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Viscous Wing Theory Development, Volume II -- "GRUMWING" Computer Program User's Manual

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Hampton, Virginia 23665-5225

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VOLUME II - "GRUMWING" COMPUTER PROGRAM
USER'S MANUAL

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1. INTRODUCTION

The computer program described herein is for the analysis of the steady, viscous transonic flow over wings in free air. The program is applicable for high Reynolds number flow over general wings with moderate swept angle and relatively large aspect ratio. The free-stream Mach number is less than one, and the flow is assumed to be adiabatic. The method was designed primarily for flows that are turbulent over most of the wing area; no special analysis is offered for the treatment of separated flow. The method, however, does incorporate a procedure to circumvent the difficulty involved when boundary layer separation occurs during an intermediate stage of the computation. The viscous solution is then required to remain attached to the wing surface. The principal features of the code include: the finite volume approximate factorization (AFZ) scheme solution of the inviscid irrotational three-dimensional velocity potential flow equation; integral solutions of the laminar and turbulent three-dimensional boundary layer equations; three-dimensional wake surface curvature and displacement effects; and a local two-dimensional strong interaction solution in the vicinity of the trailing edge. A complete description of the formulation and the numerical method can be found in "VISCOUS WING THEORY DEVELOPMENT VOLUME I - ANALYSIS, METHOD & RESULTS," Volume I of this report.

The inviscid portion of the code consists of a newly-developed, fast and robust, AFZ scheme using Jameson's finite volume formulation and parabolic C - mesh mapping for the computation coordinates. In conjunction with the AFZ scheme, Jameson's second order treatment is adapted for the supersonic zone calculations. In addition, a Prandtl-Glauert asymptotic formula is used for the far field boundary conditions for improved accuracy and rate of convergence. The local boundary conditions in the inviscid problem are modified to account for viscous effects using a surface-source formulation of the matching conditions; thus, avoiding the need to carry out repeated coordinate mapping for the shifted-wing surface as would be required using a displacement-thickness approach. An iterative scheme is employed to obtain a self-consistent solution of the coupled boundary layer and inviscid flow equations, with the viscous matching conditions periodically updated during the course of the inviscid relaxation process. The viscous matching

conditions employed in the theory account for displacement effects on the wing as well as both wake-thickness and wake-curvature effects. Only longitudinal curvature in the chordwise direction has been taken into account in the method. A procedure was devised so that results of the strong interaction solution from our two-dimensional viscous airfoil analysis is incorporated for the normal pressure correction to the conventional inviscid-boundary layer iterative method near the trailing edge region.

The present method does not provide for special treatment of the strong-interaction phenomenon near shock-wave/boundary-layer interaction zones. Theoretical study in this area for the three-dimensional problem is almost non-existent at the present time. Two-dimensional viscous airfoil studies indicate, however, that ignoring this local strong interaction can yield remarkably accurate results for the pressure distribution near the shock wave. Present three-dimensional results also have yielded a similar conclusion.

The three-dimensional boundary layer development on the wing and in the wake is determined using integral methods. The work of Myring-Smith-Stock is extensively modified to be suitable for the present interaction study. An empirical crossflow boundary layer profile is introduced to explore three-dimensional effects, and the lag-entrainment method of Green is adopted along the direction of external surface streamlines. Of particular importance in our method is the inclusion of the wing thickness when computing the metric coefficients of the boundary layer equations. The resulting partial differential equations derived from the integral method are of hyperbolic type, and the solution is obtained using a surface nonorthogonal curvilinear coordinate system on the wing and in the wake. The initial conditions are prescribed near the leading edge of the wing for starting the laminar boundary layer calculation. Turbulent boundary layer calculations are started either by a pre-set transition location, or by natural transition determined by laminar boundary layer separation. Zero gradient boundary conditions are prescribed at the wing root and wing tip. For wings with moderate swept angle and with relatively large aspect ratio, good results can be obtained without detailed knowledge of the wing tip and wing root conditions. For large sweep angles, however, the solution can intimately be related to the conditions in these regions. These subtle aspects are not studied in the present work. The

solution of the boundary layer and the wake provide the surface source distribution and the wake matching condition to the inviscid flow computations.

This report is intended to serve as a user's manual for the computer program GRUMWING. Because of limitations of computer memory, the code was originally composed with a small core memory and employed frequent transfer of the velocity potential via I/O devices during the development stage of the program. The code has since been converted to a large core memory with I/O eliminated. One version is running on the VPS32 computer at NASA Langley Research Center and a second version on a CRAY-1M computer at Grumman. Table 1 shows the comparison of respective running times (CPU's) using various modes of vectorization with the VPS32 computer and the CRAY-1M computer. We note that the slight decrease in CPU's (409) from using the small-core version was the result of some bugs in the original program. The fastest run on the VPS32 was accomplished using the CYBER 200 FORTRAN compiler with the "V" option for auto-vectorization and the VAST preprocesser on the most heavily used subroutine YSWAFZ. The running-time ratio for this case as compared to the CRAY run was 1.6.

Table 1 Comparison of Respective Running Times, CPU,s

	Scalar version*	Scalar version auto-vectorizer	Vector version*	Vector version auto-vectorizer	Vector version auto-vectorizer vast-preprocessor
ORIGINAL VERSION: OUT OF CORE WITH I/O, SMALL CORE					
VPS CPU,s	409	319	–	–	–
VPS system time units	363	265	–	–	–
Cray CPU,s	365	260	365	152	–
OPTIMIZED VERSION: IN CORE I/O ELIMINATED, LARGE CORE					
VPS CPU,s	417	310	445	269	228
VPS system time units	313	231	335	200	171
Cray CPU,s	360	256	348	142	–

*Vector/Scalar version applied to subroutine YSWAFZ only.
Test case computation stops after 5 global B.L. iterations.

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2. PROGRAM STRUCTURE DESCRIPTION

The computer program GRUMWING contains three groups of subroutines (see Subroutine Tree Diagram, Fig. 1). The first group is structured very similar to Jameson's 3-D inviscid program FL027/28. It consists of reading in the wing geometry and the sectional ordinates; setting up the computational grids and coordinate mapping; computating the inviscid solution; calculating the pressures and forces; and outputting the solution. The second group of subroutines links the inviscid and viscous solutions, and incorporates the trailing edge solution. The third group of subroutines computes the 3-D boundary layer and the viscous wake solution. When the program is running in the inviscid mode, the second and the third group of subroutines are not used. When the program is running in the interaction mode, the frequency of boundary layer calculations is controlled by the number of cycles of inviscid relaxation per boundary layer calculation. There are two sets of relaxation factors: The first set, consisting of three constants, controls the convergence of the inviscid solution. The second set consists of four constants that control the relaxation of the source distributions on the wing, the source distribution in the wake, the viscous wake curvature condition, and the coordinates of the floating wake in the global iteration. The computation can be terminated either by a preset number of boundary layer calculations, or by a total number of cumulative inviscid cycles of calculations.

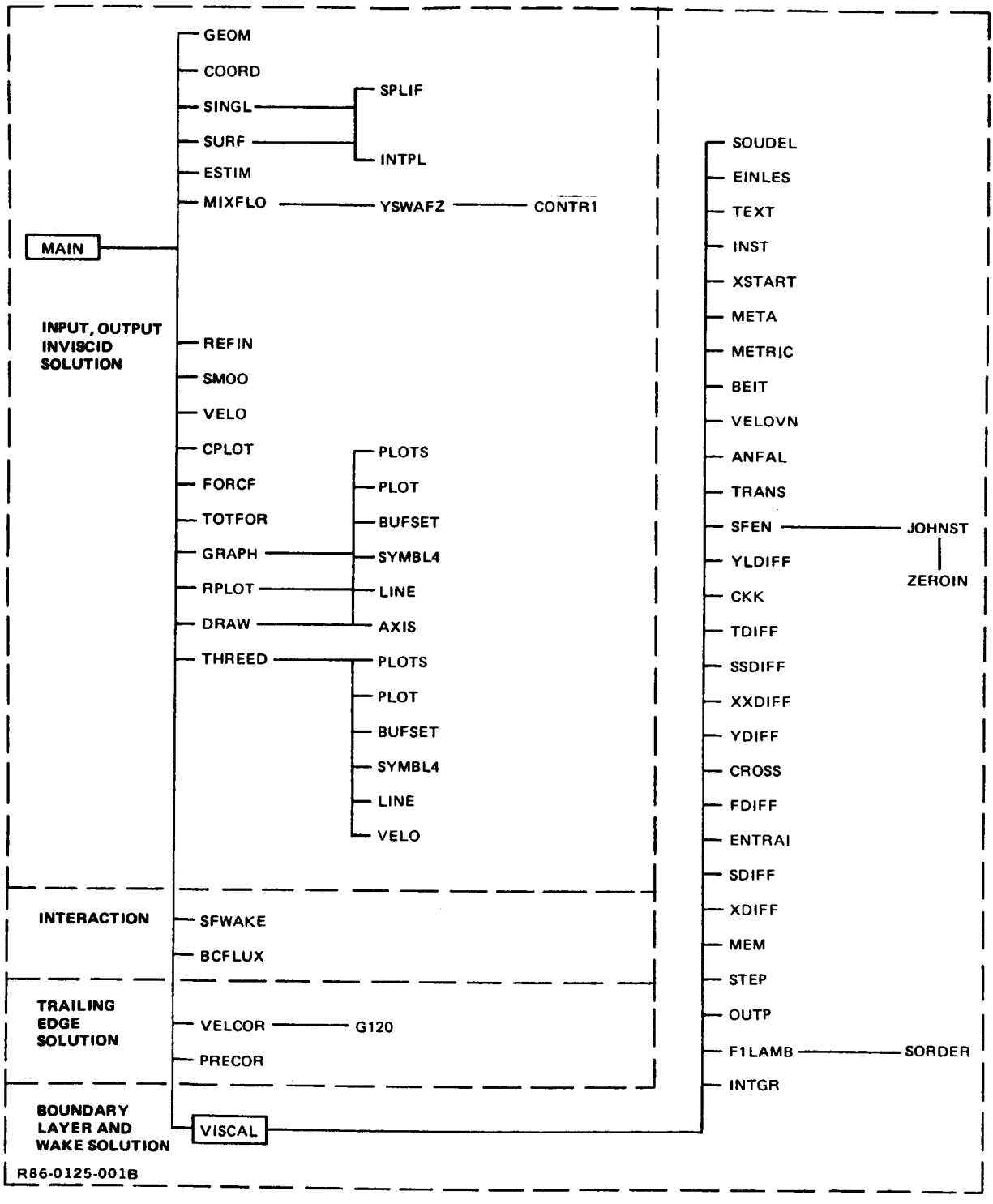


Fig. 1 Subroutine Tree Diagram

The subroutines used in the program are listed below, along with a brief description of their usage. The subroutines GRAPH, RPLOT, DRAW AND THREED call a number of Calcomp routines which are members of a GRUMMAN library. The user will probably have to modify these routines slightly to make them compatible with different graphics installations.

GEOM	The geometric definition of wing provided by the input data
COORD	Sets up the stretched parabolic and spanwise coordinates
SINGL	Generates the singular line for the square root transformation
SURF	Interpolates the mapped wing surface and the wake surface at mesh points
SPLIF	The spline fit routine (Jameson)
INTPL	The interpolation routine using Taylor series
MIXFLO	Solution of the three-dimensional potential flow equation for mixed subsonic and supersonic flow
YSWAFZ	The approximate factorization finite volume scheme
CONTR1	Computes the contravariant flux for the source distribution
ESTIM	Initial estimate of the reduced potential function
REFIN	Prepares initial estimate of the reduced potential function for the halved mesh size
SMOO	Smooths the reduced potential function
VELO	Calculates the inviscid surface velocity
CPLOT	Plots C_p at the computational mesh points from the printer
FORCE	Calculates the section force coefficients
TOTFOR	Calculates the total force coefficients for the wing
GRAPH	Calcomp plots of the section pressure distributions
RPLOT	Calcomp plots of the convergence
DRAW	Draws the configuration
THREED	Generates the three-dimensional Calcomp plots
SFWAKE	Calculates the floating wake coordinates and computes the viscous wake curvature condition

BCFLUX	Computes the source distributions from the boundary layer and the wake solution
VELCOR	Computes the normal pressure correction from the trailing edge solution
PRECOR	Computes the trailing edge values of the boundary layer parameters for the trailing edge corrections
G120	The trailing edge solution
VISCAL	The calling program for the boundary layer and the viscous wake calculation
SOUDEL	Writes out the boundary layer separation location
EINLES	Computes the leading edge line, the chord distribution and the span coordinates for the boundary layer calculation
TEXT	Indicates the top or the bottom wing surface
INST	Indicates the number of boundary layer and wake computation steps
XSTART	Determines the starting location of boundary layer compuations
META	Computes transformation functions for the nonorthogonal curvilinear boundary layer coordinates
METRIC	Computes the metric coefficients for the nonorthogonal curvilinear boundary layer coordinates
BEIT	Computes the derivatives of the metric coefficients
VELOVN	Interpolates the surface velocity for the boundary layer calculation
ANFAL	Computes the initial values for laminar boundary layer calculations
TRANS	Sets up boundary layer transition and computes the intial values for turbulent boundary layer calculation
SFEN	Computes skin friction for turbulent boundary layer calculation
JOHNST	Computes the limiting wall streamline angle β when Johnston cross-flow boundary layer profile is used
YLDIFF	Computes the spanwise derivatives for the laminar boundary layer calculations

CKK	Polynominal velocity profile fits for the laminar boundary layer
TDIFF	Transformation functions for the laminar boundary layer calculations
SSDIFF	Right-hand-side functions for the laminar boundary layer equations
XXDIFF	x-derivatives for the solution of the laminar boundary layer equations
YDIFF	Computes the spanwise derivatives for the turbulent boundary layer calculation
CROSS	Computes the cross-flow functions of the turbulent boundary layer
FDIFF	Computes the normalization functions for the reduced integral thicknesses of the turbulent boundary layer
ENTRAI	Computes the x-derivative of the entrainment coefficient using lag-entrainment equation
SDIFF	Right-hand-side functions for the turbulent boundary layer equations
XDIFF	x-derivatives for the solution of the turbulent boundary layer equations
MEM	Interpolates the displacement thickness and the source at the inviscid computation nodes
STEP	Determines the integration step size for the laminar and the turbulent boundary layer calculation
OUTP	Prints out the boundary layer and the wake solution at a constant chord station
FILAMB	Computes the eigenvalues at each integration step of the boundary layer and the wake calculation
SORDER	Orders the eigenvalues by their magnitude
INTGR	Explicit integration routine for the laminar and turbulent boundary layers and the wake computations

3. INPUT DATA FILE DESCRIPTION

For convenience in running the program, the input data format is very similar in structure to that of Jameson's FLO 27/28 code. An additional namelist data card is used to input the parameters that control the running of the interaction mode of the program. An example of the input data is given in Appendix A.

In the following, we shall briefly describe (according to the order of the input data format, see Appendix A) the input parameters and their suggested values, whenever applicable. The data file begins with a title card (to describe the specific run) followed by a namelist card (for inputting the values of the controlling parameters for the interaction runs) and then by groups of data, each started with a title card.

FNX	The number of mesh cells along the c-coordinate axis (in the chord direction)
FNY	The number of mesh cells in the direction normal to the c-coordinate axis and the span
FNZ	The number of mesh cells in the span direction
FMESH	The total number of sets of mesh computation for the inviscid flow, for interaction mode calculation, the boundary layer calculation enters at the finest (last) mesh computation
FPLOT	Controls generation of plots FPLOT=0. for a print plot but no Calcomp plot at each span station FPLOT=1. for both a print plot and a Calcomp plot at each span station FPLOT=2. for a Calcomp plot but no print plot at each span station FPLOT=3. for a three-dimensional Calcomp plot only
XSCAL, PSCAL	Control the scales of the Calcomp plots XSCAL≠0. scales each section plot to XSCAL XSCAL=0. scales each section plot to 5.0 XSCAL≠0. scales the maximum chord to XSCAL and each section plot proportionately to the local chord PSCAL≠0. sets the pressure scale to PSCAL per inch in each section plot PSCAL=0. sets the pressure scale to 0.4 per inch in each section plot. Also,

	PSCAL>0. scales the three-dimensional plot so that the span or semispan is 5. If PSCAL=0. and XSCAL≠0. then the three-dimensional plot is scaled so that the maximum chord is 1/2 XSCAL
FCONT	Indictor which determines the manner of starting the program FCONT=0. indicates the calculation begins at iteration zero FCONT=1. indicates the computation is to be continued from a previous calculation. In this case, the values of the velocity potential and the circulation are read from a magnetic tape where they were previously stored
FIT	The maximum number of inviscid iteration sweeps which will be computed
COV	The desired accuracy. If the maximum correction is less than COV, the calculation terminates or proceeds to a finer mesh. Otherwise, the number of cycles set by FIT is completed
(P1,P2,P3)	The relaxation factors for inviscid flow iteration Suggested values for (P1,P2,P3) are for AFZ mode computation, (P1,P2,P3) = (1.,0.9,0.6), for FL027 mode computation, (P1,P2,P3) = (1.6,0.7,1.0)
FMACH	The free-stream Mach number
YAW	The yaw angle of the wing in degrees
ALPHA	The angle of attack in degrees
CDO	The estimated friction drag coefficient of the wing - used only when program is run in inviscid mode
ZSYM	Determines whether to treat a wing on a wall or an isolated wing ZSYM=1.: the wing is on a wall ZSYM=0.: the wing is an isolated wing at a yaw angle given by YAW. Used only when program is run in inviscid-FL027 mode
FNS	Indicates the number of sections of wing coordinates
SWEEP	Sweep of singular line for the parabolic coordinate mapping at the wing tip if ZSYM=1., or at the leading tip if ZYSM=0
DIHED	Dihedral of singular line for the parabolic coordinate mapping at the wing tip if ZSYM=1., or at the leading tip if ZYSM=0
FUS	Determines whether the geometry includes a fuselage.

	FUS=0 for the present program always
PX	Bunching parameters for the C-mesh nodes near the trailing edge region. The suggested value of PX is $0 < PX < 0.5$
PZ	Bunching parameter for the spanwise coordinate nodes near the wing tip region. The suggested value of PZ is $0 < PZ < 0.5$
Z	Span location of the section
XLE,YLE	x- and y-coordinates of the leading edge
CHORD	The local chord value by which the profile coordinates are scaled
THICK	Modifies the section thickness. The y-coordinates are multiplied by THICK
ALPHI	The angle through which the section is rotated to introduce twist
YSYM	Indicates the type of profile YSYM=0. denotes a cambered profile. Coordinates are supplied for upper and lower surfaces, each ordered from nose to coil with the leading edge included in both surfaces YSYM=1. denotes a symmetric profile. A table of coordinates is read for the upper surface only
FNU	The number of upper surface coordinates
FNL	The number of lower surface coordinates. For YSYM=1., FNL=FNU even though no lower surface coordinates are given
TRL	The included angle at the trailing edge in degrees. The profile may be open, in which case it is the difference in angle between the upper and lower surfaces
SLT	The slope of the mean camber line at the trailing edge
XSING, YSING	The coordinates of the singular point inside the nose about which the square root transformation is applied to generate parabolic coordinates. This point should be located as symmetrically as possible between the upper and lower surfaces at a distance from the nose roughly proportional to the leading edge radius. It can be seen whether the location has been correctly chosen by inspecting the coordinates of the mapped profile printed in the output. If the mapped profile has a bump at the center, the singular point should be moved closer to the leading edge. If the mapped profile is not symmetric near the center, with a step increase in y, say, as x increases through 0, the singular point should be moved closer to the

upper surface. The coordinates of the singular point are chosen relative to the profile coordinates supplied on the cards which follow

Y(I), Y(I) — The coordinates of the upper or the lower surface. These are read on the data cards following the title card, one pair of coordinates per card in the first two fields of 10, from leading to trailing edge inclusive. The leading edge point is the same for both upper and lower surfaces. The trailing edge point may be different if the profile has an open tail. The lower surface coordinates are read only when ISYM=0.

In addition to FPLOT which controls the generation of inviscid solution plots, additional input parameters controlling the boundary layer solution and the interactive solution output are included in the namelist input described in the next section.

4. PROGRAM RUNNING MODE AND INPUT/OUTPUT PARAMETER DESCRIPTION FOR INTERACTION CALCULATION

This section describes the parameters included in the namelist. Values can be changed through the namelist card in the input file.

The four parameters controlling the running mode of the program are described in the following:

LINKBL = { 0, code runs with inviscid mode only
         { 1, code runs on interactive mode

IFLOAT = { 0, code runs with fixed wake surface
         { 1, code runs with floated wake surface

IVCOR = { 0, code runs without trailing edge interaction
        { 1, code runs with trailing edge interaction

JVLOAD = { 0, inviscid surface pressure is used to computed the loads
         { 1, composite surface pressure with trailing edge interaction is used to compute the loads

The following input completes the data required for boundary layer and interaction calculation:

ITBLMX: Total number of boundary layer calculations to be coupled; the computation stops whenever the value of ITBLMX or FIT, the maximum number of inviscid iterations, is reached

UINF: Normalized free-stream velocity in boundary layer calculation. UINF = 1

RINF: The chord Reynolds number in millions

XREF: Normalized reference length for boundary layer calculation. XREF = 1

AK(1),AK(2): Assigned transition location for the upper and lower wing surface as fraction of root chord, respectively. Suggested values for transonic cruise wings AK(1) = 0.10, AK(2) = 0.6

TO: Stagnation temperature in degrees Kelvin

PO: Stagnation pressure in standard atmospheric pressure

XPROZ: Not used

XDRUCK; Intervals of location as fraction of chord where boundary layer solution is to be printed out with XDRUCK = 0. Corresponds to no print out

ICROSS= {0, Mager cross-flow boundary layer profile is used
1, Johnston cross-flow boundary layer profile (not used when viscous wake is computed)

LAG = {0, equilibrium turbulent boundary layer model is used
1, lag entrainment model is used

IPRNT: Not used

SLAX: Relaxation factor for iterative floating wake surface with suggested value SLAX = 0.5

DGLAX: Relaxation factor for circulation jump across the wake surface with suggested value DGLAX = 0.5

VLAX: Relaxation factor for source distribution on the wing with suggested value VLAX = 0.5

DVLAX: Relaxation factor for net source distribution across the wake surface with suggested value DVLAX = 0.5

KLINE = {0, with no tape output from interaction solution
1, with tape output from interaction solution used for surface isocline plots. UNIT 7 is for surface pressure, UNIT 9 is for all the integral values from turbulent boundary layer solution

APPENDIX A EXAMPLE OF INPUT DATA

```
 LOCKHEED WING A   FLOW27  DATA
&VWING1 ITBLMX=5,XDRUCK=1.0,&END
FNX         FNY         FNZ         FMESH       FPLOT       XSCAL     PSCAL     FCONT
40.          4.          8.          3.          0.0           1.0       1.0       0.0
FIT         COV         P1          P2          P3
 48.          0.          1.00      0.9           0.60
 48.          0.          1.00      0.9           0.60
640.          0.          1.00      0.9           0.60
FMACH        YAW         ALPHA       CDO
.820        0.0         1.00      0.0
 ZSYM        FNS           SWEEP       DIHED        FUS         PX          PZ          FIX
 1.0         6.000000  27.000000   0.0         0.0         0.0         0.0         0.0
  Z           XLE           YLE         CHORD       THICK       ALPHI     SECTION
 0.0         0.0          0.156495    6.500000    1.000000    2.760000    1.000000
  YSYM        FNU         FNL
 0.0         33.000000  33.000000
  TRL         SLT         XSING       YSING
 1.618387   -0.168050   0.008503    0.000380
   X(I)        Y(I)          UPPER SURFACE
 0.0         0.0
 0.002410    0.009520
 0.009610    0.017580
 0.021530    0.024310
 0.038060    0.030180
 0.059040    0.034960
 0.084270    0.038570
 0.113490    0.041360
 0.146450    0.043640
 0.182800    0.045540
 0.222210    0.047040
 0.264300    0.048070
 0.308660    0.048640
 0.354860    0.048740
 0.402450    0.048350
 0.450990    0.047360
 0.500000    0.045740
 0.549010    0.043450
 0.597550    0.040620
 0.645140    0.037260
 0.691340    0.033530
 0.735700    0.029580
 0.777790    0.025540
 0.817200    0.021530
 0.853550    0.017670
 0.886510    0.014100
 0.915730    0.010870
 0.940960    0.008060
 0.961940    0.005740
 0.978470    0.003820
 0.990390    0.002370
 0.997590    0.001240
 1.000000    0.000800
   X(I)        Y(I)          LOWER SURFACE
 0.0         0.0
 0.002410   -0.008000
 0.009610   -0.015780
 0.021530   -0.022050
 0.038060   -0.028220
 0.059040   -0.034320
 0.084270   -0.040550
 0.113490   -0.046840
 0.146450   -0.053090
 0.182800   -0.058890
 0.222210   -0.063910
 0.264300   -0.067720
 0.308660   -0.070310
 0.354860   -0.071260
 0.402450   -0.070940
 0.450990   -0.068820
 0.500000   -0.065400
 0.549010   -0.060080
 0.597550   -0.053490
```

```
0.645140 -0.045480
0.691340 -0.036950
0.735700 -0.028380
0.777790 -0.020340
0.817200 -0.013230
0.853550 -0.007340
0.886510 -0.002830
0.915730  0.000160
0.940960  0.001680
0.961940  0.001950
0.978470  0.001420
0.990390  0.000480
0.997590 -0.000430
1.000000 -0.000800
 Z          XLE        YLE       CHORD      THICK      ALPHI     SECTION
3.600000   1.834292  0.089811   5.720000   1.000000   1.799528   2.000000
 YSYM       FNU        FNL
0.0       33.000000 33.000000
 TRL        SLT        XSING      YSING
1.821813 -0.178989  0.008467  0.000320
  X(I)       Y(I)        UPPER SURFACE
0.0        0.0
0.002410   0.009371
0.009610   0.017525
0.021530   0.024425
0.038060   0.030441
0.059040   0.035404
0.084270   0.039255
0.113490   0.042302
0.146450   0.044816
0.182800   0.046915
0.222210   0.048583
0.264300   0.049759
0.308660   0.050454
0.354860   0.050657
0.402450   0.050351
0.450990   0.049437
0.500000   0.047894
0.549010   0.045681
0.597550   0.042919
0.645140   0.039610
0.691340   0.035896
0.735700   0.031895
0.777790   0.027716
0.817200   0.023477
0.853550   0.019323
0.886510   0.015431
0.915730   0.011887
0.940960   0.008798
0.961940   0.006249
0.978470   0.004150
0.990390   0.002592
0.997590   0.001386
1.000000   0.000915
  X(I)       Y(I)        LOWER SURFACE
0.0        0.0
0.002410  -0.008090
0.009610  -0.015789
0.021530  -0.021992
0.038060  -0.028008
0.059040  -0.033895
0.084270  -0.039882
0.113490  -0.045908
0.146450  -0.051891
0.182800  -0.057442
0.222210  -0.062247
0.264300  -0.065905
0.308660  -0.068393
0.354860  -0.069320
0.402450  -0.069004
0.450990  -0.066929
0.500000  -0.063509
```

```
0.549010 -0.058185
0.597550 -0.051571
0.645140 -0.043598
0.691340 -0.035145
0.735700 -0.026706
0.777790 -0.018837
0.817200 -0.011937
0.853550 -0.006288
0.886510 -0.002031
0.915730  0.000706
0.940960  0.002002
0.961940  0.002097
0.978470  0.001432
0.990390  0.000434
0.997590 -0.000524
1.000000 -0.000915
 Z          XLE         YLE        CHORD      THICK      ALPHI     SECTION
7.200000   3.668583   0.036192   4.940000   1.000000   0.839562   3.000000
 YSYM        FNU         FNL
0.0        33.000000  33.000000
 TRL         SLT         XSING        YSING
2.086462  -0.193383   0.008415   0.000242
   X(I)        Y(I)          UPPER SURFACE
0.0         0.0
0.002410    0.009175
0.009610    0.017452
0.021530    0.024575
0.038060    0.030784
0.059040    0.035987
0.084270    0.040155
0.113490    0.043541
0.146450    0.046364
0.182800    0.048725
0.222210    0.050613
0.264300    0.051982
0.308660    0.052840
0.354860    0.053180
0.402450    0.052984
0.450990    0.052171
0.500000    0.050727
0.549010    0.048616
0.597550    0.045944
0.645140    0.042702
0.691340    0.039010
0.735700    0.034940
0.777790    0.030580
0.817200    0.026039
0.853550    0.021497
0.886510    0.017182
0.915730    0.013226
0.940960    0.009769
0.961940    0.006919
0.978470    0.004584
0.990390    0.002884
0.997590    0.001579
1.000000    0.001067
   X(I)        Y(I)          LOWER SURFACE
0.0         0.0
0.002410   -0.008208
0.009610   -0.015801
0.021530   -0.021915
0.038060   -0.027729
0.059040   -0.033335
0.084270   -0.039003
0.113490   -0.044682
0.146450   -0.050313
0.182800   -0.055536
0.222210   -0.060059
0.264300   -0.063516
0.308660   -0.065870
0.354860   -0.066767
0.402450   -0.066456
```

```
0.450990 -0.064441
0.500000 -0.061021
0.549010 -0.055691
0.597550 -0.049046
0.645140 -0.041122
0.691340 -0.032771
0.735700 -0.024504
0.777790 -0.016860
0.817200 -0.010236
0.853550 -0.004904
0.886510 -0.000979
0.915730  0.001425
0.940960  0.002425
0.961940  0.002291
0.978470  0.001447
0.990390  0.000373
0.997590 -0.000647
1.000000 -0.001067
  Z          XLE        YLE        CHORD      THICK      ALPHI     SECTION
10.800000  5.502875 -0.004362  4.160000  1.000000 -0.120168  4.000000
  YSYM       FNU        FNL
 0.0      33.000000 33.000000
  TRL        SLT        XSING      YSING
 2.444312 -0.213174  0.008335  0.000133
   X(I)       Y(I)         UPPER SURFACE
 0.0        0.0
 0.002410   0.008905
 0.009610   0.017351
 0.021530   0.024782
 0.038060   0.031256
 0.059040   0.036790
 0.084270   0.041394
 0.113490   0.045245
 0.146450   0.048492
 0.182800   0.051214
 0.222210   0.053404
 0.264300   0.055037
 0.308660   0.056121
 0.354860   0.056649
 0.402450   0.056604
 0.450990   0.055929
 0.500000   0.054624
 0.549010   0.052652
 0.597550   0.050104
 0.645140   0.046954
 0.691340   0.043291
 0.735700   0.039127
 0.777790   0.034517
 0.817200   0.029562
 0.853550   0.024487
 0.886510   0.019590
 0.915730   0.015066
 0.940960   0.011105
 0.961940   0.007840
 0.978470   0.005181
 0.990390   0.003285
 0.997590   0.001844
 1.000000   0.001276
   X(I)       Y(I)         LOWER SURFACE
 0.0        0.0
 0.002410  -0.008371
 0.009610  -0.015817
 0.021530  -0.021810
 0.038060  -0.027346
 0.059040  -0.032565
 0.084270  -0.037794
 0.113490  -0.042996
 0.146450  -0.048144
 0.182800  -0.052916
 0.222210  -0.057051
 0.264300  -0.060231
 0.308660  -0.062401
```

```
 0.354860 -0.063257
 0.402450 -0.062952
 0.450990 -0.061020
 0.500000 -0.057600
 0.549010 -0.052261
 0.597550 -0.045574
 0.645140 -0.037717
 0.691340 -0.029506
 0.735700 -0.021476
 0.777790 -0.014141
 0.817200 -0.007897
 0.853550 -0.003001
 0.886510  0.000466
 0.915730  0.002414
 0.940960  0.003007
 0.961940  0.002557
 0.978470  0.001469
 0.990390  0.000289
 0.997590 -0.000816
 1.000000 -0.001276
   Z          XLE        YLE       CHORD     THICK     ALPHI     SECTION
14.400000  7.337166 -0.031852  3.380000  1.000000 -1.079933  5.000000
  YSYM       FNU        FNL
 0.0      33.000000 33.000000
  TRL        SLT        XSING       YSING
 2.953534 -0.242100  0.008203 -0.000025
   X(I)       Y(I)        UPPER SURFACE
 0.0        0.0
 0.002410   0.008511
 0.009610   0.017205
 0.021530   0.025085
 0.038060   0.031946
 0.059040   0.037963
 0.084270   0.043204
 0.113490   0.047735
 0.146450   0.051603
 0.182800   0.054851
 0.222210   0.057483
 0.264300   0.059504
 0.308660   0.060917
 0.354860   0.061718
 0.402450   0.061895
 0.450990   0.061422
 0.500000   0.060318
 0.549010   0.058552
 0.597550   0.056183
 0.645140   0.053168
 0.691340   0.049548
 0.735700   0.045248
 0.777790   0.040272
 0.817200   0.034712
 0.853550   0.028858
 0.886510   0.023109
 0.915730   0.017756
 0.940960   0.013057
 0.961940   0.009186
 0.978470   0.006054
 0.990390   0.003872
 0.997590   0.002231
 1.000000   0.001582
   X(I)       Y(I)        LOWER SURFACE
 0.0        0.0
 0.002410  -0.008609
 0.009610  -0.015842
 0.021530  -0.021656
 0.038060  -0.026786
 0.059040  -0.031440
 0.084270  -0.036027
 0.113490  -0.040532
 0.146450  -0.044973
 0.182800  -0.049087
 0.222210  -0.052655
```

```
0.264300 -0.055431
0.308660 -0.057332
0.354860 -0.058128
0.402450 -0.057832
0.450990 -0.056020
0.500000 -0.052600
0.549010 -0.047249
0.597550 -0.040499
0.645140 -0.032742
0.691340 -0.024735
0.735700 -0.017051
0.777790 -0.010168
0.817200 -0.004479
0.853550 -0.000220
0.886510  0.002579
0.915730  0.003858
0.940960  0.003858
0.961940  0.002947
0.978470  0.001500
0.990390  0.000166
0.997590 -0.001064
1.000000 -0.001582
  Z          XLE        YLE        CHORD      THICK      ALPHI     SECTION
18.000000  9.171458 -0.046276  2.600000  1.000000 -2.040000  6.000000
  YSYM       FNU        FNL
 0.0       33.000000 33.000000
  TRL        SLT        XSING       YSING
 3.730311 -0.288382  0.007951 -0.000277
   X(I)       Y(I)        UPPER SURFACE
 0.0        0.0
 0.002410   0.007880
 0.009610   0.016970
 0.021530   0.025570
 0.038060   0.033050
 0.059040   0.039840
 0.084270   0.046100
 0.113490   0.051720
 0.146450   0.056580
 0.182800   0.060670
 0.222210   0.064010
 0.264300   0.066650
 0.308660   0.068590
 0.354860   0.069830
 0.402450   0.070360
 0.450990   0.070210
 0.500000   0.069430
 0.549010   0.067990
 0.597550   0.065910
 0.645140   0.063110
 0.691340   0.059560
 0.735700   0.055040
 0.777790   0.049480
 0.817200   0.042950
 0.853550   0.035850
 0.886510   0.028740
 0.915730   0.022060
 0.940960   0.016180
 0.961940   0.011340
 0.978470   0.007450
 0.990390   0.004810
 0.997590   0.002850
 1.000000   0.002070
   X(I)       Y(I)        LOWER SURFACE
 0.0        0.0
 0.002410  -0.008990
 0.009610  -0.015880
 0.021530  -0.021410
 0.038060  -0.025890
 0.059040  -0.029640
 0.084270  -0.033200
 0.113490  -0.036590
 0.146450  -0.039900
```

0.182800	-0.042960
0.222210	-0.045620
0.264300	-0.047750
0.308660	-0.049220
0.354860	-0.049920
0.402450	-0.049640
0.450990	-0.048020
0.500000	-0.044600
0.549010	-0.039230
0.597550	-0.032380
0.645140	-0.024780
0.691340	-0.017100
0.735700	-0.009970
0.777790	-0.003810
0.817200	0.000990
0.853550	0.004230
0.886510	0.005960
0.915730	0.006170
0.940960	0.005220
0.961940	0.003570
0.978470	0.001550
0.990390	-0.000030
0.997590	-0.001460
1.000000	-0.002070

APPENDIX B SAMPLE CASE

```
PROGRAM GRUMMING VERSION I
REUBEN R. CHOW     GRUMMAN AEROSPACE
THREE DIMENSIONAL VISCOUS TRANSONIC WING ANALYSIS
USING FINITE VOLUME AF2 SCHEME LINKED
WITH 3DBL AND VISCOUS WAKE

 LOCKHEED WING A   FLOW27  DATA
INTERACTIVE CALCULATION
VISCOUS WAKE IS FLOATED
MAXIMUM NUMBER OF BOUNDARY LAYER CALCULATION =   5
REFERENCE CHORD REYNOLDS NUMBER = 6.0  MILLIONS
UPPER WING SURFACE TRANSITION PRE-SET AT 0.100 CHORD
LOWER WING SURFACE TRANSITION PRE-SET AT 0.600 CHORD
MAGER CROSS FLOW BOUNDARY LAYER PROFILE USED
GREEN LAG ENTRAINMENT TURBULENT BOUNDARY LAYER USED

FUSELAGE RAD
    0.0000

   SWEEP          DIHED
  27.0000         0.0000
```

PROFILE AT Z = 0.00000

TE ANGLE	TE SLOPE	X SING	Y SING
1.6184	-0.1681	0.0005	0.0004

X	Y
1.0000	-0.0008
0.9976	-0.0004
0.9904	0.0000
0.9784	0.0014
0.9618	0.0028
0.9410	0.0037
0.9157	0.0042
0.8867	-0.0028
0.8539	-0.0073
0.8172	-0.0132
0.7774	-0.0203
0.7357	-0.0264
0.6913	-0.0370
0.6451	-0.0452
0.5975	-0.0525
0.5498	-0.0581
0.5000	-0.0624
0.4510	-0.0658
0.4024	-0.0709
0.3549	-0.0713
0.3087	-0.0703
0.2643	-0.0677
0.2222	-0.0639
0.1828	-0.0589
0.1464	-0.0531
0.1132	-0.0468
0.0833	-0.0406
0.0570	-0.0343
0.0343	-0.0282
0.0155	-0.0227
0.0039	-0.0178
0.0024	-0.0088
0.0000	0.0000
0.0024	0.0095
0.0096	0.0176
0.0215	0.0243
0.0381	0.0302
0.0590	0.0350
0.0843	0.0384
0.1132	0.0414
0.1464	0.0436
0.1828	0.0455
0.2222	0.0470
0.2643	0.0461
0.3087	0.0446
0.3549	0.0447
0.4024	0.0463
0.4510	0.0474
0.5000	0.0457
0.5498	0.0434
0.5975	0.0406
0.6451	0.0373
0.6913	0.0335
0.7357	0.0296
0.7774	0.0252
0.8172	0.0215
0.8539	0.0177
0.8867	0.0141
0.9157	0.0109
0.9410	0.0081
0.9619	0.0057
0.9784	0.0038
0.9904	0.0024
0.9976	0.0012
1.0000	0.0000

SECTION DEFINITION AT Z = 0.00000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
0.0000	0.1365	6.5000	1.0000	2.7600

PROFILE AT Z = 3.60000

TE ANGLE	TE SLOPE	X SING	Y SING
1.8218	-0.1790	0.0005	0.0003

X	Y
1.0000	-0.0009
0.9976	-0.0005
0.9904	0.0004
0.9785	0.0014
0.9619	0.0021
0.9410	0.0028
0.9157	0.0037
0.8865	-0.0028
0.8535	-0.0063
0.8172	-0.0119
0.7778	-0.0188
0.7357	-0.0267
0.6913	-0.0351
0.6451	-0.0436
0.5975	-0.0516
0.5490	-0.0582
0.5000	-0.0635
0.4510	-0.0669
0.4024	-0.0690
0.3549	-0.0693
0.3087	-0.0684
0.2643	-0.0659
0.2222	-0.0622
0.1828	-0.0574
0.1464	-0.0519
0.1135	-0.0459
0.0843	-0.0399
0.0590	-0.0339
0.0381	-0.0280
0.0215	-0.0220
0.0096	-0.0158
0.0024	-0.0081
0.0000	0.0000
0.0024	0.0094
0.0096	0.0175
0.0215	0.0244
0.0381	0.0304
0.0590	0.0354
0.0843	0.0393
0.1135	0.0423
0.1464	0.0448
0.1828	0.0469
0.2222	0.0486
0.2643	0.0498
0.3087	0.0505
0.3549	0.0507
0.4024	0.0504
0.4510	0.0494
0.5000	0.0479
0.5490	0.0457
0.5975	0.0429
0.6451	0.0396
0.6913	0.0359
0.7357	0.0319
0.7778	0.0277
0.8172	0.0235
0.8535	0.0193
0.8865	0.0154
0.9157	0.0119
0.9410	0.0088
0.9619	0.0062
0.9785	0.0041
0.9904	0.0026
0.9976	0.0014
1.0000	0.0009

SECTION DEFINITION AT Z = 3.60000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
1.8343	0.0898	5.7280	1.0000	1.7995

PROFILE AT Z = 7.2000

TE ANGLE	TE SLOPE	X SING	Y SING
2.8869	-0.1934	0.0004	0.0002

X	Y
1.0000	-0.0011
0.9976	-0.0006
0.9904	0.0004
0.9785	0.0014
0.9619	0.0023
0.9410	0.0024
0.9157	0.0016
0.8865	-0.0010
0.8535	-0.0049
0.8172	-0.0102
0.7778	-0.0169
0.7357	-0.0248
0.6913	-0.0338
0.6451	-0.0431
0.5975	-0.0490
0.5498	-0.0457
0.5000	-0.0410
0.4510	-0.0444
0.4024	-0.0465
0.3549	-0.0468
0.3087	-0.0459
0.2643	-0.0436
0.2222	-0.0401
0.1828	-0.0360
0.1464	-0.0318
0.1135	-0.0447
0.0843	-0.0390
0.0590	-0.0333
0.0381	-0.0277
0.0214	-0.0219
0.0096	-0.0158
0.0024	-0.0083
0.0000	0.0000
0.0024	0.0092
0.0096	0.0178
0.0215	0.0244
0.0381	0.0308
0.0590	0.0360
0.0843	0.0402
0.1135	0.0439
0.1464	0.0464
0.1828	0.0487
0.2222	0.0496
0.2643	0.0498
0.3087	0.0488
0.3549	0.0472
0.4024	0.0448
0.4510	0.0422
0.5000	0.0387
0.5498	0.0446
0.5975	0.0459
0.6451	0.0427
0.6913	0.0398
0.7357	0.0349
0.7778	0.0306
0.8172	0.0260
0.8535	0.0215
0.8865	0.0172
0.9157	0.0132
0.9410	0.0098
0.9619	0.0069
0.9785	0.0046
0.9904	0.0029
0.9976	0.0016
1.0000	0.0011

SECTION DEFINITION AT Z = 7.2000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
3.6686	0.0362	4.9480	1.0000	0.0396

PROFILE AT Z = 10.80000

TE ANGLE	TE SLOPE	X SING	Y SING
2.4443	-0.2132	0.0003	0.0001

X	Y
1.0000	-0.0013
0.9976	-0.0008
0.9904	0.0003
0.9785	0.0015
0.9619	0.0026
0.9410	0.0030
0.9157	0.0024
0.8865	0.0005
0.8535	-0.0030
0.8172	-0.0079
0.7778	-0.0141
0.7357	-0.0215
0.6913	-0.0295
0.6451	-0.0377
0.5975	-0.0456
0.5490	-0.0523
0.5000	-0.0576
0.4510	-0.0618
0.4024	-0.0638
0.3549	-0.0633
0.3087	-0.0624
0.2643	-0.0602
0.2222	-0.0571
0.1828	-0.0529
0.1464	-0.0481
0.1135	-0.0430
0.0843	-0.0378
0.0590	-0.0326
0.0381	-0.0273
0.0215	-0.0218
0.0096	-0.0158
0.0024	-0.0084
0.0000	0.0000
0.0024	0.0089
0.0096	0.0174
0.0215	0.0248
0.0381	0.0313
0.0590	0.0368
0.0843	0.0414
0.1135	0.0452
0.1464	0.0485
0.1828	0.0512
0.2222	0.0534
0.2643	0.0550
0.3087	0.0561
0.3549	0.0566
0.4024	0.0566
0.4510	0.0559
0.5000	0.0546
0.5490	0.0527
0.5975	0.0501
0.6451	0.0470
0.6913	0.0433
0.7357	0.0391
0.7778	0.0345
0.8172	0.0296
0.8535	0.0245
0.8865	0.0196
0.9157	0.0151
0.9410	0.0111
0.9619	0.0078
0.9785	0.0052
0.9904	0.0033
0.9976	0.0018
1.0000	0.0013

SECTION DEFINITION AT Z = 10.80000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
5.5029	-0.0044	4.1600	1.0000	-0.1202

PROFILE AT Z = 14.40000

TE ANGLE	TE SLOPE	X SING	Y SING
3.9838	-0.2421	0.0002	0.0000

X	Y
1.0000	-0.0016
0.9976	-0.0011
0.9904	0.0002
0.9784	0.0018
0.9618	0.0030
0.9410	0.0039
0.9157	0.0039
0.8865	0.0026
0.8538	-0.0002
0.8172	-0.0045
0.7778	-0.0102
0.7357	-0.0171
0.6913	-0.0247
0.6451	-0.0327
0.5975	-0.0405
0.5490	-0.0472
0.5000	-0.0526
0.4510	-0.0560
0.4024	-0.0570
0.3549	-0.0561
0.3087	-0.0533
0.2643	-0.0494
0.2221	-0.0437
0.1822	-0.0431
0.1464	-0.0438
0.1136	-0.0405
0.0843	-0.0360
0.0590	-0.0314
0.0381	-0.0268
0.0215	-0.0217
0.0096	-0.0158
0.0024	-0.0086
0.0000	0.0000
0.0024	0.0085
0.0096	0.0172
0.0215	0.0291
0.0381	0.0319
0.0590	0.0380
0.0843	0.0432
0.1136	0.0477
0.1464	0.0516
0.1828	0.0549
0.2221	0.0575
0.2643	0.0595
0.3087	0.0609
0.3549	0.0617
0.4024	0.0619
0.4510	0.0614
0.5000	0.0603
0.5490	0.0586
0.5975	0.0562
0.6451	0.0532
0.6913	0.0495
0.7357	0.0452
0.7778	0.0403
0.8172	0.0347
0.8538	0.0289
0.8865	0.0231
0.9157	0.0178
0.9410	0.0131
0.9618	0.0092
0.9785	0.0061
0.9904	0.0039
0.9976	0.0022
1.0000	0.0016

SECTION DEFINITION AT Z = 14.40000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
7.3372	-0.0319	3.3880	1.0000	-1.0799

PROFILE AT Z = 18.0000

TE ANGLE	TE SLOPE	X SING	Y SING
3.7383	-0.2884	0.0000	-0.0003

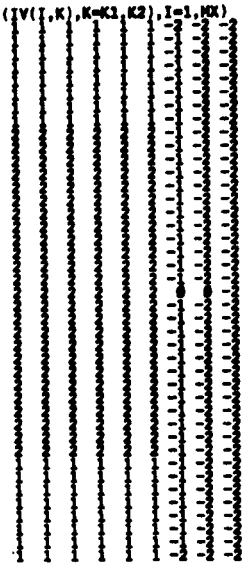
X	Y
1.0000	-0.0021
0.9976	-0.0018
0.9904	0.0000
0.9785	0.0016
0.9619	0.0036
0.9410	0.0052
0.9157	0.0062
0.8865	0.0060
0.8535	0.0042
0.8172	0.0010
0.7774	-0.0038
0.7357	-0.0100
0.6913	-0.0171
0.6451	-0.0248
0.5975	-0.0324
0.5490	-0.0392
0.5000	-0.0446
0.4510	-0.0480
0.4024	-0.0496
0.3549	-0.0499
0.3087	-0.0492
0.2643	-0.0477
0.2222	-0.0456
0.1828	-0.0430
0.1464	-0.0399
0.1135	-0.0366
0.0843	-0.0332
0.0590	-0.0296
0.0381	-0.0259
0.0215	-0.0214
0.0096	-0.0159
0.0024	-0.0090
0.0000	0.0000
0.0024	0.0079
0.0096	0.0170
0.0215	0.0256
0.0381	0.0331
0.0590	0.0398
0.0843	0.0461
0.1135	0.0517
0.1464	0.0566
0.1828	0.0607
0.2222	0.0640
0.2643	0.0667
0.3087	0.0686
0.3549	0.0698
0.4024	0.0704
0.4510	0.0702
0.5000	0.0694
0.5490	0.0680
0.5975	0.0659
0.6451	0.0631
0.6913	0.0596
0.7357	0.0558
0.7774	0.0495
0.8172	0.0438
0.8535	0.0358
0.8865	0.0287
0.9157	0.0221
0.9410	0.0162
0.9619	0.0113
0.9785	0.0075
0.9904	0.0048
0.9976	0.0029
1.0000	0.0021

SECTION DEFINITION AT Z = 18.0000

XLE	YLE	CHORD	THICKNESS RATIO	ALPHA
9.1715	-0.0463	2.6000	1.0000	-2.0400

INDICATION OF LOCATION OF WING AND VORTEX SHEET IN COORDINATE PLANE Y = 0.

((IV(I,K),K=K1,K2),I=1,MX)



CHORDWISE CELL DISTRIBUTION IN SQUARE ROOT PLANE AND MAPPED SURFACE COORDINATES AT CENTER LINE AND TIP

X	ROOT PROFILE	TIP PROFILE
-1.09298	0.01357	0.00352
-0.95583	0.01619	0.00497
-0.86269	0.01835	0.00599
-0.79894	0.02006	0.00659
-0.73132	0.02128	0.00664
-0.67891	0.02185	0.00598
-0.62882	0.02140	0.00387
-0.58583	0.01915	-0.00043
-0.54000	0.01333	-0.00913
-0.49588	0.01476	-0.00988
-0.45000	0.02264	-0.00279
-0.40588	0.03091	0.00618
-0.36000	0.03697	0.01319
-0.31588	0.04092	0.01795
-0.27000	0.04303	0.02081
-0.22588	0.04348	0.02264
-0.18000	0.04294	0.02443
-0.13588	0.04277	0.03081
-0.09000	0.04423	0.03737
-0.04588	0.04871	0.04259
0.00000	0.05005	0.04327
0.04588	0.04931	0.04365
0.09000	0.04818	0.04502
0.13588	0.03971	0.04727
0.18000	0.02934	0.04544
0.22588	0.02402	0.04326
0.27000	0.01942	0.04062
0.31588	0.01505	0.03816
0.36000	0.01068	0.03517
0.40588	0.00560	0.03174
0.45000	-0.00012	0.02739
0.49588	-0.00639	0.02025
0.54000	-0.01289	0.01025
0.58583	-0.01874	0.00144
0.62882	-0.02183	-0.00271
0.67891	-0.02158	-0.00348
0.73132	-0.02054	-0.00308
0.79894	-0.01976	-0.00231
0.86269	-0.01888	-0.00158
0.95583	-0.01694	-0.00133
1.09298	-0.01336	-0.00296

TE LOCATION	POWER LAW
0.56250	0.50000

NORMAL CELL DISTRIBUTION IN SQUARE ROOT PLANE

Y
1.03237
0.42743
0.23193
0.11246
0.00000

SCALE FACTOR	POWER LAW
0.50000	0.50000

SPANWISE CELL DISTRIBUTION AND SINGULAR LINE

Z	X SING	Y SING
0.00000	0.05527	0.15896
3.60000	1.88272	0.09164
7.19999	3.71015	0.03739
10.79999	5.53754	-0.00331
14.39999	7.36488	-0.03194
17.99998	9.19212	-0.04780
21.72525	11.08446	-0.05669
26.39531	13.46049	-0.06311
34.97267	17.82829	-0.06759

TIP LOCATION	POWER LAW
0.56250	0.50000

ITERATIVE SOLUTION

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

NX	NY	NZ
48	4	8

RELAX FCT 1	RELAX FCT 2	RELAX FCT 3
1.00000	0.90000	0.60000

ITERATION	MAX CORRECN	I	J	K	AVG CORRECN	MAX RESIDAL	I	J	K	AVG RESIDAL	CIRCULATN	SONIC PTS
1	0.36099E-02	32	4	5	0.18548E-03	0.65336E-03	33	5	3	0.17159E-04	0.00173	0
2	0.33684E-02	32	4	4	0.34109E-03	0.46170E-03	33	5	3	0.23331E-04	0.00381	0
3	0.39819E-02	32	4	6	0.62532E-03	0.68845E-03	2	5	4	0.28345E-04	0.00648	0
4	0.49271E-02	37	4	5	0.10328E-02	-0.74999E-03	2	4	3	0.37761E-04	0.01087	0
5	0.12448E-02	40	4	8	0.14291E-03	0.89732E-03	40	3	3	0.38696E-04	0.01250	15
6	0.11474E-02	33	4	3	0.18234E-03	-0.11114E-02	2	3	3	0.36711E-04	0.01414	17
7	0.18210E-02	35	4	3	0.32727E-03	0.11154E-02	40	3	3	0.23371E-04	0.01649	19
8	0.31486E-02	37	4	7	0.54633E-03	0.11032E-02	40	3	3	0.20417E-04	0.02025	22
9	0.48485E-03	40	4	7	0.79590E-04	0.10365E-02	40	3	3	0.18017E-04	0.02126	47
10	0.68723E-03	40	4	7	0.73525E-04	0.10600E-02	40	3	3	0.15914E-04	0.02225	46
11	0.10767E-02	39	4	3	0.12979E-03	0.10032E-02	40	3	3	0.14377E-04	0.02364	48
12	0.17468E-02	39	4	3	0.21798E-03	0.88596E-03	40	3	3	0.12236E-04	0.02575	51
13	-0.29133E-03	9	4	3	0.31587E-04	0.67451E-03	40	2	3	0.95625E-05	0.02630	54
14	0.37744E-03	40	4	3	0.27237E-04	0.64498E-03	40	2	3	0.85802E-05	0.02683	55
15	0.61073E-03	40	4	3	0.43896E-04	0.59059E-03	40	2	3	0.79030E-05	0.02751	55
16	0.85476E-03	40	4	3	0.72716E-04	0.48945E-03	40	2	3	0.69025E-05	0.02842	55
17	-0.19233E-03	9	4	3	0.18162E-04	0.32688E-03	40	2	3	0.41974E-05	0.02868	55
18	0.20570E-03	40	4	3	0.18102E-04	0.29988E-03	40	2	3	0.38655E-05	0.02893	55
19	0.31430E-03	40	4	3	0.15803E-04	0.26852E-03	40	2	3	0.35501E-05	0.02922	54
20	0.39977E-03	40	4	3	0.22974E-04	0.21293E-03	40	2	3	0.28228E-05	0.02952	54
21	-0.86347E-04	9	4	3	0.32985E-05	0.13368E-03	2	2	3	0.17344E-05	0.02969	55
22	0.10641E-03	40	4	3	0.44394E-05	0.13095E-03	2	2	3	0.16388E-05	0.02977	55
23	0.15588E-03	40	4	3	0.63941E-05	0.12883E-03	40	2	3	0.14975E-05	0.02989	55
24	0.11649E-03	40	4	3	0.92624E-05	0.10286E-03	2	2	3	0.11957E-05	0.02999	55
25	-0.53451E-04	9	4	3	0.16548E-05	0.76872E-04	2	2	3	0.79220E-06	0.03006	55
26	0.58449E-04	40	4	3	0.28859E-05	0.75503E-04	2	2	3	0.77610E-06	0.03013	55
27	0.84078E-04	40	4	3	0.29856E-05	0.70025E-04	2	2	3	0.72086E-06	0.03019	55
28	0.99849E-04	40	4	3	0.44686E-05	0.60344E-04	2	2	3	0.58248E-06	0.03025	55
29	-0.35887E-04	9	4	3	0.98848E-06	0.46432E-04	40	2	3	0.42257E-06	0.03029	55
30	0.35054E-04	40	4	3	0.11256E-05	0.45664E-04	2	2	3	0.42156E-06	0.03033	55
31	0.50481E-04	40	4	3	0.16933E-05	0.42475E-04	40	2	3	0.39741E-06	0.03037	55
32	0.68877E-04	40	4	3	0.26872E-05	0.36924E-04	2	2	3	0.33240E-06	0.03041	55
33	-0.23881E-04	9	4	3	0.85199E-06	0.29046E-04	40	2	3	0.26144E-06	0.03044	55
34	0.22093E-04	40	4	3	0.70500E-06	0.28565E-04	2	2	3	0.26151E-06	0.03047	55
35	0.31957E-04	40	4	3	0.11287E-05	0.26564E-04	2	2	3	0.24798E-06	0.03049	55
36	0.39037E-04	40	4	3	0.18689E-05	0.23138E-04	2	2	3	0.20867E-06	0.03052	55
37	-0.19286E-04	9	4	3	0.35687E-06	0.18332E-04	2	2	3	0.16829E-06	0.03054	55
38	0.14084E-04	40	4	3	0.43820E-06	0.18021E-04	40	2	3	0.16777E-06	0.03056	55
39	0.20270E-04	40	4	3	0.71268E-06	0.16738E-04	2	2	3	0.15890E-06	0.03057	55
40	0.24776E-04	40	4	3	0.11932E-05	0.14258E-04	2	2	3	0.13378E-06	0.03059	55
41	-0.98628E-05	9	4	3	0.32108E-06	0.11522E-04	2	2	3	0.10687E-06	0.03060	55
42	-0.88134E-05	9	4	3	0.26756E-06	0.11325E-04	2	2	3	0.10650E-06	0.03061	55
43	0.12685E-04	40	4	3	0.43329E-06	0.10569E-04	40	2	3	0.10963E-06	0.03062	55
44	0.15616E-04	40	4	3	0.71870E-06	0.91263E-05	40	3	3	0.84550E-07	0.03063	55
45	-0.62749E-05	9	4	3	0.13464E-06	0.72050E-05	40	3	3	0.66818E-07	0.03064	55
46	-0.55284E-05	9	4	3	0.16383E-06	0.70839E-05	40	3	3	0.66692E-07	0.03065	55
47	0.78674E-05	40	4	3	0.26233E-06	0.65726E-05	40	5	3	0.62950E-07	0.03065	55
48	0.95007E-05	40	4	3	0.43148E-06	0.57844E-05	40	5	3	0.52905E-07	0.03066	55

MAX RESIDAL 1	MAX RESIDAL 2	WORK	REDUCTN/CYCLE
0.6534E-03	0.5784E-05	47.0000	0.9841

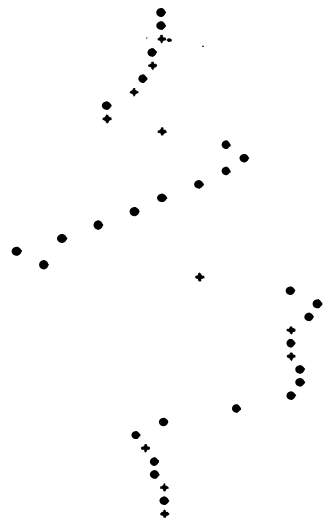
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.00000	0.39167	0.04672	-0.17439

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1159	-0.5246	0.8157	0.0092
2.5391	-0.5403	0.8130	0.0152
2.1355	-0.5418	0.8086	0.0246
1.8266	-0.5284	0.8026	0.0375
1.5751	-0.4963	0.7944	0.0551
1.3688	-0.4373	0.7831	0.0793
1.1717	-0.3359	0.7676	0.1128
1.0000	-0.1598	0.7242	0.2059
0.8414	-0.1638	0.7226	0.2093
0.6947	-0.2915	0.8139	0.0132
0.5633	-0.3941	0.9196	-0.2124
0.4448	-0.4298	0.9592	-0.2952
0.3404	-0.4184	0.9285	-0.2310
0.2502	-0.3543	0.8734	-0.1144
0.1743	-0.2732	0.8156	0.0095
0.1125	-0.1825	0.7614	0.1261
0.0643	-0.0961	0.7181	0.2160
0.0294	-0.0169	0.6430	0.3774
0.0073	0.0421	0.5533	0.5710
0.0000	0.1598	0.6829	0.4399
0.0075	0.2590	0.8753	-0.1186
0.0300	0.3266	1.0418	-0.6432
0.0662	0.3719	1.0908	-0.8579
0.1158	0.3972	1.0716	-0.8221
0.1788	0.3977	1.0439	-0.7674
0.2553	0.3906	1.0369	-0.7534
0.3453	0.3684	1.0435	-0.7667
0.4491	0.3275	1.0538	-0.7871
0.5668	0.2592	1.0547	-0.7888
0.6975	0.1566	1.0289	-0.7374
0.8428	0.0193	0.9426	-0.2605
1.0000	-0.1486	0.8147	0.0115
1.1718	-0.3255	0.7638	0.1210
1.3689	-0.4278	0.7824	0.0889
1.5751	-0.4859	0.7944	0.0552
1.8266	-0.5181	0.8026	0.0373
2.1356	-0.5315	0.8086	0.0244
2.5392	-0.5300	0.8130	0.0151
3.1160	-0.5142	0.8157	0.0092



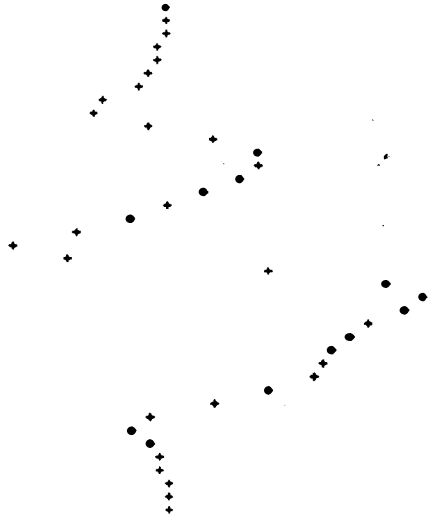
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
3.60000	0.45862	0.01829	-0.18314

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1152	-0.4068	0.8156	0.0096
2.5387	-0.4203	0.8130	0.0151
2.1353	-0.4216	0.8089	0.0238
1.8265	-0.4101	0.8032	0.0361
1.5751	-0.3825	0.7949	0.0540
1.3689	-0.3320	0.7818	0.0821
1.1718	-0.2449	0.7607	0.1275
1.0000	-0.0935	0.7104	0.2354
0.8415	-0.1058	0.6972	0.2633
0.6961	-0.2286	0.7753	0.0961
0.5639	-0.3309	0.8881	-0.1457
0.4495	-0.3728	0.9662	-0.3098
0.3412	-0.3668	0.9745	-0.3268
0.2510	-0.3261	0.9333	-0.2412
0.1750	-0.2648	0.8732	-0.1140
0.1121	-0.1928	0.8099	0.0216
0.0647	-0.1240	0.7458	0.1596
0.0297	-0.0596	0.6681	0.3417
0.0074	0.0072	0.5491	0.5674
0.0000	0.0916	0.6368	0.3921
0.0074	0.1766	0.9823	-0.3428
0.0297	0.2428	1.2141	-0.7878
0.0657	0.2878	1.2975	-0.9279
0.1153	0.3129	1.2579	-0.8624
0.1782	0.3260	1.1846	-0.7345
0.2547	0.3289	1.1345	-0.6425
0.3448	0.3193	1.1088	-0.5948
0.4486	0.2942	1.0933	-0.5642
0.5660	0.2464	1.0631	-0.5084
0.6972	0.1692	0.9941	-0.3678
0.8418	0.0589	0.8938	-0.1577
1.0000	-0.0830	0.7982	0.0442
1.1719	-0.2344	0.7573	0.1348
1.3610	-0.3215	0.7813	0.0833
1.5751	-0.3721	0.7949	0.0540
1.8265	-0.3996	0.8033	0.0359
2.1353	-0.4111	0.8090	0.0237
2.5387	-0.4098	0.8130	0.0150
3.1153	-0.3964	0.8156	0.0095



SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CN
7.19999	0.49581	0.00472	-0.28023

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1149	-0.3085	0.8153	0.0101
2.5386	-0.3280	0.8128	0.0156
2.1353	-0.3211	0.8086	0.0244
1.8265	-0.3113	0.8027	0.0372
1.5752	-0.2878	0.7939	0.0561
1.3611	-0.2445	0.7801	0.0858
1.1720	-0.1701	0.7581	0.1332
1.0000	-0.0499	0.7059	0.2449
0.8416	-0.0565	0.6888	0.2813
0.6964	-0.1704	0.7605	0.1281
0.5645	-0.2698	0.8682	-0.1034
0.4463	-0.3149	0.9589	-0.2779
0.3428	-0.3173	0.9716	-0.3208
0.2519	-0.2912	0.9412	-0.2577
0.1758	-0.2462	0.8878	-0.1491
0.1137	-0.1929	0.8291	-0.0195
0.0652	-0.1484	0.7681	0.1116
0.0299	-0.0899	0.6836	0.2926
0.0076	-0.0348	0.5673	0.5315
0.0000	0.0374	0.6399	0.3839
0.0072	0.1110	0.9760	-0.3298
0.0293	0.1713	1.2209	-0.7988
0.0652	0.2152	1.3268	-0.9749
0.1146	0.2439	1.3862	-0.9421
0.1776	0.2630	1.2489	-0.8336
0.2540	0.2737	1.1830	-0.7345
0.3441	0.2745	1.1425	-0.6575
0.4488	0.2628	1.1123	-0.6005
0.5655	0.2321	1.0788	-0.5205
0.6968	0.1778	0.9944	-0.3676
0.8416	0.0898	0.8909	-0.1517
1.0000	-0.0303	0.7868	0.0714
1.1720	-0.1596	0.7543	0.1414
1.3611	-0.2348	0.7793	0.0875
1.5752	-0.2772	0.7938	0.0563
1.8266	-0.3008	0.8028	0.0371
2.1353	-0.3106	0.8087	0.0243
2.5386	-0.3095	0.8128	0.0154
3.1150	-0.2980	0.8154	0.0100

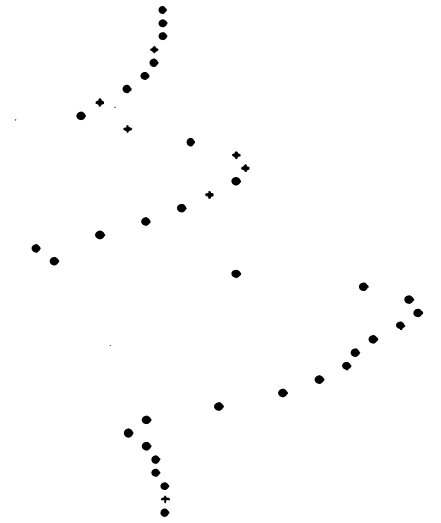
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CN
10.79999	0.52910	-0.00363	-0.22606

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1151	-0.2298	0.8151	0.0106
2.5387	-0.2396	0.8125	0.0161
2.1354	-0.2406	0.8083	0.0252
1.8267	-0.2322	0.8021	0.0386
1.5754	-0.2128	0.7928	0.0586
1.3613	-0.1751	0.7784	0.0895
1.1721	-0.1115	0.7557	0.1382
1.0000	-0.0010	0.7010	0.2553
0.8416	-0.0158	0.6880	0.2998
0.6967	-0.1171	0.7480	0.1549
0.5651	-0.2084	0.8529	-0.0707
0.4478	-0.2553	0.9359	-0.2466
0.3429	-0.2641	0.9612	-0.2993
0.2527	-0.2496	0.9388	-0.2526
0.1766	-0.2198	0.8943	-0.1589
0.1143	-0.1828	0.8438	-0.0511
0.0656	-0.1453	0.7904	0.0638
0.0302	-0.1078	0.7188	0.2345
0.0077	-0.0639	0.5574	0.4913
0.0000	-0.0038	0.6253	0.4141
0.0071	0.0584	0.9353	-0.2454
0.0288	0.1123	1.1684	-0.7052
0.0645	0.1540	1.2881	-0.8995
0.1138	0.1858	1.2859	-0.9091
0.1767	0.2085	1.2451	-0.8406
0.2532	0.2252	1.2016	-0.7649
0.3434	0.2339	1.1652	-0.6993
0.4472	0.2324	1.1341	-0.6418
0.5649	0.2163	1.0949	-0.5673
0.6963	0.1799	1.0196	-0.4188
0.8414	0.1120	0.9053	-0.1821
1.0000	0.0096	0.7879	0.0691
1.1722	-0.1009	0.7515	0.1473
1.3613	-0.1645	0.7775	0.0915
1.5755	-0.2014	0.7927	0.0588
1.8268	-0.2216	0.8021	0.0384
2.1355	-0.2300	0.8084	0.0256
2.5388	-0.2290	0.8126	0.0159
3.1151	-0.2192	0.8151	0.0104



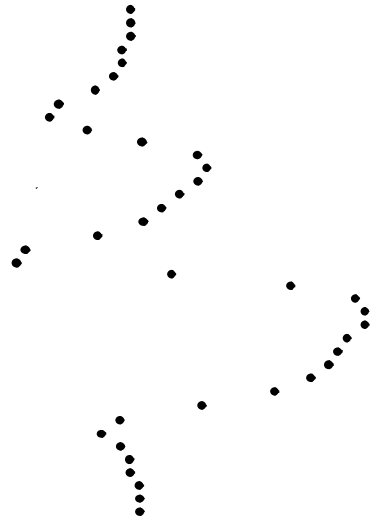
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
14.39999	0.55882	-0.01891	-0.25851

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1157	-0.1706	0.8152	0.0102
2.5392	-0.1791	0.8128	0.0154
2.1369	-0.1799	0.8088	0.0242
1.8272	-0.1727	0.8025	0.0376
1.5758	-0.1554	0.7928	0.0585
1.3616	-0.1236	0.7776	0.0913
1.1724	-0.0698	0.7535	0.1430
1.0000	0.0260	0.6947	0.2688
0.8416	0.0162	0.6682	0.3248
0.6978	-0.0685	0.7318	0.1897
0.5656	-0.1492	0.8339	-0.0298
0.4477	-0.1948	0.9162	-0.2052
0.3437	-0.2046	0.9445	-0.2646
0.2536	-0.2013	0.9309	-0.2362
0.1774	-0.1848	0.8992	-0.1692
0.1150	-0.1624	0.8621	-0.0903
0.0662	-0.1387	0.8221	-0.0044
0.0305	-0.1133	0.7831	0.1439
0.0077	-0.0881	0.6289	0.4231
0.0000	-0.0319	0.6029	0.4601
0.0078	0.0186	0.8741	-0.1159
0.0282	0.0655	1.0926	-0.5628
0.0636	0.1043	1.2082	-0.7764
0.1128	0.1363	1.2418	-0.8336
0.1756	0.1626	1.2277	-0.8107
0.2521	0.1833	1.2036	-0.7613
0.3423	0.1976	1.1776	-0.7218
0.4463	0.2059	1.1530	-0.6768
0.5640	0.1991	1.1251	-0.6248
0.6956	0.1779	1.0573	-0.4940
0.8418	0.1255	0.9279	-0.2299
1.0000	0.0367	0.7905	0.0634
1.1724	-0.0583	0.7490	0.1528
1.3617	-0.1138	0.7767	0.0933
1.5759	-0.1447	0.7928	0.0586
1.8272	-0.1620	0.8026	0.0373
2.1359	-0.1692	0.8089	0.0238
2.5393	-0.1684	0.8130	0.0151
3.1157	-0.1599	0.8153	0.0100



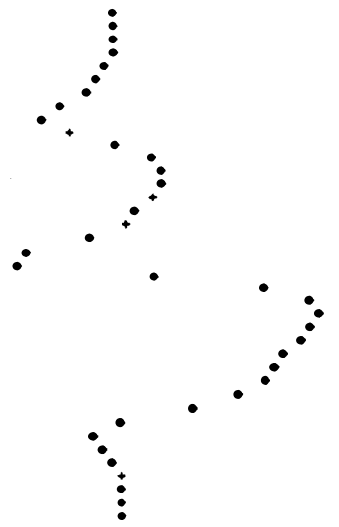
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
17.99998	0.51122	-0.02158	-0.23953

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.1169	-0.1310	0.8171	0.0062
2.5402	-0.1384	0.8156	0.0095
2.1367	-0.1391	0.8129	0.0154
1.8278	-0.1329	0.8085	0.0248
1.5764	-0.1178	0.8014	0.0400
1.3621	-0.0902	0.7896	0.0654
1.1727	-0.0426	0.7698	0.1058
1.0000	0.0402	0.7169	0.2215
0.8415	0.0395	0.6888	0.2829
0.6978	-0.0248	0.7332	0.1865
0.5660	-0.0913	0.8095	0.0226
0.4484	-0.1310	0.8703	-0.1078
0.3446	-0.1447	0.8926	-0.1553
0.2546	-0.1464	0.8883	-0.1460
0.1783	-0.1411	0.8724	-0.1123
0.1158	-0.1318	0.8519	-0.0684
0.0668	-0.1206	0.8278	-0.0150
0.0308	-0.1065	0.7726	0.1021
0.0078	-0.0833	0.6938	0.3550
0.0000	-0.0470	0.6392	0.3884
0.0068	-0.0083	0.8742	-0.1161
0.0273	0.0321	1.0451	-0.5092
0.0624	0.0659	1.1622	-0.6938
0.1112	0.0976	1.1843	-0.7339
0.1739	0.1252	1.1636	-0.6964
0.2504	0.1479	1.1340	-0.6414
0.3407	0.1656	1.1057	-0.5879
0.4448	0.1769	1.0835	-0.5462
0.5627	0.1804	1.0668	-0.5127
0.6945	0.1718	1.0273	-0.4342
0.8404	0.1383	0.9331	-0.2486
0.9999	0.0589	0.8091	0.0234
1.1727	-0.0319	0.7648	0.1189
1.3621	-0.0794	0.7885	0.0677
1.5764	-0.1070	0.8013	0.0401
1.8279	-0.1221	0.8087	0.0243
2.1368	-0.1283	0.8131	0.0149
2.5403	-0.1276	0.8157	0.0092
3.1169	-0.1202	0.8172	0.0060

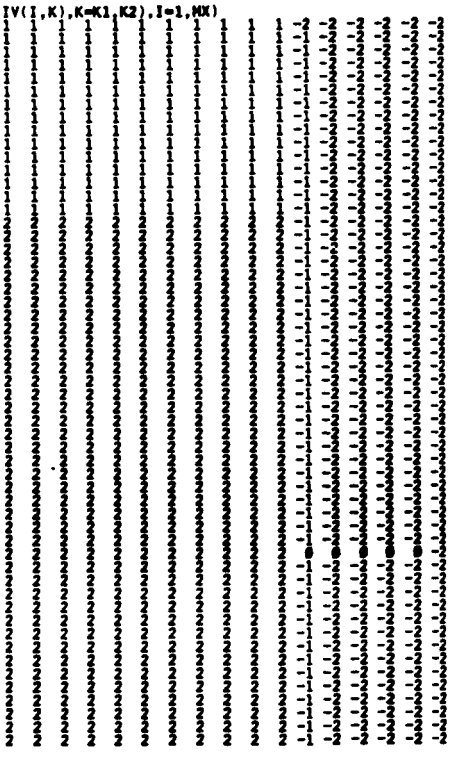


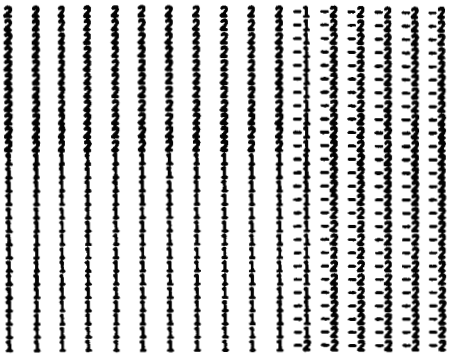
WING CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK			
0.82000	0.00000	1.00000			
CL	CD FORM	CD FRICTION	CD	L/D FORM	L/D
0.48829	0.00878	0.00000	0.00878	55.63097	55.63097
CM PITCH	CN ROLL	CN YAW			
-0.64225	0.44523	-0.00161			

INDICATION OF LOCATION OF WING AND VORTEX SHEET IN COORDINATE PLANE Y = 0.

