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USER'S GUIDE

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TIP VORTEX COMPUTER CODE SRATIP

R. Levy and S. J. Lin

SCIENTIFIC RESEARCH ASSOCIATES, INC.
Glastonbury, CT 06033

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Langley Research Center
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INTRODUCTION

The present User's Guide applies to the three-dimensional viscous flow forward marching analysis as used for the calculation of the helicoptor tip vortex flow field. The basic analysis is described in Refs. 1 and 2 as well as Ref. 7 which present equations and results related to this program. The present User's Guide, which should be utilized in conjunction with Ref. 7 presents a discussion of the program flow and subroutines, as well as a list of input and output.

DESCRIPTION OF SUBROUTINES

The present section describes the various subroutines used in the code. The main program is termed PEPSIG which controls the logic of the program. After setting initial conditions PEPSIG marches the solution downstream from the initial station. Subroutine PRIMRY in conjunction with COEFM and ADI solves the primary momentum equation. In this sequence COEFM writes the differential equation in finite difference form; i.e. loads the required storage locations to represent the finite difference form of the equation as a linearized algebraic equation at each grid point. This process yields a coupled set of linear equations, one equation at each grid point, which is then solved in ADI. Secondary flow is calculated via SECFLO, which calls COEFPH, ADI, COEFVS and ADI2X2. This set of subroutines serves to solve the continuity equation and the coupled stream function - vorticity equations. COEFPH forms the linearized continuity equation in terms of the unknown potential (see Ref. 7) at each grid point and ADI solves the set of equations through matrix inversion. COEFVS and ADI2X2 relate to the coupled stream function - vorticity equation. Of the remaining routines CROSEC is a routine structured to perform several unrelated objectives depending upon the argument list. These include updating variables and turbulence quantities, computing integral quantities, writing plot files, etc. RESTAR and RESTRG are restart subroutines. VISC and TURB set laminar and turbulent viscosity, respectively. A description of these and other routines follow. In addition, Fig. 1 shows the general flow through the program.

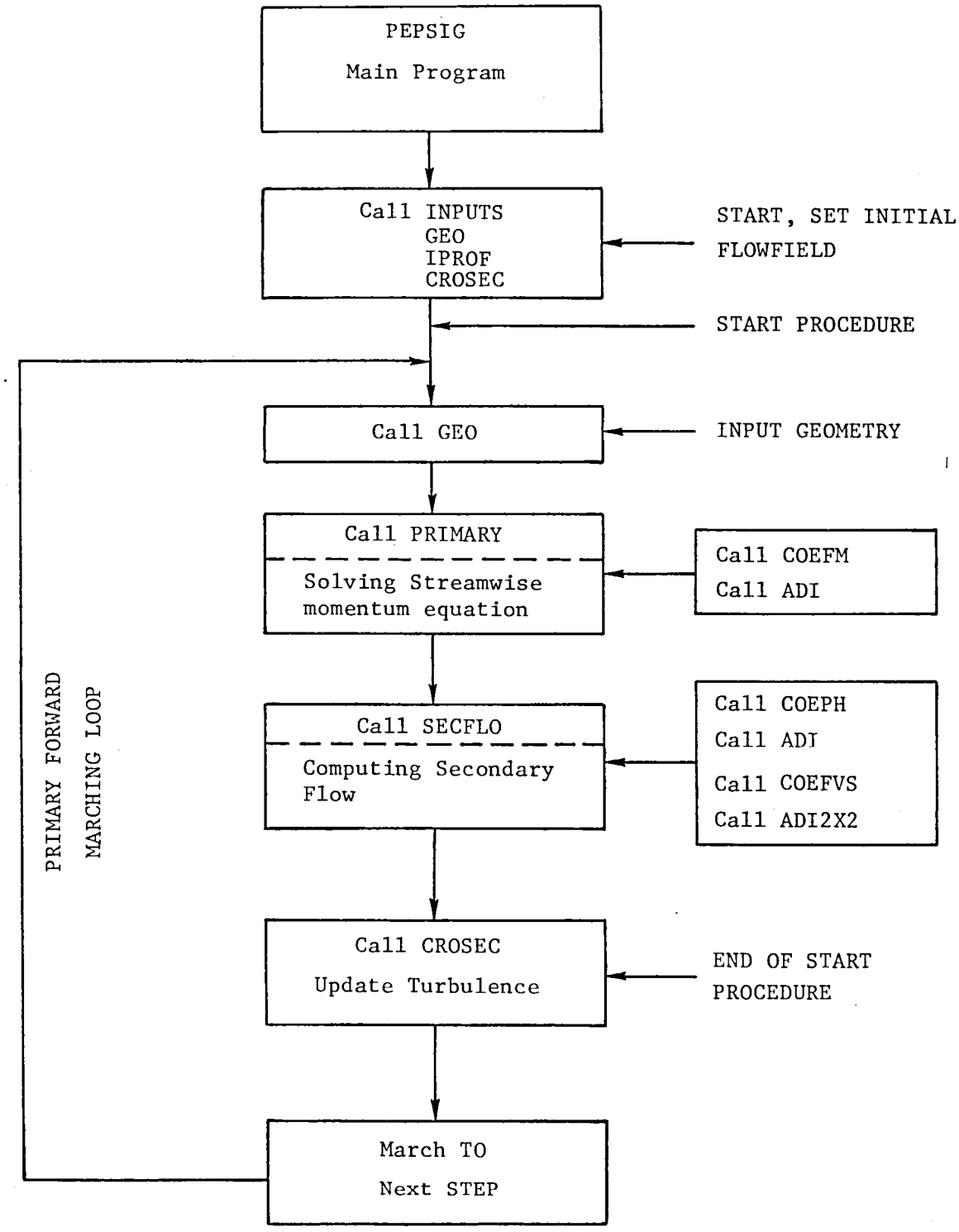

FIG. 1 - OVERALL PROGRAM FLOW

ADDRES

The first subscript in the Z array is the name of the variable stored. The second subscript is the grid point designator. The arguments of the call are the grid coordinates IY, IZ. The variables LN1A, LN2A and LN3A are passed through common from subroutine READZ, permitting subroutine address to operate both for the Z array incore option (INCORE=1) or for the out of core option (INCORE=0). The output consists of the grid point designators used for Y direction derivatives KY1, KY2, KY3, Z direction derivatives KZ1, KZ2, KZ3, cross derivatives K11, K12, K13, K21, K22, K23, K31, K32, K33 and source terms KPT. Note that shifting within ADDRES retains consistency of the output when used at boundary points.

ADI

Subroutine ADI solves 2-D scalar linear equations of the form:

$$\frac{\partial(A\phi)}{\partial t} = D_y(\phi) + D_z(\phi) + C$$

with boundary conditions of the form

$$D_y(\phi) + D_z(\phi) + C = 0$$

where ϕ is a dependent variable, D_y and D_z are Y direction and Z direction difference operators, and A and C are independent of ϕ. A Douglas-Gunn scheme is used to solve the equations (Ref. 3). Parabolic equations are solved without iteration, elliptic equations are solved iteratively using a pseudo-time marching technique.

The array C(N, IY, JZ) contains the initial conditions and the equations to be solved. The solution is returned in C(1, IY, JZ) for parabolic equations and in C(2, IY, JZ) for elliptic equations.

The argument list contains:

MODE1

0	elliptic equation (A≡1)
-1	elliptic equation with no Dirichlet boundary conditions (A≡1)
1	parabolic equation
2	paraboilc equation (A≡1)

IDUMP1	
0	no output
1	namelist and iterative information
2	input C array plus IDUMP=1
3	sweep 1 and sweep 2 coefficients plus IDUMP=2
4	GAUSS coefficients plus IDUMP=3
5	iterative information only
INLY1, INLY2	index limits on IY
INLZ1, INLZ2	index limits on JZ
MAXITS	maximum number of iterations allowed for elliptic equations
LIN	not used
ICON	iterative convergence flag returned 1 converged, 0 not converged

ADI2X2

Subroutine ADI2X2 solves two coupled linear two-dimensional equations. For parabolic equations the form is:

$$\frac{\partial}{\partial t}(A_f\ \phi_f) = D_{yf}(\phi_f, \phi_s) + D_{zf}(\phi_f, \phi_s) - S_{f1}\ \phi_f - S_{f2}\ \phi_s + C_f + D_{yzf}(\phi_f, \phi_s)$$

$$\frac{\partial}{\partial t}(A_s\ \phi_s) = D_{ys}(\phi_f, \phi_s) + D_{zs}(\phi_f, \phi_s) - S_{s1}\ \phi_f - S_{s2}\ \phi_s + C_s + D_{yzs}(\phi_f, \phi_s)$$

For elliptic equations the form is:

$$D_t(\phi_f, \phi_s) = D_{yf}(\phi_f, \phi_s) + D_{zf}(\phi_f, \phi_s) - S_{f1}\phi_f - S_{f2}\phi_s + C_f + D_{yzf}(\phi_f, \phi_s)$$

$$D_t(\phi_f, \phi_s) = D_{ys}(\phi_f, \phi_s) + D_{zs}(\phi_f, \phi_s) - S_{s1}\phi_f - S_{s2}\phi_s + C_s + D_{yzs}(\phi_f, \phi_s)$$

where ϕ_f and ϕ_s are the dependant variables, D_t, D_y, D_z are time, Y direction and Z direction operators. D_{yz} is a cross derivative operation, and C is a constant. Subscripts f and s refer to first and second variables or equations.

Boundary conditions are of the form:

$$D_{yf}(\phi_f,\phi_s) + D_{zf}(\phi_f,\phi_s) + C_f = 0$$

$$D_{ys}(\phi_f,\phi_s) + D_{zs}(\phi_f,\phi_s) + C_s = C$$

A Douglas-Gunn Linearized Block Implicit scheme is used to solve the equations (Ref. 3). Parabolic equations are solved without iteration, elliptic equations are solved iteratively using a pseudo-time marching technique.

The array Q(N, IY, IZ) contains the equations to be solved. The array PHI(N, JY, JZ) contains the initial conditions and the solution.

In the argument list IWRITE controls intermediate printout. Caution must be exercised with this variable since massive printout is produced.

IWRITE

- 0 iteration summary information only
- 1 input equation dump plus IWRITE=0
- 2 equations sent to block tridiagonal matrix inverter and solution returned plus IWRITE=1
- 3 tridiagonal matrix inverter printout (subroutine MGS2X2) plus IWRITE=2

Argument ICONV is a flag set in ADI2X2 indicating convergence (ICONV=5) for elliptic equations solved by pseudo-time iteration. Failure to converge is indicated by ICONV < 5. The maximum number of iterations allowed in iterating for convergence is MAX2X2 in common NAM2X2. Parameters MODEF and

MODES in the same common block indicate parabolic or elliptic equations and they are intended to be set to the same values for any problem, 1 for parabolic equations, 0 for elliptic equations with Dirichlet boundary conditions and -1 for elliptic equations with Neumann boundary conditions on all boundaries.

ADI3D (not used in the present problem)
BULEEV (not used in the present problem)
CL (not used in the present problem)

COEFM

This subroutine writes the streamwise momentum equation:

$$
\begin{aligned}
0 = &- \frac{\rho u_p}{h}\frac{\partial u_p}{\partial x_3} - \rho v_s \frac{\partial u_p}{\partial x_1} - \rho w_s \frac{\partial u_p}{\partial x_2} - \frac{\rho u_p v_s}{h}\frac{\partial h}{\partial x_1} \\
&- \frac{\rho u_p w_s}{h}\frac{\partial h}{\partial x_2} - \frac{1}{h}\frac{\partial}{\partial x_3}(P_I + P_v) \\
&+ \frac{1}{h}\frac{\partial}{\partial x_1}\left(h\mu\frac{\partial u_p}{\partial x_1} - \mu u_p \frac{\partial h}{\partial x_1}\right) \\
&+ \frac{1}{h}\frac{\partial}{\partial x_2}\left(h\mu\frac{\partial u_p}{\partial x_2} - \mu u_p \frac{\partial h}{\partial x_2}\right) \\
&+ \frac{\mu}{h}\frac{\partial h}{\partial x_1}\frac{\partial u_p}{\partial x_1} - \frac{\mu u_p}{h^2}\left(\frac{\partial h}{\partial x_1}\right)^2 \\
&+ \frac{\mu}{h}\frac{\partial h}{\partial x_2}\frac{\partial u_p}{\partial x_2} - \frac{\mu u_p}{h^2}\left(\frac{\partial h}{\partial x_2}\right)^2
\end{aligned}
$$

Calls to subroutine DXYZ apply the chain rule to express this equation in a body-fitted coordinate system used. Boundary conditions are either no-slip or symmetry as controlled by the indicies NS1, NS2, NS3, NS4 for each cross-sectional boundary separately.

COEFPH

The scalar potential equation:

$$0 = \frac{\partial}{\partial x_1}\left(\rho h \frac{\partial \phi}{\partial x_1}\right) + \frac{\partial}{\partial x_2}\left(\rho h \frac{\partial \phi}{\partial x_2}\right) + \frac{\partial \rho u_p}{\partial x_3}$$

is written. Calls to subroutine DXYZ apply the chain rule to express this equation in body fitted coordinates. Boundary conditions set normal derivatives equal to zero on the wall and inner board and set $\phi=0$ at the center boundary. The resulting two-dimensional elliptic scalar equation in ϕ is solved by a call to subroutine ADI. The arguments of the call are:

MODE = -1

IDUMP1 = ICOEF(1,13)

INLY1 = 1

INLY2 = NEY

INLZ1 = 1

INLZ2 = NEY

MAXITS = ICOEF(1,3)

LIN = 1

ICONV = -1

A warning message is printed if convergence has not been achieved.

The irrotational components of the secondary flow velocity are computed from the scalar potential:

$$v_\phi = \frac{\partial \phi}{\partial x_1} = \frac{\partial y_1}{\partial x_1}\frac{\partial \phi}{\partial y_1} + \frac{\partial y_2}{\partial x_1}\frac{\partial \phi}{\partial y_2}$$

$$w_\phi = \frac{\partial \phi}{\partial x_2} = \frac{\partial y_1}{\partial x_2}\frac{\partial \phi}{\partial y_1} + \frac{\partial y_2}{\partial x_2}\frac{\partial \phi}{\partial y_2}$$

COEFVS

This subroutine writes the vector potential equation and the vorticity transport equation as a coupled system for solution by subroutine ADI2X2.

Vector Potential

$$0 = \frac{\partial}{\partial x_1}\left(\frac{1}{\rho h}\frac{\partial h\psi}{\partial x_1}\right) + \frac{\partial}{\partial x_2}\left(\frac{1}{\rho h}\frac{\partial h\psi}{\partial x_2}\right) + \Omega$$

Vorticity Transport

$$\begin{aligned} 0 = {} & \frac{\rho u_p}{h}\frac{\partial \Omega}{\partial x_3} + \frac{\partial\, \rho v_s \Omega}{\partial x_1} + \frac{\partial}{\partial x_2}(\rho w_s \Omega) \\ & + \frac{\partial w_s}{\partial x_3}\frac{\partial}{\partial x_1}\left(\frac{\rho u_p}{h}\right) - \frac{\partial v_s}{\partial x_3}\frac{\partial}{\partial x_2}\left(\frac{\rho u_p}{h}\right) \\ & - \frac{\partial}{\partial x_1}\left(\frac{\rho u_p^2}{h}\frac{\partial h}{\partial x_2}\right) + \frac{\partial}{\partial x_2}\left(\frac{\rho u_p^2}{h}\frac{\partial h}{\partial x_1}\right) \\ & + \frac{\partial \rho v_s}{\partial x_1}\frac{\partial v_s}{\partial x_2} - \frac{\partial \rho v_s}{\partial x_2}\frac{\partial v_s}{\partial x_1} + \frac{\partial \rho w_s}{\partial x_1}\frac{\partial w_s}{\partial x_2} - \frac{\partial \rho w_s}{\partial x_2}\frac{\partial w_s}{\partial x_1} \\ & - \frac{\partial}{\partial x_1}\left(\frac{1}{h}\frac{\partial}{\partial x_1}(h\mu\Omega)\right) - \frac{\partial}{\partial x_2}\left(\frac{1}{h}\cdot\frac{\partial}{\partial x_2}(h\mu\Omega)\right) \end{aligned}$$

Where:

$$v_s = v_\phi + v_\psi = \frac{\partial \phi}{\partial x_1} + \frac{1}{h\rho}\frac{\partial h\psi}{\partial x_2}$$

$$w_s = w_\phi + w_\psi = \frac{\partial \phi}{\partial x_2} - \frac{1}{h\rho}\frac{\partial h\psi}{\partial x_1}$$

Although zero normal derivatives of ϕ in the scalar potential equation correspond to zero normal velocity, the tangential velocity, V_t, at solid boundaries is generally nonzero. In the coupled vorticity and vector-potential equations, both normal and tangential velocity components can be specified as boundary conditions since these equations are solved as a coupled system. By choosing (a) zero normal velocity and (b) $-v_t$ as the ψ-contribution to the tangential velocity, the slip velocity v_t arising from the ϕ calculation is cancelled, and the composite secondary flow velocity including both ϕ and ψ contributions will satisfy the no-slip condition exactly. Inner board and outer boundaries use boundary conditions of zero vorticity. The vector potential, ψ, is set to zero on wall and inner board boundaries. At outer boundary, ψ is obtained by integrating inviscid vertical velocity.

The equations are written in the array Q(N,IY, 1) for each line IZ=constant. Each line of equations is written onto logical unit NDR using binary write statements. These are to read in subroutine LOAD and used in SCALE, ADI2X2 and MGS2X2 to solve the equations.

COPY

The restart procedure saves all the common blocks in the "COMDECKS" COM and GCOM. In addition the entire Z array is saved as part of the restart. Whether the Z array is stored on disc or kept in core, subroutine COPY copies Z onto the restart unit or from the restart unit to the appropriate storage. Copy is called from subroutine RESTAR.

CROSS (not used in the present problem)

CROSEC

Subroutine CROSEC is structured to perform several unrelated operations while surveying a cross section of the solution. This subroutine was written especially for the INCORE=0 option to facilitate the use of auxiliary storage. This approach naturally inhibits vectorization.

Using the formal arguments IOPT1, IOPT2, IOPT3, IPOT4 subroutine CROSEC will perform up to four of the following functions at a single call:

IOPT=1	rotate N+1 level quantities into N level storage
IOPT=2	update turbulence quantities
IOPT=3	compute integral properties
IOPT=4,5,6	unused
IOPT=7	load resultant secondary flow velocities and pressure at conclusion of computational step
IOPT=8	compute vorticity vector
IOPT=9	load secondary flow velocities on starting iteration
IOPT=10	write plot file and on MODE=3 write geometry for potential flow

DD (not used in the present problem)

DFN (not used in the present problem)

DXYZ

Subroutine DXYZ writes finite difference approximations in computational coordinates for terms of the form:

$$A \frac{\partial}{\partial x_i} \left(B \frac{\partial \phi}{\partial x_j} \right) \qquad (1)$$

where A and B are independent of ϕ and X_i, X_j are reference coordinate directions. Transformation from reference coordinates to computational coordinates is performed within this subroutine. On option (LOAD) the resulting coefficients are loaded into appropriate storage for matrix inversion. Alternatively the term can be evaluated at the explicit (marching

step n) level. Setting derivative direction subscript i=0 produces terms of the form B $\partial\phi/\partial X_j$. Setting derivative direction subscript j=0 produces terms of the form A $\partial/\partial X_i(B\phi)$.

Marching direction derivatives are written as backward differences, transverse direction derivatives are written as central differences at the fully implicit (n+1) level or on option at the explicit (n) level.

Transformation from reference coordinates, X, into computational coordinates, Y, is accomplished by the chain rule $\partial/\partial X_i = (\partial Y_j/\partial X_i)$ $\partial/\partial Y_j$ with a summation on j. The elements of the Jacobian matrix are stored in the Z array. Difference weights in the transverse directions are stored in the AG array.

The argument list contains:

I,IJ	computational indices of the grid point
ND	number of derivatives in summation in Jacobian transformation from reference coordinates to computational coordinates, ND=2 cross plane transformation only, ND=3 includes marching direction.
ID,JD	derivative direction subscripts (i,j) in Eq. 1.
LOAD	
-1	explicit evaluation of term for ϕ=Z(IVAR,KPT)
0	difference approximation returned in AC array in common GRID
1,2	difference approximations loaded in Q array for ADI2X2. Equation is designated by LOAD (1 or 2), variable is designated by IVAR(1 or 2)
3	difference approximations loaded into C array for solution by ADI
IVAR	(See LOAD)
IDUMP	
0	no printout
$\neq$ 0	printout of AC array

NPLUS

0	Jacobian transformation evaluated at explicit (n) level
1	Jacobian transformation evaluated at implicit (n+1) level
Bet	not used

FRAME

This subroutine, called from GEO, computes geometric quantities for the reference line based reference orthogonal coordinate system. Output includes:

FFRAME(J,1,1) FFRAME(J,2,1) FFRAME(J,3,1)	normalized vector basis for the orthogonal reference coordinate system T, ν, η
B(12,J,4) B(12,J,5) B(12,J,6)	arc length derivative of the basis vectors $\frac{\partial T}{\partial S}$, $\frac{\partial \nu}{\partial S}$, $\frac{\partial \eta}{\partial S}$
CNU,CETA	components of centerline curvature κ_ν, κ_η
A(7,1) A(7,2) A(7,3)	reference line arc length and derivatives
B(16,J,K)	reference line locations in Cartesian coordinates and derivatives (k-1)

Variables A and B appear in common GVAR, CNU and CETA are in common GEOS, and FFRAME is in common GEOM. In addition, B(12,J,K) contains the orthogonal basis vectors for the reference orthogonal coordinate system expressed in Cartesian reference coordinates (IFRAME=1) for use in computing coordinates for the potential flow or expressed in orthogonal reference coordinates (IFRAME=0) for use in the viscous flow. Thus, for IFRAME=0, B(12,J,K) = δ_{JK} and for IFRAME=1, B(12,J,K)=FFRAME(J,K,1). The arc length derivatives of the basis vectors are also expressed in the same choice of vector bases depending on the IFRAME option.

Specification of the reference line is provided by either specification of the parameters S(t), $\kappa_\nu(t)$, $\kappa_\eta(t)$ on option ICOEF(1,9)=0 or specification of the location x(t), y(t), z(t) on option ICOEF(1,9)=1. For either option, the following relations are used in integral (ICOEF(1,9)=0) or differential (ICOEF(1,9)=1) form:

$$\frac{\partial \bar{R}}{\partial S} = \hat{T}$$

$$\frac{\partial \hat{T}}{\partial S} = \kappa_\nu \hat{\nu} + \kappa_\eta \hat{\eta}$$

$$\frac{\partial \hat{\nu}}{\partial S} = - \kappa_\nu \hat{T}$$

$$\frac{\partial \hat{\eta}}{\partial S} = - \kappa_\eta \hat{T}$$

where $\bar{R}(S)$ is the location of a point on the reference line and S is arclength. The following intermediate print is provided at each call to subroutine FRAME.

```
WRITE(6,2)      JX, [(B(16,J,K), J=1,3), K=1.3]
WRITE(6,2)      JX, [(A(7,J), J=1,3]
WRITE(6,1)      FFRAME
WRITE(6,3)      JX,X,CNU,CETA
WRITE(6,1)      [(B(12,J,K), J=1,3), K=4.6]
1 FORMAT        (' FRAME ',9F12.4)
2 FORMAT        (I6,9E11.4)
3 FORMAT        (' FRAME ', I12,3F12.4)
```

GAUSS

Subroutine GAUSS solves a scalar matrix equation AX=B where A is a tridiagonal matrix and X and B are column matrices. Common GAUS contains the arrays, C1, C2 and C3 which are the coefficients in the A matrix. The array C4 contains the entries of the B matrix. Gaussian elimination and back substitution are used to solve for X. The solution is returned in C1. The indices I1 and IL indicate the first and last rows in the arrays to be used for inversion.

GEO

Subroutine GEO is the control subroutine for inputting geometry information and inviscid flow pressure and velocity. For the tip vortex generation problem, the geometry is created by the grid generation code of Frank Thames (Ref. 5). A separate subroutine GEOM reads and reprocesses the inputted grid system and computes Jacobian associated with grid systems. The reprocessed grid system and its Jacobian are stored in the coded file JOB30. The GEO subroutine will call subroutine TESTG which will read the grid point locations and its Jacobian from JOB30. At each computational grid point GEO loads the Z array with the transformation matrix from orthogonal reference coordinates to body-fitted coordinates, the determinant of the matrix, grid point locations in Cartesian reference coordinates.

For viscous flow calculations (MODE=1) subroutine GEO calls subroutine PFIELD to load the inviscid pressure field into the Z array.

The first call to subroutine GEO after a restart or at the initiation of a run reads namelist GEOM containing many of the parameters needed to specify the reference line and duct cross-section. Namelist input is explained in detail in the input section of this User's Manual.

INPUTS

Subroutine INPUTS reads and prints namelist information. Details of the namelist input are given in the input section of the User's Manual. Subroutine calls are made to VISC to initialize the laminar viscosity and to ROBTS to load the difference weights into the AG array and the computational coordinates into Y and YSAVE.

INTBL (not used in the present problem)

INVERS, INVERZ

These subroutines invert 3 x 3 matrices. Some CDC computers require level 2 storage for some variables. INVERZ assumes the input matrix is in level 2 storage.

IPROF

This subroutine loads the initial conditions into the Z array. An inviscid velocity is computed from the input static pressure coefficient. Boundary layers are put on no-slip walls using subroutine VKPOHL for laminar flow and TPROF for turbulent flow. Laminar viscosity is loaded by a call to VISC.

LENGTH (not used in the present problem)

LSFE (not used in the present problem)

LOAD

The equations for solution by the block coupled LBI solver, ADI2X2, are written on logical unit LDR in subroutine COEFVS. Subroutine LOAD reads unit NDR and calls SCALE to perform time-step scaling to speed convergence of the solution. If resident memory storage limitation is a problem, the equations can be written on logical unit NDR2X2 in a form compatible with their use in subroutine ADI2X2. The controlling index is IN. The resident memory option is IN=1, and unit NDR2X2 is not used. Options IN=0 and IN=-1 both write unit NDR2X2 in the same format. Option IN=-1 requires less resident storage than IN=0, but requires more reading of unit NDR and consequently more computer time.

PEPSIG

The code is based on the viscous primary/secondary flow analysis of Briley and McDonald (Ref. 1) as modified by Levy, Briley and McDonald (Ref. 2). The main program PEPSIG controls the logical flow or the code.

The title card read at the top of the main program contains the index MODE in column 1. Successive cases may be read in, each with a new title card. If MODE=0 or the first four letters of the title are STOP, the program will terminate.

MODE=1 computes viscous flow using the subject viscous primary/secondary flow analysis. After initial geometry and fluid dynamics conditions are set or after restart conditions are read in, the main computational loop marches the solution downstream. Subroutine PRIMRY computes the primary flow by solving the streamwise momentum equation. Secondary flows, both rotational and irrotational, are computed by subroutine SECFLO. Post-processing and writing of a plot file are accomplished by calls to CROSEC. Printed output is provided through subroutine OUTPUT and saving restart file is controlled by subroutine RESTRT. The end of the loop is reached, thus finishing a marching step. Printed output, plot files and restart files are written at user designated stations and not necessarily produced at each marching step.

MGS2X2

Subroutine MGS2X2 solves a matrix equation AX=B where A is a block triagonal matrix with block size 2X2. X and B are block column matrices with block size 1x2. The array Q1, equivalenced into common BLKMM, contains matrices A and B. Gaussian elimination, and back of substitution are used to solve for X. The solution is returned in matrix B. Arguments IL and IH indicate the first and last rows in the A and B matrices to be used for inversion. Argument IGDMP - 0 prints the input A and B matrices.

NTRN

Subroutine NTRN can be used to control transfers between fast core and large core memory on CDC machines. It can also be used to link with NTRAN utilities on Univac.

OUTPUT

This subroutine controls the two-dimensional printout of variables from the Z array. The C array is used to transfer data from Z to the printout. The only argument of the call is:

IWRITE

1	printout of polar coordinates of each grid point, computational velocity components, streamwise vorticity, and pressure coefficient
2	printout of velocity and vorticity for starting iteration.
3	printout of auxilliary variables requested in ICOEF(2,6) to ICOEF(2,13)

Velocity vectors are presented in computational coordinate directions. Additional printout of velocity in reference orthogonal coordinate directions can be turned on by setting ICOEF(1,11)=1.

The C array is loaded by a call to subroutine READ9 and two-dimensional output is provided by a call to subroutine OUT2D.

OUT2D

This subroutine contains the write statements and formatting for two-dimensional printout of a single variable and a label. The label is passed through the argument list as MSG and the variable is selected from the C array by the argument IP.

PARSE (not used in the present problem)

PFIELD

A three-dimensional inviscid pressure field is input for use in the viscous primary/secondary flow analysis. The inviscid pressure field is supplied by Maskew [Ref. 6]. Subroutine PFIELD reads the inviscid pressure field input file, logical unit KDRUM and loads 0.5 times the inviscid pressure coefficient into the Z array. When no inviscid pressure field is being used ICOEF(1,6)=1 loads Cp=0 into the Z array. Standard operation sets ICOEF(1,6)=0.

Since the inviscid flow can be run on a coarse mesh, streamwise smoothing of the inviscid flow pressure field is used to better represent the inviscid flowfield. The smoothed pressure coefficient at index JX is computed as

$$CP(JX) = (CP(JX-1) + 2 *CP(JX) + CP(JX+1))/4$$

PFLOW (not used in the present problem)

POLY (not used in the present problem)

PRIMRY

The controlling subroutine for calculation of primary flow is PRIMRY. It calls COEFM to write the primary flow momentum equation, and calls ADI to solve the streamwise momentum equation.

PROB (not used in the present problem)

READZ, WRITEZ

When the PEPSIG code is used on computers with very little resident memory it may be necessary to use extensive disc storage for many variables. On option INCORE=0 the Z array containing the fluid dynamic and geometric quantities can be stored on logical unit 9. Subroutines READZ, WRITEZ and ADDRES work together to manipulate the Z array and keep track of storage addressing. READZ and WRITEZ call subroutine NTRN to interface with machine dependent utilities such as NTRAN or MOVLEV.

For all operations subroutine READZ sets indices LN1A, LN2A and LN3A for use by subroutine ADDRES.

READ9

For two-dimensional output of variables in a cross section, subroutine READ9 loads the C array for subsequent printout by OUTPUT and OUT2D. The options associated with argument IWRITE are the same as those explained under subroutine OUTPUT.

RESTAR, RESTRG

A flexible restart capability is provided which allows the saving of the solution at designated stations and subsequent restart from those stations. The Z array, which may be stored on logical unit 9 (INCORE=0) and all the common blocks in common deck COM are written on the designated restart file JRSTOT or read in from the designated restart file JRSTIN. Subroutine RESTRG reads or writes the common blocks in common deck GCOM. Multiple restart files can be written on a single logical unit without multiple end of file marks.

ROBTS

Finite difference operators for first and second derivatives are loaded into the AG array in subroutine ROBTS. First derivative operators are:

$$\left(\frac{-.5}{h}\ ,\ 0\ ,\ \frac{.5}{h}\right)$$

and second derivative operators are:

$$\frac{1}{h^2}\ ,\quad \frac{-2}{h^2}\ ,\quad \frac{1}{h^2}$$

where h is the local computational grid interval. The computational grid is equally spaced going from 0 to 1. The computational coordinates are stored in the Y and YSAVE arrays by this subroutine. ROBTS is called by INPUTS at the start of a calculation.

SCALE

A system of two coupled equations is solved by pseudo-time iteration using an LBI technique in subroutine ADI2X2. The time step taken at each grid point is scaled to help speed convergence. Four time scales are computed and the smallest time scale is used. The four time scales are:

T_1 twice the reciprocal of the geometric mean of the Y and Z direction operator diagonal terms

T_2 16 * $SIN^2(\pi/(2 \cdot NE))$ divided by the magnitude of the source term

T_3 4 * $SIN^2(\pi/(2 \cdot NE))$ divided by the magnitude of the difference between the off diagonal terms in the derivative operators

T_4 a default value set to prevent a divide by zero (10^{31})

SECFLO

Subroutine SECFLO is the controlling subroutine for computation of secondary flows. Subroutine COEFPH is called to write and solve the scalar potential equation. COEFVS is called to write the equations for the coupled vorticity transport and vector potential equations. ADI2X2 is called to solve these coupled equations. The resulting solution is loaded into the Z. Special care is taken in computing the velocities at the polar coordinate singularity at the duct centerline.

TESTG

Subroutine TESTG is called by subroutine GEO to read the coordinates of grid point and its Jacobian from input file JOB30.

TPROF, VKPOHL

For initial conditions a boundary layer profile is placed adjacent to a wall. Subroutine TPROF computes velocity profiles for a turbulent boundary layer based on a modified Coles profile. Subroutine VKPOHL computes velocity profiles for a laminar boundary layer based on a von Karman - Pohlhausen profile. These routines are called from IPROF at the start of a calculation. Density profiles are computed in IPROF based on velocity, pressure and the perfect gas law.

TUBE (not used in the present problem)

TURB

TURB subroutine is called by CROSEC subroutine to update the eddy viscosity. The eddy viscosity computation is based on Clause's Model, Eqs. (19 and 20) in the main report.

UNIVAR

Linear interpolation on a monatonic function is performed. The data is sampled to determine if the function is increasing or decreasing. The location in the data array of the previous data point is saved as a starting point for the new search.

VISC

On an initial call from INPUTS with VISCOS=0, this subroutine sets the reference viscosity from reference density, velocity, length and Reynolds number. Subsequent calls from IPROF set laminar viscosity.

WAVINT

A weighted quadratic interpolation is performed using four node points. Quadratic equations are fit through the three points on the right and another quadratic is fit through the three points on the left. A weighted average of these two parabolas is provided.

REFERENCES

1. Briley, W.R. and McDonald, H.: Analysis and Computation of Viscous Subsonic Primary and Secondary Flows, AIAA Paper No. 79-1453.

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3. Douglas, J. and Gunn, J.E.: A General Formulation of Alternating Direction Methods, Numerische Math., Vol. 6, 1964, p. 428.

4. Levy, R.: User's Manual for PEPSIG Computer Code, 1983, SRA R90008-27, under NAS3-22741.

5. Thames, F.C.: Generation of Three-Dimensional Boundary Fitted Curvilinear Coordinate Systems for Wing/Wing Tip Geometries Using the Elliptic Solver Method, Symposium on Numerical Generation of Curvilinear Coordinate Systems, Nashville, Tennessee, April 13-16, 1982.

6. Maskew, B.: Prediction of Subsonic Aerodynamic Characteristics: A Case for Low Order Panel Methods, Journal of Aircraft, Vol. 19, No. 2, 1982.

7. Lin, S.-J., Levy, R., Shamroth, S.J. and Govindan, T.R.: A Three-Dimensional Viscous Flow Analysis for the Helicopter Tip Vortex Generation Problem, NASA CR-3906, 1985.

DESCRIPTION OR INPUT

TITLE CARD (I1,8A4)

COLUMN 1 MODE = 1 viscous flow primary/secondary analysis

MODE = 0 terminate run

COLUMN 2-33 TITLE

NAMELIST RESTAR

IRSTIN is the station number to be read in for RESTART if IRSTIN = 0 not a RESTART case (DEFAULT IRSTIN = 0)

IRSTOT is the interval for saving RESTART information If IRSTOT = 0 no RESTART info saved

JRSTIN logical file name from which RESTART information is to be read (DEFAULT JRSTIN=11)

JRSTOT logical file name onto which RESTART information is to be written (DEFAULT JRSTOT=11)

NFILE is the sequence number in JRSTIN of the desired restart information (DEFAULT NFILE=0)

NSAVED is the number of RESTART stations saved on JRSTOT. Must be initialized in inputs to the number of stations already written (and to be preserved) on JRSTOT. Nominally initialized NSAVED=0. NOTE that by setting JRSTOT = JRSTIN and NFILE = NSAVED one file can be used for both read and write without destroying the already saved information.

