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F-8 SUPERCRITICAL WING FLIGHT PRESSURE, BOUNDARY-LAYER, AND WAKE MEASUREMENTS AND COMPARISONS WITH WIND TUNNEL DATA

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16. Abstract

Flight pressure, boundary-layer, and wake profile results for the F-8 supercritical wing airplane are presented for speeds from Mach 0.50 to Mach 0.99. Data are presented for configurations with and without fuselage area-rule additions, with and without leading-edge vortex generators, and with and without boundary-layer trips on the wing. The wing pressure coefficients are tabulated. Comparisons between the airplane and model data show that higher second velocity peaks occurred on the airplane wing than on the model wing. For speeds of Mach 0.95 and 0.99 the differences were attributed to wind tunnel wall interference effects that caused too much rear camber to be designed into the wing. Wind tunnel wall interference could also have caused the differences that existed at Mach 0.90, but other factors that could not be accounted for also affected the results. The wing trailing-edge pressure, boundary-layer, and wake data showed that the optimum flow conditions on the outboard wing section occurred at Mach 0.98 at an angle of attack near 4°. The measured differences in section drag with and without boundary-layer trips on the wing suggested that a region of laminar flow existed on the outboard wing without trips.

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INTRODUCTION

At high subsonic speeds, airfoils like the NACA 6-series airfoils develop a region of supersonic flow on the upper surface which terminates in a strong shock. In addition to the wave drag produced, the shock separates the boundary layer and causes more drag, buffeting, and deteriorating stability and control. These effects restrict the cruise speed and wing thickness at transonic speeds. In the midsixties, Richard T. Whitcomb developed an airfoil that did not experience the drag increase associated with a strong shock on the upper surface. The new airfoil, called supercritical, delayed the drag rise to higher speeds and seemed to offer promise in terms of making transport aircraft operation possible at speeds near Mach 1.0. To demonstrate the advantage of using a supercritical airfoil for flight near sonic speed, a flight program was initiated in which a TF-8A airplane was used as a test bed. The original TF-8A wing was removed and replaced by a supercritical wing with a planform shape similar to that of many current jet transports. The configuration was developed in the 8-Foot Transonic Pressure Tunnel at the Langley Research Center and was designed for optimum cruise at a Mach number of 0.99. The F-8 supercritical wing airplane (TF-8A airplane with supercritical wing) was tested at the Dryden Flight Research Center at Edwards, Calif. Reference 1 is a progress report on the flight evaluation. The practicality of the supercritical wing concept was demonstrated by the flight tests, and data were obtained that verified that a delayed drag-rise Mach number and a high buffet-free lift coefficient were possible with the supercritical airfoil.

Some flight-measured wing pressure distributions were reported in reference 1; however, additional tests were made in which the wing flow and surface pressures were further investigated. In addition, the effects of fuselage area-rule additions and wing leading-edge vortex generators on the airplane's drag and wing pressure distributions were evaluated. The drag results are reported in reference 2. This report presents all the wing pressure, boundary-layer, and wake profile data that were acquired during the flight program and compares the flight data with available wind tunnel data.

SYMBOLS

Parenthetical symbols are computer identifiers.

b	wingspan, cm
C	constant equal to 5.0
C_m (CM)	section pitching-moment coefficient, $\int_{\text{Leading edge}}^{\text{Trailing edge}} \left(C_{p_l} - C_{p_u}\right)(0.25 - x/c)\,d(x/c)$
C_n (CN)	section normal-force coefficient, $\int_{\text{Leading edge}}^{\text{Trailing edge}} \left(C_{p_l} - C_{p_u}\right)d(x/c)$
$C_{n_{wp}}$ (CNWP)	wing-panel normal-force coefficient, $\int_{0.133}^{1.0} C_n \frac{c}{c_{av}} d\left(\frac{2y}{b}\right)$
C_p (CP)	pressure coefficient, $\frac{p - p_\infty}{q}$
c	local streamwise chord of wing panel (wing-panel chord), cm
c_{av}	average chord of wing panel, cm
c'_d	wing section drag coefficient (quasi-two-dimensional)
c_f	local skin friction coefficient
h	probe height, cm
k	constant equal to 0.40
M	free-stream Mach number

p	static pressure, N/m^2
p_d	differential pressure, N/m^2
p_r	reference pressure, N/m^2
p_t	total pressure, N/m^2
q (Q)	free-stream dynamic pressure, $0.7M^2p$, N/m^2
R_δ	Reynolds number based on boundary-layer velocity thickness
$R_{\theta_{al}}$	Reynolds number based on attachment line momentum thickness
t	static temperature
t_s	surface temperature
t_t	total temperature
u	velocity
u_∞/ν_∞ (RN)	unit Reynolds number per m
$u_\delta{}^*$	generalized velocity at boundary-layer edge
u_τ	friction velocity
x/c (X/C)	ratio of distance from leading edge to local chord length of basic wing panel
y	distance perpendicular to airplane centerline, or to wing surface, cm
α	corrected airplane angle of attack, deg
β_w	angle between free-stream line and wing surface streamline, deg
Δp_t	$= p_{t_w} - p_t$, N/m^2
δ	boundary-layer velocity thickness, cm
δ_a (DA)	right aileron position, positive trailing edge down, deg

δ^*	boundary-layer displacement thickness, cm
θ	boundary-layer momentum thickness, cm
ν	kinematic viscosity
Π	Coles' strength-of-wake parameter
σ	$= 1 - t/t_t$

Subscripts:

l	wing lower surface
te	trailing edge
u	wing upper surface
w	wake
wp	wing panel (defined by extending straight-lined portion of leading and trailing edges to fuselage centerline)
δ	boundary-layer edge conditions
∞	free stream

CONFIGURATION DESCRIPTION

Airplane

The supercritical wing flight tests were conducted with a TF-8A fighter airplane that was lent to NASA by the U.S. Navy. This airplane was selected as the test-bed vehicle because it was capable of flying at transonic speeds and because it was relatively easy to remove the wing and replace it with one of supercritical design. A three-view drawing of the basic F-8 supercritical wing airplane is shown in figure 1, and an in-flight photograph is shown in figure 2. The airplane's physical characteristics are listed in table 1.

The F-8 supercritical wing airplane has a planform configuration typical of that of current jet transports. A quarter-chord sweep angle of 42.24° was used because it resulted in a drag-rise Mach number near 1.0 for the wing. The space in front of the inboard wing was filled with a glove to provide the same drag-rise Mach number for the wing's root sections as for its outboard regions. The unloaded wing had a root incidence angle of 1.5° and 5° of twist (washout) between the root and tip. Streamwise thickness-to-chord ratio varied from approximately 11 percent at the wing-body junction to approximately 7 percent at the wingtip. The thickness-to-chord ratio at the wing's trailing edge was approximately 0.01. The wing section

streamwise profile near the midsemispan of the wing is shown in figure 3. The wing section coordinates at the six span stations where surface pressures were measured are given in table 2. These coordinates are for 0° of twist. The spanwise twist distributions for the airplane in the unloaded condition and in the 1g design cruise condition are shown in figure 4.

The airplane wing was designed to deform to the same shape as the model wing when the airplane was in level flight at a Mach number of 0.99 and a lift coefficient of 0.40. Laboratory load tests were conducted to verify that the airplane wing would deform to the proper shape when it was subjected to the design cruise load distribution. The load tests, which are reported in reference 3, indicated that the design requirement was satisfied. The wing surfaces were filled and sanded until they were as close to the smoothness and surface contour of the model as practical.

During the flight program, four airplane configurations were tested. The configurations were as follows:

Configuration	Fuselage additions	Leading-edge vortex generator	Boundary-layer trips
A	Off	On	Off
B	On	On	Off
C	On	Off	Off
D	On	On	On

The fuselage additions (called Mach 1 fairings in ref. 1) were added to produce a weaker shock pattern near Mach 1.0 in hopes of improving the correlation between the drag data obtained in the Langley 8-Foot Transonic Pressure Tunnel and those obtained in flight. The area distributions with and without the fuselage additions are shown in figure 5.

Leading-edge vortex generators were installed on the lower wing surface to alleviate an unstable pitch break that occurred at moderate lift coefficients (ref. 4). The vortex generators (figs. 1 and 2) were mounted at the 60-percent semispan station on each wing. The streamwise airfoil section was a 10-percent-thick Clark Y airfoil with the flat lower surface facing inboard, and the vortex generators were swept forward approximately 42° with respect to the vertical.

Finally, boundary-layer trips were installed on the wing for some wing section drag tests. The trips were on the upper and lower surfaces of the outboard section of the right wing 10 centimeters back of the leading edge. The trip on the upper surface is shown in figure 6.

Model

The F-8 supercritical wing configuration was developed in extensive model testing at the Langley Research Center. The evolution of the configuration is

described in detail in reference 4. The pressure distribution model was of 0.087 scale and duplicated the airplane's geometry in detail, including such protuberances as the aileron hinge fairings and radio and telemetry antennas. The model wing twist distribution at the test condition corresponding to the 1g cruise design condition is shown in figure 4.

Boundary-layer trips were placed on the upper and lower surfaces of the model's wing at the locations shown in figure 7. The locations for the trips were determined from calculations based on the criteria in reference 5 that provided the same trailing-edge boundary-layer-displacement thickness relative to the chord length for the model as for the airplane. As a result of these calculations, the trips were placed at the 31-percent chord on the upper and lower surfaces of the outer wing for tests at speeds equal to or greater than Mach 0.95. For tests at Mach 0.90 and below, the upper surface trips were relocated to vary linearly from the 8-percent chord at the wingtip to the 5-percent chord near orifice row 2. They were relocated to prevent the laminar boundary layer from separating back of the velocity peak that occurred near the leading edge at high lift coefficients. On the inboard (glove) section of the wing, the upper surface trips were placed at the 5-percent chord because laminar flow could not be maintained in this region. Because of this and the fact that the fuselage boundary layer near the wing root was not to scale, boundary-layer scaling was not expected to be correct for the inboard sections of the model wing.

TEST CONDITIONS

Airplane

Flight data were obtained and are presented over a range of angles of attack at speeds from Mach 0.50 to Mach 0.99. The angles of attack for which the surface pressure coefficients are tabulated herein are given in the following table.

Mach number	Fuselage additions -	
	Off	On
	Angle of attack, deg	
0.50	- - - - - - - - - - - - - - - - - - -	2.25[a], 3.39, 4.30, 5.26[a], 5.40[a], 6.40[a]
0.80	3.62, 4.07, 4.12, 4.39, 4.62, 5.00, 8.86, 9.30	2.23, 2.29[a], 3.39[a], 4.14, 4.57[a], 5.19[a], 5.58[a], 5.80, 6.52[a], 6.76, 7.74
0.90	2.48, 3.43, 4.55, 4.77, 5.28, 6.35, 9.28	2.41[a], 2.62, 3.29[a], 3.50[a], 4.03, 4.26[a], 4.72[a], 4.78, 5.44[a], 5.47, 6.28[a]
0.95	2.43, 3.32, 3.72, 4.74, 7.23, 9.36	1.86, 2.14[a], 3.11, 3.86[a], 4.00, 4.69, 5.34[a], 5.55, 6.46[a], 7.16, 7.84
0.97	2.45, 3.19, 4.01, 5.90, 7.49, 7.63	2.22[a], 2.52, 3.46[a], 3.93, 4.09[a], 5.37[a], 5.38, 6.25[a], 6.40[a], 7.86
0.98	3.35, 3.41, 3.63, 4.48, 4.69, 5.27, 5.49, 5.82, 6.75	2.37[a], 3.87[a], 4.02, 4.92, 5.57, 6.48[a], 6.65[a]
0.99	3.33, 4.23, 6.43, 8.63	3.72[a], 3.89[a], 6.37[a]

[a]Leading-edge vortex generators off.

These data were obtained at a dynamic pressure of approximately 10 kN/m^2 and a unit Reynolds number of approximately 4×10^6 per meter. Wing trailing-edge boundary-layer measurements were obtained for unit Reynolds numbers of 4×10^6 per meter and 7×10^6 per meter.

Model

The model wing pressure distribution data were acquired in the Langley 8-Foot Transonic Pressure Tunnel (ref. 6). The wind tunnel conditions for the tests of the model with and without fuselage additions are shown in the following table.

M	Fuselage additions-			
	Off		On	
	q, kN/m^2	u_∞/ν_∞ per m	q, kN/m^2	u_∞/ν_∞ per m
1.00	44.2	16.0×10^6	40.7	14.8×10^6
0.99	44.2	16.0	40.7	14.8
0.98	44.2	16.0	40.7	14.8
0.97	44.2	16.0	40.7	14.8
0.95	44.2	16.4	40.7	15.1
0.90	47.9	18.4	40.7	15.7
0.80	47.9	20.0	40.7	17.1
0.50	24.0	14.6	21.5	13.1

Some of the model wing trailing-edge pressures presented herein were obtained in the Langley 16-Foot Transonic Tunnel at Mach 0.95 and Mach 0.99. For these tests, the dynamic pressure was approximately 36 kN/m^2 and the unit Reynolds number was approximately 13.2×10^6 per meter.

The wind tunnels are described in reference 7.

INSTRUMENTATION

Wing Pressures

The flight wing pressure measurements were obtained from six rows of orifices on the top and bottom surfaces of the right wing at the span stations shown in figure 8. The locations of these span stations were identical to those used for the pressure survey on the model. The chordwise locations of the flight wing pressure orifices in each row are presented in table 3.

The wing pressures were transmitted through 0.318-centimeter inner-diameter tubing to three wing instrument bays, where the pressures were measured with scanivalves. The locations of the three wing bays are shown in figure 8. These locations were chosen so that the scanivalves would be as close as possible to the orifices.

Differential transducers were used on every scanivalve and were referenced to one source. The reference source was a compartment located in the fuselage behind the cockpit. A 1.27-centimeter inner-diameter line connected the compartment with the wing bays. Precision absolute pressure transducers were used to measure the compartment pressure.

To measure wing section drag, a rotating wake probe was mounted behind the wing trailing edge at the location shown in figure 8. Photographs of the probe are shown in figure 9. The probe consisted of a pitot-static head with two transducers mounted within the fairing that housed the drive motor. Total and static pressures were measured with the transducers. The static pressure was measured with an absolute transducer; the total pressure was measured with a differential transducer and referenced to the static pressure. The probe's motion was programed to move through an arc of approximately 45° above and below the wing trailing edge. All measurements were made inboard of the probe's wing mounting and approximately $0.30c$ behind the wing trailing edge.

Boundary-layer rakes were installed near the wing trailing edge at two locations (fig. 8). The inboard rake was near pressure orifice row 3, and the outboard rake was between orifice rows 5 and 6. Both rakes were 12.7 centimeters high, and the pressure at each probe was measured on a scanivalve. The rakes are shown in figure 10. Three of the lower probes were bent inboard 90° to measure crossflow during some of the later tests.

Air Data

A Mach-number-compensated pitot-static probe designed for this configuration and standard NACA flow-direction-sensing vanes were mounted on the nose boom. An in-flight calibration of the angle of attack vane indicated that interference was occurring between the angle of attack vane and the angle of sideslip vane at speeds near Mach 1.0. The effect of the interference on the angle of attack measurements was determined from tests made with the sideslip vane and mounting shaft removed,

and an angle of attack correction was applied to data taken with the sideslip vane installed.

ACCURACY

The pressure range for the scanivalve transducers was scaled on the basis of wind tunnel pressure coefficients for flight conditions near the wing design condition. The scanivalve zero pressure differential was checked during each flight by connecting both sides of the differential transducer to the same pressure. Scanivalve transducers were also checked against each other in pairs by measuring the pressure at the same orifice.

Three transducers with overlapping ranges were used to measure the reference pressure. Only the data from the transducer with a range best suited for the particular test altitude were used. Also, the transducers were checked against one another.

The average error in C_p based on the flight data was estimated to be 0.01, an accuracy comparable to that of the wind tunnel.

The maximum estimated error in each of the flight measurements for a total wing-panel normal-force coefficient of 0.40, a Mach number of 0.99, a dynamic pressure of 9.6 kN/m^2, and an altitude of 14,000 meters is as follows:

p_d, kN/m^2	±0.38
p_r, kN/m^2	±0.19
p, kN/m^2	±0.10
M	±0.003
α, deg	±0.25
q, kN/m^2	±0.14

The rake pressures were measured by using the wing scanivalves that were used to obtain the wing pressure distribution; therefore, the rake pressure errors were comparable to the wing static pressure errors.

The maximum errors in the wake survey measurements are presented below relative to free-stream conditions. The resulting percentage of error in the wing section drag coefficient is also shown:

Wake survey measurement	Measurement error, percent	Resulting error in c'_d, percent
p_w	6	2
Δp_t	1	8
y	±3	-

The error due to Δp_t was accounted for by adjusting Δp_t to zero outside the wake and below the wing.

RESULTS AND DISCUSSION

The surface pressure coefficients derived from the pressure measurements are listed in tables 4 and 5. The coefficients were integrated to give section normal-force coefficients (CN), pitching-moment coefficients (CM), and the total wing-panel normal-force coefficients (CNWP). These values are also given in the tables.