((IV(I,K),K=K1,K2),I=1,MX)





CHORDWISE CELL DISTRIBUTION IN SQUARE ROOT PLANE AND MAPPED SURFACE COORDINATES AT CENTER LINE AND TIP

X	ROOT PROFILE	TIP PROFILE
-1.09290	0.01498	0.00414
-1.01641	0.01641	0.00495
-0.94583	0.01776	0.00562
-0.90564	0.01894	0.00617
-0.86265	0.01998	0.00658
-0.82485	0.02087	0.00686
-0.79094	0.02161	0.00697
-0.75999	0.02219	0.00690
-0.73132	0.02259	0.00662
-0.70443	0.02276	0.00607
-0.67891	0.02267	0.00518
-0.65447	0.02222	0.00386
-0.63082	0.02132	0.00198
-0.60774	0.01981	-0.00067
-0.58503	0.01746	-0.00435
-0.56250	0.01389	-0.00951
-0.54006	0.01293	-0.01147
-0.51750	0.01512	-0.01047
-0.49500	0.01867	-0.00760
-0.47250	0.02288	-0.00363
-0.45000	0.02721	0.00085
-0.42750	0.03129	0.00536
-0.40500	0.03479	0.00944
-0.38250	0.03768	0.01288
-0.36000	0.04009	0.01548
-0.33750	0.04196	0.01750
-0.31500	0.04347	0.01930
-0.29250	0.04448	0.02092
-0.27000	0.04518	0.02241
-0.24750	0.04572	0.02382
-0.22500	0.04623	0.02521
-0.20250	0.04695	0.02667
-0.18000	0.04465	0.02833
-0.15750	0.04458	0.03033
-0.13500	0.04463	0.03276
-0.11250	0.04524	0.03588
-0.09000	0.04638	0.03957
-0.06750	0.04846	0.04375
-0.04500	0.05089	0.04779
-0.02250	0.05193	0.05029
0.00000	0.05213	0.05038
0.02250	0.05179	0.05002
0.04500	0.05049	0.05060
0.06750	0.04778	0.05133
0.09000	0.04444	0.05121
0.11250	0.04129	0.05037
0.13500	0.03863	0.04946
0.15750	0.03672	0.04857
0.18000	0.03155	0.04768
0.20250	0.02866	0.04665
0.22500	0.02604	0.04555
0.24750	0.02363	0.04437
0.27000	0.02135	0.04314
0.29250	0.01913	0.04187
0.31500	0.01694	0.04055

0.33750	0.01477	0.03916
0.36000	0.01297	0.03767
0.38250	0.01026	0.03610
0.40500	0.00780	0.03442
0.42750	0.00516	0.03259
0.45000	0.00235	0.03053
0.47250	-0.00063	0.02820
0.49500	-0.00373	0.02491
0.51750	-0.00692	0.02071
0.54000	-0.01011	0.01576
0.56250	-0.01343	0.01064
0.58500	-0.01702	0.00547
0.60774	-0.01939	0.00175
0.63062	-0.02092	-0.00093
0.65447	-0.02183	-0.00286
0.67891	-0.02229	-0.00421
0.70443	-0.02240	-0.00513
0.73132	-0.02224	-0.00572
0.75999	-0.02186	-0.00603
0.79094	-0.02129	-0.00613
0.82485	-0.02056	-0.00605
0.86265	-0.01969	-0.00581
0.90564	-0.01866	-0.00544
0.95583	-0.01750	-0.00493
1.01641	-0.01616	-0.00430
1.09298	-0.01467	-0.00354

TE LOCATION	POWER LAW
0.56250	0.50000

NORMAL CELL DISTRIBUTION IN SQUARE ROOT PLANE

Y
1.03237
0.63888
0.45743
0.34017
0.25195
0.17927
0.11546
0.05661
0.00000

SCALE FACTOR	POWER LAW
0.50000	0.50000

SPANWISE CELL DISTRIBUTION AND SINGULAR LINE

Z	X SING	Y SING
0.00000	0.00527	0.12094
1.00000	0.96900	0.12427
2.00000	1.88272	0.09164
3.00000	2.79644	0.04271
4.00000	3.71015	0.03739
5.00000	4.62385	0.01524
10.79999	9.55754	-0.00381
12.59999	6.45123	-0.01968
14.39999	7.36488	-0.03194
16.19998	8.27851	-0.04050
17.99998	9.19212	-0.04700
19.81584	10.11383	-0.05241
21.72525	11.08466	-0.05669
23.85288	12.16674	-0.06019
26.39531	13.46049	-0.06311
29.74953	15.16813	-0.06557
34.97267	17.82829	-0.06759

TIP LOCATION	POWER LAW
0.96250	0.50000

ITERATIVE SOLUTION

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

NX	NY	NZ
80	8	16

RELAX FCT 1	RELAX FCT 2	RELAX FCT 3
1.00000	0.90000	0.60000

ITERATION	MAX CORRECN	I	J	K	AVG CORRECN	MAX RESIDAL	I	J	K	AVG RESIDAL	CIRCULATN	SONIC PTS
1	-0.12265E-02	80	8	9	0.40504E-04	-0.32730E-03	80	8	3	0.41222E-05	0.03110	396
2	0.96873E-03	80	8	12	0.66703E-04	0.11988E-03	80	8	8	0.30625E-05	0.03130	401
3	0.85688E-03	80	8	8	0.10307E-03	-0.27623E-03	2	2	10	0.24547E-05	0.03139	408
4	-0.76276E-03	46	8	4	0.14368E-03	0.19720E-03	80	2	3	0.19794E-05	0.03158	414
5	-0.18102E-03	40	8	4	0.22194E-04	0.18346E-03	80	2	3	0.14953E-05	0.03172	431
6	-0.22034E-03	26	8	3	0.31484E-04	0.18672E-03	80	2	3	0.13363E-05	0.03185	436
7	-0.32062E-03	26	8	3	0.56234E-04	0.17942E-03	80	2	3	0.12037E-05	0.03205	440
8	0.45668E-03	73	8	6	0.10184E-03	0.16419E-03	80	2	3	0.10670E-05	0.03245	450
9	0.10618E-03	66	8	3	0.16847E-04	0.13434E-03	80	2	3	0.97259E-06	0.03261	461
10	0.12254E-03	80	8	6	0.20747E-04	0.14399E-03	80	2	3	0.91936E-06	0.03277	465
11	0.19510E-03	73	8	3	0.37666E-04	0.13756E-03	80	2	3	0.84359E-06	0.03303	473
12	0.36484E-03	73	8	3	0.70994E-04	0.12484E-03	80	2	3	0.76626E-06	0.03351	476
13	0.79110E-04	66	8	3	0.12642E-04	0.10824E-03	80	2	3	0.71681E-06	0.03365	488
14	0.98812E-04	66	8	3	0.13829E-04	0.10465E-03	80	2	3	0.68226E-06	0.03380	491
15	0.15398E-03	66	8	3	0.25425E-04	0.10019E-03	80	2	3	0.64125E-06	0.03403	491
16	0.27468E-03	77	8	3	0.48542E-04	0.98198E-04	80	2	3	0.58877E-06	0.03444	496
17	0.59389E-04	64	8	3	0.89169E-05	0.72223E-04	80	2	3	0.52950E-06	0.03459	498
18	0.70830E-04	66	8	3	0.93611E-05	0.73777E-04	80	2	3	0.50729E-06	0.03466	499
19	0.12168E-03	66	8	3	0.17164E-04	0.78476E-04	80	2	3	0.48568E-06	0.03485	499
20	0.21338E-03	68	8	3	0.32289E-04	0.62975E-04	80	2	3	0.44405E-06	0.03516	501
21	0.45112E-04	64	8	3	0.58822E-05	0.49333E-04	80	2	3	0.38260E-06	0.03524	501
22	0.52443E-04	67	8	3	0.62873E-05	0.47409E-04	80	2	3	0.36639E-06	0.03532	501
23	0.92939E-04	67	8	3	0.11513E-04	0.47082E-04	80	2	3	0.35852E-06	0.03545	501
24	0.16809E-03	68	8	3	0.21911E-04	0.41571E-04	80	2	3	0.31494E-06	0.03567	501
25	0.32468E-04	64	8	3	0.36497E-05	0.31604E-04	80	2	3	0.25961E-06	0.03572	503
26	0.38718E-04	67	8	3	0.42787E-05	0.31253E-04	80	2	3	0.24895E-06	0.03578	504
27	0.67783E-04	68	8	3	0.79979E-05	0.29592E-04	80	2	3	0.23745E-06	0.03586	505
28	0.11370E-03	68	8	3	0.14492E-04	0.25939E-04	79	2	3	0.21184E-06	0.03600	505
29	0.22347E-04	64	8	3	0.22369E-05	0.20397E-04	79	2	3	0.17096E-06	0.03603	502
30	0.27601E-04	68	8	3	0.30218E-05	0.19574E-04	79	2	3	0.16447E-06	0.03607	503
31	0.47840E-04	68	8	3	0.56934E-05	0.18485E-04	79	2	3	0.16679E-06	0.03612	503
32	0.77088E-04	68	8	3	0.10446E-04	0.16431E-04	79	2	3	0.13891E-06	0.03620	503
33	0.14934E-04	67	8	3	0.14778E-05	0.12662E-04	79	2	3	0.11244E-06	0.03623	503
34	0.18936E-04	68	8	3	0.22129E-05	0.12121E-04	79	2	3	0.10843E-06	0.03625	503
35	0.31716E-04	69	8	3	0.41894E-05	0.11398E-04	79	2	3	0.10314E-06	0.03628	503
36	0.50998E-04	69	8	3	0.77773E-05	0.10065E-04	79	2	3	0.91307E-07	0.03633	503
37	0.10002E-04	68	8	3	0.11077E-05	0.83771E-05	80	9	3	0.75186E-07	0.03635	502
38	0.13200E-04	40	8	14	0.16719E-05	0.80879E-05	80	9	3	0.72417E-07	0.03636	502
39	0.21037E-04	69	8	3	0.31743E-05	0.74647E-05	2	9	3	0.68867E-07	0.03638	501
40	0.33477E-04	69	8	3	0.59682E-05	0.66202E-05	80	9	3	0.61358E-07	0.03641	501
41	0.73959E-05	48	8	14	0.86914E-06	0.54917E-05	2	9	3	0.52095E-07	0.03642	502
42	0.10343E-04	48	8	14	0.12821E-05	0.52948E-05	2	9	3	0.49988E-07	0.03643	502
43	0.15754E-04	41	8	14	0.24230E-05	0.48729E-05	80	9	3	0.47584E-07	0.03644	502
44	0.24795E-04	43	8	14	0.45988E-05	0.43018E-05	2	9	3	0.42732E-07	0.03646	502
45	0.57598E-05	48	8	14	0.68311E-06	0.35475E-05	2	9	3	0.37394E-07	0.03646	501
46	0.79977E-05	48	8	14	0.99183E-06	0.34228E-05	80	9	3	0.35732E-07	0.03647	501

47	0.12116E-04	41	8	14	0.18821E-05	0.31483E-05	88	9	3	0.340976E-07	0.03648		501
48	0.18910E-04	43	8	14	0.35654E-05	0.27784E-05	88	9	3	0.389339E-07	0.03649		501

MAX RESIDAL 1	MAX RESIDAL 2	WORK	REDUCTN/CYCLE
-0.3273E-03	0.2778E-05	47.0000	0.9835

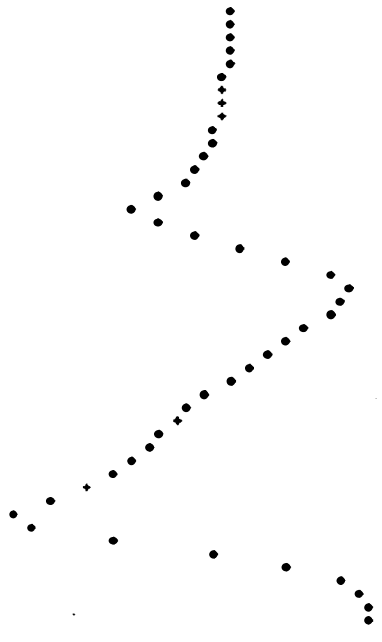
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

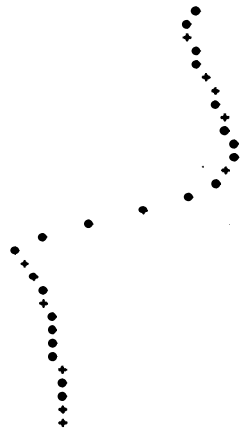
SPAN STATION	CL	CD	CM
0.00000	0.44118	0.00895	-0.28494

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2469	-0.5282	0.8149	0.0110
2.8721	-0.5322	0.8146	0.0116
2.5791	-0.5395	0.8127	0.0158
2.3486	-0.5427	0.8103	0.0208
2.1485	-0.5419	0.8077	0.0264
1.9686	-0.5378	0.8047	0.0329
1.8180	-0.5277	0.8012	0.0404
1.6839	-0.5136	0.7971	0.0493
1.5628	-0.4939	0.7922	0.0599
1.4521	-0.4675	0.7861	0.0729
1.3500	-0.4331	0.7785	0.0892
1.2548	-0.3886	0.7688	0.1101
1.1654	-0.3312	0.7562	0.1372
1.0807	-0.2569	0.7395	0.1731
1.0000	-0.1590	0.6827	0.2943
0.9223	-0.1252	0.6457	0.3719
0.8475	-0.1595	0.6832	0.2932
0.7757	-0.2174	0.7518	0.1467
0.7069	-0.2811	0.8314	-0.0244
0.6411	-0.3396	0.9149	-0.2025
0.5785	-0.3856	0.9866	-0.3518
0.5190	-0.4147	1.0169	-0.4133
0.4628	-0.4277	1.0082	-0.3958
0.4098	-0.4286	0.9823	-0.3428
0.3602	-0.4176	0.9471	-0.2699
0.3137	-0.3985	0.9120	-0.1964
0.2706	-0.3707	0.8776	-0.1233
0.2307	-0.3368	0.8428	-0.0489
0.1941	-0.2977	0.8084	0.0250
0.1608	-0.2553	0.7749	0.0978
0.1308	-0.2116	0.7438	0.1640
0.1039	-0.1682	0.7157	0.2240
0.0801	-0.1264	0.6906	0.2775
0.0594	-0.0863	0.6669	0.3275
0.0418	-0.0482	0.6417	0.3802
0.0272	-0.0107	0.6088	0.4480
0.0154	0.0258	0.5604	0.5452
0.0068	0.0657	0.4892	0.6899
0.0017	0.1116	0.4186	0.8043
0.0000	0.1590	0.4515	0.7484
0.0017	0.2064	0.6091	0.4474
0.0069	0.2515	0.7851	0.0751
0.0156	0.2903	0.9150	-0.2026
0.0277	0.3218	0.9958	-0.3706
0.0429	0.3481	1.0439	-0.4673
0.0611	0.3680	1.0596	-0.4985
0.0825	0.3816	1.0549	-0.4892



0.1070	0.3982	1.0454	-0.4705
0.1345	0.3953	1.0408	-0.4613
0.1651	0.3975	1.0438	-0.4672
0.1988	0.3971	1.0319	-0.4833
0.2357	0.3936	1.0615	-0.5022
0.2756	0.3867	1.0706	-0.5200
0.3187	0.3763	1.0793	-0.5371
0.3650	0.3619	1.0887	-0.5554
0.4144	0.3431	1.0990	-0.5751
0.4669	0.3187	1.1089	-0.5948
0.5226	0.2875	1.1163	-0.6082
0.5815	0.2488	1.1183	-0.6119
0.6434	0.2028	1.1102	-0.5965
0.7082	0.1468	1.0861	-0.5503
0.7767	0.0837	1.0348	-0.4533
0.8481	0.0132	0.9499	-0.2759
0.9225	-0.0624	0.8671	-0.1010
1.0000	-0.1486	0.7790	0.0882
1.0808	-0.2464	0.7345	0.1838
1.1654	-0.3208	0.7542	0.1416
1.2549	-0.3782	0.7688	0.1118
1.3500	-0.4227	0.7782	0.0898
1.4522	-0.4572	0.7860	0.0731
1.5628	-0.4835	0.7922	0.0599
1.6839	-0.5032	0.7971	0.0492
1.8180	-0.5174	0.8012	0.0403
1.9686	-0.5266	0.8047	0.0329
2.1405	-0.5316	0.8077	0.0264
2.3406	-0.5324	0.8104	0.0207
2.5791	-0.5292	0.8127	0.0158
2.8722	-0.5218	0.8146	0.0116
3.2469	-0.5099	0.8149	0.0111



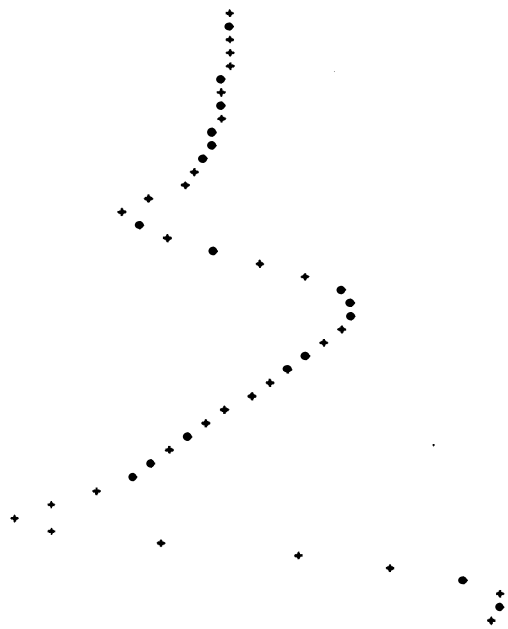
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

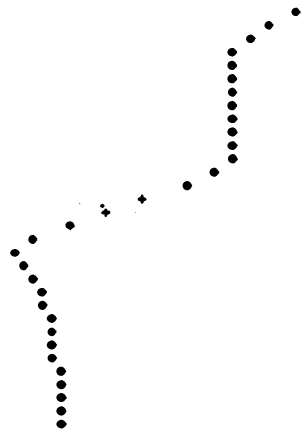
SPAN STATION	CL	CD	CM
1.00000	0.47841	0.03465	-0.20058

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2465	-0.4591	0.8148	0.0112
2.8718	-0.4702	0.8146	0.0116
2.5788	-0.4771	0.8127	0.0156
2.3483	-0.4800	0.8105	0.0204
2.1483	-0.4793	0.8080	0.0257
1.9685	-0.4747	0.8052	0.0318
1.8179	-0.4661	0.8020	0.0387
1.6838	-0.4530	0.7982	0.0469
1.5628	-0.4347	0.7937	0.0566
1.4521	-0.4103	0.7881	0.0686
1.3500	-0.3783	0.7810	0.0839
1.2549	-0.3370	0.7715	0.1044
1.1654	-0.2837	0.7579	0.1335
1.0807	-0.2147	0.7378	0.1768
1.0000	-0.1241	0.6782	0.3037
0.9223	-0.0044	0.6337	0.3968
0.8475	-0.1287	0.6567	0.3488
0.7758	-0.1855	0.7115	0.2331
0.7071	-0.2482	0.7799	0.0862
0.6414	-0.3062	0.8565	-0.0782
0.5788	-0.3525	0.9349	-0.2446
0.5194	-0.3829	0.9975	-0.3739
0.4632	-0.3980	1.0265	-0.4326
0.4102	-0.4014	1.0255	-0.4306
0.3606	-0.3935	1.0061	-0.3915
0.3141	-0.3779	0.9785	-0.3358
0.2710	-0.3542	0.9468	-0.2693
0.2311	-0.3248	0.9122	-0.1967
0.1944	-0.2904	0.8761	-0.1201
0.1613	-0.2529	0.8394	-0.0416
0.1311	-0.2141	0.8040	0.0344
0.1041	-0.1754	0.7713	0.1048
0.0803	-0.1388	0.7418	0.1699
0.0596	-0.1019	0.7115	0.2331
0.0428	-0.0676	0.6791	0.3018
0.0273	-0.0335	0.6368	0.3903
0.0155	0.0000	0.5760	0.5142
0.0068	0.0370	0.4913	0.6769
0.0017	0.0797	0.4215	0.7995
0.0000	0.1243	0.4912	0.6772
0.0017	0.1689	0.6964	0.2650
0.0068	0.2114	0.9173	-0.2075
0.0155	0.2485	1.0950	-0.5674
0.0276	0.2791	1.2260	-0.8078
0.0427	0.3049	1.3051	-0.9483
0.0609	0.3250	1.3239	-0.9783
0.0823	0.3395	1.2975	-0.9281



0.1867	0.3495	1.2443	-0.8392
0.1342	0.3563	1.1900	-0.7442
0.1648	0.3606	1.1513	-0.6737
0.1986	0.3624	1.1306	-0.6352
0.2384	0.3615	1.1218	-0.6185
0.2754	0.3574	1.1183	-0.6119
0.3185	0.3501	1.1177	-0.6109
0.3647	0.3393	1.1203	-0.6158
0.4141	0.3244	1.1257	-0.6260
0.4667	0.3044	1.1310	-0.6360
0.5224	0.2782	1.1314	-0.6366
0.5813	0.2457	1.1197	-0.6146
0.6433	0.2044	1.0871	-0.5522
0.7084	0.1568	1.0293	-0.4403
0.7766	0.0997	0.9552	-0.2969
0.8480	0.0355	0.8891	-0.1679
0.9225	-0.0349	0.8357	-0.0337
1.0000	-0.1136	0.7636	0.1213
1.0808	-0.2042	0.7337	0.1856
1.1655	-0.2732	0.7564	0.1369
1.2549	-0.3265	0.7709	0.1057
1.3501	-0.3678	0.7808	0.0843
1.4522	-0.3998	0.7881	0.0686
1.5628	-0.4242	0.7937	0.0565
1.6839	-0.4425	0.7983	0.0468
1.8179	-0.4557	0.8020	0.0386
1.9685	-0.4643	0.8053	0.0317
2.1404	-0.4688	0.8081	0.0256
2.3404	-0.4696	0.8106	0.0203
2.5788	-0.4666	0.8128	0.0156
2.8718	-0.4598	0.8146	0.0116
3.2465	-0.4487	0.8148	0.0113



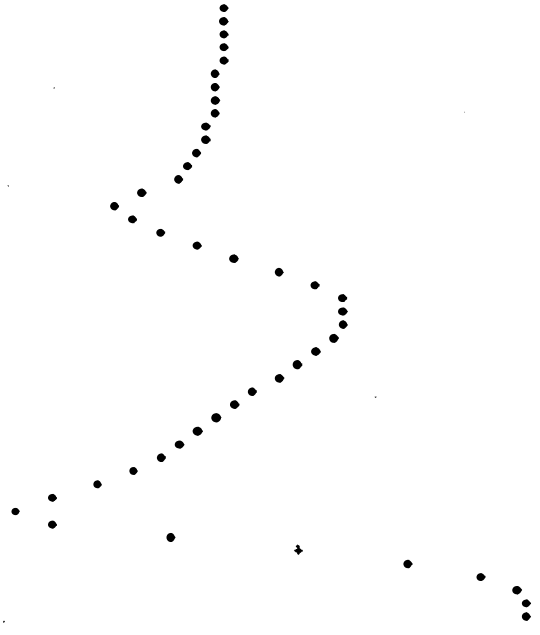
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

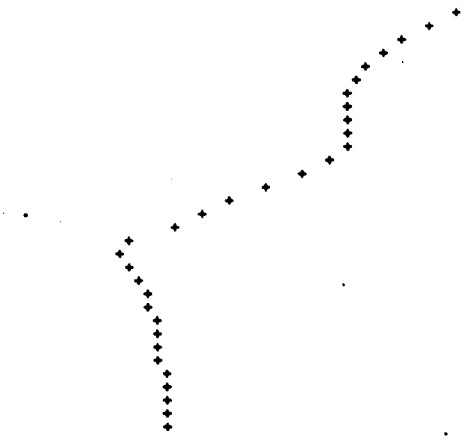
SPAN STATION	CL	CD	CM
3.60000	0.50519	0.02103	-0.20144

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2461	-0.4030	0.8146	0.0116
2.8716	-0.4133	0.8145	0.0119
2.5786	-0.4196	0.8127	0.0158
2.3402	-0.4224	0.8105	0.0204
2.1402	-0.4216	0.8081	0.0257
1.9684	-0.4174	0.8053	0.0316
1.8179	-0.4095	0.8021	0.0384
1.6838	-0.3974	0.7984	0.0464
1.5628	-0.3805	0.7939	0.0561
1.4522	-0.3579	0.7883	0.0681
1.3501	-0.3283	0.7811	0.0837
1.2549	-0.2902	0.7713	0.1048
1.1655	-0.2409	0.7573	0.1349
1.0808	-0.1771	0.7365	0.1796
1.0000	-0.0936	0.6771	0.3061
0.9223	-0.0678	0.6316	0.4011
0.8476	-0.1017	0.6507	0.3613
0.7759	-0.1572	0.7002	0.2578
0.7072	-0.2185	0.7629	0.1229
0.6416	-0.2756	0.8333	-0.0286
0.5791	-0.3219	0.9058	-0.1831
0.5197	-0.3532	0.9702	-0.3179
0.4635	-0.3700	1.0124	-0.4041
0.4106	-0.3756	1.0262	-0.4320
0.3609	-0.3705	1.0193	-0.4181
0.3145	-0.3581	0.9999	-0.3788
0.2714	-0.3382	0.9711	-0.3198
0.2315	-0.3129	0.9373	-0.2496
0.1949	-0.2830	0.9012	-0.1734
0.1615	-0.2501	0.8639	-0.0942
0.1314	-0.2158	0.8279	-0.0178
0.1044	-0.1815	0.7965	0.0549
0.0806	-0.1482	0.7698	0.1216
0.0598	-0.1161	0.7332	0.1866
0.0421	-0.0853	0.6999	0.2577
0.0274	-0.0544	0.6563	0.3496
0.0156	-0.0239	0.5938	0.4786
0.0069	0.0103	0.5079	0.6461
0.0017	0.0500	0.4405	0.7674
0.0000	0.0916	0.5134	0.6359
0.0017	0.1334	0.7284	0.2148
0.0068	0.1734	0.9452	-0.2661
0.0154	0.2087	1.1399	-0.6525
0.0274	0.2382	1.2841	-0.9060
0.0425	0.2634	1.3702	-1.0419
0.0607	0.2836	1.4091	-1.0995
0.0820	0.2987	1.4075	-1.0972



0.1064	0.3099	1.3716	-1.0441
0.1348	0.3182	1.3154	-0.9568
0.1646	0.3242	1.2557	-0.8586
0.1983	0.3288	1.2064	-0.7734
0.2361	0.3293	1.1730	-0.7136
0.2751	0.3278	1.1538	-0.6784
0.3142	0.3233	1.1447	-0.6615
0.3644	0.3157	1.1423	-0.6570
0.4139	0.3044	1.1433	-0.6588
0.4444	0.2883	1.1424	-0.6573
0.5222	0.2667	1.1323	-0.6383
0.5810	0.2388	1.1042	-0.5851
0.6431	0.2039	1.0534	-0.4862
0.7062	0.1617	0.9874	-0.3539
0.7765	0.1118	0.9248	-0.2232
0.8479	0.0538	0.8751	-0.1188
0.9224	-0.0108	0.8279	-0.0169
1.0000	-0.0830	0.7591	0.1310
1.0808	-0.1644	0.7328	0.1891
1.1625	-0.2384	0.7555	0.1387
1.2520	-0.2797	0.7784	0.1064
1.3501	-0.3179	0.7885	0.0843
1.4523	-0.3474	0.7882	0.0684
1.5628	-0.3700	0.7939	0.0561
1.6839	-0.3869	0.7984	0.0464
1.8179	-0.3998	0.8022	0.0383
1.9684	-0.4078	0.8054	0.0315
2.1402	-0.4112	0.8081	0.0256
2.3402	-0.4119	0.8105	0.0204
2.5786	-0.4092	0.8127	0.0157
2.8716	-0.4029	0.8145	0.0119
3.2462	-0.3926	0.8146	0.0116



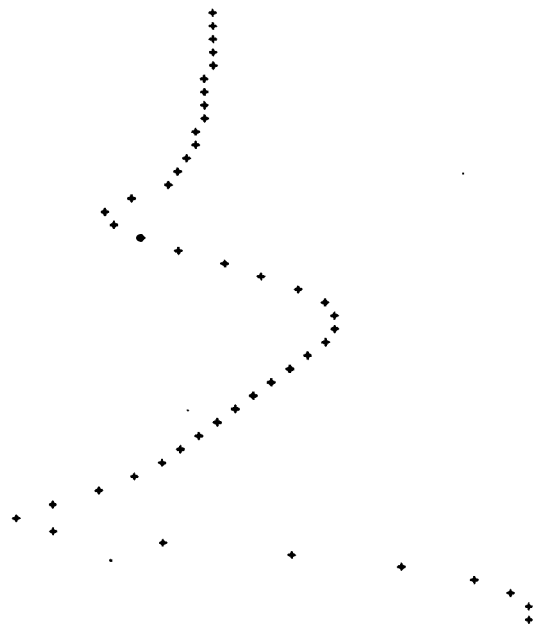
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.62000	0.00000	1.00000

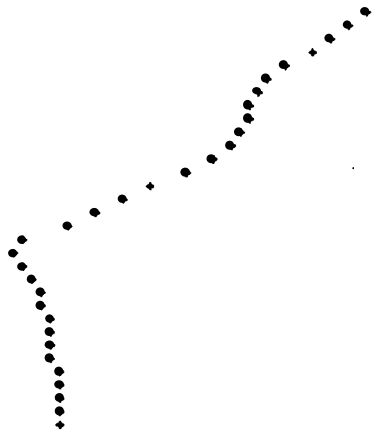
SPAN STATION	CL	CD	CM
5.39999	0.52786	0.01179	-0.20668

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2459	-0.3526	0.8144	0.0120
2.8714	-0.3622	0.8143	0.0123
2.5785	-0.3680	0.8125	0.0161
2.3401	-0.3705	0.8104	0.0207
2.1402	-0.3699	0.8079	0.0260
1.9684	-0.3660	0.8052	0.0319
1.8179	-0.3586	0.8019	0.0389
1.6839	-0.3474	0.7981	0.0470
1.5628	-0.3317	0.7936	0.0569
1.4523	-0.3108	0.7878	0.0692
1.3501	-0.2834	0.7805	0.0851
1.2550	-0.2480	0.7704	0.1066
1.1655	-0.2023	0.7562	0.1372
1.0808	-0.1432	0.7351	0.1825
1.0000	-0.0698	0.6758	0.3093
0.9223	-0.0431	0.6295	0.4054
0.8476	-0.0760	0.6473	0.3685
0.7760	-0.1295	0.6947	0.2688
0.7074	-0.1848	0.7549	0.1481
0.6418	-0.2446	0.8225	-0.0054
0.5793	-0.2983	0.8919	-0.1538
0.5200	-0.3222	0.9538	-0.2840
0.4639	-0.3404	0.9973	-0.3736
0.4110	-0.3477	1.0164	-0.4124
0.3614	-0.3451	1.0152	-0.4100
0.3150	-0.3357	1.0014	-0.3820
0.2718	-0.3193	0.9771	-0.3321
0.2319	-0.2980	0.9459	-0.2674
0.1953	-0.2724	0.9114	-0.1980
0.1619	-0.2439	0.8754	-0.1186
0.1317	-0.2141	0.8402	-0.0439
0.1047	-0.1842	0.8076	0.0264
0.0808	-0.1550	0.7774	0.0916
0.0600	-0.1267	0.7479	0.1552
0.0422	-0.0994	0.7192	0.2252
0.0276	-0.0718	0.6718	0.3173
0.0157	-0.0441	0.6082	0.4493
0.0069	-0.0127	0.5196	0.6241
0.0017	0.0240	0.4483	0.7546
0.0000	0.0627	0.5169	0.6292
0.0017	0.1016	0.7212	0.2123
0.0067	0.1398	0.9442	-0.2640
0.0153	0.1725	1.1422	-0.6567
0.0272	0.2010	1.2988	-0.9171
0.0422	0.2256	1.3783	-1.0542
0.0604	0.2457	1.4226	-1.1189
0.0817	0.2614	1.4325	-1.1330



0.1861	0.2737	1.4141	-1.1067
0.1336	0.2834	1.3773	-1.0527
0.1642	0.2918	1.3314	-0.9822
0.1979	0.2966	1.2837	-0.9095
0.2348	0.3000	1.2396	-0.8312
0.2747	0.3008	1.2028	-0.7671
0.3179	0.2998	1.1760	-0.7189
0.3641	0.2943	1.1594	-0.6887
0.4136	0.2863	1.1498	-0.6709
0.4662	0.2748	1.1396	-0.6519
0.5219	0.2566	1.1194	-0.6140
0.5808	0.2335	1.0823	-0.5428
0.6429	0.2048	1.0294	-0.4384
0.7081	0.1676	0.9718	-0.3212
0.7764	0.1235	0.9212	-0.2187
0.8478	0.0711	0.8762	-0.1283
0.9224	0.0116	0.8275	-0.0161
1.0000	-0.0552	0.7576	0.1342
1.0809	-0.1326	0.7303	0.1927
1.1656	-0.1917	0.7542	0.1416
1.2550	-0.2374	0.7696	0.1085
1.3502	-0.2728	0.7801	0.0860
1.4523	-0.3002	0.7877	0.0696
1.5629	-0.3212	0.7935	0.0570
1.6839	-0.3368	0.7981	0.0478
1.8179	-0.3481	0.8020	0.0388
1.9684	-0.3554	0.8052	0.0319
2.1402	-0.3593	0.8080	0.0269
2.3402	-0.3600	0.8104	0.0206
2.5785	-0.3575	0.8125	0.0160
2.8714	-0.3516	0.8143	0.0122
3.2460	-0.3421	0.8144	0.0120

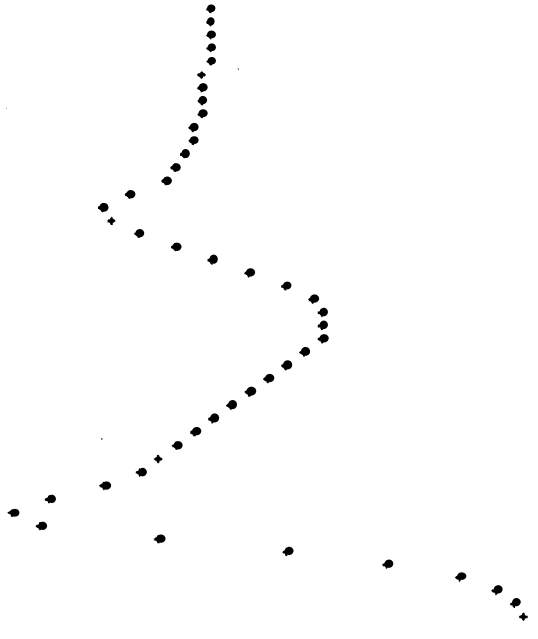


SECTION CHARACTERISTICS

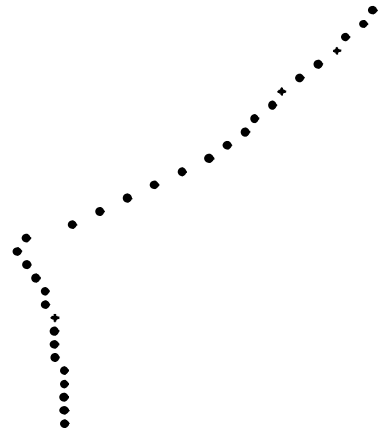
MACH NO	YAW	ANG OF ATTACK	
0.82000	0.00000	1.00000	
SPAN STATION	CL	CD	CM
7.19999	0.54562	0.00546	-0.21545

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2458	-0.3053	0.8142	0.0124
2.8713	-0.3141	0.8141	0.0127
2.5784	-0.3195	0.8123	0.0165
2.3401	-0.3218	0.8102	0.0211
2.1402	-0.3212	0.8077	0.0265
1.9684	-0.3176	0.8049	0.0326
1.8179	-0.3108	0.8016	0.0397
1.6839	-0.3005	0.7977	0.0480
1.5629	-0.2868	0.7930	0.0582
1.4523	-0.2667	0.7871	0.0708
1.3502	-0.2415	0.7796	0.0870
1.2551	-0.2088	0.7694	0.1089
1.1656	-0.1667	0.7550	0.1398
1.0809	-0.1122	0.7338	0.1853
1.0000	-0.0409	0.6728	0.3130
0.9223	-0.0211	0.6271	0.4104
0.8476	-0.0527	0.6439	0.3757
0.7761	-0.1040	0.6899	0.2789
0.7075	-0.1610	0.7488	0.1532
0.6420	-0.2150	0.8151	0.0106
0.5796	-0.2599	0.8832	-0.1352
0.5203	-0.2920	0.9436	-0.2627
0.4642	-0.3111	0.9867	-0.3518
0.4114	-0.3199	1.0070	-0.3933
0.3618	-0.3195	1.0078	-0.3948
0.3154	-0.3127	0.9966	-0.3722
0.2722	-0.2996	0.9754	-0.3288
0.2323	-0.2818	0.9472	-0.2703
0.1957	-0.2602	0.9151	-0.2029
0.1623	-0.2359	0.8811	-0.1308
0.1320	-0.2103	0.8477	-0.0594
0.1050	-0.1844	0.8166	0.0073
0.0811	-0.1590	0.7878	0.0692
0.0603	-0.1343	0.7597	0.1297
0.0425	-0.1103	0.7284	0.1970
0.0277	-0.0858	0.6858	0.2876
0.0158	-0.0608	0.6218	0.4214
0.0070	-0.0322	0.5302	0.6039
0.0017	0.0015	0.4531	0.7455
0.0000	0.0374	0.5142	0.6343
0.0016	0.0734	0.7134	0.2290
0.0067	0.1082	0.9322	-0.2389
0.0152	0.1398	1.1262	-0.6269
0.0270	0.1671	1.2747	-0.8905
0.0420	0.1909	1.3640	-1.0326
0.0601	0.2108	1.4102	-1.1011
0.0814	0.2269	1.4249	-1.1222



0.1058	0.2400	1.4150	-1.1888
0.1323	0.2508	1.3981	-1.0717
0.1639	0.2598	1.3583	-1.0239
0.1976	0.2669	1.3242	-0.9709
0.2344	0.2720	1.2891	-0.9143
0.2744	0.2749	1.2532	-0.8544
0.3178	0.2754	1.2180	-0.7938
0.3638	0.2732	1.1866	-0.7381
0.4133	0.2681	1.1600	-0.6897
0.4659	0.2591	1.1346	-0.6426
0.5216	0.2456	1.1042	-0.5852
0.5806	0.2269	1.0651	-0.5094
0.6426	0.2024	1.0197	-0.4189
0.7079	0.1714	0.9736	-0.3249
0.7762	0.1328	0.9288	-0.2317
0.8477	0.0855	0.8820	-0.1327
0.9223	0.0310	0.8297	-0.0288
1.0000	-0.0303	0.7570	0.1355
1.0809	-0.1016	0.7287	0.1962
1.1657	-0.1561	0.7528	0.1445
1.2551	-0.1983	0.7684	0.1118
1.3503	-0.2309	0.7791	0.0888
1.4524	-0.2562	0.7869	0.0712
1.5630	-0.2755	0.7929	0.0584
1.6840	-0.2894	0.7977	0.0481
1.8188	-0.3003	0.8016	0.0396
1.9685	-0.3071	0.8049	0.0325
2.1402	-0.3107	0.8078	0.0263
2.3401	-0.3113	0.8102	0.0210
2.5785	-0.3090	0.8124	0.0164
2.8713	-0.3036	0.8141	0.0126
3.2458	-0.2948	0.8153	0.0123



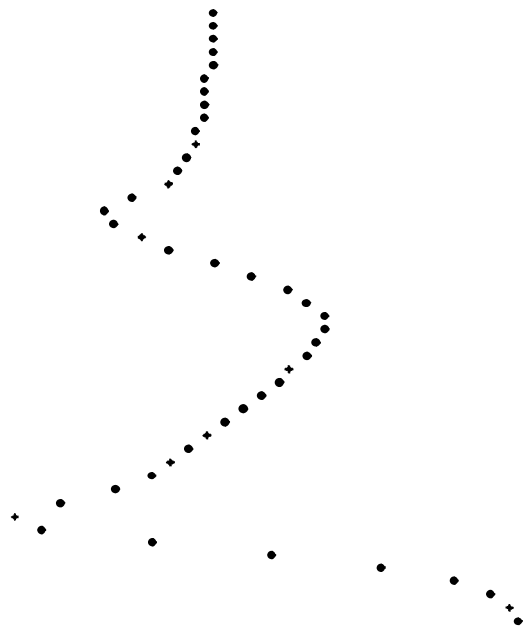
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

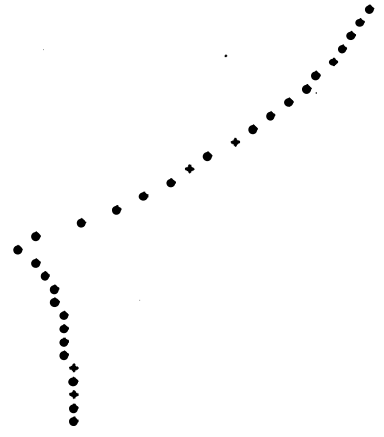
SPAN STATION	CL	CD	CM
0.99999	0.56145	0.00037	-0.22729

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2458	-0.2646	0.8141	0.0128
2.8713	-0.2728	0.8139	0.0131
2.5785	-0.2778	0.8121	0.0169
2.3402	-0.2808	0.8100	0.0216
2.1483	-0.2794	0.8074	0.0278
1.9685	-0.2761	0.8045	0.0333
1.8188	-0.2698	0.8011	0.0406
1.6840	-0.2602	0.7971	0.0493
1.5630	-0.2467	0.7923	0.0597
1.4524	-0.2288	0.7863	0.0726
1.3503	-0.2054	0.7786	0.0892
1.2552	-0.1751	0.7682	0.1114
1.1657	-0.1360	0.7537	0.1427
1.0809	-0.0854	0.7324	0.1884
1.0000	-0.0193	0.6717	0.3173
0.9223	-0.0016	0.6242	0.4163
0.8477	-0.0310	0.6400	0.3836
0.7762	-0.0793	0.6849	0.2896
0.7077	-0.1334	0.7427	0.1662
0.6423	-0.1852	0.8051	0.0258
0.5799	-0.2288	0.8757	-0.1192
0.5207	-0.2607	0.9358	-0.2464
0.4646	-0.2804	0.9787	-0.3355
0.4118	-0.2903	0.9991	-0.3773
0.3622	-0.2917	1.0005	-0.3802
0.3158	-0.2873	0.9907	-0.3600
0.2727	-0.2772	0.9717	-0.3211
0.2328	-0.2629	0.9462	-0.2682
0.1961	-0.2451	0.9167	-0.2062
0.1626	-0.2249	0.8850	-0.1391
0.1324	-0.2033	0.8537	-0.0723
0.1053	-0.1815	0.8246	-0.0099
0.0814	-0.1599	0.7978	0.0478
0.0605	-0.1388	0.7716	0.1041
0.0426	-0.1180	0.7422	0.1674
0.0278	-0.0966	0.7089	0.2555
0.0159	-0.0744	0.6365	0.3918
0.0070	-0.0485	0.5417	0.5817
0.0017	-0.0177	0.4574	0.7380
0.0000	0.0152	0.5086	0.6449
0.0016	0.0483	0.7007	0.2561
0.0066	0.0806	0.9132	-0.1990
0.0150	0.1103	1.0997	-0.5764
0.0268	0.1364	1.2460	-0.8421
0.0417	0.1593	1.3373	-0.9915
0.0598	0.1790	1.3848	-1.0626
0.0811	0.1955	1.4013	-1.0882



0.1054	0.2994	1.3966	-1.0814
0.1329	0.2213	1.3791	-1.0254
0.1635	0.2315	1.3561	-1.0206
0.1972	0.2408	1.3319	-0.9831
0.2340	0.2467	1.3072	-0.9437
0.2740	0.2514	1.2803	-0.8999
0.3171	0.2548	1.2508	-0.8498
0.3634	0.2562	1.2162	-0.7907
0.4129	0.2557	1.1798	-0.7258
0.4655	0.2527	1.1411	-0.6548
0.5213	0.2458	1.1008	-0.5785
0.5803	0.2373	1.0604	-0.5000
0.6424	0.2013	1.0221	-0.4237
0.7076	0.1752	0.9847	-0.3478
0.7761	0.1416	0.9414	-0.2588
0.8476	0.0988	0.8897	-0.1492
0.9223	0.0483	0.8327	-0.0274
1.0000	-0.0086	0.7566	0.1365
1.0810	-0.0747	0.7278	0.1999
1.1657	-0.1254	0.7513	0.1477
1.2542	-0.1644	0.7671	0.1138
1.3464	-0.1947	0.7788	0.0903
1.4429	-0.2182	0.7860	0.0732
1.5431	-0.2361	0.7921	0.0599
1.6841	-0.2498	0.7971	0.0493
1.8181	-0.2591	0.8011	0.0406
1.9686	-0.2654	0.8046	0.0332
2.1483	-0.2688	0.8075	0.0269
2.3482	-0.2693	0.8100	0.0214
2.5785	-0.2671	0.8122	0.0167
2.8714	-0.2621	0.8140	0.0129
3.2459	-0.2548	0.8141	0.0127



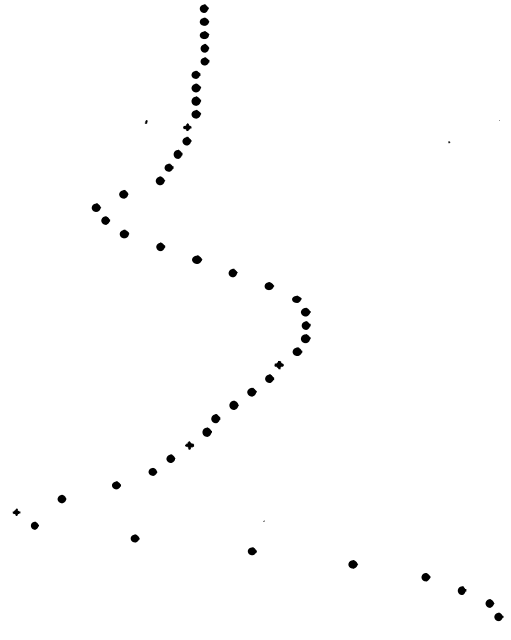
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

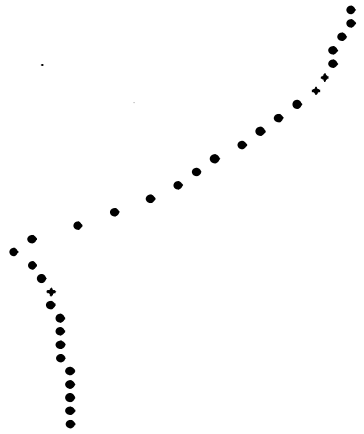
SPAN STATION	CL	CD	CM
10.79999	0.57586	-0.00371	-0.24199

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2460	-0.2278	0.8139	0.0130
2.8715	-0.2345	0.8138	0.0132
2.5786	-0.2391	0.8121	0.0171
2.3483	-0.2411	0.8098	0.0218
2.1484	-0.2406	0.8073	0.0274
1.9686	-0.2376	0.8042	0.0339
1.8182	-0.2317	0.8007	0.0415
1.6842	-0.2229	0.7965	0.0505
1.5432	-0.2105	0.7915	0.0613
1.4526	-0.1940	0.7853	0.0746
1.3505	-0.1725	0.7774	0.0917
1.2553	-0.1445	0.7669	0.1143
1.1658	-0.1085	0.7521	0.1460
1.0810	-0.0619	0.7306	0.1922
1.0000	-0.0010	0.6993	0.3224
0.9222	0.0147	0.6208	0.4233
0.8477	-0.0125	0.6356	0.3929
0.7762	-0.0576	0.6791	0.3018
0.7078	-0.1086	0.7360	0.1807
0.6425	-0.1577	0.8006	0.0416
0.5802	-0.1997	0.8679	-0.1026
0.5210	-0.2309	0.9283	-0.2307
0.4650	-0.2509	0.9715	-0.3205
0.4122	-0.2617	0.9918	-0.3623
0.3626	-0.2646	0.9934	-0.3655
0.3162	-0.2622	0.9843	-0.3469
0.2731	-0.2548	0.9674	-0.3120
0.2332	-0.2436	0.9445	-0.2645
0.1965	-0.2293	0.9177	-0.2083
0.1630	-0.2128	0.8886	-0.1468
0.1327	-0.1950	0.8598	-0.0853
0.1056	-0.1768	0.8331	-0.0280
0.0816	-0.1588	0.8086	0.0245
0.0607	-0.1409	0.7849	0.0755
0.0428	-0.1232	0.7588	0.1335
0.0279	-0.1046	0.7186	0.2178
0.0159	-0.0850	0.6541	0.3543
0.0070	-0.0617	0.5956	0.5546
0.0017	-0.0338	0.4627	0.7287
0.0000	-0.0038	0.5007	0.6595
0.0016	0.0264	0.6835	0.2924
0.0065	0.0560	0.8889	-0.1478
0.0149	0.0837	1.0667	-0.5128
0.0266	0.1084	1.2101	-0.7798
0.0414	0.1304	1.3027	-0.9364
0.0595	0.1496	1.3484	-1.0088
0.0807	0.1662	1.3674	-1.0377



0.1050	0.1806	1.3669	-1.0371
0.1325	0.1932	1.3523	-1.0194
0.1611	0.2043	1.3390	-0.9942
0.1948	0.2139	1.3218	-0.9670
0.2336	0.2219	1.3042	-0.9389
0.2736	0.2281	1.2861	-0.9077
0.3167	0.2324	1.2527	-0.8705
0.3638	0.2346	1.2353	-0.8239
0.4138	0.2343	1.2014	-0.7646
0.4691	0.2310	1.1684	-0.6906
0.5218	0.2261	1.1151	-0.6059
0.5799	0.2182	1.0718	-0.5218
0.6421	0.1974	1.0346	-0.4489
0.7074	0.1759	1.0011	-0.3813
0.7799	0.1468	0.9564	-0.2894
0.8475	0.1084	0.8985	-0.1679
0.9222	0.0620	0.8361	-0.0345
1.0000	0.0096	0.7560	0.1377
1.0810	-0.0513	0.7258	0.2842
1.1658	-0.0979	0.7496	0.1514
1.2553	-0.1339	0.7657	0.1168
1.3505	-0.1618	0.7769	0.0928
1.4526	-0.1834	0.7851	0.0752
1.5632	-0.1999	0.7914	0.0618
1.6842	-0.2123	0.7965	0.0505
1.8182	-0.2211	0.8008	0.0414
1.9687	-0.2269	0.8043	0.0337
2.1404	-0.2300	0.8073	0.0272
2.3403	-0.2305	0.8099	0.0217
2.5786	-0.2285	0.8121	0.0169
2.8715	-0.2239	0.8139	0.0131
3.2468	-0.2164	0.8148	0.0129



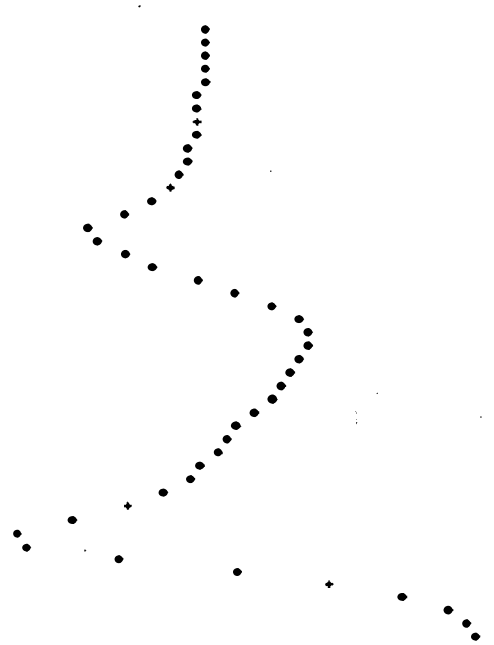
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

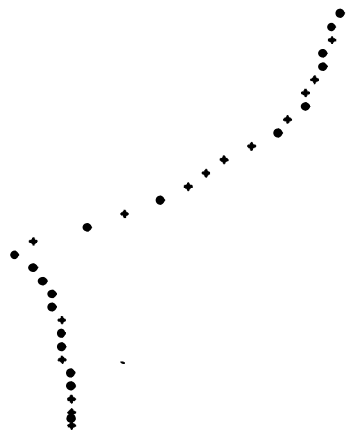
SPAN STATION	CL	CD	CM
12.59999	0.58741	-0.00756	-0.25844

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2442	-0.1968	0.8139	0.0131
2.8717	-0.2038	0.8139	0.0131
2.5788	-0.2081	0.8121	0.0170
2.3485	-0.2100	0.8099	0.0217
2.1486	-0.2095	0.8073	0.0273
1.9688	-0.2067	0.8042	0.0340
1.8183	-0.2012	0.8005	0.0419
1.6843	-0.1938	0.7962	0.0513
1.5623	-0.1815	0.7909	0.0626
1.4527	-0.1661	0.7844	0.0766
1.3506	-0.1468	0.7762	0.0943
1.2554	-0.1206	0.7653	0.1177
1.1659	-0.0864	0.7502	0.1501
1.0810	-0.0429	0.7284	0.1969
1.0000	0.0139	0.6664	0.3286
0.9222	0.0287	0.6169	0.4315
0.8477	0.0047	0.6383	0.4037
0.7763	-0.0364	0.6724	0.3159
0.7079	-0.0835	0.7282	0.1974
0.6427	-0.1295	0.7921	0.0600
0.5804	-0.1693	0.8592	-0.0848
0.5213	-0.1996	0.9202	-0.2137
0.4653	-0.2195	0.9639	-0.3049
0.4126	-0.2307	0.9843	-0.3478
0.3638	-0.2348	0.9860	-0.3504
0.3167	-0.2342	0.9777	-0.3333
0.2736	-0.2293	0.9629	-0.3028
0.2336	-0.2211	0.9429	-0.2611
0.1949	-0.2102	0.9191	-0.2114
0.1635	-0.1973	0.8932	-0.1566
0.1331	-0.1832	0.8674	-0.1016
0.1060	-0.1687	0.8437	-0.0508
0.0819	-0.1543	0.8223	-0.0050
0.0618	-0.1397	0.8019	0.0389
0.0438	-0.1251	0.7784	0.0896
0.0281	-0.1095	0.7416	0.1685
0.0160	-0.0924	0.6771	0.3061
0.0071	-0.0718	0.5740	0.5181
0.0017	-0.0468	0.4701	0.7154
0.0000	-0.0197	0.4912	0.6772
0.0016	0.0075	0.6618	0.3383
0.0065	0.0345	0.8579	-0.0814
0.0147	0.0602	1.0261	-0.4319
0.0263	0.0836	1.1662	-0.7012
0.0411	0.1046	1.2589	-0.8641
0.0591	0.1234	1.3025	-0.9361
0.0802	0.1401	1.3228	-0.9686



0.1045	0.1551	1.3271	-0.9754
0.1320	0.1684	1.3220	-0.9673
0.1625	0.1804	1.3124	-0.9528
0.1962	0.1910	1.3014	-0.9343
0.2330	0.2001	1.2897	-0.9153
0.2730	0.2077	1.2769	-0.8941
0.3162	0.2135	1.2619	-0.8691
0.3625	0.2174	1.2436	-0.8381
0.4120	0.2192	1.2195	-0.7964
0.4647	0.2183	1.1862	-0.7374
0.5205	0.2143	1.1429	-0.6581
0.5795	0.2064	1.0931	-0.5677
0.6417	0.1946	1.0534	-0.4866
0.7071	0.1772	1.0196	-0.4187
0.7756	0.1522	0.9734	-0.3245
0.8473	0.1173	0.9083	-0.1886
0.9221	0.0738	0.8387	-0.0483
1.0000	0.0247	0.7546	0.1407
1.0811	-0.0322	0.7224	0.2097
1.1649	-0.0756	0.7476	0.1558
1.2554	-0.1092	0.7641	0.1283
1.3507	-0.1352	0.7756	0.0955
1.4528	-0.1553	0.7842	0.0771
1.5634	-0.1707	0.7908	0.0627
1.6844	-0.1822	0.7962	0.0512
1.8186	-0.1905	0.8006	0.0417
1.9689	-0.1959	0.8043	0.0337
2.1406	-0.1987	0.8074	0.0271
2.3405	-0.1992	0.8100	0.0215
2.5789	-0.1974	0.8122	0.0167
2.8717	-0.1931	0.8140	0.0128
3.2462	-0.1861	0.8140	0.0129

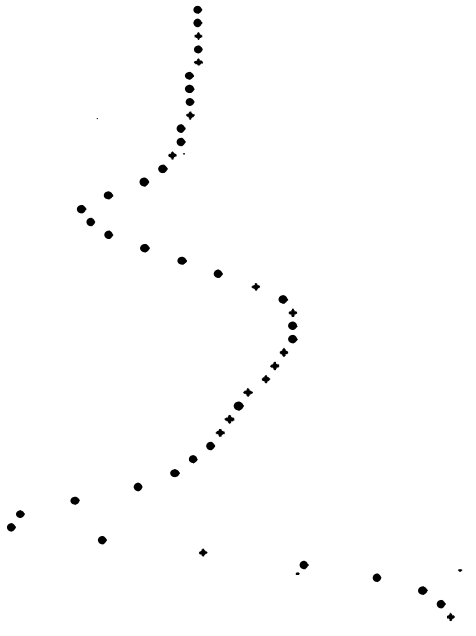


SECTION CHARACTERISTICS

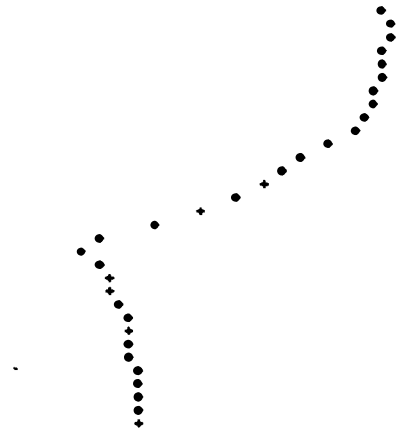
MACH NO	YAW	ANG OF ATTACK	
0.82000	0.00000	1.00000	
SPAN STATION	**CL**	**CD**	**CM**
14.39999	0.59392	-0.01111	-0.27458

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2466	-0.1682	0.8142	0.0125
2.8728	-0.1747	0.8143	0.0123
2.5791	-0.1787	0.8125	0.0162
2.3408	-0.1804	0.8104	0.0207
2.1408	-0.1799	0.8079	0.0261
1.9691	-0.1773	0.8048	0.0327
1.8186	-0.1723	0.8011	0.0407
1.6846	-0.1647	0.7968	0.0505
1.5635	-0.1541	0.7918	0.0624
1.4529	-0.1399	0.7841	0.0772
1.3508	-0.1214	0.7754	0.0959
1.2556	-0.0974	0.7640	0.1206
1.1660	-0.0664	0.7482	0.1544
1.0811	-0.0264	0.7259	0.2023
1.0000	0.0260	0.6631	0.3356
0.9222	0.0398	0.6124	0.4407
0.8477	0.0188	0.6242	0.4164
0.7763	-0.0182	0.6645	0.3326
0.7080	-0.0613	0.7189	0.2173
0.6428	-0.1038	0.7819	0.0828
0.5807	-0.1411	0.8487	-0.0615
0.5216	-0.1701	0.9103	-0.1928
0.4657	-0.1895	0.9546	-0.2857
0.4129	-0.2008	0.9751	-0.3288
0.3634	-0.2059	0.9778	-0.3319
0.3171	-0.2067	0.9699	-0.3173
0.2740	-0.2039	0.9576	-0.2919
0.2341	-0.1982	0.9411	-0.2574
0.1974	-0.1903	0.9212	-0.2158
0.1639	-0.1806	0.8993	-0.1694
0.1335	-0.1699	0.8774	-0.1228
0.1063	-0.1587	0.8575	-0.0802
0.0822	-0.1474	0.8403	-0.0439
0.0612	-0.1358	0.8244	-0.0094
0.0432	-0.1248	0.8057	0.0308
0.0282	-0.1111	0.7729	0.1014
0.0161	-0.0965	0.7087	0.2398
0.0071	-0.0784	0.6002	0.4655
0.0017	-0.0561	0.4825	0.6930
0.0000	-0.0319	0.4802	0.6972
0.0016	-0.0076	0.6341	0.3968
0.0064	0.0166	0.8284	-0.0008
0.0145	0.0403	0.9797	-0.3375
0.0260	0.0621	1.1155	-0.6067
0.0407	0.0819	1.2060	-0.7726
0.0587	0.1000	1.2467	-0.8434
0.0798	0.1165	1.2692	-0.8814



0.1040	0.1316	1.2882	-0.8996
0.1314	0.1493	1.2837	-0.9054
0.1619	0.1578	1.2828	-0.9039
0.1956	0.1690	1.2795	-0.8985
0.2325	0.1789	1.2748	-0.8907
0.2725	0.1873	1.2689	-0.8809
0.3157	0.1943	1.2617	-0.8688
0.3620	0.1996	1.2519	-0.8522
0.4115	0.2029	1.2354	-0.8240
0.4642	0.2040	1.2059	-0.7725
0.5201	0.2024	1.1605	-0.6987
0.5791	0.1976	1.1082	-0.5937
0.6413	0.1889	1.0648	-0.5126
0.7067	0.1762	1.0391	-0.4579
0.7753	0.1599	0.9953	-0.3494
0.8471	0.1395	0.9288	-0.2149
0.9220	0.1152	0.8410	-0.0452
1.0000	0.0867	0.7528	0.1447
1.0811	-0.0157	0.7196	0.2156
1.1648	-0.0558	0.7456	0.1601
1.2506	-0.0867	0.7628	0.1230
1.3388	-0.1107	0.7750	0.0969
1.4530	-0.1292	0.7840	0.0774
1.5636	-0.1434	0.7911	0.0622
1.6846	-0.1540	0.7967	0.0502
1.8186	-0.1616	0.8013	0.0403
1.9491	-0.1666	0.8050	0.0323
2.1489	-0.1692	0.8080	0.0257
2.3488	-0.1697	0.8106	0.0203
2.5792	-0.1688	0.8126	0.0158
2.8721	-0.1648	0.8144	0.0120
3.2466	-0.1575	0.8143	0.0122



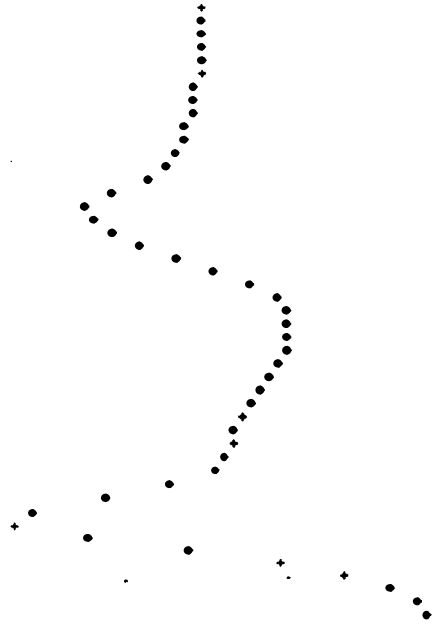
SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

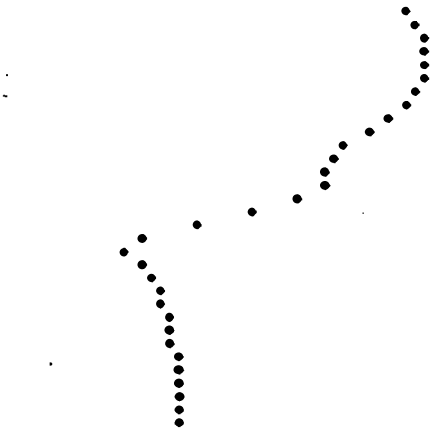
SPAN STATION	CL	CD	CM
16.19998	0.58279	-0.01612	-0.28363

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2472	-0.1479	0.8154	0.0099
2.8726	-0.1540	0.8153	0.0102
2.5796	-0.1577	0.8138	0.0133
2.3412	-0.1594	0.8121	0.0170
2.1412	-0.1598	0.8099	0.0217
1.9494	-0.1565	0.8071	0.0276
1.8189	-0.1518	0.8037	0.0351
1.6848	-0.1446	0.7994	0.0444
1.5638	-0.1346	0.7939	0.0562
1.4532	-0.1212	0.7869	0.0712
1.3510	-0.1037	0.7778	0.0908
1.2557	-0.0811	0.7657	0.1169
1.1662	-0.0520	0.7490	0.1528
1.0812	-0.0142	0.7252	0.2037
1.0000	0.0353	0.6610	0.3399
0.9221	0.0493	0.6087	0.4483
0.8476	0.0327	0.6181	0.4289
0.7763	0.0008	0.6557	0.3518
0.7081	-0.0374	0.7079	0.2408
0.6430	-0.0759	0.7691	0.1095
0.5809	-0.1103	0.8347	-0.0316
0.5219	-0.1375	0.8959	-0.1624
0.4660	-0.1561	0.9400	-0.2551
0.4133	-0.1672	0.9601	-0.2971
0.3639	-0.1728	0.9628	-0.3026
0.3176	-0.1748	0.9578	-0.2922
0.2745	-0.1739	0.9492	-0.2744
0.2346	-0.1708	0.9377	-0.2503
0.1979	-0.1658	0.9235	-0.2206
0.1643	-0.1594	0.9076	-0.1871
0.1339	-0.1521	0.8918	-0.1536
0.1067	-0.1444	0.8782	-0.1246
0.0826	-0.1363	0.8676	-0.1020
0.0615	-0.1279	0.8592	-0.0841
0.0434	-0.1191	0.8489	-0.0619
0.0283	-0.1089	0.8228	-0.0059
0.0162	-0.0967	0.7596	0.1299
0.0071	-0.0812	0.6434	0.3767
0.0017	-0.0618	0.5071	0.6477
0.0000	-0.0405	0.4743	0.7078
0.0017	-0.0192	0.6052	0.4554
0.0064	0.0023	0.7789	0.0885
0.0142	0.0239	0.9316	-0.2376
0.0256	0.0443	1.0595	-0.4984
0.0402	0.0630	1.1457	-0.6634
0.0581	0.0804	1.1989	-0.7458
0.0791	0.0968	1.2285	-0.7981



0.1032	0.1122	1.2424	-0.8360
0.1306	0.1264	1.2582	-0.8628
0.1611	0.1394	1.2685	-0.8802
0.1948	0.1513	1.2738	-0.8891
0.2316	0.1619	1.2744	-0.8900
0.2717	0.1713	1.2696	-0.8821
0.3149	0.1793	1.2581	-0.8627
0.3612	0.1858	1.2366	-0.8268
0.4106	0.1905	1.2024	-0.7663
0.4629	0.1933	1.1579	-0.6889
0.5174	0.1938	1.1138	-0.6034
0.5735	0.1916	1.0836	-0.5454
0.6308	0.1859	1.0738	-0.5264
0.7042	0.1756	1.0697	-0.5184
0.7749	0.1573	1.0571	-0.4938
0.8468	0.1282	0.9265	-0.2479
0.9219	0.0897	0.8448	-0.0932
1.0000	0.0462	0.7523	0.1457
1.0812	-0.0033	0.7188	0.2175
1.1662	-0.0611	0.7465	0.1581
1.2558	-0.0782	0.7649	0.1186
1.3510	-0.0928	0.7777	0.0909
1.4532	-0.1103	0.7871	0.0707
1.5638	-0.1237	0.7943	0.0554
1.6849	-0.1337	0.7998	0.0435
1.8189	-0.1408	0.8041	0.0342
1.9694	-0.1455	0.8075	0.0268
2.1413	-0.1480	0.8102	0.0210
2.3412	-0.1484	0.8124	0.0164
2.5796	-0.1468	0.8141	0.0127
2.8726	-0.1431	0.8155	0.0097
3.2472	-0.1370	0.8166	0.0095

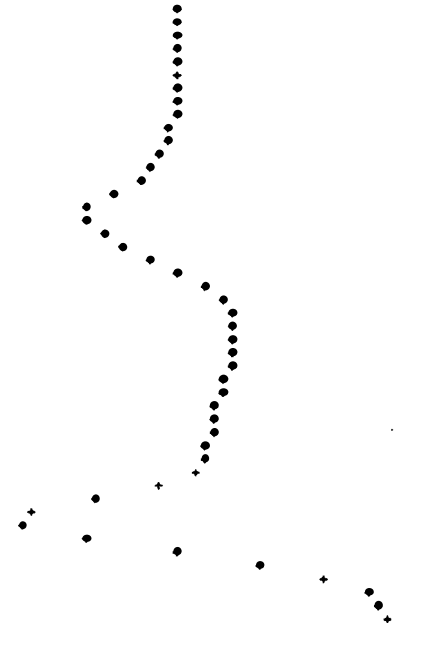


SECTION CHARACTERISTICS

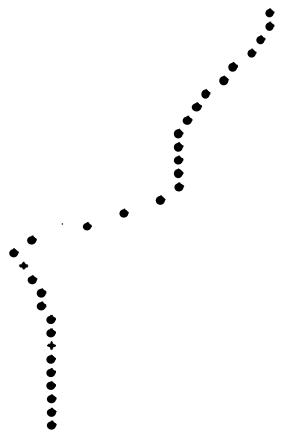
MACH NO	YAW	ANG OF ATTACK	
0.82000	0.00000	1.00000	
SPAN STATION	**CL**	**CD**	**CM**
17.99998	0.48355	-0.02103	-0.23868

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.2479	-0.1298	0.8210	-0.0023
2.8732	-0.1346	0.8209	-0.0019
2.5801	-0.1380	0.8202	-0.0004
2.3417	-0.1395	0.8191	0.0019
2.1417	-0.1392	0.8177	0.0050
1.9698	-0.1369	0.8159	0.0088
1.8192	-0.1325	0.8137	0.0136
1.6852	-0.1259	0.8108	0.0197
1.5641	-0.1167	0.8072	0.0276
1.4534	-0.1043	0.8023	0.0380
1.3512	-0.0882	0.7958	0.0521
1.2568	-0.0673	0.7866	0.0720
1.1663	-0.0404	0.7730	0.1011
1.0812	-0.0055	0.7524	0.1454
1.0000	0.0402	0.6985	0.2608
0.9221	0.0540	0.6558	0.3524
0.8475	0.0413	0.6599	0.3421
0.7762	0.0143	0.6853	0.2887
0.7081	-0.0190	0.7229	0.2087
0.6436	-0.0533	0.7684	0.1111
0.5818	-0.0844	0.8172	0.0059
0.5221	-0.1094	0.8619	-0.0899
0.4663	-0.1268	0.8934	-0.1571
0.4137	-0.1374	0.9087	-0.1894
0.3642	-0.1433	0.9131	-0.1986
0.3180	-0.1461	0.9126	-0.1976
0.2749	-0.1467	0.9100	-0.1920
0.2350	-0.1456	0.9054	-0.1823
0.1983	-0.1431	0.8988	-0.1685
0.1647	-0.1395	0.8907	-0.1512
0.1343	-0.1350	0.8819	-0.1326
0.1071	-0.1301	0.8743	-0.1164
0.0829	-0.1249	0.8685	-0.1040
0.0618	-0.1191	0.8644	-0.0951
0.0436	-0.1128	0.8584	-0.0824
0.0285	-0.1050	0.8375	-0.0376
0.0162	-0.0951	0.7807	0.0845
0.0071	-0.0820	0.6755	0.3094
0.0016	-0.0654	0.5608	0.5445
0.0000	-0.0470	0.5437	0.5779
0.0017	-0.0287	0.6590	0.3440
0.0063	-0.0099	0.8134	0.0143
0.0140	0.0095	0.9563	-0.2892
0.0251	0.0281	1.0756	-0.5298
0.0397	0.0454	1.1500	-0.6713
0.0574	0.0618	1.1834	-0.7324
0.0784	0.0777	1.2002	-0.7624



0.1025	0.0928	1.2888	-0.7763
0.1297	0.1078	1.2864	-0.7734
0.1602	0.1200	1.1947	-0.7029
0.1939	0.1328	1.1744	-0.7160
0.2308	0.1429	1.1481	-0.6678
0.2708	0.1526	1.1194	-0.6139
0.3140	0.1612	1.0913	-0.5603
0.3604	0.1684	1.0666	-0.5122
0.4100	0.1741	1.0473	-0.4743
0.4627	0.1781	1.0352	-0.4500
0.5187	0.1802	1.0301	-0.4399
0.5778	0.1801	1.0299	-0.4415
0.6401	0.1769	1.0339	-0.4514
0.7057	0.1693	1.0358	-0.4512
0.7745	0.1568	1.0058	-0.3908
0.8465	0.1377	0.9415	-0.2584
0.9217	0.0916	0.8789	-0.1091
0.9999	0.0509	0.7838	0.0795
1.0813	0.0052	0.7467	0.1576
1.1663	-0.0297	0.7714	0.1045
1.2548	-0.0566	0.7866	0.0718
1.3513	-0.0775	0.7965	0.0506
1.4539	-0.0936	0.8033	0.0359
1.5641	-0.1059	0.8082	0.0254
1.6852	-0.1151	0.8118	0.0176
1.8193	-0.1217	0.8146	0.0117
1.9698	-0.1261	0.8167	0.0071
2.1417	-0.1284	0.8184	0.0036
2.3417	-0.1287	0.8197	0.0006
2.5802	-0.1272	0.8207	-0.0015
2.8733	-0.1238	0.8212	-0.0026
3.2479	-0.1182	0.8212	-0.0027

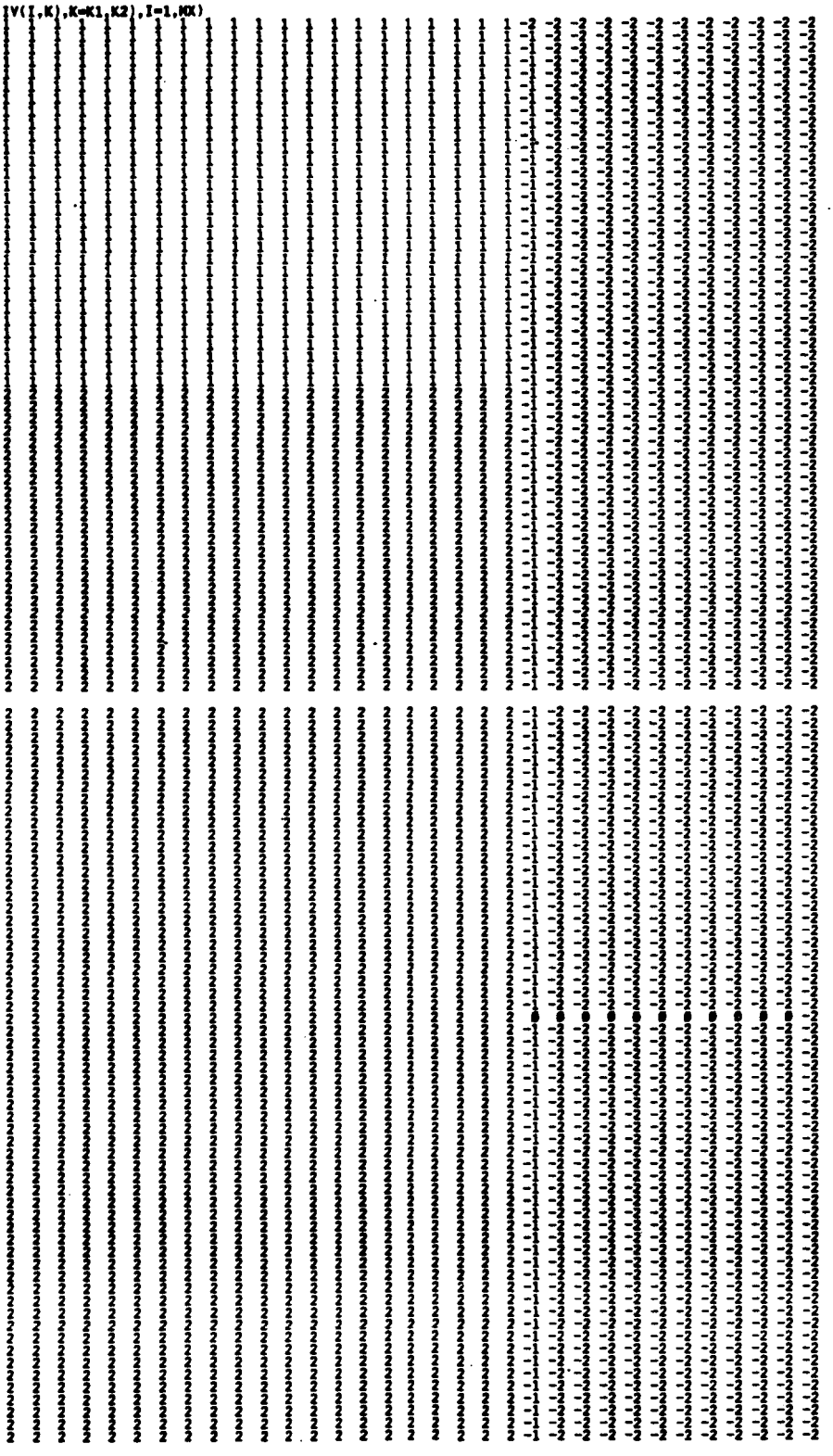


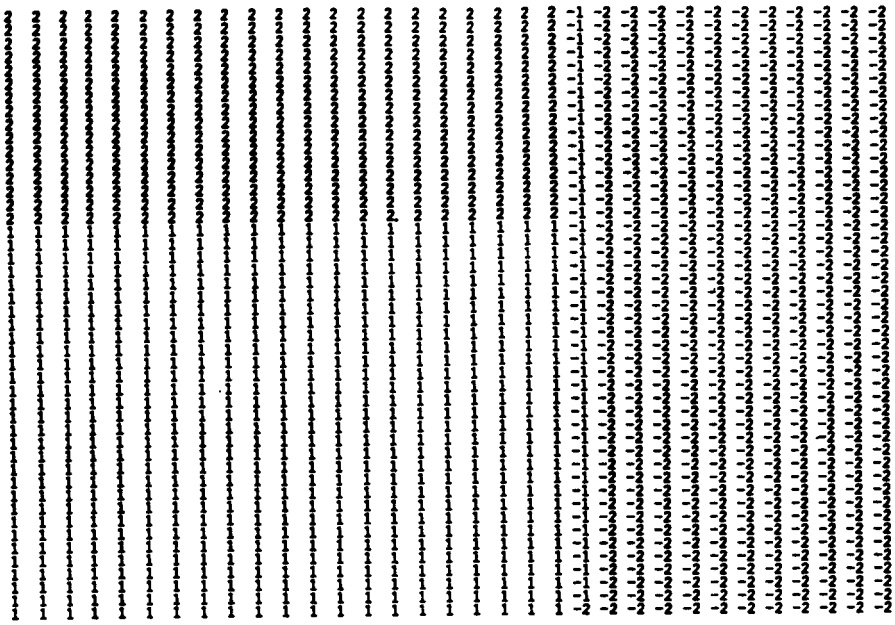
WING CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK			
0.82000	0.00000	1.00000			
CL	CD FORM	CD FRICTION	CD	L/D FORM	L/D
0.53396	0.01184	0.00000	0.01184	48.35468	48.35468
CM PITCH	CM ROLL	CM YAW			
-0.72026	0.47916	-0.00178			

INDICATION OF LOCATION OF WING AND VORTEX SHEET IN COORDINATE PLANE Y = 0.

(([V(I,K),K=K1,K2),I=1,MX)





CHORDWISE CELL DISTRIBUTION IN SQUARE ROOT PLANE AND MAPPED SURFACE COORDINATES AT CENTER LINE AND TIP

X	ROOT PROFILE	TIP PROFILE
-1.09298	0.01488	0.00414
-1.05217	0.01567	0.00456
-1.01641	0.01641	0.00495
-0.98458	0.01711	0.00530
-0.95583	0.01776	0.00562
-0.92967	0.01837	0.00591
-0.90564	0.01894	0.00617
-0.88339	0.01948	0.00639
-0.86265	0.01998	0.00658
-0.84319	0.02044	0.00674
-0.82485	0.02087	0.00686
-0.80748	0.02126	0.00693
-0.79094	0.02161	0.00697
-0.77514	0.02192	0.00696
-0.75999	0.02219	0.00690
-0.74540	0.02242	0.00679
-0.73132	0.02259	0.00662
-0.71768	0.02271	0.00638
-0.70443	0.02276	0.00607
-0.69152	0.02275	0.00567
-0.67893	0.02267	0.00518
-0.66658	0.02249	0.00458
-0.65447	0.02222	0.00386
-0.64256	0.02184	0.00300
-0.63082	0.02132	0.00198
-0.61922	0.02065	0.00076
-0.60774	0.01981	-0.00067
-0.59635	0.01876	-0.00236
-0.58503	0.01746	-0.00435
-0.57375	0.01587	-0.00670
-0.56250	0.01389	-0.00951
-0.55125	0.01282	-0.01096
-0.54000	0.01293	-0.01147
-0.52875	0.01378	-0.01128
-0.51750	0.01512	-0.01047
-0.50625	0.01678	-0.00922
-0.49500	0.01867	-0.00760
-0.48375	0.02073	-0.00571
-0.47250	0.02288	-0.00363
-0.46125	0.02505	-0.00142
-0.45000	0.02721	0.00085
-0.43875	0.02933	0.00313
-0.42750	0.03129	0.00536
-0.41625	0.03308	0.00749
-0.40500	0.03479	0.00946
-0.39375	0.03633	0.01124
-0.38250	0.03768	0.01280
-0.37125	0.03892	0.01418
-0.36000	0.04009	0.01540
-0.34875	0.04110	0.01650
-0.33750	0.04196	0.01750
-0.32625	0.04275	0.01843
-0.31500	0.04347	0.01930
-0.30375	0.04404	0.02013
-0.29250	0.04448	0.02092

-0.28125	0.04483	0.02168
-0.27000	0.04510	0.02241
-0.25875	0.04526	0.02312
-0.24750	0.04532	0.02382
-0.23625	0.04530	0.02451
-0.22500	0.04523	0.02521
-0.21375	0.04511	0.02593
-0.20250	0.04496	0.02667
-0.19125	0.04478	0.02746
-0.18000	0.04465	0.02833
-0.16875	0.04462	0.02929
-0.15750	0.04480	0.03033
-0.14625	0.04491	0.03147
-0.13500	0.04463	0.03276
-0.12375	0.04487	0.03423
-0.11250	0.04524	0.03588
-0.10125	0.04578	0.03766
-0.09000	0.04630	0.03957
-0.07875	0.04719	0.04161
-0.06750	0.04846	0.04375
-0.05625	0.04982	0.04586
-0.04500	0.05089	0.04779
-0.03375	0.05156	0.04931
-0.02250	0.05193	0.05028
-0.01125	0.05210	0.05048
0.00000	0.05213	0.05038
0.01125	0.05205	0.05015
0.02250	0.05179	0.05002
0.03375	0.05129	0.05019
0.04500	0.05049	0.05068
0.05625	0.04932	0.05104
0.06750	0.04778	0.05139
0.07875	0.04609	0.05140
0.09000	0.04444	0.05121
0.10125	0.04286	0.05083
0.11250	0.04129	0.05037
0.12375	0.03968	0.04991
0.13500	0.03803	0.04946
0.14625	0.03637	0.04901
0.15750	0.03472	0.04857
0.16875	0.03311	0.04812
0.18000	0.03155	0.04765
0.19125	0.03007	0.04716
0.20250	0.02866	0.04665
0.21375	0.02732	0.04611
0.22500	0.02604	0.04555
0.23625	0.02482	0.04497
0.24750	0.02363	0.04437
0.25875	0.02248	0.04376
0.27000	0.02135	0.04314
0.28125	0.02023	0.04252
0.29250	0.01913	0.04187
0.30375	0.01803	0.04122
0.31500	0.01694	0.04055
0.32625	0.01586	0.03986
0.33750	0.01477	0.03916
0.34875	0.01368	0.03843
0.36000	0.01257	0.03767
0.37125	0.01143	0.03690
0.38250	0.01026	0.03610
0.39375	0.00905	0.03528
0.40500	0.00780	0.03442
0.41625	0.00650	0.03353
0.42750	0.00516	0.03259
0.43875	0.00378	0.03160
0.45000	0.00235	0.03053
0.46125	0.00088	0.02937
0.47250	-0.00063	0.02808
0.48375	-0.00217	0.02661
0.49500	-0.00373	0.02491
0.50625	-0.00532	0.02294
0.51750	-0.00692	0.02071
0.52875	-0.00852	0.01828
0.54000	-0.01011	0.01575
0.55125	-0.01168	0.01325
0.56250	-0.01343	0.01068
0.57375	-0.01542	0.00785
0.58503	-0.01702	0.00547
0.59635	-0.01833	0.00346
0.60774	-0.01939	0.00175
0.61922	-0.02024	0.00030
0.63082	-0.02092	-0.00093
0.64256	-0.02144	-0.00198
0.65447	-0.02183	-0.00286
0.66658	-0.02211	-0.00359
0.67891	-0.02229	-0.00421
0.69152	-0.02238	-0.00472
0.70443	-0.02240	-0.00513
0.71768	-0.02235	-0.00546
0.73132	-0.02224	-0.00572
0.74540	-0.02208	-0.00591
0.75999	-0.02186	-0.00603
0.77514	-0.02160	-0.00611
0.79094	-0.02129	-0.00613
0.80748	-0.02095	-0.00611
0.82485	-0.02056	-0.00605
0.84319	-0.02014	-0.00595
0.86265	-0.01969	-0.00581
0.88339	-0.01919	-0.00564
0.90564	-0.01866	-0.00544
0.92967	-0.01810	-0.00520
0.95583	-0.01750	-0.00493
0.98455	-0.01685	-0.00462
1.01641	-0.01616	-0.00428
1.05217	-0.01543	-0.00393
1.09298	-0.01464	-0.00353

TE LOCATION	POWER LAW
0.56250	0.50000

NORMAL CELL DISTRIBUTION IN SQUARE ROOT PLANE

Y
1.03237
0.78680
0.63888
0.53682
0.45743
0.39381
0.34017
0.29352
0.25199
0.21418
0.17927
0.14654
0.11546
0.08560
0.05661
0.02817
0.00000

SCALE FACTOR	POWER LAW
0.50000	0.50000

SPANWISE CELL DISTRIBUTION AND SINGULAR LINE

Z	X SING	Y SING
0.00000	0.09527	0.15896
0.90000	0.51213	0.14149
1.80000	0.96900	0.12427
2.70000	1.42586	0.10757
3.60000	1.88272	0.09164
4.50000	2.33958	0.07669
5.39999	2.79644	0.06271
6.29999	3.25330	0.04963
7.19999	3.71015	0.03739
8.09999	4.16700	0.02593
8.99999	4.62385	0.01524
9.89999	5.08070	0.00533
10.79999	5.53754	-0.00381
11.69999	5.99439	-0.01216
12.59999	6.45123	-0.01968
13.49999	6.90806	-0.02629
14.39999	7.36488	-0.03194
15.29998	7.82170	-0.03668
16.19998	8.27851	-0.04050
17.09998	8.73532	-0.04388
17.99998	9.19212	-0.04700
18.90185	9.64999	-0.04988
19.81584	10.11383	-0.05241
20.75164	10.58975	-0.05467
21.72525	11.08466	-0.05669
22.75216	11.60685	-0.05852
23.85288	12.16674	-0.06019
25.05462	12.77818	-0.06171
26.39531	13.46049	-0.06311
27.93892	14.24218	-0.06440
29.74953	15.16813	-0.06557
32.00148	16.31498	-0.06664
34.97267	17.82829	-0.06759

TIP LOCATION	POWER LAW
0.96250	0.50000

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1134E-01	0.1696E-01	0.1087E-01	0.0000E+00	-0.2455E+02	0.1744E+01	0.1478E+01	0.9249E+00	0.1155E+01
2	0.9000E+00	0.1155E-01	0.1613E-01	0.7024E-02	0.0000E+00	-0.2208E+02	0.1710E+01	0.1451E+01	0.9147E+00	0.1265E+01
3	0.1800E+01	0.1140E-01	0.1579E-01	0.6026E-02	0.0000E+00	-0.1969E+02	0.1691E+01	0.1435E+01	0.9113E+00	0.1155E+01
4	0.2700E+01	0.1135E-01	0.1592E-01	0.6237E-02	0.0000E+00	-0.1801E+02	0.1687E+01	0.1430E+01	0.9094E+00	0.1029E+01
5	0.3600E+01	0.1133E-01	0.1619E-01	0.6603E-02	0.0000E+00	-0.1669E+02	0.1689E+01	0.1432E+01	0.9081E+00	0.8718E+00
6	0.4500E+01	0.1129E-01	0.1648E-01	0.6988E-02	0.0000E+00	-0.1557E+02	0.1695E+01	0.1437E+01	0.9078E+00	0.7126E+00
7	0.5400E+01	0.1121E-01	0.1674E-01	0.7409E-02	0.0000E+00	-0.1446E+02	0.1705E+01	0.1445E+01	0.9062E+00	0.5553E+00
8	0.6300E+01	0.1110E-01	0.1697E-01	0.7895E-02	0.0000E+00	-0.1336E+02	0.1716E+01	0.1455E+01	0.9054E+00	0.4146E+00
9	0.7200E+01	0.1097E-01	0.1717E-01	0.8411E-02	0.0000E+00	-0.1233E+02	0.1728E+01	0.1466E+01	0.9048E+00	0.2999E+00
10	0.8100E+01	0.1085E-01	0.1736E-01	0.8930E-02	0.0000E+00	-0.1139E+02	0.1743E+01	0.1480E+01	0.9039E+00	0.2011E+00
11	0.9000E+01	0.1071E-01	0.1756E-01	0.9500E-02	0.0000E+00	-0.1037E+02	0.1761E+01	0.1496E+01	0.9031E+00	0.9598E-01
12	0.9900E+01	0.1058E-01	0.1778E-01	0.1015E-01	0.0000E+00	-0.9349E+01	0.1781E+01	0.1514E+01	0.9022E+00	0.3802E-02
13	0.1080E+02	0.1044E-01	0.1800E-01	0.1086E-01	0.0000E+00	-0.8486E+01	0.1805E+01	0.1536E+01	0.9012E+00	-0.7486E-01
14	0.1170E+02	0.1028E-01	0.1816E-01	0.1144E-01	0.0000E+00	-0.7823E+01	0.1831E+01	0.1560E+01	0.8998E+00	-0.1630E+00
15	0.1260E+02	0.1009E-01	0.1830E-01	0.1215E-01	0.0000E+00	-0.7066E+01	0.1860E+01	0.1587E+01	0.8983E+00	-0.3060E+00
16	0.1350E+02	0.9841E-02	0.1829E-01	0.1286E-01	0.0000E+00	-0.6387E+01	0.1890E+01	0.1615E+01	0.8968E+00	-0.5017E+00
17	0.1440E+02	0.9593E-02	0.1829E-01	0.1358E-01	0.0000E+00	-0.6168E+01	0.1923E+01	0.1646E+01	0.8951E+00	-0.7662E+00
18	0.1530E+02	0.9341E-02	0.1834E-01	0.1432E-01	0.0000E+00	-0.6702E+01	0.1966E+01	0.1686E+01	0.8927E+00	-0.1238E+01
19	0.1620E+02	0.9216E-02	0.1897E-01	0.1561E-01	0.0000E+00	-0.8107E+01	0.2020E+01	0.1737E+01	0.8914E+00	-0.2373E+01
20	0.1710E+02	0.8843E-02	0.1751E-01	0.1383E-01	0.0000E+00	-0.1145E+02	0.1984E+01	0.1700E+01	0.8981E+00	-0.5665E+01
21	0.1800E+02	0.5324E-02	0.9366E-02	0.7121E-02	0.0000E+00	-0.1459E+02	0.1761E+01	0.1458E+01	0.9701E+00	-0.1449E+02

X = 2.882486

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.9603E-02	0.8533E-02	-0.1899E-03	0.0000E+00	-0.6622E+01	0.1310E+01	0.1056E+01	0.9844E+00	0.7197E+00
2	0.9000E+00	0.8737E-02	0.1104E-02	-0.1252E-02	0.0000E+00	-0.6138E+01	0.1309E+01	0.1053E+01	0.9849E+00	0.4119E+00
3	0.1800E+01	0.8777E-02	0.2546E-02	-0.1009E-02	0.0000E+00	-0.6142E+01	0.1312E+01	0.1055E+01	0.9850E+00	-0.7189E-01
4	0.2700E+01	0.8596E-02	0.3804E-02	-0.7893E-03	0.0000E+00	-0.5938E+01	0.1314E+01	0.1056E+01	0.9850E+00	-0.3360E+00
5	0.3600E+01	0.8502E-02	0.4150E-02	-0.7822E-03	0.0000E+00	-0.5806E+01	0.1315E+01	0.1057E+01	0.9849E+00	-0.5374E+00
6	0.4500E+01	0.8392E-02	0.4226E-02	-0.7839E-03	0.0000E+00	-0.5658E+01	0.1317E+01	0.1058E+01	0.9847E+00	-0.7106E+00
7	0.5400E+01	0.8279E-02	0.4244E-02	-0.6128E-03	0.0000E+00	-0.5487E+01	0.1319E+01	0.1059E+01	0.9846E+00	-0.8664E+00
8	0.6300E+01	0.8164E-02	0.4047E-02	-0.6988E-03	0.0000E+00	-0.5317E+01	0.1320E+01	0.1060E+01	0.9844E+00	-0.1002E+01
9	0.7200E+01	0.8046E-02	0.3482E-02	-0.5611E-03	0.0000E+00	-0.5165E+01	0.1322E+01	0.1061E+01	0.9842E+00	-0.1111E+01
10	0.8100E+01	0.7921E-02	0.2633E-02	-0.5417E-03	0.0000E+00	-0.5028E+01	0.1323E+01	0.1062E+01	0.9840E+00	-0.1208E+01
11	0.9000E+01	0.7810E-02	0.1614E-02	-0.4870E-03	0.0000E+00	-0.4861E+01	0.1325E+01	0.1063E+01	0.9839E+00	-0.1306E+01
12	0.9900E+01	0.7709E-02	0.6581E-02	-0.4188E-03	0.0000E+00	-0.4717E+01	0.1327E+01	0.1064E+01	0.9838E+00	-0.1397E+01
13	0.1080E+02	0.7596E-02	0.6918E-02	-0.3905E-03	0.0000E+00	-0.4614E+01	0.1328E+01	0.1066E+01	0.9837E+00	-0.1474E+01
14	0.1170E+02	0.7450E-02	0.6866E-02	-0.3855E-03	0.0000E+00	-0.4530E+01	0.1330E+01	0.1067E+01	0.9837E+00	-0.1558E+01
15	0.1260E+02	0.7312E-02	0.7144E-02	-0.3152E-03	0.0000E+00	-0.4424E+01	0.1332E+01	0.1068E+01	0.9838E+00	-0.1682E+01
16	0.1350E+02	0.7185E-02	0.7899E-02	-0.1684E-03	0.0000E+00	-0.4362E+01	0.1334E+01	0.1069E+01	0.9840E+00	-0.1842E+01
17	0.1440E+02	0.7100E-02	0.8651E-02	0.1012E-04	0.0000E+00	-0.4444E+01	0.1336E+01	0.1071E+01	0.9845E+00	-0.2045E+01
18	0.1530E+02	0.7130E-02	0.9579E-02	0.2775E-03	0.0000E+00	-0.4701E+01	0.1339E+01	0.1074E+01	0.9854E+00	-0.2389E+01
19	0.1620E+02	0.7458E-02	0.1029E-01	0.4201E-03	0.0000E+00	-0.5159E+01	0.1343E+01	0.1077E+01	0.9872E+00	-0.3139E+01
20	0.1710E+02	0.7770E-02	0.6588E-02	-0.6706E-03	0.0000E+00	-0.5701E+01	0.1345E+01	0.1077E+01	0.9920E+00	-0.5241E+01
21	0.1800E+02	0.6252E-02	0.7990E-02	0.3818E-03	0.0000E+00	-0.4898E+01	0.1354E+01	0.1072E+01	0.1013E+01	-0.1228E+02