INCORE Z Array uses no auxiliary storage (INCORE=1), DEFAULT) Z Array stored on logical unit 9, retrieval and storage controlled by subroutines READZ and WRITEZ (INCORE=0)

NAMELIST FLUIDS

X	marching parameter used in evaluation of polynomials P and PA in namelist GEOM. X is the streamwise computational coordinate.
DX	initial increment in X at station JX=NFIRST
AP	ratio of adjacent values of DX for geometric change in X. (default AP=1)
NFIRST	station number of the parameter X. Note if this is not the same as the first station in a run subroutine INPUTS will compute the needed values of X and DX.
NS	station number of last station to be computed.
NEY,NEZ	number of grid points in circumferential and radial directions respectively.
IPLOT	=1 plot file written as controlled by ICOEF (2,4) and ICOEF (2,5) or a controlled by IPSTA = 0 no plot file written
CMACH	reference Mach number
REY	reference Reynolds number based on UZERO, RZERO, YZERO
KTURB	= 0 laminar flow (DEFAULT) = 1 turbulent flow
IBULEV	= 0 Buleev length scale not used (DEFAULT) = 1 Buleev length scale used in initial conditions to compute effective distance to wall only = 2 Buleev length scale used in calculation of turbulence mixing length

BLD(1) not used

BLD(2) not used

BLD(3) not used

BLD(4) initial boundary layer thickness for IBULEV=0 option

DELBUL value of Buleev length scale at edge of initial boundary layer for use with IBULEV=1 or 2 options

ICDC indicator flag for disc writing in subroutine NTRN

ARC centerline arc length at start of calculation (DEFAULT ARC=0)

IWSTA station numbers printed output is to be produced (DIMENSION IWSTA (101)) activated for ICOEF(2,3) < 0

IPSTA station numbers that plot file is to be written (DIMENSION IPSTA(101)) activated for ICOEF(2,5) < 0

ICOEF(1,N)

N

1 initial station print (0)

2 momentum integral boundary layer calculation for boundary layer thickness used in turbulence model (1)

3 PHI - ADI iteration limit (200)

4 ADI3D iteration limit (200)

5 max no. of pressure iterations in PRIMRY (5)

6 0 - LOAD CPI, 1 - CPI = 0 (0)

7 PFLOW INTER DUMP -1, FULL DUMP 1 or 3 (0)

8 $\frac{\partial y_i}{\partial x_j}$ printout from CROSEC (0)

9	FRAME PA: 0 is CNU,CETA,S; 1 is Y,Z,X (0)
10	OUTPUT PHI,PSI Cartesian velocities (0)
11	OUTPUT Cartesian velocities (0)
12	ADI2X2 dump (0)
13	ADI dump for scalar potential equation (5)
14	ADI dump for streamwise momentum equation (0)
15	INPUT namelist dump (1)
16	IPROF dump (0)
18	Difference weights dump (0)
19	PFIELD drum reading information (0)

ICOEF(2,N)

N	
1	ADI2X2 iterations (100)
2	PRINT INTERVAL (0)
3	PRINT INTERVAL - NOTE: If .LT.0 See IWSTA (1)
4	PLOT INTERVAL (0)
5	PLOT INTERVAL - NOTE: If .LT.0 See IPSTA (1)
6	AUXILIARY VARIABLE PRINTOUT
7	AUXILIARY VARIABLE PRINTOUT
8	AUXILIARY VARIABLE PRINTOUT
9	AUXILIARY VARIABLE PRINTOUT
10	AUXILIARY VARIABLE PRINTOUT
11	AUXILIARY VARIABLE PRINTOUT
12	AUXILIARY VARIABLE PRINTOUT
13	AUXILIARY VARIABLE PRINTOUT
18	N PLANE intermediate DUMP of velocity + vorticity (0)
20	Geometry DUMP for MODE+3 (0)

NOTE: Printout at station JX will be produced for ICOEF(2,3).GT.0 If MOD(JX-ICOEF(2,2), ICOEF(2,3)) = 0

The plot file will be written at station JX for ICOEF(2,5).GT.0 If MOD(JX-ICOEF(2,4), ICOEF(2.5)) = 0

Printout of auxiliary variables from the Z array are produced by filling ICOEF(2,6) - ICOEF(2,13) with the variable storage index from the following list

1	u	- velocity component at N
2	u	- velocity component at N+1
3	v	- velocity component at N
4	v	- velocity component at N+1
5	w	- velocity component at N
6	w	- velocity component at N+1
7	ρ	density at N
8	ρ	density at N+1
9	Ω	streamwise vorticity component at N
10	Ω	streamwise vorticity component at N+1
11	C_{p_I}	inviscid pressure coefficient at N
12	C_{p_I}	inviscid pressure coefficient at N+1
13	J	determinant of the Jacobian at N
14	J	determinant of the Jacobian at N+1
15	μ	laminar viscosity at N
16	μ	laminar viscosity at N+1
17	μ_T	turbulence viscosity at N
18	μ_T	turbulence viscosity at N+1
19	Y	coordinate in ν direction at N
20	Z	coordinate in η direction at N
21	Y	coordinate in ν direction at N+1
22	Z	coordinate in η direction at N+1
23	Φ	dissipation function (2D:D)
24	ℓ	turbulence mixing length
25	ϕ	scalar potential
26	ψ	vector potential
27	P	pressure
28	-	(not used)
29	$v\phi$	scalar potential velocity component
30	$w\phi$	scalar potential velocity component
31	v_ψ	vector potential velocity component
32	w_ψ	vector potential velocity component

33	Ω_1	vorticity component in ν direction
34	Ω_2	vorticity component in η direction
35	Ω_3	vorticity component in T direction
36	Y	reference Cartesian coordinate
37	Z	reference Cartesian coordinate
38	X	reference Cartesian coordinate
39 - 47		components of Jacobian at N + 1
48 - 56		components of Jacobian at N
57	-	
58	-	
59		
60		
61		
62		

ICOEF(5,N)

N

5 modify pseudo-time increment for iterative solution elliptic equations $1/\Delta t = (1/\Delta t)_{REF}$ 2.**ICOEF (5,5) (DEFAULT ICOEF (5,5)=0)

6 modify pseudo-time increment for iteration solution of coupled elliptic equations $1/\Delta t = (1/\Delta\tau)_{REF}$ 2.**ICOEF (5,6) (DEFAULT ICOEF(5,6)=0)

7 modify pseudo-time increment for iterative solution of 3-D elliptic equation $1/\Delta t = (1/\Delta t)_{REF}$ 2.**ICOEF (5,7) (DEFAULT ICOEF(5,7)=0)

8 time step selection in ADI3D is based on the magnitude of the finite difference operators. One time scale is based on a composite of the cross plane operators. Another time scale is based on either (ICOEF(5,8)=0) the streamwise operator or (ICOEF(5,8)=1) a composite of all three direction operators.

NAMELIST GEOM (not used in the present problem)

File Input/Output

The geometric information and inviscid pressure field needed in the tip vortex flow calculation for NACA0012 are stored in permanent files JOB30 and INVICI4. If restart calculation is desired, the restart information from previous calculations stored in local temporary file RESTEP should be saved and made permanent for restart calculation. Also if a plot is desired, the local temporary file TIPPL which contains plot information can be saved and made permanent.

Sample Input Cards and Printed Output

A sample case was run to illustrate the set up of inputs streams and typical printouts of the code. The given input card deck is for a new calculation. In the case of restarted calculation, proper parameters in namelist 'RESTART' must be set as described in The User's Guide.

The code output first prints out the namelists, 'RESTART', 'NAME' and 'FLUIDS'. This is followed by the computational coordinates of the grid points and their associated finite difference coefficients for the first and second derivatives in both directions.

The next output item is the integral property across cross section, like the cross section area and mass flux. This is then followed by the printouts of the Cartesian coordinates of the grid points and of the flowfield variables at the initial starting step of the calculation. The enclosed output has been annotated to explain the printed variables, coordinates and iteration histories.

CONTROL CARDS TO RUN SAMPLE CASE

```
!!UT.
SRA01,T900,CM67000.
USER,795535C,SRASTE.
CHARGE,101867,LRC.
CATLIST(LO=F,UN=795535C)
CATLIST(LO=F,UN=795535C/ST=LPF)
GET(INVICI4)
COPYEI(INVICI4,RESTIP3)
CATALOG(RESTIP3,R,U,N)
RETURN(INVICI4)
GET,OLDPL=PG5/UN=795535C.
UPDATE,P=OLDPL,L=A1234,F.
TOVPS(INPUT,C6UD=COMPILE,RESTIP3,UN=795535,PW=SRASTE,AC=101867)

*/     FEPSIG MODE
*I     SJL1182.16
       XN=XPF(JP1)
 SJLTIP.
 USER(U=795535,PA=SRASTE,AC=101867)
 RESOURCE(TL=450,WS=1536,LP=12,JCAT=MDBAT)
 FILES,PRI=*.
 ATTACH,COMPILE.
 ATTACH(RESTIP3)
 ATTACH(JOB30)
 COPY(JOB30,GJOB)
 RETURN(JOB30)
 REQUEST(RESTIP/2000,RT=W)
 REQUEST(TAPE5,RT=W)
 COPY(INPUT,TAPE5)
 COPY(TAPE5,OUTPUT)
 REQUEST(TAPE1/2000,RT=W)
 REQUEST(TAPE16/2000,RT=W)
 REQUEST(TAPE13/200,RT=W)
 REQUEST(TAPE14/2000,RT=W)
 REQUEST(TAPE15/2000,RT=W)
 FORTRAN(L=OUTPUT/1000,I=COMPILE,B=BINARY/250,OPT=BL)
 LOAD(BINARY,L=OUTPUT,CM=60,1000,GRLPALL= )
 GO.
```

NAMELIST INPUT FOR SAMPLE CASE

```
1  S BEND TEST CASE -2
 &RESTRT
 IRSTIN=0,
 IRSTOT=5,
 JRSTOT=11,
 JRSTIN=11,
 NSAVED=0,
 NFILE=0
 &END
 &FLUIDS
 ITUBE=0,
 NEY=30,NEZ=33,
 IOVER=0,
 NE1PF=9,NE2PF=9,
 CHACH=0.01,REY=1000000.00,KTURB=1,ICOEF(1,6)=1,ICOEF(1,15)=1,
 ICOEF(2,6)=18,
 X=1.0000,DX=1.0000,AP=1.0000,NS=24,DELBUL=0.02,
 NS=5,
 NS1=0,NS2=0,NS3=0,NS4=0,
 IDUCT=0,
 BLD(4)=0.070,
 ICOEF(2,15)=1,ICOEF(1,8)=0,ICOEF(1,16)=1,
 ICOEF(1,12)=0,
 ICOEF(1,14)=1,ICOEF(2,17)=1,ICOEF(1,13)=1,
 IPLOT=0,
 ICOEF(3,1)=10,
 ICOEF(3,2)=11,
 ICOEF(3,3)=10,
 ICOEF(3,4)=14,
 ICOEF(3,5)=1,
 ICOEF(1,6)=0,
 ICOEF(1,16)=0,
 ICOEF(1,11)=1,
 ICOEF(1,8)=0,
 ICOEF(2,16)=1,
 ICOEF(1,12)=0,
 ICOEF(1,13)=1,
 ICOEF(1,14)=1,
 ICOEF(1,10)=0,
 ICOEF(2,1)=100,
 YS(1,1)=1.,
 YS(2,1)=30.,
 YS(1,2)=1.,
 YS(2,2)=33.,
 XPP=1,2,3,4,
 5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,
 21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,
 XPQ=0.1044,0.1236,0.1404,0.1596,0.1816,
 0.2033,0.2276,0.2516,0.2777,0.3035,0.3312,0.3586,0.3875,0.4161,0.4455,
 0.4748,0.5045,0.5340,0.5634,0.5930,0.6215,0.6501,0.6777,0.7051,0.7313,
 0.7572,
 0.7814,0.8053,0.8273,0.8490,0.8685,0.8877,0.9045,
 NFIRST=1
 &END
 &GEOM
 NGEOM=2,
 ITUBE=0,
 ISYM=2
 &END
 STOP
```

```
&RESTRT
IRSTIN  =   0,
IRSTOT  =   5,
JRSTIN  =  11,
JRSTOT  =  11,
NFILE   =   0,
NSAVED  =   0,
NS      =   5,
INCORE  =   1
&END
&NAME
NUN     =   1,
NU      =   2,
NVN     =   3,
NV      =   4,
NWN     =   5,
NW      =   6,
NRHOL   =   7,
NRHO    =   8,
NVGRN   =   9,
NVOR    =  10,
NCPIN   =  11,
NCPI    =  12,
NJN     =  13,
NJ      =  14,
MUN     =  15,
MU      =  16,
MUTN    =  17,
MUT     =  18,
NXYZN   =  19,
NXYZ    =  21,
NDD     =  23,
NLEN    =  24,
NPHI    =  25,
NPSI    =  26,
NPRES   =  27,
NVPH    =  28,
NWPH    =  30,
NVPS    =  31,
NWPS    =  32,
NVOR1   =  33,
NVOR2   =  34,
NVOR3   =  35,
NXYZA   =  36,
NEI11   =  39,
NEN11   =  49,
MZVAR   =  74,
NDY     =  50,
NDZ     =  50,
NE1PF   =  10,
NE2PF   =  10,
NIN     =  50,
LZ      =  185000,
NSLAB   =  3700,
NREAD   =   0,
NE      =  50,  50,
NTERM   =  50
&END
```

```
FLUIDS
        =   .1E+01,
X       =   .1E+01,
S       =   5,
P       =   .1E+01,
EY      =   30,
EZ      =   33,
E1PF    =   9,
E2PF    =   9,
DUCT    =   0,
TUBE    =   0,
PLOT    =   0,
OVER    =   0,
MACH    =   .1E-01,
EY      =   .1E+07,
TURB    =   1,
LAW     =   2,
BULEV   =   1,
S1      =   0,
S2      =   0,
S3      =   0,
S4      =   0,
LD      =   .0,  .0,  .0,  .7E-01,
ELBUL   =   .2E-01,
COEF    =   0,  100,  10,  0,  0,  0,  0,  11,  0,  0,  0,  0,  10,  0,  0,  0,  0,  14,  0,  0,  0,  0,  1,
 0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  0,  1,  0,  0,  0,  0,  0,  0,
 0,  1,  0,  0,  0,  0,  1,  1,  0,  0,  0,  0,  1,  0,  0,  0,  0,  1,  0,  0,  0,  0,  0,  0,  0,  0,  0,
 0,  0,
CDC     =   1,
FIRST   =   1,
S       =   .1E+01,  .3E+02,  .1E+01,  .33E+02,
PP      =   .1E+01,  .2E+01,  .3E+01,  .4E+01,  .5 +01,  .6E+01,  .7E+01,  .8E+01,  .9E+01,  .1E+02,  .11E+02,
 .14E+02,  .15E+02,  .16E+02,  .17E+02,  .1 +02,  .1 E+02,  .2E+02,  .21E+02,  .22 +02,  .23 +02,  .24E+02,
 .27E+02,  .28E+02,  .29E+02,  .3 +02,  .31 +02,  .32E+02,  .33 +02,  .34 +02,  .35E+02,  .36 +02,  .37E+02,
 .4E+02,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,
PQ      =   .1044E+00,  .1236 +00,  .1404E+00,  .1 6 E+00,  .1816 +00,  .20 3E+00,  .2276E+00,  .25 E+00,  .2
 .3312E+00,  .3586 +00,  .3 7 +00,  .4161E+00,  .4450 +00,  .4742E+00,  .5045 +00,  .534 +00,  .5634E+00,
 .6501E+00,  .6777 +00,  .7 1 +00,  .7313E+00,  .7 7 E+00,  .7 14 +00,  .8 53 +00,  .8273 +00,  .8 8 +00,
 .9045E+00,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0,  .0
END
```

COORD DUMP - YFHYS,YCOMP,DIFFERENCE WEIGHTS

1	1.00000	1.00000	-.15000E+01	.20000E+01	-.50000E+00
2	2.00000	2.00000	-.50000E+00	.0	.50000E+00
3	3.00000	3.00000	.50000E+00	.0	.50000E+00
4	4.00000	4.00000	.50000E+00	.0	.50000E+00
5	5.00000	5.00000	.50000E+00	.0	.50000E+00
6	6.00000	6.00000	.50000E+00	.0	.50000E+00
7	7.00000	7.00000	.50000E+00	.0	.50000E+00
8	8.00000	8.00000	.50000E+00	.0	.50000E+00
9	9.00000	9.00000	.50000E+00	.0	.50000E+00
10	10.00000	10.00000	.50000E+00	.0	.50000E+00
11	11.00000	11.00000	.50000E+00	.0	.50000E+00
12	12.00000	12.00000	.50000E+00	.0	.50000E+00
13	13.00000	13.00000	.50000E+00	.0	.50000E+00
14	14.00000	14.00000	.50000E+00	.0	.50000E+00
15	15.00000	15.00000	.50000E+00	.0	.50000E+00
16	16.00000	16.00000	.50000E+00	.0	.50000E+00
17	17.00000	17.00000	.50000E+00	.0	.50000E+00
18	18.00000	18.00000	.50000E+00	.0	.50000E+00
19	19.00000	19.00000	.50000E+00	.0	.50000E+00
20	20.00000	20.00000	.50000E+00	.0	.50000E+00
21	21.00000	21.00000	.50000E+00	.0	.50000E+00
22	22.00000	22.00000	.50000E+00	.0	.50000E+00
23	23.00000	23.00000	.50000E+00	.0	.50000E+00
24	24.00000	24.00000	.50000E+00	.0	.50000E+00
25	25.00000	25.00000	.50000E+00	.0	.50000E+00
26	26.00000	26.00000	.50000E+00	.0	.50000E+00
27	27.00000	27.00000	.50000E+00	.0	.50000E+00
28	28.00000	28.00000	.50000E+00	.0	.50000E+00
29	29.00000	29.00000	.50000E+00	.0	.50000E+00
30	30.00000	30.00000	.50000E+00	-.20000E+01	.15000E+01
1	1.00000	1.00000	-.15000E+01	.20000E+01	-.50000E+00
2	2.00000	2.00000	-.50000E+00	.0	.50000E+00
3	3.00000	3.00000	.50000E+00	.0	.50000E+00
4	4.00000	4.00000	.50000E+00	.0	.50000E+00
5	5.00000	5.00000	.50000E+00	.0	.50000E+00
6	6.00000	6.00000	.50000E+00	.0	.50000E+00
7	7.00000	7.00000	.50000E+00	.0	.50000E+00
8	8.00000	8.00000	.50000E+00	.0	.50000E+00
9	9.00000	9.00000	.50000E+00	.0	.50000E+00
10	10.00000	10.00000	.50000E+00	.0	.50000E+00
11	11.00000	11.00000	.50000E+00	.0	.50000E+00
12	12.00000	12.00000	.50000E+00	.0	.50000E+00
13	13.00000	13.00000	.50000E+00	.0	.50000E+00
14	14.00000	14.00000	.50000E+00	.0	.50000E+00
15	15.00000	15.00000	.50000E+00	.0	.50000E+00
16	16.00000	16.00000	.50000E+00	.0	.50000E+00
17	17.00000	17.00000	.50000E+00	.0	.50000E+00
18	18.00000	18.00000	.50000E+00	.0	.50000E+00
19	19.00000	19.00000	.50000E+00	.0	.50000E+00
20	20.00000	20.00000	.50000E+00	.0	.50000E+00
21	21.00000	21.00000	.50000E+00	.0	.50000E+00
22	22.00000	22.00000	.50000E+00	.0	.50000E+00
23	23.00000	23.00000	.50000E+00	.0	.50000E+00
24	24.00000	24.00000	.50000E+00	.0	.50000E+00
25	25.00000	25.00000	.50000E+00	.0	.50000E+00
26	26.00000	26.00000	.50000E+00	.0	.50000E+00
27	27.00000	27.00000	.50000E+00	.0	.50000E+00
28	28.00000	28.00000	.50000E+00	.0	.50000E+00
29	29.00000	29.00000	.50000E+00	.0	.50000E+00
30	30.00000	30.00000	.50000E+00	.0	.50000E+00
31	31.00000	31.00000	.50000E+00	.0	.50000E+00
32	32.00000	32.00000	.50000E+00	.0	.50000E+00
33	33.00000	33.00000	.50000E+00	-.20000E+01	.15000E+01

The following three pages contain the values of the Cartesian vertical coordinate Y at the grid points (IY, IZ) in the first cross-sectional plane. Each column represents a given IZ location and each row represents a given IY location. For example, the "Y" physical location for IY=10, IZ=4 is .05131. Following the print out for 'Y', the Cartesian spanwise coordinate 'Z', the streamwise velocity 'u', the vertical velocity 'v', the spanwise velocity 'w', the streamwise vorticity 'VOR-X' at grid point IY, IZ are printed out.

INTEGRATED PROPERTIES AT STATION 1

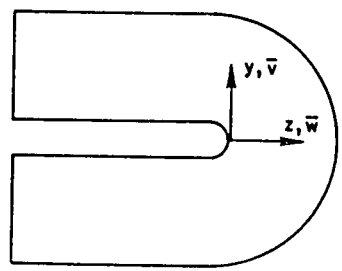
AREA .60752E-02 SQ.FT.
MASS FLUX .29126E-02 LBM./SEC.

CENTERLINE LOCATION (.0 , .0 , .10000E+01) 1-IN STATION AT .10000E+01 STEP SIZE .10000E+01

STATION 1 **** Y ****

IY	IZ= / Z = / Y	1 .1000E+01	2 .2000E+01	3 .3000E+01	4 .4000E+01	5 .5000E+01	6 .6000E+01	7 .7000E+01	8 .8000E+01	9 .9000E+01	10 .1000E+02
1	.1000E+01	.5000E-01	.4999E-01	.4999E-01	.5000E-01	.5000E-01	.5000E-01	.5000E-01	.4999E-01	.4993E-01	.4956E-01
2	.2000E+01	.5005E-01	.5005E-01	.5005E-01	.5005E-01	.5005E-01	.5005E-01	.5005E-01	.5004E-01	.4998E-01	.4960E-01
3	.3000E+01	.5011E-01	.5011E-01	.5011E-01	.5011E-01	.5011E-01	.5011E-01	.5011E-01	.5010E-01	.5004E-01	.4966E-01
4	.4000E+01	.5019E-01	.5019E-01	.5019E-01	.5019E-01	.5019E-01	.5019E-01	.5019E-01	.5018E-01	.5011E-01	.4972E-01
5	.5000E+01	.5029E-01	.5029E-01	.5029E-01	.5029E-01	.5029E-01	.5029E-01	.5029E-01	.5028E-01	.5020E-01	.4981E-01
6	.6000E+01	.5041E-01	.5041E-01	.5041E-01	.5041E-01	.5041E-01	.5041E-01	.5041E-01	.5040E-01	.5032E-01	.4992E-01
7	.7000E+01	.5056E-01	.5056E-01	.5056E-01	.5057E-01	.5057E-01	.5057E-01	.5056E-01	.5055E-01	.5046E-01	.5005E-01
8	.8000E+01	.5076E-01	.5076E-01	.5076E-01	.5076E-01	.5076E-01	.5076E-01	.5076E-01	.5074E-01	.5064E-01	.5022E-01
9	.9000E+01	.5100E-01	.5100E-01	.5100E-01	.5100E-01	.5100E-01	.5100E-01	.5100E-01	.5098E-01	.5087E-01	.5043E-01
10	.1000E+02	.5131E-01	.5131E-01	.5131E-01	.5131E-01	.5131E-01	.5131E-01	.5130E-01	.5127E-01	.5116E-01	.5069E-01
11	.1100E+02	.5169E-01	.5169E-01	.5169E-01	.5169E-01	.5169E-01	.5169E-01	.5168E-01	.5165E-01	.5151E-01	.5102E-01
12	.1200E+02	.5217E-01	.5217E-01	.5217E-01	.5217E-01	.5217E-01	.5217E-01	.5216E-01	.5212E-01	.5196E-01	.5144E-01
13	.1300E+02	.5277E-01	.5277E-01	.5277E-01	.5277E-01	.5277E-01	.5277E-01	.5276E-01	.5270E-01	.5252E-01	.5196E-01
14	.1400E+02	.5352E-01	.5352E-01	.5352E-01	.5352E-01	.5353E-01	.5353E-01	.5351E-01	.5344E-01	.5323E-01	.5261E-01
15	.1500E+02	.5447E-01	.5447E-01	.5447E-01	.5447E-01	.5448E-01	.5448E-01	.5445E-01	.5437E-01	.5412E-01	.5343E-01
16	.1600E+02	.5566E-01	.5566E-01	.5566E-01	.5566E-01	.5567E-01	.5567E-01	.5564E-01	.5553E-01	.5523E-01	.5446E-01
17	.1700E+02	.5716E-01	.5716E-01	.5716E-01	.5717E-01	.5718E-01	.5718E-01	.5714E-01	.5700E-01	.5664E-01	.5576E-01
18	.1800E+02	.5906E-01	.5905E-01	.5905E-01	.5906E-01	.5908E-01	.5908E-01	.5903E-01	.5886E-01	.5841E-01	.5740E-01
19	.1900E+02	.6145E-01	.6145E-01	.6145E-01	.6146E-01	.6148E-01	.6148E-01	.6142E-01	.6120E-01	.6065E-01	.5948E-01
20	.2000E+02	.6449E-01	.6449E-01	.6449E-01	.6450E-01	.6452E-01	.6452E-01	.6444E-01	.6417E-01	.6349E-01	.6211E-01
21	.2100E+02	.6836E-01	.6835E-01	.6835E-01	.6837E-01	.6839E-01	.6839E-01	.6829E-01	.6795E-01	.6711E-01	.6546E-01
22	.2200E+02	.7329E-01	.7329E-01	.7329E-01	.7331E-01	.7334E-01	.7334E-01	.7322E-01	.7278E-01	.7173E-01	.6973E-01
23	.2300E+02	.7964E-01	.7963E-01	.7963E-01	.7966E-01	.7970E-01	.7970E-01	.7954E-01	.7899E-01	.7767E-01	.7523E-01
24	.2400E+02	.8786E-01	.8785E-01	.8785E-01	.8788E-01	.8793E-01	.8794E-01	.8773E-01	.8703E-01	.8536E-01	.8234E-01
25	.2500E+02	.9859E-01	.9858E-01	.9858E-01	.9861E-01	.9869E-01	.9869E-01	.9843E-01	.9753E-01	.9540E-01	.9163E-01
26	.2600E+02	.1128E+00	.1128E+00	.1128E+00	.1128E+00	.1129E+00	.1129E+00	.1126E+00	.1114E+00	.1087E+00	.1039E+00
27	.2700E+02	.1319E+00	.1318E+00	.1318E+00	.1319E+00	.1320E+00	.1320E+00	.1316E+00	.1301E+00	.1265E+00	.1204E+00
28	.2800E+02	.1581E+00	.1580E+00	.1580E+00	.1581E+00	.1583E+00	.1583E+00	.1577E+00	.1557E+00	.1511E+00	.1431E+00
29	.2900E+02	.1952E+00	.1951E+00	.1951E+00	.1953E+00	.1955E+00	.1955E+00	.1947E+00	.1920E+00	.1858E+00	.1753E+00
30	.3000E+02	.2500E+00	.2499E+00	.2499E+00	.2501E+00	.2504E+00	.2504E+00	.2493E+00	.2457E+00	.2371E+00	.2227E+00

COORDINATE SYSTEM



	Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY	Y										
1	.1000E+01	.4824E-01	.4526E-01	.3958E-01	.3157E-01	.2190E-01	.1120E-01	.2313E-15	-.1120E-01	-.2190E-01	-.3157E-01
2	.2000E+01	.4828E-01	.4530E-01	.3960E-01	.3159E-01	.2191E-01	.1120E-01	.2311E-15	-.1120E-01	-.2191E-01	-.3159E-01
3	.3000E+01	.4833E-01	.4534E-01	.3964E-01	.3161E-01	.2193E-01	.1121E-01	.2308E-15	-.1121E-01	-.2193E-01	-.3161E-01
4	.4000E+01	.4839E-01	.4539E-01	.3968E-01	.3165E-01	.2195E-01	.1122E-01	.2305E-15	-.1122E-01	-.2195E-01	-.3165E-01
5	.5000E+01	.4846E-01	.4545E-01	.3973E-01	.3169E-01	.2198E-01	.1124E-01	.2300E-15	-.1124E-01	-.2198E-01	-.3169E-01
6	.6000E+01	.4856E-01	.4554E-01	.3980E-01	.3174E-01	.2202E-01	.1126E-01	.2295E-15	-.1126E-01	-.2202E-01	-.3174E-01
7	.7000E+01	.4868E-01	.4564E-01	.3988E-01	.3180E-01	.2206E-01	.1128E-01	.2288E-15	-.1128E-01	-.2206E-01	-.3180E-01
8	.8000E+01	.4883E-01	.4577E-01	.3999E-01	.3188E-01	.2211E-01	.1131E-01	.2280E-15	-.1131E-01	-.2211E-01	-.3188E-01
9	.9000E+01	.4902E-01	.4593E-01	.4012E-01	.3198E-01	.2218E-01	.1134E-01	.2270E-15	-.1134E-01	-.2218E-01	-.3198E-01
10	.1000E+02	.4925E-01	.4613E-01	.4028E-01	.3211E-01	.2227E-01	.1138E-01	.2257E-15	-.1138E-01	-.2227E-01	-.3211E-01
11	.1100E+02	.4955E-01	.4638E-01	.4049E-01	.3227E-01	.2237E-01	.1144E-01	.2240E-15	-.1144E-01	-.2237E-01	-.3227E-01
12	.1200E+02	.4992E-01	.4670E-01	.4075E-01	.3246E-01	.2251E-01	.1150E-01	.2220E-15	-.1150E-01	-.2251E-01	-.3246E-01
13	.1300E+02	.5038E-01	.4710E-01	.4108E-01	.3271E-01	.2268E-01	.1159E-01	.2194E-15	-.1159E-01	-.2268E-01	-.3271E-01
14	.1400E+02	.5096E-01	.4759E-01	.4148E-01	.3303E-01	.2289E-01	.1170E-01	.2161E-15	-.1170E-01	-.2289E-01	-.3305E-01
15	.1500E+02	.5170E-01	.4822E-01	.4200E-01	.3342E-01	.2315E-01	.1183E-01	.2120E-15	-.1183E-01	-.2315E-01	-.3342E-01
16	.1600E+02	.5262E-01	.4901E-01	.4264E-01	.3391E-01	.2349E-01	.1200E-01	.2069E-15	-.1200E-01	-.2349E-01	-.3391E-01
17	.1700E+02	.5378E-01	.5000E-01	.4345E-01	.3453E-01	.2391E-01	.1221E-01	.2005E-15	-.1221E-01	-.2391E-01	-.3453E-01
18	.1800E+02	.5524E-01	.5126E-01	.4448E-01	.3532E-01	.2444E-01	.1248E-01	.1923E-15	-.1248E-01	-.2444E-01	-.3532E-01
19	.1900E+02	.5709E-01	.5284E-01	.4578E-01	.3631E-01	.2511E-01	.1281E-01	.1820E-15	-.1281E-01	-.2511E-01	-.3631E-01
20	.2000E+02	.5944E-01	.5485E-01	.4742E-01	.3756E-01	.2596E-01	.1324E-01	.1689E-15	-.1324E-01	-.2596E-01	-.3756E-01
21	.2100E+02	.6242E-01	.5741E-01	.4951E-01	.3916E-01	.2704E-01	.1379E-01	.1523E-15	-.1379E-01	-.2704E-01	-.3916E-01
22	.2200E+02	.6624E-01	.6067E-01	.5218E-01	.4120E-01	.2842E-01	.1449E-01	.1311E-15	-.1449E-01	-.2842E-01	-.4120E-01
23	.2300E+02	.7114E-01	.6487E-01	.5562E-01	.4383E-01	.3020E-01	.1538E-01	.1038E-15	-.1538E-01	-.3020E-01	-.4383E-01
24	.2400E+02	.7749E-01	.7030E-01	.6007E-01	.4723E-01	.3250E-01	.1654E-01	.6842E-16	-.1654E-01	-.3250E-01	-.4723E-01
25	.2500E+02	.8578E-01	.7740E-01	.6587E-01	.5167E-01	.3550E-01	.1806E-01	.2224E-15	-.1806E-01	-.3550E-01	-.5167E-01
26	.2600E+02	.9674E-01	.8679E-01	.7356E-01	.5754E-01	.3947E-01	.2006E-01	-.3882E-16	-.2006E-01	-.3947E-01	-.5754E-01
27	.2700E+02	.1115E+00	.9941E-01	.8388E-01	.6543E-01	.4481E-01	.2276E-01	-.1209E-15	-.2276E-01	-.4481E-01	-.6543E-01
28	.2800E+02	.1317E+00	.1167E+00	.9806E-01	.7627E-01	.5214E-01	.2646E-01	-.2336E-15	-.2646E-01	-.5214E-01	-.7627E-01
29	.2900E+02	.1604E+00	.1413E+00	.1181E+00	.9162E-01	.6252E-01	.3170E-01	-.3933E-15	-.3170E-01	-.6252E-01	-.9162E-01
30	.3000E+02	.2027E+00	.1775E+00	.1478E+00	.1143E+00	.7787E-01	.3944E-01	-.6291E-15	-.3944E-01	-.7787E-01	-.1143E+00

	IZ=	21	22	23	24	25	26	27	28	29	30
	Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY	Y										
1	.1000E+01	-.3958E-01	-.4526E-01	-.4824E-01	-.4956E-01	-.4993E-01	-.4999E-01	-.5000E-01	-.5000E-01	-.5000E-01	-.5000E-01
2	.2000E+01	-.3960E-01	-.4530E-01	-.4828E-01	-.4960E-01	-.4998E-01	-.5004E-01	-.5005E-01	-.5005E-01	-.5005E-01	-.5005E-01
3	.3000E+01	-.3964E-01	-.4534E-01	-.4833E-01	-.4966E-01	-.5004E-01	-.5010E-01	-.5011E-01	-.5011E-01	-.5011E-01	-.5011E-01
4	.4000E+01	-.3968E-01	-.4539E-01	-.4839E-01	-.4972E-01	-.5011E-01	-.5018E-01	-.5019E-01	-.5019E-01	-.5019E-01	-.5019E-01
5	.5000E+01	-.3973E-01	-.4545E-01	-.4846E-01	-.4981E-01	-.5020E-01	-.5028E-01	-.5029E-01	-.5029E-01	-.5029E-01	-.5029E-01
6	.6000E+01	-.3980E-01	-.4554E-01	-.4856E-01	-.4992E-01	-.5032E-01	-.5040E-01	-.5041E-01	-.5041E-01	-.5041E-01	-.5041E-01
7	.7000E+01	-.3988E-01	-.4564E-01	-.4868E-01	-.5005E-01	-.5046E-01	-.5055E-01	-.5056E-01	-.5057E-01	-.5057E-01	-.5057E-01
8	.8000E+01	-.3999E-01	-.4577E-01	-.4883E-01	-.5022E-01	-.5064E-01	-.5074E-01	-.5076E-01	-.5076E-01	-.5076E-01	-.5076E-01
9	.9000E+01	-.4012E-01	-.4593E-01	-.4902E-01	-.5043E-01	-.5087E-01	-.5098E-01	-.5100E-01	-.5100E-01	-.5100E-01	-.5100E-01
10	.1000E+02	-.4028E-01	-.4613E-01	-.4925E-01	-.5069E-01	-.5116E-01	-.5127E-01	-.5130E-01	-.5131E-01	-.5131E-01	-.5131E-01
11	.1100E+02	-.4049E-01	-.4638E-01	-.4955E-01	-.5102E-01	-.5151E-01	-.5165E-01	-.5168E-01	-.5169E-01	-.5169E-01	-.5169E-01
12	.1200E+02	-.4075E-01	-.4670E-01	-.4992E-01	-.5144E-01	-.5196E-01	-.5212E-01	-.5216E-01	-.5217E-01	-.5217E-01	-.5217E-01
13	.1300E+02	-.4108E-01	-.4710E-01	-.5038E-01	-.5196E-01	-.5252E-01	-.5270E-01	-.5276E-01	-.5277E-01	-.5277E-01	-.5277E-01
14	.1400E+02	-.4148E-01	-.4759E-01	-.5096E-01	-.5261E-01	-.5323E-01	-.5344E-01	-.5351E-01	-.5353E-01	-.5353E-01	-.5352E-01
15	.1500E+02	-.4200E-01	-.4822E-01	-.5170E-01	-.5343E-01	-.5412E-01	-.5437E-01	-.5445E-01	-.5448E-01	-.5448E-01	-.5447E-01
16	.1600E+02	-.4264E-01	-.4901E-01	-.5262E-01	-.5446E-01	-.5523E-01	-.5553E-01	-.5564E-01	-.5567E-01	-.5567E-01	-.5566E-01
17	.1700E+02	-.4345E-01	-.5000E-01	-.5378E-01	-.5576E-01	-.5664E-01	-.5700E-01	-.5714E-01	-.5718E-01	-.5718E-01	-.5717E-01
18	.1800E+02	-.4448E-01	-.5126E-01	-.5524E-01	-.5740E-01	-.5841E-01	-.5886E-01	-.5903E-01	-.5908E-01	-.5908E-01	-.5906E-01
19	.1900E+02	-.4578E-01	-.5284E-01	-.5709E-01	-.5948E-01	-.6065E-01	-.6120E-01	-.6142E-01	-.6148E-01	-.6148E-01	-.6146E-01
20	.2000E+02	-.4742E-01	-.5485E-01	-.5944E-01	-.6211E-01	-.6349E-01	-.6417E-01	-.6444E-01	-.6452E-01	-.6452E-01	-.6450E-01
21	.2100E+02	-.4951E-01	-.5741E-01	-.6242E-01	-.6546E-01	-.6711E-01	-.6795E-01	-.6829E-01	-.6839E-01	-.6839E-01	-.6837E-01
22	.2200E+02	-.5218E-01	-.6067E-01	-.6624E-01	-.6973E-01	-.7173E-01	-.7278E-01	-.7322E-01	-.7334E-01	-.7334E-01	-.7331E-01
23	.2300E+02	-.5562E-01	-.6487E-01	-.7114E-01	-.7523E-01	-.7767E-01	-.7895E-01	-.7954E-01	-.7970E-01	-.7970E-01	-.7966E-01
24	.2400E+02	-.6007E-01	-.7030E-01	-.7749E-01	-.8234E-01	-.8536E-01	-.8703E-01	-.8773E-01	-.8794E-01	-.8793E-01	-.8788E-01
25	.2500E+02	-.6587E-01	-.7740E-01	-.8578E-01	-.9163E-01	-.9540E-01	-.9753E-01	-.9843E-01	-.9869E-01	-.9869E-01	-.9861E-01
26	.2600E+02	-.7356E-01	-.8679E-01	-.9674E-01	-.1039E+00	-.1087E+00	-.1114E+00	-.1126E+00	-.1129E+00	-.1129E+00	-.1128E+00
27	.2700E+02	-.8368E-01	-.9941E-01	-.1115E+00	-.1204E+00	-.1265E+00	-.1301E+00	-.1316E+00	-.1320E+00	-.1320E+00	-.1319E+00
28	.2800E+02	-.9806E-01	-.1167E+00	-.1317E+00	-.1431E+00	-.1511E+00	-.1557E+00	-.1577E+00	-.1583E+00	-.1583E+00	-.1581E+00
29	.2900E+02	-.1181E+00	-.1413E+00	-.1604E+00	-.1753E+00	-.1858E+00	-.1920E+00	-.1947E+00	-.1955E+00	-.1955E+00	-.1953E+00
30	.3000E+02	-.1478E+00	-.1775E+00	-.2027E+00	-.2227E+00	-.2371E+00	-.2457E+00	-.2493E+00	-.2504E+00	-.2504E+00	-.2501E+00

