.284E-03	.214E+00	1.068	1.064	.125E+01	.808E+01	.644E+01	.376E+03	.378E+03
3.00	.368	90.000	.323E-03	.150E+00	1.068	1.064	.129E+01	.928E+01	.719E+01	.387E+03	.389E+03
3.20	.350	90.000	.362E-03	.103E+00	1.068	1.063	.133E+01	.106E+02	.794E+01	.399E+03	.401E+03
3.40	.335	90.000	.401E-03	.693E-01	1.068	1.063	.137E+01	.119E+02	.869E+01	.412E+03	.413E+03
3.60	.321	90.000	.440E-03	.457E-01	1.068	1.062	.142E+01	.134E+02	.944E+01	.425E+03	.427E+03
3.80	.309	90.000	.479E-03	.296E-01	1.068	1.062	.146E+01	.149E+02	.102E+02	.439E+03	.440E+03
4.00	.299	90.000	.518E-03	.188E-01	1.068	1.062	.151E+01	.165E+02	.109E+02	.454E+03	.455E+03
4.50	.277	90.000	.612E-03	.581E-02	1.068	1.061	.164E+01	.209E+02	.127E+02	.493E+03	.494E+03
5.00	.260	90.000	.702E-03	.169E-02	1.068	1.060	.179E+01	.259E+02	.145E+02	.536E+03	.538E+03
6.00	.235	90.000	.866E-03	.133E-03	1.068	1.059	.212E+01	.373E+02	.176E+02	.635E+03	.636E+03
7.00	.219	90.000	.101E-02	.102E-04	1.068	1.058	.250E+01	.508E+02	.203E+02	.750E+03	.751E+03
8.00	.208	90.000	.113E-02	.818E-06	1.068	1.057	.294E+01	.664E+02	.226E+02	.881E+03	.882E+03
9.00	.199	90.000	.123E-02	.713E-07	1.068	1.057	.342E+01	.840E+02	.245E+02	.103E+04	.103E+04
10.00	.193	90.000	.131E-02	.684E-08	1.068	1.056	.397E+01	.104E+03	.261E+02	.119E+04	.119E+04
11.00	.188	90.000	.138E-02	.727E-09	1.068	1.056	.457E+01	.126E+03	.275E+02	.137E+04	.137E+04
12.00	.184	90.000	.144E-02	.857E-10	1.068	1.056	.522E+01	.149E+03	.286E+02	.157E+04	.157E+04
13.00	.181	90.000	.149E-02	.112E-10	1.068	1.056	.593E+01	.175E+03	.296E+02	.178E+04	.178E+04
14.00	.179	90.000	.153E-02	.160E-11	1.068	1.056	.669E+01	.204E+03	.304E+02	.201E+04	.201E+04
more than 99 iterations											
15.00	.177	90.000	.157E-02	.252E-12	1.068	1.056	.751E+01	.234E+03	.311E+02	.225E+04	.225E+04
more than 99 iterations											
16.00	.175	90.000	.160E-02	.429E-13	1.068	1.056	.838E+01	.266E+03	.317E+02	.252E+04	.252E+04
17.00	.174	90.000	.163E-02	.793E-14	1.068	1.056	.931E+01	.300E+03	.322E+02	.279E+04	.280E+04
more than 99 iterations											
18.00	.173	90.000	.165E-02	.158E-14	1.068	1.056	.103E+02	.337E+03	.327E+02	.309E+04	.309E+04
more than 99 iterations											
19.00	.172	90.000	.167E-02	.335E-15	1.068	1.056	.113E+02	.375E+03	.331E+02	.340E+04	.341E+04
20.00	.171	90.000	.169E-02	.759E-16	1.068	1.056	.124E+02	.416E+03	.334E+02	.373E+04	.373E+04
21.00	.170	90.000	.171E-02	.182E-16	1.068	1.056	.136E+02	.458E+03	.337E+02	.408E+04	.408E+04
more than 99 iterations											
22.00	.169	90.000	.172E-02	.463E-17	1.068	1.056	.148E+02	.503E+03	.340E+02	.444E+04	.444E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	85.000	.491E-02	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.300E+03	.310E+03
1.05	.961	85.000	.453E+00	.100E+01	1.068	1.068	.101E+01	.110E+01	.109E+01	.302E+03	.311E+03
1.10	.918	85.000	.960E+00	.999E+00	1.068	1.068	.101E+01	.121E+01	.119E+01	.304E+03	.312E+03
1.15	.880	85.000	.149E+01	.997E+00	1.068	1.068	.102E+01	.132E+01	.130E+01	.305E+03	.313E+03
1.20	.845	85.000	.203E+01	.993E+00	1.068	1.068	.102E+01	.144E+01	.141E+01	.307E+03	.315E+03
1.25	.813	85.000	.259E+01	.986E+00	1.068	1.068	.103E+01	.157E+01	.152E+01	.309E+03	.316E+03
1.30	.784	85.000	.317E+01	.978E+00	1.068	1.068	.104E+01	.170E+01	.164E+01	.311E+03	.317E+03
1.35	.757	85.000	.377E+01	.967E+00	1.068	1.068	.104E+01	.184E+01	.176E+01	.313E+03	.318E+03
1.40	.732	85.000	.438E+01	.953E+00	1.068	1.067	.105E+01	.198E+01	.189E+01	.314E+03	.320E+03
1.45	.709	85.000	.500E+01	.937E+00	1.068	1.067	.105E+01	.212E+01	.202E+01	.316E+03	.321E+03
1.50	.688	85.000	.564E+01	.918E+00	1.068	1.067	.106E+01	.227E+01	.215E+01	.318E+03	.323E+03
1.60	.651	85.000	.695E+01	.874E+00	1.068	1.067	.107E+01	.259E+01	.242E+01	.321E+03	.326E+03
1.70	.619	85.000	.831E+01	.823E+00	1.068	1.067	.108E+01	.293E+01	.271E+01	.325E+03	.329E+03
1.80	.590	85.000	.971E+01	.766E+00	1.068	1.067	.110E+01	.329E+01	.300E+01	.329E+03	.333E+03
1.90	.566	85.000	.111E+02	.706E+00	1.068	1.066	.111E+01	.367E+01	.331E+01	.333E+03	.336E+03
2.00	.545	85.000	.126E+02	.643E+00	1.068	1.066	.112E+01	.407E+01	.362E+01	.337E+03	.340E+03
2.20	.510	85.000	.155E+02	.517E+00	1.068	1.066	.115E+01	.493E+01	.428E+01	.346E+03	.348E+03
2.40	.483	85.000	.185E+02	.401E+00	1.068	1.065	.118E+01	.588E+01	.497E+01	.355E+03	.357E+03
2.60	.463	85.000	.214E+02	.300E+00	1.068	1.065	.122E+01	.691E+01	.568E+01	.365E+03	.367E+03
2.80	.447	85.000	.243E+02	.218E+00	1.068	1.064	.125E+01	.802E+01	.640E+01	.375E+03	.377E+03
3.00	.436	85.000	.270E+02	.154E+00	1.068	1.064	.129E+01	.921E+01	.714E+01	.387E+03	.388E+03
3.20	.427	85.000	.296E+02	.106E+00	1.068	1.063	.133E+01	.105E+02	.789E+01	.399E+03	.400E+03
3.40	.421	85.000	.321E+02	.712E-01	1.068	1.063	.137E+01	.118E+02	.864E+01	.411E+03	.413E+03
3.60	.417	85.000	.344E+02	.470E-01	1.068	1.062	.141E+01	.133E+02	.939E+01	.424E+03	.426E+03
3.80	.414	85.000	.366E+02	.305E-01	1.068	1.062	.146E+01	.148E+02	.101E+02	.438E+03	.439E+03
4.00	.413	85.000	.386E+02	.195E-01	1.068	1.062	.151E+01	.164E+02	.109E+02	.453E+03	.454E+03
4.50	.414	85.000	.430E+02	.605E-02	1.068	1.061	.164E+01	.208E+02	.127E+02	.492E+03	.493E+03
5.00	.418	85.000	.466E+02	.178E-02	1.068	1.060	.178E+01	.257E+02	.144E+02	.535E+03	.536E+03
6.00	.432	85.000	.519E+02	.141E-03	1.068	1.059	.211E+01	.370E+02	.175E+02	.633E+03	.634E+03
7.00	.446	85.000	.556E+02	.109E-04	1.068	1.058	.249E+01	.504E+02	.202E+02	.747E+03	.748E+03
8.00	.460	85.000	.581E+02	.883E-06	1.068	1.057	.292E+01	.659E+02	.225E+02	.876E+03	.877E+03
9.00	.472	85.000	.600E+02	.773E-07	1.068	1.057	.341E+01	.834E+02	.245E+02	.102E+04	.102E+04
10.00	.482	85.000	.613E+02	.746E-08	1.068	1.056	.395E+01	.103E+03	.261E+02	.118E+04	.119E+04
11.00	.490	85.000	.624E+02	.797E-09	1.068	1.056	.454E+01	.125E+03	.275E+02	.136E+04	.136E+04
12.00	.497	85.000	.632E+02	.943E-10	1.068	1.056	.519E+01	.148E+03	.286E+02	.156E+04	.156E+04
13.00	.504	85.000	.639E+02	.123E-10	1.068	1.056	.589E+01	.174E+03	.296E+02	.177E+04	.177E+04
14.00	.509	85.000	.644E+02	.177E-11	1.068	1.056	.665E+01	.202E+03	.304E+02	.199E+04	.200E+04
15.00	.513	85.000	.648E+02	.279E-12	1.068	1.056	.746E+01	.232E+03	.311E+02	.224E+04	.224E+04
16.00	.517	85.000	.652E+02	.477E-13	1.068	1.056	.833E+01	.264E+03	.317E+02	.250E+04	.250E+04
17.00	.520	85.000	.655E+02	.882E-14	1.068	1.056	.925E+01	.298E+03	.322E+02	.278E+04	.278E+04
18.00	.523	85.000	.657E+02	.176E-14	1.068	1.056	.102E+02	.334E+03	.326E+02	.307E+04	.307E+04
19.00	.525	85.000	.659E+02	.374E-15	1.068	1.056	.113E+02	.372E+03	.330E+02	.338E+04	.338E+04
20.00	.527	85.000	.661E+02	.848E-16	1.068	1.056	.124E+02	.412E+03	.334E+02	.371E+04	.371E+04
21.00	.529	85.000	.663E+02	.204E-16	1.068	1.056	.135E+02	.455E+03	.337E+02	.405E+04	.405E+04
22.00	.531	85.000	.664E+02	.519E-17	1.068	1.056	.147E+02	.499E+03	.340E+02	.441E+04	.441E+04

m1	m2	zeta	delta	pt2/pt1	gam1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	80.000	.639E-02	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.300E+03	.310E+03
1.05	.985	80.000	.658E+00	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.301E+03	.311E+03
1.10	.943	80.000	.163E+01	.100E+01	1.068	1.068	.101E+01	.118E+01	.117E+01	.303E+03	.312E+03
1.15	.906	80.000	.263E+01	.998E+00	1.068	1.068	.102E+01	.129E+01	.127E+01	.305E+03	.313E+03
1.20	.873	80.000	.367E+01	.994E+00	1.068	1.068	.102E+01	.141E+01	.138E+01	.307E+03	.314E+03
1.25	.842	80.000	.473E+01	.988E+00	1.068	1.068	.103E+01	.153E+01	.149E+01	.309E+03	.315E+03
1.30	.815	80.000	.581E+01	.980E+00	1.068	1.068	.103E+01	.166E+01	.161E+01	.310E+03	.317E+03
1.35	.790	80.000	.692E+01	.970E+00	1.068	1.068	.104E+01	.179E+01	.172E+01	.312E+03	.318E+03
1.40	.768	80.000	.804E+01	.957E+00	1.068	1.067	.105E+01	.193E+01	.185E+01	.314E+03	.319E+03
1.45	.748	80.000	.918E+01	.942E+00	1.068	1.067	.105E+01	.207E+01	.197E+01	.315E+03	.321E+03
1.50	.729	80.000	.103E+02	.925E+00	1.068	1.067	.106E+01	.222E+01	.210E+01	.317E+03	.322E+03
1.60	.698	80.000	.127E+02	.883E+00	1.068	1.067	.107E+01	.253E+01	.237E+01	.321E+03	.325E+03
1.70	.671	80.000	.150E+02	.834E+00	1.068	1.067	.108E+01	.286E+01	.265E+01	.324E+03	.328E+03
1.80	.650	80.000	.174E+02	.779E+00	1.068	1.067	.109E+01	.322E+01	.294E+01	.328E+03	.332E+03
1.90	.633	80.000	.197E+02	.719E+00	1.068	1.066	.111E+01	.359E+01	.324E+01	.332E+03	.335E+03
2.00	.619	80.000	.221E+02	.657E+00	1.068	1.066	.112E+01	.398E+01	.355E+01	.336E+03	.339E+03
2.20	.600	80.000	.265E+02	.533E+00	1.068	1.066	.115E+01	.482E+01	.420E+01	.345E+03	.347E+03
2.40	.590	80.000	.307E+02	.416E+00	1.068	1.065	.118E+01	.574E+01	.487E+01	.354E+03	.356E+03
2.60	.586	80.000	.345E+02	.314E+00	1.068	1.065	.121E+01	.675E+01	.557E+01	.363E+03	.365E+03
2.80	.588	80.000	.380E+02	.230E+00	1.068	1.064	.125E+01	.783E+01	.629E+01	.374E+03	.376E+03
3.00	.593	80.000	.411E+02	.163E+00	1.068	1.064	.128E+01	.900E+01	.702E+01	.385E+03	.386E+03
3.20	.600	80.000	.438E+02	.113E+00	1.068	1.063	.132E+01	.102E+02	.775E+01	.396E+03	.398E+03
3.40	.610	80.000	.463E+02	.770E-01	1.068	1.063	.136E+01	.116E+02	.849E+01	.409E+03	.410E+03
3.60	.621	80.000	.484E+02	.513E-01	1.068	1.063	.141E+01	.130E+02	.923E+01	.422E+03	.423E+03
3.80	.632	80.000	.504E+02	.336E-01	1.068	1.062	.145E+01	.145E+02	.997E+01	.435E+03	.436E+03
4.00	.644	80.000	.521E+02	.216E-01	1.068	1.062	.150E+01	.160E+02	.107E+02	.449E+03	.451E+03
4.50	.676	80.000	.556E+02	.684E-02	1.068	1.061	.162E+01	.203E+02	.125E+02	.487E+03	.489E+03
5.00	.706	80.000	.582E+02	.205E-02	1.068	1.060	.177E+01	.251E+02	.142E+02	.530E+03	.531E+03
6.00	.763	80.000	.619E+02	.168E-03	1.068	1.059	.208E+01	.362E+02	.173E+02	.625E+03	.627E+03
7.00	.810	80.000	.642E+02	.134E-04	1.068	1.058	.246E+01	.492E+02	.200E+02	.737E+03	.738E+03
8.00	.849	80.000	.658E+02	.111E-05	1.068	1.057	.288E+01	.644E+02	.224E+02	.864E+03	.865E+03
9.00	.881	80.000	.669E+02	.989E-07	1.068	1.057	.335E+01	.815E+02	.243E+02	.101E+04	.101E+04
10.00	.907	80.000	.677E+02	.970E-08	1.068	1.057	.388E+01	.101E+03	.259E+02	.116E+04	.117E+04
11.00	.929	80.000	.683E+02	.105E-08	1.068	1.056	.446E+01	.122E+03	.273E+02	.134E+04	.134E+04
12.00	.947	80.000	.687E+02	.126E-09	1.068	1.056	.510E+01	.145E+03	.284E+02	.153E+04	.153E+04
13.00	.962	80.000	.691E+02	.166E-10	1.068	1.056	.578E+01	.170E+03	.294E+02	.173E+04	.174E+04
14.00	.974	80.000	.694E+02	.240E-11	1.068	1.056	.652E+01	.197E+03	.303E+02	.196E+04	.196E+04
15.00	.985	80.000	.696E+02	.381E-12	1.068	1.056	.732E+01	.227E+03	.310E+02	.220E+04	.220E+04
16.00	.994	80.000	.698E+02	.655E-13	1.068	1.056	.817E+01	.258E+03	.316E+02	.245E+04	.245E+04
17.00	1.001	80.000	.700E+02	.122E-13	1.068	1.056	.907E+01	.291E+03	.321E+02	.272E+04	.272E+04
18.00	1.008	80.000	.701E+02	.243E-14	1.068	1.056	.100E+02	.326E+03	.326E+02	.301E+04	.301E+04
19.00	1.014	80.000	.702E+02	.520E-15	1.068	1.056	.110E+02	.364E+03	.330E+02	.331E+04	.331E+04
20.00	1.019	80.000	.703E+02	.118E-15	1.068	1.056	.121E+02	.403E+03	.333E+02	.363E+04	.363E+04
more than 99 iterations											
21.00	1.023	80.000	.704E+02	.286E-16	1.068	1.056	.132E+02	.444E+03	.336E+02	.397E+04	.397E+04
more than 99 iterations											
22.00	1.027	80.000	.705E+02	.728E-17	1.068	1.056	.144E+02	.488E+03	.339E+02	.432E+04	.432E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	75.000	.565E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.310E+03
1.05	1.024	75.000	.407E+00	.100E+01	1.068	1.068	.100E+01	.103E+01	.103E+01	.301E+03	.311E+03
1.10	.984	75.000	.177E+01	.100E+01	1.068	1.068	.101E+01	.113E+01	.112E+01	.302E+03	.312E+03
1.15	.948	75.000	.317E+01	.999E+00	1.068	1.068	.101E+01	.124E+01	.122E+01	.304E+03	.313E+03
1.20	.917	75.000	.460E+01	.996E+00	1.068	1.068	.102E+01	.135E+01	.133E+01	.306E+03	.314E+03
1.25	.890	75.000	.605E+01	.991E+00	1.068	1.068	.103E+01	.147E+01	.144E+01	.308E+03	.315E+03
1.30	.865	75.000	.753E+01	.985E+00	1.068	1.068	.103E+01	.160E+01	.155E+01	.309E+03	.316E+03
1.35	.844	75.000	.901E+01	.976E+00	1.068	1.068	.104E+01	.172E+01	.166E+01	.311E+03	.317E+03
1.40	.824	75.000	.105E+02	.965E+00	1.068	1.068	.104E+01	.186E+01	.178E+01	.313E+03	.319E+03
1.45	.808	75.000	.120E+02	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.314E+03	.320E+03
1.50	.793	75.000	.135E+02	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.316E+03	.321E+03
1.60	.769	75.000	.165E+02	.897E+00	1.068	1.067	.107E+01	.244E+01	.229E+01	.320E+03	.324E+03
1.70	.751	75.000	.194E+02	.850E+00	1.068	1.067	.108E+01	.275E+01	.256E+01	.323E+03	.327E+03
1.80	.738	75.000	.222E+02	.798E+00	1.068	1.067	.109E+01	.309E+01	.284E+01	.327E+03	.331E+03
1.90	.730	75.000	.250E+02	.741E+00	1.068	1.066	.110E+01	.345E+01	.313E+01	.331E+03	.334E+03
2.00	.725	75.000	.276E+02	.681E+00	1.068	1.066	.111E+01	.383E+01	.343E+01	.334E+03	.338E+03
2.20	.725	75.000	.324E+02	.558E+00	1.068	1.066	.114E+01	.464E+01	.406E+01	.343E+03	.345E+03
2.40	.733	75.000	.366E+02	.442E+00	1.068	1.065	.117E+01	.552E+01	.472E+01	.351E+03	.354E+03
2.60	.747	75.000	.403E+02	.338E+00	1.068	1.065	.120E+01	.649E+01	.540E+01	.361E+03	.363E+03
2.80	.766	75.000	.435E+02	.250E+00	1.068	1.064	.124E+01	.753E+01	.609E+01	.371E+03	.373E+03
3.00	.787	75.000	.463E+02	.181E+00	1.068	1.064	.127E+01	.865E+01	.681E+01	.381E+03	.383E+03
3.20	.810	75.000	.486E+02	.127E+00	1.068	1.063	.131E+01	.985E+01	.753E+01	.393E+03	.394E+03
3.40	.834	75.000	.507E+02	.876E-01	1.068	1.063	.135E+01	.111E+02	.825E+01	.405E+03	.406E+03
3.60	.858	75.000	.524E+02	.591E-01	1.068	1.063	.139E+01	.125E+02	.898E+01	.417E+03	.418E+03
3.80	.883	75.000	.540E+02	.392E-01	1.068	1.062	.143E+01	.139E+02	.970E+01	.430E+03	.431E+03
4.00	.907	75.000	.553E+02	.257E-01	1.068	1.062	.148E+01	.154E+02	.104E+02	.444E+03	.445E+03
4.50	.966	75.000	.580E+02	.839E-02	1.068	1.061	.160E+01	.195E+02	.122E+02	.481E+03	.482E+03
5.00	1.021	75.000	.600E+02	.259E-02	1.068	1.060	.174E+01	.241E+02	.139E+02	.521E+03	.522E+03
6.00	1.117	75.000	.626E+02	.224E-03	1.068	1.059	.205E+01	.348E+02	.170E+02	.614E+03	.615E+03
7.00	1.195	75.000	.643E+02	.188E-04	1.068	1.058	.240E+01	.474E+02	.197E+02	.721E+03	.722E+03
8.00	1.259	75.000	.654E+02	.162E-05	1.068	1.057	.281E+01	.619E+02	.220E+02	.843E+03	.844E+03
9.00	1.311	75.000	.662E+02	.149E-06	1.068	1.057	.327E+01	.784E+02	.240E+02	.981E+03	.982E+03
10.00	1.353	75.000	.667E+02	.150E-07	1.068	1.057	.378E+01	.968E+02	.256E+02	.113E+04	.113E+04
11.00	1.388	75.000	.671E+02	.166E-08	1.068	1.056	.434E+01	.117E+03	.270E+02	.130E+04	.130E+04
12.00	1.417	75.000	.675E+02	.203E-09	1.068	1.056	.495E+01	.139E+03	.282E+02	.148E+04	.149E+04
13.00	1.441	75.000	.677E+02	.272E-10	1.068	1.056	.561E+01	.164E+03	.292E+02	.168E+04	.168E+04
14.00	1.461	75.000	.679E+02	.400E-11	1.068	1.056	.632E+01	.190E+03	.300E+02	.190E+04	.190E+04
15.00	1.478	75.000	.681E+02	.641E-12	1.068	1.056	.708E+01	.218E+03	.308E+02	.213E+04	.213E+04
16.00	1.493	75.000	.682E+02	.111E-12	1.068	1.056	.790E+01	.248E+03	.314E+02	.237E+04	.237E+04
more than 99 iterations											
17.00	1.505	75.000	.683E+02	.209E-13	1.068	1.056	.877E+01	.280E+03	.319E+02	.263E+04	.263E+04
more than 99 iterations											
18.00	1.516	75.000	.684E+02	.421E-14	1.068	1.056	.969E+01	.314E+03	.324E+02	.291E+04	.291E+04
19.00	1.525	75.000	.685E+02	.906E-15	1.068	1.056	.107E+02	.350E+03	.328E+02	.320E+04	.320E+04
20.00	1.533	75.000	.686E+02	.207E-15	1.068	1.056	.117E+02	.388E+03	.332E+02	.351E+04	.351E+04
21.00	1.540	75.000	.686E+02	.503E-16	1.068	1.056	.128E+02	.428E+03	.335E+02	.383E+04	.383E+04
22.00	1.546	75.000	.687E+02	.129E-16	1.068	1.056	.139E+02	.469E+03	.338E+02	.417E+04	.417E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.460E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.05	1.051	70.000	.128E-01	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.300E+03	.310E+03
1.10	1.038	70.000	.122E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.301E+03	.311E+03
1.15	1.005	70.000	.292E+01	.100E+01	1.068	1.068	.101E+01	.117E+01	.116E+01	.303E+03	.312E+03
1.20	.977	70.000	.465E+01	.998E+00	1.068	1.068	.102E+01	.128E+01	.126E+01	.305E+03	.313E+03
1.25	.952	70.000	.639E+01	.995E+00	1.068	1.068	.102E+01	.139E+01	.136E+01	.307E+03	.314E+03
1.30	.931	70.000	.813E+01	.990E+00	1.068	1.068	.103E+01	.151E+01	.147E+01	.308E+03	.315E+03
1.35	.913	70.000	.987E+01	.982E+00	1.068	1.068	.103E+01	.163E+01	.158E+01	.310E+03	.316E+03
1.40	.897	70.000	.116E+02	.973E+00	1.068	1.068	.104E+01	.176E+01	.169E+01	.311E+03	.318E+03
1.45	.884	70.000	.133E+02	.962E+00	1.068	1.068	.104E+01	.189E+01	.181E+01	.313E+03	.319E+03
1.50	.873	70.000	.150E+02	.948E+00	1.068	1.067	.105E+01	.202E+01	.193E+01	.315E+03	.320E+03
1.60	.857	70.000	.183E+02	.914E+00	1.068	1.067	.106E+01	.230E+01	.217E+01	.318E+03	.323E+03
1.70	.848	70.000	.215E+02	.873E+00	1.068	1.067	.107E+01	.260E+01	.243E+01	.322E+03	.326E+03
1.80	.845	70.000	.245E+02	.824E+00	1.068	1.067	.108E+01	.292E+01	.270E+01	.325E+03	.329E+03
1.90	.846	70.000	.273E+02	.771E+00	1.068	1.067	.110E+01	.326E+01	.298E+01	.329E+03	.332E+03
2.00	.850	70.000	.299E+02	.714E+00	1.068	1.066	.111E+01	.362E+01	.327E+01	.332E+03	.336E+03
2.20	.868	70.000	.346E+02	.595E+00	1.068	1.066	.113E+01	.439E+01	.387E+01	.340E+03	.343E+03
2.40	.894	70.000	.386E+02	.478E+00	1.068	1.065	.116E+01	.523E+01	.450E+01	.349E+03	.351E+03
2.60	.925	70.000	.419E+02	.373E+00	1.068	1.065	.119E+01	.614E+01	.515E+01	.357E+03	.360E+03
2.80	.959	70.000	.448E+02	.281E+00	1.068	1.065	.122E+01	.713E+01	.583E+01	.367E+03	.369E+03
3.00	.995	70.000	.471E+02	.207E+00	1.068	1.064	.126E+01	.819E+01	.651E+01	.377E+03	.379E+03
3.20	1.033	70.000	.491E+02	.149E+00	1.068	1.064	.129E+01	.932E+01	.721E+01	.388E+03	.389E+03
3.40	1.070	70.000	.509E+02	.104E+00	1.068	1.063	.133E+01	.105E+02	.792E+01	.399E+03	.401E+03
3.60	1.107	70.000	.523E+02	.718E-01	1.068	1.063	.137E+01	.118E+02	.862E+01	.411E+03	.412E+03
3.80	1.144	70.000	.536E+02	.486E-01	1.068	1.062	.141E+01	.132E+02	.933E+01	.423E+03	.425E+03
4.00	1.180	70.000	.547E+02	.324E-01	1.068	1.062	.145E+01	.146E+02	.100E+02	.436E+03	.438E+03
4.50	1.265	70.000	.569E+02	.111E-01	1.068	1.061	.157E+01	.185E+02	.118E+02	.471E+03	.472E+03
5.00	1.344	70.000	.584E+02	.358E-02	1.068	1.060	.170E+01	.228E+02	.134E+02	.510E+03	.511E+03
6.00	1.480	70.000	.606E+02	.336E-03	1.068	1.059	.199E+01	.329E+02	.165E+02	.598E+03	.599E+03
7.00	1.592	70.000	.619E+02	.300E-04	1.068	1.058	.233E+01	.448E+02	.192E+02	.699E+03	.700E+03
8.00	1.682	70.000	.627E+02	.274E-05	1.068	1.058	.272E+01	.586E+02	.216E+02	.815E+03	.817E+03
9.00	1.755	70.000	.633E+02	.265E-06	1.068	1.057	.315E+01	.742E+02	.235E+02	.946E+03	.947E+03
10.00	1.815	70.000	.638E+02	.278E-07	1.068	1.057	.363E+01	.916E+02	.252E+02	.109E+04	.109E+04
11.00	1.864	70.000	.641E+02	.318E-08	1.068	1.056	.416E+01	.111E+03	.266E+02	.125E+04	.125E+04
12.00	1.905	70.000	.644E+02	.399E-09	1.068	1.056	.474E+01	.132E+03	.278E+02	.142E+04	.142E+04
13.00	1.939	70.000	.646E+02	.548E-10	1.068	1.056	.537E+01	.155E+03	.289E+02	.161E+04	.161E+04
14.00	1.968	70.000	.647E+02	.821E-11	1.068	1.056	.604E+01	.180E+03	.297E+02	.181E+04	.181E+04
15.00	1.992	70.000	.649E+02	.134E-11	1.068	1.056	.677E+01	.206E+03	.305E+02	.203E+04	.203E+04
16.00	2.013	70.000	.650E+02	.236E-12	1.068	1.056	.754E+01	.235E+03	.311E+02	.226E+04	.226E+04
17.00	2.030	70.000	.650E+02	.448E-13	1.068	1.056	.836E+01	.265E+03	.317E+02	.251E+04	.251E+04
18.00	2.045	70.000	.651E+02	.913E-14	1.068	1.056	.923E+01	.297E+03	.322E+02	.277E+04	.277E+04
more than 99 iterations											
19.00	2.059	70.000	.652E+02	.199E-14	1.068	1.056	.102E+02	.331E+03	.326E+02	.305E+04	.305E+04
more than 99 iterations											
20.00	2.071	70.000	.652E+02	.458E-15	1.068	1.056	.111E+02	.367E+03	.330E+02	.334E+04	.334E+04
21.00	2.080	70.000	.653E+02	.112E-15	1.068	1.056	.121E+02	.405E+03	.333E+02	.364E+04	.365E+04
more than 99 iterations											
22.00	2.090	70.000	.653E+02	.289E-16	1.068	1.056	.132E+02	.444E+03	.336E+02	.396E+04	.397E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.355E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.05	1.050	65.000	.698E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.10	1.117	65.000	-.393E+00	.100E+01	1.068	1.068	.999E+00	.981E+00	.982E+00	.300E+03	.310E+03
1.15	1.076	65.000	.181E+01	.100E+01	1.068	1.068	.101E+01	.109E+01	.108E+01	.302E+03	.311E+03
1.20	1.049	65.000	.374E+01	.100E+01	1.068	1.068	.101E+01	.119E+01	.118E+01	.303E+03	.312E+03
1.25	1.028	65.000	.567E+01	.998E+00	1.068	1.068	.102E+01	.129E+01	.127E+01	.305E+03	.313E+03
1.30	1.009	65.000	.759E+01	.994E+00	1.068	1.068	.102E+01	.140E+01	.137E+01	.307E+03	.314E+03
1.35	.994	65.000	.949E+01	.989E+00	1.068	1.068	.103E+01	.151E+01	.147E+01	.308E+03	.315E+03
1.40	.982	65.000	.114E+02	.982E+00	1.068	1.068	.103E+01	.163E+01	.158E+01	.310E+03	.316E+03
1.45	.973	65.000	.132E+02	.973E+00	1.068	1.068	.104E+01	.175E+01	.169E+01	.311E+03	.318E+03
1.50	.966	65.000	.150E+02	.963E+00	1.068	1.068	.104E+01	.188E+01	.180E+01	.313E+03	.319E+03
1.60	.959	65.000	.184E+02	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.316E+03	.321E+03
1.70	.958	65.000	.217E+02	.899E+00	1.068	1.067	.106E+01	.242E+01	.227E+01	.319E+03	.324E+03
1.80	.963	65.000	.247E+02	.856E+00	1.068	1.067	.108E+01	.272E+01	.253E+01	.323E+03	.327E+03
1.90	.972	65.000	.274E+02	.807E+00	1.068	1.067	.109E+01	.303E+01	.279E+01	.326E+03	.330E+03
2.00	.986	65.000	.300E+02	.755E+00	1.068	1.066	.110E+01	.336E+01	.306E+01	.330E+03	.333E+03
2.20	1.020	65.000	.344E+02	.641E+00	1.068	1.066	.112E+01	.408E+01	.363E+01	.337E+03	.340E+03
2.40	1.062	65.000	.381E+02	.527E+00	1.068	1.066	.115E+01	.486E+01	.423E+01	.345E+03	.348E+03
2.60	1.109	65.000	.411E+02	.420E+00	1.068	1.065	.118E+01	.571E+01	.485E+01	.353E+03	.356E+03
2.80	1.158	65.000	.437E+02	.325E+00	1.068	1.065	.121E+01	.663E+01	.549E+01	.362E+03	.364E+03
3.00	1.209	65.000	.458E+02	.245E+00	1.068	1.064	.124E+01	.761E+01	.615E+01	.372E+03	.373E+03
3.20	1.260	65.000	.475E+02	.180E+00	1.068	1.064	.127E+01	.867E+01	.681E+01	.382E+03	.383E+03
3.40	1.310	65.000	.490E+02	.129E+00	1.068	1.064	.131E+01	.979E+01	.749E+01	.392E+03	.394E+03
3.60	1.360	65.000	.503E+02	.914E-01	1.068	1.063	.134E+01	.110E+02	.817E+01	.403E+03	.405E+03
3.80	1.409	65.000	.514E+02	.634E-01	1.068	1.063	.138E+01	.122E+02	.885E+01	.415E+03	.416E+03
4.00	1.457	65.000	.523E+02	.433E-01	1.068	1.062	.142E+01	.136E+02	.953E+01	.427E+03	.428E+03
4.50	1.569	65.000	.542E+02	.157E-01	1.068	1.061	.153E+01	.172E+02	.112E+02	.460E+03	.461E+03
5.00	1.673	65.000	.555E+02	.538E-02	1.068	1.061	.165E+01	.212E+02	.129E+02	.496E+03	.497E+03
6.00	1.852	65.000	.573E+02	.560E-03	1.068	1.059	.193E+01	.306E+02	.159E+02	.578E+03	.579E+03
7.00	1.998	65.000	.584E+02	.548E-04	1.068	1.058	.224E+01	.417E+02	.186E+02	.673E+03	.674E+03
8.00	2.117	65.000	.591E+02	.538E-05	1.068	1.058	.260E+01	.545E+02	.209E+02	.781E+03	.782E+03
9.00	2.214	65.000	.597E+02	.555E-06	1.068	1.057	.301E+01	.690E+02	.229E+02	.902E+03	.904E+03
10.00	2.294	65.000	.600E+02	.613E-07	1.068	1.057	.346E+01	.852E+02	.246E+02	.104E+04	.104E+04
11.00	2.360	65.000	.603E+02	.733E-08	1.068	1.056	.395E+01	.103E+03	.261E+02	.119E+04	.119E+04
12.00	2.415	65.000	.605E+02	.955E-09	1.068	1.056	.449E+01	.123E+03	.273E+02	.135E+04	.135E+04
13.00	2.461	65.000	.607E+02	.135E-09	1.068	1.056	.507E+01	.144E+03	.284E+02	.152E+04	.152E+04
14.00	2.499	65.000	.608E+02	.209E-10	1.068	1.056	.570E+01	.167E+03	.293E+02	.171E+04	.171E+04
15.00	2.532	65.000	.609E+02	.348E-11	1.068	1.056	.637E+01	.192E+03	.301E+02	.191E+04	.191E+04
16.00	2.560	65.000	.610E+02	.627E-12	1.068	1.056	.709E+01	.218E+03	.308E+02	.213E+04	.213E+04
more than 99 iterations											
17.00	2.584	65.000	.611E+02	.121E-12	1.068	1.056	.786E+01	.247E+03	.314E+02	.236E+04	.236E+04
18.00	2.605	65.000	.612E+02	.251E-13	1.068	1.056	.867E+01	.276E+03	.319E+02	.260E+04	.260E+04
19.00	2.623	65.000	.612E+02	.552E-14	1.068	1.056	.953E+01	.308E+03	.323E+02	.286E+04	.286E+04
20.00	2.639	65.000	.613E+02	.129E-14	1.068	1.056	.104E+02	.341E+03	.327E+02	.313E+04	.313E+04
21.00	2.652	65.000	.613E+02	.319E-15	1.068	1.056	.114E+02	.376E+03	.331E+02	.341E+04	.342E+04
22.00	2.665	65.000	.613E+02	.830E-16	1.068	1.056	.124E+02	.413E+03	.334E+02	.371E+04	.371E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.265E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.05	1.050	60.000	.439E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.10	1.101	60.000	.849E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.15	1.167	60.000	-.469E+00	.100E+01	1.068	1.068	.999E+00	.980E+00	.981E+00	.300E+03	.310E+03
1.20	1.134	60.000	.189E+01	.100E+01	1.068	1.068	.101E+01	.108E+01	.108E+01	.302E+03	.311E+03
1.25	1.114	60.000	.394E+01	.100E+01	1.068	1.068	.101E+01	.118E+01	.117E+01	.303E+03	.312E+03
1.30	1.099	60.000	.597E+01	.998E+00	1.068	1.068	.102E+01	.128E+01	.126E+01	.305E+03	.313E+03
1.35	1.087	60.000	.795E+01	.995E+00	1.068	1.068	.102E+01	.138E+01	.135E+01	.306E+03	.314E+03
1.40	1.078	60.000	.990E+01	.991E+00	1.068	1.068	.103E+01	.149E+01	.145E+01	.308E+03	.315E+03
1.45	1.072	60.000	.118E+02	.985E+00	1.068	1.068	.103E+01	.160E+01	.155E+01	.309E+03	.316E+03
1.50	1.068	60.000	.136E+02	.977E+00	1.068	1.068	.104E+01	.171E+01	.165E+01	.311E+03	.317E+03
1.60	1.068	60.000	.171E+02	.955E+00	1.068	1.067	.105E+01	.195E+01	.186E+01	.314E+03	.320E+03
1.70	1.075	60.000	.203E+02	.927E+00	1.068	1.067	.106E+01	.221E+01	.209E+01	.317E+03	.322E+03
1.80	1.088	60.000	.233E+02	.891E+00	1.068	1.067	.107E+01	.248E+01	.232E+01	.320E+03	.325E+03
1.90	1.105	60.000	.260E+02	.849E+00	1.068	1.067	.108E+01	.277E+01	.257E+01	.323E+03	.327E+03
2.00	1.126	60.000	.284E+02	.802E+00	1.068	1.067	.109E+01	.307E+01	.282E+01	.327E+03	.330E+03
2.20	1.176	60.000	.326E+02	.698E+00	1.068	1.066	.111E+01	.372E+01	.335E+01	.333E+03	.337E+03
2.40	1.234	60.000	.361E+02	.588E+00	1.068	1.066	.114E+01	.443E+01	.390E+01	.341E+03	.343E+03
2.60	1.295	60.000	.389E+02	.481E+00	1.068	1.065	.116E+01	.521E+01	.449E+01	.348E+03	.351E+03
2.80	1.359	60.000	.412E+02	.382E+00	1.068	1.065	.119E+01	.605E+01	.509E+01	.357E+03	.359E+03
3.00	1.423	60.000	.431E+02	.296E+00	1.068	1.065	.122E+01	.695E+01	.571E+01	.365E+03	.367E+03
3.20	1.488	60.000	.447E+02	.224E+00	1.068	1.064	.125E+01	.791E+01	.634E+01	.374E+03	.376E+03
3.40	1.551	60.000	.461E+02	.166E+00	1.068	1.064	.128E+01	.894E+01	.698E+01	.384E+03	.386E+03
3.60	1.614	60.000	.472E+02	.121E+00	1.068	1.063	.131E+01	.100E+02	.763E+01	.394E+03	.396E+03
3.80	1.675	60.000	.482E+02	.864E-01	1.068	1.063	.135E+01	.112E+02	.828E+01	.405E+03	.406E+03
4.00	1.735	60.000	.490E+02	.608E-01	1.068	1.063	.139E+01	.124E+02	.893E+01	.416E+03	.418E+03
4.50	1.876	60.000	.507E+02	.238E-01	1.068	1.062	.149E+01	.157E+02	.105E+02	.446E+03	.447E+03
5.00	2.005	60.000	.519E+02	.872E-02	1.068	1.061	.160E+01	.194E+02	.121E+02	.479E+03	.480E+03
6.00	2.230	60.000	.535E+02	.103E-02	1.068	1.060	.185E+01	.279E+02	.151E+02	.555E+03	.556E+03
7.00	2.415	60.000	.544E+02	.113E-03	1.068	1.059	.214E+01	.381E+02	.178E+02	.642E+03	.643E+03
8.00	2.567	60.000	.551E+02	.122E-04	1.068	1.058	.247E+01	.497E+02	.201E+02	.741E+03	.742E+03
9.00	2.692	60.000	.555E+02	.137E-05	1.068	1.057	.284E+01	.630E+02	.222E+02	.852E+03	.853E+03
10.00	2.795	60.000	.559E+02	.162E-06	1.068	1.057	.325E+01	.778E+02	.239E+02	.976E+03	.977E+03
11.00	2.880	60.000	.561E+02	.205E-07	1.068	1.057	.370E+01	.941E+02	.254E+02	.111E+04	.111E+04
12.00	2.952	60.000	.563E+02	.280E-08	1.068	1.056	.420E+01	.112E+03	.267E+02	.126E+04	.126E+04
13.00	3.012	60.000	.564E+02	.414E-09	1.068	1.056	.473E+01	.132E+03	.278E+02	.142E+04	.142E+04
14.00	3.063	60.000	.566E+02	.662E-10	1.068	1.056	.530E+01	.153E+03	.288E+02	.159E+04	.159E+04
15.00	3.106	60.000	.567E+02	.114E-10	1.068	1.056	.592E+01	.175E+03	.296E+02	.178E+04	.178E+04
16.00	3.144	60.000	.567E+02	.211E-11	1.068	1.056	.658E+01	.199E+03	.303E+02	.197E+04	.198E+04
17.00	3.175	60.000	.568E+02	.417E-12	1.068	1.056	.728E+01	.225E+03	.309E+02	.218E+04	.218E+04
more than 99 iterations											
18.00	3.203	60.000	.569E+02	.880E-13	1.068	1.056	.802E+01	.252E+03	.315E+02	.241E+04	.241E+04
19.00	3.226	60.000	.569E+02	.197E-13	1.068	1.056	.880E+01	.281E+03	.320E+02	.264E+04	.264E+04
20.00	3.248	60.000	.569E+02	.469E-14	1.068	1.056	.962E+01	.312E+03	.324E+02	.289E+04	.289E+04
21.00	3.266	60.000	.570E+02	.117E-14	1.068	1.056	.105E+02	.344E+03	.328E+02	.315E+04	.315E+04
22.00	3.282	60.000	.570E+02	.309E-15	1.068	1.056	.114E+02	.377E+03	.331E+02	.342E+04	.342E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.190E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.05	1.050	55.000	.294E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.10	1.100	55.000	.466E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.15	1.150	55.000	.815E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
more than 99 iterations											
1.20	1.227	55.000	-.852E+00	.100E+01	1.068	1.069	.998E+00	.967E+00	.969E+00	.299E+03	.310E+03
1.25	1.212	55.000	.126E+01	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.301E+03	.311E+03
1.30	1.198	55.000	.334E+01	.100E+01	1.068	1.068	.101E+01	.114E+01	.113E+01	.303E+03	.312E+03
1.35	1.188	55.000	.537E+01	.999E+00	1.068	1.068	.101E+01	.123E+01	.121E+01	.304E+03	.312E+03
1.40	1.182	55.000	.736E+01	.997E+00	1.068	1.068	.102E+01	.133E+01	.130E+01	.306E+03	.313E+03
1.45	1.178	55.000	.927E+01	.994E+00	1.068	1.068	.102E+01	.142E+01	.139E+01	.307E+03	.314E+03
1.50	1.178	55.000	.111E+02	.989E+00	1.068	1.068	.103E+01	.153E+01	.149E+01	.308E+03	.315E+03
1.60	1.183	55.000	.146E+02	.974E+00	1.068	1.068	.104E+01	.174E+01	.168E+01	.311E+03	.317E+03
1.70	1.197	55.000	.178E+02	.953E+00	1.068	1.067	.105E+01	.197E+01	.188E+01	.314E+03	.320E+03
1.80	1.216	55.000	.207E+02	.926E+00	1.068	1.067	.106E+01	.221E+01	.209E+01	.317E+03	.322E+03
1.90	1.241	55.000	.233E+02	.892E+00	1.068	1.067	.107E+01	.247E+01	.232E+01	.320E+03	.325E+03
2.00	1.269	55.000	.257E+02	.852E+00	1.068	1.067	.108E+01	.274E+01	.255E+01	.323E+03	.327E+03
2.20	1.333	55.000	.298E+02	.761E+00	1.068	1.066	.110E+01	.332E+01	.303E+01	.329E+03	.333E+03
2.40	1.405	55.000	.330E+02	.659E+00	1.068	1.066	.112E+01	.396E+01	.354E+01	.336E+03	.339E+03
2.60	1.480	55.000	.357E+02	.555E+00	1.068	1.066	.114E+01	.466E+01	.407E+01	.343E+03	.346E+03
2.80	1.558	55.000	.379E+02	.456E+00	1.068	1.065	.117E+01	.541E+01	.463E+01	.350E+03	.353E+03
3.00	1.636	55.000	.397E+02	.365E+00	1.068	1.065	.119E+01	.621E+01	.520E+01	.358E+03	.360E+03
3.20	1.714	55.000	.411E+02	.286E+00	1.068	1.065	.122E+01	.707E+01	.579E+01	.366E+03	.368E+03
3.40	1.791	55.000	.424E+02	.219E+00	1.068	1.064	.125E+01	.799E+01	.639E+01	.375E+03	.377E+03
3.60	1.866	55.000	.435E+02	.165E+00	1.068	1.064	.128E+01	.896E+01	.700E+01	.384E+03	.386E+03
3.80	1.940	55.000	.444E+02	.122E+00	1.068	1.063	.131E+01	.999E+01	.761E+01	.394E+03	.396E+03
4.00	2.012	55.000	.451E+02	.889E-01	1.068	1.063	.135E+01	.111E+02	.822E+01	.404E+03	.406E+03
4.50	2.182	55.000	.467E+02	.379E-01	1.068	1.062	.144E+01	.140E+02	.976E+01	.431E+03	.432E+03
5.00	2.340	55.000	.478E+02	.151E-01	1.068	1.061	.154E+01	.173E+02	.113E+02	.461E+03	.462E+03
6.00	2.616	55.000	.492E+02	.210E-02	1.068	1.060	.176E+01	.250E+02	.142E+02	.529E+03	.530E+03
7.00	2.845	55.000	.501E+02	.263E-03	1.068	1.059	.202E+01	.340E+02	.168E+02	.607E+03	.608E+03
8.00	3.034	55.000	.507E+02	.320E-04	1.068	1.058	.232E+01	.445E+02	.192E+02	.697E+03	.698E+03
9.00	3.191	55.000	.511E+02	.395E-05	1.068	1.058	.266E+01	.563E+02	.212E+02	.797E+03	.798E+03
10.00	3.322	55.000	.514E+02	.509E-06	1.068	1.057	.302E+01	.696E+02	.230E+02	.907E+03	.908E+03
11.00	3.431	55.000	.517E+02	.695E-07	1.068	1.057	.343E+01	.842E+02	.246E+02	.103E+04	.103E+04
12.00	3.523	55.000	.518E+02	.101E-07	1.068	1.057	.387E+01	.100E+03	.259E+02	.116E+04	.116E+04
13.00	3.601	55.000	.520E+02	.158E-08	1.068	1.056	.435E+01	.118E+03	.271E+02	.131E+04	.131E+04
14.00	3.666	55.000	.521E+02	.264E-09	1.068	1.056	.487E+01	.137E+03	.281E+02	.146E+04	.146E+04
15.00	3.723	55.000	.522E+02	.473E-10	1.068	1.056	.542E+01	.157E+03	.289E+02	.163E+04	.163E+04
16.00	3.771	55.000	.522E+02	.905E-11	1.068	1.056	.601E+01	.178E+03	.297E+02	.180E+04	.180E+04
17.00	3.813	55.000	.523E+02	.185E-11	1.068	1.056	.663E+01	.201E+03	.304E+02	.199E+04	.199E+04
18.00	3.849	55.000	.524E+02	.400E-12	1.068	1.056	.730E+01	.226E+03	.309E+02	.219E+04	.219E+04
19.00	3.882	55.000	.524E+02	.919E-13	1.068	1.056	.800E+01	.252E+03	.315E+02	.240E+04	.240E+04
20.00	3.909	55.000	.524E+02	.223E-13	1.068	1.056	.873E+01	.279E+03	.319E+02	.262E+04	.262E+04
21.00	3.934	55.000	.525E+02	.569E-14	1.068	1.056	.951E+01	.307E+03	.323E+02	.285E+04	.286E+04
22.00	3.954	55.000	.525E+02	.152E-14	1.068	1.056	.103E+02	.337E+03	.327E+02	.310E+04	.310E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	.128E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.05	1.050	50.000	.189E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.10	1.100	50.000	.282E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.15	1.150	50.000	.416E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.20	1.200	50.000	.647E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.25	1.251	50.000	.113E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.30	1.315	50.000	-.537E+00	.100E+01	1.068	1.068	.999E+00	.980E+00	.981E+00	.300E+03	.310E+03
1.35	1.299	50.000	.186E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.301E+03	.311E+03
1.40	1.294	50.000	.385E+01	.100E+01	1.068	1.068	.101E+01	.115E+01	.114E+01	.303E+03	.312E+03
1.45	1.292	50.000	.578E+01	.999E+00	1.068	1.068	.101E+01	.124E+01	.122E+01	.304E+03	.313E+03
1.50	1.293	50.000	.764E+01	.996E+00	1.068	1.068	.102E+01	.133E+01	.131E+01	.306E+03	.313E+03
1.60	1.304	50.000	.111E+02	.989E+00	1.068	1.068	.103E+01	.152E+01	.148E+01	.308E+03	.315E+03
1.70	1.322	50.000	.143E+02	.976E+00	1.068	1.068	.104E+01	.172E+01	.166E+01	.311E+03	.317E+03
1.80	1.347	50.000	.172E+02	.957E+00	1.068	1.067	.105E+01	.193E+01	.185E+01	.314E+03	.319E+03
1.90	1.377	50.000	.198E+02	.933E+00	1.068	1.067	.105E+01	.216E+01	.204E+01	.316E+03	.322E+03
2.00	1.412	50.000	.221E+02	.902E+00	1.068	1.067	.106E+01	.239E+01	.225E+01	.319E+03	.324E+03
2.20	1.489	50.000	.260E+02	.828E+00	1.068	1.067	.108E+01	.290E+01	.268E+01	.325E+03	.329E+03
2.40	1.573	50.000	.292E+02	.739E+00	1.068	1.066	.110E+01	.346E+01	.314E+01	.331E+03	.334E+03
2.60	1.662	50.000	.318E+02	.643E+00	1.068	1.066	.112E+01	.407E+01	.362E+01	.337E+03	.340E+03
2.80	1.753	50.000	.339E+02	.546E+00	1.068	1.066	.115E+01	.472E+01	.412E+01	.344E+03	.346E+03
3.00	1.845	50.000	.356E+02	.453E+00	1.068	1.065	.117E+01	.543E+01	.465E+01	.351E+03	.353E+03
3.20	1.936	50.000	.370E+02	.368E+00	1.068	1.065	.119E+01	.618E+01	.518E+01	.358E+03	.360E+03
3.40	2.026	50.000	.383E+02	.293E+00	1.068	1.065	.122E+01	.698E+01	.573E+01	.366E+03	.368E+03
3.60	2.115	50.000	.393E+02	.229E+00	1.068	1.064	.125E+01	.783E+01	.629E+01	.374E+03	.376E+03
3.80	2.201	50.000	.401E+02	.177E+00	1.068	1.064	.127E+01	.873E+01	.685E+01	.382E+03	.384E+03
4.00	2.286	50.000	.409E+02	.134E+00	1.068	1.064	.130E+01	.968E+01	.743E+01	.391E+03	.393E+03
4.50	2.488	50.000	.423E+02	.629E-01	1.068	1.063	.138E+01	.123E+02	.887E+01	.415E+03	.416E+03
5.00	2.676	50.000	.434E+02	.276E-01	1.068	1.062	.147E+01	.152E+02	.103E+02	.441E+03	.443E+03
6.00	3.008	50.000	.448E+02	.460E-02	1.068	1.061	.167E+01	.218E+02	.131E+02	.501E+03	.502E+03
7.00	3.287	50.000	.456E+02	.679E-03	1.068	1.059	.190E+01	.298E+02	.157E+02	.570E+03	.571E+03
8.00	3.520	50.000	.462E+02	.954E-04	1.068	1.059	.216E+01	.389E+02	.180E+02	.649E+03	.650E+03
9.00	3.716	50.000	.466E+02	.133E-04	1.068	1.058	.246E+01	.493E+02	.200E+02	.737E+03	.738E+03
10.00	3.880	50.000	.469E+02	.191E-05	1.068	1.057	.278E+01	.608E+02	.219E+02	.834E+03	.835E+03
11.00	4.019	50.000	.471E+02	.286E-06	1.068	1.057	.314E+01	.736E+02	.235E+02	.941E+03	.942E+03
12.00	4.136	50.000	.473E+02	.450E-07	1.068	1.057	.352E+01	.877E+02	.249E+02	.106E+04	.106E+04
13.00	4.236	50.000	.474E+02	.752E-08	1.068	1.056	.394E+01	.103E+03	.261E+02	.118E+04	.118E+04
14.00	4.321	50.000	.475E+02	.133E-08	1.068	1.056	.440E+01	.119E+03	.272E+02	.132E+04	.132E+04
15.00	4.394	50.000	.476E+02	.251E-09	1.068	1.056	.488E+01	.137E+03	.281E+02	.146E+04	.147E+04
16.00	4.458	50.000	.476E+02	.503E-10	1.068	1.056	.540E+01	.156E+03	.289E+02	.162E+04	.162E+04
17.00	4.512	50.000	.477E+02	.107E-10	1.068	1.056	.594E+01	.176E+03	.296E+02	.178E+04	.178E+04
18.00	4.560	50.000	.477E+02	.240E-11	1.068	1.056	.652E+01	.197E+03	.303E+02	.196E+04	.196E+04
19.00	4.602	50.000	.478E+02	.567E-12	1.068	1.056	.714E+01	.220E+03	.308E+02	.214E+04	.214E+04
20.00	4.639	50.000	.478E+02	.141E-12	1.068	1.056	.778E+01	.244E+03	.313E+02	.234E+04	.234E+04
21.00	4.671	50.000	.479E+02	.370E-13	1.068	1.056	.846E+01	.269E+03	.318E+02	.254E+04	.254E+04
22.00	4.701	50.000	.479E+02	.101E-13	1.068	1.056	.917E+01	.295E+03	.322E+02	.275E+04	.275E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.745E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.05	1.050	45.000	.113E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.10	1.100	45.000	.166E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.15	1.150	45.000	.233E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.20	1.200	45.000	.328E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.25	1.250	45.000	.469E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.30	1.300	45.000	.706E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.35	1.351	45.000	.113E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.40	1.419	45.000	-.713E+00	.100E+01	1.068	1.068	.998E+00	.974E+00	.976E+00	.299E+03	.310E+03
1.45	1.415	45.000	.141E+01	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.301E+03	.311E+03
1.50	1.417	45.000	.326E+01	.100E+01	1.068	1.068	.101E+01	.113E+01	.112E+01	.302E+03	.311E+03
1.60	1.430	45.000	.675E+01	.998E+00	1.068	1.068	.102E+01	.129E+01	.127E+01	.305E+03	.313E+03
1.70	1.451	45.000	.993E+01	.992E+00	1.068	1.068	.102E+01	.146E+01	.142E+01	.307E+03	.315E+03
1.80	1.480	45.000	.128E+02	.982E+00	1.068	1.068	.103E+01	.164E+01	.159E+01	.310E+03	.317E+03
1.90	1.515	45.000	.154E+02	.967E+00	1.068	1.068	.104E+01	.183E+01	.176E+01	.312E+03	.318E+03
2.00	1.554	45.000	.177E+02	.947E+00	1.068	1.067	.105E+01	.203E+01	.194E+01	.315E+03	.320E+03
2.20	1.642	45.000	.216E+02	.892E+00	1.068	1.067	.107E+01	.247E+01	.231E+01	.320E+03	.325E+03
2.40	1.738	45.000	.248E+02	.821E+00	1.068	1.067	.108E+01	.294E+01	.272E+01	.325E+03	.329E+03
2.60	1.840	45.000	.273E+02	.739E+00	1.068	1.066	.110E+01	.346E+01	.314E+01	.331E+03	.334E+03
2.80	1.943	45.000	.294E+02	.650E+00	1.068	1.066	.112E+01	.402E+01	.358E+01	.336E+03	.340E+03
3.00	2.048	45.000	.311E+02	.561E+00	1.068	1.066	.114E+01	.462E+01	.405E+01	.343E+03	.345E+03
3.20	2.152	45.000	.325E+02	.474E+00	1.068	1.065	.116E+01	.526E+01	.452E+01	.349E+03	.351E+03
3.40	2.256	45.000	.337E+02	.393E+00	1.068	1.065	.119E+01	.594E+01	.502E+01	.356E+03	.358E+03
3.60	2.358	45.000	.347E+02	.321E+00	1.068	1.065	.121E+01	.667E+01	.552E+01	.363E+03	.365E+03
3.80	2.458	45.000	.356E+02	.258E+00	1.068	1.064	.123E+01	.743E+01	.603E+01	.370E+03	.372E+03
4.00	2.556	45.000	.363E+02	.204E+00	1.068	1.064	.126E+01	.824E+01	.655E+01	.378E+03	.379E+03
4.50	2.791	45.000	.378E+02	.107E+00	1.068	1.063	.133E+01	.104E+02	.787E+01	.398E+03	.400E+03
5.00	3.011	45.000	.388E+02	.524E-01	1.068	1.063	.140E+01	.129E+02	.920E+01	.421E+03	.422E+03
6.00	3.405	45.000	.402E+02	.107E-01	1.068	1.061	.157E+01	.186E+02	.118E+02	.472E+03	.474E+03
7.00	3.741	45.000	.410E+02	.192E-02	1.068	1.060	.177E+01	.253E+02	.143E+02	.532E+03	.533E+03
8.00	4.027	45.000	.415E+02	.320E-03	1.068	1.059	.200E+01	.331E+02	.166E+02	.599E+03	.601E+03
9.00	4.269	45.000	.419E+02	.520E-04	1.068	1.058	.225E+01	.420E+02	.186E+02	.675E+03	.676E+03
10.00	4.475	45.000	.422E+02	.850E-05	1.068	1.058	.253E+01	.518E+02	.205E+02	.759E+03	.760E+03
11.00	4.650	45.000	.424E+02	.142E-05	1.068	1.057	.283E+01	.627E+02	.221E+02	.850E+03	.851E+03
12.00	4.799	45.000	.426E+02	.247E-06	1.068	1.057	.317E+01	.747E+02	.236E+02	.950E+03	.951E+03
13.00	4.927	45.000	.427E+02	.450E-07	1.068	1.057	.352E+01	.877E+02	.249E+02	.106E+04	.106E+04
14.00	5.038	45.000	.428E+02	.861E-08	1.068	1.057	.391E+01	.102E+03	.260E+02	.117E+04	.117E+04
15.00	5.133	45.000	.429E+02	.173E-08	1.068	1.056	.432E+01	.117E+03	.270E+02	.130E+04	.130E+04
16.00	5.216	45.000	.429E+02	.368E-09	1.068	1.056	.477E+01	.133E+03	.279E+02	.143E+04	.143E+04
17.00	5.289	45.000	.430E+02	.821E-10	1.068	1.056	.523E+01	.150E+03	.287E+02	.157E+04	.157E+04
18.00	5.352	45.000	.430E+02	.193E-10	1.068	1.056	.573E+01	.168E+03	.294E+02	.172E+04	.172E+04
more than 99 iterations											
19.00	5.408	45.000	.431E+02	.475E-11	1.068	1.056	.625E+01	.187E+03	.300E+02	.188E+04	.188E+04
20.00	5.456	45.000	.431E+02	.123E-11	1.068	1.056	.680E+01	.208E+03	.305E+02	.204E+04	.204E+04
21.00	5.501	45.000	.432E+02	.331E-12	1.068	1.056	.738E+01	.229E+03	.310E+02	.221E+04	.222E+04
22.00	5.539	45.000	.432E+02	.931E-13	1.068	1.056	.799E+01	.251E+03	.315E+02	.240E+04	.240E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	40.000	.293E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.05	1.050	40.000	.552E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.10	1.100	40.000	.858E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.15	1.150	40.000	.123E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.20	1.200	40.000	.169E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.25	1.250	40.000	.230E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.30	1.300	40.000	.309E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.35	1.350	40.000	.419E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.40	1.400	40.000	.587E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.45	1.451	40.000	.851E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
1.50	1.501	40.000	.165E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.310E+03
1.60	1.564	40.000	.154E+01	.100E+01	1.068	1.068	.100E+01	.106E+01	.106E+01	.301E+03	.311E+03
1.70	1.586	40.000	.474E+01	.999E+00	1.068	1.068	.101E+01	.120E+01	.119E+01	.304E+03	.312E+03
1.80	1.617	40.000	.764E+01	.996E+00	1.068	1.068	.102E+01	.135E+01	.132E+01	.306E+03	.314E+03
1.90	1.655	40.000	.103E+02	.990E+00	1.068	1.068	.103E+01	.151E+01	.147E+01	.308E+03	.315E+03
2.00	1.697	40.000	.126E+02	.979E+00	1.068	1.068	.103E+01	.167E+01	.162E+01	.310E+03	.317E+03
2.20	1.794	40.000	.166E+02	.947E+00	1.068	1.067	.105E+01	.203E+01	.194E+01	.315E+03	.320E+03
2.40	1.900	40.000	.198E+02	.898E+00	1.068	1.067	.107E+01	.243E+01	.228E+01	.320E+03	.324E+03
2.60	2.012	40.000	.224E+02	.835E+00	1.068	1.067	.108E+01	.285E+01	.264E+01	.324E+03	.328E+03
2.80	2.127	40.000	.245E+02	.763E+00	1.068	1.066	.110E+01	.332E+01	.302E+01	.329E+03	.333E+03
3.00	2.244	40.000	.262E+02	.683E+00	1.068	1.066	.111E+01	.381E+01	.342E+01	.334E+03	.338E+03
3.20	2.361	40.000	.277E+02	.602E+00	1.068	1.066	.113E+01	.434E+01	.383E+01	.340E+03	.343E+03
3.40	2.478	40.000	.289E+02	.521E+00	1.068	1.066	.115E+01	.491E+01	.426E+01	.345E+03	.348E+03
3.60	2.593	40.000	.299E+02	.444E+00	1.068	1.065	.117E+01	.550E+01	.470E+01	.351E+03	.354E+03
3.80	2.707	40.000	.307E+02	.373E+00	1.068	1.065	.119E+01	.614E+01	.515E+01	.357E+03	.360E+03
4.00	2.818	40.000	.315E+02	.309E+00	1.068	1.065	.121E+01	.680E+01	.561E+01	.364E+03	.366E+03
4.50	3.088	40.000	.330E+02	.182E+00	1.068	1.064	.127E+01	.862E+01	.679E+01	.381E+03	.383E+03
5.00	3.343	40.000	.340E+02	.101E+00	1.068	1.063	.133E+01	.107E+02	.799E+01	.400E+03	.402E+03
6.00	3.806	40.000	.354E+02	.261E-01	1.068	1.062	.148E+01	.154E+02	.104E+02	.443E+03	.445E+03
7.00	4.207	40.000	.362E+02	.581E-02	1.068	1.061	.164E+01	.209E+02	.127E+02	.493E+03	.494E+03
8.00	4.554	40.000	.368E+02	.118E-02	1.068	1.060	.183E+01	.274E+02	.149E+02	.550E+03	.551E+03
9.00	4.852	40.000	.372E+02	.231E-03	1.068	1.059	.204E+01	.347E+02	.170E+02	.613E+03	.614E+03
10.00	5.109	40.000	.374E+02	.442E-04	1.068	1.058	.227E+01	.428E+02	.188E+02	.682E+03	.683E+03
11.00	5.331	40.000	.377E+02	.851E-05	1.068	1.058	.253E+01	.518E+02	.205E+02	.759E+03	.760E+03
12.00	5.522	40.000	.378E+02	.167E-05	1.068	1.057	.280E+01	.617E+02	.220E+02	.841E+03	.842E+03
13.00	5.688	40.000	.379E+02	.339E-06	1.068	1.057	.310E+01	.724E+02	.233E+02	.931E+03	.932E+03
14.00	5.831	40.000	.380E+02	.714E-07	1.068	1.057	.342E+01	.840E+02	.245E+02	.103E+04	.103E+04
15.00	5.957	40.000	.381E+02	.156E-07	1.068	1.057	.377E+01	.964E+02	.256E+02	.113E+04	.113E+04
16.00	6.067	40.000	.382E+02	.357E-08	1.068	1.056	.413E+01	.110E+03	.266E+02	.124E+04	.124E+04
17.00	6.163	40.000	.382E+02	.853E-09	1.068	1.056	.452E+01	.124E+03	.274E+02	.136E+04	.136E+04
18.00	6.248	40.000	.383E+02	.212E-09	1.068	1.056	.493E+01	.139E+03	.282E+02	.148E+04	.148E+04
19.00	6.323	40.000	.383E+02	.551E-10	1.068	1.056	.537E+01	.155E+03	.289E+02	.161E+04	.161E+04
20.00	6.390	40.000	.384E+02	.149E-10	1.068	1.056	.582E+01	.172E+03	.295E+02	.175E+04	.175E+04
21.00	6.449	40.000	.384E+02	.420E-11	1.068	1.056	.630E+01	.189E+03	.300E+02	.189E+04	.189E+04
22.00	6.502	40.000	.384E+02	.123E-11	1.068	1.056	.680E+01	.208E+03	.305E+02	.204E+04	.204E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	35.000	-.321E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.05	1.050	35.000	.109E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.10	1.100	35.000	.289E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.15	1.150	35.000	.507E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.20	1.200	35.000	.764E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.25	1.250	35.000	.105E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.30	1.300	35.000	.140E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.35	1.350	35.000	.184E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.40	1.400	35.000	.237E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.45	1.450	35.000	.306E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.50	1.500	35.000	.396E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.60	1.601	35.000	.721E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
more than 99 iterations											
1.70	1.722	35.000	-.108E+01	.985E+00	1.068	1.069	.998E+00	.960E+00	.963E+00	.299E+03	.310E+03
1.80	1.763	35.000	.166E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.106E+01	.301E+03	.311E+03
1.90	1.800	35.000	.433E+01	.999E+00	1.068	1.068	.101E+01	.119E+01	.118E+01	.303E+03	.312E+03
2.00	1.844	35.000	.674E+01	.997E+00	1.068	1.068	.102E+01	.133E+01	.130E+01	.306E+03	.313E+03
2.20	1.945	35.000	.109E+02	.984E+00	1.068	1.068	.103E+01	.161E+01	.156E+01	.310E+03	.316E+03
2.40	2.058	35.000	.142E+02	.958E+00	1.068	1.067	.105E+01	.193E+01	.184E+01	.314E+03	.319E+03
2.60	2.179	35.000	.169E+02	.919E+00	1.068	1.067	.106E+01	.227E+01	.214E+01	.318E+03	.323E+03
2.80	2.305	35.000	.191E+02	.869E+00	1.068	1.067	.107E+01	.263E+01	.245E+01	.322E+03	.326E+03
3.00	2.433	35.000	.209E+02	.808E+00	1.068	1.067	.109E+01	.303E+01	.278E+01	.326E+03	.330E+03
3.20	2.561	35.000	.224E+02	.741E+00	1.068	1.066	.110E+01	.345E+01	.313E+01	.331E+03	.334E+03
3.40	2.690	35.000	.237E+02	.669E+00	1.068	1.066	.112E+01	.390E+01	.349E+01	.335E+03	.338E+03
3.60	2.819	35.000	.247E+02	.596E+00	1.068	1.066	.113E+01	.438E+01	.386E+01	.340E+03	.343E+03
3.80	2.946	35.000	.256E+02	.524E+00	1.068	1.066	.115E+01	.488E+01	.424E+01	.345E+03	.348E+03
4.00	3.071	35.000	.264E+02	.455E+00	1.068	1.065	.117E+01	.541E+01	.463E+01	.350E+03	.353E+03
4.50	3.377	35.000	.279E+02	.304E+00	1.068	1.065	.121E+01	.686E+01	.565E+01	.364E+03	.366E+03
5.00	3.668	35.000	.290E+02	.190E+00	1.068	1.064	.127E+01	.847E+01	.669E+01	.380E+03	.382E+03
6.00	4.205	35.000	.305E+02	.637E-01	1.068	1.063	.138E+01	.122E+02	.884E+01	.415E+03	.416E+03
7.00	4.681	35.000	.314E+02	.182E-01	1.068	1.062	.152E+01	.167E+02	.110E+02	.455E+03	.456E+03
8.00	5.100	35.000	.319E+02	.468E-02	1.068	1.061	.167E+01	.218E+02	.131E+02	.500E+03	.502E+03
9.00	5.467	35.000	.323E+02	.113E-02	1.068	1.060	.184E+01	.276E+02	.150E+02	.551E+03	.552E+03
10.00	5.787	35.000	.326E+02	.262E-03	1.068	1.059	.203E+01	.341E+02	.168E+02	.608E+03	.609E+03
11.00	6.067	35.000	.328E+02	.599E-04	1.068	1.058	.223E+01	.412E+02	.185E+02	.669E+03	.670E+03
12.00	6.313	35.000	.330E+02	.137E-04	1.068	1.058	.245E+01	.491E+02	.200E+02	.736E+03	.737E+03
13.00	6.528	35.000	.331E+02	.320E-05	1.068	1.058	.269E+01	.576E+02	.214E+02	.807E+03	.809E+03
14.00	6.717	35.000	.332E+02	.759E-06	1.068	1.057	.295E+01	.669E+02	.227E+02	.885E+03	.886E+03
15.00	6.883	35.000	.333E+02	.185E-06	1.068	1.057	.322E+01	.768E+02	.238E+02	.967E+03	.968E+03
16.00	7.031	35.000	.334E+02	.467E-07	1.068	1.057	.352E+01	.874E+02	.248E+02	.106E+04	.106E+04
17.00	7.161	35.000	.334E+02	.121E-07	1.068	1.057	.383E+01	.986E+02	.258E+02	.115E+04	.115E+04
18.00	7.276	35.000	.335E+02	.327E-08	1.068	1.056	.416E+01	.111E+03	.266E+02	.125E+04	.125E+04
19.00	7.380	35.000	.335E+02	.909E-09	1.068	1.056	.450E+01	.123E+03	.274E+02	.135E+04	.135E+04
20.00	7.472	35.000	.336E+02	.262E-09	1.068	1.056	.487E+01	.137E+03	.281E+02	.146E+04	.146E+04
21.00	7.553	35.000	.336E+02	.780E-10	1.068	1.056	.525E+01	.151E+03	.287E+02	.157E+04	.158E+04
more than 99 iterations											
22.00	7.628	35.000	.336E+02	.240E-10	1.068	1.056	.565E+01	.165E+03	.293E+02	.170E+04	.170E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.296E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.05	1.050	30.000	-.201E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.10	1.100	30.000	-.799E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.15	1.150	30.000	.177E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.20	1.200	30.000	.163E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.25	1.250	30.000	.314E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.30	1.300	30.000	.488E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.35	1.350	30.000	.683E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.40	1.400	30.000	.914E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.45	1.450	30.000	.116E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.50	1.500	30.000	.148E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.60	1.600	30.000	.229E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.70	1.700	30.000	.352E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
1.80	1.801	30.000	.571E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
1.90	1.901	30.000	.100E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
2.00	2.008	30.000	-.375E+00	.100E+01	1.068	1.068	.999E+00	.984E+00	.985E+00	.300E+03	.310E+03
2.20	2.102	30.000	.435E+01	.999E+00	1.068	1.068	.101E+01	.122E+01	.120E+01	.304E+03	.312E+03
2.40	2.218	30.000	.787E+01	.992E+00	1.068	1.068	.102E+01	.145E+01	.142E+01	.307E+03	.315E+03
2.60	2.344	30.000	.107E+02	.976E+00	1.068	1.068	.104E+01	.171E+01	.165E+01	.311E+03	.317E+03
2.80	2.477	30.000	.131E+02	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.314E+03	.320E+03
3.00	2.614	30.000	.151E+02	.916E+00	1.068	1.067	.106E+01	.229E+01	.216E+01	.318E+03	.323E+03
3.20	2.753	30.000	.167E+02	.871E+00	1.068	1.067	.107E+01	.261E+01	.244E+01	.322E+03	.326E+03
3.40	2.893	30.000	.180E+02	.820E+00	1.068	1.067	.108E+01	.295E+01	.272E+01	.325E+03	.329E+03
3.60	3.033	30.000	.192E+02	.762E+00	1.068	1.066	.110E+01	.332E+01	.302E+01	.329E+03	.333E+03
3.80	3.173	30.000	.202E+02	.701E+00	1.068	1.066	.111E+01	.370E+01	.333E+01	.333E+03	.336E+03
4.00	3.312	30.000	.210E+02	.638E+00	1.068	1.066	.112E+01	.410E+01	.365E+01	.337E+03	.340E+03
4.50	3.652	30.000	.227E+02	.482E+00	1.068	1.065	.116E+01	.520E+01	.448E+01	.348E+03	.351E+03
5.00	3.981	30.000	.238E+02	.343E+00	1.068	1.065	.120E+01	.643E+01	.535E+01	.360E+03	.362E+03
6.00	4.598	30.000	.254E+02	.150E+00	1.068	1.064	.129E+01	.928E+01	.719E+01	.387E+03	.389E+03
7.00	5.158	30.000	.264E+02	.564E-01	1.068	1.063	.139E+01	.126E+02	.906E+01	.418E+03	.420E+03
8.00	5.660	30.000	.270E+02	.188E-01	1.068	1.062	.151E+01	.165E+02	.109E+02	.454E+03	.455E+03
9.00	6.108	30.000	.274E+02	.581E-02	1.068	1.061	.164E+01	.209E+02	.127E+02	.493E+03	.494E+03
10.00	6.508	30.000	.277E+02	.169E-02	1.068	1.060	.179E+01	.259E+02	.145E+02	.536E+03	.538E+03
11.00	6.863	30.000	.279E+02	.478E-03	1.068	1.059	.195E+01	.313E+02	.161E+02	.584E+03	.585E+03
12.00	7.179	30.000	.281E+02	.133E-03	1.068	1.059	.212E+01	.373E+02	.176E+02	.635E+03	.636E+03
13.00	7.460	30.000	.283E+02	.367E-04	1.068	1.058	.230E+01	.438E+02	.190E+02	.690E+03	.692E+03
14.00	7.711	30.000	.284E+02	.102E-04	1.068	1.058	.250E+01	.508E+02	.203E+02	.750E+03	.751E+03
15.00	7.934	30.000	.285E+02	.286E-05	1.068	1.058	.271E+01	.583E+02	.215E+02	.813E+03	.814E+03
16.00	8.134	30.000	.285E+02	.818E-06	1.068	1.057	.294E+01	.664E+02	.226E+02	.881E+03	.882E+03
17.00	8.313	30.000	.286E+02	.239E-06	1.068	1.057	.317E+01	.749E+02	.236E+02	.952E+03	.953E+03
18.00	8.473	30.000	.287E+02	.713E-07	1.068	1.057	.342E+01	.840E+02	.245E+02	.103E+04	.103E+04
19.00	8.617	30.000	.287E+02	.218E-07	1.068	1.057	.369E+01	.936E+02	.254E+02	.111E+04	.111E+04
20.00	8.747	30.000	.287E+02	.684E-08	1.068	1.056	.397E+01	.104E+03	.261E+02	.119E+04	.119E+04
21.00	8.863	30.000	.288E+02	.220E-08	1.068	1.056	.426E+01	.114E+03	.269E+02	.128E+04	.128E+04
22.00	8.970	30.000	.288E+02	.727E-09	1.068	1.056	.457E+01	.126E+03	.275E+02	.137E+04	.137E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	25.000	-.474E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.05	1.050	25.000	-.419E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.10	1.100	25.000	-.348E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.15	1.150	25.000	-.277E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.20	1.200	25.000	-.196E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.25	1.250	25.000	-.112E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.30	1.300	25.000	-.262E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.35	1.350	25.000	.445E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.40	1.400	25.000	.154E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.45	1.450	25.000	.264E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.50	1.500	25.000	.390E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.60	1.600	25.000	.685E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.70	1.700	25.000	.106E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
1.80	1.800	25.000	.153E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
1.90	1.900	25.000	.220E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
2.00	2.000	25.000	.313E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
2.20	2.201	25.000	.716E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
2.40	2.390	25.000	.624E+00	.100E+01	1.068	1.068	.100E+01	.103E+01	.103E+01	.301E+03	.311E+03
2.60	2.514	25.000	.376E+01	.999E+00	1.068	1.068	.101E+01	.121E+01	.120E+01	.304E+03	.312E+03
2.80	2.649	25.000	.636E+01	.994E+00	1.068	1.068	.102E+01	.141E+01	.138E+01	.307E+03	.314E+03
3.00	2.792	25.000	.852E+01	.983E+00	1.068	1.068	.103E+01	.163E+01	.158E+01	.310E+03	.316E+03
3.20	2.938	25.000	.103E+02	.965E+00	1.068	1.068	.104E+01	.186E+01	.178E+01	.313E+03	.319E+03
3.40	3.087	25.000	.119E+02	.939E+00	1.068	1.067	.105E+01	.210E+01	.200E+01	.316E+03	.321E+03
3.60	3.237	25.000	.131E+02	.907E+00	1.068	1.067	.106E+01	.236E+01	.222E+01	.319E+03	.324E+03
3.80	3.387	25.000	.142E+02	.869E+00	1.068	1.067	.107E+01	.263E+01	.245E+01	.322E+03	.326E+03
4.00	3.538	25.000	.152E+02	.825E+00	1.068	1.067	.108E+01	.292E+01	.270E+01	.325E+03	.329E+03
4.50	3.911	25.000	.170E+02	.700E+00	1.068	1.066	.111E+01	.371E+01	.334E+01	.333E+03	.337E+03
5.00	4.277	25.000	.184E+02	.566E+00	1.068	1.066	.114E+01	.458E+01	.402E+01	.342E+03	.345E+03
6.00	4.977	25.000	.201E+02	.326E+00	1.068	1.065	.121E+01	.662E+01	.548E+01	.362E+03	.364E+03
7.00	5.626	25.000	.212E+02	.162E+00	1.068	1.064	.128E+01	.902E+01	.703E+01	.385E+03	.387E+03
8.00	6.223	25.000	.219E+02	.721E-01	1.068	1.063	.137E+01	.118E+02	.862E+01	.411E+03	.412E+03
9.00	6.768	25.000	.224E+02	.293E-01	1.068	1.062	.146E+01	.149E+02	.102E+02	.439E+03	.441E+03
10.00	7.264	25.000	.227E+02	.112E-01	1.068	1.061	.157E+01	.185E+02	.118E+02	.471E+03	.472E+03
11.00	7.714	25.000	.230E+02	.404E-02	1.068	1.060	.169E+01	.223E+02	.133E+02	.506E+03	.507E+03
12.00	8.121	25.000	.232E+02	.142E-02	1.068	1.060	.181E+01	.266E+02	.147E+02	.543E+03	.544E+03
13.00	8.491	25.000	.233E+02	.485E-03	1.068	1.059	.194E+01	.312E+02	.161E+02	.583E+03	.584E+03
14.00	8.825	25.000	.235E+02	.164E-03	1.068	1.059	.209E+01	.362E+02	.174E+02	.626E+03	.627E+03
15.00	9.128	25.000	.236E+02	.555E-04	1.068	1.058	.224E+01	.416E+02	.186E+02	.672E+03	.673E+03
16.00	9.402	25.000	.236E+02	.187E-04	1.068	1.058	.240E+01	.474E+02	.197E+02	.721E+03	.722E+03
17.00	9.651	25.000	.237E+02	.637E-05	1.068	1.058	.258E+01	.535E+02	.208E+02	.773E+03	.774E+03
18.00	9.878	25.000	.238E+02	.219E-05	1.068	1.057	.276E+01	.600E+02	.218E+02	.827E+03	.828E+03
19.00	10.083	25.000	.238E+02	.760E-06	1.068	1.057	.295E+01	.669E+02	.227E+02	.885E+03	.886E+03
20.00	10.271	25.000	.239E+02	.268E-06	1.068	1.057	.315E+01	.741E+02	.235E+02	.945E+03	.946E+03
21.00	10.442	25.000	.239E+02	.962E-07	1.068	1.057	.336E+01	.817E+02	.243E+02	.101E+04	.101E+04
22.00	10.598	25.000	.239E+02	.351E-07	1.068	1.057	.358E+01	.897E+02	.250E+02	.107E+04	.108E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	-.540E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.05	1.050	20.000	-.514E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.10	1.100	20.000	-.483E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.15	1.150	20.000	-.446E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.20	1.200	20.000	-.410E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.25	1.250	20.000	-.371E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.30	1.300	20.000	-.325E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.35	1.350	20.000	-.277E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.40	1.400	20.000	-.228E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.45	1.450	20.000	-.176E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.50	1.500	20.000	-.116E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.60	1.600	20.000	.439E-05	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.70	1.700	20.000	.123E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
1.80	1.800	20.000	.274E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
1.90	1.900	20.000	.463E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
2.00	2.000	20.000	.683E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
2.20	2.200	20.000	.127E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
2.40	2.401	20.000	.224E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
2.60	2.601	20.000	.410E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
2.80	2.802	20.000	.859E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
3.00	2.982	20.000	.915E+00	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.301E+03	.311E+03
3.20	3.127	20.000	.300E+01	.999E+00	1.068	1.068	.101E+01	.120E+01	.119E+01	.304E+03	.312E+03
3.40	3.280	20.000	.477E+01	.995E+00	1.068	1.068	.102E+01	.136E+01	.134E+01	.306E+03	.314E+03
3.60	3.436	20.000	.628E+01	.988E+00	1.068	1.068	.103E+01	.153E+01	.149E+01	.309E+03	.315E+03
3.80	3.594	20.000	.758E+01	.977E+00	1.068	1.068	.104E+01	.171E+01	.165E+01	.311E+03	.317E+03
4.00	3.753	20.000	.869E+01	.960E+00	1.068	1.068	.104E+01	.190E+01	.182E+01	.313E+03	.319E+03
4.50	4.154	20.000	.109E+02	.899E+00	1.068	1.067	.106E+01	.242E+01	.227E+01	.319E+03	.324E+03
5.00	4.552	20.000	.125E+02	.814E+00	1.068	1.067	.109E+01	.299E+01	.275E+01	.326E+03	.330E+03
6.00	5.331	20.000	.146E+02	.604E+00	1.068	1.066	.113E+01	.432E+01	.382E+01	.340E+03	.342E+03
7.00	6.072	20.000	.158E+02	.399E+00	1.068	1.065	.118E+01	.589E+01	.498E+01	.355E+03	.357E+03
8.00	6.771	20.000	.166E+02	.238E+00	1.068	1.064	.124E+01	.771E+01	.621E+01	.373E+03	.374E+03
9.00	7.426	20.000	.172E+02	.130E+00	1.068	1.064	.131E+01	.977E+01	.748E+01	.392E+03	.394E+03
10.00	8.035	20.000	.176E+02	.665E-01	1.068	1.063	.138E+01	.121E+02	.876E+01	.413E+03	.415E+03
11.00	8.602	20.000	.179E+02	.321E-01	1.068	1.062	.145E+01	.146E+02	.100E+02	.436E+03	.438E+03
12.00	9.126	20.000	.182E+02	.148E-01	1.068	1.061	.154E+01	.174E+02	.113E+02	.462E+03	.463E+03
13.00	9.611	20.000	.183E+02	.661E-02	1.068	1.061	.163E+01	.204E+02	.125E+02	.489E+03	.490E+03
14.00	10.058	20.000	.185E+02	.287E-02	1.068	1.060	.173E+01	.237E+02	.137E+02	.518E+03	.519E+03
15.00	10.471	20.000	.186E+02	.122E-02	1.068	1.060	.183E+01	.272E+02	.149E+02	.548E+03	.549E+03
16.00	10.853	20.000	.187E+02	.513E-03	1.068	1.059	.194E+01	.310E+02	.160E+02	.581E+03	.582E+03
17.00	11.205	20.000	.188E+02	.214E-03	1.068	1.059	.205E+01	.350E+02	.171E+02	.616E+03	.617E+03
18.00	11.529	20.000	.188E+02	.888E-04	1.068	1.059	.217E+01	.393E+02	.181E+02	.652E+03	.653E+03
19.00	11.829	20.000	.189E+02	.368E-04	1.068	1.058	.230E+01	.437E+02	.190E+02	.690E+03	.691E+03
20.00	12.106	20.000	.190E+02	.153E-04	1.068	1.058	.243E+01	.485E+02	.199E+02	.730E+03	.731E+03
21.00	12.362	20.000	.190E+02	.640E-05	1.068	1.058	.257E+01	.535E+02	.208E+02	.772E+03	.774E+03
22.00	12.599	20.000	.190E+02	.269E-05	1.068	1.057	.272E+01	.587E+02	.216E+02	.816E+03	.817E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.504E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.05	1.050	15.000	-.504E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.10	1.100	15.000	-.485E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.15	1.150	15.000	-.464E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.20	1.200	15.000	-.466E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.25	1.250	15.000	-.434E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.30	1.300	15.000	-.422E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.35	1.350	15.000	-.406E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.40	1.400	15.000	-.389E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.45	1.450	15.000	-.364E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.50	1.500	15.000	-.345E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.60	1.600	15.000	-.302E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.70	1.700	15.000	-.248E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.80	1.800	15.000	-.195E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
1.90	1.900	15.000	-.131E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
2.00	2.000	15.000	-.632E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
2.20	2.200	15.000	.768E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
2.40	2.400	15.000	.266E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
2.60	2.600	15.000	.505E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
2.80	2.800	15.000	.826E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
3.00	3.001	15.000	.126E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
3.20	3.201	15.000	.191E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.307E+03
3.40	3.401	15.000	.300E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
3.60	3.602	15.000	.535E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
more than 99 iterations											
3.80	3.811	15.000	-.454E+00	.100E+01	1.068	1.069	.998E+00	.968E+00	.970E+00	.299E+03	.310E+03
4.00	3.978	15.000	.943E+00	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.301E+03	.311E+03
4.50	4.390	15.000	.370E+01	.995E+00	1.068	1.068	.102E+01	.137E+01	.134E+01	.306E+03	.314E+03
5.00	4.811	15.000	.572E+01	.978E+00	1.068	1.068	.104E+01	.170E+01	.164E+01	.311E+03	.317E+03
6.00	5.654	15.000	.837E+01	.893E+00	1.068	1.067	.107E+01	.246E+01	.231E+01	.320E+03	.324E+03
7.00	6.481	15.000	.999E+01	.755E+00	1.068	1.066	.110E+01	.336E+01	.306E+01	.330E+03	.333E+03
8.00	7.282	15.000	.110E+02	.593E+00	1.068	1.066	.113E+01	.440E+01	.388E+01	.340E+03	.343E+03
9.00	8.051	15.000	.118E+02	.435E+00	1.068	1.065	.117E+01	.558E+01	.475E+01	.352E+03	.354E+03
10.00	8.786	15.000	.123E+02	.301E+00	1.068	1.065	.122E+01	.690E+01	.567E+01	.365E+03	.367E+03
11.00	9.486	15.000	.127E+02	.197E+00	1.068	1.064	.126E+01	.835E+01	.662E+01	.379E+03	.380E+03
12.00	10.151	15.000	.130E+02	.124E+00	1.068	1.063	.131E+01	.995E+01	.758E+01	.394E+03	.395E+03
13.00	10.780	15.000	.132E+02	.745E-01	1.068	1.063	.137E+01	.117E+02	.856E+01	.410E+03	.411E+03
14.00	11.375	15.000	.134E+02	.434E-01	1.068	1.062	.142E+01	.136E+02	.953E+01	.427E+03	.428E+03
15.00	11.937	15.000	.135E+02	.246E-01	1.068	1.062	.148E+01	.156E+02	.105E+02	.445E+03	.446E+03
16.00	12.467	15.000	.137E+02	.136E-01	1.068	1.061	.155E+01	.177E+02	.114E+02	.464E+03	.466E+03
17.00	12.966	15.000	.138E+02	.739E-02	1.068	1.061	.162E+01	.200E+02	.124E+02	.485E+03	.486E+03
18.00	13.436	15.000	.138E+02	.395E-02	1.068	1.060	.169E+01	.224E+02	.133E+02	.506E+03	.508E+03
19.00	13.878	15.000	.139E+02	.208E-02	1.068	1.060	.176E+01	.250E+02	.142E+02	.529E+03	.530E+03
20.00	14.294	15.000	.140E+02	.109E-02	1.068	1.060	.184E+01	.277E+02	.150E+02	.553E+03	.554E+03
21.00	14.686	15.000	.140E+02	.564E-03	1.068	1.059	.192E+01	.306E+02	.159E+02	.577E+03	.578E+03
22.00	15.055	15.000	.141E+02	.291E-03	1.068	1.059	.201E+01	.336E+02	.167E+02	.603E+03	.604E+03