X = 3.014242

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5555E-02	0.6795E-02	-0.3668E-03	0.0000E+00	-0.3728E+01	0.1275E+01	0.1018E+01	0.9952E+00	0.7411E+00
2	0.9000E+00	0.5143E-02	0.2012E-02	0.9083E-03	0.0000E+00	-0.3392E+01	0.1276E+01	0.1018E+01	0.9954E+00	0.4182E+00
3	0.1800E+01	0.5307E-02	0.1943E-02	0.1745E-03	0.0000E+00	-0.3368E+01	0.1278E+01	0.1019E+01	0.9953E+00	-0.8859E-01
4	0.2700E+01	0.5442E-02	0.3428E-02	0.2266E-03	0.0000E+00	-0.3301E+01	0.1280E+01	0.1020E+01	0.9952E+00	-0.3659E+00
5	0.3600E+01	0.5521E-02	0.3903E-02	0.2811E-03	0.0000E+00	-0.3239E+01	0.1281E+01	0.1021E+01	0.9952E+00	-0.5711E+00
6	0.4500E+01	0.5567E-02	0.4116E-02	0.3220E-03	0.0000E+00	-0.3166E+01	0.1283E+01	0.1021E+01	0.9951E+00	-0.7420E+00
7	0.5400E+01	0.5636E-02	0.4527E-02	0.3357E-03	0.0000E+00	-0.3078E+01	0.1285E+01	0.1022E+01	0.9952E+00	-0.8920E+00
8	0.6300E+01	0.5698E-02	0.4885E-02	0.2559E-03	0.0000E+00	-0.2981E+01	0.1286E+01	0.1023E+01	0.9952E+00	-0.1021E+01
9	0.7200E+01	0.5715E-02	0.5281E-02	0.2248E-03	0.0000E+00	-0.2903E+01	0.1288E+01	0.1024E+01	0.9952E+00	-0.1124E+01
10	0.8100E+01	0.5733E-02	0.5521E-02	0.2485E-03	0.0000E+00	-0.2834E+01	0.1289E+01	0.1026E+01	0.9951E+00	-0.1216E+01
11	0.9000E+01	0.5766E-02	0.5895E-02	0.2264E-03	0.0000E+00	-0.2750E+01	0.1291E+01	0.1026E+01	0.9951E+00	-0.1309E+01
12	0.9900E+01	0.5801E-02	0.6275E-02	0.1387E-03	0.0000E+00	-0.2668E+01	0.1292E+01	0.1027E+01	0.9950E+00	-0.1396E+01
13	0.1080E+02	0.5788E-02	0.6587E-02	0.1108E-03	0.0000E+00	-0.2619E+01	0.1294E+01	0.1028E+01	0.9949E+00	-0.1466E+01
14	0.1170E+02	0.5748E-02	0.6657E-02	0.1522E-03	0.0000E+00	-0.2586E+01	0.1295E+01	0.1029E+01	0.9949E+00	-0.1541E+01
15	0.1260E+02	0.5718E-02	0.6848E-02	0.1045E-03	0.0000E+00	-0.2528E+01	0.1296E+01	0.1030E+01	0.9949E+00	-0.1652E+01
16	0.1350E+02	0.5684E-02	0.7325E-02	-0.3839E-04	0.0000E+00	-0.2490E+01	0.1298E+01	0.1031E+01	0.9951E+00	-0.1794E+01
17	0.1440E+02	0.5649E-02	0.7774E-02	-0.1894E-03	0.0000E+00	-0.2539E+01	0.1299E+01	0.1032E+01	0.9954E+00	-0.1968E+01
18	0.1530E+02	0.5669E-02	0.8240E-02	-0.3400E-03	0.0000E+00	-0.2695E+01	0.1301E+01	0.1033E+01	0.9959E+00	-0.2273E+01
19	0.1620E+02	0.5885E-02	0.8821E-02	-0.1533E-02	0.0000E+00	-0.2976E+01	0.1303E+01	0.1035E+01	0.9969E+00	-0.2986E+01
20	0.1710E+02	0.6915E-02	0.1174E-01	0.2259E-02	0.0000E+00	-0.3869E+01	0.1306E+01	0.1038E+01	0.9999E+00	-0.5088E+01
21	0.1800E+02	0.5348E-02	0.7858E-02	-0.2771E-03	0.0000E+00	-0.2837E+01	0.1323E+01	0.1040E+01	0.1019E+01	-0.1215E+02

X = 3.058933

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5281E-02	0.6689E-02	-0.3652E-03	0.0000E+00	-0.3668E+01	0.1273E+01	0.1017E+01	0.9954E+00	0.7443E+00
2	0.9000E+00	0.4904E-02	0.2275E-02	0.9056E-03	0.0000E+00	-0.3335E+01	0.1275E+01	0.1017E+01	0.9956E+00	0.4193E+00
3	0.1800E+01	0.5075E-02	0.1989E-02	0.1458E-03	0.0000E+00	-0.3311E+01	0.1277E+01	0.1018E+01	0.9955E+00	-0.8973E-01
4	0.2700E+01	0.5227E-02	0.3492E-02	0.2170E-03	0.0000E+00	-0.3249E+01	0.1279E+01	0.1019E+01	0.9954E+00	-0.3668E+00
5	0.3600E+01	0.5318E-02	0.3948E-02	0.2763E-03	0.0000E+00	-0.3190E+01	0.1280E+01	0.1020E+01	0.9954E+00	-0.5708E+00
6	0.4500E+01	0.5376E-02	0.4209E-02	0.3198E-03	0.0000E+00	-0.3118E+01	0.1282E+01	0.1020E+01	0.9954E+00	-0.7403E+00
7	0.5400E+01	0.5458E-02	0.4624E-02	0.3363E-03	0.0000E+00	-0.3032E+01	0.1284E+01	0.1021E+01	0.9954E+00	-0.8895E+00
8	0.6300E+01	0.5532E-02	0.4959E-02	0.2562E-03	0.0000E+00	-0.2937E+01	0.1285E+01	0.1022E+01	0.9954E+00	-0.1018E+01
9	0.7200E+01	0.5559E-02	0.5346E-02	0.2249E-03	0.0000E+00	-0.2860E+01	0.1287E+01	0.1023E+01	0.9954E+00	-0.1122E+01
10	0.8100E+01	0.5587E-02	0.5593E-02	0.2504E-03	0.0000E+00	-0.2792E+01	0.1288E+01	0.1024E+01	0.9954E+00	-0.1214E+01
11	0.9000E+01	0.5630E-02	0.5961E-02	0.2293E-03	0.0000E+00	-0.2710E+01	0.1290E+01	0.1025E+01	0.9953E+00	-0.1308E+01
12	0.9900E+01	0.5675E-02	0.6316E-02	0.1402E-03	0.0000E+00	-0.2629E+01	0.1292E+01	0.1026E+01	0.9952E+00	-0.1395E+01
13	0.1080E+02	0.5669E-02	0.6619E-02	0.1112E-03	0.0000E+00	-0.2581E+01	0.1293E+01	0.1027E+01	0.9951E+00	-0.1465E+01
14	0.1170E+02	0.5636E-02	0.6701E-02	0.1546E-03	0.0000E+00	-0.2549E+01	0.1294E+01	0.1028E+01	0.9951E+00	-0.1548E+01
15	0.1260E+02	0.5614E-02	0.6879E-02	0.1083E-03	0.0000E+00	-0.2492E+01	0.1295E+01	0.1029E+01	0.9951E+00	-0.1650E+01
16	0.1350E+02	0.5585E-02	0.7315E-02	-0.3462E-04	0.0000E+00	-0.2454E+01	0.1297E+01	0.1030E+01	0.9953E+00	-0.1781E+01
17	0.1440E+02	0.5551E-02	0.7719E-02	-0.1844E-03	0.0000E+00	-0.2501E+01	0.1298E+01	0.1031E+01	0.9956E+00	-0.1965E+01
18	0.1530E+02	0.5566E-02	0.8144E-02	-0.3145E-03	0.0000E+00	-0.2652E+01	0.1300E+01	0.1032E+01	0.9962E+00	-0.2269E+01
19	0.1620E+02	0.5757E-02	0.8636E-02	-0.1593E-02	0.0000E+00	-0.2918E+01	0.1302E+01	0.1034E+01	0.9972E+00	-0.2984E+01
20	0.1710E+02	0.6799E-02	0.1241E-01	0.2343E-02	0.0000E+00	-0.3824E+01	0.1305E+01	0.1037E+01	0.1000E+01	-0.5087E+01
21	0.1800E+02	0.5243E-02	0.7769E-02	-0.2774E-03	0.0000E+00	-0.2780E+01	0.1322E+01	0.1039E+01	0.1019E+01	-0.1215E+02

389 INTEGRATION STEP
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

ITERATIVE SOLUTION

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

NX	NY	NZ
160	16	32

RELAX FCT 1	RELAX FCT 2	RELAX FCT 3
1.00000	0.90000	0.60000

ITERATION	MAX CORRECN	I	J	K	AVG CORRECN	MAX RESIDAL	I	J	K	AVG RESIDAL	CIRCULATN	SONIC PTS
1	-0.28626E-02	160	16	12	0.99743E-05	-0.24641E-03	160	16	3	0.64377E-06	0.03647	3598
2	0.11112E-02	160	16	13	0.14443E-04	0.96788E-04	160	16	18	0.43710E-06	0.03644	3601
3	0.80220E-03	160	16	18	0.21909E-04	-0.25444E-03	2	2	34	0.32466E-06	0.03640	3612
4	-0.68426E-03	131	16	24	0.32301E-04	-0.10285E-03	2	2	34	0.20867E-06	0.03637	3620
5	-0.73505E-04	132	16	24	0.46099E-05	-0.27633E-04	2	2	3	0.14103E-06	0.03638	3625
6	-0.10931E-03	132	16	24	0.74039E-05	-0.25495E-04	2	2	3	0.12560E-06	0.03639	3629
7	-0.16226E-03	129	16	24	0.13144E-04	-0.24272E-04	2	2	3	0.11002E-06	0.03638	3631
8	-0.21379E-03	128	16	24	0.22686E-04	-0.21720E-04	2	2	3	0.94844E-07	0.03637	3633

3DBL CALCULATION ITBLX ITBL= 0 1

UPPER WING SURFACE
BOUNDARY LAYER STARTING NODE UPPER WING IWNODE= 169

X = 0.006879

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5551E-04	0.1231E-03	0.2520E-02	0.2199E-02	-0.1409E+02	0.2593E+01	0.2225E+01	0.9319E+00	0.4150E+01
2	0.9000E+00	0.5012E-04	0.1111E-03	0.2159E-02	0.2185E-02	-0.1382E+02	0.2687E+01	0.2224E+01	0.1032E+01	0.3447E+01
3	0.1800E+01	0.4931E-04	0.1093E-03	0.1736E-02	0.2086E-02	-0.1407E+02	0.2751E+01	0.2225E+01	0.1091E+01	0.4094E+01
4	0.2700E+01	0.4936E-04	0.1094E-03	0.1481E-02	0.2068E-02	-0.1432E+02	0.2759E+01	0.2227E+01	0.1096E+01	0.4766E+01
5	0.3600E+01	0.4918E-04	0.1090E-03	0.1205E-02	0.2056E-02	-0.1440E+02	0.2770E+01	0.2227E+01	0.1105E+01	0.4975E+01
6	0.4500E+01	0.4945E-04	0.1096E-03	0.9581E-03	0.2055E-02	-0.1454E+02	0.2765E+01	0.2228E+01	0.1099E+01	0.5351E+01
7	0.5400E+01	0.4959E-04	0.1099E-03	0.7011E-03	0.2055E-02	-0.1463E+02	0.2761E+01	0.2229E+01	0.1095E+01	0.5580E+01
8	0.6300E+01	0.4987E-04	0.1106E-03	0.4494E-03	0.2060E-02	-0.1474E+02	0.2752E+01	0.2230E+01	0.1086E+01	0.5874E+01
9	0.7200E+01	0.5007E-04	0.1110E-03	0.1921E-03	0.2066E-02	-0.1483E+02	0.2744E+01	0.2230E+01	0.1078E+01	0.6114E+01
10	0.8100E+01	0.5035E-04	0.1116E-03	-0.6367E-04	0.2075E-02	-0.1494E+02	0.2734E+01	0.2231E+01	0.1068E+01	0.6412E+01
11	0.9000E+01	0.5060E-04	0.1122E-03	-0.3242E-03	0.2086E-02	-0.1505E+02	0.2723E+01	0.2232E+01	0.1057E+01	0.6705E+01
12	0.9900E+01	0.5086E-04	0.1127E-03	-0.5909E-03	0.2099E-02	-0.1517E+02	0.2712E+01	0.2233E+01	0.1045E+01	0.7017E+01
13	0.1080E+02	0.5108E-04	0.1132E-03	-0.8646E-03	0.2114E-02	-0.1529E+02	0.2700E+01	0.2234E+01	0.1032E+01	0.7343E+01
14	0.1170E+02	0.5134E-04	0.1139E-03	-0.1141E-02	0.2133E-02	-0.1545E+02	0.2686E+01	0.2235E+01	0.1017E+01	0.7746E+01
15	0.1260E+02	0.5165E-04	0.1145E-03	-0.1428E-02	0.2155E-02	-0.1562E+02	0.2672E+01	0.2237E+01	0.1001E+01	0.8204E+01
16	0.1350E+02	0.5193E-04	0.1151E-03	-0.1728E-02	0.2181E-02	-0.1581E+02	0.2657E+01	0.2239E+01	0.9832E+00	0.8715E+01
17	0.1440E+02	0.5220E-04	0.1157E-03	-0.2047E-02	0.2209E-02	-0.1603E+02	0.2642E+01	0.2241E+01	0.9645E+00	0.9310E+01
18	0.1530E+02	0.5257E-04	0.1165E-03	-0.2383E-02	0.2246E-02	-0.1634E+02	0.2623E+01	0.2244E+01	0.9399E+00	0.1015E+02
19	0.1620E+02	0.5279E-04	0.1170E-03	-0.2771E-02	0.2273E-02	-0.1675E+02	0.2611E+01	0.2249E+01	0.9212E+00	0.1124E+02
20	0.1710E+02	0.5435E-04	0.1205E-03	-0.3186E-02	0.2266E-02	-0.1749E+02	0.2595E+01	0.2258E+01	0.8895E+00	0.1329E+02
21	0.1800E+02	0.5509E-04	0.1221E-03	-0.3175E-02	0.2090E-02	-0.1697E+02	0.2644E+01	0.2251E+01	0.9542E+00	0.1186E+02

X = 0.885335

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1888E-03	0.6043E-03	0.6508E-03	0.3485E-03	0.1874E+02	0.3266E+01	0.2514E+01	0.1222E+01	-0.3381E+01
2	0.9000E+00	0.1851E-03	0.9031E-03	0.2526E-01	0.5641E-04	0.6362E+02	0.4814E+01	0.3513E+01	0.1377E+01	-0.6346E+01
3	0.1800E+01	0.1587E-03	0.6556E-03	0.2247E-02	0.2000E-03	0.2750E+02	0.4200E+01	0.2828E+01	0.1491E+01	-0.8315E+01
4	0.2700E+01	0.1451E-03	0.5600E-03	0.1093E-02	0.3013E-03	0.1158E+02	0.3994E+01	0.2576E+01	0.1548E+01	-0.9123E+01
5	0.3600E+01	0.1395E-03	0.5276E-03	0.8810E-03	0.3424E-03	0.7185E+01	0.3940E+01	0.2496E+01	0.1570E+01	-0.9358E+01
6	0.4500E+01	0.1360E-03	0.5087E-03	0.6933E-03	0.3639E-03	0.5646E+01	0.3908E+01	0.2467E+01	0.1574E+01	-0.9334E+01
7	0.5400E+01	0.1336E-03	0.4970E-03	0.6545E-03	0.3742E-03	0.5274E+01	0.3893E+01	0.2460E+01	0.1572E+01	-0.9238E+01
8	0.6300E+01	0.1312E-03	0.4849E-03	0.6295E-03	0.3849E-03	0.4943E+01	0.3871E+01	0.2456E+01	0.1566E+01	-0.9103E+01
9	0.7200E+01	0.1291E-03	0.4755E-03	0.6188E-03	0.3907E-03	0.5131E+01	0.3860E+01	0.2462E+01	0.1559E+01	-0.8974E+01
10	0.8100E+01	0.1270E-03	0.4653E-03	0.6053E-03	0.3980E-03	0.5294E+01	0.3842E+01	0.2466E+01	0.1549E+01	-0.8827E+01
11	0.9000E+01	0.1248E-03	0.4548E-03	0.6009E-03	0.4060E-03	0.5421E+01	0.3822E+01	0.2472E+01	0.1538E+01	-0.8665E+01
12	0.9900E+01	0.1225E-03	0.4430E-03	0.5951E-03	0.4170E-03	0.5298E+01	0.3794E+01	0.2473E+01	0.1526E+01	-0.8490E+01
13	0.1080E+02	0.1203E-03	0.4312E-03	0.5823E-03	0.4281E-03	0.5171E+01	0.3765E+01	0.2475E+01	0.1512E+01	-0.8306E+01
14	0.1170E+02	0.1179E-03	0.4176E-03	0.5765E-03	0.4447E-03	0.4821E+01	0.3723E+01	0.2472E+01	0.1496E+01	-0.8089E+01
15	0.1260E+02	0.1155E-03	0.4035E-03	0.5513E-03	0.4634E-03	0.4281E+01	0.3676E+01	0.2468E+01	0.1478E+01	-0.7825E+01
16	0.1350E+02	0.1130E-03	0.3890E-03	0.5156E-03	0.4843E-03	0.3649E+01	0.3626E+01	0.2464E+01	0.1457E+01	-0.7525E+01
17	0.1440E+02	0.1105E-03	0.3743E-03	0.4806E-03	0.5082E-03	0.3086E+01	0.3573E+01	0.2458E+01	0.1435E+01	-0.7182E+01
18	0.1530E+02	0.1077E-03	0.3575E-03	0.4304E-03	0.5410E-03	0.2309E+01	0.3504E+01	0.2446E+01	0.1409E+01	-0.6699E+01
19	0.1620E+02	0.1045E-03	0.3395E-03	0.3880E-03	0.5804E-03	0.1158E+01	0.3441E+01	0.2429E+01	0.1388E+01	-0.6050E+01
20	0.1710E+02	0.1003E-03	0.3142E-03	0.3316E-03	0.6486E-03	-0.7036E+00	0.3349E+01	0.2387E+01	0.1368E+01	-0.4803E+01
21	0.1800E+02	0.1028E-03	0.3316E-03	0.3764E-03	0.5568E-03	0.4893E-01	0.3470E+01	0.2494E+01	0.1359E+01	-0.3973E+01

LAMINAR SEPARATION AT 8.5 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

N	H	TE	GAM	F	1	0.14500E+01	0.18881E-03	0.18834E+00	0.19238E-01
N	H	TE	GAM	F	2	0.14500E+01	0.18506E-03	0.10136E+00	0.19337E-01
N	H	TE	GAM	F	3	0.14500E+01	0.15865E-03	0.24193E-01	0.18925E-01
N	H	TE	GAM	F	4	0.14500E+01	0.14509E-03	-0.16158E-01	0.18682E-01
N	H	TE	GAM	F	5	0.14500E+01	0.13947E-03	-0.31828E-01	0.18575E-01
N	H	TE	GAM	F	6	0.14500E+01	0.13682E-03	-0.48442E-01	0.18518E-01
N	H	TE	GAM	F	7	0.14500E+01	0.13358E-03	-0.65022E-01	0.18442E-01
N	H	TE	GAM	F	8	0.14500E+01	0.13121E-03	-0.81617E-01	0.18451E-01
N	H	TE	GAM	F	9	0.14500E+01	0.12910E-03	-0.97732E-01	0.18423E-01
N	H	TE	GAM	F	10	0.14500E+01	0.12697E-03	-0.56056E-01	0.18395E-01
N	H	TE	GAM	F	11	0.14500E+01	0.12477E-03	-0.59581E-01	0.18363E-01
N	H	TE	GAM	F	12	0.14500E+01	0.12251E-03	-0.63268E-01	0.18329E-01
N	H	TE	GAM	F	13	0.14500E+01	0.12028E-03	-0.66483E-01	0.18293E-01
N	H	TE	GAM	F	14	0.14500E+01	0.11789E-03	-0.70051E-01	0.18250E-01
N	H	TE	GAM	F	15	0.14500E+01	0.11545E-03	-0.74024E-01	0.18202E-01
N	H	TE	GAM	F	16	0.14500E+01	0.11298E-03	-0.77976E-01	0.18147E-01
N	H	TE	GAM	F	17	0.14500E+01	0.11046E-03	-0.81337E-01	0.18083E-01
N	H	TE	GAM	F	18	0.14500E+01	0.10775E-03	-0.84862E-01	0.18004E-01
N	H	TE	GAM	F	19	0.14500E+01	0.10455E-03	-0.90290E-01	0.17908E-01
N	H	TE	GAM	F	20	0.14500E+01	0.10029E-03	-0.10064E+00	0.17773E-01
N	H	TE	GAM	F	21	0.14500E+01	0.10277E-03	-0.98283E-01	0.17829E-01

X = 1.007126

ORIGINAL PAGE IS
OF POOR QUALITY

SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

LOWER WING SURFACE
BOUNDARY LAYER STARTING NODE LOWER WING IHNODE= 153

X = 0.006751

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6614E-04	0.1466E-03	0.5392E-02	0.2797E-02	-0.1832E+02	0.2413E+01	0.2270E+01	0.5945E+00	0.1562E+02
2	0.9000E+00	0.6364E-04	0.1411E-03	0.5592E-02	0.2849E-02	-0.1916E+02	0.2428E+01	0.2284E+01	0.5957E+00	0.1814E+02
3	0.1800E+01	0.6300E-04	0.1397E-03	0.5501E-02	0.2723E-02	-0.2004E+02	0.2457E+01	0.2303E+01	0.6150E+00	0.2098E+02
4	0.2700E+01	0.6353E-04	0.1409E-03	0.4975E-02	0.2630E-02	-0.2037E+02	0.2471E+01	0.2311E+01	0.6249E+00	0.2215E+02
5	0.3600E+01	0.6292E-04	0.1395E-03	0.4260E-02	0.2611E-02	-0.2039E+02	0.2477E+01	0.2311E+01	0.6348E+00	0.2222E+02
6	0.4500E+01	0.6284E-04	0.1393E-03	0.3505E-02	0.2583E-02	-0.2037E+02	0.2481E+01	0.2311E+01	0.6426E+00	0.2215E+02
7	0.5400E+01	0.6242E-04	0.1384E-03	0.2747E-02	0.2576E-02	-0.2027E+02	0.2483E+01	0.2308E+01	0.6505E+00	0.2181E+02
8	0.6300E+01	0.6221E-04	0.1379E-03	0.2020E-02	0.2564E-02	-0.2018E+02	0.2484E+01	0.2306E+01	0.6572E+00	0.2146E+02
9	0.7200E+01	0.6188E-04	0.1372E-03	0.1326E-02	0.2560E-02	-0.2005E+02	0.2485E+01	0.2303E+01	0.6641E+00	0.2101E+02
10	0.8100E+01	0.6160E-04	0.1366E-03	0.6566E-03	0.2553E-02	-0.1991E+02	0.2486E+01	0.2300E+01	0.6711E+00	0.2054E+02
11	0.9000E+01	0.6127E-04	0.1358E-03	0.2306E-04	0.2549E-02	-0.1975E+02	0.2486E+01	0.2296E+01	0.6786E+00	0.2000E+02
12	0.9900E+01	0.6095E-04	0.1351E-03	-0.5728E-03	0.2543E-02	-0.1958E+02	0.2487E+01	0.2292E+01	0.6866E+00	0.1944E+02
13	0.1080E+02	0.6059E-04	0.1343E-03	-0.1130E-02	0.2537E-02	-0.1939E+02	0.2488E+01	0.2289E+01	0.6953E+00	0.1883E+02
14	0.1170E+02	0.6017E-04	0.1334E-03	-0.1654E-02	0.2528E-02	-0.1916E+02	0.2490E+01	0.2284E+01	0.7059E+00	0.1813E+02
15	0.1260E+02	0.5972E-04	0.1324E-03	-0.2137E-02	0.2517E-02	-0.1891E+02	0.2493E+01	0.2280E+01	0.7180E+00	0.1736E+02
16	0.1350E+02	0.5924E-04	0.1313E-03	-0.2575E-02	0.2501E-02	-0.1862E+02	0.2497E+01	0.2275E+01	0.7320E+00	0.1652E+02
17	0.1440E+02	0.5868E-04	0.1301E-03	-0.2970E-02	0.2481E-02	-0.1832E+02	0.2502E+01	0.2270E+01	0.7486E+00	0.1564E+02
18	0.1530E+02	0.5805E-04	0.1287E-03	-0.3318E-02	0.2452E-02	-0.1795E+02	0.2511E+01	0.2264E+01	0.7700E+00	0.1459E+02
19	0.1620E+02	0.5728E-04	0.1270E-03	-0.3647E-02	0.2405E-02	-0.1763E+02	0.2526E+01	0.2260E+01	0.7988E+00	0.1368E+02
20	0.1710E+02	0.5732E-04	0.1271E-03	-0.4013E-02	0.2351E-02	-0.1763E+02	0.2538E+01	0.2260E+01	0.8154E+00	0.1368E+02
21	0.1800E+02	0.6095E-04	0.1351E-03	-0.3881E-02	0.2121E-02	-0.1781E+02	0.2564E+01	0.2262E+01	0.8457E+00	0.1419E+02

X = 0.498392

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.3694E-03	0.1225E-02	0.2590E-03	0.2517E-03	-0.4930E+01	0.2885E+01	0.2208E+01	0.1218E+01	-0.1412E+01
2	0.9000E+00	0.3839E-03	0.1321E-02	0.6804E-03	0.2076E-03	-0.8847E+01	0.3042E+01	0.2322E+01	0.1230E+01	-0.2182E+01
3	0.1800E+01	0.3910E-03	0.1393E-02	0.1138E-02	0.1559E-03	-0.1966E+02	0.3298E+01	0.2538E+01	0.1223E+01	-0.2933E+01
4	0.2700E+01	0.3953E-03	0.1475E-02	0.1806E-02	0.1066E-03	-0.3110E+02	0.3601E+01	0.2806E+01	0.1208E+01	-0.3196E+01
5	0.3600E+01	0.3993E-03	0.1589E-02	0.2897E-02	0.6954E-04	-0.4377E+02	0.3913E+01	0.3083E+01	0.1194E+01	-0.3224E+01
6	0.4500E+01	0.3976E-03	0.1673E-02	0.4137E-02	0.4703E-04	-0.5379E+02	0.4177E+01	0.3317E+01	0.1184E+01	-0.3153E+01
7	0.5400E+01	0.3925E-03	0.1692E-02	0.4846E-02	0.3810E-04	-0.5699E+02	0.4303E+01	0.3433E+01	0.1176E+01	-0.3046E+01
8	0.6300E+01	0.3851E-03	0.1657E-02	0.4831E-02	0.3756E-04	-0.5355E+02	0.4315E+01	0.3451E+01	0.1171E+01	-0.2934E+01
9	0.7200E+01	0.3770E-03	0.1603E-02	0.4517E-02	0.4041E-04	-0.4702E+02	0.4281E+01	0.3429E+01	0.1167E+01	-0.2825E+01
10	0.8100E+01	0.3681E-03	0.1543E-02	0.4199E-02	0.4425E-04	-0.3899E+02	0.4238E+01	0.3398E+01	0.1163E+01	-0.2724E+01
11	0.9000E+01	0.3594E-03	0.1485E-02	0.3935E-02	0.4835E-04	-0.3164E+02	0.4195E+01	0.3367E+01	0.1160E+01	-0.2627E+01
12	0.9900E+01	0.3515E-03	0.1446E-02	0.3909E-02	0.4973E-04	-0.2486E+02	0.4188E+01	0.3366E+01	0.1156E+01	-0.2533E+01
13	0.1080E+02	0.3435E-03	0.1407E-02	0.3934E-02	0.5096E-04	-0.1655E+02	0.4183E+01	0.3367E+01	0.1153E+01	-0.2441E+01
14	0.1170E+02	0.3353E-03	0.1370E-02	0.4063E-02	0.5159E-04	-0.6474E+01	0.4186E+01	0.3375E+01	0.1149E+01	-0.2349E+01
15	0.1260E+02	0.3277E-03	0.1340E-02	0.4338E-02	0.5117E-04	0.3885E+01	0.4200E+01	0.3392E+01	0.1146E+01	-0.2245E+01
16	0.1350E+02	0.3207E-03	0.1320E-02	0.4902E-02	0.4896E-04	0.1635E+02	0.4233E+01	0.3426E+01	0.1142E+01	-0.2126E+01
17	0.1440E+02	0.3136E-03	0.1301E-02	0.5819E-02	0.4622E-04	0.3133E+02	0.4271E+01	0.3465E+01	0.1137E+01	-0.1964E+01
18	0.1530E+02	0.3064E-03	0.1283E-02	0.7828E-02	0.4258E-04	0.4680E+02	0.4319E+01	0.3514E+01	0.1132E+01	-0.1798E+01
19	0.1620E+02	0.3005E-03	0.1279E-02	0.1732E-01	0.3663E-04	0.6093E+02	0.4391E+01	0.3585E+01	0.1125E+01	-0.1510E+01
20	0.1710E+02	0.2853E-03	0.1193E-02	0.1116E-01	0.4292E-04	0.5824E+02	0.4331E+01	0.3547E+01	0.1116E+01	-0.1176E+01
21	0.1800E+02	0.2846E-03	0.1171E-02	0.5415E-02	0.4200E-04	0.4314E+02	0.4307E+01	0.3568E+01	0.1086E+01	0.1321E+01

LAMINAR SEPARATION AT 49.8 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

N H TE GAM F 1	0.14500E+01	0.36939E-03	0.22531E+00	0.20991E-01
N H TE GAM F 2	0.14500E+01	0.38386E-03	0.18229E+00	0.21067E-01
N H TE GAM F 3	0.14500E+01	0.39098E-03	0.10925E+00	0.21113E-01
N H TE GAM F 4	0.14500E+01	0.39532E-03	0.67392E-01	0.21147E-01
N H TE GAM F 5	0.14500E+01	0.39930E-03	0.45259E-01	0.21178E-01
N H TE GAM F 6	0.14500E+01	0.39757E-03	0.26772E-01	0.21174E-01
N H TE GAM F 7	0.14500E+01	0.39250E-03	0.11746E-01	0.21148E-01
N H TE GAM F 8	0.14500E+01	0.38506E-03	-0.31648E-02	0.21107E-01
N H TE GAM F 9	0.14500E+01	0.37705E-03	-0.17048E-01	0.21060E-01
N H TE GAM F 10	0.14500E+01	0.36808E-03	-0.30783E-01	0.21004E-01
N H TE GAM F 11	0.14500E+01	0.35937E-03	-0.42752E-01	0.20949E-01
N H TE GAM F 12	0.14500E+01	0.35148E-03	-0.53329E-01	0.20896E-01
N H TE GAM F 13	0.14500E+01	0.34349E-03	-0.63344E-01	0.20842E-01
N H TE GAM F 14	0.14500E+01	0.33528E-03	-0.72523E-01	0.20783E-01
N H TE GAM F 15	0.14500E+01	0.32769E-03	-0.79540E-01	0.20727E-01
N H TE GAM F 16	0.14500E+01	0.32066E-03	-0.85257E-01	0.20673E-01
N H TE GAM F 17	0.14500E+01	0.31360E-03	-0.90877E-01	0.20616E-01
N H TE GAM F 18	0.14500E+01	0.30641E-03	-0.95930E-01	0.20556E-01
N H TE GAM F 19	0.14500E+01	0.30051E-03	-0.98996E-01	0.20504E-01
N H TE GAM F 20	0.14500E+01	0.28535E-03	-0.10956E+00	0.20366E-01
N H TE GAM F 21	0.14500E+01	0.28456E-03	-0.11441E+00	0.20336E-01

X = 1.009548

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6449E-02	0.9136E-02	-0.8492E-02	0.0000E+00	-0.4695E+01	0.1448E+01	0.1242E+01	0.8444E+00	0.7211E+00
2	0.9000E+00	0.6038E-02	0.8093E-02	-0.8036E-02	0.0000E+00	-0.4489E+01	0.1433E+01	0.1229E+01	0.8428E+00	0.1524E+01
3	0.1800E+01	0.5739E-02	0.7838E-02	-0.7674E-02	0.0000E+00	-0.3870E+01	0.1428E+01	0.1224E+01	0.8431E+00	0.2583E+01
4	0.2700E+01	0.5593E-02	0.7930E-02	-0.7344E-02	0.0000E+00	-0.3831E+01	0.1427E+01	0.1223E+01	0.8428E+00	0.3101E+01
5	0.3600E+01	0.5439E-02	0.7909E-02	-0.7203E-02	0.0000E+00	-0.3839E+01	0.1427E+01	0.1223E+01	0.8422E+00	0.3429E+01
6	0.4500E+01	0.5285E-02	0.7834E-02	-0.7071E-02	0.0000E+00	-0.3825E+01	0.1426E+01	0.1223E+01	0.8414E+00	0.3670E+01

7	0.5400E+01	0.5132E-02	0.7693E-02	-0.6939E-02	0.0000E+00	-0.3832E+01	0.1426E+01	0.1223E+01	0.8406E+00	0.3865E+01
8	0.6300E+01	0.4979E-02	0.7488E-02	-0.6787E-02	0.0000E+00	-0.3841E+01	0.1426E+01	0.1224E+01	0.8398E+00	0.4018E+01
9	0.7200E+01	0.4826E-02	0.7255E-02	-0.6648E-02	0.0000E+00	-0.3811E+01	0.1426E+01	0.1224E+01	0.8389E+00	0.4134E+01
10	0.8100E+01	0.4671E-02	0.7012E-02	-0.6508E-02	0.0000E+00	-0.3722E+01	0.1425E+01	0.1224E+01	0.8379E+00	0.4233E+01
11	0.9000E+01	0.4516E-02	0.6783E-02	-0.6351E-02	0.0000E+00	-0.3656E+01	0.1425E+01	0.1224E+01	0.8368E+00	0.4331E+01
12	0.9900E+01	0.4360E-02	0.6565E-02	-0.6193E-02	0.0000E+00	-0.3590E+01	0.1425E+01	0.1224E+01	0.8357E+00	0.4416E+01
13	0.1080E+02	0.4203E-02	0.6342E-02	-0.6045E-02	0.0000E+00	-0.3462E+01	0.1424E+01	0.1224E+01	0.8344E+00	0.4482E+01
14	0.1170E+02	0.4044E-02	0.6122E-02	-0.5898E-02	0.0000E+00	-0.3252E+01	0.1423E+01	0.1224E+01	0.8329E+00	0.4555E+01
15	0.1260E+02	0.3886E-02	0.5923E-02	-0.5737E-02	0.0000E+00	-0.3089E+01	0.1423E+01	0.1225E+01	0.8312E+00	0.4660E+01
16	0.1350E+02	0.3726E-02	0.5725E-02	-0.5577E-02	0.0000E+00	-0.2928E+01	0.1422E+01	0.1225E+01	0.8295E+00	0.4776E+01
17	0.1440E+02	0.3563E-02	0.5518E-02	-0.5427E-02	0.0000E+00	-0.2641E+01	0.1421E+01	0.1224E+01	0.8277E+00	0.4904E+01
18	0.1530E+02	0.3395E-02	0.5312E-02	-0.5260E-02	0.0000E+00	-0.2201E+01	0.1419E+01	0.1224E+01	0.8258E+00	0.5128E+01
19	0.1620E+02	0.3214E-02	0.5115E-02	-0.5065E-02	0.0000E+00	-0.1694E+01	0.1419E+01	0.1224E+01	0.8254E+00	0.5680E+01
20	0.1710E+02	0.2964E-02	0.4763E-02	-0.4757E-02	0.0000E+00	-0.1948E+00	0.1421E+01	0.1221E+01	0.8333E+00	0.7405E+01
21	0.1800E+02	0.2465E-02	0.4270E-02	-0.4176E-02	0.0000E+00	0.3315E+01	0.1453E+01	0.1222E+01	0.8930E+00	0.1412E+02

X = 2.007763

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4385E-02	0.6458E-02	-0.1094E-03	0.0000E+00	0.1585E+01	0.1293E+01	0.1031E+01	0.9846E+00	-0.9100E+00
2	0.9000E+00	0.4009E-02	0.7208E-02	0.2725E-03	0.0000E+00	0.1346E+01	0.1292E+01	0.1030E+01	0.9850E+00	-0.4909E+00
3	0.1800E+01	0.3735E-02	0.6204E-02	0.1377E-03	0.0000E+00	0.1243E+01	0.1291E+01	0.1029E+01	0.9851E+00	0.8912E-01
4	0.2700E+01	0.3739E-02	0.6323E-02	0.3351E-04	0.0000E+00	0.1183E+01	0.1292E+01	0.1029E+01	0.9851E+00	0.4031E+00
5	0.3600E+01	0.3670E-02	0.6489E-02	0.9327E-04	0.0000E+00	0.1099E+01	0.1292E+01	0.1029E+01	0.9850E+00	0.6280E+00
6	0.4500E+01	0.3565E-02	0.6325E-02	0.9195E-04	0.0000E+00	0.1021E+01	0.1292E+01	0.1029E+01	0.9848E+00	0.8036E+00
7	0.5400E+01	0.3457E-02	0.6191E-02	0.9186E-04	0.0000E+00	0.9383E+00	0.1292E+01	0.1029E+01	0.9847E+00	0.9484E+00
8	0.6300E+01	0.3347E-02	0.5961E-02	0.8650E-04	0.0000E+00	0.8565E+00	0.1292E+01	0.1029E+01	0.9845E+00	0.1063E+01
9	0.7200E+01	0.3233E-02	0.5623E-02	0.6824E-04	0.0000E+00	0.7873E+00	0.1292E+01	0.1029E+01	0.9843E+00	0.1147E+01
10	0.8100E+01	0.3112E-02	0.5242E-02	0.4318E-04	0.0000E+00	0.7381E+00	0.1292E+01	0.1029E+01	0.9841E+00	0.1215E+01
11	0.9000E+01	0.2994E-02	0.5042E-02	0.4050E-04	0.0000E+00	0.6826E+00	0.1292E+01	0.1029E+01	0.9840E+00	0.1281E+01
12	0.9900E+01	0.2877E-02	0.4825E-02	0.3608E-04	0.0000E+00	0.6261E+00	0.1292E+01	0.1029E+01	0.9838E+00	0.1336E+01
13	0.1080E+02	0.2756E-02	0.4516E-02	0.1768E-04	0.0000E+00	0.5892E+00	0.1292E+01	0.1029E+01	0.9837E+00	0.1376E+01
14	0.1170E+02	0.2627E-02	0.4191E-02	-0.4791E-05	0.0000E+00	0.5797E+00	0.1292E+01	0.1029E+01	0.9837E+00	0.1425E+01
15	0.1260E+02	0.2501E-02	0.4071E-02	-0.6425E-06	0.0000E+00	0.5551E+00	0.1292E+01	0.1029E+01	0.9838E+00	0.1507E+01
16	0.1350E+02	0.2376E-02	0.3908E-02	-0.3377E-06	0.0000E+00	0.5269E+00	0.1292E+01	0.1029E+01	0.9840E+00	0.1610E+01
17	0.1440E+02	0.2243E-02	0.3609E-02	-0.1927E-04	0.0000E+00	0.5368E+00	0.1292E+01	0.1029E+01	0.9844E+00	0.1744E+01
18	0.1530E+02	0.2093E-02	0.3304E-02	-0.4028E-04	0.0000E+00	0.5936E+00	0.1293E+01	0.1029E+01	0.9852E+00	0.2012E+01
19	0.1620E+02	0.1918E-02	0.3118E-02	-0.4309E-04	0.0000E+00	0.6449E+00	0.1293E+01	0.1029E+01	0.9869E+00	0.2751E+01
20	0.1710E+02	0.1631E-02	0.2447E-02	-0.6813E-04	0.0000E+00	0.8034E+00	0.1294E+01	0.1027E+01	0.9918E+00	0.5132E+01
21	0.1800E+02	0.1222E-02	0.1811E-02	-0.7147E-04	0.0000E+00	0.9910E+00	0.1301E+01	0.1023E+01	0.1012E+01	0.1209E+02

X = 3.005978

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5142E-02	0.6633E-02	0.1084E-03	0.0000E+00	0.9213E+00	0.1287E+01	0.1019E+01	0.9951E+00	-0.8691E+00
2	0.9000E+00	0.4559E-02	0.6430E-02	-0.3739E-03	0.0000E+00	0.7726E+00	0.1286E+01	0.1018E+01	0.9954E+00	-0.4743E+00
3	0.1800E+01	0.4154E-02	0.5622E-02	-0.2464E-03	0.0000E+00	0.7039E+00	0.1285E+01	0.1017E+01	0.9953E+00	0.7247E-01
4	0.2700E+01	0.4141E-02	0.6158E-02	-0.4995E-04	0.0000E+00	0.6830E+00	0.1285E+01	0.1017E+01	0.9952E+00	0.3684E+00
5	0.3600E+01	0.4009E-02	0.6131E-02	-0.1422E-03	0.0000E+00	0.6379E+00	0.1285E+01	0.1017E+01	0.9952E+00	0.5856E+00
6	0.4500E+01	0.3851E-02	0.5958E-02	-0.1393E-03	0.0000E+00	0.5948E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.7600E+00
7	0.5400E+01	0.3689E-02	0.5805E-02	-0.1448E-03	0.0000E+00	0.5485E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.9070E+00
8	0.6300E+01	0.3529E-02	0.5575E-02	-0.1407E-03	0.0000E+00	0.5026E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.1025E+01
9	0.7200E+01	0.3385E-02	0.5256E-02	-0.1180E-03	0.0000E+00	0.4647E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.1112E+01
10	0.8100E+01	0.3236E-02	0.4926E-02	-0.9223E-04	0.0000E+00	0.4373E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.1182E-01
11	0.9000E+01	0.3089E-02	0.4722E-02	-0.9330E-04	0.0000E+00	0.4053E+00	0.1285E+01	0.1017E+01	0.9950E+00	0.1250E+01
12	0.9900E+01	0.2944E-02	0.4514E-02	-0.8803E-04	0.0000E+00	0.3731E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1308E+01
13	0.1080E+02	0.2810E-02	0.4257E-02	-0.6445E-04	0.0000E+00	0.3529E+00	0.1284E+01	0.1016E+01	0.9948E+00	0.1352E+01
14	0.1170E+02	0.2678E-02	0.3989E-02	-0.3963E-04	0.0000E+00	0.3479E+00	0.1284E+01	0.1016E+01	0.9947E+00	0.1408E+01
15	0.1260E+02	0.2539E-02	0.3855E-02	-0.4795E-04	0.0000E+00	0.3332E+00	0.1284E+01	0.1016E+01	0.9948E+00	0.1501E+01
16	0.1350E+02	0.2402E-02	0.3698E-02	-0.4685E-04	0.0000E+00	0.3173E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1621E+01
17	0.1440E+02	0.2278E-02	0.3468E-02	-0.1946E-04	0.0000E+00	0.3250E+00	0.1284E+01	0.1016E+01	0.9952E+00	0.1779E+01
18	0.1530E+02	0.2166E-02	0.3262E-02	0.1747E-04	0.0000E+00	0.3618E+00	0.1284E+01	0.1016E+01	0.9957E+00	0.2080E+01
19	0.1620E+02	0.2080E-02	0.3233E-02	0.6481E-04	0.0000E+00	0.4012E+00	0.1285E+01	0.1016E+01	0.9967E+00	0.2845E+01
20	0.1710E+02	0.1994E-02	0.2910E-02	0.2110E-03	0.0000E+00	0.5173E+00	0.1285E+01	0.1015E+01	0.9998E+00	0.5200E+01
21	0.1800E+02	0.1091E-02	0.1112E-02	-0.2765E-03	0.0000E+00	0.5202E+00	0.1291E+01	0.1011E+01	0.1017E+01	0.1210E+02

X = 3.050674

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5213E-02	0.6665E-02	0.1100E-03	0.0000E+00	0.9120E+00	0.1287E+01	0.1019E+01	0.9954E+00	-0.8653E+00
2	0.9000E+00	0.4614E-02	0.6321E-02	-0.3782E-03	0.0000E+00	0.7647E+00	0.1286E+01	0.1018E+01	0.9956E+00	-0.4729E+00
3	0.1800E+01	0.4198E-02	0.5550E-02	-0.2500E-03	0.0000E+00	0.6960E+00	0.1285E+01	0.1017E+01	0.9955E+00	0.7146E-01
4	0.2700E+01	0.4181E-02	0.6144E-02	-0.4935E-04	0.0000E+00	0.6754E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.3674E+00
5	0.3600E+01	0.4042E-02	0.6090E-02	-0.1429E-03	0.0000E+00	0.6307E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.5857E+00
6	0.4500E+01	0.3880E-02	0.5918E-02	-0.1392E-03	0.0000E+00	0.5882E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.7614E+00
7	0.5400E+01	0.3712E-02	0.5763E-02	-0.1449E-03	0.0000E+00	0.5425E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.9091E+00
8	0.6300E+01	0.3548E-02	0.5534E-02	-0.1405E-03	0.0000E+00	0.4971E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.1027E+01
9	0.7200E+01	0.3401E-02	0.5222E-02	-0.1174E-03	0.0000E+00	0.4598E+00	0.1285E+01	0.1017E+01	0.9954E+00	0.1113E+01
10	0.8100E+01	0.3251E-02	0.4899E-02	-0.9137E-04	0.0000E+00	0.4327E+00	0.1285E+01	0.1016E+01	0.9953E+00	0.1183E+01
11	0.9000E+01	0.3101E-02	0.4695E-02	-0.9264E-04	0.0000E+00	0.4010E+00	0.1284E+01	0.1016E+01	0.9952E+00	0.1250E+01
12	0.9900E+01	0.2955E-02	0.4489E-02	-0.8723E-04	0.0000E+00	0.3692E+00	0.1284E+01	0.1016E+01	0.9951E+00	0.1308E+01
13	0.1080E+02	0.2819E-02	0.4238E-02	-0.6337E-04	0.0000E+00	0.3493E+00	0.1284E+01	0.1016E+01	0.9950E+00	0.1353E+01
14	0.1170E+02	0.2687E-02	0.3977E-02	-0.3857E-04	0.0000E+00	0.3445E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1409E+01
15	0.1260E+02	0.2547E-02	0.3841E-02	-0.4737E-04	0.0000E+00	0.3299E+00	0.1284E+01	0.1016E+01	0.9950E+00	0.1502E+01
16	0.1350E+02	0.2408E-02	0.3685E-02	-0.4632E-04	0.0000E+00	0.3143E+00	0.1284E+01	0.1016E+01	0.9951E+00	0.1623E+01
17	0.1440E+02	0.2284E-02	0.3462E-02	-0.1873E-04	0.0000E+00	0.3220E+00	0.1284E+01	0.1016E+01	0.9954E+00	0.1781E+01
18	0.1530E+02	0.2175E-02	0.3268E-02	0.1850E-04	0.0000E+00	0.3586E+00	0.1284E+01	0.1016E+01	0.9960E+00	0.2083E+01
19	0.1620E+02	0.2097E-02	0.3253E-02	0.6718E-04	0.0000E+00	0.3984E+00	0.1285E+01	0.1016E+01	0.9969E+00	0.2845E+01
20	0.1710E+02	0.2032E-02	0.2973E-02	0.2223E-03	0.0000E+00	0.5169E+00	0.1285E+01	0.1015E+01	0.9999E+00	0.5199E+01
21	0.1800E+02	0.1081E-02	0.1028E-02	-0.3000E-03	0.0000E+00	0.5140E+00	0.1291E+01	0.1010E+01	0.1017E+01	0.1210E+02

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     451  INTEGRATION    STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
        9  0.11213E-03  21  16   7   0.38568E-05 -0.38584E-04  2  2  3  0.11695E-06  0.03632     3633
       10 -0.13942E-03  13  16   9   0.76449E-05 -0.26178E-04  3  2  3  0.14135E-06  0.03625     3630
       11 -0.17383E-03  14  16   9   0.15784E-04 -0.21297E-04  3  2  3  0.12624E-06  0.03619     3631
       12  0.19849E-03  15  16  13   0.27454E-04 -0.13728E-04  4  2  3  0.10168E-06  0.03609     3628
       13  0.14097E-04  14  16  13   0.39190E-05  0.10050E-04  2  3  3  0.95553E-07  0.03606     3606
       14  0.74697E-04  15  16  13   0.62853E-05  0.12735E-04  2  3  3  0.90268E-07  0.03602     3603
       15  0.12908E-03  15  16  13   0.12073E-04  0.13408E-04  2  3  3  0.85566E-07  0.03597     3592
       16  0.16445E-03  16  16  13   0.21384E-04  0.13778E-04  2  3  3  0.76971E-07  0.03591     3576
 3DBL CALCULATION ITBLX ITBL=       1       2
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UPPER WING SURFACE
BOUNDARY LAYER STARTING NODE UPPER WING IWNODE= 169

X = 0.000879

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5637E-04	0.1250E-03	0.2683E-02	0.2254E-02	-0.1428E+02	0.2565E+01	0.2227E+01	0.8966E+00	0.4664E+01
2	0.9000E+00	0.5001E-04	0.1189E-03	0.2140E-02	0.2175E-02	-0.1376E+02	0.2693E+01	0.2223E+01	0.1039E+01	0.3271E+01
3	0.1800E+01	0.4923E-04	0.1891E-03	0.1751E-02	0.2091E-02	-0.1410E+02	0.2751E+01	0.2225E+01	0.1090E+01	0.4185E+01
4	0.2700E+01	0.4891E-04	0.1884E-03	0.1472E-02	0.2069E-02	-0.1427E+02	0.2770E+01	0.2226E+01	0.1105E+01	0.4638E+01
5	0.3600E+01	0.4878E-04	0.1881E-03	0.1202E-02	0.2059E-02	-0.1437E+02	0.2778E+01	0.2227E+01	0.1112E+01	0.4883E+01
6	0.4500E+01	0.4887E-04	0.1884E-03	0.9501E-03	0.2059E-02	-0.1447E+02	0.2776E+01	0.2228E+01	0.1109E+01	0.5168E+01
7	0.5400E+01	0.4902E-04	0.1887E-03	0.6947E-03	0.2061E-02	-0.1456E+02	0.2771E+01	0.2228E+01	0.1104E+01	0.5484E+01
8	0.6300E+01	0.4924E-04	0.1892E-03	0.4412E-03	0.2066E-02	-0.1466E+02	0.2763E+01	0.2229E+01	0.1096E+01	0.5662E+01
9	0.7200E+01	0.4947E-04	0.1897E-03	0.1836E-03	0.2072E-02	-0.1475E+02	0.2754E+01	0.2230E+01	0.1088E+01	0.5909E+01
10	0.8100E+01	0.4977E-04	0.1103E-03	-0.7222E-04	0.2081E-02	-0.1487E+02	0.2743E+01	0.2231E+01	0.1077E+01	0.6204E+01
11	0.9000E+01	0.5008E-04	0.1110E-03	-0.3322E-03	0.2092E-02	-0.1498E+02	0.2731E+01	0.2232E+01	0.1065E+01	0.6513E+01
12	0.9900E+01	0.5039E-04	0.1117E-03	-0.5982E-03	0.2104E-02	-0.1511E+02	0.2719E+01	0.2233E+01	0.1052E+01	0.6840E+01
13	0.1080E+02	0.5066E-04	0.1123E-03	-0.8768E-03	0.2119E-02	-0.1526E+02	0.2706E+01	0.2234E+01	0.1039E+01	0.7186E+01
14	0.1170E+02	0.5097E-04	0.1130E-03	-0.1147E-02	0.2138E-02	-0.1539E+02	0.2691E+01	0.2235E+01	0.1023E+01	0.7609E+01
15	0.1260E+02	0.5130E-04	0.1137E-03	-0.1432E-02	0.2161E-02	-0.1557E+02	0.2676E+01	0.2237E+01	0.1005E+01	0.8091E+01
16	0.1350E+02	0.5162E-04	0.1144E-03	-0.1732E-02	0.2184E-02	-0.1577E+02	0.2660E+01	0.2238E+01	0.9878E+00	0.8622E+01
17	0.1440E+02	0.5194E-04	0.1152E-03	-0.2051E-02	0.2214E-02	-0.1601E+02	0.2644E+01	0.2241E+01	0.9671E+00	0.9245E+01
18	0.1530E+02	0.5226E-04	0.1161E-03	-0.2389E-02	0.2252E-02	-0.1633E+02	0.2624E+01	0.2244E+01	0.9414E+00	0.1013E+02
19	0.1620E+02	0.5277E-04	0.1170E-03	-0.2775E-02	0.2285E-02	-0.1675E+02	0.2608E+01	0.2249E+01	0.9171E+00	0.1125E+02
20	0.1710E+02	0.5391E-04	0.1195E-03	-0.3224E-02	0.2303E-02	-0.1759E+02	0.2590E+01	0.2259E+01	0.8816E+00	0.1358E+02
21	0.1800E+02	0.5508E-04	0.1221E-03	-0.3286E-02	0.2091E-02	-0.1716E+02	0.2644E+01	0.2254E+01	0.9516E+00	0.1238E+02

X = 0.005335

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1762E-03	0.5797E-03	0.5884E-03	0.3739E-03	0.1642E+02	0.3224E+01	0.2483E+01	0.1218E+01	-0.3113E+01
2	0.9000E+00	0.1869E-03	0.9376E-03	0.1935E+00	0.4239E-04	0.6775E+02	0.4948E+01	0.3621E+01	0.1375E+01	-0.6170E+01
3	0.1800E+01	0.1590E-03	0.6948E-03	0.2240E-02	0.1992E-03	0.2744E+02	0.4198E+01	0.2830E+01	0.1489E+01	-0.8191E+01
4	0.2700E+01	0.1466E-03	0.5726E-03	0.1158E-02	0.2839E-03	0.1389E+02	0.4037E+01	0.2613E+01	0.1544E+01	-0.9017E+01
5	0.3600E+01	0.1416E-03	0.5461E-03	0.9293E-03	0.3122E-03	0.9619E+01	0.4011E+01	0.2558E+01	0.1564E+01	-0.9233E+01
6	0.4500E+01	0.1384E-03	0.5307E-03	0.8579E-03	0.3260E-03	0.8637E+01	0.3996E+01	0.2540E+01	0.1568E+01	-0.9229E+01
7	0.5400E+01	0.1359E-03	0.5178E-03	0.8193E-03	0.3366E-03	0.8206E+01	0.3979E+01	0.2532E+01	0.1566E+01	-0.9151E+01
8	0.6300E+01	0.1334E-03	0.5046E-03	0.7951E-03	0.3478E-03	0.7794E+01	0.3954E+01	0.2524E+01	0.1561E+01	-0.9040E+01
9	0.7200E+01	0.1310E-03	0.4921E-03	0.7641E-03	0.3583E-03	0.7562E+01	0.3929E+01	0.2520E+01	0.1553E+01	-0.8920E+01
10	0.8100E+01	0.1287E-03	0.4791E-03	0.7341E-03	0.3701E-03	0.7342E+01	0.3897E+01	0.2515E+01	0.1543E+01	-0.8776E+01
11	0.9000E+01	0.1262E-03	0.4654E-03	0.7007E-03	0.3838E-03	0.6953E+01	0.3861E+01	0.2509E+01	0.1532E+01	-0.8611E+01
12	0.9900E+01	0.1238E-03	0.4513E-03	0.6657E-03	0.3989E-03	0.6477E+01	0.3822E+01	0.2502E+01	0.1520E+01	-0.8433E+01
13	0.1080E+02	0.1213E-03	0.4373E-03	0.6308E-03	0.4146E-03	0.6034E+01	0.3783E+01	0.2497E+01	0.1507E+01	-0.8250E+01
14	0.1170E+02	0.1188E-03	0.4223E-03	0.5998E-03	0.4339E-03	0.5433E+01	0.3734E+01	0.2488E+01	0.1491E+01	-0.8031E+01
15	0.1260E+02	0.1162E-03	0.4073E-03	0.5692E-03	0.4544E-03	0.4740E+01	0.3684E+01	0.2481E+01	0.1473E+01	-0.7763E+01
16	0.1350E+02	0.1136E-03	0.3919E-03	0.5384E-03	0.4773E-03	0.3994E+01	0.3630E+01	0.2473E+01	0.1453E+01	-0.7463E+01
17	0.1440E+02	0.1110E-03	0.3763E-03	0.4807E-03	0.5031E-03	0.3294E+01	0.3572E+01	0.2465E+01	0.1430E+01	-0.7121E+01
18	0.1530E+02	0.1083E-03	0.3589E-03	0.4334E-03	0.5373E-03	0.2394E+01	0.3500E+01	0.2452E+01	0.1403E+01	-0.6645E+01
19	0.1620E+02	0.1051E-03	0.3393E-03	0.3874E-03	0.5822E-03	0.1106E+01	0.3420E+01	0.2430E+01	0.1376E+01	-0.5979E+01
20	0.1710E+02	0.1006E-03	0.3132E-03	0.3350E-03	0.6584E-03	-0.7866E+00	0.3326E+01	0.2384E+01	0.1357E+01	-0.4608E+01
21	0.1800E+02	0.1023E-03	0.3273E-03	0.3685E-03	0.5723E-03	-0.3498E+00	0.3446E+01	0.2477E+01	0.1357E+01	-0.3560E+01

LAMINAR SEPARATION AT 8.5 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

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N H TE GAM F    1 0.14500E+01 0.17621E-03 0.99921E-01 0.19165E-01
N H TE GAM F    2 0.14500E+01 0.18688E-03 0.10735E+00 0.19368E-01
N H TE GAM F    3 0.14500E+01 0.15898E-03 0.25672E-01 0.18931E-01
N H TE GAM F    4 0.14500E+01 0.14457E-03-0.11263E-01 0.18707E-01
N H TE GAM F    5 0.14500E+01 0.14156E-03-0.25860E-01 0.18613E-01
N H TE GAM F    6 0.14500E+01 0.13845E-03-0.33269E-01 0.18562E-01
N H TE GAM F    7 0.14500E+01 0.13587E-03-0.38338E-01 0.18525E-01
N H TE GAM F    8 0.14500E+01 0.13339E-03-0.42897E-01 0.18491E-01
N H TE GAM F    9 0.14500E+01 0.13100E-03-0.46907E-01 0.18459E-01
N H TE GAM F   10 0.14500E+01 0.12867E-03-0.50553E-01 0.18428E-01
N H TE GAM F   11 0.14500E+01 0.12621E-03-0.54596E-01 0.18392E-01
N H TE GAM F   12 0.14500E+01 0.12376E-03-0.58658E-01 0.18355E-01
N H TE GAM F   13 0.14500E+01 0.12129E-03-0.62513E-01 0.18314E-01
N H TE GAM F   14 0.14500E+01 0.11876E-03-0.66490E-01 0.18269E-01
N H TE GAM F   15 0.14500E+01 0.11620E-03-0.70938E-01 0.18218E-01
N H TE GAM F   16 0.14500E+01 0.11361E-03-0.75405E-01 0.18160E-01
N H TE GAM F   17 0.14500E+01 0.11101E-03-0.79259E-01 0.18094E-01
N H TE GAM F   18 0.14500E+01 0.10826E-03-0.83417E-01 0.18013E-01
N H TE GAM F   19 0.14500E+01 0.10506E-03-0.88850E-01 0.17909E-01
N H TE GAM F   20 0.14500E+01 0.10056E-03-0.97552E-01 0.17767E-01
N H TE GAM F   21 0.14500E+01 0.10232E-03-0.98303E-01 0.17816E-01
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X = 1.001245

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1145E-01	0.1722E-01	0.1006E-01	0.0000E+00	-0.2443E+02	0.1746E+01	0.1481E+01	0.9223E+00	0.7928E+00
2	0.9000E+00	0.1176E-01	0.1658E-01	0.5685E-02	0.0000E+00	-0.2195E+02	0.1713E+01	0.1456E+01	0.9115E+00	0.1013E+01
3	0.1800E+01	0.1170E-01	0.1629E-01	0.4764E-02	0.0000E+00	-0.1938E+02	0.1695E+01	0.1439E+01	0.9077E+00	0.1041E+01
4	0.2700E+01	0.1167E-01	0.1641E-01	0.4979E-02	0.0000E+00	-0.1762E+02	0.1689E+01	0.1434E+01	0.9060E+00	0.9501E+00
5	0.3600E+01	0.1159E-01	0.1657E-01	0.5271E-02	0.0000E+00	-0.1621E+02	0.1689E+01	0.1433E+01	0.9048E+00	0.8185E+00
6	0.4500E+01	0.1145E-01	0.1673E-01	0.5612E-02	0.0000E+00	-0.1499E+02	0.1693E+01	0.1437E+01	0.9038E+00	0.6778E+00
7	0.5400E+01	0.1133E-01	0.1693E-01	0.6028E-02	0.0000E+00	-0.1381E+02	0.1701E+01	0.1443E+01	0.9029E+00	0.5358E+00

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
8	0.6300E+01	0.1123E-01	0.1717E-01	0.6524E-02	0.0000E+00	-0.1267E+02	0.1711E+01	0.1453E+01	0.9022E+00	0.4067E+00
9	0.7200E+01	0.1116E-01	0.1746E-01	0.7069E-02	0.0000E+00	-0.1160E+02	0.1723E+01	0.1463E+01	0.9014E+00	0.3005E+00
10	0.8100E+01	0.1110E-01	0.1774E-01	0.7580E-02	0.0000E+00	-0.1059E+02	0.1737E+01	0.1476E+01	0.9004E+00	0.2060E+00
11	0.9000E+01	0.1101E-01	0.1803E-01	0.8126E-02	0.0000E+00	-0.9488E+01	0.1754E+01	0.1491E+01	0.8995E+00	0.1067E+00
12	0.9900E+01	0.1090E-01	0.1831E-01	0.8747E-02	0.0000E+00	-0.8403E+01	0.1774E+01	0.1510E+01	0.8984E+00	0.1202E-01
13	0.1080E+02	0.1076E-01	0.1858E-01	0.9437E-02	0.0000E+00	-0.7492E+01	0.1799E+01	0.1533E+01	0.8972E+00	-0.6948E-01
14	0.1170E+02	0.1059E-01	0.1877E-01	0.9978E-02	0.0000E+00	-0.6804E+01	0.1827E+01	0.1559E+01	0.8956E+00	-0.1668E+00
15	0.1260E+02	0.1037E-01	0.1887E-01	0.1060E-01	0.0000E+00	-0.6063E+01	0.1858E+01	0.1588E+01	0.8939E+00	-0.3228E+00
16	0.1350E+02	0.1012E-01	0.1891E-01	0.1130E-01	0.0000E+00	-0.5429E+01	0.1890E+01	0.1618E+01	0.8920E+00	-0.5450E+00
17	0.1440E+02	0.9892E-02	0.1895E-01	0.1200E-01	0.0000E+00	-0.5313E+01	0.1924E+01	0.1650E+01	0.8897E+00	-0.8736E+00
18	0.1530E+02	0.9682E-02	0.1908E-01	0.1268E-01	0.0000E+00	-0.6002E+01	0.1965E+01	0.1689E+01	0.8872E+00	-0.1506E+01
19	0.1620E+02	0.9475E-02	0.1947E-01	0.1353E-01	0.0000E+00	-0.7677E+01	0.2016E+01	0.1736E+01	0.8854E+00	-0.2848E+01
20	0.1710E+02	0.8635E-02	0.1774E-01	0.1107E-01	0.0000E+00	-0.1149E+02	0.1994E+01	0.1714E+01	0.8895E+00	-0.6111E+01
21	0.1800E+02	0.5558E-02	0.9864E-02	0.5514E-02	0.0000E+00	-0.1436E+02	0.1782E+01	0.1489E+01	0.9486E+00	-0.1388E+02

X = 2.014229

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.9701E-02	0.8908E-02	-0.1458E-03	0.0000E+00	-0.6349E+01	0.1311E+01	0.1055E+01	0.9842E+00	0.4559E+00
2	0.9000E+00	0.8827E-02	0.1469E-02	-0.1226E-02	0.0000E+00	-0.6119E+01	0.1309E+01	0.1053E+01	0.9843E+00	0.2319E+00
3	0.1800E+01	0.8918E-02	0.2848E-02	-0.9852E-03	0.0000E+00	-0.5917E+01	0.1312E+01	0.1055E+01	0.9845E+00	-0.1177E+00
4	0.2700E+01	0.8794E-02	0.3414E-02	-0.9114E-03	0.0000E+00	-0.5709E+01	0.1314E+01	0.1056E+01	0.9847E+00	-0.3666E+00
5	0.3600E+01	0.8649E-02	0.3767E-02	-0.8558E-03	0.0000E+00	-0.5499E+01	0.1316E+01	0.1057E+01	0.9848E+00	-0.5647E+00
6	0.4500E+01	0.8506E-02	0.4182E-02	-0.7965E-03	0.0000E+00	-0.5285E+01	0.1318E+01	0.1058E+01	0.9848E+00	-0.7317E+00
7	0.5400E+01	0.8391E-02	0.4770E-02	-0.7148E-03	0.0000E+00	-0.5067E+01	0.1320E+01	0.1059E+01	0.9848E+00	-0.8798E+00
8	0.6300E+01	0.8305E-02	0.5479E-02	-0.6261E-03	0.0000E+00	-0.4861E+01	0.1322E+01	0.1060E+01	0.9847E+00	-0.1006E+01
9	0.7200E+01	0.8231E-02	0.5907E-02	-0.5874E-03	0.0000E+00	-0.4684E+01	0.1324E+01	0.1061E+01	0.9846E+00	-0.1108E+01
10	0.8100E+01	0.8141E-02	0.6066E-02	-0.5700E-03	0.0000E+00	-0.4514E+01	0.1326E+01	0.1063E+01	0.9845E+00	-0.1197E+01
11	0.9000E+01	0.8052E-02	0.6433E-02	-0.5152E-03	0.0000E+00	-0.4330E+01	0.1327E+01	0.1064E+01	0.9843E+00	-0.1288E+01
12	0.9900E+01	0.7960E-02	0.7056E-02	-0.4302E-03	0.0000E+00	-0.4160E+01	0.1329E+01	0.1065E+01	0.9841E+00	-0.1373E+01
13	0.1080E+02	0.7845E-02	0.7467E-02	-0.3842E-03	0.0000E+00	-0.4042E+01	0.1331E+01	0.1067E+01	0.9839E+00	-0.1447E+01
14	0.1170E+02	0.7687E-02	0.7510E-02	-0.3586E-03	0.0000E+00	-0.3958E+01	0.1332E+01	0.1067E+01	0.9838E+00	-0.1537E+01
15	0.1260E+02	0.7534E-02	0.7906E-02	-0.2559E-03	0.0000E+00	-0.3873E+01	0.1333E+01	0.1069E+01	0.9837E+00	-0.1674E+01
16	0.1350E+02	0.7414E-02	0.8782E-02	-0.6840E-04	0.0000E+00	-0.3864E+01	0.1335E+01	0.1070E+01	0.9838E+00	-0.1858E+01
17	0.1440E+02	0.7334E-02	0.9584E-02	0.1153E-03	0.0000E+00	-0.4052E+01	0.1337E+01	0.1072E+01	0.9841E+00	-0.2103E+01
18	0.1530E+02	0.7285E-02	0.9883E-02	0.1967E-03	0.0000E+00	-0.4469E+01	0.1339E+01	0.1074E+01	0.9848E+00	-0.2527E+01
19	0.1620E+02	0.7261E-02	0.8567E-02	-0.1406E-03	0.0000E+00	-0.4987E+01	0.1340E+01	0.1075E+01	0.9864E+00	-0.3378E+01
20	0.1710E+02	0.7284E-02	0.5660E-02	-0.9111E-03	0.0000E+00	-0.4869E+01	0.1343E+01	0.1074E+01	0.9908E+00	-0.5458E+01
21	0.1800E+02	0.6134E-02	0.7888E-02	0.3025E-03	0.0000E+00	-0.3546E+01	0.1353E+01	0.1071E+01	0.1010E+01	-0.1162E+02

X = 3.014572

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5926E-02	0.7334E-02	-0.2739E-03	0.0000E+00	-0.3469E+01	0.1278E+01	0.1019E+01	0.9958E+00	0.4537E+00
2	0.9000E+00	0.5420E-02	0.2189E-02	0.8256E-03	0.0000E+00	-0.3272E+01	0.1278E+01	0.1019E+01	0.9957E+00	0.2194E+00
3	0.1800E+01	0.5721E-02	0.2891E-02	0.4403E-03	0.0000E+00	-0.3170E+01	0.1281E+01	0.1020E+01	0.9955E+00	-0.1202E+00
4	0.2700E+01	0.5870E-02	0.3633E-02	0.4979E-03	0.0000E+00	-0.3069E+01	0.1283E+01	0.1021E+01	0.9953E+00	-0.3711E+00
5	0.3600E+01	0.5905E-02	0.3907E-02	0.4381E-03	0.0000E+00	-0.2955E+01	0.1284E+01	0.1022E+01	0.9951E+00	-0.5749E+00
6	0.4500E+01	0.5969E-02	0.4390E-02	0.4422E-03	0.9000E+00	-0.2852E+01	0.1286E+01	0.1023E+01	0.9950E+00	-0.7476E+00
7	0.5400E+01	0.6048E-02	0.4885E-02	0.3787E-03	0.0000E+00	-0.2741E+01	0.1288E+01	0.1024E+01	0.9948E+00	-0.9001E+00
8	0.6300E+01	0.6135E-02	0.5549E-02	0.3225E-03	0.0000E+00	-0.2639E+01	0.1290E+01	0.1025E+01	0.9947E+00	-0.1030E+01
9	0.7200E+01	0.6225E-02	0.5942E-02	0.3038E-03	0.0000E+00	-0.2549E+01	0.1291E+01	0.1026E+01	0.9946E+00	-0.1134E+01
10	0.8100E+01	0.6248E-02	0.6074E-02	0.2835E-03	0.0000E+00	-0.2460E+01	0.1293E+01	0.1027E+01	0.9945E+0C	-0.1222E+01
11	0.9000E+01	0.6298E-02	0.6461E-02	0.2693E-03	0.0000E+00	-0.2373E+01	0.1294E+01	0.1028E+C1	0.9944E+00	-0.1308E+01
12	0.9900E+01	0.6335E-02	0.6923E-02	0.1887E-03	0.0000E+00	-0.2284E+01	0.1296E+01	0.1029E+01	0.9944E+00	-0.1388E+01
13	0.1080E+02	0.6333E-02	0.7292E-02	0.1602E-03	0.0000E+00	-0.2223E+01	0.1297E+01	0.1030E+01	0.9944E+00	-0.1453E+01
14	0.1170E+02	0.6274E-02	0.7381E-02	0.1761E-03	0.0000E+00	-0.2178E+01	0.1299E+01	0.1031E+01	0.9944E+00	-0.1529E+01
15	0.1260E+02	0.6213E-02	0.7626E-02	0.1052E-03	0.0000E+00	-0.2121E+01	0.1300E+01	0.1032E+01	0.9946E+00	-0.1647E+01
16	0.1350E+02	0.6161E-02	0.8140E-02	-0.6138E-04	0.0000E+00	-0.2096E+01	0.1302E+01	0.1033E+01	0.9949E+00	-0.1810E+01
17	0.1440E+02	0.6107E-02	0.8635E-02	-0.2038E-03	0.0000E+00	-0.2177E+01	0.1303E+01	0.1034E+01	0.9954E+00	-0.2035E+01
18	0.1530E+02	0.6040E-02	0.8786E-02	-0.2450E-03	0.0000E+00	-0.2376E+01	0.1304E+01	0.1035E+01	0.9961E+00	-0.2454E+01
19	0.1620E+02	0.5976E-02	0.6926E-02	-0.6781E-03	0.0000E+00	-0.2648E+01	0.1305E+01	0.1036E+01	0.9969E+00	-0.3283E+01
20	0.1710E+02	0.6787E-02	0.1001E-01	0.1819E-02	0.0000E+00	-0.3000E+01	0.1309E+01	0.1039E+01	0.9991E+00	-0.5252E+01
21	0.1800E+02	0.5668E-02	0.8005E-02	-0.1441E-03	0.0000E+00	-0.2044E+01	0.1324E+01	0.1042E+01	0.1014E+01	-0.1136E+02

X = 3.059262

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5691E-02	0.7256E-02	-0.2708E-03	0.0000E+00	-0.3399E+01	0.1277E+01	0.1018E+01	0.9961E+00	0.4534E+00
2	0.9000E+00	0.5216E-02	0.2428E-02	0.8242E-03	0.0000E+00	-0.3202E+01	0.1277E+01	0.1018E+01	0.9959E+00	0.2181E+00
3	0.1800E+01	0.5526E-02	0.3016E-02	0.4276E-03	0.0000E+00	-0.3103E+01	0.1280E+01	0.1019E+01	0.9957E+00	-0.1219E+00
4	0.2700E+01	0.5692E-02	0.3777E-02	0.4928E-03	0.0000E+00	-0.3006E+01	0.1282E+01	0.1020E+01	0.9955E+00	-0.3727E+00
5	0.3600E+01	0.5740E-02	0.4034E-02	0.4347E-03	0.0C00E+00	-0.2895E+01	0.1284E+01	0.1021E+01	0.9953E+00	-0.5760E+00
6	0.4500E+01	0.5816E-02	0.4518E-02	0.4417E-03	0.0000E+00	-0.2795E+01	0.1285E+01	0.1022E+01	0.9952E+00	-0.7481E+00
7	0.5400E+01	0.5907E-02	0.4995E-02	0.3787E-03	0.0030E+00	-0.2687E+01	0.1287E+01	0.1023E+01	0.9950E+00	-0.9001E+00
8	0.6300E+01	0.6004E-02	0.5643E-02	0.3229E-03	0.0000E+00	-0.2588E+01	0.1289E+01	0.1024E+01	0.9949E+00	-0.1030E+01
9	0.7200E+01	0.6105E-02	0.6031E-02	0.3052E-03	0.0000E+00	-0.2500E+01	0.1291E+01	0.1025E+01	0.9948E+00	-0.1133E+01
10	0.8100E+01	0.6136E-02	0.6157E-02	0.2860E-03	0.0000E+00	-0.2414E+01	0.1292E+01	0.1026E+01	0.9947E+00	-0.1221E+01
11	0.9000E+01	0.6194E-02	0.6540E-02	0.2734E-03	0.0000E+00	-0.2329E+01	0.1294E+01	0.1027E+01	0.9946E+00	-0.1307E+01
12	0.9900E+01	0.6240E-02	0.6978E-02	0.1929E-03	0.0000E+00	-0.2241E+01	0.1295E+01	0.1028E+01	0.9946E+00	-0.1386E+01
13	0.1080E+02	0.6246E-02	0.7340E-02	0.1649E-03	0.0000E+00	-0.2181E+01	0.1297E+01	0.1029E+01	0.9946E+00	-0.1451E+01
14	0.1170E+02	0.6194E-02	0.7433E-02	0.1831E-03	0.0000E+00	-0.2136E+01	0.1298E+01	0.1030E+01	0.9947E+00	-0.1526E+01
15	0.1260E+02	0.6139E-02	0.7658E-02	0.1146E-03	0.0000E+00	-0.2078E+01	0.1299E+01	0.1031E+01	0.9949E+00	-0.1643E+01
16	0.1350E+02	0.6091E-02	0.8124E-02	-0.4985E-04	0.0000E+00	-0.2051E+01	0.1301E+01	0.1032E+01	0.9952E+00	-0.1805E+01
17	0.1440E+02	0.6038E-02	0.8579E-02	-0.1895E-03	0.0000E+00	-0.2126E+01	0.1302E+01	0.1033E+01	0.9958E+00	-0.2029E+01
18	0.1530E+02	0.5970E-02	0.8719E-02	-0.2225E-03	0.0000E+00	-0.2315E+01	0.1304E+01	0.1034E+01	0.9966E+00	-0.2449E+01
19	0.1620E+02	0.5892E-02	0.6721E-02	-0.7247E-03	0.0000E+00	-0.2571E+01	0.1304E+01	0.1035E+01	0.9974E+00	-0.3280E+01
20	0.1710E+02	0.6730E-02	0.1055E-01	0.1847E-02	0.0000E+00	-0.2940E+01	0.1308E+01	0.1038E+01	0.9994E+00	-0.5249E+01
21	0.1800E+02	0.5604E-02	0.7964E-02	-0.1365E-03	0.0000E+00	-0.2003E+01	0.1324E+01	0.1041E+01	0.1015E+01	-0.1136E+02

379 INTEGRATION STEP

SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00C00
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

LOWER WING SURFACE
BOUNDARY LAYER STARTING NODE LOWER WING IWNODE= 153

X = 0.006751

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6476E-04	0.1480E-03	0.5615E-02	0.2833E-02	-0.1822E+02	0.2405E+01	0.2268E+01	0.5828E+00	0.1534E+02
2	0.9000E+00	0.6299E-04	0.1397E-03	0.5559E-02	0.2879E-02	-0.1986E+02	0.2427E+01	0.2282E+01	0.5969E+00	0.1782E+02
3	0.1800E+01	0.6314E-04	0.1408E-03	0.5483E-02	0.2708E-02	-0.2005E+02	0.2459E+01	0.2303E+01	0.6167E+00	0.2102E+02
4	0.2700E+01	0.6311E-04	0.1395E-03	0.5436E-02	0.2637E-02	-0.2032E+02	0.2472E+01	0.2310E+01	0.6281E+00	0.2198E+02
5	0.3600E+01	0.6273E-04	0.1391E-03	0.4215E-02	0.2668E-02	-0.2035E+02	0.2478E+01	0.2310E+01	0.6381E+00	0.2208E+02
6	0.4500E+01	0.6248E-04	0.1385E-03	0.3454E-02	0.2587E-02	-0.2031E+02	0.2481E+01	0.2309E+01	0.6466E+00	0.2192E+02
7	0.5400E+01	0.6211E-04	0.1377E-03	0.2697E-02	0.2577E-02	-0.2020E+02	0.2483E+01	0.2307E+01	0.6547E+00	0.2156E+02
8	0.6300E+01	0.6184E-04	0.1371E-03	0.1974E-02	0.2567E-02	-0.2009E+02	0.2485E+01	0.2304E+01	0.6620E+00	0.2115E+02
9	0.7200E+01	0.6151E-04	0.1364E-03	0.1284E-02	0.2561E-02	-0.1995E+02	0.2486E+01	0.2301E+01	0.6694E+00	0.2068E+02
10	0.8100E+01	0.6121E-04	0.1357E-03	0.6227E-03	0.2555E-02	-0.1980E+02	0.2486E+01	0.2297E+01	0.6770E+00	0.2016E+02
11	0.9000E+01	0.6088E-04	0.1350E-03	-0.2078E-05	0.2549E-02	-0.1963E+02	0.2487E+01	0.2293E+01	0.6850E+00	0.1960E+02
12	0.9900E+01	0.6056E-04	0.1343E-03	-0.5874E-03	0.2542E-02	-0.1945E+02	0.2488E+01	0.2290E+01	0.6933E+00	0.1902E+02
13	0.1080E+02	0.6021E-04	0.1335E-03	-0.1134E-02	0.2534E-02	-0.1925E+02	0.2490E+01	0.2286E+01	0.7024E+00	0.1841E+02
14	0.1170E+02	0.5979E-04	0.1326E-03	-0.1649E-02	0.2524E-02	-0.1902E+02	0.2492E+01	0.2282E+01	0.7133E+00	0.1778E+02
15	0.1260E+02	0.5934E-04	0.1316E-03	-0.2123E-02	0.2512E-02	-0.1876E+02	0.2495E+01	0.2277E+01	0.7258E+00	0.1693E+02
16	0.1350E+02	0.5886E-04	0.1305E-03	-0.2555E-02	0.2496E-02	-0.1849E+02	0.2499E+01	0.2272E+01	0.7400E+00	0.1611E+02
17	0.1440E+02	0.5830E-04	0.1292E-03	-0.2943E-02	0.2475E-02	-0.1818E+02	0.2506E+01	0.2268E+01	0.7572E+00	0.1522E+02
18	0.1530E+02	0.5763E-04	0.1278E-03	-0.3287E-02	0.2444E-02	-0.1781E+02	0.2515E+01	0.2262E+01	0.7797E+00	0.1418E+02
19	0.1620E+02	0.5681E-04	0.1259E-03	-0.3594E-02	0.2399E-02	-0.1743E+02	0.2531E+01	0.2257E+01	0.8094E+00	0.1312E+02
20	0.1710E+02	0.5669E-04	0.1255E-03	-0.3918E-02	0.2329E-02	-0.1731E+02	0.2550E+01	0.2255E+01	0.8370E+00	0.1279E+02
21	0.1800E+02	0.5970E-04	0.1324E-03	-0.3825E-02	0.2102E-02	-0.1755E+02	0.2582E+01	0.2259E+01	0.8732E+00	0.1345E+02

X = 0.492371

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.3604E-03	0.1173E-02	0.1857E-03	0.2593E-03	-0.3138E+01	0.2882E+01	0.2201E+01	0.1222E+01	-0.1350E+01
2	0.9000E+00	0.3763E-03	0.1288E-02	0.5380E-03	0.2198E-03	-0.5852E+01	0.3008E+01	0.2286E+01	0.1237E+01	-0.2173E+01
3	0.1800E+01	0.3826E-03	0.1344E-02	0.9271E-03	0.1707E-03	-0.1541E+02	0.3240E+01	0.2480E+01	0.1231E+01	-0.2967E+01
4	0.2700E+01	0.3861E-03	0.1403E-02	0.1487E-02	0.1242E-03	-0.2465E+02	0.3503E+01	0.2712E+01	0.1217E+01	-0.3264E+01
5	0.3600E+01	0.3902E-03	0.1492E-02	0.2004E-02	0.8860E-04	-0.3343E+02	0.3755E+01	0.2938E+01	0.1203E+01	-0.3315E+01
6	0.4500E+01	0.3886E-03	0.1537E-02	0.2467E-02	0.7056E-04	-0.3827E+02	0.3922E+01	0.3091E+01	0.1193E+01	-0.3258E+01
7	0.5400E+01	0.3835E-03	0.1532E-02	0.2608E-02	0.6508E-04	-0.3834E+02	0.3984E+01	0.3152E+01	0.1186E+01	-0.3163E+01
8	0.6300E+01	0.3761E-03	0.1496E-02	0.2547E-02	0.6573E-04	-0.3595E+02	0.3985E+01	0.3161E+01	0.1181E+01	-0.3059E+01
9	0.7200E+01	0.3682E-03	0.1452E-02	0.2431E-02	0.6853E-04	-0.3199E+02	0.3966E+01	0.3151E+01	0.1177E+01	-0.2958E+01
10	0.8100E+01	0.3598E-03	0.1406E-02	0.2292E-02	0.7102E-04	-0.2830E+02	0.3948E+01	0.3141E+01	0.1173E+01	-0.2865E+01
11	0.9000E+01	0.3515E-03	0.1361E-02	0.2147E-02	0.7305E-04	-0.2515E+02	0.3927E+01	0.3128E+01	0.1169E+01	-0.2775E+01
12	0.9900E+01	0.3438E-03	0.1325E-02	0.2016E-02	0.7698E-04	-0.2200E+02	0.3921E+01	0.3128E+01	0.1166E+01	-0.2687E+01
13	0.1080E+02	0.3360E-03	0.1290E-02	0.2201E-02	0.7881E-04	-0.1831E+02	0.3917E+01	0.3130E+01	0.1163E+01	-0.2598E+01
14	0.1170E+02	0.3281E-03	0.1254E-02	0.2209E-02	0.8022E-04	-0.1397E+02	0.3918E+01	0.3136E+01	0.1159E+01	-0.2504E+01
15	0.1260E+02	0.3208E-03	0.1227E-02	0.2287E-02	0.8028E-04	-0.9656E+01	0.3930E+01	0.3151E+01	0.1155E+01	-0.2393E+01
16	0.1350E+02	0.3141E-03	0.1207E-02	0.2415E-02	0.7894E-04	-0.4849E+01	0.3953E+01	0.3176E+01	0.1151E+01	-0.2259E+01
17	0.1440E+02	0.3074E-03	0.1187E-02	0.2362E-02	0.7701E-04	0.2131E+01	0.3980E+01	0.3206E+01	0.1147E+01	-0.2096E+01
18	0.1530E+02	0.3005E-03	0.1178E-02	0.2800E-02	0.7342E-04	0.1219E+02	0.4023E+01	0.3248E+01	0.1142E+01	-0.1872E+01
19	0.1620E+02	0.2963E-03	0.1200E-02	0.4723E-02	0.5810E-04	0.3376E+02	0.4174E+01	0.3384E+01	0.1136E+01	-0.1529E+01
20	0.1710E+02	0.2860E-03	0.1224E-02	0.1639E-01	0.3692E-04	0.6069E+02	0.4413E+01	0.3599E+01	0.1128E+01	-0.1210E+01
21	0.1800E+02	0.2849E-03	0.1142E-02	0.2895E-02	0.5325E-04	0.8473E+01	0.4195E+01	0.3465E+01	0.1091E+01	0.8198E+00