	IZ=	31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	-.4999E-01	-.4999E-01	-.5000E-01
2	.2000E+01	-.5005E-01	-.5005E-01	-.5005E-01
3	.3000E+01	-.5011E-01	-.5011E-01	-.5011E-01
4	.4000E+01	-.5019E-01	-.5019E-01	-.5019E-01
5	.5000E+01	-.5029E-01	-.5029E-01	-.5029E-01
6	.6000E+01	-.5041E-01	-.5041E-01	-.5041E-01
7	.7000E+01	-.5056E-01	-.5056E-01	-.5056E-01
8	.8000E+01	-.5076E-01	-.5076E-01	-.5076E-01
9	.9000E+01	-.5100E-01	-.5100E-01	-.5100E-01
10	.1000E+02	-.5131E-01	-.5131E-01	-.5131E-01
11	.1100E+02	-.5169E-01	-.5169E-01	-.5169E-01
12	.1200E+02	-.5217E-01	-.5217E-01	-.5217E-01
13	.1300E+02	-.5277E-01	-.5277E-01	-.5277E-01
14	.1400E+02	-.5352E-01	-.5352E-01	-.5352E-01
15	.1500E+02	-.5447E-01	-.5447E-01	-.5447E-01
16	.1600E+02	-.5566E-01	-.5566E-01	-.5566E-01
17	.1700E+02	-.5716E-01	-.5716E-01	-.5716E-01
18	.1800E+02	-.5905E-01	-.5905E-01	-.5906E-01
19	.1900E+02	-.6145E-01	-.6145E-01	-.6145E-01
20	.2000E+02	-.6449E-01	-.6449E-01	-.6449E-01
21	.2100E+02	-.6835E-01	-.6835E-01	-.6836E-01
22	.2200E+02	-.7329E-01	-.7329E-01	-.7329E-01
23	.2300E+02	-.7963E-01	-.7963E-01	-.7964E-01
24	.2400E+02	-.8785E-01	-.8785E-01	-.8786E-01
25	.2500E+02	-.9858E-01	-.9858E-01	-.9859E-01
26	.2600E+02	-.1128E+00	-.1128E+00	-.1128E+00
27	.2700E+02	-.1318E+00	-.1318E+00	-.1319E+00
28	.2800E+02	-.1580E+00	-.1580E+00	-.1581E+00
29	.2900E+02	-.1951E+00	-.1951E+00	-.1952E+00
30	.3000E+02	-.2499E+00	-.2499E+00	-.2500E+00

STATION 1 **** Z ****

IY	IZ=	1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
	Y										
1	.1000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1443E+00	-.1165E+00	-.9168E-01	-.6946E-01	-.4948E-01	-.3142E-01	-.1500E-01
2	.2000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1165E+00	-.9167E-01	-.6945E-01	-.4946E-01	-.3139E-01	-.1497E-01
3	.3000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1165E+00	-.9166E-01	-.6943E-01	-.4943E-01	-.3136E-01	-.1493E-01
4	.4000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1165E+00	-.9164E-01	-.6941E-01	-.4940E-01	-.3132E-01	-.1488E-01
5	.5000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1164E+00	-.9162E-01	-.6938E-01	-.4936E-01	-.3127E-01	-.1482E-01
6	.6000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1164E+00	-.9159E-01	-.6934E-01	-.4932E-01	-.3121E-01	-.1475E-01
7	.7000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1164E+00	-.9156E-01	-.6929E-01	-.4925E-01	-.3113E-01	-.1465E-01
8	.8000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1164E+00	-.9152E-01	-.6924E-01	-.4918E-01	-.3103E-01	-.1454E-01
9	.9000E+01	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1163E+00	-.9147E-01	-.6916E-01	-.4908E-01	-.3091E-01	-.1439E-01
10	.1000E+02	-.2500E+00	-.2105E+00	-.1754E+00	-.1442E+00	-.1163E+00	-.9141E-01	-.6907E-01	-.4896E-01	-.3076E-01	-.1420E-01
11	.1100E+02	-.2500E+00	-.2105E+00	-.1754E+00	-.1441E+00	-.1163E+00	-.9133E-01	-.6896E-01	-.4881E-01	-.3057E-01	-.1397E-01
12	.1200E+02	-.2500E+00	-.2105E+00	-.1754E+00	-.1441E+00	-.1162E+00	-.9123E-01	-.6882E-01	-.4862E-01	-.3033E-01	-.1368E-01
13	.1300E+02	-.2500E+00	-.2105E+00	-.1753E+00	-.1441E+00	-.1161E+00	-.9110E-01	-.6864E-01	-.4838E-01	-.3003E-01	-.1332E-01
14	.1400E+02	-.2500E+00	-.2105E+00	-.1753E+00	-.1440E+00	-.1160E+00	-.9095E-01	-.6841E-01	-.4808E-01	-.2965E-01	-.1286E-01
15	.1500E+02	-.2500E+00	-.2105E+00	-.1753E+00	-.1439E+00	-.1159E+00	-.9075E-01	-.6813E-01	-.4770E-01	-.2917E-01	-.1228E-01
16	.1600E+02	-.2500E+00	-.2105E+00	-.1753E+00	-.1438E+00	-.1157E+00	-.9050E-01	-.6778E-01	-.4723E-01	-.2857E-01	-.1156E-01
17	.1700E+02	-.2500E+00	-.2105E+00	-.1752E+00	-.1437E+00	-.1155E+00	-.9019E-01	-.6733E-01	-.4663E-01	-.2782E-01	-.1065E-01
18	.1800E+02	-.2500E+00	-.2105E+00	-.1752E+00	-.1436E+00	-.1153E+00	-.8979E-01	-.6677E-01	-.4588E-01	-.2686E-01	-.9500E-02
19	.1900E+02	-.2500E+00	-.2105E+00	-.1751E+00	-.1434E+00	-.1150E+00	-.8929E-01	-.6605E-01	-.4493E-01	-.2566E-01	-.8046E-02
20	.2000E+02	-.2500E+00	-.2105E+00	-.1750E+00	-.1432E+00	-.1146E+00	-.8866E-01	-.6515E-01	-.4372E-01	-.2413E-01	-.6202E-02
21	.2100E+02	-.2500E+00	-.2104E+00	-.1749E+00	-.1429E+00	-.1140E+00	-.8785E-01	-.6400E-01	-.4218E-01	-.2219E-01	-.3856E-02
22	.2200E+02	-.2500E+00	-.2104E+00	-.1748E+00	-.1426E+00	-.1134E+00	-.8682E-01	-.6253E-01	-.4022E-01	-.1971E-01	-.8586E-03
23	.2300E+02	-.2500E+00	-.2104E+00	-.1746E+00	-.1421E+00	-.1126E+00	-.8550E-01	-.6064E-01	-.3770E-01	-.1652E-01	.2993E-02
24	.2400E+02	-.2500E+00	-.2104E+00	-.1744E+00	-.1415E+00	-.1115E+00	-.8378E-01	-.5820E-01	-.3444E-01	-.1239E-01	.7979E-02
25	.2500E+02	-.2500E+00	-.2104E+00	-.1741E+00	-.1408E+00	-.1100E+00	-.8155E-01	-.5500E-01	-.3017E-01	-.6994E-02	.1449E-01
26	.2600E+02	-.2500E+00	-.2103E+00	-.1737E+00	-.1398E+00	-.1082E+00	-.7859E-01	-.5078E-01	-.2453E-01	.1409E-03	.2311E-01
27	.2700E+02	-.2500E+00	-.2103E+00	-.1732E+00	-.1384E+00	-.1056E+00	-.7461E-01	-.4510E-01	-.1695E-01	.9730E-02	.3469E-01
28	.2800E+02	-.2500E+00	-.2102E+00	-.1725E+00	-.1365E+00	-.1022E+00	-.6914E-01	-.3730E-01	-.6537E-02	.2290E-01	.5060E-01
29	.2900E+02	-.2500E+00	-.2101E+00	-.1715E+00	-.1339E+00	-.9724E-01	-.6140E-01	-.2626E-01	.8206E-02	.4155E-01	.7311E-01
30	.3000E+02	-.2500E+00	-.2100E+00	-.1700E+00	-.1300E+00	-.9997E-01	-.4997E-01	-.9950E-02	.2999E-01	.6911E-01	.1064E+00

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.3420E-05	.1363E-01	.2549E-01	.3501E-01	.4194E-01	.4614E-01	.4756E-01	.4614E-01	.4194E-01	.3501E-01
2 .2000E+01	.3891E-04	.1367E-01	.2553E-01	.3505E-01	.4199E-01	.4619E-01	.4761E-01	.4619E-01	.4199E-01	.3505E-01
3 .3000E+01	.8332E-04	.1372E-01	.2558E-01	.3511E-01	.4205E-01	.4625E-01	.4767E-01	.4625E-01	.4205E-01	.3511E-01
4 .4000E+01	.1389E-03	.1378E-01	.2565E-01	.3518E-01	.4212E-01	.4633E-01	.4775E-01	.4633E-01	.4212E-01	.3518E-01
5 .5000E+01	.2085E-03	.1386E-01	.2574E-01	.3527E-01	.4222E-01	.4642E-01	.4785E-01	.4642E-01	.4222E-01	.3527E-01
6 .6000E+01	.2957E-03	.1396E-01	.2584E-01	.3539E-01	.4234E-01	.4655E-01	.4798E-01	.4655E-01	.4234E-01	.3539E-01
7 .7000E+01	.4048E-03	.1408E-01	.2598E-01	.3553E-01	.4249E-01	.4670E-01	.4813E-01	.4670E-01	.4249E-01	.3553E-01
8 .8000E+01	.5415E-03	.1423E-01	.2615E-01	.3571E-01	.4267E-01	.4689E-01	.4832E-01	.4689E-01	.4267E-01	.3571E-01
9 .9000E+01	.7127E-03	.1443E-01	.2636E-01	.3593E-01	.4291E-01	.4713E-01	.4857E-01	.4713E-01	.4291E-01	.3593E-01
10 .1000E+02	.9272E-03	.1467E-01	.2662E-01	.3621E-01	.4320E-01	.4744E-01	.4887E-01	.4744E-01	.4320E-01	.3621E-01
11 .1100E+02	.1196E-02	.1497E-01	.2695E-01	.3657E-01	.4357E-01	.4781E-01	.4925E-01	.4781E-01	.4357E-01	.3657E-01
12 .1200E+02	.1533E-02	.1535E-01	.2736E-01	.3701E-01	.4403E-01	.4829E-01	.4973E-01	.4829E-01	.4403E-01	.3701E-01
13 .1300E+02	.1956E-02	.1582E-01	.2788E-01	.3756E-01	.4461E-01	.4889E-01	.5033E-01	.4889E-01	.4461E-01	.3756E-01
14 .1400E+02	.2488E-02	.1642E-01	.2853E-01	.3826E-01	.4534E-01	.4963E-01	.5109E-01	.4963E-01	.4534E-01	.3826E-01
15 .1500E+02	.3155E-02	.1717E-01	.2935E-01	.3913E-01	.4625E-01	.5057E-01	.5204E-01	.5057E-01	.4625E-01	.3913E-01
16 .1600E+02	.3995E-02	.1811E-01	.3038E-01	.4023E-01	.4740E-01	.5175E-01	.5323E-01	.5175E-01	.4740E-01	.4023E-01
17 .1700E+02	.5053E-02	.1930E-01	.3167E-01	.4161E-01	.4885E-01	.5324E-01	.5473E-01	.5324E-01	.4885E-01	.4161E-01
18 .1800E+02	.6387E-02	.2079E-01	.3331E-01	.4336E-01	.5068E-01	.5512E-01	.5663E-01	.5512E-01	.5068E-01	.4336E-01
19 .1900E+02	.8075E-02	.2269E-01	.3538E-01	.4557E-01	.5299E-01	.5750E-01	.5902E-01	.5750E-01	.5299E-01	.4557E-01
20 .2000E+02	.1022E-01	.2509E-01	.3800E-01	.4837E-01	.5593E-01	.6051E-01	.6206E-01	.6051E-01	.5593E-01	.4837E-01
21 .2100E+02	.1294E-01	.2814E-01	.4133E-01	.5193E-01	.5966E-01	.6434E-01	.6593E-01	.6434E-01	.5966E-01	.5193E-01
22 .2200E+02	.1642E-01	.3205E-01	.4560E-01	.5648E-01	.6442E-01	.6924E-01	.7087E-01	.6924E-01	.6442E-01	.5648E-01
23 .2300E+02	.2089E-01	.3706E-01	.5108E-01	.6233E-01	.7055E-01	.7553E-01	.7722E-01	.7553E-01	.7055E-01	.6233E-01
24 .2400E+02	.2668E-01	.4356E-01	.5817E-01	.6991E-01	.7847E-01	.8368E-01	.8544E-01	.8368E-01	.7847E-01	.6991E-01
25 .2500E+02	.3424E-01	.5204E-01	.6743E-01	.7980E-01	.8883E-01	.9432E-01	.9618E-01	.9432E-01	.8883E-01	.7980E-01
26 .2600E+02	.4424E-01	.6326E-01	.7968E-01	.9288E-01	.1025E+00	.1084E+00	.1104E+00	.1084E+00	.1025E+00	.9288E-01
27 .2700E+02	.5768E-01	.7834E-01	.9615E-01	.1105E+00	.1209E+00	.1273E+00	.1295E+00	.1273E+00	.1209E+00	.1105E+00
28 .2800E+02	.7614E-01	.9906E-01	.1188E+00	.1346E+00	.1462E+00	.1533E+00	.1557E+00	.1533E+00	.1462E+00	.1346E+00
29 .2900E+02	.1023E+00	.1284E+00	.1508E+00	.1688E+00	.1820E+00	.1901E+00	.1928E+00	.1901E+00	.1820E+00	.1688E+00
30 .3000E+02	.1409E+00	.1717E+00	.1981E+00	.2194E+00	.2349E+00	.2445E+00	.2477E+00	.2445E+00	.2349E+00	.2194E+00

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.2549E-01	.1363E-01	.3420E-05	-.1500E-01	-.3142E-01	-.4948E-01	-.6946E-01	-.9168E-01	-.1165E+00	-.1443E+00
2 .2000E+01	.2553E-01	.1367E-01	.3891E-04	-.1497E-01	-.3139E-01	-.4946E-01	-.6945E-01	-.9167E-01	-.1165E+00	-.1442E+00
3 .3000E+01	.2558E-01	.1372E-01	.8332E-04	-.1493E-01	-.3136E-01	-.4943E-01	-.6943E-01	-.9166E-01	-.1165E+00	-.1442E+00
4 .4000E+01	.2565E-01	.1378E-01	.1389E-03	-.1488E-01	-.3132E-01	-.4940E-01	-.6941E-01	-.9164E-01	-.1165E+00	-.1442E+00
5 .5000E+01	.2574E-01	.1386E-01	.2085E-03	-.1482E-01	-.3127E-01	-.4936E-01	-.6938E-01	-.9162E-01	-.1164E+00	-.1442E+00
6 .6000E+01	.2584E-01	.1396E-01	.2957E-03	-.1475E-01	-.3121E-01	-.4932E-01	-.6934E-01	-.9159E-01	-.1164E+00	-.1442E+00
7 .7000E+01	.2598E-01	.1408E-01	.4048E-03	-.1465E-01	-.3113E-01	-.4925E-01	-.6929E-01	-.9156E-01	-.1164E+00	-.1442E+00
8 .8000E+01	.2615E-01	.1423E-01	.5415E-03	-.1454E-01	-.3103E-01	-.4918E-01	-.6924E-01	-.9152E-01	-.1164E+00	-.1442E+00
9 .9000E+01	.2636E-01	.1443E-01	.7127E-03	-.1439E-01	-.3091E-01	-.4908E-01	-.6916E-01	-.9147E-01	-.1163E+00	-.1442E+00
10 .1000E+02	.2662E-01	.1467E-01	.9272E-03	-.1420E-01	-.3076E-01	-.4896E-01	-.6907E-01	-.9141E-01	-.1163E+00	-.1442E+00
11 .1100E+02	.2695E-01	.1497E-01	.1196E-02	-.1397E-01	-.3057E-01	-.4881E-01	-.6896E-01	-.9133E-01	-.1163E+00	-.1441E+00
12 .1200E+02	.2736E-01	.1535E-01	.1533E-02	-.1368E-01	-.3033E-01	-.4862E-01	-.6882E-01	-.9123E-01	-.1162E+00	-.1441E+00
13 .1300E+02	.2788E-01	.1582E-01	.1956E-02	-.1332E-01	-.3003E-01	-.4838E-01	-.6864E-01	-.9110E-01	-.1161E+00	-.1441E+00
14 .1400E+02	.2853E-01	.1642E-01	.2488E-02	-.1286E-01	-.2965E-01	-.4808E-01	-.6841E-01	-.9095E-01	-.1160E+00	-.1440E+00
15 .1500E+02	.2935E-01	.1717E-01	.3155E-02	-.1228E-01	-.2917E-01	-.4770E-01	-.6813E-01	-.9075E-01	-.1159E+00	-.1439E+00
16 .1600E+02	.3038E-01	.1811E-01	.3995E-02	-.1156E-01	-.2857E-01	-.4723E-01	-.6778E-01	-.9050E-01	-.1157E+00	-.1438E+00
17 .1700E+02	.3167E-01	.1930E-01	.5053E-02	-.1065E-01	-.2782E-01	-.4666E-01	-.6733E-01	-.9019E-01	-.1155E+00	-.1437E+00
18 .1800E+02	.3331E-01	.2079E-01	.6387E-02	-.9500E-02	-.2686E-01	-.4588E-01	-.6677E-01	-.8979E-01	-.1153E+00	-.1436E+00
19 .1900E+02	.3538E-01	.2269E-01	.8075E-02	-.8046E-02	-.2566E-01	-.4493E-01	-.6605E-01	-.8929E-01	-.1150E+00	-.1434E+00
20 .2000E+02	.3800E-01	.2509E-01	.1022E-01	-.6202E-02	-.2413E-01	-.4372E-01	-.6515E-01	-.8866E-01	-.1146E+00	-.1432E+00
21 .2100E+02	.4133E-01	.2814E-01	.1294E-01	-.3856E-02	-.2219E-01	-.4218E-01	-.6400E-01	-.8785E-01	-.1140E+00	-.1429E+00
22 .2200E+02	.4560E-01	.3205E-01	.1642E-01	-.8586E-03	-.1971E-01	-.4022E-01	-.6253E-01	-.8682E-01	-.1134E+00	-.1426E+00
23 .2300E+02	.5108E-01	.3706E-01	.2089E-01	.2993E-02	-.1652E-01	-.3770E-01	-.6064E-01	-.8550E-01	-.1126E+00	-.1421E+00
24 .2400E+02	.5817E-01	.4356E-01	.2668E-01	.7979E-02	-.1239E-01	-.3444E-01	-.5820E-01	-.8378E-01	-.1115E+00	-.1415E+00
25 .2500E+02	.6743E-01	.5204E-01	.3424E-01	.1449E-01	-.6994E-02	-.3017E-01	-.5500E-01	-.8155E-01	-.1100E+00	-.1408E+00
26 .2600E+02	.7968E-01	.6326E-01	.4424E-01	.2311E-01	.1409E-03	-.2453E-01	-.5078E-01	-.7859E-01	-.1082E+00	-.1398E+00
27 .2700E+02	.9615E-01	.7834E-01	.5768E-01	.3469E-01	.9730E-02	-.1695E-01	-.4510E-01	-.7461E-01	-.1056E+00	-.1384E+00
28 .2800E+02	.1188E+00	.9906E-01	.7614E-01	.5060E-01	.2290E-01	-.6537E-02	-.3730E-01	-.6914E-01	-.1022E+00	-.1365E+00
29 .2900E+02	.1508E+00	.1284E+00	.1023E+00	.7311E-01	.4155E-01	.8206E-02	-.2626E-01	-.6140E-01	-.9724E-01	-.1339E+00
30 .3000E+02	.1981E+00	.1717E+00	.1409E+00	.1064E+00	.6911E-01	.2999E-01	-.9950E-02	-.4997E-01	-.8997E-01	-.1300E+00

IZ=	31	32	33
Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	-.1754E+00	-.2105E+00	-.2500E+00
2	.2000E+01	-.1754E+00	-.2105E+00	-.2500E+00
3	.3000E+01	-.1754E+00	-.2105E+00	-.2500E+00
4	.4000E+01	-.1754E+00	-.2105E+00	-.2500E+00
5	.5000E+01	-.1754E+00	-.2105E+00	-.2500E+00
6	.6000E+01	-.1754E+00	-.2105E+00	-.2500E+00
7	.7000E+01	-.1754E+00	-.2105E+00	-.2500E+00
8	.8000E+01	-.1754E+00	-.2105E+00	-.2500E+00
9	.9000E+01	-.1754E+00	-.2105E+00	-.2500E+00
10	.1000E+02	-.1754E+00	-.2105E+00	-.2500E+00
11	.1100E+02	-.1754E+00	-.2105E+00	-.2500E+00
12	.1200E+02	-.1754E+00	-.2105E+00	-.2500E+00
13	.1300E+02	-.1753E+00	-.2105E+00	-.2500E+00
14	.1400E+02	-.1753E+00	-.2105E+00	-.2500E+00
15	.1500E+02	-.1753E+00	-.2105E+00	-.2500E+00
16	.1600E+02	-.1753E+00	-.2105E+00	-.2500E+00
17	.1700E+02	-.1752E+00	-.2105E+00	-.2500E+00
18	.1800E+02	-.1752E+00	-.2105E+00	-.2500E+00
19	.1900E+02	-.1751E+00	-.2105E+00	-.2500E+00
20	.2000E+02	-.1750E+00	-.2105E+00	-.2500E+00
21	.2100E+02	-.1749E+00	-.2104E+00	-.2500E+00
22	.2200E+02	-.1748E+00	-.2104E+00	-.2500E+00
23	.2300E+02	-.1746E+00	-.2104E+00	-.2500E+00
24	.2400E+02	-.1744E+00	-.2104E+00	-.2500E+00
25	.2500E+02	-.1741E+00	-.2104E+00	-.2500E+00
26	.2600E+02	-.1737E+00	-.2103E+00	-.2500E+00
27	.2700E+02	-.1732E+00	-.2103E+00	-.2500E+00
28	.2800E+02	-.1725E+00	-.2102E+00	-.2500E+00
29	.2900E+02	-.1715E+00	-.2101E+00	-.2500E+00
30	.3000E+02	-.1700E+00	-.2100E+00	-.2500E+00

VELOCITY VECTOR DISPLAYED IN CARTESIAN COORDINATES

STATION 1 **** U-VEL ****

IZ=	1	2	3	4	5	6	7	8	9	10
Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y									
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.1800E+00	.1786E+00	.1773E+00	.1755E+00	.1738E+00	.1722E+00	.1696E+00	.1673E+00	.1654E+00	.1273E+00
3	.3000E+01	.3453E+00	.3442E+00	.3430E+00	.3413E+00	.3559E+00	.3546E+00	.3359E+00	.3337E+00	.3318E+00	.2903E+00
4	.4000E+01	.4239E+00	.4233E+00	.4226E+00	.4221E+00	.4268E+00	.4262E+00	.4196E+00	.4186E+00	.4177E+00	.3964E+00
5	.5000E+01	.4625E+00	.4622E+00	.4619E+00	.4615E+00	.4638E+00	.4634E+00	.4596E+00	.4590E+00	.4556E+00	.4463E+00
6	.6000E+01	.4922E+00	.4919E+00	.4916E+00	.4912E+00	.4908E+00	.4905E+00	.4899E+00	.4874E+00	.4851E+00	.4772E+00
7	.7000E+01	.5163E+00	.5160E+00	.5177E+00	.5173E+00	.5169E+00	.5166E+00	.5160E+00	.5127E+00	.5094E+00	.5023E+00
8	.8000E+01	.5413E+00	.5410E+00	.5407E+00	.5404E+00	.5400E+00	.5397E+00	.5391E+00	.5365E+00	.5340E+00	.5277E+00
9	.9000E+01	.5642E+00	.5639E+00	.5637E+00	.5633E+00	.5630E+00	.5626E+00	.5621E+00	.5600E+00	.5564E+00	.5501E+00
10	.1000E+02	.5859E+00	.5856E+00	.5854E+00	.5850E+00	.5847E+00	.5844E+00	.5833E+00	.5816E+00	.5781E+00	.5721E+00
11	.1100E+02	.6065E+00	.6062E+00	.6060E+00	.6057E+00	.6058E+00	.6055E+00	.6046E+00	.6027E+00	.5990E+00	.5929E+00
12	.1200E+02	.6272E+00	.6269E+00	.6267E+00	.6264E+00	.6261E+00	.6258E+00	.6250E+00	.6231E+00	.6194E+00	.6136E+00
13	.1300E+02	.6473E+00	.6471E+00	.6469E+00	.6466E+00	.6463E+00	.6461E+00	.6454E+00	.6432E+00	.6396E+00	.6340E+00
14	.1400E+02	.6672E+00	.6670E+00	.6668E+00	.6665E+00	.6665E+00	.6662E+00	.6653E+00	.6633E+00	.6598E+00	.6540E+00
15	.1500E+02	.6871E+00	.6869E+00	.6867E+00	.6864E+00	.6863E+00	.6861E+00	.6852E+00	.6833E+00	.6795E+00	.6740E+00
16	.1600E+02	.7069E+00	.7067E+00	.7065E+00	.7064E+00	.7063E+00	.7061E+00	.7053E+00	.7033E+00	.6995E+00	.6940E+00
17	.1700E+02	.7270E+00	.7269E+00	.7267E+00	.7266E+00	.7265E+00	.7263E+00	.7255E+00	.7236E+00	.7198E+00	.7141E+00
18	.1800E+02	.7477E+00	.7475E+00	.7474E+00	.7472E+00	.7471E+00	.7469E+00	.7461E+00	.7442E+00	.7403E+00	.7346E+00
19	.1900E+02	.7691E+00	.7689E+00	.7688E+00	.7686E+00	.7686E+00	.7684E+00	.7676E+00	.7657E+00	.7616E+00	.7558E+00
20	.2000E+02	.7918E+00	.7916E+00	.7915E+00	.7914E+00	.7914E+00	.7912E+00	.7904E+00	.7884E+00	.7840E+00	.7779E+00
21	.2100E+02	.8164E+00	.8163E+00	.8162E+00	.8161E+00	.8161E+00	.8160E+00	.8151E+00	.8129E+00	.8083E+00	.8017E+00
22	.2200E+02	.8440E+00	.8439E+00	.8439E+00	.8438E+00	.8438E+00	.8437E+00	.8428E+00	.8404E+00	.8353E+00	.8280E+00
23	.2300E+02	.8757E+00	.8756E+00	.8755E+00	.8755E+00	.8756E+00	.8755E+00	.8746E+00	.8719E+00	.8661E+00	.8580E+00
24	.2400E+02	.9123E+00	.9123E+00	.9121E+00	.9122E+00	.9123E+00	.9122E+00	.9113E+00	.9083E+00	.9018E+00	.8928E+00
25	.2500E+02	.9527E+00	.9526E+00	.9526E+00	.9527E+00	.9529E+00	.9529E+00	.9519E+00	.9486E+00	.9422E+00	.9325E+00
26	.2600E+02	.9901E+00	.9901E+00	.9901C+00	.9901C+00	.9903E+00	.9903E+00	.9897E+00	.9873E+00	.9820E+00	.9738E+00
27	.2700E+02	.1148E+01	.1140E+01	.1132E+01	.1120E+01	.1110E+01	.1097E+01	.1083E+01	.1069E+01	.1055E+01	.1043E+01
28	.2800E+02	.1121E+01	.1113E+01	.1106E+01	.1096E+01	.1086E+01	.1075E+01	.1063E+01	.1051E+01	.1039E+01	.1030E+01
29	.2900E+02	.1093E+01	.1087E+01	.1079E+01	.1071E+01	.1062E+01	.1053E+01	.1043E+01	.1032E+01	.1024E+01	.1018E+01
30	.3000E+02	.1065E+01	.1059E+01	.1054E+01	.1046E+01	.1038E+01	.1030E+01	.1023E+01	.1017E+01	.1012E+01	.1008E+01

IZ=		11	12	13	14	15	16	17	18	19	20
	Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.1350E+00	.1173E+00	.1047E+00	.1203E+00	.1339E+00	.1460E+00	.1425E+00	.1459E+00	.1388E+00	.1202E+00
3	.3000E+01	.3009E+00	.2816E+00	.2873E+00	.2891E+00	.3097E+00	.3101E+00	.3067E+00	.3099E+00	.3095E+00	.2890E+00
4	.4000E+01	.3950E+00	.3938E+00	.3909E+00	.3979E+00	.3996E+00	.4063E+00	.4050E+00	.4062E+00	.3995E+00	.3978E+00
5	.5000E+01	.4440E+00	.4405E+00	.4421E+00	.4462E+00	.4500E+00	.4488E+00	.4516E+00	.4488E+00	.4499E+00	.4462E+00
6	.6000E+01	.4729E+00	.4740E+00	.4739E+00	.4783E+00	.4802E+00	.4818E+00	.4833E+00	.4817E+00	.4802E+00	.4783E+00
7	.7000E+01	.4987E+00	.4989E+00	.5016E+00	.5047E+00	.5069E+00	.5072E+00	.5083E+00	.5072E+00	.5069E+00	.5047E+00
8	.8000E+01	.5239E+00	.5229E+00	.5253E+00	.5289E+00	.5301E+00	.5313E+00	.5320E+00	.5318E+00	.5300E+00	.5289E+00
9	.9000E+01	.5465E+00	.5457E+00	.5480E+00	.5515E+00	.5536E+00	.5542E+00	.5555E+00	.5542E+00	.5536E+00	.5514E+00
10	.1000E+02	.5676E+00	.5680E+00	.5702E+00	.5731E+00	.5752E+00	.5759E+00	.5771E+00	.5769E+00	.5752E+00	.5731E+00
11	.1100E+02	.5869E+00	.5887E+00	.5916E+00	.5949E+00	.5967E+00	.5977E+00	.5983E+00	.5977E+00	.5967E+00	.5948E+00
12	.1200E+02	.6098E+00	.6095E+00	.6123E+00	.6157E+00	.6176E+00	.6189E+00	.6192E+00	.6188E+00	.6176E+00	.6156E+00
13	.1300E+02	.6301E+00	.6297E+00	.6328E+00	.6361E+00	.6382E+00	.6395E+00	.6397E+00	.6394E+00	.6381E+00	.6360E+00
14	.1400E+02	.6502E+00	.6500E+00	.6530E+00	.6565E+00	.6585E+00	.6596E+00	.6602E+00	.6595E+00	.6584E+00	.6565E+00
15	.1500E+02	.6701E+00	.6700E+00	.6732E+00	.6766E+00	.6786E+00	.6799E+00	.6804E+00	.6798E+00	.6785E+00	.6765E+00
16	.1600E+02	.6900E+00	.6900E+00	.6933E+00	.6969E+00	.6989E+00	.7001E+00	.7007E+00	.7001E+00	.6988E+00	.6967E+00
17	.1700E+02	.7101E+00	.7103E+00	.7136E+00	.7171E+00	.7193E+00	.7207E+00	.7212E+00	.7206E+00	.7192E+00	.7170E+00
18	.1800E+02	.7305E+00	.7307E+00	.7342E+00	.7380E+00	.7403E+00	.7417E+00	.7422E+00	.7416E+00	.7402E+00	.7379E+00
19	.1900E+02	.7515E+00	.7519E+00	.7556E+00	.7595E+00	.7620E+00	.7635E+00	.7639E+00	.7634E+00	.7619E+00	.7594E+00
20	.2000E+02	.7736E+00	.7740E+00	.7780E+00	.7822E+00	.7849E+00	.7865E+00	.7870E+00	.7865E+00	.7849E+00	.7821E+00
21	.2100E+02	.7972E+00	.7977E+00	.8021E+00	.8068E+00	.8098E+00	.8115E+00	.8120E+00	.8114E+00	.8097E+00	.8066E+00
22	.2200E+02	.8231E+00	.8238E+00	.8289E+00	.8341E+00	.8375E+00	.8394E+00	.8400E+00	.8394E+00	.8374E+00	.8339E+00
23	.2300E+02	.8525E+00	.8535E+00	.8592E+00	.8653E+00	.8692E+00	.8714E+00	.8721E+00	.8713E+00	.8691E+00	.8652E+00
24	.2400E+02	.8866E+00	.8878E+00	.8944E+00	.9014E+00	.9058E+00	.9083E+00	.9091E+00	.9083E+00	.9057E+00	.9013E+00
25	.2500E+02	.9259E+00	.9273E+00	.9345E+00	.9420E+00	.9467E+00	.9493E+00	.9501E+00	.9493E+00	.9467E+00	.9420E+00
26	.2600E+02	.9677E+00	.9690E+00	.9757E+00	.9821E+00	.9858E+00	.9879E+00	.9886E+00	.9879E+00	.9858E+00	.9821E+00
27	.2700E+02	.1033E+01	.1026E+01	.1019E+01	.1016E+01	.1014E+01	.1013E+01	.1011E+01	.1009E+01	.1007E+01	.1005E+01
28	.2800E+02	.1024E+01	.1016E+01	.1014E+01	.1012E+01	.1011E+01	.1009E+01	.1007E+01	.1006E+01	.1004E+01	.1002E+01
29	.2900E+02	.1013E+01	.1011E+01	.1009E+01	.1007E+01	.1005E+01	.1004E+01	.1003E+01	.1002E+01	.1001E+01	.9999E+00
30	.3000E+02	.1007E+01	.1005E+01	.1003E+01	.1003E+01	.1002E+01	.1002E+01	.1001E+01	.1001E+01	.9998E+00	.9991E+00