Some of the airplane and the model pressure distributions, section normal-force coefficients, and trailing-edge pressure divergence characteristics for configuration A are compared and discussed in reference 1. Some of those comparisons are repeated herein, and additional data obtained for configuration A are also included. The same kinds of data obtained for configurations B and C are discussed, and the effects of configuration changes are noted. The boundary-layer and wake measurements discussed herein are presented for the first time.

Surface Pressure Measurements

Pressure distributions. - Airplane and model chordwise pressure distributions and isobars are compared in figure 11 for conditions near design cruise. At a Mach number of 0.90 (fig. 11(a)), the comparison of chordwise pressure distributions for the airplane and the model shows higher second velocity peaks (more negative pressure coefficients) near the trailing edge in the airplane data. In reference 8 the difference between the airplane and model data is attributed to a Reynolds number effect associated with the forward trip on the model at this speed. The forward trip might have caused the slightly higher leading-edge velocity peak that was measured on the model at the two outboard rows. The effects of the forward trip location on boundary-layer scaling are discussed in Reynolds Number Effects.

At a Mach number of 0.95 (fig. 11(b)), chordwise pressure distributions for the airplane and the model show good agreement on the lower surface for the outboard rows. The difference in the lower surface pressures on the inboard rows is thought to be due to the effects of the unscaled model boundary layer and possible interference from a fuselage vent located under the wing of the airplane. On the upper surface, the initial flow recompression occurred farther back on the model than on the airplane, with the airplane data again having higher second velocity peaks.

At the cruise design Mach number of 0.99 (fig. 11(c)), the pressure distributions again show higher second velocity peaks on the upper surface of the airplane wing.

In reference 1, a comparison was made between model data obtained in the Langley Research Center 8-Foot Transonic Pressure Tunnel and data obtained in the 16-Foot Transonic Tunnel. The same model was used in both tunnels. The 16-foot tunnel data showed higher second velocity peaks on the upper wing surface than

were measured in the 8-foot tunnel. The difference was attributed to a wall effect at Mach 0.99 in the 8-foot tunnel. The wall effect caused too much rear camber to be designed into the airplane wing, and the excessive rear camber produced the high second velocity peaks seen in the flight data at Mach 0.99.

The wing upper surface isobars, as interpreted from the pressure distributions, are also shown in figure 11. Comparison of the airplane and model results shows that the design goal of constant sweep isobars was achieved over the upper wing surface. The inboard wing shaping that was necessary to achieve this goal is described in reference 1. The unscaled model boundary layer in the inboard wing regions appears to have had little, if any, effect on the position of the isobars.

Trailing-edge pressure recovery characteristics. - In figures 12 and 13 trailing-edge pressure coefficients are plotted as a function of angle of attack. Unlike the airplane, the model had no orifices in the actual trailing edge; therefore the pressures measured at the upper surface orifice that was farthest rear were used. The angle of attack at which the trailing-edge pressure coefficients begin to rise or diverge is taken as the condition for the beginning of boundary-layer separation at the trailing edge and increased section drag. Whether buffet onset occurs depends partially upon the extent of the boundary-layer separation. At speeds at which high velocities occur at the leading edge, the variation of trailing-edge pressure coefficients with angle of attack generally has a monotonic trend, which typifies flow separation that begins at the trailing edge and spreads rapidly forward. As shown in figures 12 and 13, the airplane and the model exhibit this trend at speeds of Mach 0.80 and (for most rows) Mach 0.90. On the outboard rows, the trailing-edge pressures diverge rapidly at an angle of attack near 6°, which closely corresponds to the angle of attack for the onset of buffet at these speeds, as determined from wing structural sensor data (ref. 1).

When the velocities at the leading edge are lower and a weak shock has formed on the upper surface, the variation of the trailing-edge pressure coefficients with angle of attack changes from monotonic to exhibiting a relative minimum at the angles of attack immediately preceding the trailing-edge pressure divergence. This characteristic is best observed in the model data obtained on the outboard rows in the 8-foot tunnel at speeds of Mach 0.95 and above. The relative minimum occurs at angles of attack between 3° and 4°, which closely corresponds to the design lift coefficient for the airplane. As discussed in reference 1, buffet onset does not coincide with the trailing-edge pressure divergence at these speeds, but is delayed to higher angles of attack by the favorable action of the upper surface flow in confining the separated region to the rear of the wing.

Except at row 1, the trailing-edge pressure recovery levels are more negative on the airplane than on the model, which indicates that the flow did not recover from the high forward velocity peaks as well on the airplane as it did on the model. If actual trailing-edge pressures had been measured on the model, the model data may have shown even better pressure recovery levels. At row 1, however, the pressure recovery on the model was not as good as on the airplane, and this may be an effect of the unscaled model fuselage and wing boundary layer in this region. Data were obtained on the model in both the 8-foot tunnel and the 16-foot tunnel at speeds of Mach 0.95 and Mach 0.99 (fig. 12). At Mach 0.95, the two sets of data can be compared up to an angle of attack of 5°, and they agree quite well. At Mach 0.99,

however, less favorable trailing-edge pressure recovery levels (more negative coefficients) were measured in the 16-foot tunnel than in the 8-foot tunnel. The differences at Mach 0.99 are attributed to the wind tunnel wall effect in the 8-foot tunnel. The best trailing-edge pressure recovery for the airplane wing appears to occur on the outboard rows at Mach 0.98 at an angle of attack between 3° and 4°.

Although the data are sparse, a comparison of the model and the airplane data in figures 12 and 13 indicates less favorable trailing-edge pressure recovery on the outboard rows after the fuselage additions were installed (configurations B and C). The airplane data presented in figure 13 also seem to show a slight improvement in the trailing-edge pressure recovery levels on the outboard rows when the leading-edge vortex generators were installed (configuration B). The effect, if any, of the vortex generators on the pressure divergence condition could not be determined because the data were insufficient.

Section characteristics. - The variations of the section normal-force and pitching-moment coefficients with angle of attack are shown in figures 14 to 17. For configuration A, the section normal-force coefficients measured on the airplane tend to be lower than those measured on the model (fig. 14). With fuselage additions (configurations B and C), the agreement between the airplane and model data improves (fig. 15). The fuselage additions appear to cause a larger increase in the wing section normal-force coefficients for the airplane than for the model. The reason for this is unknown.

Removing the leading-edge vortex generators (configuration C) caused little change in the section normal-force coefficients over the angle of attack range for which pressure data were obtained. The vortex generators were installed to alleviate an unstable pitch break that occurred at angles of attack equal to or greater than 8° (ref. 9). Strain gage loads data obtained at angles of attack above 8° (ref. 10) showed that at speeds above Mach 0.90, the vortex generators reduced the rate at which wing-panel air loads decreased as angle of attack increased. However, the installation of vortex generators had no effect at speeds of Mach 0.50 and 0.80.

The wing section pitching-moment coefficients are more negative on the airplane than on the model at all stations except those in row 1 (fig. 16). The more negative pitching moments reflect the greater rear loading of the sections caused by the high second velocity peaks that occurred on the outboard wing sections of the airplane. The normal-force coefficients did not show a corresponding increase due to the greater rear loading, however. The reason for this anomaly is unknown. As shown by a comparison of the data in figures 16 and 17, the fuselage additions had little effect on the levels or trends of the section pitching-moment coefficients for either the airplane or the model. As with the section normal-force coefficients, the vortex generators had virtually no effect on the pitching-moment coefficients at these lower angles of attack.

Boundary-Layer Measurements

Boundary-layer rake pressures. - The pressures measured with the boundary-layer rake probes were combined with an assumed surface static pressure to derive local Mach numbers. It was assumed that the total temperature within the boundary layer was constant and that it was equal to the free-stream value, and the local

Mach numbers derived were used to obtain local velocities at each probe height. The surface static pressure assumed to exist at the inboard rake location was obtained by making a linear interpolation between the values at $x/c = 0.965$ and $x/c = 1.000$ at row 3. The outboard rake surface static pressure was obtained by linearly interpolating between the values measured at $x/c = 0.86$ and $x/c = 0.99$ at row 5. As shown in figure 8, the outboard rake was approximately midway between pressure orifice rows 5 and 6. For some conditions, the pressures measured at rows 5 and 6, in the region corresponding to the rake location, differed. The use of interpolated row 5 values for these conditions may have introduced an error into the outboard rake boundary-layer parameters.

Outboard boundary-layer flow detection with bent probes. - Photographs of oil flow on the upper surface of the model wing were made during the tests of the model. Two of these photographs are shown in figure 18. The photographs show the existence of outboard flow at the surface near the wing trailing edge at locations corresponding to the boundary-layer rakes installed on the airplane. The path of the oil flow was used to estimate the surface crossflow angle, β_w. Values for β_w between 30° and 45° were estimated at the inboard (row 3) rake location. At the outboard rake location, conditions varied from essentially no outboard flow at the surface for Mach 0.90, $\alpha = 3.5°$ (fig. 18(a)) to separated flow for Mach 0.97, $\alpha = 4.0°$ (fig. 18(b)). A power-law profile was assumed for the streamwise velocities, and a simple crossflow model was used to estimate the magnitude of the spanwise velocities that would be expected on the airplane at the boundary-layer rake locations. For example, for $\beta_w = 30°$ and Mach 0.90, maximum crossflow velocities of approximately $0.3u_\delta$ were expected at 0.1δ centimeter above the surface at the inboard rake location.

Since this amount of crossflow might affect the interpretation of the boundary-layer rake measurements, an attempt was made to detect the presence of outboard boundary-layer flow and to define the conditions for its existence. Therefore, the two probes nearest the surface on the inboard rake were bent inboard 90°, and the second probe above the surface on the outboard rake was bent inboard 90°. Measurements from the bent probes were processed the same as those from the straight probes. When the velocities derived from the pressures measured by the bent probes were zero, the boundary layer was considered to have no outboard flow. When velocities other than zero were derived, some outboard flow was assumed to exist. The angle of attack and Mach number conditions tested for outboard flow are shown in figure 19. Typical maximum outboard flow velocities were $0.4u_\delta$ at the inboard rake and $0.5u_\delta$ at the outboard rake.

The estimated boundaries for outboard flow based on the data are also shown in figure 19. Outboard flow existed at the inboard rake location at all angles of attack for which data were available above Mach 0.94 as well as at angles of attack greater than approximately 5° at Mach 0.80 and 0.90. A scarcity of bent probe data at the outboard rake location makes the interpretation of those data uncertain except near Mach 0.94. Near Mach 0.94, the bent probe data from the outboard rake indicate that there is outboard flow in the boundary layer at angles of attack below approximately 4°. At $\alpha = 4°$, the boundary-layer flow becomes streamwise and remains so to an angle of attack of at least 5°.

Boundary-layer velocity profiles and thickness parameters. - Boundary-layer velocity profiles and upper surface chordwise pressure coefficient distributions are shown in figures 20 and 21 for the inboard rake, and in figure 22 for the outboard rake. Velocity profile data obtained at high Reynolds numbers are shown in figures 23(a) and 23(b) for the inboard and outboard rake locations, respectively. For all velocity profiles, only the velocities derived from probes alined with the direction of the free stream are shown. These velocities are normalized to the maximum value measured at each rake and are plotted against a normalized height. The normalized velocities were assumed to have been measured in two-dimensional flow, and the method described in the appendix was used to determine the velocity (δ), displacement (δ^*), and momentum (θ) thicknesses. Values of the thicknesses are plotted as functions of angle of attack in figures 24 and 25. When the boundary layer was near separation or contained large outboard flow components, only velocity thickness was estimated.

At speeds of Mach 0.89 and below, the velocity profiles at both rake locations are similar (figs. 20(a) to 20(d) and figs. 22(a) to 22(c)). Monotonic growth in the thickness and relatively minor profile shape changes occur as angle of attack increases. Above Mach 0.89, however, large changes take place in the velocity profile shapes as angle of attack varies. These changes are associated with the rapidly changing flow conditions near the design speed.

As mentioned earlier, the bent probe data from the outboard rake indicated outboard flow in the boundary layer at that location for angles of attack below approximately 4° and above 5° at speeds near Mach 0.94. The boundary-layer velocity profiles derived for these conditions are shown in figures 22(d) and 22(e). Because of the unknown crossflow components, the meaning of the integral thickness parameters derived from the fitted profiles is open to question. The velocity thickness is not as subject to interpretation, however, and its variation with angle of attack (fig. 24(b)) shows that a minimum thickness exists for this outboard section of the wing at an angle of attack near 4.0°. This is a result of the favorable flow conditions on the upper surface of the supercritical airfoil. The row 5 pressure distributions in figure 22(e) indicate that for angles of attack between 4.0° and 5.2°, flow recompression takes place at the most rearward position, with good pressure recovery at the trailing edge and no second velocity peak. Although acquired at a different spanwise location, the boundary-layer rake data probably were obtained in a similar region of slow pressure recovery (mildly adverse gradient). Above an angle of attack of 5°, there was a rapid thickening of the boundary layer and progressively poorer pressure recovery, leading eventually to separation. At Mach 0.94, $\alpha = 7°$, a velocity thickness could not be obtained. At Mach 0.98, the data in figure 24(b) indicate a minimum velocity thickness at an angle of attack near 4°. However, the velocity profile data in figures 22(g) and 22(h) do not show the same trends as were seen at Mach 0.94 and Mach 0.96. At Mach 0.98, $\alpha = 3.7°$, an outboard flow velocity of $0.54u_\delta$ was measured by the bent probe. This large outboard flow velocity, combined with the shape of the velocity profiles, suggests that large outboard flow components were present at the rake location but that the flow had not separated. The upper surface pressure distribution data in figures 22(g) and 22(h) show that the flow at row 6 recovers fairly well up to angles of attack near 5.6°, but that the flow at row 5 does not recover well at any angle of attack above 2.5°. Such spanwise variations in the pressure recovery characteristics in

this outboard region of the wing complicate the interpretation of both the boundary-layer rake and the wake probe data taken in this region.

For the flight conditions at which the flow at the outboard rake location was near optimum, the flow at the inboard rake was not. This is apparent in the boundary-layer thickness data in figure 24(a). There is a thickening of the boundary layer at the inboard rake that begins near Mach 0.89 and continues as speed increases. There is no relative minimum boundary-layer thickness at an angle of attack near 4° at row 3 as there is at the outboard rake location for speeds of Mach 0.94 and above. At Mach 0.94, there is an indication of a thinning of the boundary layer at angles of attack between 4° and 5°. The upper surface flow in the row 3 region is close to, but not quite, optimum, a condition referred to as slightly off design. The flow is characterized by a second velocity peak at approximately the 80-percent chord. As figure 21 shows, the flow at this condition exhibits an apparent sensitivity to aileron deflection at small deflection angles. When the aileron is deflected downward from 1.1° to 1.5°, the flow continues to expand past the 70-percent chord and causes a high second velocity peak at approximately the 80-percent chord. Beyond the 85-percent chord, the pressure recovery with the two aileron deflections is not appreciably different. The rake measurements on the aileron show a thickening of the boundary layer and a change in the velocity profile shape that is indicative of increased outboard flow near the surface.

In figures 24 and 25, the boundary-layer velocity and displacement thicknesses obtained at both rake locations on the airplane at a speed near Mach 0.90 are compared with values calculated for an angle of attack of 5°. The calculated values were taken from reference 11, which contains the results of a three-dimensional calculation of the boundary layer over the complete wing, based on measured airplane pressure distributions. The calculated values compare favorably with the levels obtained by matching the measured velocity profiles. However, the bent probe data presented in figure 19 indicate that little or no crossflow existed at the rake locations for the calculated condition, and so these data may not represent an adequate test case for a three-dimensional method.

The boundary-layer profiles derived for the higher Reynolds number conditions are shown in figures 23(a) and 23(b), and the integral thicknesses are plotted with the lower Reynolds number data in figure 25. In almost all cases, the higher Reynolds number conditions give slightly smaller thicknesses. The data are relatively few, but there do not appear to be any significant differences in the boundary-layer thicknesses for the various airplane configurations.

Wake Pressure Measurements

The static and differential pressures measured by the rotating wake probe were summed to give the total pressure in the wake. The difference between the wake total pressure and the free-stream total pressure was normalized with respect to the free-stream dynamic pressure to give the normalized total pressure loss in the wake. A typical plot is shown in figure 26(a). The data were faired by eye and then adjusted for apparent zero shifts (fig. 26(b)). The distributions were integrated by using the same method as was used in reference 12 to obtain a quasi-two-dimensional

section drag coefficient, c'_d. The adjustments for apparent zero shifts were made relative to the measured total pressure loss outside the wake and below the wing, because the angle of attack range investigated was above the values for lower surface shock losses. Upper surface shock losses were observed for some conditions, but their vertical extent could not be determined. In these cases, the wake data were faired to the adjusted zero (based on the lower surface) above the wing to exclude shock losses. The adjusted wake profiles and the upper surface pressure coefficients for rows 5 and 6 are shown in figure 27. The section drag values are shown in figures 28 and 29.