LAMINAR SEPARATION AT 49.2 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

N	H	TE	GAM	F	1	0.14500E+01	0.36040E-03	0.22198E+00	0.20933E-01
N	H	TE	GAM	F	2	0.14500E+01	0.37632E-03	0.18934E+00	0.21019E-01
N	H	TE	GAM	F	3	0.14500E+01	0.38256E-03	0.11224E+00	0.21059E-01
N	H	TE	GAM	F	4	0.14500E+01	0.38614E-03	0.70853E-01	0.21090E-01
N	H	TE	GAM	F	5	0.14500E+01	0.39021E-03	0.47744E-01	0.21121E-01
N	H	TE	GAM	F	6	0.14500E+01	0.38860E-03	0.29542E-01	0.21118E-01
N	H	TE	GAM	F	7	0.14500E+01	0.38345E-03	0.14298E-01	0.21091E-01
N	H	TE	GAM	F	8	0.14500E+01	0.37613E-03	-0.49117E-03	0.21049E-01
N	H	TE	GAM	F	9	0.14500E+01	0.36821E-03	-0.14414E-01	0.21002E-01
N	H	TE	GAM	F	10	0.14500E+01	0.35981E-03	-0.27839E-01	0.20949E-01
N	H	TE	GAM	F	11	0.14500E+01	0.35153E-03	-0.39752E-01	0.20895E-01
N	H	TE	GAM	F	12	0.14500E+01	0.34376E-03	-0.50479E-01	0.20843E-01
N	H	TE	GAM	F	13	0.14500E+01	0.33600E-03	-0.60039E-01	0.20789E-01
N	H	TE	GAM	F	14	0.14500E+01	0.32805E-03	-0.69456E-01	0.20731E-01
N	H	TE	GAM	F	15	0.14500E+01	0.32082E-03	-0.76425E-01	0.20677E-01
N	H	TE	GAM	F	16	0.14500E+01	0.31418E-03	-0.81818E-01	0.20624E-01
N	H	TE	GAM	F	17	0.14500E+01	0.30742E-03	-0.86730E-01	0.20570E-01
N	H	TE	GAM	F	18	0.14500E+01	0.30051E-03	-0.90454E-01	0.20511E-01
N	H	TE	GAM	F	19	0.14500E+01	0.29633E-03	-0.91165E-01	0.20474E-01
N	H	TE	GAM	F	20	0.14500E+01	0.28600E-03	-0.10341E+00	0.20379E-01
N	H	TE	GAM	F	21	0.14500E+01	0.28493E-03	-0.11942E+00	0.20344E-01

X = 1.005614

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5083E-02	0.7884E-02	-0.2699E-02	0.0000E+00	-0.4078E+01	0.1436E+01	0.1187E+01	0.9307E+00	0.9882E+00
2	0.9000E+00	0.4889E-02	0.6433E-02	-0.2964E-02	0.0000E+00	-0.4212E+01	0.1426E+01	0.1184E+01	0.9197E+00	0.1531E+01
3	0.1800E+01	0.4691E-02	0.6288E-02	-0.3041E-02	0.0000E+00	-0.3827E+01	0.1423E+01	0.1183E+01	0.9158E+00	0.2394E+01
4	0.2700E+01	0.4586E-02	0.6405E-02	-0.2964E-02	0.0000E+00	-0.3809E+01	0.1422E+01	0.1183E+01	0.9141E+00	0.2860E+01
5	0.3600E+01	0.4467E-02	0.6399E-02	-0.2919E-02	0.0000E+00	-0.3816E+01	0.1421E+01	0.1183E+01	0.9128E+00	0.3156E+01
6	0.4500E+01	0.4354E-02	0.6396E-02	-0.2888E-02	0.0000E+00	-0.3805E+01	0.1422E+01	0.1184E+01	0.9118E+00	0.3370E+01
7	0.5400E+01	0.4227E-02	0.6221E-02	-0.2827E-02	0.0000E+00	-0.3803E+01	0.1422E+01	0.1184E+01	0.9109E+00	0.3540E+01
8	0.6300E+01	0.4098E-02	0.6046E-02	-0.2772E-02	0.0000E+00	-0.3800E+01	0.1421E+01	0.1184E+01	0.9102E+00	0.3673E+01
9	0.7200E+01	0.3968E-02	0.5854E-02	-0.2715E-02	0.0000E+00	-0.3763E+01	0.1421E+01	0.1184E+01	0.9094E+00	0.3773E+01
10	0.8100E+01	0.3837E-02	0.5661E-02	-0.2669E-02	0.0000E+00	-0.3674E+01	0.1420E+01	0.1184E+01	0.9084E+00	0.3859E+01
11	0.9000E+01	0.3706E-02	0.5478E-02	-0.2604E-02	0.0000E+00	-0.3604E+01	0.1420E+01	0.1184E+01	0.9075E+00	0.3943E+01
12	0.9900E+01	0.3575E-02	0.5299E-02	-0.2543E-02	0.0000E+00	-0.3533E+01	0.1419E+01	0.1184E+01	0.9065E+00	0.4016E+01
13	0.1080E+02	0.3443E-02	0.5115E-02	-0.2493E-02	0.0000E+00	-0.3407E+01	0.1418E+01	0.1184E+01	0.9053E+00	0.4074E+01
14	0.1170E+02	0.3310E-02	0.4933E-02	-0.2450E-02	0.0000E+00	-0.3210E+01	0.1417E+01	0.1184E+01	0.9037E+00	0.4144E+01
15	0.1260E+02	0.3181E-02	0.4774E-02	-0.2384E-02	0.0000E+00	-0.3049E+01	0.1416E+01	0.1184E+01	0.9021E+00	0.4249E+01
16	0.1350E+02	0.3049E-02	0.4613E-02	-0.2314E-02	0.0000E+00	-0.2899E+01	0.1416E+01	0.1184E+01	0.9002E+00	0.4373E+01
17	0.1440E+02	0.2916E-02	0.4443E-02	-0.2266E-02	0.0000E+00	-0.2637E+01	0.1414E+01	0.1184E+01	0.8979E+00	0.4533E+01

18	0.1530E+02	0.2782E-02	0.4279E-02	-0.2225E-02	0.0000E+00	-0.2234E+01	0.1413E+01	0.1184E+01	0.8953E+00	0.4830E+01
19	0.1620E+02	0.2653E-02	0.4180E-02	-0.2207E-02	0.0000E+00	-0.1797E+01	0.1413E+01	0.1185E+01	0.8934E+00	0.5438E+01
20	0.1710E+02	0.2491E-02	0.4060E-02	-0.2257E-02	0.0000E+00	-0.6372E+00	0.1416E+01	0.1185E+01	0.8974E+00	0.6895E+01
21	0.1800E+02	0.2082E-02	0.3604E-02	-0.1863E-02	0.0000E+00	0.2016E+01	0.1451E+01	0.1186E+01	0.9552E+00	0.1225E+02

X = 2.000733

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4384E-02	0.6296E-02	-0.7586E-04	0.0000E+00	0.1316E+01	0.1293E+01	0.1031E+01	0.9839E+00	-0.5739E+00
2	0.9000E+00	0.4060E-02	0.6795E-02	0.2243E-03	0.0000E+00	0.1263E+01	0.1292E+01	0.1030E+01	0.9841E+00	-0.2807E+00
3	0.1800E+01	0.3788E-02	0.6533E-02	0.3160E-03	0.0000E+00	0.1063E+01	0.1291E+01	0.1029E+01	0.9842E+00	0.1943E+00
4	0.2700E+01	0.3739E-02	0.6325E-02	0.1619E-03	0.0000E+00	0.9431E+00	0.1292E+01	0.1029E+01	0.9844E+00	0.4686E+00
5	0.3600E+01	0.3648E-02	0.6194E-02	0.1547E-03	0.0000E+00	0.8295E+00	0.1292E+01	0.1029E+01	0.9845E+00	0.6626E+00
6	0.4500E+01	0.3544E-02	0.5918E-02	0.1224E-03	0.0000E+00	0.7348E+00	0.1292E+01	0.1029E+01	0.9846E+00	0.8147E+00
7	0.5400E+01	0.3434E-02	0.5763E-02	0.1141E-03	0.0000E+00	0.6370E+00	0.1292E+01	0.1029E+01	0.9846E+00	0.9422E+00
8	0.6300E+01	0.3322E-02	0.5518E-02	0.1008E-03	0.0000E+00	0.5423E+00	0.1292E+01	0.1029E+01	0.9845E+00	0.1044E+01
9	0.7200E+01	0.3206E-02	0.5181E-02	0.7183E-04	0.0000E+00	0.4663E+00	0.1292E+01	0.1029E+01	0.9844E+00	0.1120E+01
10	0.8100E+01	0.3085E-02	0.4831E-02	0.4069E-04	0.0000E+00	0.4131E+00	0.1292E+01	0.1029E+01	0.9842E+00	0.1183E+01
11	0.9000E+01	0.2968E-02	0.4640E-02	0.3240E-04	0.0000E+00	0.3590E+00	0.1292E+01	0.1029E+01	0.9840E+00	0.1246E+01
12	0.9900E+01	0.2853E-02	0.4435E-02	0.2460E-04	0.0000E+00	0.3076E+00	0.1292E+01	0.1029E+01	0.9838E+00	0.1300E+01
13	0.1080E+02	0.2733E-02	0.4142E-02	0.1465E-05	0.0000E+00	0.2825E+00	0.1292E+01	0.1029E+01	0.9837E+00	0.1338E+01
14	0.1170E+02	0.2607E-02	0.3847E-02	-0.2188E-04	0.0000E+00	0.2876E+00	0.1292E+01	0.1029E+01	0.9835E+00	0.1385E+01
15	0.1260E+02	0.2485E-02	0.3730E-02	-0.2014E-04	0.0000E+00	0.2851E+00	0.1292E+01	0.1029E+01	0.9835E+00	0.1470E+01
16	0.1350E+02	0.2360E-02	0.3576E-02	-0.2201E-04	0.0000E+00	0.2865E+00	0.1292E+01	0.1029E+01	0.9835E+00	0.1591E+01
17	0.1440E+02	0.2225E-02	0.3278E-02	-0.4804E-04	0.0000E+00	0.3457E+00	0.1292E+01	0.1029E+01	0.9838E+00	0.1778E+01
18	0.1530E+02	0.2073E-02	0.2958E-02	-0.8009E-04	0.0000E+00	0.4878E+00	0.1292E+01	0.1029E+01	0.9846E+00	0.2180E+01
19	0.1620E+02	0.1906E-02	0.2775E-02	-0.1011E-03	0.0000E+00	0.6940E+00	0.1293E+01	0.1029E+01	0.9862E+00	0.3077E+01
20	0.1710E+02	0.1672E-02	0.2520E-02	-0.6991E-04	0.0000E+00	0.8216E+00	0.1294E+01	0.1027E+01	0.9907E+00	0.5277E+01
21	0.1800E+02	0.1312E-02	0.2019E-02	-0.4372E-04	0.0000E+00	0.8657E+00	0.1302E+01	0.1024E+01	0.1010E+01	0.1126E+02

X = 3.013847

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4851E-02	0.6277E-02	0.2400E-04	0.0000E+00	0.6708E+00	0.1287E+01	0.1018E+01	0.9958E+00	-0.5570E+00
2	0.9000E+00	0.4419E-02	0.6121E-02	-0.3150E-03	0.0000E+00	0.6128E+00	0.1286E+01	0.1017E+01	0.9957E+00	-0.2895E+00
3	0.1800E+01	0.4041E-02	0.5771E-02	-0.3449E-03	0.0000E+00	0.5178E+00	0.1285E+01	0.1017E+01	0.9955E+00	0.1900E+00
4	0.2700E+01	0.3949E-02	0.5874E-02	-0.1966E-03	0.0000E+00	0.4641E+00	0.1285E+01	0.1017E+01	0.9953E+00	0.4580E+00
5	0.3600E+01	0.3806E-02	0.5585E-02	-0.2268E-03	0.0000E+00	0.4005E+00	0.1284E+01	0.1016E+01	0.9951E+00	0.6424E+00
6	0.4500E+01	0.3658E-02	0.5457E-02	-0.1676E-03	0.0000E+00	0.3553E+00	0.1284E+01	0.1016E+01	0.9950E+00	0.7853E+00
7	0.5400E+01	0.3503E-02	0.5296E-02	-0.1668E-03	0.0000E+00	0.3072E+00	0.1284E+01	0.1016E+01	0.9948E+00	0.9050E+00
8	0.6300E+01	0.3350E-02	0.5072E-02	-0.1536E-03	0.0000E+00	0.2611E+00	0.1284E+01	0.1016E+01	0.9947E+00	0.1001E+01
9	0.7200E+01	0.3207E-02	0.4794E-02	-0.1241E-03	0.0000E+00	0.2246E+00	0.1284E+01	0.1016E+01	0.9946E+00	0.1072E+01
10	0.8100E+01	0.3069E-02	0.4507E-02	-0.9420E-04	0.0000E+00	0.1997E+00	0.1283E+01	0.1016E+01	0.9945E+00	0.1134E+01
11	0.9000E+01	0.2932E-02	0.4324E-02	-0.8995E-04	0.0000E+00	0.1731E+00	0.1283E+01	0.1016E+01	0.9944E+00	0.1199E+01
12	0.9900E+01	0.2798E-02	0.4133E-02	-0.8318E-04	0.0000E+00	0.1474E+00	0.1283E+01	0.1016E+01	0.9944E+00	0.1256E+01
13	0.1080E+02	0.2674E-02	0.3895E-02	-0.5973E-04	0.0000E+00	0.1346E+00	0.1283E+01	0.1016E+01	0.9944E+00	0.1301E+01
14	0.1170E+02	0.2550E-02	0.3626E-02	-0.4270E-04	0.0000E+00	0.1325E+00	0.1283E+01	0.1016E+01	0.9944E+00	0.1361E+01
15	0.1260E+02	0.2424E-02	0.3528E-02	-0.4152E-04	0.0000E+00	0.1289E+00	0.1283E+01	0.1016E+01	0.9946E+00	0.1462E+01
16	0.1350E+02	0.2299E-02	0.3382E-02	-0.4126E-04	0.0000E+00	0.1258E+00	0.1283E+01	0.1015E+01	0.9949E+00	0.1599E+01
17	0.1440E+02	0.2186E-02	0.3162E-02	-0.1379E-04	0.0000E+00	0.1505E+00	0.1284E+01	0.1015E+01	0.9954E+00	0.1801E+01
18	0.1530E+02	0.2082E-02	0.2947E-02	0.2302E-04	0.0000E+00	0.2145E+00	0.1284E+01	0.1015E+01	0.9961E+00	0.2200E+01
19	0.1620E+02	0.2012E-02	0.2922E-02	0.7505E-04	0.0000E+00	0.3150E+00	0.1284E+01	0.1015E+01	0.9969E+00	0.3106E+01
20	0.1710E+02	0.1955E-02	0.2907E-02	0.1708E-03	0.0000E+00	0.4337E+00	0.1285E+01	0.1015E+01	0.9991E+00	0.5399E+01
21	0.1800E+02	0.1183E-02	0.1384E-02	-0.2122E-03	0.0000E+00	0.4201E+00	0.1290E+01	0.1011E+01	0.1014E+01	0.1132E+02

X = 3.058543

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4885E-02	0.6283E-02	0.2218E-04	0.0000E+00	0.6527E+00	0.1287E+01	0.1018E+01	0.9961E+00	-0.5568E+00
2	0.9000E+00	0.4443E-02	0.6030E-02	-0.3176E-03	0.0000E+00	0.5930E+00	0.1286E+01	0.1017E+01	0.9959E+00	-0.2908E+00
3	0.1800E+01	0.4059E-02	0.5672E-02	-0.3408E-03	0.0000E+00	0.5011E+00	0.1285E+01	0.1016E+01	0.9957E+00	0.1883E+00
4	0.2700E+01	0.3962E-02	0.5818E-02	-0.1957E-03	0.0000E+00	0.4489E+00	0.1285E+01	0.1016E+01	0.9955E+00	0.4563E+00
5	0.3600E+01	0.3815E-02	0.5520E-02	-0.2256E-03	0.0000E+00	0.3868E+00	0.1284E+01	0.1016E+01	0.9953E+00	0.6411E+00
6	0.4500E+01	0.3664E-02	0.5409E-02	-0.1652E-03	0.0000E+00	0.3431E+00	0.1284E+01	0.1016E+01	0.9952E+00	0.7845E+00
7	0.5400E+01	0.3506E-02	0.5248E-02	-0.1645E-03	0.0000E+00	0.2965E+00	0.1284E+01	0.1016E+01	0.9950E+00	0.9046E+00
8	0.6300E+01	0.3351E-02	0.5028E-02	-0.1510E-03	0.0000E+00	0.2518E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1001E+01
9	0.7200E+01	0.3207E-02	0.4758E-02	-0.1216E-03	0.0000E+00	0.2166E+00	0.1283E+01	0.1016E+01	0.9948E+00	0.1072E+01
10	0.8100E+01	0.3069E-02	0.4480E-02	-0.9205E-04	0.0000E+00	0.1926E+00	0.1283E+01	0.1015E+01	0.9947E+00	0.1134E+01
11	0.9000E+01	0.2930E-02	0.4298E-02	-0.8827E-04	0.0000E+00	0.1667E+00	0.1283E+01	0.1015E+01	0.9946E+00	0.1199E+01
12	0.9900E+01	0.2795E-02	0.4109E-02	-0.8176E-04	0.0000E+00	0.1418E+00	0.1283E+01	0.1015E+01	0.9946E+00	0.1257E+01
13	0.1080E+02	0.2670E-02	0.3877E-02	-0.5869E-04	0.0000E+00	0.1293E+00	0.1283E+01	0.1015E+01	0.9946E+00	0.1303E+01
14	0.1170E+02	0.2547E-02	0.3614E-02	-0.4213E-04	0.0000E+00	0.1271E+00	0.1283E+01	0.1015E+01	0.9947E+00	0.1363E+01
15	0.1260E+02	0.2421E-02	0.3516E-02	-0.4130E-04	0.0000E+00	0.1233E+00	0.1283E+01	0.1015E+01	0.9949E+00	0.1465E+01
16	0.1350E+02	0.2295E-02	0.3370E-02	-0.4141E-04	0.0000E+00	0.1198E+00	0.1283E+01	0.1015E+01	0.9952E+00	0.1604E+01
17	0.1440E+02	0.2182E-02	0.3158E-02	-0.1465E-04	0.0000E+00	0.1432E+00	0.1284E+01	0.1015E+01	0.9958E+00	0.1806E+01
18	0.1530E+02	0.2081E-02	0.2953E-02	0.2083E-04	0.0000E+00	0.2047E+00	0.1284E+01	0.1015E+01	0.9966E+00	0.2203E+01
19	0.1620E+02	0.2017E-02	0.2943E-02	0.7145E-04	0.0000E+00	0.3017E+00	0.1284E+01	0.1015E+01	0.9974E+00	0.3106E+01
20	0.1710E+02	0.1978E-02	0.2958E-02	0.1759E-03	0.0000E+00	0.4233E+00	0.1285E+01	0.1014E+01	0.9994E+00	0.5398E+01
21	0.1800E+02	0.1174E-02	0.1321E-02	-0.2227E-03	0.0000E+00	0.4113E+00	0.1290E+01	0.1011E+01	0.1015E+01	0.1132E+02

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     449  INTEGRATION     STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
     17  -0.81618E-04 130  16  21   0.33910E-05   0.15590E-04   2   3  3   0.82234E-07  0.03588   3560
     18  -0.41810E-03 160  16  11   0.12599E-04  -0.37011E-04 160  17  3   0.23191E-06  0.03584   3560
     19  -0.26395E-03 160  16   9   0.20566E-04  -0.29763E-04 160  17  3   0.15010E-06  0.03578   3556
     20  -0.26239E-03 159  16   7   0.37241E-04  -0.30362E-04 160   2  3   0.14105E-06  0.03565   3549
     21  -0.60143E-04 160  16  22   0.52692E-05  -0.31720E-04 160   2  3   0.13139E-06  0.03560   3542
     22  -0.74613E-04 160  16  21   0.86508E-05  -0.37093E-04 160   2  3   0.12766E-06  0.03555   3544
     23  -0.10503E-03 159  16  20   0.17291E-04  -0.36649E-04 160   2  3   0.11858E-06  0.03548   3542
     24  -0.16790E-03 128  16  21   0.34181E-04  -0.34545E-04 160   2  3   0.10878E-06  0.03535   3537
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3DBL CALCULATION ITBLX ITBL= 2 3

UPPER WING SURFACE
BOUNDARY LAYER STARTING NODE UPPER WING IWNODE= 169

X = 0.006879

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5643E-04	0.1251E-03	0.2795E-02	0.2291E-02	-0.1443E+02	0.2553E+01	0.2228E+01	0.8812E+00	0.5048E+01
2	0.9000E+00	0.5003E-04	0.1189E-03	0.2135E-02	0.2168E-02	-0.1376E+02	0.2696E+01	0.2223E+01	0.1042E+01	0.3272E+01
3	0.1800E+01	0.4926E-04	0.1892E-03	0.1792E-02	0.2089E-02	-0.1413E+02	0.2751E+01	0.2226E+01	0.1090E+01	0.4252E+01
4	0.2700E+01	0.4888E-04	0.1884E-03	0.1478E-02	0.2067E-02	-0.1428E+02	0.2771E+01	0.2226E+01	0.1107E+01	0.4645E+01
5	0.3600E+01	0.4876E-04	0.1881E-03	0.1206E-02	0.2060E-02	-0.1438E+02	0.2778E+01	0.2227E+01	0.1112E+01	0.4920E+01
6	0.4500E+01	0.4884E-04	0.1883E-03	0.9524E-03	0.2060E-02	-0.1448E+02	0.2776E+01	0.2228E+01	0.1109E+01	0.5187E+01
7	0.5400E+01	0.4898E-04	0.1886E-03	0.6988E-03	0.2062E-02	-0.1457E+02	0.2771E+01	0.2229E+01	0.1104E+01	0.5432E+01
8	0.6300E+01	0.4918E-04	0.1890E-03	0.4442E-03	0.2067E-02	-0.1467E+02	0.2764E+01	0.2229E+01	0.1097E+01	0.5676E+01
9	0.7200E+01	0.4941E-04	0.1895E-03	0.1866E-03	0.2074E-02	-0.1476E+02	0.2755E+01	0.2230E+01	0.1088E+01	0.5920E+01
10	0.8100E+01	0.4969E-04	0.1102E-03	-0.7014E-04	0.2083E-02	-0.1487E+02	0.2744E+01	0.2231E+01	0.1077E+01	0.6203E+01
11	0.9000E+01	0.4998E-04	0.1108E-03	-0.3306E-03	0.2094E-02	-0.1498E+02	0.2732E+01	0.2232E+01	0.1066E+01	0.6586E+01
12	0.9900E+01	0.5029E-04	0.1115E-03	-0.5972E-03	0.2106E-02	-0.1510E+02	0.2720E+01	0.2233E+01	0.1053E+01	0.6826E+01
13	0.1080E+02	0.5055E-04	0.1121E-03	-0.8701E-03	0.2122E-02	-0.1523E+02	0.2707E+01	0.2234E+01	0.1040E+01	0.7172E+01
14	0.1170E+02	0.5086E-04	0.1128E-03	-0.1146E-02	0.2141E-02	-0.1539E+02	0.2692E+01	0.2235E+01	0.1024E+01	0.7600E+01
15	0.1260E+02	0.5118E-04	0.1135E-03	-0.1432E-02	0.2161E-02	-0.1558E+02	0.2676E+01	0.2237E+01	0.1006E+01	0.8093E+01
16	0.1350E+02	0.5150E-04	0.1142E-03	-0.1733E-02	0.2191E-02	-0.1578E+02	0.2660E+01	0.2238E+01	0.9866E+00	0.8643E+01
17	0.1440E+02	0.5184E-04	0.1150E-03	-0.2052E-02	0.2223E-02	-0.1603E+02	0.2642E+01	0.2241E+01	0.9653E+00	0.9300E+01
18	0.1530E+02	0.5225E-04	0.1159E-03	-0.2393E-02	0.2264E-02	-0.1637E+02	0.2622E+01	0.2244E+01	0.9383E+00	0.1022E+02
19	0.1620E+02	0.5277E-04	0.1169E-03	-0.2779E-02	0.2306E-02	-0.1681E+02	0.2602E+01	0.2249E+01	0.9093E+00	0.1141E+02
20	0.1710E+02	0.5349E-04	0.1186E-03	-0.3245E-02	0.2329E-02	-0.1765E+02	0.2587E+01	0.2260E+01	0.8778E+00	0.1374E+02
21	0.1800E+02	0.5501E-04	0.1220E-03	-0.3231E-02	0.2895E-02	-0.1731E+02	0.2644E+01	0.2255E+01	0.9489E+00	0.1279E+02

X = 0.004342

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1734E-03	0.5685E-03	0.5898E-03	0.3808E-03	0.1558E+02	0.3222E+01	0.2482E+01	0.1218E+01	-0.3895E+01
2	0.9000E+00	0.1858E-03	0.9206E-03	0.4690E-01	0.4778E-04	0.6406E+02	0.4888E+01	0.3580E+01	0.1372E+01	-0.6094E+01
3	0.1800E+01	0.1594E-03	0.6642E-03	0.2378E-02	0.1886E-03	0.2972E+02	0.4231E+01	0.2869E+01	0.1482E+01	-0.8049E+01
4	0.2700E+01	0.1469E-03	0.5777E-03	0.1235E-02	0.2730E-03	0.1672E+02	0.4062E+01	0.2643E+01	0.1537E+01	-0.8885E+01
5	0.3600E+01	0.1413E-03	0.5468E-03	0.9730E-03	0.3069E-03	0.1053E+02	0.4022E+01	0.2575E+01	0.1559E+01	-0.9134E+01
6	0.4500E+01	0.1379E-03	0.5288E-03	0.8732E-03	0.3252E-03	0.9847E+01	0.3999E+01	0.2546E+01	0.1564E+01	-0.9159E+01
7	0.5400E+01	0.1351E-03	0.5144E-03	0.8192E-03	0.3384E-03	0.8357E+01	0.3977E+01	0.2533E+01	0.1565E+01	-0.9096E+01
8	0.6300E+01	0.1325E-03	0.5007E-03	0.7899E-03	0.3509E-03	0.7794E+01	0.3950E+01	0.2523E+01	0.1560E+01	-0.8996E+01
9	0.7200E+01	0.1302E-03	0.4886E-03	0.7589E-03	0.3609E-03	0.7581E+01	0.3927E+01	0.2519E+01	0.1553E+01	-0.8880E+01
10	0.8100E+01	0.1279E-03	0.4763E-03	0.7296E-03	0.3715E-03	0.7423E+01	0.3898E+01	0.2517E+01	0.1543E+01	-0.8737E+01
11	0.9000E+01	0.1256E-03	0.4637E-03	0.6977E-03	0.3830E-03	0.7188E+01	0.3866E+01	0.2515E+01	0.1531E+01	-0.8566E+01
12	0.9900E+01	0.1234E-03	0.4508E-03	0.6658E-03	0.3953E-03	0.6886E+01	0.3831E+01	0.2513E+01	0.1517E+01	-0.8379E+01
13	0.1080E+02	0.1211E-03	0.4379E-03	0.6328E-03	0.4084E-03	0.6596E+01	0.3794E+01	0.2512E+01	0.1503E+01	-0.8180E+01
14	0.1170E+02	0.1187E-03	0.4237E-03	0.6041E-03	0.4256E-03	0.6871E+01	0.3746E+01	0.2507E+01	0.1489E+01	-0.7938E+01
15	0.1260E+02	0.1164E-03	0.4094E-03	0.5618E-03	0.4448E-03	0.5464E+01	0.3696E+01	0.2503E+01	0.1465E+01	-0.7647E+01
16	0.1350E+02	0.1139E-03	0.3941E-03	0.5187E-03	0.4662E-03	0.4713E+01	0.3641E+01	0.2496E+01	0.1444E+01	-0.7324E+01
17	0.1440E+02	0.1113E-03	0.3781E-03	0.4746E-03	0.4938E-03	0.3981E+01	0.3578E+01	0.2486E+01	0.1420E+01	-0.6963E+01
18	0.1530E+02	0.1085E-03	0.3602E-03	0.4213E-03	0.5287E-03	0.2830E+01	0.3502E+01	0.2470E+01	0.1392E+01	-0.6480E+01
19	0.1620E+02	0.1052E-03	0.3392E-03	0.3692E-03	0.5787E-03	0.1355E+01	0.3413E+01	0.2443E+01	0.1363E+01	-0.5799E+01
20	0.1710E+02	0.1008E-03	0.3147E-03	0.3195E-03	0.6456E-03	-0.2973E+00	0.3331E+01	0.2401E+01	0.1348E+01	-0.4391E+01
21	0.1800E+02	0.1823E-03	0.3276E-03	0.3337E-03	0.5661E-03	-0.5311E-01	0.3450E+01	0.2490E+01	0.1350E+01	-0.3143E+01

LAMINAR SEPARATION AT 8.4 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

N	H	TE	GAM	F	1	0.14500E+01	0.17337E-03	0.92882E-01	0.19128E-01
N	H	TE	GAM	F	2	0.14500E+01	0.18580E-03	0.10615E+00	0.19348E-01
N	H	TE	GAM	F	3	0.14500E+01	0.15940E-03	0.26754E-01	0.18943E-01
N	H	TE	GAM	F	4	0.14500E+01	0.14688E-03	-0.96155E-02	0.18718E-01
N	H	TE	GAM	F	5	0.14500E+01	0.14133E-03	-0.25447E-01	0.18615E-01
N	H	TE	GAM	F	6	0.14500E+01	0.13787E-03	-0.33681E-01	0.18556E-01
N	H	TE	GAM	F	7	0.14500E+01	0.13518E-03	-0.39218E-01	0.18514E-01
N	H	TE	GAM	F	8	0.14500E+01	0.13295E-03	-0.44081E-01	0.18478E-01
N	H	TE	GAM	F	9	0.14500E+01	0.13019E-03	-0.48115E-01	0.18446E-01
N	H	TE	GAM	F	10	0.14500E+01	0.12794E-03	-0.51602E-01	0.18416E-01
N	H	TE	GAM	F	11	0.14500E+01	0.12564E-03	-0.55364E-01	0.18383E-01
N	H	TE	GAM	F	12	0.14500E+01	0.12337E-03	-0.59050E-01	0.18349E-01
N	H	TE	GAM	F	13	0.14500E+01	0.12110E-03	-0.62456E-01	0.18312E-01
N	H	TE	GAM	F	14	0.14500E+01	0.11874E-03	-0.65971E-01	0.18269E-01
N	H	TE	GAM	F	15	0.14500E+01	0.11635E-03	-0.69972E-01	0.18220E-01
N	H	TE	GAM	F	16	0.14500E+01	0.11387E-03	-0.74099E-01	0.18163E-01
N	H	TE	GAM	F	17	0.14500E+01	0.11128E-03	-0.77857E-01	0.18095E-01
N	H	TE	GAM	F	18	0.14500E+01	0.10852E-03	-0.82080E-01	0.18010E-01
N	H	TE	GAM	F	19	0.14500E+01	0.10516E-03	-0.87319E-01	0.17898E-01
N	H	TE	GAM	F	20	0.14500E+01	0.10078E-03	-0.94532E-01	0.17761E-01
N	H	TE	GAM	F	21	0.14500E+01	0.10232E-03	-0.96226E-01	0.17807E-01

X = 1.009183

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1226E-01	0.1858E-01	0.8572E-02	0.0000E+00	-0.2528E+02	0.1759E+01	0.1506E+01	0.9004E+00	0.8579E+00
2	0.9000E+00	0.1216E-01	0.1692E-01	0.3078E-02	0.0000E+00	-0.2218E+02	0.1705E+01	0.1457E+01	0.8966E+00	0.1003E+01
3	0.1800E+01	0.1196E-01	0.1652E-01	0.2325E-02	0.0000E+00	-0.1961E+02	0.1685E+01	0.1438E+01	0.8957E+00	0.1058E+01
4	0.2700E+01	0.1194E-01	0.1649E-01	0.2705E-02	0.0000E+00	-0.1791E+02	0.1680E+01	0.1433E+01	0.8948E+00	0.9978E+00
5	0.3600E+01	0.1193E-01	0.1694E-01	0.2981E-02	0.0000E+00	-0.1656E+02	0.1682E+01	0.1433E+01	0.8938E+00	0.8789E+00
6	0.4500E+01	0.1184E-01	0.1713E-01	0.3201E-02	0.0000E+00	-0.1537E+02	0.1686E+01	0.1437E+01	0.8930E+00	0.7469E+00
7	0.5400E+01	0.1170E-01	0.1728E-01	0.3450E-02	0.0000E+00	-0.1420E+02	0.1692E+01	0.1442E+01	0.8922E+00	0.6106E+00
8	0.6300E+01	0.1156E-01	0.1746E-01	0.3749E-02	0.0000E+00	-0.1305E+02	0.1700E+01	0.1449E+01	0.8915E+00	0.4840E+00
9	0.7200E+01	0.1147E-01	0.1768E-01	0.4055E-02	0.0000E+00	-0.1198E+02	0.1710E+01	0.1457E+01	0.8907E+00	0.3762E+00
10	0.8100E+01	0.1141E-01	0.1794E-01	0.4302E-02	0.0000E+00	-0.1096E+02	0.1721E+01	0.1467E+01	0.8898E+00	0.2739E+00
11	0.9000E+01	0.1134E-01	0.1825E-01	0.4564E-02	0.0000E+00	-0.9863E+01	0.1734E+01	0.1480E+01	0.8890E+00	0.1607E+00
12	0.9900E+01	0.1123E-01	0.1854E-01	0.4849E-02	0.0000E+00	-0.8796E+01	0.1751E+01	0.1495E+01	0.8882E+00	0.4821E-01
13	0.1080E+02	0.1106E-01	0.1874E-01	0.5111E-02	0.0000E+00	-0.7939E+01	0.1772E+01	0.1514E+01	0.8872E+00	-0.5328E-01
14	0.1170E+02	0.1081E-01	0.1877E-01	0.5145E-02	0.0000E+00	-0.7338E+01	0.1795E+01	0.1536E+01	0.8859E+00	-0.1770E+00
15	0.1260E+02	0.1055E-01	0.1877E-01	0.5242E-02	0.0000E+00	-0.6741E+01	0.1822E+01	0.1561E+01	0.8845E+00	-0.3794E+00
16	0.1350E+02	0.1028E-01	0.1871E-01	0.5089E-02	0.0000E+00	-0.6334E+01	0.1847E+01	0.1585E+01	0.8829E+00	-0.6800E+00
17	0.1440E+02	0.1014E-01	0.1885E-01	0.5314E-02	0.0000E+00	-0.6223E+01	0.1877E+01	0.1614E+01	0.8784E+00	-0.9866E+00
18	0.1530E+02	0.9758E-02	0.1838E-01	0.5142E-02	0.0000E+00	-0.6685E+01	0.1890E+01	0.1627E+01	0.8775E+00	-0.1601E+01

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
19	0.1620E+02	0.9488E-02	0.1862E-01	0.5281E-02	0.0000E+00	-0.7588E+01	0.1925E+01	0.1659E+01	0.8769E+00	-0.2752E+01
20	0.1710E+02	0.8670E-02	0.1727E-01	0.4058E-02	0.0000E+00	-0.1076E+02	0.1930E+01	0.1662E+01	0.8805E+00	-0.5585E+01
21	0.1800E+02	0.5729E-02	0.1003E-01	0.2772E-02	0.0000E+00	-0.1366E+02	0.1768E+01	0.1486E+01	0.9322E+00	-0.1267E+02

X = 2.005910

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.9676E-02	0.8928E-02	-0.1374E-03	0.0000E+00	-0.6324E+01	0.1312E+01	0.1056E+01	0.9843E+00	0.5753E+00
2	0.9000E+00	0.8688E-02	0.1028E-02	-0.1300E-02	0.0000E+00	-0.6017E+01	0.1309E+01	0.1053E+01	0.9844E+00	0.2834E+00
3	0.1800E+01	0.8768E-02	0.3075E-02	-0.9489E-03	0.0000E+00	-0.5856E+01	0.1313E+01	0.1055E+01	0.9846E+00	-0.1643E+00
4	0.2700E+01	0.8660E-02	0.3872E-02	-0.8318E-03	0.0000E+00	-0.5657E+01	0.1315E+01	0.1057E+01	0.9847E+00	-0.4357E+00
5	0.3600E+01	0.8558E-02	0.4007E-02	-0.8179E-03	0.0000E+00	-0.5467E+01	0.1317E+01	0.1058E+01	0.9847E+00	-0.6266E+00
6	0.4500E+01	0.8430E-02	0.4169E-02	-0.7863E-03	0.0000E+00	-0.5261E+01	0.1319E+01	0.1058E+01	0.9847E+00	-0.7823E+00
7	0.5400E+01	0.8308E-02	0.4681E-02	-0.7063E-03	0.0000E+00	-0.5041E+01	0.1320E+01	0.1059E+01	0.9845E+00	-0.9160E+00
8	0.6300E+01	0.8213E-02	0.5406E-02	-0.6098E-03	0.0000E+00	-0.4835E+01	0.1322E+01	0.1061E+01	0.9843E+00	-0.1028E+01
9	0.7200E+01	0.8140E-02	0.5902E-02	-0.5637E-03	0.0000E+00	-0.4660E+01	0.1324E+01	0.1062E+01	0.9840E+00	-0.1117E+01
10	0.8100E+01	0.8067E-02	0.6059E-02	-0.5541E-03	0.0000E+00	-0.4496E+01	0.1326E+01	0.1063E+01	0.9838E+00	-0.1200E+01
11	0.9000E+01	0.7993E-02	0.6411E-02	-0.5097E-03	0.0000E+00	-0.4314E+01	0.1328E+01	0.1065E+01	0.9835E+00	-0.1293E+01
12	0.9900E+01	0.7904E-02	0.7003E-02	-0.4306E-03	0.0000E+00	-0.4142E+01	0.1330E+01	0.1066E+01	0.9834E+00	-0.1384E+01
13	0.1080E+02	0.7779E-02	0.7432E-02	-0.3759E-03	0.0000E+00	-0.4020E+01	0.1331E+01	0.1067E+01	0.9832E+00	-0.1465E+01
14	0.1170E+02	0.7608E-02	0.7556E-02	-0.3338E-03	0.0000E+00	-0.3938E+01	0.1332E+01	0.1068E+01	0.9831E+00	-0.1566E+01
15	0.1260E+02	0.7456E-02	0.7901E-02	-0.2624E-03	0.0000E+00	-0.3869E+01	0.1334E+01	0.1069E+01	0.9832E+00	-0.1726E+01
16	0.1350E+02	0.7275E-02	0.8536E-02	-0.1109E-03	0.0000E+00	-0.3861E+01	0.1335E+01	0.1070E+01	0.9834E+00	-0.1978E+01
17	0.1440E+02	0.7104E-02	0.8849E-02	0.8291E-05	0.0000E+00	-0.4029E+01	0.1337E+01	0.1071E+01	0.9838E+00	-0.2239E+01
18	0.1530E+02	0.6956E-02	0.8931E-02	0.3640E-04	0.0000E+00	-0.4359E+01	0.1338E+01	0.1073E+01	0.9845E+00	-0.2591E+01
19	0.1620E+02	0.6920E-02	0.7915E-02	-0.2718E-03	0.0000E+00	-0.4693E+01	0.1340E+01	0.1074E+01	0.9860E+00	-0.3282E+01
20	0.1710E+02	0.6995E-02	0.5654E-02	-0.8706E-03	0.0000E+00	-0.4366E+01	0.1343E+01	0.1075E+01	0.9900E+00	-0.5033E+01
21	0.1800E+02	0.5944E-02	0.7619E-02	0.2582E-03	0.0000E+00	-0.3009E+01	0.1352E+01	0.1072E+01	0.1006E+01	-0.1056E+02

X = 3.009278

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5889E-02	0.7322E-02	-0.2842E-03	0.0000E+00	-0.3455E+01	0.1278E+01	0.1019E+01	0.9951E+00	0.5018E+00
2	0.9000E+00	0.5341E-02	0.2096E-02	0.9646E-03	0.0000E+00	-0.3204E+01	0.1278E+01	0.1019E+01	0.9949E+00	0.2217E+00
3	0.1800E+01	0.5625E-02	0.2859E-02	0.3131E-03	0.0000E+00	-0.3096E+01	0.1281E+01	0.1020E+01	0.9948E+00	-0.1801E+00
4	0.2700E+01	0.5795E-02	0.3789E-02	0.3477E-03	0.0000E+00	-0.3014E+01	0.1283E+01	0.1021E+01	0.9947E+00	-0.4413E+00
5	0.3600E+01	0.5904E-02	0.4096E-02	0.4131E-03	0.0000E+00	-0.2931E+01	0.1285E+01	0.1022E+01	0.9947E+00	-0.6383E+00
6	0.4500E+01	0.5969E-02	0.4324E-02	0.4320E-03	0.0000E+00	-0.2833E+01	0.1286E+01	0.1023E+01	0.9946E+00	-0.8033E+00
7	0.5400E+01	0.6032E-02	0.4770E-02	0.3843E-03	0.0000E+00	-0.2723E+01	0.1288E+01	0.1024E+01	0.9945E+00	-0.9452E+00
8	0.6300E+01	0.6100E-02	0.5347E-02	0.2968E-03	0.0000E+00	-0.2620E+01	0.1290E+01	0.1025E+01	0.9944E+00	-0.1062E+01
9	0.7200E+01	0.6171E-02	0.5823E-02	0.2736E-03	0.0000E+00	-0.2537E+01	0.1291E+01	0.1026E+01	0.9943E+00	-0.1151E+01
10	0.8100E+01	0.6232E-02	0.6035E-02	0.2913E-03	0.0000E+00	-0.2459E+01	0.1293E+01	0.1027E+01	0.9941E+00	-0.1231E+01
11	0.9000E+01	0.6293E-02	0.6444E-02	0.2911E-03	0.0000E+00	-0.2367E+01	0.1295E+01	0.1029E+01	0.9941E+00	-0.1316E+01
12	0.9900E+01	0.6343E-02	0.6856E-02	0.2123E-03	0.0000E+00	-0.2267E+01	0.1296E+01	0.1030E+01	0.9940E+00	-0.1396E+01
13	0.1080E+02	0.6297E-02	0.7140E-02	0.1388E-03	0.0000E+00	-0.2193E+01	0.1298E+01	0.1031E+01	0.9940E+00	-0.1463E+01
14	0.1170E+02	0.6220E-02	0.7342E-02	0.1405E-03	0.0000E+00	-0.2157E+01	0.1299E+01	0.1031E+01	0.9941E+00	-0.1548E+01
15	0.1260E+02	0.6165E-02	0.7694E-02	0.1329E-03	0.0000E+00	-0.2115E+01	0.1300E+01	0.1032E+01	0.9942E+00	-0.1693E+01
16	0.1350E+02	0.6047E-02	0.7973E-02	-0.3268E-04	0.0000E+00	-0.2082E+01	0.1301E+01	0.1033E+01	0.9945E+00	-0.1932E+01
17	0.1440E+02	0.5925E-02	0.8091E-02	-0.1297E-03	0.0000E+00	-0.2150E+01	0.1302E+01	0.1034E+01	0.9948E+00	-0.2185E+01
18	0.1530E+02	0.5803E-02	0.8171E-02	-0.1293E-03	0.0000E+00	-0.2304E+01	0.1303E+01	0.1035E+01	0.9952E+00	-0.2530E+01
19	0.1620E+02	0.5780E-02	0.6841E-02	-0.4257E-03	0.0000E+00	-0.2489E+01	0.1304E+01	0.1036E+01	0.9956E+00	-0.3172E+01
20	0.1710E+02	0.6592E-02	0.9275E-02	0.1519E-02	0.0000E+00	-0.2683E+01	0.1309E+01	0.1039E+01	0.9976E+00	-0.4804E+01
21	0.1800E+02	0.5519E-02	0.7691E-02	-0.1448E-03	0.0000E+00	-0.1807E+01	0.1322E+01	0.1042E+01	0.1011E+01	-0.1032E+02

X = 3.053969

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5654E-02	0.7240E-02	-0.2798E-03	0.0000E+00	-0.3386E+01	0.1277E+01	0.1018E+01	0.9954E+00	0.4999E+00
2	0.9000E+00	0.5141E-02	0.2375E-02	0.9647E-03	0.0000E+00	-0.3136E+01	0.1277E+01	0.1018E+01	0.9952E+00	0.2207E+00
3	0.1800E+01	0.5434E-02	0.2947E-02	0.2973E-03	0.0000E+00	-0.3029E+01	0.1280E+01	0.1019E+01	0.9951E+00	-0.1792E+00
4	0.2700E+01	0.5619E-02	0.3888E-02	0.3402E-03	0.0000E+00	-0.2952E+01	0.1282E+01	0.1020E+01	0.9950E+00	-0.4401E+00
5	0.3600E+01	0.5741E-02	0.4215E-02	0.4095E-03	0.0000E+00	-0.2872E+01	0.1284E+01	0.1021E+01	0.9949E+00	-0.6372E+00
6	0.4500E+01	0.5818E-02	0.4449E-02	0.4308E-03	0.0000E+00	-0.2777E+01	0.1285E+01	0.1022E+01	0.9948E+00	-0.8027E+00
7	0.5400E+01	0.5893E-02	0.4881E-02	0.3844E-03	0.0000E+00	-0.2671E+01	0.1287E+01	0.1023E+01	0.9947E+00	-0.9449E+00
8	0.6300E+01	0.5971E-02	0.5433E-02	0.2968E-03	0.0000E+00	-0.2570E+01	0.1289E+01	0.1024E+01	0.9946E+00	-0.1062E+01
9	0.7200E+01	0.6050E-02	0.5902E-02	0.2741E-03	0.0000E+00	-0.2490E+01	0.1290E+01	0.1025E+01	0.9945E+00	-0.1151E+01
10	0.8100E+01	0.6120E-02	0.6120E-02	0.2931E-03	0.0000E+00	-0.2414E+01	0.1292E+01	0.1026E+01	0.9943E+00	-0.1231E+01
11	0.9000E+01	0.6191E-02	0.6529E-02	0.2944E-03	0.0000E+00	-0.2324E+01	0.1294E+01	0.1028E+01	0.9943E+00	-0.1315E+01
12	0.9900E+01	0.6250E-02	0.6918E-02	0.2161E-03	0.0000E+00	-0.2225E+01	0.1296E+01	0.1029E+01	0.9942E+00	-0.1394E+01
13	0.1080E+02	0.6212E-02	0.7181E-02	0.1420E-03	0.0000E+00	-0.2152E+01	0.1297E+01	0.1030E+01	0.9942E+00	-0.1461E+01
14	0.1170E+02	0.6140E-02	0.7384E-02	0.1448E-03	0.0000E+00	-0.2116E+01	0.1298E+01	0.1030E+01	0.9943E+00	-0.1545E+01
15	0.1260E+02	0.6091E-02	0.7734E-02	0.1407E-03	0.0000E+00	-0.2073E+01	0.1299E+01	0.1031E+01	0.9945E+00	-0.1689E+01
16	0.1350E+02	0.5978E-02	0.7965E-02	-0.2513E-04	0.0000E+00	-0.2038E+01	0.1301E+01	0.1032E+01	0.9948E+00	-0.1928E+01
17	0.1440E+02	0.5859E-02	0.8055E-02	-0.1207E-03	0.0000E+00	-0.2100E+01	0.1302E+01	0.1033E+01	0.9952E+00	-0.2182E+01
18	0.1530E+02	0.5738E-02	0.8136E-02	-0.1142E-03	0.0000E+00	-0.2247E+01	0.1302E+01	0.1034E+01	0.9956E+00	-0.2526E+01
19	0.1620E+02	0.5707E-02	0.6711E-02	-0.4616E-03	0.0000E+00	-0.2421E+01	0.1304E+01	0.1035E+01	0.9961E+00	-0.3168E+01
20	0.1710E+02	0.6541E-02	0.9720E-02	0.1541E-02	0.0000E+00	-0.2633E+01	0.1308E+01	0.1038E+01	0.9978E+00	-0.4798E+01
21	0.1800E+02	0.5453E-02	0.7649E-02	-0.1448E-03	0.0000E+00	-0.1780E+01	0.1321E+01	0.1041E+01	0.1011E+01	-0.1031E+02

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      379  INTEGRATION    STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
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LOWER WING SURFACE
BOUNDARY LAYER STARTING NODE LOWER WING IWNODE= 153

X = 0.006751

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6717E-04	0.1489E-03	0.5474E-02	0.2839E-02	-0.1826E+02	0.2403E+01	0.2269E+01	0.5777E+00	0.1546E+02
2	0.9000E+00	0.6269E-04	0.1390E-03	0.5529E-02	0.2884E-02	-0.1901E+02	0.2427E+01	0.2281E+01	0.5994E+00	0.1767E+02
3	0.1800E+01	0.6307E-04	0.1398E-03	0.5436E-02	0.2699E-02	-0.2003E+02	0.2460E+01	0.2302E+01	0.6198E+00	0.2095E+02
4	0.2700E+01	0.6292E-04	0.1395E-03	0.4875E-02	0.2635E-02	-0.2027E+02	0.2472E+01	0.2308E+01	0.6314E+00	0.2181E+02
5	0.3600E+01	0.6261E-04	0.1388E-03	0.4161E-02	0.2604E-02	-0.2031E+02	0.2478E+01	0.2309E+01	0.6411E+00	0.2192E+02
6	0.4500E+01	0.6229E-04	0.1381E-03	0.3405E-02	0.2586E-02	-0.2025E+02	0.2482E+01	0.2308E+01	0.6497E+00	0.2173E+02
7	0.5400E+01	0.6194E-04	0.1373E-03	0.2656E-02	0.2575E-02	-0.2015E+02	0.2484E+01	0.2305E+01	0.6578E+00	0.2134E+02
8	0.6300E+01	0.6164E-04	0.1367E-03	0.1939E-02	0.2566E-02	-0.2003E+02	0.2485E+01	0.2302E+01	0.6654E+00	0.2093E+02
9	0.7200E+01	0.6134E-04	0.1360E-03	0.1255E-02	0.2559E-02	-0.1988E+02	0.2486E+01	0.2299E+01	0.6730E+00	0.2045E+02
10	0.8100E+01	0.6102E-04	0.1353E-03	0.5999E-03	0.2553E-02	-0.1972E+02	0.2487E+01	0.2295E+01	0.6809E+00	0.1991E+02
11	0.9000E+01	0.6066E-04	0.1345E-03	-0.1788E-04	0.2547E-02	-0.1954E+02	0.2488E+01	0.2292E+01	0.6894E+00	0.1932E+02
12	0.9900E+01	0.6031E-04	0.1337E-03	-0.5958E-03	0.2540E-02	-0.1935E+02	0.2489E+01	0.2288E+01	0.6982E+00	0.1872E+02
13	0.1080E+02	0.5992E-04	0.1328E-03	-0.1135E-02	0.2531E-02	-0.1914E+02	0.2491E+01	0.2284E+01	0.7082E+00	0.1806E+02
14	0.1170E+02	0.5946E-04	0.1318E-03	-0.1641E-02	0.2521E-02	-0.1889E+02	0.2494E+01	0.2279E+01	0.7201E+00	0.1731E+02
15	0.1260E+02	0.5895E-04	0.1307E-03	-0.2109E-02	0.2506E-02	-0.1861E+02	0.2498E+01	0.2274E+01	0.7341E+00	0.1648E+02
16	0.1350E+02	0.5841E-04	0.1295E-03	-0.2526E-02	0.2488E-02	-0.1831E+02	0.2503E+01	0.2270E+01	0.7502E+00	0.1560E+02
17	0.1440E+02	0.5779E-04	0.1281E-03	-0.2901E-02	0.2464E-02	-0.1797E+02	0.2511E+01	0.2264E+01	0.7696E+00	0.1462E+02
18	0.1530E+02	0.5708E-04	0.1265E-03	-0.3231E-02	0.2429E-02	-0.1756E+02	0.2522E+01	0.2259E+01	0.7946E+00	0.1349E+02
19	0.1620E+02	0.5629E-04	0.1248E-03	-0.3518E-02	0.2382E-02	-0.1714E+02	0.2539E+01	0.2253E+01	0.8257E+00	0.1232E+02
20	0.1710E+02	0.5573E-04	0.1235E-03	-0.3825E-02	0.2307E-02	-0.1696E+02	0.2564E+01	0.2251E+01	0.8614E+00	0.1182E+02
21	0.1800E+02	0.5852E-04	0.1297E-03	-0.3762E-02	0.2082E-02	-0.1722E+02	0.2601E+01	0.2254E+01	0.9823E+00	0.1259E+02

X = 0.487673

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.3957E-03	0.1146E-02	0.3843E-04	0.2644E-03	-0.1773E+01	0.2878E+01	0.2194E+01	0.1225E+01	-0.1286E+01
2	0.9000E+00	0.3689E-03	0.1241E-02	0.1675E-03	0.2315E-03	-0.3694E+01	0.2980E+01	0.2254E+01	0.1245E+01	-0.2172E+01
3	0.1800E+01	0.3723E-03	0.1287E-02	0.4877E-03	0.1891E-03	-0.1176E+02	0.3176E+01	0.2412E+01	0.1264E+01	-0.3021E+01
4	0.2700E+01	0.3758E-03	0.1329E-02	0.7915E-03	0.1444E-03	-0.1943E+02	0.3422E+01	0.2619E+01	0.1231E+01	-0.3366E+01
5	0.3600E+01	0.3784E-03	0.1397E-02	0.1067E-02	0.1097E-03	-0.2558E+02	0.3622E+01	0.2810E+01	0.1218E+01	-0.3449E+01
6	0.4500E+01	0.3779E-03	0.1438E-02	0.1329E-02	0.8281E-04	-0.2896E+02	0.3778E+01	0.2946E+01	0.1207E+01	-0.3413E+01
7	0.5400E+01	0.3737E-03	0.1438E-02	0.1487E-02	0.8226E-04	-0.2918E+02	0.3837E+01	0.3012E+01	0.1199E+01	-0.3331E+01
8	0.6300E+01	0.3673E-03	0.1412E-02	0.1475E-02	0.8495E-04	-0.2748E+02	0.3850E+01	0.3030E+01	0.1194E+01	-0.3237E+01
9	0.7200E+01	0.3599E-03	0.1373E-02	0.1357E-02	0.8879E-04	-0.2495E+02	0.3837E+01	0.3025E+01	0.1190E+01	-0.3145E+01
10	0.8100E+01	0.3515E-03	0.1329E-02	0.1383E-02	0.9074E-04	-0.2220E+02	0.3818E+01	0.3014E+01	0.1186E+01	-0.3058E+01
11	0.9000E+01	0.3440E-03	0.1294E-02	0.1424E-02	0.9282E-04	-0.2015E+02	0.3815E+01	0.3016E+01	0.1183E+01	-0.2972E+01
12	0.9900E+01	0.3367E-03	0.1261E-02	0.1446E-02	0.9513E-04	-0.1799E+02	0.3811E+01	0.3017E+01	0.1180E+01	-0.2884E+01
13	0.1080E+02	0.3292E-03	0.1228E-02	0.1446E-02	0.9713E-04	-0.1541E+02	0.3806E+01	0.3018E+01	0.1177E+01	-0.2794E+01
14	0.1170E+02	0.3216E-03	0.1194E-02	0.1533E-02	0.9774E-04	-0.1242E+02	0.3805E+01	0.3021E+01	0.1173E+01	-0.2699E+01
15	0.1260E+02	0.3144E-03	0.1168E-02	0.1637E-02	0.9774E-04	-0.9523E+01	0.3813E+01	0.3033E+01	0.1170E+01	-0.2589E+01
16	0.1350E+02	0.3081E-03	0.1148E-02	0.1772E-02	0.9713E-04	-0.6056E+01	0.3831E+01	0.3053E+01	0.1166E+01	-0.2463E+01
17	0.1440E+02	0.3013E-03	0.1127E-02	0.1991E-02	0.9595E-04	-0.4432E+00	0.3853E+01	0.3076E+01	0.1163E+01	-0.2322E+01
18	0.1530E+02	0.2943E-03	0.1110E-02	0.2365E-02	0.9243E-04	0.7386E+01	0.3895E+01	0.3115E+01	0.1160E+01	-0.2126E+01
19	0.1620E+02	0.2903E-03	0.1136E-02	0.3545E-02	0.7679E-04	0.2142E+02	0.4030E+01	0.3235E+01	0.1155E+01	-0.1823E+01
20	0.1710E+02	0.2841E-03	0.1222E-02	0.2017E-01	0.3824E-04	0.6188E+02	0.4421E+01	0.3583E+01	0.1144E+01	-0.1568E+01
21	0.1800E+02	0.2831E-03	0.1186E-02	0.2363E-02	0.6544E-04	-0.5593E+01	0.4091E+01	0.3365E+01	0.1180E+01	0.1310E+00

LAMINAR SEPARATION AT 48.8 PERCENTAGE MINGCHORD

TRANSITION LAMINAR - TURBULENT

N	H	TE	GAM	F	1	0.14500E+01	0.35569E-03	0.22203E+00	0.20902E-01
N	H	TE	GAM	F	2	0.14500E+01	0.36886E-03	0.19299E+00	0.20969E-01
N	H	TE	GAM	F	3	0.14500E+01	0.37229E-03	0.11369E+00	0.20990E-01
N	H	TE	GAM	F	4	0.14500E+01	0.37497E-03	0.71444E-01	0.21015E-01
N	H	TE	GAM	F	5	0.14500E+01	0.37842E-03	0.47135E-01	0.21045E-01
N	H	TE	GAM	F	6	0.14500E+01	0.37792E-03	0.29225E-01	0.21048E-01
N	H	TE	GAM	F	7	0.14500E+01	0.37367E-03	0.14103E-01	0.21027E-01
N	H	TE	GAM	F	8	0.14500E+01	0.36732E-03	-0.14771E-04	0.20990E-01
N	H	TE	GAM	F	9	0.14500E+01	0.35988E-03	-0.13680E-01	0.20945E-01
N	H	TE	GAM	F	10	0.14500E+01	0.35154E-03	-0.27011E-01	0.20892E-01
N	H	TE	GAM	F	11	0.14500E+01	0.34398E-03	-0.38389E-01	0.20842E-01
N	H	TE	GAM	F	12	0.14500E+01	0.33668E-03	-0.48641E-01	0.20792E-01
N	H	TE	GAM	F	13	0.14500E+01	0.32924E-03	-0.58385E-01	0.20739E-01
N	H	TE	GAM	F	14	0.14500E+01	0.32157E-03	-0.67236E-01	0.20683E-01
N	H	TE	GAM	F	15	0.14500E+01	0.31444E-03	-0.73689E-01	0.20631E-01
N	H	TE	GAM	F	16	0.14500E+01	0.30807E-03	-0.78755E-01	0.20579E-01
N	H	TE	GAM	F	17	0.14500E+01	0.30128E-03	-0.83446E-01	0.20524E-01
N	H	TE	GAM	F	18	0.14500E+01	0.29428E-03	-0.87834E-01	0.20469E-01
N	H	TE	GAM	F	19	0.14500E+01	0.29033E-03	-0.88397E-01	0.20430E-01
N	H	TE	GAM	F	20	0.14500E+01	0.28415E-03	-0.10262E+00	0.20371E-01
N	H	TE	GAM	F	21	0.14500E+01	0.28308E-03	-0.12724E+00	0.20334E-01

X = 1.003279

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5782E-02	0.8883E-02	-0.4338E-02	0.0000E+00	-0.4482E+01	0.1456E+01	0.1212E+01	0.9158E+00	0.1051E+01
2	0.9000E+00	0.5429E-02	0.7142E-02	-0.4317E-02	0.0000E+00	-0.4572E+01	0.1440E+01	0.1202E+01	0.9092E+00	0.1572E+01
3	0.1800E+01	0.5172E-02	0.6892E-02	-0.4370E-02	0.0000E+00	-0.4093E+01	0.1436E+01	0.1199E+01	0.9074E+00	0.2427E+01
4	0.2700E+01	0.5047E-02	0.6978E-02	-0.4195E-02	0.0000E+00	-0.4031E+01	0.1435E+01	0.1198E+01	0.9062E+00	0.2894E+01
5	0.3600E+01	0.4988E-02	0.6935E-02	-0.4106E-02	0.0000E+00	-0.4022E+01	0.1434E+01	0.1198E+01	0.9052E+00	0.3178E+01
6	0.4500E+01	0.4767E-02	0.6834E-02	-0.4028E-02	0.0000E+00	-0.3996E+01	0.1433E+01	0.1198E+01	0.9044E+00	0.3378E+01
7	0.5400E+01	0.4626E-02	0.6687E-02	-0.3945E-02	0.0000E+00	-0.3991E+01	0.1433E+01	0.1198E+01	0.9037E+00	0.3535E+01
8	0.6300E+01	0.4485E-02	0.6504E-02	-0.3869E-02	0.0000E+00	-0.3986E+01	0.1433E+01	0.1198E+01	0.9030E+00	0.3654E+01
9	0.7200E+01	0.4343E-02	0.6301E-02	-0.3803E-02	0.0000E+00	-0.3946E+01	0.1432E+01	0.1198E+01	0.9023E+00	0.3741E+01
10	0.8100E+01	0.4200E-02	0.6092E-02	-0.3732E-02	0.0000E+00	-0.3851E+01	0.1432E+01	0.1198E+01	0.9015E+00	0.3816E+01
11	0.9000E+01	0.4056E-02	0.5901E-02	-0.3654E-02	0.0000E+00	-0.3777E+01	0.1431E+01	0.1198E+01	0.9007E+00	0.3890E+01
12	0.9900E+01	0.3912E-02	0.5707E-02	-0.3577E-02	0.0000E+00	-0.3701E+01	0.1431E+01	0.1198E+01	0.8999E+00	0.3956E+01
13	0.1080E+02	0.3767E-02	0.5507E-02	-0.3515E-02	0.0000E+00	-0.3661E+01	0.1430E+01	0.1198E+01	0.8991E+00	0.4010E+01
14	0.1170E+02	0.3623E-02	0.5311E-02	-0.3466E-02	0.0000E+00	-0.3352E+01	0.1429E+01	0.1198E+01	0.8978E+00	0.4085E+01
15	0.1260E+02	0.3477E-02	0.5135E-02	-0.3368E-02	0.0000E+00	-0.3175E+01	0.1428E+01	0.1198E+01	0.8964E+00	0.4207E+01
16	0.1350E+02	0.3330E-02	0.4952E-02	-0.3239E-02	0.0000E+00	-0.3008E+01	0.1428E+01	0.1198E+01	0.8947E+00	0.4345E+01
17	0.1440E+02	0.3205E-02	0.4797E-02	-0.3113E-02	0.0000E+00	-0.2795E+01	0.1427E+01	0.1199E+01	0.8901E+00	0.4433E+01
18	0.1530E+02	0.3050E-02	0.4608E-02	-0.3063E-02	0.0000E+00	-0.2400E+01	0.1426E+01	0.1199E+01	0.8891E+00	0.4661E+01
19	0.1620E+02	0.2983E-02	0.4488E-02	-0.3038E-02	0.0000E+00	-0.1988E+01	0.1425E+01	0.1199E+01	0.8883E+00	0.5122E+01
20	0.1710E+02	0.2723E-02	0.4402E-02	-0.3072E-02	0.0000E+00	-0.7919E+00	0.1427E+01	0.1198E+01	0.8915E+00	0.6346E+01
21	0.1800E+02	0.2281E-02	0.3891E-02	-0.2629E-02	0.0000E+00	0.2081E+01	0.1459E+01	0.1200E+01	0.9427E+00	0.1127E+02

X = 2.000884

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL

1	0.0000E+00	0.4665E-02	0.6606E-02	-0.9430E-04	0.0000E+00	0.1310E+01	0.1296E+01	0.1033E+01	0.9842E+00	-0.7124E+00
2	0.9000E+00	0.4247E-02	0.6936E-02	0.2296E-03	0.0000E+00	0.1198E+01	0.1294E+01	0.1031E+01	0.9843E+00	-0.3507E+00
3	0.1800E+01	0.3967E-02	0.6391E-02	0.2416E-03	0.0000E+00	0.1036E+01	0.1293E+01	0.1030E+01	0.9845E+00	0.1980E+00
4	0.2700E+01	0.3952E-02	0.6409E-02	0.1291E-03	0.0000E+00	0.9275E+00	0.1294E+01	0.1030E+01	0.9846E+00	0.4794E+00
5	0.3600E+01	0.3867E-02	0.6355E-02	0.1463E-03	0.0000E+00	0.8159E+00	0.1294E+01	0.1031E+01	0.9847E+00	0.6687E+00
6	0.4500E+01	0.3752E-02	0.6099E-02	0.1235E-03	0.0000E+00	0.7180E+00	0.1294E+01	0.1031E+01	0.9846E+00	0.8233E+00
7	0.5400E+01	0.3637E-02	0.5913E-02	0.1100E-03	0.0000E+00	0.6213E+00	0.1294E+01	0.1031E+01	0.9844E+00	0.9555E+00
8	0.6300E+01	0.3521E-02	0.5671E-02	0.9550E-04	0.0000E+00	0.5286E+00	0.1294E+01	0.1031E+01	0.9842E+00	0.1061E+01
9	0.7200E+01	0.3403E-02	0.5334E-02	0.6784E-04	0.0000E+00	0.4538E+00	0.1294E+01	0.1031E+01	0.9839E+00	0.1138E+01
10	0.8100E+01	0.3276E-02	0.4976E-02	0.3657E-04	0.0000E+00	0.4021E+00	0.1294E+01	0.1031E+01	0.9837E+00	0.1203E+01
11	0.9000E+01	0.3154E-02	0.4790E-02	0.2931E-04	0.0000E+00	0.3484E+00	0.1294E+01	0.1031E+01	0.9835E+00	0.1270E+01
12	0.9900E+01	0.3033E-02	0.4581E-02	0.2210E-04	0.0000E+00	0.2972E+00	0.1294E+01	0.1031E+01	0.9833E+00	0.1325E+01
13	0.1080E+02	0.2908E-02	0.4277E-02	-0.1583E-05	0.0000E+00	0.2730E+00	0.1294E+01	0.1031E+01	0.9831E+00	0.1363E+01
14	0.1170E+02	0.2774E-02	0.3964E-02	-0.2757E-04	0.0000E+00	0.2822E+00	0.1294E+01	0.1031E+01	0.9830E+00	0.1421E+01
15	0.1260E+02	0.2640E-02	0.3835E-02	-0.2674E-04	0.0000E+00	0.2849E+00	0.1294E+01	0.1031E+01	0.9831E+00	0.1538E+01
16	0.1350E+02	0.2499E-02	0.3639E-02	-0.3440E-04	0.0000E+00	0.3017E+00	0.1294E+01	0.1031E+01	0.9833E+00	0.1739E+01
17	0.1440E+02	0.2369E-02	0.3368E-02	-0.6070E-04	0.0000E+00	0.3806E+00	0.1294E+01	0.1031E+01	0.9837E+00	0.1944E+01
18	0.1530E+02	0.2227E-02	0.3095E-02	-0.8518E-04	0.0000E+00	0.5330E+00	0.1294E+01	0.1031E+01	0.9844E+00	0.2251E+01
19	0.1620E+02	0.2067E-02	0.2983E-02	-0.8702E-04	0.0000E+00	0.7040E+00	0.1295E+01	0.1030E+01	0.9860E+00	0.2942E+01
20	0.1710E+02	0.1830E-02	0.2790E-02	-0.4265E-04	0.0000E+00	0.7495E+00	0.1296E+01	0.1029E+01	0.9899E+00	0.4741E+01
21	0.1800E+02	0.1447E-02	0.2179E-02	-0.2719E-04	0.0000E+00	0.7514E+00	0.1302E+01	0.1026E+01	0.1006E+01	0.1011E+02

X = 3.013998

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5185E-02	0.6639E-02	0.4768E-04	0.0000E+00	0.6731E+00	0.1288E+01	0.1020E+01	0.9952E+00	-0.7732E+00
2	0.9000E+00	0.4617E-02	0.6229E-02	-0.3356E-03	0.0000E+00	0.5837E+00	0.1286E+01	0.1018E+01	0.9949E+00	-0.4127E+00
3	0.1800E+01	0.4203E-02	0.5666E-02	-0.3123E-03	0.0000E+00	0.5028E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.1765E+00
4	0.2700E+01	0.4159E-02	0.6024E-02	-0.1638E-03	0.0000E+00	0.4591E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.4587E+00
5	0.3600E+01	0.4024E-02	0.5764E-02	-0.2194E-03	0.0000E+00	0.3984E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.6396E+00
6	0.4500E+01	0.3861E-02	0.5620E-02	-0.1731E-03	0.0000E+00	0.3516E+00	0.1285E+01	0.1017E+01	0.9946E+00	0.7843E+00
7	0.5400E+01	0.3697E-02	0.5437E-02	-0.1659E-03	0.0000E+00	0.3041E+00	0.1285E+01	0.1017E+01	0.9945E+00	0.9076E+00
8	0.6300E+01	0.3540E-02	0.5216E-02	-0.1519E-03	0.0000E+00	0.2587E+00	0.1285E+01	0.1017E+01	0.9944E+00	0.1006E+01
9	0.7200E+01	0.3394E-02	0.4936E-02	-0.1232E-03	0.0000E+00	0.2225E+00	0.1284E+01	0.1017E+01	0.9943E+00	0.1080E+01
10	0.8100E+01	0.3250E-02	0.4640E-02	-0.9333E-04	0.0000E+00	0.1980E+00	0.1284E+01	0.1017E+01	0.9942E+00	0.1148E+01
11	0.9000E+01	0.3105E-02	0.4458E-02	-0.9070E-04	0.0000E+00	0.1713E+00	0.1284E+01	0.1017E+01	0.9941E+00	0.1222E+01
12	0.9900E+01	0.2965E-02	0.4262E-02	-0.8460E-04	0.0000E+00	0.1454E+00	0.1284E+01	0.1016E+01	0.9940E+00	0.1285E+01
13	0.1080E+02	0.2837E-02	0.4016E-02	-0.6004E-04	0.0000E+00	0.1329E+00	0.1284E+01	0.1016E+01	0.9940E+00	0.1333E+01
14	0.1170E+02	0.2710E-02	0.3740E-02	-0.3953E-04	0.0000E+00	0.1333E+00	0.1284E+01	0.1016E+01	0.9941E+00	0.1404E+01
15	0.1260E+02	0.2577E-02	0.3635E-02	-0.3693E-04	0.0000E+00	0.1324E+00	0.1284E+01	0.1016E+01	0.9943E+00	0.1533E+01
16	0.1350E+02	0.2427E-02	0.3434E-02	-0.3773E-04	0.0000E+00	0.1361E+00	0.1284E+01	0.1016E+01	0.9946E+00	0.1742E+01
17	0.1440E+02	0.2319E-02	0.3241E-02	-0.1056E-04	0.0000E+00	0.1695E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1952E+01
18	0.1530E+02	0.2232E-02	0.3073E-02	0.2280E-04	0.0000E+00	0.2387E+00	0.1285E+01	0.1016E+01	0.9952E+00	0.2262E+01
19	0.1620E+02	0.2163E-02	0.3081E-02	0.5781E-04	0.0000E+00	0.3251E+00	0.1285E+01	0.1016E+01	0.9957E+00	0.2992E+01
20	0.1710E+02	0.2102E-02	0.3117E-02	0.1428E-03	0.0000E+00	0.4049E+00	0.1285E+01	0.1016E+01	0.9976E+00	0.4889E+01
21	0.1800E+02	0.1315E-02	0.1581E-02	-0.1869E-03	0.0000E+00	0.3883E+00	0.1289E+01	0.1012E+01	0.1011E+01	0.1020E+02

X = 3.058694

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5225E-02	0.6652E-02	0.4431E-04	0.0000E+00	0.6556E+00	0.1288E+01	0.1019E+01	0.9954E+00	-0.7752E+00
2	0.9000E+00	0.4644E-02	0.6131E-02	-0.3394E-03	0.0000E+00	0.5654E+00	0.1286E+01	0.1018E+01	0.9952E+00	-0.4141E+00
3	0.1800E+01	0.4220E-02	0.5576E-02	-0.3096E-03	0.0000E+00	0.4870E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.1771E+00
4	0.2700E+01	0.4173E-02	0.5976E-02	-0.1621E-03	0.0000E+00	0.4446E+00	0.1285E+01	0.1017E+01	0.9950E+00	0.4596E+00
5	0.3600E+01	0.4033E-02	0.5701E-02	-0.2174E-03	0.0000E+00	0.3854E+00	0.1285E+01	0.1017E+01	0.9949E+0C	0.6402E+00
6	0.4500E+01	0.3867E-02	0.5570E-02	-0.1702E-03	0.0000E+00	0.3401E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.7845E+00
7	0.5400E+01	0.3701E-02	0.5389E-02	-0.1634E-03	0.0000E+00	0.2940E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.9075E+00
8	0.6300E+01	0.3542E-02	0.5172E-02	-0.1496E-03	0.0000E+00	0.2500E+00	0.1284E+01	0.1016E+01	0.9946E+00	0.1006E+01
9	0.7200E+01	0.3394E-02	0.4901E-02	-0.1212E-03	0.0000E+00	0.2150E+00	0.1284E+01	0.1016E+01	0.9945E+00	0.1080E+01
10	0.8100E+01	0.3249E-02	0.4613E-02	-0.9165E-04	0.0000E+00	0.1913E+00	0.1284E+01	0.1016E+01	0.9944E+00	0.1148E+01
11	0.9000E+01	0.3103E-02	0.4432E-02	-0.8947E-04	0.0000E+00	0.1653E+00	0.1284E+01	0.1016E-01	0.9943E+00	0.1222E+01
12	0.9900E+01	0.2962E-02	0.4238E-02	-0.8355E-04	0.0000E+00	0.1401E+00	0.1284E+01	0.1016E+01	0.9942E+00	0.1286E+01
13	0.1080E+02	0.2834E-02	0.3998E-02	-0.5928E-04	0.0000E+00	0.1279E+00	0.1284E+01	0.1016E+01	0.9943E+00	0.1335E+01
14	0.1170E+02	0.2707E-02	0.3729E-02	-0.3917E-04	0.0000E+00	0.1281E+00	0.1284E+01	0.1016E+01	0.9943E+00	0.1406E+01
15	0.1260E+02	0.2574E-02	0.3624E-02	-0.3690E-04	0.0000E+00	0.1270E+00	0.1284E+01	0.1016E+01	0.9945E+00	0.1536E+01
16	0.1350E+02	0.2422E-02	0.3423E-02	-0.3811E-04	0.0000E+00	0.1301E+00	0.1284E+01	0.1016E+01	0.9949E+00	0.1745E+01
17	0.1440E+02	0.2315E-02	0.3238E-02	-0.1173E-04	0.0000E+00	0.1618E+00	0.1284E+01	0.1016E+01	0.9952E+00	0.1955E+01
18	0.1530E+02	0.2231E-02	0.3079E-02	0.2042E-04	0.0000E+00	0.2283E+00	0.1285E+01	0.1016E+01	0.9956E+00	0.2264E+01
19	0.1620E+02	0.2168E-02	0.3097E-02	0.5465E-04	0.0000E+00	0.3120E+00	0.1285E+01	0.1016E+01	0.9961E+00	0.2992E+01
20	0.1710E+02	0.2126E-02	0.3160E-02	0.1482E-03	0.0000E+00	0.3959E+00	0.1285E+01	0.1015E+01	0.9979E+00	0.4886E+01
21	0.1800E+02	0.1307E-02	0.1525E-02	-0.1937E-03	0.0000E+00	0.3826E+00	0.1289E+01	0.1012E+01	0.1011E+01	0.1020E+02

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         447  INTEGRATION   STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
      25   -0.47637E-04 131  16  21   0.47589E-05  -0.33914E-04 160  2  3  0.11295E-06  0.03531   3541
      26   -0.22805E-03 160  16  10   0.11727E-04  -0.37975E-04 160  2  3  0.18918E-06  0.03525   3541
      27   -0.17664E-03 160  16   8   0.21720E-04  -0.41810E-04 160  2  3  0.13958E-06  0.03516   3541
      28   -0.21534E-03 134  16  20   0.42765E-04  -0.40430E-04 160  2  3  0.13551E-06  0.03498   3543
      29   -0.49226E-04 160  16  20   0.58621E-05  -0.35431E-04 160  2  3  0.13307E-06  0.03493   3539
      30   -0.68660E-04 160  16  20   0.95916E-05  -0.40333E-04 160  2  3  0.13245E-06  0.03487   3545
      31   -0.97998E-04 159  16  19   0.19458E-04  -0.39485E-04 160  2  3  0.12565E-06  0.03478   3547
      32   -0.16552E-03 126  16  20   0.39556E-04  -0.36670E-04 160  2  3  0.11715E-06  0.03461   3542
 3DBL CALCULATION ITBLX ITBL=       3      4
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UPPER WING SURFACE
BOUNDARY LAYER STARTING NODE UPPER WING IHNODE= 169

X = 0.006879

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL

ORIGINAL PAGE IS OF POOR QUALITY

1	0.0000E+00	0.5628E-04	0.1248E-03	0.2841E-02	0.2306E-02	-0.1450E+02	0.2551E+01	0.2228E+01	0.8774E+00	0.5241E+01
2	0.9000E+00	0.5003E-04	0.1109E-03	0.2132E-02	0.2164E-02	-0.1377E+02	0.2698E+01	0.2223E+01	0.1043E+01	0.3310E+01
3	0.1800E+01	0.4924E-04	0.1092E-03	0.1753E-02	0.2088E-02	-0.1414E+02	0.2752E+01	0.2226E+01	0.1091E+01	0.4291E+01
4	0.2700E+01	0.4883E-04	0.1083E-03	0.1471E-02	0.2067E-02	-0.1428E+02	0.2772E+01	0.2227E+01	0.1107E+01	0.4661E+01
5	0.3600E+01	0.4871E-04	0.1080E-03	0.1208E-02	0.2061E-02	-0.1439E+02	0.2779E+01	0.2227E+01	0.1112E+01	0.4937E+01
6	0.4500E+01	0.4878E-04	0.1081E-03	0.9541E-03	0.2061E-02	-0.1449E+02	0.2777E+01	0.2228E+01	0.1110E+01	0.5197E+01
7	0.5400E+01	0.4892E-04	0.1085E-03	0.7012E-03	0.2064E-02	-0.1458E+02	0.2772E+01	0.2229E+01	0.1105E+01	0.5445E+01
8	0.6300E+01	0.4911E-04	0.1089E-03	0.4465E-03	0.2069E-02	-0.1467E+02	0.2764E+01	0.2229E+01	0.1097E+01	0.5687E+01
9	0.7200E+01	0.4934E-04	0.1094E-03	0.1893E-03	0.2077E-02	-0.1476E+02	0.2755E+01	0.2230E+01	0.1088E+01	0.5934E+01
10	0.8100E+01	0.4962E-04	0.1100E-03	-0.6751E-04	0.2086E-02	-0.1487E+02	0.2744E+01	0.2231E+01	0.1078E+01	0.6218E+01
11	0.9000E+01	0.4991E-04	0.1106E-03	-0.3278E-03	0.2097E-02	-0.1499E+02	0.2732E+01	0.2232E+01	0.1065E+01	0.6524E+01
12	0.9900E+01	0.5021E-04	0.1113E-03	-0.5944E-03	0.2110E-02	-0.1511E+02	0.2719E+01	0.2233E+01	0.1053E+01	0.6849E+01
13	0.1080E+02	0.5046E-04	0.1119E-03	-0.8673E-03	0.2127E-02	-0.1524E+02	0.2706E+01	0.2234E+01	0.1039E+01	0.7202E+01
14	0.1170E+02	0.5077E-04	0.1126E-03	-0.1143E-02	0.2148E-02	-0.1541E+02	0.2691E+01	0.2235E+01	0.1022E+01	0.7644E+01
15	0.1260E+02	0.5109E-04	0.1133E-03	-0.1429E-02	0.2174E-02	-0.1560E+02	0.2674E+01	0.2237E+01	0.1003E+01	0.8158E+01
16	0.1350E+02	0.5142E-04	0.1140E-03	-0.1731E-02	0.2202E-02	-0.1581E+02	0.2657E+01	0.2239E+01	0.9832E+00	0.8734E+01
17	0.1440E+02	0.5176E-04	0.1148E-03	-0.2052E-02	0.2236E-02	-0.1607E+02	0.2638E+01	0.2241E+01	0.9607E+00	0.9421E+01
18	0.1530E+02	0.5219E-04	0.1157E-03	-0.2396E-02	0.2280E-02	-0.1642E+02	0.2617E+01	0.2245E+01	0.9325E+00	0.1036E+02
19	0.1620E+02	0.5267E-04	0.1168E-03	-0.2784E-02	0.2328E-02	-0.1687E+02	0.2596E+01	0.2250E+01	0.9015E+00	0.1159E+02
20	0.1710E+02	0.5322E-04	0.1180E-03	-0.3265E-02	0.2348E-02	-0.1771E+02	0.2586E+01	0.2261E+01	0.8746E+00	0.1390E+02
21	0.1800E+02	0.5500E-04	0.1219E-03	-0.3255E-02	0.2101E-02	-0.1744E+02	0.2642E+01	0.2257E+01	0.9447E+00	0.1316E+02

X = 0.083349

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1718E-03	0.5627E-03	0.6087E-03	0.3839E-03	0.1516E+02	0.3223E+01	0.2483E+01	0.1218E+01	-0.3106E+01
2	0.9000E+00	0.1837E-03	0.8871E-03	0.1725E-01	0.6078E-04	0.6213E+02	0.4765E+01	0.3486E+01	0.1371E+01	-0.6071E+01
3	0.1800E+01	0.1590E-03	0.6652E-03	0.2462E-02	0.1842E-03	0.3088E+02	0.4249E+01	0.2888E+01	0.1478E+01	-0.7976E+01
4	0.2700E+01	0.1465E-03	0.5776E-03	0.1274E-02	0.2694E-03	0.1550E+02	0.4072E+01	0.2656E+01	0.1534E+01	-0.8812E+01
5	0.3600E+01	0.1409E-03	0.5458E-03	0.9896E-03	0.3044E-03	0.1108E+02	0.4027E+01	0.2585E+01	0.1556E+01	-0.9065E+01
6	0.4500E+01	0.1375E-03	0.5279E-03	0.8826E-03	0.3224E-03	0.9578E+01	0.4004E+01	0.2557E+01	0.1562E+01	-0.9089E+01
7	0.5400E+01	0.1348E-03	0.5138E-03	0.8276E-03	0.3351E-03	0.8920E+01	0.3982E+01	0.2544E+01	0.1560E+01	-0.9020E+01
8	0.6300E+01	0.1322E-03	0.5001E-03	0.8003E-03	0.3476E-03	0.8306E+01	0.3954E+01	0.2534E+01	0.1555E+01	-0.8915E+01
9	0.7200E+01	0.1299E-03	0.4877E-03	0.7661E-03	0.3580E-03	0.8065E+01	0.3929E+01	0.2530E+01	0.1548E+01	-0.8795E+01
10	0.8100E+01	0.1276E-03	0.4753E-03	0.7335E-03	0.3690E-03	0.7869E+01	0.3899E+01	0.2527E+01	0.1538E+01	-0.8649E+01
11	0.9000E+01	0.1253E-03	0.4626E-03	0.6990E-03	0.3807E-03	0.7612E+01	0.3866E+01	0.2525E+01	0.1526E+01	-0.8476E+01
12	0.9900E+01	0.1231E-03	0.4498E-03	0.6664E-03	0.3929E-03	0.7324E+01	0.3831E+01	0.2523E+01	0.1512E+01	-0.8288E+01
13	0.1080E+02	0.1208E-03	0.4370E-03	0.6330E-03	0.4056E-03	0.7055E+01	0.3795E+01	0.2522E+01	0.1497E+01	-0.8085E+01
14	0.1170E+02	0.1185E-03	0.4228E-03	0.6061E-03	0.4229E-03	0.6474E+01	0.3746E+01	0.2517E+01	0.1479E+01	-0.7837E+01
15	0.1260E+02	0.1161E-03	0.4088E-03	0.5624E-03	0.4405E-03	0.5902E+01	0.3696E+01	0.2514E+01	0.1458E+01	-0.7535E+01
16	0.1350E+02	0.1137E-03	0.3937E-03	0.5194E-03	0.4622E-03	0.5165E+01	0.3640E+01	0.2508E+01	0.1435E+01	-0.7198E+01
17	0.1440E+02	0.1112E-03	0.3778E-03	0.4726E-03	0.4887E-03	0.4347E+01	0.3577E+01	0.2499E+01	0.1411E+01	-0.6822E+01
18	0.1530E+02	0.1085E-03	0.3599E-03	0.4136E-03	0.5247E-03	0.3198E+01	0.3499E+01	0.2483E+01	0.1382E+01	-0.6327E+01
19	0.1620E+02	0.1050E-03	0.3382E-03	0.3570E-03	0.5779E-03	0.1590E+01	0.3406E+01	0.2453E+01	0.1352E+01	-0.5634E+01
20	0.1710E+02	0.1007E-03	0.3148E-03	0.3064E-03	0.6408E-03	-0.2350E-01	0.3333E+01	0.2413E+01	0.1340E+01	-0.4209E+01
21	0.1800E+02	0.1023E-03	0.3275E-03	0.3167E-03	0.5613E-03	0.2982E+00	0.3451E+01	0.2502E+01	0.1342E+01	-0.2788E+01