IZ=		21	22	23	24	25	26	27	28	29	30
	Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.1049E+00	.1188E+00	.1350E+00	.1264E+00	.1503E+00	.1458E+00	.1447E+00	.1435E+00	.1428E+00	.1420E+00
3	.3000E+01	.2876E+00	.2837E+00	.3058E+00	.2892E+00	.3158E+00	.3107E+00	.3093E+00	.3262E+00	.3254E+00	.3061E+00
4	.4000E+01	.3911E+00	.3951E+00	.3978E+00	.3958E+00	.4099E+00	.4071E+00	.4064E+00	.4124E+00	.4120E+00	.4047E+00
5	.5000E+01	.4422E+00	.4411E+00	.4484E+00	.4460E+00	.4511E+00	.4527E+00	.4523E+00	.4550E+00	.4547E+00	.4514E+00
6	.6000E+01	.4740E+00	.4745E+00	.4740E+00	.4770E+00	.4814E+00	.4822E+00	.4838E+00	.4835E+00	.4833E+00	.4831E+00
7	.7000E+01	.5017E+00	.4994E+00	.4997E+00	.5021E+00	.5059E+00	.5076E+00	.5102E+00	.5099E+00	.5097E+00	.5096E+00
8	.8000E+01	.5254E+00	.5233E+00	.5249E+00	.5276E+00	.5307E+00	.5317E+00	.5336E+00	.5333E+00	.5331E+00	.5329E+00
9	.9000E+01	.5481E+00	.5460E+00	.5474E+00	.5500E+00	.5533E+00	.5555E+00	.5568E+00	.5565E+00	.5564E+00	.5562E+00
10	.1000E+02	.5702E+00	.5685E+00	.5685E+00	.5720E+00	.5751E+00	.5772E+00	.5782E+00	.5786E+00	.5784E+00	.5783E+00
11	.1100E+02	.5916E+00	.5891E+00	.5897E+00	.5928E+00	.5962E+00	.5995E+00	.5998E+00	.6000E+00	.5998E+00	.5992E+00
12	.1200E+02	.6123E+00	.6098E+00	.6105E+00	.6135E+00	.6167E+00	.6191E+00	.6204E+00	.6206E+00	.6204E+00	.6203E+00
13	.1300E+02	.6328E+00	.6300E+00	.6308E+00	.6340E+00	.6371E+00	.6394E+00	.6410E+00	.6411E+00	.6410E+00	.6408E+00
14	.1400E+02	.6530E+00	.6503E+00	.6507E+00	.6541E+00	.6575E+00	.6598E+00	.6613E+00	.6615E+00	.6614E+00	.6610E+00
15	.1500E+02	.6732E+00	.6701E+00	.6706E+00	.6740E+00	.6774E+00	.6800E+00	.6813E+00	.6817E+00	.6816E+00	.6812E+00
16	.1600E+02	.6933E+00	.6901E+00	.6904E+00	.6942E+00	.6976E+00	.7002E+00	.7017E+00	.7020E+00	.7018E+00	.7016E+00
17	.1700E+02	.7135E+00	.7103E+00	.7104E+00	.7142E+00	.7180E+00	.7207E+00	.7221E+00	.7224E+00	.7223E+00	.7221E+00
18	.1800E+02	.7342E+00	.7307E+00	.7308E+00	.7347E+00	.7388E+00	.7416E+00	.7431E+00	.7434E+00	.7433E+00	.7431E+00
19	.1900E+02	.7556E+00	.7519E+00	.7517E+00	.7560E+00	.7602E+00	.7633E+00	.7649E+00	.7652E+00	.7651E+00	.7648E+00
20	.2000E+02	.7779E+00	.7739E+00	.7736E+00	.7781E+00	.7829E+00	.7863E+00	.7879E+00	.7883E+00	.7882E+00	.7880E+00
21	.2100E+02	.8020E+00	.7976E+00	.7971E+00	.8017E+00	.8073E+00	.8111E+00	.8130E+00	.8134E+00	.8133E+00	.8131E+00
22	.2200E+02	.8287E+00	.8237E+00	.8229E+00	.8279E+00	.8345E+00	.8388E+00	.8410E+00	.8416E+00	.8415E+00	.8413E+00
23	.2300E+02	.8590E+00	.8533E+00	.8523E+00	.8577E+00	.8655E+00	.8707E+00	.8732E+00	.8739E+00	.8738E+00	.8735E+00
24	.2400E+02	.8943E+00	.8876E+00	.8864E+00	.8924E+00	.9014E+00	.9075E+00	.9103E+00	.9111E+00	.9111E+00	.9108E+00
25	.2500E+02	.9345E+00	.9271E+00	.9257E+00	.9322E+00	.9418E+00	.9485E+00	.9514E+00	.9523E+00	.9522E+00	.9520E+00
26	.2600E+02	.9757E+00	.9690E+00	.9676E+00	.9737E+00	.9819E+00	.9872E+00	.9896E+00	.9901E+00	.9901E+00	.9899E+00
27	.2700E+02	.1003E+01	.1003E+01	.1002E+01	.1002E+01	.9991E+00	.9946E+00	.9897E+00	.9849E+00	.9807E+00	.9773E+00
28	.2800E+02	.9998E+00	.9976E+00	.9962E+00	.9943E+00	.9916E+00	.9898E+00	.9864E+00	.9826E+00	.9791E+00	.9761E+00
29	.2900E+02	.9981E+00	.9957E+00	.9936E+00	.9914E+00	.9884E+00	.9861E+00	.9844E+00	.9812E+00	.9779E+00	.9753E+00
30	.3000E+02	.9966E+00	.9971E+00	.9952E+00	.9933E+00	.9910E+00	.9884E+00	.9857E+00	.9820E+00	.9802E+00	.9783E+00

	IZ=	31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	.0	.0	.0
2	.2000E+01	.1412E+00	.1406E+00	.1398E+00
3	.3000E+01	.3051E+00	.3043E+00	.3034E+00
4	.4000E+01	.4041E+00	.4037E+00	.4032E+00
5	.5000E+01	.4512E+00	.4509E+00	.4507E+00
6	.6000E+01	.4829E+00	.4827E+00	.4225E+00
7	.7000E+01	.5094E+00	.5092E+00	.5090E+00
8	.8000E+01	.5327E+00	.5326E+00	.5324E+00
9	.9000E+01	.5560E+00	.5559E+00	.5557E+00
10	.1000E+02	.5781E+00	.5779E+00	.5778E+00
11	.1100E+02	.5990E+00	.5989E+00	.5987E+00
12	.1200E+02	.6201E+00	.6200E+00	.6198E+00
13	.1300E+02	.6407E+00	.6405E+00	.6404E+00
14	.1400E+02	.6609E+00	.6607E+00	.6606E+00
15	.1500E+02	.6811E+00	.6810E+00	.6809E+00
16	.1600E+02	.7013E+00	.7012E+00	.7011E+00
17	.1700E+02	.7218E+00	.7217E+00	.7216E+00
18	.1800E+02	.7429E+00	.7428E+00	.7427E+00
19	.1900E+02	.7647E+00	.7646E+00	.7646E+00
20	.2000E+02	.7878E+00	.7878E+00	.7877E+00
21	.2100E+02	.8130E+00	.8129E+00	.8128E+00
22	.2200E+02	.8411E+00	.8410E+00	.8410E+00
23	.2300E+02	.8733E+00	.8733E+00	.8733E+00
24	.2400E+02	.9106E+00	.9106E+00	.9106E+00
25	.2500E+02	.9518E+00	.9518E+00	.9518E+00
26	.2600E+02	.9899E+00	.9899E+00	.9899E+00
27	.2700E+02	.9736E+00	.9577E+00	.9380E+00
28	.2800E+02	.9731E+00	.9620E+00	.9486E+00
29	.2900E+02	.9725E+00	.9703E+00	.9680E+00
30	.3000E+02	.9764E+00	.9744E+00	.9723E+00

STATION 1 **** V-VEL ****

	IZ=	1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.4447E-07	.4447E-07	.4447E-07	.4447E-07	.4447E-07	.4447E-07	.4447E-07	.4450E-07	.4487E-07	.2995E-07
3	.3000E+01	.2152E-06	.2152E-06	.2152E-06	.2152E-06	.2561E-06	.2561E-06	.2152E-06	.2154E-06	.2170E-06	.1519E-06
4	.4000E+01	.6421E-06	.6421E-06	.6421E-06	.6421E-06	.7115E-06	.7115E-06	.6421E-06	.6426E-06	.6472E-06	.4793E-06
5	.5000E+01	.1496E-05	.1496E-05	.1496E-05	.1496E-05	.1601E-05	.1601E-05	.1496E-05	.1497E-05	.1406E-05	.1168E-05
6	.6000E+01	.3138E-05	.3138E-05	.3138E-05	.3138E-05	.3138E-05	.3138E-05	.3138E-05	.2992E-05	.2869E-05	.2417E-05
7	.7000E+01	.5984E-05	.5984E-05	.5984E-05	.5984E-05	.5984E-05	.5983E-05	.5984E-05	.5582E-05	.5229E-05	.4484E-05
8	.8000E+01	.1055E-04	.1055E-04	.1055E-04	.1055E-04	.1055E-04	.1055E-04	.1055E-04	.1001E-04	.9556E-05	.8367E-05
9	.9000E+01	.1851E-04	.1851E-04	.1851E-04	.1851E-04	.1851E-04	.1851E-04	.1851E-04	.1780E-04	.1652E-04	.1444E-04
10	.1000E+02	.3146E-04	.3146E-04	.3146E-04	.3146E-04	.3146E-04	.3146E-04	.3099E-04	.3008E-04	.2801E-04	.2467E-04
11	.1100E+02	.5201E-04	.5201E-04	.5201E-04	.5201E-04	.5262E-04	.5252E-04	.5201E-04	.5024E-04	.4647E-04	.4086E-04
12	.1200E+02	.8609E-04	.8609E-04	.8609E-04	.8609E-04	.8609E-04	.8609E-04	.8531E-04	.8228E-04	.7609E-04	.6733E-04
13	.1300E+02	.1404E-03	.1404E-03	.1404E-03	.1404E-03	.1404E-03	.1404E-03	.1395E-03	.1336E-03	.1240E-03	.1101E-03
14	.1400E+02	.2267E-03	.2267E-03	.2267E-03	.2267E-03	.2280E-03	.2280E-03	.2254E-03	.2168E-03	.2012E-03	.1780E-03
15	.1500E+02	.3650E-03	.3650E-03	.3650E-03	.3650E-03	.3666E-03	.3666E-03	.3618E-03	.3493E-03	.3223E-03	.2866E-03
16	.1600E+02	.5840E-03	.5840E-03	.5840E-03	.5860E-03	.5881E-03	.5881E-03	.5820E-03	.5602E-03	.5171E-03	.4606E-03
17	.1700E+02	.9349E-03	.9349E-03	.9349E-03	.9375E-03	.9401E-03	.9401E-03	.9298E-03	.8973E-03	.8291E-03	.7354E-03
18	.1800E+02	.1496E-02	.1496E-02	.1496E-02	.1499E-02	.1502E-02	.1502E-02	.1486E-02	.1432E-02	.1323E-02	.1176E-02
19	.1900E+02	.2393E-02	.2393E-02	.2393E-02	.2393E-02	.2402E-02	.2402E-02	.2377E-02	.2293E-02	.2115E-02	.1883E-02
20	.2000E+02	.3828E-02	.3828E-02	.3828E-02	.3833E-02	.3844E-02	.3844E-02	.3802E-02	.3671E-02	.3385E-02	.3012E-02
21	.2100E+02	.6140E-02	.6140E-02	.6140E-02	.6147E-02	.6167E-02	.6157E-02	.6101E-02	.5883E-02	.5429E-02	.4833E-02
22	.2200E+02	.9890E-02	.9890E-02	.9890E-02	.9907E-02	.9932E-02	.9932E-02	.9831E-02	.9474E-02	.8749E-02	.7783E-02
23	.2300E+02	.1602E-01	.1601E-01	.1601E-01	.1603E-01	.1608E-01	.1608E-01	.1591E-01	.1534E-01	.1416E-01	.1261E-01
24	.2400E+02	.2612E-01	.2611E-01	.2611E-01	.2615E-01	.2623E-01	.2623E-01	.2596E-01	.2503E-01	.2310E-01	.2057E-01
25	.2500E+02	.4304E-01	.4300E-01	.4300E-01	.4307E-01	.4321E-01	.4321E-01	.4274E-01	.4124E-01	.3804E-01	.3387E-01
26	.2600E+02	.7161E-01	.7161E-01	.7161E-01	.7181E-01	.7204E-01	.7204E-01	.7136E-01	.6874E-01	.6343E-01	.5661E-01
27	.2700E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
28	.2800E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
29	.2900E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
30	.3000E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 .2000E+01	.3461E-07	.2900E-07	.2519E-07	.3238E-07	.4189E-07	.4609E-07	.4447E-07	.4609E-07	.4189E-07	.3238E-07
3 .3000E+01	.1752E-06	.1546E-06	.1693E-06	.1769E-06	.2178E-06	.2211E-06	.2152E-06	.2211E-06	.2178E-06	.1769E-06
4 .4000E+01	.4885E-06	.5029E-06	.5004E-06	.5627E-06	.5862E-06	.6518E-06	.6421E-06	.6518E-06	.5862E-06	.5627E-06
5 .5000E+01	.1145E-05	.1102E-05	.1172E-05	.1300E-05	.1429E-05	.1405E-05	.1496E-05	.1405E-05	.1429E-05	.1300E-05
6 .6000E+01	.2228E-05	.2359E-05	.2409E-05	.2726E-05	.2887E-05	.3018E-05	.3138E-05	.3018E-05	.2887E-05	.2726E-05
7 .7000E+01	.4212E-05	.4356E-05	.4752E-05	.5202E-05	.5543E-05	.5620E-05	.5779E-05	.5620E-05	.5543E-05	.5202E-05
8 .8000E+01	.7804E-05	.7819E-05	.8462E-05	.9371E-05	.9734E-05	.1010E-04	.1027E-04	.1010E-04	.9734E-05	.9371E-05
9 .9000E+01	.1353E-04	.1360E-04	.1469E-04	.1617E-04	.1720E-04	.1755E-04	.1814E-04	.1755E-04	.1720E-04	.1617E-04
10 .1000E+02	.2260E-04	.2334E-04	.2510E-04	.2728E-04	.2894E-04	.3033E-04	.3052E-04	.3033E-04	.2894E-04	.2728E-04
11 .1100E+02	.3783E-04	.3855E-04	.4202E-04	.4602E-04	.4856E-04	.5000E-04	.5080E-04	.5000E-04	.4856E-04	.4602E-04
12 .1200E+02	.6269E-04	.6348E-04	.6903E-04	.7577E-04	.8011E-04	.8289E-04	.8376E-04	.8289E-04	.8011E-04	.7577E-04
13 .1300E+02	.1022E-03	.1032E-03	.1129E-03	.1233E-03	.1308E-03	.1354E-03	.1365E-03	.1354E-03	.1308E-03	.1233E-03
14 .1400E+02	.1653E-03	.1679E-03	.1826E-03	.2007E-03	.2119E-03	.2183E-03	.2216E-03	.2183E-03	.2119E-03	.2007E-03
15 .1500E+02	.2658E-03	.2697E-03	.2947E-03	.3222E-03	.3401E-03	.3519E-03	.3570E-03	.3519E-03	.3401E-03	.3222E-03
16 .1600E+02	.4258E-03	.4329E-03	.4727E-03	.5176E-03	.5464E-03	.5639E-03	.5718E-03	.5639E-03	.5464E-03	.5176E-03
17 .1700E+02	.6806E-03	.6941E-03	.7560E-03	.8268E-03	.8748E-03	.9037E-03	.9144E-03	.9037E-03	.8748E-03	.8268E-03
18 .1800E+02	.1088E-02	.1106E-02	.1209E-02	.1323E-02	.1401E-02	.1446E-02	.1463E-02	.1446E-02	.1401E-02	.1323E-02
19 .1900E+02	.1738E-02	.1772E-02	.1934E-02	.2117E-02	.2238E-02	.2313E-02	.2336E-02	.2313E-02	.2238E-02	.2117E-02
20 .2000E+02	.2786E-02	.2835E-02	.3096E-02	.3390E-02	.3586E-02	.3701E-02	.3740E-02	.3701E-02	.3586E-02	.3390E-02
21 .2100E+02	.4469E-02	.4549E-02	.4966E-02	.5438E-02	.5755E-02	.5937E-02	.6002E-02	.5937E-02	.5755E-02	.5438E-02
22 .2200E+02	.7196E-02	.7323E-02	.8003E-02	.8752E-02	.9263E-02	.9554E-02	.9665E-02	.9564E-02	.9263E-02	.8752E-02
23 .2300E+02	.1165E-01	.1186E-01	.1295E-01	.1418E-01	.1501E-01	.1548E-01	.1565E-01	.1548E-01	.1501E-01	.1418E-01
24 .2400E+02	.1900E-01	.1934E-01	.2112E-01	.2313E-01	.2447E-01	.2526E-01	.2552E-01	.2526E-01	.2447E-01	.2313E-01
25 .2500E+02	.3130E-01	.3186E-01	.3460E-01	.3810E-01	.4031E-01	.4160E-01	.4205E-01	.4160E-01	.4031E-01	.3810E-01
26 .2600E+02	.5225E-01	.5319E-01	.5810E-01	.6359E-01	.6724E-01	.6947E-01	.7024E-01	.6947E-01	.6724E-01	.6359E-01
27 .2700E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
28 .2800E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
29 .2900E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
30 .3000E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 .2000E+01	.2519E-07	.2900E-07	.3461E-07	.2995E-07	.4487E-07	.4450E-07	.4447E-07	.4447E-07	.4447E-07	.4447E-07
3 .3000E+01	.1693E-06	.1546E-06	.1752E-06	.1519E-06	.2170E-06	.2154E-06	.2152E-06	.2561E-06	.2561E-06	.2152E-06
4 .4000E+01	.5004E-06	.5029E-06	.4885E-06	.4793E-06	.6472E-06	.6426E-06	.6421E-06	.7115E-06	.7115E-06	.6421E-06
5 .5000E+01	.1172E-05	.1102E-05	.1145E-05	.1169E-05	.1406E-05	.1497E-05	.1496E-05	.1601E-05	.1601E-05	.1496E-05
6 .6000E+01	.2409E-05	.2359E-05	.2228E-05	.2417E-05	.2885E-05	.2992E-05	.3138E-05	.3138E-05	.3138E-05	.3138E-05
7 .7000E+01	.4752E-05	.4356E-05	.4212E-05	.4484E-05	.5229E-05	.5582E-05	.5779E-05	.5984E-05	.5984E-05	.5984E-05
8 .8000E+01	.8462E-05	.7819E-05	.7804E-05	.8367E-05	.9656E-05	.1001E-04	.1055E-04	.1055E-04	.1055E-04	.1055E-04
9 .9000E+01	.1469E-04	.1360E-04	.1353E-04	.1444E-04	.1652E-04	.1780E-04	.1851E-04	.1851E-04	.1851E-04	.1851E-04
10 .1000E+02	.2510E-04	.2334E-04	.2260E-04	.2467E-04	.2801E-04	.3008E-04	.3099E-04	.3146E-04	.3146E-04	.3146E-04
11 .1100E+02	.4202E-04	.3855E-04	.3783E-04	.4086E-04	.4647E-04	.5024E-04	.5201E-04	.5262E-04	.5262E-04	.5201E-04
12 .1200E+02	.6903E-04	.6348E-04	.6269E-04	.6733E-04	.7699E-04	.8228E-04	.8831E-04	.8609E-04	.8609E-04	.8609E-04
13 .1300E+02	.1129E-03	.1032E-03	.1022E-03	.1101E-03	.1240E-03	.1336E-03	.1395E-03	.1404E-03	.1404E-03	.1404E-03
14 .1400E+02	.1826E-03	.1679E-03	.1653E-03	.1780E-03	.2012E-03	.2168E-03	.2254E-03	.2280E-03	.2280E-03	.2267E-03.
15 .1500E+02	.2947E-03	.2697E-03	.2658E-03	.2866E-03	.3223E-03	.3493E-03	.3618E-03	.3666E-03	.3666E-03	.3650E-03
16 .1600E+02	.4727E-03	.4329E-03	.4258E-03	.4606E-03	.5171E-03	.5602E-03	.5820E-03	.5881E-03	.5881E-03	.5860E-03
17 .1700E+02	.7560E-03	.6941E-03	.6806E-03	.7354E-03	.8291E-03	.8973E-03	.9298E-03	.9401E-03	.9401E-03	.9375E-03
18 .1800E+02	.1209E-02	.1106E-02	.1088E-02	.1176E-02	.1323E-02	.1432E-02	.1486E-02	.1502E-02	.1502E-02	.1499E-02
19 .1900E+02	.1934E-02	.1772E-02	.1738E-02	.1883E-02	.2115E-02	.2293E-02	.2377E-02	.2402E-02	.2402E-02	.2393E-02
20 .2000E+02	.3096E-02	.2835E-02	.2786E-02	.3012E-02	.3385E-02	.3671E-02	.3802E-02	.3844E-02	.3844E-02	.3833E-02
21 .2100E+02	.4966E-02	.4549E-02	.4469E-02	.4833E-02	.5429E-02	.5883E-02	.6101E-02	.6167E-02	.6167E-02	.6147E-02
22 .2200E+02	.8003E-02	.7323E-02	.7196E-02	.7783E-02	.8749E-02	.9474E-02	.9831E-02	.9932E-02	.9932E-02	.9907E-02
23 .2300E+02	.1295E-01	.1186E-01	.1165E-01	.1261E-01	.1416E-01	.1534E-01	.1591E-01	.1608E-01	.1608E-01	.1603E-01
24 .2400E+02	.2112E-01	.1934E-01	.1900E-01	.2057E-01	.2310E-01	.2503E-01	.2596E-01	.2623E-01	.2623E-01	.2615E-01
25 .2500E+02	.3460E-01	.3186E-01	.3130E-01	.3387E-01	.3804E-01	.4124E-01	.4274E-01	.4321E-01	.4321E-01	.4307E-01
26 .2600E+02	.5810E-01	.5319E-01	.5225E-01	.5661E-01	.6343E-01	.6874E-01	.7136E-01	.7204E-01	.7204E-01	.7181E-01
27 .2700E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
28 .2800E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
29 .2900E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01
30 .3000E+02	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01	.8716E-01

	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	.0	.0	.0
2	.2000E+01	.4447E-07	.4447E-07	.4447E-07
3	.3000E+01	.2152E-06	.2152E-06	.2152E-06
4	.4000E+01	.6421E-06	.6421E-06	.6421E-06
5	.5000E+01	.1496E-05	.1496E-05	.1496E-05
6	.6000E+01	.3138E-05	.3138E-05	.3138E-05
7	.7000E+01	.5984E-05	.5984E-05	.5984E-05
8	.8000E+01	.1055E-04	.1055E-04	.1055E-04
9	.9000E+01	.1851E-04	.1851E-04	.1851E-04
10	.1000E+02	.3146E-04	.3146E-04	.3146E-04
11	.1100E+02	.5201E-04	.5201E-04	.5201E-04
12	.1200E+02	.8609E-04	.8609E-04	.8609E-04
13	.1300E+02	.1404E-03	.1404E-03	.1404E-03
14	.1400E+02	.2267E-03	.2267E-03	.2267E-03
15	.1500E+02	.3650E-03	.3650E-03	.3650E-03
16	.1600E+02	.5840E-03	.5840E-03	.5840E-03
17	.1700E+02	.9349E-03	.9349E-03	.9349E-03
18	.1800E+02	.1496E-02	.1496E-02	.1496E-02
19	.1900E+02	.2389E-02	.2389E-02	.2393E-02
20	.2000E+02	.3828E-02	.3828E-02	.3828E-02
21	.2100E+02	.6140E-02	.6140E-02	.6140E-02
22	.2200E+02	.9890E-02	.9890E-02	.9890E-02
23	.2300E+02	.1601E-01	.1601E-01	.1602E-01
24	.2400E+02	.2611E-01	.2611E-01	.2612E-01
25	.2500E+02	.4300E-01	.4300E-01	.4304E-01
26	.2600E+02	.7181E-01	.7181E-01	.7181E-01
27	.2700E+02	.8716E-01	.8716E-01	.8716E-01
28	.2800E+02	.8716E-01	.8716E-01	.8716E-01
29	.2900E+02	.8716E-01	.8716E-01	.8716E-01
30	.3000E+02	.8716E-01	.8716E-01	.8716E-01

STATION 1 **** W-V-L ****

	IZ=	1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.3000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.4000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.5000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.6000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.7000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.8000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.9000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.1000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.1100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.1200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	.1300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	.1400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	.1500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	.1600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	.1700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	.1800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	.1900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	.2000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	.2100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.2200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.2300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.2400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.2500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.2600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.2700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.2800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.2900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.3000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.4000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.5000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.6000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.7000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.8000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.9000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.1000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.1100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.1200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	.1300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	.1400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	.1500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	.1600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	.1700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	.1800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	.1900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	.2000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	.2100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.2200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.2300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.2400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.2500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.2600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.2700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.2800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.2900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	IZ=	21	22	23	24	25	26	27	28	29	30
	Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY	Y										
1	.1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3	.3000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4	.4000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5	.5000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6	.6000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7	.7000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8	.8000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9	.9000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10	.1000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11	.1100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12	.1200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13	.1300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14	.1400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15	.1500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16	.1600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17	.1700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18	.1800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19	.1900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20	.2000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
21	.2100E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
22	.2200E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
23	.2300E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
24	.2400E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
25	.2500E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
26	.2600E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
27	.2700E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
28	.2800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.2900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	IZ= Z =	31 .3100E+02	32 .3200E+02	33 .3300E+02
1	.1000E+01	.0	.0	.0
2	.2000E+01	.0	.0	.0
3	.3000E+01	.0	.0	.0
4	.4000E+01	.0	.0	.0
5	.5000E+01	.0	.0	.0
6	.6000E+01	.0	.0	.0
7	.7000E+01	.0	.0	.0
8	.8000E+01	.0	.0	.0
9	.9000E+01	.0	.0	.0
10	.1000E+02	.0	.0	.0
11	.1100E+02	.0	.0	.0
12	.1200E+02	.0	.0	.0
13	.1300E+02	.0	.0	.0
14	.1400E+02	.0	.0	.0
15	.1500E+02	.0	.0	.0
16	.1600E+02	.0	.0	.0
17	.1700E+02	.0	.0	.0
18	.1800E+02	.0	.0	.0
19	.1900E+02	.0	.0	.0
20	.2000E+02	.0	.0	.0
21	.2100E+02	.0	.0	.0
22	.2200E+02	.0	.0	.0
23	.2300E+02	.0	.0	.0
24	.2400E+02	.0	.0	.0
25	.2500E+02	.0	.0	.0
26	.2600E+02	.0	.0	.0
27	.2700E+02	.0	.0	.0
28	.2800E+02	.0	.0	.0
29	.2900E+02	.0	.0	.0
30	.3000E+02	.0	.0	.0

STATION 1 **** VOR-X ****

IY	IZ= Z = / Y	1 .1000E+01	2 .2000E+01	3 .3000E+01	4 .4000E+01	5 .5000E+01	6 .6000E+01	7 .7000E+01	8 .8000E+01	9 .9000E+01	10 .1000E+02
1	.1000E+01	.3567E-16	.1498E-16	-.1973E-12	-.1273E-10	-.9051E-09	-.6308E-08	.1624E-07	.4201E-06	.3416E-05	.1439E-04
2	.2000E+01	-.9387E-09	-.3325E-09	.1134E-08	.3756E-08	.5663E-08	.3207E-08	-.1359E-05	-.2043E-05	-.1525E-04	-.5289E-04
3	.3000E+01	-.4688E-08	-.1566E-08	.5663E-08	-.6752E-06	-.7573E-06	.8430E-06	.5162E-05	-.4984E-05	-.3383E-04	-.1255E-03
4	.4000E+01	-.1361E-07	-.4836E-08	.1643E-07	-.1123E-05	-.1268E-05	.1364E-05	.5450E-05	-.9503E-05	-.5328E-04	-.2265E-03
5	.5000E+01	-.3207E-07	-.1139E-07	.3671E-07	-.1653E-05	-.1870E-05	.1949E-05	.1475E-05	-.1304E-04	-.6038E-04	-.3494E-03
6	.6000E+01	-.6563E-07	-.2331E-07	.7921E-07	.2590E-05	.2032E-06	-.6236E-06	-.9877E-05	-.1725E-04	-.1127E-03	-.4768E-03
7	.7000E+01	-.1168E-06	-.4219E-07	.1434E-06	.4662E-06	.3736E-06	-.1212E-05	.1815E-05	-.1857E-04	-.1589E-03	-.6942E-03
8	.8000E+01	-.2149E-06	-.7632E-07	.2593E-06	.8465E-06	.6762E-06	-.2259E-05	-.8557E-05	-.3604E-04	-.2265E-03	-.9397E-03
9	.9000E+01	-.3778E-06	-.1342E-06	.4556E-06	.1487E-05	.1176E-05	-.4053E-05	-.5924E-05	-.4373E-04	-.2882E-03	-.1245E-02
10	.1000E+02	-.6289E-06	-.2233E-06	.7591E-06	.2473E-05	.1975E-05	.3011E-05	-.5218E-05	-.6343E-04	-.3871E-03	-.1626E-02
11	.1100E+02	-.1056E-05	-.7747E-06	.1272E-05	-.6171E-05	-.8312E-05	.1291E-05	-.5111E-05	-.8016E-04	-.4968E-03	-.2146E-02
12	.1200E+02	-.1748E-05	-.6204E-06	.2105E-05	.6863E-05	.5232E-05	-.2730E-05	-.1171E-04	-.1047E-03	-.6712E-03	-.2873E-02
13	.1300E+02	-.2628E-05	-.1003E-05	.3402E-05	.1109E-04	.8648E-05	-.1068E-04	-.3690E-05	-.1366E-03	-.9248E-03	-.3775E-02
14	.1400E+02	-.4573E-05	-.1621E-05	.5499E-05	-.3544E-05	-.1007E-04	.2059E-05	.5280E-05	-.2091E-03	-.1201E-02	-.4954E-02
15	.1500E+02	-.7344E-05	-.2603E-05	.8818E-05	.1706E-05	-.8116E-05	.1868E-04	-.1488E-04	-.2784E-03	-.1594E-02	-.6637E-02
16	.1600E+02	-.1179E-04	-.4175E-05	-.1649E-04	-.2244E-04	-.2655E-05	-.4313E-05	-.1760E-04	-.3517E-03	-.2212E-02	-.8805E-02
17	.1700E+02	-.1893E-04	-.6696E-05	-.1603E-04	-.1289E-04	.8144E-05	.3631E-05	-.6421E-04	-.5657E-03	-.2933E-02	-.1174E-01
18	.1800E+02	-.3031E-04	-.1066E-04	-.1273E-04	.8093E-05	.2895E-04	.8522E-06	-.6603E-04	-.7762E-03	-.4074E-02	-.1608E-01
19	.1900E+02	.1002E-03	[illegible]	-.3512E-05	-.1916E-04	-.1038E-04	-.2675E-04	-.1722E-03	-.1090E-02	-.5711E-02	-.2196E-01
20	.2000E+02	-.7751E-04	-.2735E-04	.1439E-04	.3816E-04	.3473E-04	-.7956E-06	-.2670E-03	-.1636E-02	-.7948E-02	-.3037E-01
21	.2100E+02	-.1246E-03	-.4343E-04	.4914E-04	.3995E-04	-.6363E-06	-.2087E-04	-.3276E-03	-.2341E-02	-.1153E-01	-.4245E-01
22	.2200E+02	-.2013E-03	-.7051E-04	-.1155E-04	.7409E-04	.1207E-03	-.1509E-03	-.4803E-03	-.3556E-02	-.1657E-01	-.5965E-01
23	.2300E+02	.5958E-04	.2760E-04	.6707E-04	.1031E-04	-.3035E-04	-.9446E-04	-.8156E-03	-.5325E-02	-.2403E-01	-.8505E-01
24	.2400E+02	-.4069E-04	-.5332E-05	.2127E-04	.6147E-05	.4550E-04	-.2724E-03	-.1491E-02	-.8166E-02	-.3541E-01	-.1218E+00
25	.2500E+02	.3670E-03	.1554E-03	-.5272E-07	-.1112E-03	-.1470E-04	-.1735E-04	-.2266E-02	-.1255E-01	-.5201E-01	-.1767E+00
26	.2600E+02	-.2283E-03	-.2841E-03	.3274E-03	-.5566E-03	-.1534E-02	.4130E-02	.2421E-01	.4922E-01	.1244E-01	-.1900E+00
27	.2700E+02	-.2771E-03	-.1798E-04	.3031E-03	.3654E-03	.6672E-03	-.2324E-02	-.1159E-01	-.3639E-01	-.9295E-01	-.1947E+00
28	.2800E+02	.2177E-13	.0	.0	.0	.0	.0	.0	.0	.0	.0
29	.2900E+02	.2194E-13	.0	.0	.0	.0	.0	.0	.0	.0	.0
30	.3000E+02	.2225E-13	.1814E-16	-.5477E-15	-.1591E-15	-.1086E-15	.3677E-15	.1620E-13	.4110E-14	.7615E-14	.1143E-13

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.6033E-04	.1471E-03	.4371E-03	.4061E-03	.5038E-03	.4053E-03	.4240E-03	.4053E-03	.5088E-03	.4061E-03
2 .2000E+01	-.2236E-03	-.4574E-03	-.8386E-03	-.1178E-02	-.1711E-02	-.1895E-02	-.1896E-02	-.1895E-02	-.1711E-02	-.1178E-02
3 .3000E+01	-.4639E-03	-.1122E-02	-.1681E-02	-.2822E-02	-.3416E-02	-.4149E-02	-.4207E-02	-.4149E-02	-.3416E-02	-.2822E-02
4 .4000E+01	-.7958E-03	-.1794E-02	-.3173E-02	-.4779E-02	-.6077E-02	-.6476E-02	-.7204E-02	-.6476E-02	-.6077E-02	-.4779E-02
5 .5000E+01	-.1142E-02	-.2613E-02	-.4829E-02	-.7352E-02	-.9218E-02	-.1034E-01	-.1121E-01	-.1034E-01	-.9218E-02	-.7352E-02
6 .6000E+01	-.1617E-02	-.3951E-02	-.7245E-02	-.1060E-01	-.1316E-01	-.1471E-01	-.1537E-01	-.1471E-01	-.1316E-01	-.1060E-01
7 .7000E+01	-.2364E-02	-.5317E-02	-.9800E-02	-.1442E-01	-.1750E-01	-.1973E-01	-.2044E-01	-.1973E-01	-.1750E-01	-.1442E-01
8 .8000E+01	-.3170E-02	-.7207E-02	-.1287E-01	-.1903E-01	-.2380E-01	-.2655E-01	-.2828E-01	-.2655E-01	-.2380E-01	-.1903E-01
9 .9000E+01	-.4054E-02	-.9707E-02	-.1724E-01	-.2482E-01	-.3131E-01	-.3594E-01	-.3697E-01	-.3594E-01	-.3131E-01	-.2482E-01
10 .1000E+02	-.5376E-02	-.1254E-01	-.2265E-01	-.3303E-01	-.4082E-01	-.4599E-01	-.4756E-01	-.4599E-01	-.4082E-01	-.3303E-01
11 .1100E+02	-.7172E-02	-.1623E-01	-.2917E-01	-.4289E-01	-.5313E-01	-.5943E-01	-.6183E-01	-.5943E-01	-.5313E-01	-.4289E-01
12 .1200E+02	-.9328E-02	-.2103E-01	-.3772E-01	-.5463E-01	-.6812E-01	-.7701E-01	-.7934E-01	-.7701E-01	-.6812E-01	-.5463E-01
13 .1300E+02	-.1208E-01	-.2737E-01	-.4843E-01	-.7053E-01	-.8704E-01	-.9726E-01	-.1018E+00	-.9726E-01	-.8704E-01	-.7053E-01
14 .1400E+02	-.1574E-01	-.3525E-01	-.6215E-01	-.8961E-01	-.1102E+00	-.1239E+00	-.1296E+00	-.1239E+00	-.1102E+00	-.8961E-01
15 .1500E+02	-.2054E-01	-.4545E-01	-.7960E-01	-.1140E+00	-.1403E+00	-.1573E+00	-.1636E+00	-.1573E+00	-.1403E+00	-.1140E+00
16 .1600E+02	-.2687E-01	-.5905E-01	-.1016E+00	-.1449E+00	-.1784E+00	-.1995E+00	-.2069E+00	-.1995E+00	-.1784E+00	-.1449E+00
17 .1700E+02	-.3554E-01	-.7626E-01	-.1302E+00	-.1846E+00	-.2266E+00	-.2530E+00	-.2623E+00	-.2530E+00	-.2266E+00	-.1846E+00
18 .1800E+02	-.4711E-01	-.9951E-01	-.1676E+00	-.2356E+00	-.2870E+00	-.3204E+00	-.3312E+00	-.3204E+00	-.2870E+00	-.2356E+00
19 .1900E+02	-.6312E-01	-.1305E+00	-.2161E+00	-.3004E+00	-.3644E+00	-.4051E+00	-.4188E+00	-.4051E+00	-.3644E+00	-.3004E+00
20 .2000E+02	-.8505E-01	-.1717E+00	-.2792E+00	-.3836E+00	-.4631E+00	-.5127E+00	-.5309E+00	-.5127E+00	-.4631E+00	-.3836E+00
21 .2100E+02	-.1155E+00	-.2277E+00	-.3633E+00	-.4912E+00	-.5887E+00	-.6512E+00	-.6728E+00	-.6512E+00	-.5887E+00	-.4912E+00
22 .2200E+02	-.1583E+00	-.3043E+00	-.4743E+00	-.6327E+00	-.7522E+00	-.8275E+00	-.8541E+00	-.8275E+00	-.7522E+00	-.6327E+00
23 .2300E+02	-.2187E+00	-.4099E+00	-.6234E+00	-.8190E+00	-.9636E+00	-.1056E+01	-.1089E+01	-.1056E+01	-.9636E+00	-.8190E+00
24 .2400E+02	-.3049E+00	-.5558E+00	-.8256E+00	-.1064E+01	-.1240E+01	-.1354E+01	-.1393E+01	-.1354E+01	-.1240E+01	-.1064E+01
25 .2500E+02	-.4284E+00	-.7604E+00	-.1102E+01	-.1393E+01	-.1605E+01	-.1744E+01	-.1793E+01	-.1744E+01	-.1605E+01	-.1393E+01
26 .2600E+02	-.5864E+00	-.9969E+00	-.1240E+01	-.1318E+01	-.1342E+01	-.1353E+01	-.1355E+01	-.1353E+01	-.1342E+01	-.1318E+01
27 .2700E+02	-.3267E+00	-.4307E+00	-.4621E+00	-.4376E+00	-.4083E+00	-.3833E+00	-.3734E+00	-.3838E+00	-.4083E+00	-.4376E+00
28 .2800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 .2900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30 .3000E+02	.1520E-13	.1874E-13	.2188E-13	.2444E-13	.2633E-13	.2748E-13	.2787E-13	.2748E-13	.2633E-13	.2444E-13