Wing section drag. - As figure 28 shows, the section drag varies with angle of attack in approximately the same way as the pressure coefficients for the outboard wing upper surface trailing edge (figs. 12 and 13) and the boundary-layer thicknesses for this region (fig. 24(b)). At speeds above Mach 0.93, the section drag appears to be near a minimum at an angle of attack near 4°. This angle of attack coincides approximately with the angle of attack for a relative minimum in the pressure coefficients and the boundary-layer thicknesses for the outboard upper surface trailing edge, and all these data indicate that the range of angle of attack for the optimum flow condition on the outboard wing may be as narrow as 1°. At speeds above Mach 0.97, some of the trailing-edge pressure coefficient data suggest that the optimum angle of attack might be lower than 4° (figs. 12 and 13). This observation is supported by the boundary-layer velocity profile data taken at angles of attack of 3.7° (fig. 22(h)) and 3.4° (high dynamic pressure conditions, fig. 23(b)). Only for these two cases did the rake probes near the surface measure velocities greater than zero, indicating that the boundary layer had not separated. At speeds above Mach 0.94, the section drag increases rapidly as angle of attack increases above 4°. Although at Mach 0.94 the section drag more than doubles as angle of attack increases from near 4° to slightly above 5°, there is no evidence of separated flow in the boundary-layer rake data in figures 22(d) and 22(e), or of any crossflow in the bent probe data (fig. 19). At an angle of attack of 7°, however, the boundary-layer thickness is greater than the height of the rake, and the trailing-edge pressure coefficients have diverged, indicating the presence of separated flow.

Laminar flow on outboard wing. - During the flight tests, the airplane wing was kept aerodynamically clean. All cracks and holes were filled with putty, and the wing surfaces were rubbed and polished so that the condition of the airplane wing was as close as possible to that of the model wing. Because the surfaces were smooth, there was a possibility that the flow over them would be laminar as long as spanwise contamination did not cause turbulence along the wing's blunt leading edge.

With swept leading edges, roughness-induced spanwise turbulent contamination along the leading edge and fully developed turbulent flow over the outboard wing have been observed on both models and aircraft when the attachment-line momentum thickness Reynolds number has exceeded a critical value. Below the critical value, wedge-shaped regions of turbulent flow that trail downstream of individual roughness particles on the leading edge are washed over the leading edge and do not contaminate the outboard surface areas. The critical value of the momentum thickness Reynolds number is approximately 100 for large leading-edge roughness particles, and it has been as high as 200 in flight with a smooth leading edge and no

free-stream turbulence (ref. 13). Attachment-line momentum thickness Reynolds numbers were estimated for the F-8 supercritical wing airplane at Mach 0.95 and a dynamic pressure of 95 hectonewtons per square meter. The results are shown in the adjacent table.

Row	$R_{\theta_{al}}$
3	140
4	127
5	115
6	95

As the table shows, the values are well within the range for no spanwise contamination when the leading edge is smooth, and the outboard rows are approximately within this range even with large leading-edge roughness particles.

An attempt was made to determine the extent of laminar flow on the wing opposite the instrumented wing. Subliming chemicals were sprayed on the outboard wing area. The chemicals sublime at specific temperature and pressure conditions, and are removed at a greater rate by turbulent boundary-layer flow than by laminar flow. In-flight photographs show the turbulent flow areas where the chemicals have been removed. Unfortunately, most attempts to determine the extent of laminar flow were unsuccessful, because high ambient temperatures on the ground caused the chemicals to sublime before the flight test conditions could be reached. An exception occurred when the airplane returned from a flight test with some chemical remaining on the outboard leading edge. It was observed that a wedge-shaped region in which no chemical remained originated at a roughness particle on the leading edge. (The roughness was left by masking tape used in the previous spraying process.) The wedge-shaped region extended over the leading edge, rather than along it, indicating that no spanwise spreading of turbulent flow took place along the leading edge. Of course, had the leading edge been smooth like the opposite instrumented wing, laminar flow may have existed on large areas of the outer wing panel.

Extensive laminar flow on the upper surface would not be possible at the combinations of speed and angle of attack for which high velocity peaks existed near the leading edge or for which the recompression gradient was sufficient to cause the laminar boundary layer to become turbulent. Generally speaking, this occurs at speeds of Mach 0.90 and below. At the higher speeds, however, recompression takes place farther back on the upper surface, and it would be possible for laminar flow to exist over a greater length of the chord. This would give a lower section drag if there were no adverse effects at or behind the recompression that resulted from the boundary layer being laminar (or transitional) in the region of the recompression. This is discussed in reference 5 in connection with the placement of boundary-layer trips on a model.

Effect of boundary-layer trips on airplane wing section drag. - Because it was possible that some laminar flow existed on the wing during the first section drag tests, further tests were conducted with artificial boundary-layer trips at approximately the 8-percent chord on the upper and lower surfaces of the wing outboard of the leading-edge vortex generator. The resulting section drag coefficients are shown in figure 28 (configuration D). Selected wake profiles with and without the boundary-layer trips, in addition to the surface pressure coefficient distributions at rows 5 and 6, are compared in figure 27. As expected, there is little difference in the section drag data with and without the trips at the lower Mach numbers. The largest measured differences occur at Mach 0.96 and Mach 0.97 at an angle of attack

of approximately 4°. These are the most favorable conditions for reduced drag as indicated by the upper surface pressure distributions and boundary-layer rake measurements in figure 22(f). At Mach 0.98, the scarcity of data makes the interpretation of the drag results uncertain. There is some scatter in the data at Mach 0.98 without artificial boundary-layer trips (fig. 28, configuration B), but the level is approximately the same as that measured with artificial trips. The reason for this could be that even though the boundary layer may be laminar to $x/c = 0.4$ or 0.5 before the recompression and transition to turbulence take place on the clean wing, the high second velocity peak and second recompression cause the drag to increase to a level near that for the tripped case. Although turbulent to the rear of $x/c = 0.08$, the tripped wing has more favorable pressure recovery characteristics than the clean wing, as shown in the pressure coefficient distributions in figure 27(f).

The wing section drag levels at an angle of attack near 4° were obtained for configurations B and D by fairing the data in figure 28. The resulting Mach number variation is shown in figure 29. The drag level for the wing with the tripped boundary layer decreases approximately 30 percent as Mach number increases from 0.93 to 0.98. The reduction would probably be even greater if all the shock losses could be included. Large shock losses are evident in the wake data at Mach 0.93 (fig. 27(b)). There are shock losses in some of the wake data at speeds up to Mach 0.98, but the amount of shock loss seems to diminish as the speed increases. As figures 27(c) and 27(d) show, upper surface shock losses were not always present in the wake data, even though the flight conditions were nearly the same. This apparent inconsistency also occurred in the flight data in reference 14. The untripped boundary-layer drag data in figure 29 show trends similar to the tripped case. The differences are believed to be due to the existence of laminar flow on the outboard wing panel, as discussed previously. Generally speaking, the trends in the wake total pressure profiles are similar to trends in two-dimensional wind tunnel data for supercritical wings (refs. 12, 15, and 16). There are difficulties in comparing the flight data with the two-dimensional data, however, because of the differences in the measurement techniques. For example, the two-dimensional drag data in reference 12 were obtained by integrating the total pressure losses over the complete wake, which extended to a height equivalent to 30 percent of the chord above the trailing edge. In addition, the shape of the upper surface wake was different. In the two-dimensional case, the upper surface shock losses were not as apparent as in the present case. The upper surface losses in references 15 and 16 seemed to be caused by the loss in momentum within the boundary layer due to moderately adverse gradients rather than by a well-defined shock. Comparing these results with the two-dimensional data is also difficult because it is hard to know what effects the spanwise variations in flow characteristics have on the wake measurements. Regardless of these difficulties, it appears from the measurements that the outboard sections of the wing panel exhibit minimum section drag at an angle of attack near 4° and a speed near Mach 0.98. This tendency is also evident in the upper surface trailing-edge pressure recovery characteristics in figures 12 and 13. Those data, as well as the section drag data, suggest that, at conditions near its minimum value, the section drag of the outboard wing is sensitive to changes in both speed and angle of attack. If this sensitivity exists only on the outboard wing panel, changes in speed and angle of attack would be expected to have only a small effect on the overall airplane drag.

Reynolds Number Effects

As mentioned earlier, the measured pressure distributions show that the airplane wing produced higher second velocity peaks than the model wing. In reference 1, this difference was attributed to a wind tunnel wall interference effect at Mach 0.99, while at Mach 0.90 the difference was attributed to a Reynolds number effect associated with the forward trip location on the model. The forward trip location was necessary at Mach 0.90 in order to prevent laminar boundary-layer separation near the leading edge at high lift coefficients. At the lower cruise lift coefficient, the forward trip location produced a boundary layer that was thicker, relative to the local chord, on the model than on the airplane. It was reasoned that this "Reynolds number effect" might reduce the effective camber of the upper surface near the trailing edge, and that if it did, it would result in a lower second velocity peak on the model than on the airplane. The effect was investigated on the 0.087-scale model in the 8-Foot Transonic Pressure Tunnel at speeds of Mach 0.90, 0.95, and 0.99 at unit Reynolds numbers of approximately 15×10^6 per meter. Pressure distributions were obtained with boundary-layer trips at both the $x/c = 0.05$ and $x/c = 0.31$ positions on the upper surface. The data are compared in figure 30. The most noticeable effect of moving the trip rearward is that it reduces the leading-edge velocity peaks at the outboard rows. Apparently, when the trip was near the leading edge it caused a local flow expansion in that region. The large second velocity peaks measured on the airplane (fig. 11) were not produced on the model wing when the trips were moved rearwards, as it might have if the hypothesized effect existed. Some of the data in figure 30 for the outboard rows indicate that the second velocity peak was slightly affected by the movement of the trip, but the same data indicate that the movement of the trip also affected the leading-edge velocity peak, and the two effects cannot be separated.

The technique described in reference 5 was used during the wind tunnel tests to scale the model's boundary layer to the airplane conditions at speeds of Mach 0.95 and above. For purposes of comparison, calculations of the displacement thickness-to-chord ratio for the model and the airplane at Mach 0.90 were made using the two-dimensional method described in reference 17. Row 5 pressure distributions were used and are shown in figure 31(a), and the results of the calculations are shown in figure 31(b). The difference in the displacement thickness calculated for the two trip positions on the model is approximately $0.001c$, or approximately 0.14 millimeter, in the region of the second velocity peak. Actual boundary-layer conditions were not measured with the two trip locations; however, if this small difference existed, it appears not to have affected the pressure distributions in that region significantly, as shown in the model data in figure 31(a). The calculated displacement thickness distribution for the airplane with boundary-layer trips at the 8-percent chord is also shown in figure 31(b), and, at the chord position where the expansion toward the higher speed velocity peak takes place, the values are approximately midway between those calculated for the forward and rear trip positions on the model. At this location the differences between calculated displacement thickness ratios for the airplane and the model are very small and would be difficult to measure. The earlier hypothesis that attributed the differences in the second velocity peaks to a Reynolds number effect is not confirmed by this analysis.

An attempt to separate a Reynolds number effect in these data is further complicated by a lack of information on other factors that possibly contribute to the differences. For example, there may be geometric differences between the model wing and the airplane wing which are similar to the calculated displacement thickness differences. The aileron, which was displaced slightly downward in all the flight tests (figs. 20 and 21), may also have had an effect. In addition, there may be wind tunnel wall interference on the model at Mach 0.90 as well as at Mach 0.95 and 0.99. Additional tests would be required to determine the effects of these factors.

CONCLUDING REMARKS

The flight pressures, boundary-layer, and wake profile results for the F-8 supercritical wing airplane are presented for speeds of Mach 0.50 to Mach 0.99. The data are for configurations with and without fuselage area-rule additions, with and without leading-edge vortex generators, and with and without boundary-layer trips on the wing. Comparisons of wing pressure distributions on the airplane and the model show higher second velocity peaks on the airplane. At speeds of Mach 0.95 and 0.99 the differences are attributed to wind tunnel wall interference effects that caused too much rear camber to be designed into the wing. At a speed of Mach 0.90, a hypothesized Reynolds number effect that caused higher second velocity peaks on the airplane than were measured on the model could not be confirmed by analysis. Although a Reynolds number effect may exist, an attempt to separate its effect is complicated by the possible effects of other factors, such as geometric differences, aileron displacement, and wind tunnel wall interference.

The higher second velocity peaks measured on the airplane caused more negative section pitching moments (greater effective rear camber) than were measured on the model for the basic configuration, but the section normal-force coefficients were generally lower. The reason for this anomaly is unknown. With fuselage area-rule additions to the model and the airplane, there was little change in the comparative section pitching moments of the model and the airplane, but the section normal-force coefficient data agreed better.

Wing trailing-edge pressure recovery levels were generally more negative on the airplane than on the model, and at Mach 0.99, the airplane data were more comparable to data measured in the Langley Research Center 16-Foot Transonic Tunnel than to data measured in the 8-Foot Transonic Pressure Tunnel. The best trailing-edge pressure recovery characteristics measured on the airplane occurred on the outboard orifice rows at Mach 0.98 at an angle of attack near 4°. Airplane fuselage area-rule additions produced more negative trailing-edge pressure levels on the outboard rows than were measured on the basic configuration, and the addition of a leading-edge vortex generator near midsemispan resulted in slightly more positive trailing-edge pressure levels.

Trailing-edge boundary-layer rake and wake probe data show that the condition for least spanwise flow and minimum section drag on the outboard wing occurs at the condition for best trailing-edge pressure recovery. The data also show that there is some spanwise variation in the trailing-edge boundary-layer and wake characteristics.

Section drag was derived from the wake probe data for an untripped boundary layer and for trips located at the 8-percent wing chord. The resulting differences in the drag suggest that a region of laminar flow existed on the outboard wing without trips. The section drag data show angle of attack trends similar to the trends of the trailing-edge pressure data, with the minimum drag occurring at an angle of attack near 4° and a speed near Mach 0.98. Boundary-layer rake and trailing-edge pressure data indicate that, at conditions near its minimum value, the section drag of the outboard wing was sensitive to changes in speed and angle of attack.

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APPENDIX

INTERPRETATION OF VELOCITY PROFILES AND INTEGRAL THICKNESSES

Maise and McDonald (ref. 18) show that the extension of Van Driest's generalized velocities (ref. 19) to Coles' wake function (ref. 20) provides a reasonably successful means of correlating compressible turbulent boundary-layer velocity profiles without heat transfer or pressure gradient. Mathews, Childs, and Paynter (ref. 21) present a generalized form for the complete wall-wake profile and correlate pressure gradient cases by least squares fitting experimental velocity profiles. The results indicate that the generalized form provides a good representation of the velocity profiles, even under such extreme conditions as those encountered within and downstream of interactions between oblique and normal shock waves and boundary layers. The method provides a substantial improvement over the power-law representation of the velocity distribution and is felt to be useful in integral analyses of problems such as shock-wave boundary-layer interactions.

The above approach is followed below in analyzing some of the flight data taken in the shock-wave boundary-layer interaction region on the upper surface of a 17-percent-thick supercritical airfoil (ref. 22). It is also used in the main body of this report for analyzing flight data taken near the trailing edge of a swept supercritical wing; however, no attempt is made to apply the method in three dimensions in view of the limited applicability of the data.

The complete wall-wake velocity profile is written as follows (ref. 21):

$$\frac{u}{u_\delta} = \frac{1}{\sigma^{1/2}} \sin\left\{\left[\sin^{-1}\sigma^{1/2}\right]\left[1 + \frac{1}{k}\frac{u_\tau}{u_\delta{}^*}\ln\left(\frac{y}{\delta}\right) - \frac{\Pi}{k}\frac{u_\tau}{u_\delta{}^*}\left(1 + \cos\frac{\pi y}{\delta}\right)\right]\right\} \tag{1}$$

where

$$\frac{1}{k}\frac{u_\tau}{u_\delta{}^*} = \frac{1}{k}\frac{\left[\frac{c_f}{2}\left(\frac{\sigma}{1-\sigma}\right)\right]^{1/2}}{\sin^{-1}\sigma^{1/2}}$$

for $t_s = t_t$ and

$$\Pi = \frac{1}{2}\left\{\frac{1}{\frac{1}{k}\frac{u_\tau}{u_\delta{}^*}} - \ln\left[R_\delta\left(\frac{c_f}{2}\right)^{1/2}(1-\sigma)^{1.26}\right] - kC\right\} \tag{2}$$

(With given values of k, C, ν_δ, and u_δ, equation (2) becomes a compressible friction law and determines any one of the parameters c_f, δ, or Π if the other two are known.) In the spirit of reference 23, values of c_f and δ were found such that equation (1) best fit the measured profiles. The constants k and C were taken as 0.4 and 5.0, respectively, and ν_δ and u_δ were calculated from the measured surface pressures and free-stream conditions. The analytical profiles were evaluated by using a desk-type calculator, and the best fit was determined by eye by comparing computer-plotted calculated velocity profiles with the experimentally derived normalized profiles. The results are shown in the lower part of figure 32 for a shock boundary-layer interaction near the 50-percent chord. Boundary-layer traversing probe measurements were made at the locations indicated by the letters A to F on the upper part of the figure, where the calculated local velocity is shown at the chord positions of the measured surface pressures. The pressure and velocity at location B, the region of the shock, was estimated by linear interpolation between the values at positions A and C. The fitting procedure followed that of reference 23: Data in the central part of the profile were heavily weighted because the wall law is probably more accurate than the data; data near the outer edge were less heavily weighted because the data are probably more accurate than the wake law. Little weight was given to the data near the surface because of suspected inaccuracies. For various reasons, others have chosen to exclude from the fit all data above specified values of u/u_δ. For example, in reference 23, the value was usually taken to be 0.90, but it decreased to less than 0.75, depending on the circumstances. In reference 24, data points for which u/u_δ was greater than or equal to 0.98 were excluded. Because of the large spacing of the data points obtained in flight, none were excluded. In many cases, the inclusion of the outer data points probably caused those few points near the outer edge to be weighted more heavily than was warranted during the fitting operation. This effect was accepted as unavoidable, although not desirable.