m1	m2	zeta	delta	pt2/pt1	gamma1	gamma2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	10.000	-.389E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.05	1.050	10.000	-.404E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.10	1.100	10.000	-.377E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.15	1.150	10.000	-.417E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.20	1.200	10.000	-.361E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.25	1.250	10.000	-.570E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.30	1.300	10.000	-.314E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.35	1.350	10.000	-.367E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.40	1.400	10.000	-.347E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.45	1.450	10.000	-.349E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.50	1.500	10.000	-.360E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.60	1.600	10.000	-.331E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.70	1.700	10.000	-.318E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.80	1.800	10.000	-.314E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
1.90	1.900	10.000	-.287E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
2.00	2.000	10.000	-.277E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
2.20	2.200	10.000	-.238E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
2.40	2.400	10.000	-.194E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
2.60	2.600	10.000	-.142E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
2.80	2.800	10.000	-.899E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
3.00	3.000	10.000	-.257E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
3.20	3.200	10.000	.327E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
3.40	3.400	10.000	.114E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
3.60	3.600	10.000	.206E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
3.80	3.800	10.000	.317E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
4.00	4.001	10.000	.446E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
4.50	4.501	10.000	.924E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
5.00	5.002	10.000	.190E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
6.00	5.976	10.000	.755E+00	.100E+01	1.068	1.068	.101E+01	.109E+01	.108E+01	.302E+03	.311E+03
7.00	6.857	10.000	.309E+01	.990E+00	1.068	1.068	.103E+01	.149E+01	.145E+01	.308E+03	.315E+03
8.00	7.739	10.000	.462E+01	.954E+00	1.068	1.067	.105E+01	.196E+01	.187E+01	.314E+03	.320E+03
9.00	8.609	10.000	.568E+01	.889E+00	1.068	1.067	.107E+01	.249E+01	.233E+01	.320E+03	.325E+03
10.00	9.464	10.000	.644E+01	.799E+00	1.068	1.067	.109E+01	.308E+01	.283E+01	.327E+03	.331E+03
11.00	10.299	10.000	.700E+01	.694E+00	1.068	1.066	.111E+01	.374E+01	.336E+01	.334E+03	.337E+03
12.00	11.112	10.000	.743E+01	.584E+00	1.068	1.066	.114E+01	.446E+01	.392E+01	.341E+03	.344E+03
13.00	11.903	10.000	.776E+01	.477E+00	1.068	1.065	.116E+01	.524E+01	.451E+01	.349E+03	.351E+03
14.00	12.670	10.000	.802E+01	.379E+00	1.068	1.065	.119E+01	.608E+01	.511E+01	.357E+03	.359E+03
15.00	13.413	10.000	.824E+01	.293E+00	1.068	1.065	.122E+01	.698E+01	.573E+01	.366E+03	.368E+03
16.00	14.131	10.000	.841E+01	.222E+00	1.068	1.064	.125E+01	.795E+01	.636E+01	.375E+03	.377E+03
17.00	14.825	10.000	.856E+01	.164E+00	1.068	1.064	.128E+01	.898E+01	.701E+01	.385E+03	.386E+03
18.00	15.495	10.000	.868E+01	.119E+00	1.068	1.063	.132E+01	.101E+02	.766E+01	.395E+03	.396E+03
19.00	16.140	10.000	.878E+01	.850E-01	1.068	1.063	.135E+01	.112E+02	.831E+01	.405E+03	.407E+03
20.00	16.762	10.000	.887E+01	.597E-01	1.068	1.063	.139E+01	.124E+02	.896E+01	.417E+03	.418E+03
21.00	17.361	10.000	.895E+01	.413E-01	1.068	1.062	.143E+01	.137E+02	.961E+01	.428E+03	.430E+03
22.00	17.936	10.000	.902E+01	.283E-01	1.068	1.062	.147E+01	.151E+02	.103E+02	.441E+03	.442E+03

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m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	-.221E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.05	1.050	5.000	-.218E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.10	1.100	5.000	-.219E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.15	1.150	5.000	-.222E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.20	1.200	5.000	-.221E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.25	1.250	5.000	-.217E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.30	1.300	5.000	-.216E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.35	1.350	5.000	-.217E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.40	1.400	5.000	-.218E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.45	1.450	5.000	-.217E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.50	1.500	5.000	-.213E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.60	1.600	5.000	-.216E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.70	1.700	5.000	-.209E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.80	1.800	5.000	-.203E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
1.90	1.900	5.000	-.197E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
2.00	2.000	5.000	-.195E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
2.20	2.200	5.000	-.208E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
2.40	2.400	5.000	-.177E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.300E+03
2.60	2.600	5.000	-.206E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
2.80	2.800	5.000	-.192E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
3.00	3.000	5.000	-.184E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
3.20	3.200	5.000	-.168E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
3.40	3.400	5.000	-.160E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
3.60	3.600	5.000	-.155E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
3.80	3.800	5.000	-.146E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
4.00	4.000	5.000	-.136E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.301E+03
4.50	4.500	5.000	-.113E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
5.00	5.000	5.000	-.836E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.302E+03
6.00	6.001	5.000	-.136E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.303E+03
7.00	7.001	5.000	.884E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.304E+03
8.00	8.001	5.000	.240E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.305E+03
9.00	9.002	5.000	.487E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.306E+03
10.00	10.003	5.000	.995E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.308E+03
11.00	11.009	5.000	.231E-02	.999E+00	1.068	1.068	.100E+01	.100E+01	.100E+01	.300E+03	.309E+03
12.00	11.967	5.000	.415E+00	.999E+00	1.068	1.068	.101E+01	.110E+01	.109E+01	.302E+03	.311E+03
13.00	12.881	5.000	.107E+01	.997E+00	1.068	1.068	.102E+01	.129E+01	.127E+01	.305E+03	.313E+03
14.00	13.793	5.000	.158E+01	.990E+00	1.068	1.068	.103E+01	.151E+01	.147E+01	.308E+03	.315E+03
15.00	14.700	5.000	.200E+01	.975E+00	1.068	1.068	.104E+01	.173E+01	.167E+01	.311E+03	.317E+03
16.00	15.600	5.000	.235E+01	.953E+00	1.068	1.067	.105E+01	.198E+01	.189E+01	.314E+03	.320E+03
17.00	16.492	5.000	.263E+01	.923E+00	1.068	1.067	.106E+01	.224E+01	.211E+01	.317E+03	.322E+03
18.00	17.375	5.000	.287E+01	.886E+00	1.068	1.067	.107E+01	.251E+01	.235E+01	.320E+03	.325E+03
19.00	18.248	5.000	.307E+01	.843E+00	1.068	1.067	.108E+01	.280E+01	.260E+01	.324E+03	.328E+03
20.00	19.111	5.000	.324E+01	.796E+00	1.068	1.067	.109E+01	.311E+01	.285E+01	.327E+03	.331E+03
21.00	19.963	5.000	.339E+01	.744E+00	1.068	1.066	.110E+01	.343E+01	.311E+01	.330E+03	.334E+03
22.00	20.804	5.000	.352E+01	.690E+00	1.068	1.066	.111E+01	.377E+01	.338E+01	.334E+03	.337E+03

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Table 9. Normal and oblique shock properties.

$$T = 310^{\circ}\text{K}$$

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.002	90.000	.690E-07	.100E+01	1.068	1.068	.100E+01	.998E+00	.998E+00	.310E+03	.320E+03
1.05	.953	90.000	.517E-05	.100E+01	1.068	1.068	.101E+01	.111E+01	.110E+01	.312E+03	.322E+03
1.10	.910	90.000	.105E-04	.999E+00	1.068	1.067	.101E+01	.122E+01	.120E+01	.314E+03	.323E+03
1.15	.871	90.000	.161E-04	.997E+00	1.068	1.067	.102E+01	.133E+01	.131E+01	.316E+03	.324E+03
1.20	.835	90.000	.219E-04	.992E+00	1.068	1.067	.102E+01	.145E+01	.142E+01	.318E+03	.325E+03
1.25	.803	90.000	.279E-04	.986E+00	1.068	1.067	.103E+01	.158E+01	.153E+01	.319E+03	.326E+03
1.30	.773	90.000	.341E-04	.976E+00	1.068	1.067	.104E+01	.171E+01	.165E+01	.321E+03	.328E+03
1.35	.745	90.000	.404E-04	.965E+00	1.068	1.067	.104E+01	.185E+01	.178E+01	.323E+03	.329E+03
1.40	.720	90.000	.470E-04	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.325E+03	.330E+03
1.45	.696	90.000	.537E-04	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.327E+03	.332E+03
1.50	.674	90.000	.607E-04	.916E+00	1.068	1.067	.106E+01	.229E+01	.216E+01	.328E+03	.333E+03
1.60	.634	90.000	.750E-04	.871E+00	1.068	1.066	.107E+01	.261E+01	.244E+01	.332E+03	.337E+03
1.70	.600	90.000	.900E-04	.820E+00	1.068	1.066	.108E+01	.295E+01	.273E+01	.336E+03	.340E+03
1.80	.569	90.000	.106E-03	.762E+00	1.068	1.066	.110E+01	.332E+01	.302E+01	.340E+03	.344E+03
1.90	.542	90.000	.122E-03	.701E+00	1.068	1.066	.111E+01	.370E+01	.333E+01	.344E+03	.347E+03
2.00	.517	90.000	.138E-03	.638E+00	1.068	1.065	.112E+01	.410E+01	.365E+01	.348E+03	.351E+03
2.20	.476	90.000	.173E-03	.512E+00	1.068	1.065	.115E+01	.497E+01	.431E+01	.357E+03	.360E+03
2.40	.441	90.000	.209E-03	.395E+00	1.068	1.065	.118E+01	.592E+01	.501E+01	.367E+03	.369E+03
2.60	.413	90.000	.246E-03	.295E+00	1.068	1.064	.122E+01	.696E+01	.572E+01	.377E+03	.379E+03
2.80	.389	90.000	.284E-03	.213E+00	1.068	1.064	.125E+01	.807E+01	.645E+01	.388E+03	.390E+03
3.00	.368	90.000	.323E-03	.150E+00	1.068	1.063	.129E+01	.927E+01	.720E+01	.399E+03	.401E+03
3.20	.350	90.000	.362E-03	.103E+00	1.068	1.063	.133E+01	.106E+02	.795E+01	.412E+03	.413E+03
3.40	.335	90.000	.402E-03	.690E-01	1.068	1.062	.137E+01	.119E+02	.870E+01	.425E+03	.426E+03
3.60	.321	90.000	.441E-03	.454E-01	1.068	1.062	.141E+01	.134E+02	.946E+01	.438E+03	.440E+03
3.80	.309	90.000	.480E-03	.293E-01	1.068	1.062	.146E+01	.149E+02	.102E+02	.453E+03	.454E+03
4.00	.298	90.000	.519E-03	.187E-01	1.068	1.061	.151E+01	.165E+02	.110E+02	.468E+03	.469E+03
4.50	.276	90.000	.614E-03	.573E-02	1.068	1.060	.164E+01	.209E+02	.128E+02	.508E+03	.509E+03
5.00	.259	90.000	.704E-03	.166E-02	1.068	1.060	.178E+01	.259E+02	.145E+02	.553E+03	.554E+03
6.00	.235	90.000	.868E-03	.129E-03	1.068	1.059	.211E+01	.373E+02	.177E+02	.654E+03	.655E+03
7.00	.219	90.000	.101E-02	.974E-05	1.068	1.058	.249E+01	.508E+02	.204E+02	.772E+03	.773E+03
8.00	.207	90.000	.113E-02	.770E-06	1.068	1.057	.293E+01	.663E+02	.227E+02	.907E+03	.908E+03
9.00	.199	90.000	.123E-02	.661E-07	1.068	1.057	.341E+01	.840E+02	.246E+02	.106E+04	.106E+04
10.00	.193	90.000	.131E-02	.624E-08	1.068	1.056	.396E+01	.104E+03	.262E+02	.123E+04	.123E+04
11.00	.188	90.000	.138E-02	.654E-09	1.068	1.056	.455E+01	.126E+03	.276E+02	.141E+04	.141E+04
12.00	.184	90.000	.144E-02	.760E-10	1.068	1.056	.521E+01	.149E+03	.287E+02	.161E+04	.162E+04
13.00	.181	90.000	.149E-02	.977E-11	1.068	1.056	.591E+01	.175E+03	.297E+02	.183E+04	.183E+04
more than 99 iterations											
14.00	.179	90.000	.154E-02	.138E-11	1.068	1.056	.668E+01	.203E+03	.305E+02	.207E+04	.207E+04
more than 99 iterations											
15.00	.177	90.000	.157E-02	.214E-12	1.068	1.056	.749E+01	.234E+03	.312E+02	.232E+04	.233E+04
16.00	.175	90.000	.160E-02	.362E-13	1.068	1.056	.837E+01	.266E+03	.318E+02	.259E+04	.260E+04
17.00	.174	90.000	.163E-02	.660E-14	1.068	1.056	.930E+01	.300E+03	.323E+02	.288E+04	.288E+04
18.00	.173	90.000	.165E-02	.130E-14	1.068	1.056	.103E+02	.336E+03	.327E+02	.319E+04	.319E+04
more than 99 iterations											
19.00	.172	90.000	.167E-02	.273E-15	1.068	1.056	.113E+02	.375E+03	.331E+02	.351E+04	.351E+04
20.00	.171	90.000	.169E-02	.613E-16	1.068	1.056	.124E+02	.415E+03	.334E+02	.385E+04	.385E+04
more than 99 iterations											
21.00	.170	90.000	.171E-02	.146E-16	1.068	1.056	.136E+02	.458E+03	.337E+02	.421E+04	.421E+04
more than 99 iterations											
22.00	.169	90.000	.172E-02	.368E-17	1.068	1.056	.148E+02	.503E+03	.340E+02	.458E+04	.459E+04