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.4371E-03	.1471E-03	.6033E-04	.1439E-04	.3416E-05	.4201E-06	.1824E-07	-.6308E-08	-.9051E-09	-.1273E-10
2 .2000E+01	-.8386E-03	-.4574E-03	-.2236E-03	-.5289E-04	-.1525E-04	-.2043E-05	-.1359E-05	.3207E-08	.5669E-08	.3756E-08
3 .3000E+01	-.1881E-02	-.1122E-02	-.4639E-03	-.1255E-03	-.3383E-04	-.4984E-05	.5162E-05	.8430E-05	-.7573E-06	-.6752E-06
4 .4000E+01	-.3173E-02	-.1794E-02	-.7958E-03	-.2265E-03	-.5328E-04	-.9503E-05	.5450E-05	.1364E-05	-.1268E-05	-.1123E-05
5 .5000E+01	-.4829E-02	-.2813E-02	-.1142E-02	-.3494E-03	-.8038E-04	-.1304E-04	.1475E-05	.1949E-05	-.1890E-05	-.1653E-05
6 .6000E+01	-.7245E-02	-.3951E-02	-.1617E-02	-.4768E-03	-.1127E-03	-.1725E-04	-.9877E-05	-.6236E-06	.2092E-06	.2590E-06
7 .7000E+01	-.9800E-02	-.5317E-02	-.2364E-02	-.6942E-03	-.1589E-03	-.1857E-04	.1815E-05	-.1212E-05	.3796E-06	.4682E-06
8 .8000E+01	-.1287E-01	-.7207E-02	-.3170E-02	-.9397E-03	-.2265E-03	-.3604E-04	-.8557E-05	-.2259E-05	.6762E-06	.8465E-06
9 .9000E+01	-.1724E-01	-.9707E-02	-.4054E-02	-.1245E-02	-.2882E-03	-.4373E-04	-.5924E-05	-.4053E-05	.1176E-05	.1487E-05
10 .1000E+02	-.2265E-01	-.1254E-01	-.5376E-02	-.1626E-02	-.3871E-03	-.6843E-04	-.5218E-05	.3011E-05	.1975E-05	.2473E-05
11 .1100E+02	-.2917E-01	-.1623E-01	-.7172E-02	-.2146E-02	-.4968E-03	-.8016E-04	-.6111E-05	.1291E-05	-.8318E-05	-.6171E-05
12 .1200E+02	-.3772E-01	-.2103E-01	-.9328E-02	-.2873E-02	-.6712E-03	-.1047E-03	-.1171E-04	-.2730E-05	.5292E-05	.6863E-05
13 .1300E+02	-.4843E-01	-.2737E-01	-.1208E-01	-.3775E-02	-.9248E-03	-.1366E-03	-.3690E-05	-.1068E-04	.8648E-05	.1109E-04
14 .1400E+02	-.6215E-01	-.3525E-01	-.1574E-01	-.4954E-02	-.1201E-02	-.2091E-03	.5280E-05	.2059E-05	-.1007E-04	-.3544E-05
15 .1500E+02	-.7960E-01	-.4545E-01	-.2054E-01	-.6637E-02	-.1594E-02	-.2784E-03	-.1488E-04	.1868E-04	-.8116E-05	.1706E-05
16 .1600E+02	-.1016E+00	-.5905E-01	-.2687E-01	-.8805E-02	-.2212E-02	-.3517E-03	-.1760E-04	-.4313E-05	-.2865E-05	-.2244E-04
17 .1700E+02	-.1302E+00	-.7626E-01	-.3554E-01	-.1174E-01	-.2933E-02	-.5657E-03	-.6421E-04	.3631E-05	.8144E-05	-.1289E-04
18 .1800E+02	-.1676E+00	-.9951E-01	-.4711E-01	-.1608E-01	-.4074E-02	-.7762E-03	-.6603E-04	.8528E-06	.2895E-04	.8093E-05
19 .1900E+02	-.2161E+00	-.1305E+00	-.6312E-01	-.2196E-01	-.5711E-02	-.1090E-02	-.1722E-03	-.2675E-04	-.1008E-04	-.1916E-04
20 .2000E+02	-.2792E+00	-.1717E+00	-.8505E-01	-.3037E-01	-.7948E-02	-.1636E-02	-.2870E-03	-.7956E-06	.3473E-04	.3816E-04
21 .2100E+02	-.3633E+00	-.2277E+00	-.1155E+00	-.4245E-01	-.1153E-01	-.2341E-02	-.3276E-03	-.2087E-04	-.6363E-06	.3995E-04
22 .2200E+02	-.4743E+00	-.3043E+00	-.1583E+00	-.5965E-01	-.1657E-01	-.3556E-02	-.4803E-03	-.1509E-03	.1207E-03	.7409E-04
23 .2300E+02	-.6234E+00	-.4099E+00	-.2187E+00	-.8505E-01	-.2403E-01	-.5325E-02	-.8156E-03	-.9446E-04	-.3035E-04	.1031E-04
24 .2400E+02	-.8256E+00	-.5558E+00	-.3049E+00	-.1218E+00	-.3541E-01	-.8166E-02	-.1491E-02	-.2724E-03	.4560E-04	.8147E-05
25 .2500E+02	-.1102E+01	-.7604E+00	-.4284E+00	-.1767E+00	-.5201E-01	-.1255E-01	-.2266E-02	-.1735E-04	-.1670E-04	-.1112E-03
26 .2600E+02	-.1240E+01	-.9969E+00	-.5864E+00	-.1900E+00	.1244E-01	.4822E-01	.2421E-01	.4130E-02	-.1584E-02	-.5566E-03
27 .2700E+02	-.4621E+00	-.4307E+00	-.3267E+00	-.1947E+00	-.9295E-01	-.3639E-01	-.1159E-01	-.2384E-02	.6672E-03	.9368E-03
28 .2800E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
29 .2900E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
30 .3000E+02	.2188E-13	.1874E-13	.1520E-13	.1143E-13	.7615E-14	.4110E-14	.1620E-14	.3677E-15	-.1086E-15	-.1591E-15

	IZ=	31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	-.1978E-12	.1498E-16	.4460E-16
2	.2000E+01	.1134E-08	-.3335E-09	-.9387E-09
3	.3000E+01	.5663E-08	-.1666E-08	-.4688E-08
4	.4000E+01	.1643E-07	-.4836E-08	-.1361E-07
5	.5000E+01	.3871E-07	-.1139E-07	-.3207E-07
6	.6000E+01	.7921E-07	-.2331E-07	-.6563E-07
7	.7000E+01	.1434E-06	-.4219E-07	-.1188E-06
8	.8000E+01	.2593E-06	-.7632E-07	-.2149E-06
9	.9000E+01	.4556E-06	-.1342E-06	-.3778E-06
10	.1000E+02	.7581E-06	-.2233E-06	-.6289E-06
11	.1100E+02	.1272E-05	-.3747E-06	-.1056E-05
12	.1200E+02	.2105E-05	-.6204E-06	-.1748E-05
13	.1300E+02	.3402E-05	-.1003E-05	-.2828E-05
14	.1400E+02	.5498E-05	-.1621E-05	-.4573E-05
15	.1500E+02	.8818E-05	-.2603E-05	-.7344E-05
16	.1600E+02	-.1649E-04	-.4175E-05	-.1179E-04
17	.1700E+02	-.1603E-04	-.6696E-05	-.1893E-04
18	.1800E+02	-.1273E-04	-.1068E-04	-.3031E-04
19	.1900E+02	-.3912E-05	.3800E-04	.1002E-03
20	.2000E+02	.1439E-04	-.2735E-04	-.7751E-04
21	.2100E+02	.4914E-04	-.4383E-04	-.1246E-03
22	.2200E+02	-.1155E-04	-.7051E-04	-.2013E-03
23	.2300E+02	.6707E-04	-.2760E-04	.5956E-04
24	.2400E+02	.2127E-04	-.5332E-05	-.4069E-04
25	.2500E+02	-.5272E-07	.1554E-03	.3870E-03
26	.2600E+02	.9274E-03	-.2841E-03	-.8283E-03
27	.2700E+02	.3031E-03	-.9398E-04	-.2771E-03
28	.2800E+02	.0	.0	-.4354E-13
29	.2900E+02	.0	.0	-.4398E-13
30	.3000E+02	-.5477E-16	.1814E-16	-.4433E-13

The next page prints out integral properties, area and mass flux. It also prints out the iteration history of scalar potential equation at streamwise station 3. The ITER is the iteration number, PMAX is the maximum value of scalar potential, DELP is the maximum of change of scalar potential at one iteration. RHSMAX is the maximum residual of equation. The PTEST and RHS test are the measures of criterion of convergence test of equation. In the present calculation, when PTEST < 0.1, RHS < 0.1, and if RHMAX/RHMAXI < 0.005 (RHMAXI is the maximum residue at ITER=1), the equation converges.

ENTERING PRIMARY

VISCOUS PRESSURE DROP ITERATION
DP/DX MASS FLUX ERROR
.0 .0

INTEGRATED PROPERTIES AT STATION 3

AREA .70592E-02 SQ.FT.
PASS FLUX .33719E-02 LBM./SEC.

ENTERING SECFLG
GREEN .00000

ADI ITER	PMAX	DELP	RHSMAX	PTEST	RHS TEST
1	.30287E-01	.13316E-03	.83318E+02	.40651E+02	.23766E-02
2	.30269E-01	.18805E-05	.51752E+02	.21945E+02	.72667E-02
3	.30333E-01	.20866E-03	.20545E+02	.93125E+01	.20313E-01
4	.30552E-01	.21978E-03	.10439E+02	.37465E+01	.42106E-01
5	.30964E-01	.41110E-03	.63594E+02	.26554E+01	.13928E-01
6	.30962E-01	.19783E-04	.19587E+03	.58784E+01	.20191E-03
7	.30975E-01	.34785E-04	.21660E+02	.39649E+01	.32071E-02
8	.31021E-01	.54580E-04	.93676E+01	.24045E+01	.11740E-01
9	.31133E-01	.11184E-03	.87993E+01	.18712E+01	.25401E-01
10	.31336E-01	.20467E-03	.21810E+02	.13063E+01	.18762E-01
11	.31339E-01	.27450E-05	.60676E+02	.25672E+01	.23625E-03
12	.31348E-01	.15052E-04	.2654CE+01	.17638E+01	.35380E-02
13	.31374E-01	.26573E-04	.53329E+01	.11662E+01	.10116E-01
14	.31433E-01	.59599E-04	.50773E+01	.98757E+00	.23476E-01
15	.31543E-01	.11056E-03	.99089E+01	.73907E+00	.23527E-01
16	.31546E-01	.40767E-05	.25236E+02	.11839E+01	.32309E-03
17	.31552E-01	.72320E-05	.46695E+01	.80971E+00	.30976E-02
18	.31567E-01	.15091E-04	.31637E+01	.64846E+00	.85398E-02
19	.31601E-01	.35514E-04	.31509E+01	.58536E+00	.22542E-01
20	.31664E-01	.73185E-04	.57502E+01	.46226E+00	.25455E-01
21	.31666E-01	.22857E-05	.14245E+02	.66406E+00	.32090E-03
22	.31670E-01	.46258E-05	.27408E+01	.51598E+00	.33754E-02
23	.31679E-01	.94590E-05	.19545E+01	.40417E+00	.85586E-02
24	.31699E-01	.22165E-04	.19382E+01	.36426E+00	.22876E-01
25	.31737E-01	.46378E-04	.31853E+01	.29226E+00	.29120E-01
26	.31739E-01	.14530E-05	.97024E+01	.42117E+00	.23951E-03
27	.31741E-01	.29417E-05	.16700E+01	.32740E+00	.35229E-02
28	.31747E-01	.59254E-05	.12298E+01	.25318E+00	.96364E-02
29	.31759E-01	.13937E-04	.11992E+01	.22858E+00	.23244E-01
30	.31782E-01	.29251E-04	.19152E+01	.18407E+00	.30546E-01
31	.31783E-01	.91508E-06	.61829E+01	.26604E+00	.29730E-03
32	.31784E-01	.18536E-05	.10340E+01	.20602E+00	.35853E-02
33	.31788E-01	.37328E-05	.77689E+00	.15929E+00	.96097E-02
34	.31795E-01	.87727E-05	.74911E+00	.14371E+00	.23421E-01
35	.31810E-01	.18488E-04	.11733E+01	.11624E+00	.31515E-01
36	.31810E-01	.58627E-06	.38251E+01	.16956E+00	.30654E-03
37	.31811E-01	.11626E-05	.64446E+00	.12911E+00	.36079E-02
38	.31813E-01	.23494E-05	.48110E+00	.10017E+00	.95677E-02
39	.31818E-01	.55230E-05	.47353E+00	.90411E-01	.23327E-01
40	.31827E-01	.11671E-04	.72213E+00	.73339E-01	.32323E-01
41	.31827E-01	.37219E-06	.23636E+01	.10759E+00	.31493E-03

ADI CONVERGES IN 42 ITERATIONS, EPS,PAT= .80902E-01 .35950E-02 .10000E-03 .50000E-03
POISSON EQUATION CONVERGES IN 1

The next page prints out iteration history of stream function - vorticity equations at streamwise station 3. The ITER is the iteration number. RHO is the parameter for time scaling, MODEF and MODES are parameters relating to time scaling. DFF, PXF are the maximum value of charge of streamwise vorticity and maximum value of streamwise vorticity respectively. DPS, PXS are the maximum absolute value of charge of stream-function and maximum value of stream-function respectively. TS and TF are the measures of criterion of convergence test of equation. When TS < 0.1 and TF < 0.1 simultaneously ICONV value increases by 1. If ICONV=5, then equation converges.

CALL LOAD
CALL ADI2X2

CONVERGENCE HISTORY FOR VORTICITY-STREAM FUNCTION, WHEN ICONT=5, EQUATION CONVERGES

ITER	RHO	MODEF	DPF	PXF	MODES	DPS	PXS	TF	TS	ICONV
1	.3991E+01	0	.5653E+03	.4185E+03	0	.1083E-02	.3567E-01	.5391E+04	.1212E+03	0
2	.8710E+00	0	.3049E+03	.3645E+03	0	.3508E-03	.3544E-01	.7287E+03	.8622E+01	0
3	.1901E+00	0	.1548E+04	.1511E+04	0	.3667E-03	.3511E-01	.1949E+03	.1986E+01	0
4	.4149E-01	0	.2206E+04	.3543E+04	0	.3359E-03	.3487E-01	.2584E+02	.3998E+00	0
5	.9056E-02	0	.1092E+04	.2875E+04	0	.2089E-03	.3494E-01	.3439E+01	.5430E-01	0
6	.3991E+01	0	.2833E+04	.4961E+03	0	.7556E-04	.3484E-01	.2279E+05	.8655E+01	0
7	.8710E+00	0	.1746E+03	.3506E+03	0	.6143E-04	.3486E-01	.4337E+03	.1535E+01	0
8	.1901E+00	0	.3206E+03	.5348E+03	0	.4541E-04	.3486E-01	.1140E+03	.2476E+00	0
9	.4149E-01	0	.7440E+03	.1279E+04	0	.5265E-04	.3483E-01	.2414E+02	.6271E-01	0
10	.9056E-02	0	.5658E+03	.1077E+04	0	.3665E-04	.3483E-01	.4757E+01	.9530E-02	0
11	.3991E+01	0	.7340E+03	.3431E+03	0	.1293E-04	.3483E-01	.8536E+04	.1482E+01	0
12	.8710E+00	0	.3179E+02	.3150E+03	0	.2090E-04	.3484E-01	.8791E+02	.5225E+00	0
13	.1901E+00	0	.6649E+02	.2485E+03	0	.1711E-04	.3484E-01	.5086E+02	.9335E-01	0
14	.4149E-01	0	.3154E+03	.2916E+03	0	.1133E-04	.3484E-01	.4488E+02	.1349E-01	0
15	.9056E-02	0	.5662E+02	.3149E+03	0	.1586E-04	.3484E-01	.1629E+01	.4124E-02	0
16	.3991E+01	0	.2766E+03	.2670E+03	0	.3937E-05	.3484E-01	.4134E+04	.4510E+00	0
17	.8710E+00	0	.1269E+02	.2704E+03	0	.7279E-05	.3484E-01	.4087E+02	.1820E+00	0
18	.1901E+00	0	.2604E+02	.2964E+03	0	.6861E-05	.3484E-01	.1670E+02	.3744E-01	0
19	.4149E-01	0	.1087E+03	.4051E+03	0	.6100E-05	.3484E-01	.1114E+02	.7265E-02	0
20	.9056E-02	0	.2207E+02	.3860E+03	0	.6123E-05	.3484E-01	.5177E+00	.1592E-02	1
21	.3991E+01	0	.9345E+02	.2941E+03	0	.1381E-05	.3484E-01	.1268E+04	.1583E+00	0
22	.8710E+00	0	.4954E+01	.2892E+03	0	.2834E-05	.3484E-01	.1492E+02	.7086E-01	0
23	.1901E+00	0	.8266E+01	.2875E+03	0	.2821E-05	.3484E-01	.5466E+01	.1540E-01	0
24	.4149E-01	0	.3381E+02	.2871E+03	0	.2215E-05	.3484E-01	.4858E+01	.2638E-02	0
25	.9056E-02	0	.8782E+01	.2821E+03	0	.2155E-05	.3484E-01	.2820E+00	.5602E-03	1
26	.3991E+01	0	.2851E+02	.2820E+03	0	.4577E-06	.3484E-01	.4035E+03	.5243E-01	0
27	.8710E+00	0	.1460E+01	.2835E+03	0	.1016E-05	.3484E-01	.4486E+01	.2545E-01	0
28	.1901E+00	0	.2733E+01	.2823E+03	0	.1141E-05	.3484E-01	.1874E+01	.6227E-02	0
29	.4149E-01	0	.1343E+02	.2861E+03	0	.9175E-06	.3484E-01	.1947E+01	.1093E-02	0
30	.9056E-02	0	.3382E+01	.2855E+03	0	.7696E-06	.3484E-01	.1073E+00	.2001E-03	1
31	.3991E+01	0	.1212E+02	.2850E+03	0	.1720E-06	.3484E-01	.1698E+03	.1970E-01	0
32	.8710E+00	0	.5918E+00	.2847E+03	0	.3544E-06	.3484E-01	.1610E+01	.8861E-02	0
33	.1901E+00	0	.1013E+01	.2857E+03	0	.4059E-06	.3484E-01	.6741E+00	.2215E-02	1
34	.4149E-01	0	.4915E+01	.2906E+03	0	.3254E-06	.3484E-01	.7017E+00	.3887E-03	2
35	.9056E-02	0	.1373E+01	.2893E+03	0	.2387E-06	.3484E-01	.4298E-01	.6205E-04	3
36	.3991E+01	0	.4514E+01	.2848E+03	0	.7184E-07	.3484E-01	.6325E+02	.8229E-02	0
37	.8710E+00	0	.2003E+00	.2848E+03	0	.1146E-06	.3484E-01	.6141E+00	.2670E-02	1
38	.1901E+00	0	.4585E+00	.2843E+03	0	.1349E-06	.3484E-01	.3320E+00	.7362E-03	2
39	.4149E-01	0	.2173E+01	.2821E+03	0	.1052E-06	.3484E-01	.3226E+00	.1301E-03	3
40	.9056E-02	0	.4604E+00	.2826E+03	0	.9649E-07	.3484E-01	.1540E-01	.2508E-04	4
41	.3991E+01	0	.1385E+01	.2845E+03	0	.2753E-07	.3484E-01	.2784E+02	.3186E-02	0
42	.8710E+00	0	.8305E-01	.2846E+03	0	.4686E-07	.3484E-01	.2542E+00	.1171E-02	1
43	.1901E+00	0	.2156E+00	.2848E+03	0	.4117E-07	.3484E-01	.1439E+00	.2246E-03	2
44	.4149E-01	0	.9260E+00	.2855E+03	0	.3360E-07	.3484E-01	.1346E+00	.4002E-04	3
45	.9056E-02	0	.2446E+00	.2854E+03	0	.4056E-07	.3484E-01	.7762E-02	.1054E-04	4
46	.3991E+01	0	.8154E+00	.2848E+03	0	.1100E-07	.3484E-01	.1143E+02	.1261E-02	0
47	.8710E+00	0	.3578E-01	.2847E+03	0	.2010E-07	.3484E-01	.1094E+00	.5024E-03	1
48	.1901E+00	0	.8129E-01	.2847E+03	0	.1830E-07	.3484E-01	.5429E-01	.9985E-04	2
49	.4149E-01	0	.3314E+00	.2849E+03	0	.1457E-07	.3484E-01	.4836E-01	.1735E-04	3
50	.9056E-02	0	.8626E-01	.2845E+03	0	.1637E-07	.3484E-01	.2746E-02	.4256E-05	4
51	.3991E+01	0	.2978E+00	.2847E+03	0	.3966E-08	.3484E-01	.4166E+01	.4543E-03	0
52	.8710E+00	0	.1550E-01	.2847E+03	0	.7877E-08	.3484E-01	.4744E-01	.1969E-03	1
53	.1901E+00	0	.3176E-01	.2847E+03	0	.7776E-08	.3484E-01	.2121E-01	.4243E-04	2
54	.4149E-01	0	.1268E+00	.2847E+03	0	.6273E-08	.3484E-01	.1847E-01	.7471E-05	3
55	.9056E-02	0	.3142E-01	.2847E+03	0	.6105E-08	.3484E-01	.9993E-03	.1587E-05	4
56	.3991E+01	0	.1034E+00	.2847E+03	0	.1370E-08	.3484E-01	.1519E+01	.1570E-03	0
57	.8710E+00	0	.5024E-02	.2847E+03	0	.2907E-08	.3484E-01	.1537E-01	.7269E-04	1
58	.1901E+00	0	.1005E-01	.2847E+03	0	.3056E-08	.3484E-01	.6709E-02	.1667E-04	2
59	.4149E-01	0	.4078E-01	.2847E+03	0	.2481E-08	.3484E-01	.5943E-02	.2955E-05	3
60	.9056E-02	0	.9898E-02	.2847E+03	0	.2128E-08	.3484E-01	.3149E-03	.5532E-06	4
61	.3991E+01	0	.3421E-01	.2847E+03	0	.4570E-09	.3484E-01	.4796E+00	.5235E-04	1
62	.8710E+00	0	.1573E-02	.2847E+03	0	.1018E-08	.3484E-01	.4814E-02	.2544E-04	2
63	.1901E+00	0	.3113E-02	.2847E+03	0	.1125E-08	.3484E-01	.2079E-02	.6140E-05	3
64	.4149E-01	0	.1450E-01	.2847E+03	0	.9132E-09	.3484E-01	.2091E-02	.1088E-05	4
65	.9056E-02	0	.3606E-02	.2847E+03	0	.6816E-09	.3484E-01	.1147E-03	.1772E-06	5

RETURNED FROM ADI2X2

The following pages print out the Cartesian vertical coordinate 'Y', Cartesian spanwise coordinate 'Z', streamwise velocity 'u', the vertical velocity 'v', the spanwise velocity 'w', the streamwise vorticity 'vor-x' at grid point IY, IZ.

3-TH STATION AT .50000E+01

CENTERLINE LOCATION (.0 , .0 , .30000E+01) STEP SIZE .10000E+01

STATION 3 **** Y ****

IY	IZ= / Z =	1 .1000E+01	2 .2000E+01	3 .3000E+01	4 .4000E+01	5 .5000E+01	6 .6000E+01	7 .7000E+01	8 .8000E+01	9 .9000E+01	10 .1000E+02
1	.1000E+01	.5243E-01	.5243E-01	.5243E-01	.5243E-01	.5243E-01	.5243E-01	.5243E-01	.5242E-01	.5234E-01	.5182E-01
2	.2000E+01	.5246E-01	.5248E-01	.5248E-01	.5248E-01	.5248E-01	.5248E-01	.5248E-01	.5247E-01	.5238E-01	.5186E-01
3	.3000E+01	.5254E-01	.5254E-01	.5254E-01	.5254E-01	.5254E-01	.5254E-01	.5254E-01	.5253E-01	.5244E-01	.5192E-01
4	.4000E+01	.5262E-01	.5262E-01	.5262E-01	.5262E-01	.5262E-01	.5262E-01	.5262E-01	.5261E-01	.5251E-01	.5198E-01
5	.5000E+01	.5272E-01	.5272E-01	.5272E-01	.5272E-01	.5272E-01	.5272E-01	.5272E-01	.5270E-01	.5260E-01	.5207E-01
6	.6000E+01	.5284E-01	.5284E-01	.5284E-01	.5284E-01	.5284E-01	.5284E-01	.5284E-01	.5282E-01	.5272E-01	.5217E-01
7	.7000E+01	.5299E-01	.5299E-01	.5299E-01	.5299E-01	.5299E-01	.5299E-01	.5299E-01	.5297E-01	.5286E-01	.5231E-01
8	.8000E+01	.5318E-01	.5318E-01	.5318E-01	.5318E-01	.5319E-01	.5319E-01	.5318E-01	.5316E-01	.5304E-01	.5247E-01
9	.9000E+01	.5342E-01	.5342E-01	.5342E-01	.5343E-01	.5343E-01	.5343E-01	.5342E-01	.5340E-01	.5327E-01	.5268E-01
10	.1000E+02	.5373E-01	.5373E-01	.5373E-01	.5373E-01	.5373E-01	.5373E-01	.5372E-01	.5369E-01	.5355E-01	.5294E-01
11	.1100E+02	.5410E-01	.5410E-01	.5410E-01	.5410E-01	.5411E-01	.5411E-01	.5410E-01	.5406E-01	.5390E-01	.5327E-01
12	.1200E+02	.5456E-01	.5457E-01	.5457E-01	.5458E-01	.5458E-01	.5456E-01	.5457E-01	.5452E-01	.5434E-01	.5368E-01
13	.1300E+02	.5517E-01	.5517E-01	.5517E-01	.5517E-01	.5517E-01	.5517E-01	.5516E-01	.5510E-01	.5490E-01	.5419E-01
14	.1400E+02	.5591E-01	.5591E-01	.5591E-01	.5592E-01	.5592E-01	.5592E-01	.5590E-01	.5583E-01	.5559E-01	.5483E-01
15	.1500E+02	.5685E-01	.5685E-01	.5685E-01	.5685E-01	.5686E-01	.5686E-01	.5684E-01	.5675E-01	.5647E-01	.5564E-01
16	.1600E+02	.5803E-01	.5803E-01	.5803E-01	.5803E-01	.5804E-01	.5804E-01	.5801E-01	.5790E-01	.5757E-01	.5666E-01
17	.1700E+02	.5951E-01	.5951E-01	.5951E-01	.5951E-01	.5952E-01	.5953E-01	.5949E-01	.5935E-01	.5896E-01	.5795E-01
18	.1800E+02	.6138E-01	.6138E-01	.6138E-01	.6139E-01	.6140E-01	.6140E-01	.6135E-01	.6118E-01	.6071E-01	.5956E-01
19	.1900E+02	.6375E-01	.6375E-01	.6375E-01	.6375E-01	.6377E-01	.6377E-01	.6371E-01	.6349E-01	.6292E-01	.6161E-01
20	.2000E+02	.6675E-01	.6675E-01	.6675E-01	.6676E-01	.6678E-01	.6678E-01	.6670E-01	.6643E-01	.6572E-01	.6421E-01
21	.2100E+02	.7056E-01	.7056E-01	.7056E-01	.7058E-01	.7060E-01	.7061E-01	.7051E-01	.7016E-01	.6929E-01	.6751E-01
22	.2200E+02	.7544E-01	.7544E-01	.7544E-01	.7546E-01	.7549E-01	.7549E-01	.7537E-01	.7493E-01	.7386E-01	.7173E-01
23	.2300E+02	.8171E-01	.8171E-01	.8171E-01	.8173E-01	.8176E-01	.8178E-01	.8162E-01	.8106E-01	.7972E-01	.7715E-01
24	.2400E+02	.8982E-01	.8982E-01	.8982E-01	.8985E-01	.8991E-01	.8991E-01	.8970E-01	.8900E-01	.8731E-01	.8417E-01
25	.2500E+02	.1004E+00	.1004E+00	.1004E+00	.1005E+00	.1005E+00	.1005E+00	.1003E+00	.9937E-01	.9722E-01	.9335E-01
26	.2600E+02	.1145E+00	.1144E+00	.1144E+00	.1145E+00	.1146E+00	.1146E+00	.1142E+00	.1131E+00	.1103E+00	.1055E+00
27	.2700E+02	.1333E+00	.1333E+00	.1333E+00	.1333E+00	.1335E+00	.1335E+00	.1330E+00	.1315E+00	.1280E+00	.1218E+00
28	.2800E+02	.1592E+00	.1592E+00	.1592E+00	.1592E+00	.1594E+00	.1594E+00	.1588E+00	.1568E+00	.1522E+00	.1442E+00
29	.2900E+02	.1958E+00	.1958E+00	.1958E+00	.1959E+00	.1961E+00	.1961E+00	.1954E+00	.1927E+00	.1864E+00	.1759E+00
30	.3000E+02	.2500E+00	.2499E+00	.2499E+00	.2501E+00	.2504E+00	.2504E+00	.2493E+00	.2457E+00	.2371E+00	.2227E+00

Y	Y										
1	.1000E+01	.5007E-01	.4683E-01	.4052E-01	.3214E-01	.2222E-01	.1133E-01	.2128E-15	-.1133E-01	-.2222E-01	-.3214E-01
2	.2000E+01	.5011E-01	.4686E-01	.4055E-01	.3217E-01	.2223E-01	.1134E-01	.2126E-15	-.1134E-01	-.2223E-01	-.3217E-01
3	.3000E+01	.5016E-01	.4690E-01	.4059E-01	.3219E-01	.2225E-01	.1135E-01	.2123E-15	-.1135E-01	-.2225E-01	-.3219E-01
4	.4000E+01	.5022E-01	.4695E-01	.4063E-01	.3222E-01	.2227E-01	.1136E-01	.2120E-15	-.1136E-01	-.2227E-01	-.3222E-01
5	.5000E+01	.5029E-01	.4702E-01	.4068E-01	.3226E-01	.2230E-01	.1137E-01	.2116E-15	-.1137E-01	-.2230E-01	-.3226E-01
6	.6000E+01	.5039E-01	.4710E-01	.4075E-01	.3232E-01	.2233E-01	.1139E-01	.2110E-15	-.1139E-01	-.2233E-01	-.3232E-01
7	.7000E+01	.5050E-01	.4720E-01	.4083E-01	.3238E-01	.2237E-01	.1141E-01	.2104E-15	-.1141E-01	-.2237E-01	-.3238E-01
8	.8000E+01	.5065E-01	.4732E-01	.4093E-01	.3246E-01	.2243E-01	.1144E-01	.2096E-15	-.1144E-01	-.2243E-01	-.3246E-01
9	.9000E+01	.5084E-01	.4748E-01	.4106E-01	.3256E-01	.2250E-01	.1148E-01	.2086E-15	-.1148E-01	-.2250E-01	-.3256E-01
0	.1000E+02	.5107E-01	.4768E-01	.4123E-01	.3268E-01	.2258E-01	.1152E-01	.2073E-15	-.1152E-01	-.2258E-01	-.3268E-01
1	.1100E+02	.5136E-01	.4793E-01	.4143E-01	.3284E-01	.2269E-01	.1157E-01	.2057E-15	-.1157E-01	-.2269E-01	-.3284E-01
2	.1200E+02	.5173E-01	.4824E-01	.4169E-01	.3304E-01	.2282E-01	.1164E-01	.2037E-15	-.1164E-01	-.2282E-01	-.3304E-01
3	.1300E+02	.5219E-01	.4864E-01	.4201E-01	.3328E-01	.2299E-01	.1172E-01	.2011E-15	-.1172E-01	-.2299E-01	-.3328E-01
4	.1400E+02	.5276E-01	.4913E-01	.4242E-01	.3359E-01	.2320E-01	.1183E-01	.1979E-15	-.1183E-01	-.2320E-01	-.3359E-01
5	.1500E+02	.5349E-01	.4975E-01	.4292E-01	.3398E-01	.2346E-01	.1196E-01	.1940E-15	-.1196E-01	-.2346E-01	-.3398E-01
6	.1600E+02	.5439E-01	.5053E-01	.4356E-01	.3447E-01	.2379E-01	.1213E-01	.1889E-15	-.1213E-01	-.2379E-01	-.3447E-01
7	.1700E+02	.5554E-01	.5151E-01	.4437E-01	.3509E-01	.2421E-01	.1234E-01	.1826E-15	-.1234E-01	-.2421E-01	-.3509E-01
8	.1800E+02	.5699E-01	.5275E-01	.4539E-01	.3587E-01	.2474E-01	.1261E-01	.1746E-15	-.1261E-01	-.2474E-01	-.3587E-01
9	.1900E+02	.5882E-01	.5431E-01	.4667E-01	.3685E-01	.2540E-01	.1294E-01	.1646E-15	-.1294E-01	-.2540E-01	-.3685E-01
0	.2000E+02	.6113E-01	.5630E-01	.4830E-01	.3810E-01	.2625E-01	.1337E-01	.1518E-15	-.1337E-01	-.2625E-01	-.3810E-01
1	.2100E+02	.6408E-01	.5883E-01	.5037E-01	.3969E-01	.2732E-01	.1391E-01	.1355E-15	-.1391E-01	-.2732E-01	-.3969E-01
2	.2200E+02	.6785E-01	.6205E-01	.5302E-01	.4172E-01	.2870E-01	.1461E-01	.1147E-15	-.1461E-01	-.2870E-01	-.4172E-01
3	.2300E+02	.7270E-01	.6620E-01	.5643E-01	.4432E-01	.3047E-01	.1550E-01	.8800E-16	-.1550E-01	-.3047E-01	-.4432E-01
4	.2400E+02	.7897E-01	.7157E-01	.6084E-01	.4770E-01	.3275E-01	.1665E-01	.5342E-16	-.1665E-01	-.3275E-01	-.4770E-01
5	.2500E+02	.8716E-01	.7859E-01	.6659E-01	.5211E-01	.3574E-01	.1816E-01	.8236E-17	-.1816E-01	-.3574E-01	-.5211E-01
6	.2600E+02	.9800E-01	.8786E-01	.7421E-01	.5794E-01	.3969E-01	.2016E-01	-.5152E-16	-.2016E-01	-.3969E-01	-.5794E-01
7	.2700E+02	.1126E+00	.1003E+00	.8444E-01	.6577E-01	.4499E-01	.2284E-01	-.1318E-15	-.2284E-01	-.4499E-01	-.6577E-01
8	.2800E+02	.1326E+00	.1175E+00	.9850E-01	.7654E-01	.5229E-01	.2652E-01	-.2422E-15	-.2652E-01	-.5229E-01	-.7654E-01
9	.2900E+02	.1609E+00	.1417E+00	.1184E+00	.9178E-01	.6261E-01	.3173E-01	-.3983E-15	-.3173E-01	-.6261E-01	-.9178E-01
0	.3000E+02	.2027E+00	.1775E+00	.1478E+00	.1143E+00	.7787E-01	.3944E-01	-.6291E-15	-.3944E-01	-.7787E-01	-.1143E+00