With the exception of the profile at position B (the approximate shock location), there was little difficulty with the fitting operation. For the sake of consistency, the integral thicknesses were evaluated from the fitted wall-wake profiles. A comparison of the resulting δ/δ^* ratios with the values obtained by the numerical integration of the data points using the trapezoidal rule is given in the table in figure 32. The agreement is good. The profile at position D, where a separation bubble was thought to exist, was readily fitted by assuming skin friction to be near zero. The ratio here is near the value 2.0, the value required by the wake law for low-speed separation (ref. 20).

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TABLE 1. - GEOMETRIC CHARACTERISTICS OF TF-8A AIRPLANE AND SUPERCRITICAL WING

Fuselage:	
Length, m	16.09
Wing planform (defined by extending the straight-lined leading and trailing edges to the centerline of the fuselage):	
Area, m^2	25.51
Span, m	13.14
Root chord, m	2.84
Tip chord, m	1.04
Aspect ratio	6.773
Taper ratio	0.3656
Mean aerodynamic chord, m	2.08
25-percent chord sweepback angle, deg	42.3
35-percent chord sweepback angle, deg	41.4
Aileron planform (both segments):	
Hinge line location, percent chord of wing planform	75
Inboard edge location, percent semispan of wing planform	40
Outboard edge location, percent semispan of wing planform	80
Area, m^2	1.16
Span, m	26.3
Average chord, m	0.440
Vertical tail:	
Area, m^2	10.13
Aspect ratio	1.5
Span, m	3.68
Rudder:	
Area, m^2	1.17
Horizontal tail:	
Area, m^2	8.68
Aspect ratio	3.5
Span, m	5.52
Tail length, center of gravity to quarter-chord point of mean geometric chord, m	5.31

TABLE 2. - F-8 SUPERCRITICAL WING ORDINATES AS MEASURED FROM AIRPLANE AND MODEL WINGS AT SIX SPAN STATIONS

[Zero degrees twist]

Station, percent	Wing ordinates, cm											
	Row 1		Row 2		Row 3		Row 4		Row 5		Row 6	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
0	0	0	0	0	0	0	0	0	0	0	0	0
0.25	2.921	-2.921	1.321	-2.311	1.346	-1.270	1.245	-1.321	0.914	-1.092	0.635	-0.635
0.50	4.394	-4.394	2.057	-2.946	2.337	-1.905	1.803	-1.753	1.575	-1.499	0.991	-0.965
1.00	5.842	-6.731	3.073	-4.115	2.870	-2.743	2.591	-2.743	1.854	-2.007	1.397	-1.524
2.00	9.652	-9.347	4.547	-5.334	3.810	-3.632	3.200	-3.556	2.388	-2.540	1.880	-1.981
4.00	13.741	-13.157	6.426	-6.883	4.724	-4.826	4.267	-4.547	3.200	-3.302	2.438	-2.616
6.00	16.662	-16.078	7.417	-8.077	5.512	-5.817	4.851	-5.232	3.556	-3.734	2.845	-2.972
8.00	18.694	-16.662	8.204	-8.890	6.096	-6.350	5.232	-5.588	3.912	-3.962	3.175	-3.302
10.00	20.752	-18.110	8.941	-9.550	6.452	-6.782	5.436	-5.893	4.216	-4.216	3.353	-3.556
15.00	23.952	-21.031	10.033	-10.668	7.163	-7.569	6.147	-6.299	4.724	-4.597	3.734	-3.962
20.00	25.705	-22.784	10.693	-11.430	7.493	-8.128	6.502	-6.350	4.978	-4.826	3.962	-4.115
25.00	27.457	-23.952	11.176	-11.684	7.874	8.306	6.858	-6.477	5.258	-5.080	4.166	-4.115
30.00	27.457	-24.841	11.176	-11.760	8.026	-8.407	6.985	-6.477	5.410	-5.080	4.293	-4.089
35.00	27.178	-24.536	11.176	-11.684	8.204	-8.407	6.960	-6.426	5.461	-4.877	4.343	-4.039
40.00	26.873	-23.368	11.049	-11.430	8.331	-8.331	7.087	-6.121	5.588	-4.724	4.420	-3.861
45.00	25.452	-22.200	10.744	-11.201	8.280	-8.052	7.112	-5.893	5.715	-4.572	4.496	-3.708
50.00	24.257	-20.168	10.414	-10.668	8.153	-7.595	7.112	-5.563	5.791	-4.293	4.521	-3.505
55.00	23.368	-17.526	9.931	-9.855	7.925	-7.036	7.112	-5.156	5.715	-3.861	4.547	-3.175
60.00	21.031	-14.910	9.398	-8.814	7.722	-6.172	6.934	-4.521	5.639	-3.251	4.445	-2.870
65.00	19.863	-11.684	9.042	-6.985	7.544	-5.055	6.807	-3.556	5.588	-2.540	4.318	-2.261
70.00	17.562	-8.179	8.433	-5.182	7.137	-3.454	6.553	-2.337	5.486	-1.575	4.267	-1.295
75.00	15.494	-5.563	7.849	-3.200	6.655	-3.200	6.198	-1.016	5.080	-0.508	4.115	-0.559
80.00	13.741	-2.921	6.883	-1.270	5.994	-0.076	5.817	0.254	4.775	0.381	3.988	-0.102
85.00	11.100	-0.305	5.893	0.051	5.258	1.143	5.105	1.067	4.267	0.965	3.556	0.508
90.00	8.484	0.889	4.572	0.737	4.293	1.448	4.115	1.270	3.378	1.016	2.972	0.762
95.00	5.842	0.584	1.981	0.457	2.921	0.737	2.667	0.508	2.235	0.508	2.007	0.457
99.00	3.505	-0.584	1.270	-0.813	1.067	-0.889	0.889	-0.762	0.889	-0.584	0.889	-0.381
100.00	2.337	-2.057	---	-1.194	---	-1.499	---	-1.194	---	-0.889	---	---

TABLE 3. - CHORDWISE LOCATION OF WING PRESSURE ORIFICES

Orifice	Chordwise location, percent chord											
	Row 1		Row 2		Row 3		Row 4		Row 5		Row 6	
	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface	Upper surface	Lower surface
1	0	-----	0	-----	-----	-----	0	-----	-----	-----	0	-----
2	0.020	0.020	0.022	0.022	0.026	0.028	0.017	0.017	0.024	0.025	0.018	0.020
3	0.040	0.040	0.041	0.041	0.076	0.077	0.032	0.045	0.064	0.066	0.038	0.040
4	0.060	0.060	0.074	0.074	0.138	0.139	0.051	0.055	0.136	0.139	0.058	0.060
5	0.100	0.100	0.109	0.101	0.211	0.210	0.070	0.070	0.208	0.211	0.139	0.140
6	0.200	0.200	0.201	0.207	0.300	0.301	0.148	0.152	0.298	0.302	0.195	0.196
7	0.300	0.300	0.301	0.301	0.400	0.400	0.219	0.220	0.398	0.400	0.297	0.253
8	0.400	0.325	0.401	0.326	0.499	0.500	0.268	0.269	0.499	0.503	0.386	0.306
9	0.500	0.344	0.501	0.350	0.573	0.574	0.314	0.315	0.564	0.565	0.452	0.388
10	0.525	0.375	0.526	0.376	0.686	0.715	0.383	0.383	0.676	0.703	0.504	0.432
11	0.550	0.400	0.551	0.400	0.787	0.788	0.440	0.411	0.786	0.789	0.556	0.474
12	0.575	0.429	0.576	0.425	0.859	0.860	0.498	0.439	0.858	0.861	0.647	0.494
13	0.600	0.450	0.600	0.450	0.924	0.924	0.538	0.479	0.907	0.933	0.696	0.559
14	0.625	0.475	0.629	0.475	0.965	0.965	0.570	0.518	0.957	0.975	0.746	0.637
15	0.650	0.500	0.650	0.500	1.000		0.615	0.546	1.000		0.797	0.679
16	0.669	0.525	0.675	0.525			0.648	0.570			0.852	0.752
17	0.688	0.550	0.699	0.550			0.667	0.640			0.896	0.845
18	0.719	0.575	0.726	0.576			0.701	0.702			0.946	0.935
19	0.750	0.600	0.750	0.600			0.777	0.800			1.000	
20	0.775	0.625	0.775	0.628			0.816	0.857				
21	0.800	0.650	0.800	0.650			0.856	0.919				
22	0.825	0.675	0.824	0.675			0.896	0.959				
23	0.850	0.700	0.849	0.700			0.935					
24	0.875	0.750	0.874	0.750			0.972					
25	0.900	0.800	0.899	0.800			1.000					
26	0.925	0.850	0.924	0.849								
27	0.950	0.900	0.950	0.900								
28	0.975	0,950	0.974	0.949								
29	1.000		1.000									

TABLE 4. - SURFACE PRESSURE COEFFICIENTS, SECTION NORMAL-FORCE AND PITCHING-MOMENT COEFFICIENTS, AND TOTAL WING-PANEL NORMAL-FORCE COEFFICIENTS WITH FUSELAGE ADDITIONS OFF

[Q, kN/m^2; ALPHA, deg; DA, deg; RN/m, X 10^6; CP = 0.000 indicates pressure not available]

M = .804 Q =10.81 ALPHA = 3.62 CNWP = .2670 DA =1.0 RN =6.24

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.108	0.000	.025	.026	-.940	0.000	.385	.024	-.470	0.000	.424
.020	-.277	.022	-.765	.076	-.823	.017	-.756	.064	-.446	.018	-.457
.040	-.313	.041	-.907	.138	-.525	.032	-.845	.136	-.442	.038	-.466
.060	-.329	.074	-.809	.211	-.431	.051	-.733	.208	-.414	.058	-.494
.100	-.360	.109	-.720	.300	-.389	.070	-.524	.298	-.362	.139	-.411
.200	-.449	.201	-.479	.400	-.362	.148	-.445	.398	-.351	.195	-.373
.300	-.383	.301	-.498	.499	-.307	.219	-.392	.499	-.347	.297	-.316
.400	-.348	.401	-.383	.573	-.307	.268	-.362	.564	-.356	.386	-.291
.500	-.260	.501	-.321	.686	-.358	.314	-.334	.676	-.477	.452	-.281
.525	-.234	.526	-.285	.787	-.377	.383	-.316	.786	-.433	.504	-.301
.550	-.241	.551	-.283	.859	-.370	.440	-.316	.858	-.449	.556	-.304
.575	-.250	.576	-.286	.924	-.306	.498	-.304	.907	-.251	.647	-.325
.600	-.242	.600	-.327	.965	-.198	.538	-.307	.957	-.246	.696	-.328
.625	0.000	.629	-.313	1.000	-.133	.570	-.304	1.000	-.172	.746	-.345
.650	-.206	.650	-.319			.615	-.327			.797	-.369
.669	-.192	.675	-.303			.648	-.371			.852	-.389
.688	-.183	.699	-.308			.667	-.390			.896	-.373
.719	-.185	.726	-.328			.701	-.426			.946	-.273
.750	-.181	.750	-.340			.777	-.496			1.000	-.130
.775	-.182	.775	-.328			.816	-.426				
.800	-.185	.800	-.334			.856	-.428				
.825	-.186	.824	-.343			.896	-.428				
.850	-.193	.849	-.317			.935	-.290				
.875	-.215	.874	-.299			.972	-.146				
.900	-.223	.899	-.272			1.000	-.162				
.925	-.211	.924	-.244								
.950	-.214	.950	-.210								
.975	-.159	.974	-.147								
1.000	-.092	1.000	-.107								
					LOWER SURFACE						
.020	-.024	.022	.164	.028	.176	.017	.129	.025	-.085	.020	-.114
.040	-.029	.041	.098	.077	-.099	.045	-.096	.066	-.155	.040	-.169
.060	-.042	.074	-.025	.139	-.135	.055	-.126	.139	-.186	.060	-.222
.100	-.070	.101	-.084	.210	-.158	.070	-.131	.211	-.193	.140	-.246
.200	-.094	.207	-.240	.301	-.166	.152	-.201	.302	-.173	.196	-.232
.300	-.155	.301	-.192	.400	-.165	.220	-.168	.400	-.168	.253	-.212
.325	-.230	.326	-.191	.500	-.145	.269	-.163	.503	-.149	.306	-.178
.344	-.194	.350	-.216	.574	-.113	.315	-.150	.565	-.138	.388	-.171
.375	-.198	.376	-.220	.715	-.076	.383	-.165	.703	.022	.432	-.175
.400	-.201	.400	-.232	.788	.129	.411	-.170	.789	.137	.474	-.165
.429	-.243	.425	-.210	.860	.276	.439	-.164	.861	.203	.494	-.153
.450	-.212	.450	-.257	.924	.261	.479	-.151	.933	.226	.559	-.131
.475	-.253	.475	-.266	.965	.259	.518	-.129	.975	.146	.637	-.054
.500	-.205	.500	-.244			.546	-.116			.679	.002
.525	-.218	.525	-.232			.570	-.097			.752	.080
.550	-.224	.550	-.176			.640	-.016			.845	.121
.575	-.220	.576	-.196			.702	.036			.935	.187
.600	-.222	.600	-.217			.800	.137				
.625	-.209	.628	.163			.857	.162				
.650	-.174	.650	-.077			.919	.213				
.675	-.162	.675	-.057			.959	.211				
.700	-.127	.700	-.037								
.750	-.093	.750	-.038								
.800	-.027	.800	.106								
.850	.086	.849	.149								
.900	.122	.900	.184								
.950	.118	.949	.143								
CN =	.3214		.3361		.3769		.3469		.3243		.2593
CM =	.0285		-.0591		-.0861		-.1030		-.1063		-.0926

TABLE 4. - Continued.

M = .735 Q = 9.65 ALPHA = 4.07 CNWP = .2936 DA =1.6 RN =5.54

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.051	0.000	.041	.026	-1.138	0.000	.382	.024	-.593	0.000	.457
.020	-.228	.022	-.761	.076	-.818	.017	-.886	.064	-.413	.018	-.508
.040	-.264	.041	-.867	.138	-.486	.032	-.785	.136	-.387	.038	-.477
.060	-.282	.074	-.785	.211	-.392	.051	-.792	.208	-.359	.058	-.516
.100	-.312	.109	-.702	.300	-.344	.070	-.494	.298	-.295	.139	-.361
.200	-.330	.201	-.429	.400	-.317	.148	-.431	.398	-.283	.195	-.313
.300	-.323	.301	-.439	.499	-.270	.219	-.374	.499	-.269	.297	-.244
.400	-.293	.401	-.320	.573	-.272	.268	-.342	.564	-.289	.386	-.213
.500	-.204	.501	-.259	.686	-.329	.314	-.311	.676	-.401	.452	-.201
.525	-.177	.526	-.225	.787	-.358	.383	-.301	.786	-.327	.504	-.215
.550	-.186	.551	-.225	.859	-.317	.440	-.299	.858	-.363	.556	-.220
.575	-.193	.576	-.233	.924	-.234	.498	-.281	.907	0.000	.647	-.241
.600	-.182	.600	-.265	.965	-.128	.538	-.281	.957	-.209	.696	-.239
.625	0.000	.629	-.254	1.000	-.073	.570	-.281	1.000	-.090	.746	-.269
.650	-.142	.650	-.261			.615	-.299			.797	-.295
.669	-.129	.675	-.245			.648	-.346			.852	-.313
.688	-.119	.699	-.249			.667	-.370			.896	-.296
.719	-.121	.726	-.265			.701	-.403			.946	-.199
.750	-.118	.750	-.269			.777	0.000			1.000	-.059
.775	-.123	.775	-.262			.816	-.390				
.800	-.123	.800	-.265			.856	-.370				
.825	-.125	.824	-.268			.896	-.370				
.850	-.132	.849	-.248			.935	-.221				
.875	-.154	.874	-.227			.972	-.092				
.900	-.159	.899	-.200			1.000	-.102				
.925	-.151	.924	-.176								
.950	-.151	.950	-.142								
.975	-.098	.974	-.079								
1.000	-.029	1.000	-.041								

LOWER SURFACE

.020	.037	.022	.249	.028	.241	.017	.226	.025	.069	.020	.077
.040	.037	.041	.176	.077	.004	.045	.021	.066	-.008	.040	-.012
.060	.026	.074	.060	.139	-.042	.055	-.009	.139	-.067	.060	-.074
.100	.001	.101	.001	.210	-.073	.070	-.020	.211	-.079	.140	-.123
.200	-.048	.207	-.147	.301	-.086	.152	-.095	.302	-.067	.136	-.119
.300	-.095	.301	-.113	.400	-.084	.220	-.076	.400	-.067	.253	-.108
.325	0.000	.326	-.109	.500	-.063	.269	-.074	.503	-.054	.306	-.085
.344	-.120	.350	-.130	.574	-.035	.315	-.063	.565	-.041	.388	-.086
.375	-.121	.376	-.139	.715	.004	.383	-.081	.703	.101	.432	-.092
.400	-.126	.400	-.145	.788	.218	.411	-.089	.789	.204	.474	-.082
.429	-.168	.425	-.124	.860	.351	.439	-.088	.861	.264	.494	-.073
.450	-.134	.450	-.171	.924	.330	.479	-.075	.933	.284	.559	-.055
.475	-.170	.475	-.179	.965	.324	.518	-.054	.975	.205	.637	.012
.500	-.129	.500	-.156			.546	-.039			.679	.074
.525	-.138	.525	-.147			.570	-.016			.752	.151
.550	-.154	.550	-.091			.640	.063			.845	.187
.575	-.156	.576	-.112			.702	.117			.935	.257
.600	-.144	.600	-.135			.800	.209				
.625	-.124	.628	-.083			.857	.229				
.650	-.096	.650	-.004			.919	.282				
.675	-.085	.675	.014			.959	.278				
.700	-.045	.700	.031								
.750	-.020	.750	.105								
.800	.097	.800	.170								
.850	.149	.849	.212								
.900	.184	.900	.250								
.950	.179	.949	.208								

CN =	.3471		.3596		.4129		.4045		.3581		.2794
CM =	.0350		-.0546		-.0942		-.1093		-.1103		-.0832

TABLE 4. - Continued.