LAMINAR SEPARATION AT 8.3 PERCENTAGE HINGCHORD

TRANSITION LAMINAR - TURBULENT

N H TE GAM F	1	0.14500E+01	0.17178E-03	0.89213E-01	0.19095E-01
N H TE GAM F	2	0.14500E+01	0.18375E-03	0.10307E+00	0.19322E-01
N H TE GAM F	3	0.14500E+01	0.15900E-03	0.26302E-01	0.18940E-01
N H TE GAM F	4	0.14500E+01	0.14650E-03	-0.96679E-02	0.18716E-01
N H TE GAM F	5	0.14500E+01	0.14089E-03	-0.25673E-01	0.18612E-01
N H TE GAM F	6	0.14500E+01	0.13747E-03	-0.33772E-01	0.18554E-01
N H TE GAM F	7	0.14500E+01	0.13476E-03	-0.39307E-01	0.18513E-01
N H TE GAM F	8	0.14500E+01	0.13223E-03	-0.43995E-01	0.18477E-01
N H TE GAM F	9	0.14500E+01	0.12988E-03	-0.48024E-01	0.18445E-01
N H TE GAM F	10	0.14500E+01	0.12763E-03	-0.51510E-01	0.18414E-01
N H TE GAM F	11	0.14500E+01	0.12532E-03	-0.55305E-01	0.18380E-01
N H TE GAM F	12	0.14500E+01	0.12307E-03	-0.59000E-01	0.18346E-01
N H TE GAM F	13	0.14500E+01	0.12081E-03	-0.62452E-01	0.18308E-01
N H TE GAM F	14	0.14500E+01	0.11848E-03	-0.65948E-01	0.18264E-01
N H TE GAM F	15	0.14500E+01	0.11615E-03	-0.69827E-01	0.18215E-01
N H TE GAM F	16	0.14500E+01	0.11373E-03	-0.73779E-01	0.18157E-01
N H TE GAM F	17	0.14500E+01	0.11120E-03	-0.77439E-01	0.18088E-01
N H TE GAM F	18	0.14500E+01	0.10849E-03	-0.81474E-01	0.18001E-01
N H TE GAM F	19	0.14500E+01	0.10503E-03	-0.86471E-01	0.17882E-01
N H TE GAM F	20	0.14500E+01	0.10072E-03	-0.93170E-01	0.17749E-01
N H TE GAM F	21	0.14500E+01	0.10227E-03	-0.95248E-01	0.17795E-01

X = 1.008562

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1233E-01	0.1855E-01	0.9778E-02	0.0000E+00	-0.2522E+02	0.1749E+01	0.1499E+01	0.8970E+00	0.8400E+00
2	0.9000E+00	0.1210E-01	0.1659E-01	0.3444E-02	0.0000E+00	-0.2197E+02	0.1692E+01	0.1447E+01	0.8946E+00	0.9666E+00
3	0.1800E+01	0.1187E-01	0.1612E-01	0.2581E-02	0.0000E+00	-0.1935E+02	0.1672E+01	0.1427E+01	0.8945E+00	0.1031E+01
4	0.2700E+01	0.1173E-01	0.1617E-01	0.2928E-02	0.0000E+00	-0.1764E+02	0.1666E+01	0.1420E+01	0.8938E+00	0.9807E+00
5	0.3600E+01	0.1163E-01	0.1638E-01	0.3260E-02	0.0000E+00	-0.1631E+02	0.1666E+01	0.1420E+01	0.8929E+00	0.8649E+00
6	0.4500E+01	0.1160E-01	0.1666E-01	0.3538E-02	0.0000E+00	-0.1520E+02	0.1671E+01	0.1424E+01	0.8921E+00	0.7343E+00
7	0.5400E+01	0.1154E-01	0.1691E-01	0.3774E-02	0.0000E+00	-0.1408E+02	0.1679E+01	0.1430E+01	0.8915E+00	0.5959E+00
8	0.6300E+01	0.1144E-01	0.1712E-01	0.4021E-02	0.0000E+00	-0.1297E+02	0.1687E+01	0.1437E+01	0.8909E+00	0.4641E+00
9	0.7200E+01	0.1131E-01	0.1729E-01	0.4265E-02	0.0000E+00	-0.1192E+02	0.1695E+01	0.1445E+01	0.8903E+00	0.3490E+00
10	0.8100E+01	0.1118E-01	0.1742E-01	0.4451E-02	0.0000E+00	-0.1094E+02	0.1705E+01	0.1453E+01	0.8897E+00	0.2382E+00
11	0.9000E+01	0.1104E-01	0.1758E-01	0.4660E-02	0.0000E+00	-0.9891E+01	0.1716E+01	0.1464E+01	0.8891E+00	0.1164E+00
12	0.9900E+01	0.1090E-01	0.1775E-01	0.4916E-02	0.0000E+00	-0.8871E+01	0.1731E+01	0.1477E+01	0.8885E+00	-0.3455E-02
13	0.1080E+02	0.1072E-01	0.1787E-01	0.5103E-02	0.0000E+00	-0.8033E+01	0.1747E+01	0.1492E+01	0.8878E+00	-0.1114E+00
14	0.1170E+02	0.1051E-01	0.1791E-01	0.5096E-02	0.0000E+00	-0.7428E+01	0.1767E+01	0.1510E+01	0.8868E+00	-0.2433E+00
15	0.1260E+02	0.1026E-01	0.1788E-01	0.5106E-02	0.0000E+00	-0.6829E+01	0.1788E+01	0.1529E+01	0.8857E+00	-0.4607E+00
16	0.1350E+02	0.9954E-02	0.1768E-01	0.4717E-02	0.0000E+00	-0.6416E+01	0.1806E+01	0.1547E+01	0.8845E+00	-0.7785E+00
17	0.1440E+02	0.9789E-02	0.1775E-01	0.4946E-02	0.0000E+00	-0.6223E+01	0.1833E+01	0.1574E+01	0.8787E+00	-0.1016E+01
18	0.1530E+02	0.9452E-02	0.1731E-01	0.4700E-02	0.0000E+00	-0.6417E+01	0.1841E+01	0.1581E+01	0.8787E+00	-0.1532E+01
19	0.1620E+02	0.9111E-02	0.1733E-01	0.4841E-02	0.0000E+00	-0.6983E+01	0.1863E+01	0.1601E+01	0.8787E+00	-0.2492E+01
20	0.1710E+02	0.8220E-02	0.1596E-01	0.3824E-02	0.0000E+00	-0.9697E+01	0.1869E+01	0.1606E+01	0.8818E+00	-0.5039E+01
21	0.1800E+02	0.5488E-02	0.9412E-02	0.2421E-02	0.0000E+00	-0.1250E+02	0.1731E+01	0.1453E+01	0.9316E+00	-0.1170E+02

X = 2.001963

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.9752E-02	0.9815E-02	-0.1234E-03	0.0000E+00	-0.6276E+01	0.1312E+01	0.1056E+01	0.9842E+00	0.6547E+00

2	0.9000E+00	0.8611E-02	0.4169E-03	-0.1419E-02	0.0000E+00	-0.5961E+01	0.1309E+01	0.1053E+01	0.9842E+00	0.3088E+00
3	0.1800E+01	0.8660E-02	0.2287E-02	-0.1053E-02	0.0000E+00	-0.5741E+01	0.1312E+01	0.1055E+01	0.9843E+00	-0.1899E+00
4	0.2700E+01	0.8490E-02	0.3607E-02	-0.8012E-03	0.0000E+00	-0.5501E+01	0.1314E+01	0.1056E+01	0.9844E+00	-0.4618E+00
5	0.3600E+01	0.8392E-02	0.4293E-02	-0.7449E-03	0.0000E+00	-0.5318E+01	0.1316E+01	0.1057E+01	0.9844E+00	-0.6426E+00
6	0.4500E+01	0.8313E-02	0.4456E-02	-0.7463E-03	0.0000E+00	-0.5132E+01	0.1318E+01	0.1058E+01	0.9844E+00	-0.7953E+00
7	0.5400E+01	0.8226E-02	0.4723E-02	-0.7108E-03	0.0000E+00	-0.4920E+01	0.1320E+01	0.1059E+01	0.9843E+00	-0.9315E+00
8	0.6300E+01	0.8132E-02	0.5242E-02	-0.6399E-03	0.0000E+00	-0.4702E+01	0.1322E+01	0.1060E+01	0.9842E+00	-0.1048E+01
9	0.7200E+01	0.8030E-02	0.5667E-02	-0.5960E-03	0.0000E+00	-0.4504E+01	0.1324E+01	0.1061E+01	0.9840E+00	-0.1144E+01
10	0.8100E+01	0.7916E-02	0.5863E-02	-0.5724E-03	0.0000E+00	-0.4315E+01	0.1325E+01	0.1062E+01	0.9838E+00	-0.1236E+01
11	0.9000E+01	0.7813E-02	0.6273E-02	-0.5065E-03	0.0000E+00	-0.4112E+01	0.1327E+01	0.1064E+01	0.9836E+00	-0.1336E+01
12	0.9900E+01	0.7719E-02	0.6907E-02	-0.4091E-03	0.0000E+00	-0.3929E+01	0.1329E+01	0.1065E+01	0.9835E+00	-0.1429E+01
13	0.1080E+02	0.7607E-02	0.7357E-02	-0.3486E-03	0.0000E+00	-0.3809E+01	0.1330E+01	0.1066E+01	0.9834E+00	-0.1507E+01
14	0.1170E+02	0.7460E-02	0.7405E-02	-0.3311E-03	0.0000E+00	-0.3734E+01	0.1332E+01	0.1067E+01	0.9833E+00	-0.1605E+01
15	0.1260E+02	0.7300E-02	0.7521E-02	-0.3152E-03	0.0000E+00	-0.3656E+01	0.1333E+01	0.1068E+01	0.9833E+00	-0.1770E+01
16	0.1350E+02	0.7077E-02	0.8132E-02	-0.1564E-03	0.0000E+00	-0.3581E+01	0.1334E+01	0.1069E+01	0.9836E+00	-0.2045E+01
17	0.1440E+02	0.6874E-02	0.8623E-02	0.7985E-05	0.0000E+00	-0.3678E+01	0.1336E+01	0.1070E+01	0.9840E+00	-0.2292E+01
18	0.1530E+02	0.6727E-02	0.8580E-02	0.3708E-04	0.0000E+00	-0.3997E+01	0.1337E+01	0.1072E+01	0.9847E+00	-0.2563E+01
19	0.1620E+02	0.6649E-02	0.7933E-02	-0.1639E-03	0.0000E+00	-0.4334E+01	0.1339E+01	0.1073E+01	0.9860E+00	-0.3111E+01
20	0.1710E+02	0.6643E-02	0.5866E-02	-0.7164E-03	0.0000E+00	-0.4198E+01	0.1341E+01	0.1073E+01	0.9894E+00	-0.4624E+01
21	0.1800E+02	0.5600E-02	0.7172E-02	0.2170E-03	0.0000E+00	-0.3090E+01	0.1347E+01	0.1069E+01	0.1003E+01	-0.9735E+01

X = 3.014774

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5964E-02	0.7356E-02	-0.3051E-03	0.0000E+00	-0.3421E+01	0.1279E+01	0.1020E+01	0.9951E+00	0.5990E+00
2	0.9000E+00	0.5297E-02	0.1648E-02	0.1077E-02	0.0000E+00	-0.3164E+01	0.1278E+01	0.1018E+01	0.9949E+00	0.2534E+00
3	0.1800E+01	0.5570E-02	0.2051E-02	0.3371E-03	0.0000E+00	-0.3016E+01	0.1281E+01	0.1020E+01	0.9948E+00	-0.2042E+00
4	0.2700E+01	0.5714E-02	0.3470E-02	0.3289E-03	0.0000E+00	-0.2924E+01	0.1283E+01	0.1021E+01	0.9947E+00	-0.4685E+00
5	0.3600E+01	0.5816E-02	0.4288E-02	0.3675E-03	0.0000E+00	-0.2842E+01	0.1285E+01	0.1022E+01	0.9946E+00	-0.6549E+00
6	0.4500E+01	0.5890E-02	0.4531E-02	0.3861E-03	0.0000E+00	-0.2752E+01	0.1286E+01	0.1023E+01	0.9945E+00	-0.8152E+00
7	0.5400E+01	0.5981E-02	0.4860E-02	0.3908E-03	0.0000E+00	-0.2652E+01	0.1288E+01	0.1024E+01	0.9944E+00	-0.9578E+00
8	0.6300E+01	0.6059E-02	0.5286E-02	0.3324E-03	0.0000E+00	-0.2544E+01	0.1290E+01	0.1025E+01	0.9943E+00	-0.1078E+01
9	0.7200E+01	0.6108E-02	0.5678E-02	0.3030E-03	0.0000E+00	-0.2447E+01	0.1291E+01	0.1026E+01	0.9942E+00	-0.1175E+01
10	0.8100E+01	0.6134E-02	0.5936E-02	0.3146E-03	0.0000E+00	-0.2356E+01	0.1293E+01	0.1027E+01	0.9940E+00	-0.1264E+01
11	0.9000E+01	0.6171E-02	0.6290E-02	0.2718E-03	0.0000E+00	-0.2254E+01	0.1294E+01	0.1028E+01	0.9940E+00	-0.1358E+01
12	0.9900E+01	0.6207E-02	0.6747E-02	0.1793E-03	0.0000E+00	-0.2157E+01	0.1296E+01	0.1029E+01	0.9939E+00	-0.1443E+01
13	0.1080E+02	0.6204E-02	0.7120E-02	0.1342E-03	0.0000E+00	-0.2095E+01	0.1297E+01	0.1030E+01	0.9938E+00	-0.1512E+01
14	0.1170E+02	0.6146E-02	0.7192E-02	0.1291E-03	0.0000E+00	-0.2058E+01	0.1298E+01	0.1031E+01	0.9938E+00	-0.1599E+01
15	0.1260E+02	0.6090E-02	0.7474E-02	0.1880E-03	0.0000E+00	-0.2017E+01	0.1300E+01	0.1032E+01	0.9939E+00	-0.1749E+01
16	0.1350E+02	0.5941E-02	0.7711E-02	0.9493E-05	0.0000E+00	-0.1951E+01	0.1301E+01	0.1033E+01	0.9940E+00	-0.2011E+01
17	0.1440E+02	0.5804E-02	0.7924E-02	-0.1279E-03	0.0000E+00	-0.1985E+01	0.1302E+01	0.1034E+01	0.9941E+00	-0.2248E+01
18	0.1530E+02	0.5685E-02	0.7879E-02	-0.1153E-03	0.0000E+00	-0.2134E+01	0.1302E+01	0.1034E+01	0.9943E+00	-0.2508E+01
19	0.1620E+02	0.5622E-02	0.6811E-02	-0.4339E-03	0.0000E+00	-0.2308E+01	0.1303E+01	0.1035E+01	0.9947E+00	-0.3004E+01
20	0.1710E+02	0.6223E-02	0.8988E-02	0.1320E-02	0.0000E+00	-0.2566E+01	0.1307E+01	0.1038E+01	0.9964E+00	-0.4409E+01
21	0.1800E+02	0.5135E-02	0.7183E-02	-0.1357E-03	0.0000E+00	-0.1797E+01	0.1317E+01	0.1039E+01	0.1008E+01	-0.9504E+01

X = 3.059464

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5726E-02	0.7268E-02	-0.3027E-03	0.0000E+00	-0.3353E+01	0.1278E+01	0.1019E+01	0.9954E+00	0.5974E+00
2	0.9000E+00	0.5099E-02	0.1960E-02	0.1073E-02	0.0000E+00	-0.3097E+01	0.1277E+01	0.1017E+01	0.9952E+00	0.2521E+00
3	0.1800E+01	0.5383E-02	0.2145E-02	0.3151E-03	0.0000E+00	-0.2951E+01	0.1280E+01	0.1019E+01	0.9951E+00	-0.2041E+00
4	0.2700E+01	0.5543E-02	0.3564E-02	0.3202E-03	0.0000E+00	-0.2864E+01	0.1282E+01	0.1020E+01	0.9950E+00	-0.4680E+00
5	0.3600E+01	0.5657E-02	0.4394E-02	0.3641E-03	0.0000E+00	-0.2786E+01	0.1284E+01	0.1021E+01	0.9949E+00	-0.6544E+00
6	0.4500E+01	0.5741E-02	0.4642E-02	0.3840E-03	0.0000E+00	-0.2699E+01	0.1285E+01	0.1022E+01	0.9947E+00	-0.8149E+00
7	0.5400E+01	0.5844E-02	0.4973E-02	0.3901E-03	0.0000E+00	-0.2603E+01	0.1287E+01	0.1023E+01	0.9946E+00	-0.9577E+00
8	0.6300E+01	0.5933E-02	0.5383E-02	0.3319E-03	0.0000E+00	-0.2497E+01	0.1289E+01	0.1024E+01	0.9945E+00	-0.1078E+01
9	0.7200E+01	0.5991E-02	0.5765E-02	0.3029E-03	0.0000E+00	-0.2403E+01	0.1290E+01	0.1025E+01	0.9944E+00	-0.1175E+01
10	0.8100E+01	0.6026E-02	0.6027E-02	0.3161E-03	0.0000E+00	-0.2314E+01	0.1292E+01	0.1026E+01	0.9942E+00	-0.1263E+01
11	0.9000E+01	0.6072E-02	0.6369E-02	0.2742E-03	0.0000E+00	-0.2214E+01	0.1293E+01	0.1027E+01	0.9941E+00	-0.1357E+01
12	0.9900E+01	0.6116E-02	0.6799E-02	0.1818E-03	0.0000E+00	-0.2120E+01	0.1295E+01	0.1028E+01	0.9941E+00	-0.1442E+01
13	0.1080E+02	0.6121E-02	0.7159E-02	0.1374E-03	0.0000E+00	-0.2099E+01	0.1296E+01	0.1029E+01	0.9940E+00	-0.1511E+01
14	0.1170E+02	0.6068E-02	0.7230E-02	0.1322E-03	0.0000E+00	-0.2021E+01	0.1298E+01	0.1030E+01	0.9940E+00	-0.1597E+01
15	0.1260E+02	0.6018E-02	0.7529E-02	0.1946E-03	0.0000E+00	-0.1980E+01	0.1299E+01	0.1031E+01	0.9941E+00	-0.1747E+01
16	0.1350E+02	0.5875E-02	0.7715E-02	0.1554E-04	0.0000E+00	-0.1913E+01	0.1300E+01	0.1032E+01	0.9943E+00	-0.2008E+01
17	0.1440E+02	0.5742E-02	0.7888E-02	-0.1203E-03	0.0000E+00	-0.1944E+01	0.1301E+01	0.1033E+01	0.9944E+00	-0.2246E+01
18	0.1530E+02	0.5625E-02	0.7847E-02	-0.1018E-03	0.0000E+00	-0.2085E+01	0.1302E+01	0.1033E+01	0.9946E+00	-0.2506E+01
19	0.1620E+02	0.5555E-02	0.6680E-02	-0.4657E-03	0.0000E+00	-0.2250E+01	0.1303E+01	0.1034E+01	0.9950E+00	-0.3000E+01
20	0.1710E+02	0.6174E-02	0.9375E-02	0.1338E-02	0.0000E+00	-0.2520E+01	0.1306E+01	0.1037E+01	0.9966E+00	-0.4401E+01
21	0.1800E+02	0.5073E-02	0.7144E-02	-0.1316E-03	0.0000E+00	-0.1767E+01	0.1316E+01	0.1038E+01	0.1008E+01	-0.9501E+01

447 INTEGRATION STEP
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

LOWER WING SURFACE
BOUNDARY LAYER STARTING NODE LOWER WING IWNODE= 153

X = 0.006751

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6727E-04	0.1491E-03	0.5508E-02	0.2836E-02	-0.1831E+02	0.2404E+01	0.2270E+01	0.5769E+00	0.1560E+02
2	0.9000E+00	0.6255E-04	0.1387E-03	0.5507E-02	0.2879E-02	-0.1900E+02	0.2428E+01	0.2281E+01	0.6018E+00	0.1763E+02
3	0.1800E+01	0.6300E-04	0.1397E-03	0.5398E-02	0.2693E-02	-0.2001E+02	0.2461E+01	0.2302E+01	0.6222E+00	0.2088E+02
4	0.2700E+01	0.6280E-04	0.1392E-03	0.4833E-02	0.2632E-02	-0.2024E+02	0.2473E+01	0.2308E+01	0.6339E+00	0.2169E+02
5	0.3600E+01	0.6248E-04	0.1385E-03	0.4121E-02	0.2602E-02	-0.2027E+02	0.2479E+01	0.2308E+01	0.6436E+00	0.2179E+02
6	0.4500E+01	0.6214E-04	0.1378E-03	0.3367E-02	0.2585E-02	-0.2021E+02	0.2482E+01	0.2307E+01	0.6524E+00	0.2157E+02
7	0.5400E+01	0.6178E-04	0.1370E-03	0.2622E-02	0.2574E-02	-0.2010E+02	0.2484E+01	0.2304E+01	0.6609E+00	0.2119E+02
8	0.6300E+01	0.6145E-04	0.1362E-03	0.1907E-02	0.2565E-02	-0.1997E+02	0.2486E+01	0.2301E+01	0.6688E+00	0.2073E+02

9	0.7200E+01	0.6115E-04	0.1356E-03	0.1227E-02	0.2557E-02	-0.1981E+02	0.2487E+01	0.2298E+01	0.6768E+00	0.2022E+02
10	0.8100E+01	0.6088E-04	0.1348E-03	0.5775E-03	0.2550E-02	-0.1964E+02	0.2488E+01	0.2294E+01	0.6854E+00	0.1964E+02
11	0.9000E+01	0.6042E-04	0.1340E-03	-0.3359E-04	0.2543E-02	-0.1945E+02	0.2489E+01	0.2290E+01	0.6945E+00	0.1902E+02
12	0.9900E+01	0.6003E-04	0.1331E-03	-0.6042E-03	0.2535E-02	-0.1924E+02	0.2491E+01	0.2286E+01	0.7043E+00	0.1837E+02
13	0.1080E+02	0.5960E-04	0.1321E-03	-0.1135E-02	0.2526E-02	-0.1901E+02	0.2493E+01	0.2281E+01	0.7153E+00	0.1767E+02
14	0.1170E+02	0.5911E-04	0.1310E-03	-0.1631E-02	0.2513E-02	-0.1874E+02	0.2496E+01	0.2277E+01	0.7285E+00	0.1686E+02
15	0.1260E+02	0.5857E-04	0.1299E-03	-0.2084E-02	0.2497E-02	-0.1844E+02	0.2501E+01	0.2272E+01	0.7439E+00	0.1597E+02
16	0.1350E+02	0.5801E-04	0.1286E-03	-0.2493E-02	0.2476E-02	-0.1811E+02	0.2507E+01	0.2267E+01	0.7614E+00	0.1504E+02
17	0.1440E+02	0.5740E-04	0.1272E-03	-0.2858E-02	0.2449E-02	-0.1775E+02	0.2516E+01	0.2261E+01	0.7821E+00	0.1402E+02
18	0.1530E+02	0.5667E-04	0.1256E-03	-0.3179E-02	0.2412E-02	-0.1734E+02	0.2529E+01	0.2256E+01	0.8081E+00	0.1286E+02
19	0.1620E+02	0.5587E-04	0.1239E-03	-0.3457E-02	0.2365E-02	-0.1689E+02	0.2547E+01	0.2250E+01	0.8400E+00	0.1165E+02
20	0.1710E+02	0.5499E-04	0.1219E-03	-0.3759E-02	0.2287E-02	-0.1668E+02	0.2578E+01	0.2248E+01	0.8826E+00	0.1106E+02
21	0.1800E+02	0.5763E-04	0.1278E-03	-0.3712E-02	0.2862E-02	-0.1695E+02	0.2619E+01	0.2251E+01	0.9269E+00	0.1181E+02

X = 0.484738

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.3535E-03	0.1136E-02	0.3182E-04	0.2676E-03	-0.1029E+01	0.2874E+01	0.2189E+01	0.1228E+01	-0.1245E+01
2	0.9000E+00	0.3644E-03	0.1220E-02	0.1441E-03	0.2383E-03	-0.2633E+01	0.2968E+01	0.2237E+01	0.1251E+01	-0.2170E+01
3	0.1800E+01	0.3655E-03	0.1251E-02	0.3587E-03	0.2008E-03	-0.3923E+01	0.3141E+01	0.2372E+01	0.1253E+01	-0.3054E+01
4	0.2700E+01	0.3672E-03	0.1282E-02	0.6926E-03	0.1576E-03	-0.1681E+02	0.3360E+01	0.2531E+01	0.1242E+01	-0.3431E+01
5	0.3600E+01	0.3713E-03	0.1347E-02	0.1019E-02	0.1218E-03	-0.2228E+02	0.3561E+01	0.2745E+01	0.1229E+01	-0.3538E+01
6	0.4500E+01	0.3716E-03	0.1391E-02	0.1264E-02	0.1002E-03	-0.2533E+02	0.3709E+01	0.2881E+01	0.1218E+01	-0.3516E+01
7	0.5400E+01	0.3679E-03	0.1395E-02	0.1365E-02	0.9169E-04	-0.2558E+02	0.3788E+01	0.2950E+01	0.1210E+01	-0.3442E+01
8	0.6300E+01	0.3621E-03	0.1373E-02	0.1365E-02	0.9026E-04	-0.2422E+02	0.3799E+01	0.2974E+01	0.1204E+01	-0.3353E+01
9	0.7200E+01	0.3551E-03	0.1339E-02	0.1337E-02	0.9232E-04	-0.2218E+02	0.3793E+01	0.2975E+01	0.1200E+01	-0.3264E+01
10	0.8100E+01	0.3471E-03	0.1298E-02	0.1316E-02	0.9599E-04	-0.1988E+02	0.3777E+01	0.2966E+01	0.1196E+01	-0.3179E+01
11	0.9000E+01	0.3395E-03	0.1261E-02	0.1324E-02	0.9911E-04	-0.1799E+02	0.3767E+01	0.2962E+01	0.1193E+01	-0.3096E+01
12	0.9900E+01	0.3322E-03	0.1224E-02	0.1349E-02	0.1016E-03	-0.1620E+02	0.3761E+01	0.2961E+01	0.1190E+01	-0.3014E+01
13	0.1080E+02	0.3258E-03	0.1197E-02	0.1383E-02	0.1046E-03	-0.1486E+02	0.3757E+01	0.2963E+01	0.1187E+01	-0.2931E+01
14	0.1170E+02	0.3177E-03	0.1166E-02	0.1449E-02	0.1059E-03	-0.1356E+02	0.3758E+01	0.2968E+01	0.1184E+01	-0.2848E+01
15	0.1260E+02	0.3106E-03	0.1137E-02	0.1523E-02	0.1079E-03	-0.9175E+01	0.3759E+01	0.2972E+01	0.1181E+01	-0.2754E+01
16	0.1350E+02	0.3040E-03	0.1115E-02	0.1623E-02	0.1083E-03	-0.6410E+01	0.3769E+01	0.2985E+01	0.1178E+01	-0.2646E+01
17	0.1440E+02	0.2969E-03	0.1090E-02	0.1786E-02	0.1089E-03	-0.2872E+01	0.3781E+01	0.2998E+01	0.1176E+01	-0.2520E+01
18	0.1530E+02	0.2900E-03	0.1076E-02	0.2175E-02	0.1041E-03	0.4831E+01	0.3831E+01	0.3043E+01	0.1174E+01	-0.2345E+01
19	0.1620E+02	0.2873E-03	0.1118E-02	0.3432E-02	0.8193E-04	0.1889E+02	0.4005E+01	0.3196E+01	0.1169E+01	-0.2067E+01
20	0.1710E+02	0.2832E-03	0.1210E-02	0.1450E-01	0.4221E-04	0.5706E+02	0.4389E+01	0.3541E+01	0.1153E+01	-0.1870E+01
21	0.1800E+02	0.2797E-03	0.1046E-02	0.1749E-02	0.8447E-04	-0.1494E+02	0.3941E+01	0.3231E+01	0.1184E+01	-0.3839E+00

LAMINAR SEPARATION AT 48.5 PERCENTAGE WINGCHORD

TRANSITION LAMINAR - TURBULENT

N	H	TE	GAM	F	1	0.14500E+01	0.35352E-03	0.22409E+00	0.20887E-01
N	H	TE	GAM	F	2	0.14500E+01	0.36439E-03	0.19495E+00	0.20938E-01
N	H	TE	GAM	F	3	0.14500E+01	0.36948E-03	0.11448E+00	0.20943E-01
N	H	TE	GAM	F	4	0.14500E+01	0.36720E-03	0.71579E-01	0.20961E-01
N	H	TE	GAM	F	5	0.14500E+01	0.37126E-03	0.47314E-01	0.20995E-01
N	H	TE	GAM	F	6	0.14500E+01	0.37165E-03	0.29548E-01	0.21005E-01
N	H	TE	GAM	F	7	0.14500E+01	0.36790E-03	0.14548E-01	0.20986E-01
N	H	TE	GAM	F	8	0.14500E+01	0.36207E-03	0.82247E-03	0.20953E-01
N	H	TE	GAM	F	9	0.14500E+01	0.35509E-03	-0.12485E-01	0.20910E-01
N	H	TE	GAM	F	10	0.14500E+01	0.34713E-03	-0.25465E-01	0.20859E-01
N	H	TE	GAM	F	11	0.14500E+01	0.33949E-03	-0.36787E-01	0.20809E-01
N	H	TE	GAM	F	12	0.14500E+01	0.33229E-03	-0.46914E-01	0.20759E-01
N	H	TE	GAM	F	13	0.14500E+01	0.32507E-03	-0.56503E-01	0.20708E-01
N	H	TE	GAM	F	14	0.14500E+01	0.31766E-03	-0.65187E-01	0.20653E-01
N	H	TE	GAM	F	15	0.14500E+01	0.31058E-03	-0.71655E-01	0.20599E-01
N	H	TE	GAM	F	16	0.14500E+01	0.30401E-03	-0.76497E-01	0.20548E-01
N	H	TE	GAM	F	17	0.14500E+01	0.29685E-03	-0.81276E-01	0.20489E-01
N	H	TE	GAM	F	18	0.14500E+01	0.29000E-03	-0.85085E-01	0.20432E-01
N	H	TE	GAM	F	19	0.14500E+01	0.28731E-03	-0.86921E-01	0.20407E-01
N	H	TE	GAM	F	20	0.14500E+01	0.28322E-03	-0.10261E+00	0.20366E-01
N	H	TE	GAM	F	21	0.14500E+01	0.27966E-03	-0.13153E+00	0.20305E-01

X = 1.882546

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5299E-02	0.7294E-02	-0.3680E-02	0.0000E+00	-0.4367E+01	0.1427E+01	0.1189E+01	0.9111E+00	0.1054E+01
2	0.9000E+00	0.5067E-02	0.6955E-02	-0.3843E-02	0.0000E+00	-0.4504E+01	0.1419E+01	0.1184E+01	0.9057E+00	0.1566E+01
3	0.1800E+01	0.4828E-02	0.6314E-02	-0.3956E-02	0.0000E+00	-0.4079E+01	0.1415E+01	0.1181E+01	0.9048E+00	0.2412E+01
4	0.2700E+01	0.4706E-02	0.6402E-02	-0.3798E-02	0.0000E+00	-0.4017E+01	0.1414E+01	0.1181E+01	0.9038E+00	0.2885E+01
5	0.3600E+01	0.4574E-02	0.6367E-02	-0.3715E-02	0.0000E+00	-0.4012E+01	0.1413E+01	0.1181E+01	0.9029E+00	0.3165E+01
6	0.4500E+01	0.4449E-02	0.6289E-02	-0.3651E-02	0.0000E+00	-0.3991E+01	0.1413E+01	0.1181E+01	0.9021E+00	0.3359E+01
7	0.5400E+01	0.4315E-02	0.6154E-02	-0.3576E-02	0.0000E+00	-0.3989E+01	0.1412E+01	0.1181E+01	0.9015E+00	0.3510E+01
8	0.6300E+01	0.4180E-02	0.5985E-02	-0.3505E-02	0.0000E+00	-0.3988E+01	0.1412E+01	0.1181E+01	0.9010E+00	0.3626E+01
9	0.7200E+01	0.4045E-02	0.5796E-02	-0.3440E-02	0.0000E+00	-0.3953E+01	0.1412E+01	0.1181E+01	0.9004E+00	0.3718E+01
10	0.8100E+01	0.3908E-02	0.5599E-02	-0.3369E-02	0.0000E+00	-0.3867E+01	0.1411E+01	0.1180E+01	0.8998E+00	0.3783E+01
11	0.9000E+01	0.3778E-02	0.5416E-02	-0.3291E-02	0.0000E+00	-0.3799E+01	0.1410E+01	0.1180E+01	0.8993E+00	0.3858E+01
12	0.9900E+01	0.3633E-02	0.5232E-02	-0.3214E-02	0.0000E+00	-0.3731E+01	0.1410E+01	0.1180E+01	0.8987E+00	0.3923E+01
13	0.1080E+02	0.3495E-02	0.5045E-02	-0.3152E-02	0.0000E+00	-0.3606E+01	0.1409E+01	0.1180E+01	0.8981E+00	0.3974E+01
14	0.1170E+02	0.3357E-02	0.4861E-02	-0.3100E-02	0.0000E+00	-0.3406E+01	0.1408E+01	0.1179E+01	0.8970E+00	0.4045E+01
15	0.1260E+02	0.3224E-02	0.4700E-02	-0.3010E-02	0.0000E+00	-0.3235E+01	0.1408E+01	0.1179E+01	0.8959E+00	0.4166E+01
16	0.1350E+02	0.3100E-02	0.4554E-02	-0.2903E-02	0.0000E+00	-0.3078E+01	0.1408E+01	0.1180E+01	0.8944E+00	0.4300E+01
17	0.1440E+02	0.3016E-02	0.4457E-02	-0.2778E-02	0.0000E+00	-0.2953E+01	0.1409E+01	0.1184E+01	0.8885E+00	0.4320E+01
18	0.1530E+02	0.2867E-02	0.4288E-02	-0.2736E-02	0.0000E+00	-0.2687E+01	0.1408E+01	0.1183E+01	0.8884E+00	0.4468E+01
19	0.1620E+02	0.2722E-02	0.4175E-02	-0.2783E-02	0.0000E+00	-0.2274E+01	0.1408E+01	0.1183E+01	0.8883E+00	0.4786E+01
20	0.1710E+02	0.2548E-02	0.4092E-02	-0.2755E-02	0.0000E+00	-0.1188E+01	0.1409E+01	0.1182E+01	0.8911E+00	0.5826E+01
21	0.1800E+02	0.2118E-02	0.3527E-02	-0.2350E-02	0.0000E+00	0.1403E+01	0.1439E+01	0.1183E+01	0.9405E+00	0.1045E+02

X = 2.980519

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4678E-02	0.6478E-02	-0.1054E-03	0.0000E+00	0.1090E+01	0.1296E+01	0.1033E+01	0.9842E+00	-0.9142E+00
2	0.9000E+00	0.4243E-02	0.6350E-02	0.1254E-03	0.0000E+00	0.1057E+01	0.1294E+01	0.1031E+01	0.9842E+00	-0.4768E+00
3	0.1800E+01	0.3987E-02	0.6154E-02	0.1962E-03	0.0000E+00	0.9047E+00	0.1293E+01	0.1030E+01	0.9843E+00	0.1906E+00
4	0.2700E+01	0.4011E-02	0.6309E-02	0.1002E-03	0.0000E+00	0.8035E+00	0.1294E+01	0.1031E+01	0.9843E+00	0.5007E+00
5	0.3600E+01	0.3936E-02	0.6297E-02	0.1300E-03	0.0000E+00	0.6963E+00	0.1294E+01	0.1031E+01	0.9844E+00	0.6905E+00
6	0.4500E+01	0.3825E-02	0.6057E-02	0.1129E-03	0.0000E+00	0.6002E+00	0.1294E+01	0.1031E+01	0.9844E+00	0.8449E+00
7	0.5400E+01	0.3706E-02	0.5882E-02	0.1048E-03	0.0000E+00	0.5016E+00	0.1295E+01	0.1031E+01	0.9843E+00	0.9784E+00
8	0.6300E+01	0.3586E-02	0.5644E-02	0.9243E-04	0.0000E+00	0.4053E+00	0.1295E+01	0.1031E+01	0.9841E+00	0.1087E+01
9	0.7200E+01	0.3463E-02	0.5381E-02	0.6509E-04	0.0000E+00	0.3264E+00	0.1294E+01	0.1031E+01	0.9840E+00	0.1168E+01
10	0.8100E+01	0.3332E-02	0.4940E-02	0.3338E-04	0.0000E+00	0.2707E+00	0.1294E+01	0.1031E+01	0.9838E+00	0.1238E+01
11	0.9000E+01	0.3206E-02	0.4752E-02	0.2688E-04	0.0000E+00	0.2116E+00	0.1294E+01	0.1031E+01	0.9836E+00	0.1311E+01

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
12	0.9900E+01	0.3082E-02	0.4538E-02	0.1911E-04	0.0000E+00	0.1558E+00	0.1294E+01	0.1031E+01	0.9835E+00	0.1369E+01
13	0.1080E+02	0.2953E-02	0.4225E-02	-0.7209E-05	0.0000E+00	0.1301E+00	0.1294E+01	0.1031E+01	0.9833E+00	0.1411E+01
14	0.1170E+02	0.2815E-02	0.3905E-02	-0.3608E-04	0.0000E+00	0.1423E+00	0.1294E+01	0.1031E+01	0.9833E+00	0.1474E+01
15	0.1260E+02	0.2678E-02	0.3768E-02	-0.3625E-04	0.0000E+00	0.1506E+00	0.1294E+01	0.1031E+01	0.9833E+00	0.1597E+01
16	0.1350E+02	0.2540E-02	0.3594E-02	-0.3620E-04	0.0000E+00	0.1598E+00	0.1294E+01	0.1031E+01	0.9836E+00	0.1809E+01
17	0.1440E+02	0.2431E-02	0.3399E-02	-0.5397E-04	0.0000E+00	0.2134E+00	0.1295E+01	0.1031E+01	0.9840E+00	0.1973E+01
18	0.1530E+02	0.2293E-02	0.3093E-02	-0.8916E-04	0.0000E+00	0.3672E+00	0.1295E+01	0.1031E+01	0.9847E+00	0.2177E+01
19	0.1620E+02	0.2132E-02	0.3001E-02	-0.9071E-04	0.0000E+00	0.5402E+00	0.1296E+01	0.1031E+01	0.9860E+00	0.2709E+01
20	0.1710E+02	0.1885E-02	0.2749E-02	-0.5901E-04	0.0000E+00	0.6396E+00	0.1296E+01	0.1030E+01	0.9894E+00	0.4260E+01
21	0.1800E+02	0.1483E-02	0.2107E-02	-0.3907E-04	0.0000E+00	0.6969E+00	0.1300E+01	0.1026E+01	0.1003E+01	0.9295E+01

X = 3.013633

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5117E-02	0.6504E-02	0.5367E-04	0.0000E+00	0.5614E+00	0.1288E+01	0.1019E+01	0.9951E+00	-0.9300E+00
2	0.9000E+00	0.4554E-02	0.5763E-02	-0.2714E-03	0.0000E+00	0.5070E+00	0.1286E+01	0.1018E+01	0.9949E+00	-0.5226E+00
3	0.1800E+01	0.4157E-02	0.5453E-02	-0.2736E-03	0.0000E+00	0.4349E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.1707E+00
4	0.2700E+01	0.4165E-02	0.5958E-02	-0.1345E-03	0.0000E+00	0.3977E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.4798E+00
5	0.3600E+01	0.4047E-02	0.5735E-02	-0.2014E-03	0.0000E+00	0.3410E+00	0.1285E+01	0.1017E+01	0.9946E+00	0.6626E+00
6	0.4500E+01	0.3889E-02	0.5579E-02	-0.1662E-03	0.0000E+00	0.2951E+00	0.1285E+01	0.1017E+01	0.9945E+00	0.8089E+00
7	0.5400E+01	0.3723E-02	0.5398E-02	-0.1639E-03	0.0000E+00	0.2466E+00	0.1285E+01	0.1017E+01	0.9944E+00	0.9345E+00
8	0.6300E+01	0.3562E-02	0.5173E-02	-0.1521E-03	0.0000E+00	0.1993E+00	0.1285E+01	0.1017E+01	0.9943E+00	0.1035E+01
9	0.7200E+01	0.3412E-02	0.4891E-02	-0.1239E-03	0.0000E+00	0.1608E+00	0.1284E+01	0.1017E+01	0.9942E+00	0.1111E+01
10	0.8100E+01	0.3265E-02	0.4594E-02	-0.9294E-04	0.0000E+00	0.1343E+00	0.1284E+01	0.1017E+01	0.9940E+00	0.1182E+01
11	0.9000E+01	0.3116E-02	0.4411E-02	-0.8982E-04	0.0000E+00	0.1055E+00	0.1284E+01	0.1017E+01	0.9939E+00	0.1259E+01
12	0.9900E+01	0.2975E-02	0.4213E-02	-0.8267E-04	0.0000E+00	0.7789E-01	0.1284E+01	0.1016E+01	0.9939E+00	0.1323E+01
13	0.1080E+02	0.2846E-02	0.3963E-02	-0.5580E-04	0.0000E+00	0.6494E-01	0.1284E+01	0.1016E+01	0.9938E+00	0.1371E+01
14	0.1170E+02	0.2717E-02	0.3697E-02	-0.3037E-04	0.0000E+00	0.6833E-01	0.1284E+01	0.1016E+01	0.9938E+00	0.1445E+01
15	0.1260E+02	0.2587E-02	0.3582E-02	-0.2765E-04	0.0000E+00	0.7087E-01	0.1284E+01	0.1016E+01	0.9939E+00	0.1582E+01
16	0.1350E+02	0.2434E-02	0.3383E-02	-0.3360E-04	0.0000E+00	0.7431E-01	0.1284E+01	0.1016E+01	0.9940E+00	0.1804E+01
17	0.1440E+02	0.2343E-02	0.3246E-02	-0.1479E-04	0.0000E+00	0.9801E-01	0.1284E+01	0.1016E+01	0.9941E+00	0.1978E+01
18	0.1530E+02	0.2266E-02	0.3067E-02	0.2584E-04	0.0000E+00	0.1668E+00	0.1284E+01	0.1017E+01	0.9943E+00	0.2192E+01
19	0.1620E+02	0.2198E-02	0.3090E-02	0.5663E-04	0.0000E+00	0.2494E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.2764E+01
20	0.1710E+02	0.2145E-02	0.3098E-02	0.1529E-03	0.0000E+00	0.3479E+00	0.1285E+01	0.1016E+01	0.9964E+00	0.4407E+01
21	0.1800E+02	0.1362E-02	0.1601E-02	-0.1475E-03	0.0000E+00	0.3697E+00	0.1288E+01	0.1012E+01	0.1008E+01	0.9417E+01

X = 3.058329

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5154E-02	0.6519E-02	0.5092E-04	0.0000E+00	0.5469E+00	0.1287E+01	0.1019E+01	0.9954E+00	-0.9307E+00
2	0.9000E+00	0.4580E-02	0.5684E-02	-0.2694E-03	0.0000E+00	0.4905E+00	0.1286E+01	0.1018E+01	0.9952E+00	-0.5239E+00
3	0.1800E+01	0.4173E-02	0.5374E-02	-0.2703E-03	0.0000E+00	0.4209E+00	0.1285E+01	0.1017E+01	0.9951E+00	0.1708E+00
4	0.2700E+01	0.4177E-02	0.5919E-02	-0.1332E-03	0.0000E+00	0.3850E+00	0.1285E+01	0.1017E+01	0.9950E+00	0.4802E+00
5	0.3600E+01	0.4054E-02	0.5677E-02	-0.1999E-03	0.0000E+00	0.3298E+00	0.1285E+01	0.1017E+01	0.9949E+00	0.6628E+00
6	0.4500E+01	0.3893E-02	0.5531E-02	-0.1635E-03	0.0000E+00	0.2853E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.8088E+00
7	0.5400E+01	0.3725E-02	0.5351E-02	-0.1615E-03	0.0000E+00	0.2383E+00	0.1285E+01	0.1017E+01	0.9946E+00	0.9341E+00
8	0.6300E+01	0.3562E-02	0.5129E-02	-0.1498E-03	0.0000E+00	0.1924E+00	0.1284E+01	0.1017E+01	0.9945E+00	0.1035E+01
9	0.7200E+01	0.3410E-02	0.4855E-02	-0.1218E-03	0.0000E+00	0.1551E+00	0.1284E+01	0.1016E+01	0.9943E+00	0.1110E+01
10	0.8100E+01	0.3262E-02	0.4567E-02	-0.9109E-04	0.0000E+00	0.1295E+00	0.1284E+01	0.1016E+01	0.9942E+00	0.1182E+01
11	0.9000E+01	0.3113E-02	0.4385E-02	-0.8833E-04	0.0000E+00	0.1016E+00	0.1284E+01	0.1016E+01	0.9941E+00	0.1259E+01
12	0.9900E+01	0.2970E-02	0.4189E-02	-0.8139E-04	0.0000E+00	0.7482E-01	0.1284E+01	0.1016E+01	0.9941E+00	0.1323E+01
13	0.1080E+02	0.2841E-02	0.3947E-02	-0.5491E-04	0.0000E+00	0.6221E-01	0.1284E+01	0.1016E+01	0.9940E+00	0.1372E+01
14	0.1170E+02	0.2713E-02	0.3688E-02	-0.2996E-04	0.0000E+00	0.6543E-01	0.1284E+01	0.1016E+01	0.9940E+00	0.1446E+01
15	0.1260E+02	0.2583E-02	0.3574E-02	-0.2761E-04	0.0000E+00	0.6766E-01	0.1284E+01	0.1016E+01	0.9941E+00	0.1583E+01
16	0.1350E+02	0.2428E-02	0.3373E-02	-0.3353E-04	0.0000E+00	0.7089E-01	0.1284E+01	0.1016E+01	0.9943E+00	0.1806E+01
17	0.1440E+02	0.2338E-02	0.3242E-02	-0.1542E-04	0.0000E+00	0.9356E-01	0.1284E+01	0.1016E+01	0.9944E+00	0.1980E+01
18	0.1530E+02	0.2263E-02	0.3074E-02	0.2363E-04	0.0000E+00	0.1595E+00	0.1284E+01	0.1016E+01	0.9946E+00	0.2193E+01
19	0.1620E+02	0.2201E-02	0.3106E-02	0.5350E-04	0.0000E+00	0.2390E+00	0.1284E+01	0.1016E+01	0.9950E+00	0.2764E+01
20	0.1710E+02	0.2167E-02	0.3143E-02	0.1578E-03	0.0000E+00	0.3401E+00	0.1285E+01	0.1016E+01	0.9966E+00	0.4404E+01
21	0.1800E+02	0.1356E-02	0.1558E-02	-0.1528E-03	0.0000E+00	0.3649E+00	0.1287E+01	0.1012E+01	0.1008E+01	0.9419E+01

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      446  INTEGRATION    STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=     0.00000
      33   -0.36950E-04 117  16  14   0.54731E-05   -0.34129E-04 160  2  3   0.12082E-06   0.03457   3523
      34   -0.12270E-03 160  16  12   0.10623E-04   -0.37269E-04 160  2  3   0.15473E-06   0.03451   3522
      35   -0.11482E-03 160  16  10   0.20666E-04   -0.38030E-04 160  2  3   0.12897E-06   0.03441   3526
      36   -0.19067E-03 120  16  19   0.41572E-04   -0.35673E-04 160  2  3   0.12449E-06   0.03422   3522
      37   -0.40025E-04 160  16  20   0.57954E-05   -0.30170E-04 160  2  3   0.12470E-06   0.03417   3502
      38   -0.59370E-04 118  16  15   0.93415E-05   -0.34368E-04 160  2  3   0.12538E-06   0.03411   3499
      39   -0.10233E-03 119  16  20   0.18776E-04   -0.33727E-04 160  2  3   0.12031E-06   0.03401   3494
      40   -0.18834E-03 120  16  19   0.38203E-04   -0.31391E-04 160  2  3   0.11388E-06   0.03384   3486
 3DBL CALCULATION ITBLX ITBL=      4      5
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UPPER WING SURFACE
BOUNDARY LAYER STARTING NODE UPPER WING IWNODE= 169

X = 0.006879

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5612E-04	0.1244E-03	0.2851E-02	0.2308E-02	-0.1454E+02	0.2552E+01	0.2228E+01	0.8787E+00	0.5335E+01
2	0.9000E+00	0.5002E-04	0.1109E-03	0.2130E-02	0.2161E-02	-0.1379E+02	0.2699E+01	0.2223E+01	0.1045E+01	0.3359E+01
3	0.1800E+01	0.4921E-04	0.1091E-03	0.1755E-02	0.2088E-02	-0.1415E+02	0.2753E+01	0.2226E+01	0.1091E+01	0.4320E+01
4	0.2700E+01	0.4879E-04	0.1082E-03	0.1473E-02	0.2068E-02	-0.1429E+02	0.2773E+01	0.2227E+01	0.1108E+01	0.4678E+01
5	0.3600E+01	0.4867E-04	0.1079E-03	0.1211E-02	0.2062E-02	-0.1439E+02	0.2779E+01	0.2227E+01	0.1112E+01	0.4954E+01
6	0.4500E+01	0.4873E-04	0.1080E-03	0.9571E-03	0.2063E-02	-0.1449E+02	0.2777E+01	0.2228E+01	0.1110E+01	0.5214E+01
7	0.5400E+01	0.4887E-04	0.1083E-03	0.7049E-03	0.2066E-02	-0.1459E+02	0.2771E+01	0.2229E+01	0.1104E+01	0.5466E+01
8	0.6300E+01	0.4906E-04	0.1088E-03	0.4507E-03	0.2073E-02	-0.1468E+02	0.2764E+01	0.2229E+01	0.1097E+01	0.5713E+01
9	0.7200E+01	0.4929E-04	0.1093E-03	0.1939E-03	0.2080E-02	-0.1478E+02	0.2754E+01	0.2230E+01	0.1088E+01	0.5967E+01

10	0.8100E+01	0.4957E-04	0.1099E-03	-0.6260E-04	0.2098E-02	-0.1489E+02	0.2743E+01	0.2231E+01	0.1076E+01	0.6257E+01
11	0.9000E+01	0.4987E-04	0.1106E-03	-0.3226E-03	0.2102E-02	-0.1500E+02	0.2730E+01	0.2232E+01	0.1064E+01	0.6574E+01
12	0.9900E+01	0.5017E-04	0.1112E-03	-0.5889E-03	0.2116E-02	-0.1513E+02	0.2717E+01	0.2233E+01	0.1050E+01	0.6910E+01
13	0.1080E+02	0.5042E-04	0.1118E-03	-0.8618E-03	0.2134E-02	-0.1527E+02	0.2704E+01	0.2236E+01	0.1036E+01	0.7276E+01
14	0.1170E+02	0.5074E-04	0.1125E-03	-0.1138E-02	0.2157E-02	-0.1544E+02	0.2687E+01	0.2237E+01	0.1018E+01	0.7736E+01
15	0.1260E+02	0.5108E-04	0.1132E-03	-0.1426E-02	0.2184E-02	-0.1564E+02	0.2670E+01	0.2239E+01	0.9989E+00	0.8278E+01
16	0.1350E+02	0.5142E-04	0.1140E-03	-0.1727E-02	0.2214E-02	-0.1586E+02	0.2652E+01	0.2239E+01	0.9779E+00	0.8866E+01
17	0.1440E+02	0.5176E-04	0.1148E-03	-0.2051E-02	0.2250E-02	-0.1613E+02	0.2634E+01	0.2242E+01	0.9547E+00	0.9571E+01
18	0.1530E+02	0.5220E-04	0.1157E-03	-0.2399E-02	0.2294E-02	-0.1648E+02	0.2612E+01	0.2246E+01	0.9259E+00	0.1053E+02
19	0.1620E+02	0.5266E-04	0.1167E-03	-0.2791E-02	0.2344E-02	-0.1694E+02	0.2591E+01	0.2251E+01	0.8941E+00	0.1178E+02
20	0.1710E+02	0.5304E-04	0.1176E-03	-0.3206E-02	0.2363E-02	-0.1779E+02	0.2583E+01	0.2262E+01	0.8705E+00	0.1412E+02
21	0.1800E+02	0.5510E-04	0.1222E-03	-0.3278E-02	0.2107E-02	-0.1758E+02	0.2638E+01	0.2259E+01	0.9384E+00	0.1355E+02

X = 0.883349

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1718E-03	0.5633E-03	0.6155E-03	0.3823E-03	0.1512E+02	0.3227E+01	0.2485E+01	0.1219E+01	-0.3097E+01
2	0.9000E+00	0.1847E-03	0.9117E-03	0.4030E-01	0.4989E-04	0.6554E+02	0.4873E+01	0.3572E+01	0.1369E+01	-0.6024E+01
3	0.1800E+01	0.1598E-03	0.6744E-03	0.2636E-02	0.1754E-03	0.3267E+02	0.4282E+01	0.2919E+01	0.1476E+01	-0.7911E+01
4	0.2700E+01	0.1470E-03	0.5828E-03	0.1314E-02	0.2633E-03	0.1629E+02	0.4085E+01	0.2671E+01	0.1531E+01	-0.8756E+01
5	0.3600E+01	0.1413E-03	0.5489E-03	0.1011E-02	0.2994E-03	0.1162E+02	0.4036E+01	0.2596E+01	0.1553E+01	-0.9016E+01
6	0.4500E+01	0.1378E-03	0.5306E-03	0.8997E-03	0.3176E-03	0.1086E+02	0.4012E+01	0.2568E+01	0.1559E+01	-0.9043E+01
7	0.5400E+01	0.1351E-03	0.5162E-03	0.8440E-03	0.3305E-03	0.9376E+01	0.3989E+01	0.2554E+01	0.1558E+01	-0.8975E+01
8	0.6300E+01	0.1326E-03	0.5023E-03	0.8174E-03	0.3431E-03	0.8732E+01	0.3961E+01	0.2544E+01	0.1553E+01	-0.8870E+01
9	0.7200E+01	0.1302E-03	0.4899E-03	0.7823E-03	0.3542E-03	0.8489E+01	0.3935E+01	0.2540E+01	0.1544E+01	-0.8747E+01
10	0.8100E+01	0.1280E-03	0.4774E-03	0.7463E-03	0.3642E-03	0.8289E+01	0.3904E+01	0.2537E+01	0.1534E+01	-0.8597E+01
11	0.9000E+01	0.1257E-03	0.4646E-03	0.7139E-03	0.3758E-03	0.8029E+01	0.3870E+01	0.2535E+01	0.1521E+01	-0.8418E+01
12	0.9900E+01	0.1234E-03	0.4517E-03	0.6759E-03	0.3881E-03	0.7738E+01	0.3834E+01	0.2533E+01	0.1507E+01	-0.8224E+01
13	0.1080E+02	0.1212E-03	0.4387E-03	0.6388E-03	0.4010E-03	0.7446E+01	0.3796E+01	0.2532E+01	0.1492E+01	-0.8016E+01
14	0.1170E+02	0.1188E-03	0.4262E-03	0.6093E-03	0.4188E-03	0.6798E+01	0.3745E+01	0.2526E+01	0.1473E+01	-0.7763E+01
15	0.1260E+02	0.1165E-03	0.4099E-03	0.5632E-03	0.4369E-03	0.6186E+01	0.3694E+01	0.2522E+01	0.1452E+01	-0.7455E+01
16	0.1350E+02	0.1140E-03	0.3947E-03	0.5187E-03	0.4591E-03	0.5411E+01	0.3636E+01	0.2515E+01	0.1429E+01	-0.7114E+01
17	0.1440E+02	0.1115E-03	0.3787E-03	0.4690E-03	0.4854E-03	0.4561E+01	0.3573E+01	0.2507E+01	0.1404E+01	-0.6732E+01
18	0.1530E+02	0.1088E-03	0.3606E-03	0.4059E-03	0.5223E-03	0.3375E+01	0.3492E+01	0.2489E+01	0.1374E+01	-0.6227E+01
19	0.1620E+02	0.1053E-03	0.3385E-03	0.3443E-03	0.5771E-03	0.1712E+01	0.3397E+01	0.2457E+01	0.1345E+01	-0.5520E+01
20	0.1710E+02	0.1009E-03	0.3154E-03	0.2953E-03	0.6383E-03	0.6359E-01	0.3330E+01	0.2418E+01	0.1335E+01	-0.4880E+01
21	0.1800E+02	0.1026E-03	0.3278E-03	0.3027E-03	0.5596E-03	0.3784E+00	0.3442E+01	0.2506E+01	0.1334E+01	-0.2515E+01

LAMINAR SEPARATION AT 8.3 PERCENTAGE MINGCHORD

TRANSITION LAMINAR - TURBULENT

N H TE GAM F	1	0.14500E+01	0.17184E-03	0.88607E-01	0.19097E-01
N H TE GAM F	2	0.14500E+01	0.18468E-03	0.18363E+00	0.19334E-01
N H TE GAM F	3	0.14500E+01	0.15985E-03	0.27671E-01	0.18954E-01
N H TE GAM F	4	0.14500E+01	0.14784E-03	-0.84797E-02	0.18726E-01
N H TE GAM F	5	0.14500E+01	0.14130E-03	-0.24696E-01	0.18620E-01
N H TE GAM F	6	0.14500E+01	0.13784E-03	-0.32881E-01	0.18562E-01
N H TE GAM F	7	0.14500E+01	0.13510E-03	-0.38482E-01	0.18521E-01
N H TE GAM F	8	0.14500E+01	0.13255E-03	-0.43204E-01	0.18485E-01
N H TE GAM F	9	0.14500E+01	0.13021E-03	-0.47214E-01	0.18453E-01
N H TE GAM F	10	0.14500E+01	0.12797E-03	-0.50635E-01	0.18422E-01
N H TE GAM F	11	0.14500E+01	0.12568E-03	-0.54360E-01	0.18389E-01
N H TE GAM F	12	0.14500E+01	0.12343E-03	-0.58003E-01	0.18354E-01
N H TE GAM F	13	0.14500E+01	0.12116E-03	-0.61487E-01	0.18315E-01
N H TE GAM F	14	0.14500E+01	0.11882E-03	-0.64986E-01	0.18271E-01
N H TE GAM F	15	0.14500E+01	0.11647E-03	-0.68864E-01	0.18221E-01
N H TE GAM F	16	0.14500E+01	0.11405E-03	-0.72824E-01	0.18162E-01
N H TE GAM F	17	0.14500E+01	0.11152E-03	-0.76519E-01	0.18091E-01
N H TE GAM F	18	0.14500E+01	0.10882E-03	-0.80431E-01	0.18002E-01
N H TE GAM F	19	0.14500E+01	0.10530E-03	-0.85283E-01	0.17880E-01
N H TE GAM F	20	0.14500E+01	0.10095E-03	-0.92051E-01	0.17748E-01
N H TE GAM F	21	0.14500E+01	0.10261E-03	-0.94313E-01	0.17793E-01

X = 1.882367

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1222E-01	0.1846E-01	0.1224E-01	0.0000E+00	-0.2513E+02	0.1756E+01	0.1502E+01	0.9815E+00	0.7255E+00
2	0.9000E+00	0.1208E-01	0.1671E-01	0.5280E-02	0.0000E+00	-0.2191E+02	0.1702E+01	0.1454E+01	0.8981E+00	0.8682E+00
3	0.1800E+01	0.1183E-01	0.1631E-01	0.4303E-02	0.0000E+00	-0.1924E+02	0.1682E+01	0.1433E+01	0.8980E+00	0.9382E+00
4	0.2700E+01	0.1181E-01	0.1648E-01	0.4731E-02	0.0000E+00	-0.1757E+02	0.1678E+01	0.1429E+01	0.8973E+00	0.8856E+00
5	0.3600E+01	0.1177E-01	0.1668E-01	0.5009E-02	0.0000E+00	-0.1623E+02	0.1678E+01	0.1429E+01	0.8964E+00	0.7647E+00
6	0.4500E+01	0.1166E-01	0.1683E-01	0.5250E-02	0.0000E+00	-0.1504E+02	0.1682E+01	0.1432E+01	0.8957E+00	0.6314E+00
7	0.5400E+01	0.1150E-01	0.1696E-01	0.5510E-02	0.0000E+00	-0.1387E+02	0.1688E+01	0.1437E+01	0.8951E+00	0.4911E+00
8	0.6300E+01	0.1134E-01	0.1710E-01	0.5818E-02	0.0000E+00	-0.1274E+02	0.1696E+01	0.1444E+01	0.8947E+00	0.3574E+00
9	0.7200E+01	0.1119E-01	0.1725E-01	0.6141E-02	0.0000E+00	-0.1169E+02	0.1706E+01	0.1452E+01	0.8942E+00	0.2409E+00
10	0.8100E+01	0.1104E-01	0.1739E-01	0.6412E-02	0.0000E+00	-0.1072E+02	0.1717E+01	0.1462E+01	0.8937E+00	0.1292E+00
11	0.9000E+01	0.1088E-01	0.1752E-01	0.6684E-02	0.0000E+00	-0.9695E+01	0.1730E+01	0.1473E+01	0.8932E+00	0.7049E-02
12	0.9900E+01	0.1067E-01	0.1758E-01	0.6983E-02	0.0000E+00	-0.8703E+01	0.1744E+01	0.1486E+01	0.8922E+00	-0.1125E+00
13	0.1080E+02	0.1044E-01	0.1759E-01	0.7224E-02	0.0000E+00	-0.7890E+01	0.1761E+01	0.1502E+01	0.8912E+00	-0.2196E+00
14	0.1170E+02	0.1020E-01	0.1751E-01	0.7308E-02	0.0000E+00	-0.7289E+01	0.1780E+01	0.1519E+01	0.8914E+00	-0.3482E+00
15	0.1260E+02	0.9971E-02	0.1751E-01	0.7449E-02	0.0000E+00	-0.6660E+01	0.1801E+01	0.1538E+01	0.8905E+00	-0.5585E+00
16	0.1350E+02	0.9617E-02	0.1718E-01	0.7849E-02	0.0000E+00	-0.6193E+01	0.1818E+01	0.1554E+01	0.8894E+00	-0.8526E+00
17	0.1440E+02	0.9428E-02	0.1726E-01	0.7816E-02	0.0000E+00	-0.5824E+01	0.1848E+01	0.1585E+01	0.8832E+00	-0.1025E+01
18	0.1530E+02	0.8949E-02	0.1632E-01	0.7403E-02	0.0000E+00	-0.6012E+01	0.1858E+01	0.1594E+01	0.8830E+00	-0.1455E+01
19	0.1620E+02	0.9103E-02	0.1759E-01	0.8348E-02	0.0000E+00	-0.6480E+01	0.1899E+01	0.1632E+01	0.8829E+00	-0.2290E+01
20	0.1710E+02	0.8227E-02	0.1628E-01	0.7163E-02	0.0000E+00	-0.9384E+01	0.1902E+01	0.1633E+01	0.8855E+00	-0.4703E+01
21	0.1800E+02	0.5489E-02	0.9463E-02	0.3589E-02	0.0000E+00	-0.1261E+02	0.1748E+01	0.1467E+01	0.9339E+00	-0.1122E+02

X = 2.881486

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.1807E-01	0.9281E-02	-0.1189E-03	0.0000E+00	-0.6233E+01	0.1314E+01	0.1057E+01	0.9843E+00	0.7617E+00
2	0.9000E+00	0.8823E-02	0.4566E-03	-0.1466E-02	0.0000E+00	-0.5973E+01	0.1310E+01	0.1053E+01	0.9844E+00	0.3563E+00
3	0.1800E+01	0.8873E-02	0.2788E-02	-0.1053E-02	0.0000E+00	-0.5710E+01	0.1314E+01	0.1056E+01	0.9844E+00	-0.1979E+00
4	0.2700E+01	0.8741E-02	0.3772E-02	-0.8607E-03	0.0000E+00	-0.5464E+01	0.1316E+01	0.1057E+01	0.9845E+00	-0.4795E+00
5	0.3600E+01	0.8620E-02	0.3974E-02	-0.8391E-03	0.0000E+00	-0.5259E+01	0.1318E+01	0.1058E+01	0.9845E+00	-0.6639E+00
6	0.4500E+01	0.8479E-02	0.4133E-02	-0.8147E-03	0.0000E+00	-0.5039E+01	0.1319E+01	0.1059E+01	0.9845E+00	-0.8192E+00
7	0.5400E+01	0.8342E-02	0.4580E-02	-0.7461E-03	0.0000E+00	-0.4802E+01	0.1321E+01	0.1059E+01	0.9844E+00	-0.9572E+00
8	0.6300E+01	0.8219E-02	0.5240E-02	-0.6958E-03	0.0000E+00	-0.4565E+01	0.1323E+01	0.1060E+01	0.9843E+00	-0.1076E+01
9	0.7200E+01	0.8104E-02	0.5716E-02	-0.6879E-03	0.0000E+00	-0.4356E+01	0.1324E+01	0.1061E+01	0.9842E+00	-0.1172E+01
10	0.8100E+01	0.7975E-02	0.5883E-02	-0.5880E-03	0.0000E+00	-0.4157E+01	0.1326E+01	0.1062E+01	0.9840E+00	-0.1264E+01
11	0.9000E+01	0.7843E-02	0.6261E-02	-0.5203E-03	0.0000E+00	-0.3943E+01	0.1327E+01	0.1064E+01	0.9839E+00	-0.1362E+01
12	0.9900E+01	0.7707E-02	0.6878E-02	-0.4141E-03	0.0000E+00	-0.3750E+01	0.1329E+01	0.1065E+01	0.9837E+00	-0.1452E+01

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
13	0.1080E+02	0.7557E-02	0.7298E-02	-0.3485E-03	0.0000E+00	-0.3625E+01	0.1330E+01	0.1066E+01	0.9836E+00	-0.1525E+01
14	0.1170E+02	0.7381E-02	0.7307E-02	-0.3383E-03	0.0000E+00	-0.3547E+01	0.1331E+01	0.1066E+01	0.9835E+00	-0.1619E+01
15	0.1260E+02	0.7208E-02	0.7226E-02	-0.3641E-03	0.0000E+00	-0.3457E+01	0.1332E+01	0.1067E+01	0.9836E+00	-0.1776E+01
16	0.1350E+02	0.6931E-02	0.7745E-02	-0.1997E-03	0.0000E+00	-0.3327E+01	0.1333E+01	0.1068E+01	0.9839E+00	-0.2046E+01
17	0.1440E+02	0.6697E-02	0.8359E-02	0.1813E-04	0.0000E+00	-0.3359E+01	0.1335E+01	0.1069E+01	0.9843E+00	-0.2262E+01
18	0.1530E+02	0.6559E-02	0.8845E-02	0.1424E-03	0.0000E+00	-0.3664E+01	0.1337E+01	0.1070E+01	0.9849E+00	-0.2461E+01
19	0.1620E+02	0.6719E-02	0.8208E-02	-0.1008E-03	0.0000E+00	-0.4091E+01	0.1340E+01	0.1073E+01	0.9862E+00	-0.2911E+01
20	0.1710E+02	0.6682E-02	0.6049E-02	-0.6690E-03	0.0000E+00	-0.4070E+01	0.1341E+01	0.1073E+01	0.9893E+00	-0.4302E+01
21	0.1800E+02	0.5578E-02	0.7086E-02	0.2002E-03	0.0000E+00	-0.3075E+01	0.1346E+01	0.1069E+01	0.1001E+01	-0.9210E+01

X = 3.000687

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6236E-02	0.7540E-02	-0.3289E-03	0.0000E+00	-0.3418E+01	0.1280E+01	0.1020E+01	0.9952E+00	0.7037E+00
2	0.9000E+00	0.5463E-02	0.1702E-02	0.1106E-02	0.0000E+00	-0.3192E+01	0.1279E+01	0.1019E+01	0.9950E+00	0.2973E+00
3	0.1800E+01	0.5759E-02	0.2340E-02	0.2451E-03	0.0000E+00	-0.3010E+01	0.1282E+01	0.1021E+01	0.9948E+00	-0.2129E+00
4	0.2700E+01	0.5960E-02	0.3644E-02	0.3523E-03	0.0000E+00	-0.2928E+01	0.1284E+01	0.1022E+01	0.9947E+00	-0.4905E+00
5	0.3600E+01	0.6054E-02	0.4066E-02	0.4385E-03	0.0000E+00	-0.2838E+01	0.1286E+01	0.1023E+01	0.9946E+00	-0.6808E+00
6	0.4500E+01	0.6095E-02	0.4299E-02	0.4473E-03	0.0000E+00	-0.2730E+01	0.1287E+01	0.1023E+01	0.9944E+00	-0.8418E+00
7	0.5400E+01	0.6151E-02	0.4779E-02	0.4301E-03	0.0000E+00	-0.2613E+01	0.1289E+01	0.1024E+01	0.9943E+00	-0.9841E+00
8	0.6300E+01	0.6209E-02	0.5285E-02	0.3438E-03	0.0000E+00	-0.2492E+01	0.1290E+01	0.1025E+01	0.9942E+00	-0.1105E+01
9	0.7200E+01	0.6241E-02	0.5730E-02	0.3072E-03	0.0000E+00	-0.2389E+01	0.1292E+01	0.1026E+01	0.9941E+00	-0.1202E+01
10	0.8100E+01	0.6260E-02	0.5988E-02	0.3302E-03	0.0000E+00	-0.2295E+01	0.1293E+01	0.1027E+01	0.9940E+00	-0.1292E+01
11	0.9000E+01	0.6273E-02	0.6317E-02	0.2898E-03	0.0000E+00	-0.2185E+01	0.1295E+01	0.1028E+01	0.9938E+00	-0.1385E+01
12	0.9900E+01	0.6272E-02	0.6729E-02	0.1860E-03	0.0000E+00	-0.2080E+01	0.1296E+01	0.1030E+01	0.9937E+00	-0.1468E+01
13	0.1080E+02	0.6224E-02	0.7074E-02	0.1343E-03	0.0000E+00	-0.2015E+01	0.1297E+01	0.1030E+01	0.9937E+00	-0.1534E+01
14	0.1170E+02	0.6141E-02	0.7142E-02	0.1367E-03	0.0000E+00	-0.1976E+01	0.1298E+01	0.1031E+01	0.9936E+00	-0.1615E+01
15	0.1260E+02	0.6079E-02	0.7299E-02	0.2344E-03	0.0000E+00	-0.1930E+01	0.1300E+01	0.1032E+01	0.9936E+00	-0.1754E+01
16	0.1350E+02	0.5885E-02	0.7437E-02	0.5120E-04	0.0000E+00	-0.1837E+01	0.1301E+01	0.1033E+01	0.9937E+00	-0.2006E+01
17	0.1440E+02	0.5724E-02	0.7680E-02	-0.1298E-03	-0.0000E+00	-0.1839E+01	0.1301E+01	0.1033E+01	0.9938E+00	-0.2212E+01
18	0.1530E+02	0.5599E-02	0.8007E-02	-0.2132E-03	0.0000E+00	-0.1983E+01	0.1302E+01	0.1034E+01	0.9939E+00	-0.2403E+01
19	0.1620E+02	0.5760E-02	0.7088E-02	-0.4341E-03	0.0000E+00	-0.2214E+01	0.1304E+01	0.1036E+01	0.9942E+00	-0.2809E+01
20	0.1710E+02	0.6270E-02	0.8927E-02	0.1242E-02	0.0000E+00	-0.2500E+01	0.1307E+01	0.1038E+01	0.9958E+00	-0.4106E+01
21	0.1800E+02	0.5106E-02	0.7075E-02	-0.1305E-03	0.0000E+00	-0.1777E+01	0.1316E+01	0.1039E+01	0.1006E+01	-0.8995E+01

X = 3.053378

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5994E-02	0.7445E-02	-0.3243E-03	0.0000E+00	-0.3349E+01	0.1279E+01	0.1019E+01	0.9954E+00	0.7016E+00
2	0.9000E+00	0.5260E-02	0.2022E-02	0.1101E-02	0.0000E+00	-0.3124E+01	0.1278E+01	0.1018E+01	0.9952E+00	0.2952E+00
3	0.1800E+01	0.5568E-02	0.2406E-02	0.2169E-03	0.0000E+00	-0.2945E+01	0.1281E+01	0.1020E+01	0.9950E+00	-0.2137E+00
4	0.2700E+01	0.5787E-02	0.3744E-02	0.3406E-03	0.0000E+00	-0.2869E+01	0.1283E+01	0.1021E+01	0.9949E+00	-0.4907E+00
5	0.3600E+01	0.5894E-02	0.4193E-02	0.4331E-03	0.0000E+00	-0.2783E+01	0.1285E+01	0.1022E+01	0.9948E+00	-0.6808E+00
6	0.4500E+01	0.5947E-02	0.4428E-02	0.4436E-03	0.0000E+00	-0.2679E+01	0.1286E+01	0.1022E+01	0.9946E+00	-0.8417E+00
7	0.5400E+01	0.6015E-02	0.4903E-02	0.4283E-03	0.0000E+00	-0.2565E+01	0.1288E+01	0.1023E+01	0.9945E+00	-0.9840E+00
8	0.6300E+01	0.6084E-02	0.5384E-02	0.3419E-03	0.0000E+00	-0.2447E+01	0.1290E+01	0.1024E+01	0.9944E+00	-0.1105E+01
9	0.7200E+01	0.6125E-02	0.5819E-02	0.3055E-03	0.0000E+00	-0.2347E+01	0.1291E+01	0.1025E+01	0.9943E+00	-0.1202E+01
10	0.8100E+01	0.6154E-02	0.6084E-02	0.3303E-03	0.0000E+00	-0.2255E+01	0.1292E+01	0.1026E+01	0.9941E+00	-0.1291E+01
11	0.9000E+01	0.6176E-02	0.6401E-02	0.2911E-03	0.0000E+00	-0.2148E+01	0.1294E+01	0.1027E+01	0.9940E+00	-0.1385E+01
12	0.9900E+01	0.6184E-02	0.6783E-02	0.1876E-03	0.0000E+00	-0.2045E+01	0.1295E+01	0.1029E+01	0.9939E+00	-0.1468E+01
13	0.1080E+02	0.6143E-02	0.7113E-02	0.1365E-03	0.0000E+00	-0.1981E+01	0.1297E+01	0.1029E+01	0.9939E+00	-0.1533E+01
14	0.1170E+02	0.6065E-02	0.7182E-02	0.1380E-03	0.0000E+00	-0.1942E+01	0.1298E+01	0.1030E+01	0.9938E+00	-0.1614E+01
15	0.1260E+02	0.6011E-02	0.7368E-02	0.2390E-03	0.0000E+00	-0.1896E+01	0.1299E+01	0.1031E+01	0.9938E+00	-0.1753E+01
16	0.1350E+02	0.5823E-02	0.7453E-02	0.5544E-04	0.0000E+00	-0.1803E+01	0.1300E+01	0.1032E+01	0.9939E+00	-0.2004E+01
17	0.1440E+02	0.5665E-02	0.7644E-02	-0.1220E-03	0.0000E+00	-0.1804E+01	0.1301E+01	0.1032E+01	0.9941E+00	-0.2210E+01
18	0.1530E+02	0.5541E-02	0.7948E-02	-0.1999E-03	0.0000E+00	-0.1940E+01	0.1301E+01	0.1033E+01	0.9942E+00	-0.2401E+01
19	0.1620E+02	0.5697E-02	0.6958E-02	-0.4576E-03	0.0000E+00	-0.2160E+01	0.1303E+01	0.1035E+01	0.9944E+00	-0.2806E+01
20	0.1710E+02	0.6223E-02	0.9291E-02	0.1264E-02	0.0000E+00	-0.2455E+01	0.1306E+01	0.1037E+01	0.9960E+00	-0.4098E+01
21	0.1800E+02	0.5046E-02	0.7038E-02	-0.1296E-03	0.0000E+00	-0.1745E+01	0.1315E+01	0.1038E+01	0.1006E+01	-0.8992E+01

389 INTEGRATION STEP
SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)= 0.00000

LOWER WING SURFACE
BOUNDARY LAYER STARTING NODE LOWER WING IWNODE= 153

X = 0.006751

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.6718E-04	0.1489E-03	0.5522E-02	0.2830E-02	-0.1835E+02	0.2405E+01	0.2270E+01	0.5784E+00	0.1571E+02
2	0.9000E+00	0.6247E-04	0.1385E-03	0.5486E-02	0.2871E-02	-0.1899E+02	0.2429E+01	0.2281E+01	0.6042E+00	0.1762E+02
3	0.1800E+01	0.6292E-04	0.1395E-03	0.5361E-02	0.2687E-02	-0.1999E+02	0.2461E+01	0.2301E+01	0.6245E+00	0.2081E+02
4	0.2700E+01	0.6270E-04	0.1390E-03	0.4791E-02	0.2629E-02	-0.2021E+02	0.2473E+01	0.2307E+01	0.6362E+00	0.2158E+02
5	0.3600E+01	0.6236E-04	0.1383E-03	0.4081E-02	0.2599E-02	-0.2023E+02	0.2479E+01	0.2307E+01	0.6461E+00	0.2165E+02
6	0.4500E+01	0.6199E-04	0.1374E-03	0.3328E-02	0.2582E-02	-0.2016E+02	0.2483E+01	0.2306E+01	0.6553E+00	0.2141E+02
7	0.5400E+01	0.6162E-04	0.1366E-03	0.2585E-02	0.2571E-02	-0.2005E+02	0.2485E+01	0.2303E+01	0.6641E+00	0.2100E+02
8	0.6300E+01	0.6128E-04	0.1359E-03	0.1874E-02	0.2562E-02	-0.1990E+02	0.2486E+01	0.2300E+01	0.6725E+00	0.2052E+02
9	0.7200E+01	0.6097E-04	0.1352E-03	0.1199E-02	0.2553E-02	-0.1974E+02	0.2487E+01	0.2296E+01	0.6809E+00	0.1998E+02
10	0.8100E+01	0.6061E-04	0.1344E-03	0.5546E-03	0.2545E-02	-0.1956E+02	0.2489E+01	0.2292E+01	0.6900E+00	0.1937E+02
11	0.9000E+01	0.6021E-04	0.1335E-03	-0.4968E-04	0.2538E-02	-0.1935E+02	0.2490E+01	0.2288E+01	0.6998E+00	0.1872E+02
12	0.9900E+01	0.5981E-04	0.1326E-03	-0.6126E-03	0.2529E-02	-0.1913E+02	0.2492E+01	0.2284E+01	0.7102E+00	0.1804E+02
13	0.1080E+02	0.5937E-04	0.1316E-03	-0.1135E-02	0.2518E-02	-0.1889E+02	0.2495E+01	0.2279E+01	0.7219E+00	0.1730E+02
14	0.1170E+02	0.5887E-04	0.1305E-03	-0.1622E-02	0.2504E-02	-0.1861E+02	0.2499E+01	0.2274E+01	0.7358E+00	0.1647E+02
15	0.1260E+02	0.5834E-04	0.1293E-03	-0.2066E-02	0.2486E-02	-0.1829E+02	0.2504E+01	0.2269E+01	0.7519E+00	0.1556E+02
16	0.1350E+02	0.5778E-04	0.1281E-03	-0.2468E-02	0.2464E-02	-0.1796E+02	0.2511E+01	0.2264E+01	0.7699E+00	0.1461E+02
17	0.1440E+02	0.5716E-04	0.1267E-03	-0.2825E-02	0.2436E-02	-0.1760E+02	0.2520E+01	0.2259E+01	0.7911E+00	0.1358E+02
18	0.1530E+02	0.5642E-04	0.1251E-03	-0.3141E-02	0.2399E-02	-0.1717E+02	0.2534E+01	0.2254E+01	0.8179E+00	0.1241E+02
19	0.1620E+02	0.5556E-04	0.1232E-03	-0.3413E-02	0.2351E-02	-0.1671E+02	0.2553E+01	0.2248E+01	0.8512E+00	0.1116E+02

20	0.1710E+02	0.5447E-04	0.1208E-03	-0.3712E-02	0.2268E-02	-0.1647E+02	0.2589E+01	0.2246E+01	0.8998E+00	0.1051E+02
21	0.1800E+02	0.5711E-04	0.1266E-03	-0.3674E-02	0.2044E-02	-0.1676E+02	0.2633E+01	0.2249E+01	0.9450E+00	0.1130E+02

X = 0.483830

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.3921E-03	0.1131E-02	0.3537E-04	0.2700E-03	-0.7262E+00	0.2873E+01	0.2183E+01	0.1231E+01	-0.1217E+01
2	0.9000E+00	0.3618E-03	0.1205E-02	0.1284E-03	0.2435E-03	-0.2197E+01	0.2959E+01	0.2223E+01	0.1257E+01	-0.2169E+01
3	0.1800E+01	0.3609E-03	0.1229E-02	0.3243E-03	0.2084E-03	-0.9111E+01	0.3121E+01	0.2346E+01	0.1261E+01	-0.3079E+01
4	0.2700E+01	0.3624E-03	0.1295E-02	0.6634E-03	0.1656E-03	-0.1578E+02	0.3333E+01	0.2531E+01	0.1250E+01	-0.3479E+01
5	0.3600E+01	0.3671E-03	0.1322E-02	0.1007E-02	0.1281E-03	-0.2108E+02	0.3536E+01	0.2714E+01	0.1237E+01	-0.3599E+01
6	0.4500E+01	0.3644E-03	0.1372E-02	0.1282E-02	0.1042E-03	-0.2430E+02	0.3691E+01	0.2857E+01	0.1225E+01	-0.3584E+01
7	0.5400E+01	0.3655E-03	0.1383E-02	0.1414E-02	0.9374E-04	-0.2486E+02	0.3774E+01	0.2936E+01	0.1217E+01	-0.3513E+01
8	0.6300E+01	0.3601E-03	0.1367E-02	0.1430E-02	0.9120E-04	-0.2366E+02	0.3802E+01	0.2967E+01	0.1211E+01	-0.3426E+01
9	0.7200E+01	0.3534E-03	0.1335E-02	0.1401E-02	0.9281E-04	-0.2166E+02	0.3798E+01	0.2971E+01	0.1206E+01	-0.3339E+01
10	0.8100E+01	0.3458E-03	0.1296E-02	0.1376E-02	0.9611E-04	-0.1941E+02	0.3785E+01	0.2964E+01	0.1203E+01	-0.3257E+01
11	0.9000E+01	0.3380E-03	0.1257E-02	0.1372E-02	0.9979E-04	-0.1738E+02	0.3771E+01	0.2957E+01	0.1200E+01	-0.3179E+01
12	0.9900E+01	0.3309E-03	0.1227E-02	0.1394E-02	0.1018E-03	-0.1564E+02	0.3763E+01	0.2959E+01	0.1197E+01	-0.3104E+01
13	0.1080E+02	0.3234E-03	0.1194E-02	0.1411E-02	0.1056E-03	-0.1351E+02	0.3755E+01	0.2952E+01	0.1194E+01	-0.3031E+01
14	0.1170E+02	0.3157E-03	0.1156E-02	0.1449E-02	0.1091E-03	-0.1109E+02	0.3746E+01	0.2948E+01	0.1192E+01	-0.2959E+01
15	0.1260E+02	0.3085E-03	0.1125E-02	0.1510E-02	0.1118E-03	-0.8776E+01	0.3743E+01	0.2949E+01	0.1189E+01	-0.2875E+01
16	0.1350E+02	0.3018E-03	0.1102E-02	0.1625E-02	0.1126E-03	-0.6853E+01	0.3752E+01	0.2960E+01	0.1187E+01	-0.2776E+01
17	0.1440E+02	0.2951E-03	0.1084E-02	0.1835E-02	0.1105E-03	-0.1386E+01	0.3782E+01	0.2987E+01	0.1185E+01	-0.2654E+01
18	0.1530E+02	0.2889E-03	0.1079E-02	0.2340E-02	0.1021E-03	0.6472E+01	0.3855E+01	0.3053E+01	0.1182E+01	-0.2487E+01
19	0.1620E+02	0.2874E-03	0.1142E-02	0.4332E-02	0.7379E-04	0.2588E+02	0.4083E+01	0.3253E+01	0.1175E+01	-0.2227E+01
20	0.1710E+02	0.2843E-03	0.1239E-02	0.7145E-01	0.3541E-04	0.6450E+02	0.4472E+01	0.3606E+01	0.1157E+01	-0.2069E+01
21	0.1800E+02	0.2792E-03	0.1025E-02	0.1593E-02	0.9319E-04	-0.1788E+02	0.3875E+01	0.3175E+01	0.1184E+01	-0.7223E+00