m1	m2	zeta	delta	pt2/pt1	gamma1	gamma2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	85.000	.503E-02	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.320E+03
1.05	.961	85.000	.453E+00	.100E+01	1.068	1.068	.101E+01	.110E+01	.109E+01	.312E+03	.321E+03
1.10	.918	85.000	.960E+00	.999E+00	1.068	1.067	.101E+01	.121E+01	.119E+01	.314E+03	.323E+03
1.15	.880	85.000	.149E+01	.997E+00	1.068	1.067	.102E+01	.132E+01	.130E+01	.316E+03	.324E+03
1.20	.845	85.000	.203E+01	.993E+00	1.068	1.067	.102E+01	.144E+01	.141E+01	.317E+03	.325E+03
1.25	.813	85.000	.259E+01	.986E+00	1.068	1.067	.103E+01	.157E+01	.152E+01	.319E+03	.326E+03
1.30	.784	85.000	.317E+01	.978E+00	1.068	1.067	.104E+01	.170E+01	.164E+01	.321E+03	.327E+03
1.35	.757	85.000	.377E+01	.966E+00	1.068	1.067	.104E+01	.184E+01	.176E+01	.323E+03	.329E+03
1.40	.732	85.000	.438E+01	.953E+00	1.068	1.067	.105E+01	.198E+01	.189E+01	.325E+03	.330E+03
1.45	.709	85.000	.500E+01	.937E+00	1.068	1.067	.105E+01	.212E+01	.202E+01	.326E+03	.332E+03
1.50	.688	85.000	.564E+01	.918E+00	1.068	1.067	.106E+01	.227E+01	.215E+01	.328E+03	.333E+03
1.60	.651	85.000	.696E+01	.874E+00	1.068	1.066	.107E+01	.259E+01	.242E+01	.332E+03	.336E+03
1.70	.618	85.000	.832E+01	.823E+00	1.068	1.066	.108E+01	.293E+01	.271E+01	.336E+03	.340E+03
1.80	.590	85.000	.972E+01	.766E+00	1.068	1.066	.110E+01	.329E+01	.300E+01	.340E+03	.343E+03
1.90	.566	85.000	.112E+02	.705E+00	1.068	1.066	.111E+01	.367E+01	.331E+01	.344E+03	.347E+03
2.00	.545	85.000	.126E+02	.642E+00	1.068	1.065	.112E+01	.407E+01	.363E+01	.348E+03	.351E+03
2.20	.510	85.000	.156E+02	.517E+00	1.068	1.065	.115E+01	.493E+01	.429E+01	.357E+03	.359E+03
2.40	.483	85.000	.185E+02	.400E+00	1.068	1.065	.118E+01	.588E+01	.497E+01	.366E+03	.369E+03
2.60	.463	85.000	.214E+02	.299E+00	1.068	1.064	.121E+01	.690E+01	.569E+01	.376E+03	.378E+03
2.80	.447	85.000	.243E+02	.217E+00	1.068	1.064	.125E+01	.801E+01	.641E+01	.387E+03	.389E+03
3.00	.435	85.000	.270E+02	.153E+00	1.068	1.063	.129E+01	.920E+01	.716E+01	.399E+03	.400E+03
3.20	.427	85.000	.297E+02	.105E+00	1.068	1.063	.133E+01	.105E+02	.790E+01	.411E+03	.413E+03
3.40	.421	85.000	.321E+02	.709E-01	1.068	1.062	.137E+01	.118E+02	.866E+01	.424E+03	.425E+03
3.60	.417	85.000	.345E+02	.467E-01	1.068	1.062	.141E+01	.133E+02	.941E+01	.437E+03	.439E+03
3.80	.414	85.000	.366E+02	.303E-01	1.068	1.062	.146E+01	.148E+02	.102E+02	.452E+03	.453E+03
4.00	.413	85.000	.386E+02	.193E-01	1.068	1.061	.150E+01	.164E+02	.109E+02	.466E+03	.468E+03
4.50	.414	85.000	.430E+02	.597E-02	1.068	1.060	.163E+01	.208E+02	.127E+02	.507E+03	.508E+03
5.00	.419	85.000	.466E+02	.174E-02	1.068	1.060	.178E+01	.257E+02	.144E+02	.551E+03	.552E+03
6.00	.432	85.000	.520E+02	.136E-03	1.068	1.059	.210E+01	.370E+02	.176E+02	.652E+03	.653E+03
7.00	.447	85.000	.556E+02	.104E-04	1.068	1.058	.248E+01	.504E+02	.203E+02	.769E+03	.770E+03
8.00	.460	85.000	.582E+02	.831E-06	1.068	1.057	.291E+01	.658E+02	.226E+02	.903E+03	.904E+03
9.00	.472	85.000	.600E+02	.717E-07	1.068	1.057	.340E+01	.833E+02	.245E+02	.105E+04	.105E+04
10.00	.482	85.000	.614E+02	.681E-08	1.068	1.056	.394E+01	.103E+03	.261E+02	.122E+04	.122E+04
11.00	.491	85.000	.624E+02	.717E-09	1.068	1.056	.453E+01	.125E+03	.275E+02	.140E+04	.141E+04
12.00	.498	85.000	.632E+02	.837E-10	1.068	1.056	.518E+01	.148E+03	.286E+02	.160E+04	.161E+04
13.00	.504	85.000	.639E+02	.108E-10	1.068	1.056	.588E+01	.174E+03	.296E+02	.182E+04	.182E+04
14.00	.509	85.000	.644E+02	.153E-11	1.068	1.056	.663E+01	.202E+03	.304E+02	.206E+04	.206E+04
15.00	.513	85.000	.648E+02	.238E-12	1.068	1.056	.745E+01	.232E+03	.311E+02	.231E+04	.231E+04
16.00	.517	85.000	.652E+02	.402E-13	1.068	1.056	.831E+01	.264E+03	.317E+02	.258E+04	.258E+04
17.00	.520	85.000	.655E+02	.735E-14	1.068	1.056	.924E+01	.298E+03	.322E+02	.286E+04	.287E+04
more than 99 iterations											
18.00	.523	85.000	.657E+02	.145E-14	1.068	1.056	.102E+02	.334E+03	.327E+02	.317E+04	.317E+04
more than 99 iterations											
19.00	.525	85.000	.659E+02	.305E-15	1.068	1.056	.112E+02	.372E+03	.331E+02	.349E+04	.349E+04
more than 99 iterations											
20.00	.528	85.000	.661E+02	.685E-16	1.068	1.056	.123E+02	.412E+03	.334E+02	.382E+04	.383E+04
21.00	.529	85.000	.663E+02	.163E-16	1.068	1.056	.135E+02	.454E+03	.337E+02	.418E+04	.418E+04
22.00	.531	85.000	.664E+02	.412E-17	1.068	1.056	.147E+02	.499E+03	.340E+02	.455E+04	.455E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	80.000	.644E-02	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.320E+03
1.05	.985	80.000	.658E+00	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.311E+03	.321E+03
1.10	.943	80.000	.163E+01	.100E+01	1.068	1.068	.101E+01	.118E+01	.117E+01	.313E+03	.322E+03
1.15	.906	80.000	.263E+01	.998E+00	1.068	1.067	.102E+01	.129E+01	.127E+01	.315E+03	.323E+03
1.20	.873	80.000	.367E+01	.994E+00	1.068	1.067	.102E+01	.141E+01	.138E+01	.317E+03	.325E+03
1.25	.842	80.000	.473E+01	.988E+00	1.068	1.067	.103E+01	.153E+01	.149E+01	.319E+03	.326E+03
1.30	.815	80.000	.581E+01	.980E+00	1.068	1.067	.103E+01	.166E+01	.161E+01	.320E+03	.327E+03
1.35	.790	80.000	.692E+01	.970E+00	1.068	1.067	.104E+01	.179E+01	.172E+01	.322E+03	.328E+03
1.40	.768	80.000	.804E+01	.957E+00	1.068	1.067	.105E+01	.193E+01	.185E+01	.324E+03	.330E+03
1.45	.748	80.000	.919E+01	.942E+00	1.068	1.067	.105E+01	.207E+01	.197E+01	.326E+03	.331E+03
1.50	.729	80.000	.103E+02	.925E+00	1.068	1.067	.106E+01	.222E+01	.210E+01	.328E+03	.333E+03
1.60	.698	80.000	.127E+02	.883E+00	1.068	1.066	.107E+01	.253E+01	.237E+01	.331E+03	.336E+03
1.70	.671	80.000	.150E+02	.834E+00	1.068	1.066	.108E+01	.286E+01	.265E+01	.335E+03	.339E+03
1.80	.650	80.000	.174E+02	.778E+00	1.068	1.066	.109E+01	.321E+01	.294E+01	.339E+03	.343E+03
1.90	.633	80.000	.198E+02	.719E+00	1.068	1.066	.111E+01	.359E+01	.324E+01	.343E+03	.346E+03
2.00	.619	80.000	.221E+02	.657E+00	1.068	1.066	.112E+01	.398E+01	.355E+01	.347E+03	.350E+03
2.20	.600	80.000	.265E+02	.532E+00	1.068	1.065	.115E+01	.482E+01	.420E+01	.356E+03	.358E+03
2.40	.590	80.000	.307E+02	.415E+00	1.068	1.065	.118E+01	.574E+01	.488E+01	.365E+03	.367E+03
2.60	.587	80.000	.345E+02	.313E+00	1.068	1.064	.121E+01	.675E+01	.558E+01	.375E+03	.377E+03
2.80	.588	80.000	.380E+02	.229E+00	1.068	1.064	.124E+01	.783E+01	.630E+01	.385E+03	.387E+03
3.00	.593	80.000	.411E+02	.163E+00	1.068	1.063	.128E+01	.899E+01	.703E+01	.397E+03	.398E+03
3.20	.601	80.000	.439E+02	.113E+00	1.068	1.063	.132E+01	.102E+02	.777E+01	.409E+03	.410E+03
3.40	.610	80.000	.463E+02	.767E-01	1.068	1.063	.136E+01	.116E+02	.851E+01	.421E+03	.423E+03
3.60	.621	80.000	.485E+02	.510E-01	1.068	1.062	.140E+01	.130E+02	.925E+01	.435E+03	.436E+03
3.80	.633	80.000	.504E+02	.333E-01	1.068	1.062	.145E+01	.145E+02	.999E+01	.448E+03	.450E+03
4.00	.645	80.000	.521E+02	.215E-01	1.068	1.061	.149E+01	.160E+02	.107E+02	.463E+03	.464E+03
4.50	.676	80.000	.556E+02	.676E-02	1.068	1.061	.162E+01	.203E+02	.125E+02	.502E+03	.503E+03
5.00	.707	80.000	.583E+02	.201E-02	1.068	1.060	.176E+01	.251E+02	.142E+02	.546E+03	.547E+03
6.00	.763	80.000	.619E+02	.163E-03	1.068	1.059	.208E+01	.361E+02	.174E+02	.644E+03	.645E+03
7.00	.811	80.000	.642E+02	.128E-04	1.068	1.058	.245E+01	.492E+02	.201E+02	.759E+03	.760E+03
8.00	.850	80.000	.658E+02	.104E-05	1.068	1.057	.287E+01	.643E+02	.224E+02	.890E+03	.891E+03
9.00	.882	80.000	.669E+02	.919E-07	1.068	1.057	.334E+01	.814E+02	.243E+02	.104E+04	.104E+04
10.00	.908	80.000	.677E+02	.887E-08	1.068	1.056	.387E+01	.101E+03	.260E+02	.120E+04	.120E+04
11.00	.930	80.000	.683E+02	.946E-09	1.068	1.056	.445E+01	.122E+03	.273E+02	.138E+04	.138E+04
12.00	.948	80.000	.687E+02	.112E-09	1.068	1.056	.508E+01	.145E+03	.285E+02	.158E+04	.158E+04
13.00	.962	80.000	.691E+02	.145E-10	1.068	1.056	.577E+01	.170E+03	.295E+02	.179E+04	.179E+04
14.00	.975	80.000	.694E+02	.208E-11	1.068	1.056	.651E+01	.197E+03	.303E+02	.202E+04	.202E+04
15.00	.985	80.000	.696E+02	.325E-12	1.068	1.056	.730E+01	.226E+03	.310E+02	.226E+04	.227E+04
16.00	.994	80.000	.698E+02	.553E-13	1.068	1.056	.815E+01	.258E+03	.316E+02	.253E+04	.253E+04
17.00	1.002	80.000	.700E+02	.102E-13	1.068	1.056	.905E+01	.291E+03	.321E+02	.281E+04	.281E+04
more than 99 iterations											
18.00	1.009	80.000	.701E+02	.201E-14	1.068	1.056	.100E+02	.326E+03	.326E+02	.310E+04	.310E+04
19.00	1.014	80.000	.702E+02	.426E-15	1.068	1.056	.110E+02	.363E+03	.330E+02	.342E+04	.342E+04
20.00	1.019	80.000	.703E+02	.959E-16	1.068	1.056	.121E+02	.403E+03	.333E+02	.375E+04	.375E+04
21.00	1.024	80.000	.704E+02	.229E-16	1.068	1.056	.132E+02	.444E+03	.336E+02	.409E+04	.410E+04
22.00	1.028	80.000	.705E+02	.579E-17	1.068	1.056	.144E+02	.487E+03	.339E+02	.446E+04	.446E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	75.000	.571E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.05	1.024	75.000	.407E+00	.100E+01	1.068	1.068	.100E+01	.103E+01	.103E+01	.311E+03	.321E+03
1.10	.984	75.000	.177E+01	.100E+01	1.068	1.068	.101E+01	.113E+01	.112E+01	.312E+03	.322E+03
1.15	.948	75.000	.317E+01	.999E+00	1.068	1.067	.101E+01	.124E+01	.122E+01	.314E+03	.323E+03
1.20	.917	75.000	.460E+01	.996E+00	1.068	1.067	.102E+01	.135E+01	.133E+01	.316E+03	.324E+03
1.25	.890	75.000	.606E+01	.991E+00	1.068	1.067	.103E+01	.147E+01	.144E+01	.318E+03	.325E+03
1.30	.865	75.000	.753E+01	.985E+00	1.068	1.067	.103E+01	.160E+01	.155E+01	.320E+03	.326E+03
1.35	.844	75.000	.902E+01	.976E+00	1.068	1.067	.104E+01	.172E+01	.166E+01	.321E+03	.328E+03
1.40	.824	75.000	.105E+02	.965E+00	1.068	1.067	.104E+01	.186E+01	.178E+01	.323E+03	.329E+03
1.45	.808	75.000	.120E+02	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.325E+03	.330E+03
1.50	.793	75.000	.135E+02	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.327E+03	.332E+03
1.60	.769	75.000	.165E+02	.897E+00	1.068	1.066	.106E+01	.243E+01	.229E+01	.330E+03	.335E+03
1.70	.751	75.000	.194E+02	.850E+00	1.068	1.066	.108E+01	.275E+01	.256E+01	.334E+03	.338E+03
1.80	.738	75.000	.223E+02	.798E+00	1.068	1.066	.109E+01	.309E+01	.284E+01	.337E+03	.341E+03
1.90	.730	75.000	.250E+02	.741E+00	1.068	1.066	.110E+01	.345E+01	.313E+01	.341E+03	.345E+03
2.00	.725	75.000	.276E+02	.681E+00	1.068	1.066	.111E+01	.382E+01	.343E+01	.345E+03	.349E+03
2.20	.725	75.000	.324E+02	.558E+00	1.068	1.065	.114E+01	.463E+01	.406E+01	.354E+03	.356E+03
2.40	.733	75.000	.367E+02	.441E+00	1.068	1.065	.117E+01	.552E+01	.472E+01	.363E+03	.365E+03
2.60	.748	75.000	.404E+02	.337E+00	1.068	1.064	.120E+01	.649E+01	.540E+01	.372E+03	.374E+03
2.80	.766	75.000	.436E+02	.250E+00	1.068	1.064	.123E+01	.753E+01	.610E+01	.383E+03	.384E+03
3.00	.787	75.000	.463E+02	.180E+00	1.068	1.063	.127E+01	.865E+01	.682E+01	.393E+03	.395E+03
3.20	.810	75.000	.487E+02	.127E+00	1.068	1.063	.131E+01	.985E+01	.754E+01	.405E+03	.407E+03
3.40	.834	75.000	.507E+02	.872E-01	1.068	1.063	.135E+01	.111E+02	.827E+01	.417E+03	.419E+03
3.60	.859	75.000	.525E+02	.588E-01	1.068	1.062	.139E+01	.125E+02	.900E+01	.430E+03	.431E+03
3.80	.883	75.000	.540E+02	.390E-01	1.068	1.062	.143E+01	.139E+02	.972E+01	.443E+03	.445E+03
4.00	.908	75.000	.553E+02	.254E-01	1.068	1.062	.148E+01	.154E+02	.104E+02	.457E+03	.459E+03
4.50	.967	75.000	.580E+02	.829E-02	1.068	1.061	.160E+01	.195E+02	.122E+02	.495E+03	.496E+03
5.00	1.022	75.000	.600E+02	.255E-02	1.068	1.060	.173E+01	.241E+02	.139E+02	.537E+03	.538E+03
6.00	1.118	75.000	.627E+02	.218E-03	1.068	1.059	.204E+01	.348E+02	.170E+02	.632E+03	.633E+03
7.00	1.197	75.000	.643E+02	.180E-04	1.068	1.058	.240E+01	.473E+02	.198E+02	.743E+03	.744E+03
8.00	1.261	75.000	.654E+02	.153E-05	1.068	1.057	.280E+01	.619E+02	.221E+02	.869E+03	.870E+03
9.00	1.313	75.000	.662E+02	.139E-06	1.068	1.057	.326E+01	.783E+02	.240E+02	.101E+04	.101E+04
10.00	1.355	75.000	.667E+02	.138E-07	1.068	1.057	.377E+01	.967E+02	.257E+02	.117E+04	.117E+04
11.00	1.389	75.000	.672E+02	.150E-08	1.068	1.056	.432E+01	.117E+03	.271E+02	.134E+04	.134E+04
12.00	1.418	75.000	.675E+02	.181E-09	1.068	1.056	.493E+01	.139E+03	.283E+02	.153E+04	.153E+04
13.00	1.442	75.000	.677E+02	.240E-10	1.068	1.056	.559E+01	.164E+03	.292E+02	.173E+04	.174E+04
14.00	1.462	75.000	.679E+02	.347E-11	1.068	1.056	.631E+01	.190E+03	.301E+02	.195E+04	.196E+04
more than 99 iterations											
15.00	1.479	75.000	.681E+02	.550E-12	1.068	1.056	.707E+01	.218E+03	.308E+02	.219E+04	.219E+04
more than 99 iterations											
16.00	1.493	75.000	.682E+02	.945E-13	1.068	1.056	.788E+01	.248E+03	.314E+02	.244E+04	.245E+04
17.00	1.506	75.000	.683E+02	.175E-13	1.068	1.056	.875E+01	.280E+03	.320E+02	.271E+04	.272E+04
18.00	1.516	75.000	.684E+02	.349E-14	1.068	1.056	.967E+01	.314E+03	.324E+02	.300E+04	.300E+04
19.00	1.526	75.000	.685E+02	.744E-15	1.068	1.056	.106E+02	.350E+03	.329E+02	.330E+04	.330E+04
20.00	1.534	75.000	.686E+02	.169E-15	1.068	1.056	.117E+02	.387E+03	.332E+02	.362E+04	.362E+04
21.00	1.540	75.000	.686E+02	.405E-16	1.068	1.056	.127E+02	.427E+03	.335E+02	.395E+04	.395E+04
22.00	1.547	75.000	.687E+02	.103E-16	1.068	1.056	.139E+02	.469E+03	.338E+02	.430E+04	.430E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.457E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.05	1.051	70.000	.128E-01	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.320E+03
1.10	1.038	70.000	.122E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.311E+03	.321E+03
1.15	1.005	70.000	.292E+01	.100E+01	1.068	1.068	.101E+01	.117E+01	.116E+01	.313E+03	.322E+03
1.20	.977	70.000	.465E+01	.998E+00	1.068	1.067	.102E+01	.128E+01	.126E+01	.315E+03	.323E+03
1.25	.952	70.000	.639E+01	.995E+00	1.068	1.067	.102E+01	.139E+01	.136E+01	.317E+03	.324E+03
1.30	.931	70.000	.814E+01	.990E+00	1.068	1.067	.103E+01	.151E+01	.147E+01	.318E+03	.326E+03
1.35	.913	70.000	.988E+01	.982E+00	1.068	1.067	.103E+01	.163E+01	.158E+01	.320E+03	.327E+03
1.40	.897	70.000	.116E+02	.973E+00	1.068	1.067	.104E+01	.176E+01	.169E+01	.322E+03	.328E+03
1.45	.884	70.000	.133E+02	.962E+00	1.068	1.067	.104E+01	.189E+01	.181E+01	.323E+03	.329E+03
1.50	.873	70.000	.150E+02	.948E+00	1.068	1.067	.105E+01	.202E+01	.193E+01	.325E+03	.331E+03
1.60	.857	70.000	.183E+02	.914E+00	1.068	1.067	.106E+01	.230E+01	.217E+01	.329E+03	.333E+03
1.70	.848	70.000	.215E+02	.872E+00	1.068	1.066	.107E+01	.260E+01	.243E+01	.332E+03	.336E+03
1.80	.845	70.000	.245E+02	.824E+00	1.068	1.066	.108E+01	.292E+01	.270E+01	.336E+03	.340E+03
1.90	.846	70.000	.273E+02	.771E+00	1.068	1.066	.109E+01	.326E+01	.298E+01	.339E+03	.343E+03
2.00	.850	70.000	.299E+02	.714E+00	1.068	1.066	.111E+01	.362E+01	.327E+01	.343E+03	.346E+03
2.20	.868	70.000	.346E+02	.595E+00	1.068	1.065	.113E+01	.438E+01	.387E+01	.351E+03	.354E+03
2.40	.894	70.000	.386E+02	.478E+00	1.068	1.065	.116E+01	.522E+01	.450E+01	.360E+03	.362E+03
2.60	.925	70.000	.420E+02	.372E+00	1.068	1.064	.119E+01	.614E+01	.516E+01	.369E+03	.371E+03
2.80	.960	70.000	.448E+02	.281E+00	1.068	1.064	.122E+01	.712E+01	.583E+01	.379E+03	.381E+03
3.00	.996	70.000	.472E+02	.207E+00	1.068	1.064	.125E+01	.818E+01	.652E+01	.389E+03	.391E+03
3.20	1.033	70.000	.492E+02	.148E+00	1.068	1.063	.129E+01	.932E+01	.722E+01	.400E+03	.402E+03
3.40	1.071	70.000	.509E+02	.104E+00	1.068	1.063	.133E+01	.105E+02	.793E+01	.411E+03	.413E+03
3.60	1.108	70.000	.524E+02	.714E-01	1.068	1.062	.137E+01	.118E+02	.864E+01	.424E+03	.425E+03
3.80	1.145	70.000	.536E+02	.483E-01	1.068	1.062	.141E+01	.132E+02	.935E+01	.436E+03	.438E+03
4.00	1.181	70.000	.547E+02	.321E-01	1.068	1.062	.145E+01	.146E+02	.101E+02	.450E+03	.451E+03
4.50	1.267	70.000	.569E+02	.110E-01	1.068	1.061	.157E+01	.185E+02	.118E+02	.486E+03	.487E+03
5.00	1.346	70.000	.585E+02	.352E-02	1.068	1.060	.169E+01	.228E+02	.135E+02	.525E+03	.526E+03
6.00	1.482	70.000	.606E+02	.327E-03	1.068	1.059	.199E+01	.329E+02	.166E+02	.616E+03	.617E+03
7.00	1.594	70.000	.619E+02	.289E-04	1.068	1.058	.232E+01	.448E+02	.193E+02	.720E+03	.722E+03
8.00	1.684	70.000	.628E+02	.260E-05	1.068	1.057	.271E+01	.585E+02	.216E+02	.840E+03	.841E+03
9.00	1.757	70.000	.634E+02	.248E-06	1.068	1.057	.314E+01	.741E+02	.236E+02	.974E+03	.975E+03
10.00	1.817	70.000	.638E+02	.256E-07	1.068	1.057	.362E+01	.916E+02	.253E+02	.112E+04	.112E+04
11.00	1.866	70.000	.641E+02	.289E-08	1.068	1.056	.415E+01	.111E+03	.267E+02	.129E+04	.129E+04
12.00	1.907	70.000	.644E+02	.357E-09	1.068	1.056	.473E+01	.132E+03	.279E+02	.147E+04	.147E+04
13.00	1.941	70.000	.646E+02	.484E-10	1.068	1.056	.535E+01	.155E+03	.289E+02	.166E+04	.166E+04
14.00	1.970	70.000	.647E+02	.716E-11	1.068	1.056	.603E+01	.180E+03	.298E+02	.187E+04	.187E+04
15.00	1.993	70.000	.649E+02	.115E-11	1.068	1.056	.675E+01	.206E+03	.305E+02	.209E+04	.210E+04
16.00	2.014	70.000	.650E+02	.201E-12	1.068	1.056	.752E+01	.235E+03	.312E+02	.233E+04	.233E+04
17.00	2.032	70.000	.651E+02	.378E-13	1.068	1.056	.835E+01	.265E+03	.317E+02	.259E+04	.259E+04
18.00	2.047	70.000	.651E+02	.761E-14	1.068	1.056	.922E+01	.297E+03	.322E+02	.286E+04	.286E+04
19.00	2.060	70.000	.652E+02	.164E-14	1.068	1.056	.101E+02	.331E+03	.327E+02	.314E+04	.314E+04
20.00	2.071	70.000	.652E+02	.375E-15	1.068	1.056	.111E+02	.367E+03	.330E+02	.344E+04	.345E+04
more than 99 iterations											
21.00	2.082	70.000	.653E+02	.907E-16	1.068	1.056	.121E+02	.404E+03	.334E+02	.376E+04	.376E+04
more than 99 iterations											
22.00	2.091	70.000	.653E+02	.232E-16	1.068	1.056	.132E+02	.444E+03	.336E+02	.409E+04	.409E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.352E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.05	1.050	65.000	.697E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.10	1.117	65.000	-.385E+00	.100E+01	1.068	1.068	.999E+00	.981E+00	.983E+00	.310E+03	.320E+03
1.15	1.076	65.000	.181E+01	.100E+01	1.068	1.068	.101E+01	.109E+01	.108E+01	.312E+03	.321E+03
1.20	1.049	65.000	.374E+01	.100E+01	1.068	1.067	.101E+01	.119E+01	.118E+01	.313E+03	.322E+03
1.25	1.028	65.000	.567E+01	.998E+00	1.068	1.067	.102E+01	.129E+01	.127E+01	.315E+03	.323E+03
1.30	1.009	65.000	.759E+01	.994E+00	1.068	1.067	.102E+01	.140E+01	.137E+01	.317E+03	.324E+03
1.35	.994	65.000	.949E+01	.989E+00	1.068	1.067	.103E+01	.151E+01	.147E+01	.318E+03	.326E+03
1.40	.982	65.000	.114E+02	.982E+00	1.068	1.067	.103E+01	.163E+01	.158E+01	.320E+03	.327E+03
1.45	.973	65.000	.132E+02	.973E+00	1.068	1.067	.104E+01	.175E+01	.169E+01	.322E+03	.328E+03
1.50	.966	65.000	.150E+02	.963E+00	1.068	1.067	.104E+01	.188E+01	.180E+01	.323E+03	.329E+03
1.60	.959	65.000	.184E+02	.935E+00	1.068	1.067	.105E+01	.214E+01	.203E+01	.327E+03	.332E+03
1.70	.958	65.000	.217E+02	.899E+00	1.068	1.066	.106E+01	.242E+01	.227E+01	.330E+03	.335E+03
1.80	.963	65.000	.247E+02	.856E+00	1.068	1.066	.108E+01	.272E+01	.253E+01	.333E+03	.338E+03
1.90	.972	65.000	.275E+02	.807E+00	1.068	1.066	.109E+01	.303E+01	.279E+01	.337E+03	.341E+03
2.00	.986	65.000	.300E+02	.755E+00	1.068	1.066	.110E+01	.336E+01	.306E+01	.340E+03	.344E+03
2.20	1.020	65.000	.344E+02	.641E+00	1.068	1.065	.112E+01	.408E+01	.363E+01	.348E+03	.351E+03
2.40	1.063	65.000	.381E+02	.527E+00	1.068	1.065	.115E+01	.486E+01	.423E+01	.356E+03	.359E+03
2.60	1.109	65.000	.412E+02	.419E+00	1.068	1.065	.118E+01	.571E+01	.485E+01	.365E+03	.367E+03
2.80	1.159	65.000	.437E+02	.324E+00	1.068	1.064	.121E+01	.662E+01	.550E+01	.374E+03	.376E+03
3.00	1.210	65.000	.458E+02	.244E+00	1.068	1.064	.124E+01	.761E+01	.615E+01	.383E+03	.385E+03
3.20	1.261	65.000	.476E+02	.179E+00	1.068	1.063	.127E+01	.866E+01	.683E+01	.394E+03	.395E+03
3.40	1.311	65.000	.490E+02	.129E+00	1.068	1.063	.130E+01	.979E+01	.750E+01	.404E+03	.406E+03
3.60	1.361	65.000	.503E+02	.910E-01	1.068	1.063	.134E+01	.110E+02	.819E+01	.416E+03	.417E+03
3.80	1.410	65.000	.514E+02	.630E-01	1.068	1.062	.138E+01	.122E+02	.887E+01	.428E+03	.429E+03
4.00	1.458	65.000	.523E+02	.430E-01	1.068	1.062	.142E+01	.136E+02	.955E+01	.440E+03	.441E+03
4.50	1.571	65.000	.542E+02	.156E-01	1.068	1.061	.153E+01	.172E+02	.112E+02	.474E+03	.475E+03
5.00	1.675	65.000	.555E+02	.531E-02	1.068	1.060	.165E+01	.212E+02	.129E+02	.511E+03	.512E+03
6.00	1.854	65.000	.573E+02	.547E-03	1.068	1.059	.192E+01	.306E+02	.159E+02	.595E+03	.596E+03
7.00	2.001	65.000	.584E+02	.528E-04	1.068	1.058	.224E+01	.417E+02	.186E+02	.693E+03	.694E+03
8.00	2.120	65.000	.592E+02	.513E-05	1.068	1.058	.260E+01	.545E+02	.210E+02	.805E+03	.806E+03
9.00	2.217	65.000	.597E+02	.521E-06	1.068	1.057	.300E+01	.689E+02	.230E+02	.930E+03	.931E+03
10.00	2.297	65.000	.600E+02	.567E-07	1.068	1.057	.345E+01	.852E+02	.247E+02	.107E+04	.107E+04
11.00	2.363	65.000	.603E+02	.670E-08	1.068	1.056	.394E+01	.103E+03	.262E+02	.122E+04	.122E+04
more than 99 iterations											
12.00	2.417	65.000	.605E+02	.861E-09	1.068	1.056	.448E+01	.123E+03	.274E+02	.139E+04	.139E+04
13.00	2.463	65.000	.607E+02	.120E-09	1.068	1.056	.506E+01	.144E+03	.285E+02	.157E+04	.157E+04
14.00	2.502	65.000	.608E+02	.183E-10	1.068	1.056	.569E+01	.167E+03	.294E+02	.176E+04	.176E+04
15.00	2.534	65.000	.609E+02	.302E-11	1.068	1.056	.636E+01	.192E+03	.302E+02	.197E+04	.197E+04
16.00	2.562	65.000	.610E+02	.538E-12	1.068	1.056	.708E+01	.218E+03	.308E+02	.219E+04	.220E+04
17.00	2.586	65.000	.611E+02	.103E-12	1.068	1.056	.784E+01	.246E+03	.314E+02	.243E+04	.243E+04
18.00	2.607	65.000	.612E+02	.210E-13	1.068	1.056	.865E+01	.276E+03	.319E+02	.268E+04	.268E+04
19.00	2.625	65.000	.612E+02	.459E-14	1.068	1.056	.951E+01	.308E+03	.324E+02	.295E+04	.295E+04
20.00	2.640	65.000	.613E+02	.106E-14	1.068	1.056	.104E+02	.341E+03	.328E+02	.323E+04	.323E+04
more than 99 iterations											
21.00	2.653	65.000	.613E+02	.260E-15	1.068	1.056	.114E+02	.376E+03	.331E+02	.352E+04	.352E+04
22.00	2.667	65.000	.613E+02	.671E-16	1.068	1.056	.124E+02	.413E+03	.334E+02	.383E+04	.383E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.264E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.05	1.050	60.000	.439E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.10	1.101	60.000	.833E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.15	1.167	60.000	-.460E+00	.100E+01	1.068	1.068	.999E+00	.980E+00	.982E+00	.310E+03	.320E+03
1.20	1.134	60.000	.189E+01	.100E+01	1.068	1.068	.101E+01	.108E+01	.108E+01	.312E+03	.321E+03
1.25	1.114	60.000	.394E+01	.100E+01	1.068	1.068	.101E+01	.118E+01	.117E+01	.313E+03	.322E+03
1.30	1.099	60.000	.597E+01	.998E+00	1.068	1.067	.102E+01	.128E+01	.126E+01	.315E+03	.323E+03
1.35	1.087	60.000	.796E+01	.995E+00	1.068	1.067	.102E+01	.138E+01	.135E+01	.316E+03	.324E+03
1.40	1.078	60.000	.990E+01	.991E+00	1.068	1.067	.103E+01	.149E+01	.145E+01	.318E+03	.325E+03
1.45	1.072	60.000	.118E+02	.985E+00	1.068	1.067	.103E+01	.160E+01	.155E+01	.320E+03	.326E+03
1.50	1.068	60.000	.136E+02	.977E+00	1.068	1.067	.104E+01	.171E+01	.165E+01	.321E+03	.328E+03
1.60	1.068	60.000	.171E+02	.955E+00	1.068	1.067	.105E+01	.195E+01	.186E+01	.324E+03	.330E+03
1.70	1.075	60.000	.203E+02	.927E+00	1.068	1.067	.106E+01	.221E+01	.209E+01	.327E+03	.333E+03
1.80	1.088	60.000	.233E+02	.891E+00	1.068	1.066	.107E+01	.248E+01	.232E+01	.331E+03	.335E+03
1.90	1.105	60.000	.260E+02	.849E+00	1.068	1.066	.108E+01	.276E+01	.257E+01	.334E+03	.338E+03
2.00	1.126	60.000	.284E+02	.802E+00	1.068	1.066	.109E+01	.307E+01	.282E+01	.337E+03	.341E+03
2.20	1.177	60.000	.327E+02	.697E+00	1.068	1.066	.111E+01	.372E+01	.335E+01	.344E+03	.347E+03
2.40	1.234	60.000	.361E+02	.587E+00	1.068	1.065	.113E+01	.443E+01	.391E+01	.352E+03	.354E+03
2.60	1.296	60.000	.389E+02	.480E+00	1.068	1.065	.116E+01	.521E+01	.449E+01	.360E+03	.362E+03
2.80	1.360	60.000	.412E+02	.382E+00	1.068	1.065	.119E+01	.605E+01	.509E+01	.368E+03	.370E+03
3.00	1.424	60.000	.431E+02	.296E+00	1.068	1.064	.122E+01	.695E+01	.571E+01	.377E+03	.379E+03
3.20	1.489	60.000	.447E+02	.224E+00	1.068	1.064	.125E+01	.791E+01	.635E+01	.386E+03	.388E+03
3.40	1.553	60.000	.461E+02	.166E+00	1.068	1.063	.128E+01	.893E+01	.699E+01	.396E+03	.398E+03
3.60	1.615	60.000	.472E+02	.121E+00	1.068	1.063	.131E+01	.100E+02	.764E+01	.407E+03	.408E+03
3.80	1.677	60.000	.482E+02	.860E-01	1.068	1.063	.135E+01	.112E+02	.829E+01	.418E+03	.419E+03
4.00	1.736	60.000	.490E+02	.605E-01	1.068	1.062	.138E+01	.124E+02	.895E+01	.429E+03	.430E+03
4.50	1.878	60.000	.507E+02	.236E-01	1.068	1.061	.148E+01	.157E+02	.106E+02	.460E+03	.461E+03
5.00	2.007	60.000	.519E+02	.862E-02	1.068	1.061	.159E+01	.194E+02	.122E+02	.494E+03	.495E+03
6.00	2.233	60.000	.535E+02	.101E-02	1.068	1.059	.184E+01	.279E+02	.152E+02	.571E+03	.572E+03
7.00	2.419	60.000	.545E+02	.110E-03	1.068	1.058	.213E+01	.380E+02	.178E+02	.661E+03	.662E+03
8.00	2.571	60.000	.551E+02	.117E-04	1.068	1.058	.246E+01	.497E+02	.202E+02	.763E+03	.764E+03
9.00	2.695	60.000	.555E+02	.129E-05	1.068	1.057	.283E+01	.629E+02	.222E+02	.878E+03	.879E+03
10.00	2.798	60.000	.559E+02	.151E-06	1.068	1.057	.324E+01	.777E+02	.240E+02	.101E+04	.101E+04
11.00	2.884	60.000	.561E+02	.188E-07	1.068	1.057	.369E+01	.941E+02	.255E+02	.114E+04	.115E+04
12.00	2.955	60.000	.563E+02	.254E-08	1.068	1.056	.418E+01	.112E+03	.268E+02	.130E+04	.130E+04
13.00	3.015	60.000	.564E+02	.371E-09	1.068	1.056	.472E+01	.131E+03	.279E+02	.146E+04	.146E+04
14.00	3.066	60.000	.566E+02	.586E-10	1.068	1.056	.529E+01	.153E+03	.288E+02	.164E+04	.164E+04
15.00	3.109	60.000	.567E+02	.996E-11	1.068	1.056	.591E+01	.175E+03	.296E+02	.183E+04	.183E+04
16.00	3.145	60.000	.567E+02	.182E-11	1.068	1.056	.656E+01	.199E+03	.304E+02	.203E+04	.204E+04
17.00	3.177	60.000	.568E+02	.357E-12	1.068	1.056	.726E+01	.225E+03	.310E+02	.225E+04	.225E+04
18.00	3.204	60.000	.569E+02	.745E-13	1.068	1.056	.800E+01	.252E+03	.315E+02	.248E+04	.248E+04
19.00	3.229	60.000	.569E+02	.165E-13	1.068	1.056	.878E+01	.281E+03	.320E+02	.272E+04	.273E+04
20.00	3.250	60.000	.569E+02	.389E-14	1.068	1.056	.961E+01	.311E+03	.324E+02	.298E+04	.298E+04
21.00	3.268	60.000	.570E+02	.966E-15	1.068	1.056	.105E+02	.343E+03	.328E+02	.325E+04	.325E+04
more than 99 iterations											
22.00	3.285	60.000	.570E+02	.252E-15	1.068	1.056	.114E+02	.377E+03	.331E+02	.353E+04	.353E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.189E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.05	1.050	55.000	.293E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.10	1.100	55.000	.463E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.15	1.150	55.000	.810E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.20	1.201	55.000	.157E-01	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.320E+03
1.25	1.212	55.000	.126E+01	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.311E+03	.321E+03
1.30	1.198	55.000	.334E+01	.100E+01	1.068	1.068	.101E+01	.114E+01	.113E+01	.313E+03	.322E+03
1.35	1.188	55.000	.538E+01	.999E+00	1.068	1.067	.101E+01	.123E+01	.121E+01	.314E+03	.323E+03
1.40	1.182	55.000	.736E+01	.997E+00	1.068	1.067	.102E+01	.133E+01	.130E+01	.316E+03	.324E+03
1.45	1.178	55.000	.928E+01	.994E+00	1.068	1.067	.102E+01	.142E+01	.139E+01	.317E+03	.325E+03
1.50	1.178	55.000	.111E+02	.989E+00	1.068	1.067	.103E+01	.153E+01	.149E+01	.319E+03	.326E+03
1.60	1.183	55.000	.146E+02	.974E+00	1.068	1.067	.104E+01	.174E+01	.168E+01	.322E+03	.328E+03
1.70	1.197	55.000	.178E+02	.953E+00	1.068	1.067	.105E+01	.197E+01	.188E+01	.325E+03	.330E+03
1.80	1.216	55.000	.207E+02	.926E+00	1.068	1.067	.106E+01	.221E+01	.210E+01	.327E+03	.333E+03
1.90	1.241	55.000	.234E+02	.892E+00	1.068	1.066	.107E+01	.247E+01	.232E+01	.330E+03	.335E+03
2.00	1.269	55.000	.257E+02	.852E+00	1.068	1.066	.108E+01	.274E+01	.255E+01	.334E+03	.338E+03
2.20	1.333	55.000	.298E+02	.761E+00	1.068	1.066	.110E+01	.332E+01	.303E+01	.340E+03	.344E+03
2.40	1.405	55.000	.330E+02	.659E+00	1.068	1.066	.112E+01	.396E+01	.354E+01	.347E+03	.350E+03
2.60	1.481	55.000	.357E+02	.555E+00	1.068	1.065	.114E+01	.466E+01	.408E+01	.354E+03	.357E+03
2.80	1.558	55.000	.379E+02	.456E+00	1.068	1.065	.117E+01	.540E+01	.463E+01	.362E+03	.364E+03
3.00	1.637	55.000	.397E+02	.365E+00	1.068	1.064	.119E+01	.621E+01	.521E+01	.370E+03	.372E+03
3.20	1.715	55.000	.412E+02	.285E+00	1.068	1.064	.122E+01	.707E+01	.580E+01	.378E+03	.380E+03
3.40	1.792	55.000	.424E+02	.219E+00	1.068	1.064	.125E+01	.799E+01	.640E+01	.387E+03	.389E+03
3.60	1.868	55.000	.435E+02	.165E+00	1.068	1.063	.128E+01	.896E+01	.701E+01	.396E+03	.398E+03
3.80	1.941	55.000	.444E+02	.122E+00	1.068	1.063	.131E+01	.999E+01	.762E+01	.406E+03	.408E+03
4.00	2.014	55.000	.452E+02	.885E-01	1.068	1.063	.134E+01	.111E+02	.824E+01	.417E+03	.418E+03
4.50	2.185	55.000	.467E+02	.377E-01	1.068	1.062	.143E+01	.140E+02	.978E+01	.444E+03	.446E+03
5.00	2.343	55.000	.478E+02	.150E-01	1.068	1.061	.153E+01	.173E+02	.113E+02	.475E+03	.476E+03
6.00	2.619	55.000	.493E+02	.206E-02	1.068	1.060	.176E+01	.250E+02	.142E+02	.545E+03	.546E+03
7.00	2.848	55.000	.502E+02	.256E-03	1.068	1.059	.202E+01	.340E+02	.169E+02	.626E+03	.627E+03
8.00	3.038	55.000	.507E+02	.308E-04	1.068	1.058	.231E+01	.445E+02	.192E+02	.718E+03	.719E+03
9.00	3.195	55.000	.512E+02	.376E-05	1.068	1.057	.265E+01	.563E+02	.213E+02	.821E+03	.822E+03
10.00	3.326	55.000	.515E+02	.478E-06	1.068	1.057	.302E+01	.695E+02	.231E+02	.935E+03	.936E+03
11.00	3.435	55.000	.517E+02	.644E-07	1.068	1.057	.342E+01	.842E+02	.246E+02	.106E+04	.106E+04
12.00	3.527	55.000	.518E+02	.926E-08	1.068	1.056	.386E+01	.100E+03	.260E+02	.120E+04	.120E+04
13.00	3.604	55.000	.520E+02	.143E-08	1.068	1.056	.434E+01	.118E+03	.271E+02	.134E+04	.135E+04
14.00	3.670	55.000	.521E+02	.236E-09	1.068	1.056	.485E+01	.136E+03	.281E+02	.150E+04	.151E+04
15.00	3.726	55.000	.522E+02	.417E-10	1.068	1.056	.540E+01	.157E+03	.290E+02	.168E+04	.168E+04
16.00	3.774	55.000	.523E+02	.790E-11	1.068	1.056	.599E+01	.178E+03	.297E+02	.186E+04	.186E+04
17.00	3.816	55.000	.523E+02	.159E-11	1.068	1.056	.662E+01	.201E+03	.304E+02	.205E+04	.205E+04
18.00	3.852	55.000	.524E+02	.342E-12	1.068	1.056	.728E+01	.226E+03	.310E+02	.226E+04	.226E+04
19.00	3.884	55.000	.524E+02	.778E-13	1.068	1.056	.798E+01	.251E+03	.315E+02	.247E+04	.248E+04
20.00	3.911	55.000	.524E+02	.187E-13	1.068	1.056	.872E+01	.279E+03	.320E+02	.270E+04	.270E+04
21.00	3.935	55.000	.525E+02	.472E-14	1.068	1.056	.949E+01	.307E+03	.324E+02	.294E+04	.295E+04
22.00	3.958	55.000	.525E+02	.125E-14	1.068	1.056	.103E+02	.337E+03	.327E+02	.319E+04	.320E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	.126E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.05	1.050	50.000	.190E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.10	1.100	50.000	.279E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.15	1.150	50.000	.415E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.20	1.200	50.000	.645E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.25	1.251	50.000	.113E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.30	1.315	50.000	-.527E+00	.100E+01	1.068	1.068	.999E+00	.980E+00	.982E+00	.310E+03	.320E+03
1.35	1.299	50.000	.186E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.311E+03	.321E+03
1.40	1.294	50.000	.385E+01	.100E+01	1.068	1.068	.101E+01	.115E+01	.114E+01	.313E+03	.322E+03
1.45	1.292	50.000	.578E+01	.999E+00	1.068	1.067	.101E+01	.124E+01	.122E+01	.314E+03	.323E+03
1.50	1.294	50.000	.764E+01	.996E+00	1.068	1.067	.102E+01	.133E+01	.131E+01	.316E+03	.324E+03
1.60	1.304	50.000	.111E+02	.989E+00	1.068	1.067	.103E+01	.152E+01	.148E+01	.319E+03	.326E+03
1.70	1.322	50.000	.143E+02	.976E+00	1.068	1.067	.104E+01	.172E+01	.166E+01	.321E+03	.328E+03
1.80	1.347	50.000	.172E+02	.957E+00	1.068	1.067	.105E+01	.193E+01	.185E+01	.324E+03	.330E+03
1.90	1.378	50.000	.198E+02	.933E+00	1.068	1.067	.105E+01	.216E+01	.205E+01	.327E+03	.332E+03
2.00	1.412	50.000	.221E+02	.902E+00	1.068	1.066	.106E+01	.239E+01	.225E+01	.330E+03	.334E+03
2.20	1.489	50.000	.260E+02	.828E+00	1.068	1.066	.108E+01	.290E+01	.268E+01	.335E+03	.339E+03
2.40	1.574	50.000	.292E+02	.739E+00	1.068	1.066	.110E+01	.346E+01	.314E+01	.341E+03	.345E+03
2.60	1.663	50.000	.318E+02	.643E+00	1.068	1.065	.112E+01	.407E+01	.362E+01	.348E+03	.351E+03
2.80	1.754	50.000	.339E+02	.545E+00	1.068	1.065	.114E+01	.472E+01	.413E+01	.355E+03	.357E+03
3.00	1.846	50.000	.356E+02	.453E+00	1.068	1.065	.117E+01	.543E+01	.465E+01	.362E+03	.364E+03
3.20	1.937	50.000	.371E+02	.368E+00	1.068	1.064	.119E+01	.618E+01	.519E+01	.369E+03	.371E+03
3.40	2.027	50.000	.383E+02	.293E+00	1.068	1.064	.122E+01	.698E+01	.574E+01	.377E+03	.379E+03
3.60	2.116	50.000	.393E+02	.229E+00	1.068	1.064	.124E+01	.783E+01	.630E+01	.385E+03	.387E+03
3.80	2.203	50.000	.402E+02	.176E+00	1.068	1.063	.127E+01	.873E+01	.687E+01	.394E+03	.396E+03
4.00	2.288	50.000	.409E+02	.133E+00	1.068	1.063	.130E+01	.968E+01	.744E+01	.403E+03	.405E+03
4.50	2.491	50.000	.424E+02	.626E-01	1.068	1.062	.138E+01	.123E+02	.888E+01	.428E+03	.429E+03
5.00	2.679	50.000	.434E+02	.274E-01	1.068	1.062	.147E+01	.151E+02	.103E+02	.455E+03	.456E+03
6.00	3.011	50.000	.448E+02	.453E-02	1.068	1.060	.167E+01	.218E+02	.131E+02	.516E+03	.517E+03
7.00	3.291	50.000	.457E+02	.664E-03	1.068	1.059	.190E+01	.297E+02	.157E+02	.588E+03	.589E+03
8.00	3.525	50.000	.462E+02	.923E-04	1.068	1.058	.216E+01	.389E+02	.180E+02	.668E+03	.670E+03
9.00	3.721	50.000	.466E+02	.128E-04	1.068	1.058	.245E+01	.492E+02	.201E+02	.759E+03	.760E+03
10.00	3.885	50.000	.469E+02	.181E-05	1.068	1.057	.277E+01	.608E+02	.219E+02	.859E+03	.861E+03
11.00	4.023	50.000	.471E+02	.267E-06	1.068	1.057	.313E+01	.736E+02	.235E+02	.970E+03	.971E+03
12.00	4.141	50.000	.473E+02	.416E-07	1.068	1.057	.351E+01	.876E+02	.249E+02	.109E+04	.109E+04
13.00	4.240	50.000	.474E+02	.687E-08	1.068	1.056	.393E+01	.103E+03	.261E+02	.122E+04	.122E+04
14.00	4.325	50.000	.475E+02	.120E-08	1.068	1.056	.438E+01	.119E+03	.272E+02	.136E+04	.136E+04
15.00	4.398	50.000	.476E+02	.225E-09	1.068	1.056	.487E+01	.137E+03	.281E+02	.151E+04	.151E+04
16.00	4.462	50.000	.476E+02	.445E-10	1.068	1.056	.538E+01	.156E+03	.290E+02	.167E+04	.167E+04
more than 99 iterations											
17.00	4.516	50.000	.477E+02	.934E-11	1.068	1.056	.593E+01	.176E+03	.297E+02	.184E+04	.184E+04
18.00	4.563	50.000	.477E+02	.207E-11	1.068	1.056	.651E+01	.197E+03	.303E+02	.202E+04	.202E+04
19.00	4.605	50.000	.478E+02	.486E-12	1.068	1.056	.712E+01	.220E+03	.309E+02	.221E+04	.221E+04
20.00	4.642	50.000	.478E+02	.120E-12	1.068	1.056	.777E+01	.244E+03	.314E+02	.241E+04	.241E+04
21.00	4.675	50.000	.479E+02	.311E-13	1.068	1.056	.845E+01	.269E+03	.318E+02	.262E+04	.262E+04
22.00	4.703	50.000	.479E+02	.844E-14	1.068	1.056	.916E+01	.295E+03	.322E+02	.284E+04	.284E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.734E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.05	1.050	45.000	.113E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.10	1.100	45.000	.165E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.15	1.150	45.000	.232E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.20	1.200	45.000	.327E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.25	1.250	45.000	.466E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.30	1.300	45.000	.704E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.35	1.351	45.000	.113E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.40	1.418	45.000	-.702E+00	.100E+01	1.068	1.068	.998E+00	.974E+00	.976E+00	.309E+03	.320E+03
1.45	1.415	45.000	.141E+01	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.311E+03	.321E+03
1.50	1.417	45.000	.326E+01	.100E+01	1.068	1.068	.101E+01	.113E+01	.112E+01	.312E+03	.322E+03
1.60	1.430	45.000	.676E+01	.998E+00	1.068	1.067	.102E+01	.129E+01	.127E+01	.315E+03	.323E+03
1.70	1.451	45.000	.994E+01	.992E+00	1.068	1.067	.102E+01	.146E+01	.142E+01	.318E+03	.325E+03
1.80	1.481	45.000	.128E+02	.982E+00	1.068	1.067	.103E+01	.164E+01	.159E+01	.320E+03	.327E+03
1.90	1.515	45.000	.154E+02	.967E+00	1.068	1.067	.104E+01	.183E+01	.176E+01	.323E+03	.329E+03
2.00	1.554	45.000	.177E+02	.947E+00	1.068	1.067	.105E+01	.203E+01	.194E+01	.325E+03	.331E+03
2.20	1.642	45.000	.216E+02	.892E+00	1.068	1.066	.107E+01	.247E+01	.231E+01	.330E+03	.335E+03
2.40	1.739	45.000	.248E+02	.821E+00	1.068	1.066	.108E+01	.294E+01	.272E+01	.336E+03	.340E+03
2.60	1.840	45.000	.273E+02	.739E+00	1.068	1.066	.110E+01	.346E+01	.314E+01	.341E+03	.345E+03
2.80	1.944	45.000	.294E+02	.650E+00	1.068	1.065	.112E+01	.402E+01	.359E+01	.347E+03	.350E+03
3.00	2.049	45.000	.311E+02	.560E+00	1.068	1.065	.114E+01	.462E+01	.405E+01	.354E+03	.356E+03
3.20	2.153	45.000	.325E+02	.474E+00	1.068	1.065	.116E+01	.526E+01	.453E+01	.360E+03	.363E+03
3.40	2.257	45.000	.337E+02	.393E+00	1.068	1.065	.118E+01	.594E+01	.502E+01	.367E+03	.369E+03
3.60	2.359	45.000	.347E+02	.320E+00	1.068	1.064	.121E+01	.667E+01	.552E+01	.374E+03	.376E+03
3.80	2.459	45.000	.356E+02	.257E+00	1.068	1.064	.123E+01	.743E+01	.604E+01	.382E+03	.384E+03
4.00	2.558	45.000	.363E+02	.203E+00	1.068	1.064	.126E+01	.824E+01	.656E+01	.389E+03	.391E+03
4.50	2.794	45.000	.378E+02	.107E+00	1.068	1.063	.132E+01	.104E+02	.788E+01	.411E+03	.412E+03
5.00	3.014	45.000	.388E+02	.520E-01	1.068	1.062	.140E+01	.129E+02	.922E+01	.434E+03	.435E+03
6.00	3.409	45.000	.402E+02	.106E-01	1.068	1.061	.157E+01	.186E+02	.118E+02	.487E+03	.488E+03
7.00	3.746	45.000	.410E+02	.189E-02	1.068	1.060	.177E+01	.253E+02	.143E+02	.548E+03	.549E+03
8.00	4.032	45.000	.416E+02	.312E-03	1.068	1.059	.199E+01	.331E+02	.166E+02	.618E+03	.619E+03
9.00	4.275	45.000	.419E+02	.502E-04	1.068	1.058	.224E+01	.419E+02	.187E+02	.695E+03	.696E+03
10.00	4.480	45.000	.422E+02	.811E-05	1.068	1.058	.252E+01	.518E+02	.205E+02	.781E+03	.782E+03
11.00	4.655	45.000	.424E+02	.134E-05	1.068	1.057	.283E+01	.627E+02	.222E+02	.876E+03	.877E+03
12.00	4.805	45.000	.426E+02	.231E-06	1.068	1.057	.316E+01	.746E+02	.236E+02	.978E+03	.980E+03
13.00	4.933	45.000	.427E+02	.416E-07	1.068	1.057	.351E+01	.876E+02	.249E+02	.109E+04	.109E+04
14.00	5.043	45.000	.428E+02	.787E-08	1.068	1.056	.390E+01	.102E+03	.261E+02	.121E+04	.121E+04
15.00	5.139	45.000	.429E+02	.157E-08	1.068	1.056	.431E+01	.117E+03	.271E+02	.134E+04	.134E+04
16.00	5.221	45.000	.429E+02	.329E-09	1.068	1.056	.475E+01	.133E+03	.279E+02	.147E+04	.147E+04
17.00	5.293	45.000	.430E+02	.728E-10	1.068	1.056	.522E+01	.150E+03	.287E+02	.162E+04	.162E+04
18.00	5.356	45.000	.431E+02	.169E-10	1.068	1.056	.572E+01	.168E+03	.294E+02	.177E+04	.177E+04
19.00	5.412	45.000	.431E+02	.413E-11	1.068	1.056	.624E+01	.187E+03	.300E+02	.193E+04	.194E+04
20.00	5.461	45.000	.431E+02	.106E-11	1.068	1.056	.679E+01	.208E+03	.306E+02	.210E+04	.211E+04
21.00	5.504	45.000	.432E+02	.282E-12	1.068	1.056	.737E+01	.229E+03	.311E+02	.228E+04	.229E+04
22.00	5.543	45.000	.432E+02	.788E-13	1.068	1.056	.797E+01	.251E+03	.315E+02	.247E+04	.247E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	40.000	.296E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.05	1.050	40.000	.552E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.10	1.100	40.000	.858E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.15	1.150	40.000	.123E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.20	1.200	40.000	.169E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.25	1.250	40.000	.229E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.30	1.300	40.000	.307E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.35	1.350	40.000	.417E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.40	1.400	40.000	.584E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.45	1.451	40.000	.846E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.50	1.501	40.000	.161E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.60	1.564	40.000	.154E+01	.100E+01	1.068	1.068	.100E+01	.106E+01	.106E+01	.311E+03	.321E+03
1.70	1.586	40.000	.474E+01	.999E+00	1.068	1.067	.101E+01	.120E+01	.119E+01	.314E+03	.322E+03
1.80	1.617	40.000	.764E+01	.996E+00	1.068	1.067	.102E+01	.135E+01	.132E+01	.316E+03	.324E+03
1.90	1.655	40.000	.103E+02	.990E+00	1.068	1.067	.103E+01	.151E+01	.147E+01	.318E+03	.326E+03
2.00	1.698	40.000	.126E+02	.979E+00	1.068	1.067	.103E+01	.167E+01	.162E+01	.321E+03	.327E+03
2.20	1.794	40.000	.166E+02	.947E+00	1.068	1.067	.105E+01	.203E+01	.194E+01	.325E+03	.331E+03
2.40	1.900	40.000	.198E+02	.898E+00	1.068	1.066	.106E+01	.243E+01	.228E+01	.330E+03	.335E+03
2.60	2.012	40.000	.224E+02	.835E+00	1.068	1.066	.108E+01	.285E+01	.264E+01	.335E+03	.339E+03
2.80	2.128	40.000	.245E+02	.762E+00	1.068	1.066	.110E+01	.331E+01	.302E+01	.340E+03	.344E+03
3.00	2.245	40.000	.262E+02	.683E+00	1.068	1.066	.111E+01	.381E+01	.342E+01	.345E+03	.348E+03
3.20	2.362	40.000	.277E+02	.601E+00	1.068	1.065	.113E+01	.434E+01	.384E+01	.351E+03	.354E+03
3.40	2.479	40.000	.289E+02	.520E+00	1.068	1.065	.115E+01	.490E+01	.426E+01	.356E+03	.359E+03
3.60	2.594	40.000	.299E+02	.444E+00	1.068	1.065	.117E+01	.550E+01	.471E+01	.362E+03	.365E+03
3.80	2.708	40.000	.308E+02	.372E+00	1.068	1.064	.119E+01	.613E+01	.516E+01	.369E+03	.371E+03
4.00	2.820	40.000	.315E+02	.308E+00	1.068	1.064	.121E+01	.680E+01	.562E+01	.375E+03	.377E+03
4.50	3.091	40.000	.330E+02	.182E+00	1.068	1.063	.127E+01	.862E+01	.680E+01	.393E+03	.395E+03
5.00	3.346	40.000	.340E+02	.100E+00	1.068	1.063	.133E+01	.107E+02	.800E+01	.413E+03	.414E+03
6.00	3.810	40.000	.354E+02	.258E-01	1.068	1.062	.147E+01	.154E+02	.104E+02	.457E+03	.458E+03
7.00	4.212	40.000	.362E+02	.573E-02	1.068	1.060	.164E+01	.209E+02	.128E+02	.508E+03	.509E+03
8.00	4.560	40.000	.368E+02	.116E-02	1.068	1.060	.183E+01	.273E+02	.150E+02	.566E+03	.567E+03
9.00	4.859	40.000	.372E+02	.224E-03	1.068	1.059	.204E+01	.346E+02	.170E+02	.631E+03	.632E+03
10.00	5.116	40.000	.375E+02	.426E-04	1.068	1.058	.227E+01	.428E+02	.189E+02	.703E+03	.704E+03
11.00	5.338	40.000	.377E+02	.812E-05	1.068	1.058	.252E+01	.518E+02	.205E+02	.781E+03	.782E+03
12.00	5.529	40.000	.378E+02	.158E-05	1.068	1.057	.280E+01	.616E+02	.220E+02	.867E+03	.868E+03
13.00	5.694	40.000	.379E+02	.318E-06	1.068	1.057	.309E+01	.724E+02	.234E+02	.959E+03	.960E+03
14.00	5.838	40.000	.380E+02	.662E-07	1.068	1.057	.341E+01	.840E+02	.246E+02	.106E+04	.106E+04
15.00	5.963	40.000	.381E+02	.144E-07	1.068	1.057	.376E+01	.964E+02	.257E+02	.116E+04	.117E+04
16.00	6.073	40.000	.382E+02	.325E-08	1.068	1.056	.412E+01	.110E+03	.266E+02	.128E+04	.128E+04
17.00	6.169	40.000	.383E+02	.768E-09	1.068	1.056	.451E+01	.124E+03	.275E+02	.140E+04	.140E+04
18.00	6.254	40.000	.383E+02	.189E-09	1.068	1.056	.492E+01	.139E+03	.282E+02	.153E+04	.153E+04
19.00	6.329	40.000	.383E+02	.487E-10	1.068	1.056	.535E+01	.155E+03	.289E+02	.166E+04	.166E+04
20.00	6.395	40.000	.384E+02	.131E-10	1.068	1.056	.581E+01	.171E+03	.295E+02	.180E+04	.180E+04
21.00	6.454	40.000	.384E+02	.364E-11	1.068	1.056	.629E+01	.189E+03	.301E+02	.195E+04	.195E+04
22.00	6.507	40.000	.384E+02	.106E-11	1.068	1.056	.679E+01	.208E+03	.306E+02	.210E+04	.211E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	35.000	-.193E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.05	1.050	35.000	.116E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.10	1.100	35.000	.292E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.15	1.150	35.000	.504E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.20	1.200	35.000	.751E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.25	1.250	35.000	.105E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.30	1.300	35.000	.140E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.35	1.350	35.000	.182E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.40	1.400	35.000	.236E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.45	1.450	35.000	.303E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.50	1.500	35.000	.394E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.60	1.601	35.000	.716E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.70	1.702	35.000	.134E-01	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.320E+03
1.80	1.763	35.000	.166E+01	.100E+01	1.068	1.068	.100E+01	.107E+01	.106E+01	.311E+03	.321E+03
1.90	1.800	35.000	.433E+01	.999E+00	1.068	1.067	.101E+01	.119E+01	.118E+01	.314E+03	.322E+03
2.00	1.844	35.000	.675E+01	.997E+00	1.068	1.067	.102E+01	.133E+01	.130E+01	.316E+03	.324E+03
2.20	1.945	35.000	.109E+02	.984E+00	1.068	1.067	.103E+01	.161E+01	.156E+01	.320E+03	.327E+03
2.40	2.059	35.000	.142E+02	.958E+00	1.068	1.067	.104E+01	.192E+01	.184E+01	.324E+03	.330E+03
2.60	2.180	35.000	.169E+02	.919E+00	1.068	1.067	.106E+01	.226E+01	.214E+01	.328E+03	.333E+03
2.80	2.305	35.000	.191E+02	.868E+00	1.068	1.066	.107E+01	.263E+01	.246E+01	.332E+03	.337E+03
3.00	2.433	35.000	.209E+02	.808E+00	1.068	1.066	.109E+01	.303E+01	.279E+01	.337E+03	.341E+03
3.20	2.562	35.000	.224E+02	.741E+00	1.068	1.066	.110E+01	.345E+01	.313E+01	.341E+03	.345E+03
3.40	2.691	35.000	.237E+02	.669E+00	1.068	1.066	.112E+01	.390E+01	.349E+01	.346E+03	.349E+03
3.60	2.820	35.000	.247E+02	.596E+00	1.068	1.065	.113E+01	.437E+01	.386E+01	.351E+03	.354E+03
3.80	2.947	35.000	.256E+02	.524E+00	1.068	1.065	.115E+01	.488E+01	.425E+01	.356E+03	.359E+03
4.00	3.073	35.000	.264E+02	.455E+00	1.068	1.065	.117E+01	.541E+01	.464E+01	.362E+03	.364E+03
4.50	3.379	35.000	.279E+02	.303E+00	1.068	1.064	.121E+01	.685E+01	.565E+01	.376E+03	.378E+03
5.00	3.671	35.000	.290E+02	.190E+00	1.068	1.064	.126E+01	.847E+01	.670E+01	.392E+03	.394E+03
6.00	4.210	35.000	.305E+02	.634E-01	1.068	1.062	.138E+01	.122E+02	.886E+01	.427E+03	.429E+03
7.00	4.687	35.000	.314E+02	.180E-01	1.068	1.061	.151E+01	.166E+02	.110E+02	.469E+03	.470E+03
8.00	5.106	35.000	.319E+02	.462E-02	1.068	1.060	.166E+01	.218E+02	.131E+02	.516E+03	.517E+03
9.00	5.474	35.000	.323E+02	.110E-02	1.068	1.059	.183E+01	.276E+02	.150E+02	.568E+03	.569E+03
10.00	5.795	35.000	.326E+02	.254E-03	1.068	1.059	.202E+01	.340E+02	.169E+02	.626E+03	.627E+03
11.00	6.076	35.000	.328E+02	.578E-04	1.068	1.058	.222E+01	.412E+02	.185E+02	.689E+03	.690E+03
12.00	6.321	35.000	.330E+02	.132E-04	1.068	1.058	.244E+01	.491E+02	.201E+02	.758E+03	.759E+03
13.00	6.536	35.000	.331E+02	.303E-05	1.068	1.057	.268E+01	.576E+02	.215E+02	.832E+03	.833E+03
14.00	6.725	35.000	.332E+02	.715E-06	1.068	1.057	.294E+01	.668E+02	.227E+02	.911E+03	.912E+03
15.00	6.892	35.000	.333E+02	.173E-06	1.068	1.057	.321E+01	.767E+02	.239E+02	.996E+03	.998E+03
16.00	7.039	35.000	.334E+02	.432E-07	1.068	1.057	.351E+01	.873E+02	.249E+02	.109E+04	.109E+04
17.00	7.169	35.000	.334E+02	.111E-07	1.068	1.056	.382E+01	.986E+02	.258E+02	.118E+04	.118E+04
18.00	7.284	35.000	.335E+02	.297E-08	1.068	1.056	.414E+01	.111E+03	.267E+02	.128E+04	.129E+04
19.00	7.387	35.000	.335E+02	.819E-09	1.068	1.056	.449E+01	.123E+03	.274E+02	.139E+04	.139E+04
20.00	7.479	35.000	.336E+02	.234E-09	1.068	1.056	.486E+01	.137E+03	.281E+02	.151E+04	.151E+04
21.00	7.560	35.000	.336E+02	.691E-10	1.068	1.056	.524E+01	.151E+03	.287E+02	.162E+04	.163E+04
22.00	7.635	35.000	.336E+02	.211E-10	1.068	1.056	.564E+01	.165E+03	.293E+02	.175E+04	.175E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.296E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.05	1.050	30.000	-.195E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.10	1.100	30.000	-.769E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.15	1.150	30.000	.532E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.20	1.200	30.000	.151E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.25	1.250	30.000	.311E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.30	1.300	30.000	.482E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.35	1.350	30.000	.677E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.40	1.400	30.000	.902E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.45	1.450	30.000	.116E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.50	1.500	30.000	.147E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.60	1.600	30.000	.226E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.70	1.700	30.000	.350E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.80	1.801	30.000	.573E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.90	1.901	30.000	.100E-01	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
2.00	2.008	30.000	-.365E+00	.100E+01	1.068	1.068	.999E+00	.985E+00	.986E+00	.310E+03	.320E+03
2.20	2.102	30.000	.435E+01	.999E+00	1.068	1.067	.101E+01	.122E+01	.120E+01	.314E+03	.323E+03
2.40	2.218	30.000	.788E+01	.992E+00	1.068	1.067	.102E+01	.145E+01	.142E+01	.318E+03	.325E+03
2.60	2.344	30.000	.108E+02	.976E+00	1.068	1.067	.104E+01	.171E+01	.165E+01	.321E+03	.328E+03
2.80	2.477	30.000	.131E+02	.951E+00	1.068	1.067	.105E+01	.199E+01	.190E+01	.325E+03	.330E+03
3.00	2.614	30.000	.151E+02	.916E+00	1.068	1.067	.106E+01	.229E+01	.216E+01	.328E+03	.333E+03
3.20	2.754	30.000	.167E+02	.871E+00	1.068	1.066	.107E+01	.261E+01	.244E+01	.332E+03	.337E+03
3.40	2.894	30.000	.180E+02	.820E+00	1.068	1.066	.108E+01	.295E+01	.273E+01	.336E+03	.340E+03
3.60	3.034	30.000	.192E+02	.762E+00	1.068	1.066	.110E+01	.332E+01	.302E+01	.340E+03	.344E+03
3.80	3.174	30.000	.202E+02	.701E+00	1.068	1.066	.111E+01	.370E+01	.333E+01	.344E+03	.347E+03
4.00	3.313	30.000	.210E+02	.637E+00	1.068	1.065	.112E+01	.410E+01	.365E+01	.348E+03	.351E+03
4.50	3.654	30.000	.227E+02	.481E+00	1.068	1.065	.116E+01	.520E+01	.448E+01	.359E+03	.362E+03
5.00	3.984	30.000	.239E+02	.343E+00	1.068	1.064	.120E+01	.643E+01	.536E+01	.372E+03	.374E+03
6.00	4.602	30.000	.254E+02	.150E+00	1.068	1.063	.129E+01	.927E+01	.720E+01	.399E+03	.401E+03
7.00	5.163	30.000	.264E+02	.561E-01	1.068	1.062	.139E+01	.126E+02	.908E+01	.431E+03	.433E+03
8.00	5.666	30.000	.270E+02	.187E-01	1.068	1.061	.151E+01	.165E+02	.110E+02	.468E+03	.469E+03
9.00	6.116	30.000	.274E+02	.573E-02	1.068	1.060	.164E+01	.209E+02	.128E+02	.508E+03	.509E+03
10.00	6.516	30.000	.277E+02	.166E-02	1.068	1.060	.178E+01	.259E+02	.145E+02	.553E+03	.554E+03
11.00	6.872	30.000	.280E+02	.467E-03	1.068	1.059	.194E+01	.313E+02	.161E+02	.601E+03	.602E+03
12.00	7.189	30.000	.281E+02	.129E-03	1.068	1.059	.211E+01	.373E+02	.177E+02	.654E+03	.655E+03
13.00	7.470	30.000	.283E+02	.353E-04	1.068	1.058	.229E+01	.437E+02	.191E+02	.711E+03	.712E+03
14.00	7.721	30.000	.284E+02	.974E-05	1.068	1.058	.249E+01	.507E+02	.204E+02	.772E+03	.773E+03
15.00	7.944	30.000	.285E+02	.272E-05	1.068	1.057	.270E+01	.583E+02	.216E+02	.838E+03	.839E+03
16.00	8.144	30.000	.285E+02	.770E-06	1.068	1.057	.293E+01	.663E+02	.227E+02	.907E+03	.908E+03
17.00	8.322	30.000	.286E+02	.223E-06	1.068	1.057	.316E+01	.749E+02	.237E+02	.981E+03	.982E+03
18.00	8.483	30.000	.287E+02	.661E-07	1.068	1.057	.341E+01	.840E+02	.246E+02	.106E+04	.106E+04
19.00	8.626	30.000	.287E+02	.200E-07	1.068	1.057	.368E+01	.936E+02	.254E+02	.114E+04	.114E+04
20.00	8.756	30.000	.287E+02	.624E-08	1.068	1.056	.396E+01	.104E+03	.262E+02	.123E+04	.123E+04
21.00	8.873	30.000	.288E+02	.199E-08	1.068	1.056	.425E+01	.114E+03	.269E+02	.132E+04	.132E+04
22.00	8.978	30.000	.288E+02	.654E-09	1.068	1.056	.455E+01	.126E+03	.276E+02	.141E+04	.141E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	25.000	-.460E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.05	1.050	25.000	-.400E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.10	1.100	25.000	-.340E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.15	1.150	25.000	-.269E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.20	1.200	25.000	-.194E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.25	1.250	25.000	-.107E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.30	1.300	25.000	-.209E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.35	1.350	25.000	.445E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.40	1.400	25.000	.149E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.45	1.450	25.000	.264E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.50	1.500	25.000	.387E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.60	1.600	25.000	.683E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.70	1.700	25.000	.105E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.80	1.800	25.000	.152E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.90	1.900	25.000	.218E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
2.00	2.000	25.000	.311E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
2.20	2.201	25.000	.715E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
2.40	2.390	25.000	.624E+00	.100E+01	1.068	1.068	.100E+01	.103E+01	.103E+01	.311E+03	.321E+03
2.60	2.514	25.000	.376E+01	.999E+00	1.068	1.067	.101E+01	.121E+01	.120E+01	.314E+03	.323E+03
2.80	2.650	25.000	.636E+01	.994E+00	1.068	1.067	.102E+01	.141E+01	.138E+01	.317E+03	.325E+03
3.00	2.792	25.000	.853E+01	.983E+00	1.068	1.067	.103E+01	.163E+01	.158E+01	.320E+03	.327E+03
3.20	2.938	25.000	.103E+02	.965E+00	1.068	1.067	.104E+01	.186E+01	.178E+01	.323E+03	.329E+03
3.40	3.087	25.000	.119E+02	.939E+00	1.068	1.067	.105E+01	.210E+01	.200E+01	.326E+03	.331E+03
3.60	3.237	25.000	.131E+02	.907E+00	1.068	1.066	.106E+01	.236E+01	.222E+01	.329E+03	.334E+03
3.80	3.388	25.000	.142E+02	.868E+00	1.068	1.066	.107E+01	.263E+01	.245E+01	.332E+03	.337E+03
4.00	3.539	25.000	.152E+02	.825E+00	1.068	1.066	.108E+01	.292E+01	.270E+01	.336E+03	.340E+03
4.50	3.913	25.000	.170E+02	.700E+00	1.068	1.066	.111E+01	.370E+01	.334E+01	.344E+03	.347E+03
5.00	4.279	25.000	.184E+02	.565E+00	1.068	1.065	.114E+01	.458E+01	.402E+01	.353E+03	.356E+03
6.00	4.980	25.000	.201E+02	.325E+00	1.068	1.064	.121E+01	.661E+01	.549E+01	.374E+03	.376E+03
7.00	5.631	25.000	.212E+02	.162E+00	1.068	1.063	.128E+01	.902E+01	.704E+01	.397E+03	.399E+03
8.00	6.229	25.000	.219E+02	.717E-01	1.068	1.062	.137E+01	.118E+02	.863E+01	.423E+03	.425E+03
9.00	6.775	25.000	.224E+02	.291E-01	1.068	1.062	.146E+01	.149E+02	.102E+02	.453E+03	.454E+03
10.00	7.272	25.000	.227E+02	.110E-01	1.068	1.061	.157E+01	.185E+02	.118E+02	.485E+03	.487E+03
11.00	7.723	25.000	.230E+02	.398E-02	1.068	1.060	.168E+01	.223E+02	.133E+02	.521E+03	.522E+03
12.00	8.132	25.000	.232E+02	.139E-02	1.068	1.060	.180E+01	.266E+02	.147E+02	.559E+03	.560E+03
13.00	8.502	25.000	.233E+02	.474E-03	1.068	1.059	.194E+01	.312E+02	.161E+02	.601E+03	.602E+03
14.00	8.837	25.000	.235E+02	.160E-03	1.068	1.059	.208E+01	.362E+02	.174E+02	.645E+03	.646E+03
15.00	9.140	25.000	.236E+02	.535E-04	1.068	1.058	.223E+01	.416E+02	.186E+02	.692E+03	.694E+03
16.00	9.415	25.000	.236E+02	.180E-04	1.068	1.058	.240E+01	.473E+02	.198E+02	.743E+03	.744E+03
17.00	9.664	25.000	.237E+02	.607E-05	1.068	1.058	.257E+01	.535E+02	.208E+02	.796E+03	.797E+03
18.00	9.890	25.000	.238E+02	.207E-05	1.068	1.057	.275E+01	.600E+02	.218E+02	.852E+03	.853E+03
19.00	10.096	25.000	.238E+02	.715E-06	1.068	1.057	.294E+01	.668E+02	.227E+02	.911E+03	.912E+03
20.00	10.283	25.000	.239E+02	.251E-06	1.068	1.057	.314E+01	.740E+02	.236E+02	.973E+03	.975E+03
21.00	10.454	25.000	.239E+02	.893E-07	1.068	1.057	.335E+01	.816E+02	.244E+02	.104E+04	.104E+04
22.00	10.609	25.000	.239E+02	.324E-07	1.068	1.057	.357E+01	.896E+02	.251E+02	.111E+04	.111E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	-.533E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.05	1.050	20.000	-.494E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.10	1.100	20.000	-.474E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.15	1.150	20.000	-.432E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.20	1.200	20.000	-.393E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.25	1.250	20.000	-.358E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.30	1.300	20.000	-.318E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.35	1.350	20.000	-.272E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.40	1.400	20.000	-.222E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.45	1.450	20.000	-.171E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.50	1.500	20.000	-.119E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.60	1.600	20.000	-.110E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.70	1.700	20.000	.125E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.80	1.800	20.000	.274E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.90	1.900	20.000	.461E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
2.00	2.000	20.000	.681E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
2.20	2.200	20.000	.125E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
2.40	2.401	20.000	.222E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
2.60	2.601	20.000	.408E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
2.80	2.802	20.000	.862E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
3.00	2.982	20.000	.915E+00	.100E+01	1.068	1.068	.100E+01	.105E+01	.105E+01	.311E+03	.321E+03
3.20	3.128	20.000	.300E+01	.999E+00	1.068	1.067	.101E+01	.120E+01	.119E+01	.314E+03	.323E+03
3.40	3.280	20.000	.478E+01	.995E+00	1.068	1.067	.102E+01	.136E+01	.134E+01	.316E+03	.324E+03
3.60	3.436	20.000	.629E+01	.988E+00	1.068	1.067	.103E+01	.153E+01	.149E+01	.319E+03	.326E+03
3.80	3.594	20.000	.758E+01	.977E+00	1.068	1.067	.104E+01	.171E+01	.165E+01	.321E+03	.328E+03
4.00	3.754	20.000	.870E+01	.960E+00	1.068	1.067	.104E+01	.190E+01	.182E+01	.324E+03	.329E+03
4.50	4.155	20.000	.109E+02	.899E+00	1.068	1.066	.106E+01	.241E+01	.227E+01	.330E+03	.335E+03
5.00	4.554	20.000	.125E+02	.814E+00	1.068	1.066	.108E+01	.299E+01	.275E+01	.336E+03	.340E+03
6.00	5.333	20.000	.146E+02	.604E+00	1.068	1.065	.113E+01	.432E+01	.382E+01	.350E+03	.353E+03
7.00	6.076	20.000	.158E+02	.398E+00	1.068	1.065	.118E+01	.589E+01	.499E+01	.366E+03	.369E+03
8.00	6.777	20.000	.167E+02	.237E+00	1.068	1.064	.124E+01	.771E+01	.622E+01	.384E+03	.386E+03
9.00	7.432	20.000	.172E+02	.130E+00	1.068	1.063	.130E+01	.977E+01	.749E+01	.404E+03	.406E+03
10.00	8.043	20.000	.176E+02	.662E-01	1.068	1.062	.137E+01	.121E+02	.878E+01	.426E+03	.427E+03
11.00	8.611	20.000	.179E+02	.319E-01	1.068	1.062	.145E+01	.146E+02	.101E+02	.450E+03	.451E+03
12.00	9.136	20.000	.182E+02	.147E-01	1.068	1.061	.153E+01	.174E+02	.113E+02	.476E+03	.477E+03
13.00	9.622	20.000	.183E+02	.652E-02	1.068	1.061	.162E+01	.204E+02	.126E+02	.504E+03	.505E+03
14.00	10.071	20.000	.185E+02	.282E-02	1.068	1.060	.172E+01	.237E+02	.138E+02	.533E+03	.534E+03
15.00	10.485	20.000	.186E+02	.120E-02	1.068	1.060	.182E+01	.272E+02	.149E+02	.565E+03	.566E+03
16.00	10.867	20.000	.187E+02	.501E-03	1.068	1.059	.193E+01	.310E+02	.160E+02	.599E+03	.600E+03
17.00	11.220	20.000	.188E+02	.208E-03	1.068	1.059	.205E+01	.350E+02	.171E+02	.634E+03	.635E+03
18.00	11.545	20.000	.188E+02	.859E-04	1.068	1.058	.217E+01	.392E+02	.181E+02	.672E+03	.673E+03
19.00	11.845	20.000	.189E+02	.355E-04	1.068	1.058	.229E+01	.437E+02	.191E+02	.711E+03	.712E+03
20.00	12.122	20.000	.190E+02	.147E-04	1.068	1.058	.243E+01	.485E+02	.200E+02	.752E+03	.753E+03
21.00	12.378	20.000	.190E+02	.610E-05	1.068	1.058	.257E+01	.534E+02	.208E+02	.796E+03	.797E+03
22.00	12.616	20.000	.190E+02	.255E-05	1.068	1.057	.271E+01	.587E+02	.216E+02	.841E+03	.842E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.504E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.05	1.050	15.000	-.497E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.10	1.100	15.000	-.483E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.15	1.150	15.000	-.461E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.20	1.200	15.000	-.447E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.25	1.250	15.000	-.435E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.30	1.300	15.000	-.415E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.35	1.350	15.000	-.396E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.40	1.400	15.000	-.374E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.45	1.450	15.000	-.362E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.50	1.500	15.000	-.330E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.60	1.600	15.000	-.292E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.70	1.700	15.000	-.242E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.80	1.800	15.000	-.186E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.90	1.900	15.000	-.126E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
2.00	2.000	15.000	-.581E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
2.20	2.200	15.000	.803E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
2.40	2.400	15.000	.265E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
2.60	2.600	15.000	.507E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
2.80	2.800	15.000	.821E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
3.00	3.001	15.000	.125E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
3.20	3.201	15.000	.189E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
3.40	3.401	15.000	.298E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
3.60	3.602	15.000	.532E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
more than 99 iterations											
3.80	3.811	15.000	-.449E+00	.100E+01	1.068	1.068	.998E+00	.968E+00	.970E+00	.309E+03	.320E+03
4.00	3.978	15.000	.943E+00	.100E+01	1.068	1.068	.100E+01	.107E+01	.107E+01	.311E+03	.321E+03
4.50	4.390	15.000	.370E+01	.995E+00	1.068	1.067	.102E+01	.137E+01	.134E+01	.316E+03	.324E+03
5.00	4.812	15.000	.572E+01	.978E+00	1.068	1.067	.104E+01	.170E+01	.164E+01	.321E+03	.327E+03
6.00	5.656	15.000	.838E+01	.893E+00	1.068	1.066	.107E+01	.246E+01	.231E+01	.330E+03	.335E+03
7.00	6.484	15.000	.999E+01	.755E+00	1.068	1.066	.110E+01	.336E+01	.306E+01	.340E+03	.344E+03
8.00	7.286	15.000	.111E+02	.592E+00	1.068	1.065	.113E+01	.440E+01	.388E+01	.351E+03	.354E+03
9.00	8.056	15.000	.118E+02	.435E+00	1.068	1.065	.117E+01	.558E+01	.476E+01	.363E+03	.366E+03
10.00	8.792	15.000	.123E+02	.300E+00	1.068	1.064	.121E+01	.689E+01	.568E+01	.376E+03	.378E+03
11.00	9.494	15.000	.127E+02	.197E+00	1.068	1.064	.126E+01	.835E+01	.663E+01	.390E+03	.392E+03
12.00	10.160	15.000	.130E+02	.123E+00	1.068	1.063	.131E+01	.994E+01	.760E+01	.406E+03	.407E+03
13.00	10.791	15.000	.132E+02	.742E-01	1.068	1.062	.136E+01	.117E+02	.857E+01	.422E+03	.424E+03
14.00	11.387	15.000	.134E+02	.432E-01	1.068	1.062	.142E+01	.136E+02	.955E+01	.440E+03	.441E+03
15.00	11.950	15.000	.135E+02	.244E-01	1.068	1.061	.148E+01	.156E+02	.105E+02	.459E+03	.460E+03
16.00	12.481	15.000	.137E+02	.135E-01	1.068	1.061	.154E+01	.177E+02	.115E+02	.479E+03	.480E+03
17.00	12.981	15.000	.138E+02	.729E-02	1.068	1.061	.161E+01	.200E+02	.124E+02	.500E+03	.501E+03
18.00	13.453	15.000	.138E+02	.389E-02	1.068	1.060	.168E+01	.224E+02	.133E+02	.522E+03	.523E+03
19.00	13.896	15.000	.139E+02	.204E-02	1.068	1.060	.176E+01	.250E+02	.142E+02	.545E+03	.546E+03
20.00	14.313	15.000	.140E+02	.107E-02	1.068	1.059	.184E+01	.277E+02	.151E+02	.569E+03	.570E+03
21.00	14.705	15.000	.140E+02	.551E-03	1.068	1.059	.192E+01	.306E+02	.159E+02	.595E+03	.596E+03
22.00	15.075	15.000	.141E+02	.283E-03	1.068	1.059	.200E+01	.335E+02	.167E+02	.621E+03	.622E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	10.000	-.396E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.05	1.050	10.000	-.408E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.10	1.100	10.000	-.385E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.15	1.150	10.000	-.408E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.20	1.200	10.000	-.398E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.25	1.257	10.000	-.622E-02	.100E+01	1.068	1.068	.100E+01	.999E+00	.999E+00	.310E+03	.310E+03
1.30	1.300	10.000	-.452E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.35	1.350	10.000	-.328E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.40	1.400	10.000	-.348E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.45	1.450	10.000	-.359E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.50	1.500	10.000	-.346E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.60	1.600	10.000	-.334E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.70	1.700	10.000	-.317E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.80	1.800	10.000	-.300E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.90	1.900	10.000	-.284E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
2.00	2.000	10.000	-.270E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
2.20	2.200	10.000	-.229E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.40	2.400	10.000	-.190E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.60	2.600	10.000	-.142E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.80	2.800	10.000	-.853E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
3.00	3.000	10.000	-.234E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
3.20	3.200	10.000	.339E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
3.40	3.400	10.000	.112E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
3.60	3.600	10.000	.206E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
3.80	3.800	10.000	.317E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
4.00	4.001	10.000	.446E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
4.50	4.501	10.000	.916E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
5.00	5.002	10.000	.189E-02	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
6.00	5.976	10.000	.755E+00	.100E+01	1.068	1.068	.101E+01	.109E+01	.108E+01	.312E+03	.321E+03
7.00	6.858	10.000	.309E+01	.990E+00	1.068	1.067	.103E+01	.149E+01	.146E+01	.318E+03	.325E+03
8.00	7.740	10.000	.462E+01	.954E+00	1.068	1.067	.105E+01	.196E+01	.187E+01	.324E+03	.330E+03
9.00	8.612	10.000	.568E+01	.889E+00	1.068	1.066	.107E+01	.249E+01	.233E+01	.331E+03	.335E+03
10.00	9.467	10.000	.644E+01	.799E+00	1.068	1.066	.109E+01	.308E+01	.283E+01	.337E+03	.341E+03
11.00	10.303	10.000	.700E+01	.695E+00	1.068	1.066	.111E+01	.374E+01	.336E+01	.344E+03	.348E+03
12.00	11.118	10.000	.743E+01	.584E+00	1.068	1.065	.114E+01	.445E+01	.392E+01	.352E+03	.355E+03
13.00	11.910	10.000	.776E+01	.477E+00	1.068	1.065	.116E+01	.523E+01	.451E+01	.360E+03	.362E+03
14.00	12.678	10.000	.803E+01	.379E+00	1.068	1.064	.119E+01	.608E+01	.512E+01	.368E+03	.370E+03
15.00	13.423	10.000	.824E+01	.293E+00	1.068	1.064	.122E+01	.698E+01	.574E+01	.377E+03	.379E+03
16.00	14.142	10.000	.842E+01	.221E+00	1.068	1.064	.125E+01	.795E+01	.637E+01	.387E+03	.389E+03
17.00	14.838	10.000	.856E+01	.164E+00	1.068	1.063	.128E+01	.898E+01	.702E+01	.397E+03	.398E+03
18.00	15.509	10.000	.868E+01	.119E+00	1.068	1.063	.131E+01	.101E+02	.767E+01	.407E+03	.409E+03
19.00	16.156	10.000	.879E+01	.846E-01	1.068	1.063	.135E+01	.112E+02	.832E+01	.418E+03	.420E+03
20.00	16.779	10.000	.888E+01	.594E-01	1.068	1.062	.139E+01	.124E+02	.898E+01	.430E+03	.431E+03
21.00	17.379	10.000	.895E+01	.411E-01	1.068	1.062	.142E+01	.137E+02	.963E+01	.442E+03	.443E+03
22.00	17.956	10.000	.902E+01	.280E-01	1.068	1.062	.146E+01	.151E+02	.103E+02	.454E+03	.455E+03

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m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	-.219E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.05	1.050	5.000	-.216E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.10	1.100	5.000	-.216E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.15	1.150	5.000	-.213E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.20	1.200	5.000	-.212E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.25	1.250	5.000	-.213E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.30	1.300	5.000	-.215E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.35	1.350	5.000	-.211E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.40	1.400	5.000	-.209E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.45	1.450	5.000	-.210E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.50	1.500	5.000	-.208E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.60	1.600	5.000	-.202E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.70	1.700	5.000	-.205E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.80	1.800	5.000	-.207E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.90	1.900	5.000	-.195E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
2.00	2.000	5.000	-.197E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
2.20	2.200	5.000	-.203E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
2.40	2.400	5.000	-.187E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
2.60	2.600	5.000	-.201E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
2.80	2.800	5.000	-.176E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
3.00	3.000	5.000	-.175E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
3.20	3.200	5.000	-.164E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
3.40	3.400	5.000	-.158E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
3.60	3.600	5.000	-.153E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
3.80	3.800	5.000	-.144E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
4.00	4.000	5.000	-.132E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
4.50	4.500	5.000	-.110E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
5.00	5.000	5.000	-.812E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
6.00	6.001	5.000	-.593E-05	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
7.00	7.001	5.000	.872E-04	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
8.00	8.001	5.000	.238E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
9.00	9.002	5.000	.484E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
10.00	10.003	5.000	.998E-03	.100E+01	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
11.00	11.009	5.000	.233E-02	.999E+00	1.068	1.068	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
12.00	11.968	5.000	.415E+00	.999E+00	1.068	1.068	.101E+01	.110E+01	.109E+01	.312E+03	.321E+03
13.00	12.881	5.000	.107E+01	.997E+00	1.068	1.067	.102E+01	.129E+01	.127E+01	.315E+03	.323E+03
14.00	13.794	5.000	.158E+01	.990E+00	1.068	1.067	.103E+01	.151E+01	.147E+01	.318E+03	.326E+03
15.00	14.702	5.000	.200E+01	.975E+00	1.068	1.067	.104E+01	.173E+01	.167E+01	.321E+03	.328E+03
16.00	15.603	5.000	.235E+01	.953E+00	1.068	1.067	.105E+01	.198E+01	.189E+01	.325E+03	.330E+03
17.00	16.496	5.000	.263E+01	.923E+00	1.068	1.067	.106E+01	.224E+01	.211E+01	.328E+03	.333E+03
18.00	17.379	5.000	.287E+01	.886E+00	1.068	1.066	.107E+01	.251E+01	.235E+01	.331E+03	.336E+03
19.00	18.254	5.000	.307E+01	.843E+00	1.068	1.066	.108E+01	.280E+01	.260E+01	.334E+03	.338E+03
20.00	19.118	5.000	.324E+01	.796E+00	1.068	1.066	.109E+01	.311E+01	.285E+01	.338E+03	.341E+03
21.00	19.971	5.000	.339E+01	.744E+00	1.068	1.066	.110E+01	.343E+01	.312E+01	.341E+03	.345E+03
22.00	20.813	5.000	.352E+01	.690E+00	1.068	1.066	.111E+01	.377E+01	.339E+01	.345E+03	.348E+03