M = .759 Q = 9.68 ALPHA = 4.12 CNWP = .3092 DA =1.7 RN =5.55

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.062	0.000	-.001	.026	-1.238	0.000	.324	.024	-.566	0.000	.410
.020	-.238	.022	-.847	.076	-.841	.017	-1.055	.064	-.440	.018	-.677
.040	-.271	.041	-.962	.138	-.503	.032	-.997	.136	-.435	.038	-.536
.060	-.298	.074	-.803	.211	-.418	.051	-.844	.208	-.398	.058	-.619
.100	-.319	.109	-.696	.300	-.370	.070	-.590	.298	-.326	.139	-.382
.200	-.396	.201	-.461	.400	-.334	.148	-.448	.398	-.306	.195	-.328
.300	-.328	.301	-.463	.499	-.288	.219	-.387	.499	-.236	.297	-.254
.400	-.299	.401	-.344	.573	-.288	.268	-.357	.564	-.310	.386	-.215
.500	-.208	.501	-.280	.686	-.345	.314	-.326	.676	-.418	.452	-.210
.525	-.183	.526	-.242	.787	-.362	.383	-.306	.786	-.340	.504	-.218
.550	-.190	.551	-.244	.859	-.319	.440	-.306	.858	-.365	.556	-.227
.575	-.198	.576	-.248	.924	-.238	.498	-.286	.907	0.000	.647	-.245
.600	-.189	.600	-.280	.965	-.138	.538	-.284	.957	-.220	.696	-.252
.625	0.000	.629	-.261	1.000	-.081	.570	-.294	1.000	-.100	.745	-.272
.650	-.153	.650	-.266			.615	-.306			.797	-.305
.669	-.139	.675	-.251			.648	-.353			.852	-.321
.688	-.127	.699	-.253			.667	-.379			.896	-.302
.719	-.127	.726	-.274			.701	-.408			.946	-.206
.750	-.127	.750	-.277			.777	0.000			1.000	-.066
.775	-.131	.775	-.271			.816	-.399				
.800	-.134	.800	-.268			.856	-.375				
.825	-.135	.824	-.275			.896	-.375				
.850	-.140	.849	-.255			.935	-.225				
.875	-.161	.874	-.233			.972	-.103				
.900	-.168	.899	-.207			1.000	-.109				
.925	-.158	.924	-.179								
.950	-.160	.950	-.144								
.975	-.106	.974	-.085								
1.000	-.038	1.000	-.046								
					LOWER SURFACE						
.020	.031	.022	.260	.028	.265	.017	.269	.025	.104	.020	.128
.040	.035	.041	.191	.077	.027	.045	.024	.066	.016	.040	-.006
.060	.024	.074	.083	.139	-.209	.055	-.009	.139	-.052	.060	-.073
.100	.003	.101	.019	.210	-.062	.070	-.022	.211	-.071	.140	-.129
.200	-.049	.207	-.130	.301	-.078	.152	-.101	.302	-.060	.196	-.125
.300	-.096	.301	-.102	.400	-.078	.220	-.078	.400	-.066	.253	-.112
.325	0.000	.326	-.099	.500	-.061	.269	-.079	.503	-.053	.306	-.088
.344	-.120	.350	-.125	.574	-.037	.315	-.069	.565	-.042	.388	-.090
.375	-.121	.376	-.140	.715	.003	.383	-.087	.703	.037	.432	-.098
.400	-.122	.400	-.146	.788	.213	.411	-.091	.789	.195	.474	-.089
.429	-.155	.425	-.125	.860	.347	.439	-.091	.861	.254	.494	-.081
.450	-.134	.450	-.175	.924	.322	.479	-.078	.933	.279	.559	-.064
.475	-.167	.473	-.185	.965	.318	.518	-.057	.975	.197	.637	.008
.500	-.128	.500	-.163			.546	-.043			.679	.064
.525	-.137	.525	-.155			.570	-.020			.752	.142
.550	-.150	.550	-.099			.640	.060			.845	.179
.575	-.155	.576	-.116			.702	.114			.935	.241
.600	-.141	.600	-.140			.800	.203				
.625	-.123	.629	-.091			.857	.223				
.650	-.095	.650	-.009			.919	.275				
.675	-.082	.675	.012			.959	.273				
.700	-.040	.700	.026								
.750	-.020	.750	.098								
.800	.091	.800	.164								
.850	.150	.849	.207								
.900	.180	.900	.243								
.950	.177	.949	.202								
CN =	.3589		.3865		.4355		.4142		.3864		.2903
CM =	.0334		-.0555		-.0947		-.1049		-.1104		-.0803

TABLE 4. - Continued.

M = .794 Q = 9.66 ALPHA = 4.39 CNWP = .3020 DA =1.8 RN =5.54

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.067	0.000	.011	.026	-1.208	0.000	.355	.024	-.551	0.000	.440
.020	-.246	.022	-.818	.076	-.757	.017	-.953	.064	-.437	.018	-.544
.040	-.275	.041	-.932	.138	-.498	.032	-.736	.136	-.413	.038	-.495
.060	-.293	.074	-.799	.211	-.407	.051	-.791	.208	-.381	.058	-.529
.100	-.324	.109	-.698	.300	-.367	.070	-.504	.298	-.315	.139	-.396
.200	-.400	.201	-.447	.400	-.325	.148	-.458	.398	-.297	.195	-.340
.300	-.330	.301	-.449	.499	-.285	.219	-.408	.499	-.285	.297	-.263
.400	-.300	.401	-.330	.573	-.285	.268	-.367	.564	-.299	.386	-.224
.500	-.211	.501	-.269	.686	-.338	.314	-.327	.676	-.411	.452	-.216
.525	-.187	.526	-.233	.787	-.365	.383	-.311	.786	-.331	.504	-.223
.550	-.188	.551	-.235	.859	-.321	.440	-.309	.858	-.365	.556	-.231
.575	-.199	.576	-.239	.924	-.236	.498	-.295	.907	0.000	.647	-.246
.600	-.185	.600	-.269	.965	-.133	.538	-.285	.957	-.214	.696	-.246
.625	0.000	.629	-.269	1.000	-.077	.570	-.289	1.000	-.099	.746	-.276
.650	-.146	.650	-.269			.615	-.307			.797	-.300
.669	-.137	.675	-.256			.648	-.356			.852	-.322
.688	-.126	.699	-.258			.667	-.378			.896	-.303
.719	-.125	.726	-.280			.701	-.413			.946	-.200
.750	-.123	.750	-.275			.777	-.513			1.000	-.067
.775	-.127	.775	-.266			.816	-.397				
.800	-.127	.800	-.268			.856	-.376				
.825	-.131	.824	-.275			.896	-.376				
.850	-.139	.849	-.253			.935	-.227				
.875	-.160	.874	-.231			.972	-.101				
.900	-.166	.899	-.206			1.000	-.108				
.925	-.160	.924	-.180								
.950	-.158	.950	-.143								
.975	-.104	.974	-.082								
1.000	-.033	1.000	-.044								
					LOWER SURFACE						
.020	.034	.022	.251	.028	.256	.017	.240	.025	.090	.020	.090
.040	.033	.041	.179	.077	.018	.045	.039	.066	.007	.040	.012
.060	.020	.074	.066	.139	-.036	.055	.007	.139	-.059	.060	-.056
.100	-.002	.101	.006	.210	-.070	.070	-.012	.211	-.081	.140	-.120
.200	-.052	.207	-.148	.301	-.082	.152	-.093	.302	-.064	.196	-.121
.300	-.096	.301	-.112	.400	-.083	.220	-.077	.400	-.063	.253	-.109
.325	0.000	.325	-.112	.500	-.064	.269	-.079	.503	-.057	.306	-.086
.344	-.120	.350	-.133	.574	-.039	.315	-.067	.565	-.045	.388	-.091
.375	-.122	.376	-.130	.715	.002	.383	-.083	.703	.094	.432	-.097
.400	-.124	.400	-.142	.788	.212	.411	-.093	.789	.196	.474	-.089
.429	-.166	.425	-.121	.860	.347	.439	-.089	.861	.254	.494	-.079
.450	-.137	.450	-.170	.924	.326	.479	-.077	.933	.283	.559	-.062
.475	-.171	.475	-.177	.965	.319	.518	-.058	.975	.199	.637	.006
.500	-.133	.500	-.158			.546	-.045			.679	.067
.525	-.137	.525	-.150			.570	-.022			.752	.146
.550	-.151	.550	-.095			.640	-.061			.845	.184
.575	-.155	.576	-.117			.702	.113			.935	.246
.600	-.142	.600	-.139			.800	.204				
.625	-.124	.628	-.086			.857	.225				
.650	-.097	.650	-.005			.919	.277				
.675	-.094	.675	.012			.959	.273				
.700	-.045	.700	.028								
.750	-.022	.750	.099								
.800	.094	.800	.162								
.850	.147	.849	.207								
.900	.180	.900	.224								
.950	.175	.949	.206								
CN =	.3540		.3690		.4210		.4220		.3730		.2850
CM =	.0360		-.0540		-.0955		-.1160		-.1080		-.0820

TABLE 4. - Continued.

M = .803 Q =10.80 ALPHA = 4.62 CNWP = .3239 DA =1.2 RN =6.24

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.125	0.000	-.059	.026	-1.300	0.000	.305	.024	-.629	0.000	.357
.020	-.317	.022	-.928	.076	-1.289	.017	-1.089	.064	-.513	.018	-.722
.040	-.347	.041	-1.007	.138	-.547	.032	-1.208	.136	-.528	.038	-.605
.060	-.362	.074	-.840	.211	-.465	.051	-.772	.208	-.482	.058	-.713
.100	-.392	.109	-.770	.300	-.419	.070	-.794	.298	-.406	.139	-.491
.200	-.487	.201	-.525	.400	-.388	.148	-.510	.398	-.389	.195	-.436
.300	-.415	.301	-.525	.499	-.337	.219	-.451	.499	-.378	.297	-.355
.400	-.374	.401	-.406	.573	-.328	.268	-.428	.564	-.385	.386	-.322
.500	-.231	.501	-.342	.686	-.372	.314	-.391	.676	-.530	.452	-.311
.525	-.266	.526	-.305	.787	-.402	.383	-.365	.786	-.441	.504	-.324
.550	-.271	.551	-.305	.859	-.377	.440	-.365	.858	-.449	.556	-.331
.575	-.281	.576	-.307	.924	-.304	.498	-.346	.907	-.257	.647	-.350
.600	-.270	.600	-.345	.965	-.193	.538	-.346	.957	-.257	.696	-.352
.625	0.000	.629	-.333	1.000	-.136	.570	-.346	1.000	-.188	.746	-.359
.650	-.230	.650	-.339			.615	-.363			.797	-.380
.669	-.215	.675	-.324			.649	-.403			.852	-.403
.688	-.207	.699	-.324			.667	-.429			.895	-.381
.719	-.202	.726	-.342			.701	-.448			.946	-.278
.750	-.197	.750	-.350			.777	-.510			1.000	-.133
.775	-.200	.775	-.340			.816	-.438				
.800	-.202	.800	-.341			.856	-.437				
.825	-.203	.824	-.344			.896	-.437				
.850	-.207	.849	-.320			.935	-.289				
.875	-.228	.874	-.297			.972	-.155				
.900	-.235	.899	-.269			1.000	-.166				
.925	-.223	.924	-.241								
.950	-.228	.950	-.206								
.975	-.159	.974	-.143								
1.000	-.035	1.000	-.111								
					LOWER SURFACE						
.020	-.020	.022	.211	.028	.237	.017	.218	.025	.014	.020	.012
.040	-.022	.041	.141	.077	-.027	.045	-.007	.066	-.062	.040	-.051
.060	-.030	.074	.022	.139	-.083	.055	-.039	.139	-.126	.060	-.124
.100	-.056	.101	-.040	.210	-.118	.070	-.038	.211	-.143	.140	-.197
.200	-.079	.207	-.196	.301	-.135	.152	-.126	.302	-.144	.196	-.174
.300	-.140	.301	-.162	.400	-.141	.220	-.115	.400	-.145	.253	-.168
.325	-.213	.326	-.160	.500	-.126	.269	-.115	.503	-.133	.306	-.148
.344	-.179	.350	-.185	.574	-.102	.315	-.111	.565	-.123	.388	-.157
.375	-.185	.376	-.191	.715	-.071	.383	-.133	.703	.022	.432	-.164
.400	-.193	.400	-.200	.788	.137	.411	-.140	.789	.137	.474	-.157
.429	-.226	.425	-.180	.860	.281	.439	-.141	.861	.202	.494	-.147
.450	-.195	.450	-.226	.924	.265	.479	-.132	.933	.226	.559	-.129
.475	-.236	.475	-.240	.965	.262	.518	-.115	.975	.137	.637	-.058
.500	-.185	.500	-.216			.546	-.103			.679	0.000
.525	-.202	.525	-.206			.570	-.084			.752	.075
.550	-.208	.550	-.148			.640	-.009			.845	.111
.575	-.206	.576	-.170			.702	.038			.935	.174
.600	-.202	.600	-.193			.800	.140				
.625	-.186	.629	-.142			.857	.166				
.650	-.156	.650	-.057			.919	.215				
.675	-.146	.675	-.041			.959	.211				
.700	-.119	.700	-.026								
.750	-.077	.750	.044								
.800	-.042	.800	.112								
.850	.098	.849	.154								
.900	.131	.900	.188								
.950	.130	.949	.147								
CN =	.3904		.3860		.4694		.4318		.3893		.3331
CM =	.0376		-.0594		-.0807		-.1027		-.1063		-.0877

TABLE 4. – Continued.