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02

Y	Y										
1	.1000E+01	-.4052E-01	-.4683E-01	-.5007E-01	-.5182E-01	-.5234E-01	-.5242E-01	-.5243E-01	-.5243E-01	-.5243E-01	-.5243E-01
2	.2000E+01	-.4055E-01	-.4686E-01	-.5011E-01	-.5186E-01	-.5238E-01	-.5247E-01	-.5248E-01	-.5248E-01	-.5248E-01	-.5248E-01
3	.3000E+01	-.4059E-01	-.4690E-01	-.5016E-01	-.5192E-01	-.5244E-01	-.5253E-01	-.5254E-01	-.5254E-01	-.5254E-01	-.5254E-01
4	.4000E+01	-.4063E-01	-.4695E-01	-.5022E-01	-.5198E-01	-.5251E-01	-.5261E-01	-.5262E-01	-.5262E-01	-.5262E-01	-.5262E-01
5	.5000E+01	-.4068E-01	-.4702E-01	-.5029E-01	-.5207E-01	-.5260E-01	-.5270E-01	-.5272E-01	-.5272E-01	-.5272E-01	-.5272E-01
6	.6000E+01	-.4075E-01	-.4710E-01	-.5039E-01	-.5217E-01	-.5272E-01	-.5282E-01	-.5284E-01	-.5284E-01	-.5284E-01	-.5284E-01
7	.7000E+01	-.4083E-01	-.4720E-01	-.5050E-01	-.5231E-01	-.5286E-01	-.5297E-01	-.5299E-01	-.5299E-01	-.5299E-01	-.5299E-01
8	.8000E+01	-.4093E-01	-.4732E-01	-.5065E-01	-.5247E-01	-.5304E-01	-.5316E-01	-.5318E-01	-.5319E-01	-.5319E-01	-.5318E-01
9	.9000E+01	-.4106E-01	-.4748E-01	-.5084E-01	-.5268E-01	-.5327E-01	-.5340E-01	-.5342E-01	-.5343E-01	-.5343E-01	-.5343E-01
0	.1000E+02	-.4123E-01	-.4768E-01	-.5107E-01	-.5294E-01	-.5355E-01	-.5369E-01	-.5372E-01	-.5373E-01	-.5373E-01	-.5373E-01
1	.1100E+02	-.4143E-01	-.4793E-01	-.5136E-01	-.5327E-01	-.5390E-01	-.5406E-01	-.5410E-01	-.5411E-01	-.5411E-01	-.5410E-01
2	.1200E+02	-.4169E-01	-.4824E-01	-.5173E-01	-.5368E-01	-.5434E-01	-.5452E-01	-.5457E-01	-.5458E-01	-.5458E-01	-.5458E-01
3	.1300E+02	-.4201E-01	-.4864E-01	-.5219E-01	-.5419E-01	-.5490E-01	-.5510E-01	-.5516E-01	-.5517E-01	-.5517E-01	-.5517E-01
4	.1400E+02	-.4242E-01	-.4913E-01	-.5276E-01	-.5483E-01	-.5559E-01	-.5583E-01	-.5590E-01	-.5592E-01	-.5592E-01	-.5592E-01
5	.1500E+02	-.4292E-01	-.4975E-01	-.5349E-01	-.5564E-01	-.5647E-01	-.5675E-01	-.5684E-01	-.5686E-01	-.5686E-01	-.5685E-01
6	.1600E+02	-.4356E-01	-.5053E-01	-.5439E-01	-.5666E-01	-.5757E-01	-.5790E-01	-.5801E-01	-.5804E-01	-.5804E-01	-.5803E-01
7	.1700E+02	-.4437E-01	-.5151E-01	-.5554E-01	-.5795E-01	-.5896E-01	-.5935E-01	-.5949E-01	-.5953E-01	-.5952E-01	-.5951E-01
8	.1800E+02	-.4539E-01	-.5275E-01	-.5699E-01	-.5956E-01	-.6071E-01	-.6118E-01	-.6135E-01	-.6140E-01	-.6140E-01	-.6139E-01
9	.1900E+02	-.4667E-01	-.5431E-01	-.5882E-01	-.6161E-01	-.6292E-01	-.6343E-01	-.6371E-01	-.6377E-01	-.6377E-01	-.6375E-01
0	.2000E+02	-.4830E-01	-.5630E-01	-.6113E-01	-.6421E-01	-.6572E-01	-.6643E-01	-.6670E-01	-.6678E-01	-.6678E-01	-.6676E-01
1	.2100E+02	-.5037E-01	-.5883E-01	-.6408E-01	-.6751E-01	-.6929E-01	-.7016E-01	-.7051E-01	-.7061E-01	-.7060E-01	-.7058E-01
2	.2200E+02	-.5302E-01	-.6205E-01	-.6785E-01	-.7173E-01	-.7386E-01	-.7493E-01	-.7537E-01	-.7549E-01	-.7549E-01	-.7546E-01
3	.2300E+02	-.5643E-01	-.6620E-01	-.7270E-01	-.7715E-01	-.7972E-01	-.8106E-01	-.8162E-01	-.8178E-01	-.8178E-01	-.8173E-01
4	.2400E+02	-.6084E-01	-.7157E-01	-.7897E-01	-.8417E-01	-.8731E-01	-.8900E-01	-.8970E-01	-.8991E-01	-.8991E-01	-.8985E-01
5	.2500E+02	-.6659E-01	-.7859E-01	-.8716E-01	-.9335E-01	-.9722E-01	-.9937E-01	-.1003E+00	-.1005E+00	-.1005E+00	-.1005E+00
6	.2600E+02	-.7421E-01	-.8786E-01	-.9800E-01	-.1055E+00	-.1103E+00	-.1131E+00	-.1142E+00	-.1146E+00	-.1146E+00	-.1145E+00
7	.2700E+02	-.8444E-01	-.1003E+00	-.1126E+00	-.1218E+00	-.1280E+00	-.1315E+00	-.1330E+00	-.1335E+00	-.1335E+00	-.1333E+00
8	.2800E+02	-.9850E-01	-.1175E+00	-.1326E+00	-.1442E+00	-.1522E+00	-.1568E+00	-.1588E+00	-.1594E+00	-.1594E+00	-.1592E+00
9	.2900E+02	-.1184E+00	-.1417E+00	-.1609E+00	-.1759E+00	-.1864E+00	-.1927E+00	-.1954E+00	-.1961E+00	-.1961E+00	-.1959E+00
0	.3000E+02	-.1478E+00	-.1775E+00	-.2027E+00	-.2227E+00	-.2371E+00	-.2457E+00	-.2493E+00	-.2504E+00	-.2504E+00	-.2501E+00

1	.1000E+01	-.5243E-01	-.5243E-01
2	.2000E+01	-.5248E-01	-.5248E-01
3	.3000E+01	-.5254E-01	-.5254E-01
4	.4000E+01	-.5262E-01	-.5262E-01
5	.5000E+01	-.5272E-01	-.5272E-01
6	.6000E+01	-.5284E-01	-.5284E-01
7	.7000E+01	-.5299E-01	-.5299E-01
8	.8000E+01	-.5318E-01	-.5318E-01
9	.9000E+01	-.5342E-01	-.5342E-01
10	.1000E+02	-.5373E-01	-.5373E-01
11	.1100E+02	-.5410E-01	-.5410E-01
12	.1200E+02	-.5457E-01	-.5458E-01
13	.1300E+02	-.5517E-01	-.5517E-01
14	.1400E+02	-.5591E-01	-.5591E-01
15	.1500E+02	-.5685E-01	-.5685E-01
16	.1600E+02	-.5803E-01	-.5803E-01
17	.1700E+02	-.5951E-01	-.5951E-01
18	.1800E+02	-.6138E-01	-.6138E-01
19	.1900E+02	-.6375E-01	-.6375E-01
20	.2000E+02	-.6675E-01	-.6675E-01
21	.2100E+02	-.7056E-01	-.7057E-01
22	.2200E+02	-.7544E-01	-.7545E-01
23	.2300E+02	-.8171E-01	-.8172E-01
24	.2400E+02	-.8982E-01	-.8983E-01
25	.2500E+02	-.1004E+00	-.1004E+00
26	.2600E+02	-.1144E+00	-.1145E+00
27	.2700E+02	-.1333E+00	-.1333E+00
28	.2800E+02	-.1592E+00	-.1592E+00
29	.2900E+02	-.1958E+00	-.1958E+00
30	.3000E+02	-.2499E+00	-.2500E+00

STATION 3 **** Z ****

IY	Y	IZ= 1	2	3	4	5	6	7	8	9	10
		Z = .1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
1	.1000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1134E+00	-.8801E-01	-.6527E-01	-.4482E-01	-.2634E-01	-.9553E-02
2	.2000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1134E+00	-.8800E-01	-.6526E-01	-.4481E-01	-.2632E-01	-.9524E-02
3	.3000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1134E+00	-.8798E-01	-.6524E-01	-.4478E-01	-.2629E-01	-.9487E-02
4	.4000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1134E+00	-.8797E-01	-.6522E-01	-.4475E-01	-.2625E-01	-.9441E-02
5	.5000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1133E+00	-.8795E-01	-.6519E-01	-.4472E-01	-.2621E-01	-.9384E-02
6	.6000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1133E+00	-.8793E-01	-.6516E-01	-.4467E-01	-.2615E-01	-.9312E-02
7	.7000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1133E+00	-.8790E-01	-.6511E-01	-.4461E-01	-.2607E-01	-.9223E-02
8	.8000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1418E+00	-.1133E+00	-.8786E-01	-.6506E-01	-.4454E-01	-.2598E-01	-.9110E-02
9	.9000E+01	-.2500E+00	-.2096E+00	-.1737E+00	-.1417E+00	-.1133E+00	-.8781E-01	-.6499E-01	-.4445E-01	-.2586E-01	-.8969E-02
10	.1000E+02	-.2500E+00	-.2096E+00	-.1737E+00	-.1417E+00	-.1132E+00	-.8776E-01	-.6491E-01	-.4433E-01	-.2572E-01	-.8793E-02
11	.1100E+02	-.2500E+00	-.2096E+00	-.1737E+00	-.1417E+00	-.1132E+00	-.8768E-01	-.6480E-01	-.4419E-01	-.2554E-01	-.8571E-02
12	.1200E+02	-.2500E+00	-.2096E+00	-.1737E+00	-.1417E+00	-.1131E+00	-.8759E-01	-.6467E-01	-.4401E-01	-.2531E-01	-.8294E-02
13	.1300E+02	-.2500E+00	-.2096E+00	-.1736E+00	-.1416E+00	-.1130E+00	-.8748E-01	-.6451E-01	-.4379E-01	-.2502E-01	-.7946E-02
14	.1400E+02	-.2500E+00	-.2096E+00	-.1736E+00	-.1416E+00	-.1130E+00	-.8734E-01	-.6430E-01	-.4351E-01	-.2466E-01	-.7509E-02
15	.1500E+02	-.2500E+00	-.2096E+00	-.1736E+00	-.1415E+00	-.1129E+00	-.8715E-01	-.6403E-01	-.4315E-01	-.2421E-01	-.6959E-02
16	.1600E+02	-.2500E+00	-.2096E+00	-.1736E+00	-.1415E+00	-.1127E+00	-.8693E-01	-.6370E-01	-.4271E-01	-.2364E-01	-.6268E-02
17	.1700E+02	-.2500E+00	-.2096E+00	-.1736E+00	-.1414E+00	-.1125E+00	-.8664E-01	-.6329E-01	-.4214E-01	-.2292E-01	-.5398E-02
18	.1800E+02	-.2500E+00	-.2096E+00	-.1735E+00	-.1413E+00	-.1123E+00	-.8628E-01	-.6277E-01	-.4144E-01	-.2202E-01	-.4299E-02
19	.1900E+02	-.2500E+00	-.2096E+00	-.1735E+00	-.1411E+00	-.1120E+00	-.8583E-01	-.6210E-01	-.4054E-01	-.2088E-01	-.2911E-02
20	.2000E+02	-.2500E+00	-.2096E+00	-.1734E+00	-.1409E+00	-.1117E+00	-.8520E-01	-.6126E-01	-.3940E-01	-.1943E-01	-.1150E-02
21	.2100E+02	-.2500E+00	-.2096E+00	-.1734E+00	-.1407E+00	-.1112E+00	-.8451E-01	-.6018E-01	-.3796E-01	-.1758E-01	.1091E-02
22	.2200E+02	-.2500E+00	-.2096E+00	-.1733E+00	-.1404E+00	-.1107E+00	-.8357E-01	-.5883E-01	-.3611E-01	-.1522E-01	.3954E-02
23	.2300E+02	-.2500E+00	-.2096E+00	-.1731E+00	-.1400E+00	-.1099E+00	-.8237E-01	-.5707E-01	-.3374E-01	-.1220E-01	.7633E-02
24	.2400E+02	-.2500E+00	-.2097E+00	-.1730E+00	-.1396E+00	-.1089E+00	-.8081E-01	-.5480E-01	-.3066E-01	-.8275E-02	.1240E-01
25	.2500E+02	-.2500E+00	-.2097E+00	-.1728E+00	-.1388E+00	-.1077E+00	-.7876E-01	-.5183E-01	-.2665E-01	-.3152E-02	.1862E-01
26	.2600E+02	-.2500E+00	-.2097E+00	-.1725E+00	-.1381E+00	-.1060E+00	-.7606E-01	-.4790E-01	-.2134E-01	.3622E-02	.2685E-01
27	.2700E+02	-.2500E+00	-.2097E+00	-.1720E+00	-.1370E+00	-.1036E+00	-.7244E-01	-.4263E-01	-.1420E-01	.1273E-01	.3791E-01
28	.2800E+02	-.2500E+00	-.2096E+00	-.1712E+00	-.1354E+00	-.1001E+00	-.6745E-01	-.3538E-01	-.4397E-02	.2524E-01	.5310E-01
29	.2900E+02	-.2500E+00	-.2095E+00	-.1700E+00	-.1332E+00	-.9639E-01	-.6040E-01	-.2511E-01	.9482E-02	.4294E-01	.7461E-01
30	.3000E+02	-.2500E+00	-.2100E+00	-.1700E+00	-.1300E+00	-.8997E-01	-.4997E-01	-.9950E-02	.2999E-01	.6911E-01	.1064E+00

IY	Y	IZ= 11	12	13	14	15	16	17	18	19	20
		Z = .1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
1	.1000E+01	.5695E-02	.1950E-01	.3115E-01	.4040E-01	.4705E-01	.5106E-01	.5243E-01	.5106E-01	.4705E-01	.4040E-01
2	.2000E+01	.5729E-02	.1954E-01	.3119E-01	.4044E-01	.4710E-01	.5111E-01	.5248E-01	.5111E-01	.4710E-01	.4044E-01
3	.3000E+01	.5771E-02	.1958E-01	.3124E-01	.4050E-01	.4716E-01	.5117E-01	.5254E-01	.5117E-01	.4716E-01	.4050E-01
4	.4000E+01	.5825E-02	.1964E-01	.3131E-01	.4057E-01	.4723E-01	.5125E-01	.5262E-01	.5125E-01	.4723E-01	.4057E-01
5	.5000E+01	.5891E-02	.1972E-01	.3139E-01	.4066E-01	.4732E-01	.5134E-01	.5271E-01	.5134E-01	.4732E-01	.4066E-01
6	.6000E+01	.5975E-02	.1981E-01	.3150E-01	.4077E-01	.4744E-01	.5146E-01	.5283E-01	.5146E-01	.4744E-01	.4077E-01
7	.7000E+01	.6080E-02	.1993E-01	.3162E-01	.4091E-01	.4758E-01	.5161E-01	.5299E-01	.5161E-01	.4758E-01	.4091E-01
8	.8000E+01	.6211E-02	.2008E-01	.3179E-01	.4108E-01	.4777E-01	.5180E-01	.5318E-01	.5180E-01	.4777E-01	.4108E-01
9	.9000E+01	.6375E-02	.2026E-01	.3199E-01	.4130E-01	.4800E-01	.5203E-01	.5341E-01	.5203E-01	.4800E-01	.4130E-01
10	.1000E+02	.6581E-02	.2050E-01	.3224E-01	.4157E-01	.4828E-01	.5233E-01	.5371E-01	.5238E-01	.4828E-01	.4157E-01
11	.1100E+02	.6839E-02	.2079E-01	.3256E-01	.4191E-01	.4864E-01	.5270E-01	.5408E-01	.5270E-01	.4864E-01	.4191E-01
12	.1200E+02	.7163E-02	.2115E-01	.3296E-01	.4234E-01	.4909E-01	.5316E-01	.5455E-01	.5316E-01	.4909E-01	.4234E-01
13	.1300E+02	.7569E-02	.2161E-01	.3346E-01	.4288E-01	.4965E-01	.5374E-01	.5514E-01	.5374E-01	.4965E-01	.4288E-01
14	.1400E+02	.8078E-02	.2218E-01	.3409E-01	.4356E-01	.5036E-01	.5447E-01	.5587E-01	.5447E-01	.5036E-01	.4356E-01
15	.1500E+02	.8719E-02	.2290E-01	.3488E-01	.4440E-01	.5125E-01	.5539E-01	.5680E-01	.5539E-01	.5125E-01	.4440E-01
16	.1600E+02	.9525E-02	.2381E-01	.3588E-01	.4547E-01	.5237E-01	.5654E-01	.5796E-01	.5654E-01	.5237E-01	.4547E-01
17	.1700E+02	.1054E-01	.2495E-01	.3713E-01	.4681E-01	.5378E-01	.5799E-01	.5943E-01	.5799E-01	.5378E-01	.4681E-01
18	.1800E+02	.1182E-01	.2640E-01	.3871E-01	.4851E-01	.5556E-01	.5982E-01	.6128E-01	.5982E-01	.5556E-01	.4851E-01
19	.1900E+02	.1344E-01	.2822E-01	.4071E-01	.5065E-01	.5781E-01	.6214E-01	.6361E-01	.6214E-01	.5781E-01	.5065E-01
20	.2000E+02	.1549E-01	.3053E-01	.4325E-01	.5337E-01	.6067E-01	.6508E-01	.6658E-01	.6508E-01	.6067E-01	.5337E-01
21	.2100E+02	.1811E-01	.3347E-01	.4648E-01	.5683E-01	.6430E-01	.6882E-01	.7035E-01	.6882E-01	.6430E-01	.5683E-01
22	.2200E+02	.2145E-01	.3723E-01	.5060E-01	.6125E-01	.6894E-01	.7359E-01	.7517E-01	.7359E-01	.6894E-01	.6125E-01
23	.2300E+02	.2574E-01	.4206E-01	.5590E-01	.6693E-01	.7490E-01	.7973E-01	.8137E-01	.7973E-01	.7490E-01	.6693E-01
24	.2400E+02	.3129E-01	.4832E-01	.6276E-01	.7428E-01	.8262E-01	.8767E-01	.8939E-01	.8767E-01	.8262E-01	.7428E-01
25	.2500E+02	.3854E-01	.5648E-01	.7172E-01	.8388E-01	.9270E-01	.9805E-01	.9986E-01	.9805E-01	.9270E-01	.8388E-01
26	.2600E+02	.4814E-01	.6729E-01	.8357E-01	.9658E-01	.1060E+00	.1118E+00	.1137E+00	.1118E+00	.1060E+00	.9658E-01
27	.2700E+02	.6104E-01	.8181E-01	.9949E-01	.1137E+00	.1240E+00	.1302E+00	.1323E+00	.1302E+00	.1240E+00	.1137E+00
28	.2800E+02	.7876E-01	.1018E+00	.1214E+00	.1371E+00	.1486E+00	.1556E+00	.1579E+00	.1556E+00	.1486E+00	.1371E+00
29	.2900E+02	.1038E+00	.1300E+00	.1523E+00	.1703E+00	.1834E+00	.1915E+00	.1941E+00	.1915E+00	.1834E+00	.1703E+00
30	.3000E+02	.1409E+00	.1717E+00	.1981E+00	.2194E+00	.2349E+00	.2445E+00	.2477E+00	.2445E+00	.2349E+00	.2194E+00

IY	Y	IZ= 21	22	23	24	25	26	27	28	29	30
		Z = .2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
1	.1000E+01	.3115E-01	.1950E-01	.5695E-02	-.9553E-02	-.2634E-01	-.4482E-01	-.6527E-01	-.8801E-01	-.1134E+00	-.1418E+00
2	.2000E+01	.3119E-01	.1954E-01	.5729E-02	-.9524E-02	-.2632E-01	-.4481E-01	-.6526E-01	-.8800E-01	-.1134E+00	-.1418E+00
3	.3000E+01	.3124E-01	.1958E-01	.5771E-02	-.9487E-02	-.2629E-01	-.4478E-01	-.6524E-01	-.8798E-01	-.1134E+00	-.1418E+00
4	.4000E+01	.3131E-01	.1964E-01	.5825E-02	-.9441E-02	-.2625E-01	-.4475E-01	-.6522E-01	-.8797E-01	-.1134E+00	-.1418E+00
5	.5000E+01	.3139E-01	.1972E-01	.5891E-02	-.9384E-02	-.2621E-01	-.4472E-01	-.6519E-01	-.8795E-01	-.1133E+00	-.1418E+00
6	.6000E+01	.3150E-01	.1981E-01	.5975E-02	-.9312E-02	-.2615E-01	-.4467E-01	-.6516E-01	-.8793E-01	-.1133E+00	-.1418E+00
7	.7000E+01	.3162E-01	.1993E-01	.6080E-02	-.9223E-02	-.2607E-01	-.4461E-01	-.6511E-01	-.8790E-01	-.1133E+00	-.1418E+00
8	.8000E+01	.3179E-01	.2008E-01	.6211E-02	-.9110E-02	-.2598E-01	-.4454E-01	-.6506E-01	-.8786E-01	-.1133E+00	-.1418E+00
9	.9000E+01	.3199E-01	.2026E-01	.6375E-02	-.8969E-02	-.2586E-01	-.4445E-01	-.6499E-01	-.8781E-01	-.1133E+00	-.1417E+00
10	.1000E+02	.3224E-01	.2050E-01	.6581E-02	-.8793E-02	-.2572E-01	-.4433E-01	-.6491E-01	-.8776E-01	-.1132E+00	-.1417E+00
11	.1100E+02	.3256E-01	.2079E-01	.6839E-02	-.8571E-02	-.2554E-01	-.4419E-01	-.6480E-01	-.8768E-01	-.1132E+00	-.1417E+00
12	.1200E+02	.3296E-01	.2115E-01	.7163E-02	-.8294E-02	-.2531E-01	-.4401E-01	-.6467E-01	-.8759E-01	-.1131E+00	-.1417E+00
13	.1300E+02	.3346E-01	.2161E-01	.7569E-02	-.7946E-02	-.2502E-01	-.4379E-01	-.6451E-01	-.8748E-01	-.1131E+00	-.1416E+00
14	.1400E+02	.3409E-01	.2218E-01	.8078E-02	-.7509E-02	-.2466E-01	-.4351E-01	-.6430E-01	-.8734E-01	-.1130E+00	-.1416E+00
15	.1500E+02	.3488E-01	.2290E-01	.8719E-02	-.6959E-02	-.2421E-01	-.4315E-01	-.6403E-01	-.8715E-01	-.1129E+00	-.1415E+00
16	.1600E+02	.3588E-01	.2381E-01	.9525E-02	-.6268E-02	-.2364E-01	-.4271E-01	-.6370E-01	-.8693E-01	-.1127E+00	-.1415E+00
17	.1700E+02	.3713E-01	.2495E-01	.1054E-01	-.5398E-02	-.2292E-01	-.4214E-01	-.6329E-01	-.8664E-01	-.1125E+00	-.1414E+00
18	.1800E+02	.3871E-01	.2640E-01	.1182E-01	-.4299E-02	-.2202E-01	-.4144E-01	-.6277E-01	-.8628E-01	-.1123E+00	-.1413E+00
19	.1900E+02	.4071E-01	.2822E-01	.1344E-01	-.2911E-02	-.2088E-01	-.4054E-01	-.6210E-01	-.8583E-01	-.1120E+00	-.1411E+00
20	.2000E+02	.4325E-01	.3053E-01	.1549E-01	-.1150E-02	-.1943E-01	-.3940E-01	-.6126E-01	-.8525E-01	-.1117E+00	-.1409E+00
21	.2100E+02	.4648E-01	.3347E-01	.1811E-01	.1091E-02	-.1758E-01	-.3796E-01	-.6019E-01	-.8451E-01	-.1112E+00	-.1407E+00
22	.2200E+02	.5060E-01	.3723E-01	.2145E-01	.3954E-02	-.1522E-01	-.3611E-01	-.5883E-01	-.8357E-01	-.1107E+00	-.1404E+00
23	.2300E+02	.5590E-01	.4206E-01	.2574E-01	.7633E-02	-.1220E-01	-.3374E-01	-.5707E-01	-.8237E-01	-.1099E+00	-.1400E+00
24	.2400E+02	.6276E-01	.4832E-01	.3129E-01	.1240E-01	-.8275E-02	-.3066E-01	-.5480E-01	-.8081E-01	-.1089E+00	-.1396E+00
25	.2500E+02	.7172E-01	.5648E-01	.3854E-01	.1862E-01	-.3152E-02	-.2665E-01	-.5183E-01	-.7876E-01	-.1077E+00	-.1389E+00
26	.2600E+02	.8357E-01	.6729E-01	.4814E-01	.2685E-01	.3622E-02	-.2134E-01	-.4790E-01	-.7606E-01	-.1060E+00	-.1381E+00
27	.2700E+02	.9949E-01	.8181E-01	.6104E-01	.3791E-01	.1273E-01	-.1420E-01	-.4263E-01	-.7244E-01	-.1038E+00	-.1370E+00
28	.2800E+02	.1214E+00	.1018E+00	.7876E-01	.5310E-01	.2524E-01	-.4397E-02	-.3538E-01	-.6745E-01	-.1007E+00	-.1354E+00
29	.2900E+02	.1523E+00	.1300E+00	.1038E+00	.7461E-01	.4294E-01	.9482E-02	-.2511E-01	-.6040E-01	-.9639E-01	-.1332E+00
30	.3000E+02	.1981E+00	.1717E+00	.1409E+00	.1064E+00	.6911E-01	.2999E-01	-.9950E-02	-.4997E-01	-.8997E-01	-.1300E+00

	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	-.1737E+00	-.2096E+00	-.2500E+00
2	.2000E+01	-.1737E+00	-.2096E+00	-.2500E+00
3	.3000E+01	-.1737E+00	-.2096E+00	-.2500E+00
4	.4000E+01	-.1737E+00	-.2096E+00	-.2500E+00
5	.5000E+01	-.1737E+00	-.2096E+00	-.2500E+00
6	.6000E+01	-.1737E+00	-.2096E+00	-.2500E+00
7	.7000E+01	-.1737E+00	-.2096E+00	-.2500E+00
8	.8000E+01	-.1737E+00	-.2096E+00	-.2500E+00
9	.9000E+01	-.1737E+00	-.2096E+00	-.2500E+00
10	.1000E+02	-.1737E+00	-.2096E+00	-.2500E+00
11	.1100E+02	-.1737E+00	-.2096E+00	-.2500E+00
12	.1200E+02	-.1737E+00	-.2096E+00	-.2500E+00
13	.1300E+02	-.1736E+00	-.2096E+00	-.2500E+00
14	.1400E+02	-.1736E+00	-.2096E+00	-.2500E+00
15	.1500E+02	-.1736E+00	-.2096E+00	-.2500E+00
16	.1600E+02	-.1736E+00	-.2096E+00	-.2500E+00
17	.1700E+02	-.1736E+00	-.2096E+00	-.2500E+00
18	.1800E+02	-.1735E+00	-.2096E+00	-.2500E+00
19	.1900E+02	-.1735E+00	-.2096E+00	-.2500E+00
20	.2000E+02	-.1734E+00	-.2096E+00	-.2500E+00
21	.2100E+02	-.1734E+00	-.2096E+00	-.2500E+00
22	.2200E+02	-.1733E+00	-.2096E+00	-.2500E+00
23	.2300E+02	-.1731E+00	-.2096E+00	-.2500E+00
24	.2400E+02	-.1730E+00	-.2097E+00	-.2500E+00
25	.2500E+02	-.1728E+00	-.2097E+00	-.2500E+00
26	.2600E+02	-.1725E+00	-.2097E+00	-.2500E+00
27	.2700E+02	-.1722E+00	-.2097E+00	-.2500E+00
28	.2800E+02	-.1717E+00	-.2098E+00	-.2500E+00
29	.2900E+02	-.1710E+00	-.2099E+00	-.2500E+00
30	.3000E+02	-.1700E+00	-.2100E+00	-.2500E+00

VELOCITY VECTOR DISPLAYED IN CARTESIAN COORDINATES

STATION 3 **** U-VEL ****

IY	YZ= Y / Z =	1 .1000E+01	2 .2000E+01	3 .3000E+01	4 .4000E+01	5 .5000E+01	6 .6000E+01	7 .7000E+01	8 .8000E+01	9 .9000E+01	10 .1000E+02
1	.1000E+01	.7848E-11	.0	.0	.0	.0	.0	.0	.0	.0	.0
2	.2000E+01	.5859E-01	.5662E-01	.5872E-01	.5966E-01	.5923E-01	.5842E-01	.5779E-01	.5681E-01	.5750E-01	.5874E-01
3	.3000E+01	.1023E+00	.1023E+00	.1025E+00	.1051E+00	.1041E+00	.1033E+00	.1029E+00	.1016E+00	.1005E+00	.9961E-01
4	.4000E+01	.1419E+00	.1419E+00	.1419E+00	.1451E+00	.1444E+00	.1432E+00	.1421E+00	.1413E+00	.1386E+00	.1361E+00
5	.5000E+01	.1803E+00	.1803E+00	.1803E+00	.1837E+00	.1833E+00	.1817E+00	.1801E+00	.1791E+00	.1761E+00	.1722E+00
6	.6000E+01	.2201E+00	.2201E+00	.2201E+00	.2236E+00	.2235E+00	.2214E+00	.2192E+00	.2177E+00	.2141E+00	.2097E+00
7	.7000E+01	.2627E+00	.2627E+00	.2627E+00	.2658E+00	.2659E+00	.2635E+00	.2610E+00	.2587E+00	.2544E+00	.2496E+00
8	.8000E+01	.3085E+00	.3082E+00	.3081E+00	.3108E+00	.3112E+00	.3085E+00	.3057E+00	.3026E+00	.2978E+00	.2925E+00
9	.9000E+01	.3566E+00	.3565E+00	.3563E+00	.3588E+00	.3593E+00	.3566E+00	.3531E+00	.3495E+00	.3442E+00	.3386E+00
10	.1000E+02	.4066E+00	.4067E+00	.4066E+00	.4088E+00	.4095E+00	.4067E+00	.4030E+00	.3989E+00	.3929E+00	.3873E+00
11	.1100E+02	.4579E+00	.4578E+00	.4576E+00	.4595E+00	.4603E+00	.4577E+00	.4540E+00	.4495E+00	.4431E+00	.4375E+00
12	.1200E+02	.5083E+00	.5082E+00	.5080E+00	.5096E+00	.5104E+00	.5080E+00	.5045E+00	.4999E+00	.4934E+00	.4877E+00
13	.1300E+02	.5564E+00	.5564E+00	.5562E+00	.5574E+00	.5582E+00	.5562E+00	.5529E+00	.5484E+00	.5420E+00	.5363E+00
14	.1400E+02	.6011E+00	.6010E+00	.6008E+00	.6017E+00	.6023E+00	.6007E+00	.5978E+00	.5937E+00	.5876E+00	.5819E+00
15	.1500E+02	.6413E+00	.6412E+00	.6410E+00	.6417E+00	.6421E+00	.6406E+00	.6384E+00	.6347E+00	.6290E+00	.6234E+00
16	.1600E+02	.6768E+00	.6767E+00	.6766E+00	.6770E+00	.6773E+00	.6763E+00	.6744E+00	.6711E+00	.6657E+00	.6604E+00
17	.1700E+02	.7080E+00	.7080E+00	.7078E+00	.7081E+00	.7083E+00	.7076E+00	.7060E+00	.7030E+00	.6981E+00	.6930E+00
18	.1800E+02	.7356E+00	.7356E+00	.7356E+00	.7357E+00	.7358E+00	.7353E+00	.7340E+00	.7314E+00	.7268E+00	.7218E+00
19	.1900E+02	.7610E+00	.7610E+00	.7609E+00	.7609E+00	.7609E+00	.7605E+00	.7594E+00	.7571E+00	.7527E+00	.7479E+00
20	.2000E+02	.7846E+00	.7846E+00	.7845E+00	.7845E+00	.7845E+00	.7842E+00	.7831E+00	.7808E+00	.7765E+00	.7719E+00
21	.2100E+02	.8069E+00	.8069E+00	.8069E+00	.8069E+00	.8069E+00	.8067E+00	.8060E+00	.8055E+00	.8009E+00	.7960E+00
22	.2200E+02	.8276E+00	.8276E+00	.8275E+00	.8275E+00	.8276E+00	.8274E+00	.8263E+00	.8335E+00	.8284E+00	.8227E+00
23	.2300E+02	.8469E+00	.8469E+00	.8469E+00	.8469E+00	.8469E+00	.8467E+00	.8464E+00	.8654E+00	.8598E+00	.8534E+00
24	.2400E+02	.8651E+00	.8651E+00	.8651E+00	.8651E+00	.8651E+00	.8650E+00	.8651E+00	.8919E+00	.8957E+00	.8885E+00
25	.2500E+02	.8822E+00	.8822E+00	.8822E+00	.8822E+00	.8822E+00	.8822E+00	.8822E+00	.9021E+00	.9775E+00	.9711E+00
26	.2600E+02	.8984E+00	.8984E+00	.8984E+00	.8984E+00	.8984E+00	.8984E+00	.8984E+00	.9084E+00	.9361E+00	.9284E+00
27	.2700E+02	.9138E+00	.9138E+00	.9138E+00	.9138E+00	.9138E+00	.9138E+00	.9138E+00	.9141E+00	.9215E+00	.9711E+00
28	.2800E+02	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00	.9286E+00
29	.2900E+02	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00	.9428E+00
30	.3000E+02	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00	.9566E+00