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Table 10. Normal and oblique shock properties.

$$T = 320^{\circ}\text{K}$$

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.002	90.000	.695E-07	.100E+01	1.067	1.067	.100E+01	.998E+00	.998E+00	.320E+03	.331E+03
1.05	.953	90.000	.517E-05	.100E+01	1.067	1.067	.101E+01	.111E+01	.110E+01	.322E+03	.332E+03
1.10	.910	90.000	.105E-04	.999E+00	1.067	1.067	.101E+01	.122E+01	.120E+01	.324E+03	.333E+03
1.15	.871	90.000	.161E-04	.997E+00	1.067	1.067	.102E+01	.133E+01	.131E+01	.326E+03	.334E+03
1.20	.835	90.000	.219E-04	.992E+00	1.067	1.067	.102E+01	.145E+01	.142E+01	.328E+03	.335E+03
1.25	.803	90.000	.279E-04	.986E+00	1.067	1.066	.103E+01	.158E+01	.153E+01	.330E+03	.337E+03
1.30	.773	90.000	.341E-04	.976E+00	1.067	1.066	.104E+01	.171E+01	.165E+01	.331E+03	.338E+03
1.35	.745	90.000	.405E-04	.965E+00	1.067	1.066	.104E+01	.185E+01	.178E+01	.333E+03	.339E+03
1.40	.720	90.000	.470E-04	.951E+00	1.067	1.066	.105E+01	.199E+01	.190E+01	.335E+03	.341E+03
1.45	.696	90.000	.538E-04	.935E+00	1.067	1.066	.105E+01	.214E+01	.203E+01	.337E+03	.342E+03
1.50	.674	90.000	.607E-04	.916E+00	1.067	1.066	.106E+01	.229E+01	.216E+01	.339E+03	.344E+03
1.60	.634	90.000	.750E-04	.871E+00	1.067	1.066	.107E+01	.261E+01	.244E+01	.343E+03	.347E+03
1.70	.600	90.000	.900E-04	.819E+00	1.067	1.066	.108E+01	.295E+01	.273E+01	.347E+03	.351E+03
1.80	.569	90.000	.106E-03	.762E+00	1.067	1.065	.110E+01	.331E+01	.303E+01	.351E+03	.354E+03
1.90	.542	90.000	.122E-03	.701E+00	1.067	1.065	.111E+01	.370E+01	.333E+01	.355E+03	.358E+03
2.00	.517	90.000	.138E-03	.637E+00	1.067	1.065	.112E+01	.410E+01	.365E+01	.359E+03	.362E+03
2.20	.476	90.000	.173E-03	.511E+00	1.067	1.064	.115E+01	.497E+01	.432E+01	.368E+03	.371E+03
2.40	.441	90.000	.209E-03	.395E+00	1.067	1.064	.118E+01	.592E+01	.501E+01	.378E+03	.380E+03
2.60	.413	90.000	.246E-03	.295E+00	1.067	1.064	.121E+01	.695E+01	.573E+01	.388E+03	.391E+03
2.80	.388	90.000	.285E-03	.213E+00	1.067	1.063	.125E+01	.807E+01	.646E+01	.400E+03	.402E+03
3.00	.368	90.000	.324E-03	.150E+00	1.067	1.063	.129E+01	.927E+01	.721E+01	.412E+03	.413E+03
3.20	.350	90.000	.363E-03	.103E+00	1.067	1.062	.133E+01	.106E+02	.796E+01	.424E+03	.426E+03
3.40	.334	90.000	.402E-03	.687E-01	1.067	1.062	.137E+01	.119E+02	.872E+01	.437E+03	.439E+03
3.60	.321	90.000	.442E-03	.451E-01	1.067	1.062	.141E+01	.134E+02	.948E+01	.451E+03	.453E+03
3.80	.309	90.000	.481E-03	.291E-01	1.067	1.061	.146E+01	.149E+02	.102E+02	.466E+03	.468E+03
4.00	.298	90.000	.520E-03	.185E-01	1.067	1.061	.150E+01	.165E+02	.110E+02	.482E+03	.483E+03
4.50	.276	90.000	.615E-03	.566E-02	1.067	1.060	.163E+01	.209E+02	.128E+02	.523E+03	.524E+03
5.00	.259	90.000	.706E-03	.163E-02	1.067	1.059	.178E+01	.258E+02	.145E+02	.569E+03	.570E+03
6.00	.235	90.000	.871E-03	.125E-03	1.067	1.058	.210E+01	.372E+02	.177E+02	.673E+03	.674E+03
7.00	.218	90.000	.101E-02	.934E-05	1.067	1.058	.248E+01	.507E+02	.204E+02	.795E+03	.796E+03
8.00	.207	90.000	.113E-02	.728E-06	1.067	1.057	.292E+01	.663E+02	.227E+02	.934E+03	.935E+03
9.00	.199	90.000	.123E-02	.615E-07	1.067	1.057	.341E+01	.839E+02	.246E+02	.109E+04	.109E+04
10.00	.193	90.000	.132E-02	.573E-08	1.067	1.056	.395E+01	.104E+03	.263E+02	.126E+04	.126E+04
11.00	.188	90.000	.139E-02	.592E-09	1.067	1.056	.454E+01	.125E+03	.276E+02	.145E+04	.146E+04
12.00	.184	90.000	.145E-02	.679E-10	1.067	1.056	.519E+01	.149E+03	.287E+02	.166E+04	.166E+04
13.00	.181	90.000	.150E-02	.862E-11	1.067	1.056	.590E+01	.175E+03	.297E+02	.189E+04	.189E+04
14.00	.179	90.000	.154E-02	.121E-11	1.067	1.056	.666E+01	.203E+03	.305E+02	.213E+04	.213E+04
15.00	.177	90.000	.157E-02	.185E-12	1.067	1.056	.748E+01	.233E+03	.312E+02	.239E+04	.240E+04
16.00	.175	90.000	.161E-02	.308E-13	1.067	1.056	.835E+01	.266E+03	.318E+02	.267E+04	.268E+04
17.00	.174	90.000	.163E-02	.557E-14	1.067	1.056	.928E+01	.300E+03	.323E+02	.297E+04	.297E+04
more than 99 iterations											
18.00	.172	90.000	.166E-02	.108E-14	1.067	1.056	.103E+02	.336E+03	.327E+02	.329E+04	.329E+04
19.00	.171	90.000	.168E-02	.226E-15	1.067	1.056	.113E+02	.375E+03	.331E+02	.362E+04	.362E+04
more than 99 iterations											
20.00	.171	90.000	.169E-02	.502E-16	1.067	1.056	.124E+02	.415E+03	.335E+02	.397E+04	.397E+04
more than 99 iterations											
21.00	.170	90.000	.171E-02	.119E-16	1.067	1.056	.136E+02	.458E+03	.338E+02	.434E+04	.434E+04
more than 99 iterations											
22.00	.169	90.000	.172E-02	.296E-17	1.067	1.056	.148E+02	.502E+03	.340E+02	.472E+04	.473E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	85.000	.505E-02	.100E+01	1.067	1.067	.100E+01	.999E+00	.999E+00	.320E+03	.331E+03
1.05	.961	85.000	.453E+00	.100E+01	1.067	1.067	.101E+01	.110E+01	.109E+01	.322E+03	.332E+03
1.10	.918	85.000	.960E+00	.999E+00	1.067	1.067	.101E+01	.121E+01	.119E+01	.324E+03	.333E+03
1.15	.880	85.000	.149E+01	.997E+00	1.067	1.067	.102E+01	.132E+01	.130E+01	.326E+03	.334E+03
1.20	.845	85.000	.203E+01	.993E+00	1.067	1.067	.102E+01	.144E+01	.141E+01	.328E+03	.335E+03
1.25	.813	85.000	.259E+01	.986E+00	1.067	1.066	.103E+01	.157E+01	.152E+01	.329E+03	.337E+03
1.30	.784	85.000	.317E+01	.977E+00	1.067	1.066	.104E+01	.170E+01	.164E+01	.331E+03	.338E+03
1.35	.757	85.000	.377E+01	.966E+00	1.067	1.066	.104E+01	.184E+01	.176E+01	.333E+03	.339E+03
1.40	.732	85.000	.438E+01	.953E+00	1.067	1.066	.105E+01	.198E+01	.189E+01	.335E+03	.341E+03
1.45	.709	85.000	.501E+01	.937E+00	1.067	1.066	.105E+01	.212E+01	.202E+01	.337E+03	.342E+03
1.50	.688	85.000	.565E+01	.918E+00	1.067	1.066	.106E+01	.227E+01	.215E+01	.339E+03	.344E+03
1.60	.651	85.000	.696E+01	.874E+00	1.067	1.066	.107E+01	.259E+01	.242E+01	.342E+03	.347E+03
1.70	.618	85.000	.833E+01	.823E+00	1.067	1.066	.108E+01	.293E+01	.271E+01	.346E+03	.350E+03
1.80	.590	85.000	.973E+01	.766E+00	1.067	1.065	.109E+01	.329E+01	.300E+01	.350E+03	.354E+03
1.90	.566	85.000	.112E+02	.705E+00	1.067	1.065	.111E+01	.367E+01	.331E+01	.354E+03	.358E+03
2.00	.545	85.000	.126E+02	.642E+00	1.067	1.065	.112E+01	.407E+01	.363E+01	.359E+03	.362E+03
2.20	.510	85.000	.156E+02	.517E+00	1.067	1.065	.115E+01	.493E+01	.429E+01	.368E+03	.371E+03
2.40	.483	85.000	.185E+02	.400E+00	1.067	1.064	.118E+01	.587E+01	.498E+01	.378E+03	.380E+03
2.60	.462	85.000	.215E+02	.299E+00	1.067	1.064	.121E+01	.690E+01	.569E+01	.388E+03	.390E+03
2.80	.447	85.000	.243E+02	.217E+00	1.067	1.063	.125E+01	.801E+01	.642E+01	.399E+03	.401E+03
3.00	.435	85.000	.271E+02	.153E+00	1.067	1.063	.128E+01	.920E+01	.717E+01	.411E+03	.413E+03
3.20	.427	85.000	.297E+02	.105E+00	1.067	1.062	.132E+01	.105E+02	.792E+01	.423E+03	.425E+03
3.40	.421	85.000	.322E+02	.705E-01	1.067	1.062	.136E+01	.118E+02	.867E+01	.437E+03	.438E+03
3.60	.417	85.000	.345E+02	.465E-01	1.067	1.062	.141E+01	.133E+02	.942E+01	.450E+03	.452E+03
3.80	.414	85.000	.367E+02	.301E-01	1.067	1.061	.145E+01	.148E+02	.102E+02	.465E+03	.466E+03
4.00	.413	85.000	.387E+02	.192E-01	1.067	1.061	.150E+01	.164E+02	.109E+02	.480E+03	.482E+03
4.50	.414	85.000	.431E+02	.590E-02	1.067	1.060	.163E+01	.208E+02	.127E+02	.522E+03	.523E+03
5.00	.419	85.000	.467E+02	.171E-02	1.067	1.060	.177E+01	.256E+02	.145E+02	.567E+03	.568E+03
6.00	.432	85.000	.520E+02	.133E-03	1.067	1.058	.210E+01	.370E+02	.176E+02	.671E+03	.672E+03
7.00	.447	85.000	.557E+02	.100E-04	1.067	1.058	.247E+01	.503E+02	.204E+02	.791E+03	.793E+03
8.00	.460	85.000	.582E+02	.786E-06	1.067	1.057	.290E+01	.658E+02	.227E+02	.929E+03	.930E+03
9.00	.472	85.000	.601E+02	.669E-07	1.067	1.057	.339E+01	.833E+02	.246E+02	.108E+04	.109E+04
10.00	.482	85.000	.614E+02	.626E-08	1.067	1.056	.393E+01	.103E+03	.262E+02	.126E+04	.126E+04
11.00	.491	85.000	.625E+02	.650E-09	1.067	1.056	.452E+01	.124E+03	.276E+02	.145E+04	.145E+04
12.00	.498	85.000	.633E+02	.748E-10	1.067	1.056	.516E+01	.148E+03	.287E+02	.165E+04	.165E+04
13.00	.504	85.000	.639E+02	.953E-11	1.067	1.056	.587E+01	.174E+03	.297E+02	.188E+04	.188E+04
14.00	.509	85.000	.644E+02	.134E-11	1.067	1.056	.662E+01	.202E+03	.305E+02	.212E+04	.212E+04
15.00	.513	85.000	.649E+02	.205E-12	1.067	1.056	.743E+01	.232E+03	.312E+02	.238E+04	.238E+04
16.00	.517	85.000	.652E+02	.343E-13	1.067	1.056	.830E+01	.264E+03	.318E+02	.266E+04	.266E+04
more than 99 iterations											
17.00	.521	85.000	.655E+02	.620E-14	1.067	1.056	.922E+01	.298E+03	.323E+02	.295E+04	.295E+04
18.00	.523	85.000	.657E+02	.121E-14	1.067	1.056	.102E+02	.334E+03	.327E+02	.326E+04	.327E+04
19.00	.526	85.000	.660E+02	.252E-15	1.067	1.056	.112E+02	.372E+03	.331E+02	.359E+04	.360E+04
more than 99 iterations											
20.00	.528	85.000	.661E+02	.562E-16	1.067	1.056	.123E+02	.412E+03	.334E+02	.394E+04	.394E+04
21.00	.530	85.000	.663E+02	.133E-16	1.067	1.056	.135E+02	.454E+03	.337E+02	.431E+04	.431E+04
more than 99 iterations											
22.00	.531	85.000	.664E+02	.332E-17	1.067	1.056	.147E+02	.498E+03	.340E+02	.469E+04	.469E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	80.000	.646E-02	.100E+01	1.067	1.067	.100E+01	.999E+00	.999E+00	.320E+03	.330E+03
1.05	.985	80.000	.658E+00	.100E+01	1.067	1.067	.100E+01	.107E+01	.107E+01	.321E+03	.331E+03
1.10	.943	80.000	.163E+01	.100E+01	1.067	1.067	.101E+01	.118E+01	.117E+01	.323E+03	.333E+03
1.15	.906	80.000	.263E+01	.998E+00	1.067	1.067	.102E+01	.129E+01	.127E+01	.325E+03	.334E+03
1.20	.873	80.000	.367E+01	.994E+00	1.067	1.067	.102E+01	.141E+01	.138E+01	.327E+03	.335E+03
1.25	.842	80.000	.473E+01	.988E+00	1.067	1.067	.103E+01	.153E+01	.149E+01	.329E+03	.336E+03
1.30	.815	80.000	.582E+01	.980E+00	1.067	1.066	.103E+01	.166E+01	.161E+01	.331E+03	.337E+03
1.35	.790	80.000	.692E+01	.970E+00	1.067	1.066	.104E+01	.179E+01	.173E+01	.333E+03	.339E+03
1.40	.768	80.000	.805E+01	.957E+00	1.067	1.066	.104E+01	.193E+01	.185E+01	.334E+03	.340E+03
1.45	.748	80.000	.919E+01	.942E+00	1.067	1.066	.105E+01	.207E+01	.197E+01	.336E+03	.342E+03
1.50	.729	80.000	.103E+02	.925E+00	1.067	1.066	.106E+01	.222E+01	.210E+01	.338E+03	.343E+03
1.60	.697	80.000	.127E+02	.883E+00	1.067	1.066	.107E+01	.253E+01	.237E+01	.342E+03	.346E+03
1.70	.671	80.000	.151E+02	.833E+00	1.067	1.066	.108E+01	.286E+01	.265E+01	.346E+03	.350E+03
1.80	.650	80.000	.174E+02	.778E+00	1.067	1.065	.109E+01	.321E+01	.294E+01	.349E+03	.353E+03
1.90	.633	80.000	.198E+02	.719E+00	1.067	1.065	.110E+01	.358E+01	.324E+01	.354E+03	.357E+03
2.00	.619	80.000	.221E+02	.657E+00	1.067	1.065	.112E+01	.398E+01	.356E+01	.358E+03	.361E+03
2.20	.600	80.000	.266E+02	.532E+00	1.067	1.065	.115E+01	.482E+01	.420E+01	.367E+03	.369E+03
2.40	.590	80.000	.307E+02	.415E+00	1.067	1.064	.118E+01	.574E+01	.488E+01	.376E+03	.379E+03
2.60	.587	80.000	.346E+02	.313E+00	1.067	1.064	.121E+01	.674E+01	.558E+01	.386E+03	.389E+03
2.80	.588	80.000	.380E+02	.229E+00	1.067	1.063	.124E+01	.783E+01	.630E+01	.397E+03	.399E+03
3.00	.593	80.000	.411E+02	.163E+00	1.067	1.063	.128E+01	.899E+01	.704E+01	.409E+03	.411E+03
3.20	.601	80.000	.439E+02	.113E+00	1.067	1.063	.132E+01	.102E+02	.778E+01	.421E+03	.423E+03
3.40	.610	80.000	.464E+02	.763E-01	1.067	1.062	.136E+01	.116E+02	.852E+01	.434E+03	.435E+03
3.60	.621	80.000	.485E+02	.507E-01	1.067	1.062	.140E+01	.130E+02	.927E+01	.448E+03	.449E+03
3.80	.633	80.000	.505E+02	.331E-01	1.067	1.061	.144E+01	.145E+02	.100E+02	.462E+03	.463E+03
4.00	.645	80.000	.522E+02	.213E-01	1.067	1.061	.149E+01	.160E+02	.108E+02	.477E+03	.478E+03
4.50	.677	80.000	.557E+02	.668E-02	1.067	1.060	.162E+01	.203E+02	.126E+02	.517E+03	.518E+03
5.00	.708	80.000	.583E+02	.198E-02	1.067	1.060	.176E+01	.251E+02	.143E+02	.562E+03	.563E+03
6.00	.764	80.000	.620E+02	.158E-03	1.067	1.058	.207E+01	.361E+02	.174E+02	.663E+03	.664E+03
7.00	.812	80.000	.643E+02	.123E-04	1.067	1.058	.244E+01	.492E+02	.202E+02	.781E+03	.782E+03
8.00	.851	80.000	.658E+02	.989E-06	1.067	1.057	.286E+01	.643E+02	.225E+02	.916E+03	.917E+03
9.00	.883	80.000	.669E+02	.858E-07	1.067	1.057	.334E+01	.814E+02	.244E+02	.107E+04	.107E+04
10.00	.909	80.000	.677E+02	.817E-08	1.067	1.056	.386E+01	.101E+03	.260E+02	.124E+04	.124E+04
more than 99 iterations											
11.00	.931	80.000	.683E+02	.859E-09	1.067	1.056	.444E+01	.122E+03	.274E+02	.142E+04	.142E+04
12.00	.948	80.000	.688E+02	.100E-09	1.067	1.056	.507E+01	.145E+03	.285E+02	.162E+04	.162E+04
more than 99 iterations											
13.00	.963	80.000	.691E+02	.129E-10	1.067	1.056	.576E+01	.170E+03	.295E+02	.184E+04	.184E+04
14.00	.976	80.000	.694E+02	.182E-11	1.067	1.056	.650E+01	.197E+03	.303E+02	.208E+04	.208E+04
15.00	.986	80.000	.696E+02	.281E-12	1.067	1.056	.729E+01	.226E+03	.311E+02	.233E+04	.233E+04
16.00	.995	80.000	.698E+02	.473E-13	1.067	1.056	.814E+01	.258E+03	.317E+02	.260E+04	.261E+04
17.00	1.002	80.000	.700E+02	.860E-14	1.067	1.056	.904E+01	.291E+03	.322E+02	.289E+04	.289E+04
18.00	1.009	80.000	.701E+02	.168E-14	1.067	1.056	.999E+01	.326E+03	.326E+02	.320E+04	.320E+04
more than 99 iterations											
19.00	1.015	80.000	.703E+02	.353E-15	1.067	1.056	.110E+02	.363E+03	.330E+02	.352E+04	.352E+04
20.00	1.020	80.000	.704E+02	.788E-16	1.067	1.056	.121E+02	.403E+03	.334E+02	.386E+04	.386E+04
more than 99 iterations											
21.00	1.024	80.000	.704E+02	.187E-16	1.067	1.056	.132E+02	.444E+03	.337E+02	.422E+04	.422E+04
more than 99 iterations											
22.00	1.028	80.000	.705E+02	.468E-17	1.067	1.056	.144E+02	.487E+03	.339E+02	.459E+04	.460E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	75.000	.568E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.05	1.024	75.000	.407E+00	.100E+01	1.067	1.067	.100E+01	.103E+01	.103E+01	.321E+03	.331E+03
1.10	.984	75.000	.177E+01	.100E+01	1.067	1.067	.101E+01	.113E+01	.112E+01	.323E+03	.332E+03
1.15	.948	75.000	.317E+01	.999E+00	1.067	1.067	.101E+01	.124E+01	.122E+01	.324E+03	.333E+03
1.20	.917	75.000	.460E+01	.996E+00	1.067	1.067	.102E+01	.135E+01	.133E+01	.326E+03	.334E+03
1.25	.890	75.000	.606E+01	.991E+00	1.067	1.067	.103E+01	.147E+01	.144E+01	.328E+03	.336E+03
1.30	.865	75.000	.753E+01	.985E+00	1.067	1.066	.103E+01	.160E+01	.155E+01	.330E+03	.337E+03
1.35	.844	75.000	.902E+01	.976E+00	1.067	1.066	.104E+01	.172E+01	.166E+01	.332E+03	.338E+03
1.40	.824	75.000	.105E+02	.964E+00	1.067	1.066	.104E+01	.186E+01	.178E+01	.333E+03	.339E+03
1.45	.808	75.000	.120E+02	.951E+00	1.067	1.066	.105E+01	.199E+01	.190E+01	.335E+03	.341E+03
1.50	.793	75.000	.135E+02	.935E+00	1.067	1.066	.105E+01	.214E+01	.203E+01	.337E+03	.342E+03
1.60	.769	75.000	.165E+02	.896E+00	1.067	1.066	.106E+01	.243E+01	.229E+01	.341E+03	.345E+03
1.70	.751	75.000	.194E+02	.850E+00	1.067	1.066	.108E+01	.275E+01	.256E+01	.344E+03	.349E+03
1.80	.738	75.000	.223E+02	.798E+00	1.067	1.065	.109E+01	.309E+01	.284E+01	.348E+03	.352E+03
1.90	.730	75.000	.250E+02	.741E+00	1.067	1.065	.110E+01	.345E+01	.313E+01	.352E+03	.356E+03
2.00	.725	75.000	.276E+02	.681E+00	1.067	1.065	.111E+01	.382E+01	.344E+01	.356E+03	.359E+03
2.20	.725	75.000	.324E+02	.558E+00	1.067	1.065	.114E+01	.463E+01	.407E+01	.365E+03	.368E+03
2.40	.733	75.000	.367E+02	.441E+00	1.067	1.064	.117E+01	.552E+01	.472E+01	.374E+03	.376E+03
2.60	.748	75.000	.404E+02	.337E+00	1.067	1.064	.120E+01	.649E+01	.541E+01	.384E+03	.386E+03
2.80	.766	75.000	.436E+02	.249E+00	1.067	1.063	.123E+01	.753E+01	.611E+01	.394E+03	.396E+03
3.00	.788	75.000	.463E+02	.180E+00	1.067	1.063	.127E+01	.865E+01	.683E+01	.405E+03	.407E+03
3.20	.811	75.000	.487E+02	.126E+00	1.067	1.063	.130E+01	.984E+01	.755E+01	.417E+03	.419E+03
3.40	.835	75.000	.507E+02	.868E-01	1.067	1.062	.134E+01	.111E+02	.828E+01	.430E+03	.431E+03
3.60	.859	75.000	.525E+02	.585E-01	1.067	1.062	.138E+01	.125E+02	.901E+01	.443E+03	.444E+03
3.80	.884	75.000	.540E+02	.388E-01	1.067	1.062	.143E+01	.139E+02	.974E+01	.457E+03	.458E+03
4.00	.909	75.000	.554E+02	.253E-01	1.067	1.061	.147E+01	.154E+02	.105E+02	.471E+03	.472E+03
4.50	.968	75.000	.581E+02	.820E-02	1.067	1.060	.159E+01	.195E+02	.122E+02	.510E+03	.511E+03
5.00	1.023	75.000	.600E+02	.251E-02	1.067	1.060	.173E+01	.241E+02	.140E+02	.553E+03	.554E+03
6.00	1.119	75.000	.627E+02	.212E-03	1.067	1.059	.203E+01	.347E+02	.171E+02	.651E+03	.652E+03
7.00	1.198	75.000	.643E+02	.173E-04	1.067	1.058	.239E+01	.473E+02	.198E+02	.764E+03	.765E+03
8.00	1.262	75.000	.654E+02	.145E-05	1.067	1.057	.279E+01	.618E+02	.221E+02	.894E+03	.895E+03
9.00	1.314	75.000	.662E+02	.130E-06	1.067	1.057	.325E+01	.783E+02	.241E+02	.104E+04	.104E+04
10.00	1.356	75.000	.668E+02	.127E-07	1.067	1.056	.376E+01	.967E+02	.257E+02	.120E+04	.120E+04
11.00	1.391	75.000	.672E+02	.137E-08	1.067	1.056	.431E+01	.117E+03	.271E+02	.138E+04	.138E+04
12.00	1.419	75.000	.675E+02	.163E-09	1.067	1.056	.492E+01	.139E+03	.283E+02	.158E+04	.158E+04
13.00	1.443	75.000	.677E+02	.213E-10	1.067	1.056	.558E+01	.164E+03	.293E+02	.179E+04	.179E+04
14.00	1.463	75.000	.679E+02	.305E-11	1.067	1.056	.629E+01	.190E+03	.301E+02	.201E+04	.202E+04
15.00	1.480	75.000	.681E+02	.477E-12	1.067	1.056	.706E+01	.218E+03	.309E+02	.226E+04	.226E+04
16.00	1.495	75.000	.682E+02	.810E-13	1.067	1.056	.787E+01	.248E+03	.315E+02	.252E+04	.252E+04
17.00	1.506	75.000	.684E+02	.149E-13	1.067	1.056	.874E+01	.280E+03	.320E+02	.280E+04	.280E+04
18.00	1.518	75.000	.684E+02	.293E-14	1.067	1.056	.966E+01	.314E+03	.325E+02	.309E+04	.309E+04
19.00	1.526	75.000	.685E+02	.619E-15	1.067	1.056	.106E+02	.349E+03	.329E+02	.340E+04	.340E+04
more than 99 iterations											
20.00	1.534	75.000	.686E+02	.139E-15	1.067	1.056	.116E+02	.387E+03	.332E+02	.373E+04	.373E+04
21.00	1.541	75.000	.687E+02	.331E-16	1.067	1.056	.127E+02	.427E+03	.336E+02	.407E+04	.408E+04
22.00	1.548	75.000	.687E+02	.834E-17	1.067	1.056	.139E+02	.469E+03	.338E+02	.443E+04	.444E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.454E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.05	1.051	70.000	.129E-01	.100E+01	1.067	1.067	.100E+01	.999E+00	.999E+00	.320E+03	.330E+03
1.10	1.038	70.000	.122E+01	.100E+01	1.067	1.067	.100E+01	.107E+01	.107E+01	.321E+03	.331E+03
1.15	1.005	70.000	.292E+01	.100E+01	1.067	1.067	.101E+01	.117E+01	.116E+01	.323E+03	.332E+03
1.20	.977	70.000	.465E+01	.998E+00	1.067	1.067	.102E+01	.128E+01	.126E+01	.325E+03	.334E+03
1.25	.952	70.000	.639E+01	.995E+00	1.067	1.067	.102E+01	.139E+01	.136E+01	.327E+03	.335E+03
1.30	.931	70.000	.814E+01	.990E+00	1.067	1.067	.103E+01	.151E+01	.147E+01	.329E+03	.336E+03
1.35	.913	70.000	.988E+01	.982E+00	1.067	1.066	.103E+01	.163E+01	.158E+01	.330E+03	.337E+03
1.40	.897	70.000	.116E+02	.973E+00	1.067	1.066	.104E+01	.175E+01	.169E+01	.332E+03	.338E+03
1.45	.884	70.000	.133E+02	.962E+00	1.067	1.066	.104E+01	.188E+01	.181E+01	.334E+03	.340E+03
1.50	.873	70.000	.150E+02	.948E+00	1.067	1.066	.105E+01	.202E+01	.193E+01	.335E+03	.341E+03
1.60	.858	70.000	.183E+02	.914E+00	1.067	1.066	.106E+01	.230E+01	.217E+01	.339E+03	.344E+03
1.70	.848	70.000	.215E+02	.872E+00	1.067	1.066	.107E+01	.260E+01	.243E+01	.343E+03	.347E+03
1.80	.845	70.000	.245E+02	.824E+00	1.067	1.066	.108E+01	.292E+01	.270E+01	.346E+03	.350E+03
1.90	.846	70.000	.273E+02	.771E+00	1.067	1.065	.109E+01	.326E+01	.298E+01	.350E+03	.354E+03
2.00	.850	70.000	.300E+02	.714E+00	1.067	1.065	.111E+01	.362E+01	.327E+01	.354E+03	.357E+03
2.20	.868	70.000	.347E+02	.594E+00	1.067	1.065	.113E+01	.438E+01	.387E+01	.362E+03	.365E+03
2.40	.894	70.000	.386E+02	.478E+00	1.067	1.064	.116E+01	.522E+01	.451E+01	.371E+03	.373E+03
2.60	.925	70.000	.420E+02	.372E+00	1.067	1.064	.119E+01	.614E+01	.516E+01	.380E+03	.382E+03
2.80	.960	70.000	.448E+02	.281E+00	1.067	1.064	.122E+01	.712E+01	.584E+01	.390E+03	.392E+03
3.00	.996	70.000	.472E+02	.206E+00	1.067	1.063	.125E+01	.818E+01	.653E+01	.401E+03	.403E+03
3.20	1.034	70.000	.492E+02	.148E+00	1.067	1.063	.129E+01	.931E+01	.723E+01	.412E+03	.414E+03
3.40	1.072	70.000	.509E+02	.104E+00	1.067	1.062	.132E+01	.105E+02	.794E+01	.424E+03	.425E+03
3.60	1.109	70.000	.524E+02	.711E-01	1.067	1.062	.136E+01	.118E+02	.866E+01	.436E+03	.438E+03
3.80	1.146	70.000	.537E+02	.480E-01	1.067	1.062	.140E+01	.132E+02	.937E+01	.449E+03	.451E+03
4.00	1.182	70.000	.547E+02	.319E-01	1.067	1.061	.145E+01	.146E+02	.101E+02	.463E+03	.464E+03
4.50	1.268	70.000	.569E+02	.109E-01	1.067	1.061	.156E+01	.185E+02	.118E+02	.500E+03	.501E+03
5.00	1.347	70.000	.585E+02	.347E-02	1.067	1.060	.169E+01	.228E+02	.135E+02	.541E+03	.542E+03
6.00	1.484	70.000	.606E+02	.319E-03	1.067	1.059	.198E+01	.329E+02	.166E+02	.634E+03	.635E+03
7.00	1.596	70.000	.619E+02	.278E-04	1.067	1.058	.232E+01	.448E+02	.193E+02	.742E+03	.743E+03
8.00	1.686	70.000	.628E+02	.247E-05	1.067	1.057	.270E+01	.585E+02	.217E+02	.865E+03	.866E+03
9.00	1.759	70.000	.634E+02	.233E-06	1.067	1.057	.313E+01	.741E+02	.236E+02	.100E+04	.100E+04
10.00	1.819	70.000	.638E+02	.237E-07	1.067	1.057	.361E+01	.915E+02	.253E+02	.116E+04	.116E+04
11.00	1.868	70.000	.641E+02	.264E-08	1.067	1.056	.414E+01	.111E+03	.267E+02	.133E+04	.133E+04
12.00	1.908	70.000	.644E+02	.322E-09	1.067	1.056	.472E+01	.132E+03	.279E+02	.151E+04	.151E+04
13.00	1.942	70.000	.646E+02	.431E-10	1.067	1.056	.534E+01	.155E+03	.290E+02	.171E+04	.171E+04
14.00	1.971	70.000	.647E+02	.631E-11	1.067	1.056	.602E+01	.179E+03	.298E+02	.193E+04	.193E+04
15.00	1.995	70.000	.649E+02	.100E-11	1.067	1.056	.674E+01	.206E+03	.306E+02	.216E+04	.216E+04
16.00	2.015	70.000	.650E+02	.173E-12	1.067	1.056	.751E+01	.234E+03	.312E+02	.240E+04	.241E+04
17.00	2.033	70.000	.651E+02	.322E-13	1.067	1.056	.833E+01	.265E+03	.318E+02	.267E+04	.267E+04
more than 99 iterations											
18.00	2.048	70.000	.651E+02	.642E-14	1.067	1.056	.920E+01	.297E+03	.323E+02	.294E+04	.295E+04
19.00	2.061	70.000	.652E+02	.137E-14	1.067	1.056	.101E+02	.331E+03	.327E+02	.324E+04	.324E+04
more than 99 iterations											
20.00	2.073	70.000	.652E+02	.310E-15	1.067	1.056	.111E+02	.366E+03	.331E+02	.355E+04	.355E+04
21.00	2.083	70.000	.653E+02	.745E-16	1.067	1.056	.121E+02	.404E+03	.334E+02	.387E+04	.388E+04
more than 99 iterations											
22.00	2.092	70.000	.653E+02	.189E-16	1.067	1.056	.132E+02	.443E+03	.337E+02	.422E+04	.422E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.350E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.05	1.050	65.000	.694E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.10	1.116	65.000	-.377E+00	.100E+01	1.067	1.067	.999E+00	.982E+00	.983E+00	.320E+03	.331E+03
1.15	1.076	65.000	.181E+01	.100E+01	1.067	1.067	.101E+01	.109E+01	.108E+01	.322E+03	.332E+03
1.20	1.049	65.000	.374E+01	.999E+00	1.067	1.067	.101E+01	.119E+01	.118E+01	.324E+03	.333E+03
1.25	1.028	65.000	.568E+01	.998E+00	1.067	1.067	.102E+01	.129E+01	.127E+01	.325E+03	.334E+03
1.30	1.009	65.000	.760E+01	.995E+00	1.067	1.067	.102E+01	.140E+01	.137E+01	.327E+03	.335E+03
1.35	.994	65.000	.950E+01	.989E+00	1.067	1.067	.103E+01	.151E+01	.147E+01	.329E+03	.336E+03
1.40	.983	65.000	.114E+02	.982E+00	1.067	1.066	.103E+01	.163E+01	.158E+01	.330E+03	.337E+03
1.45	.973	65.000	.132E+02	.973E+00	1.067	1.066	.104E+01	.175E+01	.169E+01	.332E+03	.338E+03
1.50	.966	65.000	.150E+02	.963E+00	1.067	1.066	.104E+01	.188E+01	.180E+01	.334E+03	.340E+03
1.60	.959	65.000	.185E+02	.935E+00	1.067	1.066	.105E+01	.214E+01	.203E+01	.337E+03	.342E+03
1.70	.958	65.000	.217E+02	.899E+00	1.067	1.066	.106E+01	.242E+01	.227E+01	.340E+03	.345E+03
1.80	.963	65.000	.247E+02	.856E+00	1.067	1.066	.107E+01	.272E+01	.253E+01	.344E+03	.348E+03
1.90	.973	65.000	.275E+02	.807E+00	1.067	1.065	.109E+01	.303E+01	.279E+01	.347E+03	.351E+03
2.00	.986	65.000	.300E+02	.754E+00	1.067	1.065	.110E+01	.336E+01	.306E+01	.351E+03	.355E+03
2.20	1.021	65.000	.345E+02	.641E+00	1.067	1.065	.112E+01	.407E+01	.363E+01	.359E+03	.362E+03
2.40	1.063	65.000	.381E+02	.527E+00	1.067	1.065	.115E+01	.486E+01	.423E+01	.367E+03	.370E+03
2.60	1.110	65.000	.412E+02	.419E+00	1.067	1.064	.117E+01	.571E+01	.486E+01	.376E+03	.378E+03
2.80	1.160	65.000	.437E+02	.324E+00	1.067	1.064	.120E+01	.662E+01	.550E+01	.385E+03	.387E+03
3.00	1.210	65.000	.458E+02	.244E+00	1.067	1.063	.123E+01	.761E+01	.616E+01	.395E+03	.397E+03
3.20	1.262	65.000	.476E+02	.179E+00	1.067	1.063	.127E+01	.866E+01	.683E+01	.406E+03	.407E+03
3.40	1.312	65.000	.491E+02	.129E+00	1.067	1.063	.130E+01	.978E+01	.751E+01	.417E+03	.418E+03
3.60	1.363	65.000	.503E+02	.906E-01	1.067	1.062	.134E+01	.110E+02	.820E+01	.428E+03	.430E+03
3.80	1.412	65.000	.514E+02	.627E-01	1.067	1.062	.138E+01	.122E+02	.889E+01	.440E+03	.442E+03
4.00	1.459	65.000	.524E+02	.427E-01	1.067	1.062	.142E+01	.136E+02	.957E+01	.453E+03	.455E+03
4.50	1.573	65.000	.542E+02	.155E-01	1.067	1.061	.152E+01	.172E+02	.113E+02	.488E+03	.489E+03
5.00	1.677	65.000	.556E+02	.524E-02	1.067	1.060	.164E+01	.212E+02	.129E+02	.526E+03	.527E+03
6.00	1.856	65.000	.574E+02	.535E-03	1.067	1.059	.191E+01	.306E+02	.160E+02	.613E+03	.614E+03
7.00	2.003	65.000	.585E+02	.511E-04	1.067	1.058	.223E+01	.416E+02	.187E+02	.713E+03	.714E+03
8.00	2.122	65.000	.592E+02	.490E-05	1.067	1.057	.259E+01	.544E+02	.210E+02	.828E+03	.829E+03
9.00	2.220	65.000	.597E+02	.491E-06	1.067	1.057	.299E+01	.689E+02	.230E+02	.957E+03	.958E+03
10.00	2.299	65.000	.600E+02	.528E-07	1.067	1.057	.344E+01	.851E+02	.248E+02	.110E+04	.110E+04
11.00	2.365	65.000	.603E+02	.615E-08	1.067	1.056	.393E+01	.103E+03	.262E+02	.126E+04	.126E+04
12.00	2.419	65.000	.605E+02	.781E-09	1.067	1.056	.447E+01	.123E+03	.275E+02	.143E+04	.143E+04
13.00	2.465	65.000	.607E+02	.108E-09	1.067	1.056	.505E+01	.144E+03	.285E+02	.162E+04	.162E+04
14.00	2.503	65.000	.608E+02	.162E-10	1.067	1.056	.568E+01	.167E+03	.294E+02	.182E+04	.182E+04
15.00	2.536	65.000	.609E+02	.265E-11	1.067	1.056	.635E+01	.192E+03	.302E+02	.203E+04	.203E+04
16.00	2.563	65.000	.610E+02	.466E-12	1.067	1.056	.707E+01	.218E+03	.309E+02	.226E+04	.226E+04
17.00	2.588	65.000	.611E+02	.882E-13	1.067	1.056	.783E+01	.246E+03	.315E+02	.251E+04	.251E+04
more than 99 iterations											
18.00	2.608	65.000	.612E+02	.179E-13	1.067	1.056	.864E+01	.276E+03	.320E+02	.276E+04	.277E+04
19.00	2.626	65.000	.612E+02	.386E-14	1.067	1.056	.949E+01	.308E+03	.324E+02	.304E+04	.304E+04
20.00	2.641	65.000	.613E+02	.886E-15	1.067	1.056	.104E+02	.341E+03	.328E+02	.333E+04	.333E+04
21.00	2.655	65.000	.613E+02	.215E-15	1.067	1.056	.113E+02	.376E+03	.331E+02	.363E+04	.363E+04
22.00	2.667	65.000	.613E+02	.550E-16	1.067	1.056	.123E+02	.413E+03	.334E+02	.395E+04	.395E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.261E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.05	1.050	60.000	.433E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.10	1.101	60.000	.828E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.15	1.166	60.000	-.451E+00	.100E+01	1.067	1.067	.999E+00	.981E+00	.982E+00	.320E+03	.331E+03
1.20	1.134	60.000	.189E+01	.100E+01	1.067	1.067	.100E+01	.108E+01	.108E+01	.322E+03	.332E+03
1.25	1.114	60.000	.394E+01	.100E+01	1.067	1.067	.101E+01	.118E+01	.117E+01	.323E+03	.333E+03
1.30	1.099	60.000	.597E+01	.998E+00	1.067	1.067	.102E+01	.128E+01	.126E+01	.325E+03	.334E+03
1.35	1.087	60.000	.796E+01	.995E+00	1.067	1.067	.102E+01	.138E+01	.135E+01	.327E+03	.335E+03
1.40	1.078	60.000	.990E+01	.991E+00	1.067	1.067	.103E+01	.149E+01	.145E+01	.328E+03	.336E+03
1.45	1.072	60.000	.118E+02	.985E+00	1.067	1.066	.103E+01	.160E+01	.155E+01	.330E+03	.337E+03
1.50	1.068	60.000	.136E+02	.977E+00	1.067	1.066	.104E+01	.171E+01	.165E+01	.331E+03	.338E+03
1.60	1.068	60.000	.171E+02	.955E+00	1.067	1.066	.105E+01	.195E+01	.187E+01	.335E+03	.340E+03
1.70	1.075	60.000	.204E+02	.926E+00	1.067	1.066	.106E+01	.221E+01	.209E+01	.338E+03	.343E+03
1.80	1.088	60.000	.233E+02	.891E+00	1.067	1.066	.107E+01	.248E+01	.232E+01	.341E+03	.346E+03
1.90	1.105	60.000	.260E+02	.848E+00	1.067	1.066	.108E+01	.276E+01	.257E+01	.344E+03	.349E+03
2.00	1.126	60.000	.285E+02	.802E+00	1.067	1.065	.109E+01	.307E+01	.282E+01	.348E+03	.352E+03
2.20	1.177	60.000	.327E+02	.697E+00	1.067	1.065	.111E+01	.372E+01	.335E+01	.355E+03	.358E+03
2.40	1.234	60.000	.361E+02	.587E+00	1.067	1.065	.113E+01	.443E+01	.391E+01	.363E+03	.366E+03
2.60	1.296	60.000	.389E+02	.480E+00	1.067	1.064	.116E+01	.521E+01	.449E+01	.371E+03	.373E+03
2.80	1.360	60.000	.412E+02	.381E+00	1.067	1.064	.119E+01	.604E+01	.510E+01	.379E+03	.382E+03
3.00	1.425	60.000	.432E+02	.295E+00	1.067	1.064	.121E+01	.694E+01	.572E+01	.388E+03	.390E+03
3.20	1.490	60.000	.448E+02	.223E+00	1.067	1.063	.124E+01	.791E+01	.636E+01	.398E+03	.400E+03
3.40	1.554	60.000	.461E+02	.165E+00	1.067	1.063	.128E+01	.893E+01	.700E+01	.408E+03	.410E+03
3.60	1.617	60.000	.472E+02	.120E+00	1.067	1.063	.131E+01	.100E+02	.765E+01	.419E+03	.421E+03
3.80	1.678	60.000	.482E+02	.857E-01	1.067	1.062	.134E+01	.112E+02	.831E+01	.430E+03	.432E+03
4.00	1.738	60.000	.491E+02	.602E-01	1.067	1.062	.138E+01	.124E+02	.896E+01	.442E+03	.443E+03
4.50	1.879	60.000	.507E+02	.234E-01	1.067	1.061	.148E+01	.157E+02	.106E+02	.474E+03	.475E+03
5.00	2.010	60.000	.519E+02	.853E-02	1.067	1.060	.159E+01	.194E+02	.122E+02	.508E+03	.510E+03
6.00	2.236	60.000	.535E+02	.994E-03	1.067	1.059	.184E+01	.279E+02	.152E+02	.588E+03	.589E+03
7.00	2.421	60.000	.545E+02	.106E-03	1.067	1.058	.213E+01	.380E+02	.179E+02	.680E+03	.682E+03
8.00	2.574	60.000	.551E+02	.112E-04	1.067	1.058	.246E+01	.497E+02	.202E+02	.786E+03	.787E+03
9.00	2.699	60.000	.556E+02	.122E-05	1.067	1.057	.282E+01	.629E+02	.223E+02	.904E+03	.905E+03
10.00	2.801	60.000	.559E+02	.141E-06	1.067	1.057	.323E+01	.777E+02	.240E+02	.103E+04	.104E+04
11.00	2.887	60.000	.561E+02	.174E-07	1.067	1.056	.368E+01	.940E+02	.255E+02	.118E+04	.118E+04
12.00	2.958	60.000	.563E+02	.232E-08	1.067	1.056	.417E+01	.112E+03	.268E+02	.134E+04	.134E+04
13.00	3.018	60.000	.565E+02	.335E-09	1.067	1.056	.471E+01	.131E+03	.279E+02	.151E+04	.151E+04
14.00	3.068	60.000	.566E+02	.523E-10	1.067	1.056	.528E+01	.152E+03	.289E+02	.169E+04	.169E+04
15.00	3.111	60.000	.567E+02	.879E-11	1.067	1.056	.589E+01	.175E+03	.297E+02	.189E+04	.189E+04
16.00	3.148	60.000	.567E+02	.159E-11	1.067	1.056	.655E+01	.199E+03	.304E+02	.210E+04	.210E+04
more than 99 iterations											
17.00	3.179	60.000	.568E+02	.308E-12	1.067	1.056	.725E+01	.225E+03	.310E+02	.232E+04	.232E+04
18.00	3.206	60.000	.569E+02	.637E-13	1.067	1.056	.799E+01	.252E+03	.316E+02	.256E+04	.256E+04
more than 99 iterations											
19.00	3.231	60.000	.569E+02	.140E-13	1.067	1.056	.877E+01	.281E+03	.320E+02	.281E+04	.281E+04
20.00	3.251	60.000	.569E+02	.327E-14	1.067	1.056	.959E+01	.311E+03	.325E+02	.307E+04	.307E+04
21.00	3.268	60.000	.570E+02	.805E-15	1.067	1.056	.105E+02	.343E+03	.328E+02	.335E+04	.335E+04
22.00	3.285	60.000	.570E+02	.208E-15	1.067	1.056	.114E+02	.377E+03	.331E+02	.364E+04	.364E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.187E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.05	1.050	55.000	.289E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.10	1.100	55.000	.458E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.15	1.150	55.000	.805E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
more than 99 iterations											
1.20	1.227	55.000	-.833E+00	.996E+00	1.067	1.067	.998E+00	.968E+00	.970E+00	.319E+03	.330E+03
1.25	1.212	55.000	.126E+01	.100E+01	1.067	1.067	.100E+01	.105E+01	.105E+01	.321E+03	.331E+03
1.30	1.198	55.000	.334E+01	.100E+01	1.067	1.067	.101E+01	.114E+01	.113E+01	.323E+03	.332E+03
1.35	1.188	55.000	.538E+01	.999E+00	1.067	1.067	.101E+01	.123E+01	.121E+01	.324E+03	.333E+03
1.40	1.182	55.000	.736E+01	.997E+00	1.067	1.067	.102E+01	.133E+01	.130E+01	.326E+03	.334E+03
1.45	1.178	55.000	.928E+01	.994E+00	1.067	1.067	.102E+01	.142E+01	.139E+01	.327E+03	.335E+03
1.50	1.178	55.000	.111E+02	.989E+00	1.067	1.067	.103E+01	.153E+01	.149E+01	.329E+03	.336E+03
1.60	1.184	55.000	.146E+02	.974E+00	1.067	1.066	.104E+01	.174E+01	.168E+01	.332E+03	.338E+03
1.70	1.197	55.000	.178E+02	.953E+00	1.067	1.066	.105E+01	.197E+01	.188E+01	.335E+03	.341E+03
1.80	1.217	55.000	.207E+02	.926E+00	1.067	1.066	.106E+01	.221E+01	.210E+01	.338E+03	.343E+03
1.90	1.241	55.000	.234E+02	.892E+00	1.067	1.066	.107E+01	.247E+01	.232E+01	.341E+03	.346E+03
2.00	1.269	55.000	.257E+02	.852E+00	1.067	1.066	.108E+01	.274E+01	.255E+01	.344E+03	.348E+03
2.20	1.334	55.000	.298E+02	.761E+00	1.067	1.065	.110E+01	.332E+01	.303E+01	.351E+03	.354E+03
2.40	1.405	55.000	.331E+02	.659E+00	1.067	1.065	.112E+01	.396E+01	.354E+01	.358E+03	.361E+03
2.60	1.481	55.000	.357E+02	.555E+00	1.067	1.065	.114E+01	.465E+01	.408E+01	.365E+03	.368E+03
2.80	1.559	55.000	.379E+02	.455E+00	1.067	1.064	.116E+01	.540E+01	.464E+01	.373E+03	.375E+03
3.00	1.638	55.000	.397E+02	.364E+00	1.067	1.064	.119E+01	.621E+01	.522E+01	.381E+03	.383E+03
3.20	1.716	55.000	.412E+02	.285E+00	1.067	1.064	.122E+01	.707E+01	.581E+01	.390E+03	.392E+03
3.40	1.793	55.000	.424E+02	.218E+00	1.067	1.063	.125E+01	.799E+01	.641E+01	.399E+03	.401E+03
3.60	1.869	55.000	.435E+02	.164E+00	1.067	1.063	.128E+01	.896E+01	.702E+01	.408E+03	.410E+03
3.80	1.943	55.000	.444E+02	.121E+00	1.067	1.063	.131E+01	.998E+01	.763E+01	.419E+03	.420E+03
4.00	2.015	55.000	.452E+02	.882E-01	1.067	1.062	.134E+01	.111E+02	.825E+01	.429E+03	.431E+03
4.50	2.187	55.000	.467E+02	.374E-01	1.067	1.062	.143E+01	.140E+02	.980E+01	.458E+03	.459E+03
5.00	2.345	55.000	.478E+02	.148E-01	1.067	1.061	.153E+01	.173E+02	.113E+02	.489E+03	.490E+03
6.00	2.622	55.000	.493E+02	.202E-02	1.067	1.060	.175E+01	.250E+02	.142E+02	.561E+03	.562E+03
7.00	2.852	55.000	.502E+02	.249E-03	1.067	1.059	.201E+01	.340E+02	.169E+02	.644E+03	.645E+03
8.00	3.042	55.000	.508E+02	.297E-04	1.067	1.058	.231E+01	.444E+02	.193E+02	.739E+03	.740E+03
9.00	3.199	55.000	.512E+02	.358E-05	1.067	1.057	.264E+01	.563E+02	.213E+02	.845E+03	.846E+03
10.00	3.330	55.000	.515E+02	.451E-06	1.067	1.057	.301E+01	.695E+02	.231E+02	.962E+03	.963E+03
11.00	3.439	55.000	.517E+02	.600E-07	1.067	1.057	.341E+01	.841E+02	.247E+02	.109E+04	.109E+04
12.00	3.531	55.000	.519E+02	.852E-08	1.067	1.056	.385E+01	.100E+03	.260E+02	.123E+04	.123E+04
13.00	3.608	55.000	.520E+02	.130E-08	1.067	1.056	.433E+01	.118E+03	.272E+02	.138E+04	.139E+04
14.00	3.673	55.000	.521E+02	.212E-09	1.067	1.056	.484E+01	.136E+03	.282E+02	.155E+04	.155E+04
15.00	3.729	55.000	.522E+02	.372E-10	1.067	1.056	.539E+01	.157E+03	.290E+02	.173E+04	.173E+04
16.00	3.777	55.000	.523E+02	.696E-11	1.067	1.056	.598E+01	.178E+03	.298E+02	.191E+04	.192E+04
17.00	3.818	55.000	.523E+02	.139E-11	1.067	1.056	.660E+01	.201E+03	.305E+02	.211E+04	.212E+04
18.00	3.854	55.000	.524E+02	.296E-12	1.067	1.056	.727E+01	.226E+03	.310E+02	.233E+04	.233E+04
more than 99 iterations											
19.00	3.886	55.000	.524E+02	.666E-13	1.067	1.056	.797E+01	.251E+03	.315E+02	.255E+04	.255E+04
20.00	3.912	55.000	.524E+02	.159E-13	1.067	1.056	.870E+01	.278E+03	.320E+02	.278E+04	.279E+04
21.00	3.938	55.000	.525E+02	.398E-14	1.067	1.056	.948E+01	.307E+03	.324E+02	.303E+04	.304E+04
22.00	3.959	55.000	.525E+02	.105E-14	1.067	1.056	.103E+02	.337E+03	.328E+02	.329E+04	.329E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	.125E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.05	1.050	50.000	.189E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.10	1.100	50.000	.277E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.15	1.150	50.000	.410E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.20	1.200	50.000	.642E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.25	1.251	50.000	.113E-01	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.30	1.315	50.000	-.517E+00	.100E+01	1.067	1.067	.999E+00	.981E+00	.982E+00	.320E+03	.331E+03
1.35	1.299	50.000	.186E+01	.100E+01	1.067	1.067	.100E+01	.107E+01	.107E+01	.321E+03	.331E+03
1.40	1.294	50.000	.385E+01	.999E+00	1.067	1.067	.101E+01	.115E+01	.114E+01	.323E+03	.332E+03
1.45	1.292	50.000	.579E+01	.999E+00	1.067	1.067	.101E+01	.124E+01	.122E+01	.324E+03	.333E+03
1.50	1.294	50.000	.765E+01	.996E+00	1.067	1.067	.102E+01	.133E+01	.131E+01	.326E+03	.334E+03
1.60	1.304	50.000	.111E+02	.989E+00	1.067	1.067	.103E+01	.152E+01	.148E+01	.329E+03	.336E+03
1.70	1.322	50.000	.143E+02	.976E+00	1.067	1.066	.104E+01	.172E+01	.166E+01	.332E+03	.338E+03
1.80	1.348	50.000	.172E+02	.957E+00	1.067	1.066	.104E+01	.193E+01	.185E+01	.334E+03	.340E+03
1.90	1.378	50.000	.198E+02	.933E+00	1.067	1.066	.105E+01	.216E+01	.205E+01	.337E+03	.343E+03
2.00	1.412	50.000	.221E+02	.902E+00	1.067	1.066	.106E+01	.239E+01	.225E+01	.340E+03	.345E+03
2.20	1.489	50.000	.261E+02	.828E+00	1.067	1.066	.108E+01	.290E+01	.268E+01	.346E+03	.350E+03
2.40	1.574	50.000	.292E+02	.739E+00	1.067	1.065	.110E+01	.346E+01	.314E+01	.352E+03	.356E+03
2.60	1.663	50.000	.318E+02	.642E+00	1.067	1.065	.112E+01	.407E+01	.363E+01	.359E+03	.362E+03
2.80	1.755	50.000	.339E+02	.545E+00	1.067	1.065	.114E+01	.472E+01	.413E+01	.366E+03	.368E+03
3.00	1.846	50.000	.356E+02	.452E+00	1.067	1.064	.117E+01	.542E+01	.465E+01	.373E+03	.375E+03
3.20	1.938	50.000	.371E+02	.367E+00	1.067	1.064	.119E+01	.618E+01	.519E+01	.381E+03	.383E+03
3.40	2.028	50.000	.383E+02	.292E+00	1.067	1.064	.121E+01	.698E+01	.574E+01	.389E+03	.391E+03
3.60	2.118	50.000	.393E+02	.229E+00	1.067	1.063	.124E+01	.783E+01	.631E+01	.397E+03	.399E+03
3.80	2.205	50.000	.402E+02	.176E+00	1.067	1.063	.127E+01	.873E+01	.688E+01	.406E+03	.408E+03
4.00	2.290	50.000	.409E+02	.133E+00	1.067	1.063	.130E+01	.967E+01	.745E+01	.416E+03	.417E+03
4.50	2.493	50.000	.424E+02	.623E-01	1.067	1.062	.138E+01	.123E+02	.890E+01	.441E+03	.442E+03
5.00	2.681	50.000	.434E+02	.272E-01	1.067	1.061	.146E+01	.151E+02	.103E+02	.468E+03	.470E+03
6.00	3.015	50.000	.448E+02	.447E-02	1.067	1.060	.166E+01	.218E+02	.131E+02	.532E+03	.533E+03
7.00	3.295	50.000	.457E+02	.650E-03	1.067	1.059	.189E+01	.297E+02	.157E+02	.605E+03	.606E+03
8.00	3.529	50.000	.462E+02	.895E-04	1.067	1.058	.215E+01	.389E+02	.181E+02	.688E+03	.689E+03
9.00	3.725	50.000	.466E+02	.123E-04	1.067	1.058	.244E+01	.492E+02	.202E+02	.781E+03	.782E+03
10.00	3.890	50.000	.469E+02	.172E-05	1.067	1.057	.276E+01	.608E+02	.220E+02	.885E+03	.886E+03
11.00	4.028	50.000	.471E+02	.251E-06	1.067	1.057	.312E+01	.736E+02	.236E+02	.998E+03	.999E+03
12.00	4.145	50.000	.473E+02	.387E-07	1.067	1.057	.351E+01	.876E+02	.250E+02	.112E+04	.112E+04
13.00	4.244	50.000	.474E+02	.631E-08	1.067	1.056	.392E+01	.103E+03	.262E+02	.126E+04	.126E+04
14.00	4.329	50.000	.475E+02	.110E-08	1.067	1.056	.437E+01	.119E+03	.273E+02	.140E+04	.140E+04
15.00	4.402	50.000	.476E+02	.202E-09	1.067	1.056	.486E+01	.137E+03	.282E+02	.155E+04	.156E+04
16.00	4.465	50.000	.476E+02	.396E-10	1.067	1.056	.537E+01	.156E+03	.290E+02	.172E+04	.172E+04
17.00	4.519	50.000	.477E+02	.824E-11	1.067	1.056	.592E+01	.176E+03	.297E+02	.189E+04	.190E+04
18.00	4.567	50.000	.478E+02	.181E-11	1.067	1.056	.650E+01	.197E+03	.303E+02	.208E+04	.208E+04
19.00	4.609	50.000	.478E+02	.421E-12	1.067	1.056	.711E+01	.220E+03	.309E+02	.228E+04	.228E+04
20.00	4.645	50.000	.478E+02	.103E-12	1.067	1.056	.775E+01	.243E+03	.314E+02	.248E+04	.248E+04
more than 99 iterations											
21.00	4.677	50.000	.479E+02	.265E-13	1.067	1.056	.843E+01	.268E+03	.318E+02	.270E+04	.270E+04
22.00	4.705	50.000	.479E+02	.712E-14	1.067	1.056	.914E+01	.295E+03	.322E+02	.293E+04	.293E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.734E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.05	1.050	45.000	.112E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.10	1.100	45.000	.162E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.15	1.150	45.000	.230E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.20	1.200	45.000	.323E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.25	1.250	45.000	.462E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.30	1.300	45.000	.700E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.35	1.351	45.000	.112E-01	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.40	1.418	45.000	-.692E+00	.100E+01	1.067	1.067	.998E+00	.975E+00	.976E+00	.319E+03	.330E+03
1.45	1.415	45.000	.141E+01	.100E+01	1.067	1.067	.100E+01	.105E+01	.105E+01	.321E+03	.331E+03
1.50	1.417	45.000	.326E+01	.100E+01	1.067	1.067	.101E+01	.113E+01	.112E+01	.322E+03	.332E+03
1.60	1.430	45.000	.676E+01	.998E+00	1.067	1.067	.102E+01	.129E+01	.127E+01	.325E+03	.334E+03
1.70	1.452	45.000	.994E+01	.992E+00	1.067	1.067	.102E+01	.146E+01	.142E+01	.328E+03	.335E+03
1.80	1.481	45.000	.128E+02	.982E+00	1.067	1.066	.103E+01	.164E+01	.159E+01	.330E+03	.337E+03
1.90	1.515	45.000	.154E+02	.967E+00	1.067	1.066	.104E+01	.183E+01	.176E+01	.333E+03	.339E+03
2.00	1.555	45.000	.177E+02	.947E+00	1.067	1.066	.105E+01	.203E+01	.194E+01	.336E+03	.341E+03
2.20	1.643	45.000	.216E+02	.892E+00	1.067	1.066	.107E+01	.247E+01	.232E+01	.341E+03	.346E+03
2.40	1.739	45.000	.248E+02	.821E+00	1.067	1.066	.108E+01	.294E+01	.272E+01	.346E+03	.351E+03
2.60	1.841	45.000	.274E+02	.739E+00	1.067	1.065	.110E+01	.346E+01	.314E+01	.352E+03	.356E+03
2.80	1.945	45.000	.294E+02	.650E+00	1.067	1.065	.112E+01	.402E+01	.359E+01	.358E+03	.361E+03
3.00	2.050	45.000	.311E+02	.560E+00	1.067	1.065	.114E+01	.462E+01	.405E+01	.365E+03	.367E+03
3.20	2.154	45.000	.326E+02	.473E+00	1.067	1.064	.116E+01	.526E+01	.453E+01	.371E+03	.374E+03
3.40	2.258	45.000	.337E+02	.392E+00	1.067	1.064	.118E+01	.594E+01	.503E+01	.378E+03	.381E+03
3.60	2.360	45.000	.348E+02	.320E+00	1.067	1.064	.120E+01	.666E+01	.553E+01	.386E+03	.388E+03
3.80	2.461	45.000	.356E+02	.257E+00	1.067	1.063	.123E+01	.743E+01	.605E+01	.393E+03	.395E+03
4.00	2.560	45.000	.363E+02	.203E+00	1.067	1.063	.125E+01	.824E+01	.657E+01	.401E+03	.403E+03
4.50	2.796	45.000	.378E+02	.106E+00	1.067	1.062	.132E+01	.104E+02	.789E+01	.423E+03	.425E+03
5.00	3.017	45.000	.388E+02	.518E-01	1.067	1.062	.140E+01	.129E+02	.923E+01	.447E+03	.448E+03
6.00	3.413	45.000	.402E+02	.105E-01	1.067	1.061	.157E+01	.186E+02	.119E+02	.501E+03	.502E+03
7.00	3.750	45.000	.410E+02	.185E-02	1.067	1.060	.176E+01	.253E+02	.144E+02	.564E+03	.565E+03
8.00	4.037	45.000	.416E+02	.304E-03	1.067	1.059	.199E+01	.331E+02	.167E+02	.636E+03	.637E+03
9.00	4.280	45.000	.419E+02	.485E-04	1.067	1.058	.224E+01	.419E+02	.187E+02	.716E+03	.717E+03
10.00	4.486	45.000	.422E+02	.777E-05	1.067	1.058	.251E+01	.518E+02	.206E+02	.804E+03	.805E+03
11.00	4.661	45.000	.424E+02	.127E-05	1.067	1.057	.282E+01	.627E+02	.222E+02	.901E+03	.903E+03
12.00	4.810	45.000	.426E+02	.217E-06	1.067	1.057	.315E+01	.746E+02	.237E+02	.101E+04	.101E+04
13.00	4.938	45.000	.427E+02	.387E-07	1.067	1.057	.351E+01	.876E+02	.250E+02	.112E+04	.112E+04
14.00	5.048	45.000	.428E+02	.724E-08	1.067	1.056	.389E+01	.102E+03	.261E+02	.124E+04	.125E+04
15.00	5.144	45.000	.429E+02	.143E-08	1.067	1.056	.430E+01	.117E+03	.271E+02	.138E+04	.138E+04
16.00	5.226	45.000	.430E+02	.297E-09	1.067	1.056	.474E+01	.133E+03	.280E+02	.152E+04	.152E+04
17.00	5.297	45.000	.430E+02	.650E-10	1.067	1.056	.521E+01	.150E+03	.288E+02	.167E+04	.167E+04
18.00	5.361	45.000	.431E+02	.150E-10	1.067	1.056	.570E+01	.168E+03	.295E+02	.183E+04	.183E+04
19.00	5.416	45.000	.431E+02	.362E-11	1.067	1.056	.623E+01	.187E+03	.301E+02	.199E+04	.199E+04
20.00	5.465	45.000	.431E+02	.919E-12	1.067	1.056	.678E+01	.207E+03	.306E+02	.217E+04	.217E+04
21.00	5.508	45.000	.432E+02	.244E-12	1.067	1.056	.735E+01	.229E+03	.311E+02	.235E+04	.236E+04
22.00	5.546	45.000	.432E+02	.675E-13	1.067	1.056	.796E+01	.251E+03	.315E+02	.255E+04	.255E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	40.000	.293E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.05	1.050	40.000	.548E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.10	1.100	40.000	.844E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.15	1.150	40.000	.121E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.20	1.200	40.000	.167E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.25	1.250	40.000	.226E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.30	1.300	40.000	.304E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.35	1.350	40.000	.413E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.40	1.400	40.000	.578E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.45	1.451	40.000	.851E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.50	1.501	40.000	.158E-01	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.60	1.564	40.000	.154E+01	.100E+01	1.067	1.067	.100E+01	.106E+01	.106E+01	.321E+03	.331E+03
1.70	1.587	40.000	.474E+01	.999E+00	1.067	1.067	.101E+01	.120E+01	.119E+01	.324E+03	.333E+03
1.80	1.618	40.000	.765E+01	.996E+00	1.067	1.067	.102E+01	.135E+01	.132E+01	.326E+03	.334E+03
1.90	1.655	40.000	.103E+02	.990E+00	1.067	1.067	.103E+01	.151E+01	.147E+01	.329E+03	.336E+03
2.00	1.698	40.000	.126E+02	.979E+00	1.067	1.066	.103E+01	.167E+01	.162E+01	.331E+03	.338E+03
2.20	1.794	40.000	.166E+02	.947E+00	1.067	1.066	.105E+01	.203E+01	.194E+01	.336E+03	.341E+03
2.40	1.901	40.000	.198E+02	.898E+00	1.067	1.066	.106E+01	.243E+01	.228E+01	.340E+03	.345E+03
2.60	2.013	40.000	.224E+02	.835E+00	1.067	1.066	.108E+01	.285E+01	.264E+01	.345E+03	.350E+03
2.80	2.129	40.000	.245E+02	.762E+00	1.067	1.065	.110E+01	.331E+01	.302E+01	.351E+03	.354E+03
3.00	2.246	40.000	.262E+02	.683E+00	1.067	1.065	.111E+01	.381E+01	.342E+01	.356E+03	.359E+03
3.20	2.363	40.000	.277E+02	.601E+00	1.067	1.065	.113E+01	.434E+01	.384E+01	.362E+03	.365E+03
3.40	2.480	40.000	.289E+02	.520E+00	1.067	1.065	.115E+01	.490E+01	.427E+01	.368E+03	.370E+03
3.60	2.596	40.000	.299E+02	.443E+00	1.067	1.064	.117E+01	.550E+01	.471E+01	.374E+03	.376E+03
3.80	2.710	40.000	.308E+02	.372E+00	1.067	1.064	.119E+01	.613E+01	.516E+01	.380E+03	.382E+03
4.00	2.822	40.000	.315E+02	.308E+00	1.067	1.064	.121E+01	.680E+01	.562E+01	.387E+03	.389E+03
4.50	3.093	40.000	.330E+02	.181E+00	1.067	1.063	.127E+01	.862E+01	.681E+01	.405E+03	.407E+03
5.00	3.349	40.000	.340E+02	.998E-01	1.067	1.062	.133E+01	.106E+02	.802E+01	.425E+03	.427E+03
6.00	3.814	40.000	.354E+02	.257E-01	1.067	1.061	.147E+01	.154E+02	.104E+02	.470E+03	.472E+03
7.00	4.217	40.000	.362E+02	.566E-02	1.067	1.060	.163E+01	.209E+02	.128E+02	.523E+03	.524E+03
8.00	4.565	40.000	.368E+02	.114E-02	1.067	1.059	.182E+01	.273E+02	.150E+02	.583E+03	.584E+03
9.00	4.865	40.000	.372E+02	.218E-03	1.067	1.059	.203E+01	.346E+02	.171E+02	.649E+03	.651E+03
10.00	5.122	40.000	.375E+02	.411E-04	1.067	1.058	.226E+01	.428E+02	.189E+02	.723E+03	.724E+03
11.00	5.344	40.000	.377E+02	.778E-05	1.067	1.058	.251E+01	.518E+02	.206E+02	.804E+03	.805E+03
12.00	5.535	40.000	.378E+02	.150E-05	1.067	1.057	.279E+01	.616E+02	.221E+02	.892E+03	.893E+03
13.00	5.701	40.000	.380E+02	.299E-06	1.067	1.057	.309E+01	.723E+02	.234E+02	.987E+03	.988E+03
14.00	5.844	40.000	.380E+02	.617E-07	1.067	1.057	.340E+01	.839E+02	.246E+02	.109E+04	.109E+04
15.00	5.969	40.000	.381E+02	.133E-07	1.067	1.056	.375E+01	.963E+02	.257E+02	.120E+04	.120E+04
16.00	6.079	40.000	.382E+02	.297E-08	1.067	1.056	.411E+01	.110E+03	.267E+02	.132E+04	.132E+04
17.00	6.175	40.000	.383E+02	.696E-09	1.067	1.056	.450E+01	.124E+03	.275E+02	.144E+04	.144E+04
18.00	6.259	40.000	.383E+02	.170E-09	1.067	1.056	.491E+01	.139E+03	.283E+02	.157E+04	.157E+04
19.00	6.334	40.000	.383E+02	.434E-10	1.067	1.056	.534E+01	.155E+03	.290E+02	.171E+04	.171E+04
20.00	6.400	40.000	.384E+02	.115E-10	1.067	1.056	.580E+01	.171E+03	.296E+02	.185E+04	.186E+04
21.00	6.459	40.000	.384E+02	.320E-11	1.067	1.056	.627E+01	.189E+03	.301E+02	.201E+04	.201E+04
22.00	6.512	40.000	.384E+02	.920E-12	1.067	1.056	.678E+01	.207E+03	.306E+02	.217E+04	.217E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	35.000	-.289E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.05	1.050	35.000	.119E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.10	1.100	35.000	.289E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.15	1.150	35.000	.497E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.20	1.200	35.000	.748E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.25	1.250	35.000	.103E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.30	1.300	35.000	.138E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.35	1.350	35.000	.180E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.40	1.400	35.000	.233E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.45	1.450	35.000	.301E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.50	1.500	35.000	.390E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.60	1.601	35.000	.709E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.70	1.702	35.000	.250E-01	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
1.80	1.763	35.000	.166E+01	.100E+01	1.067	1.067	.100E+01	.107E+01	.106E+01	.321E+03	.331E+03
1.90	1.800	35.000	.433E+01	.999E+00	1.067	1.067	.101E+01	.119E+01	.118E+01	.324E+03	.333E+03
2.00	1.844	35.000	.675E+01	.997E+00	1.067	1.067	.102E+01	.133E+01	.130E+01	.326E+03	.334E+03
2.20	1.945	35.000	.109E+02	.984E+00	1.067	1.066	.103E+01	.161E+01	.156E+01	.330E+03	.337E+03
2.40	2.059	35.000	.142E+02	.958E+00	1.067	1.066	.104E+01	.192E+01	.184E+01	.334E+03	.340E+03
2.60	2.180	35.000	.169E+02	.919E+00	1.067	1.066	.106E+01	.226E+01	.214E+01	.339E+03	.344E+03
2.80	2.306	35.000	.191E+02	.868E+00	1.067	1.066	.107E+01	.263E+01	.246E+01	.343E+03	.347E+03
3.00	2.434	35.000	.209E+02	.808E+00	1.067	1.065	.109E+01	.303E+01	.279E+01	.347E+03	.351E+03
3.20	2.563	35.000	.224E+02	.741E+00	1.067	1.065	.110E+01	.345E+01	.313E+01	.352E+03	.356E+03
3.40	2.692	35.000	.237E+02	.669E+00	1.067	1.065	.112E+01	.390E+01	.349E+01	.357E+03	.360E+03
3.60	2.821	35.000	.247E+02	.596E+00	1.067	1.065	.113E+01	.437E+01	.387E+01	.362E+03	.365E+03
3.80	2.949	35.000	.256E+02	.524E+00	1.067	1.065	.115E+01	.488E+01	.425E+01	.367E+03	.370E+03
4.00	3.075	35.000	.264E+02	.455E+00	1.067	1.064	.116E+01	.541E+01	.464E+01	.373E+03	.375E+03
4.50	3.381	35.000	.279E+02	.303E+00	1.067	1.064	.121E+01	.685E+01	.566E+01	.387E+03	.390E+03
5.00	3.674	35.000	.290E+02	.189E+00	1.067	1.063	.126E+01	.847E+01	.671E+01	.404E+03	.405E+03
6.00	4.213	35.000	.305E+02	.631E-01	1.067	1.062	.138E+01	.122E+02	.888E+01	.440E+03	.442E+03
7.00	4.692	35.000	.314E+02	.179E-01	1.067	1.061	.151E+01	.166E+02	.110E+02	.483E+03	.484E+03
8.00	5.112	35.000	.319E+02	.455E-02	1.067	1.060	.166E+01	.218E+02	.131E+02	.531E+03	.532E+03
9.00	5.480	35.000	.323E+02	.108E-02	1.067	1.059	.183E+01	.275E+02	.151E+02	.585E+03	.586E+03
10.00	5.802	35.000	.326E+02	.248E-03	1.067	1.059	.201E+01	.340E+02	.169E+02	.644E+03	.645E+03
11.00	6.083	35.000	.328E+02	.559E-04	1.067	1.058	.222E+01	.412E+02	.186E+02	.709E+03	.710E+03
12.00	6.329	35.000	.330E+02	.126E-04	1.067	1.058	.244E+01	.490E+02	.201E+02	.780E+03	.781E+03
13.00	6.544	35.000	.331E+02	.289E-05	1.067	1.057	.268E+01	.576E+02	.215E+02	.856E+03	.857E+03
14.00	6.733	35.000	.332E+02	.675E-06	1.067	1.057	.293E+01	.668E+02	.228E+02	.938E+03	.939E+03
15.00	6.899	35.000	.333E+02	.162E-06	1.067	1.057	.321E+01	.767E+02	.239E+02	.103E+04	.103E+04
16.00	7.046	35.000	.334E+02	.401E-07	1.067	1.057	.350E+01	.873E+02	.250E+02	.112E+04	.112E+04
17.00	7.176	35.000	.335E+02	.103E-07	1.067	1.056	.381E+01	.985E+02	.259E+02	.122E+04	.122E+04
18.00	7.292	35.000	.335E+02	.271E-08	1.067	1.056	.413E+01	.110E+03	.267E+02	.132E+04	.132E+04
19.00	7.393	35.000	.335E+02	.743E-09	1.067	1.056	.448E+01	.123E+03	.275E+02	.143E+04	.144E+04
20.00	7.484	35.000	.336E+02	.211E-09	1.067	1.056	.484E+01	.136E+03	.282E+02	.155E+04	.155E+04
21.00	7.567	35.000	.336E+02	.618E-10	1.067	1.056	.523E+01	.150E+03	.288E+02	.167E+04	.167E+04
22.00	7.640	35.000	.336E+02	.187E-10	1.067	1.056	.563E+01	.165E+03	.294E+02	.180E+04	.180E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.290E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.05	1.050	30.000	-.189E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.10	1.100	30.000	-.769E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.15	1.150	30.000	.237E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.20	1.200	30.000	.157E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.25	1.250	30.000	.308E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.30	1.300	30.000	.476E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.35	1.350	30.000	.671E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.40	1.400	30.000	.890E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.45	1.450	30.000	.114E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.50	1.500	30.000	.145E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.60	1.600	30.000	.224E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
1.70	1.700	30.000	.345E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
1.80	1.801	30.000	.568E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
1.90	1.901	30.000	.112E-01	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
2.00	2.008	30.000	-.356E+00	.100E+01	1.067	1.067	.999E+00	.985E+00	.986E+00	.320E+03	.331E+03
2.20	2.102	30.000	.435E+01	.999E+00	1.067	1.067	.101E+01	.122E+01	.120E+01	.324E+03	.333E+03
2.40	2.218	30.000	.788E+01	.992E+00	1.067	1.067	.102E+01	.145E+01	.142E+01	.328E+03	.335E+03
2.60	2.345	30.000	.108E+02	.976E+00	1.067	1.066	.104E+01	.171E+01	.165E+01	.331E+03	.338E+03
2.80	2.478	30.000	.131E+02	.951E+00	1.067	1.066	.105E+01	.199E+01	.190E+01	.335E+03	.341E+03
3.00	2.615	30.000	.151E+02	.916E+00	1.067	1.066	.106E+01	.229E+01	.216E+01	.339E+03	.344E+03
3.20	2.754	30.000	.167E+02	.871E+00	1.067	1.066	.107E+01	.261E+01	.244E+01	.343E+03	.347E+03
3.40	2.895	30.000	.180E+02	.819E+00	1.067	1.066	.108E+01	.295E+01	.273E+01	.347E+03	.351E+03
3.60	3.035	30.000	.192E+02	.762E+00	1.067	1.065	.110E+01	.331E+01	.303E+01	.351E+03	.354E+03
3.80	3.175	30.000	.202E+02	.701E+00	1.067	1.065	.111E+01	.370E+01	.333E+01	.355E+03	.358E+03
4.00	3.314	30.000	.210E+02	.637E+00	1.067	1.065	.112E+01	.410E+01	.365E+01	.359E+03	.362E+03
4.50	3.656	30.000	.227E+02	.481E+00	1.067	1.064	.116E+01	.520E+01	.449E+01	.371E+03	.373E+03
5.00	3.986	30.000	.239E+02	.342E+00	1.067	1.064	.120E+01	.643E+01	.537E+01	.383E+03	.385E+03
6.00	4.606	30.000	.254E+02	.150E+00	1.067	1.063	.129E+01	.927E+01	.721E+01	.412E+03	.413E+03
7.00	5.168	30.000	.264E+02	.558E-01	1.067	1.062	.139E+01	.126E+02	.910E+01	.444E+03	.446E+03
8.00	5.672	30.000	.270E+02	.185E-01	1.067	1.061	.150E+01	.165E+02	.110E+02	.482E+03	.483E+03
9.00	6.123	30.000	.274E+02	.566E-02	1.067	1.060	.163E+01	.209E+02	.128E+02	.523E+03	.524E+03
10.00	6.524	30.000	.277E+02	.163E-02	1.067	1.059	.178E+01	.258E+02	.145E+02	.569E+03	.570E+03
11.00	6.881	30.000	.280E+02	.456E-03	1.067	1.059	.193E+01	.313E+02	.162E+02	.619E+03	.620E+03
12.00	7.197	30.000	.281E+02	.125E-03	1.067	1.058	.210E+01	.372E+02	.177E+02	.673E+03	.674E+03
13.00	7.479	30.000	.283E+02	.341E-04	1.067	1.058	.229E+01	.437E+02	.191E+02	.732E+03	.733E+03
14.00	7.730	30.000	.284E+02	.934E-05	1.067	1.058	.248E+01	.507E+02	.204E+02	.795E+03	.796E+03
15.00	7.954	30.000	.285E+02	.259E-05	1.067	1.057	.269E+01	.582E+02	.216E+02	.862E+03	.863E+03
16.00	8.153	30.000	.285E+02	.728E-06	1.067	1.057	.292E+01	.663E+02	.227E+02	.934E+03	.935E+03
17.00	8.332	30.000	.286E+02	.209E-06	1.067	1.057	.315E+01	.748E+02	.237E+02	.101E+04	.101E+04
18.00	8.491	30.000	.287E+02	.615E-07	1.067	1.057	.341E+01	.839E+02	.246E+02	.109E+04	.109E+04
19.00	8.635	30.000	.287E+02	.185E-07	1.067	1.057	.367E+01	.935E+02	.255E+02	.117E+04	.118E+04
20.00	8.764	30.000	.287E+02	.573E-08	1.067	1.056	.395E+01	.104E+03	.263E+02	.126E+04	.126E+04
21.00	8.881	30.000	.288E+02	.182E-08	1.067	1.056	.424E+01	.114E+03	.270E+02	.136E+04	.136E+04
22.00	8.987	30.000	.288E+02	.592E-09	1.067	1.056	.454E+01	.125E+03	.276E+02	.145E+04	.146E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	25.000	-.453E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.05	1.050	25.000	-.398E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.10	1.100	25.000	-.340E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.15	1.150	25.000	-.262E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.20	1.200	25.000	-.199E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.25	1.250	25.000	-.110E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.30	1.300	25.000	-.419E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.35	1.350	25.000	.471E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.40	1.400	25.000	.152E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.45	1.450	25.000	.262E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.50	1.500	25.000	.387E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.60	1.600	25.000	.670E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
1.70	1.700	25.000	.104E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.80	1.800	25.000	.150E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
1.90	1.900	25.000	.216E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
2.00	2.000	25.000	.308E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
2.20	2.201	25.000	.711E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
2.40	2.390	25.000	.624E+00	.100E+01	1.067	1.067	.100E+01	.103E+01	.103E+01	.321E+03	.331E+03
2.60	2.514	25.000	.376E+01	.999E+00	1.067	1.067	.101E+01	.121E+01	.120E+01	.324E+03	.333E+03
2.80	2.650	25.000	.637E+01	.994E+00	1.067	1.067	.102E+01	.141E+01	.138E+01	.327E+03	.335E+03
3.00	2.792	25.000	.853E+01	.983E+00	1.067	1.066	.103E+01	.163E+01	.158E+01	.330E+03	.337E+03
3.20	2.939	25.000	.103E+02	.964E+00	1.067	1.066	.104E+01	.186E+01	.178E+01	.333E+03	.339E+03
3.40	3.088	25.000	.119E+02	.939E+00	1.067	1.066	.105E+01	.210E+01	.200E+01	.336E+03	.342E+03
3.60	3.238	25.000	.131E+02	.907E+00	1.067	1.066	.106E+01	.236E+01	.222E+01	.340E+03	.345E+03
3.80	3.389	25.000	.142E+02	.868E+00	1.067	1.066	.107E+01	.263E+01	.246E+01	.343E+03	.347E+03
4.00	3.540	25.000	.152E+02	.825E+00	1.067	1.066	.108E+01	.292E+01	.270E+01	.346E+03	.350E+03
4.50	3.915	25.000	.171E+02	.699E+00	1.067	1.065	.111E+01	.370E+01	.334E+01	.355E+03	.358E+03
5.00	4.281	25.000	.184E+02	.565E+00	1.067	1.065	.114E+01	.458E+01	.403E+01	.364E+03	.367E+03
6.00	4.983	25.000	.201E+02	.325E+00	1.067	1.064	.120E+01	.661E+01	.550E+01	.385E+03	.387E+03
7.00	5.635	25.000	.212E+02	.161E+00	1.067	1.063	.128E+01	.901E+01	.705E+01	.409E+03	.411E+03
8.00	6.234	25.000	.219E+02	.714E-01	1.067	1.062	.136E+01	.118E+02	.865E+01	.436E+03	.438E+03
9.00	6.782	25.000	.224E+02	.289E-01	1.067	1.061	.146E+01	.149E+02	.102E+02	.466E+03	.468E+03
10.00	7.280	25.000	.227E+02	.109E-01	1.067	1.061	.156E+01	.184E+02	.118E+02	.500E+03	.501E+03
11.00	7.732	25.000	.230E+02	.393E-02	1.067	1.060	.168E+01	.223E+02	.133E+02	.536E+03	.537E+03
12.00	8.142	25.000	.232E+02	.134E-02	1.067	1.059	.180E+01	.266E+02	.148E+02	.576E+03	.577E+03
13.00	8.512	25.000	.233E+02	.463E-03	1.067	1.059	.193E+01	.312E+02	.162E+02	.618E+03	.619E+03
14.00	8.847	25.000	.235E+02	.155E-03	1.067	1.058	.208E+01	.362E+02	.175E+02	.664E+03	.665E+03
15.00	9.151	25.000	.236E+02	.518E-04	1.067	1.058	.223E+01	.416E+02	.187E+02	.713E+03	.714E+03
16.00	9.426	25.000	.237E+02	.173E-04	1.067	1.058	.239E+01	.473E+02	.198E+02	.764E+03	.766E+03
17.00	9.676	25.000	.237E+02	.580E-05	1.067	1.057	.256E+01	.534E+02	.209E+02	.819E+03	.820E+03
18.00	9.902	25.000	.238E+02	.197E-05	1.067	1.057	.274E+01	.599E+02	.219E+02	.877E+03	.878E+03
19.00	10.107	25.000	.238E+02	.676E-06	1.067	1.057	.293E+01	.668E+02	.228E+02	.938E+03	.939E+03
20.00	10.294	25.000	.239E+02	.235E-06	1.067	1.057	.313E+01	.740E+02	.236E+02	.100E+04	.100E+04
21.00	10.466	25.000	.239E+02	.834E-07	1.067	1.057	.334E+01	.816E+02	.244E+02	.107E+04	.107E+04
22.00	10.621	25.000	.239E+02	.300E-07	1.067	1.057	.356E+01	.896E+02	.252E+02	.114E+04	.114E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	-.527E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.05	1.050	20.000	-.494E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.10	1.100	20.000	-.465E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.15	1.150	20.000	-.428E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.20	1.200	20.000	-.391E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.25	1.250	20.000	-.351E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.30	1.300	20.000	-.303E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.35	1.350	20.000	-.270E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.40	1.400	20.000	-.215E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.45	1.450	20.000	-.169E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.50	1.500	20.000	-.121E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.60	1.600	20.000	-.110E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
1.70	1.700	20.000	.121E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.80	1.800	20.000	.274E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
1.90	1.900	20.000	.457E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
2.00	2.000	20.000	.672E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
2.20	2.200	20.000	.124E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
2.40	2.401	20.000	.219E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
2.60	2.601	20.000	.404E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
2.80	2.802	20.000	.858E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
3.00	2.982	20.000	.915E+00	.100E+01	1.067	1.067	.100E+01	.105E+01	.105E+01	.321E+03	.331E+03
3.20	3.128	20.000	.300E+01	.999E+00	1.067	1.067	.101E+01	.120E+01	.119E+01	.324E+03	.333E+03
3.40	3.280	20.000	.478E+01	.995E+00	1.067	1.067	.102E+01	.136E+01	.134E+01	.326E+03	.334E+03
3.60	3.436	20.000	.629E+01	.988E+00	1.067	1.067	.103E+01	.153E+01	.149E+01	.329E+03	.336E+03
3.80	3.595	20.000	.758E+01	.976E+00	1.067	1.066	.104E+01	.171E+01	.165E+01	.331E+03	.338E+03
4.00	3.754	20.000	.870E+01	.960E+00	1.067	1.066	.104E+01	.190E+01	.182E+01	.334E+03	.340E+03
4.50	4.156	20.000	.109E+02	.899E+00	1.067	1.066	.106E+01	.241E+01	.227E+01	.340E+03	.345E+03
5.00	4.555	20.000	.125E+02	.814E+00	1.067	1.066	.108E+01	.299E+01	.276E+01	.347E+03	.351E+03
6.00	5.336	20.000	.146E+02	.604E+00	1.067	1.065	.113E+01	.432E+01	.382E+01	.361E+03	.364E+03
7.00	6.080	20.000	.158E+02	.398E+00	1.067	1.064	.118E+01	.589E+01	.499E+01	.378E+03	.380E+03
8.00	6.781	20.000	.167E+02	.237E+00	1.067	1.063	.124E+01	.771E+01	.623E+01	.396E+03	.398E+03
9.00	7.438	20.000	.172E+02	.129E+00	1.067	1.063	.130E+01	.976E+01	.750E+01	.416E+03	.418E+03
10.00	8.051	20.000	.176E+02	.659E-01	1.067	1.062	.137E+01	.121E+02	.880E+01	.439E+03	.440E+03
11.00	8.619	20.000	.179E+02	.317E-01	1.067	1.061	.145E+01	.146E+02	.101E+02	.463E+03	.465E+03
12.00	9.146	20.000	.182E+02	.145E-01	1.067	1.061	.153E+01	.174E+02	.114E+02	.490E+03	.491E+03
13.00	9.633	20.000	.183E+02	.645E-02	1.067	1.060	.162E+01	.204E+02	.126E+02	.518E+03	.520E+03
14.00	10.083	20.000	.185E+02	.278E-02	1.067	1.060	.172E+01	.237E+02	.138E+02	.549E+03	.550E+03
15.00	10.498	20.000	.186E+02	.117E-02	1.067	1.059	.182E+01	.272E+02	.150E+02	.582E+03	.583E+03
16.00	10.880	20.000	.187E+02	.490E-03	1.067	1.059	.193E+01	.310E+02	.161E+02	.616E+03	.617E+03
17.00	11.233	20.000	.188E+02	.202E-03	1.067	1.059	.204E+01	.350E+02	.171E+02	.653E+03	.654E+03
18.00	11.559	20.000	.189E+02	.833E-04	1.067	1.058	.216E+01	.392E+02	.182E+02	.691E+03	.692E+03
19.00	11.860	20.000	.189E+02	.342E-04	1.067	1.058	.229E+01	.437E+02	.191E+02	.732E+03	.733E+03
20.00	12.137	20.000	.190E+02	.141E-04	1.067	1.058	.242E+01	.484E+02	.200E+02	.774E+03	.775E+03
21.00	12.393	20.000	.190E+02	.583E-05	1.067	1.057	.256E+01	.534E+02	.209E+02	.819E+03	.820E+03
22.00	12.630	20.000	.190E+02	.243E-05	1.067	1.057	.270E+01	.586E+02	.217E+02	.866E+03	.867E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.482E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.05	1.050	15.000	-.473E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.10	1.100	15.000	-.471E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.15	1.150	15.000	-.468E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.20	1.200	15.000	-.444E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.25	1.250	15.000	-.429E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.30	1.300	15.000	-.412E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.35	1.350	15.000	-.389E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.40	1.400	15.000	-.374E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.45	1.450	15.000	-.355E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.50	1.500	15.000	-.333E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.60	1.600	15.000	-.285E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.70	1.700	15.000	-.241E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.80	1.800	15.000	-.181E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
1.90	1.900	15.000	-.125E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
2.00	2.000	15.000	-.649E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
2.20	2.200	15.000	.768E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
2.40	2.400	15.000	.263E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
2.60	2.600	15.000	.497E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
2.80	2.800	15.000	.815E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
3.00	3.001	15.000	.124E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.326E+03
3.20	3.201	15.000	.188E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
3.40	3.401	15.000	.298E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
3.60	3.602	15.000	.525E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.329E+03
more than 99 iterations											
3.80	3.810	15.000	-.444E+00	.100E+01	1.067	1.067	.998E+00	.968E+00	.970E+00	.319E+03	.330E+03
4.00	3.978	15.000	.943E+00	.100E+01	1.067	1.067	.100E+01	.107E+01	.107E+01	.321E+03	.331E+03
4.50	4.391	15.000	.370E+01	.995E+00	1.067	1.067	.102E+01	.137E+01	.134E+01	.326E+03	.334E+03
5.00	4.812	15.000	.572E+01	.978E+00	1.067	1.066	.104E+01	.170E+01	.164E+01	.331E+03	.338E+03
6.00	5.657	15.000	.838E+01	.893E+00	1.067	1.066	.107E+01	.246E+01	.231E+01	.341E+03	.346E+03
7.00	6.486	15.000	.100E+02	.755E+00	1.067	1.065	.110E+01	.336E+01	.306E+01	.351E+03	.355E+03
8.00	7.289	15.000	.111E+02	.592E+00	1.067	1.065	.113E+01	.440E+01	.388E+01	.362E+03	.365E+03
9.00	8.060	15.000	.118E+02	.434E+00	1.067	1.064	.117E+01	.557E+01	.476E+01	.374E+03	.377E+03
10.00	8.798	15.000	.123E+02	.300E+00	1.067	1.064	.121E+01	.689E+01	.569E+01	.388E+03	.390E+03
11.00	9.501	15.000	.127E+02	.196E+00	1.067	1.063	.126E+01	.835E+01	.664E+01	.402E+03	.404E+03
12.00	10.168	15.000	.130E+02	.123E+00	1.067	1.063	.131E+01	.994E+01	.761E+01	.418E+03	.420E+03
13.00	10.800	15.000	.132E+02	.738E-01	1.067	1.062	.136E+01	.117E+02	.859E+01	.435E+03	.437E+03
14.00	11.398	15.000	.134E+02	.429E-01	1.067	1.062	.142E+01	.135E+02	.957E+01	.453E+03	.455E+03
15.00	11.963	15.000	.135E+02	.242E-01	1.067	1.061	.148E+01	.156E+02	.105E+02	.472E+03	.474E+03
16.00	12.495	15.000	.137E+02	.133E-01	1.067	1.061	.154E+01	.177E+02	.115E+02	.493E+03	.494E+03
17.00	12.996	15.000	.138E+02	.721E-02	1.067	1.060	.161E+01	.200E+02	.124E+02	.514E+03	.516E+03
18.00	13.468	15.000	.139E+02	.383E-02	1.067	1.060	.168E+01	.224E+02	.134E+02	.537E+03	.538E+03
19.00	13.912	15.000	.139E+02	.201E-02	1.067	1.060	.175E+01	.250E+02	.143E+02	.561E+03	.562E+03
20.00	14.330	15.000	.140E+02	.104E-02	1.067	1.059	.183E+01	.277E+02	.151E+02	.586E+03	.587E+03
21.00	14.723	15.000	.140E+02	.539E-03	1.067	1.059	.191E+01	.305E+02	.160E+02	.612E+03	.613E+03
22.00	15.093	15.000	.141E+02	.276E-03	1.067	1.059	.200E+01	.335E+02	.168E+02	.640E+03	.641E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	10.000	-.371E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.05	1.050	10.000	-.380E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.10	1.100	10.000	-.391E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.15	1.150	10.000	-.376E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.20	1.200	10.000	-.445E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.25	1.251	10.000	-.899E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.30	1.300	10.000	-.346E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.35	1.350	10.000	-.369E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.40	1.400	10.000	-.354E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.45	1.450	10.000	-.327E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.50	1.500	10.000	-.327E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.60	1.600	10.000	-.326E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.70	1.700	10.000	-.310E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.80	1.800	10.000	-.297E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
1.90	1.900	10.000	-.279E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
2.00	2.000	10.000	-.263E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
2.20	2.200	10.000	-.227E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
2.40	2.400	10.000	-.187E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
2.60	2.600	10.000	-.138E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
2.80	2.800	10.000	-.864E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
3.00	3.000	10.000	-.304E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
3.20	3.200	10.000	.339E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
3.40	3.400	10.000	.113E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
3.60	3.600	10.000	.207E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
3.80	3.800	10.000	.313E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
4.00	4.001	10.000	.440E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
4.50	4.501	10.000	.903E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
5.00	5.002	10.000	.187E-02	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
6.00	5.976	10.000	.755E+00	.100E+01	1.067	1.067	.101E+01	.109E+01	.108E+01	.322E+03	.332E+03
7.00	6.859	10.000	.309E+01	.990E+00	1.067	1.067	.103E+01	.149E+01	.146E+01	.328E+03	.336E+03
8.00	7.742	10.000	.463E+01	.954E+00	1.067	1.066	.105E+01	.196E+01	.187E+01	.335E+03	.341E+03
9.00	8.614	10.000	.568E+01	.889E+00	1.067	1.066	.107E+01	.249E+01	.234E+01	.341E+03	.346E+03
10.00	9.470	10.000	.644E+01	.799E+00	1.067	1.065	.109E+01	.308E+01	.283E+01	.348E+03	.352E+03
11.00	10.307	10.000	.700E+01	.694E+00	1.067	1.065	.111E+01	.374E+01	.337E+01	.355E+03	.359E+03
12.00	11.123	10.000	.743E+01	.584E+00	1.067	1.065	.113E+01	.445E+01	.393E+01	.363E+03	.366E+03
13.00	11.916	10.000	.776E+01	.477E+00	1.067	1.064	.116E+01	.523E+01	.451E+01	.371E+03	.374E+03
14.00	12.686	10.000	.803E+01	.378E+00	1.067	1.064	.119E+01	.607E+01	.512E+01	.380E+03	.382E+03
15.00	13.431	10.000	.824E+01	.292E+00	1.067	1.064	.121E+01	.698E+01	.575E+01	.389E+03	.391E+03
16.00	14.153	10.000	.842E+01	.221E+00	1.067	1.063	.125E+01	.795E+01	.638E+01	.398E+03	.400E+03
17.00	14.849	10.000	.856E+01	.163E+00	1.067	1.063	.128E+01	.898E+01	.703E+01	.409E+03	.410E+03
18.00	15.522	10.000	.869E+01	.118E+00	1.067	1.063	.131E+01	.101E+02	.768E+01	.419E+03	.421E+03
19.00	16.170	10.000	.879E+01	.843E-01	1.067	1.062	.135E+01	.112E+02	.834E+01	.431E+03	.432E+03
20.00	16.795	10.000	.888E+01	.591E-01	1.067	1.062	.138E+01	.124E+02	.900E+01	.442E+03	.444E+03
21.00	17.396	10.000	.895E+01	.408E-01	1.067	1.062	.142E+01	.137E+02	.965E+01	.455E+03	.456E+03
22.00	17.974	10.000	.902E+01	.278E-01	1.067	1.061	.146E+01	.151E+02	.103E+02	.468E+03	.469E+03