M = .807 Q = 8.58 ALPHA = 5.00 CNWP = .3846 DA =1.6 RN =4.93

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
UPPER SURFACE											
0.000	-.065	0.000	-.069	.026	-1.350	0.000	.281	.024	-1.142	0.000	.325
.020	-.265	.022	-.927	.076	-1.389	.017	-1.245	.064	-1.000	.018	-1.157
.040	-.297	.041	-1.190	.138	-.863	.032	-1.334	.136	-.558	.038	-.657
.060	-.311	.074	-1.112	.211	-.484	.051	-1.210	.208	-.433	.058	-.621
.100	-.343	.109	-.906	.300	-.360	.070	-1.162	.298	-.365	.139	-.415
.200	-.428	.201	-.596	.400	-.338	.148	-.464	.398	-.331	.195	-.387
.300	-.352	.301	-.518	.499	-.303	.219	-.424	.499	-.315	.297	-.279
.400	-.360	.401	-.364	.573	-.303	.268	-.395	.564	-.319	.386	-.234
.500	-.293	.501	-.287	.686	-.338	.314	-.360	.676	-.435	.452	-.216
.525	-.215	.526	-.252	.787	-.339	.383	-.338	.786	-.329	.504	-.230
.550	-.209	.551	-.252	.859	-.302	.440	-.331	.858	-.350	.556	-.232
.575	-.223	.576	-.245	.924	-.220	.498	-.310	.907	-.139	.647	-.241
.600	-.208	.600	-.285	.965	-.121	.538	-.303	.957	-.186	.696	-.243
.625	0.000	.629	-.271	1.000	-.064	.570	-.303	1.000	-.078	.746	-.259
.650	-.168	.650	-.275			.615	-.310			.797	-.309
.659	-.152	.675	-.254			.648	-.342			.852	.322
.688	-.144	.699	-.261			.667	-.377			.896	-.291
.719	-.144	.726	-.275			.701	-.408			.946	-.183
.750	-.137	.750	-.283			.777	-.473			1.000	-.052
.775	-.135	.775	-.273			.816	-.381				
.800	-.140	.800	-.268			.856	-.356				
.825	-.146	.824	-.272			.896	-.356				
.850	-.147	.849	-.247			.935	-.197				
.875	-.163	.874	-.218			.972	-.102				
.900	-.170	.899	-.192			1.000	-.096				
.925	-.167	.924	-.161								
.950	-.160	.950	-.122								
.975	-.105	.974	-.065								
1.000	-.025	1.000	-.038								
LOWER SURFACE											
.020	.058	.022	.326	.028	.340	.017	.347	.025	.235	.020	.237
.040	.053	.041	.264	.077	.096	.045	.120	.066	.107	.040	.106
.060	.058	.074	.142	.139	.032	.055	.083	.139	.023	.060	.029
.100	.038	.101	.076	.210	-.012	.070	.058	.211	-.010	.140	-.063
.200	-.014	.207	-.081	.301	-.033	.152	-.032	.302	-.018	.196	-.072
.300	-.067	.301	-.059	.400	-.044	.220	-.032	.400	-.032	.253	-.071
.325	-.133	.326	-.065	.500	-.032	.269	-.028	.503	-.026	.306	-.073
.344	-.100	.350	-.086	.574	-.011	.315	-.026	.565	-.019	.388	-.133
.375	-.090	.376	-.101	.715	.025	.383	-.048	.703	.117	.432	-.074
.400	-.098	.400	-.106	.788	.223	.411	-.057	.789	.215	.474	-.070
.429	-.134	.425	-.087	.860	.364	.439	-.055	.861	.274	.494	-.062
.450	-.106	.450	-.134	.924	.344	.479	-.044	.933	.236	.559	-.047
.475	-.131	.475	-.147	.965	.342	.518	-.027	.975	.212	.637	.024
.500	-.095	.500	-.126			.546	-.014			.679	.077
.525	-.099	.525	-.120			.570	.006			.752	.152
.550	-.118	.550	-.058			.640	.084			.845	.187
.575	-.109	.576	-.059			.702	-.052			.935	.244
.600	-.106	.600	-.087			.800	.224				
.625	-.086	.628	-.072			.857	.247				
.650	-.060	.650	-.013			.919	.297				
.675	-.055	.675	.039			.959	.291				
.700	-.009	.700	.050								
.750	.006	.750	.125								
.800	.124	.800	.189								
.850	.177	.849	.231								
.900	.207	.900	.263								
.950	.202	.949	.221								
CN =	.4520		.4680		.5280		.4860		.4840		.3380
CM =	.0440		-.0520		-.0860		-.0940		-.0940		-.0760

TABLE 4. - Continued.

M = .794 Q =10.67 ALPHA = 8.86 CNWP = .5915 DA =2.3 RN =6.21

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.274	0.000	-.577	.026	-1.293	0.000	-.149	.024	-1.697	0.000	-.183
.020	-.590	.022	-1.705	.078	-1.073	.017	-1.716	.064	-1.569	.018	-1.693
.040	-.585	.041	-1.843	.138	-1.012	.032	-1.813	.136	-1.013	.038	-1.789
.060	-.599	.074	-1.507	.211	-.961	.051	-1.815	.208	-.806	.058	-1.706
.100	-.588	.109	-1.498	.300	-.884	.070	-1.726	.298	-.655	.139	-1.052
.200	-.644	.201	-1.472	.400	-.884	.148	-.951	.398	-.566	.195	-.757
.300	-.551	.301	-.131	.499	-.754	.219	-.542	.499	-.509	.297	-.486
.400	-.525	.401	-.907	.573	-.713	.268	-.514	.564	-.497	.386	-.407
.500	-.430	.501	-.322	.686	-.611	.314	-.470	.676	-.460	.452	-.371
.525	-.397	.526	-.253	.787	-.592	.383	-.411	.786	-.386	.504	-.363
.550	-.412	.551	-.255	.859	-.530	.440	-.369	.858	-.349	.556	-.348
.575	-.422	.576	-.240	.924	-.506	.498	-.385	.907	-.267	.647	-.348
.600	-.413	.600	-.295	.965	-.482	.538	-.359	.957	-.271	.696	-.329
.625	0.000	.629	-.278	1.000	-.478	.570	-.373	1.000	-.308	.746	-.320
.650	-.357	.650	-.295			.615	-.342			.797	-.357
.669	-.344	.675	-.278			.648	-.335			.852	-.356
.688	-.323	.699	-.291			.667	-.344			.896	-.336
.719	-.312	.726	-.316			.701	-.310			.946	-.270
.750	-.292	.750	-.342			.777	-.341			1.000	-.185
.775	-.285	.775	-.330			.816	-.312				
.800	-.283	.800	-.330			.855	-.337				
.825	-.282	.824	-.342			.896	-.337				
.850	-.278	.849	-.310			.935	-.339				
.875	-.289	.874	-.290			.972	-.315				
.900	-.289	.899	-.268			1.000	-.304				
.925	-.270	.924	-.248								
.950	-.260	.950	-.224								
.975	-.193	.974	-.164								
1.000	-.116	1.000	-.120								
					LOWER SURFACE						
.020	-.023	.022	.303	.028	.431	.017	.433	.025	.308	.020	.341
.040	.033	.041	.313	.077	.214	.045	.248	.066	.179	.040	.244
.060	.047	.074	.233	.139	.121	.055	.221	.139	.061	.060	.165
.100	.039	.101	.181	.210	.059	.070	.180	.211	.007	.140	.010
.200	.016	.207	.024	.301	.009	.152	.042	.302	-.029	.196	-.034
.300	-.039	.301	.010	.400	-.025	.220	.015	.400	-.062	.253	-.062
.325	-.093	.326	.006	.500	-.036	.269	-.015	.503	-.077	.306	-.068
.344	-.063	.350	-.024	.574	-.046	.315	-.024	.565	-.081	.388	-.104
.375	-.072	.376	-.035	.715	-.061	.383	-.067	.703	.029	.432	-.124
.400	-.070	.400	-.050	.788	.147	.411	-.084	.789	.126	.474	-.129
.429	-.114	.425	-.036	.850	.261	.439	-.088	.861	.182	.494	-.128
.450	-.085	.450	-.086	.924	.209	.479	-.097	.933	.193	.553	-.123
.475	-.127	.475	-.103	.965	.179	.518	-.086	.975	.081	.637	-.080
.500	-.084	.500	-.089			.546	-.081			.679	-.025
.525	-.089	.525	-.091			.570	-.063			.752	.035
.550	-.097	.550	-.051			.640	-.003			.845	.063
.575	-.101	.576	-.073			.702	.032			.935	.127
.600	-.094	.600	-.101			.800	.103				
.625	-.081	.628	-.067			.857	.141				
.650	-.056	.650	.007			.919	.191				
.675	-.059	.675	.017			.959	.159				
.700	-.021	.700	.021								
.750	-.002	.750	.081								
.800	.108	.800	.140								
.850	.157	.849	.177								
.900	.179	.900	.206								
.950	.162	.949	.154								
CN =	.7797		.8309		.8450		.6020		.6910		.5540
CM =	.1020		-.0393		-.1460		-.0599		-.0758		-.0467

TABLE 4. – Continued.

M = .791 Q =10.63 ALPHA = 9.30 CNWP = .5774 DA =2.0 RN =6.20

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.266	0.000	-.587	.026	-1.299	0.000	-.158	.024	-1.738	0.000	-.194
.020	-.572	.022	-1.727	.076	-1.074	.017	-1.736	.064	-1.573	.018	-1.682
.040	-.571	.041	-1.860	.138	-.965	.032	-1.836	.136	-1.010	.038	-1.800
.060	-.570	.074	-1.513	.211	-.928	.051	-1.824	.208	-.816	.058	-1.840
.100	-.569	.109	-1.507	.300	-.892	.070	-1.793	.298	-.679	.139	-1.014
.200	-.644	.201	-1.456	.400	-.824	.148	-.999	.398	-.574	.195	-.729
.300	-.545	.301	-1.278	.499	-.745	.219	-.571	.499	-.520	.297	-.437
.400	-.513	.401	-.832	.573	-.724	.268	-.504	.564	-.485	.386	-.394
.500	-.424	.501	-.305	.686	-.624	.314	-.471	.676	-.435	.452	-.369
.525	-.398	.526	-.274	.787	-.568	.383	-.421	.786	-.379	.504	-.367
.550	-.408	.551	-.297	.859	-.529	.440	-.406	.858	-.321	.556	-.362
.575	-.413	.576	-.297	.924	-.464	.498	-.356	.907	-.277	.647	-.354
.600	-.410	.600	-.345	.965	-.453	.538	-.350	.957	-.254	.696	-.350
.625	0.000	.629	-.324	1.000	-.434	.570	-.335	1.000	-.312	.746	-.333
.650	-.364	.650	-.339			.615	-.356			.797	-.347
.669	-.342	.675	-.309			.648	-.360			.852	-.331
.688	-.323	.699	-.318			.667	-.349			.896	-.328
.719	-.314	.726	-.345			.701	-.386			.946	-.248
.750	-.299	.750	-.343			.777	-.352			1.000	-.198
.775	-.294	.775	-.328			.816	-.291				
.800	-.289	.800	-.330			.856	-.327				
.825	-.279	.824	-.338			.896	-.327				
.850	-.279	.849	-.308			.935	-.340				
.875	-.293	.874	-.290			.972	-.342				
.900	-.291	.899	-.270			1.000	-.304				
.925	-.273	.924	-.251								
.950	-.266	.950	-.234								
.975	-.196	.974	-.171								
1.000	-.120	1.000	-.130								

LOWER SURFACE

.020	-.019	.022	.303	.028	.431	.017	.433	.025	.311	.020	.332
.040	.027	.041	.313	.077	.218	.045	.247	.066	.187	.040	.238
.060	.038	.074	.233	.139	.123	.055	.214	.139	.067	.060	.158
.100	.032	.101	.176	.210	.058	.070	.175	.211	.002	.140	.004
.200	.015	.207	.019	.301	.008	.152	.039	.302	-.026	.196	-.034
.300	-.043	.301	.003	.400	-.024	.220	.014	.400	-.062	.253	-.060
.325	-.092	.326	-.006	.500	-.038	.269	-.008	.503	-.071	.306	-.073
.344	-.064	.350	-.032	.574	-.047	.315	-.021	.565	-.082	.388	-.103
.375	-.071	.376	-.043	.715	-.056	.383	-.064	.703	.026	.432	-.128
.400	-.073	.400	-.060	.788	.141	.411	-.081	.789	.121	.474	-.131
.429	-.115	.425	-.043	.860	.268	.439	-.099	.861	.178	.494	-.125
.450	-.087	.450	-.092	.924	.221	.479	-.093	.933	.189	.559	-.133
.475	-.125	.475	-.110	.965	.190	.518	-.093	.975	.085	.637	-.081
.500	-.083	.500	-.095			.546	-.090			.679	-.029
.525	-.090	.525	-.095			.570	-.076			.752	.035
.550	-.095	.550	-.056			.640	-.026			.845	.067
.575	-.102	.576	-.077			.702	.023			.935	.132
.600	-.097	.600	-.103			.800	.101				
.625	-.080	.628	-.066			.857	.138				
.650	-.056	.650	.004			.919	.187				
.675	-.060	.675	.015			.959	.154				
.700	-.022	.700	.020								
.750	-.003	.750	.079								
.800	.108	.800	.140								
.850	.153	.849	.177								
.900	.177	.900	.207								
.950	.159	.949	.154								

CN =	.7670	.8170	.8120	.6030	.6620	.5320
CM =	.0920	-.0260	-.1460	-.0602	-.0820	-.0440

TABLE 4. - Continued.

M = .894 Q = 9.73 ALPHA = 2.48 CNWP = .1970 DA =1.2 RN =5.47

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.031	0.000	.231	.026	-.496	0.000	.522	.024	-.192	0.000	.513
.020	-.166	.022	-.399	.076	-.765	.017	-.300	.064	-.208	.018	-.098
.040	-.208	.041	-.549	.138	-.458	.032	-.450	.136	-.271	.038	-.184
.060	-.217	.074	-.558	.211	-.270	.051	-.380	.208	-.275	.058	-.294
.100	-.258	.109	-.449	.300	-.316	.070	-.397	.298	-.246	.139	-.259
.200	-.445	.201	-.368	.400	-.294	.148	-.254	.398	-.251	.195	-.316
.300	-.271	.301	-.328	.499	-.274	.219	-.331	.499	-.259	.297	-.230
.400	-.420	.401	-.286	.573	-.229	.268	-.239	.564	-.286	.386	-.206
.500	-.173	.501	-.182	.686	-.292	.314	-.264	.676	-.404	.452	-.196
.525	-.149	.526	-.146	.787	-.362	.383	-.264	.785	-.406	.504	-.238
.550	-.158	.551	-.154	.859	-.298	.440	-.283	.858	-.309	.556	-.238
.575	-.181	.576	-.154	.924	-.184	.498	-.233	.907	0.000	.647	-.306
.600	-.165	.600	-.215	.965	-.060	.538	-.213	.957	-.187	.696	-.300
.625	0.000	.629	-.223	1.000	-.103	.570	-.221	1.000	-.071	.746	-.255
.650	-.129	.650	-.232			.615	-.241			.797	-.263
.669	-.113	.675	-.215			.648	-.304			.852	-.305
.688	-.104	.699	-.228			.667	-.355			.896	-.242
.719	-.110	.726	-.275			.701	-.471			.946	-.135
.750	-.100	.750	-.275			.777	0.000			1.000	-.015
.775	-.108	.775	-.268			.816	-.477				
.800	-.110	.800	-.261			.856	-.349				
.825	-.117	.824	-.260			.896	-.349				
.850	-.129	.849	-.235			.935	-.180				
.875	-.160	.874	-.207			.972	-.074				
.900	-.179	.899	-.179			1.000	-.076				
.925	-.179	.924	-.146								
.950	-.180	.950	-.109								
.975	-.111	.974	-.042								
1.000	-.021	1.000	-.001								

LOWER SURFACE

.020	.017	.022	.162	.028	.045	.017	-.041	.025	-.283	.020	-.306
.040	-.008	.041	.079	.077	-.166	.045	-.201	.066	-.232	.040	-.278
.060	-.019	.074	-.027	.139	-.177	.055	-.227	.139	-.212	.060	-.307
.100	-.052	.101	-.094	.210	-.181	.070	-.196	.211	-.205	.140	-.350
.200	-.069	.207	-.269	.301	-.172	.152	-.239	.302	-.151	.196	-.239
.300	-.142	.301	-.186	.400	-.159	.220	-.184	.400	-.131	.253	-.194
.325	-.261	.326	-.182	.500	-.113	.269	-.161	.503	-.103	.306	-.141
.344	-.191	.350	-.204	.574	-.058	.315	-.135	.565	-.080	.389	-.130
.375	-.185	.376	-.216	.715	-.012	.383	-.159	.703	.095	.432	-.130
.400	-.199	.400	-.216	.788	.200	.411	-.165	.789	.207	.474	-.112
.429	-.230	.425	-.190	.860	.352	.439	-.158	.861	.275	.494	-.105
.450	-.201	.450	-.249	.924	.325	.479	-.130	.933	.320	.553	-.074
.475	-.237	.475	-.265	.965	.330	.518	-.098	.975	.239	.637	.015
.500	-.188	.500	-.220			.546	-.080			.679	.092
.525	-.212	.525	-.198			.570	-.050			.752	.174
.550	-.208	.550	-.120			.640	.045			.845	.226
.575	-.225	.576	-.148			.702	.104			.935	.279
.600	-.189	.600	-.171			.800	.199				
.625	-.171	.628	-.101			.857	.211				
.650	-.137	.650	-.009			.919	.265				
.675	-.120	.675	.016			.959	.276				
.700	-.080	.700	.036								
.750	-.038	.750	.118								
.800	.081	.800	.184								
.850	.141	.849	.227								
.900	.183	.900	.272								
.950	.192	.949	.243								

CN =	.2794		.2312		.2753		.2386		.2520		.2072
CM =	.0129		-.0619		-.0872		-.1105		-.1214		-.1003

TABLE 4. - Continued.