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 .2000E+01	.5405E-01	.6640E-01	.6420E-01	.5435E-01	.6511E-01	.6532E-01	.6460E-01	.5963E-01	.6208E-01	.5715E-01
3 .3000E+01	.9138E-01	.1079E+00	.1155E+00	.1145E+00	.1188E+00	.1195E+00	.1145E+00	.1039E+00	.1018E+00	.8954E-01
4 .4000E+01	.1254E+00	.1446E+00	.1586E+00	.1624E+00	.1658E+00	.1617E+00	.1566E+00	.1471E+00	.1375E+00	.1215E+00
5 .5000E+01	.1609E+00	.1841E+00	.2006E+00	.2039E+00	.2088E+00	.2036E+00	.1966E+00	.1849E+00	.1723E+00	.1546E+00
6 .6000E+01	.1983E+00	.2244E+00	.2440E+00	.2462E+00	.2505E+00	.2442E+00	.2364E+00	.2239E+00	.2087E+00	.1890E+00
7 .7000E+01	.2386E+00	.2673E+00	.2887E+00	.2898E+00	.2937E+00	.2864E+00	.2777E+00	.2640E+00	.2470E+00	.2265E+00
8 .8000E+01	.2823E+00	.3135E+00	.3355E+00	.3355E+00	.3392E+00	.3304E+00	.3217E+00	.3071E+00	.2892E+00	.2681E+00
9 .9000E+01	.3293E+00	.3621E+00	.3840E+00	.3831E+00	.3869E+00	.3773E+00	.3688E+00	.3539E+00	.3356E+00	.3142E+00
10 .1000E+02	.3790E+00	.4124E+00	.4334E+00	.4323E+00	.4358E+00	.4256E+00	.4183E+00	.4039E+00	.3859E+00	.3648E+00
11 .1100E+02	.4302E+00	.4631E+00	.4824E+00	.4814E+00	.4851E+00	.4767E+00	.4691E+00	.4558E+00	.4387E+00	.4189E+00
12 .1200E+02	.4813E+00	.5124E+00	.5296E+00	.5294E+00	.5331E+00	.5261E+00	.5196E+00	.5079E+00	.4926E+00	.4748E+00
13 .1300E+02	.5307E+00	.5589E+00	.5738E+00	.5747E+00	.5784E+00	.5732E+00	.5681E+00	.5584E+00	.5454E+00	.5302E+00
14 .1400E+02	.5771E+00	.6016E+00	.6140E+00	.6163E+00	.6199E+00	.6166E+00	.6129E+00	.6054E+00	.5950E+00	.5826E+00
15 .1500E+02	.6193E+00	.6397E+00	.6500E+00	.6534E+00	.6569E+00	.6553E+00	.6530E+00	.6475E+00	.6397E+00	.6300E+00
16 .1600E+02	.6566E+00	.6733E+00	.6818E+00	.6860E+00	.6895E+00	.6892E+00	.6881E+00	.6843E+00	.6787E+00	.6716E+00
17 .1700E+02	.6899E+00	.7030E+00	.7101E+00	.7149E+00	.7183E+00	.7190E+00	.7186E+00	.7162E+00	.7123E+00	.7071E+00
18 .1800E+02	.7192E+00	.7295E+00	.7356E+00	.7408E+00	.7441E+00	.7455E+00	.7457E+00	.7442E+00	.7414E+00	.7375E+00
19 .1900E+02	.7456E+00	.7539E+00	.7596E+00	.7649E+00	.7681E+00	.7698E+00	.7703E+00	.7694E+00	.7673E+00	.7642E+00
20 .2000E+02	.7700E+00	.7769E+00	.7824E+00	.7877E+00	.7910E+00	.7929E+00	.7936E+00	.7929E+00	.7912E+00	.7884E+00
21 .2100E+02	.7943E+00	.8005E+00	.8062E+00	.8118E+00	.8154E+00	.8175E+00	.8184E+00	.8178E+00	.8161E+00	.8133E+00
22 .2200E+02	.8209E+00	.8270E+00	.8334E+00	.8397E+00	.8436E+00	.8460E+00	.8470E+00	.8464E+00	.8446E+00	.8413E+00
23 .2300E+02	.8513E+00	.8575E+00	.8646E+00	.8715E+00	.8758E+00	.8783E+00	.8794E+00	.8788E+00	.8767E+00	.8731E+00
24 .2400E+02	.8861E+00	.8922E+00	.9001E+00	.9076E+00	.9121E+00	.9148E+00	.9159E+00	.9152E+00	.9129E+00	.9088E+00
25 .2500E+02	.9255E+00	.9314E+00	.9396E+00	.9472E+00	.9516E+00	.9542E+00	.9552E+00	.9544E+00	.9521E+00	.9478E+00
26 .2600E+02	.9680E+00	.9726E+00	.9795E+00	.9854E+00	.9886E+00	.9904E+00	.9909E+00	.9901E+00	.9882E+00	.9847E+00
27 .2700E+02	.1029E+01	.1023E+01	.1017E+01	.1015E+01	.1014E+01	.1012E+01	.1010E+01	.1009E+01	.1007E+01	.1005E+01
28 .2800E+02	.1022E+01	.1016E+01	.1014E+01	.1012E+01	.1010E+01	.1008E+01	.1007E+01	.1005E+01	.1004E+01	.1002E+01
29 .2900E+02	.1013E+01	.1011E+01	.1009E+01	.1007E+01	.1005E+01	.1003E+01	.1002E+01	.1002E+01	.1001E+01	.9995E+00
30 .3000E+02	.1004E+01	.1002E+01	.9990E+00	.9984E+00	.9978E+00	.9971E+00	.9962E+00	.9953E+00	.9946E+00	.9940E+00

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2 .2000E+01	.4463E-01	.3893E-01	.4538E-01	.5301E-01	.5487E-01	.5893E-01	.5934E-01	.5939E-01	.5967E-01	.6014E-01
3 .3000E+01	.7696E-01	.7239E-01	.8026E-01	.9167E-01	.9618E-01	.1032E+00	.1039E+00	.1043E+00	.1047E+00	.1052E+00
4 .4000E+01	.1073E+00	.1033E+00	.1112E+00	.1264E+00	.1336E+00	.1420E+00	.1433E+00	.1439E+00	.1443E+00	.1446E+00
5 .5000E+01	.1384E+00	.1346E+00	.1424E+00	.1608E+00	.1707E+00	.1793E+00	.1811E+00	.1821E+00	.1824E+00	.1824E+00
6 .6000E+01	.1709E+00	.1680E+00	.1759E+00	.1962E+00	.2090E+00	.2177E+00	.2201E+00	.2215E+00	.2217E+00	.2213E+00
7 .7000E+01	.2068E+00	.2046E+00	.2125E+00	.2346E+00	.2500E+00	.2568E+00	.2618E+00	.2632E+00	.2634E+00	.2625E+00
8 .8000E+01	.2470E+00	.2456E+00	.2533E+00	.2768E+00	.2944E+00	.3032E+00	.3066E+00	.3079E+00	.3079E+00	.3066E+00
9 .9000E+01	.2923E+00	.2917E+00	.2988E+00	.3230E+00	.3421E+00	.3507E+00	.3542E+00	.3558E+00	.3557E+00	.3540E+00
10 .1000E+02	.3429E+00	.3429E+00	.3489E+00	.3731E+00	.3924E+00	.4009E+00	.4044E+00	.4059E+00	.4057E+00	.4037E+00
11 .1100E+02	.3979E+00	.3982E+00	.4025E+00	.4260E+00	.4445E+00	.4524E+00	.4558E+00	.4571E+00	.4567E+00	.4545E+00
12 .1200E+02	.4554E+00	.4556E+00	.4580E+00	.4798E+00	.4966E+00	.5036E+00	.5068E+00	.5078E+00	.5072E+00	.5050E+00
13 .1300E+02	.5130E+00	.5130E+00	.5134E+00	.5325E+00	.5469E+00	.5529E+00	.5556E+00	.5563E+00	.5557E+00	.5535E+00
14 .1400E+02	.5682E+00	.5678E+00	.5664E+00	.5823E+00	.5939E+00	.5988E+00	.6008E+00	.6013E+00	.6005E+00	.5985E+00
15 .1500E+02	.6186E+00	.6179E+00	.6150E+00	.6276E+00	.6363E+00	.6400E+00	.6416E+00	.6417E+00	.6409E+00	.6392E+00
16 .1600E+02	.6628E+00	.6618E+00	.6581E+00	.6676E+00	.6738E+00	.6765E+00	.6776E+00	.6774E+00	.6766E+00	.6752E+00
17 .1700E+02	.7005E+00	.6992E+00	.6953E+00	.7022E+00	.7065E+00	.7084E+00	.7091E+00	.7088E+00	.7080E+00	.7068E+00
18 .1800E+02	.7324E+00	.7309E+00	.7272E+00	.7322E+00	.7353E+00	.7367E+00	.7372E+00	.7368E+00	.7360E+00	.7350E+00
19 .1900E+02	.7600E+00	.7582E+00	.7550E+00	.7589E+00	.7613E+00	.7624E+00	.7627E+00	.7622E+00	.7614E+00	.7605E+00
20 .2000E+02	.7846E+00	.7827E+00	.7800E+00	.7831E+00	.7854E+00	.7865E+00	.7867E+00	.7862E+00	.7854E+00	.7846E+00
21 .2100E+02	.8093E+00	.8070E+00	.8045E+00	.8076E+00	.8104E+00	.8118E+00	.8123E+00	.8118E+00	.8110E+00	.8101E+00
22 .2200E+02	.8367E+00	.8337E+00	.8314E+00	.8351E+00	.8390E+00	.8410E+00	.8415E+00	.8410E+00	.8401E+00	.8393E+00
23 .2300E+02	.8677E+00	.8639E+00	.8619E+00	.8662E+00	.8713E+00	.8740E+00	.8748E+00	.8742E+00	.8733E+00	.8723E+00
24 .2400E+02	.9027E+00	.8980E+00	.8963E+00	.9014E+00	.9077E+00	.9113E+00	.9123E+00	.9119E+00	.9109E+00	.9099E+00
25 .2500E+02	.9413E+00	.9361E+00	.9346E+00	.9402E+00	.9473E+00	.9516E+00	.9529E+00	.9526E+00	.9518E+00	.9508E+00
26 .2600E+02	.9794E+00	.9747E+00	.9736E+00	.9783E+00	.9841E+00	.9875E+00	.9887E+00	.9885E+00	.9880E+00	.9874E+00
27 .2700E+02	.1003E+01	.1004E+01	.1003E+01	.1002E+01	.9986E+00	.9943E+00	.9895E+00	.9849E+00	.9809E+00	.9777E+00
28 .2800E+02	.9993E+00	.9971E+00	.9957E+00	.9938E+00	.9912E+00	.9896E+00	.9863E+00	.9827E+00	.9792E+00	.9762E+00
29 .2900E+02	.9978E+00	.9954E+00	.9933E+00	.9911E+00	.9882E+00	.9861E+00	.9844E+00	.9818E+00	.9779E+00	.9752E+00
30 .3000E+02	.9936E+00	.9925E+00	.9911E+00	.9894E+00	.9882E+00	.9866E+00	.9850E+00	.9838E+00	.9834E+00	.9824E+00

IZ=		31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	.0	.0	.9313E-11
2	.2000E+01	.5893E-01	.5887E-01	.5886E-01
3	.3000E+01	.1024E+00	.1023E+00	.1022E+00
4	.4000E+01	.1412E+00	.1410E+00	.1410E+00
5	.5000E+01	.1786E+00	.1785E+00	.1785E+00
6	.6000E+01	.2175E+00	.2172E+00	.2171E+00
7	.7000E+01	.2590E+00	.2586E+00	.2585E+00
8	.8000E+01	.3034E+00	.3030E+00	.3029E+00
9	.9000E+01	.3509E+00	.3503E+00	.3502E+00
10	.1000E+02	.4007E+00	.4001E+00	.4000E+00
11	.1100E+02	.4518E+00	.4511E+00	.4509E+00
12	.1200E+02	.5025E+00	.5018E+00	.5017E+00
13	.1300E+02	.5513E+00	.5506E+00	.5504E+00
14	.1400E+02	.5966E+00	.5960E+00	.5959E+00
15	.1500E+02	.6376E+00	.6371E+00	.6369E+00
16	.1600E+02	.6739E+00	.6734E+00	.6732E+00
17	.1700E+02	.7058E+00	.7053E+00	.7052E+00
18	.1800E+02	.7341E+00	.7337E+00	.7336E+00
19	.1900E+02	.7598E+00	.7595E+00	.7594E+00
20	.2000E+02	.7840E+00	.7837E+00	.7836E+00
21	.2100E+02	.8095E+00	.8092E+00	.8091E+00
22	.2200E+02	.8386E+00	.8383E+00	.8382E+00
23	.2300E+02	.8717E+00	.8714E+00	.8713E+00
24	.2400E+02	.9092E+00	.9089E+00	.9088E+00
25	.2500E+02	.9502E+00	.9499E+00	.9498E+00
26	.2600E+02	.9871E+00	.9866E+00	.9864E+00
27	.2700E+02	.9742E+00	.9592E+00	.9543E+00
28	.2800E+02	.9731E+00	.9620E+00	.9583E+00
29	.2900E+02	.9725E+00	.9699E+00	.9691E+00
30	.3000E+02	.9813E+00	.9802E+00	.9799E+00

STATION 3 **** V-VEL ****

IZ=		1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y										
1	.1000E+01	-.1317E-03	-.1435E-10	-.3151E-10	.8307E-10	.2284E-08	.8685E-08	-.2173E-05	-.3707E-05	-.3037E-04	-.1447E-03
2	.2000E+01	.8652E-02	.8624E-02	.8841E-02	.9076E-02	.9053E-02	.9068E-02	.9168E-02	.9274E-02	.9485E-02	.9343E-02
3	.3000E+01	.1487E-01	.1501E-01	.1503E-01	.1541E-01	.1539E-01	.1540E-01	.1550E-01	.1567E-01	.1581E-01	.1536E-01
4	.4000E+01	.2030E-01	.2043E-01	.2045E-01	.2091E-01	.2093E-01	.2090E-01	.2091E-01	.2109E-01	.2105E-01	.2019E-01
5	.5000E+01	.2573E-01	.2586E-01	.2587E-01	.2634E-01	.2643E-01	.2633E-01	.2622E-01	.2636E-01	.2622E-01	.2506E-01
6	.6000E+01	.3155E-01	.3168E-01	.3168E-01	.3213E-01	.3229E-01	.3212E-01	.3190E-01	.3195E-01	.3170E-01	.3036E-01
7	.7000E+01	.3803E-01	.3816E-01	.3815E-01	.3855E-01	.3877E-01	.3854E-01	.3823E-01	.3814E-01	.3777E-01	.3633E-01
8	.8000E+01	.4529E-01	.4543E-01	.4540E-01	.4573E-01	.4601E-01	.4575E-01	.4534E-01	.4510E-01	.4462E-01	.4316E-01
9	.9000E+01	.5335E-01	.5349E-01	.5345E-01	.5373E-01	.5405E-01	.5377E-01	.5326E-01	.5289E-01	.5229E-01	.5090E-01
10	.1000E+02	.6211E-01	.6225E-01	.6221E-01	.6243E-01	.6277E-01	.6251E-01	.6194E-01	.6144E-01	.6077E-01	.5953E-01
11	.1100E+02	.7139E-01	.7154E-01	.7149E-01	.7163E-01	.7199E-01	.7176E-01	.7115E-01	.7058E-01	.6986E-01	.6890E-01
12	.1200E+02	.8090E-01	.8103E-01	.8097E-01	.8104E-01	.8141E-01	.8124E-01	.8066E-01	.8004E-01	.7931E-01	.7871E-01
13	.1300E+02	.9032E-01	.9044E-01	.9039E-01	.9037E-01	.9068E-01	.9057E-01	.9004E-01	.8943E-01	.8883E-01	.8866E-01
14	.1400E+02	.9928E-01	.9941E-01	.9934E-01	.9924E-01	.9953E-01	.9949E-01	.9903E-01	.9849E-01	.9797E-01	.9845E-01
15	.1500E+02	.1076E+00	.1077E+00	.1077E+00	.1075E+00	.1077E+00	.1077E+00	.1074E+00	.1069E+00	.1066E+00	.1078E+00
16	.1600E+02	.1151E+00	.1152E+00	.1152E+00	.1149E+00	.1151E+00	.1151E+00	.1148E+00	.1145E+00	.1145E+00	.1165E+00
17	.1700E+02	.1218E+00	.1220E+00	.1219E+00	.1216E+00	.1217E+00	.1217E+00	.1215E+00	.1213E+00	.1216E+00	.1245E+00
18	.1800E+02	.1279E+00	.1280E+00	.1279E+00	.1276E+00	.1276E+00	.1277E+00	.1275E+00	.1274E+00	.1281E+00	.1319E+00
19	.1900E+02	.1335E+00	.1337E+00	.1335E+00	.1332E+00	.1331E+00	.1332E+00	.1330E+00	.1331E+00	.1341E+00	.1388E+00
20	.2000E+02	.1391E+00	.1393E+00	.1391E+00	.1387E+00	.1386E+00	.1386E+00	.1385E+00	.1386E+00	.1399E+00	.1454E+00
21	.2100E+02	.1453E+00	.1454E+00	.1452E+00	.1446E+00	.1446E+00	.1445E+00	.1443E+00	.1445E+00	.1462E+00	.1521E+00
22	.2200E+02	.1523E+00	.1524E+00	.1522E+00	.1517E+00	.1514E+00	.1512E+00	.1510E+00	.1512E+00	.1530E+00	.1590E+00
23	.2300E+02	.1604E+00	.1606E+00	.1603E+00	.1599E+00	.1593E+00	.1590E+00	.1587E+00	.1598E+00	.1606E+00	.1659E+00
24	.2400E+02	.1700E+00	.1702E+00	.1698E+00	.1691E+00	.1685E+00	.1680E+00	.1675E+00	.1673E+00	.1686E+00	.1729E+00
25	.2500E+02	.1809E+00	.1810E+00	.1806E+00	.1798E+00	.1789E+00	.1781E+00	.1772E+00	.1765E+00	.1769E+00	.1795E+00
26	.2600E+02	.1978E+00	.1979E+00	.1967E+00	.1953E+00	.1934E+00	.1915E+00	.1893E+00	.1871E+00	.1859E+00	.1865E+00
27	.2700E+02	.2200E+00	.2197E+00	.2177E+00	.2148E+00	.2110E+00	.2068E+00	.2022E+00	.1976E+00	.1943E+00	.1929E+00
28	.2800E+02	.2341E+00	.2336E+00	.2311E+00	.2267E+00	.2216E+00	.2154E+00	.2085E+00	.2017E+00	.1959E+00	.1917E+00
29	.2900E+02	.2409E+00	.2403E+00	.2373E+00	.2321E+00	.2249E+00	.2162E+00	.2069E+00	.1970E+00	.1870E+00	.1788E+00
30	.3000E+02	.2575E+00	.2548E+00	.2523E+00	.2451E+00	.2349E+00	.2234E+00	.2138E+00	.1976E+00	.1780E+00	.1659E+00

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	-.3485E-03	-.6343E-03	-.1563E-02	-.1880E-02	-.2257E-02	-.2343E-02	-.2310E-02	-.1491E-02	-.9999E-03	-.3446E-03
2 .2000E+01	.7522E-02	.7295E-02	.3439E-02	-.2959E-04	-.2700E-02	-.4948E-02	-.6778E-02	-.7364E-02	-.7494E-02	-.7230E-02
3 .3000E+01	.1246E-01	.1215E-01	.7149E-02	.2488E-02	-.1520E-02	-.4869E-02	-.7752E-02	-.9316E-02	-.9966E-02	-.1020E-01
4 .4000E+01	.1639E-01	.1625E-01	.1133E-01	.6901E-02	.2652E-02	-.1027E-02	-.4441E-02	-.6927E-02	-.8482E-02	-.9830E-02
5 .5000E+01	.2086E-01	.2139E-01	.1718E-01	.1351E-01	.1004E-01	.6604E-02	.2871E-02	-.6863E-03	-.3756E-02	-.7021E-02
6 .6000E+01	.2599E-01	.2776E-01	.2503E-01	.2278E-01	.2075E-01	.1803E-01	.1409E-01	.9304E-02	.4106E-02	-.1809E-02
7 .7000E+01	.3213E-01	.3558E-01	.3504E-01	.3493E-01	.3487E-01	.3320E-01	.2910E-01	.2281E-01	.1498E-01	.5676E-02
8 .8000E+01	.3937E-01	.4501E-01	.4724E-01	.4993E-01	.5232E-01	.5189E-01	.4762E-01	.3955E-01	.2857E-01	.1519E-01
9 .9000E+01	.4781E-01	.5600E-01	.6154E-01	.6757E-01	.7269E-01	.7364E-01	.6913E-01	.5901E-01	.4444E-01	.2635E-01
10 .1000E+02	.5740E-01	.6641E-01	.7757E-01	.8733E-01	.9535E-01	.9770E-01	.9281E-01	.8040E-01	.6193E-01	.3865E-01
11 .1100E+02	.6797E-01	.8194E-01	.9490E-01	.1086E+00	.1193E+00	.1230E+00	.1175E+00	.1027E+00	.8016E-01	.5142E-01
12 .1200E+02	.7926E-01	.9605E-01	.1128E+00	.1302E+00	.1435E+00	.1481E+00	.1420E+00	.1247E+00	.9820E-01	.6399E-01
13 .1300E+02	.9089E-01	.1103E+00	.1305E+00	.1512E+00	.1664E+00	.1717E+00	.1647E+00	.1451E+00	.1148E+00	.7561E-01
14 .1400E+02	.1026E+00	.1242E+00	.1472E+00	.1705E+00	.1869E+00	.1924E+00	.1844E+00	.1627E+00	.1293E+00	.8577E-01
15 .1500E+02	.1138E+00	.1371E+00	.1622E+00	.1871E+00	.2038E+00	.2089E+00	.1999E+00	.1764E+00	.1406E+00	.9380E-01
16 .1600E+02	.1244E+00	.1487E+00	.1749E+00	.2001E+00	.2162E+00	.2205E+00	.2103E+00	.1856E+00	.1482E+00	.9941E-01
17 .1700E+02	.1342E+00	.1587E+00	.1849E+00	.2092E+00	.2240E+00	.2269E+00	.2156E+00	.1901E+00	.1520E+00	.1025E+00
18 .1800E+02	.1430E+00	.1669E+00	.1921E+00	.2144E+00	.2272E+00	.2285E+00	.2162E+00	.1903E+00	.1524E+00	.1033E+00
19 .1900E+02	.1508E+00	.1735E+00	.1967E+00	.2162E+00	.2265E+00	.2259E+00	.2127E+00	.1869E+00	.1499E+00	.1023E+00
20 .2000E+02	.1578E+00	.1785E+00	.1990E+00	.2152E+00	.2229E+00	.2204E+00	.2065E+00	.1811E+00	.1454E+00	.1001E+00
21 .2100E+02	.1640E+00	.1824E+00	.1997E+00	.2125E+00	.2173E+00	.2132E+00	.1986E+00	.1739E+00	.1398E+00	.9716E-01
22 .2200E+02	.1698E+00	.1853E+00	.1993E+00	.2066E+00	.2110E+00	.2053E+00	.1904E+00	.1664E+00	.1341E+00	.9419E-01
23 .2300E+02	.1750E+00	.1875E+00	.1982E+00	.2047E+00	.2050E+00	.1981E+00	.1831E+00	.1600E+00	.1295E+00	.9220E-01
24 .2400E+02	.1797E+00	.1892E+00	.1973E+00	.2017E+00	.2007E+00	.1933E+00	.1784E+00	.1563E+00	.1274E+00	.9231E-01
25 .2500E+02	.1841E+00	.1913E+00	.1977E+00	.2010E+00	.1995E+00	.1919E+00	.1777E+00	.1565E+00	.1291E+00	.9595E-01
26 .2600E+02	.1891E+00	.1946E+00	.1994E+00	.2012E+00	.1984E+00	.1905E+00	.1768E+00	.1578E+00	.1323E+00	.1021E+00
27 .2700E+02	.1931E+00	.1951E+00	.1958E+00	.1938E+00	.1886E+00	.1797E+00	.1667E+00	.1496E+00	.1284E+00	.1033E+00
28 .2800E+02	.1862E+00	.1854E+00	.1812E+00	.1755E+00	.1680E+00	.1586E+00	.1469E+00	.1326E+00	.1157E+00	.9624E-01
29 .2900E+02	.1715E+00	.1647E+00	.1565E+00	.1482E+00	.1396E+00	.1309E+00	.1215E+00	.1107E+00	.9846E-01	.8509E-01
30 .3000E+02	.1558E+00	.1458E+00	.1349E+00	.1261E+00	.1181E+00	.1106E+00	.1030E+00	.9446E-01	.8480E-01	.7496E-01

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.3843E-04	.2168E-03	.1394E-03	.4887E-04	.1039E-04	.1041E-05	.5876E-07	-.2339E-08	-.6197E-09	-.2739E-10
2 .2000E+01	-.6997E-02	-.7264E-02	-.7573E-02	-.8856E-02	-.9008E-02	-.9303E-02	-.9189E-02	-.9104E-02	-.9064E-02	-.9055E-02
3 .3000E+01	-.1060E-01	-.1170E-01	-.1238E-01	-.1455E-01	-.1505E-01	-.1563E-01	-.1549E-01	-.1541E-01	-.1536E-01	-.1533E-01
4 .4000E+01	-.1161E-01	-.1436E-01	-.1576E-01	-.1902E-01	-.2014E-01	-.2091E-01	-.2084E-01	-.2062E-01	-.2077E-01	-.2069E-01
5 .5000E+01	-.1092E-01	-.1611E-01	-.1887E-01	-.2329E-01	-.2520E-01	-.2607E-01	-.2614E-01	-.2608E-01	-.2608E-01	-.2592E-01
6 .6000E+01	-.8653E-02	-.1715E-01	-.2190E-01	-.2773E-01	-.3056E-01	-.3156E-01	-.3167E-01	-.3180E-01	-.3173E-01	-.3147E-01
7 .7000E+01	-.4978E-02	-.1771E-01	-.2518E-01	-.3261E-01	-.3653E-01	-.3767E-01	-.3789E-01	-.3806E-01	-.3799E-01	-.3763E-01
8 .8000E+01	-.1186E-03	-.1603E-01	-.2882E-01	-.3810E-01	-.4322E-01	-.4455E-01	-.4487E-01	-.4509E-01	-.4501E-01	-.4455E-01
9 .9000E+01	.5622E-02	-.1031E-01	-.3298E-01	-.4445E-01	-.5068E-01	-.5224E-01	-.5266E-01	-.5293E-01	-.5284E-01	-.5232E-01
10 .1000E+02	.1188E-01	-.1871E-01	-.3769E-01	-.5147E-01	-.5884E-01	-.6065E-01	-.6117E-01	-.6147E-01	-.6138E-01	-.6081E-01
11 .1100E+02	.1834E-01	-.1922E-01	-.4285E-01	-.5905E-01	-.6747E-01	-.6955E-01	-.7014E-01	-.7048E-01	-.7040E-01	-.6982E-01
12 .1200E+02	.2454E-01	-.2003E-01	-.4824E-01	-.6684E-01	-.7622E-01	-.7860E-01	-.7930E-01	-.7966E-01	-.7960E-01	-.7903E-01
13 .1300E+02	.3033E-01	-.2079E-01	-.5347E-01	-.7436E-01	-.8471E-01	-.8735E-01	-.8817E-01	-.8857E-01	-.8856E-01	-.8811E-01
14 .1400E+02	.3536E-01	-.2128E-01	-.5821E-01	-.8122E-01	-.9235E-01	-.9544E-01	-.9639E-01	-.9688E-01	-.9696E-01	-.9661E-01
15 .1500E+02	.3955E-01	-.2134E-01	-.6184E-01	-.8690E-01	-.9893E-01	-.1024E+00	-.1036E+00	-.1043E+00	-.1045E+00	-.1043E+00
16 .1600E+02	.4279E-01	-.2068E-01	-.6424E-01	-.9091E-01	-.1040E+00	-.1081E+00	-.1097E+00	-.1105E+00	-.1109E+00	-.1110E+00
17 .1700E+02	.4513E-01	-.1922E-01	-.6493E-01	-.9316E-01	-.1074E+00	-.1124E+00	-.1144E+00	-.1155E+00	-.1162E+00	-.1165E+00
18 .1800E+02	.4664E-01	-.1689E-01	-.6393E-01	-.9351E-01	-.1091E+00	-.1151E+00	-.1178E+00	-.1194E+00	-.1204E+00	-.1210E+00
19 .1900E+02	.4758E-01	-.1376E-01	-.6117E-01	-.9189E-01	-.1091E+00	-.1165E+00	-.1201E+00	-.1222E+00	-.1236E+00	-.1246E+00
20 .2000E+02	.4821E-01	-.9863E-02	-.5686E-01	-.8852E-01	-.1075E+00	-.1165E+00	-.1213E+00	-.1242E+00	-.1261E+00	-.1276E+00
21 .2100E+02	.4869E-01	-.5384E-02	-.5121E-01	-.8359E-01	-.1045E+00	-.1155E+00	-.1217E+00	-.1256E+00	-.1283E+00	-.1303E+00
22 .2200E+02	.4925E-01	-.6025E-03	-.4450E-01	-.7729E-01	-.1030E+00	-.1133E+00	-.1214E+00	-.1266E+00	-.1302E+00	-.1329E+00
23 .2300E+02	.5053E-01	.4741E-02	-.3684E-01	-.6947E-01	-.9397E-01	-.1097E+00	-.1200E+00	-.1269E+00	-.1317E+00	-.1354E+00
24 .2400E+02	.5345E-01	.1116E-01	-.2757E-01	-.6016E-01	-.8590E-01	-.1042E+00	-.1171E+00	-.1260E+00	-.1324E+00	-.1373E+00
25 .2500E+02	.5918E-01	.1957E-01	-.1749E-01	-.4898E-01	-.7563E-01	-.9625E-01	-.1119E+00	-.1233E+00	-.1319E+00	-.1383E+00
26 .2600E+02	.6820E-01	.3114E-01	-.4341E-02	-.3537E-01	-.6250E-01	-.8488E-01	-.1030E+00	-.1172E+00	-.1280E+00	-.1362E+00
27 .2700E+02	.7480E-01	.4305E-01	.1126E-01	-.1838E-01	-.4564E-01	-.6944E-01	-.8967E-01	-.1061E+00	-.1192E+00	-.1292E+00
28 .2800E+02	.7442E-01	.5013E-01	.2481E-01	-.6014E-03	-.2607E-01	-.5036E-01	-.7245E-01	-.9151E-01	-.1073E+00	-.1197E+00
29 .2900E+02	.7057E-01	.5403E-01	.3650E-01	.1742E-01	-.4309E-02	-.2753E-01	-.5065E-01	-.7233E-01	-.9150E-01	-.1071E+00
30 .3000E+02	.6530E-01	.5442E-01	.4309E-01	.3143E-01	.1432E-01	-.8793E-02	-.3290E-01	-.5603E-01	-.7785E-01	-.9652E-01

IZ=		31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	-.1023E-10	-.2534E-11	.1092E-03
2	.2000E+01	-.8802E-02	-.8786E-02	-.8675E-02
3	.3000E+01	-.1491E-01	-.1488E-01	-.1477E-01
4	.4000E+01	-.2018E-01	-.2015E-01	-.2003E-01
5	.5000E+01	-.2540E-01	-.2535E-01	-.2522E-01
6	.6000E+01	-.3096E-01	-.3089E-01	-.3076E-01
7	.7000E+01	-.3715E-01	-.3708E-01	-.3694E-01
8	.8000E+01	-.4413E-01	-.4405E-01	-.4391E-01
9	.9000E+01	-.5193E-01	-.5184E-01	-.5169E-01
10	.1000E+02	-.6046E-01	-.6037E-01	-.6021E-01
11	.1100E+02	-.6955E-01	-.6946E-01	-.6930E-01
12	.1200E+02	-.7883E-01	-.7877E-01	-.7865E-01
13	.1300E+02	-.8802E-01	-.8799E-01	-.8788E-01
14	.1400E+02	-.9668E-01	-.9668E-01	-.9659E-01
15	.1500E+02	-.1045E+00	-.1046E+00	-.1045E+00
16	.1600E+02	-.1113E+00	-.1115E+00	-.1115E+00
17	.1700E+02	-.1170E+00	-.1173E+00	-.1174E+00
18	.1800E+02	-.1218E+00	-.1222E+00	-.1223E+00
19	.1900E+02	-.1256E+00	-.1262E+00	-.1264E+00
20	.2000E+02	-.1289E+00	-.1297E+00	-.1300E+00
21	.2100E+02	-.1320E+00	-.1331E+00	-.1335E+00
22	.2200E+02	-.1351E+00	-.1365E+00	-.1371E+00
23	.2300E+02	-.1381E+00	-.1400E+00	-.1408E+00
24	.2400E+02	-.1409E+00	-.1434E+00	-.1446E+00
25	.2500E+02	-.1430E+00	-.1463E+00	-.1478E+00
26	.2600E+02	-.1421E+00	-.1460E+00	-.1480E+00
27	.2700E+02	-.1363E+00	-.1406E+00	-.1429E+00
28	.2800E+02	-.1287E+00	-.1341E+00	-.1371E+00
29	.2900E+02	-.1187E+00	-.1260E+00	-.1300E+00
30	.3000E+02	-.1112E+00	-.1212E+00	-.1278E+00

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STATION 3 **** W-VEL ****

IZ=		1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y										
1	.1000E+01	-.1562E-13	.2048E-03	.4132E-03	.6511E-03	.8504E-03	.1060E-02	.1286E-02	.1514E-02	.1777E-02	.2047E-02
2	.2000E+01	.2378E-11	.6443E-03	.1240E-02	.1873E-02	.2400E-02	.2909E-02	.3401E-02	.3899E-02	.4592E-02	.6099E-02
3	.3000E+01	-.4800E-08	.9300E-03	.1797E-02	.2708E-02	.3476E-02	.4236E-02	.4981E-02	.5759E-02	.6916E-02	.9374E-02
4	.4000E+01	-.6492E-08	.1055E-02	.2091E-02	.3139E-02	.4079E-02	.5034E-02	.6030E-02	.7083E-02	.8704E-02	.1191E-01
5	.5000E+01	-.7826E-08	.9686E-03	.2002E-02	.3043E-02	.4010E-02	.5054E-02	.6202E-02	.7501E-02	.9456E-02	.1329E-01
6	.6000E+01	-.8867E-08	.6677E-03	.1527E-02	.2397E-02	.3240E-02	.4269E-02	.5473E-02	.6940E-02	.9127E-02	.1340E-01
7	.7000E+01	-.9667E-08	.1446E-03	.6443E-03	.1162E-02	.1774E-02	.2656E-02	.3809E-02	.5345E-02	.7657E-02	.1215E-01
8	.8000E+01	-.1026E-07	-.6011E-03	-.6364E-03	-.5943E-03	-.4080E-03	-.2075E-03	-.1187E-02	-.2684E-02	-.4580E-02	-.9460E-02
9	.9000E+01	-.1067E-07	-.1560E-02	-.2313E-02	-.2915E-02	-.3273E-02	-.3070E-02	-.2366E-02	-.1031E-02	-.1094E-02	-.5312E-02
10	.1000E+02	-.1092E-07	-.2692E-02	-.4325E-02	-.5718E-02	-.6742E-02	-.7069E-02	-.6762E-02	-.5723E-02	-.3450E-02	-.2510E-03
11	.1100E+02	-.1103E-07	-.3984E-02	-.6615E-02	-.8602E-02	-.1071E-01	-.1166E-01	-.1188E-01	-.1126E-01	-.1002E-01	-.7119E-02
12	.1200E+02	-.1099E-07	-.5354E-02	-.9070E-02	-.1234E-01	-.1500E-01	-.1668E-01	-.1751E-01	-.1744E-01	-.1688E-01	-.1504E-01
13	.1300E+02	-.1082E-07	-.6760E-02	-.1160E-01	-.1557E-01	-.1941E-01	-.2186E-01	-.2337E-01	-.2395E-01	-.2427E-01	-.2370E-01
14	.1400E+02	-.1052E-07	-.8112E-02	-.1406E-01	-.1931E-01	-.2373E-01	-.2696E-01	-.2917E-01	-.3053E-01	-.3175E-01	-.3267E-01
15	.1500E+02	-.1010E-07	-.9359E-02	-.1634E-01	-.2251E-01	-.2776E-01	-.3174E-01	-.3468E-01	-.3680E-01	-.3911E-01	-.4151E-01
16	.1600E+02	-.9562E-08	-.1044E-01	-.1833E-01	-.2531E-01	-.3123E-01	-.3597E-01	-.3959E-01	-.4249E-01	-.4582E-01	-.4956E-01
17	.1700E+02	-.8936E-08	-.1132E-01	-.1997E-01	-.2763E-01	-.3423E-01	-.3951E-01	-.4376E-01	-.4738E-01	-.5165E-01	-.5654E-01
18	.1800E+02	-.8246E-08	-.1196E-01	-.2124E-01	-.2944E-01	-.3655E-01	-.4232E-01	-.4711E-01	-.5138E-01	-.5642E-01	-.6203E-01
19	.1900E+02	-.7542E-08	-.1246E-01	-.2217E-01	-.3079E-01	-.3827E-01	-.4448E-01	-.4968E-01	-.5449E-01	-.6005E-01	-.6578E-01
20	.2000E+02	-.6875E-08	-.1278E-01	-.2284E-01	-.3177E-01	-.3952E-01	-.4604E-01	-.5166E-01	-.5680E-01	-.6255E-01	-.6786E-01
21	.2100E+02	-.6309E-08	-.1298E-01	-.2331E-01	-.3249E-01	-.4047E-01	-.4728E-01	-.5315E-01	-.5855E-01	-.6413E-01	-.6831E-01
22	.2200E+02	-.5911E-08	-.1312E-01	-.2368E-01	-.3306E-01	-.4124E-01	-.4828E-01	-.5444E-01	-.5985E-01	-.6485E-01	-.6748E-01
23	.2300E+02	-.5730E-08	-.1325E-01	-.2404E-01	-.3366E-01	-.4208E-01	-.4933E-01	-.5565E-01	-.6100E-01	-.6512E-01	-.6573E-01
24	.2400E+02	-.5781E-08	-.1338E-01	-.2443E-01	-.3431E-01	-.4295E-01	-.5050E-01	-.5702E-01	-.6201E-01	-.6501E-01	-.6389E-01
25	.2500E+02	-.5994E-08	-.1353E-01	-.2489E-01	-.3511E-01	-.4409E-01	-.5182E-01	-.5844E-01	-.6315E-01	-.6515E-01	-.6276E-01
26	.2600E+02	-.6156E-08	-.1357E-01	-.2560E-01	-.3632E-01	-.4568E-01	-.5357E-01	-.6004E-01	-.6421E-01	-.6567E-01	-.6343E-01
27	.2700E+02	-.5782E-08	-.1444E-01	-.2716E-01	-.3875E-01	-.4876E-01	-.5699E-01	-.6341E-01	-.6716E-01	-.6793E-01	-.6530E-01
28	.2800E+02	-.4045E-08	-.1576E-01	-.3009E-01	-.4330E-01	-.5420E-01	-.6311E-01	-.6969E-01	-.7323E-01	-.7255E-01	-.6799E-01
29	.2900E+02	.4400E-11	-.1733E-01	-.3365E-01	-.4848E-01	-.6093E-01	-.7023E-01	-.7674E-01	-.8216E-01	-.7878E-01	-.7197E-01
30	.3000E+02	.3469E-17	-.1996E-01	-.3529E-01	-.5727E-01	-.7226E-01	-.8248E-01	-.8756E-01	-.9391E-01	-.8870E-01	-.7925E-01