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m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	-.215E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.05	1.050	5.000	-.212E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.10	1.100	5.000	-.208E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.15	1.150	5.000	-.206E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.20	1.200	5.000	-.211E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.25	1.250	5.000	-.207E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.30	1.300	5.000	-.210E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.35	1.350	5.000	-.204E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.40	1.400	5.000	-.203E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.45	1.450	5.000	-.209E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.50	1.500	5.000	-.202E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.60	1.600	5.000	-.200E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.70	1.700	5.000	-.204E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.80	1.800	5.000	-.197E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
1.90	1.900	5.000	-.202E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
2.00	2.000	5.000	-.200E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
2.20	2.200	5.000	-.195E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
2.40	2.400	5.000	-.181E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.320E+03
2.60	2.600	5.000	-.180E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
2.80	2.800	5.000	-.178E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
3.00	3.000	5.000	-.174E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
3.20	3.200	5.000	-.161E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
3.40	3.400	5.000	-.159E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
3.60	3.600	5.000	-.152E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
3.80	3.800	5.000	-.143E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
4.00	4.000	5.000	-.135E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.321E+03
4.50	4.500	5.000	-.109E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
5.00	5.000	5.000	-.812E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.322E+03
6.00	6.001	5.000	-.107E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.323E+03
7.00	7.001	5.000	.866E-04	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.324E+03
8.00	8.001	5.000	.235E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.325E+03
9.00	9.002	5.000	.477E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.327E+03
10.00	10.003	5.000	.988E-03	.100E+01	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.328E+03
11.00	11.009	5.000	.229E-02	.999E+00	1.067	1.067	.100E+01	.100E+01	.100E+01	.320E+03	.330E+03
12.00	11.968	5.000	.415E+00	.999E+00	1.067	1.067	.101E+01	.110E+01	.109E+01	.322E+03	.332E+03
13.00	12.882	5.000	.107E+01	.997E+00	1.067	1.067	.102E+01	.129E+01	.127E+01	.325E+03	.334E+03
14.00	13.796	5.000	.159E+01	.990E+00	1.067	1.067	.103E+01	.150E+01	.147E+01	.329E+03	.336E+03
15.00	14.704	5.000	.200E+01	.975E+00	1.067	1.066	.104E+01	.173E+01	.167E+01	.332E+03	.338E+03
16.00	15.606	5.000	.235E+01	.953E+00	1.067	1.066	.105E+01	.198E+01	.189E+01	.335E+03	.341E+03
17.00	16.499	5.000	.263E+01	.923E+00	1.067	1.066	.106E+01	.223E+01	.211E+01	.338E+03	.343E+03
18.00	17.384	5.000	.287E+01	.886E+00	1.067	1.066	.107E+01	.251E+01	.235E+01	.341E+03	.346E+03
19.00	18.259	5.000	.307E+01	.843E+00	1.067	1.066	.108E+01	.280E+01	.260E+01	.345E+03	.349E+03
20.00	19.124	5.000	.324E+01	.795E+00	1.067	1.065	.109E+01	.311E+01	.285E+01	.348E+03	.352E+03
21.00	19.978	5.000	.339E+01	.744E+00	1.067	1.065	.110E+01	.343E+01	.312E+01	.352E+03	.355E+03
22.00	20.822	5.000	.352E+01	.690E+00	1.067	1.065	.111E+01	.377E+01	.339E+01	.355E+03	.359E+03

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Table 11. Normal and oblique shock properties.

T - 330°K

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.002	90.000	.705E-07	.100E+01	1.066	1.066	.100E+01	.998E+00	.998E+00	.330E+03	.341E+03
1.05	.953	90.000	.517E-05	.100E+01	1.066	1.066	.101E+01	.111E+01	.110E+01	.332E+03	.342E+03
1.10	.910	90.000	.105E-04	.999E+00	1.066	1.066	.101E+01	.122E+01	.120E+01	.334E+03	.343E+03
1.15	.871	90.000	.161E-04	.997E+00	1.066	1.066	.102E+01	.133E+01	.131E+01	.336E+03	.344E+03
1.20	.835	90.000	.219E-04	.992E+00	1.066	1.066	.102E+01	.145E+01	.142E+01	.338E+03	.346E+03
1.25	.803	90.000	.279E-04	.986E+00	1.066	1.066	.103E+01	.158E+01	.154E+01	.340E+03	.347E+03
1.30	.773	90.000	.341E-04	.976E+00	1.066	1.066	.104E+01	.171E+01	.165E+01	.342E+03	.348E+03
1.35	.745	90.000	.405E-04	.965E+00	1.066	1.066	.104E+01	.185E+01	.178E+01	.344E+03	.350E+03
1.40	.720	90.000	.470E-04	.951E+00	1.066	1.066	.105E+01	.199E+01	.190E+01	.345E+03	.351E+03
1.45	.696	90.000	.538E-04	.935E+00	1.066	1.065	.105E+01	.214E+01	.203E+01	.347E+03	.353E+03
1.50	.674	90.000	.607E-04	.916E+00	1.066	1.065	.106E+01	.229E+01	.216E+01	.349E+03	.354E+03
1.60	.634	90.000	.751E-04	.871E+00	1.066	1.065	.107E+01	.261E+01	.244E+01	.353E+03	.358E+03
1.70	.599	90.000	.901E-04	.819E+00	1.066	1.065	.108E+01	.295E+01	.273E+01	.357E+03	.361E+03
1.80	.569	90.000	.106E-03	.762E+00	1.066	1.065	.109E+01	.331E+01	.303E+01	.361E+03	.365E+03
1.90	.542	90.000	.122E-03	.701E+00	1.066	1.065	.111E+01	.370E+01	.334E+01	.366E+03	.369E+03
2.00	.517	90.000	.138E-03	.637E+00	1.066	1.064	.112E+01	.410E+01	.366E+01	.370E+03	.373E+03
2.20	.475	90.000	.173E-03	.511E+00	1.066	1.064	.115E+01	.497E+01	.432E+01	.379E+03	.382E+03
2.40	.441	90.000	.209E-03	.395E+00	1.066	1.064	.118E+01	.592E+01	.502E+01	.389E+03	.392E+03
2.60	.412	90.000	.247E-03	.294E+00	1.066	1.063	.121E+01	.695E+01	.573E+01	.400E+03	.402E+03
2.80	.388	90.000	.285E-03	.213E+00	1.066	1.063	.125E+01	.807E+01	.647E+01	.412E+03	.413E+03
3.00	.367	90.000	.324E-03	.149E+00	1.066	1.062	.128E+01	.927E+01	.722E+01	.424E+03	.425E+03
3.20	.350	90.000	.364E-03	.102E+00	1.066	1.062	.132E+01	.106E+02	.797E+01	.437E+03	.438E+03
3.40	.334	90.000	.403E-03	.684E-01	1.066	1.062	.136E+01	.119E+02	.873E+01	.450E+03	.452E+03
3.60	.320	90.000	.443E-03	.449E-01	1.066	1.061	.141E+01	.134E+02	.949E+01	.465E+03	.466E+03
3.80	.308	90.000	.482E-03	.289E-01	1.066	1.061	.145E+01	.149E+02	.102E+02	.480E+03	.481E+03
4.00	.298	90.000	.521E-03	.184E-01	1.066	1.061	.150E+01	.165E+02	.110E+02	.495E+03	.497E+03
4.50	.276	90.000	.616E-03	.559E-02	1.066	1.060	.163E+01	.209E+02	.128E+02	.538E+03	.539E+03
5.00	.259	90.000	.707E-03	.161E-02	1.066	1.059	.177E+01	.258E+02	.146E+02	.585E+03	.586E+03
6.00	.234	90.000	.873E-03	.122E-03	1.066	1.058	.210E+01	.372E+02	.177E+02	.693E+03	.694E+03
7.00	.218	90.000	.101E-02	.898E-05	1.066	1.057	.248E+01	.507E+02	.205E+02	.818E+03	.819E+03
8.00	.207	90.000	.113E-02	.691E-06	1.066	1.057	.291E+01	.663E+02	.228E+02	.960E+03	.962E+03
9.00	.199	90.000	.124E-02	.576E-07	1.066	1.057	.340E+01	.839E+02	.247E+02	.112E+04	.112E+04
10.00	.192	90.000	.132E-02	.529E-08	1.066	1.056	.394E+01	.104E+03	.263E+02	.130E+04	.130E+04
11.00	.188	90.000	.139E-02	.540E-09	1.066	1.056	.453E+01	.125E+03	.277E+02	.150E+04	.150E+04
12.00	.184	90.000	.145E-02	.612E-10	1.066	1.056	.518E+01	.149E+03	.288E+02	.171E+04	.171E+04
13.00	.181	90.000	.150E-02	.767E-11	1.066	1.056	.589E+01	.175E+03	.297E+02	.194E+04	.195E+04
14.00	.179	90.000	.154E-02	.106E-11	1.066	1.056	.665E+01	.203E+03	.305E+02	.219E+04	.220E+04
15.00	.177	90.000	.158E-02	.161E-12	1.066	1.056	.747E+01	.233E+03	.312E+02	.246E+04	.247E+04
more than 99 iterations											
16.00	.175	90.000	.161E-02	.265E-13	1.066	1.056	.834E+01	.265E+03	.318E+02	.275E+04	.275E+04
17.00	.174	90.000	.163E-02	.475E-14	1.066	1.056	.927E+01	.300E+03	.323E+02	.306E+04	.306E+04
18.00	.172	90.000	.166E-02	.915E-15	1.066	1.056	.103E+02	.336E+03	.328E+02	.338E+04	.339E+04
more than 99 iterations											
19.00	.171	90.000	.168E-02	.189E-15	1.066	1.056	.113E+02	.374E+03	.332E+02	.373E+04	.373E+04
20.00	.170	90.000	.169E-02	.417E-16	1.066	1.056	.124E+02	.415E+03	.335E+02	.409E+04	.409E+04
21.00	.170	90.000	.171E-02	.977E-17	1.066	1.056	.135E+02	.457E+03	.338E+02	.447E+04	.447E+04
22.00	.169	90.000	.172E-02	.242E-17	1.066	1.056	.147E+02	.502E+03	.340E+02	.487E+04	.487E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	85.000	.510E-02	.100E+01	1.066	1.066	.100E+01	.999E+00	.999E+00	.330E+03	.341E+03
1.05	.961	85.000	.453E+00	.100E+01	1.066	1.066	.101E+01	.110E+01	.109E+01	.332E+03	.342E+03
1.10	.918	85.000	.961E+00	.999E+00	1.066	1.066	.101E+01	.121E+01	.119E+01	.334E+03	.343E+03
1.15	.880	85.000	.149E+01	.997E+00	1.066	1.066	.102E+01	.132E+01	.130E+01	.336E+03	.344E+03
1.20	.845	85.000	.203E+01	.993E+00	1.066	1.066	.102E+01	.144E+01	.141E+01	.338E+03	.346E+03
1.25	.813	85.000	.260E+01	.986E+00	1.066	1.066	.103E+01	.157E+01	.152E+01	.340E+03	.347E+03
1.30	.784	85.000	.318E+01	.977E+00	1.066	1.066	.103E+01	.170E+01	.164E+01	.342E+03	.348E+03
1.35	.757	85.000	.377E+01	.966E+00	1.066	1.066	.104E+01	.184E+01	.176E+01	.343E+03	.350E+03
1.40	.732	85.000	.438E+01	.953E+00	1.066	1.066	.105E+01	.198E+01	.189E+01	.345E+03	.351E+03
1.45	.709	85.000	.501E+01	.937E+00	1.066	1.066	.105E+01	.212E+01	.202E+01	.347E+03	.353E+03
1.50	.688	85.000	.565E+01	.918E+00	1.066	1.065	.106E+01	.227E+01	.215E+01	.349E+03	.354E+03
1.60	.651	85.000	.697E+01	.874E+00	1.066	1.065	.107E+01	.259E+01	.242E+01	.353E+03	.358E+03
1.70	.618	85.000	.833E+01	.823E+00	1.066	1.065	.108E+01	.293E+01	.271E+01	.357E+03	.361E+03
1.80	.590	85.000	.974E+01	.766E+00	1.066	1.065	.109E+01	.329E+01	.301E+01	.361E+03	.365E+03
1.90	.566	85.000	.112E+02	.705E+00	1.066	1.065	.111E+01	.367E+01	.331E+01	.365E+03	.369E+03
2.00	.544	85.000	.126E+02	.642E+00	1.066	1.064	.112E+01	.407E+01	.363E+01	.370E+03	.373E+03
2.20	.510	85.000	.156E+02	.516E+00	1.066	1.064	.115E+01	.493E+01	.429E+01	.379E+03	.382E+03
2.40	.483	85.000	.186E+02	.400E+00	1.066	1.064	.118E+01	.587E+01	.498E+01	.389E+03	.391E+03
2.60	.462	85.000	.215E+02	.299E+00	1.066	1.063	.121E+01	.690E+01	.570E+01	.400E+03	.402E+03
2.80	.447	85.000	.244E+02	.216E+00	1.066	1.063	.125E+01	.801E+01	.643E+01	.411E+03	.413E+03
3.00	.435	85.000	.271E+02	.152E+00	1.066	1.062	.128E+01	.920E+01	.718E+01	.423E+03	.425E+03
3.20	.427	85.000	.297E+02	.105E+00	1.066	1.062	.132E+01	.105E+02	.793E+01	.436E+03	.437E+03
3.40	.421	85.000	.322E+02	.702E-01	1.066	1.062	.136E+01	.118E+02	.868E+01	.449E+03	.451E+03
3.60	.417	85.000	.346E+02	.462E-01	1.066	1.061	.140E+01	.133E+02	.944E+01	.464E+03	.465E+03
3.80	.414	85.000	.367E+02	.299E-01	1.066	1.061	.145E+01	.148E+02	.102E+02	.479E+03	.480E+03
4.00	.413	85.000	.387E+02	.190E-01	1.066	1.061	.150E+01	.164E+02	.109E+02	.494E+03	.496E+03
4.50	.414	85.000	.432E+02	.583E-02	1.066	1.060	.163E+01	.208E+02	.128E+02	.537E+03	.538E+03
5.00	.419	85.000	.468E+02	.169E-02	1.066	1.059	.177E+01	.256E+02	.145E+02	.583E+03	.584E+03
6.00	.432	85.000	.521E+02	.129E-03	1.066	1.058	.209E+01	.369E+02	.177E+02	.690E+03	.691E+03
7.00	.447	85.000	.557E+02	.962E-05	1.066	1.058	.247E+01	.503E+02	.204E+02	.814E+03	.815E+03
8.00	.461	85.000	.583E+02	.746E-06	1.066	1.057	.290E+01	.658E+02	.227E+02	.956E+03	.957E+03
9.00	.473	85.000	.601E+02	.626E-07	1.066	1.057	.338E+01	.832E+02	.246E+02	.112E+04	.112E+04
10.00	.483	85.000	.615E+02	.579E-08	1.066	1.056	.392E+01	.103E+03	.263E+02	.129E+04	.129E+04
11.00	.491	85.000	.625E+02	.593E-09	1.066	1.056	.451E+01	.124E+03	.276E+02	.149E+04	.149E+04
12.00	.498	85.000	.633E+02	.674E-10	1.066	1.056	.515E+01	.148E+03	.287E+02	.170E+04	.170E+04
13.00	.504	85.000	.639E+02	.848E-11	1.066	1.056	.585E+01	.174E+03	.297E+02	.193E+04	.193E+04
14.00	.509	85.000	.645E+02	.118E-11	1.066	1.056	.661E+01	.202E+03	.305E+02	.218E+04	.218E+04
15.00	.514	85.000	.649E+02	.179E-12	1.066	1.056	.742E+01	.231E+03	.312E+02	.245E+04	.245E+04
16.00	.517	85.000	.652E+02	.295E-13	1.066	1.056	.829E+01	.263E+03	.318E+02	.273E+04	.274E+04
17.00	.521	85.000	.655E+02	.529E-14	1.066	1.056	.921E+01	.297E+03	.323E+02	.304E+04	.304E+04
18.00	.523	85.000	.658E+02	.102E-14	1.066	1.056	.102E+02	.333E+03	.327E+02	.336E+04	.336E+04
19.00	.526	85.000	.660E+02	.212E-15	1.066	1.056	.112E+02	.372E+03	.331E+02	.370E+04	.370E+04
20.00	.528	85.000	.661E+02	.467E-16	1.066	1.056	.123E+02	.412E+03	.335E+02	.406E+04	.406E+04
more than 99 iterations											
21.00	.530	85.000	.663E+02	.109E-16	1.066	1.056	.134E+02	.454E+03	.338E+02	.444E+04	.444E+04
more than 99 iterations											
22.00	.531	85.000	.664E+02	.271E-17	1.066	1.056	.146E+02	.498E+03	.340E+02	.483E+04	.484E+04