M = .897 Q = 9.71 ALPHA = 3.43 CNWP = .2707 DA =1.6 RN =5.46

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.043	0.000	.169	.026	-.784	0.000	.460	.024	-.458	0.000	.498
.020	-.201	.022	-.537	.076	-.882	.017	-.634	.064	-.383	.018	-.320
.040	-.235	.041	-.656	.138	-.847	.032	-.678	.136	-.377	.038	-.329
.060	-.248	.074	-.746	.211	-.460	.051	-.698	.208	-.347	.058	-.449
.100	-.292	.109	-.675	.300	-.278	.070	-.698	.298	-.320	.139	-.352
.200	-.461	.201	-.390	.400	-.284	.148	-.327	.398	-.308	.195	-.387
.300	-.238	.301	-.399	.499	-.339	.219	-.380	.499	-.308	.297	-.354
.400	-.455	.401	-.401	.573	-.258	.268	-.329	.564	-.325	.386	-.208
.500	-.172	.501	-.252	.686	-.329	.314	-.327	.676	-.469	.452	-.202
.525	-.160	.526	-.188	.787	-.407	.383	-.394	.786	-.402	.504	-.238
.550	-.176	.551	-.172	.859	-.325	.440	-.331	.858	-.281	.556	-.238
.575	-.212	.576	-.174	.924	-.187	.498	-.298	.907	0.000	.647	-.310
.600	-.196	.600	-.229	.965	-.058	.538	-.314	.957	-.192	.696	-.322
.625	0.000	.629	-.244	1.000	-.091	.570	-.306	1.000	-.085	.746	-.341
.650	-.148	.650	-.259			.615	-.237			.797	-.258
.669	-.140	.675	-.229			.648	-.288			.852	-.336
.688	-.128	.699	-.229			.667	-.331			.896	-.257
.719	-.133	.726	-.269			.701	-.450			.945	-.148
.750	-.132	.750	-.283			.777	0.000			1.000	-.028
.775	-.136	.775	-.278			.816	-.562				
.800	-.142	.800	-.268			.856	-.445				
.825	-.145	.824	-.279			.896	-.445				
.850	-.155	.849	-.243			.935	-.178				
.875	-.183	.874	-.218			.972	-.103				
.900	-.199	.899	-.181			1.000	-.093				
.925	-.199	.924	-.146								
.950	-.189	.950	-.104								
.975	-.119	.974	-.043								
1.000	-.025	1.000	-.006								
					LOWER SURFACE						
.020	.027	.022	.227	.028	.132	.017	.106	.025	-.106	.020	-.090
.040	.011	.041	.148	.077	-.079	.045	-.074	.066	-.099	.040	-.128
.060	-.001	.074	.039	.139	-.110	.055	-.105	.139	-.135	.060	-.176
.100	-.032	.101	-.030	.210	-.128	.070	-.098	.211	-.145	.140	-.179
.200	-.050	.207	-.203	.301	-.130	.152	-.173	.302	-.106	.196	-.194
.300	-.130	.301	-.143	.400	-.121	.220	-.128	.400	-.103	.253	-.162
.325	-.234	.326	-.140	.500	-.089	.269	-.117	.503	-.082	.306	-.122
.344	-.166	.350	-.164	.574	-.041	.315	-.099	.565	-.067	.388	-.116
.375	-.161	.376	-.178	.715	0.000	.383	-.123	.703	.101	.432	-.122
.400	-.175	.400	-.179	.788	.217	.411	-.130	.789	.207	.474	-.109
.429	-.211	.425	-.156	.860	.364	.439	-.128	.861	.276	.494	-.098
.450	-.178	.450	-.212	.924	.336	.479	-.105	.933	.308	.559	-.072
.475	-.212	.475	-.228	.965	.338	.518	-.078	.975	.228	.637	.009
.500	-.165	.500	-.190			.546	-.056			.679	.082
.525	-.185	.525	-.170			.570	-.035			.752	.163
.550	-.183	.550	-.101			.640	.063			.845	.209
.575	-.202	.576	-.131			.702	.119			.935	.275
.600	-.169	.600	-.152			.800	.212				
.625	-.148	.628	-.086			.857	.226				
.650	-.112	.650	.003			.919	.284				
.675	-.098	.675	.028			.959	.290				
.700	-.059	.700	.048								
.750	-.023	.750	.126								
.800	.096	.800	.192								
.850	.154	.849	.234								
.900	.194	.900	.275								
.950	.202	.949	.240								
CN =	.3413		.3220		.3786		.3511		.3447		.2833
CM =	.0161		-.0608		-.0885		-.1166		-.1177		-.0961

TABLE 4. - Continued.

M = .898 Q = 9.71 ALPHA = 4.55 CNWP = .3548 DA =1.9 RN =5.44

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.305 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.056	0.000	.070	.026	-.933	0.000	.386	.024	-.720	0.000	.423
.020	-.239	.022	-.696	.076	-1.019	.017	-.852	.064	-.834	.018	-.813
.040	-.263	.041	-.893	.138	-.988	.032	-.972	.136	-.377	.038	-.636
.060	-.287	.074	-.644	.211	-.933	.051	-.937	.208	-.432	.058	-.783
.100	-.318	.109	-.698	.300	-.507	.070	-.927	.298	-.369	.139	-.445
.200	-.480	.201	-.526	.400	-.282	.148	-.925	.398	-.354	.195	-.510
.300	-.268	.301	-.490	.499	-.272	.219	-.446	.499	-.364	.297	-.404
.400	-.453	.401	-.465	.573	-.216	.268	-.310	.564	-.375	.386	-.302
.500	-.186	.501	-.346	.686	-.300	.314	-.226	.676	-.431	.452	-.173
.525	-.166	.526	-.301	.787	-.405	.383	-.261	.786	-.412	.504	-.212
.550	-.181	.551	-.273	.859	-.320	.440	-.300	.858	-.253	.556	-.231
.575	-.219	.576	-.242	.924	-.188	.498	-.312	.907	0.000	.647	-.304
.600	-.219	.600	-.283	.965	-.058	.538	-.312	.957	-.174	.695	-.318
.625	0.000	.629	-.279	1.000	-.090	.570	-.320	1.000	-.094	.746	-.345
.650	-.196	.650	-.281			.615	-.322			.797	-.260
.669	-.181	.675	-.260			.648	-.343			.852	-.331
.688	-.167	.699	-.267			.667	-.363			.896	-.255
.719	-.175	.726	-.301			.701	-.468			.946	-.137
.750	-.175	.750	-.289			.777	0.000			1.000	-.023
.775	-.181	.775	-.361			.816	-.496				
.800	-.186	.800	-.246			.856	-.427				
.825	-.187	.824	-.247			.896	-.427				
.850	-.195	.849	-.222			.935	-.196				
.875	-.215	.874	-.193			.972	-.095				
.900	-.231	.899	-.159			1.000	-.096				
.925	-.217	.924	-.121								
.950	-.211	.950	-.085								
.975	-.127	.974	-.029								
1.000	-.036	1.000	-.007								

LOWER SURFACE

.020	.036	.022	.297	.028	.233	.017	.233	.025	.080	.020	.099
.040	.032	.041	.228	.077	.007	.045	.040	.066	.026	.040	.033
.060	.024	.074	.117	.139	-.039	.055	.006	.139	-.039	.060	-.030
.100	-.004	.101	.048	.210	-.069	.070	-.002	.211	-.066	.140	-.100
.200	-.026	.207	-.124	.301	-.081	.152	-.095	.302	-.052	.196	-.111
.300	-.106	.301	-.087	.400	-.080	.220	-.067	.400	-.049	.253	-.105
.325	-.200	.326	-.085	.500	-.055	.269	-.061	.503	-.045	.306	-.082
.344	-.136	.350	-.112	.574	-.016	.315	-.050	.565	-.035	.388	-.085
.375	-.136	.376	-.127	.715	.018	.383	-.076	.703	.115	.432	-.102
.400	-.147	.400	-.132	.788	.235	.411	-.084	.789	.215	.474	-.089
.429	-.183	.425	-.113	.860	.379	.439	-.082	.861	.278	.494	-.083
.450	-.150	.450	-.164	.924	.349	.479	-.064	.933	.316	.559	-.062
.475	-.190	.475	-.179	.965	.346	.518	-.041	.975	.228	.637	.014
.500	-.137	.500	-.147			.546	-.027			.673	.086
.525	-.154	.525	-.134			.570	-.001			.752	.159
.550	-.153	.550	-.068			.640	.089			.845	.201
.575	-.168	.576	-.098			.702	.141			.935	.265
.600	-.132	.600	-.120			.800	.228				
.625	-.112	.628	-.061			.857	.247				
.650	-.078	.650	.025			.919	.301				
.675	-.069	.675	.048			.959	.303				
.700	-.031	.700	.066								
.750	0.000	.750	.139								
.800	.119	.800	.205								
.850	.183	.849	.247								
.900	.222	.900	.284								
.950	.222	.949	.247								

CN =	.4231		.4161		.5084		.4877		.4419		.3535
CM =	.0149		-.0645		-.0885		-.1104		-.1126		-.0800

TABLE 4. - Continued.

M = .895 Q = 9.56 ALPHA = 4.77 CNWB = .3723 DA =1.9 RN =5.38

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.065	0.000	.060	.026	-.957	0.000	.373	.024	-.764	0.000	.408
.020	-.250	.022	-.717	.076	-1.039	.017	-.895	.064	-.861	.018	-.867
.040	-.274	.041	-.906	.138	-1.007	.032	-1.007	.136	-.392	.038	-.682
.060	-.233	.074	-.667	.211	-.955	.051	-.968	.208	-.430	.058	-.817
.100	-.324	.109	-.721	.300	-.498	.070	-.955	.298	-.359	.139	-.478
.200	-.489	.201	-.534	.400	-.290	.148	-.955	.398	-.369	.195	-.554
.300	-.258	.301	-.495	.499	-.270	.219	-.487	.499	-.376	.297	-.413
.400	-.470	.401	-.472	.573	-.227	.268	-.362	.564	-.386	.386	-.206
.500	-.192	.501	-.350	.686	-.286	.314	-.250	.676	-.498	.452	-.185
.525	-.176	.526	-.301	.787	-.406	.383	-.269	.786	-.367	.504	-.227
.550	-.192	.551	-.272	.859	-.311	.440	-.303	.858	-.261	.556	-.243
.575	-.229	.576	-.249	.924	-.189	.498	-.318	.907	0.000	.647	-.313
.600	-.229	.600	-.291	.965	.061	.538	-.308	.957	-.183	.696	-.326
.625	0.000	.629	-.276	1.000	-.094	.570	-.310	1.000	-.089	.746	-.326
.650	-.202	.650	-.282			.615	-.286			.797	-.280
.669	-.184	.675	-.270			.648	-.335			.852	-.335
.688	-.174	.699	-.270			.667	-.374			.896	-.260
.719	-.180	.725	-.295			.701	-.487			.946	-.142
.750	-.176	.750	-.275			.777	0.000			1.000	-.031
.775	-.183	.775	-.264			.816	-.501				
.800	-.185	.800	-.252			.856	-.432				
.825	-.189	.824	-.257			.896	-.432				
.850	-.196	.849	-.226			.935	-.196				
.875	-.219	.874	-.196			.972	-.101				
.900	-.229	.899	-.163			1.000	-.095				
.925	-.214	.924	-.127								
.950	-.208	.950	-.086								
.975	-.130	.974	-.034								
1.000	-.037	1.000	-.011								
					LOWER SURFACE						
.020	.035	.022	.302	.028	.233	.017	.242	.025	.089	.020	.124
.040	.032	.041	.234	.077	.013	.045	.049	.066	.033	.040	.048
.060	-.022	.074	.122	.139	-.035	.055	.018	.139	-.036	.060	-.018
.100	-.003	.101	.052	.210	-.066	.070	.008	.211	-.058	.140	-.092
.200	-.022	.207	-.123	.301	-.078	.152	-.089	.302	-.046	.196	-.101
.300	-.104	.301	-.081	.400	-.079	.220	-.062	.400	-.048	.253	-.098
.325	0.000	.326	-.087	.500	-.056	.269	-.059	.503	-.043	.306	-.079
.344	-.134	.350	-.110	.574	-.017	.315	-.047	.565	-.034	.388	-.086
.375	-.138	.376	-.123	.715	.018	.383	-.073	.703	.112	.432	-.097
.400	-.143	.400	-.129	.788	.234	.411	-.080	.789	.216	.474	-.091
.429	-.134	.425	-.108	.860	.377	.439	-.079	.861	.277	.494	-.086
.450	-.150	.450	-.161	.924	.347	.479	-.063	.933	.309	.559	-.061
.475	-.191	.475	-.173	.965	.342	.518	-.041	.975	.233	.637	.009
.500	-.137	.500	-.174			.546	-.025			.679	.080
.525	-.156	.525	-.133			.570	-.003			.752	.152
.550	-.152	.550	-.067			.640	.089			.845	.196
.575	-.169	.576	-.095			.702	.139			.935	.257
.600	-.131	.600	-.113			.800	.226				
.625	-.110	.628	-.060			.857	.224				
.650	-.081	.650	.025			.919	.297				
.675	-.068	.675	.044			.959	.300				
.700	-.032	.700	.062								
.750	-.002	.750	.136								
.800	.119	.800	.199								
.850	.179	.849	.244								
.900	.221	.900	.273								
.950	.221	.949	.243								
CN =	.4407		.4215		.5341		.5215		.4716		.3915
CM =	.0151		-.0633		-.0855		-.1146		-.1039		-.0801

TABLE 4. - Continued.

M = .893 Q = 9.37 ALPHA = 5.28 CNWP = .4218 DA =1.9 PN =5.27

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.076	0.000	-.006	.026	-1.058	0.000	.330	.024	-.946	0.000	.355
.020	-.272	.022	-.820	.076	-1.130	.017	-.985	.064	-1.018	.018	-.986
.040	-.291	.041	-1.015	.138	-1.077	.032	-1.077	.136	-.950	.038	-.939
.060	-.319	.074	-1.091	.211	-1.043	.051	-1.056	.208	-.534	.058	-.976
.100	-.344	.109	-.731	.300	-.724	.070	-1.045	.298	-.322	.139	-.855
.200	-.500	.201	-.555	.400	-.380	.148	-1.030	.398	-.355	.195	-.439
.300	-.268	.301	-.544	.499	-.276	.219	-1.013	.499	-.368	.297	-.419
.400	-.479	.401	-.523	.573	-.223	.268	-.567	.564	-.378	.386	-.195
.500	-.210	.501	-.384	.686	-.301	.314	-.491	.676	-.512	.452	-.193
.525	-.190	.526	-.336	.787	-.367	.383	-.305	.786	-.387	.504	-.231
.550	-.205	.551	-.308	.859	-.285	.440	-.238	.858	-.263	.556	-.250
.575	-.237	.576	-.286	.924	-.187	.498	-.227	.907	0.000	.647	-.314
.600	-.241	.600	-.321	.965	-.054	.538	-.242	.957	-.178	.696	-.329
.625	0.000	.629	-.319	1.000	-.086	.570	-.259	1.000	-.091	.746	-.333
.650	-.221	.650	-.323			.615	-.283			.797	-.298
.669	-.209	.675	-.297			.648	-.337			.852	-.355
.688	-.194	.699	-.284			.667	-.388			.896	-.277
.719	-.204	.726	-.301			.701	-.497			.946	-.160
.750	-.206	.750	-.299			.777	0.000			1.000	-.040
.775	-.212	.775	-.252			.816	-.461				
.800	-.219	.800	-.242			.856	-.413				
.825	-.222	.824	-.237			.896	-.413				
.850	-.223	.849	-.209			.935	-.209				
.875	-.245	.874	-.179			.972	-.090				
.900	-.250	.899	-.148			1.000	-.092				
.925	-.229	.924	-.116								
.950	-.213	.950	-.076								
.975	-.132	.974	-.031								
1.000	-.039	1.000	-.015								

LOWER SURFACE

.020	.042	.022	.328	.028	.283	.017	.285	.025	.162	.020	.188
.040	.042	.041	.265	.077	.061	.045	.106	.066	.087	.040	.123
.060	.036	.074	.153	.139	.004	.055	.071	.139	.012	.060	.056
.100	.014	.101	.084	.210	-.033	.070	.056	.211	-.016	.140	-.043
.200	-.010	.207	-.085	.301	-.051	.152	-.046	.302	-.017	.195	-.061
.300	-.084	.301	-.058	.400	-.055	.220	-.027	.400	-.023	.253	-.065
.325	-.174	.326	-.056	.500	-.036	.269	-.027	.503	-.024	.306	-.053
.344	-.115	.350	-.082	.574	-.004	.315	-.016	.565	-.016	.388	-.065
.375	-.117	.376	-.095	.715	.029	.383	-.044	.703	.124	.432	-.082
.400	-.123	.400	-.105	.788	.248	.411	-.053	.789	.221	.474	-.076
.429	-.163	.425	-.085	.860	.384	.439	-.051	.861	.277	.494	-.072
.450	-.131	.450	-.134	.924	.352	.479	-.036	.933	.310	.559	-.052
.475	-.173	.475	-.146	.965	.348	.518	-.016	.975	.222	.637	.009
.500	-.119	.500	-.124			.546	-.005			.679	.079
.525	-.134	.525	-.109			.570	.020			.752	.150
.550	-.130	.550	-.050			.640	.105			.845	.185
.575	-.148	.576	-.070			.702	.154			.935	.245
.600	-.110	.600	-.100			.800	.237				
.625	-.091	.628	-.046			.857	.256				
.650	-.061	.650	.038			.919	.309				
.675	-.053	.675	.058			.959	.309				
.700	-.016	.700	.070								
.750	.008	.750	.143								
.800	.130	.800	.207								
.850	.189	.849	.246								
.900	.226	.900	.285								
.950	.223	.949	.243								

CN =	.4921	.4827	.6033	.5947	.5472	.4144
CM =	.0167	-.0628	-.0831	-.1109	-.1038	-.0765

TABLE 4. - Continued.