LAMINAR SEPARATION AT 48.4 PERCENTAGE MINGCHORD

TRANSITION LAMINAR - TURBULENT

N H TE	GAM F	1	0.14500E+01	0.35207E-03	0.22511E+00	0.20876E-01
N H TE	GAM F	2	0.14500E+01	0.36097E-03	0.19489E+00	0.20913E-01
N H TE	GAM F	3	0.14500E+01	0.36094E-03	0.11395E+00	0.20909E-01
N H TE	GAM F	4	0.14500E+01	0.36236E-03	0.78774E-01	0.20926E-01
N H TE	GAM F	5	0.14500E+01	0.36710E-03	0.46750E-01	0.20965E-01
N H TE	GAM F	6	0.14500E+01	0.36841E-03	0.29321E-01	0.20988E-01
N H TE	GAM F	7	0.14500E+01	0.36548E-03	0.14763E-01	0.20968E-01
N H TE	GAM F	8	0.14500E+01	0.36014E-03	0.13769E-02	0.20938E-01
N H TE	GAM F	9	0.14500E+01	0.35343E-03	-0.11628E-01	0.20897E-01
N H TE	GAM F	10	0.14500E+01	0.34576E-03	-0.24366E-01	0.20848E-01
N H TE	GAM F	11	0.14500E+01	0.33796E-03	-0.35744E-01	0.20796E-01
N H TE	GAM F	12	0.14500E+01	0.33093E-03	-0.45764E-01	0.20748E-01
N H TE	GAM F	13	0.14500E+01	0.32543E-03	-0.54459E-01	0.20705E-01
N H TE	GAM F	14	0.14500E+01	0.31971E-03	-0.64244E-01	0.20638E-01
N H TE	GAM F	15	0.14500E+01	0.30851E-03	-0.78743E-01	0.20583E-01
N H TE	GAM F	16	0.14500E+01	0.30176E-03	-0.87706E-01	0.20530E-01
N H TE	GAM F	17	0.14500E+01	0.29505E-03	-0.88340E-01	0.20475E-01
N H TE	GAM F	18	0.14500E+01	0.28886E-03	-0.84154E-01	0.20423E-01
N H TE	GAM F	19	0.14500E+01	0.28745E-03	-0.86232E-01	0.20410E-01
N H TE	GAM F	20	0.14500E+01	0.28427E-03	-0.10332E+00	0.20377E-01
N H TE	GAM F	21	0.14500E+01	0.27918E-03	-0.13529E+00	0.20300E-01

X = 1.004887

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5934E-02	0.8274E-02	-0.3139E-02	0.0000E+00	-0.4464E+01	0.1454E+01	0.1214E+01	0.9895E+00	0.9330E+00
2	0.9000E+00	0.5532E-02	0.7215E-02	-0.3483E-02	0.0000E+00	-0.4742E+01	0.1438E+01	0.1202E+01	0.9857E+00	0.1456E+01
3	0.1800E+01	0.5236E-02	0.6890E-02	-0.3627E-02	0.0000E+00	-0.4234E+01	0.1433E+01	0.1198E+01	0.9856E+00	0.2300E+01
4	0.2700E+01	0.5100E-02	0.6966E-02	-0.3453E-02	0.0000E+00	-0.4143E+01	0.1432E+01	0.1197E+01	0.9848E+00	0.2779E+01
5	0.3600E+01	0.4957E-02	0.6919E-02	-0.3374E-02	0.0000E+00	-0.4127E+01	0.1431E+01	0.1197E+01	0.9840E+00	0.3060E+01
6	0.4500E+01	0.4814E-02	0.6823E-02	-0.3313E-02	0.0000E+00	-0.4102E+01	0.1431E+01	0.1197E+01	0.9832E+00	0.3253E+01
7	0.5400E+01	0.4669E-02	0.6680E-02	-0.3249E-02	0.0000E+00	-0.4097E+01	0.1431E+01	0.1197E+01	0.9827E+00	0.3402E+01
8	0.6300E+01	0.4526E-02	0.6504E-02	-0.3194E-02	0.0000E+00	-0.4093E+01	0.1430E+01	0.1197E+01	0.9822E+00	0.3516E+01
9	0.7200E+01	0.4380E-02	0.6301E-02	-0.3145E-02	0.0000E+00	-0.4055E+01	0.1430E+01	0.1197E+01	0.9818E+00	0.3599E+01
10	0.8100E+01	0.4234E-02	0.6092E-02	-0.3088E-02	0.0000E+00	-0.3960E+01	0.1429E+01	0.1196E+01	0.9813E+00	0.3669E+01
11	0.9000E+01	0.4086E-02	0.5894E-02	-0.3021E-02	0.0000E+00	-0.3886E+01	0.1429E+01	0.1196E+01	0.9809E+00	0.3739E+01
12	0.9900E+01	0.3938E-02	0.5698E-02	-0.2964E-02	0.0000E+00	-0.3812E+01	0.1429E+01	0.1196E+01	0.9805E+00	0.3797E+01
13	0.1080E+02	0.3789E-02	0.5491E-02	-0.2908E-02	0.0000E+00	-0.3679E+01	0.1428E+01	0.1196E+01	0.9800E+00	0.3840E+01
14	0.1170E+02	0.3641E-02	0.5288E-02	-0.2873E-02	0.0000E+00	-0.3463E+01	0.1427E+01	0.1195E+01	0.8992E+00	0.3901E+01
15	0.1260E+02	0.3494E-02	0.5108E-02	-0.2797E-02	0.0000E+00	-0.3280E+01	0.1427E+01	0.1195E+01	0.8984E+00	0.4013E+01
16	0.1350E+02	0.3344E-02	0.4925E-02	-0.2692E-02	0.0000E+00	-0.3111E+01	0.1426E+01	0.1195E+01	0.8972E+00	0.4141E+01
17	0.1440E+02	0.3241E-02	0.4805E-02	-0.2548E-02	0.0000E+00	-0.2981E+01	0.1426E+01	0.1198E+01	0.8987E+00	0.4114E+01
18	0.1530E+02	0.3079E-02	0.4619E-02	-0.2527E-02	0.0000E+00	-0.2640E+01	0.1424E+01	0.1197E+01	0.8984E+00	0.4204E+01
19	0.1620E+02	0.2918E-02	0.4509E-02	-0.2586E-02	0.0000E+00	-0.2304E+01	0.1423E+01	0.1196E+01	0.8995E+00	0.4434E+01
20	0.1710E+02	0.2720E-02	0.4394E-02	-0.2996E-02	0.0000E+00	-0.1166E+01	0.1424E+01	0.1195E+01	0.9132E+00	0.5384E+01
21	0.1800E+02	0.2263E-02	0.3756E-02	-0.2283E-02	0.0000E+00	0.1652E+01	0.1454E+01	0.1196E+01	0.9488E+00	0.9874E+01

X = 2.000539

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.4433E-02	0.6459E-02	-0.1131E-03	0.0000E+00	0.1869E+01	0.1296E+01	0.1033E+01	0.9843E+00	-0.1052E+01
2	0.9000E+00	0.4177E-02	0.6242E-02	0.1140E-03	0.0000E+00	0.1847E+01	0.1294E+01	0.1031E+01	0.9843E+00	-0.5451E+00
3	0.1800E+01	0.3925E-02	0.6070E-02	0.1995E-03	0.0000E+00	0.8844E+00	0.1293E+01	0.1030E+01	0.9844E+00	0.1870E+00
4	0.2700E+01	0.3974E-02	0.6233E-02	0.8888E-04	0.0000E+00	0.7844E+00	0.1294E+01	0.1031E+01	0.9849E+00	0.5213E+00
5	0.3600E+01	0.3909E-02	0.6247E-02	0.1223E-03	0.0000E+00	0.6791E+00	0.1294E+01	0.1031E+01	0.9845E+00	0.7198E+00
6	0.4500E+01	0.3797E-02	0.6028E-02	0.1111E-03	0.0000E+00	0.5822E+00	0.1294E+01	0.1031E+01	0.9845E+00	0.8756E+00
7	0.5400E+01	0.3681E-02	0.5863E-02	0.1034E-03	0.0000E+00	0.4830E+00	0.1295E+01	0.1031E+01	0.9844E+00	0.1007E+01
8	0.6300E+01	0.3565E-02	0.5630E-02	0.9095E-04	0.0000E+00	0.3863E+00	0.1295E+01	0.1031E+01	0.9843E+00	0.1112E+01
9	0.7200E+01	0.3444E-02	0.5296E-02	0.6368E-04	0.0000E+00	0.3072E+00	0.1295E+01	0.1031E+01	0.9841E+00	0.1191E+01
10	0.8100E+01	0.3316E-02	0.4939E-02	0.3144E-04	0.0000E+00	0.2517E+00	0.1295E+01	0.1031E+01	0.9840E+00	0.1261E+01
11	0.9000E+01	0.3193E-02	0.4752E-02	0.2447E-04	0.0000E+00	0.1937E+00	0.1295E+01	0.1031E+01	0.9838E+00	0.1333E+01
12	0.9900E+01	0.3073E-02	0.4543E-02	0.1567E-04	0.0000E+00	0.1404E+00	0.1295E+01	0.1031E+01	0.9837E+00	0.1390E+01
13	0.1080E+02	0.2948E-02	0.4228E-02	-0.1119E-04	0.0000E+00	0.1191E+00	0.1295E+01	0.1031E+01	0.9836E+00	0.1427E+01
14	0.1170E+02	0.2815E-02	0.3911E-02	-0.3980E-04	0.0000E+00	0.1362E+00	0.1295E+01	0.1031E+01	0.9835E+00	0.1480E+01
15	0.1260E+02	0.2683E-02	0.3790E-02	-0.3672E-04	0.0000E+00	0.1449E+00	0.1295E+01	0.1031E+01	0.9836E+00	0.1590E+01
16	0.1350E+02	0.2544E-02	0.3653E-02	-0.2600E-04	0.0000E+00	0.1347E+00	0.1295E+01	0.1031E+01	0.9839E+00	0.1791E+01
17	0.1440E+02	0.2428E-02	0.3441E-02	-0.4265E-04	0.0000E+00	0.1672E+00	0.1295E+01	0.1032E+01	0.9843E+00	0.1921E+01
18	0.1530E+02	0.2296E-02	0.3119E-02	-0.8791E-04	0.0000E+00	0.3185E+00	0.1295E+01	0.1032E+01	0.9849E+00	0.2058E+01
19	0.1620E+02	0.2139E-02	0.3044E-02	-0.9210E-04	0.0000E+00	0.4945E+00	0.1296E+01	0.1031E+01	0.9862E+00	0.2496E+01
20	0.1710E+02	0.1893E-02	0.2762E-02	-0.7849E-04	0.0000E+00	0.6313E+00	0.1296E+01	0.1030E+01	0.9893E+00	0.3922E+01
21	0.1800E+02	0.1494E-02	0.2091E-02	-0.4765E-04	0.0000E+00	0.7269E+00	0.1300E+01	0.1027E+01	0.1001E+01	0.8793E+01

X = 3.013653

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5063E-02	0.6486E-02	0.5786E-04	0.0000E+00	0.5519E+00	0.1287E+01	0.1019E+01	0.9953E+00	-0.1015E+01
2	0.9000E+00	0.4477E-02	0.5602E-02	-0.2772E-03	0.0000E+00	0.4988E+00	0.1286E+01	0.1018E+01	0.9950E+00	-0.5863E+00
3	0.1800E+01	0.4080E-02	0.5343E-02	-0.2771E-03	0.0000E+00	0.4233E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.1708E+00
4	0.2700E+01	0.4122E-02	0.5909E-02	-0.1171E-03	0.0000E+00	0.3895E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.4986E+00
5	0.3600E+01	0.4016E-02	0.5703E-02	-0.1921E-03	0.0000E+00	0.3349E+00	0.1285E+01	0.1017E+01	0.9946E+00	0.6880E+00
6	0.4500E+01	0.3858E-02	0.5553E-02	-0.1635E-03	0.0000E+00	0.2889E+00	0.1285E+01	0.1017E+01	0.9945E+00	0.8359E+00
7	0.5400E+01	0.3696E-02	0.5383E-02	-0.1607E-03	0.0000E+00	0.2408E+00	0.1285E+01	0.1017E+01	0.9943E+00	0.9603E+00
8	0.6300E+01	0.3539E-02	0.5168E-02	-0.1493E-03	0.0000E+00	0.1936E+00	0.1284E+01	0.1017E+01	0.9942E+00	0.1059E+01
9	0.7200E+01	0.3392E-02	0.4891E-02	-0.1214E-03	0.0000E+00	0.1553E+00	0.1284E+01	0.1017E+01	0.9941E+00	0.1133E+01
10	0.8100E+01	0.3248E-02	0.4599E-02	-0.9010E-04	0.0000E+00	0.1292E+00	0.1284E+01	0.1017E+01	0.9940E+00	0.1203E+01
11	0.9000E+01	0.3103E-02	0.4418E-02	-0.8651E-04	0.0000E+00	0.1012E+00	0.1284E+01	0.1016E+01	0.9939E+00	0.1279E+01
12	0.9900E+01	0.2966E-02	0.4227E-02	-0.7850E-04	0.0000E+00	0.7505E-01	0.1284E+01	0.1016E+01	0.9938E+00	0.1340E+01
13	0.1080E+02	0.2843E-02	0.3977E-02	-0.5111E-04	0.0000E+00	0.6429E-01	0.1284E+01	0.1016E+01	0.9937E+00	0.1385E+01
14	0.1170E+02	0.2721E-02	0.3718E-02	-0.2458E-04	0.0000E+00	0.7090E-01	0.1284E+01	0.1016E+01	0.9936E+00	0.1453E+01
15	0.1260E+02	0.2597E-02	0.3611E-02	-0.2492E-04	0.0000E+00	0.7424E-01	0.1284E+01	0.1016E+01	0.9936E+00	0.1581E+01
16	0.1350E+02	0.2435E-02	0.3424E-02	-0.4038E-04	0.0000E+00	0.6961E-01	0.1284E+01	0.1016E+01	0.9938E+00	0.1796E+01
17	0.1440E+02	0.2334E-02	0.3268E-02	-0.2143E-04	0.0000E+00	0.8460E-01	0.1284E+01	0.1016E+01	0.9939E+00	0.1936E+01
18	0.1530E+02	0.2264E-02	0.3093E-02	0.2712E-04	0.0000E+00	0.1516E+00	0.1284E+01	0.1017E+01	0.9940E+00	0.2080E+01
19	0.1620E+02	0.2203E-02	0.3139E-02	0.5907E-04	0.0000E+00	0.2331E+00	0.1284E+01	0.1017E+01	0.9942E+00	0.2549E+01
20	0.1710E+02	0.2161E-02	0.3148E-02	0.1677E-03	0.0000E+00	0.3476E+00	0.1285E+01	0.1016E+01	0.9959E+00	0.4059E+01
21	0.1800E+02	0.1395E-02	0.1627E-02	-0.1323E-03	0.0000E+00	0.3882E+00	0.1287E+01	0.1013E+01	0.1006E+01	0.8924E+01

X = 3.058349

SPAN	Y	TE	DELST	DELSTX	CF	BETA	H	HINC	UE	AL
1	0.0000E+00	0.5100E-02	0.6503E-02	0.5604E-04	0.0000E+00	0.5381E+00	0.1287E+01	0.1019E+01	0.9955E+00	-0.1015E+01
2	0.9000E+00	0.4502E-02	0.5522E-02	-0.2742E-03	0.0000E+00	0.4825E+00	0.1286E+01	0.1017E+01	0.9952E+00	-0.5880E+00
3	0.1800E+01	0.4097E-02	0.5263E-02	-0.2732E-03	0.0000E+00	0.4100E+00	0.1285E+01	0.1016E+01	0.9951E+00	0.1700E+00
4	0.2700E+01	0.4135E-02	0.5875E-02	-0.1157E-03	0.0000E+00	0.3775E+00	0.1285E+01	0.1017E+01	0.9949E+00	0.4981E+00
5	0.3600E+01	0.4023E-02	0.5647E-02	-0.1908E-03	0.0000E+00	0.3243E+00	0.1285E+01	0.1017E+01	0.9948E+00	0.6876E+00
6	0.4500E+01	0.3863E-02	0.5506E-02	-0.1610E-03	0.0000E+00	0.2798E+00	0.1285E+01	0.1017E+01	0.9947E+00	0.8355E+00
7	0.5400E+01	0.3698E-02	0.5337E-02	-0.1583E-03	0.0000E+00	0.2332E+00	0.1284E+01	0.1017E+01	0.9945E+00	0.9598E+00
8	0.6300E+01	0.3538E-02	0.5125E-02	-0.1469E-03	0.0000E+00	0.1875E+00	0.1284E+01	0.1016E+01	0.9944E+00	0.1059E+01
9	0.7200E+01	0.3390E-02	0.4856E-02	-0.1192E-03	0.0000E+00	0.1504E+00	0.1284E+01	0.1016E+01	0.9943E+00	0.1133E+01
10	0.8100E+01	0.3246E-02	0.4573E-02	-0.8819E-04	0.0000E+00	0.1253E+00	0.1284E+01	0.1016E+01	0.9942E+00	0.1203E+01
11	0.9000E+01	0.3100E-02	0.4393E-02	-0.8496E-04	0.0000E+00	0.9815E-01	0.1284E+01	0.1016E+01	0.9941E+00	0.1279E+01
12	0.9900E+01	0.2962E-02	0.4204E-02	-0.7719E-04	0.0000E+00	0.7276E-01	0.1284E+01	0.1016E+01	0.9940E+00	0.1340E+01
13	0.1080E+02	0.2838E-02	0.3962E-02	-0.5025E-04	0.0000E+00	0.6226E-01	0.1284E+01	0.1016E+01	0.9939E+00	0.1385E+01
14	0.1170E+02	0.2717E-02	0.3711E-02	-0.2419E-04	0.0000E+00	0.6863E-01	0.1283E+01	0.1016E+01	0.9938E+00	0.1453E+01
15	0.1260E+02	0.2593E-02	0.3604E-02	-0.2484E-04	0.0000E+00	0.7168E-01	0.1283E+01	0.1016E+01	0.9939E+00	0.1583E+01
16	0.1350E+02	0.2430E-02	0.3413E-02	-0.4007E-04	0.0000E+00	0.6719E-01	0.1283E+01	0.1016E+01	0.9940E+00	0.1797E+01
17	0.1440E+02	0.2329E-02	0.3262E-02	-0.2167E-04	0.0000E+00	0.8161E-01	0.1284E+01	0.1016E+01	0.9941E+00	0.1938E+01
18	0.1530E+02	0.2262E-02	0.3100E-02	0.2510E-04	0.0000E+00	0.1459E+00	0.1284E+01	0.1016E+01	0.9942E+00	0.2081E+01
19	0.1620E+02	0.2207E-02	0.3156E-02	0.5605E-04	0.0000E+00	0.2240E+00	0.1284E+01	0.1016E+01	0.9945E+00	0.2549E+01
20	0.1710E+02	0.2184E-02	0.3197E-02	0.1728E-03	0.0000E+00	0.3403E+00	0.1284E+01	0.1016E+01	0.9960E+00	0.4056E+01
21	0.1800E+02	0.1390E-02	0.1588E-02	-0.1374E-03	0.0000E+00	0.3834E+00	0.1287E+01	0.1012E+01	0.1006E+01	0.8927E+01

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       447  INTEGRATION     STEP
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000

SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
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SEPARATION AT SPAN STATION X(N)/EL(N)=    0.00000
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41	-0.32409E-04	119	16	20	0.54181E-05	-0.28793E-04	160	2	3	0.11503E-06	0.03379	3461
42	-0.78472E-04	160	16	12	0.93887E-05	-0.31625E-04	160	2	3	0.13106E-06	0.03374	3455
43	-0.93077E-04	119	16	20	0.18266E-04	-0.31528E-04	160	2	3	0.11653E-06	0.03364	3444
44	-0.17149E-03	119	16	20	0.36661E-04	-0.29281E-04	160	2	3	0.11253E-06	0.03346	3438
45	0.35682E-04	31	16	9	0.53351E-05	-0.24456E-04	160	2	3	0.11161E-06	0.03341	3420
46	-0.53555E-04	119	16	20	0.83208E-05	-0.27635E-04	160	2	3	0.11274E-06	0.03335	3420
47	-0.91929E-04	119	16	20	0.16521E-04	-0.27207E-04	160	2	3	0.10851E-06	0.03326	3413
48	-0.16238E-03	119	16	19	0.33301E-04	-0.25343E-04	160	2	3	0.10362E-06	0.03310	3395

MAX RESIDAL 1	MAX RESIDAL 2	WORK	REDUCTN/CYCLE
-0.2464E-03	-0.2446E-04	44.0000	0.9489

SECTION CHARACTERISTICS

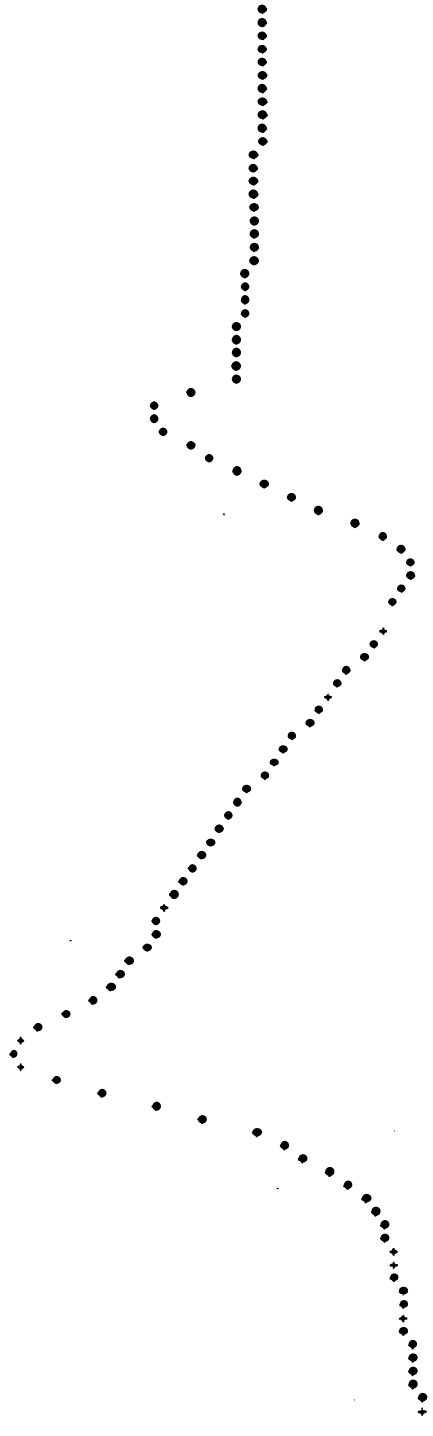
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.00000	0.40193	0.07712	-0.17765

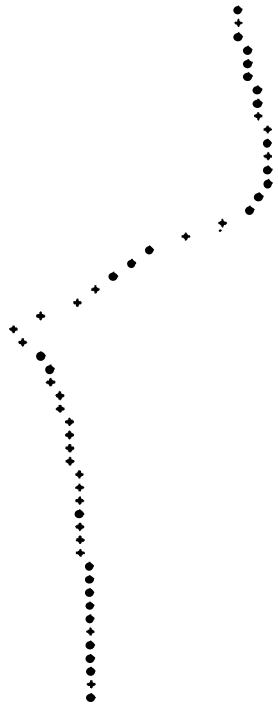
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4792	-0.3645	0.8139	0.0131
3.2472	-0.3695	0.8168	0.0068
3.0473	-0.3736	0.8159	0.0089
2.8725	-0.3772	0.8148	0.0113
2.7179	-0.3803	0.8137	0.0136
2.5795	-0.3829	0.8126	0.0159
2.4546	-0.3849	0.8113	0.0188
2.3418	-0.3863	0.8099	0.0217
2.2378	-0.3872	0.8091	0.0234
2.1410	-0.3878	0.8084	0.0249
2.0521	-0.3871	0.8074	0.0272
1.9691	-0.3861	0.8062	0.0298
1.8915	-0.3844	0.8048	0.0326
1.8186	-0.3819	0.8034	0.0358
1.7497	-0.3787	0.8018	0.0392
1.6845	-0.3747	0.8000	0.0430
1.6225	-0.3698	0.7981	0.0471
1.5633	-0.3640	0.7960	0.0516
1.5068	-0.3572	0.7937	0.0567
1.4527	-0.3494	0.7911	0.0622
1.4006	-0.3403	0.7882	0.0685
1.3505	-0.3299	0.7849	0.0755
1.3021	-0.3180	0.7812	0.0834
1.2552	-0.3043	0.7771	0.0922
1.2098	-0.2887	0.7728	0.1017
1.1657	-0.2706	0.7686	0.1105
1.1227	-0.2499	0.7667	0.1148
1.0809	-0.2252	0.7715	0.1043
1.0400	-0.1952	0.7689	0.1272
1.0000	-0.1590	0.6855	0.2883
0.9608	-0.1288	0.6198	0.4255
0.9223	-0.1252	0.6218	0.4238
0.8845	-0.1376	0.6483	0.3664
0.8475	-0.1595	0.6849	0.2896
0.8112	-0.1868	0.7247	0.2047
0.7757	-0.2174	0.7664	0.1153
0.7409	-0.2492	0.8100	0.0214
0.7069	-0.2811	0.8555	-0.0761
0.6736	-0.3115	0.9019	-0.1758
0.6411	-0.3396	0.9638	-0.3046
0.6094	-0.3649	1.0267	-0.4331
0.5785	-0.3856	1.0589	-0.4971
0.5484	-0.4017	1.0683	-0.5157
0.5190	-0.4147	1.0665	-0.5120
0.4905	-0.4235	1.0546	-0.4886
0.4628	-0.4277	1.0358	-0.4512
0.4359	-0.4293	1.0186	-0.4167
0.4098	-0.4286	1.0036	-0.3864
0.3846	-0.4246	0.9858	-0.3484
0.3602	-0.4176	0.9629	-0.3028
0.3365	-0.4089	0.9431	-0.2616
0.3137	-0.3985	0.9260	-0.2258
0.2917	-0.3857	0.9066	-0.1849
0.2706	-0.3707	0.8852	-0.1395
0.2502	-0.3543	0.8653	-0.0972
0.2307	-0.3368	0.8478	-0.0588
0.2120	-0.3179	0.8280	-0.0172
0.1941	-0.2977	0.8080	0.0259
0.1771	-0.2768	0.7882	0.0685
0.1608	-0.2553	0.7693	0.1091
0.1454	-0.2336	0.7511	0.1483
0.1308	-0.2116	0.7333	0.1864
0.1169	-0.1897	0.7164	0.2226
0.1039	-0.1682	0.7008	0.2557
0.0916	-0.1471	0.6863	0.2865
0.0801	-0.1264	0.6722	0.3163
0.0694	-0.1061	0.6583	0.3455
0.0594	-0.0863	0.6450	0.3734
0.0502	-0.0671	0.6321	0.4002
0.0418	-0.0482	0.6183	0.4286
0.0341	-0.0294	0.6020	0.4619
0.0272	-0.0107	0.5831	0.5001
0.0210	0.0077	0.5626	0.5408
0.0154	0.0258	0.5388	0.5874
0.0107	0.0449	0.5049	0.6518
0.0068	0.0657	0.4564	0.7397
0.0038	0.0881	0.3988	0.8366
0.0017	0.1114	0.3478	0.9143
0.0004	0.1351	0.3271	0.9436
0.0000	0.1590	0.3556	0.9030
0.0004	0.1828	0.4275	0.7895
0.0017	0.2064	0.5218	0.6214
0.0038	0.2294	0.6194	0.4262
0.0069	0.2515	0.7124	0.2311
0.0108	0.2719	0.7909	0.0625
0.0156	0.2903	0.8471	-0.0582
0.0213	0.3067	0.8833	-0.1356
0.0277	0.3210	0.9108	-0.2089
0.0349	0.3337	0.9548	-0.2868
0.0429	0.3481	0.9830	-0.3443
0.0516	0.3589	1.0030	-0.3852
0.0611	0.3688	1.0169	-0.4134
0.0714	0.3795	1.0267	-0.4331
0.0825	0.3816	1.0340	-0.4477
0.0944	0.3864	1.0399	-0.4595
0.1070	0.3902	1.0451	-0.4699
0.1204	0.3931	1.0498	-0.4792
0.1345	0.3953	1.0541	-0.4876
0.1494	0.3967	1.0581	-0.4956
0.1651	0.3975	1.0622	-0.5036
0.1816	0.3977	1.0664	-0.5120
0.1988	0.3971	1.0709	-0.5206
0.2169	0.3958	1.0752	-0.5291
0.2357	0.3936	1.0792	-0.5368
0.2553	0.3906	1.0826	-0.5434
0.2756	0.3867	1.0856	-0.5494



0.2968	0.3828	1.0886	-0.5551
0.3187	0.3763	1.0916	-0.5609
0.3415	0.3696	1.0949	-0.5673
0.3650	0.3619	1.0989	-0.5749
0.3893	0.3532	1.1037	-0.5841
0.4144	0.3431	1.1092	-0.5947
0.4403	0.3317	1.1153	-0.6062
0.4669	0.3187	1.1218	-0.6185
0.4944	0.3041	1.1284	-0.6311
0.5226	0.2875	1.1346	-0.6426
0.5517	0.2691	1.1400	-0.6528
0.5815	0.2488	1.1445	-0.6611
0.6121	0.2265	1.1464	-0.6646
0.6434	0.2020	1.1425	-0.6575
0.6756	0.1754	1.1289	-0.6319
0.7085	0.1468	1.1012	-0.5793
0.7423	0.1162	1.0565	-0.4924
0.7767	0.0837	0.9862	-0.3508
0.8120	0.0494	0.9204	-0.2140
0.8481	0.0132	0.8869	-0.1431
0.8849	-0.0244	0.8633	-0.0928
0.9225	-0.0634	0.8365	-0.0354
0.9609	-0.1032	0.8005	0.0419
1.0000	-0.1486	0.7354	0.1820
1.0400	-0.1847	0.6945	0.2691
1.0809	-0.2148	0.7099	0.2364
1.1228	-0.2395	0.7324	0.1883
1.1657	-0.2603	0.7476	0.1557
1.2098	-0.2783	0.7585	0.1324
1.2552	-0.2939	0.7667	0.1148
1.3021	-0.3076	0.7731	0.1009
1.3505	-0.3195	0.7784	0.0895
1.4007	-0.3299	0.7828	0.0800
1.4527	-0.3390	0.7866	0.0718
1.5069	-0.3469	0.7899	0.0648
1.5634	-0.3537	0.7928	0.0585
1.6225	-0.3595	0.7954	0.0530
1.6845	-0.3643	0.7977	0.0480
1.7497	-0.3684	0.7998	0.0435
1.8186	-0.3716	0.8017	0.0394
1.8916	-0.3740	0.8034	0.0356
1.9692	-0.3757	0.8051	0.0321
2.0521	-0.3768	0.8066	0.0289
2.1410	-0.3771	0.8079	0.0260
2.2370	-0.3769	0.8088	0.0240
2.3411	-0.3760	0.8098	0.0220
2.4547	-0.3745	0.8112	0.0189
2.5795	-0.3725	0.8127	0.0158
2.7179	-0.3700	0.8138	0.0133
2.8726	-0.3669	0.8148	0.0111
3.0473	-0.3633	0.8158	0.0090
3.2472	-0.3592	0.8168	0.0069
3.4792	-0.3542	0.8138	0.0133



SECTION CHARACTERISTICS

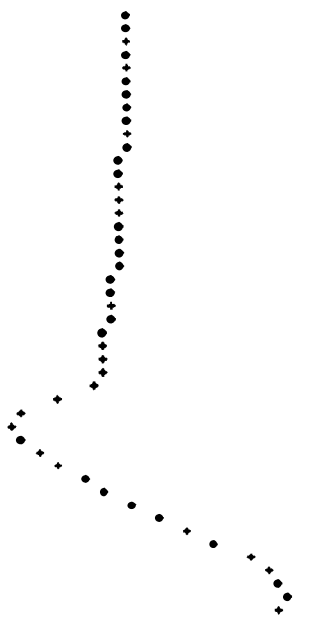
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.90000	0.41685	0.04882	-0.17199

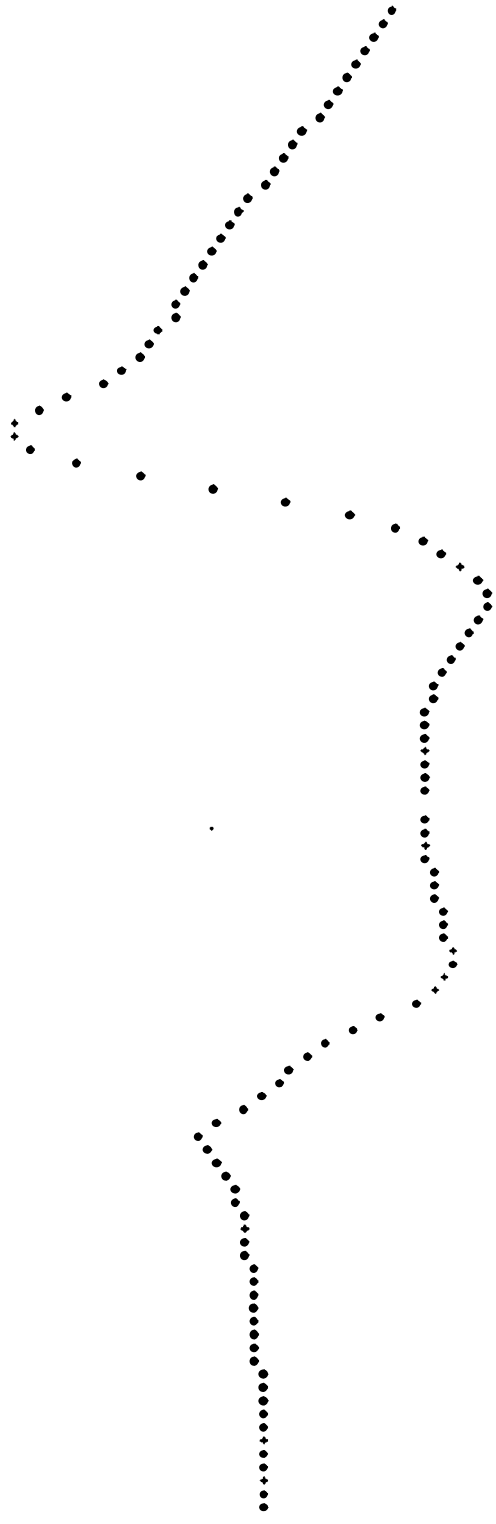
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4787	-0.4833	0.8136	0.0138
3.2467	-0.4760	0.8167	0.0072
3.0468	-0.4694	0.8157	0.0093
2.8721	-0.4634	0.8146	0.0115
2.7174	-0.4578	0.8136	0.0137
2.5791	-0.4525	0.8125	0.0160
2.4542	-0.4471	0.8112	0.0188
2.3407	-0.4418	0.8099	0.0216
2.2366	-0.4364	0.8091	0.0235
2.1407	-0.4308	0.8083	0.0253
2.0517	-0.4250	0.8072	0.0276
1.9689	-0.4188	0.8060	0.0302
1.8913	-0.4123	0.8046	0.0331
1.8183	-0.4053	0.8032	0.0362
1.7495	-0.3978	0.8016	0.0396
1.6842	-0.3897	0.7999	0.0432
1.6223	-0.3810	0.7981	0.0472
1.5632	-0.3715	0.7960	0.0516
1.5067	-0.3613	0.7938	0.0564
1.4525	-0.3501	0.7913	0.0618
1.4005	-0.3379	0.7885	0.0678
1.3504	-0.3245	0.7854	0.0745
1.3020	-0.3098	0.7819	0.0821
1.2551	-0.2936	0.7779	0.0905
1.2097	-0.2756	0.7736	0.0999
1.1656	-0.2555	0.7690	0.1098
1.1227	-0.2328	0.7651	0.1182
1.0809	-0.2068	0.7642	0.1200
1.0400	-0.1764	0.7512	0.1479
1.0000	-0.1409	0.6869	0.2853
0.9608	-0.1121	0.6227	0.4195
0.9223	-0.1092	0.6122	0.4411
0.8845	-0.1217	0.6318	0.4025
0.8475	-0.1435	0.6611	0.3396
0.8113	-0.1706	0.6957	0.2666
0.7758	-0.2009	0.7327	0.1878
0.7410	-0.2325	0.7718	0.1037
0.7070	-0.2641	0.8129	0.0153
0.6737	-0.2944	0.8554	-0.0759
0.6413	-0.3224	0.9018	-0.1748
0.6095	-0.3478	0.9582	-0.2932
0.5786	-0.3686	1.0143	-0.4088
0.5485	-0.3850	1.0552	-0.4898
0.5192	-0.3984	1.0793	-0.5378
0.4907	-0.4077	1.0814	-0.5412
0.4630	-0.4125	1.0667	-0.5125



0.4361	-0.4147	1.0527	-0.4848
0.4100	-0.4147	1.0420	-0.4636
0.3848	-0.4115	1.0252	-0.4301
0.3604	-0.4053	1.0042	-0.3876
0.3367	-0.3975	0.9877	-0.3539
0.3139	-0.3880	0.9741	-0.3260
0.2919	-0.3762	0.9564	-0.2893
0.2708	-0.3623	0.9354	-0.2466
0.2504	-0.3470	0.9160	-0.2044
0.2309	-0.3306	0.8986	-0.1680
0.2122	-0.3129	0.8805	-0.1295
0.1943	-0.2940	0.8609	-0.0877
0.1773	-0.2743	0.8411	-0.0454
0.1610	-0.2541	0.8221	-0.0045
0.1456	-0.2335	0.8036	0.0352
0.1309	-0.2128	0.7855	0.0743
0.1171	-0.1921	0.7681	0.1117
0.1040	-0.1718	0.7522	0.1459
0.0917	-0.1518	0.7374	0.1775
0.0802	-0.1322	0.7231	0.2082
0.0695	-0.1130	0.7088	0.2387
0.0595	-0.0942	0.6950	0.2681
0.0503	-0.0759	0.6816	0.2965
0.0419	-0.0580	0.6669	0.3275
0.0342	-0.0401	0.6498	0.3651
0.0273	-0.0222	0.6275	0.4097
0.0210	-0.0046	0.6035	0.4588
0.0155	0.0128	0.5748	0.5166
0.0107	0.0311	0.5342	0.5962
0.0068	0.0513	0.4775	0.7021
0.0038	0.0729	0.4124	0.8148
0.0017	0.0954	0.3594	0.8974
0.0004	0.1184	0.3485	0.9133
0.0000	0.1415	0.3992	0.8360
0.0004	0.1646	0.4974	0.6657
0.0017	0.1875	0.6172	0.4388
0.0038	0.2099	0.7419	0.1680
0.0069	0.2313	0.8623	-0.0987
0.0108	0.2513	0.9694	-0.3163
0.0156	0.2693	1.0514	-0.4823
0.0212	0.2855	1.1072	-0.5909
0.0276	0.3003	1.1469	-0.6655
0.0348	0.3141	1.1799	-0.7259
0.0428	0.3264	1.2077	-0.7757
0.0515	0.3372	1.2243	-0.8047
0.0610	0.3464	1.2246	-0.8087
0.0713	0.3542	1.2139	-0.7900
0.0824	0.3605	1.1967	-0.7562
0.0942	0.3657	1.1758	-0.7172
0.1069	0.3699	1.1548	-0.6801
0.1202	0.3732	1.1388	-0.6490
0.1344	0.3758	1.1252	-0.6251
0.1493	0.3778	1.1161	-0.6078
0.1650	0.3791	1.1100	-0.5962
0.1815	0.3798	1.1064	-0.5893
0.1987	0.3799	1.1047	-0.5861
0.2167	0.3792	1.1042	-0.5851
0.2355	0.3777	1.1041	-0.5850
0.2551	0.3754	1.1041	-0.5850
0.2755	0.3722	1.1044	-0.5855
0.2967	0.3683	1.1052	-0.5870
0.3186	0.3634	1.1066	-0.5896
0.3413	0.3576	1.1087	-0.5937
0.3649	0.3509	1.1121	-0.6002
0.3892	0.3431	1.1170	-0.6094
0.4143	0.3341	1.1227	-0.6203
0.4401	0.3237	1.1288	-0.6318
0.4668	0.3119	1.1353	-0.6439
0.4943	0.2985	1.1416	-0.6557
0.5225	0.2833	1.1465	-0.6648
0.5515	0.2662	1.1496	-0.6705
0.5814	0.2474	1.1501	-0.6716
0.6120	0.2266	1.1445	-0.6611
0.6433	0.2037	1.1257	-0.6259
0.6755	0.1788	1.0861	-0.5503
0.7085	0.1519	1.0273	-0.4343
0.7422	0.1231	0.9661	-0.3095
0.7767	0.0923	0.9206	-0.2145
0.8120	0.0596	0.8912	-0.1523
0.8480	0.0250	0.8671	-0.1018
0.8849	-0.0118	0.8417	-0.0465
0.9225	-0.0485	0.8143	0.0122
0.9609	-0.0868	0.7816	0.0826
1.0000	-0.1304	0.7322	0.1889
1.0400	-0.1659	0.7067	0.2431
1.0809	-0.1963	0.7231	0.2083
1.1227	-0.2223	0.7415	0.1688
1.1657	-0.2450	0.7539	0.1421
1.2098	-0.2651	0.7630	0.1227
1.2552	-0.2832	0.7700	0.1076
1.3020	-0.2994	0.7756	0.0955
1.3504	-0.3141	0.7803	0.0853
1.4006	-0.3278	0.7843	0.0767
1.4526	-0.3397	0.7878	0.0693
1.5067	-0.3508	0.7908	0.0628
1.5632	-0.3611	0.7935	0.0570
1.6223	-0.3705	0.7959	0.0518
1.6843	-0.3793	0.7981	0.0471
1.7495	-0.3874	0.8001	0.0429
1.8183	-0.3949	0.8019	0.0390
1.8913	-0.4019	0.8035	0.0354
1.9689	-0.4084	0.8051	0.0321
2.0518	-0.4146	0.8065	0.0291
2.1407	-0.4204	0.8078	0.0263
2.2366	-0.4260	0.8087	0.0243
2.3407	-0.4314	0.8097	0.0222
2.4543	-0.4367	0.8110	0.0194
2.5791	-0.4421	0.8124	0.0164
2.7174	-0.4474	0.8135	0.0140
2.8721	-0.4530	0.8145	0.0117
3.0468	-0.4590	0.8156	0.0095
3.2467	-0.4656	0.8166	0.0074
3.4787	-0.4729	0.8135	0.0140



SECTION CHARACTERISTICS

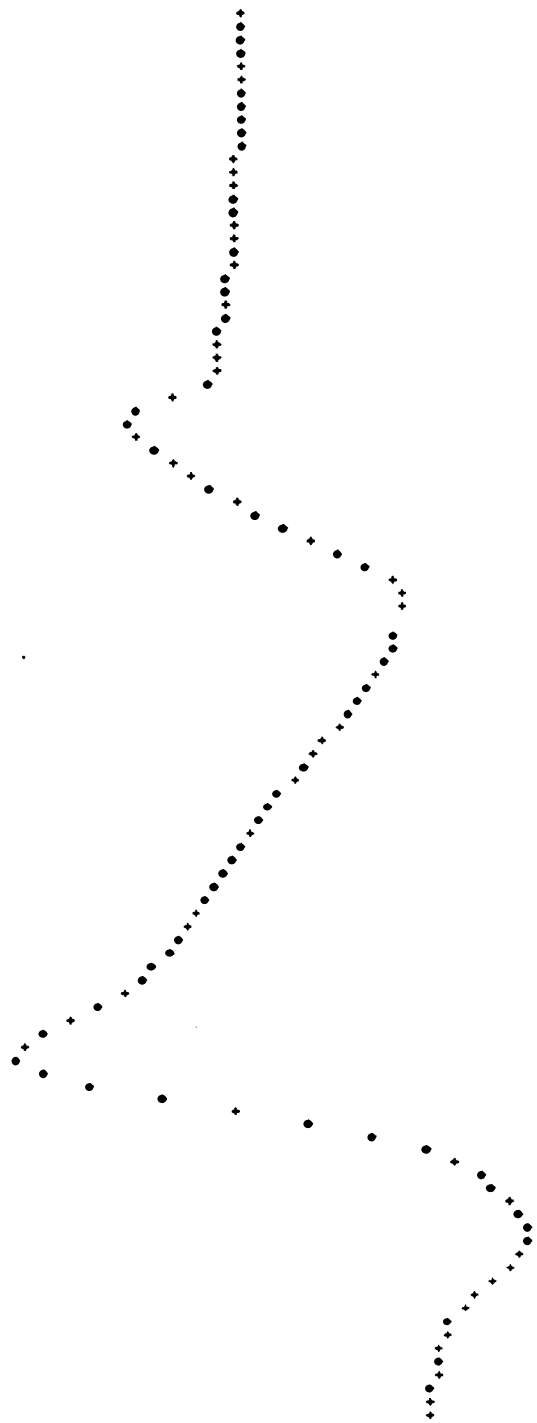
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
1.00000	0.42819	0.03396	-0.16983

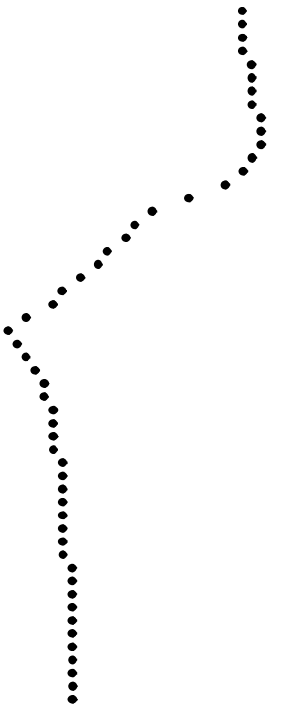
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4784	-0.4845	0.8133	0.0143
3.2464	-0.4744	0.8164	0.0077
3.0466	-0.4654	0.8155	0.0096
2.8718	-0.4574	0.8145	0.0118
2.7172	-0.4499	0.8135	0.0140
2.5789	-0.4429	0.8125	0.0162
2.4541	-0.4361	0.8113	0.0188
2.3405	-0.4294	0.8101	0.0214
2.2365	-0.4229	0.8091	0.0234
2.1406	-0.4162	0.8083	0.0253
2.0516	-0.4094	0.8072	0.0276
1.9688	-0.4024	0.8060	0.0301
1.8912	-0.3950	0.8047	0.0329
1.8182	-0.3873	0.8033	0.0359
1.7494	-0.3792	0.8018	0.0392
1.6842	-0.3706	0.8001	0.0427
1.6222	-0.3614	0.7983	0.0466
1.5631	-0.3515	0.7964	0.0509
1.5067	-0.3409	0.7942	0.0556
1.4525	-0.3295	0.7917	0.0608
1.4005	-0.3171	0.7890	0.0667
1.3504	-0.3037	0.7859	0.0733
1.3020	-0.2890	0.7825	0.0807
1.2551	-0.2728	0.7785	0.0892
1.2097	-0.2550	0.7741	0.0987
1.1656	-0.2352	0.7694	0.1089
1.1227	-0.2129	0.7650	0.1184
1.0809	-0.1877	0.7629	0.1229
1.0400	-0.1583	0.7497	0.1511
1.0000	-0.1241	0.6869	0.2854
0.9608	-0.0968	0.6222	0.4205
0.9223	-0.0944	0.6092	0.4472
0.8845	-0.1070	0.6254	0.4140
0.8475	-0.1287	0.6527	0.3573
0.8113	-0.1555	0.6843	0.2908
0.7758	-0.1855	0.7183	0.2185
0.7411	-0.2168	0.7544	0.1410
0.7071	-0.2482	0.7927	0.0588
0.6738	-0.2783	0.8325	-0.0268
0.6414	-0.3062	0.8746	-0.1170
0.6097	-0.3315	0.9204	-0.2141
0.5788	-0.3525	0.9705	-0.3186
0.5487	-0.3692	1.0222	-0.4239
0.5194	-0.3829	1.0652	-0.5095
0.4909	-0.3927	1.0841	-0.5464
0.4632	-0.3980	1.0798	-0.5381
0.4363	-0.4008	1.0720	-0.5229
0.4102	-0.4014	1.0648	-0.5088
0.3850	-0.3989	1.0495	-0.4786
0.3606	-0.3935	1.0299	-0.4394
0.3369	-0.3865	1.0153	-0.4101
0.3141	-0.3779	1.0038	-0.3868
0.2921	-0.3671	0.9871	-0.3527
0.2710	-0.3542	0.9654	-0.3081
0.2506	-0.3401	0.9452	-0.2661
0.2311	-0.3248	0.9275	-0.2289
0.2124	-0.3082	0.9089	-0.1897
0.1945	-0.2904	0.8886	-0.1468
0.1775	-0.2719	0.8683	-0.1035
0.1612	-0.2529	0.8487	-0.0615
0.1457	-0.2336	0.8295	-0.0204
0.1311	-0.2141	0.8106	0.0202
0.1172	-0.1946	0.7925	0.0591
0.1041	-0.1754	0.7759	0.0949
0.0918	-0.1565	0.7605	0.1279
0.0803	-0.1380	0.7455	0.1602
0.0696	-0.1197	0.7306	0.1923
0.0596	-0.1019	0.7160	0.2233
0.0504	-0.0846	0.7019	0.2534
0.0420	-0.0676	0.6865	0.2861
0.0343	-0.0505	0.6678	0.3257
0.0273	-0.0335	0.6455	0.3723
0.0211	-0.0167	0.6206	0.4238
0.0155	0.0000	0.5911	0.4839
0.0107	0.0176	0.5500	0.5655
0.0068	0.0378	0.4942	0.6717
0.0038	0.0579	0.4321	0.7818
0.0017	0.0797	0.3846	0.8591
0.0004	0.1019	0.3799	0.8663
0.0000	0.1243	0.4341	0.7783
0.0004	0.1467	0.5336	0.5974
0.0017	0.1689	0.6546	0.3534
0.0038	0.1906	0.7814	0.0830
0.0068	0.2114	0.9063	-0.1842
0.0107	0.2309	1.0223	-0.4243
0.0155	0.2485	1.1193	-0.6138
0.0212	0.2644	1.1840	-0.7395
0.0276	0.2791	1.2254	-0.8067
0.0347	0.2926	1.2625	-0.8702
0.0427	0.3049	1.2966	-0.9266
0.0514	0.3157	1.3228	-0.9686
0.0609	0.3250	1.3367	-0.9905
0.0712	0.3329	1.3351	-0.9881
0.0823	0.3395	1.3184	-0.9616
0.0941	0.3450	1.2910	-0.9173
0.1067	0.3495	1.2576	-0.8618
0.1201	0.3533	1.2226	-0.8018
0.1342	0.3563	1.1909	-0.7459
0.1492	0.3587	1.1663	-0.7012
0.1648	0.3606	1.1498	-0.6709
0.1813	0.3618	1.1402	-0.6530
0.1986	0.3624	1.1350	-0.6434
0.2166	0.3623	1.1320	-0.6378
0.2354	0.3615	1.1297	-0.6334
0.2550	0.3598	1.1274	-0.6292
0.2754	0.3574	1.1256	-0.6258



0.2965	0.3542	1.1246	-0.6239
0.3185	0.3501	1.1245	-0.6238
0.3412	0.3452	1.1256	-0.6257
0.3647	0.3393	1.1281	-0.6305
0.3890	0.3329	1.1323	-0.6383
0.4141	0.3246	1.1374	-0.6479
0.4400	0.3151	1.1429	-0.6582
0.4667	0.3044	1.1486	-0.6688
0.4942	0.2922	1.1537	-0.6782
0.5224	0.2788	1.1564	-0.6833
0.5514	0.2638	1.1552	-0.6809
0.5813	0.2481	1.1475	-0.6662
0.6119	0.2324	1.1347	-0.6426
0.6433	0.2165	1.1208	-0.6170
0.6754	0.1812	1.0819	-0.5428
0.7084	0.1568	1.0201	-0.4197
0.7421	0.1288	0.9628	-0.3019
0.7766	0.0997	0.9261	-0.2260
0.8119	0.0686	0.9031	-0.1775
0.8480	0.0355	0.8887	-0.1388
0.8848	0.0010	0.8567	-0.0788
0.9225	-0.0349	0.8315	-0.0247
0.9609	-0.0717	0.8056	0.0311
1.0000	-0.1136	0.7762	0.0942
1.0400	-0.1477	0.7321	0.1889
1.0809	-0.1771	0.7100	0.2363
1.1228	-0.2024	0.7261	0.2018
1.1657	-0.2247	0.7438	0.1639
1.2098	-0.2445	0.7557	0.1383
1.2552	-0.2623	0.7645	0.1195
1.3020	-0.2785	0.7712	0.1049
1.3504	-0.2932	0.7767	0.0932
1.4005	-0.3067	0.7812	0.0834
1.4526	-0.3191	0.7851	0.0751
1.5067	-0.3305	0.7884	0.0680
1.5632	-0.3411	0.7913	0.0617
1.6222	-0.3509	0.7939	0.0561
1.6842	-0.3601	0.7963	0.0511
1.7494	-0.3688	0.7984	0.0466
1.8183	-0.3769	0.8003	0.0425
1.8912	-0.3846	0.8020	0.0387
1.9688	-0.3919	0.8036	0.0353
2.0517	-0.3990	0.8051	0.0320
2.1406	-0.4058	0.8065	0.0291
2.2365	-0.4124	0.8078	0.0263
2.3405	-0.4190	0.8088	0.0241
2.4541	-0.4257	0.8098	0.0220
2.5789	-0.4325	0.8110	0.0199
2.7172	-0.4395	0.8122	0.0184
2.8719	-0.4469	0.8134	0.0162
3.0466	-0.4550	0.8144	0.0120
3.2464	-0.4648	0.8154	0.0099
3.4784	-0.4741	0.8163	0.0079
		0.8133	0.0144



SECTION CHARACTERISTICS

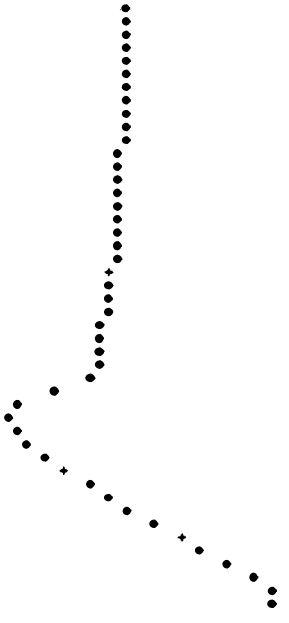
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
2.70000	0.43811	0.02468	-0.16763

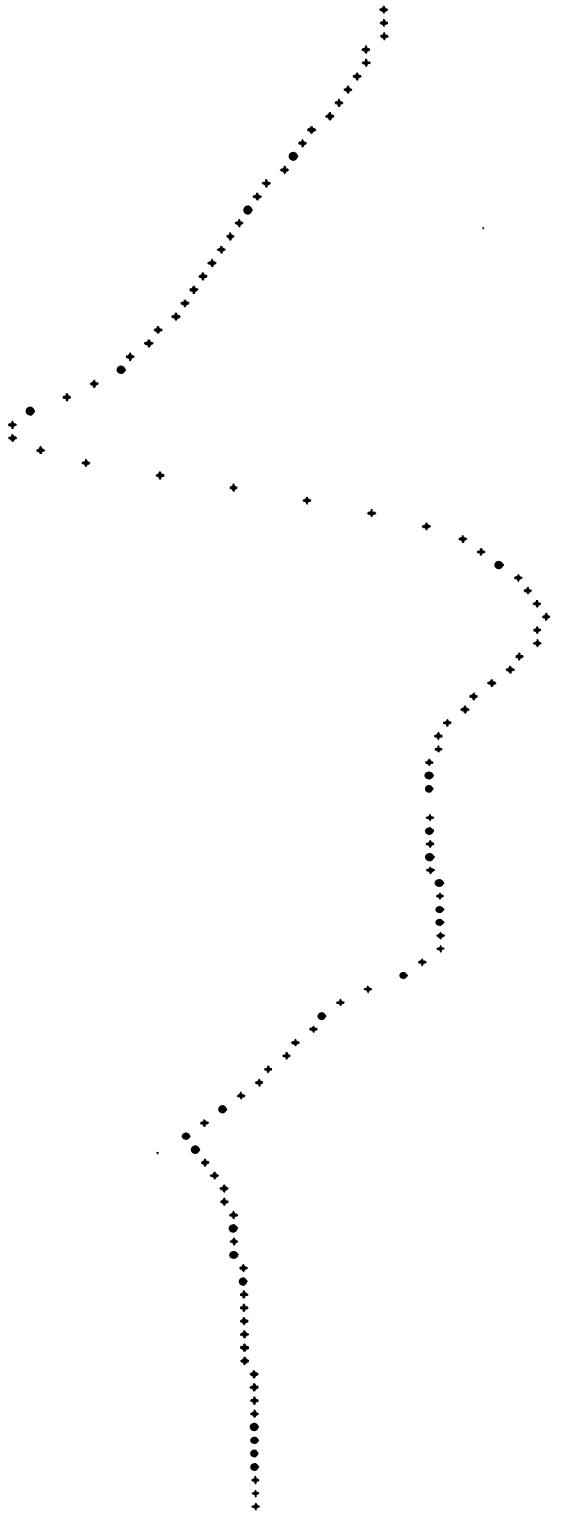
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4782	-0.4558	0.8133	0.0145
3.2463	-0.4457	0.8163	0.0081
3.0464	-0.4368	0.8154	0.0099
2.8717	-0.4289	0.8144	0.0120
2.7171	-0.4215	0.8134	0.0142
2.5788	-0.4146	0.8124	0.0163
2.4540	-0.4079	0.8113	0.0187
2.3404	-0.4014	0.8101	0.0212
2.2364	-0.3950	0.8092	0.0232
2.1405	-0.3886	0.8083	0.0252
2.0516	-0.3819	0.8072	0.0275
1.9687	-0.3751	0.8060	0.0300
1.8911	-0.3680	0.8048	0.0327
1.8182	-0.3606	0.8034	0.0357
1.7494	-0.3528	0.8019	0.0389
1.6842	-0.3445	0.8003	0.0424
1.6222	-0.3357	0.7985	0.0462
1.5631	-0.3262	0.7966	0.0504
1.5067	-0.3161	0.7944	0.0551
1.4525	-0.3051	0.7920	0.0603
1.4005	-0.2932	0.7892	0.0662
1.3504	-0.2803	0.7862	0.0728
1.3020	-0.2662	0.7827	0.0803
1.2552	-0.2508	0.7787	0.0888
1.2098	-0.2337	0.7743	0.0984
1.1657	-0.2147	0.7694	0.1089
1.1227	-0.1934	0.7648	0.1187
1.0809	-0.1692	0.7624	0.1238
1.0400	-0.1411	0.7490	0.1527
1.0000	-0.1084	0.6865	0.2862
0.9608	-0.0826	0.6220	0.4209
0.9223	-0.0807	0.6083	0.4490
0.8846	-0.0933	0.6232	0.4184
0.8476	-0.1148	0.6491	0.3648
0.8113	-0.1414	0.6791	0.3018
0.7759	-0.1710	0.7114	0.2332
0.7411	-0.2020	0.7459	0.1595
0.7071	-0.2331	0.7823	0.0810
0.6739	-0.2629	0.8204	-0.0010
0.6415	-0.2907	0.8608	-0.0876
0.6098	-0.3159	0.9027	-0.1767
0.5789	-0.3378	0.9449	-0.2654
0.5488	-0.3548	0.9923	-0.3633
0.5195	-0.3680	1.0408	-0.4613
0.4910	-0.3781	1.0707	-0.5203
0.4633	-0.3848	1.0774	-0.5334



0.4365	-0.3873	1.0775	-0.5336
0.4104	-0.3885	1.0750	-0.5286
0.3852	-0.3866	1.0623	-0.5038
0.3608	-0.3820	1.0446	-0.4689
0.3371	-0.3758	1.0319	-0.4435
0.3143	-0.3681	1.0215	-0.4227
0.2923	-0.3581	1.0057	-0.3906
0.2712	-0.3463	0.9847	-0.3478
0.2508	-0.3332	0.9643	-0.3058
0.2313	-0.3189	0.9460	-0.2678
0.2126	-0.3035	0.9269	-0.2278
0.1947	-0.2869	0.9062	-0.1848
0.1776	-0.2695	0.8855	-0.1402
0.1614	-0.2517	0.8655	-0.0976
0.1459	-0.2335	0.8459	-0.0557
0.1312	-0.2152	0.8266	-0.0141
0.1174	-0.1968	0.8081	0.0257
0.1043	-0.1787	0.7911	0.0621
0.0920	-0.1609	0.7754	0.0959
0.0805	-0.1434	0.7601	0.1289
0.0697	-0.1262	0.7448	0.1618
0.0597	-0.1093	0.7300	0.1936
0.0505	-0.0929	0.7155	0.2244
0.0420	-0.0768	0.6998	0.2579
0.0343	-0.0606	0.6807	0.2984
0.0274	-0.0443	0.6580	0.3463
0.0211	-0.0283	0.6326	0.3990
0.0156	-0.0123	0.6024	0.4610
0.0108	0.0046	0.5695	0.5450
0.0068	0.0233	0.5039	0.6537
0.0038	0.0434	0.4417	0.7653
0.0017	0.0644	0.3950	0.8427
0.0004	0.0859	0.3916	0.8481
0.0000	0.1076	0.4466	0.7568
0.0004	0.1292	0.5466	0.5722
0.0017	0.1507	0.6681	0.3250
0.0038	0.1718	0.7958	0.0521
0.0068	0.1920	0.9224	-0.2182
0.0107	0.2110	1.0430	-0.4657
0.0155	0.2282	1.1437	-0.6596
0.0211	0.2439	1.2103	-0.7883
0.0275	0.2583	1.2549	-0.8572
0.0346	0.2717	1.2950	-0.9239
0.0426	0.2838	1.3325	-0.9839
0.0513	0.2946	1.3636	-1.0319
0.0608	0.3040	1.3847	-1.0637
0.0711	0.3120	1.3922	-1.0749
0.0821	0.3188	1.3857	-1.0653
0.0940	0.3246	1.3698	-1.0402
0.1066	0.3294	1.3447	-1.0029
0.1200	0.3336	1.3136	-0.9539
0.1341	0.3370	1.2777	-0.8955
0.1490	0.3399	1.2406	-0.8329
0.1647	0.3422	1.2069	-0.7743
0.1812	0.3439	1.1808	-0.7276
0.1984	0.3450	1.1635	-0.6962
0.2164	0.3455	1.1538	-0.6783
0.2352	0.3452	1.1487	-0.6689
0.2548	0.3442	1.1456	-0.6631
0.2752	0.3425	1.1433	-0.6589
0.2964	0.3400	1.1417	-0.6559
0.3183	0.3367	1.1407	-0.6541
0.3411	0.3325	1.1407	-0.6541
0.3646	0.3275	1.1423	-0.6570
0.3889	0.3215	1.1456	-0.6631
0.4140	0.3144	1.1499	-0.6711
0.4399	0.3061	1.1544	-0.6795
0.4666	0.2965	1.1588	-0.6876
0.4940	0.2854	1.1617	-0.6928
0.5223	0.2726	1.1602	-0.6901
0.5513	0.2582	1.1510	-0.6731
0.5812	0.2421	1.1284	-0.6310
0.6118	0.2243	1.0853	-0.5488
0.6432	0.2044	1.0248	-0.4293
0.6753	0.1827	0.9693	-0.3161
0.7083	0.1591	0.9363	-0.2474
0.7421	0.1336	0.9167	-0.2063
0.7766	0.1061	0.8971	-0.1648
0.8119	0.0765	0.8751	-0.1180
0.8480	0.0451	0.8518	-0.0681
0.8848	0.0120	0.8274	-0.0159
0.9224	-0.0224	0.8024	0.0378
0.9609	-0.0577	0.7742	0.0986
1.0000	-0.0979	0.7311	0.1910
1.0400	-0.1305	0.7097	0.2369
1.0809	-0.1587	0.7261	0.2018
1.1228	-0.1829	0.7439	0.1637
1.1657	-0.2042	0.7559	0.1378
1.2098	-0.2232	0.7648	0.1188
1.2552	-0.2403	0.7716	0.1042
1.3020	-0.2558	0.7778	0.0925
1.3504	-0.2699	0.7815	0.0827
1.4005	-0.2828	0.7854	0.0745
1.4526	-0.2946	0.7887	0.0674
1.5067	-0.3056	0.7916	0.0611
1.5632	-0.3158	0.7942	0.0556
1.6222	-0.3252	0.7965	0.0506
1.6842	-0.3340	0.7985	0.0462
1.7494	-0.3423	0.8004	0.0421
1.8182	-0.3502	0.8021	0.0384
1.8912	-0.3576	0.8037	0.0350
1.9687	-0.3647	0.8052	0.0319
2.0516	-0.3715	0.8065	0.0289
2.1405	-0.3781	0.8078	0.0262
2.2364	-0.3846	0.8089	0.0240
2.3405	-0.3910	0.8099	0.0218
2.4540	-0.3975	0.8111	0.0192
2.5788	-0.4041	0.8123	0.0167
2.7171	-0.4111	0.8133	0.0144
2.8717	-0.4184	0.8143	0.0123
3.0464	-0.4264	0.8153	0.0102
3.2463	-0.4353	0.8162	0.0083
3.4782	-0.4453	0.8132	0.0146



SECTION CHARACTERISTICS

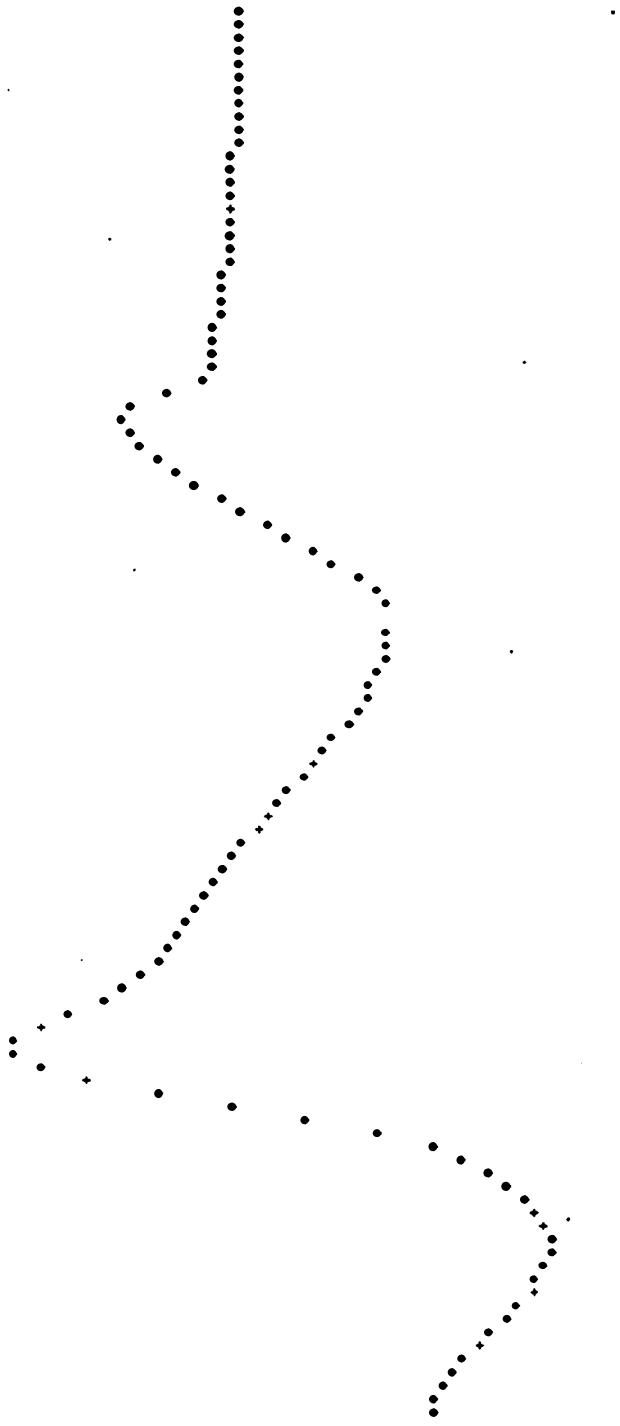
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
3.68000	0.44479	0.01813	-0.16749

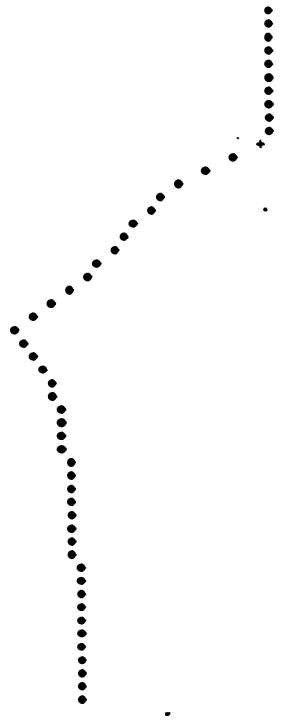
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4780	-0.4211	0.8132	0.0146
3.2461	-0.4119	0.8161	0.0084
3.0443	-0.4037	0.8153	0.0102
2.8716	-0.3963	0.8143	0.0123
2.7178	-0.3896	0.8133	0.0144
2.5787	-0.3832	0.8123	0.0165
2.4539	-0.3770	0.8113	0.0188
2.3404	-0.3710	0.8101	0.0212
2.2363	-0.3651	0.8092	0.0232
2.1404	-0.3591	0.8083	0.0252
2.0515	-0.3529	0.8072	0.0275
1.9687	-0.3466	0.8060	0.0300
1.8911	-0.3400	0.8048	0.0327
1.8182	-0.3330	0.8034	0.0357
1.7493	-0.3257	0.8019	0.0389
1.6841	-0.3179	0.8003	0.0424
1.6222	-0.3096	0.7985	0.0462
1.5631	-0.3007	0.7965	0.0505
1.5067	-0.2911	0.7944	0.0552
1.4525	-0.2807	0.7919	0.0604
1.4005	-0.2695	0.7892	0.0664
1.3504	-0.2573	0.7861	0.0730
1.3020	-0.2439	0.7825	0.0804
1.2552	-0.2293	0.7785	0.0892
1.2098	-0.2130	0.7740	0.0998
1.1657	-0.1950	0.7691	0.1096
1.1227	-0.1747	0.7644	0.1196
1.0809	-0.1516	0.7628	0.1249
1.0400	-0.1247	0.7485	0.1538
1.0000	-0.0935	0.6860	0.2872
0.9608	-0.0691	0.6216	0.4217
0.9223	-0.0678	0.6076	0.4505
0.8846	-0.0804	0.6218	0.4213
0.8476	-0.1017	0.6468	0.3695
0.8114	-0.1279	0.6760	0.3083
0.7759	-0.1572	0.7074	0.2417
0.7412	-0.1878	0.7409	0.1701
0.7072	-0.2185	0.7764	0.0938
0.6740	-0.2481	0.8135	0.0140
0.6416	-0.2756	0.8528	-0.0705
0.6099	-0.3008	0.8936	-0.1572
0.5791	-0.3219	0.9317	-0.2378
0.5490	-0.3390	0.9732	-0.3261
0.5197	-0.3532	1.0201	-0.4198
0.4912	-0.3637	1.0548	-0.4874
0.4635	-0.3700	1.0675	-0.5140
0.4367	-0.3739	1.0739	-0.5266
0.4106	-0.3756	1.0759	-0.5305
0.3854	-0.3743	1.0664	-0.5119
0.3609	-0.3705	1.0513	-0.4821
0.3373	-0.3650	1.0405	-0.4607
0.3145	-0.3581	1.0313	-0.4424
0.2925	-0.3491	1.0162	-0.4119
0.2714	-0.3382	0.9962	-0.3713
0.2510	-0.3261	0.9766	-0.3311
0.2315	-0.3129	0.9584	-0.2934
0.2128	-0.2985	0.9390	-0.2532
0.1949	-0.2830	0.9182	-0.2094
0.1778	-0.2668	0.8975	-0.1656
0.1615	-0.2501	0.8774	-0.1228
0.1461	-0.2331	0.8576	-0.0806
0.1314	-0.2158	0.8388	-0.0387
0.1175	-0.1985	0.8194	0.0013
0.1044	-0.1815	0.8024	0.0388
0.0921	-0.1647	0.7866	0.0719
0.0806	-0.1482	0.7712	0.1050
0.0698	-0.1320	0.7558	0.1381
0.0598	-0.1161	0.7410	0.1700
0.0506	-0.1006	0.7265	0.2009
0.0421	-0.0853	0.7108	0.2345
0.0344	-0.0699	0.6916	0.2753
0.0274	-0.0544	0.6687	0.3237
0.0212	-0.0392	0.6431	0.3772
0.0156	-0.0239	0.6125	0.4424
0.0108	-0.0076	0.5698	0.5265
0.0069	0.0103	0.5122	0.6360
0.0038	0.0297	0.4491	0.7525
0.0017	0.0500	0.4015	0.8323
0.0004	0.0707	0.3972	0.8391
0.0000	0.0916	0.4516	0.7482
0.0004	0.1126	0.5511	0.5634
0.0017	0.1334	0.6723	0.3162
0.0038	0.1538	0.7997	0.0437
0.0068	0.1734	0.9263	-0.2265
0.0107	0.1918	1.0482	-0.4759
0.0154	0.2087	1.1500	-0.6713
0.0210	0.2240	1.2177	-0.7932
0.0274	0.2382	1.2644	-0.8733
0.0345	0.2514	1.3064	-0.9424
0.0425	0.2634	1.3454	-1.0041
0.0512	0.2742	1.3784	-1.0544
0.0607	0.2836	1.4024	-1.0897
0.0710	0.2917	1.4148	-1.1045
0.0820	0.2987	1.4128	-1.1049
0.0938	0.3047	1.4033	-1.0910
0.1064	0.3099	1.3883	-1.0690
0.1198	0.3144	1.3682	-1.0389
0.1340	0.3182	1.3432	-1.0007
0.1489	0.3214	1.3139	-0.9544
0.1646	0.3242	1.2814	-0.9016
0.1810	0.3264	1.2481	-0.8458
0.1983	0.3280	1.2174	-0.7927
0.2163	0.3290	1.1923	-0.7482
0.2351	0.3293	1.1741	-0.7155
0.2547	0.3289	1.1626	-0.6944
0.2751	0.3278	1.1564	-0.6831



0.2962	0.3259	1.1535	-0.6777
0.3182	0.3233	1.1524	-0.6758
0.3409	0.3199	1.1525	-0.6759
0.3644	0.3157	1.1537	-0.6781
0.3888	0.3106	1.1562	-0.6828
0.4139	0.3044	1.1595	-0.6888
0.4398	0.2970	1.1625	-0.6943
0.4664	0.2883	1.1645	-0.6980
0.4939	0.2783	1.1633	-0.6958
0.5222	0.2667	1.1546	-0.6799
0.5512	0.2535	1.1328	-0.6393
0.5810	0.2388	1.0926	-0.5627
0.6117	0.2223	1.0359	-0.4516
0.6431	0.2039	0.9621	-0.3424
0.6753	0.1837	0.9493	-0.2745
0.7082	0.1617	0.9216	-0.2376
0.7420	0.1377	0.9146	-0.2019
0.7765	0.1118	0.8949	-0.1682
0.8118	0.0838	0.8734	-0.1144
0.8479	0.0538	0.8583	-0.0651
0.8848	0.0223	0.8261	-0.0138
0.9224	-0.0108	0.8011	0.0407
0.9608	-0.0445	0.7731	0.1010
1.0000	-0.0830	0.7384	0.1927
1.0400	-0.1142	0.7091	0.2380
1.0809	-0.1411	0.7257	0.2026
1.1228	-0.1642	0.7436	0.1643
1.1657	-0.1845	0.7558	0.1382
1.2098	-0.2025	0.7647	0.1191
1.2552	-0.2188	0.7715	0.1043
1.3020	-0.2335	0.7770	0.0924
1.3504	-0.2468	0.7816	0.0826
1.4005	-0.2591	0.7854	0.0743
1.4525	-0.2703	0.7888	0.0672
1.5067	-0.2807	0.7917	0.0610
1.5632	-0.2902	0.7942	0.0554
1.6222	-0.2992	0.7965	0.0505
1.6842	-0.3075	0.7986	0.0460
1.7494	-0.3153	0.8005	0.0420
1.8182	-0.3226	0.8022	0.0383
1.8911	-0.3296	0.8038	0.0350
1.9687	-0.3362	0.8052	0.0318
2.0516	-0.3425	0.8066	0.0289
2.1405	-0.3487	0.8078	0.0262
2.2364	-0.3547	0.8089	0.0239
2.3404	-0.3606	0.8099	0.0217
2.4539	-0.3666	0.8111	0.0192
2.5787	-0.3728	0.8122	0.0168
2.7170	-0.3791	0.8132	0.0146
2.8716	-0.3859	0.8142	0.0125
3.0463	-0.3933	0.8152	0.0104
3.2461	-0.4015	0.8160	0.0086
3.4780	-0.4107	0.8132	0.0146



SECTION CHARACTERISTICS

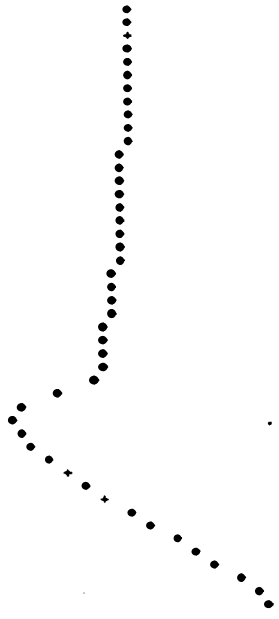
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
4.50000	0.45425	0.01309	-0.16841

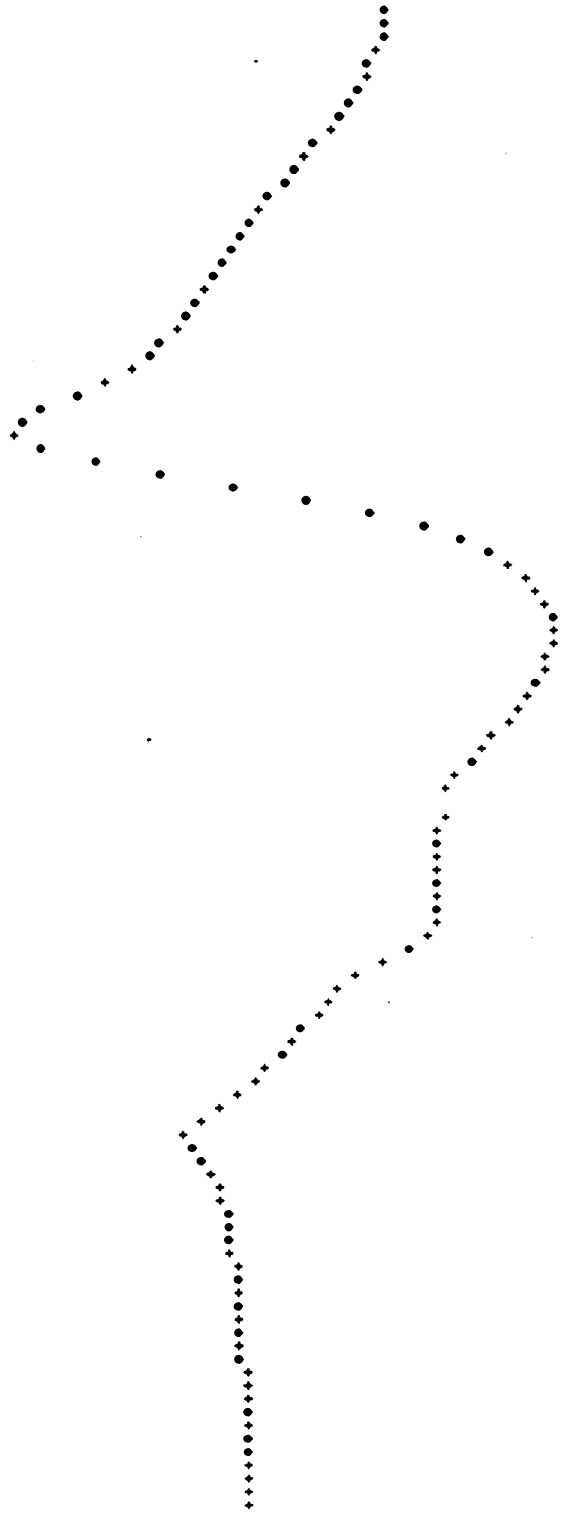
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4779	-0.3854	0.8132	0.0146
3.2460	-0.3773	0.8159	0.0088
3.0462	-0.3701	0.8151	0.0104
2.8715	-0.3636	0.8142	0.0125
2.7169	-0.3576	0.8132	0.0146
2.5786	-0.3519	0.8123	0.0166
2.4539	-0.3464	0.8112	0.0189
2.3403	-0.3411	0.8101	0.0213
2.2363	-0.3357	0.8092	0.0233
2.1404	-0.3302	0.8082	0.0253
2.0515	-0.3247	0.8072	0.0276
1.9687	-0.3189	0.8060	0.0302
1.8911	-0.3128	0.8047	0.0329
1.8182	-0.3064	0.8033	0.0359
1.7493	-0.2996	0.8018	0.0391
1.6842	-0.2923	0.8002	0.0426
1.6222	-0.2846	0.7984	0.0465
1.5631	-0.2762	0.7964	0.0508
1.5067	-0.2672	0.7942	0.0556
1.4525	-0.2575	0.7917	0.0609
1.4005	-0.2469	0.7889	0.0668
1.3504	-0.2354	0.7858	0.0736
1.3020	-0.2228	0.7822	0.0812
1.2552	-0.2088	0.7782	0.0900
1.2098	-0.1934	0.7736	0.0998
1.1657	-0.1763	0.7686	0.1105
1.1228	-0.1578	0.7640	0.1205
1.0809	-0.1349	0.7616	0.1257
1.0400	-0.1092	0.7481	0.1546
1.0000	-0.0793	0.6855	0.2883
0.9608	-0.0562	0.6210	0.4230
0.9223	-0.0551	0.6067	0.4523
0.8846	-0.0676	0.6284	0.4242
0.8476	-0.0886	0.6449	0.3735
0.8114	-0.1143	0.6736	0.3134
0.7759	-0.1431	0.7045	0.2480
0.7413	-0.1732	0.7374	0.1775
0.7073	-0.2035	0.7723	0.1026
0.6741	-0.2326	0.8088	0.0240
0.6417	-0.2599	0.8476	-0.0592
0.6101	-0.2849	0.8878	-0.1450
0.5792	-0.3068	0.9244	-0.2224
0.5491	-0.3233	0.9625	-0.3019
0.5198	-0.3377	1.0064	-0.3920
0.4914	-0.3484	1.0484	-0.4695
0.4637	-0.3552	1.0568	-0.4938