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.2027E-02	.2225E-02	.2225E-02	.1633E-02	.1156E-02	.5673E-03	-.2066E-10	-.3610E-03	-.5121E-03	-.2994E-03
2 .2000E+01	.7390E-02	.1078E-01	.1334E-01	.1352E-01	.1299E-01	.1179E-01	.9850E-02	.7415E-02	.6078E-02	.4198E-02
3 .3000E+01	.1144E-01	.1649E-01	.2045E-01	.2123E-01	.2055E-01	.1908E-01	.1663E-01	.1343E-01	.1133E-01	.8338E-02
4 .4000E+01	.1467E-01	.2027E-01	.2472E-01	.2589E-01	.2542E-01	.2419E-01	.2232E-01	.1968E-01	.1742E-01	.1423E-01
5 .5000E+01	.1639E-01	.2199E-01	.2644E-01	.2779E-01	.2819E-01	.2803E-01	.2770E-01	.2658E-01	.2512E-01	.2249E-01
6 .6000E+01	.1665E-01	.2164E-01	.2590E-01	.2753E-01	.2930E-01	.3110E-01	.3324E-01	.3450E-01	.3477E-01	.3335E-01
7 .7000E+01	.1520E-01	.1916E-01	.2316E-01	.2540E-01	.2917E-01	.3370E-01	.3924E-01	.4378E-01	.4660E-01	.4705E-01
8 .8000E+01	.1202E-01	.1461E-01	.1840E-01	.2164E-01	.2803E-01	.3609E-01	.4592E-01	.5457E-01	.6075E-01	.6366E-01
9 .9000E+01	.7020E-02	.8037E-02	.1175E-01	.1648E-01	.2614E-01	.3850E-01	.5336E-01	.6687E-01	.7709E-01	.8301E-01
10 .1000E+02	.2491E-03	-.3741E-03	.3535E-02	.1024E-01	.2374E-01	.4106E-01	.6149E-01	.8042E-01	.9522E-01	.1046E+00
11 .1100E+02	-.8139E-02	-.1031E-01	-.5787E-02	.3298E-02	.2104E-01	.4376E-01	.7004E-01	.9470E-01	.1144E+00	.1275E+00
12 .1200E+02	-.1784E-01	-.2181E-01	-.1577E-01	-.3777E-02	.1843E-01	.4659E-01	.7869E-01	.1090E+00	.1337E+00	.1507E+00
13 .1300E+02	-.2832E-01	-.3255E-01	-.2560E-01	-.1059E-01	.1604E-01	.4950E-01	.8697E-01	.1226E+00	.1519E+00	.1726E+00
14 .1400E+02	-.3911E-01	-.4340E-01	-.3462E-01	-.1630E-01	.1432E-01	.5235E-01	.9444E-01	.1345E+00	.1679E+00	.1919E+00
15 .1500E+02	-.4933E-01	-.5305E-01	-.4201E-01	-.2058E-01	.1353E-01	.5515E-01	.1007E+00	.1441E+00	.1806E+00	.2073E+00
16 .1600E+02	-.5849E-01	-.6065E-01	-.4710E-01	-.2291E-01	.1381E-01	.5786E-01	.1055E+00	.1509E+00	.1894E+00	.2179E+00
17 .1700E+02	-.6566E-01	-.6566E-01	-.4950E-01	-.2309E-01	.1527E-01	.6041E-01	.1087E+00	.1547E+00	.1939E+00	.2233E+00
18 .1800E+02	-.7048E-01	-.6775E-01	-.4920E-01	-.2119E-01	.1774E-01	.6274E-01	.1104E+00	.1557E+00	.1945E+00	.2238E+00
19 .1900E+02	-.7271E-01	-.6713E-01	-.4647E-01	-.1767E-01	.2095E-01	.6466E-01	.1105E+00	.1541E+00	.1915E+00	.2200E+00
20 .2000E+02	-.7254E-01	-.6413E-01	-.4191E-01	-.1302E-01	.2440E-01	.6609E-01	.1094E+00	.1504E+00	.1857E+00	.2128E+00
21 .2100E+02	-.7025E-01	-.5932E-01	-.3620E-01	-.7817E-02	.2766E-01	.6695E-01	.1072E+00	.1453E+00	.1779E+00	.2033E+00
22 .2200E+02	-.6648E-01	-.5371E-01	-.3024E-01	-.2851E-02	.3067E-01	.6695E-01	.1040E+00	.1389E+00	.1689E+00	.1921E+00
23 .2300E+02	-.6219E-01	-.4823E-01	-.2525E-01	.8536E-03	.3206E-01	.6552E-01	.9956E-01	.1315E+00	.1589E+00	.1801E+00
24 .2400E+02	-.5834E-01	-.4409E-01	-.2222E-01	.2208E-02	.3119E-01	.6219E-01	.9359E-01	.1231E+00	.1482E+00	.1676E+00
25 .2500E+02	-.5642E-01	-.4286E-01	-.2263E-01	.2292E-03	.2732E-01	.5636E-01	.8589E-01	.1135E+00	.1370E+00	.1550E+00
26 .2600E+02	-.5770E-01	-.4529E-01	-.2623E-01	-.4273E-02	.2131E-01	.4847E-01	.7585E-01	.1015E+00	.1235E+00	.1408E+00
27 .2700E+02	-.5913E-01	-.4693E-01	-.2886E-01	-.8253E-02	.1506E-01	.3927E-01	.6336E-01	.8580E-01	.1054E+00	.1209E+00
28 .2800E+02	-.6009E-01	-.4766E-01	-.3103E-01	-.1241E-01	.7899E-02	.2863E-01	.4882E-01	.6744E-01	.8357E-01	.9634E-01
29 .2900E+02	-.6285E-01	-.5115E-01	-.3587E-01	-.1926E-01	-.1709E-02	.1569E-01	.3226E-01	.4721E-01	.6007E-01	.7025E-01
30 .3000E+02	-.6929E-01	-.5917E-01	-.4561E-01	-.2917E-01	-.1168E-01	.5603E-02	.2126E-01	.3460E-01	.4602E-01	.5506E-01

IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.5471E-04	.5779E-03	.8107E-03	.6912E-03	.6083E-03	.4252E-03	.3477E-03	.2871E-03	.2331E-03	.1844E-03
2 .2000E+01	.2244E-02	.1028E-02	-.1695E-04	-.4944E-03	-.7016E-03	-.7642E-03	-.6885E-03	-.5586E-03	-.4632E-03	-.3609E-03
3 .3000E+01	.5344E-02	.3180E-02	.1102E-02	.4609E-03	-.2577E-04	-.2488E-03	-.2864E-03	-.2478E-03	-.2568E-03	-.2321E-03
4 .4000E+01	.1094E-01	.8221E-02	.4989E-02	.4017E-02	.3019E-02	.2304E-02	.1841E-02	.1438E-02	.1012E-02	.6679E-03
5 .5000E+01	.1915E-01	.1602E-01	.1124E-01	.9829E-02	.7972E-02	.6467E-02	.5277E-02	.4179E-02	.3110E-02	.2170E-02
6 .6000E+01	.3032E-01	.2683E-01	.2020E-01	.1794E-01	.1486E-01	.1221E-01	.1001E-01	.7959E-02	.5989E-02	.4255E-02
7 .7000E+01	.4466E-01	.4083E-01	.3192E-01	.2840E-01	.2367E-01	.1952E-01	.1603E-01	.1275E-01	.9658E-02	.6903E-02
8 .8000E+01	.6280E-01	.5805E-01	.4647E-01	.4114E-01	.3430E-01	.2829E-01	.2322E-01	.1848E-01	.1404E-01	.1008E-01
9 .9000E+01	.8302E-01	.7829E-01	.6367E-01	.5596E-01	.4654E-01	.3833E-01	.3141E-01	.2499E-01	.1904E-01	.1371E-01
10 .1000E+02	.1063E+00	.1010E+00	.8310E-01	.7244E-01	.6001E-01	.4932E-01	.4033E-01	.3210E-01	.2449E-01	.1766E-01
11 .1100E+02	.1313E+00	.1253E+00	.1041E+00	.8999E-01	.7421E-01	.6086E-01	.4965E-01	.3950E-01	.3018E-01	.2180E-01
12 .1200E+02	.1567E+00	.1500E+00	.1257E+00	.1078E+00	.8855E-01	.7245E-01	.5898E-01	.4689E-01	.3586E-01	.2593E-01
13 .1300E+02	.1809E+00	.1737E+00	.1468E+00	.1251E+00	.1024E+00	.8353E-01	.6785E-01	.5392E-01	.4126E-01	.2987E-01
14 .1400E+02	.2024E+00	.1950E+00	.1664E+00	.1410E+00	.1150E+00	.9365E-01	.7590E-01	.6028E-01	.4615E-01	.3342E-01
15 .1500E+02	.2198E+00	.2125E+00	.1832E+00	.1547E+00	.1260E+00	.1023E+00	.8278E-01	.6569E-01	.5030E-01	.3645E-01
16 .1600E+02	.2320E+00	.2254E+00	.1964E+00	.1657E+00	.1349E+00	.1094E+00	.8827E-01	.6999E-01	.5359E-01	.3884E-01
17 .1700E+02	.2386E+00	.2330E+00	.2055E+00	.1737E+00	.1415E+00	.1146E+00	.9234E-01	.7314E-01	.5597E-01	.4056E-01
18 .1800E+02	.2396E+00	.2356E+00	.2105E+00	.1787E+00	.1460E+00	.1182E+00	.9508E-01	.7521E-01	.5753E-01	.4166E-01
19 .1900E+02	.2359E+00	.2336E+00	.2116E+00	.1810E+00	.1486E+00	.1204E+00	.9672E-01	.7639E-01	.5837E-01	.4223E-01
20 .2000E+02	.2283E+00	.2279E+00	.2093E+00	.1810E+00	.1496E+00	.1215E+00	.9751E-01	.7689E-01	.5866E-01	.4238E-01
21 .2100E+02	.2180E+00	.2193E+00	.2043E+00	.1791E+00	.1494E+00	.1217E+00	.9764E-01	.7687E-01	.5855E-01	.4222E-01
22 .2200E+02	.2060E+00	.2086E+00	.1969E+00	.1752E+00	.1479E+00	.1211E+00	.9723E-01	.7641E-01	.5809E-01	.4178E-01
23 .2300E+02	.1929E+00	.1963E+00	.1876E+00	.1694E+00	.1449E+00	.1195E+00	.9614E-01	.7552E-01	.5728E-01	.4107E-01
24 .2400E+02	.1794E+00	.1831E+00	.1764E+00	.1615E+00	.1400E+00	.1166E+00	.9413E-01	.7394E-01	.5594E-01	.3998E-01
25 .2500E+02	.1660E+00	.1695E+00	.1640E+00	.1513E+00	.1326E+00	.1115E+00	.9055E-01	.7122E-01	.5381E-01	.3833E-01
26 .2600E+02	.1517E+00	.1553E+00	.1502E+00	.1386E+00	.1219E+00	.1032E+00	.8448E-01	.6677E-01	.5044E-01	.3577E-01
27 .2700E+02	.1312E+00	.1352E+00	.1315E+00	.1219E+00	.1079E+00	.9185E-01	.7553E-01	.5987E-01	.4516E-01	.3187E-01
28 .2800E+02	.1049E+00	.1085E+00	.1064E+00	.9938E-01	.8833E-01	.7527E-01	.6180E-01	.4874E-01	.3640E-01	.2535E-01
29 .2900E+02	.7696E-01	.7945E-01	.7768E-01	.7176E-01	.6129E-01	.5002E-01	.3952E-01	.2959E-01	.2069E-01	.1322E-01
30 .3000E+02	.5984E-01	.6017E-01	.5679E-01	.4807E-01	.3491E-01	.2301E-01	.1326E-01	.5425E-02	.3825E-03	-.2295E-02

IZ=		31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	.1482E-03	.6854E-04	.2078E-13
2	.2000E+01	-.1942E-03	-.1074E-03	.1725E-11
3	.3000E+01	-.1156E-03	-.7516E-04	-.3286E-08
4	.4000E+01	.4632E-03	.1866E-03	-.4444E-08
5	.5000E+01	.1416E-02	.6325E-03	-.5356E-08
6	.6000E+01	.2749E-02	.1262E-02	-.6065E-08
7	.7000E+01	.4448E-02	.2071E-02	-.6609E-08
8	.8000E+01	.6495E-02	.3046E-02	-.7006E-08
9	.9000E+01	.8833E-02	.4162E-02	-.7280E-08
10	.1000E+02	.1139E-01	.5390E-02	-.7438E-08
11	.1100E+02	.1407E-01	.6678E-02	-.7491E-08
12	.1200E+02	.1676E-01	.7969E-02	-.7440E-08
13	.1300E+02	.1931E-01	.9202E-02	-.7286E-08
14	.1400E+02	.2163E-01	.1032E-01	-.7031E-08
15	.1500E+02	.2360E-01	.1127E-01	-.6674E-08
16	.1600E+02	.2515E-01	.1203E-01	-.6216E-08
17	.1700E+02	.2627E-01	.1257E-01	-.5666E-08
18	.1800E+02	.2697E-01	.1292E-01	-.5033E-08
19	.1900E+02	.2732E-01	.1309E-01	-.4343E-08
20	.2000E+02	.2739E-01	.1313E-01	-.3625E-08
21	.2100E+02	.2723E-01	.1305E-01	-.2521E-08
22	.2200E+02	.2688E-01	.1287E-01	-.2285E-08
23	.2300E+02	.2634E-01	.1260E-01	-.1772E-08
24	.2400E+02	.2554E-01	.1218E-01	-.1437E-08
25	.2500E+02	.2432E-01	.1152E-01	-.1302E-08
26	.2600E+02	.2244E-01	.1052E-01	-.1326E-08
27	.2700E+02	.1987E-01	.9271E-02	-.1346E-08
28	.2800E+02	.1583E-01	.7467E-02	-.1037E-08
29	.2900E+02	.7530E-02	.3178E-02	.1178E-11
30	.3000E+02	-.2949E-02	-.2255E-02	-.1041E-16

STATION 3 **** VOR-X ****

IZ=		1	2	3	4	5	6	7	8	9	10
	Z =	.1000E+01	.2000E+01	.3000E+01	.4000E+01	.5000E+01	.6000E+01	.7000E+01	.8000E+01	.9000E+01	.1000E+02
IY	Y										
1	.1000E+01	.0	.1804E+02	.3410E+02	.5210E+02	.6594E+02	.7882E+02	.9159E+02	.1045E+03	.1218E+03	.1557E+03
2	.2000E+01	.0	.8365E+01	.1624E+02	.2415E+02	.3104E+02	.3789E+02	.4493E+02	.5277E+02	.6363E+02	.8178E+02
3	.3000E+01	.0	.3418E+01	.7093E+01	.1050E+02	.1387E+02	.1757E+02	.2170E+02	.2672E+02	.3412E+02	.4556E+02
4	.4000E+01	.0	.3565E+00	.1401E+01	.2250E+01	.3423E+01	.5178E+01	.7472E+01	.1057E+02	.1500E+02	.2145E+02
5	.5000E+01	.0	-.1635E+01	-.2339E+01	-.3094E+01	-.3378E+01	-.2968E+01	-.1987E+01	-.2644E+00	.1880E+01	.4742E+01
6	.6000E+01	.0	-.2904E+01	-.4758E+01	-.6523E+01	-.7769E+01	-.8300E+01	-.8286E+01	-.7619E+01	-.7109E+01	-.6965E+01
7	.7000E+01	.0	-.3624E+01	-.6170E+01	-.8511E+01	-.1035E+02	-.1150E+02	-.1218E+02	-.1234E+02	-.1305E+02	-.1488E+02
8	.8000E+01	.0	-.3911E+01	-.6786E+01	-.9403E+01	-.1154E+02	-.1307E+02	-.1418E+02	-.1495E+02	-.1652E+02	-.1968E+02
9	.9000E+01	.0	-.3871E+01	-.6797E+01	-.9441E+01	-.1165E+02	-.1335E+02	-.1469E+02	-.1588E+02	-.1798E+02	-.2197E+02
10	.1000E+02	.0	-.3591E+01	-.6360E+01	-.8850E+01	-.1097E+02	-.1256E+02	-.1410E+02	-.1552E+02	-.1788E+02	-.2225E+02
11	.1100E+02	.0	-.3155E+01	-.5626E+01	-.7839E+01	-.9745E+01	-.1132E+02	-.1272E+02	-.1421E+02	-.1664E+02	-.2102E+02
12	.1200E+02	.0	-.2635E+01	-.4726E+01	-.6595E+01	-.8218E+01	-.9605E+01	-.1088E+02	-.1232E+02	-.1464E+02	-.1874E+02
13	.1300E+02	.0	-.2092E+01	-.3773E+01	-.5274E+01	-.6588E+01	-.7741E+01	-.8841E+01	-.1014E+02	-.1223E+02	-.1585E+02
14	.1400E+02	.0	-.1577E+01	-.2858E+01	-.4002E+01	-.5012E+01	-.5920E+01	-.6817E+01	-.7922E+01	-.9700E+01	-.1273E+02
15	.1500E+02	.0	-.1123E+01	-.2047E+01	-.2871E+01	-.3607E+01	-.4285E+01	-.4978E+01	-.5865E+01	-.7296E+01	-.9684E+01
16	.1600E+02	.0	-.7516E+00	-.1379E+01	-.1939E+01	-.2445E+01	-.2922E+01	-.3429E+01	-.4101E+01	-.5186E+01	-.6949E+01
17	.1700E+02	.0	-.4702E+00	-.8692E+00	-.1227E+01	-.1554E+01	-.1872E+01	-.2223E+01	-.2701E+01	-.3473E+01	-.4681E+01
18	.1800E+02	.0	-.2741E+00	-.5117E+00	-.7267E+00	-.9258E+00	-.1126E+01	-.1356E+01	-.1677E+01	-.2189E+01	-.2953E+01
19	.1900E+02	.0	-.1491E+00	-.2825E+00	-.4046E+00	-.5203E+00	-.6413E+00	-.7849E+00	-.9886E+00	-.1306E+01	-.1755E+01
20	.2000E+02	.0	-.7679E-01	-.1485E+00	-.2159E+00	-.2816E+00	-.3535E+00	-.4417E+00	-.5673E+00	-.7563E+00	-.1008E+01
21	.2100E+02	.0	-.3875E-01	-.7758E-01	-.1153E+00	-.1539E+00	-.1980E+00	-.2530E+00	-.3301E+00	-.4433E+00	-.5933E+00
22	.2200E+02	.0	-.2210E-01	-.4595E-01	-.7022E-01	-.9593E-01	-.1263E+00	-.1647E+00	-.2179E+00	-.2959E+00	-.4102E+00
23	.2300E+02	.0	-.1536E-01	-.3270E-01	-.5073E-01	-.7053E-01	-.9408E-01	-.1242E+00	-.1677E+00	-.2378E+00	-.3556E+00
24	.2400E+02	.0	-.1190E-01	-.2547E-01	-.3977E-01	-.5555E-01	-.7465E-01	-.9959E-01	-.1389E+00	-.2139E+00	-.3574E+00
25	.2500E+02	.0	-.8252E-02	-.1784E-01	-.2820E-01	-.3969E-01	-.5341E-01	-.7249E-01	-.1087E+00	-.1943E+00	-.3803E+00
26	.2600E+02	.0	-.1260E-01	-.2472E-01	-.3844E-01	-.5035E-01	-.5369E-01	-.4555E-01	-.5023E-01	-.1408E+00	-.3908E+00
27	.2700E+02	.0	-.1396E-01	-.2660E-01	-.3461E-01	-.4223E-01	-.5172E-01	-.6421E-01	-.9394E-01	-.1602E+00	-.2677E+00
28	.2800E+02	.0	-.8371E-02	-.1457E-01	-.1597E-01	-.1689E-01	-.1849E-01	-.1965E-01	-.2100E-01	-.2002E-01	-.1793E-01
29	.2900E+02	.0	-.7383E-02	-.1243E-01	-.1335E-01	-.1348E-01	-.1358E-01	-.1332E-01	-.1147E-01	-.7803E-02	-.5420E-02
30	.3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

IZ=	11	12	13	14	15	16	17	18	19	20
Z =	.1100E+02	.1200E+02	.1300E+02	.1400E+02	.1500E+02	.1600E+02	.1700E+02	.1800E+02	.1900E+02	.2000E+02
IY Y										
1 .1000E+01	.1753E+03	.2316E+03	.2847E+03	.2832E+03	.2769E+03	.2640E+03	.2507E+03	.2062E+03	.1661E+03	.1295E+03
2 .2000E+01	.9486E+02	.1119E+03	.1195E+03	.1128E+03	.9619E+02	.8046E+02	.6468E+02	.5126E+02	.3077E+02	.1876E+02
3 .3000E+01	.5274E+02	.5324E+02	.4234E+02	.2540E+02	.1015E+02	-.3918E+01	-.1491E+02	-.2265E+02	-.3056E+02	-.3395E+02
4 .4000E+01	.2384E+02	.1397E+02	-.3294E+01	-.2201E+02	-.3765E+02	-.4990E+02	-.5880E+02	-.6410E+02	-.6625E+02	-.6657E+02
5 .5000E+01	.2909E+01	-.1273E+02	-.3210E+02	-.5006E+02	-.6506E+02	-.7621E+02	-.8345E+02	-.8697E+02	-.8701E+02	-.8607E+02
6 .6000E+01	-.1184E+02	-.3004E+02	-.4935E+02	-.6610E+02	-.7950E+02	-.8934E+02	-.9530E+02	-.9793E+02	-.9721E+02	-.9601E+02
7 .7000E+01	-.2186E+02	-.4058E+02	-.5835E+02	-.7337E+02	-.8496E+02	-.9324E+02	-.9826E+02	-.1002E+03	-.9955E+02	-.9852E+02
8 .8000E+01	-.2796E+02	-.4570E+02	-.6112E+02	-.7406E+02	-.8375E+02	-.9048E+02	-.9461E+02	-.9618E+02	-.9580E+02	-.9508E+02
9 .9000E+01	-.3081E+02	-.4657E+02	-.5929E+02	-.6996E+02	-.7765E+02	-.8293E+02	-.8619E+02	-.8748E+02	-.8743E+02	-.8708E+02
10 .1000E+02	-.3103E+02	-.4425E+02	-.5419E+02	-.6255E+02	-.6831E+02	-.7222E+02	-.7468E+02	-.7570E+02	-.7593E+02	-.7592E+02
11 .1100E+02	-.2923E+02	-.3969E+02	-.4702E+02	-.5319E+02	-.5720E+02	-.5989E+02	-.6161E+02	-.6240E+02	-.6277E+02	-.6300E+02
12 .1200E+02	-.2601E+02	-.3377E+02	-.3881E+02	-.4303E+02	-.4557E+02	-.4724E+02	-.4834E+02	-.4889E+02	-.4931E+02	-.4965E+02
13 .1300E+02	-.2195E+02	-.2727E+02	-.3044E+02	-.3306E+02	-.3444E+02	-.3534E+02	-.3593E+02	-.3628E+02	-.3666E+02	-.3702E+02
14 .1400E+02	-.1754E+02	-.2083E+02	-.2259E+02	-.2401E+02	-.2457E+02	-.2493E+02	-.2517E+02	-.2535E+02	-.2563E+02	-.2594E+02
15 .1500E+02	-.1324E+02	-.1498E+02	-.1578E+02	-.1638E+02	-.1643E+02	-.1647E+02	-.1649E+02	-.1654E+02	-.1671E+02	-.1693E+02
16 .1600E+02	-.9378E+01	-.1007E+02	-.1030E+02	-.1042E+02	-.1024E+02	-.1012E+02	-.1002E+02	-.9989E+01	-.1005E+02	-.1016E+02
17 .1700E+02	-.6194E+01	-.6288E+01	-.6270E+01	-.6174E+01	-.5937E+01	-.5773E+01	-.5630E+01	-.5552E+01	-.5532E+01	-.5536E+01
18 .1800E+02	-.3803E+01	-.3658E+01	-.3581E+01	-.3439E+01	-.3245E+01	-.3102E+01	-.2970E+01	-.2873E+01	-.2799E+01	-.2731E+01
19 .1900E+02	-.2187E+01	-.2028E+01	-.1987E+01	-.1891E+01	-.1776E+01	-.1680E+01	-.1579E+01	-.1481E+01	-.1381E+01	-.1270E+01
20 .2000E+02	-.1225E+01	-.1153E+01	-.1177E+01	-.1153E+01	-.1115E+01	-.1065E+01	-.9953E+00	-.9065E+00	-.7972E+00	-.6645E+00
21 .2100E+02	-.7307E+00	-.7638E+00	-.8490E+00	-.8925E+00	-.9138E+00	-.9047E+00	-.8608E+00	-.7801E+00	-.6653E+00	-.5188E+00
22 .2200E+02	-.5426E+00	-.6644E+00	-.8049E+00	-.9084E+00	-.9750E+00	-.9728E+00	-.8977E+00	-.7783E+00	-.6178E+00	-.4678E+00
23 .2300E+02	-.5208E+00	-.7126E+00	-.9045E+00	-.1057E+01	-.1159E+01	-.1208E+01	-.1198E+01	-.1126E+01	-.9995E+00	-.8238E+00
24 .2400E+02	-.5750E+00	-.8306E+00	-.1074E+01	-.1267E+01	-.1397E+01	-.1467E+01	-.1466E+01	-.1395E+01	-.1261E+01	-.1072E+01
25 .2500E+02	-.6685E+00	-.9852E+00	-.1258E+01	-.1455E+01	-.1583E+01	-.1650E+01	-.1649E+01	-.1581E+01	-.1455E+01	-.1280E+01
26 .2600E+02	-.7553E+00	-.1054E+01	-.1195E+01	-.1211E+01	-.1201E+01	-.1183E+01	-.1162E+01	-.1145E+01	-.1127E+01	-.1099E+01
27 .2700E+02	-.3812E+00	-.4396E+00	-.4373E+00	-.3897E+00	-.3509E+00	-.3190E+00	-.3015E+00	-.3019E+00	-.3124E+00	-.3235E+00
28 .2800E+02	-.1584E-01	-.8399E-02	-.3279E-02	-.2514E-03	.2145E-02	.4049E-02	.6066E-02	.8245E-02	.1092E-01	.1410E-01
29 .2900E+02	-.3008E-02	-.1551E-02	-.1833E-02	-.1737E-02	-.1434E-02	-.1080E-02	-.8503E-03	-.9028E-03	-.1358E-02	-.2023E-02
30 .3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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IZ=	21	22	23	24	25	26	27	28	29	30
Z =	.2100E+02	.2200E+02	.2300E+02	.2400E+02	.2500E+02	.2600E+02	.2700E+02	.2800E+02	.2900E+02	.3000E+02
IY Y										
1 .1000E+01	.1159E+03	.9560E+02	.8452E+02	.7826E+02	.6176E+02	.5420E+02	.4564E+02	.3678E+02	.2919E+02	.2186E+02
2 .2000E+01	.1416E+02	.1085E+02	.8535E+01	.3402E+01	.1018E+01	.7877E+00	.1074E+01	.1025E+01	.1321E+01	.1371E+01
3 .3000E+01	-.3485E+02	-.3539E+02	-.3094E+02	-.3223E+02	-.2873E+02	-.2427E+02	-.1973E+02	-.1563E+02	-.1166E+02	-.8183E+01
4 .4000E+01	-.6519E+02	-.6429E+02	-.5539E+02	-.5347E+02	-.4590E+02	-.3790E+02	-.3093E+02	-.2457E+02	-.1863E+02	-.1333E+02
5 .5000E+01	-.8365E+02	-.8178E+02	-.7041E+02	-.6529E+02	-.5515E+02	-.4498E+02	-.3665E+02	-.2911E+02	-.2218E+02	-.1598E+02
6 .6000E+01	-.9328E+02	-.9075E+02	-.7832E+02	-.7070E+02	-.5890E+02	-.4770E+02	-.3873E+02	-.3074E+02	-.2350E+02	-.1698E+02
7 .7000E+01	-.9612E+02	-.9320E+02	-.8066E+02	-.7127E+02	-.5862E+02	-.4719E+02	-.3817E+02	-.3026E+02	-.2317E+02	-.1678E+02
8 .8000E+01	-.9334E+02	-.9028E+02	-.7845E+02	-.6801E+02	-.5528E+02	-.4425E+02	-.3564E+02	-.2825E+02	-.2165E+02	-.1572E+02
9 .9000E+01	-.8612E+02	-.8312E+02	-.7263E+02	-.6188E+02	-.4974E+02	-.3960E+02	-.3177E+02	-.2516E+02	-.1931E+02	-.1404E+02
10 .1000E+02	-.7566E+02	-.7290E+02	-.6418E+02	-.5380E+02	-.4281E+02	-.3390E+02	-.2709E+02	-.2145E+02	-.1647E+02	-.1199E+02
11 .1100E+02	-.6327E+02	-.6088E+02	-.5412E+02	-.4469E+02	-.3523E+02	-.2775E+02	-.2209E+02	-.1748E+02	-.1344E+02	-.9800E+01
12 .1200E+02	-.5024E+02	-.4831E+02	-.4345E+02	-.3538E+02	-.2767E+02	-.2167E+02	-.1719E+02	-.1360E+02	-.1046E+02	-.7641E+01
13 .1300E+02	-.3772E+02	-.3625E+02	-.3308E+02	-.2658E+02	-.2064E+02	-.1607E+02	-.1271E+02	-.1004E+02	-.7734E+01	-.5659E+01
14 .1400E+02	-.2659E+02	-.2554E+02	-.2371E+02	-.1882E+02	-.1452E+02	-.1124E+02	-.8855E+01	-.6997E+01	-.5395E+01	-.3954E+01
15 .1500E+02	-.1743E+02	-.1671E+02	-.1584E+02	-.1243E+02	-.9531E+01	-.7335E+01	-.5758E+01	-.4549E+01	-.3513E+01	-.2580E+01
16 .1600E+02	-.1047E+02	-.1001E+02	-.9724E+01	-.7534E+01	-.5749E+01	-.4395E+01	-.3437E+01	-.2716E+01	-.2101E+01	-.1548E+01
17 .1700E+02	-.5671E+01	-.5370E+01	-.5365E+01	-.4096E+01	-.3109E+01	-.2359E+01	-.1837E+01	-.1452E+01	-.1126E+01	-.8328E+00
18 .1800E+02	-.2726E+01	-.2513E+01	-.2573E+01	-.1918E+01	-.1441E+01	-.1080E+01	-.8351E+00	-.6603E+00	-.5143E+00	-.3828E+00
19 .1900E+02	-.1175E+01	-.9966E+00	-.1013E+01	-.7060E+00	-.5102E+00	-.3686E+00	-.2786E+00	-.2199E+00	-.1729E+00	-.1307E+00
20 .2000E+02	-.5181E+00	-.3447E+00	-.2849E+00	-.1332E+00	-.6269E-01	-.2419E-01	-.8249E-02	-.5158E-02	-.5693E-02	-.6667E-02
21 .2100E+02	-.3434E+00	-.1557E+00	-.2452E-01	.8631E-01	.1197E+00	.1186E+00	.1033E+00	.8346E-01	.6382E-01	.4534E-01
22 .2200E+02	-.4145E+00	-.1949E+00	-.3352E-02	.1215E+00	.1581E+00	.1501E+00	.1280E+00	.1032E+00	.7966E-01	.5744E-01
23 .2300E+02	-.5925E+00	-.3322E+00	-.8568E-01	.7831E-01	.1365E+00	.1363E+00	.1174E+00	.9495E-01	.7338E-01	.5309E-01
24 .2400E+02	-.8161E+00	-.5121E+00	-.2086E+00	.8336E-02	.9783E-01	.1099E+00	.9628E-01	.7807E-01	.6025E-01	.4358E-01
25 .2500E+02	-.1034E+01	-.7063E+00	-.3497E+00	-.7023E-01	.5721E-01	.8080E-01	.7035E-01	.5538E-01	.4200E-01	.3043E-01
26 .2600E+02	-.1020E+01	-.7919E+00	-.4482E+00	-.1242E+00	.3931E-01	.6741E-01	.4318E-01	.2040E-01	.1038E-01	.7342E-02
27 .2700E+02	-.3283E+00	-.2961E+00	-.2370E+00	-.1582E+00	-.9064E-01	-.4555E-01	-.2282E-01	-.1320E-01	-.8862E-02	-.7617E-02
28 .2800E+02	.1730E-01	.1846E-01	.1295E-01	.4661E-02	-.1134E-02	-.4656E-02	-.7076E-02	-.7371E-02	-.6552E-02	-.5957E-02
29 .2900E+02	-.2727E-02	-.3103E-02	-.3045E-02	-.3438E-02	-.3395E-02	-.2840E-02	-.3553E-02	-.4826E-02	-.4515E-02	-.4171E-02
30 .3000E+02	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	IZ=	31	32	33
	Z =	.3100E+02	.3200E+02	.3300E+02
1	.1000E+01	.1257E+02	.6362E+01	.0
2	.2000E+01	.6479E+00	.5409E+00	.0
3	.3000E+01	-.5200E+01	-.2324E+01	.0
4	.4000E+01	-.8468E+01	-.3935E+01	.0
5	.5000E+01	-.1019E+02	-.4798E+01	.0
6	.6000E+01	-.1088E+02	-.5156E+01	.0
7	.7000E+01	-.1080E+02	-.5139E+01	.0
8	.8000E+01	-.1014E+02	-.4841E+01	.0
9	.9000E+01	-.9082E+01	-.4347E+01	.0
10	.1000E+02	-.7778E+01	-.3732E+01	.0
11	.1100E+02	-.6370E+01	-.3063E+01	.0
12	.1200E+02	-.4977E+01	-.2398E+01	.0
13	.1300E+02	-.3695E+01	-.1784E+01	.0
14	.1400E+02	-.2589E+01	-.1253E+01	.0
15	.1500E+02	-.1694E+01	-.8222E+00	.0
16	.1600E+02	-.1020E+01	-.4969E+00	.0
17	.1700E+02	-.5514E+00	-.2702E+00	.0
18	.1800E+02	-.2555E+00	-.1265E+00	.0
19	.1900E+02	-.8902E-01	-.4527E-01	.0
20	.2000E+02	-.6646E-02	-.4826E-02	.0
21	.2100E+02	.2812E-01	.1242E-01	.0
22	.2200E+02	.3647E-01	.1673E-01	.0
23	.2300E+02	.3382E-01	.1562E-01	.0
24	.2400E+02	.2769E-01	.1278E-01	.0
25	.2500E+02	.1942E-01	.8837E-02	.0
26	.2600E+02	.4815E-02	.2145E-03	.0
27	.2700E+02	-.1829E-01	-.1895E-01	.0
28	.2800E+02	-.1305E-01	-.1265E-01	.0
29	.2900E+02	-.4303E-02	-.2696E-02	.0
30	.3000E+02	.0	.0	.0

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15. Supplementary Notes

Langley Project Manager: James T. Howlett
Final Report

16. Abstract

The present User's Guide applies to the three-dimensional viscous flow forward-marching analysis, PEPSIG, as used for the calculation of the helicopter tip vortex flow field. The guide presents a discussion of the program flow and subroutines, as well as a list of sample input and output.

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