m1	m2	zeta	delta	pt2/pt1	gam1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.001	80.000	.362E-02	.100E+01	1.066	1.066	.100E+01	.999E+00	.999E+00	.330E+03	.341E+03
1.05	.985	80.000	.659E+00	.100E+01	1.066	1.066	.100E+01	.107E+01	.107E+01	.331E+03	.342E+03
1.10	.943	80.000	.163E+01	.100E+01	1.066	1.066	.101E+01	.118E+01	.117E+01	.333E+03	.343E+03
1.15	.906	80.000	.264E+01	.998E+00	1.066	1.066	.102E+01	.129E+01	.127E+01	.335E+03	.344E+03
1.20	.873	80.000	.367E+01	.994E+00	1.066	1.066	.102E+01	.141E+01	.138E+01	.337E+03	.345E+03
1.25	.842	80.000	.473E+01	.988E+00	1.066	1.066	.103E+01	.153E+01	.149E+01	.339E+03	.347E+03
1.30	.815	80.000	.582E+01	.980E+00	1.066	1.066	.103E+01	.166E+01	.161E+01	.341E+03	.348E+03
1.35	.790	80.000	.693E+01	.970E+00	1.066	1.066	.104E+01	.179E+01	.173E+01	.343E+03	.349E+03
1.40	.768	80.000	.805E+01	.957E+00	1.066	1.066	.104E+01	.193E+01	.185E+01	.345E+03	.351E+03
1.45	.748	80.000	.920E+01	.942E+00	1.066	1.066	.105E+01	.207E+01	.197E+01	.347E+03	.352E+03
1.50	.729	80.000	.104E+02	.925E+00	1.066	1.065	.106E+01	.222E+01	.210E+01	.348E+03	.354E+03
1.60	.697	80.000	.127E+02	.883E+00	1.066	1.065	.107E+01	.253E+01	.237E+01	.352E+03	.357E+03
1.70	.671	80.000	.151E+02	.833E+00	1.066	1.065	.108E+01	.286E+01	.265E+01	.356E+03	.360E+03
1.80	.650	80.000	.174E+02	.778E+00	1.066	1.065	.109E+01	.321E+01	.294E+01	.360E+03	.364E+03
1.90	.633	80.000	.198E+02	.719E+00	1.066	1.065	.110E+01	.358E+01	.325E+01	.364E+03	.368E+03
2.00	.619	80.000	.221E+02	.656E+00	1.066	1.064	.112E+01	.397E+01	.356E+01	.369E+03	.372E+03
2.20	.600	80.000	.266E+02	.532E+00	1.066	1.064	.114E+01	.482E+01	.421E+01	.378E+03	.381E+03
2.40	.590	80.000	.308E+02	.415E+00	1.066	1.064	.117E+01	.574E+01	.489E+01	.387E+03	.390E+03
2.60	.587	80.000	.346E+02	.313E+00	1.066	1.063	.121E+01	.674E+01	.559E+01	.398E+03	.400E+03
2.80	.588	80.000	.381E+02	.228E+00	1.066	1.063	.124E+01	.782E+01	.631E+01	.409E+03	.411E+03
3.00	.593	80.000	.412E+02	.162E+00	1.066	1.063	.128E+01	.899E+01	.705E+01	.421E+03	.423E+03
3.20	.601	80.000	.439E+02	.112E+00	1.066	1.062	.131E+01	.102E+02	.779E+01	.433E+03	.435E+03
3.40	.611	80.000	.464E+02	.760E-01	1.066	1.062	.135E+01	.116E+02	.854E+01	.447E+03	.448E+03
3.60	.622	80.000	.486E+02	.505E-01	1.066	1.061	.140E+01	.130E+02	.929E+01	.461E+03	.462E+03
3.80	.633	80.000	.505E+02	.329E-01	1.066	1.061	.144E+01	.144E+02	.100E+02	.475E+03	.477E+03
4.00	.646	80.000	.522E+02	.211E-01	1.066	1.061	.149E+01	.160E+02	.108E+02	.491E+03	.492E+03
4.50	.677	80.000	.557E+02	.660E-02	1.066	1.060	.161E+01	.203E+02	.126E+02	.532E+03	.533E+03
5.00	.708	80.000	.584E+02	.195E-02	1.066	1.059	.175E+01	.251E+02	.143E+02	.578E+03	.579E+03
6.00	.765	80.000	.620E+02	.154E-03	1.066	1.058	.207E+01	.361E+02	.175E+02	.682E+03	.683E+03
7.00	.813	80.000	.643E+02	.118E-04	1.066	1.058	.243E+01	.492E+02	.202E+02	.803E+03	.805E+03
8.00	.852	80.000	.659E+02	.940E-06	1.066	1.057	.285E+01	.643E+02	.225E+02	.942E+03	.943E+03
9.00	.884	80.000	.669E+02	.805E-07	1.066	1.057	.333E+01	.814E+02	.245E+02	.110E+04	.110E+04
10.00	.910	80.000	.677E+02	.756E-08	1.066	1.056	.385E+01	.100E+03	.261E+02	.127E+04	.127E+04
11.00	.931	80.000	.683E+02	.785E-09	1.066	1.056	.443E+01	.122E+03	.274E+02	.146E+04	.146E+04
12.00	.949	80.000	.688E+02	.903E-10	1.066	1.056	.506E+01	.145E+03	.286E+02	.167E+04	.167E+04
13.00	.964	80.000	.691E+02	.115E-10	1.066	1.056	.575E+01	.170E+03	.296E+02	.190E+04	.190E+04
14.00	.976	80.000	.694E+02	.160E-11	1.066	1.056	.648E+01	.197E+03	.304E+02	.214E+04	.214E+04
15.00	.986	80.000	.697E+02	.245E-12	1.066	1.056	.728E+01	.226E+03	.311E+02	.240E+04	.240E+04
16.00	.995	80.000	.699E+02	.408E-13	1.066	1.056	.812E+01	.257E+03	.317E+02	.268E+04	.268E+04
more than 99 iterations											
17.00	1.003	80.000	.700E+02	.735E-14	1.066	1.056	.902E+01	.291E+03	.322E+02	.298E+04	.298E+04
18.00	1.009	80.000	.701E+02	.143E-14	1.066	1.056	.998E+01	.326E+03	.327E+02	.329E+04	.330E+04
more than 99 iterations											
19.00	1.015	80.000	.703E+02	.296E-15	1.066	1.056	.110E+02	.363E+03	.331E+02	.363E+04	.363E+04
more than 99 iterations											
20.00	1.020	80.000	.704E+02	.656E-16	1.066	1.056	.120E+02	.402E+03	.334E+02	.398E+04	.398E+04
21.00	1.024	80.000	.704E+02	.154E-16	1.066	1.056	.132E+02	.444E+03	.337E+02	.434E+04	.435E+04
22.00	1.028	80.000	.705E+02	.383E-17	1.066	1.056	.143E+02	.487E+03	.340E+02	.473E+04	.473E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	75.000	.565E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.05	1.024	75.000	.407E+00	.100E+01	1.066	1.066	.100E+01	.103E+01	.103E+01	.331E+03	.341E+03
1.10	.983	75.000	.177E+01	.100E+01	1.066	1.066	.101E+01	.113E+01	.112E+01	.333E+03	.342E+03
1.15	.948	75.000	.317E+01	.999E+00	1.066	1.066	.101E+01	.124E+01	.122E+01	.335E+03	.343E+03
1.20	.917	75.000	.460E+01	.996E+00	1.066	1.066	.102E+01	.135E+01	.133E+01	.336E+03	.345E+03
1.25	.890	75.000	.606E+01	.991E+00	1.066	1.066	.102E+01	.147E+01	.144E+01	.338E+03	.346E+03
1.30	.865	75.000	.754E+01	.985E+00	1.066	1.066	.103E+01	.160E+01	.155E+01	.340E+03	.347E+03
1.35	.844	75.000	.903E+01	.976E+00	1.066	1.066	.104E+01	.172E+01	.166E+01	.342E+03	.349E+03
1.40	.824	75.000	.105E+02	.964E+00	1.066	1.066	.104E+01	.186E+01	.178E+01	.344E+03	.350E+03
1.45	.808	75.000	.120E+02	.951E+00	1.066	1.066	.105E+01	.199E+01	.190E+01	.345E+03	.351E+03
1.50	.793	75.000	.135E+02	.935E+00	1.066	1.065	.105E+01	.214E+01	.203E+01	.347E+03	.353E+03
1.60	.769	75.000	.165E+02	.896E+00	1.066	1.065	.106E+01	.243E+01	.229E+01	.351E+03	.356E+03
1.70	.751	75.000	.194E+02	.850E+00	1.066	1.065	.108E+01	.275E+01	.256E+01	.355E+03	.359E+03
1.80	.738	75.000	.223E+02	.798E+00	1.066	1.065	.109E+01	.309E+01	.284E+01	.359E+03	.363E+03
1.90	.730	75.000	.250E+02	.741E+00	1.066	1.065	.110E+01	.345E+01	.313E+01	.363E+03	.366E+03
2.00	.725	75.000	.276E+02	.681E+00	1.066	1.065	.111E+01	.382E+01	.344E+01	.367E+03	.370E+03
2.20	.725	75.000	.325E+02	.558E+00	1.066	1.064	.114E+01	.463E+01	.407E+01	.376E+03	.379E+03
2.40	.733	75.000	.367E+02	.441E+00	1.066	1.064	.117E+01	.552E+01	.473E+01	.385E+03	.388E+03
2.60	.748	75.000	.404E+02	.336E+00	1.066	1.063	.120E+01	.648E+01	.541E+01	.395E+03	.397E+03
2.80	.767	75.000	.436E+02	.249E+00	1.066	1.063	.123E+01	.753E+01	.612E+01	.406E+03	.408E+03
3.00	.788	75.000	.464E+02	.179E+00	1.066	1.063	.126E+01	.864E+01	.683E+01	.417E+03	.419E+03
3.20	.811	75.000	.487E+02	.126E+00	1.066	1.062	.130E+01	.984E+01	.756E+01	.429E+03	.431E+03
3.40	.835	75.000	.508E+02	.865E-01	1.066	1.062	.134E+01	.111E+02	.829E+01	.442E+03	.444E+03
3.60	.860	75.000	.525E+02	.582E-01	1.066	1.062	.138E+01	.125E+02	.903E+01	.456E+03	.457E+03
3.80	.885	75.000	.541E+02	.385E-01	1.066	1.061	.142E+01	.139E+02	.976E+01	.470E+03	.471E+03
4.00	.909	75.000	.554E+02	.251E-01	1.066	1.061	.147E+01	.154E+02	.105E+02	.485E+03	.486E+03
4.50	.968	75.000	.581E+02	.811E-02	1.066	1.060	.159E+01	.195E+02	.123E+02	.525E+03	.526E+03
5.00	1.024	75.000	.601E+02	.247E-02	1.066	1.059	.172E+01	.241E+02	.140E+02	.569E+03	.570E+03
6.00	1.120	75.000	.627E+02	.207E-03	1.066	1.058	.203E+01	.347E+02	.171E+02	.669E+03	.670E+03
7.00	1.199	75.000	.644E+02	.167E-04	1.066	1.058	.238E+01	.473E+02	.199E+02	.786E+03	.787E+03
8.00	1.263	75.000	.654E+02	.138E-05	1.066	1.057	.279E+01	.618E+02	.222E+02	.920E+03	.921E+03
9.00	1.315	75.000	.662E+02	.122E-06	1.066	1.057	.324E+01	.783E+02	.241E+02	.107E+04	.107E+04
10.00	1.357	75.000	.668E+02	.118E-07	1.066	1.056	.375E+01	.966E+02	.258E+02	.124E+04	.124E+04
11.00	1.392	75.000	.672E+02	.125E-08	1.066	1.056	.430E+01	.117E+03	.272E+02	.142E+04	.142E+04
12.00	1.421	75.000	.675E+02	.147E-09	1.066	1.056	.491E+01	.139E+03	.283E+02	.162E+04	.162E+04
13.00	1.444	75.000	.678E+02	.190E-10	1.066	1.056	.557E+01	.163E+03	.293E+02	.184E+04	.184E+04
14.00	1.464	75.000	.680E+02	.269E-11	1.066	1.056	.628E+01	.190E+03	.302E+02	.207E+04	.207E+04
15.00	1.481	75.000	.681E+02	.417E-12	1.066	1.056	.704E+01	.218E+03	.309E+02	.232E+04	.233E+04
16.00	1.495	75.000	.682E+02	.701E-13	1.066	1.056	.786E+01	.248E+03	.315E+02	.259E+04	.260E+04
17.00	1.508	75.000	.684E+02	.127E-13	1.066	1.056	.872E+01	.280E+03	.320E+02	.288E+04	.288E+04
18.00	1.518	75.000	.685E+02	.249E-14	1.066	1.056	.964E+01	.313E+03	.325E+02	.318E+04	.318E+04
19.00	1.527	75.000	.685E+02	.521E-15	1.066	1.056	.106E+02	.349E+03	.329E+02	.350E+04	.350E+04
20.00	1.535	75.000	.686E+02	.116E-15	1.066	1.056	.116E+02	.387E+03	.333E+02	.384E+04	.384E+04
21.00	1.542	75.000	.687E+02	.274E-16	1.066	1.056	.127E+02	.427E+03	.336E+02	.419E+04	.420E+04
more than 99 iterations											
22.00	1.548	75.000	.687E+02	.685E-17	1.066	1.056	.138E+02	.468E+03	.339E+02	.457E+04	.457E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.449E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.05	1.051	70.000	.128E-01	.100E+01	1.066	1.066	.100E+01	.999E+00	.999E+00	.330E+03	.341E+03
1.10	1.038	70.000	.122E+01	.100E+01	1.066	1.066	.100E+01	.107E+01	.107E+01	.331E+03	.342E+03
1.15	1.005	70.000	.292E+01	.100E+01	1.066	1.066	.101E+01	.117E+01	.116E+01	.333E+03	.343E+03
1.20	.977	70.000	.465E+01	.998E+00	1.066	1.066	.102E+01	.128E+01	.126E+01	.335E+03	.344E+03
1.25	.952	70.000	.639E+01	.995E+00	1.066	1.066	.102E+01	.139E+01	.136E+01	.337E+03	.345E+03
1.30	.931	70.000	.814E+01	.990E+00	1.066	1.066	.103E+01	.151E+01	.147E+01	.339E+03	.346E+03
1.35	.913	70.000	.989E+01	.982E+00	1.066	1.066	.103E+01	.163E+01	.158E+01	.341E+03	.348E+03
1.40	.897	70.000	.116E+02	.973E+00	1.066	1.066	.104E+01	.175E+01	.169E+01	.342E+03	.349E+03
1.45	.884	70.000	.133E+02	.962E+00	1.066	1.066	.104E+01	.188E+01	.181E+01	.344E+03	.350E+03
1.50	.873	70.000	.150E+02	.948E+00	1.066	1.066	.105E+01	.202E+01	.193E+01	.346E+03	.352E+03
1.60	.858	70.000	.184E+02	.914E+00	1.066	1.065	.106E+01	.230E+01	.217E+01	.349E+03	.355E+03
1.70	.848	70.000	.215E+02	.872E+00	1.066	1.065	.107E+01	.260E+01	.243E+01	.353E+03	.358E+03
1.80	.845	70.000	.245E+02	.824E+00	1.066	1.065	.108E+01	.292E+01	.270E+01	.357E+03	.361E+03
1.90	.846	70.000	.274E+02	.771E+00	1.066	1.065	.109E+01	.326E+01	.298E+01	.361E+03	.364E+03
2.00	.850	70.000	.300E+02	.713E+00	1.066	1.065	.110E+01	.362E+01	.327E+01	.365E+03	.368E+03
2.20	.868	70.000	.347E+02	.594E+00	1.066	1.064	.113E+01	.438E+01	.388E+01	.373E+03	.376E+03
2.40	.894	70.000	.387E+02	.478E+00	1.066	1.064	.116E+01	.522E+01	.451E+01	.382E+03	.385E+03
2.60	.926	70.000	.420E+02	.371E+00	1.066	1.064	.119E+01	.613E+01	.517E+01	.392E+03	.394E+03
2.80	.960	70.000	.448E+02	.280E+00	1.066	1.063	.122E+01	.712E+01	.585E+01	.402E+03	.404E+03
3.00	.997	70.000	.472E+02	.206E+00	1.066	1.063	.125E+01	.818E+01	.654E+01	.413E+03	.415E+03
3.20	1.034	70.000	.492E+02	.147E+00	1.066	1.062	.129E+01	.931E+01	.724E+01	.424E+03	.426E+03
3.40	1.072	70.000	.509E+02	.103E+00	1.066	1.062	.132E+01	.105E+02	.796E+01	.436E+03	.438E+03
3.60	1.110	70.000	.524E+02	.708E-01	1.066	1.062	.136E+01	.118E+02	.867E+01	.449E+03	.451E+03
3.80	1.147	70.000	.537E+02	.478E-01	1.066	1.061	.140E+01	.131E+02	.938E+01	.462E+03	.464E+03
4.00	1.183	70.000	.548E+02	.317E-01	1.066	1.061	.144E+01	.146E+02	.101E+02	.477E+03	.478E+03
4.50	1.269	70.000	.569E+02	.108E-01	1.066	1.060	.156E+01	.185E+02	.118E+02	.514E+03	.516E+03
5.00	1.348	70.000	.585E+02	.343E-02	1.066	1.060	.169E+01	.228E+02	.135E+02	.556E+03	.557E+03
6.00	1.486	70.000	.606E+02	.312E-03	1.066	1.059	.197E+01	.329E+02	.166E+02	.652E+03	.653E+03
7.00	1.597	70.000	.619E+02	.269E-04	1.066	1.058	.231E+01	.448E+02	.194E+02	.763E+03	.764E+03
8.00	1.688	70.000	.628E+02	.236E-05	1.066	1.057	.269E+01	.585E+02	.217E+02	.889E+03	.890E+03
9.00	1.761	70.000	.634E+02	.219E-06	1.066	1.057	.313E+01	.741E+02	.237E+02	.103E+04	.103E+04
10.00	1.820	70.000	.638E+02	.221E-07	1.066	1.056	.361E+01	.915E+02	.254E+02	.119E+04	.119E+04
11.00	1.870	70.000	.641E+02	.243E-08	1.066	1.056	.413E+01	.111E+03	.268E+02	.136E+04	.137E+04
12.00	1.910	70.000	.644E+02	.293E-09	1.066	1.056	.471E+01	.132E+03	.280E+02	.155E+04	.156E+04
13.00	1.944	70.000	.646E+02	.387E-10	1.066	1.056	.533E+01	.155E+03	.290E+02	.176E+04	.176E+04
14.00	1.972	70.000	.647E+02	.560E-11	1.066	1.056	.600E+01	.179E+03	.299E+02	.198E+04	.198E+04
15.00	1.996	70.000	.649E+02	.882E-12	1.066	1.056	.673E+01	.206E+03	.306E+02	.222E+04	.222E+04
16.00	2.016	70.000	.650E+02	.151E-12	1.066	1.056	.750E+01	.234E+03	.313E+02	.247E+04	.248E+04
more than 99 iterations											
17.00	2.034	70.000	.651E+02	.277E-13	1.066	1.056	.832E+01	.265E+03	.318E+02	.274E+04	.275E+04
18.00	2.049	70.000	.651E+02	.548E-14	1.066	1.056	.919E+01	.297E+03	.323E+02	.303E+04	.303E+04
more than 99 iterations											
19.00	2.062	70.000	.652E+02	.116E-14	1.066	1.056	.101E+02	.331E+03	.327E+02	.333E+04	.334E+04
more than 99 iterations											
20.00	2.073	70.000	.653E+02	.260E-15	1.066	1.056	.111E+02	.366E+03	.331E+02	.365E+04	.366E+04
21.00	2.084	70.000	.653E+02	.620E-16	1.066	1.056	.121E+02	.404E+03	.334E+02	.399E+04	.399E+04
more than 99 iterations											
22.00	2.093	70.000	.653E+02	.156E-16	1.066	1.056	.132E+02	.443E+03	.337E+02	.434E+04	.434E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.345E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.05	1.050	65.000	.688E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.10	1.116	65.000	-.370E+00	.100E+01	1.066	1.066	.999E+00	.982E+00	.983E+00	.330E+03	.341E+03
1.15	1.076	65.000	.181E+01	.100E+01	1.066	1.066	.101E+01	.109E+01	.108E+01	.332E+03	.342E+03
1.20	1.049	65.000	.374E+01	.999E+00	1.066	1.066	.101E+01	.119E+01	.118E+01	.334E+03	.343E+03
1.25	1.028	65.000	.568E+01	.998E+00	1.066	1.066	.102E+01	.129E+01	.127E+01	.335E+03	.344E+03
1.30	1.009	65.000	.760E+01	.995E+00	1.066	1.066	.102E+01	.140E+01	.137E+01	.337E+03	.345E+03
1.35	.994	65.000	.950E+01	.989E+00	1.066	1.066	.103E+01	.151E+01	.147E+01	.339E+03	.346E+03
1.40	.983	65.000	.114E+02	.982E+00	1.066	1.066	.103E+01	.163E+01	.158E+01	.341E+03	.348E+03
1.45	.973	65.000	.132E+02	.973E+00	1.066	1.066	.104E+01	.175E+01	.169E+01	.342E+03	.349E+03
1.50	.966	65.000	.150E+02	.962E+00	1.066	1.066	.104E+01	.188E+01	.180E+01	.344E+03	.350E+03
1.60	.959	65.000	.185E+02	.935E+00	1.066	1.065	.105E+01	.214E+01	.203E+01	.347E+03	.353E+03
1.70	.958	65.000	.217E+02	.899E+00	1.066	1.065	.106E+01	.242E+01	.228E+01	.351E+03	.356E+03
1.80	.963	65.000	.247E+02	.856E+00	1.066	1.065	.107E+01	.272E+01	.253E+01	.354E+03	.359E+03
1.90	.973	65.000	.275E+02	.807E+00	1.066	1.065	.108E+01	.303E+01	.279E+01	.358E+03	.362E+03
2.00	.986	65.000	.300E+02	.754E+00	1.066	1.065	.110E+01	.336E+01	.307E+01	.362E+03	.366E+03
2.20	1.021	65.000	.345E+02	.641E+00	1.066	1.064	.112E+01	.407E+01	.364E+01	.370E+03	.373E+03
2.40	1.063	65.000	.382E+02	.526E+00	1.066	1.064	.115E+01	.485E+01	.424E+01	.378E+03	.381E+03
2.60	1.110	65.000	.412E+02	.419E+00	1.066	1.064	.117E+01	.570E+01	.486E+01	.387E+03	.390E+03
2.80	1.160	65.000	.437E+02	.323E+00	1.066	1.063	.120E+01	.662E+01	.551E+01	.397E+03	.399E+03
3.00	1.211	65.000	.458E+02	.243E+00	1.066	1.063	.123E+01	.761E+01	.617E+01	.407E+03	.409E+03
3.20	1.262	65.000	.476E+02	.179E+00	1.066	1.063	.127E+01	.866E+01	.684E+01	.418E+03	.419E+03
3.40	1.313	65.000	.491E+02	.128E+00	1.066	1.062	.130E+01	.978E+01	.753E+01	.429E+03	.431E+03
3.60	1.363	65.000	.504E+02	.903E-01	1.066	1.062	.134E+01	.110E+02	.821E+01	.441E+03	.442E+03
3.80	1.413	65.000	.515E+02	.625E-01	1.066	1.062	.137E+01	.122E+02	.890E+01	.453E+03	.455E+03
4.00	1.461	65.000	.524E+02	.425E-01	1.066	1.061	.141E+01	.136E+02	.959E+01	.466E+03	.468E+03
4.50	1.574	65.000	.542E+02	.153E-01	1.066	1.061	.152E+01	.172E+02	.113E+02	.502E+03	.503E+03
5.00	1.678	65.000	.556E+02	.518E-02	1.066	1.060	.164E+01	.212E+02	.129E+02	.541E+03	.542E+03
6.00	1.858	65.000	.574E+02	.524E-03	1.066	1.059	.191E+01	.306E+02	.160E+02	.630E+03	.631E+03
7.00	2.005	65.000	.585E+02	.495E-04	1.066	1.058	.222E+01	.416E+02	.187E+02	.734E+03	.735E+03
8.00	2.125	65.000	.592E+02	.469E-05	1.066	1.057	.258E+01	.544E+02	.211E+02	.852E+03	.853E+03
9.00	2.222	65.000	.597E+02	.465E-06	1.066	1.057	.298E+01	.689E+02	.231E+02	.984E+03	.986E+03
10.00	2.301	65.000	.601E+02	.494E-07	1.066	1.057	.343E+01	.851E+02	.248E+02	.113E+04	.113E+04
11.00	2.367	65.000	.603E+02	.569E-08	1.066	1.056	.392E+01	.103E+03	.263E+02	.129E+04	.130E+04
12.00	2.421	65.000	.605E+02	.713E-09	1.066	1.056	.446E+01	.123E+03	.275E+02	.147E+04	.147E+04
13.00	2.467	65.000	.607E+02	.975E-10	1.066	1.056	.504E+01	.144E+03	.286E+02	.166E+04	.166E+04
14.00	2.505	65.000	.608E+02	.145E-10	1.066	1.056	.566E+01	.167E+03	.295E+02	.187E+04	.187E+04
15.00	2.537	65.000	.609E+02	.234E-11	1.066	1.056	.634E+01	.192E+03	.302E+02	.209E+04	.209E+04
16.00	2.565	65.000	.610E+02	.408E-12	1.066	1.056	.705E+01	.218E+03	.309E+02	.233E+04	.233E+04
more than 99 iterations											
17.00	2.589	65.000	.611E+02	.764E-13	1.066	1.056	.782E+01	.246E+03	.315E+02	.258E+04	.258E+04
more than 99 iterations											
18.00	2.609	65.000	.612E+02	.153E-13	1.066	1.056	.863E+01	.276E+03	.320E+02	.285E+04	.285E+04
19.00	2.627	65.000	.612E+02	.329E-14	1.066	1.056	.948E+01	.307E+03	.324E+02	.313E+04	.313E+04
20.00	2.643	65.000	.613E+02	.747E-15	1.066	1.056	.104E+02	.341E+03	.328E+02	.343E+04	.343E+04
more than 99 iterations											
21.00	2.656	65.000	.613E+02	.180E-15	1.066	1.056	.113E+02	.376E+03	.332E+02	.374E+04	.374E+04
more than 99 iterations											
22.00	2.668	65.000	.613E+02	.457E-16	1.066	1.056	.123E+02	.412E+03	.335E+02	.406E+04	.407E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.258E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.05	1.050	60.000	.430E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.10	1.101	60.000	.826E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.15	1.166	60.000	-.443E+00	.100E+01	1.066	1.066	.999E+00	.981E+00	.982E+00	.330E+03	.341E+03
1.20	1.134	60.000	.189E+01	.100E+01	1.066	1.066	.100E+01	.108E+01	.108E+01	.332E+03	.342E+03
1.25	1.114	60.000	.394E+01	.100E+01	1.066	1.066	.101E+01	.118E+01	.117E+01	.333E+03	.343E+03
1.30	1.099	60.000	.597E+01	.998E+00	1.066	1.066	.102E+01	.128E+01	.126E+01	.335E+03	.344E+03
1.35	1.087	60.000	.796E+01	.995E+00	1.066	1.066	.102E+01	.138E+01	.135E+01	.337E+03	.345E+03
1.40	1.078	60.000	.991E+01	.991E+00	1.066	1.066	.103E+01	.149E+01	.145E+01	.338E+03	.346E+03
1.45	1.072	60.000	.118E+02	.985E+00	1.066	1.066	.103E+01	.160E+01	.155E+01	.340E+03	.347E+03
1.50	1.069	60.000	.136E+02	.977E+00	1.066	1.066	.104E+01	.171E+01	.165E+01	.342E+03	.348E+03
1.60	1.068	60.000	.171E+02	.955E+00	1.066	1.066	.105E+01	.195E+01	.187E+01	.345E+03	.351E+03
1.70	1.075	60.000	.204E+02	.926E+00	1.066	1.065	.106E+01	.221E+01	.209E+01	.348E+03	.354E+03
1.80	1.088	60.000	.233E+02	.891E+00	1.066	1.065	.107E+01	.248E+01	.233E+01	.352E+03	.356E+03
1.90	1.105	60.000	.260E+02	.849E+00	1.066	1.065	.108E+01	.276E+01	.257E+01	.355E+03	.359E+03
2.00	1.127	60.000	.285E+02	.802E+00	1.066	1.065	.109E+01	.307E+01	.282E+01	.358E+03	.362E+03
2.20	1.177	60.000	.327E+02	.697E+00	1.066	1.065	.111E+01	.372E+01	.335E+01	.366E+03	.369E+03
2.40	1.235	60.000	.361E+02	.587E+00	1.066	1.064	.113E+01	.443E+01	.391E+01	.374E+03	.377E+03
2.60	1.297	60.000	.389E+02	.480E+00	1.066	1.064	.116E+01	.520E+01	.450E+01	.382E+03	.384E+03
2.80	1.361	60.000	.413E+02	.381E+00	1.066	1.064	.118E+01	.604E+01	.510E+01	.391E+03	.393E+03
3.00	1.426	60.000	.432E+02	.295E+00	1.066	1.063	.121E+01	.694E+01	.573E+01	.400E+03	.402E+03
3.20	1.491	60.000	.448E+02	.223E+00	1.066	1.063	.124E+01	.790E+01	.636E+01	.410E+03	.412E+03
3.40	1.555	60.000	.461E+02	.165E+00	1.066	1.063	.127E+01	.893E+01	.701E+01	.420E+03	.422E+03
3.60	1.618	60.000	.473E+02	.120E+00	1.066	1.062	.131E+01	.100E+02	.766E+01	.431E+03	.433E+03
3.80	1.679	60.000	.482E+02	.854E-01	1.066	1.062	.134E+01	.112E+02	.832E+01	.443E+03	.444E+03
4.00	1.739	60.000	.491E+02	.599E-01	1.066	1.062	.138E+01	.124E+02	.898E+01	.455E+03	.456E+03
4.50	1.881	60.000	.507E+02	.233E-01	1.066	1.061	.148E+01	.157E+02	.106E+02	.487E+03	.489E+03
5.00	2.012	60.000	.519E+02	.844E-02	1.066	1.060	.159E+01	.194E+02	.122E+02	.523E+03	.524E+03
6.00	2.238	60.000	.535E+02	.976E-03	1.066	1.059	.183E+01	.279E+02	.152E+02	.605E+03	.606E+03
7.00	2.424	60.000	.545E+02	.103E-03	1.066	1.058	.212E+01	.380E+02	.179E+02	.700E+03	.701E+03
8.00	2.576	60.000	.551E+02	.108E-04	1.066	1.058	.245E+01	.497E+02	.203E+02	.808E+03	.809E+03
9.00	2.701	60.000	.556E+02	.116E-05	1.066	1.057	.282E+01	.629E+02	.223E+02	.930E+03	.931E+03
10.00	2.804	60.000	.559E+02	.133E-06	1.066	1.057	.323E+01	.777E+02	.241E+02	.106E+04	.107E+04
11.00	2.889	60.000	.561E+02	.162E-07	1.066	1.056	.367E+01	.940E+02	.256E+02	.121E+04	.121E+04
12.00	2.960	60.000	.563E+02	.214E-08	1.066	1.056	.416E+01	.112E+03	.269E+02	.137E+04	.138E+04
13.00	3.020	60.000	.565E+02	.305E-09	1.066	1.056	.470E+01	.131E+03	.280E+02	.155E+04	.155E+04
14.00	3.070	60.000	.566E+02	.470E-10	1.066	1.056	.527E+01	.152E+03	.289E+02	.174E+04	.174E+04
15.00	3.113	60.000	.567E+02	.782E-11	1.066	1.056	.588E+01	.175E+03	.297E+02	.194E+04	.194E+04
16.00	3.149	60.000	.567E+02	.140E-11	1.066	1.056	.654E+01	.199E+03	.304E+02	.216E+04	.216E+04
17.00	3.181	60.000	.568E+02	.269E-12	1.066	1.056	.724E+01	.225E+03	.311E+02	.239E+04	.239E+04
18.00	3.208	60.000	.569E+02	.551E-13	1.066	1.056	.797E+01	.252E+03	.316E+02	.263E+04	.263E+04
19.00	3.232	60.000	.569E+02	.120E-13	1.066	1.056	.875E+01	.281E+03	.321E+02	.289E+04	.289E+04
more than 99 iterations											
20.00	3.253	60.000	.569E+02	.278E-14	1.066	1.056	.958E+01	.311E+03	.325E+02	.316E+04	.316E+04
more than 99 iterations											
21.00	3.271	60.000	.570E+02	.678E-15	1.066	1.056	.104E+02	.343E+03	.328E+02	.345E+04	.345E+04
22.00	3.287	60.000	.570E+02	.174E-15	1.066	1.056	.113E+02	.376E+03	.332E+02	.374E+04	.375E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.185E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.05	1.050	55.000	.287E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.10	1.100	55.000	.455E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.15	1.150	55.000	.798E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
more than 99 iterations											
1.20	1.229	55.000	-.601E+00	.990E+00	1.066	1.066	.998E+00	.968E+00	.970E+00	.329E+03	.340E+03
1.25	1.212	55.000	.126E+01	.100E+01	1.066	1.066	.100E+01	.105E+01	.105E+01	.331E+03	.341E+03
1.30	1.198	55.000	.334E+01	.100E+01	1.066	1.066	.101E+01	.114E+01	.113E+01	.333E+03	.342E+03
1.35	1.188	55.000	.538E+01	.999E+00	1.066	1.066	.101E+01	.123E+01	.121E+01	.334E+03	.343E+03
1.40	1.182	55.000	.736E+01	.997E+00	1.066	1.066	.102E+01	.133E+01	.130E+01	.336E+03	.344E+03
1.45	1.178	55.000	.928E+01	.994E+00	1.066	1.066	.102E+01	.142E+01	.139E+01	.337E+03	.345E+03
1.50	1.178	55.000	.111E+02	.989E+00	1.066	1.066	.103E+01	.153E+01	.149E+01	.339E+03	.346E+03
1.60	1.184	55.000	.146E+02	.974E+00	1.066	1.066	.104E+01	.174E+01	.168E+01	.342E+03	.349E+03
1.70	1.197	55.000	.178E+02	.953E+00	1.066	1.066	.105E+01	.197E+01	.188E+01	.345E+03	.351E+03
1.80	1.217	55.000	.207E+02	.926E+00	1.066	1.065	.106E+01	.221E+01	.210E+01	.348E+03	.354E+03
1.90	1.241	55.000	.234E+02	.892E+00	1.066	1.065	.106E+01	.247E+01	.232E+01	.351E+03	.356E+03
2.00	1.269	55.000	.257E+02	.852E+00	1.066	1.065	.107E+01	.274E+01	.255E+01	.355E+03	.359E+03
2.20	1.334	55.000	.298E+02	.761E+00	1.066	1.065	.110E+01	.332E+01	.303E+01	.361E+03	.365E+03
2.40	1.406	55.000	.331E+02	.659E+00	1.066	1.064	.112E+01	.396E+01	.355E+01	.368E+03	.372E+03
2.60	1.482	55.000	.357E+02	.554E+00	1.066	1.064	.114E+01	.465E+01	.408E+01	.376E+03	.379E+03
2.80	1.560	55.000	.379E+02	.455E+00	1.066	1.064	.116E+01	.540E+01	.464E+01	.384E+03	.386E+03
3.00	1.638	55.000	.397E+02	.364E+00	1.066	1.064	.119E+01	.621E+01	.522E+01	.392E+03	.395E+03
3.20	1.717	55.000	.412E+02	.285E+00	1.066	1.063	.122E+01	.707E+01	.581E+01	.401E+03	.403E+03
3.40	1.794	55.000	.424E+02	.218E+00	1.066	1.063	.124E+01	.798E+01	.641E+01	.411E+03	.413E+03
3.60	1.870	55.000	.435E+02	.164E+00	1.066	1.063	.127E+01	.895E+01	.703E+01	.421E+03	.422E+03
3.80	1.944	55.000	.444E+02	.121E+00	1.066	1.062	.131E+01	.998E+01	.764E+01	.431E+03	.433E+03
4.00	2.017	55.000	.452E+02	.878E-01	1.066	1.062	.134E+01	.111E+02	.827E+01	.442E+03	.443E+03
4.50	2.189	55.000	.467E+02	.372E-01	1.066	1.061	.143E+01	.140E+02	.982E+01	.471E+03	.472E+03
5.00	2.347	55.000	.478E+02	.147E-01	1.066	1.061	.153E+01	.173E+02	.114E+02	.503E+03	.505E+03
6.00	2.625	55.000	.493E+02	.199E-02	1.066	1.059	.175E+01	.250E+02	.143E+02	.577E+03	.578E+03
7.00	2.855	55.000	.502E+02	.243E-03	1.066	1.058	.201E+01	.340E+02	.169E+02	.662E+03	.663E+03
8.00	3.045	55.000	.508E+02	.287E-04	1.066	1.058	.230E+01	.444E+02	.193E+02	.760E+03	.761E+03
9.00	3.203	55.000	.512E+02	.343E-05	1.066	1.057	.263E+01	.563E+02	.214E+02	.869E+03	.870E+03
10.00	3.333	55.000	.515E+02	.426E-06	1.066	1.057	.300E+01	.695E+02	.232E+02	.990E+03	.991E+03
11.00	3.442	55.000	.517E+02	.561E-07	1.066	1.057	.340E+01	.841E+02	.247E+02	.112E+04	.112E+04
12.00	3.534	55.000	.519E+02	.789E-08	1.066	1.056	.384E+01	.100E+03	.261E+02	.127E+04	.127E+04
13.00	3.611	55.000	.520E+02	.119E-08	1.066	1.056	.432E+01	.117E+03	.272E+02	.142E+04	.143E+04
14.00	3.676	55.000	.521E+02	.192E-09	1.066	1.056	.483E+01	.136E+03	.282E+02	.159E+04	.160E+04
15.00	3.731	55.000	.522E+02	.333E-10	1.066	1.056	.538E+01	.156E+03	.291E+02	.178E+04	.178E+04
16.00	3.780	55.000	.523E+02	.619E-11	1.066	1.056	.597E+01	.178E+03	.298E+02	.197E+04	.197E+04
17.00	3.821	55.000	.523E+02	.122E-11	1.066	1.056	.659E+01	.201E+03	.305E+02	.218E+04	.218E+04
18.00	3.857	55.000	.524E+02	.258E-12	1.066	1.056	.725E+01	.225E+03	.311E+02	.239E+04	.240E+04
19.00	3.888	55.000	.524E+02	.576E-13	1.066	1.056	.795E+01	.251E+03	.316E+02	.262E+04	.263E+04
more than 99 iterations											
20.00	3.916	55.000	.524E+02	.136E-13	1.066	1.056	.869E+01	.278E+03	.320E+02	.287E+04	.287E+04
more than 99 iterations											
21.00	3.939	55.000	.525E+02	.338E-14	1.066	1.056	.946E+01	.307E+03	.324E+02	.312E+04	.313E+04
22.00	3.962	55.000	.525E+02	.884E-15	1.066	1.056	.103E+02	.337E+03	.328E+02	.339E+04	.339E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	.123E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.05	1.050	50.000	.186E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.10	1.100	50.000	.274E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.15	1.150	50.000	.407E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.20	1.200	50.000	.636E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.25	1.251	50.000	.112E-01	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.30	1.314	50.000	-.507E+00	.100E+01	1.066	1.066	.999E+00	.981E+00	.982E+00	.330E+03	.341E+03
1.35	1.299	50.000	.186E+01	.100E+01	1.066	1.066	.100E+01	.107E+01	.107E+01	.331E+03	.342E+03
1.40	1.294	50.000	.386E+01	.999E+00	1.066	1.066	.101E+01	.115E+01	.114E+01	.333E+03	.343E+03
1.45	1.292	50.000	.579E+01	.999E+00	1.066	1.066	.101E+01	.124E+01	.122E+01	.334E+03	.343E+03
1.50	1.294	50.000	.765E+01	.996E+00	1.066	1.066	.102E+01	.133E+01	.131E+01	.336E+03	.344E+03
1.60	1.304	50.000	.111E+02	.989E+00	1.066	1.066	.103E+01	.152E+01	.148E+01	.339E+03	.346E+03
1.70	1.323	50.000	.143E+02	.976E+00	1.066	1.066	.104E+01	.172E+01	.166E+01	.342E+03	.348E+03
1.80	1.348	50.000	.172E+02	.957E+00	1.066	1.066	.104E+01	.193E+01	.185E+01	.345E+03	.351E+03
1.90	1.378	50.000	.198E+02	.933E+00	1.066	1.065	.105E+01	.216E+01	.205E+01	.348E+03	.353E+03
2.00	1.412	50.000	.221E+02	.902E+00	1.066	1.065	.106E+01	.239E+01	.225E+01	.350E+03	.355E+03
2.20	1.490	50.000	.261E+02	.827E+00	1.066	1.065	.108E+01	.290E+01	.268E+01	.357E+03	.361E+03
2.40	1.575	50.000	.292E+02	.739E+00	1.066	1.065	.110E+01	.346E+01	.314E+01	.363E+03	.367E+03
2.60	1.664	50.000	.318E+02	.642E+00	1.066	1.064	.112E+01	.406E+01	.363E+01	.370E+03	.373E+03
2.80	1.755	50.000	.339E+02	.545E+00	1.066	1.064	.114E+01	.472E+01	.413E+01	.377E+03	.380E+03
3.00	1.847	50.000	.357E+02	.452E+00	1.066	1.064	.116E+01	.542E+01	.466E+01	.384E+03	.387E+03
3.20	1.939	50.000	.371E+02	.367E+00	1.066	1.064	.119E+01	.618E+01	.520E+01	.392E+03	.394E+03
3.40	2.030	50.000	.383E+02	.292E+00	1.066	1.063	.121E+01	.698E+01	.575E+01	.400E+03	.402E+03
3.60	2.119	50.000	.393E+02	.228E+00	1.066	1.063	.124E+01	.783E+01	.631E+01	.409E+03	.411E+03
3.80	2.206	50.000	.402E+02	.175E+00	1.066	1.063	.127E+01	.872E+01	.688E+01	.418E+03	.420E+03
4.00	2.291	50.000	.409E+02	.133E+00	1.066	1.062	.130E+01	.967E+01	.746E+01	.428E+03	.430E+03
4.50	2.495	50.000	.424E+02	.620E-01	1.066	1.062	.137E+01	.123E+02	.891E+01	.454E+03	.455E+03
5.00	2.684	50.000	.434E+02	.271E-01	1.066	1.061	.146E+01	.151E+02	.104E+02	.482E+03	.483E+03
6.00	3.018	50.000	.448E+02	.441E-02	1.066	1.060	.166E+01	.218E+02	.132E+02	.547E+03	.548E+03
7.00	3.299	50.000	.457E+02	.637E-03	1.066	1.059	.188E+01	.297E+02	.158E+02	.622E+03	.623E+03
8.00	3.533	50.000	.462E+02	.870E-04	1.066	1.058	.214E+01	.388E+02	.181E+02	.708E+03	.709E+03
9.00	3.730	50.000	.466E+02	.118E-04	1.066	1.058	.243E+01	.492E+02	.202E+02	.804E+03	.805E+03
10.00	3.894	50.000	.469E+02	.164E-05	1.066	1.057	.276E+01	.607E+02	.220E+02	.910E+03	.911E+03
11.00	4.032	50.000	.471E+02	.237E-06	1.066	1.057	.311E+01	.735E+02	.236E+02	.103E+04	.103E+04
12.00	4.149	50.000	.473E+02	.361E-07	1.066	1.057	.350E+01	.875E+02	.250E+02	.115E+04	.116E+04
13.00	4.248	50.000	.474E+02	.583E-08	1.066	1.056	.391E+01	.103E+03	.262E+02	.129E+04	.129E+04
14.00	4.333	50.000	.475E+02	.100E-08	1.066	1.056	.436E+01	.119E+03	.273E+02	.144E+04	.144E+04
15.00	4.406	50.000	.476E+02	.183E-09	1.066	1.056	.485E+01	.137E+03	.282E+02	.160E+04	.160E+04
16.00	4.468	50.000	.477E+02	.356E-10	1.066	1.056	.536E+01	.156E+03	.290E+02	.177E+04	.177E+04
17.00	4.522	50.000	.477E+02	.733E-11	1.066	1.056	.591E+01	.176E+03	.298E+02	.195E+04	.195E+04
18.00	4.570	50.000	.478E+02	.160E-11	1.066	1.056	.649E+01	.197E+03	.304E+02	.214E+04	.214E+04
19.00	4.611	50.000	.478E+02	.368E-12	1.066	1.056	.710E+01	.220E+03	.309E+02	.234E+04	.234E+04
20.00	4.647	50.000	.478E+02	.893E-13	1.066	1.056	.774E+01	.243E+03	.314E+02	.255E+04	.256E+04
more than 99 iterations											
21.00	4.680	50.000	.479E+02	.228E-13	1.066	1.056	.842E+01	.268E+03	.319E+02	.278E+04	.278E+04
22.00	4.708	50.000	.479E+02	.608E-14	1.066	1.056	.913E+01	.295E+03	.323E+02	.301E+04	.301E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.724E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.05	1.050	45.000	.111E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.10	1.100	45.000	.161E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.15	1.150	45.000	.227E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.20	1.200	45.000	.320E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.25	1.250	45.000	.459E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.30	1.300	45.000	.690E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.35	1.351	45.000	.113E-01	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.40	1.418	45.000	-.682E+00	.100E+01	1.066	1.066	.998E+00	.975E+00	.977E+00	.329E+03	.341E+03
1.45	1.415	45.000	.141E+01	.100E+01	1.066	1.066	.100E+01	.105E+01	.105E+01	.331E+03	.341E+03
1.50	1.417	45.000	.326E+01	.100E+01	1.066	1.066	.101E+01	.113E+01	.112E+01	.333E+03	.342E+03
1.60	1.430	45.000	.676E+01	.998E+00	1.066	1.066	.102E+01	.129E+01	.127E+01	.335E+03	.344E+03
1.70	1.452	45.000	.994E+01	.992E+00	1.066	1.066	.102E+01	.146E+01	.142E+01	.338E+03	.346E+03
1.80	1.481	45.000	.128E+02	.982E+00	1.066	1.066	.103E+01	.164E+01	.159E+01	.341E+03	.348E+03
1.90	1.516	45.000	.154E+02	.967E+00	1.066	1.066	.104E+01	.183E+01	.176E+01	.343E+03	.350E+03
2.00	1.555	45.000	.177E+02	.947E+00	1.066	1.066	.105E+01	.203E+01	.194E+01	.346E+03	.352E+03
2.20	1.643	45.000	.217E+02	.892E+00	1.066	1.065	.106E+01	.247E+01	.232E+01	.351E+03	.356E+03
2.40	1.740	45.000	.248E+02	.821E+00	1.066	1.065	.108E+01	.294E+01	.272E+01	.357E+03	.361E+03
2.60	1.841	45.000	.274E+02	.739E+00	1.066	1.065	.110E+01	.346E+01	.314E+01	.363E+03	.367E+03
2.80	1.945	45.000	.294E+02	.650E+00	1.066	1.064	.112E+01	.402E+01	.359E+01	.369E+03	.372E+03
3.00	2.050	45.000	.311E+02	.560E+00	1.066	1.064	.114E+01	.462E+01	.406E+01	.376E+03	.378E+03
3.20	2.155	45.000	.326E+02	.473E+00	1.066	1.064	.116E+01	.526E+01	.454E+01	.382E+03	.385E+03
3.40	2.259	45.000	.338E+02	.392E+00	1.066	1.064	.118E+01	.594E+01	.503E+01	.390E+03	.392E+03
3.60	2.362	45.000	.348E+02	.320E+00	1.066	1.063	.120E+01	.666E+01	.554E+01	.397E+03	.399E+03
3.80	2.463	45.000	.356E+02	.256E+00	1.066	1.063	.123E+01	.743E+01	.605E+01	.405E+03	.407E+03
4.00	2.561	45.000	.364E+02	.202E+00	1.066	1.063	.125E+01	.823E+01	.658E+01	.413E+03	.415E+03
4.50	2.798	45.000	.378E+02	.104E+00	1.066	1.062	.132E+01	.104E+02	.791E+01	.435E+03	.437E+03
5.00	3.020	45.000	.388E+02	.515E-01	1.066	1.061	.139E+01	.129E+02	.925E+01	.460E+03	.461E+03
6.00	3.416	45.000	.402E+02	.104E-01	1.066	1.060	.156E+01	.186E+02	.119E+02	.516E+03	.517E+03
7.00	3.755	45.000	.410E+02	.183E-02	1.066	1.059	.176E+01	.253E+02	.144E+02	.580E+03	.581E+03
8.00	4.042	45.000	.416E+02	.297E-03	1.066	1.059	.198E+01	.331E+02	.167E+02	.654E+03	.655E+03
9.00	4.285	45.000	.420E+02	.470E-04	1.066	1.058	.223E+01	.419E+02	.188E+02	.736E+03	.737E+03
10.00	4.491	45.000	.422E+02	.747E-05	1.066	1.057	.251E+01	.517E+02	.206E+02	.827E+03	.828E+03
11.00	4.666	45.000	.424E+02	.121E-05	1.066	1.057	.281E+01	.626E+02	.223E+02	.927E+03	.928E+03
12.00	4.815	45.000	.426E+02	.205E-06	1.066	1.057	.314E+01	.746E+02	.237E+02	.104E+04	.104E+04
13.00	4.943	45.000	.427E+02	.361E-07	1.066	1.057	.350E+01	.875E+02	.250E+02	.115E+04	.116E+04
14.00	5.053	45.000	.428E+02	.670E-08	1.066	1.056	.388E+01	.102E+03	.262E+02	.128E+04	.128E+04
15.00	5.148	45.000	.429E+02	.131E-08	1.066	1.056	.429E+01	.117E+03	.272E+02	.142E+04	.142E+04
16.00	5.230	45.000	.430E+02	.270E-09	1.066	1.056	.473E+01	.133E+03	.280E+02	.156E+04	.156E+04
17.00	5.302	45.000	.430E+02	.585E-10	1.066	1.056	.520E+01	.150E+03	.288E+02	.172E+04	.172E+04
18.00	5.364	45.000	.431E+02	.134E-10	1.066	1.056	.569E+01	.168E+03	.295E+02	.188E+04	.188E+04
19.00	5.420	45.000	.431E+02	.321E-11	1.066	1.056	.621E+01	.187E+03	.301E+02	.205E+04	.205E+04
20.00	5.468	45.000	.431E+02	.807E-12	1.066	1.056	.676E+01	.207E+03	.307E+02	.223E+04	.223E+04
21.00	5.512	45.000	.432E+02	.212E-12	1.066	1.056	.734E+01	.229E+03	.311E+02	.242E+04	.242E+04
22.00	5.550	45.000	.432E+02	.584E-13	1.066	1.056	.795E+01	.251E+03	.316E+02	.262E+04	.262E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	40.000	.289E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.05	1.050	40.000	.545E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.10	1.100	40.000	.837E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.15	1.150	40.000	.120E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.20	1.200	40.000	.165E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.25	1.250	40.000	.225E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.30	1.300	40.000	.301E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.35	1.350	40.000	.409E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.40	1.400	40.000	.573E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.45	1.451	40.000	.843E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.50	1.501	40.000	.133E-01	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
1.60	1.564	40.000	.154E+01	.100E+01	1.066	1.066	.100E+01	.106E+01	.106E+01	.331E+03	.342E+03
1.70	1.587	40.000	.475E+01	.999E+00	1.066	1.066	.101E+01	.120E+01	.119E+01	.334E+03	.343E+03
1.80	1.618	40.000	.765E+01	.996E+00	1.066	1.066	.102E+01	.135E+01	.132E+01	.336E+03	.345E+03
1.90	1.655	40.000	.103E+02	.990E+00	1.066	1.066	.103E+01	.151E+01	.147E+01	.339E+03	.346E+03
2.00	1.698	40.000	.126E+02	.979E+00	1.066	1.066	.103E+01	.167E+01	.162E+01	.341E+03	.348E+03
2.20	1.794	40.000	.166E+02	.947E+00	1.066	1.066	.105E+01	.203E+01	.194E+01	.346E+03	.352E+03
2.40	1.901	40.000	.198E+02	.898E+00	1.066	1.065	.106E+01	.243E+01	.228E+01	.351E+03	.356E+03
2.60	2.013	40.000	.224E+02	.835E+00	1.066	1.065	.108E+01	.285E+01	.264E+01	.356E+03	.360E+03
2.80	2.129	40.000	.245E+02	.762E+00	1.066	1.065	.109E+01	.331E+01	.303E+01	.361E+03	.365E+03
3.00	2.246	40.000	.262E+02	.683E+00	1.066	1.065	.111E+01	.381E+01	.343E+01	.367E+03	.370E+03
3.20	2.364	40.000	.277E+02	.601E+00	1.066	1.064	.113E+01	.434E+01	.384E+01	.373E+03	.376E+03
3.40	2.481	40.000	.289E+02	.520E+00	1.066	1.064	.115E+01	.490E+01	.427E+01	.379E+03	.381E+03
3.60	2.597	40.000	.299E+02	.443E+00	1.066	1.064	.117E+01	.550E+01	.471E+01	.385E+03	.387E+03
3.80	2.711	40.000	.308E+02	.372E+00	1.066	1.064	.119E+01	.613E+01	.517E+01	.392E+03	.394E+03
4.00	2.824	40.000	.315E+02	.307E+00	1.066	1.063	.121E+01	.680E+01	.563E+01	.398E+03	.401E+03
4.50	3.095	40.000	.330E+02	.181E+00	1.066	1.063	.126E+01	.861E+01	.681E+01	.417E+03	.419E+03
5.00	3.352	40.000	.340E+02	.994E-01	1.066	1.062	.133E+01	.106E+02	.803E+01	.438E+03	.439E+03
6.00	3.817	40.000	.354E+02	.255E-01	1.066	1.061	.147E+01	.153E+02	.105E+02	.484E+03	.485E+03
7.00	4.222	40.000	.363E+02	.560E-02	1.066	1.060	.163E+01	.209E+02	.128E+02	.538E+03	.539E+03
8.00	4.570	40.000	.368E+02	.112E-02	1.066	1.059	.182E+01	.273E+02	.150E+02	.599E+03	.601E+03
9.00	4.870	40.000	.372E+02	.213E-03	1.066	1.058	.202E+01	.346E+02	.171E+02	.668E+03	.669E+03
10.00	5.128	40.000	.375E+02	.398E-04	1.066	1.058	.225E+01	.427E+02	.190E+02	.744E+03	.745E+03
11.00	5.350	40.000	.377E+02	.747E-05	1.066	1.057	.251E+01	.517E+02	.206E+02	.827E+03	.828E+03
12.00	5.541	40.000	.378E+02	.143E-05	1.066	1.057	.278E+01	.616E+02	.221E+02	.918E+03	.919E+03
13.00	5.707	40.000	.380E+02	.282E-06	1.066	1.057	.308E+01	.723E+02	.235E+02	.102E+04	.102E+04
14.00	5.850	40.000	.381E+02	.577E-07	1.066	1.057	.340E+01	.839E+02	.247E+02	.112E+04	.112E+04
more than 99 iterations											
15.00	5.975	40.000	.381E+02	.123E-07	1.066	1.056	.374E+01	.963E+02	.258E+02	.123E+04	.123E+04
16.00	6.084	40.000	.382E+02	.274E-08	1.066	1.056	.410E+01	.110E+03	.267E+02	.135E+04	.135E+04
17.00	6.180	40.000	.383E+02	.635E-09	1.066	1.056	.449E+01	.124E+03	.276E+02	.148E+04	.148E+04
18.00	6.264	40.000	.383E+02	.154E-09	1.066	1.056	.490E+01	.139E+03	.283E+02	.162E+04	.162E+04
19.00	6.339	40.000	.383E+02	.390E-10	1.066	1.056	.533E+01	.155E+03	.290E+02	.176E+04	.176E+04
more than 99 iterations											
20.00	6.404	40.000	.384E+02	.103E-10	1.066	1.056	.578E+01	.171E+03	.296E+02	.191E+04	.191E+04
21.00	6.463	40.000	.384E+02	.283E-11	1.066	1.056	.626E+01	.189E+03	.302E+02	.207E+04	.207E+04
22.00	6.516	40.000	.384E+02	.808E-12	1.066	1.056	.676E+01	.207E+03	.307E+02	.223E+04	.223E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	35.000	-.160E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.05	1.050	35.000	.119E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.10	1.100	35.000	.292E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.15	1.150	35.000	.501E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.20	1.200	35.000	.741E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.25	1.250	35.000	.102E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.30	1.300	35.000	.136E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.35	1.350	35.000	.178E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.40	1.400	35.000	.228E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.45	1.450	35.000	.297E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.50	1.500	35.000	.386E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.60	1.601	35.000	.706E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.70	1.702	35.000	.141E-01	.100E+01	1.066	1.066	.100E+01	.999E+00	.999E+00	.330E+03	.340E+03
1.80	1.763	35.000	.166E+01	.100E+01	1.066	1.066	.100E+01	.107E+01	.106E+01	.331E+03	.342E+03
1.90	1.800	35.000	.434E+01	.999E+00	1.066	1.066	.101E+01	.119E+01	.118E+01	.334E+03	.343E+03
2.00	1.844	35.000	.675E+01	.997E+00	1.066	1.066	.102E+01	.133E+01	.130E+01	.336E+03	.344E+03
2.20	1.946	35.000	.109E+02	.984E+00	1.066	1.066	.103E+01	.161E+01	.156E+01	.340E+03	.347E+03
2.40	2.059	35.000	.142E+02	.958E+00	1.066	1.066	.104E+01	.192E+01	.184E+01	.345E+03	.351E+03
2.60	2.180	35.000	.169E+02	.919E+00	1.066	1.065	.106E+01	.226E+01	.214E+01	.349E+03	.354E+03
2.80	2.306	35.000	.191E+02	.868E+00	1.066	1.065	.107E+01	.263E+01	.246E+01	.353E+03	.358E+03
3.00	2.435	35.000	.209E+02	.808E+00	1.066	1.065	.108E+01	.303E+01	.279E+01	.358E+03	.362E+03
3.20	2.564	35.000	.224E+02	.740E+00	1.066	1.065	.110E+01	.345E+01	.314E+01	.363E+03	.366E+03
3.40	2.693	35.000	.237E+02	.669E+00	1.066	1.065	.111E+01	.390E+01	.350E+01	.368E+03	.371E+03
3.60	2.822	35.000	.247E+02	.596E+00	1.066	1.064	.113E+01	.437E+01	.387E+01	.373E+03	.376E+03
3.80	2.950	35.000	.256E+02	.523E+00	1.066	1.064	.115E+01	.487E+01	.425E+01	.378E+03	.381E+03
4.00	3.076	35.000	.264E+02	.454E+00	1.066	1.064	.116E+01	.541E+01	.465E+01	.384E+03	.387E+03
4.50	3.383	35.000	.280E+02	.303E+00	1.066	1.063	.121E+01	.685E+01	.567E+01	.399E+03	.401E+03
5.00	3.676	35.000	.291E+02	.189E+00	1.066	1.063	.126E+01	.847E+01	.672E+01	.416E+03	.417E+03
6.00	4.217	35.000	.305E+02	.628E-01	1.066	1.062	.137E+01	.122E+02	.889E+01	.453E+03	.455E+03
7.00	4.696	35.000	.314E+02	.178E-01	1.066	1.061	.151E+01	.166E+02	.111E+02	.497E+03	.498E+03
8.00	5.118	35.000	.319E+02	.450E-02	1.066	1.060	.165E+01	.217E+02	.131E+02	.546E+03	.547E+03
9.00	5.486	35.000	.323E+02	.106E-02	1.066	1.059	.182E+01	.275E+02	.151E+02	.601E+03	.603E+03
10.00	5.809	35.000	.326E+02	.242E-03	1.066	1.058	.201E+01	.340E+02	.169E+02	.662E+03	.664E+03
11.00	6.090	35.000	.328E+02	.543E-04	1.066	1.058	.221E+01	.412E+02	.186E+02	.729E+03	.730E+03
12.00	6.336	35.000	.330E+02	.122E-04	1.066	1.058	.243E+01	.490E+02	.202E+02	.802E+03	.803E+03
13.00	6.551	35.000	.331E+02	.276E-05	1.066	1.057	.267E+01	.575E+02	.216E+02	.881E+03	.882E+03
14.00	6.740	35.000	.332E+02	.640E-06	1.066	1.057	.292E+01	.668E+02	.228E+02	.965E+03	.966E+03
15.00	6.907	35.000	.333E+02	.153E-06	1.066	1.057	.320E+01	.766E+02	.240E+02	.106E+04	.106E+04
16.00	7.053	35.000	.334E+02	.375E-07	1.066	1.057	.349E+01	.872E+02	.250E+02	.115E+04	.115E+04
17.00	7.182	35.000	.335E+02	.951E-08	1.066	1.056	.380E+01	.985E+02	.259E+02	.125E+04	.125E+04
18.00	7.297	35.000	.335E+02	.250E-08	1.066	1.056	.413E+01	.110E+03	.268E+02	.136E+04	.136E+04
19.00	7.400	35.000	.335E+02	.678E-09	1.066	1.056	.447E+01	.123E+03	.275E+02	.148E+04	.148E+04
20.00	7.491	35.000	.336E+02	.191E-09	1.066	1.056	.483E+01	.136E+03	.282E+02	.160E+04	.160E+04
21.00	7.573	35.000	.336E+02	.556E-10	1.066	1.056	.521E+01	.150E+03	.288E+02	.172E+04	.172E+04
22.00	7.646	35.000	.336E+02	.167E-10	1.066	1.056	.561E+01	.165E+03	.294E+02	.185E+04	.185E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	-.204E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.05	1.050	5.000	-.208E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.10	1.100	5.000	-.205E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.15	1.150	5.000	-.203E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.20	1.200	5.000	-.203E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.25	1.250	5.000	-.209E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.30	1.300	5.000	-.203E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.35	1.350	5.000	-.203E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.40	1.400	5.000	-.205E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.45	1.450	5.000	-.204E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.50	1.500	5.000	-.200E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.60	1.600	5.000	-.203E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.70	1.700	5.000	-.197E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.80	1.800	5.000	-.202E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.90	1.900	5.000	-.190E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
2.00	2.000	5.000	-.187E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
2.20	2.200	5.000	-.171E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
2.40	2.400	5.000	-.125E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
2.60	2.600	5.000	-.186E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
2.80	2.800	5.000	-.162E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
3.00	3.000	5.000	-.164E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
3.20	3.200	5.000	-.166E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
3.40	3.400	5.000	-.154E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
3.60	3.600	5.000	-.145E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
3.80	3.800	5.000	-.141E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
4.00	4.000	5.000	-.129E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
4.50	4.500	5.000	-.109E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
5.00	5.000	5.000	-.783E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
6.00	6.001	5.000	-.771E-05	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
7.00	7.001	5.000	.860E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
8.00	8.001	5.000	.232E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
9.00	9.002	5.000	.477E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
10.00	10.003	5.000	.981E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
11.00	11.009	5.000	.229E-02	.999E+00	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
12.00	11.968	5.000	.416E+00	.999E+00	1.066	1.066	.101E+01	.110E+01	.109E+01	.332E+03	.342E+03
13.00	12.883	5.000	.107E+01	.997E+00	1.066	1.066	.102E+01	.129E+01	.127E+01	.335E+03	.344E+03
14.00	13.797	5.000	.159E+01	.990E+00	1.066	1.066	.103E+01	.150E+01	.147E+01	.339E+03	.346E+03
15.00	14.706	5.000	.200E+01	.975E+00	1.066	1.066	.104E+01	.173E+01	.167E+01	.342E+03	.349E+03
16.00	15.608	5.000	.235E+01	.953E+00	1.066	1.066	.105E+01	.198E+01	.189E+01	.345E+03	.351E+03
17.00	16.503	5.000	.263E+01	.923E+00	1.066	1.065	.106E+01	.223E+01	.212E+01	.349E+03	.354E+03
18.00	17.388	5.000	.287E+01	.886E+00	1.066	1.065	.107E+01	.251E+01	.235E+01	.352E+03	.357E+03
19.00	18.264	5.000	.307E+01	.843E+00	1.066	1.065	.108E+01	.280E+01	.260E+01	.355E+03	.360E+03
20.00	19.130	5.000	.325E+01	.795E+00	1.066	1.065	.109E+01	.311E+01	.286E+01	.359E+03	.363E+03
21.00	19.985	5.000	.339E+01	.744E+00	1.066	1.065	.110E+01	.343E+01	.312E+01	.363E+03	.366E+03
22.00	20.829	5.000	.352E+01	.690E+00	1.066	1.065	.111E+01	.376E+01	.339E+01	.366E+03	.370E+03

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rha2/1	t2	tt2
1.00	1.000	10.000	-.397E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.05	1.050	10.000	-.384E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.10	1.100	10.000	-.389E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.15	1.150	10.000	-.378E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.20	1.200	10.000	-.293E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.330E+03
1.25	1.250	10.000	-.593E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.30	1.300	10.000	-.378E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.35	1.350	10.000	-.324E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.40	1.400	10.000	-.353E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.45	1.450	10.000	-.336E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.50	1.500	10.000	-.334E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.60	1.600	10.000	-.319E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.70	1.700	10.000	-.303E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.80	1.800	10.000	-.293E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.90	1.900	10.000	-.280E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
2.00	2.000	10.000	-.265E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
2.20	2.200	10.000	-.224E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
2.40	2.400	10.000	-.187E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
2.60	2.600	10.000	-.137E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
2.80	2.800	10.000	-.841E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
3.00	3.000	10.000	-.222E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
3.20	3.200	10.000	.467E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
3.40	3.400	10.000	.112E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
3.60	3.600	10.000	.199E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
3.80	3.800	10.000	.305E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
4.00	4.001	10.000	.435E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
4.50	4.501	10.000	.901E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
5.00	5.001	10.000	.185E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
6.00	5.976	10.000	.756E+00	.100E+01	1.066	1.066	.101E+01	.109E+01	.108E+01	.332E+03	.342E+03
7.00	6.859	10.000	.309E+01	.990E+00	1.066	1.066	.103E+01	.149E+01	.146E+01	.339E+03	.346E+03
8.00	7.743	10.000	.463E+01	.954E+00	1.066	1.066	.105E+01	.196E+01	.187E+01	.345E+03	.351E+03
9.00	8.616	10.000	.568E+01	.889E+00	1.066	1.065	.107E+01	.249E+01	.234E+01	.352E+03	.357E+03
10.00	9.473	10.000	.644E+01	.799E+00	1.066	1.065	.109E+01	.308E+01	.284E+01	.359E+03	.363E+03
11.00	10.311	10.000	.700E+01	.694E+00	1.066	1.065	.111E+01	.374E+01	.337E+01	.366E+03	.369E+03
12.00	11.127	10.000	.743E+01	.584E+00	1.066	1.064	.113E+01	.445E+01	.393E+01	.374E+03	.377E+03
13.00	11.922	10.000	.777E+01	.476E+00	1.066	1.064	.116E+01	.523E+01	.452E+01	.382E+03	.385E+03
14.00	12.693	10.000	.803E+01	.378E+00	1.066	1.064	.118E+01	.607E+01	.513E+01	.391E+03	.393E+03
15.00	13.440	10.000	.824E+01	.292E+00	1.066	1.063	.121E+01	.698E+01	.575E+01	.400E+03	.402E+03
16.00	14.162	10.000	.842E+01	.220E+00	1.066	1.063	.124E+01	.794E+01	.639E+01	.410E+03	.412E+03
17.00	14.860	10.000	.856E+01	.163E+00	1.066	1.063	.127E+01	.897E+01	.704E+01	.421E+03	.423E+03
18.00	15.534	10.000	.869E+01	.118E+00	1.066	1.062	.131E+01	.101E+02	.769E+01	.432E+03	.433E+03
19.00	16.183	10.000	.879E+01	.839E-01	1.066	1.062	.134E+01	.112E+02	.835E+01	.443E+03	.445E+03
20.00	16.809	10.000	.888E+01	.588E-01	1.066	1.062	.138E+01	.124E+02	.901E+01	.455E+03	.457E+03
21.00	17.411	10.000	.896E+01	.406E-01	1.066	1.061	.142E+01	.137E+02	.967E+01	.468E+03	.470E+03
22.00	17.991	10.000	.902E+01	.277E-01	1.066	1.061	.146E+01	.151E+02	.103E+02	.481E+03	.483E+03

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.505E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.05	1.050	15.000	-.470E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.10	1.100	15.000	-.463E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.15	1.150	15.000	-.446E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.20	1.200	15.000	-.441E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.25	1.250	15.000	-.415E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.30	1.300	15.000	-.406E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.35	1.350	15.000	-.388E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.40	1.400	15.000	-.369E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.45	1.450	15.000	-.353E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.50	1.500	15.000	-.330E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.60	1.600	15.000	-.283E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.70	1.700	15.000	-.234E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.80	1.800	15.000	-.179E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.90	1.900	15.000	-.123E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
2.00	2.000	15.000	-.529E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
2.20	2.200	15.000	.768E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
2.40	2.400	15.000	.258E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
2.60	2.600	15.000	.492E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
2.80	2.800	15.000	.797E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
3.00	3.001	15.000	.123E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
3.20	3.201	15.000	.186E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
3.40	3.401	15.000	.295E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
3.60	3.602	15.000	.524E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
more than 99 iterations											
3.80	3.810	15.000	-.439E+00	.100E+01	1.066	1.066	.998E+00	.969E+00	.971E+00	.329E+03	.341E+03
4.00	3.978	15.000	.943E+00	.100E+01	1.066	1.066	.100E+01	.107E+01	.107E+01	.331E+03	.342E+03
4.50	4.391	15.000	.371E+01	.995E+00	1.066	1.066	.102E+01	.137E+01	.134E+01	.337E+03	.345E+03
5.00	4.813	15.000	.572E+01	.978E+00	1.066	1.066	.103E+01	.170E+01	.164E+01	.341E+03	.348E+03
6.00	5.659	15.000	.838E+01	.893E+00	1.066	1.065	.106E+01	.246E+01	.231E+01	.351E+03	.356E+03
7.00	6.488	15.000	.100E+02	.755E+00	1.066	1.065	.110E+01	.336E+01	.306E+01	.362E+03	.366E+03
8.00	7.292	15.000	.111E+02	.592E+00	1.066	1.064	.113E+01	.440E+01	.389E+01	.373E+03	.376E+03
9.00	8.065	15.000	.118E+02	.434E+00	1.066	1.064	.117E+01	.557E+01	.477E+01	.386E+03	.388E+03
10.00	8.803	15.000	.123E+02	.300E+00	1.066	1.063	.121E+01	.689E+01	.569E+01	.399E+03	.402E+03
11.00	9.507	15.000	.127E+02	.196E+00	1.066	1.063	.126E+01	.834E+01	.664E+01	.414E+03	.416E+03
12.00	10.176	15.000	.130E+02	.123E+00	1.066	1.062	.130E+01	.994E+01	.762E+01	.430E+03	.432E+03
13.00	10.809	15.000	.132E+02	.735E-01	1.066	1.062	.136E+01	.117E+02	.860E+01	.448E+03	.449E+03
14.00	11.408	15.000	.134E+02	.427E-01	1.066	1.061	.141E+01	.135E+02	.958E+01	.466E+03	.468E+03
15.00	11.974	15.000	.135E+02	.241E-01	1.066	1.061	.147E+01	.156E+02	.106E+02	.486E+03	.487E+03
16.00	12.507	15.000	.137E+02	.132E-01	1.066	1.060	.154E+01	.177E+02	.115E+02	.507E+03	.508E+03
17.00	13.010	15.000	.138E+02	.713E-02	1.066	1.060	.160E+01	.200E+02	.125E+02	.529E+03	.530E+03
18.00	13.483	15.000	.139E+02	.378E-02	1.066	1.060	.167E+01	.224E+02	.134E+02	.553E+03	.554E+03
19.00	13.928	15.000	.139E+02	.198E-02	1.066	1.059	.175E+01	.250E+02	.143E+02	.577E+03	.578E+03
20.00	14.346	15.000	.140E+02	.103E-02	1.066	1.059	.183E+01	.277E+02	.152E+02	.603E+03	.604E+03
21.00	14.740	15.000	.140E+02	.528E-03	1.066	1.059	.191E+01	.305E+02	.160E+02	.630E+03	.631E+03
22.00	15.110	15.000	.141E+02	.270E-03	1.066	1.059	.199E+01	.335E+02	.168E+02	.658E+03	.659E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	-.520E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.05	1.050	20.000	-.485E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.331E+03
1.10	1.100	20.000	-.454E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.15	1.150	20.000	-.419E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.20	1.200	20.000	-.386E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.25	1.250	20.000	-.340E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.30	1.300	20.000	-.307E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.35	1.350	20.000	-.259E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.40	1.400	20.000	-.211E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.45	1.450	20.000	-.165E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.50	1.500	20.000	-.114E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.60	1.600	20.000	.110E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.70	1.700	20.000	.121E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.80	1.800	20.000	.272E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.90	1.900	20.000	.450E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
2.00	2.000	20.000	.663E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
2.20	2.200	20.000	.123E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
2.40	2.401	20.000	.218E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
2.60	2.601	20.000	.402E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
2.80	2.802	20.000	.858E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
3.00	2.982	20.000	.916E+00	.100E+01	1.066	1.066	.100E+01	.105E+01	.105E+01	.331E+03	.342E+03
3.20	3.128	20.000	.300E+01	.999E+00	1.066	1.066	.101E+01	.120E+01	.119E+01	.334E+03	.343E+03
3.40	3.280	20.000	.478E+01	.995E+00	1.066	1.066	.102E+01	.136E+01	.134E+01	.337E+03	.345E+03
3.60	3.437	20.000	.629E+01	.988E+00	1.066	1.066	.103E+01	.153E+01	.149E+01	.339E+03	.347E+03
3.80	3.595	20.000	.758E+01	.976E+00	1.066	1.066	.104E+01	.171E+01	.165E+01	.342E+03	.348E+03
4.00	3.755	20.000	.870E+01	.960E+00	1.066	1.066	.104E+01	.190E+01	.182E+01	.344E+03	.350E+03
4.50	4.157	20.000	.109E+02	.899E+00	1.066	1.065	.106E+01	.241E+01	.227E+01	.351E+03	.356E+03
5.00	4.557	20.000	.125E+02	.814E+00	1.066	1.065	.108E+01	.299E+01	.276E+01	.358E+03	.362E+03
6.00	5.338	20.000	.146E+02	.604E+00	1.066	1.064	.113E+01	.432E+01	.383E+01	.372E+03	.375E+03
7.00	6.083	20.000	.158E+02	.398E+00	1.066	1.064	.118E+01	.589E+01	.500E+01	.389E+03	.391E+03
8.00	6.786	20.000	.167E+02	.236E+00	1.066	1.063	.124E+01	.770E+01	.623E+01	.408E+03	.410E+03
9.00	7.444	20.000	.172E+02	.129E+00	1.066	1.062	.130E+01	.976E+01	.751E+01	.429E+03	.430E+03
10.00	8.058	20.000	.176E+02	.656E-01	1.066	1.062	.137E+01	.121E+02	.881E+01	.452E+03	.453E+03
11.00	8.627	20.000	.179E+02	.315E-01	1.066	1.061	.144E+01	.146E+02	.101E+02	.477E+03	.478E+03
12.00	9.155	20.000	.182E+02	.144E-01	1.066	1.061	.153E+01	.174E+02	.114E+02	.504E+03	.505E+03
13.00	9.643	20.000	.183E+02	.637E-02	1.066	1.060	.162E+01	.204E+02	.126E+02	.533E+03	.535E+03
14.00	10.094	20.000	.185E+02	.274E-02	1.066	1.060	.171E+01	.237E+02	.138E+02	.565E+03	.566E+03
15.00	10.509	20.000	.186E+02	.115E-02	1.066	1.059	.181E+01	.272E+02	.150E+02	.598E+03	.599E+03
16.00	10.893	20.000	.187E+02	.480E-03	1.066	1.059	.192E+01	.310E+02	.161E+02	.634E+03	.635E+03
17.00	11.246	20.000	.188E+02	.197E-03	1.066	1.058	.203E+01	.350E+02	.172E+02	.671E+03	.672E+03
18.00	11.572	20.000	.189E+02	.809E-04	1.066	1.058	.215E+01	.392E+02	.182E+02	.711E+03	.712E+03
19.00	11.873	20.000	.189E+02	.331E-04	1.066	1.058	.228E+01	.437E+02	.192E+02	.753E+03	.754E+03
20.00	12.151	20.000	.190E+02	.136E-04	1.066	1.058	.241E+01	.484E+02	.201E+02	.796E+03	.798E+03
21.00	12.407	20.000	.190E+02	.560E-05	1.066	1.057	.255E+01	.534E+02	.209E+02	.842E+03	.843E+03
22.00	12.644	20.000	.190E+02	.232E-05	1.066	1.057	.270E+01	.586E+02	.217E+02	.890E+03	.891E+03