0.4369	-0.3595	1.0668	-0.5126
0.4108	-0.3617	1.0728	-0.5227
0.3856	-0.3618	1.0653	-0.5096
0.3612	-0.3578	1.0525	-0.4845
0.3375	-0.3532	1.0436	-0.4668
0.3147	-0.3478	1.0357	-0.4518
0.2928	-0.3389	1.0214	-0.4225
0.2716	-0.3289	1.0023	-0.3838
0.2513	-0.3178	0.9839	-0.3468
0.2317	-0.3056	0.9663	-0.3099
0.2130	-0.2929	0.9472	-0.2701
0.1951	-0.2779	0.9264	-0.2278
0.1780	-0.2628	0.9060	-0.1837
0.1617	-0.2473	0.8868	-0.1413
0.1462	-0.2314	0.8663	-0.0992
0.1316	-0.2153	0.8468	-0.0575
0.1177	-0.1991	0.8282	-0.0177
0.1046	-0.1832	0.8113	0.0187
0.0922	-0.1675	0.7957	0.0523
0.0807	-0.1520	0.7804	0.0852
0.0699	-0.1367	0.7652	0.1188
0.0599	-0.1218	0.7505	0.1496
0.0507	-0.1072	0.7363	0.1801
0.0422	-0.0928	0.7207	0.2133
0.0345	-0.0782	0.7017	0.2548
0.0275	-0.0636	0.6788	0.3024
0.0212	-0.0490	0.6531	0.3564
0.0157	-0.0344	0.6222	0.4206
0.0108	-0.0189	0.5788	0.5087
0.0069	-0.0017	0.5201	0.6232
0.0038	0.0169	0.4525	0.7613
0.0017	0.0365	0.4062	0.8247
0.0004	0.0565	0.4001	0.8345
0.0000	0.0767	0.4529	0.7458
0.0004	0.0969	0.5514	0.5627
0.0017	0.1170	0.6717	0.3173
0.0038	0.1367	0.7982	0.0448
0.0067	0.1557	0.9238	-0.2213
0.0104	0.1737	1.0449	-0.4693
0.0154	0.1901	1.1467	-0.6652
0.0209	0.2052	1.2155	-0.7894
0.0273	0.2192	1.2639	-0.8725
0.0344	0.2322	1.3072	-0.9437
0.0423	0.2441	1.3469	-1.0064
0.0510	0.2548	1.3886	-1.0576
0.0605	0.2642	1.4056	-1.0944
0.0708	0.2725	1.4188	-1.1135
0.0819	0.2797	1.4282	-1.1154
0.0937	0.2860	1.4142	-1.1068
0.1063	0.2915	1.4040	-1.0921
0.1197	0.2963	1.3904	-1.0722
0.1338	0.3005	1.3738	-1.0474
0.1487	0.3042	1.3543	-1.0178
0.1644	0.3073	1.3322	-0.9835
0.1809	0.3100	1.3076	-0.9443
0.1981	0.3121	1.2806	-0.9003
0.2161	0.3136	1.2523	-0.8530
0.2349	0.3144	1.2246	-0.8052
0.2545	0.3146	1.1999	-0.7619
0.2749	0.3141	1.1809	-0.7278
0.2961	0.3130	1.1686	-0.7055
0.3180	0.3111	1.1622	-0.6938
0.3408	0.3084	1.1599	-0.6896
0.3643	0.3049	1.1604	-0.6904
0.3884	0.3006	1.1624	-0.6942
0.4137	0.2953	1.1647	-0.6984
0.4396	0.2888	1.1658	-0.7004
0.4663	0.2812	1.1642	-0.6974
0.4938	0.2722	1.1566	-0.6835
0.5220	0.2617	1.1374	-0.6479
0.5511	0.2497	1.1012	-0.5793
0.5809	0.2363	1.0495	-0.4786
0.6116	0.2212	0.9978	-0.3746
0.6430	0.2042	0.9644	-0.3059
0.6752	0.1854	0.9473	-0.2704
0.7081	0.1649	0.9324	-0.2393
0.7419	0.1424	0.9150	-0.2026
0.7764	0.1179	0.8956	-0.1616
0.8118	0.0914	0.8741	-0.1160
0.8479	0.0627	0.8508	-0.0661
0.8847	0.0320	0.8261	-0.0132
0.9224	0.0007	0.8007	0.0415
0.9608	-0.0318	0.7725	0.1022
1.0000	-0.0688	0.7298	0.1938
1.0400	-0.1086	0.7086	0.2392
1.0809	-0.1244	0.7252	0.2037
1.1228	-0.1464	0.7432	0.1653
1.1657	-0.1657	0.7554	0.1390
1.2098	-0.1829	0.7644	0.1197
1.2552	-0.1983	0.7713	0.1048
1.3021	-0.2122	0.7769	0.0928
1.3504	-0.2249	0.7815	0.0829
1.4006	-0.2364	0.7854	0.0746
1.4526	-0.2470	0.7887	0.0674
1.5067	-0.2567	0.7916	0.0611
1.5632	-0.2657	0.7942	0.0555
1.6222	-0.2741	0.7965	0.0506
1.6842	-0.2818	0.7986	0.0461
1.7494	-0.2891	0.8004	0.0421
1.8182	-0.2959	0.8022	0.0384
1.8911	-0.3023	0.8037	0.0350
1.9687	-0.3083	0.8052	0.0319
2.0515	-0.3142	0.8065	0.0290
2.1404	-0.3197	0.8078	0.0263
2.2363	-0.3252	0.8089	0.0240
2.3404	-0.3306	0.8099	0.0218
2.4539	-0.3359	0.8110	0.0193
2.5787	-0.3414	0.8121	0.0169
2.7169	-0.3471	0.8131	0.0147
2.8715	-0.3531	0.8141	0.0127
3.0462	-0.3596	0.8150	0.0107
3.2460	-0.3668	0.8158	0.0090
3.4779	-0.3749	0.8132	0.0147



SECTION CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.39999	0.46062	0.00988	-0.17019

CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4778	-0.3496	0.8132	0.0147
3.2440	-0.3428	0.8158	0.0091
3.0461	-0.3366	0.8150	0.0107
2.8715	-0.3310	0.8141	0.0127
2.7169	-0.3259	0.8131	0.0148
2.5786	-0.3210	0.8122	0.0168
2.4538	-0.3162	0.8111	0.0191
2.3403	-0.3115	0.8101	0.0214
2.2363	-0.3068	0.8091	0.0234
2.1404	-0.3020	0.8082	0.0255
2.0515	-0.2970	0.8071	0.0278
1.9686	-0.2917	0.8059	0.0304
1.8911	-0.2862	0.8046	0.0331
1.8182	-0.2804	0.8032	0.0361
1.7493	-0.2741	0.8017	0.0394
1.6842	-0.2674	0.8000	0.0430
1.6227	-0.2603	0.7982	0.0469
1.5632	-0.2525	0.7962	0.0513
1.5067	-0.2442	0.7939	0.0561
1.4526	-0.2351	0.7915	0.0614
1.4005	-0.2251	0.7887	0.0674
1.3504	-0.2143	0.7855	0.0742
1.3020	-0.2024	0.7819	0.0819
1.2552	-0.1892	0.7778	0.0907
1.2098	-0.1746	0.7732	0.1006
1.1657	-0.1583	0.7682	0.1114
1.1228	-0.1399	0.7636	0.1214
1.0809	-0.1189	0.7612	0.1264
1.0400	-0.0943	0.7479	0.1552
1.0000	-0.0658	0.6951	0.2891
0.9608	-0.0438	0.6204	0.4242
0.9223	-0.0431	0.6058	0.4548
0.8846	-0.0554	0.6191	0.4269
0.8476	-0.0760	0.6431	0.3772
0.8114	-0.1013	0.6714	0.3180
0.7760	-0.1295	0.7019	0.2534
0.7413	-0.1591	0.7345	0.1838
0.7074	-0.1888	0.7690	0.1097
0.6742	-0.2176	0.8051	0.0320
0.6418	-0.2446	0.8434	-0.0503
0.6102	-0.2693	0.8832	-0.1353
0.5793	-0.2903	0.9196	-0.2124
0.5493	-0.3077	0.9561	-0.2887
0.5200	-0.3222	0.9975	-0.3748
0.4915	-0.3332	1.0309	-0.4415
0.4639	-0.3404	1.0481	-0.4758
0.4370	-0.3451	1.0594	-0.4982
0.4110	-0.3477	1.0663	-0.5116
0.3858	-0.3476	1.0615	-0.5023
0.3614	-0.3451	1.0506	-0.4807
0.3378	-0.3411	1.0432	-0.4660
0.3150	-0.3357	1.0364	-0.4525
0.2930	-0.3284	1.0232	-0.4260
0.2718	-0.3193	1.0051	-0.3894
0.2515	-0.3091	0.9877	-0.3539
0.2319	-0.2980	0.9710	-0.3197
0.2132	-0.2857	0.9525	-0.2812
0.1953	-0.2724	0.9324	-0.2393
0.1782	-0.2584	0.9122	-0.1968
0.1619	-0.2439	0.8924	-0.1549
0.1464	-0.2291	0.8729	-0.1134
0.1317	-0.2141	0.8537	-0.0722
0.1178	-0.1991	0.8353	-0.0329
0.1047	-0.1842	0.8186	0.0029
0.0924	-0.1695	0.8033	0.0359
0.0808	-0.1550	0.7883	0.0682
0.0701	-0.1407	0.7733	0.1005
0.0600	-0.1267	0.7589	0.1315
0.0508	-0.1130	0.7450	0.1613
0.0423	-0.0994	0.7298	0.1938
0.0345	-0.0856	0.7110	0.2340
0.0276	-0.0718	0.6883	0.2822
0.0213	-0.0580	0.6627	0.3363
0.0157	-0.0441	0.6315	0.4013
0.0109	-0.0292	0.5875	0.4912
0.0069	-0.0127	0.5276	0.6089
0.0039	0.0052	0.4614	0.7389
0.0017	0.0240	0.4100	0.8185
0.0004	0.0432	0.4015	0.8322
0.0000	0.0627	0.4524	0.7448
0.0004	0.0822	0.5495	0.5666
0.0017	0.1016	0.6686	0.3239
0.0038	0.1206	0.7938	0.0564
0.0067	0.1390	0.9179	-0.2088
0.0106	0.1564	1.0372	-0.4541
0.0153	0.1725	1.1386	-0.6501
0.0209	0.1873	1.2286	-0.7772
0.0272	0.2010	1.2583	-0.8631
0.0343	0.2138	1.3025	-0.9360
0.0422	0.2256	1.3424	-0.9994
0.0509	0.2362	1.3761	-1.0510
0.0604	0.2457	1.4014	-1.0884
0.0707	0.2541	1.4155	-1.1087
0.0817	0.2614	1.4181	-1.1124
0.0935	0.2679	1.4139	-1.1065
0.1061	0.2737	1.4064	-1.0955
0.1195	0.2788	1.3961	-1.0806
0.1336	0.2834	1.3838	-1.0624
0.1485	0.2875	1.3699	-1.0416
0.1642	0.2910	1.3549	-1.0187
0.1807	0.2941	1.3387	-0.9937
0.1979	0.2966	1.3218	-0.9658
0.2160	0.2986	1.3018	-0.9337
0.2348	0.3000	1.2782	-0.8964
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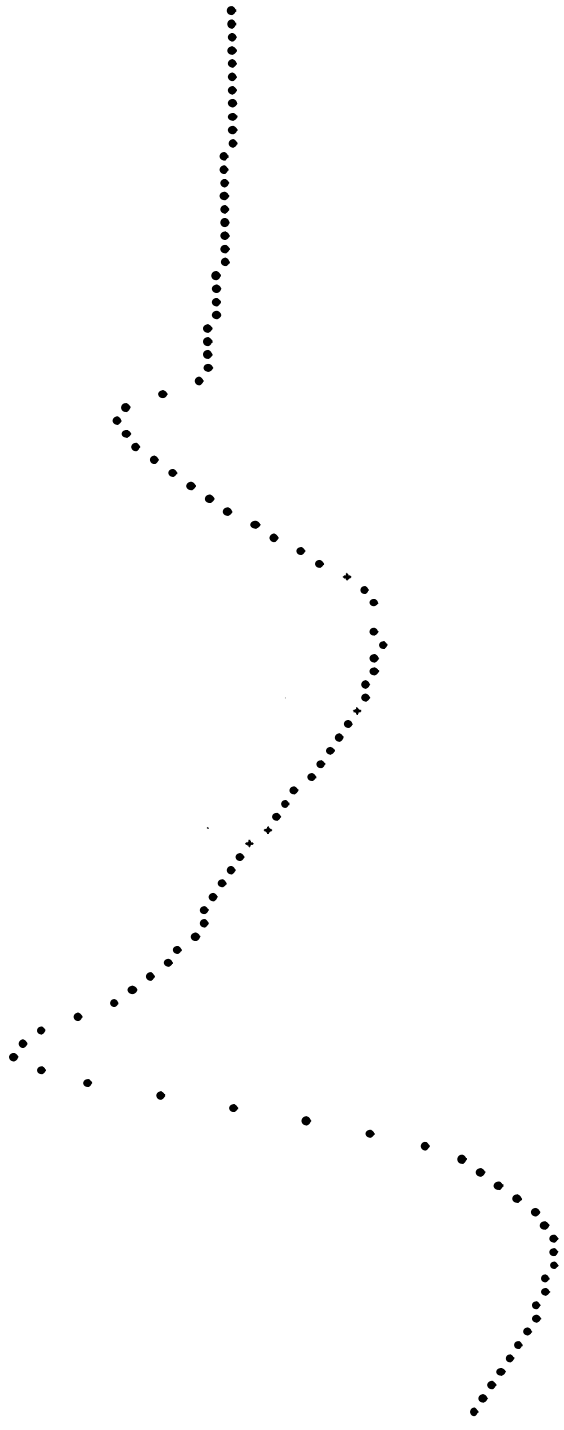
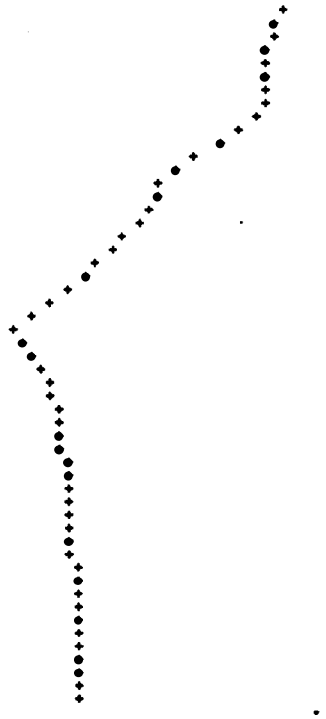
0.2747	0.3008	1.2272	-0.8098



0.2959	0.3003	1.2039	-0.7689
0.3179	0.2990	1.1856	-0.7343
0.3406	0.2970	1.1735	-0.7143
0.3641	0.2943	1.1672	-0.7028
0.3885	0.2908	1.1651	-0.6998
0.4136	0.2863	1.1644	-0.6978
0.4395	0.2807	1.1622	-0.6938
0.4662	0.2740	1.1555	-0.6814
0.4936	0.2660	1.1397	-0.6521
0.5219	0.2564	1.1090	-0.5943
0.5510	0.2458	1.0632	-0.5056
0.5808	0.2335	1.0143	-0.4082
0.6114	0.2197	0.9882	-0.3386
0.6429	0.2040	0.9629	-0.3028
0.6751	0.1867	0.9498	-0.2757
0.7081	0.1676	0.9344	-0.2435
0.7418	0.1466	0.9171	-0.2072
0.7764	0.1235	0.8979	-0.1666
0.8117	0.0984	0.8762	-0.1203
0.8478	0.0711	0.8523	-0.0693
0.8847	0.0421	0.8269	-0.0149
0.9224	0.0116	0.8009	0.0412
0.9608	-0.0197	0.7723	0.1026
1.0000	-0.0552	0.7295	0.1946
1.0400	-0.0837	0.7081	0.2402
1.0809	-0.1083	0.7248	0.2047
1.1228	-0.1294	0.7427	0.1662
1.1657	-0.1477	0.7550	0.1399
1.2099	-0.1640	0.7640	0.1205
1.2553	-0.1786	0.7710	0.1055
1.3021	-0.1918	0.7766	0.0934
1.3505	-0.2037	0.7812	0.0834
1.4006	-0.2146	0.7852	0.0750
1.4526	-0.2245	0.7885	0.0677
1.5067	-0.2336	0.7915	0.0614
1.5632	-0.2420	0.7941	0.0558
1.6222	-0.2497	0.7964	0.0508
1.6842	-0.2569	0.7985	0.0463
1.7494	-0.2636	0.8004	0.0423
1.8182	-0.2698	0.8021	0.0386
1.8911	-0.2757	0.8037	0.0352
1.9687	-0.2812	0.8051	0.0320
2.0515	-0.2864	0.8065	0.0291
2.1404	-0.2914	0.8077	0.0264
2.2363	-0.2963	0.8088	0.0241
2.3403	-0.3010	0.8098	0.0219
2.4539	-0.3057	0.8110	0.0194
2.5786	-0.3105	0.8121	0.0171
2.7169	-0.3154	0.8131	0.0149
2.8715	-0.3205	0.8140	0.0129
3.0462	-0.3261	0.8149	0.0109
3.2460	-0.3322	0.8157	0.0093
3.4778	-0.3391	0.8132	0.0147



SECTION CHARACTERISTICS

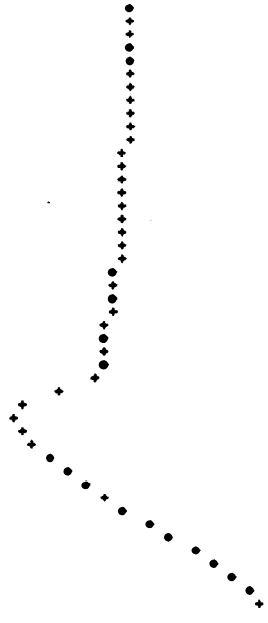
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
6.29999	0.46587	0.00575	-0.17266

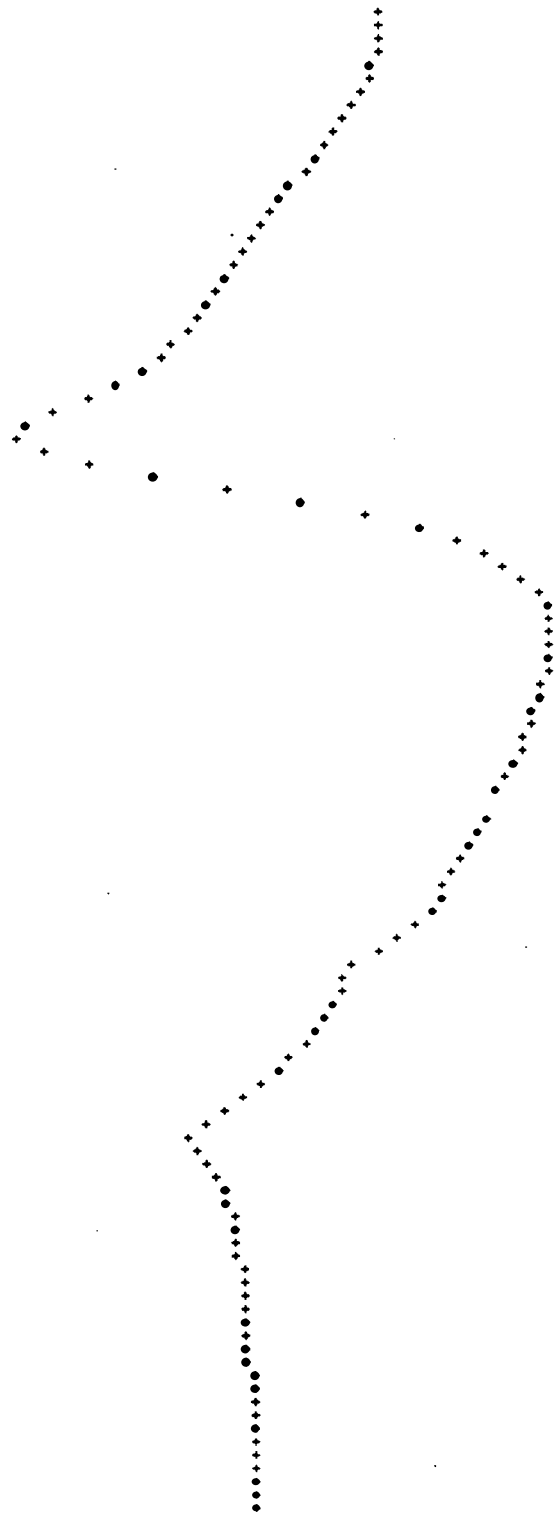
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4778	-0.3143	0.8131	0.0148
3.2459	-0.3087	0.8156	0.0094
3.0461	-0.3036	0.8149	0.0110
2.8714	-0.2990	0.8139	0.0130
2.7168	-0.2948	0.8130	0.0150
2.5786	-0.2907	0.8121	0.0170
2.4538	-0.2867	0.8110	0.0193
2.3403	-0.2826	0.8100	0.0216
2.2363	-0.2786	0.8090	0.0236
2.1404	-0.2744	0.8081	0.0257
2.0515	-0.2700	0.8070	0.0281
1.9687	-0.2653	0.8058	0.0306
1.8911	-0.2604	0.8044	0.0335
1.8182	-0.2551	0.8030	0.0365
1.7494	-0.2494	0.8015	0.0398
1.6842	-0.2434	0.7998	0.0434
1.6222	-0.2368	0.7980	0.0474
1.5632	-0.2296	0.7959	0.0518
1.5067	-0.2219	0.7937	0.0566
1.4526	-0.2134	0.7912	0.0620
1.4006	-0.2041	0.7884	0.0680
1.3505	-0.1939	0.7852	0.0748
1.3021	-0.1827	0.7816	0.0826
1.2552	-0.1703	0.7775	0.0914
1.2098	-0.1565	0.7729	0.1014
1.1657	-0.1411	0.7679	0.1122
1.1228	-0.1237	0.7632	0.1221
1.0809	-0.1037	0.7618	0.1270
1.0400	-0.0802	0.7477	0.1555
1.0000	-0.0529	0.6847	0.2898
0.9608	-0.0322	0.6198	0.4254
0.9223	-0.0318	0.6058	0.4558
0.8846	-0.0439	0.6178	0.4296
0.8476	-0.0640	0.6414	0.3808
0.8115	-0.0888	0.6693	0.3224
0.7760	-0.1164	0.6995	0.2585
0.7414	-0.1454	0.7319	0.1895
0.7075	-0.1747	0.7661	0.1160
0.6743	-0.2029	0.8019	0.0389
0.6419	-0.2296	0.8399	-0.0428
0.6103	-0.2540	0.8794	-0.1272
0.5795	-0.2749	0.9158	-0.2044
0.5494	-0.2923	0.9515	-0.2792
0.5202	-0.3070	0.9916	-0.3620
0.4917	-0.3182	1.0244	-0.4284
0.4641	-0.3257	1.0417	-0.4630



0.4372	-0.3307	1.0533	-0.4860
0.4112	-0.3338	1.0608	-0.5008
0.3860	-0.3342	1.0571	-0.4936
0.3616	-0.3323	1.0474	-0.4745
0.3380	-0.3289	1.0411	-0.4618
0.3152	-0.3242	1.0352	-0.4502
0.2932	-0.3177	1.0230	-0.4256
0.2720	-0.3095	1.0059	-0.3918
0.2517	-0.3003	0.9894	-0.3574
0.2321	-0.2900	0.9736	-0.3250
0.2134	-0.2787	0.9561	-0.2887
0.1955	-0.2664	0.9367	-0.2482
0.1784	-0.2535	0.9168	-0.2065
0.1621	-0.2401	0.8973	-0.1653
0.1466	-0.2264	0.8782	-0.1246
0.1319	-0.2124	0.8592	-0.0841
0.1180	-0.1984	0.8412	-0.0456
0.1049	-0.1845	0.8249	-0.0105
0.0925	-0.1709	0.8099	0.0217
0.0810	-0.1573	0.7952	0.0533
0.0702	-0.1439	0.7805	0.0849
0.0601	-0.1308	0.7665	0.1151
0.0509	-0.1180	0.7530	0.1440
0.0424	-0.1052	0.7383	0.1757
0.0346	-0.0922	0.7198	0.2152
0.0276	-0.0792	0.6974	0.2630
0.0213	-0.0661	0.6719	0.3170
0.0157	-0.0528	0.6405	0.3826
0.0109	-0.0386	0.5959	0.4743
0.0069	-0.0229	0.5349	0.5949
0.0039	-0.0057	0.4670	0.7210
0.0017	0.0123	0.4133	0.8130
0.0004	0.0309	0.4021	0.8312
0.0000	0.0496	0.4507	0.7497
0.0004	0.0684	0.5462	0.5729
0.0017	0.0870	0.6648	0.3335
0.0037	0.1054	0.7878	0.0693
0.0067	0.1232	0.9102	-0.1924
0.0105	0.1401	1.0273	-0.4343
0.0152	0.1558	1.1280	-0.6302
0.0208	0.1702	1.1991	-0.7605
0.0271	0.1837	1.2500	-0.8489
0.0342	0.1963	1.2947	-0.9234
0.0421	0.2079	1.3346	-0.9872
0.0508	0.2184	1.3681	-1.0388
0.0603	0.2279	1.3934	-1.0765
0.0705	0.2364	1.4077	-1.0975
0.0816	0.2439	1.4110	-1.1023
0.0934	0.2506	1.4080	-1.0980
0.1060	0.2566	1.4021	-1.0893
0.1193	0.2620	1.3938	-1.0772
0.1335	0.2669	1.3839	-1.0625
0.1484	0.2713	1.3729	-1.0461
0.1641	0.2752	1.3615	-1.0288
0.1805	0.2786	1.3499	-1.0111
0.1978	0.2816	1.3381	-0.9926
0.2158	0.2840	1.3253	-0.9726
0.2346	0.2859	1.3107	-0.9493
0.2542	0.2871	1.2932	-0.9210
0.2746	0.2878	1.2728	-0.8873
0.2957	0.2878	1.2501	-0.8491
0.3177	0.2871	1.2267	-0.8090
0.3404	0.2858	1.2051	-0.7710
0.3640	0.2838	1.1873	-0.7393
0.3883	0.2810	1.1741	-0.7155
0.4134	0.2772	1.1639	-0.6969
0.4393	0.2725	1.1533	-0.6774
0.4660	0.2666	1.1378	-0.6487
0.4935	0.2596	1.1124	-0.6007
0.5218	0.2512	1.0748	-0.5267
0.5508	0.2415	1.0297	-0.4391
0.5807	0.2304	0.9953	-0.3696
0.6113	0.2178	0.9774	-0.3329
0.6427	0.2035	0.9661	-0.3095
0.6750	0.1875	0.9527	-0.2817
0.7080	0.1698	0.9373	-0.2495
0.7417	0.1502	0.9203	-0.2139
0.7763	0.1285	0.9018	-0.1732
0.8116	0.1047	0.8789	-0.1260
0.8478	0.0787	0.8543	-0.0735
0.8847	0.0510	0.8281	-0.0175
0.9223	0.0217	0.8013	0.0403
0.9608	-0.0083	0.7723	0.1026
1.0000	-0.0423	0.7293	0.1949
1.0400	-0.0696	0.7078	0.2409
1.0809	-0.0931	0.7244	0.2055
1.1228	-0.1131	0.7423	0.1672
1.1658	-0.1305	0.7545	0.1408
1.2099	-0.1460	0.7636	0.1213
1.2553	-0.1598	0.7706	0.1062
1.3021	-0.1722	0.7763	0.0941
1.3505	-0.1834	0.7810	0.0840
1.4006	-0.1936	0.7849	0.0755
1.4526	-0.2028	0.7883	0.0682
1.5068	-0.2113	0.7913	0.0618
1.5632	-0.2191	0.7939	0.0562
1.6223	-0.2262	0.7962	0.0512
1.6842	-0.2328	0.7983	0.0467
1.7494	-0.2389	0.8002	0.0426
1.8182	-0.2446	0.8019	0.0388
1.8911	-0.2498	0.8035	0.0354
1.9687	-0.2548	0.8050	0.0322
2.0515	-0.2594	0.8064	0.0293
2.1404	-0.2638	0.8076	0.0266
2.2363	-0.2680	0.8087	0.0242
2.3403	-0.2721	0.8098	0.0220
2.4538	-0.2761	0.8109	0.0196
2.5786	-0.2801	0.8120	0.0172
2.7169	-0.2842	0.8130	0.0151
2.8715	-0.2885	0.8139	0.0131
3.0461	-0.2931	0.8148	0.0112
3.2459	-0.2981	0.8156	0.0096
3.4778	-0.3037	0.8131	0.0147



SECTION CHARACTERISTICS

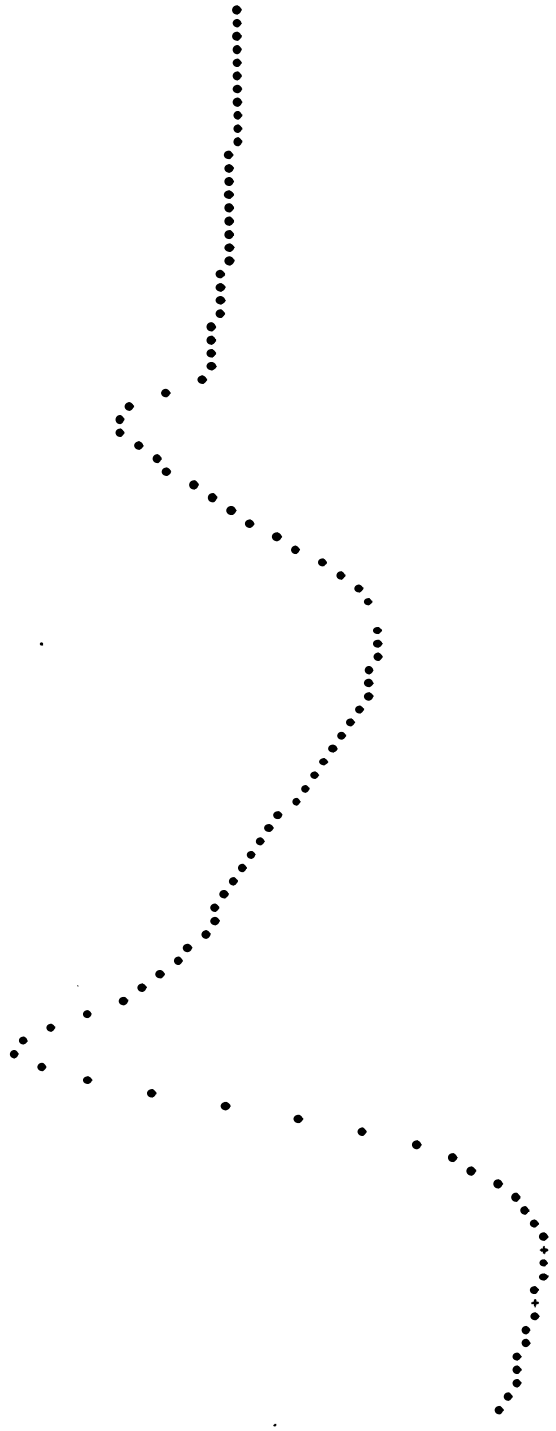
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
7.19999	0.47025	0.00293	-0.17589

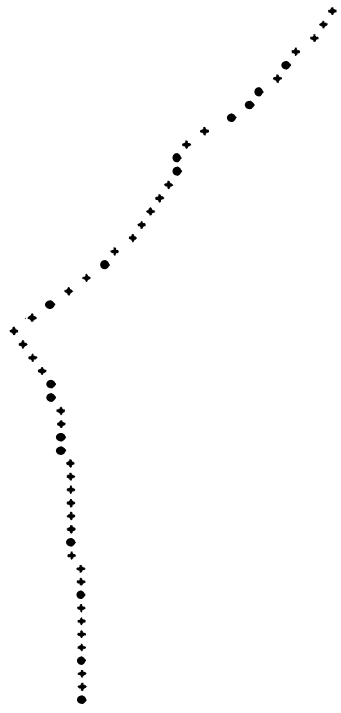
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4777	-0.2810	0.8131	0.0148
3.2459	-0.2765	0.8156	0.0098
3.0441	-0.2725	0.8147	0.0113
2.8714	-0.2688	0.8138	0.0133
2.7168	-0.2654	0.8129	0.0153
2.5786	-0.2620	0.8120	0.0173
2.4538	-0.2587	0.8109	0.0195
2.3403	-0.2553	0.8099	0.0218
2.2363	-0.2518	0.8089	0.0239
2.1404	-0.2482	0.8079	0.0260
2.0515	-0.2444	0.8068	0.0284
1.9687	-0.2403	0.8056	0.0310
1.8911	-0.2359	0.8043	0.0338
1.8182	-0.2312	0.8028	0.0369
1.7494	-0.2260	0.8013	0.0403
1.6842	-0.2205	0.7996	0.0439
1.6223	-0.2145	0.7977	0.0479
1.5632	-0.2079	0.7957	0.0523
1.5067	-0.2007	0.7934	0.0572
1.4526	-0.1928	0.7909	0.0626
1.4006	-0.1842	0.7881	0.0687
1.3505	-0.1747	0.7849	0.0755
1.3021	-0.1641	0.7813	0.0833
1.2553	-0.1525	0.7772	0.0922
1.2099	-0.1394	0.7725	0.1021
1.1658	-0.1248	0.7675	0.1129
1.1228	-0.1083	0.7629	0.1228
1.0809	-0.0892	0.7608	0.1274
1.0400	-0.0669	0.7476	0.1587
1.0000	-0.0409	0.6844	0.2905
0.9608	-0.0212	0.6192	0.4248
0.9223	-0.0211	0.6040	0.4578
0.8846	-0.0330	0.6164	0.4325
0.8476	-0.0527	0.6396	0.3846
0.8115	-0.0769	0.6672	0.3269
0.7761	-0.1040	0.6971	0.2636
0.7414	-0.1324	0.7292	0.1951
0.7075	-0.1610	0.7632	0.1222
0.6744	-0.1888	0.7988	0.0456
0.6420	-0.2150	0.8366	-0.0357
0.6104	-0.2391	0.8759	-0.1197
0.5796	-0.2599	0.9124	-0.1971
0.5496	-0.2773	0.9478	-0.2715
0.5203	-0.2928	0.9872	-0.3529
0.4919	-0.3033	1.0197	-0.4190
0.4642	-0.3111	1.0369	-0.4535
0.4374	-0.3165	1.0484	-0.4763
0.4114	-0.3199	1.0559	-0.4912
0.3862	-0.3208	1.0528	-0.4851
0.3618	-0.3185	1.0439	-0.4675
0.3382	-0.3167	1.0382	-0.4561
0.3154	-0.3127	1.0338	-0.4457
0.2934	-0.3069	1.0216	-0.4228
0.2722	-0.2996	1.0054	-0.3901
0.2519	-0.2912	0.9898	-0.3583
0.2323	-0.2818	0.9751	-0.3280
0.2136	-0.2715	0.9585	-0.2937
0.1957	-0.2602	0.9397	-0.2546
0.1786	-0.2483	0.9203	-0.2139
0.1623	-0.2359	0.9012	-0.1736
0.1468	-0.2232	0.8825	-0.1339
0.1320	-0.2103	0.8648	-0.0943
0.1181	-0.1972	0.8464	-0.0567
0.1050	-0.1844	0.8305	-0.0225
0.0927	-0.1716	0.8159	0.0088
0.0811	-0.1590	0.8016	0.0395
0.0703	-0.1465	0.7874	0.0702
0.0603	-0.1343	0.7738	0.0995
0.0510	-0.1222	0.7608	0.1273
0.0425	-0.1103	0.7466	0.1579
0.0347	-0.0981	0.7286	0.1965
0.0277	-0.0858	0.7064	0.2438
0.0214	-0.0734	0.6811	0.2976
0.0158	-0.0608	0.6495	0.3638
0.0109	-0.0472	0.6043	0.4572
0.0070	-0.0322	0.5422	0.5887
0.0039	-0.0158	0.4727	0.7188
0.0017	0.0015	0.4165	0.8077
0.0004	0.0194	0.4023	0.8309
0.0000	0.0374	0.4463	0.7540
0.0004	0.0554	0.5420	0.5812
0.0016	0.0734	0.6583	0.3456
0.0037	0.0910	0.7804	0.0922
0.0067	0.1082	0.9000	-0.1188
0.0105	0.1246	1.0155	-0.3186
0.0152	0.1398	1.1155	-0.4867
0.0207	0.1539	1.1880	-0.7486
0.0270	0.1671	1.2396	-0.8312
0.0341	0.1795	1.2845	-0.9867
0.0420	0.1909	1.3241	-0.9787
0.0507	0.2013	1.3572	-1.0223
0.0601	0.2106	1.3823	-1.0601
0.0704	0.2193	1.3967	-1.0815
0.0814	0.2269	1.4005	-1.0871
0.0932	0.2338	1.3985	-1.0840
0.1058	0.2400	1.3937	-1.0771
0.1192	0.2457	1.3870	-1.0671
0.1333	0.2508	1.3787	-1.0548
0.1482	0.2555	1.3696	-1.0411
0.1639	0.2598	1.3602	-1.0269
0.1803	0.2636	1.3511	-1.0128
0.1976	0.2669	1.3423	-0.9992
0.2156	0.2697	1.3334	-0.9854
0.2344	0.2720	1.3239	-0.9704
0.2540	0.2737	1.3129	-0.9529
0.2744	0.2749	1.2999	-0.9318



0.2956	0.2754	1.2843	-0.9063
0.3175	0.2754	1.2657	-0.8755
0.3403	0.2746	1.2444	-0.8394
0.3638	0.2732	1.2213	-0.7995
0.3881	0.2711	1.1975	-0.7576
0.4133	0.2681	1.1732	-0.7139
0.4392	0.2641	1.1472	-0.6661
0.4659	0.2591	1.1172	-0.6098
0.4933	0.2530	1.0811	-0.5405
0.5216	0.2456	1.0413	-0.4623
0.5507	0.2369	1.0000	-0.3953
0.5806	0.2269	0.9895	-0.3575
0.6112	0.2155	0.9800	-0.3380
0.6426	0.2024	0.9693	-0.3160
0.6749	0.1877	0.9557	-0.2879
0.7079	0.1714	0.9408	-0.2569
0.7417	0.1531	0.9242	-0.2220
0.7762	0.1328	0.9047	-0.1810
0.8116	0.1103	0.8820	-0.1328
0.8477	0.0855	0.8566	-0.0786
0.8846	0.0591	0.8296	-0.0206
0.9223	0.0310	0.8019	0.0390
0.9608	0.0023	0.7725	0.1023
1.0000	-0.0303	0.7292	0.1951
1.0401	-0.0563	0.7075	0.2415
1.0810	-0.0787	0.7240	0.2063
1.1228	-0.0977	0.7418	0.1681
1.1658	-0.1143	0.7541	0.1417
1.2099	-0.1289	0.7632	0.1222
1.2553	-0.1419	0.7703	0.1070
1.3021	-0.1536	0.7759	0.0948
1.3505	-0.1641	0.7807	0.0847
1.4006	-0.1737	0.7846	0.0761
1.4527	-0.1823	0.7881	0.0687
1.5068	-0.1902	0.7910	0.0623
1.5632	-0.1974	0.7937	0.0566
1.6223	-0.2039	0.7960	0.0516
1.6842	-0.2100	0.7981	0.0470
1.7494	-0.2155	0.8001	0.0429
1.8182	-0.2206	0.8018	0.0391
1.8912	-0.2254	0.8034	0.0357
1.9687	-0.2298	0.8049	0.0325
2.0515	-0.2339	0.8063	0.0295
2.1404	-0.2377	0.8075	0.0268
2.2363	-0.2413	0.8086	0.0244
2.3403	-0.2448	0.8097	0.0222
2.4538	-0.2482	0.8108	0.0198
2.5786	-0.2515	0.8119	0.0174
2.7169	-0.2548	0.8129	0.0154
2.8714	-0.2583	0.8138	0.0134
3.0461	-0.2620	0.8147	0.0115
3.2459	-0.2660	0.8154	0.0099
3.4778	-0.2705	0.8131	0.0147



SECTION CHARACTERISTICS

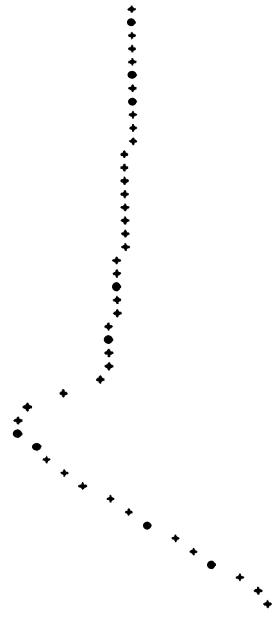
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.09999	0.47368	0.00034	-0.17992

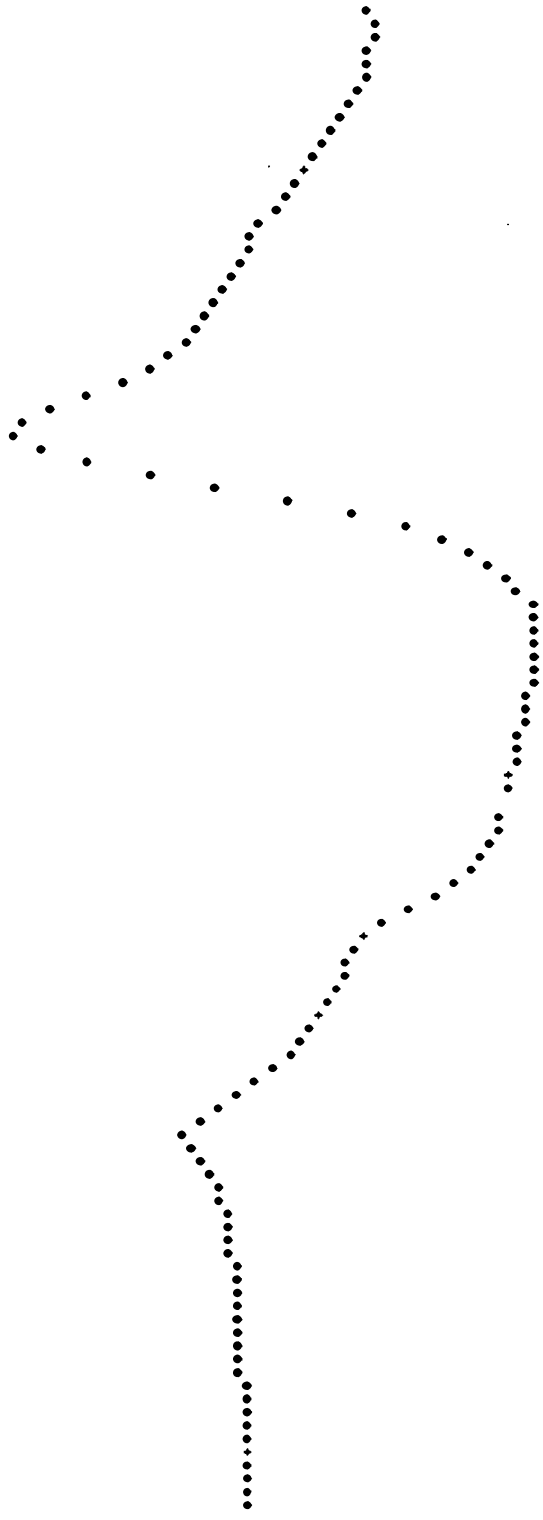
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4777	-0.2518	0.8131	0.0149
3.2459	-0.2483	0.8153	0.0100
3.0461	-0.2451	0.8146	0.0116
2.8714	-0.2422	0.8137	0.0136
2.7169	-0.2394	0.8128	0.0156
2.5786	-0.2367	0.8118	0.0176
2.4538	-0.2339	0.8108	0.0198
2.3403	-0.2311	0.8097	0.0221
2.2363	-0.2281	0.8088	0.0242
2.1404	-0.2250	0.8078	0.0263
2.0515	-0.2216	0.8066	0.0287
1.9687	-0.2180	0.8054	0.0314
1.8912	-0.2141	0.8041	0.0343
1.8182	-0.2098	0.8026	0.0374
1.7494	-0.2051	0.8010	0.0408
1.6842	-0.2000	0.7993	0.0445
1.6223	-0.1945	0.7975	0.0485
1.5632	-0.1884	0.7954	0.0529
1.5068	-0.1817	0.7931	0.0578
1.4527	-0.1743	0.7906	0.0633
1.4006	-0.1662	0.7878	0.0694
1.3505	-0.1573	0.7846	0.0762
1.3021	-0.1473	0.7809	0.0841
1.2553	-0.1362	0.7768	0.0930
1.2099	-0.1239	0.7722	0.1030
1.1658	-0.1100	0.7672	0.1137
1.1228	-0.0942	0.7626	0.1235
1.0810	-0.0760	0.7486	0.1278
1.0400	-0.0546	0.7475	0.1559
1.0000	-0.0296	0.6848	0.2914
0.9607	-0.0110	0.6184	0.4284
0.9223	-0.0109	0.6029	0.4600
0.8846	-0.0224	0.6148	0.4357
0.8477	-0.0415	0.6376	0.3887
0.8115	-0.0649	0.6649	0.3317
0.7761	-0.0912	0.6946	0.2689
0.7415	-0.1189	0.7265	0.2010
0.7076	-0.1469	0.7603	0.1285
0.6745	-0.1741	0.7957	0.0523
0.6422	-0.1998	0.8333	-0.0286
0.6106	-0.2235	0.8724	-0.1123
0.5798	-0.2441	0.9090	-0.1901
0.5497	-0.2614	0.9444	-0.2644
0.5205	-0.2761	0.9835	-0.3453
0.4921	-0.2876	1.0161	-0.4117
0.4644	-0.2956	1.0334	-0.4464



0.4376	-0.3013	1.0446	-0.4687
0.4116	-0.3050	1.0518	-0.4832
0.3864	-0.3043	1.0498	-0.4776
0.3620	-0.3025	1.0486	-0.4689
0.3384	-0.3034	1.0352	-0.4581
0.3156	-0.2999	1.0304	-0.4485
0.2936	-0.2949	1.0197	-0.4190
0.2724	-0.2884	1.0044	-0.3880
0.2521	-0.2808	0.9897	-0.3581
0.2328	-0.2724	0.9761	-0.3301
0.2138	-0.2630	0.9603	-0.2975
0.1959	-0.2528	0.9421	-0.2595
0.1788	-0.2419	0.9232	-0.2199
0.1625	-0.2305	0.9047	-0.1808
0.1469	-0.2189	0.8865	-0.1423
0.1322	-0.2070	0.8684	-0.1038
0.1183	-0.1950	0.8513	-0.0672
0.1052	-0.1831	0.8359	-0.0342
0.0928	-0.1714	0.8219	-0.0040
0.0812	-0.1597	0.8081	0.0256
0.0704	-0.1482	0.7943	0.0553
0.0604	-0.1368	0.7812	0.0834
0.0511	-0.1256	0.7689	0.1099
0.0428	-0.1148	0.7553	0.1391
0.0348	-0.1031	0.7379	0.1766
0.0277	-0.0915	0.7162	0.2238
0.0214	-0.0799	0.6918	0.2766
0.0158	-0.0680	0.6593	0.3434
0.0110	-0.0551	0.6134	0.4386
0.0070	-0.0407	0.5501	0.5654
0.0039	-0.0250	0.4786	0.7081
0.0017	-0.0084	0.4198	0.8223
0.0004	0.0086	0.4023	0.8310
0.0000	0.0259	0.4453	0.7591
0.0004	0.0432	0.5370	0.5909
0.0016	0.0604	0.6514	0.3599
0.0037	0.0774	0.7715	0.1043
0.0066	0.0940	0.8895	-0.1488
0.0104	0.1099	1.0013	-0.3817
0.0151	0.1247	1.1007	-0.5784
0.0206	0.1385	1.1747	-0.7166
0.0269	0.1514	1.2268	-0.8092
0.0340	0.1635	1.2718	-0.8858
0.0419	0.1748	1.3110	-0.9498
0.0505	0.1851	1.3435	-1.0011
0.0600	0.1946	1.3681	-1.0388
0.0702	0.2032	1.3824	-1.0603
0.0813	0.2109	1.3867	-1.0667
0.0931	0.2180	1.3855	-1.0649
0.1056	0.2245	1.3819	-1.0596
0.1190	0.2304	1.3765	-1.0515
0.1331	0.2359	1.3697	-1.0413
0.1480	0.2409	1.3621	-1.0297
0.1637	0.2455	1.3543	-1.0178
0.1801	0.2496	1.3468	-1.0062
0.1974	0.2534	1.3398	-0.9954
0.2154	0.2566	1.3331	-0.9850
0.2342	0.2593	1.3264	-0.9743
0.2538	0.2615	1.3190	-0.9626
0.2742	0.2631	1.3107	-0.9493
0.2954	0.2642	1.3010	-0.9336
0.3173	0.2647	1.2889	-0.9140
0.3401	0.2646	1.2733	-0.8882
0.3636	0.2638	1.2530	-0.8540
0.3880	0.2623	1.2267	-0.8089
0.4131	0.2600	1.1929	-0.7494
0.4390	0.2568	1.1513	-0.6737
0.4657	0.2526	1.1038	-0.5843
0.4932	0.2474	1.0564	-0.4922
0.5215	0.2409	1.0187	-0.4169
0.5505	0.2332	0.9979	-0.3748
0.5804	0.2243	0.9899	-0.3584
0.6111	0.2140	0.9828	-0.3439
0.6425	0.2022	0.9721	-0.3219
0.6747	0.1888	0.9593	-0.2953
0.7078	0.1737	0.9451	-0.2657
0.7416	0.1567	0.9287	-0.2314
0.7761	0.1376	0.9091	-0.1902
0.8115	0.1163	0.8858	-0.1408
0.8477	0.0926	0.8595	-0.0847
0.8846	0.0672	0.8314	-0.0244
0.9223	0.0401	0.8026	0.0374
0.9608	0.0124	0.7727	0.1019
1.0000	-0.0190	0.7291	0.1953
1.0401	-0.0440	0.7072	0.2422
1.0810	-0.0654	0.7236	0.2071
1.1229	-0.0835	0.7414	0.1698
1.1658	-0.0993	0.7937	0.1426
1.2099	-0.1132	0.7628	0.1298
1.2553	-0.1256	0.7699	0.1078
1.3022	-0.1367	0.7756	0.0958
1.3506	-0.1466	0.7803	0.0854
1.4007	-0.1556	0.7843	0.0767
1.4527	-0.1637	0.7878	0.0693
1.5068	-0.1711	0.7908	0.0628
1.5633	-0.1778	0.7935	0.0571
1.6223	-0.1839	0.7958	0.0520
1.6843	-0.1894	0.7980	0.0474
1.7495	-0.1945	0.7999	0.0433
1.8183	-0.1992	0.8017	0.0395
1.8912	-0.2035	0.8033	0.0360
1.9687	-0.2074	0.8048	0.0328
2.0516	-0.2110	0.8062	0.0298
2.1405	-0.2144	0.8074	0.0270
2.2363	-0.2175	0.8085	0.0246
2.3403	-0.2205	0.8096	0.0224
2.4539	-0.2233	0.8107	0.0200
2.5786	-0.2261	0.8118	0.0177
2.7169	-0.2288	0.8128	0.0156
2.8715	-0.2316	0.8137	0.0136
3.0461	-0.2345	0.8145	0.0117
3.2459	-0.2377	0.8153	0.0101
3.4778	-0.2412	0.8131	0.0148



SECTION CHARACTERISTICS

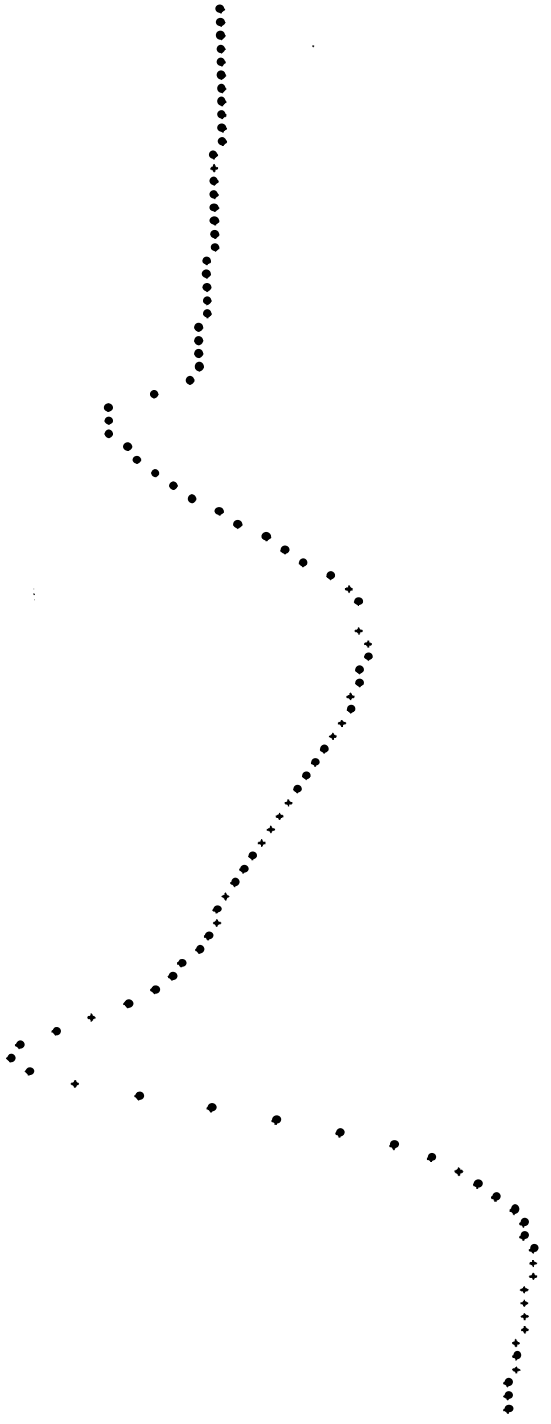
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.99999	0.47628	-0.00192	-0.18456

CL CD CM ARE BASED ON VISCOUS PRESSURE

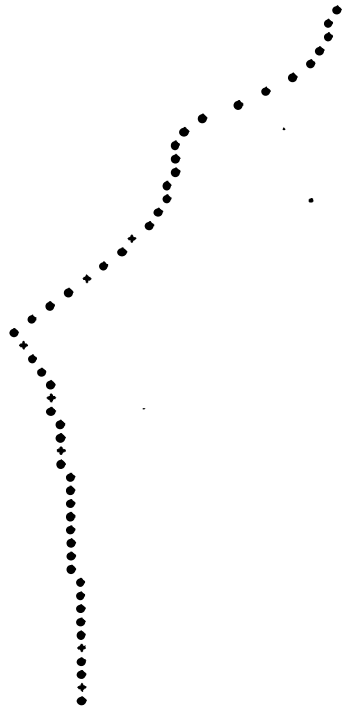
PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4778	-0.2247	0.8130	0.0150
3.2459	-0.2221	0.8152	0.0103
3.0461	-0.2196	0.8145	0.0119
2.8715	-0.2174	0.8136	0.0138
2.7169	-0.2152	0.8126	0.0158
2.5786	-0.2130	0.8117	0.0178
2.4539	-0.2108	0.8107	0.0200
2.3404	-0.2084	0.8096	0.0223
2.2364	-0.2059	0.8086	0.0244
2.1405	-0.2032	0.8076	0.0266
2.0516	-0.2003	0.8065	0.0291
1.9687	-0.1971	0.8052	0.0317
1.8912	-0.1936	0.8039	0.0347
1.8183	-0.1897	0.8024	0.0378
1.7495	-0.1855	0.8008	0.0412
1.6843	-0.1808	0.7991	0.0450
1.6223	-0.1757	0.7972	0.0490
1.5633	-0.1701	0.7951	0.0535
1.5068	-0.1638	0.7928	0.0584
1.4527	-0.1570	0.7903	0.0639
1.4007	-0.1493	0.7875	0.0700
1.3506	-0.1409	0.7842	0.0770
1.3022	-0.1315	0.7804	0.0848
1.2553	-0.1210	0.7764	0.0937
1.2099	-0.1093	0.7718	0.1038
1.1658	-0.0960	0.7668	0.1145
1.1229	-0.0810	0.7623	0.1242
1.0810	-0.0636	0.7604	0.1282
1.0401	-0.0432	0.7475	0.1559
1.0000	-0.0193	0.6837	0.2921
0.9607	-0.0016	0.6176	0.4299
0.9223	-0.0016	0.6018	0.4622
0.8846	-0.0126	0.6132	0.4398
0.8477	-0.0310	0.6356	0.3929
0.8115	-0.0537	0.6625	0.3367
0.7762	-0.0793	0.6928	0.2745
0.7415	-0.1062	0.7236	0.2071
0.7077	-0.1334	0.7572	0.1351
0.6746	-0.1600	0.7925	0.0592
0.6423	-0.1852	0.8299	-0.0213
0.6107	-0.2085	0.8689	-0.1047
0.5799	-0.2288	0.9056	-0.1829
0.5499	-0.2460	0.9411	-0.2576
0.5207	-0.2607	0.9801	-0.3383
0.4922	-0.2722	1.0128	-0.4051
0.4646	-0.2804	1.0304	-0.4404
0.4378	-0.2863	1.0413	-0.4623
0.4118	-0.2903	1.0482	-0.4760
0.3866	-0.2928	1.0455	-0.4707
0.3622	-0.2917	1.0375	-0.4546
0.3386	-0.2901	1.0323	-0.4442
0.3158	-0.2873	1.0277	-0.4350
0.2938	-0.2829	1.0176	-0.4148
0.2727	-0.2772	1.0033	-0.3857
0.2523	-0.2705	0.9897	-0.3579
0.2328	-0.2629	0.9769	-0.3317
0.2140	-0.2544	0.9617	-0.3004
0.1961	-0.2451	0.9441	-0.2637
0.1790	-0.2352	0.9258	-0.2253
0.1626	-0.2249	0.9078	-0.1875
0.1471	-0.2142	0.8902	-0.1502
0.1324	-0.2033	0.8727	-0.1129
0.1185	-0.1924	0.8561	-0.0775
0.1053	-0.1815	0.8413	-0.0458
0.0929	-0.1707	0.8278	-0.0168
0.0814	-0.1599	0.8146	0.0116
0.0705	-0.1493	0.8014	0.0401
0.0605	-0.1388	0.7889	0.0669
0.0512	-0.1284	0.7773	0.0919
0.0426	-0.1180	0.7645	0.1195
0.0348	-0.1074	0.7477	0.1555
0.0278	-0.0966	0.7265	0.2009
0.0215	-0.0856	0.7016	0.2541
0.0159	-0.0744	0.6698	0.3214
0.0110	-0.0621	0.6232	0.4185
0.0070	-0.0485	0.5586	0.5488
0.0039	-0.0335	0.4851	0.6884
0.0017	-0.0177	0.4233	0.7965
0.0004	-0.0013	0.4021	0.8313
0.0000	0.0152	0.4419	0.7650
0.0004	0.0318	0.5312	0.6021
0.0016	0.0483	0.6436	0.3762
0.0037	0.0646	0.7615	0.1259
0.0066	0.0806	0.8770	-0.1221
0.0104	0.0959	0.9859	-0.3502
0.0150	0.1103	1.0847	-0.5476
0.0205	0.1237	1.1602	-0.6901
0.0268	0.1364	1.2126	-0.7843
0.0339	0.1482	1.2575	-0.8617
0.0417	0.1593	1.2961	-0.9257
0.0504	0.1696	1.3277	-0.9764
0.0598	0.1790	1.3518	-1.0139
0.0701	0.1876	1.3658	-1.0354
0.0811	0.1955	1.3704	-1.0424
0.0929	0.2027	1.3700	-1.0418
0.1054	0.2094	1.3676	-1.0381
0.1188	0.2156	1.3635	-1.0318
0.1329	0.2213	1.3580	-1.0235
0.1478	0.2266	1.3517	-1.0139
0.1635	0.2315	1.3453	-1.0039
0.1799	0.2360	1.3391	-0.9943
0.1972	0.2400	1.3335	-0.9855
0.2152	0.2436	1.3283	-0.9774
0.2340	0.2467	1.3232	-0.9693
0.2536	0.2493	1.3179	-0.9608
0.2740	0.2514	1.3121	-0.9516



C-2

0.2952	0.2530	1.3057	-0.9413
0.3171	0.2540	1.2979	-0.9287
0.3399	0.2544	1.2873	-0.9114
0.3634	0.2542	1.2719	-0.8858
0.3878	0.2533	1.2485	-0.8465
0.4129	0.2517	1.2134	-0.7857
0.4388	0.2492	1.1638	-0.6967
0.4655	0.2457	1.1031	-0.5830
0.4930	0.2413	1.0449	-0.4694
0.5213	0.2358	1.0072	-0.3936
0.5504	0.2291	0.9950	-0.3688
0.5803	0.2212	0.9927	-0.3641
0.6109	0.2120	0.9861	-0.3506
0.6424	0.2013	0.9756	-0.3291
0.6746	0.1891	0.9637	-0.3044
0.7076	0.1752	0.9500	-0.2761
0.7414	0.1594	0.9338	-0.2423
0.7761	0.1416	0.9140	-0.2006
0.8114	0.1214	0.8900	-0.1497
0.8476	0.0988	0.8626	-0.0914
0.8845	0.0744	0.8333	-0.0286
0.9223	0.0483	0.8035	0.0356
0.9607	0.0216	0.7729	0.1013
1.0000	-0.0086	0.7291	0.1954
1.0401	-0.0325	0.7069	0.2428
1.0810	-0.0530	0.7232	0.2079
1.1229	-0.0703	0.7418	0.1699
1.1658	-0.0854	0.7533	0.1435
1.2100	-0.0986	0.7624	0.1239
1.2554	-0.1104	0.7695	0.1087
1.3022	-0.1208	0.7752	0.0963
1.3506	-0.1302	0.7800	0.0861
1.4007	-0.1387	0.7840	0.0774
1.4527	-0.1463	0.7875	0.0699
1.5069	-0.1532	0.7905	0.0634
1.5633	-0.1594	0.7932	0.0576
1.6224	-0.1651	0.7956	0.0525
1.6843	-0.1702	0.7978	0.0478
1.7495	-0.1748	0.7997	0.0436
1.8183	-0.1791	0.8015	0.0398
1.8912	-0.1829	0.8031	0.0363
1.9688	-0.1864	0.8046	0.0330
2.0516	-0.1896	0.8060	0.0300
2.1405	-0.1926	0.8073	0.0272
2.2364	-0.1953	0.8085	0.0248
2.3404	-0.1978	0.8095	0.0226
2.4539	-0.2001	0.8106	0.0202
2.5787	-0.2023	0.8117	0.0179
2.7169	-0.2045	0.8127	0.0158
2.8715	-0.2067	0.8136	0.0138
3.0462	-0.2090	0.8144	0.0120
3.2459	-0.2114	0.8152	0.0104
3.4778	-0.2140	0.8131	0.0149



SECTION CHARACTERISTICS

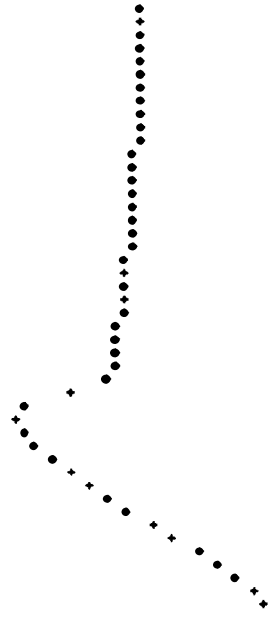
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
0.89999	0.47785	-0.00397	-0.18953

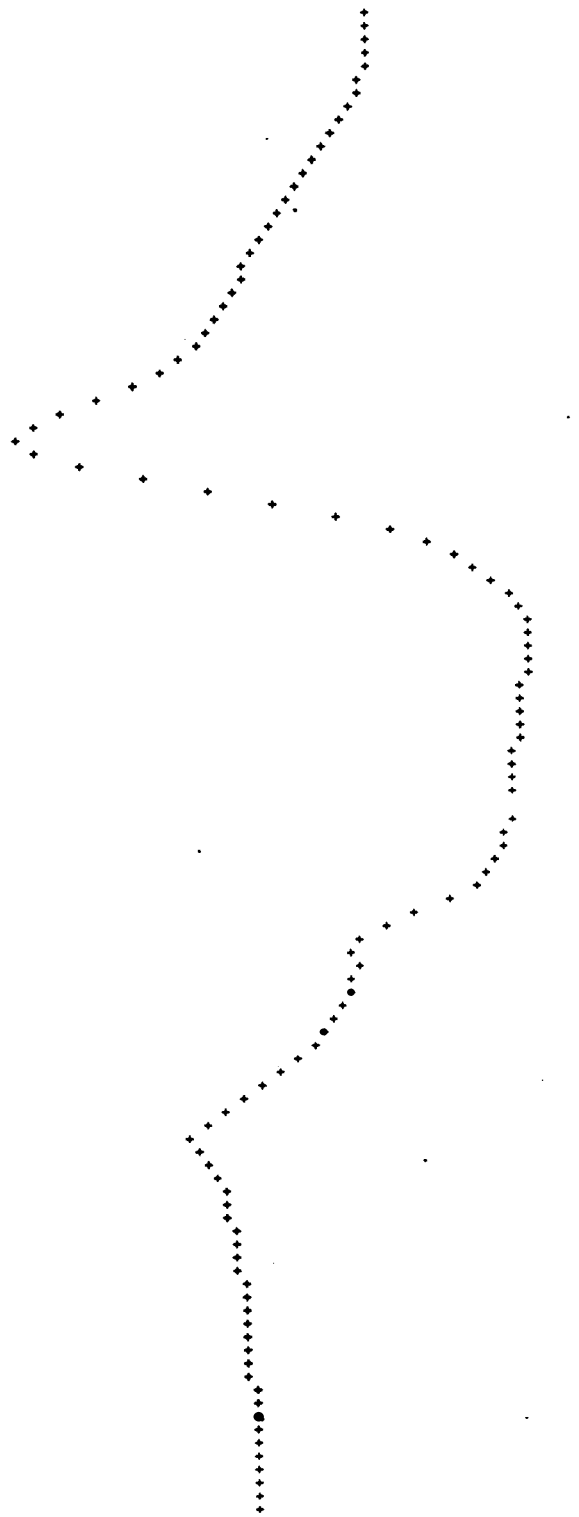
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4778	-0.1992	0.8130	0.0151
3.2460	-0.1974	0.8151	0.0105
3.0462	-0.1956	0.8144	0.0121
2.8715	-0.1940	0.8134	0.0141
2.7169	-0.1924	0.8125	0.0161
2.5787	-0.1907	0.8116	0.0181
2.4539	-0.1889	0.8106	0.0202
2.3404	-0.1870	0.8095	0.0225
2.2364	-0.1850	0.8085	0.0246
2.1405	-0.1827	0.8075	0.0269
2.0516	-0.1801	0.8064	0.0294
1.9688	-0.1773	0.8051	0.0321
1.8912	-0.1742	0.8037	0.0350
1.8183	-0.1708	0.8022	0.0382
1.7495	-0.1669	0.8006	0.0417
1.6843	-0.1627	0.7989	0.0454
1.6224	-0.1579	0.7970	0.0496
1.5633	-0.1527	0.7949	0.0541
1.5069	-0.1469	0.7926	0.0590
1.4527	-0.1405	0.7900	0.0646
1.4007	-0.1334	0.7871	0.0707
1.3506	-0.1254	0.7839	0.0777
1.3022	-0.1166	0.7802	0.0856
1.2554	-0.1067	0.7761	0.0946
1.2100	-0.0955	0.7714	0.1046
1.1658	-0.0830	0.7664	0.1153
1.1229	-0.0687	0.7619	0.1250
1.0810	-0.0521	0.7602	0.1286
1.0401	-0.0326	0.7478	0.1560
1.0000	-0.0097	0.6824	0.2927
0.9607	0.0170	0.6169	0.4314
0.9223	0.0078	0.6007	0.4445
0.8846	-0.0037	0.6116	0.4423
0.8477	-0.0214	0.6335	0.3973
0.8116	-0.0433	0.6601	0.3418
0.7762	-0.0681	0.6893	0.2803
0.7416	-0.0942	0.7207	0.2133
0.7078	-0.1207	0.7541	0.1418
0.6747	-0.1465	0.7892	0.0663
0.6424	-0.1711	0.8265	-0.0139
0.6108	-0.1940	0.8653	-0.0971
0.5800	-0.2140	0.9022	-0.1757
0.5500	-0.2310	0.9379	-0.2507
0.5208	-0.2456	0.9767	-0.3314
0.4924	-0.2571	1.0097	-0.3988
0.4648	-0.2655	1.0276	-0.4349



0.4380	-0.2716	1.0384	-0.4564
0.4120	-0.2759	1.0449	-0.4694
0.3868	-0.2779	1.0423	-0.4642
0.3624	-0.2781	1.0345	-0.4487
0.3388	-0.2770	1.0295	-0.4386
0.3160	-0.2747	1.0251	-0.4299
0.2940	-0.2710	1.0157	-0.4110
0.2729	-0.2660	1.0025	-0.3841
0.2525	-0.2601	0.9898	-0.3581
0.2330	-0.2533	0.9776	-0.3332
0.2142	-0.2457	0.9631	-0.3033
0.1963	-0.2373	0.9461	-0.2679
0.1792	-0.2283	0.9283	-0.2307
0.1628	-0.2190	0.9110	-0.1942
0.1473	-0.2093	0.8940	-0.1582
0.1326	-0.1993	0.8771	-0.1222
0.1186	-0.1893	0.8611	-0.0881
0.1055	-0.1793	0.8468	-0.0576
0.0931	-0.1695	0.8340	-0.0300
0.0815	-0.1596	0.8213	-0.0029
0.0707	-0.1498	0.8087	0.0243
0.0606	-0.1401	0.7969	0.0498
0.0513	-0.1305	0.7860	0.0731
0.0427	-0.1209	0.7740	0.0990
0.0349	-0.1111	0.7580	0.1334
0.0279	-0.1010	0.7374	0.1776
0.0215	-0.0907	0.7128	0.2301
0.0159	-0.0801	0.6810	0.2979
0.0110	-0.0685	0.6336	0.3969
0.0070	-0.0555	0.5676	0.5309
0.0039	-0.0413	0.4920	0.6758
0.0017	-0.0261	0.4271	0.7901
0.0004	-0.0105	0.4021	0.8314
0.0000	0.0053	0.4382	0.7713
0.0004	0.0212	0.5249	0.6140
0.0016	0.0369	0.6352	0.3936
0.0037	0.0526	0.7509	0.1487
0.0066	0.0679	0.8639	-0.0942
0.0103	0.0827	0.9701	-0.3177
0.0149	0.0966	1.0679	-0.5147
0.0204	0.1097	1.1441	-0.6604
0.0267	0.1220	1.1969	-0.7565
0.0337	0.1337	1.2419	-0.8351
0.0416	0.1445	1.2799	-0.8992
0.0502	0.1546	1.3107	-0.9494
0.0597	0.1640	1.3342	-0.9865
0.0699	0.1726	1.3480	-1.0080
0.0809	0.1806	1.3527	-1.0153
0.0927	0.1879	1.3530	-1.0158
0.1052	0.1948	1.3516	-1.0137
0.1186	0.2011	1.3487	-1.0092
0.1327	0.2071	1.3445	-1.0026
0.1476	0.2126	1.3393	-0.9946
0.1633	0.2177	1.3340	-0.9863
0.1797	0.2225	1.3290	-0.9784
0.1970	0.2269	1.3245	-0.9713
0.2150	0.2308	1.3204	-0.9649
0.2338	0.2343	1.3165	-0.9586
0.2534	0.2372	1.3124	-0.9520
0.2738	0.2397	1.3081	-0.9451
0.2950	0.2417	1.3034	-0.9375
0.3169	0.2432	1.2978	-0.9285
0.3397	0.2441	1.2901	-0.9160
0.3632	0.2444	1.2784	-0.8964
0.3876	0.2441	1.2592	-0.8646
0.4127	0.2431	1.2275	-0.8103
0.4386	0.2412	1.1784	-0.7233
0.4653	0.2385	1.1131	-0.6021
0.4928	0.2349	1.0467	-0.4730
0.5211	0.2302	1.0046	-0.3884
0.5502	0.2244	0.9954	-0.3696
0.5801	0.2175	0.9968	-0.3726
0.6108	0.2093	0.9987	-0.3602
0.6422	0.1997	0.9803	-0.3388
0.6745	0.1886	0.9690	-0.3154
0.7075	0.1759	0.9557	-0.2880
0.7413	0.1613	0.9395	-0.2542
0.7760	0.1446	0.9194	-0.2119
0.8114	0.1255	0.8945	-0.1592
0.8475	0.1041	0.8659	-0.0984
0.8845	0.0807	0.8354	-0.0330
0.9222	0.0556	0.8043	0.0337
0.9607	0.0299	0.7732	0.1007
1.0000	0.0009	0.7292	0.1952
1.0401	-0.0219	0.7067	0.2432
1.0810	-0.0415	0.7230	0.2085
1.1229	-0.0580	0.7486	0.1707
1.1659	-0.0723	0.7529	0.1444
1.2100	-0.0849	0.7620	0.1248
1.2554	-0.0960	0.7691	0.1095
1.3022	-0.1059	0.7749	0.0971
1.3506	-0.1148	0.7797	0.0868
1.4008	-0.1227	0.7837	0.0781
1.4528	-0.1299	0.7872	0.0706
1.5069	-0.1363	0.7903	0.0640
1.5634	-0.1421	0.7930	0.0581
1.6224	-0.1473	0.7954	0.0529
1.6844	-0.1520	0.7976	0.0483
1.7495	-0.1563	0.7995	0.0440
1.8184	-0.1601	0.8013	0.0401
1.8913	-0.1636	0.8030	0.0366
1.9688	-0.1667	0.8045	0.0333
2.0517	-0.1695	0.8059	0.0302
2.1406	-0.1720	0.8072	0.0274
2.2364	-0.1743	0.8084	0.0250
2.3404	-0.1764	0.8095	0.0227
2.4539	-0.1783	0.8106	0.0203
2.5787	-0.1800	0.8116	0.0180
2.7170	-0.1817	0.8126	0.0160
2.8715	-0.1833	0.8135	0.0141
3.0462	-0.1850	0.8143	0.0122
3.2460	-0.1867	0.8151	0.0105
3.4778	-0.1885	0.8131	0.0149



SECTION CHARACTERISTICS

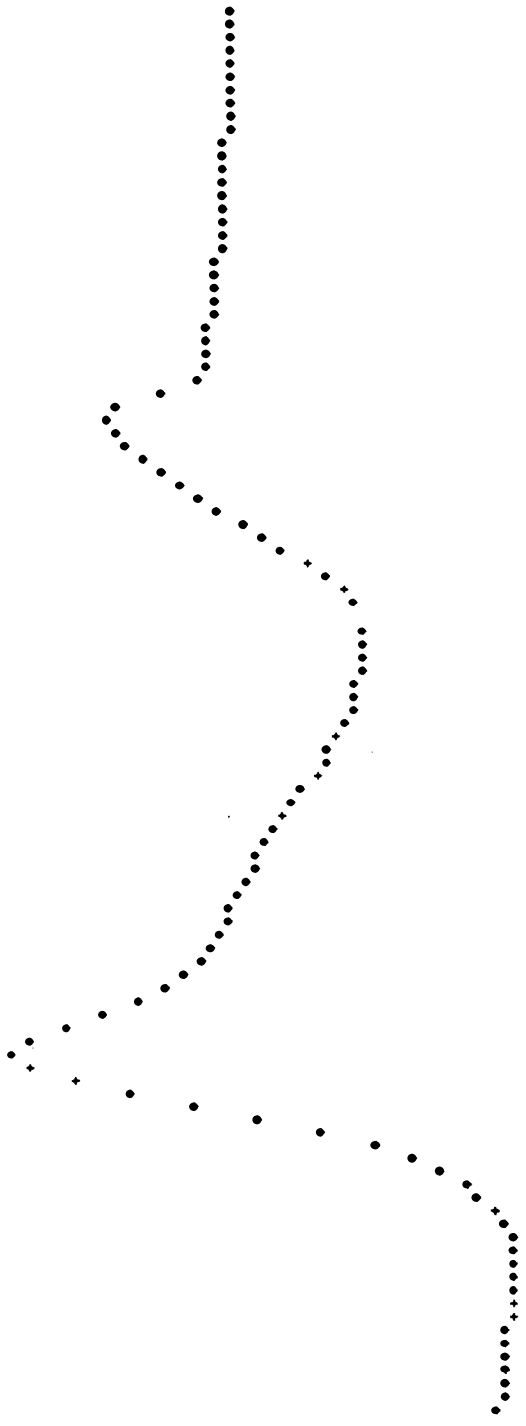
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
10.79999	0.47863	-0.00579	-0.19492

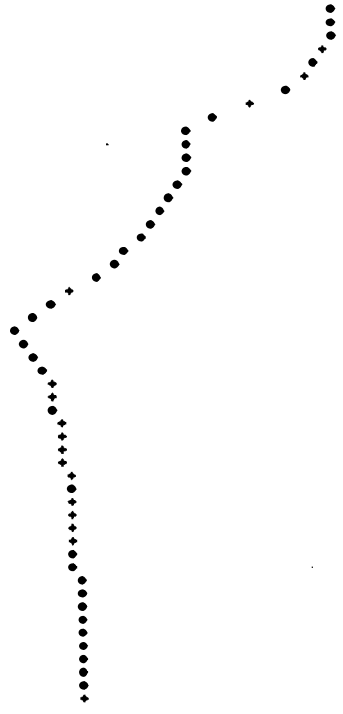
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4779	-0.1776	0.8138	0.0151
3.2440	-0.1763	0.8150	0.0107
3.0443	-0.1750	0.8143	0.0123
2.8716	-0.1737	0.8133	0.0143
2.7178	-0.1725	0.8124	0.0163
2.5788	-0.1712	0.8115	0.0183
2.4548	-0.1697	0.8105	0.0204
2.3402	-0.1681	0.8095	0.0227
2.2365	-0.1663	0.8085	0.0248
2.1406	-0.1643	0.8074	0.0271
2.0517	-0.1621	0.8062	0.0296
1.9689	-0.1596	0.8050	0.0324
1.8913	-0.1567	0.8036	0.0354
1.8184	-0.1536	0.8021	0.0386
1.7496	-0.1501	0.8004	0.0421
1.6844	-0.1461	0.7987	0.0459
1.6224	-0.1417	0.7967	0.0501
1.5634	-0.1369	0.7946	0.0546
1.5069	-0.1314	0.7923	0.0597
1.4528	-0.1254	0.7897	0.0653
1.4008	-0.1187	0.7868	0.0715
1.3507	-0.1112	0.7835	0.0786
1.3023	-0.1028	0.7798	0.0865
1.2554	-0.0934	0.7756	0.0955
1.2100	-0.0828	0.7709	0.1056
1.1659	-0.0709	0.7659	0.1164
1.1229	-0.0573	0.7615	0.1260
1.0810	-0.0415	0.7599	0.1293
1.0401	-0.0228	0.7473	0.1563
1.0000	-0.0010	0.6829	0.2936
0.9607	0.0148	0.6160	0.4332
0.9222	0.0147	0.5994	0.4671
0.8846	0.0045	0.6097	0.4461
0.8477	-0.0125	0.6311	0.4021
0.8116	-0.0337	0.6574	0.3475
0.7762	-0.0576	0.6863	0.2865
0.7416	-0.0829	0.7176	0.2200
0.7078	-0.1086	0.7508	0.1489
0.6748	-0.1337	0.7858	0.0737
0.6425	-0.1577	0.8229	-0.0062
0.6109	-0.1800	0.8616	-0.0892
0.5802	-0.1997	0.8988	-0.1683
0.5502	-0.2165	0.9346	-0.2438
0.5210	-0.2309	0.9734	-0.3246
0.4926	-0.2425	1.0067	-0.3927
0.4650	-0.2589	1.0250	-0.4297
0.4382	-0.2572	1.0356	-0.4509
0.4122	-0.2617	1.0416	-0.4629
0.3870	-0.2648	1.0390	-0.4576
0.3626	-0.2646	1.0315	-0.4427
0.3390	-0.2640	1.0266	-0.4328
0.3162	-0.2622	1.0225	-0.4245
0.2942	-0.2591	1.0139	-0.4073
0.2731	-0.2548	1.0017	-0.3826
0.2527	-0.2496	0.9898	-0.3581
0.2332	-0.2436	0.9781	-0.3342
0.2144	-0.2368	0.9643	-0.3058
0.1965	-0.2293	0.9488	-0.2719
0.1794	-0.2212	0.9309	-0.2361
0.1630	-0.2128	0.9143	-0.2012
0.1475	-0.2040	0.8980	-0.1667
0.1327	-0.1950	0.8817	-0.1321
0.1188	-0.1858	0.8663	-0.0993
0.1056	-0.1768	0.8528	-0.0703
0.0932	-0.1678	0.8406	-0.0442
0.0816	-0.1588	0.8286	-0.0185
0.0708	-0.1498	0.8166	0.0072
0.0607	-0.1409	0.8056	0.0311
0.0514	-0.1321	0.7956	0.0525
0.0428	-0.1232	0.7845	0.0764
0.0350	-0.1141	0.7694	0.1089
0.0279	-0.1046	0.7495	0.1517
0.0216	-0.0950	0.7253	0.2035
0.0159	-0.0850	0.6934	0.2716
0.0111	-0.0748	0.6453	0.3727
0.0070	-0.0647	0.5778	0.5107
0.0039	-0.0482	0.4998	0.6613
0.0017	-0.0338	0.4316	0.7826
0.0004	-0.0189	0.4022	0.8311
0.0000	-0.0038	0.4342	0.7781
0.0004	0.0113	0.5178	0.6274
0.0016	0.0264	0.6258	0.4132
0.0037	0.0413	0.7391	0.1739
0.0065	0.0560	0.8497	-0.0638
0.0103	0.0702	0.9535	-0.2833
0.0149	0.0837	1.0486	-0.4768
0.0203	0.0964	1.1250	-0.6247
0.0266	0.1084	1.1798	-0.7258
0.0336	0.1197	1.2248	-0.8056
0.0414	0.1304	1.2623	-0.8698
0.0501	0.1403	1.2922	-0.9193
0.0595	0.1496	1.3147	-0.9558
0.0697	0.1582	1.3281	-0.9771
0.0807	0.1662	1.3330	-0.9847
0.0925	0.1736	1.3340	-0.9863
0.1050	0.1806	1.3338	-0.9859
0.1184	0.1871	1.3321	-0.9834
0.1325	0.1932	1.3291	-0.9787
0.1474	0.1989	1.3252	-0.9725
0.1631	0.2043	1.3210	-0.9658
0.1795	0.2093	1.3171	-0.9596
0.1968	0.2139	1.3136	-0.9540
0.2148	0.2181	1.3105	-0.9490
0.2336	0.2219	1.3074	-0.9441
0.2532	0.2252	1.3042	-0.9389
0.2736	0.2281	1.3008	-0.9334



0.2948	0.2305	1.2971	-0.9273
0.3167	0.2324	1.2926	-0.9200
0.3395	0.2337	1.2864	-0.9099
0.3630	0.2345	1.2770	-0.8943
0.3874	0.2348	1.2613	-0.8681
0.4125	0.2343	1.2345	-0.8225
0.4384	0.2330	1.1910	-0.7499
0.4651	0.2310	1.1287	-0.6317
0.4927	0.2281	1.0591	-0.4974
0.5210	0.2241	1.0099	-0.3983
0.5500	0.2192	0.9973	-0.3735
0.5799	0.2132	1.0014	-0.3818
0.6106	0.2060	0.9970	-0.3729
0.6421	0.1974	0.9866	-0.3516
0.6743	0.1874	0.9754	-0.3286
0.7074	0.1759	0.9624	-0.3018
0.7412	0.1624	0.9460	-0.2678
0.7759	0.1468	0.9253	-0.2244
0.8113	0.1289	0.8994	-0.1697
0.8475	0.1084	0.8695	-0.1062
0.8844	0.0861	0.8376	-0.0378
0.9222	0.0620	0.8053	0.0316
0.9607	0.0374	0.7735	0.1000
1.0000	0.0096	0.7293	0.1950
1.0401	-0.0122	0.7066	0.2434
1.0810	-0.0389	0.7227	0.2091
1.1229	-0.0467	0.7402	0.1715
1.1659	-0.0603	0.7525	0.1453
1.2100	-0.0722	0.7616	0.1257
1.2554	-0.0828	0.7687	0.1103
1.3023	-0.0922	0.7745	0.0979
1.3507	-0.1006	0.7793	0.0876
1.4008	-0.1081	0.7834	0.0788
1.4528	-0.1148	0.7869	0.0712
1.5069	-0.1208	0.7900	0.0645
1.5634	-0.1262	0.7927	0.0586
1.6225	-0.1311	0.7952	0.0534
1.6844	-0.1355	0.7974	0.0486
1.7496	-0.1394	0.7994	0.0443
1.8184	-0.1430	0.8012	0.0404
1.8913	-0.1461	0.8029	0.0368
1.9689	-0.1490	0.8044	0.0335
2.0517	-0.1515	0.8059	0.0304
2.1406	-0.1537	0.8072	0.0276
2.2365	-0.1557	0.8083	0.0251
2.3405	-0.1575	0.8094	0.0228
2.4540	-0.1591	0.8105	0.0204
2.5788	-0.1605	0.8115	0.0182
2.7178	-0.1619	0.8125	0.0161
2.8716	-0.1631	0.8134	0.0142
3.0463	-0.1644	0.8143	0.0124
3.2461	-0.1657	0.8150	0.0107
3.4779	-0.1669	0.8130	0.0150



SECTION CHARACTERISTICS

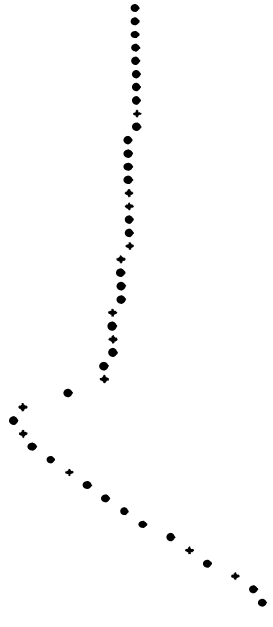
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
11.69999	0.47821	-0.00760	-0.28070