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	25.000	-.450E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.05	1.050	25.000	-.385E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.10	1.100	25.000	-.332E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.332E+03
1.15	1.150	25.000	-.259E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.20	1.200	25.000	-.188E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.25	1.250	25.000	-.105E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.30	1.300	25.000	-.183E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.35	1.350	25.000	.837E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.40	1.400	25.000	.149E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.45	1.450	25.000	.262E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.50	1.500	25.000	.385E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.60	1.600	25.000	.670E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.70	1.700	25.000	.102E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.80	1.800	25.000	.148E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.90	1.900	25.000	.213E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
2.00	2.000	25.000	.305E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
2.20	2.201	25.000	.703E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
2.40	2.390	25.000	.624E+00	.100E+01	1.066	1.066	.100E+01	.103E+01	.103E+01	.331E+03	.341E+03
2.60	2.514	25.000	.376E+01	.999E+00	1.066	1.066	.101E+01	.121E+01	.120E+01	.334E+03	.343E+03
2.80	2.650	25.000	.637E+01	.994E+00	1.066	1.066	.102E+01	.141E+01	.138E+01	.337E+03	.345E+03
3.00	2.793	25.000	.853E+01	.983E+00	1.066	1.066	.103E+01	.163E+01	.158E+01	.340E+03	.348E+03
3.20	2.939	25.000	.103E+02	.964E+00	1.066	1.066	.104E+01	.186E+01	.178E+01	.344E+03	.350E+03
3.40	3.088	25.000	.119E+02	.939E+00	1.066	1.066	.105E+01	.210E+01	.200E+01	.347E+03	.352E+03
3.60	3.239	25.000	.132E+02	.907E+00	1.066	1.065	.106E+01	.236E+01	.222E+01	.350E+03	.355E+03
3.80	3.390	25.000	.143E+02	.868E+00	1.066	1.065	.107E+01	.263E+01	.246E+01	.353E+03	.358E+03
4.00	3.541	25.000	.152E+02	.825E+00	1.066	1.065	.108E+01	.292E+01	.270E+01	.357E+03	.361E+03
4.50	3.916	25.000	.171E+02	.699E+00	1.066	1.065	.111E+01	.370E+01	.334E+01	.366E+03	.369E+03
5.00	4.283	25.000	.184E+02	.565E+00	1.066	1.064	.114E+01	.458E+01	.403E+01	.375E+03	.378E+03
6.00	4.986	25.000	.202E+02	.324E+00	1.066	1.063	.120E+01	.661E+01	.550E+01	.397E+03	.399E+03
7.00	5.639	25.000	.212E+02	.161E+00	1.066	1.063	.128E+01	.901E+01	.706E+01	.421E+03	.423E+03
8.00	6.240	25.000	.219E+02	.711E-01	1.066	1.062	.136E+01	.118E+02	.866E+01	.449E+03	.450E+03
9.00	6.788	25.000	.224E+02	.287E-01	1.066	1.061	.145E+01	.149E+02	.103E+02	.480E+03	.481E+03
10.00	7.287	25.000	.227E+02	.108E-01	1.066	1.060	.156E+01	.184E+02	.118E+02	.514E+03	.515E+03
11.00	7.740	25.000	.230E+02	.388E-02	1.066	1.060	.167E+01	.223E+02	.134E+02	.552E+03	.553E+03
12.00	8.151	25.000	.232E+02	.134E-02	1.066	1.059	.179E+01	.266E+02	.148E+02	.592E+03	.593E+03
13.00	8.522	25.000	.234E+02	.453E-03	1.066	1.059	.193E+01	.312E+02	.162E+02	.636E+03	.637E+03
14.00	8.858	25.000	.235E+02	.151E-03	1.066	1.058	.207E+01	.362E+02	.175E+02	.683E+03	.684E+03
15.00	9.162	25.000	.236E+02	.502E-04	1.066	1.058	.222E+01	.416E+02	.187E+02	.733E+03	.734E+03
16.00	9.437	25.000	.237E+02	.167E-04	1.066	1.058	.238E+01	.473E+02	.199E+02	.786E+03	.787E+03
17.00	9.686	25.000	.237E+02	.557E-05	1.066	1.057	.255E+01	.534E+02	.209E+02	.843E+03	.844E+03
18.00	9.913	25.000	.238E+02	.188E-05	1.066	1.057	.273E+01	.599E+02	.219E+02	.902E+03	.903E+03
19.00	10.118	25.000	.238E+02	.641E-06	1.066	1.057	.292E+01	.667E+02	.228E+02	.965E+03	.966E+03
20.00	10.305	25.000	.239E+02	.222E-06	1.066	1.057	.312E+01	.740E+02	.237E+02	.103E+04	.103E+04
21.00	10.475	25.000	.239E+02	.782E-07	1.066	1.057	.333E+01	.816E+02	.245E+02	.110E+04	.110E+04
22.00	10.631	25.000	.239E+02	.280E-07	1.066	1.057	.355E+01	.895E+02	.252E+02	.117E+04	.117E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.281E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.05	1.050	30.000	-.183E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.10	1.100	30.000	-.680E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.333E+03
1.15	1.150	30.000	.532E-04	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.20	1.200	30.000	.157E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.25	1.250	30.000	.305E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.334E+03
1.30	1.300	30.000	.473E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.35	1.350	30.000	.665E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.40	1.400	30.000	.875E-03	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.335E+03
1.45	1.450	30.000	.114E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.50	1.500	30.000	.144E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.336E+03
1.60	1.600	30.000	.221E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.337E+03
1.70	1.700	30.000	.341E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.338E+03
1.80	1.801	30.000	.560E-02	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.339E+03
1.90	1.901	30.000	.110E-01	.100E+01	1.066	1.066	.100E+01	.100E+01	.100E+01	.330E+03	.340E+03
2.00	2.008	30.000	-.348E+00	.100E+01	1.066	1.066	.999E+00	.985E+00	.986E+00	.330E+03	.341E+03
2.20	2.102	30.000	.435E+01	.999E+00	1.066	1.066	.101E+01	.122E+01	.120E+01	.334E+03	.343E+03
2.40	2.218	30.000	.788E+01	.992E+00	1.066	1.066	.102E+01	.145E+01	.142E+01	.338E+03	.346E+03
2.60	2.345	30.000	.108E+02	.976E+00	1.066	1.066	.104E+01	.171E+01	.165E+01	.342E+03	.348E+03
2.80	2.478	30.000	.131E+02	.951E+00	1.066	1.066	.105E+01	.199E+01	.190E+01	.345E+03	.351E+03
3.00	2.615	30.000	.151E+02	.916E+00	1.066	1.065	.106E+01	.229E+01	.216E+01	.349E+03	.354E+03
3.20	2.755	30.000	.167E+02	.871E+00	1.066	1.065	.107E+01	.261E+01	.244E+01	.353E+03	.358E+03
3.40	2.895	30.000	.180E+02	.819E+00	1.066	1.065	.108E+01	.295E+01	.273E+01	.357E+03	.361E+03
3.60	3.036	30.000	.192E+02	.762E+00	1.066	1.065	.109E+01	.331E+01	.303E+01	.361E+03	.365E+03
3.80	3.176	30.000	.202E+02	.701E+00	1.066	1.065	.111E+01	.370E+01	.334E+01	.366E+03	.369E+03
4.00	3.316	30.000	.210E+02	.637E+00	1.066	1.064	.112E+01	.410E+01	.366E+01	.370E+03	.373E+03
4.50	3.658	30.000	.227E+02	.481E+00	1.066	1.064	.116E+01	.520E+01	.449E+01	.382E+03	.384E+03
5.00	3.989	30.000	.239E+02	.342E+00	1.066	1.063	.120E+01	.642E+01	.537E+01	.395E+03	.397E+03
6.00	4.609	30.000	.254E+02	.149E+00	1.066	1.062	.128E+01	.927E+01	.722E+01	.424E+03	.425E+03
7.00	5.172	30.000	.264E+02	.555E-01	1.066	1.062	.139E+01	.126E+02	.911E+01	.457E+03	.459E+03
8.00	5.678	30.000	.270E+02	.184E-01	1.066	1.061	.150E+01	.165E+02	.110E+02	.495E+03	.497E+03
9.00	6.129	30.000	.274E+02	.559E-02	1.066	1.060	.163E+01	.209E+02	.128E+02	.538E+03	.539E+03
10.00	6.531	30.000	.277E+02	.161E-02	1.066	1.059	.177E+01	.258E+02	.146E+02	.585E+03	.586E+03
11.00	6.888	30.000	.280E+02	.446E-03	1.066	1.059	.193E+01	.313E+02	.162E+02	.637E+03	.638E+03
12.00	7.206	30.000	.281E+02	.122E-03	1.066	1.058	.210E+01	.372E+02	.177E+02	.693E+03	.694E+03
13.00	7.488	30.000	.283E+02	.330E-04	1.066	1.058	.228E+01	.437E+02	.192E+02	.753E+03	.754E+03
14.00	7.739	30.000	.284E+02	.898E-05	1.066	1.057	.248E+01	.507E+02	.205E+02	.818E+03	.819E+03
15.00	7.962	30.000	.285E+02	.247E-05	1.066	1.057	.269E+01	.582E+02	.217E+02	.887E+03	.888E+03
16.00	8.162	30.000	.285E+02	.691E-06	1.066	1.057	.291E+01	.663E+02	.228E+02	.960E+03	.962E+03
17.00	8.340	30.000	.286E+02	.197E-06	1.066	1.057	.315E+01	.748E+02	.238E+02	.104E+04	.104E+04
18.00	8.500	30.000	.287E+02	.576E-07	1.066	1.057	.340E+01	.839E+02	.247E+02	.112E+04	.112E+04
19.00	8.643	30.000	.287E+02	.172E-07	1.066	1.056	.366E+01	.935E+02	.255E+02	.121E+04	.121E+04
20.00	8.772	30.000	.287E+02	.529E-08	1.066	1.056	.394E+01	.104E+03	.263E+02	.130E+04	.130E+04
21.00	8.889	30.000	.288E+02	.167E-08	1.066	1.056	.423E+01	.114E+03	.270E+02	.140E+04	.140E+04
22.00	8.994	30.000	.288E+02	.540E-09	1.066	1.056	.453E+01	.125E+03	.277E+02	.150E+04	.150E+04

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Table 12. Normal and oblique shock properties.

$$\gamma = 1.4$$

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
more than 99 iterations											
1.00	1.000	90.000	.131E-07	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.372E+03
1.05	.953	90.000	.438E-05	.100E+01	1.400	1.400	.103E+01	.112E+01	.108E+01	.320E+03	.378E+03
1.10	.912	90.000	.882E-05	.999E+00	1.400	1.400	.106E+01	.124E+01	.117E+01	.330E+03	.385E+03
1.15	.875	90.000	.133E-04	.997E+00	1.400	1.400	.110E+01	.138E+01	.126E+01	.340E+03	.392E+03
1.20	.842	90.000	.178E-04	.993E+00	1.400	1.400	.113E+01	.151E+01	.134E+01	.350E+03	.399E+03
1.25	.813	90.000	.223E-04	.987E+00	1.400	1.400	.116E+01	.166E+01	.143E+01	.359E+03	.407E+03
1.30	.786	90.000	.269E-04	.979E+00	1.400	1.400	.119E+01	.180E+01	.152E+01	.369E+03	.415E+03
1.35	.762	90.000	.314E-04	.970E+00	1.400	1.400	.122E+01	.196E+01	.160E+01	.379E+03	.423E+03
1.40	.740	90.000	.360E-04	.958E+00	1.400	1.400	.125E+01	.212E+01	.169E+01	.389E+03	.432E+03
1.45	.720	90.000	.405E-04	.945E+00	1.400	1.400	.129E+01	.229E+01	.178E+01	.399E+03	.440E+03
1.50	.701	90.000	.449E-04	.930E+00	1.400	1.400	.132E+01	.246E+01	.186E+01	.409E+03	.449E+03
1.60	.668	90.000	.538E-04	.895E+00	1.400	1.400	.139E+01	.282E+01	.203E+01	.430E+03	.469E+03
1.70	.641	90.000	.624E-04	.856E+00	1.400	1.400	.146E+01	.320E+01	.220E+01	.452E+03	.489E+03
1.80	.617	90.000	.709E-04	.813E+00	1.400	1.400	.153E+01	.361E+01	.236E+01	.475E+03	.511E+03
1.90	.596	90.000	.790E-04	.767E+00	1.400	1.400	.161E+01	.404E+01	.252E+01	.498E+03	.534E+03
2.00	.577	90.000	.869E-04	.721E+00	1.400	1.400	.169E+01	.450E+01	.267E+01	.523E+03	.558E+03
2.20	.547	90.000	.102E-03	.628E+00	1.400	1.400	.186E+01	.548E+01	.295E+01	.576E+03	.610E+03
2.40	.523	90.000	.115E-03	.540E+00	1.400	1.400	.204E+01	.655E+01	.321E+01	.633E+03	.667E+03
2.60	.504	90.000	.128E-03	.460E+00	1.400	1.400	.224E+01	.772E+01	.345E+01	.694E+03	.729E+03
2.80	.488	90.000	.139E-03	.389E+00	1.400	1.400	.245E+01	.898E+01	.366E+01	.760E+03	.796E+03
3.00	.475	90.000	.149E-03	.328E+00	1.400	1.400	.268E+01	.103E+02	.386E+01	.830E+03	.868E+03
3.20	.464	90.000	.158E-03	.276E+00	1.400	1.400	.292E+01	.118E+02	.403E+01	.906E+03	.945E+03
3.40	.455	90.000	.166E-03	.232E+00	1.400	1.400	.318E+01	.133E+02	.419E+01	.986E+03	.103E+04
3.60	.447	90.000	.174E-03	.195E+00	1.400	1.400	.345E+01	.150E+02	.433E+01	.107E+04	.111E+04
more than 99 iterations											
3.80	.441	90.000	.180E-03	.164E+00	1.400	1.400	.374E+01	.167E+02	.446E+01	.116E+04	.121E+04
4.00	.435	90.000	.186E-03	.139E+00	1.400	1.400	.405E+01	.185E+02	.457E+01	.125E+04	.130E+04
4.50	.424	90.000	.199E-03	.917E-01	1.400	1.400	.488E+01	.235E+02	.481E+01	.151E+04	.157E+04
5.00	.415	90.000	.209E-03	.617E-01	1.400	1.400	.580E+01	.290E+02	.500E+01	.180E+04	.186E+04
more than 99 iterations											
6.00	.404	90.000	.223E-03	.297E-01	1.400	1.400	.794E+01	.418E+02	.527E+01	.246E+04	.254E+04
7.00	.397	90.000	.232E-03	.154E-01	1.400	1.400	.105E+02	.570E+02	.544E+01	.325E+04	.335E+04
8.00	.393	90.000	.238E-03	.849E-02	1.400	1.400	.134E+02	.745E+02	.557E+01	.415E+04	.428E+04
more than 99 iterations											
9.00	.390	90.000	.242E-03	.496E-02	1.400	1.400	.167E+02	.943E+02	.565E+01	.517E+04	.533E+04
10.00	.388	90.000	.246E-03	.304E-02	1.400	1.400	.204E+02	.116E+03	.571E+01	.632E+04	.651E+04
11.00	.386	90.000	.248E-03	.195E-02	1.400	1.400	.245E+02	.141E+03	.576E+01	.759E+04	.781E+04
12.00	.385	90.000	.250E-03	.129E-02	1.400	1.400	.289E+02	.168E+03	.580E+01	.897E+04	.924E+04
13.00	.384	90.000	.252E-03	.877E-03	1.400	1.400	.338E+02	.197E+03	.583E+01	.105E+05	.108E+05
14.00	.383	90.000	.253E-03	.614E-03	1.400	1.400	.391E+02	.229E+03	.585E+01	.121E+05	.125E+05
15.00	.382	90.000	.254E-03	.440E-03	1.400	1.400	.447E+02	.262E+03	.587E+01	.139E+05	.143E+05
16.00	.382	90.000	.255E-03	.321E-03	1.400	1.400	.507E+02	.299E+03	.589E+01	.157E+05	.162E+05
17.00	.381	90.000	.255E-03	.239E-03	1.400	1.400	.571E+02	.337E+03	.590E+01	.177E+05	.182E+05
18.00	.381	90.000	.256E-03	.181E-03	1.400	1.400	.639E+02	.378E+03	.591E+01	.198E+05	.204E+05
19.00	.381	90.000	.256E-03	.139E-03	1.400	1.400	.711E+02	.421E+03	.592E+01	.221E+05	.227E+05
20.00	.380	90.000	.257E-03	.108E-03	1.400	1.400	.787E+02	.467E+03	.593E+01	.244E+05	.251E+05
21.00	.380	90.000	.257E-03	.848E-04	1.400	1.400	.867E+02	.514E+03	.593E+01	.269E+05	.277E+05
22.00	.380	90.000	.257E-03	.674E-04	1.400	1.400	.951E+02	.564E+03	.594E+01	.295E+05	.303E+05

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	85.000	.516E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.372E+03
1.05	.961	85.000	.384E+00	.100E+01	1.400	1.400	.103E+01	.111E+01	.108E+01	.319E+03	.378E+03
1.10	.920	85.000	.804E+00	.999E+00	1.400	1.400	.106E+01	.123E+01	.116E+01	.329E+03	.384E+03
1.15	.883	85.000	.123E+01	.997E+00	1.400	1.400	.109E+01	.136E+01	.125E+01	.339E+03	.391E+03
1.20	.851	85.000	.166E+01	.993E+00	1.400	1.400	.113E+01	.150E+01	.133E+01	.349E+03	.399E+03
1.25	.822	85.000	.208E+01	.988E+00	1.400	1.400	.116E+01	.164E+01	.142E+01	.358E+03	.406E+03
1.30	.795	85.000	.251E+01	.980E+00	1.400	1.400	.119E+01	.179E+01	.151E+01	.368E+03	.414E+03
1.35	.772	85.000	.294E+01	.971E+00	1.400	1.400	.122E+01	.194E+01	.159E+01	.378E+03	.422E+03
1.40	.750	85.000	.336E+01	.960E+00	1.400	1.400	.125E+01	.210E+01	.168E+01	.388E+03	.431E+03
1.45	.730	85.000	.379E+01	.946E+00	1.400	1.400	.128E+01	.227E+01	.177E+01	.398E+03	.439E+03
1.50	.712	85.000	.421E+01	.932E+00	1.400	1.400	.132E+01	.244E+01	.185E+01	.408E+03	.448E+03
1.60	.681	85.000	.503E+01	.897E+00	1.400	1.400	.138E+01	.280E+01	.202E+01	.429E+03	.468E+03
1.70	.654	85.000	.583E+01	.858E+00	1.400	1.400	.145E+01	.318E+01	.219E+01	.451E+03	.488E+03
1.80	.631	85.000	.661E+01	.816E+00	1.400	1.400	.153E+01	.358E+01	.235E+01	.473E+03	.509E+03
1.90	.611	85.000	.736E+01	.771E+00	1.400	1.400	.160E+01	.401E+01	.250E+01	.497E+03	.532E+03
2.00	.594	85.000	.808E+01	.724E+00	1.400	1.400	.168E+01	.446E+01	.266E+01	.521E+03	.556E+03
2.20	.566	85.000	.942E+01	.632E+00	1.400	1.400	.185E+01	.544E+01	.294E+01	.573E+03	.608E+03
2.40	.544	85.000	.106E+02	.544E+00	1.400	1.400	.203E+01	.650E+01	.320E+01	.630E+03	.664E+03
2.60	.527	85.000	.117E+02	.464E+00	1.400	1.400	.223E+01	.766E+01	.344E+01	.691E+03	.726E+03
2.80	.513	85.000	.127E+02	.393E+00	1.400	1.400	.244E+01	.891E+01	.365E+01	.756E+03	.792E+03
3.00	.502	85.000	.136E+02	.332E+00	1.400	1.400	.267E+01	.103E+02	.385E+01	.826E+03	.864E+03
3.20	.493	85.000	.144E+02	.279E+00	1.400	1.400	.291E+01	.117E+02	.402E+01	.901E+03	.940E+03
3.40	.485	85.000	.151E+02	.235E+00	1.400	1.400	.316E+01	.132E+02	.418E+01	.981E+03	.102E+04
3.60	.479	85.000	.157E+02	.198E+00	1.400	1.400	.343E+01	.148E+02	.432E+01	.106E+04	.111E+04
3.80	.473	85.000	.163E+02	.167E+00	1.400	1.400	.372E+01	.166E+02	.445E+01	.115E+04	.120E+04
4.00	.469	85.000	.168E+02	.141E+00	1.400	1.400	.402E+01	.184E+02	.456E+01	.125E+04	.129E+04
4.50	.460	85.000	.178E+02	.930E-01	1.400	1.400	.485E+01	.233E+02	.480E+01	.150E+04	.156E+04
5.00	.453	85.000	.186E+02	.626E-01	1.400	1.400	.576E+01	.288E+02	.499E+01	.179E+04	.185E+04
6.00	.445	85.000	.197E+02	.301E-01	1.400	1.400	.789E+01	.415E+02	.526E+01	.245E+04	.253E+04
7.00	.440	85.000	.205E+02	.156E-01	1.400	1.400	.104E+02	.566E+02	.544E+01	.322E+04	.332E+04
8.00	.437	85.000	.209E+02	.863E-02	1.400	1.400	.133E+02	.739E+02	.556E+01	.412E+04	.425E+04
9.00	.435	85.000	.213E+02	.505E-02	1.400	1.400	.166E+02	.936E+02	.565E+01	.514E+04	.529E+04
10.00	.433	85.000	.216E+02	.310E-02	1.400	1.400	.202E+02	.116E+03	.571E+01	.627E+04	.646E+04
11.00	.432	85.000	.217E+02	.198E-02	1.400	1.400	.243E+02	.140E+03	.576E+01	.753E+04	.776E+04
12.00	.431	85.000	.219E+02	.131E-02	1.400	1.400	.287E+02	.167E+03	.580E+01	.891E+04	.917E+04
13.00	.431	85.000	.220E+02	.893E-03	1.400	1.400	.336E+02	.196E+03	.583E+01	.104E+05	.107E+05
14.00	.430	85.000	.221E+02	.625E-03	1.400	1.400	.388E+02	.227E+03	.585E+01	.120E+05	.124E+05
15.00	.430	85.000	.222E+02	.448E-03	1.400	1.400	.444E+02	.260E+03	.587E+01	.138E+05	.142E+05
16.00	.429	85.000	.222E+02	.327E-03	1.400	1.400	.503E+02	.296E+03	.588E+01	.156E+05	.161E+05
17.00	.429	85.000	.223E+02	.243E-03	1.400	1.400	.567E+02	.334E+03	.590E+01	.176E+05	.181E+05
18.00	.429	85.000	.223E+02	.184E-03	1.400	1.400	.635E+02	.375E+03	.591E+01	.197E+05	.202E+05
19.00	.429	85.000	.224E+02	.141E-03	1.400	1.400	.706E+02	.418E+03	.592E+01	.219E+05	.225E+05
20.00	.428	85.000	.224E+02	.110E-03	1.400	1.400	.781E+02	.463E+03	.593E+01	.242E+05	.249E+05
21.00	.428	85.000	.224E+02	.864E-04	1.400	1.400	.860E+02	.510E+03	.593E+01	.267E+05	.274E+05
22.00	.428	85.000	.225E+02	.687E-04	1.400	1.400	.943E+02	.560E+03	.594E+01	.292E+05	.301E+05

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	80.000	.584E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.370E+03
1.05	.984	80.000	.558E+00	.100E+01	1.400	1.400	.102E+01	.108E+01	.106E+01	.317E+03	.376E+03
1.10	.944	80.000	.137E+01	.999E+00	1.400	1.400	.105E+01	.120E+01	.114E+01	.327E+03	.383E+03
1.15	.908	80.000	.219E+01	.998E+00	1.400	1.400	.109E+01	.133E+01	.122E+01	.337E+03	.390E+03
1.20	.876	80.000	.301E+01	.994E+00	1.400	1.400	.112E+01	.146E+01	.131E+01	.346E+03	.397E+03
1.25	.848	80.000	.382E+01	.989E+00	1.400	1.400	.115E+01	.160E+01	.140E+01	.356E+03	.404E+03
1.30	.823	80.000	.464E+01	.983E+00	1.400	1.400	.118E+01	.175E+01	.148E+01	.365E+03	.412E+03
1.35	.800	80.000	.545E+01	.974E+00	1.400	1.400	.121E+01	.190E+01	.157E+01	.375E+03	.420E+03
1.40	.780	80.000	.625E+01	.963E+00	1.400	1.400	.124E+01	.205E+01	.165E+01	.385E+03	.428E+03
1.45	.762	80.000	.704E+01	.951E+00	1.400	1.400	.127E+01	.221E+01	.174E+01	.395E+03	.436E+03
1.50	.745	80.000	.782E+01	.937E+00	1.400	1.400	.131E+01	.238E+01	.182E+01	.405E+03	.445E+03
1.60	.716	80.000	.934E+01	.904E+00	1.400	1.400	.137E+01	.273E+01	.199E+01	.425E+03	.464E+03
1.70	.693	80.000	.108E+02	.866E+00	1.400	1.400	.144E+01	.310E+01	.216E+01	.446E+03	.484E+03
1.80	.673	80.000	.122E+02	.825E+00	1.400	1.400	.151E+01	.350E+01	.232E+01	.468E+03	.505E+03
1.90	.656	80.000	.135E+02	.781E+00	1.400	1.400	.159E+01	.392E+01	.247E+01	.492E+03	.527E+03
2.00	.642	80.000	.148E+02	.735E+00	1.400	1.400	.166E+01	.436E+01	.262E+01	.516E+03	.551E+03
2.20	.620	80.000	.171E+02	.643E+00	1.400	1.400	.183E+01	.531E+01	.291E+01	.567E+03	.601E+03
2.40	.604	80.000	.192E+02	.556E+00	1.400	1.400	.201E+01	.635E+01	.317E+01	.622E+03	.656E+03
2.60	.592	80.000	.210E+02	.475E+00	1.400	1.400	.220E+01	.748E+01	.340E+01	.681E+03	.716E+03
2.80	.583	80.000	.225E+02	.404E+00	1.400	1.400	.240E+01	.870E+01	.362E+01	.745E+03	.781E+03
3.00	.576	80.000	.239E+02	.341E+00	1.400	1.400	.263E+01	.100E+02	.381E+01	.814E+03	.851E+03
3.20	.571	80.000	.251E+02	.288E+00	1.400	1.400	.286E+01	.114E+02	.399E+01	.887E+03	.926E+03
3.40	.567	80.000	.262E+02	.243E+00	1.400	1.400	.311E+01	.129E+02	.415E+01	.965E+03	.101E+04
3.60	.564	80.000	.271E+02	.205E+00	1.400	1.400	.338E+01	.145E+02	.429E+01	.105E+04	.109E+04
more than 99 iterations											
3.80	.561	80.000	.279E+02	.173E+00	1.400	1.400	.366E+01	.162E+02	.442E+01	.113E+04	.118E+04
4.00	.559	80.000	.287E+02	.146E+00	1.400	1.400	.395E+01	.179E+02	.454E+01	.123E+04	.127E+04
4.50	.556	80.000	.301E+02	.969E-01	1.400	1.400	.476E+01	.227E+02	.478E+01	.147E+04	.153E+04
5.00	.554	80.000	.313E+02	.655E-01	1.400	1.400	.565E+01	.281E+02	.497E+01	.175E+04	.181E+04
6.00	.552	80.000	.328E+02	.316E-01	1.400	1.400	.773E+01	.406E+02	.525E+01	.240E+04	.247E+04
7.00	.551	80.000	.337E+02	.164E-01	1.400	1.400	.102E+02	.553E+02	.543E+01	.316E+04	.326E+04
8.00	.550	80.000	.344E+02	.909E-02	1.400	1.400	.130E+02	.722E+02	.555E+01	.403E+04	.416E+04
9.00	.550	80.000	.348E+02	.533E-02	1.400	1.400	.162E+02	.915E+02	.564E+01	.503E+04	.518E+04
10.00	.550	80.000	.352E+02	.327E-02	1.400	1.400	.198E+02	.113E+03	.571E+01	.614E+04	.632E+04
11.00	.550	80.000	.354E+02	.209E-02	1.400	1.400	.238E+02	.137E+03	.575E+01	.737E+04	.759E+04
12.00	.550	80.000	.356E+02	.138E-02	1.400	1.400	.281E+02	.163E+03	.579E+01	.871E+04	.897E+04
more than 99 iterations											
13.00	.550	80.000	.358E+02	.944E-03	1.400	1.400	.328E+02	.191E+03	.582E+01	.102E+05	.105E+05
14.00	.550	80.000	.359E+02	.661E-03	1.400	1.400	.379E+02	.222E+03	.585E+01	.118E+05	.121E+05
more than 99 iterations											
15.00	.550	80.000	.360E+02	.473E-03	1.400	1.400	.434E+02	.254E+03	.587E+01	.134E+05	.138E+05
16.00	.550	80.000	.360E+02	.346E-03	1.400	1.400	.492E+02	.289E+03	.588E+01	.153E+05	.157E+05
17.00	.550	80.000	.361E+02	.258E-03	1.400	1.400	.554E+02	.327E+03	.589E+01	.172E+05	.177E+05
18.00	.550	80.000	.362E+02	.195E-03	1.400	1.400	.620E+02	.366E+03	.591E+01	.192E+05	.198E+05
19.00	.550	80.000	.362E+02	.149E-03	1.400	1.400	.690E+02	.408E+03	.592E+01	.214E+05	.220E+05
more than 99 iterations											
20.00	.550	80.000	.362E+02	.116E-03	1.400	1.400	.764E+02	.452E+03	.592E+01	.237E+05	.244E+05
21.00	.550	80.000	.363E+02	.914E-04	1.400	1.400	.841E+02	.499E+03	.593E+01	.261E+05	.268E+05
22.00	.550	80.000	.363E+02	.727E-04	1.400	1.400	.922E+02	.547E+03	.594E+01	.286E+05	.294E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	75.000	.854E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.368E+03
1.05	1.022	75.000	.340E+00	.100E+01	1.400	1.400	.101E+01	.103E+01	.102E+01	.313E+03	.374E+03
1.10	.983	75.000	.150E+01	.100E+01	1.400	1.400	.104E+01	.115E+01	.111E+01	.323E+03	.380E+03
1.15	.948	75.000	.265E+01	.999E+00	1.400	1.400	.107E+01	.127E+01	.119E+01	.332E+03	.387E+03
1.20	.918	75.000	.380E+01	.996E+00	1.400	1.400	.110E+01	.140E+01	.127E+01	.342E+03	.393E+03
1.25	.891	75.000	.495E+01	.992E+00	1.400	1.400	.113E+01	.153E+01	.135E+01	.351E+03	.400E+03
1.30	.868	75.000	.608E+01	.986E+00	1.400	1.400	.116E+01	.167E+01	.144E+01	.361E+03	.408E+03
1.35	.847	75.000	.720E+01	.979E+00	1.400	1.400	.119E+01	.182E+01	.152E+01	.370E+03	.415E+03
1.40	.828	75.000	.829E+01	.969E+00	1.400	1.400	.122E+01	.197E+01	.161E+01	.379E+03	.423E+03
1.45	.812	75.000	.937E+01	.958E+00	1.400	1.400	.126E+01	.212E+01	.169E+01	.389E+03	.432E+03
1.50	.797	75.000	.104E+02	.945E+00	1.400	1.400	.129E+01	.228E+01	.177E+01	.399E+03	.440E+03
1.60	.773	75.000	.125E+02	.915E+00	1.400	1.400	.135E+01	.262E+01	.194E+01	.419E+03	.458E+03
1.70	.753	75.000	.144E+02	.879E+00	1.400	1.400	.142E+01	.298E+01	.210E+01	.439E+03	.477E+03
1.80	.738	75.000	.162E+02	.839E+00	1.400	1.400	.149E+01	.336E+01	.226E+01	.461E+03	.497E+03
1.90	.725	75.000	.179E+02	.797E+00	1.400	1.400	.156E+01	.376E+01	.241E+01	.483E+03	.519E+03
2.00	.715	75.000	.195E+02	.753E+00	1.400	1.400	.163E+01	.419E+01	.256E+01	.506E+03	.541E+03
2.20	.701	75.000	.223E+02	.663E+00	1.400	1.400	.179E+01	.510E+01	.285E+01	.555E+03	.590E+03
2.40	.693	75.000	.248E+02	.575E+00	1.400	1.400	.196E+01	.610E+01	.311E+01	.609E+03	.643E+03
2.60	.688	75.000	.269E+02	.494E+00	1.400	1.400	.215E+01	.719E+01	.335E+01	.666E+03	.701E+03
2.80	.685	75.000	.287E+02	.422E+00	1.400	1.400	.235E+01	.837E+01	.356E+01	.728E+03	.764E+03
3.00	.684	75.000	.302E+02	.358E+00	1.400	1.400	.256E+01	.963E+01	.376E+01	.794E+03	.831E+03
3.20	.683	75.000	.315E+02	.304E+00	1.400	1.400	.279E+01	.110E+02	.394E+01	.864E+03	.902E+03
3.40	.684	75.000	.327E+02	.257E+00	1.400	1.400	.303E+01	.124E+02	.410E+01	.939E+03	.979E+03
3.60	.685	75.000	.337E+02	.217E+00	1.400	1.400	.328E+01	.139E+02	.424E+01	.102E+04	.106E+04
3.80	.686	75.000	.345E+02	.184E+00	1.400	1.400	.355E+01	.156E+02	.438E+01	.110E+04	.115E+04
4.00	.687	75.000	.353E+02	.156E+00	1.400	1.400	.384E+01	.172E+02	.449E+01	.119E+04	.124E+04
4.50	.690	75.000	.368E+02	.104E+00	1.400	1.400	.461E+01	.219E+02	.474E+01	.143E+04	.148E+04
5.00	.693	75.000	.379E+02	.705E-01	1.400	1.400	.547E+01	.270E+02	.494E+01	.170E+04	.176E+04
6.00	.698	75.000	.395E+02	.342E-01	1.400	1.400	.747E+01	.390E+02	.522E+01	.232E+04	.239E+04
7.00	.702	75.000	.404E+02	.178E-01	1.400	1.400	.983E+01	.532E+02	.541E+01	.305E+04	.314E+04
more than 99 iterations											
8.00	.705	75.000	.410E+02	.992E-02	1.400	1.400	.126E+02	.695E+02	.554E+01	.389E+04	.401E+04
9.00	.707	75.000	.414E+02	.582E-02	1.400	1.400	.156E+02	.880E+02	.563E+01	.485E+04	.500E+04
10.00	.708	75.000	.418E+02	.358E-02	1.400	1.400	.191E+02	.109E+03	.569E+01	.592E+04	.609E+04
11.00	.710	75.000	.420E+02	.229E-02	1.400	1.400	.229E+02	.132E+03	.575E+01	.710E+04	.731E+04
12.00	.710	75.000	.422E+02	.152E-02	1.400	1.400	.271E+02	.157E+03	.578E+01	.839E+04	.864E+04
13.00	.711	75.000	.423E+02	.104E-02	1.400	1.400	.316E+02	.184E+03	.582E+01	.980E+04	.101E+05
14.00	.712	75.000	.424E+02	.726E-03	1.400	1.400	.365E+02	.213E+03	.584E+01	.113E+05	.116E+05
15.00	.712	75.000	.425E+02	.520E-03	1.400	1.400	.418E+02	.245E+03	.586E+01	.129E+05	.133E+05
16.00	.713	75.000	.426E+02	.380E-03	1.400	1.400	.474E+02	.278E+03	.588E+01	.147E+05	.151E+05
17.00	.713	75.000	.426E+02	.283E-03	1.400	1.400	.534E+02	.314E+03	.589E+01	.165E+05	.170E+05
18.00	.713	75.000	.427E+02	.214E-03	1.400	1.400	.597E+02	.353E+03	.590E+01	.185E+05	.191E+05
19.00	.713	75.000	.427E+02	.164E-03	1.400	1.400	.664E+02	.393E+03	.591E+01	.206E+05	.212E+05
more than 99 iterations											
20.00	.714	75.000	.428E+02	.128E-03	1.400	1.400	.735E+02	.435E+03	.592E+01	.228E+05	.234E+05
21.00	.714	75.000	.428E+02	.101E-03	1.400	1.400	.809E+02	.480E+03	.593E+01	.251E+05	.258E+05
22.00	.714	75.000	.428E+02	.800E-04	1.400	1.400	.888E+02	.527E+03	.593E+01	.275E+05	.283E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	70.000	.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.365E+03
1.05	1.050	70.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.370E+03
1.10	1.037	70.000	.103E+01	.100E+01	1.400	1.400	.102E+01	.108E+01	.106E+01	.317E+03	.376E+03
1.15	1.003	70.000	.246E+01	.999E+00	1.400	1.400	.105E+01	.120E+01	.114E+01	.326E+03	.382E+03
1.20	.974	70.000	.388E+01	.998E+00	1.400	1.400	.108E+01	.132E+01	.122E+01	.336E+03	.389E+03
1.25	.949	70.000	.528E+01	.995E+00	1.400	1.400	.111E+01	.144E+01	.130E+01	.345E+03	.396E+03
1.30	.928	70.000	.666E+01	.991E+00	1.400	1.400	.114E+01	.157E+01	.138E+01	.354E+03	.403E+03
1.35	.909	70.000	.800E+01	.984E+00	1.400	1.400	.117E+01	.171E+01	.146E+01	.363E+03	.410E+03
1.40	.892	70.000	.932E+01	.977E+00	1.400	1.400	.120E+01	.185E+01	.154E+01	.372E+03	.417E+03
1.45	.878	70.000	.106E+02	.967E+00	1.400	1.400	.123E+01	.200E+01	.162E+01	.381E+03	.425E+03
1.50	.866	70.000	.118E+02	.956E+00	1.400	1.400	.126E+01	.215E+01	.171E+01	.391E+03	.433E+03
1.60	.846	70.000	.142E+02	.929E+00	1.400	1.400	.132E+01	.247E+01	.187E+01	.410E+03	.450E+03
1.70	.832	70.000	.164E+02	.896E+00	1.400	1.400	.139E+01	.281E+01	.203E+01	.430E+03	.468E+03
1.80	.821	70.000	.185E+02	.859E+00	1.400	1.400	.145E+01	.317E+01	.218E+01	.450E+03	.487E+03
1.90	.814	70.000	.204E+02	.819E+00	1.400	1.400	.152E+01	.355E+01	.234E+01	.471E+03	.508E+03
2.00	.808	70.000	.221E+02	.777E+00	1.400	1.400	.159E+01	.395E+01	.248E+01	.493E+03	.529E+03
2.20	.803	70.000	.252E+02	.689E+00	1.400	1.400	.174E+01	.482E+01	.277E+01	.540E+03	.575E+03
2.40	.803	70.000	.278E+02	.603E+00	1.400	1.400	.191E+01	.577E+01	.303E+01	.591E+03	.625E+03
2.60	.805	70.000	.299E+02	.522E+00	1.400	1.400	.208E+01	.680E+01	.327E+01	.645E+03	.680E+03
2.80	.809	70.000	.317E+02	.448E+00	1.400	1.400	.227E+01	.791E+01	.348E+01	.704E+03	.739E+03
3.00	.814	70.000	.333E+02	.383E+00	1.400	1.400	.247E+01	.911E+01	.368E+01	.766E+03	.803E+03
3.20	.819	70.000	.346E+02	.326E+00	1.400	1.400	.269E+01	.104E+02	.386E+01	.833E+03	.871E+03
3.40	.824	70.000	.357E+02	.277E+00	1.400	1.400	.292E+01	.117E+02	.403E+01	.904E+03	.943E+03
3.60	.829	70.000	.367E+02	.236E+00	1.400	1.400	.316E+01	.132E+02	.418E+01	.979E+03	.102E+04
3.80	.834	70.000	.375E+02	.200E+00	1.400	1.400	.341E+01	.147E+02	.431E+01	.106E+04	.110E+04
4.00	.839	70.000	.382E+02	.170E+00	1.400	1.400	.368E+01	.163E+02	.443E+01	.114E+04	.119E+04
4.50	.849	70.000	.396E+02	.115E+00	1.400	1.400	.441E+01	.207E+02	.469E+01	.137E+04	.142E+04
5.00	.858	70.000	.407E+02	.782E-01	1.400	1.400	.523E+01	.256E+02	.489E+01	.162E+04	.168E+04
6.00	.870	70.000	.421E+02	.383E-01	1.400	1.400	.712E+01	.369E+02	.518E+01	.221E+04	.228E+04
7.00	.879	70.000	.429E+02	.201E-01	1.400	1.400	.935E+01	.503E+02	.538E+01	.290E+04	.299E+04
8.00	.885	70.000	.435E+02	.112E-01	1.400	1.400	.119E+02	.658E+02	.551E+01	.370E+04	.381E+04
9.00	.889	70.000	.439E+02	.660E-02	1.400	1.400	.149E+02	.833E+02	.561E+01	.460E+04	.474E+04
10.00	.893	70.000	.442E+02	.407E-02	1.400	1.400	.181E+02	.103E+03	.568E+01	.561E+04	.578E+04
more than 99 iterations											
11.00	.895	70.000	.444E+02	.261E-02	1.400	1.400	.217E+02	.124E+03	.573E+01	.673E+04	.693E+04
12.00	.897	70.000	.445E+02	.173E-02	1.400	1.400	.257E+02	.148E+03	.577E+01	.796E+04	.819E+04
13.00	.899	70.000	.447E+02	.118E-02	1.400	1.400	.300E+02	.174E+03	.581E+01	.929E+04	.956E+04
14.00	.900	70.000	.448E+02	.828E-03	1.400	1.400	.346E+02	.202E+03	.583E+01	.107E+05	.110E+05
15.00	.901	70.000	.449E+02	.594E-03	1.400	1.400	.396E+02	.232E+03	.585E+01	.123E+05	.126E+05
16.00	.902	70.000	.449E+02	.435E-03	1.400	1.400	.449E+02	.264E+03	.587E+01	.139E+05	.143E+05
more than 99 iterations											
17.00	.902	70.000	.450E+02	.324E-03	1.400	1.400	.506E+02	.298E+03	.588E+01	.157E+05	.161E+05
18.00	.903	70.000	.450E+02	.245E-03	1.400	1.400	.566E+02	.334E+03	.590E+01	.175E+05	.180E+05
more than 99 iterations											
19.00	.903	70.000	.451E+02	.188E-03	1.400	1.400	.629E+02	.372E+03	.591E+01	.195E+05	.201E+05
20.00	.904	70.000	.451E+02	.146E-03	1.400	1.400	.696E+02	.412E+03	.592E+01	.216E+05	.222E+05
21.00	.904	70.000	.451E+02	.115E-03	1.400	1.400	.767E+02	.454E+03	.592E+01	.238E+05	.245E+05
22.00	.905	70.000	.451E+02	.916E-04	1.400	1.400	.840E+02	.498E+03	.593E+01	.261E+05	.268E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	65.000	.105E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.361E+03
1.05	1.050	65.000	.523E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.366E+03
1.10	1.100	65.000	.186E-03	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.372E+03
1.15	1.073	65.000	.154E+01	.100E+01	1.400	1.400	.103E+01	.110E+01	.107E+01	.319E+03	.377E+03
1.20	1.045	65.000	.316E+01	.999E+00	1.400	1.400	.106E+01	.121E+01	.115E+01	.328E+03	.383E+03
1.25	1.022	65.000	.475E+01	.998E+00	1.400	1.400	.109E+01	.133E+01	.123E+01	.337E+03	.390E+03
1.30	1.002	65.000	.630E+01	.995E+00	1.400	1.400	.111E+01	.145E+01	.130E+01	.345E+03	.396E+03
1.35	.985	65.000	.781E+01	.990E+00	1.400	1.400	.114E+01	.158E+01	.138E+01	.354E+03	.403E+03
1.40	.971	65.000	.927E+01	.984E+00	1.400	1.400	.117E+01	.171E+01	.146E+01	.363E+03	.410E+03
1.45	.959	65.000	.107E+02	.977E+00	1.400	1.400	.120E+01	.185E+01	.154E+01	.372E+03	.417E+03
1.50	.949	65.000	.121E+02	.968E+00	1.400	1.400	.123E+01	.199E+01	.162E+01	.381E+03	.425E+03
1.60	.934	65.000	.146E+02	.945E+00	1.400	1.400	.129E+01	.229E+01	.178E+01	.399E+03	.440E+03
1.70	.925	65.000	.170E+02	.916E+00	1.400	1.400	.135E+01	.260E+01	.193E+01	.418E+03	.457E+03
1.80	.919	65.000	.192E+02	.883E+00	1.400	1.400	.141E+01	.294E+01	.208E+01	.437E+03	.475E+03
1.90	.917	65.000	.212E+02	.847E+00	1.400	1.400	.147E+01	.329E+01	.223E+01	.457E+03	.494E+03
2.00	.917	65.000	.230E+02	.807E+00	1.400	1.400	.154E+01	.367E+01	.238E+01	.478E+03	.514E+03
2.20	.921	65.000	.261E+02	.724E+00	1.400	1.400	.168E+01	.447E+01	.266E+01	.522E+03	.556E+03
2.40	.929	65.000	.287E+02	.639E+00	1.400	1.400	.184E+01	.535E+01	.292E+01	.569E+03	.603E+03
2.60	.939	65.000	.308E+02	.559E+00	1.400	1.400	.200E+01	.631E+01	.316E+01	.620E+03	.654E+03
2.80	.950	65.000	.326E+02	.484E+00	1.400	1.400	.218E+01	.735E+01	.338E+01	.674E+03	.709E+03
3.00	.961	65.000	.341E+02	.417E+00	1.400	1.400	.236E+01	.846E+01	.358E+01	.733E+03	.768E+03
3.20	.972	65.000	.353E+02	.358E+00	1.400	1.400	.256E+01	.965E+01	.376E+01	.795E+03	.831E+03
3.40	.982	65.000	.364E+02	.306E+00	1.400	1.400	.278E+01	.109E+02	.393E+01	.861E+03	.899E+03
3.60	.992	65.000	.373E+02	.262E+00	1.400	1.400	.300E+01	.123E+02	.408E+01	.930E+03	.970E+03
3.80	1.001	65.000	.381E+02	.224E+00	1.400	1.400	.324E+01	.137E+02	.422E+01	.100E+04	.105E+04
4.00	1.009	65.000	.387E+02	.191E+00	1.400	1.400	.349E+01	.152E+02	.435E+01	.108E+04	.112E+04
4.50	1.027	65.000	.401E+02	.130E+00	1.400	1.400	.417E+01	.192E+02	.461E+01	.129E+04	.134E+04
5.00	1.041	65.000	.410E+02	.894E-01	1.400	1.400	.493E+01	.238E+02	.483E+01	.153E+04	.158E+04
6.00	1.063	65.000	.423E+02	.443E-01	1.400	1.400	.669E+01	.343E+02	.513E+01	.207E+04	.214E+04
7.00	1.077	65.000	.431E+02	.235E-01	1.400	1.400	.877E+01	.468E+02	.534E+01	.272E+04	.281E+04
more than 99 iterations											
8.00	1.087	65.000	.436E+02	.132E-01	1.400	1.400	.112E+02	.612E+02	.548E+01	.346E+04	.357E+04
9.00	1.094	65.000	.440E+02	.778E-02	1.400	1.400	.139E+02	.775E+02	.558E+01	.430E+04	.444E+04
10.00	1.099	65.000	.442E+02	.481E-02	1.400	1.400	.169E+02	.957E+02	.566E+01	.524E+04	.540E+04
11.00	1.103	65.000	.444E+02	.309E-02	1.400	1.400	.203E+02	.116E+03	.571E+01	.628E+04	.647E+04
12.00	1.106	65.000	.446E+02	.205E-02	1.400	1.400	.239E+02	.138E+03	.576E+01	.742E+04	.764E+04
13.00	1.108	65.000	.447E+02	.140E-02	1.400	1.400	.279E+02	.162E+03	.579E+01	.866E+04	.892E+04
14.00	1.110	65.000	.448E+02	.985E-03	1.400	1.400	.322E+02	.188E+03	.582E+01	.100E+05	.103E+05
15.00	1.112	65.000	.448E+02	.707E-03	1.400	1.400	.369E+02	.215E+03	.584E+01	.114E+05	.118E+05
more than 99 iterations											
16.00	1.113	65.000	.449E+02	.518E-03	1.400	1.400	.418E+02	.245E+03	.586E+01	.130E+05	.133E+05
17.00	1.114	65.000	.450E+02	.386E-03	1.400	1.400	.471E+02	.277E+03	.588E+01	.146E+05	.150E+05
18.00	1.115	65.000	.450E+02	.292E-03	1.400	1.400	.527E+02	.310E+03	.589E+01	.163E+05	.168E+05
19.00	1.116	65.000	.450E+02	.224E-03	1.400	1.400	.586E+02	.346E+03	.590E+01	.182E+05	.187E+05
20.00	1.117	65.000	.451E+02	.175E-03	1.400	1.400	.648E+02	.383E+03	.591E+01	.201E+05	.207E+05
21.00	1.117	65.000	.451E+02	.137E-03	1.400	1.400	.714E+02	.422E+03	.592E+01	.221E+05	.228E+05
22.00	1.118	65.000	.451E+02	.109E-03	1.400	1.400	.782E+02	.464E+03	.593E+01	.243E+05	.250E+05

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	60.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.357E+03
1.05	1.050	60.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.361E+03
1.10	1.100	60.000	.887E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.366E+03
more than 99 iterations											
1.15	1.150	60.000	-.266E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.371E+03
1.20	1.130	60.000	.161E+01	.100E+01	1.400	1.400	.103E+01	.109E+01	.107E+01	.318E+03	.377E+03
1.25	1.108	60.000	.333E+01	.999E+00	1.400	1.400	.105E+01	.120E+01	.114E+01	.327E+03	.383E+03
1.30	1.089	60.000	.501E+01	.998E+00	1.400	1.400	.108E+01	.131E+01	.121E+01	.335E+03	.389E+03
1.35	1.074	60.000	.664E+01	.995E+00	1.400	1.400	.111E+01	.143E+01	.129E+01	.344E+03	.395E+03
1.40	1.062	60.000	.820E+01	.992E+00	1.400	1.400	.114E+01	.155E+01	.136E+01	.352E+03	.401E+03
1.45	1.052	60.000	.971E+01	.986E+00	1.400	1.400	.116E+01	.167E+01	.144E+01	.361E+03	.408E+03
1.50	1.045	60.000	.112E+02	.980E+00	1.400	1.400	.119E+01	.180E+01	.151E+01	.369E+03	.415E+03
1.60	1.034	60.000	.139E+02	.962E+00	1.400	1.400	.125E+01	.207E+01	.166E+01	.386E+03	.429E+03
1.70	1.030	60.000	.163E+02	.938E+00	1.400	1.400	.130E+01	.236E+01	.181E+01	.404E+03	.444E+03
1.80	1.029	60.000	.186E+02	.910E+00	1.400	1.400	.136E+01	.267E+01	.196E+01	.422E+03	.461E+03
1.90	1.032	60.000	.206E+02	.878E+00	1.400	1.400	.142E+01	.299E+01	.211E+01	.440E+03	.478E+03
2.00	1.037	60.000	.224E+02	.842E+00	1.400	1.400	.148E+01	.333E+01	.225E+01	.459E+03	.496E+03
2.20	1.051	60.000	.255E+02	.765E+00	1.400	1.400	.161E+01	.407E+01	.252E+01	.500E+03	.535E+03
2.40	1.068	60.000	.281E+02	.684E+00	1.400	1.400	.175E+01	.487E+01	.278E+01	.543E+03	.578E+03
2.60	1.086	60.000	.302E+02	.605E+00	1.400	1.400	.190E+01	.575E+01	.302E+01	.590E+03	.624E+03
2.80	1.105	60.000	.319E+02	.530E+00	1.400	1.400	.206E+01	.669E+01	.324E+01	.640E+03	.675E+03
3.00	1.123	60.000	.333E+02	.461E+00	1.400	1.400	.224E+01	.771E+01	.345E+01	.693E+03	.728E+03
3.20	1.139	60.000	.345E+02	.399E+00	1.400	1.400	.242E+01	.879E+01	.363E+01	.750E+03	.786E+03
3.40	1.155	60.000	.355E+02	.344E+00	1.400	1.400	.261E+01	.995E+01	.381E+01	.810E+03	.848E+03
3.60	1.170	60.000	.364E+02	.297E+00	1.400	1.400	.282E+01	.112E+02	.396E+01	.874E+03	.913E+03
3.80	1.183	60.000	.371E+02	.255E+00	1.400	1.400	.304E+01	.125E+02	.410E+01	.942E+03	.981E+03
4.00	1.196	60.000	.378E+02	.220E+00	1.400	1.400	.327E+01	.138E+02	.424E+01	.101E+04	.105E+04
4.50	1.222	60.000	.390E+02	.151E+00	1.400	1.400	.389E+01	.176E+02	.451E+01	.121E+04	.125E+04
5.00	1.243	60.000	.399E+02	.105E+00	1.400	1.400	.458E+01	.217E+02	.474E+01	.142E+04	.147E+04
6.00	1.274	60.000	.411E+02	.531E-01	1.400	1.400	.619E+01	.313E+02	.506E+01	.192E+04	.198E+04
7.00	1.295	60.000	.418E+02	.284E-01	1.400	1.400	.809E+01	.427E+02	.528E+01	.251E+04	.259E+04
8.00	1.310	60.000	.423E+02	.161E-01	1.400	1.400	.103E+02	.558E+02	.543E+01	.319E+04	.329E+04
9.00	1.320	60.000	.426E+02	.954E-02	1.400	1.400	.128E+02	.707E+02	.554E+01	.395E+04	.408E+04
10.00	1.328	60.000	.429E+02	.592E-02	1.400	1.400	.155E+02	.873E+02	.563E+01	.481E+04	.496E+04
more than 99 iterations											
11.00	1.334	60.000	.431E+02	.382E-02	1.400	1.400	.186E+02	.106E+03	.569E+01	.576E+04	.594E+04
12.00	1.338	60.000	.432E+02	.254E-02	1.400	1.400	.219E+02	.126E+03	.573E+01	.680E+04	.701E+04
13.00	1.342	60.000	.433E+02	.174E-02	1.400	1.400	.256E+02	.148E+03	.577E+01	.793E+04	.817E+04
14.00	1.344	60.000	.434E+02	.122E-02	1.400	1.400	.295E+02	.171E+03	.580E+01	.915E+04	.942E+04
15.00	1.347	60.000	.434E+02	.880E-03	1.400	1.400	.338E+02	.197E+03	.583E+01	.105E+05	.108E+05
16.00	1.349	60.000	.435E+02	.645E-03	1.400	1.400	.383E+02	.224E+03	.585E+01	.119E+05	.122E+05
17.00	1.350	60.000	.435E+02	.481E-03	1.400	1.400	.431E+02	.253E+03	.586E+01	.134E+05	.137E+05
18.00	1.352	60.000	.436E+02	.365E-03	1.400	1.400	.482E+02	.283E+03	.588E+01	.149E+05	.154E+05
19.00	1.353	60.000	.436E+02	.280E-03	1.400	1.400	.536E+02	.316E+03	.589E+01	.166E+05	.171E+05
20.00	1.354	60.000	.436E+02	.218E-03	1.400	1.400	.593E+02	.350E+03	.590E+01	.184E+05	.189E+05
21.00	1.354	60.000	.437E+02	.172E-03	1.400	1.400	.653E+02	.386E+03	.591E+01	.202E+05	.208E+05
22.00	1.355	60.000	.437E+02	.137E-03	1.400	1.400	.715E+02	.423E+03	.592E+01	.222E+05	.228E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	55.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.352E+03
1.05	1.050	55.000	.642E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.356E+03
1.10	1.100	55.000	-.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.360E+03
1.15	1.150	55.000	.128E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.365E+03
1.20	1.200	55.000	.642E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.370E+03
1.25	1.208	55.000	.106E+01	.100E+01	1.400	1.400	.102E+01	.106E+01	.104E+01	.315E+03	.375E+03
1.30	1.191	55.000	.284E+01	.100E+01	1.400	1.400	.104E+01	.116E+01	.111E+01	.323E+03	.380E+03
1.35	1.177	55.000	.454E+01	.999E+00	1.400	1.400	.107E+01	.126E+01	.118E+01	.331E+03	.386E+03
1.40	1.166	55.000	.618E+01	.997E+00	1.400	1.400	.109E+01	.137E+01	.125E+01	.339E+03	.392E+03
1.45	1.157	55.000	.775E+01	.994E+00	1.400	1.400	.112E+01	.148E+01	.132E+01	.347E+03	.397E+03
1.50	1.152	55.000	.926E+01	.990E+00	1.400	1.400	.115E+01	.159E+01	.139E+01	.355E+03	.404E+03
1.60	1.146	55.000	.121E+02	.977E+00	1.400	1.400	.120E+01	.184E+01	.153E+01	.371E+03	.417E+03
1.70	1.146	55.000	.146E+02	.960E+00	1.400	1.400	.125E+01	.210E+01	.168E+01	.387E+03	.430E+03
1.80	1.150	55.000	.169E+02	.938E+00	1.400	1.400	.130E+01	.237E+01	.182E+01	.404E+03	.445E+03
1.90	1.157	55.000	.189E+02	.911E+00	1.400	1.400	.136E+01	.266E+01	.196E+01	.421E+03	.460E+03
2.00	1.167	55.000	.207E+02	.881E+00	1.400	1.400	.141E+01	.296E+01	.210E+01	.439E+03	.476E+03
2.20	1.191	55.000	.238E+02	.812E+00	1.400	1.400	.153E+01	.362E+01	.236E+01	.475E+03	.511E+03
2.40	1.217	55.000	.264E+02	.737E+00	1.400	1.400	.166E+01	.434E+01	.262E+01	.515E+03	.550E+03
2.60	1.244	55.000	.284E+02	.660E+00	1.400	1.400	.180E+01	.513E+01	.285E+01	.557E+03	.591E+03
2.80	1.271	55.000	.301E+02	.586E+00	1.400	1.400	.194E+01	.597E+01	.308E+01	.602E+03	.636E+03
3.00	1.296	55.000	.315E+02	.516E+00	1.400	1.400	.210E+01	.688E+01	.328E+01	.650E+03	.684E+03
3.20	1.320	55.000	.326E+02	.452E+00	1.400	1.400	.226E+01	.785E+01	.347E+01	.701E+03	.736E+03
3.40	1.342	55.000	.336E+02	.394E+00	1.400	1.400	.243E+01	.888E+01	.365E+01	.755E+03	.791E+03
3.60	1.363	55.000	.345E+02	.343E+00	1.400	1.400	.262E+01	.998E+01	.381E+01	.812E+03	.849E+03
3.80	1.381	55.000	.352E+02	.298E+00	1.400	1.400	.281E+01	.111E+02	.396E+01	.872E+03	.911E+03
4.00	1.398	55.000	.358E+02	.258E+00	1.400	1.400	.302E+01	.124E+02	.409E+01	.936E+03	.976E+03
4.50	1.435	55.000	.370E+02	.181E+00	1.400	1.400	.358E+01	.157E+02	.439E+01	.111E+04	.115E+04
5.00	1.465	55.000	.378E+02	.128E+00	1.400	1.400	.420E+01	.194E+02	.462E+01	.130E+04	.135E+04
6.00	1.508	55.000	.390E+02	.659E-01	1.400	1.400	.564E+01	.280E+02	.497E+01	.175E+04	.181E+04
7.00	1.537	55.000	.397E+02	.358E-01	1.400	1.400	.733E+01	.382E+02	.521E+01	.227E+04	.235E+04
8.00	1.558	55.000	.401E+02	.204E-01	1.400	1.400	.929E+01	.499E+02	.537E+01	.288E+04	.297E+04
9.00	1.572	55.000	.404E+02	.122E-01	1.400	1.400	.115E+02	.632E+02	.549E+01	.357E+04	.368E+04
10.00	1.583	55.000	.407E+02	.763E-02	1.400	1.400	.140E+02	.781E+02	.558E+01	.434E+04	.447E+04
11.00	1.591	55.000	.408E+02	.494E-02	1.400	1.400	.167E+02	.946E+02	.565E+01	.519E+04	.534E+04
more than 99 iterations											
12.00	1.597	55.000	.409E+02	.330E-02	1.400	1.400	.197E+02	.113E+03	.570E+01	.612E+04	.630E+04
more than 99 iterations											
13.00	1.602	55.000	.410E+02	.227E-02	1.400	1.400	.230E+02	.132E+03	.575E+01	.713E+04	.734E+04
14.00	1.606	55.000	.411E+02	.160E-02	1.400	1.400	.265E+02	.153E+03	.578E+01	.822E+04	.846E+04
15.00	1.610	55.000	.412E+02	.115E-02	1.400	1.400	.303E+02	.176E+03	.581E+01	.939E+04	.967E+04
16.00	1.612	55.000	.412E+02	.843E-03	1.400	1.400	.343E+02	.200E+03	.583E+01	.106E+05	.110E+05
17.00	1.614	55.000	.413E+02	.630E-03	1.400	1.400	.387E+02	.226E+03	.585E+01	.120E+05	.123E+05
18.00	1.616	55.000	.413E+02	.478E-03	1.400	1.400	.432E+02	.253E+03	.587E+01	.134E+05	.138E+05
19.00	1.618	55.000	.413E+02	.367E-03	1.400	1.400	.480E+02	.282E+03	.588E+01	.149E+05	.153E+05
20.00	1.619	55.000	.414E+02	.286E-03	1.400	1.400	.531E+02	.313E+03	.589E+01	.165E+05	.170E+05
21.00	1.621	55.000	.414E+02	.226E-03	1.400	1.400	.585E+02	.345E+03	.590E+01	.181E+05	.187E+05
22.00	1.622	55.000	.414E+02	.180E-03	1.400	1.400	.641E+02	.379E+03	.591E+01	.199E+05	.204E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	50.000	-.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.346E+03
1.05	1.050	50.000	-.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.350E+03
1.10	1.100	50.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.354E+03
1.15	1.150	50.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.358E+03
1.20	1.200	50.000	-.673E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.362E+03
1.25	1.250	50.000	-.673E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.367E+03
1.30	1.300	50.000	.165E-03	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.371E+03
1.35	1.293	50.000	.158E+01	.100E+01	1.400	1.400	.102E+01	.108E+01	.106E+01	.317E+03	.376E+03
1.40	1.283	50.000	.328E+01	.100E+01	1.400	1.400	.105E+01	.118E+01	.112E+01	.325E+03	.381E+03
1.45	1.275	50.000	.490E+01	.999E+00	1.400	1.400	.107E+01	.127E+01	.119E+01	.332E+03	.386E+03
1.50	1.271	50.000	.644E+01	.997E+00	1.400	1.400	.110E+01	.137E+01	.125E+01	.340E+03	.392E+03
1.60	1.268	50.000	.931E+01	.990E+00	1.400	1.400	.114E+01	.159E+01	.139E+01	.355E+03	.403E+03
1.70	1.272	50.000	.119E+02	.979E+00	1.400	1.400	.119E+01	.181E+01	.152E+01	.370E+03	.415E+03
1.80	1.280	50.000	.142E+02	.963E+00	1.400	1.400	.124E+01	.205E+01	.165E+01	.385E+03	.428E+03
1.90	1.292	50.000	.163E+02	.943E+00	1.400	1.400	.129E+01	.230E+01	.179E+01	.400E+03	.441E+03
2.00	1.307	50.000	.181E+02	.919E+00	1.400	1.400	.134E+01	.257E+01	.192E+01	.416E+03	.456E+03
2.20	1.340	50.000	.213E+02	.862E+00	1.400	1.400	.145E+01	.315E+01	.217E+01	.449E+03	.486E+03
2.40	1.377	50.000	.238E+02	.795E+00	1.400	1.400	.156E+01	.378E+01	.242E+01	.484E+03	.520E+03
2.60	1.413	50.000	.258E+02	.725E+00	1.400	1.400	.168E+01	.446E+01	.265E+01	.521E+03	.556E+03
2.80	1.449	50.000	.275E+02	.653E+00	1.400	1.400	.181E+01	.520E+01	.288E+01	.561E+03	.595E+03
3.00	1.482	50.000	.289E+02	.584E+00	1.400	1.400	.195E+01	.599E+01	.308E+01	.603E+03	.637E+03
3.20	1.514	50.000	.300E+02	.519E+00	1.400	1.400	.209E+01	.684E+01	.327E+01	.648E+03	.683E+03
3.40	1.544	50.000	.310E+02	.458E+00	1.400	1.400	.224E+01	.775E+01	.345E+01	.695E+03	.731E+03
3.60	1.571	50.000	.318E+02	.404E+00	1.400	1.400	.240E+01	.871E+01	.362E+01	.746E+03	.782E+03
3.80	1.596	50.000	.325E+02	.354E+00	1.400	1.400	.258E+01	.972E+01	.377E+01	.798E+03	.835E+03
4.00	1.619	50.000	.331E+02	.311E+00	1.400	1.400	.276E+01	.108E+02	.392E+01	.854E+03	.892E+03
4.50	1.669	50.000	.342E+02	.223E+00	1.400	1.400	.324E+01	.137E+02	.422E+01	.101E+04	.105E+04
5.00	1.709	50.000	.351E+02	.160E+00	1.400	1.400	.379E+01	.169E+02	.447E+01	.117E+04	.122E+04
more than 99 iterations											
6.00	1.768	50.000	.362E+02	.848E-01	1.400	1.400	.505E+01	.245E+02	.485E+01	.156E+04	.162E+04
7.00	1.808	50.000	.369E+02	.469E-01	1.400	1.400	.653E+01	.334E+02	.511E+01	.202E+04	.209E+04
8.00	1.836	50.000	.373E+02	.271E-01	1.400	1.400	.824E+01	.436E+02	.530E+01	.256E+04	.264E+04
9.00	1.856	50.000	.376E+02	.164E-01	1.400	1.400	.102E+02	.553E+02	.543E+01	.316E+04	.326E+04
10.00	1.871	50.000	.378E+02	.103E-01	1.400	1.400	.124E+02	.683E+02	.553E+01	.383E+04	.395E+04
11.00	1.882	50.000	.380E+02	.671E-02	1.400	1.400	.147E+02	.827E+02	.561E+01	.457E+04	.471E+04
more than 99 iterations											
12.00	1.891	50.000	.381E+02	.450E-02	1.400	1.400	.174E+02	.984E+02	.566E+01	.539E+04	.555E+04
13.00	1.898	50.000	.382E+02	.310E-02	1.400	1.400	.202E+02	.116E+03	.571E+01	.627E+04	.646E+04
14.00	1.904	50.000	.383E+02	.219E-02	1.400	1.400	.233E+02	.134E+03	.575E+01	.723E+04	.744E+04
15.00	1.908	50.000	.384E+02	.158E-02	1.400	1.400	.266E+02	.154E+03	.578E+01	.825E+04	.850E+04
16.00	1.912	50.000	.384E+02	.116E-02	1.400	1.400	.302E+02	.175E+03	.581E+01	.935E+04	.962E+04
17.00	1.915	50.000	.384E+02	.870E-03	1.400	1.400	.339E+02	.198E+03	.583E+01	.105E+05	.108E+05
more than 99 iterations											
18.00	1.918	50.000	.385E+02	.661E-03	1.400	1.400	.379E+02	.222E+03	.585E+01	.118E+05	.121E+05
19.00	1.920	50.000	.385E+02	.509E-03	1.400	1.400	.421E+02	.247E+03	.586E+01	.131E+05	.134E+05
20.00	1.922	50.000	.385E+02	.397E-03	1.400	1.400	.466E+02	.274E+03	.587E+01	.144E+05	.149E+05
21.00	1.924	50.000	.386E+02	.313E-03	1.400	1.400	.513E+02	.302E+03	.589E+01	.159E+05	.164E+05
22.00	1.925	50.000	.386E+02	.249E-03	1.400	1.400	.562E+02	.331E+03	.590E+01	.174E+05	.179E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	45.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.341E+03
1.05	1.050	45.000	.683E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.344E+03
1.10	1.100	45.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.348E+03
1.15	1.150	45.000	.342E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.351E+03
1.20	1.200	45.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.355E+03
1.25	1.250	45.000	.102E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.358E+03
1.30	1.300	45.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.362E+03
1.35	1.350	45.000	-.102E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.366E+03
more than 99 iterations											
1.40	1.400	45.000	-.198E-03	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.371E+03
1.45	1.409	45.000	.119E+01	.100E+01	1.400	1.400	.102E+01	.106E+01	.104E+01	.315E+03	.375E+03
1.50	1.405	45.000	.278E+01	.100E+01	1.400	1.400	.104E+01	.115E+01	.110E+01	.322E+03	.380E+03
1.60	1.403	45.000	.573E+01	.998E+00	1.400	1.400	.108E+01	.133E+01	.122E+01	.336E+03	.389E+03
1.70	1.409	45.000	.837E+01	.993E+00	1.400	1.400	.113E+01	.152E+01	.135E+01	.350E+03	.400E+03
1.80	1.421	45.000	.107E+02	.984E+00	1.400	1.400	.117E+01	.172E+01	.147E+01	.364E+03	.410E+03
1.90	1.437	45.000	.129E+02	.971E+00	1.400	1.400	.122E+01	.194E+01	.159E+01	.378E+03	.422E+03
2.00	1.456	45.000	.147E+02	.955E+00	1.400	1.400	.126E+01	.217E+01	.171E+01	.392E+03	.434E+03
2.20	1.499	45.000	.179E+02	.911E+00	1.400	1.400	.136E+01	.266E+01	.196E+01	.421E+03	.460E+03
2.40	1.546	45.000	.205E+02	.857E+00	1.400	1.400	.146E+01	.319E+01	.219E+01	.451E+03	.489E+03
2.60	1.592	45.000	.225E+02	.795E+00	1.400	1.400	.156E+01	.378E+01	.242E+01	.484E+03	.520E+03
2.80	1.638	45.000	.242E+02	.730E+00	1.400	1.400	.167E+01	.441E+01	.264E+01	.518E+03	.553E+03
3.00	1.681	45.000	.256E+02	.664E+00	1.400	1.400	.179E+01	.508E+01	.284E+01	.554E+03	.589E+03
3.20	1.723	45.000	.268E+02	.600E+00	1.400	1.400	.191E+01	.581E+01	.304E+01	.593E+03	.627E+03
3.40	1.761	45.000	.277E+02	.538E+00	1.400	1.400	.204E+01	.658E+01	.322E+01	.634E+03	.668E+03
3.60	1.796	45.000	.285E+02	.481E+00	1.400	1.400	.218E+01	.739E+01	.339E+01	.677E+03	.712E+03
3.80	1.829	45.000	.292E+02	.428E+00	1.400	1.400	.233E+01	.826E+01	.355E+01	.722E+03	.758E+03
4.00	1.860	45.000	.298E+02	.380E+00	1.400	1.400	.248E+01	.917E+01	.369E+01	.770E+03	.806E+03
4.50	1.926	45.000	.310E+02	.281E+00	1.400	1.400	.290E+01	.116E+02	.402E+01	.899E+03	.938E+03
5.00	1.979	45.000	.319E+02	.207E+00	1.400	1.400	.336E+01	.144E+02	.429E+01	.104E+04	.108E+04
6.00	2.059	45.000	.330E+02	.113E+00	1.400	1.400	.444E+01	.208E+02	.470E+01	.138E+04	.143E+04
7.00	2.114	45.000	.337E+02	.642E-01	1.400	1.400	.570E+01	.284E+02	.498E+01	.177E+04	.183E+04
8.00	2.153	45.000	.341E+02	.378E-01	1.400	1.400	.716E+01	.372E+02	.519E+01	.222E+04	.229E+04
9.00	2.181	45.000	.344E+02	.231E-01	1.400	1.400	.882E+01	.471E+02	.534E+01	.273E+04	.282E+04
more than 99 iterations											
10.00	2.201	45.000	.346E+02	.147E-01	1.400	1.400	.107E+02	.582E+02	.545E+01	.331E+04	.341E+04
11.00	2.217	45.000	.348E+02	.963E-02	1.400	1.400	.127E+02	.704E+02	.554E+01	.394E+04	.406E+04
12.00	2.230	45.000	.349E+02	.650E-02	1.400	1.400	.149E+02	.838E+02	.561E+01	.463E+04	.477E+04
13.00	2.239	45.000	.350E+02	.450E-02	1.400	1.400	.174E+02	.984E+02	.566E+01	.539E+04	.555E+04
14.00	2.247	45.000	.351E+02	.319E-02	1.400	1.400	.200E+02	.114E+03	.571E+01	.620E+04	.639E+04
15.00	2.254	45.000	.351E+02	.231E-02	1.400	1.400	.228E+02	.131E+03	.574E+01	.707E+04	.728E+04
16.00	2.259	45.000	.352E+02	.170E-02	1.400	1.400	.258E+02	.149E+03	.577E+01	.801E+04	.825E+04
17.00	2.264	45.000	.352E+02	.128E-02	1.400	1.400	.290E+02	.168E+03	.580E+01	.900E+04	.927E+04
18.00	2.267	45.000	.353E+02	.971E-03	1.400	1.400	.324E+02	.189E+03	.582E+01	.101E+05	.104E+05
19.00	2.270	45.000	.353E+02	.749E-03	1.400	1.400	.360E+02	.210E+03	.584E+01	.112E+05	.115E+05
20.00	2.273	45.000	.353E+02	.585E-03	1.400	1.400	.398E+02	.233E+03	.585E+01	.123E+05	.127E+05
21.00	2.276	45.000	.353E+02	.462E-03	1.400	1.400	.438E+02	.257E+03	.587E+01	.136E+05	.140E+05
more than 99 iterations											
22.00	2.278	45.000	.353E+02	.368E-03	1.400	1.400	.480E+02	.282E+03	.588E+01	.149E+05	.153E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	40.000	-.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.336E+03
1.05	1.050	40.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.338E+03
1.10	1.100	40.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.341E+03
1.15	1.150	40.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.344E+03
1.20	1.200	40.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.347E+03
1.25	1.250	40.000	-.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.350E+03
1.30	1.300	40.000	.673E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.353E+03
1.35	1.350	40.000	.101E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.357E+03
1.40	1.400	40.000	.673E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.360E+03
1.45	1.450	40.000	.101E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.364E+03
1.50	1.500	40.000	.336E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.368E+03
1.60	1.556	40.000	.131E+01	.100E+01	1.400	1.400	.102E+01	.107E+01	.105E+01	.316E+03	.376E+03
1.70	1.562	40.000	.404E+01	.999E+00	1.400	1.400	.106E+01	.123E+01	.116E+01	.329E+03	.384E+03
1.80	1.576	40.000	.649E+01	.996E+00	1.400	1.400	.110E+01	.140E+01	.127E+01	.341E+03	.393E+03
1.90	1.595	40.000	.867E+01	.991E+00	1.400	1.400	.114E+01	.157E+01	.138E+01	.354E+03	.402E+03
2.00	1.617	40.000	.106E+02	.982E+00	1.400	1.400	.118E+01	.176E+01	.149E+01	.366E+03	.412E+03
2.20	1.669	40.000	.139E+02	.955E+00	1.400	1.400	.126E+01	.217E+01	.171E+01	.392E+03	.434E+03
2.40	1.725	40.000	.166E+02	.916E+00	1.400	1.400	.135E+01	.261E+01	.193E+01	.418E+03	.458E+03
2.60	1.783	40.000	.187E+02	.867E+00	1.400	1.400	.144E+01	.309E+01	.215E+01	.446E+03	.483E+03
2.80	1.840	40.000	.204E+02	.813E+00	1.400	1.400	.153E+01	.361E+01	.236E+01	.475E+03	.511E+03
3.00	1.894	40.000	.218E+02	.754E+00	1.400	1.400	.163E+01	.417E+01	.256E+01	.505E+03	.541E+03
3.20	1.946	40.000	.230E+02	.694E+00	1.400	1.400	.173E+01	.477E+01	.275E+01	.538E+03	.572E+03
3.40	1.995	40.000	.240E+02	.635E+00	1.400	1.400	.184E+01	.541E+01	.293E+01	.572E+03	.606E+03
3.60	2.041	40.000	.249E+02	.577E+00	1.400	1.400	.196E+01	.608E+01	.310E+01	.608E+03	.642E+03
3.80	2.083	40.000	.256E+02	.522E+00	1.400	1.400	.208E+01	.679E+01	.326E+01	.645E+03	.680E+03
4.00	2.123	40.000	.262E+02	.471E+00	1.400	1.400	.221E+01	.755E+01	.342E+01	.685E+03	.720E+03
4.50	2.210	40.000	.274E+02	.360E+00	1.400	1.400	.255E+01	.959E+01	.376E+01	.792E+03	.829E+03
5.00	2.282	40.000	.283E+02	.273E+00	1.400	1.400	.294E+01	.119E+02	.404E+01	.911E+03	.950E+03
6.00	2.390	40.000	.294E+02	.157E+00	1.400	1.400	.383E+01	.172E+02	.449E+01	.119E+04	.123E+04
7.00	2.465	40.000	.301E+02	.917E-01	1.400	1.400	.487E+01	.235E+02	.481E+01	.151E+04	.157E+04
8.00	2.519	40.000	.306E+02	.553E-01	1.400	1.400	.608E+01	.307E+02	.505E+01	.189E+04	.195E+04
9.00	2.559	40.000	.309E+02	.345E-01	1.400	1.400	.745E+01	.389E+02	.522E+01	.231E+04	.238E+04
10.00	2.588	40.000	.311E+02	.222E-01	1.400	1.400	.898E+01	.480E+02	.535E+01	.278E+04	.287E+04
11.00	2.611	40.000	.313E+02	.147E-01	1.400	1.400	.107E+02	.582E+02	.545E+01	.331E+04	.341E+04
12.00	2.629	40.000	.314E+02	.100E-01	1.400	1.400	.125E+02	.692E+02	.553E+01	.388E+04	.400E+04
13.00	2.643	40.000	.315E+02	.697E-02	1.400	1.400	.145E+02	.813E+02	.560E+01	.450E+04	.464E+04
14.00	2.654	40.000	.316E+02	.497E-02	1.400	1.400	.167E+02	.943E+02	.565E+01	.517E+04	.533E+04
15.00	2.663	40.000	.316E+02	.361E-02	1.400	1.400	.190E+02	.108E+03	.569E+01	.590E+04	.607E+04
16.00	2.671	40.000	.317E+02	.267E-02	1.400	1.400	.215E+02	.123E+03	.573E+01	.667E+04	.687E+04
17.00	2.677	40.000	.317E+02	.201E-02	1.400	1.400	.242E+02	.139E+03	.576E+01	.749E+04	.771E+04
18.00	2.683	40.000	.317E+02	.153E-02	1.400	1.400	.270E+02	.156E+03	.578E+01	.836E+04	.861E+04
19.00	2.687	40.000	.318E+02	.118E-02	1.400	1.400	.299E+02	.174E+03	.581E+01	.928E+04	.956E+04
20.00	2.691	40.000	.318E+02	.925E-03	1.400	1.400	.331E+02	.193E+03	.582E+01	.103E+05	.106E+05
21.00	2.695	40.000	.318E+02	.732E-03	1.400	1.400	.364E+02	.212E+03	.584E+01	.113E+05	.116E+05
22.00	2.698	40.000	.318E+02	.585E-03	1.400	1.400	.398E+02	.233E+03	.585E+01	.123E+05	.127E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	35.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.330E+03
1.05	1.050	35.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.332E+03
1.10	1.100	35.000	-.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.335E+03
1.15	1.150	35.000	.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.337E+03
1.20	1.200	35.000	-.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.339E+03
1.25	1.250	35.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.342E+03
1.30	1.300	35.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.344E+03
1.35	1.350	35.000	-.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.347E+03
1.40	1.400	35.000	.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.350E+03
1.45	1.450	35.000	-.321E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.353E+03
1.50	1.500	35.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.356E+03
1.60	1.600	35.000	-.128E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.362E+03
1.70	1.700	35.000	.353E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.369E+03
1.80	1.751	35.000	.141E+01	.100E+01	1.400	1.400	.102E+01	.108E+01	.105E+01	.317E+03	.376E+03
1.90	1.770	35.000	.370E+01	.999E+00	1.400	1.400	.106E+01	.122E+01	.115E+01	.328E+03	.384E+03
2.00	1.795	35.000	.575E+01	.997E+00	1.400	1.400	.109E+01	.137E+01	.125E+01	.339E+03	.392E+03
2.20	1.853	35.000	.921E+01	.985E+00	1.400	1.400	.117E+01	.169E+01	.145E+01	.362E+03	.409E+03
2.40	1.918	35.000	.120E+02	.964E+00	1.400	1.400	.124E+01	.204E+01	.165E+01	.384E+03	.427E+03
2.60	1.987	35.000	.142E+02	.933E+00	1.400	1.400	.131E+01	.243E+01	.185E+01	.407E+03	.448E+03
2.80	2.055	35.000	.161E+02	.893E+00	1.400	1.400	.139E+01	.284E+01	.204E+01	.432E+03	.470E+03
3.00	2.122	35.000	.176E+02	.847E+00	1.400	1.400	.147E+01	.329E+01	.223E+01	.457E+03	.494E+03
3.20	2.186	35.000	.188E+02	.797E+00	1.400	1.400	.156E+01	.376E+01	.242E+01	.483E+03	.519E+03
3.40	2.248	35.000	.199E+02	.744E+00	1.400	1.400	.165E+01	.427E+01	.259E+01	.511E+03	.546E+03
3.60	2.306	35.000	.208E+02	.691E+00	1.400	1.400	.174E+01	.481E+01	.276E+01	.540E+03	.574E+03
3.80	2.360	35.000	.215E+02	.637E+00	1.400	1.400	.184E+01	.538E+01	.292E+01	.570E+03	.605E+03
4.00	2.412	35.000	.222E+02	.586E+00	1.400	1.400	.194E+01	.597E+01	.308E+01	.602E+03	.636E+03
4.50	2.526	35.000	.235E+02	.467E+00	1.400	1.400	.222E+01	.761E+01	.343E+01	.688E+03	.723E+03
5.00	2.622	35.000	.244E+02	.368E+00	1.400	1.400	.253E+01	.943E+01	.373E+01	.783E+03	.820E+03
6.00	2.770	35.000	.256E+02	.224E+00	1.400	1.400	.324E+01	.137E+02	.422E+01	.100E+04	.104E+04
7.00	2.875	35.000	.263E+02	.137E+00	1.400	1.400	.407E+01	.186E+02	.458E+01	.126E+04	.131E+04
8.00	2.952	35.000	.268E+02	.854E-01	1.400	1.400	.503E+01	.244E+02	.485E+01	.156E+04	.162E+04
9.00	3.008	35.000	.271E+02	.545E-01	1.400	1.400	.612E+01	.309E+02	.505E+01	.190E+04	.196E+04
10.00	3.051	35.000	.273E+02	.357E-01	1.400	1.400	.734E+01	.382E+02	.521E+01	.227E+04	.235E+04
11.00	3.084	35.000	.275E+02	.240E-01	1.400	1.400	.868E+01	.463E+02	.533E+01	.269E+04	.278E+04
12.00	3.110	35.000	.276E+02	.165E-01	1.400	1.400	.102E+02	.551E+02	.543E+01	.315E+04	.325E+04
13.00	3.131	35.000	.278E+02	.116E-01	1.400	1.400	.118E+02	.647E+02	.550E+01	.364E+04	.376E+04
14.00	3.148	35.000	.278E+02	.835E-02	1.400	1.400	.135E+02	.751E+02	.557E+01	.418E+04	.431E+04
15.00	3.162	35.000	.279E+02	.610E-02	1.400	1.400	.153E+02	.862E+02	.562E+01	.475E+04	.490E+04
16.00	3.173	35.000	.280E+02	.454E-02	1.400	1.400	.173E+02	.981E+02	.566E+01	.537E+04	.553E+04
17.00	3.183	35.000	.280E+02	.343E-02	1.400	1.400	.194E+02	.111E+03	.570E+01	.602E+04	.620E+04
18.00	3.191	35.000	.280E+02	.262E-02	1.400	1.400	.217E+02	.124E+03	.573E+01	.672E+04	.692E+04
19.00	3.198	35.000	.281E+02	.203E-02	1.400	1.400	.240E+02	.138E+03	.576E+01	.745E+04	.767E+04
20.00	3.204	35.000	.281E+02	.159E-02	1.400	1.400	.265E+02	.153E+03	.578E+01	.822E+04	.847E+04
21.00	3.209	35.000	.281E+02	.126E-02	1.400	1.400	.292E+02	.169E+03	.580E+01	.904E+04	.931E+04
22.00	3.214	35.000	.281E+02	.101E-02	1.400	1.400	.319E+02	.186E+03	.582E+01	.989E+04	.102E+05