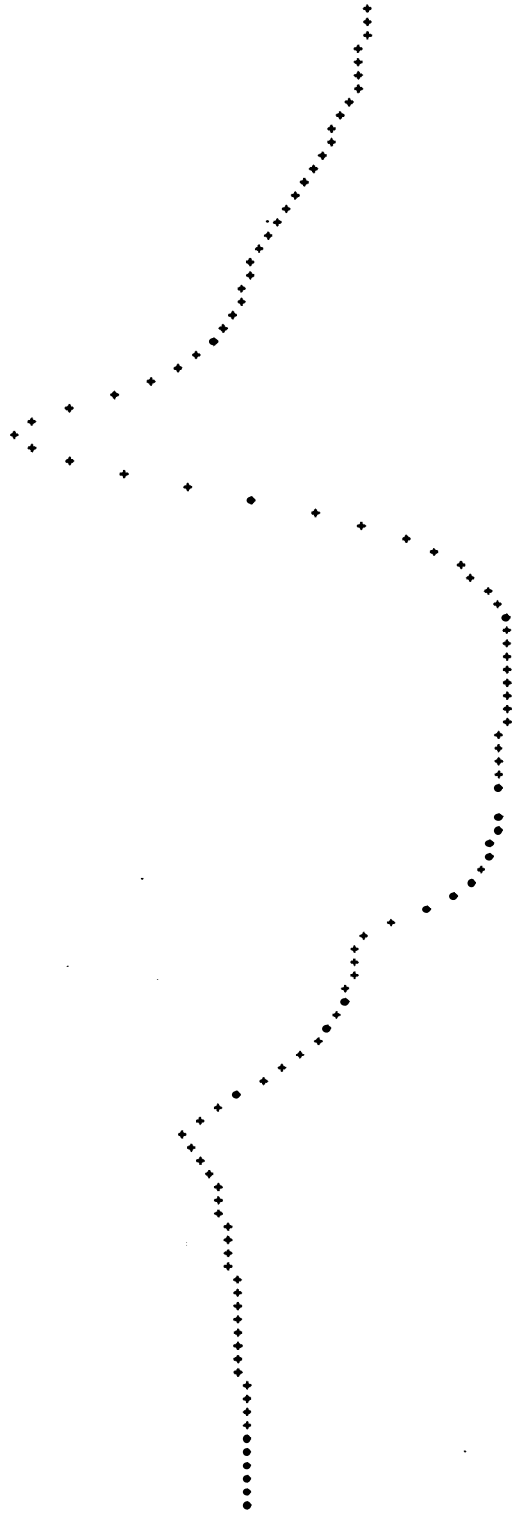
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4780	-0.1625	0.8129	0.0152
3.2462	-0.1614	0.8150	0.0107
3.0464	-0.1602	0.8142	0.0124
2.8717	-0.1590	0.8133	0.0144
2.7171	-0.1579	0.8123	0.0165
2.5789	-0.1566	0.8114	0.0185
2.4541	-0.1553	0.8104	0.0206
2.3406	-0.1538	0.8094	0.0228
2.2366	-0.1521	0.8084	0.0249
2.1407	-0.1502	0.8074	0.0272
2.0518	-0.1481	0.8062	0.0298
1.9689	-0.1457	0.8049	0.0325
1.8914	-0.1430	0.8035	0.0356
1.8185	-0.1399	0.8019	0.0389
1.7496	-0.1366	0.8003	0.0424
1.6845	-0.1328	0.7985	0.0463
1.6225	-0.1286	0.7965	0.0505
1.5634	-0.1239	0.7943	0.0552
1.5070	-0.1187	0.7920	0.0603
1.4529	-0.1129	0.7893	0.0660
1.4008	-0.1065	0.7864	0.0724
1.3507	-0.0993	0.7830	0.0795
1.3023	-0.0912	0.7793	0.0876
1.2555	-0.0822	0.7750	0.0967
1.2100	-0.0720	0.7703	0.1069
1.1659	-0.0605	0.7653	0.1178
1.1229	-0.0474	0.7600	0.1274
1.0810	-0.0322	0.7593	0.1306
1.0401	-0.0142	0.7469	0.1573
1.0000	0.0068	0.6823	0.2951
0.9607	0.0220	0.6149	0.4254
0.9222	0.0221	0.5988	0.4700
0.8846	0.0126	0.6077	0.4502
0.8477	-0.0035	0.6285	0.4074
0.8116	-0.0237	0.6544	0.3538
0.7763	-0.0466	0.6830	0.2936
0.7417	-0.0709	0.7140	0.2277
0.7079	-0.0957	0.7471	0.1569
0.6748	-0.1200	0.7820	0.0819
0.6426	-0.1433	0.8190	0.0022
0.6110	-0.1650	0.8576	-0.0807
0.5803	-0.1842	0.8951	-0.1605
0.5503	-0.2008	0.9312	-0.2368
0.5211	-0.2150	0.9702	-0.3179
0.4927	-0.2265	1.0048	-0.3872
0.4651	-0.2350	1.0229	-0.4254



0.4384	-0.2414	1.0332	-0.4461
0.4124	-0.2460	1.0386	-0.4568
0.3872	-0.2486	1.0358	-0.4512
0.3628	-0.2496	1.0285	-0.4367
0.3392	-0.2494	1.0237	-0.4271
0.3165	-0.2481	1.0200	-0.4199
0.2945	-0.2456	1.0122	-0.4038
0.2733	-0.2420	1.0008	-0.3806
0.2530	-0.2375	0.9894	-0.3575
0.2334	-0.2324	0.9785	-0.3349
0.2147	-0.2264	0.9654	-0.3081
0.1967	-0.2198	0.9499	-0.2758
0.1796	-0.2127	0.9337	-0.2419
0.1632	-0.2051	0.9179	-0.2088
0.1477	-0.1973	0.9024	-0.1760
0.1329	-0.1893	0.8869	-0.1431
0.1190	-0.1811	0.8723	-0.1120
0.1058	-0.1730	0.8595	-0.0847
0.0934	-0.1649	0.8481	-0.0604
0.0818	-0.1568	0.8370	-0.0365
0.0709	-0.1487	0.8258	-0.0125
0.0608	-0.1406	0.8157	0.0093
0.0515	-0.1326	0.8068	0.0284
0.0429	-0.1245	0.7969	0.0496
0.0351	-0.1161	0.7829	0.0798
0.0280	-0.1075	0.7639	0.1208
0.0216	-0.0985	0.7402	0.1717
0.0160	-0.0891	0.7081	0.2403
0.0111	-0.0788	0.6591	0.3439
0.0071	-0.0672	0.5898	0.4864
0.0039	-0.0544	0.5092	0.6438
0.0017	-0.0407	0.4371	0.7732
0.0004	-0.0265	0.4026	0.8384
0.0000	-0.0122	0.4298	0.7856
0.0004	0.0022	0.5098	0.6427
0.0016	0.0165	0.6147	0.4358
0.0037	0.0308	0.7252	0.2038
0.0065	0.0448	0.8327	-0.0274
0.0102	0.0585	0.9337	-0.2419
0.0148	0.0716	1.0262	-0.4321
0.0202	0.0839	1.1032	-0.5831
0.0264	0.0954	1.1603	-0.6982
0.0334	0.1067	1.2049	-0.7788
0.0413	0.1171	1.2413	-0.8342
0.0499	0.1270	1.2700	-0.8827
0.0593	0.1362	1.2915	-0.9182
0.0695	0.1448	1.3044	-0.9392
0.0805	0.1529	1.3095	-0.9474
0.0922	0.1605	1.3115	-0.9506
0.1048	0.1676	1.3128	-0.9526
0.1181	0.1743	1.3128	-0.9527
0.1322	0.1807	1.3114	-0.9505
0.1471	0.1866	1.3090	-0.9466
0.1628	0.1922	1.3062	-0.9420
0.1792	0.1975	1.3034	-0.9376
0.1965	0.2024	1.3010	-0.9337
0.2145	0.2069	1.2988	-0.9301
0.2333	0.2110	1.2966	-0.9265
0.2529	0.2147	1.2941	-0.9225
0.2733	0.2179	1.2914	-0.9180
0.2945	0.2207	1.2883	-0.9129
0.3165	0.2230	1.2844	-0.9066
0.3392	0.2248	1.2791	-0.8978
0.3628	0.2261	1.2711	-0.8846
0.3871	0.2268	1.2583	-0.8638
0.4123	0.2269	1.2365	-0.8259
0.4382	0.2262	1.2003	-0.7626
0.4649	0.2249	1.1460	-0.6639
0.4924	0.2227	1.0786	-0.5357
0.5207	0.2195	1.0219	-0.4233
0.5498	0.2154	1.0010	-0.3812
0.5797	0.2103	1.0049	-0.3890
0.6104	0.2040	1.0039	-0.3869
0.6419	0.1964	0.9941	-0.3669
0.6742	0.1875	0.9830	-0.3442
0.7072	0.1770	0.9702	-0.3179
0.7411	0.1646	0.9536	-0.2835
0.7757	0.1500	0.9321	-0.2386
0.8112	0.1330	0.9050	-0.1815
0.8474	0.1134	0.8735	-0.1146
0.8844	0.0917	0.8400	-0.0429
0.9221	0.0684	0.8062	0.0297
0.9607	0.0444	0.7737	0.0996
1.0000	0.0175	0.7292	0.1951
1.0401	-0.0035	0.7044	0.2438
1.0810	-0.0215	0.7224	0.2097
1.1229	-0.0367	0.7398	0.1724
1.1659	-0.0498	0.7528	0.1462
1.2101	-0.0613	0.7612	0.1266
1.2555	-0.0714	0.7683	0.1112
1.3023	-0.0805	0.7741	0.0987
1.3507	-0.0885	0.7790	0.0883
1.4009	-0.0958	0.7831	0.0794
1.4529	-0.1022	0.7867	0.0718
1.5070	-0.1080	0.7898	0.0650
1.5635	-0.1132	0.7926	0.0590
1.6225	-0.1179	0.7950	0.0537
1.6845	-0.1221	0.7973	0.0489
1.7497	-0.1259	0.7993	0.0445
1.8185	-0.1292	0.8012	0.0405
1.8914	-0.1322	0.8029	0.0369
1.9690	-0.1349	0.8044	0.0335
2.0518	-0.1373	0.8058	0.0305
2.1407	-0.1395	0.8071	0.0276
2.2366	-0.1414	0.8083	0.0252
2.3406	-0.1430	0.8094	0.0228
2.4541	-0.1445	0.8105	0.0205
2.5789	-0.1459	0.8115	0.0183
2.7171	-0.1471	0.8124	0.0163
2.8717	-0.1483	0.8133	0.0144
3.0464	-0.1495	0.8142	0.0125
3.2462	-0.1506	0.8150	0.0107
3.4780	-0.1517	0.8130	0.0151



SECTION CHARACTERISTICS

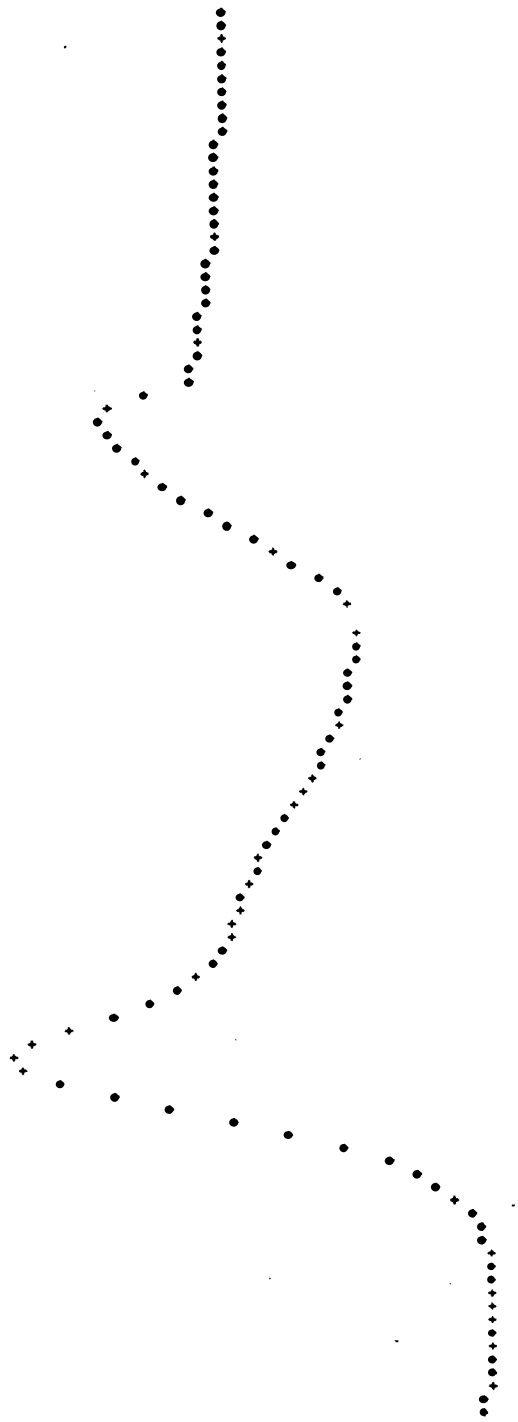
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
12.59999	0.47628	-0.00920	-0.20648

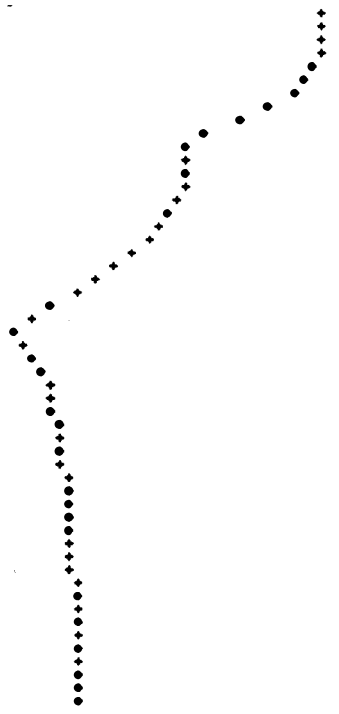
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4782	-0.1507	0.8129	0.0154
3.2463	-0.1495	0.8151	0.0106
3.0465	-0.1482	0.8142	0.0124
2.8718	-0.1470	0.8133	0.0145
2.7172	-0.1458	0.8123	0.0165
2.5790	-0.1445	0.8114	0.0184
2.4542	-0.1431	0.8105	0.0205
2.3407	-0.1415	0.8095	0.0226
2.2367	-0.1398	0.8085	0.0248
2.1408	-0.1379	0.8074	0.0271
2.0519	-0.1358	0.8062	0.0297
1.9698	-0.1335	0.8049	0.0325
1.8915	-0.1308	0.8035	0.0355
1.8185	-0.1278	0.8019	0.0389
1.7497	-0.1245	0.8002	0.0425
1.6845	-0.1209	0.7984	0.0465
1.6226	-0.1168	0.7964	0.0508
1.5635	-0.1122	0.7942	0.0556
1.5071	-0.1072	0.7917	0.0608
1.4529	-0.1016	0.7890	0.0666
1.4009	-0.0953	0.7860	0.0731
1.3508	-0.0884	0.7826	0.0804
1.3024	-0.0806	0.7788	0.0887
1.2555	-0.0719	0.7745	0.0979
1.2101	-0.0620	0.7697	0.1083
1.1659	-0.0510	0.7646	0.1193
1.1230	-0.0383	0.7600	0.1290
1.0811	-0.0237	0.7585	0.1323
1.0401	-0.0064	0.7463	0.1586
1.0000	0.0139	0.6816	0.2965
0.9607	0.0284	0.6142	0.4369
0.9222	0.0287	0.5969	0.4722
0.8845	0.0199	0.6057	0.4543
0.8477	0.0047	0.6259	0.4130
0.8116	-0.0145	0.6512	0.3604
0.7763	-0.0364	0.6795	0.3009
0.7417	-0.0597	0.7102	0.2358
0.7079	-0.0835	0.7428	0.1659
0.6749	-0.1078	0.7775	0.0915
0.6427	-0.1295	0.8146	0.0115
0.6112	-0.1506	0.8534	-0.0717
0.5804	-0.1693	0.8912	-0.1522
0.5505	-0.1856	0.9278	-0.2295
0.5213	-0.1996	0.9669	-0.3118
0.4929	-0.2110	1.0012	-0.3815
0.4653	-0.2195	1.0209	-0.4213
0.4385	-0.2260	1.0310	-0.4417
0.4126	-0.2307	1.0357	-0.4511
0.3874	-0.2336	1.0328	-0.4452
0.3630	-0.2348	1.0259	-0.4314
0.3394	-0.2350	1.0213	-0.4222
0.3167	-0.2342	1.0177	-0.4149
0.2947	-0.2323	1.0104	-0.4001
0.2736	-0.2293	0.9997	-0.3784
0.2532	-0.2255	0.9889	-0.3565
0.2336	-0.2211	0.9787	-0.3354
0.2149	-0.2159	0.9666	-0.3105
0.1969	-0.2102	0.9519	-0.2801
0.1798	-0.2039	0.9366	-0.2480
0.1635	-0.1973	0.9218	-0.2169
0.1479	-0.1904	0.9071	-0.1860
0.1331	-0.1832	0.8924	-0.1549
0.1192	-0.1760	0.8787	-0.1257
0.1060	-0.1687	0.8668	-0.1004
0.0936	-0.1615	0.8564	-0.0781
0.0819	-0.1543	0.8462	-0.0563
0.0711	-0.1470	0.8360	-0.0344
0.0610	-0.1397	0.8269	-0.0148
0.0516	-0.1325	0.8193	0.0015
0.0430	-0.1251	0.8109	0.0197
0.0352	-0.1175	0.7982	0.0469
0.0281	-0.1095	0.7802	0.0856
0.0217	-0.1012	0.7571	0.1353
0.0160	-0.0924	0.7249	0.2044
0.0111	-0.0828	0.6749	0.3106
0.0071	-0.0718	0.6038	0.4583
0.0039	-0.0597	0.5202	0.6230
0.0017	-0.0468	0.4438	0.7617
0.0004	-0.0333	0.4036	0.8289
0.0000	-0.0197	0.4249	0.7938
0.0004	-0.0060	0.5006	0.6599
0.0016	0.0075	0.6022	0.4615
0.0037	0.0211	0.7095	0.2373
0.0065	0.0345	0.8140	0.0129
0.0102	0.0476	0.9121	-0.1966
0.0147	0.0602	1.0018	-0.3827
0.0201	0.0722	1.0798	-0.5388
0.0263	0.0836	1.1395	-0.6518
0.0333	0.0944	1.1829	-0.7315
0.0411	0.1046	1.2176	-0.7930
0.0497	0.1143	1.2449	-0.8403
0.0591	0.1234	1.2653	-0.8749
0.0693	0.1320	1.2779	-0.8958
0.0802	0.1401	1.2833	-0.9048
0.0920	0.1478	1.2865	-0.9100
0.1045	0.1551	1.2894	-0.9148
0.1179	0.1619	1.2914	-0.9180
0.1320	0.1684	1.2918	-0.9187
0.1468	0.1746	1.2910	-0.9174
0.1625	0.1804	1.2896	-0.9151
0.1790	0.1859	1.2881	-0.9127
0.1962	0.1910	1.2868	-0.9105
0.2142	0.1958	1.2854	-0.9083
0.2330	0.2001	1.2839	-0.9058
0.2527	0.2041	1.2822	-0.9029
0.2730	0.2077	1.2800	-0.8993



0.2942	0.2108	1.2774	-0.8950
0.3162	0.2135	1.2741	-0.8895
0.3390	0.2157	1.2695	-0.8819
0.3625	0.2174	1.2629	-0.8708
0.3869	0.2186	1.2526	-0.8535
0.4120	0.2192	1.2356	-0.8243
0.4380	0.2191	1.2071	-0.7746
0.4647	0.2183	1.1624	-0.6942
0.4922	0.2167	1.1017	-0.5803
0.5205	0.2143	1.0409	-0.4615
0.5496	0.2109	1.0000	-0.3953
0.5795	0.2066	1.0069	-0.3930
0.6102	0.2013	1.0095	-0.3983
0.6417	0.1946	1.0017	-0.3826
0.6740	0.1867	0.9908	-0.3603
0.7071	0.1772	0.9783	-0.3346
0.7409	0.1658	0.9614	-0.2997
0.7756	0.1522	0.9398	-0.2531
0.8111	0.1361	0.9106	-0.1933
0.8473	0.1173	0.8774	-0.1229
0.8843	0.0964	0.8422	-0.0476
0.9221	0.0738	0.8069	0.0281
0.9607	0.0506	0.7737	0.0996
1.0000	0.0247	0.7291	0.1954
1.0401	0.0044	0.7061	0.2444
1.0811	-0.0129	0.7220	0.2105
1.1230	-0.0276	0.7394	0.1734
1.1660	-0.0402	0.7515	0.1473
1.2101	-0.0513	0.7607	0.1276
1.2555	-0.0611	0.7679	0.1121
1.3024	-0.0698	0.7738	0.0995
1.3508	-0.0776	0.7787	0.0889
1.4009	-0.0846	0.7828	0.0799
1.4529	-0.0908	0.7865	0.0721
1.5071	-0.0964	0.7897	0.0653
1.5636	-0.1015	0.7925	0.0592
1.6226	-0.1060	0.7950	0.0538
1.6846	-0.1101	0.7973	0.0489
1.7497	-0.1138	0.7993	0.0444
1.8186	-0.1171	0.8012	0.0404
1.8915	-0.1200	0.8029	0.0367
1.9690	-0.1227	0.8045	0.0334
2.0519	-0.1250	0.8059	0.0303
2.1408	-0.1272	0.8072	0.0275
2.2367	-0.1291	0.8084	0.0250
2.3407	-0.1308	0.8095	0.0227
2.4542	-0.1323	0.8105	0.0204
2.5790	-0.1337	0.8115	0.0182
2.7172	-0.1350	0.8124	0.0163
2.8718	-0.1362	0.8133	0.0144
3.0465	-0.1374	0.8142	0.0125
3.2463	-0.1387	0.8150	0.0107
3.4782	-0.1399	0.8129	0.0152



SECTION CHARACTERISTICS

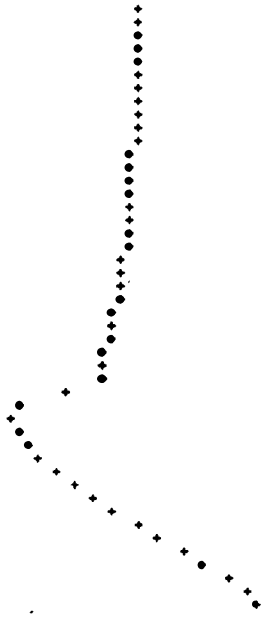
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
13.49999	0.47138	-0.01073	-0.21896

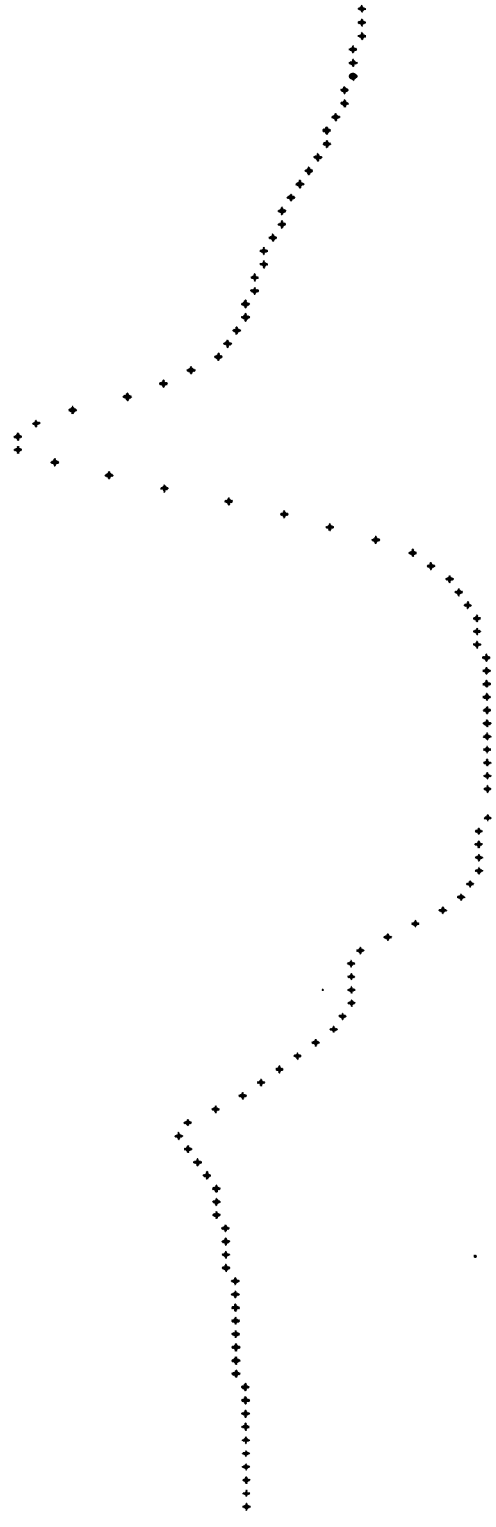
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4784	-0.1397	0.8129	0.0154
3.2465	-0.1384	0.8152	0.0102
3.0467	-0.1370	0.8143	0.0122
2.8720	-0.1357	0.8133	0.0143
2.7174	-0.1344	0.8124	0.0164
2.5791	-0.1330	0.8115	0.0182
2.4543	-0.1316	0.8107	0.0201
2.3408	-0.1300	0.8097	0.0220
2.2368	-0.1282	0.8087	0.0242
2.1409	-0.1263	0.8076	0.0266
2.0520	-0.1242	0.8064	0.0292
1.9691	-0.1218	0.8051	0.0320
1.8916	-0.1192	0.8037	0.0351
1.8186	-0.1163	0.8021	0.0386
1.7498	-0.1131	0.8004	0.0422
1.6846	-0.1095	0.7985	0.0462
1.6227	-0.1055	0.7965	0.0506
1.5636	-0.1011	0.7942	0.0555
1.5071	-0.0962	0.7917	0.0609
1.4530	-0.0908	0.7889	0.0669
1.4010	-0.0847	0.7858	0.0736
1.3508	-0.0780	0.7823	0.0811
1.3024	-0.0705	0.7784	0.0895
1.2556	-0.0621	0.7740	0.0990
1.2101	-0.0526	0.7691	0.1096
1.1660	-0.0420	0.7638	0.1209
1.1230	-0.0298	0.7591	0.1311
1.0811	-0.0158	0.7574	0.1347
1.0401	0.0008	0.7454	0.1605
1.0000	0.0203	0.6818	0.2961
0.9607	0.0340	0.6145	0.4369
0.9222	0.0346	0.5961	0.4738
0.8845	0.0264	0.6039	0.4579
0.8477	0.0121	0.6234	0.4182
0.8116	-0.0061	0.6482	0.3667
0.7763	-0.0269	0.6761	0.3081
0.7418	-0.0492	0.7065	0.2437
0.7080	-0.0721	0.7388	0.1746
0.6750	-0.0946	0.7730	0.1010
0.6427	-0.1164	0.8096	0.0224
0.6113	-0.1367	0.8485	-0.0612
0.5805	-0.1550	0.8871	-0.1436
0.5506	-0.1709	0.9243	-0.2222
0.5214	-0.1847	0.9635	-0.3041
0.4931	-0.1958	0.9983	-0.3756
0.4655	-0.2043	1.0189	-0.4174



0.4387	-0.2108	1.0291	-0.4379
0.4128	-0.2156	1.0332	-0.4462
0.3876	-0.2187	1.0304	-0.4404
0.3632	-0.2203	1.0240	-0.4275
0.3397	-0.2208	1.0194	-0.4184
0.3169	-0.2204	1.0157	-0.4109
0.2949	-0.2198	1.0087	-0.3968
0.2738	-0.2166	0.9988	-0.3767
0.2534	-0.2135	0.9889	-0.3564
0.2339	-0.2097	0.9794	-0.3369
0.2151	-0.2053	0.9682	-0.3137
0.1972	-0.2003	0.9544	-0.2852
0.1800	-0.1949	0.9401	-0.2564
0.1637	-0.1891	0.9262	-0.2263
0.1481	-0.1831	0.9125	-0.1974
0.1333	-0.1768	0.8987	-0.1682
0.1193	-0.1704	0.8859	-0.1410
0.1061	-0.1640	0.8758	-0.1177
0.0937	-0.1576	0.8656	-0.0977
0.0821	-0.1512	0.8564	-0.0781
0.0712	-0.1446	0.8472	-0.0584
0.0611	-0.1381	0.8393	-0.0414
0.0517	-0.1316	0.8331	-0.0281
0.0431	-0.1250	0.8263	-0.0135
0.0352	-0.1181	0.8152	0.0104
0.0281	-0.1107	0.7984	0.0464
0.0217	-0.1031	0.7760	0.0947
0.0161	-0.0949	0.7437	0.1642
0.0112	-0.0858	0.6926	0.2732
0.0071	-0.0756	0.6194	0.4262
0.0039	-0.0642	0.5327	0.5991
0.0017	-0.0519	0.4517	0.7479
0.0004	-0.0392	0.4053	0.8261
0.0000	-0.0263	0.4201	0.8018
0.0004	-0.0134	0.4908	0.6779
0.0016	-0.0005	0.5887	0.4887
0.0037	0.0123	0.6928	0.2728
0.0065	0.0251	0.7942	0.0554
0.0101	0.0376	0.8895	-0.1488
0.0146	0.0498	0.9766	-0.3311
0.0199	0.0614	1.0555	-0.4905
0.0261	0.0724	1.1172	-0.6099
0.0331	0.0829	1.1589	-0.6877
0.0409	0.0928	1.1915	-0.7469
0.0495	0.1023	1.2177	-0.7932
0.0589	0.1113	1.2373	-0.8273
0.0690	0.1199	1.2496	-0.8483
0.0800	0.1280	1.2555	-0.8583
0.0917	0.1357	1.2599	-0.8657
0.1043	0.1430	1.2646	-0.8737
0.1176	0.1500	1.2684	-0.8800
0.1317	0.1566	1.2707	-0.8838
0.1466	0.1629	1.2715	-0.8852
0.1622	0.1689	1.2715	-0.8853
0.1787	0.1745	1.2713	-0.8848
0.1959	0.1799	1.2709	-0.8841
0.2139	0.1848	1.2703	-0.8832
0.2328	0.1894	1.2695	-0.8818
0.2524	0.1936	1.2683	-0.8798
0.2728	0.1975	1.2667	-0.8772
0.2940	0.2009	1.2647	-0.8739
0.3159	0.2039	1.2621	-0.8695
0.3387	0.2065	1.2586	-0.8636
0.3623	0.2086	1.2537	-0.8553
0.3866	0.2102	1.2462	-0.8425
0.4118	0.2112	1.2336	-0.8210
0.4377	0.2115	1.2122	-0.7835
0.4644	0.2113	1.1769	-0.7206
0.4920	0.2103	1.1248	-0.6242
0.5203	0.2085	1.0635	-0.5061
0.5494	0.2059	1.0183	-0.4160
0.5793	0.2024	1.0072	-0.3938
0.6100	0.1978	1.0116	-0.4025
0.6415	0.1921	1.0074	-0.3942
0.6738	0.1851	0.9970	-0.3730
0.7069	0.1766	0.9848	-0.3481
0.7408	0.1662	0.9682	-0.3138
0.7755	0.1535	0.9451	-0.2659
0.8109	0.1382	0.9153	-0.2034
0.8472	0.1203	0.8805	-0.1295
0.8842	0.1002	0.8436	-0.0506
0.9221	0.0784	0.8067	0.0285
0.9606	0.0560	0.7726	0.1019
1.0000	0.0318	0.7286	0.1965
1.0401	0.0116	0.7063	0.2440
1.0811	-0.0050	0.7220	0.2105
1.1230	-0.0191	0.7391	0.1748
1.1660	-0.0312	0.7512	0.1479
1.2101	-0.0419	0.7604	0.1282
1.2556	-0.0513	0.7677	0.1126
1.3024	-0.0597	0.7736	0.0998
1.3508	-0.0672	0.7786	0.0892
1.4010	-0.0740	0.7828	0.0800
1.4530	-0.0800	0.7865	0.0721
1.5072	-0.0854	0.7897	0.0651
1.5636	-0.0903	0.7926	0.0589
1.6227	-0.0947	0.7952	0.0534
1.6846	-0.0987	0.7975	0.0484
1.7498	-0.1023	0.7996	0.0439
1.8187	-0.1055	0.8015	0.0398
1.8916	-0.1084	0.8032	0.0362
1.9691	-0.1111	0.8048	0.0328
2.0520	-0.1134	0.8062	0.0297
2.1409	-0.1156	0.8075	0.0270
2.2368	-0.1175	0.8087	0.0244
2.3408	-0.1192	0.8098	0.0220
2.4543	-0.1208	0.8108	0.0199
2.5791	-0.1222	0.8117	0.0179
2.7174	-0.1236	0.8126	0.0160
2.8720	-0.1249	0.8134	0.0142
3.0467	-0.1262	0.8143	0.0123
3.2465	-0.1276	0.8152	0.0103
3.4784	-0.1289	0.8129	0.0152



SECTION CHARACTERISTICS

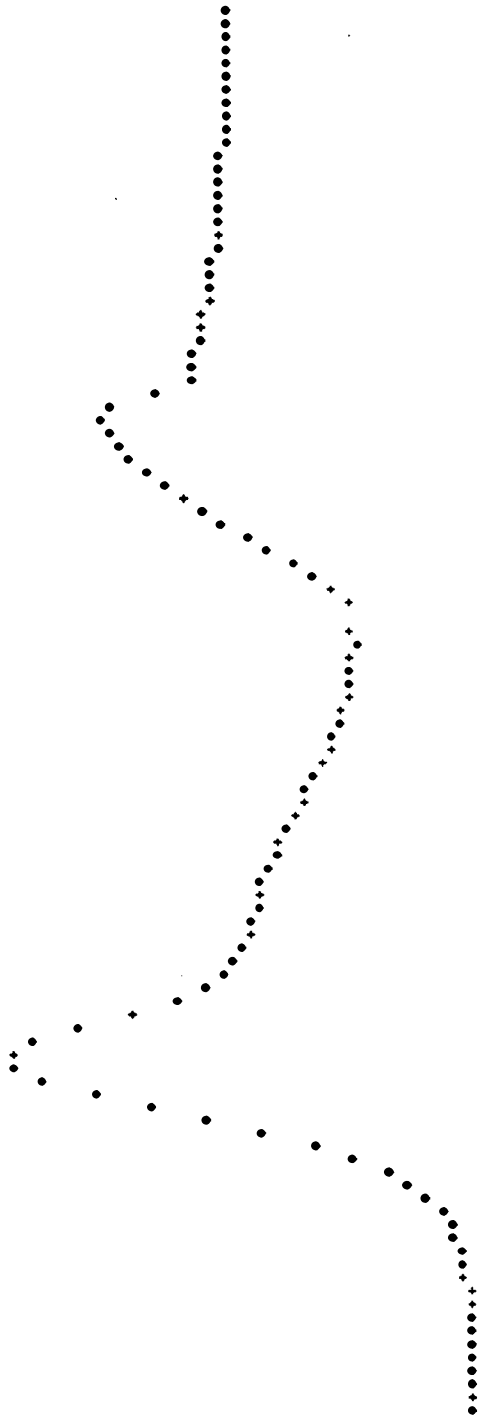
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
14.39999	0.46255	-0.012726	-0.21387

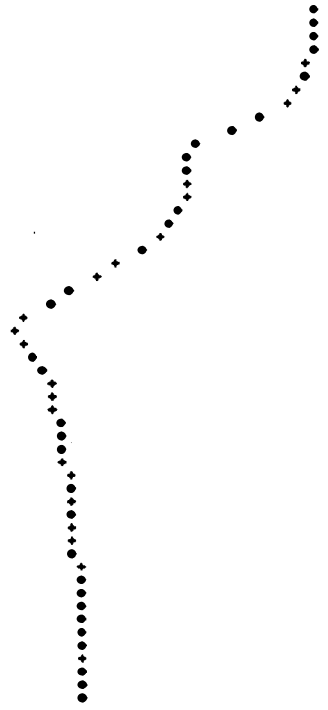
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4786	-0.1211	0.8131	0.0148
3.2467	-0.1204	0.8154	0.0098
3.0448	-0.1194	0.8144	0.0120
2.8721	-0.1184	0.8134	0.0143
2.7175	-0.1174	0.8124	0.0163
2.5793	-0.1164	0.8116	0.0180
2.4545	-0.1153	0.8109	0.0196
2.3409	-0.1140	0.8101	0.0214
2.2369	-0.1125	0.8091	0.0235
2.1410	-0.1109	0.8079	0.0260
2.0521	-0.1090	0.8067	0.0286
1.9692	-0.1069	0.8054	0.0313
1.8917	-0.1046	0.8040	0.0344
1.8188	-0.1020	0.8025	0.0377
1.7499	-0.0990	0.8007	0.0418
1.6847	-0.0957	0.7988	0.0465
1.6228	-0.0921	0.7967	0.0521
1.5637	-0.0880	0.7944	0.0591
1.5072	-0.0835	0.7918	0.0686
1.4531	-0.0784	0.7890	0.0668
1.4010	-0.0728	0.7857	0.0737
1.3509	-0.0665	0.7821	0.0814
1.3025	-0.0594	0.7781	0.0902
1.2556	-0.0515	0.7735	0.1000
1.2102	-0.0427	0.7684	0.1110
1.1660	-0.0326	0.7629	0.1228
1.1230	-0.0212	0.7570	0.1339
1.0811	-0.0079	0.7506	0.1385
1.0401	0.0077	0.7507	0.1491
1.0000	0.0260	0.6883	0.2823
0.9607	0.0391	0.6153	0.4344
0.9222	0.0398	0.5958	0.4744
0.8845	0.0323	0.6024	0.4609
0.8477	0.0188	0.6209	0.4231
0.8116	0.0016	0.6451	0.3730
0.7763	-0.0182	0.6726	0.3155
0.7418	-0.0395	0.7026	0.2519
0.7080	-0.0613	0.7347	0.1835
0.6751	-0.0829	0.7686	0.1106
0.6428	-0.1038	0.8047	0.0328
0.6114	-0.1234	0.8427	-0.0488
0.5807	-0.1411	0.8816	-0.1319
0.5507	-0.1567	0.9202	-0.2136
0.5216	-0.1701	0.9597	-0.2962
0.4932	-0.1810	0.9991	-0.3691
0.4657	-0.1895	1.0172	-0.4139
0.4389	-0.1960	1.0278	-0.4352
0.4129	-0.2008	1.0314	-0.4425
0.3878	-0.2040	1.0285	-0.4366
0.3634	-0.2059	1.0222	-0.4240
0.3399	-0.2067	1.0176	-0.4146
0.3171	-0.2067	1.0137	-0.4068
0.2951	-0.2057	1.0072	-0.3937
0.2740	-0.2039	0.9982	-0.3755
0.2536	-0.2013	0.9892	-0.3569
0.2341	-0.1982	0.9804	-0.3390
0.2153	-0.1945	0.9701	-0.3178
0.1974	-0.1903	0.9576	-0.2918
0.1802	-0.1856	0.9444	-0.2644
0.1639	-0.1806	0.9316	-0.2376
0.1483	-0.1754	0.9189	-0.2108
0.1335	-0.1699	0.9061	-0.1838
0.1195	-0.1643	0.8943	-0.1588
0.1063	-0.1587	0.8845	-0.1380
0.0939	-0.1531	0.8763	-0.1205
0.0822	-0.1474	0.8683	-0.1035
0.0713	-0.1416	0.8603	-0.0864
0.0612	-0.1358	0.8537	-0.0723
0.0518	-0.1300	0.8493	-0.0628
0.0432	-0.1240	0.8444	-0.0524
0.0353	-0.1178	0.8352	-0.0327
0.0282	-0.1111	0.8200	0.0000
0.0218	-0.1040	0.7984	0.0465
0.0161	-0.0965	0.7659	0.1164
0.0112	-0.0880	0.7135	0.2286
0.0071	-0.0784	0.6388	0.3879
0.0039	-0.0677	0.5478	0.5699
0.0017	-0.0561	0.4618	0.7303
0.0004	-0.0441	0.4083	0.8212
0.0000	-0.0319	0.4153	0.8097
0.0004	-0.0198	0.4799	0.6977
0.0016	-0.0076	0.5736	0.5190
0.0036	0.0045	0.6742	0.3120
0.0064	0.0164	0.7726	0.1021
0.0100	0.0286	0.8652	-0.0969
0.0145	0.0413	0.9502	-0.2764
0.0198	0.0545	1.0278	-0.4346
0.0260	0.0681	1.0989	-0.5557
0.0329	0.0822	1.1310	-0.6300
0.0407	0.0969	1.1627	-0.6947
0.0493	0.1121	1.1877	-0.7401
0.0587	0.1280	1.2066	-0.7738
0.0688	0.1444	1.2185	-0.7946
0.0798	0.1615	1.2251	-0.8062
0.0915	0.1792	1.2311	-0.8165
0.1040	0.1976	1.2378	-0.8282
0.1173	0.2166	1.2438	-0.8383
0.1314	0.2363	1.2480	-0.8456
0.1463	0.2567	1.2507	-0.8501
0.1619	0.2778	1.2523	-0.8529
0.1784	0.2995	1.2534	-0.8548
0.1956	0.3220	1.2542	-0.8560
0.2137	0.3451	1.2545	-0.8567
0.2325	0.3689	1.2545	-0.8567
0.2521	0.3933	1.2542	-0.8561
0.2725	0.4183	1.2536	-0.8551



0.2937	0.1910	1.2527	-0.8535
0.3157	0.1943	1.2513	-0.8513
0.3384	0.1972	1.2494	-0.8480
0.3620	0.1996	1.2466	-0.8432
0.3863	0.2015	1.2428	-0.8362
0.4115	0.2029	1.2333	-0.8203
0.4374	0.2038	1.2178	-0.7920
0.4642	0.2040	1.1884	-0.7413
0.4917	0.2036	1.1427	-0.6578
0.5201	0.2024	1.0820	-0.5423
0.5492	0.2004	1.0255	-0.4307
0.5791	0.1976	1.0036	-0.3863
0.6098	0.1938	1.0008	-0.3778
0.6413	0.1889	1.0002	-0.3958
0.6736	0.1828	0.9995	-0.3781
0.7067	0.1752	0.9895	-0.3576
0.7406	0.1657	0.9744	-0.3265
0.7753	0.1539	0.9511	-0.2784
0.8108	0.1395	0.9199	-0.2130
0.8471	0.1225	0.8831	-0.1351
0.8842	0.1032	0.8441	-0.0518
0.9220	0.0822	0.8053	0.0317
0.9606	0.0606	0.7699	0.1077
1.0000	0.0367	0.7209	0.2130
1.0401	0.0184	0.7009	0.2557
1.0811	0.0027	0.7230	0.2085
1.1230	-0.0105	0.7394	0.1733
1.1660	-0.0219	0.7514	0.1476
1.2102	-0.0320	0.7605	0.1280
1.2556	-0.0409	0.7678	0.1123
1.3025	-0.0488	0.7738	0.0995
1.3509	-0.0558	0.7788	0.0887
1.4011	-0.0621	0.7831	0.0794
1.4531	-0.0677	0.7868	0.0713
1.5072	-0.0728	0.7901	0.0643
1.5637	-0.0773	0.7931	0.0580
1.6228	-0.0814	0.7957	0.0524
1.6847	-0.0850	0.7980	0.0474
1.7499	-0.0883	0.8001	0.0429
1.8188	-0.0913	0.8019	0.0388
1.8917	-0.0939	0.8036	0.0352
1.9693	-0.0962	0.8052	0.0319
2.0521	-0.0983	0.8065	0.0290
2.1410	-0.1002	0.8078	0.0263
2.2369	-0.1018	0.8090	0.0236
2.3409	-0.1033	0.8101	0.0213
2.4545	-0.1046	0.8110	0.0193
2.5793	-0.1057	0.8118	0.0176
2.7175	-0.1067	0.8127	0.0158
2.8722	-0.1077	0.8134	0.0141
3.0469	-0.1087	0.8144	0.0121
3.2467	-0.1096	0.8154	0.0098
3.4786	-0.1104	0.8132	0.0146



SECTION CHARACTERISTICS

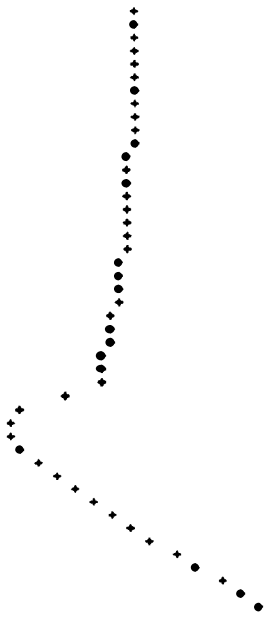
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
15.29998	0.44905	-0.01388	-0.21584

CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4789	-0.1227	0.8134	0.0141
3.2469	-0.1209	0.8158	0.0091
3.0471	-0.1191	0.8145	0.0119
2.8724	-0.1174	0.8134	0.0142
2.7177	-0.1157	0.8125	0.0161
2.5795	-0.1141	0.8118	0.0177
2.4546	-0.1125	0.8111	0.0192
2.3411	-0.1107	0.8104	0.0207
2.2371	-0.1088	0.8094	0.0228
2.1412	-0.1068	0.8083	0.0251
2.0523	-0.1045	0.8072	0.0275
1.9694	-0.1021	0.8060	0.0302
1.8918	-0.0995	0.8046	0.0331
1.8189	-0.0966	0.8031	0.0364
1.7501	-0.0934	0.8014	0.0400
1.6848	-0.0899	0.7995	0.0440
1.6229	-0.0861	0.7974	0.0486
1.5638	-0.0819	0.7951	0.0536
1.5073	-0.0772	0.7924	0.0593
1.4532	-0.0721	0.7895	0.0657
1.4011	-0.0664	0.7862	0.0728
1.3510	-0.0600	0.7824	0.0809
1.3026	-0.0530	0.7782	0.0900
1.2557	-0.0451	0.7734	0.1002
1.2103	-0.0363	0.7681	0.1117
1.1661	-0.0264	0.7624	0.1239
1.1231	-0.0151	0.7568	0.1360
1.0811	-0.0021	0.7537	0.1427
1.0401	0.0132	0.7484	0.1541
1.0000	0.0311	0.6872	0.2847
0.9607	0.0437	0.6149	0.4356
0.9222	0.0458	0.5945	0.4770
0.8845	0.0385	0.6000	0.4658
0.8476	0.0263	0.6176	0.4300
0.8116	0.0104	0.6411	0.3813
0.7763	-0.0081	0.6681	0.3249
0.7418	-0.0281	0.6978	0.2622
0.7081	-0.0488	0.7295	0.1945
0.6751	-0.0694	0.7632	0.1223
0.6429	-0.0893	0.7990	0.0451
0.6114	-0.1081	0.8367	-0.0358
0.5808	-0.1252	0.8748	-0.1174
0.5509	-0.1403	0.9137	-0.2000
0.5217	-0.1534	0.9539	-0.2842
0.4934	-0.1641	0.9984	-0.3595
0.4658	-0.1724	1.0149	-0.4892



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0.4131	-0.1836	1.0293	-0.4383
0.3880	-0.1869	1.0263	-0.4323
0.3636	-0.1890	1.0205	-0.4206
0.3401	-0.1901	1.0158	-0.4112
0.3173	-0.1905	1.0119	-0.4032
0.2954	-0.1899	1.0061	-0.3914
0.2742	-0.1886	0.9982	-0.3754
0.2539	-0.1868	0.9902	-0.3591
0.2343	-0.1843	0.9824	-0.3438
0.2156	-0.1814	0.9732	-0.3241
0.1976	-0.1779	0.9621	-0.3012
0.1805	-0.1741	0.9503	-0.2767
0.1641	-0.1700	0.9388	-0.2526
0.1486	-0.1656	0.9272	-0.2284
0.1337	-0.1611	0.9156	-0.2040
0.1197	-0.1564	0.9051	-0.1817
0.1065	-0.1517	0.8967	-0.1639
0.0941	-0.1469	0.8900	-0.1496
0.0824	-0.1420	0.8835	-0.1359
0.0715	-0.1371	0.8770	-0.1221
0.0613	-0.1321	0.8722	-0.1119
0.0520	-0.1271	0.8701	-0.1074
0.0433	-0.1219	0.8680	-0.1028
0.0354	-0.1163	0.8615	-0.0889
0.0283	-0.1103	0.8483	-0.0607
0.0218	-0.1039	0.8276	-0.0164
0.0161	-0.0969	0.7944	0.0546
0.0112	-0.0891	0.7404	0.1712
0.0071	-0.0802	0.6619	0.3381
0.0039	-0.0702	0.5673	0.5316
0.0017	-0.0594	0.4751	0.7065
0.0004	-0.0480	0.4132	0.8132
0.0000	-0.0366	0.4108	0.8172
0.0004	-0.0252	0.4477	0.7197
0.0017	-0.0138	0.5558	0.5542
0.0036	-0.0024	0.6518	0.3891
0.0064	0.0091	0.7460	0.1991
0.0100	0.0205	0.8354	-0.0331
0.0144	0.0317	0.9180	-0.2091
0.0196	0.0425	0.9925	-0.3637
0.0258	0.0529	1.0546	-0.4885
0.0327	0.0627	1.0987	-0.5747
0.0405	0.0721	1.1282	-0.6306
0.0490	0.0812	1.1510	-0.6732
0.0584	0.0900	1.1694	-0.7070
0.0685	0.0984	1.1816	-0.7291
0.0794	0.1065	1.1897	-0.7436
0.0911	0.1143	1.1983	-0.7589
0.1036	0.1218	1.2081	-0.7764
0.1169	0.1289	1.2171	-0.7922
0.1310	0.1358	1.2242	-0.8048
0.1459	0.1424	1.2294	-0.8139
0.1615	0.1486	1.2333	-0.8208
0.1780	0.1546	1.2364	-0.8257
0.1952	0.1602	1.2388	-0.8299
0.2132	0.1655	1.2407	-0.8331
0.2321	0.1705	1.2422	-0.8356
0.2517	0.1752	1.2433	-0.8376
0.2721	0.1795	1.2444	-0.8394
0.2933	0.1835	1.2453	-0.8410
0.3153	0.1871	1.2460	-0.8422
0.3380	0.1902	1.2464	-0.8428
0.3616	0.1930	1.2459	-0.8419
0.3860	0.1953	1.2432	-0.8374
0.4111	0.1971	1.2359	-0.8248
0.4371	0.1983	1.2203	-0.7977
0.4638	0.1991	1.1918	-0.7474
0.4914	0.1992	1.1432	-0.6586
0.5197	0.1986	1.0708	-0.5205
0.5489	0.1972	1.0038	-0.3868
0.5788	0.1952	0.9881	-0.3547
0.6095	0.1921	1.0031	-0.3853
0.6410	0.1880	1.0063	-0.3918
0.6734	0.1828	1.0024	-0.3838
0.7065	0.1760	0.9965	-0.3720
0.7404	0.1673	0.9837	-0.3457
0.7751	0.1563	0.9600	-0.2969
0.8107	0.1426	0.9265	-0.2269
0.8470	0.1260	0.8872	-0.1437
0.8841	0.1072	0.8456	-0.0550
0.9219	0.0865	0.8048	0.0327
0.9606	0.0653	0.7688	0.1101
1.0000	0.0419	0.7211	0.2124
1.0401	0.0240	0.7016	0.2542
1.0811	0.0087	0.7226	0.2092
1.1231	-0.0043	0.7390	0.1741
1.1661	-0.0156	0.7513	0.1478
1.2103	-0.0255	0.7606	0.1278
1.2557	-0.0343	0.7681	0.1117
1.3026	-0.0422	0.7742	0.0986
1.3510	-0.0492	0.7794	0.0874
1.4011	-0.0555	0.7838	0.0779
1.4532	-0.0612	0.7876	0.0697
1.5073	-0.0664	0.7910	0.0625
1.5638	-0.0710	0.7939	0.0562
1.6229	-0.0752	0.7965	0.0506
1.6849	-0.0791	0.7988	0.0456
1.7501	-0.0826	0.8009	0.0412
1.8189	-0.0857	0.8027	0.0373
1.8918	-0.0886	0.8043	0.0338
1.9694	-0.0913	0.8058	0.0306
2.0523	-0.0937	0.8070	0.0279
2.1412	-0.0959	0.8082	0.0253
2.2371	-0.0979	0.8094	0.0229
2.3411	-0.0998	0.8104	0.0206
2.4547	-0.1016	0.8112	0.0188
2.5795	-0.1032	0.8120	0.0172
2.7178	-0.1049	0.8128	0.0155
2.8724	-0.1065	0.8135	0.0139
3.0471	-0.1082	0.8145	0.0119
3.2469	-0.1101	0.8158	0.0091
3.4789	-0.1118	0.8135	0.0139

SECTION CHARACTERISTICS

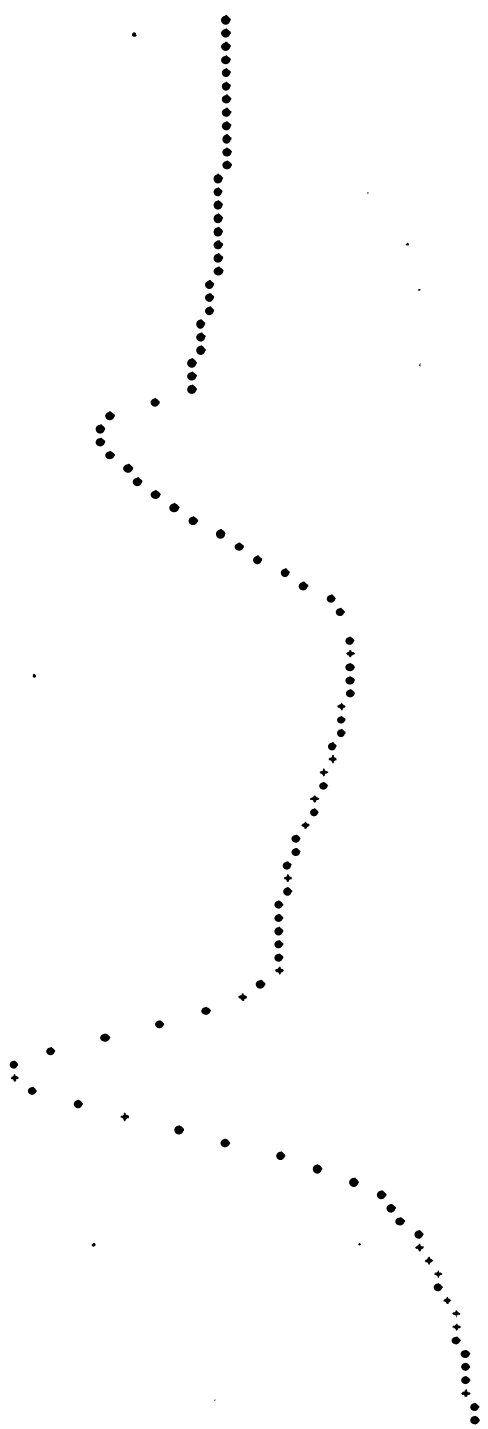
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
16.19998	0.42876	-0.01583	-0.21951

CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4792	-0.1328	0.8140	0.0130
3.2472	-0.1290	0.8162	0.0082
3.0473	-0.1256	0.8146	0.0116
2.8726	-0.1225	0.8136	0.0137
2.7180	-0.1197	0.8129	0.0153
2.5797	-0.1170	0.8122	0.0168
2.4549	-0.1144	0.8114	0.0185
2.3413	-0.1118	0.8106	0.0203
2.2373	-0.1091	0.8098	0.0218
2.1413	-0.1064	0.8091	0.0235
2.0524	-0.1036	0.8081	0.0255
1.9696	-0.1006	0.8071	0.0278
1.8920	-0.0974	0.8058	0.0305
1.8190	-0.0941	0.8044	0.0335
1.7502	-0.0904	0.8029	0.0369
1.6850	-0.0866	0.8011	0.0407
1.6230	-0.0824	0.7991	0.0450
1.5639	-0.0778	0.7968	0.0499
1.5074	-0.0729	0.7942	0.0555
1.4533	-0.0675	0.7913	0.0618
1.4012	-0.0616	0.7880	0.0690
1.3511	-0.0551	0.7842	0.0771
1.3027	-0.0479	0.7798	0.0864
1.2558	-0.0400	0.7749	0.0970
1.2103	-0.0311	0.7692	0.1092
1.1661	-0.0212	0.7628	0.1232
1.1231	-0.0100	0.7554	0.1388
1.0812	0.0029	0.7530	0.1441
1.0402	0.0179	0.7476	0.1566
1.0000	0.0353	0.6863	0.2866
0.9606	0.0476	0.6138	0.4377
0.9221	0.0493	0.5930	0.4801
0.8845	0.0438	0.5974	0.4711
0.8476	0.0327	0.6140	0.4374
0.8115	0.0181	0.6367	0.3906
0.7763	0.0008	0.6630	0.3356
0.7418	-0.0179	0.6921	0.2742
0.7081	-0.0374	0.7233	0.2078
0.6751	-0.0569	0.7564	0.1367
0.6430	-0.0759	0.7918	0.0607
0.6115	-0.0939	0.8289	-0.0192
0.5809	-0.1103	0.8668	-0.1003
0.5510	-0.1249	0.9050	-0.1816
0.5219	-0.1375	0.9438	-0.2631
0.4935	-0.1479	0.9805	-0.3391
0.4660	-0.1561	1.0076	-0.3944
0.4393	-0.1624	1.0205	-0.4207
0.4133	-0.1672	1.0236	-0.4267
0.3882	-0.1705	1.0212	-0.4221
0.3639	-0.1728	1.0166	-0.4127
0.3403	-0.1742	1.0128	-0.4050
0.3176	-0.1748	1.0095	-0.3984
0.2956	-0.1747	1.0049	-0.3891
0.2745	-0.1739	0.9988	-0.3767
0.2541	-0.1726	0.9925	-0.3637
0.2346	-0.1708	0.9860	-0.3504
0.2158	-0.1685	0.9783	-0.3347
0.1979	-0.1658	0.9693	-0.3160
0.1807	-0.1627	0.9594	-0.2955
0.1643	-0.1594	0.9494	-0.2748
0.1487	-0.1559	0.9393	-0.2538
0.1339	-0.1521	0.9291	-0.2324
0.1199	-0.1483	0.9200	-0.2133
0.1067	-0.1444	0.9133	-0.1990
0.0942	-0.1404	0.9083	-0.1886
0.0826	-0.1363	0.9037	-0.1787
0.0716	-0.1321	0.8990	-0.1688
0.0615	-0.1279	0.8964	-0.1634
0.0521	-0.1236	0.8972	-0.1651
0.0434	-0.1191	0.8987	-0.1681
0.0355	-0.1142	0.8957	-0.1618
0.0283	-0.1089	0.8852	-0.1395
0.0219	-0.1031	0.8657	-0.0979
0.0162	-0.0967	0.8319	-0.0255
0.0112	-0.0895	0.7751	0.0967
0.0071	-0.0812	0.6926	0.2732
0.0039	-0.0719	0.5928	0.4805
0.0017	-0.0618	0.4934	0.6731
0.0004	-0.0512	0.4218	0.7998
0.0000	-0.0405	0.4078	0.8220
0.0004	-0.0298	0.4551	0.7428
0.0017	-0.0192	0.5364	0.5917
0.0036	-0.0085	0.6273	0.4099
0.0064	0.0023	0.7175	0.2283
0.0099	0.0132	0.8036	0.0352
0.0142	0.0239	0.8842	-0.1374
0.0195	0.0343	0.9567	-0.2900
0.0256	0.0443	1.0185	-0.4165
0.0325	0.0538	1.0625	-0.5043
0.0402	0.0630	1.0911	-0.5599
0.0487	0.0718	1.1137	-0.6033
0.0581	0.0804	1.1323	-0.6383
0.0682	0.0888	1.1459	-0.6638
0.0791	0.0968	1.1564	-0.6832
0.0908	0.1047	1.1687	-0.7056
0.1032	0.1122	1.1825	-0.7307
0.1165	0.1195	1.1953	-0.7537
0.1306	0.1264	1.2059	-0.7725
0.1455	0.1331	1.2144	-0.7874
0.1611	0.1394	1.2213	-0.7995
0.1776	0.1455	1.2272	-0.8098
0.1948	0.1513	1.2322	-0.8185
0.2128	0.1568	1.2365	-0.8258
0.2316	0.1619	1.2402	-0.8322
0.2513	0.1668	1.2437	-0.8382
0.2717	0.1713	1.2470	-0.8439



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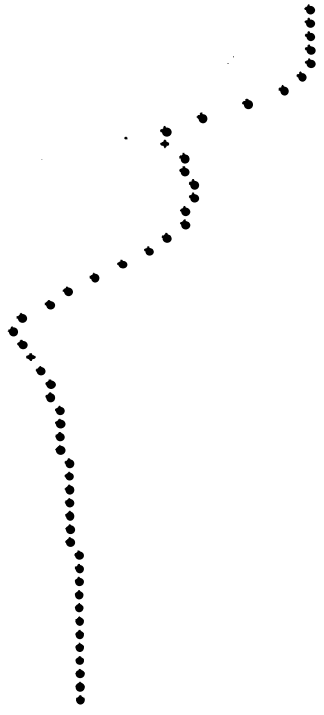
0.3149	0.1793	1.2524	-0.8531
0.3376	0.1827	1.2539	-0.8560
0.3612	0.1858	1.2522	-0.8527
0.3856	0.1884	1.2459	-0.8420
0.4108	0.1905	1.2297	-0.8142
0.4367	0.1921	1.1948	-0.7528
0.4635	0.1933	1.1308	-0.6395
0.4910	0.1938	1.0433	-0.4663
0.5194	0.1938	0.9762	-0.3383
0.5485	0.1931	0.9708	-0.3192
0.5785	0.1916	0.9981	-0.3753
0.6092	0.1893	1.0120	-0.4034
0.6408	0.1859	1.0134	-0.4062
0.6731	0.1815	1.0129	-0.4051
0.7062	0.1755	1.0093	-0.3980
0.7402	0.1676	0.9969	-0.3727
0.7749	0.1573	0.9714	-0.3204
0.8105	0.1442	0.9346	-0.2438
0.8468	0.1282	0.8928	-0.1540
0.8840	0.1099	0.8484	-0.0609
0.9219	0.0897	0.8061	0.0299
0.9605	0.0689	0.7693	0.1091
1.0000	0.0462	0.7216	0.2114
1.0401	0.0207	0.7023	0.2526
1.0811	0.0137	0.7236	0.2071
1.1231	0.0009	0.7399	0.1722
1.1661	-0.0103	0.7521	0.1468
1.2103	-0.0202	0.7619	0.1260
1.2558	-0.0291	0.7698	0.1080
1.3027	-0.0370	0.7761	0.0944
1.3511	-0.0442	0.7814	0.0831
1.4012	-0.0507	0.7859	0.0735
1.4533	-0.0566	0.7897	0.0652
1.5074	-0.0620	0.7930	0.0581
1.5639	-0.0669	0.7958	0.0520
1.6230	-0.0715	0.7983	0.0466
1.6850	-0.0756	0.8005	0.0419
1.7502	-0.0795	0.8024	0.0378
1.8190	-0.0831	0.8041	0.0342
1.8920	-0.0865	0.8056	0.0310
1.9696	-0.0896	0.8069	0.0282
2.0524	-0.0926	0.8081	0.0257
2.1414	-0.0955	0.8091	0.0235
2.2373	-0.0982	0.8099	0.0217
2.3413	-0.1008	0.8107	0.0201
2.4549	-0.1035	0.8116	0.0181
2.5797	-0.1061	0.8124	0.0163
2.7180	-0.1088	0.8131	0.0147
2.8726	-0.1116	0.8138	0.0133
3.0474	-0.1146	0.8147	0.0115
3.2472	-0.1181	0.8163	0.0081
3.4792	-0.1218	0.8142	0.0126



SECTION CHARACTERISTICS

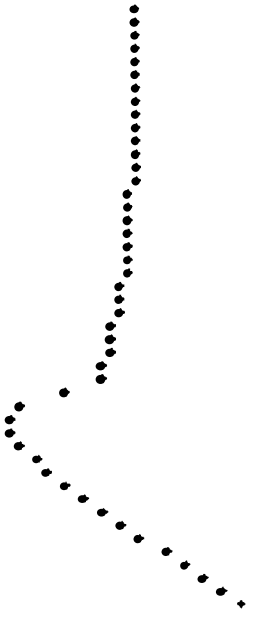
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
17.09998	0.39482	-0.01998	-0.20984

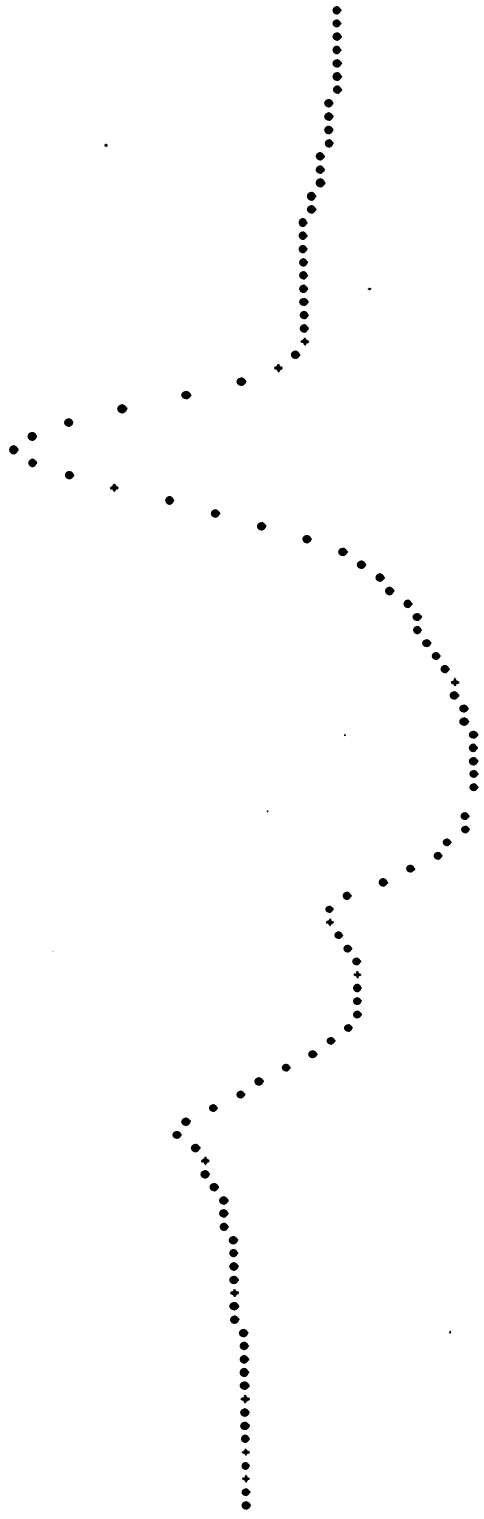
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4795	-0.1573	0.8143	0.0122
3.2475	-0.1500	0.8166	0.0074
3.0476	-0.1439	0.8155	0.0097
2.8729	-0.1387	0.8149	0.0109
2.7182	-0.1340	0.8145	0.0118
2.5799	-0.1296	0.8140	0.0129
2.4551	-0.1254	0.8131	0.0148
2.3415	-0.1213	0.8122	0.0167
2.2374	-0.1174	0.8117	0.0178
2.1415	-0.1135	0.8113	0.0188
2.0526	-0.1092	0.8105	0.0203
1.9697	-0.1055	0.8097	0.0222
1.8921	-0.1014	0.8086	0.0244
1.8192	-0.0971	0.8075	0.0270
1.7503	-0.0927	0.8061	0.0298
1.6851	-0.0881	0.8046	0.0331
1.6231	-0.0831	0.8029	0.0368
1.5640	-0.0779	0.8009	0.0411
1.5076	-0.0724	0.7986	0.0460
1.4534	-0.0664	0.7960	0.0516
1.4013	-0.0600	0.7930	0.0581
1.3512	-0.0530	0.7895	0.0657
1.3027	-0.0454	0.7853	0.0747
1.2559	-0.0371	0.7801	0.0859
1.2104	-0.0279	0.7740	0.0998
1.1662	-0.0177	0.7672	0.1137
1.1232	-0.0064	0.7601	0.1290
1.0812	0.0064	0.7548	0.1404
1.0402	0.0213	0.7467	0.1577
1.0000	0.0384	0.6867	0.2857
0.9606	0.0582	0.6172	0.4308
0.9221	0.0524	0.5964	0.4732
0.8844	0.0478	0.5998	0.4669
0.8476	0.0378	0.6142	0.4369
0.8115	0.0244	0.6352	0.3936
0.7763	0.0084	0.6600	0.3420
0.7418	-0.0091	0.6876	0.2838
0.7081	-0.0274	0.7173	0.2205
0.6752	-0.0458	0.7491	0.1525
0.6430	-0.0638	0.7830	0.0796
0.6116	-0.0809	0.8187	0.0029
0.5810	-0.0966	0.8553	-0.0758
0.5511	-0.1106	0.8923	-0.1546
0.5220	-0.1228	0.9279	-0.2298
0.4937	-0.1328	0.9611	-0.2992
0.4662	-0.1408	0.9877	-0.3539



0.4394	-0.1478	1.0015	-0.3821
0.4135	-0.1516	1.0054	-0.3900
0.3884	-0.1551	1.0049	-0.3891
0.3641	-0.1574	1.0027	-0.3846
0.3405	-0.1590	1.0008	-0.3806
0.3178	-0.1599	0.9993	-0.3776
0.2958	-0.1601	0.9975	-0.3739
0.2747	-0.1598	0.9948	-0.3685
0.2544	-0.1590	0.9916	-0.3619
0.2348	-0.1578	0.9878	-0.3541
0.2160	-0.1561	0.9830	-0.3442
0.1981	-0.1541	0.9771	-0.3322
0.1809	-0.1517	0.9706	-0.3188
0.1645	-0.1492	0.9637	-0.3045
0.1489	-0.1464	0.9562	-0.2898
0.1341	-0.1434	0.9486	-0.2750
0.1201	-0.1403	0.9419	-0.2592
0.1069	-0.1371	0.9378	-0.2505
0.0944	-0.1339	0.9357	-0.2462
0.0827	-0.1305	0.9339	-0.2423
0.0718	-0.1270	0.9320	-0.2385
0.0616	-0.1235	0.9328	-0.2401
0.0522	-0.1198	0.9381	-0.2511
0.0436	-0.1160	0.9448	-0.2653
0.0356	-0.1117	0.9472	-0.2701
0.0284	-0.1070	0.9407	-0.2566
0.0219	-0.1018	0.9230	-0.2194
0.0162	-0.0960	0.8888	-0.1456
0.0113	-0.0894	0.8275	-0.0161
0.0071	-0.0817	0.7395	0.1731
0.0039	-0.0731	0.6326	0.3990
0.0017	-0.0637	0.5251	0.6136
0.0004	-0.0539	0.4439	0.7815
0.0000	-0.0439	0.4185	0.8845
0.0005	-0.0339	0.4547	0.7427
0.0017	-0.0241	0.5275	0.6990
0.0036	-0.0141	0.6123	0.4408
0.0063	-0.0039	0.6903	0.2611
0.0098	0.0064	0.7823	0.0812
0.0141	0.0166	0.8625	-0.0910
0.0193	0.0266	0.9358	-0.2464
0.0253	0.0361	0.9981	-0.3753
0.0322	0.0453	1.0427	-0.4651
0.0400	0.0541	1.0721	-0.5230
0.0485	0.0627	1.0955	-0.5684
0.0578	0.0711	1.1156	-0.6068
0.0678	0.0793	1.1319	-0.6375
0.0787	0.0873	1.1468	-0.6639
0.0904	0.0951	1.1625	-0.6942
0.1029	0.1026	1.1806	-0.7273
0.1161	0.1099	1.1975	-0.7576
0.1302	0.1169	1.2119	-0.7831
0.1458	0.1236	1.2237	-0.8037
0.1607	0.1300	1.2334	-0.8205
0.1771	0.1361	1.2413	-0.8341
0.1944	0.1420	1.2473	-0.8444
0.2124	0.1475	1.2511	-0.8508
0.2312	0.1528	1.2526	-0.8533
0.2508	0.1578	1.2515	-0.8515
0.2712	0.1624	1.2473	-0.8443
0.2924	0.1667	1.2387	-0.8296
0.3144	0.1707	1.2243	-0.8048
0.3372	0.1744	1.2020	-0.7656
0.3608	0.1776	1.1687	-0.7057
0.3852	0.1805	1.1218	-0.6185
0.4104	0.1829	1.0636	-0.5064
0.4363	0.1849	1.0082	-0.3957
0.4631	0.1864	0.9758	-0.3296
0.4907	0.1874	0.9760	-0.3300
0.5190	0.1878	0.9946	-0.3680
0.5482	0.1875	1.0114	-0.4022
0.5781	0.1867	1.0182	-0.4159
0.6089	0.1850	1.0175	-0.4145
0.6404	0.1823	1.0170	-0.4136
0.6728	0.1786	1.0183	-0.4161
0.7060	0.1733	1.0159	-0.4114
0.7399	0.1662	1.0042	-0.3875
0.7747	0.1566	0.9786	-0.3352
0.8103	0.1442	0.9407	-0.2567
0.8467	0.1289	0.8973	-0.1652
0.8838	0.1111	0.8526	-0.0700
0.9218	0.0915	0.8093	0.0231
0.9605	0.0712	0.7722	0.1029
0.9999	0.0493	0.7255	0.2031
1.0401	0.0321	0.7079	0.2408
1.0812	0.0173	0.7302	0.1930
1.1232	0.0044	0.7478	0.1569
1.1662	-0.0069	0.7594	0.1304
1.2104	-0.0170	0.7687	0.1104
1.2559	-0.0262	0.7762	0.0943
1.3027	-0.0345	0.7824	0.0810
1.3512	-0.0421	0.7874	0.0701
1.4013	-0.0491	0.7915	0.0613
1.4534	-0.0555	0.7949	0.0539
1.5076	-0.0615	0.7979	0.0477
1.5641	-0.0670	0.8003	0.0423
1.6231	-0.0723	0.8025	0.0378
1.6851	-0.0772	0.8043	0.0338
1.7503	-0.0818	0.8059	0.0304
1.8192	-0.0862	0.8073	0.0274
1.8921	-0.0905	0.8085	0.0247
1.9697	-0.0946	0.8096	0.0224
2.0526	-0.0986	0.8106	0.0203
2.1413	-0.1025	0.8114	0.0185
2.2375	-0.1065	0.8119	0.0175
2.3415	-0.1104	0.8123	0.0165
2.4551	-0.1145	0.8132	0.0147
2.5799	-0.1187	0.8141	0.0128
2.7182	-0.1231	0.8148	0.0113
2.8729	-0.1278	0.8154	0.0099
3.0476	-0.1330	0.8160	0.0085
3.2475	-0.1390	0.8171	0.0062
3.4795	-0.1464	0.8148	0.0112



SECTION CHARACTERISTICS

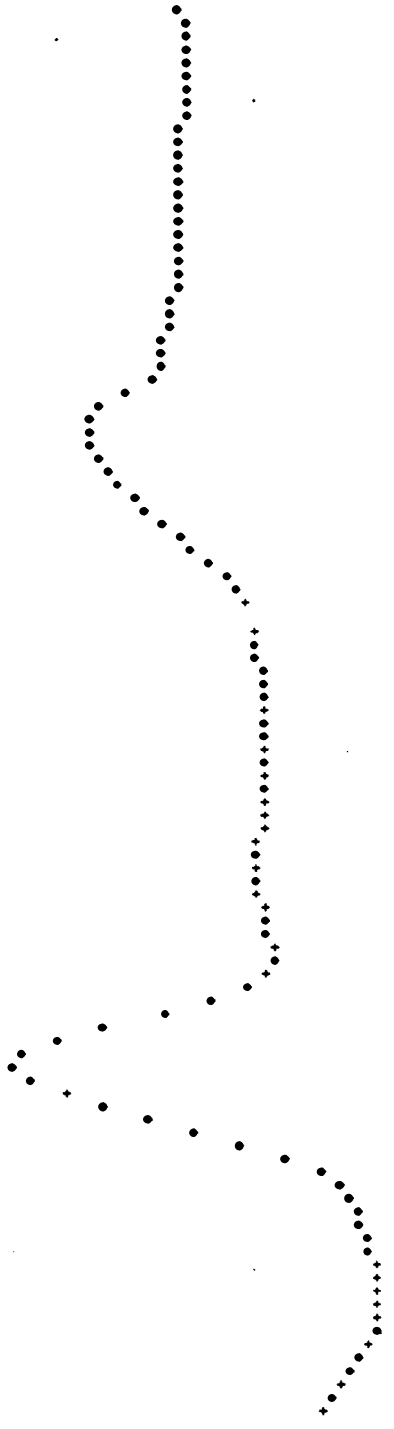
MACH NO	YAW	ANG OF ATTACK
0.82000	0.00000	1.00000

SPAN STATION	CL	CD	CM
17.99998	0.38644	-0.02293	-0.16989

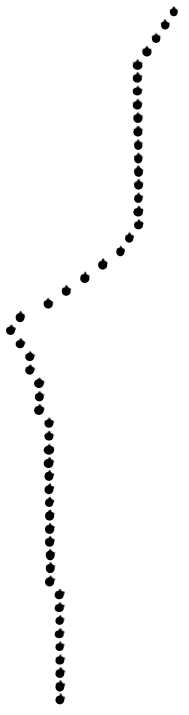
CL CD CM ARE BASED ON VISCOUS PRESSURE

PLOT OF CP AT COMPUTATIONAL MESH POINTS

X	Y	MACH NO	CP
3.4799	-0.1275	0.8217	-0.0037
3.2479	-0.1211	0.8233	-0.0070
3.0488	-0.1172	0.8234	-0.0074
2.8732	-0.1139	0.8235	-0.0076
2.7185	-0.1109	0.8236	-0.0077
2.5802	-0.1080	0.8233	-0.0071
2.4553	-0.1051	0.8228	-0.0060
2.3418	-0.1022	0.8222	-0.0047
2.2377	-0.0993	0.8217	-0.0037
2.1418	-0.0963	0.8213	-0.0029
2.0528	-0.0932	0.8208	-0.0017
1.9699	-0.0899	0.8201	-0.0003
1.8923	-0.0865	0.8194	0.0012
1.8194	-0.0829	0.8186	0.0030
1.7506	-0.0791	0.8177	0.0049
1.6853	-0.0751	0.8167	0.0071
1.6233	-0.0708	0.8156	0.0095
1.5642	-0.0661	0.8143	0.0123
1.5077	-0.0611	0.8128	0.0155
1.4536	-0.0558	0.8111	0.0192
1.4015	-0.0499	0.8091	0.0236
1.3513	-0.0435	0.8067	0.0286
1.3028	-0.0366	0.8038	0.0349
1.2560	-0.0289	0.8001	0.0428
1.2105	-0.0205	0.7958	0.0521
1.1663	-0.0111	0.7906	0.0632
1.1232	-0.0006	0.7847	0.0760
1.0813	0.0112	0.7784	0.0896
1.0402	0.0247	0.7684	0.1118
1.0000	0.0402	0.7202	0.2145
0.9606	0.0515	0.6681	0.3249
0.9221	0.0540	0.6533	0.3559
0.8844	0.0502	0.6540	0.3545
0.8475	0.0413	0.6625	0.3367
0.8115	0.0291	0.6758	0.3088
0.7762	0.0143	0.6924	0.2736
0.7418	-0.0028	0.7118	0.2323
0.7081	-0.0190	0.7334	0.1863
0.6752	-0.0363	0.7569	0.1358
0.6430	-0.0533	0.7823	0.0811
0.6117	-0.0694	0.8091	0.0235
0.5810	-0.0844	0.8365	-0.0355
0.5512	-0.0978	0.8638	-0.0948
0.5221	-0.1094	0.8894	-0.1485
0.4938	-0.1191	0.9118	-0.1960
0.4663	-0.1268	0.9290	-0.2322
0.4396	-0.1328	0.9393	-0.2536
0.4137	-0.1374	0.9442	-0.2639
0.3886	-0.1408	0.9461	-0.2692
0.3642	-0.1433	0.9484	-0.2727
0.3407	-0.1450	0.9500	-0.2760
0.3180	-0.1461	0.9518	-0.2798
0.2961	-0.1467	0.9537	-0.2837
0.2749	-0.1467	0.9553	-0.2872
0.2546	-0.1464	0.9566	-0.2897
0.2350	-0.1456	0.9573	-0.2911
0.2163	-0.1445	0.9573	-0.2912
0.1983	-0.1431	0.9567	-0.2900
0.1811	-0.1414	0.9555	-0.2875
0.1647	-0.1395	0.9538	-0.2839
0.1491	-0.1373	0.9513	-0.2787
0.1343	-0.1350	0.9483	-0.2724
0.1203	-0.1326	0.9457	-0.2670
0.1071	-0.1301	0.9447	-0.2649
0.0946	-0.1276	0.9451	-0.2657
0.0829	-0.1249	0.9456	-0.2668
0.0719	-0.1220	0.9460	-0.2676
0.0618	-0.1191	0.9485	-0.2729
0.0523	-0.1160	0.9548	-0.2860
0.0436	-0.1128	0.9627	-0.3025
0.0357	-0.1092	0.9673	-0.3119
0.0285	-0.1050	0.9641	-0.3054
0.0220	-0.1004	0.9498	-0.2756
0.0162	-0.0951	0.9180	-0.2091
0.0113	-0.0890	0.8615	-0.0889
0.0071	-0.0820	0.7791	0.0880
0.0039	-0.0741	0.6805	0.2988
0.0016	-0.0654	0.5862	0.4938
0.0004	-0.0563	0.5215	0.6209
0.0000	-0.0478	0.5065	0.6488
0.0005	-0.0378	0.5400	0.5850
0.0017	-0.0287	0.6027	0.4684
0.0036	-0.0194	0.6777	0.3048
0.0063	-0.0099	0.7578	0.1396
0.0097	-0.0002	0.8372	-0.0371
0.0140	0.0095	0.9155	-0.2037
0.0191	0.0198	0.9877	-0.3538
0.0251	0.0281	1.0459	-0.4713
0.0320	0.0369	1.0832	-0.5446
0.0397	0.0454	1.1048	-0.5863
0.0482	0.0537	1.1200	-0.6151
0.0574	0.0618	1.1315	-0.6369
0.0675	0.0698	1.1388	-0.6505
0.0784	0.0777	1.1439	-0.6600
0.0900	0.0854	1.1513	-0.6738
0.1025	0.0928	1.1594	-0.6886
0.1157	0.1000	1.1643	-0.6976
0.1297	0.1070	1.1658	-0.6989
0.1446	0.1136	1.1613	-0.6922
0.1602	0.1200	1.1539	-0.6786
0.1767	0.1262	1.1432	-0.6587
0.1939	0.1320	1.1293	-0.6327
0.2119	0.1376	1.1128	-0.6015
0.2308	0.1429	1.0945	-0.5665
0.2504	0.1479	1.0753	-0.5292
0.2708	0.1526	1.0557	-0.4907



0.2928	0.1571	1.0362	-0.4521
0.3148	0.1612	1.0176	-0.4146
0.3368	0.1650	1.0004	-0.3799
0.3604	0.1684	0.9868	-0.3504
0.3848	0.1714	0.9757	-0.3292
0.4100	0.1741	0.9707	-0.3198
0.4359	0.1763	0.9707	-0.3189
0.4627	0.1781	0.9728	-0.3233
0.4903	0.1794	0.9734	-0.3246
0.5187	0.1802	0.9715	-0.3205
0.5478	0.1805	0.9690	-0.3154
0.5778	0.1801	0.9683	-0.3140
0.6086	0.1790	0.9691	-0.3157
0.6401	0.1769	0.9708	-0.3192
0.6725	0.1738	0.9729	-0.3235
0.7057	0.1693	0.9732	-0.3241
0.7397	0.1628	0.9688	-0.3151
0.7749	0.1548	0.9569	-0.2903
0.8101	0.1423	0.9352	-0.2451
0.8465	0.1277	0.9055	-0.1826
0.8837	0.1106	0.8721	-0.1117
0.9217	0.0916	0.8392	-0.0412
0.9604	0.0721	0.8131	0.0149
0.9999	0.0589	0.7717	0.1039
1.0401	0.0353	0.7515	0.1474
1.0812	0.0218	0.7685	0.1108
1.1232	0.0101	0.7804	0.0853
1.1663	-0.0004	0.7889	0.0668
1.2105	-0.0097	0.7952	0.0533
1.2559	-0.0182	0.8000	0.0431
1.3028	-0.0258	0.8039	0.0347
1.3513	-0.0328	0.8070	0.0279
1.4015	-0.0392	0.8095	0.0225
1.4535	-0.0450	0.8116	0.0181
1.5077	-0.0504	0.8133	0.0143
1.5642	-0.0554	0.8148	0.0112
1.6233	-0.0600	0.8161	0.0084
1.6853	-0.0643	0.8172	0.0061
1.7505	-0.0684	0.8181	0.0040
1.8194	-0.0722	0.8190	0.0021
1.8923	-0.0758	0.8198	0.0005
1.9699	-0.0792	0.8205	-0.0010
2.0528	-0.0824	0.8211	-0.0023
2.1418	-0.0855	0.8216	-0.0035
2.2377	-0.0885	0.8220	-0.0043
2.3418	-0.0914	0.8223	-0.0050
2.4554	-0.0943	0.8229	-0.0062
2.5802	-0.0972	0.8235	-0.0075
2.7185	-0.1001	0.8241	-0.0087
2.8732	-0.1031	0.8249	-0.0105
3.0480	-0.1064	0.8253	-0.0114
3.2479	-0.1103	0.8248	-0.0104
3.4799	-0.1167	0.8226	-0.0055



WING CHARACTERISTICS

MACH NO	YAW	ANG OF ATTACK			
0.82000	0.00000	1.00000			
CL	CD FORM	CD FRICTION	CD	L/D FORM	L/D
0.45877	0.00859	0.00000	0.00889	50.67934	50.67934
CM PITCH	CM ROLL	CM YAW			
-0.58732	0.38989	-0.00356			

WING LOADING IS BASED ON VISCOUS PRESSURE

END OF CALCULATION

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16. Abstract

This report is a user's manual which describes the operation of the computer program, GRUMWING. The program computes the viscous transonic flow over three-dimensional wings using a boundary layer type viscid-inviscid interaction approach. The inviscid solution is obtained by an approximate factorization (AFZ)method for the full potential equation. The boundary layer solution is based on integral entrainment methods.

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