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	30.000	-.592E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.325E+03
1.05	1.050	30.000	-.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.327E+03
1.10	1.100	30.000	-.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.329E+03
1.15	1.150	30.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.330E+03
1.20	1.200	30.000	-.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.332E+03
1.25	1.250	30.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.334E+03
1.30	1.300	30.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.336E+03
1.35	1.350	30.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.338E+03
1.40	1.400	30.000	-.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.340E+03
1.45	1.450	30.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.343E+03
1.50	1.500	30.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.345E+03
1.60	1.600	30.000	.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.350E+03
1.70	1.700	30.000	-.296E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.355E+03
1.80	1.800	30.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.360E+03
1.90	1.900	30.000	-.592E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.366E+03
2.00	2.000	30.000	.804E-02	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.372E+03
2.20	2.059	30.000	.372E+01	.999E+00	1.400	1.400	.106E+01	.124E+01	.117E+01	.330E+03	.385E+03
2.40	2.131	30.000	.672E+01	.993E+00	1.400	1.400	.113E+01	.151E+01	.134E+01	.350E+03	.399E+03
2.60	2.208	30.000	.915E+01	.979E+00	1.400	1.400	.119E+01	.180E+01	.152E+01	.369E+03	.415E+03
2.80	2.288	30.000	.111E+02	.958E+00	1.400	1.400	.125E+01	.212E+01	.169E+01	.389E+03	.432E+03
3.00	2.367	30.000	.128E+02	.930E+00	1.400	1.400	.132E+01	.246E+01	.186E+01	.409E+03	.449E+03
3.20	2.445	30.000	.141E+02	.895E+00	1.400	1.400	.139E+01	.282E+01	.203E+01	.430E+03	.469E+03
3.40	2.521	30.000	.153E+02	.856E+00	1.400	1.400	.146E+01	.320E+01	.220E+01	.452E+03	.489E+03
3.60	2.594	30.000	.162E+02	.813E+00	1.400	1.400	.153E+01	.361E+01	.236E+01	.475E+03	.511E+03
3.80	2.663	30.000	.171E+02	.767E+00	1.400	1.400	.161E+01	.404E+01	.252E+01	.498E+03	.534E+03
4.00	2.728	30.000	.178E+02	.721E+00	1.400	1.400	.169E+01	.450E+01	.267E+01	.523E+03	.558E+03
4.50	2.877	30.000	.192E+02	.606E+00	1.400	1.400	.190E+01	.574E+01	.302E+01	.589E+03	.624E+03
5.00	3.006	30.000	.202E+02	.499E+00	1.400	1.400	.214E+01	.712E+01	.333E+01	.663E+03	.697E+03
6.00	3.210	30.000	.215E+02	.328E+00	1.400	1.400	.268E+01	.103E+02	.386E+01	.830E+03	.868E+03
7.00	3.360	30.000	.223E+02	.213E+00	1.400	1.400	.332E+01	.141E+02	.426E+01	.103E+04	.107E+04
8.00	3.471	30.000	.228E+02	.139E+00	1.400	1.400	.405E+01	.185E+02	.457E+01	.125E+04	.130E+04
9.00	3.555	30.000	.232E+02	.917E-01	1.400	1.400	.488E+01	.235E+02	.481E+01	.151E+04	.157E+04
10.00	3.620	30.000	.234E+02	.617E-01	1.400	1.400	.580E+01	.290E+02	.500E+01	.180E+04	.186E+04
11.00	3.670	30.000	.236E+02	.424E-01	1.400	1.400	.682E+01	.351E+02	.515E+01	.211E+04	.219E+04
12.00	3.710	30.000	.237E+02	.297E-01	1.400	1.400	.794E+01	.418E+02	.527E+01	.246E+04	.254E+04
13.00	3.742	30.000	.239E+02	.211E-01	1.400	1.400	.916E+01	.491E+02	.537E+01	.284E+04	.293E+04
14.00	3.768	30.000	.239E+02	.154E-01	1.400	1.400	.105E+02	.570E+02	.544E+01	.325E+04	.335E+04
15.00	3.790	30.000	.240E+02	.113E-01	1.400	1.400	.119E+02	.655E+02	.551E+01	.368E+04	.380E+04
16.00	3.807	30.000	.241E+02	.849E-02	1.400	1.400	.134E+02	.745E+02	.557E+01	.415E+04	.428E+04
17.00	3.823	30.000	.241E+02	.645E-02	1.400	1.400	.150E+02	.841E+02	.561E+01	.465E+04	.479E+04
18.00	3.835	30.000	.242E+02	.496E-02	1.400	1.400	.167E+02	.943E+02	.565E+01	.517E+04	.533E+04
19.00	3.846	30.000	.242E+02	.387E-02	1.400	1.400	.185E+02	.105E+03	.569E+01	.573E+04	.591E+04
more than 99 iterations											
20.00	3.856	30.000	.242E+02	.304E-02	1.400	1.400	.204E+02	.116E+03	.571E+01	.632E+04	.651E+04
21.00	3.864	30.000	.243E+02	.242E-02	1.400	1.400	.224E+02	.128E+03	.574E+01	.694E+04	.715E+04
22.00	3.871	30.000	.243E+02	.195E-02	1.400	1.400	.245E+02	.141E+03	.576E+01	.759E+04	.781E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	25.000	-.785E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.321E+03
1.05	1.050	25.000	.262E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.322E+03
1.10	1.100	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.323E+03
1.15	1.150	25.000	.785E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.325E+03
1.20	1.200	25.000	-.262E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.326E+03
1.25	1.250	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.327E+03
1.30	1.300	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.329E+03
1.35	1.350	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.330E+03
1.40	1.400	25.000	.262E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.332E+03
1.45	1.450	25.000	.523E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.333E+03
1.50	1.500	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.335E+03
1.60	1.600	25.000	.262E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.338E+03
1.70	1.700	25.000	-.262E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.342E+03
1.80	1.800	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.346E+03
1.90	1.900	25.000	.523E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.350E+03
2.00	2.000	25.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.354E+03
2.20	2.200	25.000	.785E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.364E+03
2.40	2.379	25.000	.514E+00	.100E+01	1.400	1.400	.101E+01	.103E+01	.102E+01	.313E+03	.374E+03
2.60	2.460	25.000	.322E+01	.999E+00	1.400	1.400	.106E+01	.124E+01	.117E+01	.330E+03	.385E+03
2.80	2.547	25.000	.544E+01	.994E+00	1.400	1.400	.112E+01	.147E+01	.131E+01	.346E+03	.397E+03
3.00	2.638	25.000	.728E+01	.985E+00	1.400	1.400	.117E+01	.171E+01	.146E+01	.363E+03	.410E+03
3.20	2.729	25.000	.882E+01	.969E+00	1.400	1.400	.122E+01	.197E+01	.161E+01	.379E+03	.423E+03
3.40	2.820	25.000	.101E+02	.949E+00	1.400	1.400	.128E+01	.224E+01	.175E+01	.396E+03	.438E+03
3.60	2.908	25.000	.112E+02	.923E+00	1.400	1.400	.133E+01	.253E+01	.190E+01	.414E+03	.454E+03
3.80	2.994	25.000	.121E+02	.893E+00	1.400	1.400	.139E+01	.284E+01	.204E+01	.432E+03	.470E+03
4.00	3.077	25.000	.129E+02	.860E+00	1.400	1.400	.145E+01	.317E+01	.218E+01	.450E+03	.487E+03
4.50	3.270	25.000	.145E+02	.767E+00	1.400	1.400	.161E+01	.405E+01	.252E+01	.499E+03	.534E+03
5.00	3.441	25.000	.156E+02	.668E+00	1.400	1.400	.178E+01	.504E+01	.283E+01	.552E+03	.587E+03
6.00	3.724	25.000	.171E+02	.485E+00	1.400	1.400	.217E+01	.733E+01	.338E+01	.674E+03	.709E+03
7.00	3.941	25.000	.180E+02	.340E+00	1.400	1.400	.263E+01	.100E+02	.382E+01	.815E+03	.853E+03
8.00	4.107	25.000	.186E+02	.236E+00	1.400	1.400	.315E+01	.132E+02	.417E+01	.978E+03	.102E+04
9.00	4.236	25.000	.190E+02	.164E+00	1.400	1.400	.375E+01	.167E+02	.446E+01	.116E+04	.121E+04
10.00	4.337	25.000	.193E+02	.115E+00	1.400	1.400	.441E+01	.207E+02	.469E+01	.137E+04	.142E+04
11.00	4.417	25.000	.195E+02	.813E-01	1.400	1.400	.514E+01	.250E+02	.487E+01	.159E+04	.165E+04
12.00	4.482	25.000	.197E+02	.584E-01	1.400	1.400	.594E+01	.298E+02	.502E+01	.184E+04	.190E+04
13.00	4.534	25.000	.198E+02	.425E-01	1.400	1.400	.681E+01	.350E+02	.515E+01	.211E+04	.218E+04
14.00	4.577	25.000	.199E+02	.314E-01	1.400	1.400	.775E+01	.407E+02	.525E+01	.240E+04	.248E+04
15.00	4.612	25.000	.200E+02	.235E-01	1.400	1.400	.875E+01	.467E+02	.534E+01	.271E+04	.280E+04
16.00	4.642	25.000	.201E+02	.178E-01	1.400	1.400	.983E+01	.532E+02	.541E+01	.305E+04	.314E+04
17.00	4.667	25.000	.201E+02	.137E-01	1.400	1.400	.110E+02	.601E+02	.547E+01	.340E+04	.351E+04
18.00	4.688	25.000	.202E+02	.106E-01	1.400	1.400	.122E+02	.673E+02	.552E+01	.378E+04	.390E+04
19.00	4.707	25.000	.202E+02	.835E-02	1.400	1.400	.135E+02	.751E+02	.557E+01	.418E+04	.431E+04
20.00	4.723	25.000	.202E+02	.662E-02	1.400	1.400	.148E+02	.832E+02	.561E+01	.460E+04	.474E+04
21.00	4.736	25.000	.203E+02	.529E-02	1.400	1.400	.163E+02	.917E+02	.564E+01	.504E+04	.519E+04
22.00	4.748	25.000	.203E+02	.427E-02	1.400	1.400	.178E+02	.101E+03	.567E+01	.550E+04	.567E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	20.000	.878E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.05	1.050	20.000	.110E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.10	1.100	20.000	-.549E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.15	1.150	20.000	.198E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.20	1.200	20.000	-.439E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
1.25	1.250	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.321E+03
1.30	1.300	20.000	-.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.322E+03
1.35	1.350	20.000	-.439E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.323E+03
1.40	1.400	20.000	.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.324E+03
1.45	1.450	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.325E+03
1.50	1.500	20.000	-.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.326E+03
1.60	1.600	20.000	-.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.329E+03
1.70	1.700	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.331E+03
1.80	1.800	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.333E+03
1.90	1.900	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.336E+03
2.00	2.000	20.000	.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.339E+03
2.20	2.200	20.000	.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.345E+03
2.40	2.400	20.000	.439E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.352E+03
2.60	2.600	20.000	-.220E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.359E+03
2.80	2.800	20.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.367E+03
3.00	2.960	20.000	.773E+00	.100E+01	1.400	1.400	.102E+01	.106E+01	.104E+01	.315E+03	.375E+03
3.20	3.059	20.000	.257E+01	.999E+00	1.400	1.400	.106E+01	.123E+01	.116E+01	.329E+03	.384E+03
3.40	3.161	20.000	.409E+01	.996E+00	1.400	1.400	.110E+01	.141E+01	.128E+01	.342E+03	.394E+03
3.60	3.263	20.000	.539E+01	.989E+00	1.400	1.400	.115E+01	.160E+01	.140E+01	.356E+03	.404E+03
3.80	3.366	20.000	.649E+01	.979E+00	1.400	1.400	.119E+01	.180E+01	.152E+01	.369E+03	.415E+03
4.00	3.466	20.000	.744E+01	.966E+00	1.400	1.400	.123E+01	.202E+01	.163E+01	.383E+03	.426E+03
4.50	3.709	20.000	.931E+01	.917E+00	1.400	1.400	.135E+01	.260E+01	.193E+01	.417E+03	.457E+03
5.00	3.933	20.000	.107E+02	.852E+00	1.400	1.400	.147E+01	.325E+01	.221E+01	.454E+03	.491E+03
6.00	4.324	20.000	.124E+02	.697E+00	1.400	1.400	.173E+01	.475E+01	.274E+01	.536E+03	.571E+03
7.00	4.641	20.000	.135E+02	.543E+00	1.400	1.400	.203E+01	.652E+01	.320E+01	.631E+03	.665E+03
8.00	4.896	20.000	.142E+02	.411E+00	1.400	1.400	.238E+01	.857E+01	.360E+01	.738E+03	.774E+03
9.00	5.101	20.000	.147E+02	.307E+00	1.400	1.400	.277E+01	.109E+02	.393E+01	.859E+03	.897E+03
10.00	5.267	20.000	.151E+02	.228E+00	1.400	1.400	.321E+01	.135E+02	.420E+01	.994E+03	.104E+04
11.00	5.401	20.000	.153E+02	.170E+00	1.400	1.400	.369E+01	.163E+02	.443E+01	.114E+04	.119E+04
12.00	5.512	20.000	.155E+02	.127E+00	1.400	1.400	.421E+01	.195E+02	.463E+01	.131E+04	.135E+04
13.00	5.603	20.000	.157E+02	.958E-01	1.400	1.400	.478E+01	.229E+02	.479E+01	.148E+04	.154E+04
14.00	5.679	20.000	.158E+02	.728E-01	1.400	1.400	.540E+01	.266E+02	.493E+01	.167E+04	.173E+04
15.00	5.742	20.000	.159E+02	.558E-01	1.400	1.400	.606E+01	.305E+02	.504E+01	.188E+04	.194E+04
16.00	5.796	20.000	.160E+02	.432E-01	1.400	1.400	.676E+01	.348E+02	.514E+01	.210E+04	.217E+04
17.00	5.842	20.000	.160E+02	.338E-01	1.400	1.400	.751E+01	.393E+02	.523E+01	.233E+04	.241E+04
18.00	5.881	20.000	.161E+02	.266E-01	1.400	1.400	.831E+01	.441E+02	.530E+01	.258E+04	.266E+04
19.00	5.915	20.000	.161E+02	.212E-01	1.400	1.400	.915E+01	.491E+02	.536E+01	.284E+04	.293E+04
20.00	5.945	20.000	.162E+02	.170E-01	1.400	1.400	.100E+02	.544E+02	.542E+01	.311E+04	.321E+04
21.00	5.970	20.000	.162E+02	.137E-01	1.400	1.400	.110E+02	.600E+02	.547E+01	.340E+04	.351E+04
22.00	5.993	20.000	.162E+02	.112E-01	1.400	1.400	.120E+02	.659E+02	.551E+01	.370E+04	.382E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	15.000	-.342E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.05	1.050	15.000	-.342E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.10	1.100	15.000	-.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.15	1.150	15.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.20	1.200	15.000	-.342E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.25	1.250	15.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.30	1.300	15.000	.512E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
1.35	1.350	15.000	-.854E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.40	1.400	15.000	-.137E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
1.45	1.450	15.000	.546E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.50	1.500	15.000	-.359E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
1.60	1.600	15.000	-.102E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.321E+03
1.70	1.700	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.322E+03
1.80	1.800	15.000	-.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.323E+03
1.90	1.900	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.325E+03
2.00	2.000	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.327E+03
2.20	2.200	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.330E+03
2.40	2.400	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.334E+03
2.60	2.600	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.338E+03
2.80	2.800	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.343E+03
3.00	3.000	15.000	.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.347E+03
3.20	3.200	15.000	.342E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.353E+03
3.40	3.400	15.000	-.171E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.358E+03
3.60	3.600	15.000	.683E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.364E+03
3.80	3.800	15.000	-.854E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.370E+03
4.00	3.940	15.000	.803E+00	.100E+01	1.400	1.400	.102E+01	.108E+01	.106E+01	.317E+03	.376E+03
4.50	4.223	15.000	.318E+01	.996E+00	1.400	1.400	.111E+01	.142E+01	.128E+01	.343E+03	.394E+03
5.00	4.502	15.000	.491E+01	.980E+00	1.400	1.400	.119E+01	.179E+01	.151E+01	.368E+03	.414E+03
6.00	5.024	15.000	.718E+01	.912E+00	1.400	1.400	.136E+01	.265E+01	.195E+01	.420E+03	.460E+03
7.00	5.482	15.000	.857E+01	.807E+00	1.400	1.400	.154E+01	.366E+01	.238E+01	.478E+03	.514E+03
8.00	5.876	15.000	.947E+01	.688E+00	1.400	1.400	.175E+01	.484E+01	.277E+01	.541E+03	.576E+03
9.00	6.210	15.000	.101E+02	.570E+00	1.400	1.400	.197E+01	.616E+01	.312E+01	.612E+03	.646E+03
10.00	6.493	15.000	.105E+02	.465E+00	1.400	1.400	.223E+01	.765E+01	.344E+01	.690E+03	.725E+03
11.00	6.733	15.000	.109E+02	.374E+00	1.400	1.400	.250E+01	.929E+01	.371E+01	.776E+03	.813E+03
12.00	6.936	15.000	.111E+02	.300E+00	1.400	1.400	.281E+01	.111E+02	.395E+01	.870E+03	.908E+03
13.00	7.108	15.000	.113E+02	.239E+00	1.400	1.400	.313E+01	.130E+02	.416E+01	.971E+03	.101E+04
14.00	7.256	15.000	.115E+02	.191E+00	1.400	1.400	.349E+01	.152E+02	.435E+01	.108E+04	.112E+04
15.00	7.382	15.000	.116E+02	.153E+00	1.400	1.400	.387E+01	.174E+02	.451E+01	.120E+04	.124E+04
16.00	7.491	15.000	.117E+02	.123E+00	1.400	1.400	.427E+01	.198E+02	.465E+01	.132E+04	.137E+04
17.00	7.585	15.000	.118E+02	.995E-01	1.400	1.400	.470E+01	.224E+02	.477E+01	.146E+04	.151E+04
18.00	7.667	15.000	.119E+02	.807E-01	1.400	1.400	.516E+01	.252E+02	.488E+01	.160E+04	.166E+04
19.00	7.738	15.000	.119E+02	.658E-01	1.400	1.400	.564E+01	.280E+02	.497E+01	.175E+04	.181E+04
20.00	7.801	15.000	.120E+02	.539E-01	1.400	1.400	.615E+01	.311E+02	.506E+01	.191E+04	.197E+04
21.00	7.857	15.000	.120E+02	.444E-01	1.400	1.400	.668E+01	.343E+02	.513E+01	.207E+04	.214E+04
22.00	7.906	15.000	.120E+02	.368E-01	1.400	1.400	.724E+01	.377E+02	.520E+01	.225E+04	.232E+04

m1	m2	zeta	delta	pt2/pt1	gamal	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.05	1.050	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.10	1.100	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.15	1.150	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.20	1.200	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.25	1.250	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.30	1.300	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.35	1.350	10.000	-.234E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
1.40	1.400	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.45	1.450	10.000	.234E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.50	1.500	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
1.60	1.600	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.70	1.700	10.000	-.234E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
1.80	1.800	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
1.90	1.900	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
2.00	2.000	10.000	.350E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
2.20	2.200	10.000	.117E-04	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.319E+03
2.40	2.400	10.000	-.350E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.321E+03
2.60	2.600	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.323E+03
2.80	2.800	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.325E+03
3.00	3.000	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.327E+03
3.20	3.200	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.329E+03
3.40	3.400	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.332E+03
3.60	3.600	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.334E+03
3.80	3.800	10.000	-.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.337E+03
4.00	4.000	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.340E+03
4.50	4.500	10.000	.117E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.348E+03
5.00	5.000	10.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.357E+03
6.00	5.908	10.000	.645E+00	.100E+01	1.400	1.400	.103E+01	.110E+01	.107E+01	.319E+03	.377E+03
7.00	6.516	10.000	.266E+01	.991E+00	1.400	1.400	.114E+01	.156E+01	.137E+01	.353E+03	.402E+03
8.00	7.092	10.000	.398E+01	.961E+00	1.400	1.400	.125E+01	.208E+01	.167E+01	.387E+03	.430E+03
9.00	7.624	10.000	.488E+01	.909E+00	1.400	1.400	.136E+01	.268E+01	.197E+01	.422E+03	.461E+03
10.00	8.107	10.000	.553E+01	.840E+00	1.400	1.400	.148E+01	.335E+01	.226E+01	.460E+03	.497E+03
11.00	8.543	10.000	.602E+01	.763E+00	1.400	1.400	.162E+01	.409E+01	.253E+01	.501E+03	.536E+03
12.00	8.934	10.000	.638E+01	.682E+00	1.400	1.400	.176E+01	.490E+01	.279E+01	.545E+03	.579E+03
13.00	9.284	10.000	.667E+01	.602E+00	1.400	1.400	.191E+01	.578E+01	.303E+01	.592E+03	.626E+03
14.00	9.597	10.000	.689E+01	.527E+00	1.400	1.400	.207E+01	.673E+01	.325E+01	.642E+03	.676E+03
15.00	9.876	10.000	.708E+01	.458E+00	1.400	1.400	.224E+01	.775E+01	.345E+01	.695E+03	.731E+03
16.00	10.125	10.000	.723E+01	.397E+00	1.400	1.400	.243E+01	.884E+01	.364E+01	.753E+03	.789E+03
17.00	10.348	10.000	.735E+01	.342E+00	1.400	1.400	.262E+01	.100E+02	.381E+01	.813E+03	.850E+03
18.00	10.548	10.000	.746E+01	.295E+00	1.400	1.400	.283E+01	.112E+02	.397E+01	.877E+03	.916E+03
19.00	10.727	10.000	.754E+01	.253E+00	1.400	1.400	.305E+01	.125E+02	.411E+01	.945E+03	.985E+03
20.00	10.888	10.000	.762E+01	.218E+00	1.400	1.400	.328E+01	.139E+02	.424E+01	.102E+04	.106E+04
21.00	11.033	10.000	.768E+01	.188E+00	1.400	1.400	.352E+01	.153E+02	.436E+01	.109E+04	.113E+04
22.00	11.163	10.000	.774E+01	.162E+00	1.400	1.400	.377E+01	.169E+02	.447E+01	.117E+04	.121E+04

m1	m2	zeta	delta	pt2/pt1	gama1	gama2	t2/t1	p2/p1	rho2/1	t2	tt2
1.00	1.000	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.310E+03
1.05	1.050	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.10	1.100	5.000	.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.15	1.150	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.20	1.200	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.25	1.250	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.30	1.300	5.000	-.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.35	1.350	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.40	1.400	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.45	1.450	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.50	1.500	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.60	1.600	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.70	1.700	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.311E+03
1.80	1.800	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
1.90	1.900	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.00	2.000	5.000	.000E+00	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.20	2.200	5.000	-.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.312E+03
2.40	2.400	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
2.60	2.600	5.000	.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.313E+03
2.80	2.800	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
3.00	3.000	5.000	.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.314E+03
3.20	3.200	5.000	.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
3.40	3.400	5.000	-.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.315E+03
3.60	3.600	5.000	-.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.316E+03
3.80	3.800	5.000	.178E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.317E+03
4.00	4.000	5.000	.474E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.318E+03
4.50	4.500	5.000	-.415E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.320E+03
5.00	5.000	5.000	.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.322E+03
6.00	6.000	5.000	-.119E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.327E+03
7.00	7.000	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.333E+03
8.00	8.000	5.000	.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.340E+03
9.00	9.000	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.348E+03
10.00	10.000	5.000	-.593E-06	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.357E+03
11.00	11.000	5.000	.237E-05	.100E+01	1.400	1.400	.100E+01	.100E+01	.100E+01	.310E+03	.367E+03
12.00	11.817	5.000	.356E+00	.100E+01	1.400	1.400	.103E+01	.111E+01	.108E+01	.319E+03	.378E+03
13.00	12.460	5.000	.917E+00	.998E+00	1.400	1.400	.109E+01	.133E+01	.123E+01	.337E+03	.390E+03
14.00	13.085	5.000	.136E+01	.991E+00	1.400	1.400	.114E+01	.157E+01	.138E+01	.354E+03	.402E+03
15.00	13.689	5.000	.172E+01	.978E+00	1.400	1.400	.120E+01	.183E+01	.153E+01	.371E+03	.416E+03
16.00	14.269	5.000	.202E+01	.960E+00	1.400	1.400	.125E+01	.210E+01	.168E+01	.388E+03	.431E+03
17.00	14.824	5.000	.226E+01	.936E+00	1.400	1.400	.131E+01	.239E+01	.183E+01	.405E+03	.446E+03
18.00	15.354	5.000	.247E+01	.907E+00	1.400	1.400	.137E+01	.270E+01	.198E+01	.424E+03	.463E+03
19.00	15.858	5.000	.264E+01	.874E+00	1.400	1.400	.143E+01	.303E+01	.213E+01	.442E+03	.480E+03
20.00	16.337	5.000	.279E+01	.838E+00	1.400	1.400	.149E+01	.338E+01	.227E+01	.462E+03	.498E+03
21.00	16.791	5.000	.292E+01	.799E+00	1.400	1.400	.155E+01	.374E+01	.241E+01	.482E+03	.518E+03
22.00	17.221	5.000	.303E+01	.759E+00	1.400	1.400	.162E+01	.412E+01	.254E+01	.503E+03	.538E+03

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Table 13. Listing of computer program.

^C

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B>type gary.for
c      program to calculate flow parameters
c      dr. g.harloff
c      character*3 OUT
c      data out/'con'/
c      nout=0
c      nin=0
c      open(6,file=out)
c      nit=200
c      dr=57.29577951
10 write(NOUT,15)
15 format(1H,'enter gma=')
c      read (NIN,22) gma
22 format(F10.4)
c      WRITE(NOUT,23) gma
23 FORMAT(1X,' Gamaa=',f10.4)
c      xm=0.0
c      write(nout,28)
28 format(1x,'enter mach no increment =(0.1 is suggested)')
c      read(nin,24)dxm
24 format(f10.4)
c      write(nout,27)dxm
27 format(1x,'dxm=',f10.4)
c      write(nout,26)
26 format(1x,'enter output spacing in i3 format(ex. 50)')
c      read(nin,29)npnt
29 format(1x,i3)
c      write(nout,48)npnt
48 format(1x,'npnt=',i3)
c      write(nout,31)
31 format(1x,'enter 1 for isentropic and 2 for shock,i1 format')
c      read(nin,30)ins
30 format(i1)
c      write(nout,32)ins
32 format(1x,'i normal shock(ins)=',i2)
c      write(nout,42)
42 format(1x,'enter 0 for uf6 and 1 for air,i1 format')
c      read(nin,43)iair
43 format(i1)
c      write(nout,44)iair
44 format(1x,'iair( 0 for uf6 and 1 for air)=',i2)
c      gma=1./(gma-1.)
c      gml=gma/(gma-1.)
c      if(ins.eq.1) write(NOUT,25)
25 FORMAT (1h1,15x ' m      p/pt      ro/rt      t/tt      a/a*      v/v*
1 q/pt      nu      mu ')
c      exp1=(gma+1.)/(2.*(gma-1.))
c      if(ins.eq.1) go to 35
c      if(ins.ne.1) go to 200
c      go to 37

```

```

35 continue
   do 100 i=1,nit
      xm=xm+dxm
      iprt=(i/nprt)*nprt
      if(iprt.eq.i)write(nout,25)
      denom=xm*((gma+1.)/2.)**exp1
      gm102=1.+(gma-1.)*xm*xm/2.
      aas=1./xm*(2.*gm102/(gma+1.))**exp1
      tstt=1./gm102
      pspt=1./(gm102)**gm1
      rosrot=1./(gm102)**gm
      qpt=(gma/2.)*xm*xm*pspt
      vast=((gma+1.)*xm*xm/2.)/gm102)**0.5
      if(xm.ge.1.)x1=atan(sqrt((gma-1.)*(xm*xm-1.)/(gma+1.)))
      if(xm.ge.1.)xnu=sqrt((gma+1.)/(gma-1.))*x1-atan(sqrt(xm
1*xm-1.))
      if(xm.ge.1.0)xnu=xnu*dr
      if(xm.gt.1.0)xma=(asin(1./xm))*dr
      if(xm.lt.1.0)write(nout,50)xm,pspt,rosrot,tstt,aas,vast
1,qpt
      if(xm.ge.1.0)write(nout,55)xm,pspt,rosrot,tstt,aas,vast,
1 qpt,xnu,xma
50 format(15x,f5.2,6e9.3)
55 format(15x,f5.2,8e9.3)
100 continue
   go to 200
37 continue
   write (nout,40)
40 format(1x,'input 0 for normal shock or 1 for obl.(il format)
1 and variable gamma')
   read(nin,38)inor
38 format(i1)
   if(inor.eq.0)z=1.570796327
   if(inor.eq.1)go to 200
   write(nout,125)
   xm=1.-dxm
   do 175 i=1,nit
      xm=xm+dxm
      iprt=(i/nprt)*nprt
      if(iprt.eq.i)write(nout,125)
125 format(1h1,15x,'      m      p2/p1      ro2/ro1      t2/t1      pt2/pt1
1a2/a1      m2')
      gmp1=gma+1.
      gmm1=gma-1.
      xm1=xm*sin(z)
      p2p1=1.+2.*gma/(gmp1)*(xm1*xm1-1.)
      r2r1=gmp1/(gmm1+2./(xm1*xm1))
      t2t1=p2p1/r2r1
      v1=(gmp1*xm1*xm1/2.)/(1.+gmm1*xm1*xm1/2.)
      v2=v1**((gma/gmm1)
      va=(2.*gma*xm1*xm1/gmp1-gmm1/gmp1)**(1./gmm1)

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```

vb=v2/va
pt2pt1=vb
v3=(xm1*xm1+2./gmm1)/(2.*gma*xm1*xm1/(gmm1)-1.)
v4=(gmpl*xm1*xm1/(tan(z)*gmm1))/((xm1*xm1+2./gmm1))
v5=v3*(v4*v4+1.)
a2a1=SQRT(T2T1)
xm2=sqrt(v5)
write(nout,130)xm,p2p1,r2r1,t2t1,pt2pt1,a2a1,xm2
130 format(15x,7e10.4)
175 continue
go to 300
200 continue
c temp do loop
write(nout,202)
202 format(1x,'enter upstream temperature in deg k:format f10.0')
read(nin,205)t1
205 format(f10.0)
write(nout,425)
do 299 iik1=1,5
t1=t1+10.
xm0=0.95
c starting mach no.*****
c zeta max=18*5 det=90.
nzeta=18
nmach=100
pid2=3.141592653/2.
dzeta=5.*.0174532925
zeta0=pid2+dzeta-.000001
zeta=zeta0
ikk=0
c do do do do do$*****$
do 277 ilnn=1,nzeta
xm=xm0
zeta=zeta-dzeta
c write(nout,992)zeta,dzeta
992 format(1x,'zeta=',e12.4,'dzeta=',e12.4)
c do do do do do$*****$
do 275 ij=1,nmach
ikk=ikk+1
if(xm.ge.0.0.and.xm.lt.1.45)dxm=.05
if(xm.ge.1.45.and.xm.lt.1.9)dxm=.1
if(xm.ge.1.9.and.xm.lt.4.0)dxm=.2
if(xm.ge.4.0.and.xm.lt.5.0)dxm=.5
if(xm.ge.5.0.and.xm.lt.20.0)dxm=1.0
xm=xm+dxm
iprt=(ikk/nprt)*nprt
if(iprt.eq.ikk)write(nout,425)
425 format(1h1,17x,' m1 m2 zeta delta pt2/pt1',2x,
1'gamal gama2 t2/t1 p2/p1 rho2/1 ',
23x,' t2 tt2',/)
if(xm.gt.22.)go to 277

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      call shock(xm,xmach2,t1,t2,zeta,delta,gamma1,gamma2,
1pratio,rhorat,cp1,cp2,t2t1,iair,f,g,h1,h2,rcons)
      zetao=zeta*dr
      deltao=delta*dr
cccc   check consistency of t2 via energy soln. and t2 by
c       normal shock equations
      at2t1=t2/t1
cccc   ccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c       write(nout,230)xm,xmach2,t2t1,zeta,delta,gamma1
c       write(nout,231)gamma2,pratio,rhorat
231 format(1x,3e10.4)
c       for stagnation temperature and average gamma
      htot1=h1+0.5*((xm*sin(zeta))**2)*gamma1*rcons*t1
      htot2=h2+0.5*((xmach2*sin(zeta-delta))**2)*gamma2*rcons*t2
c       guess for tt1 and tt2
      tt1=t1*(1.+(gamma1-1.)/2.*(xm*sin(zeta))**2)
      tt2=t2*(1.+(gamma2-1.)/2.*(xmach2*sin(zeta-delta))**2)
      nnit=1
500 call gam1(gamma3,tt1,iair,cp3,rcons,htot1g)
      nnit=nnit+1
      erh1=htot1-htot1g
c       write(nout,508)gamma3,tt1,iair,cp3,rcons,htot1g
508 format(1x,'gamma3,tt1,iair,cp3,rcons,htot1g',2e12.4,1l,3e12.4)
      delt1=erh1*(gamma3-1.)/(gamma3*rcons)
      tt1=tt1+delt1*.6
c       write(nout,503)tt1,delt1,htot1,htot1g
503 format(1x,'htot1 iter:tt1,delt1,ht1,htg',4e12.4)
      if(abs(delt1).le.0.1.and.abs(erh1).le.10.0)go to 550
      if(nnit.gt.99)write(nout,9631)
9631 format(1x,'exceeded 99 iter for total temp iteration')
      if(nnit.gt.60)go to 550
      go to 500
550 continue
      nnit=1
600 call gam1(gamma4,tt2,iair,cp4,rcons,htot2g)
      erh2=htot2-htot2g
      nnit=nnit+1
c       write(nout,608)gamma4,tt2,iair,cp4,rcons,htot2g
608 format(1x,'gamma4,tt2,iair,cp4,rcons,htot2g',2e12.4,1l,3e12.4)
      delt2=erh2*(gamma4-1.)/(gamma4*rcons)
      tt2=tt2+delt2*.6
c       write(nout,603)tt2,delt2,htot2,htot2g
603 format(1x,'htot2 iter:tt2, dt2,ht2,htg',4e12.4)
      if(abs(delt2).le.0.1.and.abs(erh2).le.10.0)go to 650
      if(nnit.gt.99)write(nout,9631)
      if(nnit.gt.99)go to 550
      go to 600
650 continue
      t2t1t=tt2/tt1
c       write(nout,665)t2t1t
665 format(1x,'t2t1t=',e12.4)
      call ptrto(t2t1,pratio,t2t1t,pt2r1,gamma1,gamma2,gamma3,
1gamma4)

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```

        write(nout,430)xm,xmach2,zetao,deltao,pt2r1,gammal,gamma2
        1,t2t1,pratio,rhorat,t2,tt2
430 format(14x,f6.2,f9.3,f8.3,2e10.3,2f7.3,5e10.3)
275 continue
277 continue
230 format(1x,7e10.4)
299 continue
300 continue
    stop
    end
    subroutine shock(xmach1,xmach2,t1,t2,alpha,beta,gammal,
lgamma2,p2p1,rhorat,cp1,cp2,t2t1,iair,f,g,h1,h2,rcons)
    external gam1
c    calculation of temp,pressure,and turning angle downst
c    of oblique or normal shock.
c    rcons is the specific gas consta=8314.5/(molecular weight)
c    define specific heat at consta pressure
c    solution procedure is to solve energy(f and g),mass and
c    normal momentum eqn. for mach2, and conservation of
c    tangential momentum for beta.
c    molecular weight changes are ignored, but variable gammaa
c    is accounted for.
    nout=0
    pi=3.141592653
    pio2=pi/2.
c    initial guess for gamma2=1.059
c    initial guess on alpha=45. deg
c    alpha=shock angle;beta=turning angle
    beta=0.349
c    .349=20. deg
c    guess on beta
c    r=8314.6 joules/(kg-mole-k)=1545.43 ft-lbf/(lbm-mole-r)
c    rcons=8314.5/352.
c    for initial guess of t2,beta, and xmach2, assume consta
c    gamma across shock.
c    gammal=gamma(cp(t1))
    call gam1(gammal,t1,iair,cp1,rcons,h1)
c    write(nout,111)xmach1,xmach2,t1,t2,alpha,beta
c    write(nout,102)gammal
    111 format(1x,'input',6e12.4)
    102 format(1x,'gammal=',e12.4)
c    iair=1 for air const gamma, and cp
c    write(nout,2)cp1,t1
    2 format(1x,'cp1=',f10.3,'t1=',f10.3)
    112 format(1x,'first guess;t2=',e12.4,'beta=',e12.4,'alpha=',e12.4)
c    guess for beta:see owcarek p.177
    if(alpha.ge.pio2) beta=0.0
    if(alpha.le.0.0) beta=0.0
    if(alpha.ge.pio2.or.alpha.le.0.0) go to 109
109 continue
c    guess for t2: see owcarek, p. 175. using gammal.....
    ta=2.*(gammal-1.)/((gammal+1.)*2)

```

```

tb=(xmach1*sin(alpha))*2-1.
tc=gamma1+1./((xmach1*sin(alpha))*2)
t2=t1*(1.+ta*tb*tc)
if(t2.lt.t1)t2=1.02*t1
c write(nout,112)t2,beta,alpha
call gam1(gamma2,t2,iair,cp2,rcons,h2)
call gmach(gamma1,gamma2,cp1,cp2,xmach1,xmach2,alpha,beta,
1,h1,h2,t1,t2)
call t2tis(cp1,cp2,gamma1,gamma2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2,t2t1)
call p2pis(gamma1,gamma2,xmach1,xmach2,alpha,beta,p2p1)
rhorat=p2p1/t2t1
call bbeta(alpha,beta,gamma1,gamma2,t1,t2,xmach1,xmach2,rhorat)
c write(nout,113)xmach2,cp2
113 format(1x,'first guess ; m2=',f10.3,'cp2=',e12.4)
c write(nout,205)xmach1,xmach2
205 format(1x,'m1=',e12.4,'m2=',e12.4)
call fu(t1,xmach1,gamma1,cp1,alpha,f,rcons,h1)
upstre=f
it=0
300 continue
it=it+1
call gam1(gamma2,t2,iair,cp2,rcons,h2)
c write(nout,114)t2,cp2,beta,gamma2
114 format(1x,'t2=',f10.2,'cp2=',f10.3,'beta=',e12.4,'gamma2=',
1f10.2)
call gmach(gamma1,gamma2,cp1,cp2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2)
call t2tis(cp1,cp2,gamma1,gamma2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2,t2t1)
call p2pis(gamma1,gamma2,xmach1,xmach2,alpha,beta,p2p1)
rhorat=p2p1/t2t1
call bbeta(alpha,beta,gamma1,gamma2,t1,t2,xmach1,xmach2,rhorat)
call fd(t2,xmach2,gamma2,cp2,alpha,beta,g,rcons,h2)
downst=g
error=+upstre-downst
c write(nout,245) error,xmach2,t2,gamma2,beta,h2
245 format(1x,'error=',e12.4,'m2=',e10.5,'t2=',f10.5,'gam2=',f7.3,
1'beta=',f10.3,'h2=',e12.4)
t2ave=t2
t2mx=t2ave*1.0001
call gam1(gamma2,t2mx,iair,cp2,rcons,h2)
call gmach(gamma1,gamma2,cp1,cp2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2mx)
call t2tis(cp1,cp2,gamma1,gamma2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2mx,t2t1)
call p2pis(gamma1,gamma2,xmach1,xmach2,alpha,beta,p2p1)
rhorat=p2p1/t2t1
call bbeta(alpha,beta,gamma1,gamma2,t1,t2mx,xmach1,xmach2,rhorat)
call fd(t2mx,xmach2,gamma2,cp2,alpha,beta,g,rcons,h2)
ffmx=g
t2mn=t2ave*.9999

```

```

call gam1(gamma2,t2mn,iair,cp2,rcons,h2)
call t2t1s(cp1,cp2,gamma1,gamma2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2mn,t2t1)
call p2pls(gamma1,gamma2,xmach1,xmach2,alpha,beta,p2p1)
rhorat=p2p1/t2t1
call gmach(gamma1,gamma2,cp1,cp2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2mn)
call bbeta(alpha,beta,gamma1,gamma2,t1,t2mn,xmach1,xmach2,rhorat)
call fd(t2mn,xmach2,gamma2,cp2,alpha,beta,g,rcons,h2)
ffmn=g
dffd=(ffmx-ffmn)/(0.0002*t2ave)
dt=-error/dffd

C      t2=t2ave-dt

C
CCCCCCCCCCCCZZZZZZZZZZZZZZZZZZZZ$$$$$$$$$$
C   write(nout,322)ffmx,ffmn,dffd,dt,error,t2ave,t2
322 format(1x,'ffmx=',e10.4,'ffmn=',e10.4,'dffd=',e10.4,'dt=',
1e10.4,'error=',e10.4,'t2av=',f12.5,'t2=',f12.5)
if(abs(error).lt.0.1.and.abs(dt).lt.10.)go to 200
if(it.gt.99)write(nout,9183)
9183 format(15x,' more than 99 iterations')
if(it.gt.99)go to 200
go to 300
99 continue
120 continue
100 continue
200 continue
    call gam1(gamma2,t2,iair,cp2,rcons,h2)
    call t2t1s(cp1,cp2,gamma1,gamma2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2,t2t1)
    call p2pls(gamma1,gamma2,xmach1,xmach2,alpha,beta,p2p1)
    rhorat=p2p1/t2t1
C   write(nout,222)xmach2,t2,alpha,beta,gamma2,p2p1,rhorat
222 format(1x,'m2,t2,al,bta,gm2,p2p1,r2r1=',7f10.2)
return
end
subroutine gam1(gamma,t,iair,cp,r,h)
dimension theta(6),dgen(6)
nout=0
C   subroutine after r.gentry
C   write(nout,10)gamma,t,iair,cp
10 format(1x,'ine gam1 gamma,t,iair,cp',2e12.4,i2,e12.4)
if(iair.eq.1) go to 120
theta(1)=205.
theta(2)=288.
theta(3)=267.
theta(4)=900.
theta(5)=768.
```



```

theta(6)=959.
dgen(1)=3.
dgen(2)=3.
dgen(3)=3.
dgen(4)=3.
dgen(5)=2.
dgen(6)=1.
sum1=0.0
sum2=0.0
do 110 i=1,6
x=theta(i)/t
y=exp(-x)
z=x/(1.-y)
sum1=sum1+z*y*dgen(i)
sum2=sum2+z*z*y*dgen(i)
110 continue
gamma=1.+1./(3.+sum2)
h=4.+sum1
120 continue
if(iair.eq.1)gamma=1.4
if(iair.eq.1)xmw=28.966
if(iair.eq.0)xmw=352.
r=8314.5/xmw
cp=gamma*r/(gamma-1.)
h=h*r*t
if(iair.eq.1)h=cp*t
c write(nout,123)h,r,t,cp
123 format(1x,'ine gam1:h,r,t,cp ',4e12.4)
return
end
subroutine bbeta(alpha,beta,gamma1,gamma2,t1,t2,xm1,xm2,rho)
c calculate beta
nout=0
rho12=1./rho
c write(nout,116)t1,t2,xm1,xm2
116 format(1x,'sub beta t1,t2,m1,m2=',4e12.4)
aa=tan(alpha)*(1.-rho12)
bb=1.+rho12*tan(alpha)**2
beta=atan(aa/bb)
return
end
subroutine gmach(gm1,gm2,cp1,cp2,xmach1,xmach2,alpha,beta,
ih1,h2,t1,t2)
c derived by dr.g.harloff 6-84
c all mach numbers are assumed to be normal to shock
nout=0
c write(nout,222)gm1,gm2,cp1,cp2,xmach1,xmach2,alpha,beta
222 format(1x,'ine gmach',8e12.4)
xm1=xmach1*sin(alpha)
z1=gm1*xm1*xm1*(h1/t1+cp1*(gm1-1.)*xm1*xm1/2.)
z2=(1.+2.*gm1*xm1*xm1+gm1*gm1*xm1**4)*gm2
a=gm2*gm2*z1-(gm2-1.)*z2*cp2/2.

```

```

      b=2.*gm2*z1-z2*h2/t2
      c=z1
      aaa=b*b-4.*a*c
      if(aaa.le.0.0)aaa=0.0
      xm2=(-b-sqrt(aaa))/(2.*a)
      xm2=sqrt(xm2)
c      write(nout,2)alpha,beta
      2 format(1x,'alpha=',e12.4,'beta=',e12.4)
c      write(nout,5)z1,z2,a,b,c
      5 format(1x,'sub gmach',5e12.4)
c      write(nout,10)xm2
      10 format(1x,'m2 normal=',e12.4)
      xmach2=xm2/sin(alpha-beta)
c      write(nout,20)xmach2
      20 format(1x,'mach2 complete vector=',e12.4)
      return
      end
      subroutine t2tis(cp1,cp2,gm1,gm2,xmach1,xmach2,alpha,beta,
1h1,h2,t1,t2,t2t1)
      nout=0
c      write(nout,20)cp1,cp2,gm1,gm2,xmach1,xmach2,alpha,beta
      20 format(1x,'ine t2tis',8e12.4)
      xm1=xmach1*sin(alpha)
      xm2=xmach2*(sin(alpha-beta))
      a=h1/t1+cp1*(gm1-1.)/2.*xm1**2
      b=h2/t2+cp2*(gm2-1.)/2.*xm2**2
      t2t1=a/b
c      write(nout,10)t2t1
      10 format(1x,'t2/t1=',e12.4)
      return
      end
      subroutine p2pis(gm1,gm2,xmach1,xmach2,alpha,beta,p2p1)
      nout=0
c      write(nout,20)gm1,gm2,xmach1,xmach2,alpha,beta
      20 format(1x,'ine p2p1',6e12.4)
      xm1=xmach1*sin(alpha)
      xm2=xmach2*sin(alpha-beta)
      a=1.+gm1*xm1**2
      b=1.+gm2*xm2**2
c      write(nout,30)a,b,gm1,gm2,xm1,xm2
      30 format(1x,'ine p2p1 a=',6e12.4)
      p2p1=a/b
c      write(nout,10)p2p1
      10 format(1x,'p2/p1=',e12.4)
      return
      end
      subroutine ptrto(t2tis,p2pis,t2t1t,p2p1t,gm1,gm2,gm3,gm4)
      nout=0

```

```

c   gm1,gm2 are for static temp:
c   gm3,gm4 are for stagnation temperatures.
gm5=(gm1+gm2)/2.
gm6=(gm3+gm4)/2.
g7=gm5/(gm5-1.)
g8=gm6/(gm6-1.)
t2r=1./t2t1s
p2p1t=p2p1s*(t2r**g7)*(t2t1t**g8)
c   write(nout,20)gm1,gm2,gm3,gm4,p2p1s,t2r,t2t1t
20 format(1x,'sub ptrto:gm1,gm2,gm3,gm4,p2p1s,t2r,t2t1t',7e12.4)
c   write(nout,10)p2p1t
10 format(1x,'pt2/pt1=',e12.4)
return
end
subroutine fu(t1,xmach1,gamma1,cp1,alpha,g,rcons,h1)
g=h1+gamma1*rcons*t1*0.5*(xmach1*sin(alpha))**2
return
end
subroutine fd(t2,xmach2,gamma2,cp2,alpha,beta,h,rcons,h2)
c   subroutine for downstream enthalpy balance
h=h2+gamma2*rcons*t2*0.5*(xmach2*sin(alpha-beta))**2
return
end

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