M = .894 Q = 9.09 ALPHA = 6.35 CNWP = .5254 DA = .9 RN =5.13

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.305 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.089	0.000	-.055	.026	-1.126	0.000	.306	.024	-1.026	0.000	.293
.020	-.326	.022	-.960	.076	-1.199	.017	-1.062	.064	-1.106	.018	-1.077
.040	-.332	.041	-1.129	.138	-1.186	.032	-1.148	.136	-1.055	.038	-1.086
.060	-.381	.074	-1.212	.211	-1.126	.051	-1.137	.208	-1.049	.058	-1.128
.100	-.382	.109	-1.226	.300	-1.091	.070	-1.126	.298	-1.030	.139	-1.032
.200	-.537	.201	-.865	.400	-.762	.148	-1.102	.398	-.584	.195	-1.028
.300	-.496	.301	-.588	.499	-.567	.219	-1.093	.499	-.451	.297	-.984
.400	-.457	.401	-.555	.573	-.439	.268	-1.082	.564	-.340	.386	-.344
.500	-.251	.501	-.479	.686	-.240	.314	-1.047	.676	-.357	.452	-.176
.525	-.214	.526	-.421	.787	-.230	.383	-.994	.786	-.293	.504	-.095
.550	-.226	.551	-.392	.859	-.216	.440	-.585	.858	-.289	.556	-.113
.575	-.256	.576	-.374	.924	-.140	.498	-.507	.907	0.000	.647	-.198
.600	-.263	.600	-.403	.965	-.024	.538	-.430	.957	-.135	.696	-.249
.625	0.000	.629	-.403	1.000	-.063	.570	-.355	1.000	-.093	.746	-.291
.650	-.233	.650	-.428			.615	-.279			.797	-.289
.669	-.229	.675	-.403			.648	-.255			.852	-.344
.688	-.222	.699	-.399			.667	-.257			.896	-.308
.719	-.229	.726	-.434			.701	-.279			.946	-.198
.750	-.232	.750	-.458			.777	0.000			1.000	-.054
.775	-.244	.775	-.458			.816	-.337				
.800	-.265	.800	-.455			.856	-.299				
.825	-.278	.824	-.372			.896	-.299				
.850	-.290	.849	-.239			.935	-.186				
.875	-.326	.874	-.173			.972	-.056				
.900	-.353	.899	-.128			1.000	-.067				
.925	-.352	.924	-.098								
.950	-.329	.950	-.066								
.975	-.185	.974	-.022								
1.000	-.058	1.000	-.008								

LOWER SURFACE

.020	.058	.022	.384	.028	.352	.017	.358	.025	.223	.020	.271
.040	.069	.041	.321	.077	.122	.045	.160	.066	.141	.040	.192
.060	.073	.074	.211	.139	.054	.055	.123	.139	.047	.060	.123
.100	.050	.101	.143	.210	.007	.070	.102	.211	.009	.140	.001
.200	.027	.207	-.026	.301	-.023	.152	-.015	.302	.011	.196	-.026
.300	-.055	.301	-.012	.400	-.032	.220	-.002	.400	-.002	.253	-.035
.325	-.133	.326	-.018	.500	-.020	.269	-.006	.503	-.002	.306	-.031
.344	-.081	.350	-.041	.574	.010	.315	0.000	.565	.004	.388	-.054
.375	-.087	.376	-.056	.715	.026	.383	-.030	.703	.141	.432	-.074
.400	-.089	.400	-.072	.788	.232	.411	-.041	.789	.248	.474	-.076
.429	-.128	.425	-.050	.860	.386	.439	-.041	.861	.308	.494	-.065
.450	-.102	.450	-.105	.924	.366	.479	-.029	.933	.334	.559	-.050
.475	-.145	.475	-.120	.965	.364	.518	-.009	.975	.248	.637	.022
.500	-.087	.500	-.096			.546	.003			.679	.091
.525	-.102	.525	-.089			.570	.023			.752	.159
.550	-.099	.550	-.029			.640	.106			.845	.199
.575	-.123	.576	-.058			.702	.149			.935	.260
.600	-.083	.600	-.082			.800	.250				
.625	-.066	.628	-.030			.857	.277				
.650	-.034	.650	.053			.919	.329				
.675	-.029	.675	.073			.959	.330				
.700	.012	.700	.084								
.750	.034	.750	.160								
.800	.158	.800	.226								
.850	.210	.849	.268								
.900	.243	.900	.304								
.950	.238	.949	.259								

CN =	.6499	.6440	.6964	.6909	.6930	.5596
CM =	.0183	-.0738	-.0825	-.0969	-.0959	-.0664

TABLE 4. - Continued.

M = .905 Q = 9.21 ALPHA = 9.28 CNWP = .6626 DA =1.2 RN =4.80

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.151	0.000	.300	.026	-1.280	0.000	.136	.024	-1.259	0.000	.086
.020	-.443	.022	-1.235	.076	-1.350	.017	-1.194	.064	-1.338	.018	-1.248
.040	-.440	.041	-1.372	.138	-1.348	.032	-1.289	.136	-1.310	.038	-1.280
.060	-.451	.074	-1.423	.211	-1.309	.051	-1.307	.208	-1.275	.058	-1.334
.100	-.440	.109	-1.191	.300	-.887	.070	-1.296	.298	-1.136	.139	-1.261
.200	-.568	.201	-1.109	.400	-.782	.148	-1.208	.398	-.824	.195	-1.261
.300	-.547	.301	-1.100	.499	-.697	.219	-.953	.499	-.603	.297	-1.143
.400	-.430	.401	-1.056	.573	-.646	.268	-.726	.564	-.527	.386	-.893
.500	-.352	.501	-.902	.686	-.569	.314	-.598	.676	-.444	.452	-.678
.525	-.296	.526	-.889	.787	-.513	.383	-.551	.786	-.297	.504	-.571
.550	-.277	.551	-.865	.859	-.462	.440	-.460	.858	-.243	.556	-.493
.575	-.300	.576	-.752	.924	-.439	.498	-.368	.907	-.148	.647	-.339
.600	-.314	.600	-.763	.965	-.419	.538	-.342	.957	-.137	.696	-.214
.625	0.000	.629	-.602	1.000	-.398	.570	-.313	1.000	-.142	.746	-.199
.650	-.268	.650	-.573			.615	-.284			.797	-.174
.669	-.263	.675	-.421			.648	-.295			.852	-.191
.688	-.253	.699	-.378			.667	-.310			.896	-.191
.719	-.267	.726	-.428			.701	-.326			.946	-.152
.750	-.265	.750	-.418			.777	-.297			1.000	-.113
.775	-.283	.775	-.445			.816	-.284				
.800	-.297	.800	-.496			.856	-.301				
.825	-.320	.824	-.532			.896	-.301				
.850	-.341	.849	-.232			.935	-.332				
.875	-.386	.874	-.153			.972	-.381				
.900	-.419	.899	-.134			1.000	-.302				
.925	-.436	.924	-.125								
.950	-.432	.950	-.110								
.975	-.290	.974	-.062								
1.000	-.094	1.000	-.023								
					LOWER SURFACE						
.020	.078	.022	.417	.028	.498	.017	.470	.025	.333	.020	.371
.040	.119	.041	.412	.077	.283	.045	.292	.066	.217	.040	.274
.060	.130	.074	.311	.139	.194	.055	.254	.139	.118	.060	.200
.100	.118	.101	.251	.210	.132	.070	.229	.211	.062	.140	.058
.200	.102	.207	.094	.301	.083	.152	.094	.302	.025	.196	.024
.300	.024	.301	.083	.400	.049	.220	.069	.400	-.005	.253	-.005
.325	-.031	.326	.077	.500	.036	.269	.049	.503	-.021	.306	-.012
.344	-.003	.350	.050	.574	.033	.315	.043	.565	-.028	.388	-.049
.375	.008	.376	.033	.715	-.006	.383	-.006	.703	.112	.432	-.075
.400	.010	.400	.019	.788	.200	.411	-.022	.789	.219	.474	-.075
.429	-.023	.425	.029	.860	.360	.439	-.027	.861	.287	.494	-.075
.450	.002	.450	-.023	.924	.304	.479	-.025	.933	.310	.559	-.062
.475	-.030	.475	-.043	.965	.278	.518	-.028	.975	.217	.637	-.005
.500	.008	.500	-.023			.546	-.025			.679	.054
.525	.002	.525	-.023			.570	-.010			.752	.113
.550	-.013	.550	.024			.640	.066			.845	.145
.575	-.005	.576	-.003			.702	.085			.935	.212
.600	-.008	.600	-.038			.800	.164				
.625	.008	.628	.004			.857	.204				
.650	.026	.650	.083			.919	.254				
.675	.032	.675	.097			.959	.235				
.700	.063	.700	.102								
.750	.080	.750	.165								
.800	.193	.800	.223								
.850	.242	.849	.265								
.900	.262	.900	.297								
.950	.240	.949	.247								
CN =	.8474		.9357		.9148		.6658		.8087		.7135
CM =	.0374		-.1016		-.1042		-.0819		-.0980		-.0597

TABLE 4. - Continued.

M = .945 Q = 9.51 ALPHA = 2.43 CNWP = .2095 DA =1.3 RN =5.04

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.020	0.000	.226	.026	-.433	0.000	.532	.024	-.190	0.000	.531
.020	-.161	.022	-.428	.076	-.689	.017	-.341	.064	-.271	.018	-.067
.040	-.186	.041	-.540	.138	-.562	.032	-.499	.136	-.307	.038	-.142
.060	-.226	.074	-.449	.211	-.395	.051	-.510	.208	-.311	.058	-.263
.100	-.212	.109	-.348	.300	-.391	.070	-.527	.298	-.248	.139	-.235
.200	-.387	.201	-.329	.400	-.249	.148	-.131	.398	-.213	.195	-.292
.300	-.426	.301	-.342	.499	-.255	.219	-.260	.499	-.242	.297	-.275
.400	-.446	.401	-.333	.573	-.286	.268	-.301	.564	-.284	.386	-.278
.500	-.197	.501	-.256	.686	-.353	.314	-.281	.676	-.401	.452	-.284
.525	-.079	.526	-.213	.787	-.379	.383	-.286	.786	-.538	.504	-.322
.550	-.058	.551	-.188	.859	-.300	.440	-.311	.858	-.437	.556	-.332
.575	-.067	.576	-.164	.924	-.196	.498	-.301	.907	0.000	.647	-.365
.600	-.075	.600	-.199	.965	-.043	.538	-.260	.957	-.177	.696	-.407
.625	0.000	.629	-.218	1.000	-.102	.570	-.258	1.000	-.169	.746	-.235
.650	-.073	.650	-.240			.615	-.228			.797	-.112
.669	-.070	.675	-.228			.648	-.270			.852	-.230
.688	-.070	.699	-.238			.667	-.301			.896	-.262
.719	-.082	.726	-.282			.701	-.395			.946	-.101
.750	-.089	.750	-.287			.777	0.000			1.000	.010
.775	-.103	.775	-.295			.816	-.458				
.800	-.110	.800	-.329			.856	-.419				
.825	-.122	.824	-.370			.896	-.419				
.850	-.140	.849	-.380			.935	-.179				
.875	-.180	.874	-.352			.972	-.101				
.900	-.206	.899	-.201			1.000	-.090				
.925	-.231	.924	-.116								
.950	-.292	.950	-.068								
.975	-.188	.974	-.013								
1.000	-.038	1.000	.013								
					LOWER SURFACE						
.020	.021	.022	.195	.028	.036	.017	-.048	.025	-.246	.020	-.322
.040	-.002	.041	.111	.077	-.171	.045	-.206	.066	-.272	.040	-.391
.060	-.019	.074	.002	.139	-.231	.055	-.270	.139	-.273	.060	-.411
.100	-.051	.101	-.074	.210	-.131	.070	-.224	.211	-.197	.140	-.424
.200	-.065	.207	-.046	.301	-.213	.152	-.317	.302	-.208	.196	-.403
.300	-.161	.301	-.217	.400	-.165	.220	-.180	.400	-.119	.253	-.291
.325	-.302	.326	-.195	.500	-.148	.269	-.169	.503	-.125	.306	-.291
.344	-.334	.350	-.215	.574	-.035	.315	-.136	.555	-.120	.388	-.149
.375	-.196	.376	-.262	.715	-.008	.383	-.149	.703	.088	.432	-.135
.400	-.220	.400	-.252	.788	.221	.411	-.177	.789	.202	.474	-.133
.429	-.267	.425	-.189	.860	.368	.439	-.211	.861	.275	.494	-.116
.450	-.233	.450	-.226	.924	.331	.479	-.155	.933	.325	.559	-.070
.475	-.256	.475	-.283	.965	.341	.518	-.100	.975	.236	.637	.019
.500	-.208	.500	-.305			.546	-.076			.679	.102
.525	-.224	.525	-.301			.570	-.044			.752	.184
.550	-.228	.550	-.111			.640	.061			.845	.224
.575	-.232	.576	-.157			.702	.118			.935	.288
.600	-.201	.600	-.180			.800	.201				
.625	-.190	.628	-.092			.857	.208				
.650	-.153	.650	-.005			.919	.236				
.675	-.133	.675	.025			.959	.280				
.700	-.096	.700	.049								
.750	-.055	.750	.126								
.800	.076	.800	.188								
.850	.149	.849	.233								
.900	.192	.900	.280								
.950	.205	.949	.253								
CN =	.2595		.2440		.3239		.2742		.2561		.1645
CM =	.0065		-.0724		-.1003		-.1159		-.1286		-.1067

TABLE 4. - Continued.

M = .953 Q = 9.61 ALPHA = 3.32 CNWP = .2784 DA =1.4 RN =5.07

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.031	0.000	.149	.026	-.649	0.000	.486	.024	-.461	0.000	.501
.020	-.186	.022	-.544	.076	-.767	.017	-.500	.064	-.570	.018	-.313
.040	-.214	.041	-.737	.138	-.767	.032	-.595	.136	-.225	.038	-.315
.060	-.234	.074	-.747	.211	-.409	.051	-.622	.208	-.334	.058	-.443
.100	-.267	.109	-.784	.300	-.436	.070	-.633	.298	-.311	.139	-.343
.200	-.411	.201	-.282	.400	-.309	.148	-.695	.398	-.313	.195	-.379
.300	-.450	.301	-.261	.499	-.290	.219	-.303	.499	-.236	.297	-.297
.400	-.464	.401	-.323	.573	-.353	.268	-.260	.564	-.282	.386	-.305
.500	-.358	.501	-.272	.686	-.394	.314	-.271	.676	-.412	.452	-.309
.525	-.300	.526	-.232	.787	-.513	.383	-.281	.786	-.555	.504	-.350
.550	-.227	.551	-.219	.859	-.270	.440	-.311	.858	-.437	.556	-.346
.575	-.185	.576	-.198	.924	-.108	.498	-.301	.907	0.000	.647	-.366
.600	-.116	.600	-.240	.965	-.033	.538	-.311	.957	-.202	.696	-.408
.625	0.000	.629	-.249	1.000	-.061	.570	-.322	1.000	-.195	.746	-.469
.650	-.061	.650	-.261			.615	-.299			.797	-.089
.669	-.051	.675	-.240			.648	-.334			.852	-.149
.688	-.047	.699	-.240			.667	-.361			.896	-.194
.719	-.062	.726	-.290			.701	-.457			.946	-.104
.750	-.074	.750	-.307			.777	0.000			1.000	.005
.775	-.087	.775	-.316			.816	-.426				
.800	-.104	.800	-.349			.856	-.371				
.825	-.117	.824	-.390			.896	-.371				
.850	-.138	.849	-.405			.935	-.195				
.875	-.180	.874	-.428			.972	-.115				
.900	-.213	.899	-.372			1.000	-.098				
.925	-.243	.924	-.214								
.950	-.323	.950	-.120								
.975	-.253	.974	-.049								
1.000	-.068	1.000	-.026								
					LOWER SURFACE						
.020	.020	.022	.218	.028	.113	.017	-.053	.025	-.120	.020	-.120
.040	.004	.041	.145	.077	-.115	.045	-.130	.066	-.133	.040	-.162
.060	-.009	.074	.039	.139	-.166	.055	-.185	.139	-.150	.060	-.223
.100	-.039	.101	-.033	.210	-.159	.070	-.129	.211	-.171	.140	-.249
.200	-.053	.207	-.215	.301	-.163	.152	-.238	.302	-.105	.196	-.251
.300	-.151	.301	-.152	.400	-.137	.220	-.142	.400	-.100	.253	-.258
.325	-.288	.326	-.141	.500	-.128	.269	-.165	.503	-.106	.306	-.150
.344	-.289	.350	-.177	.574	-.033	.315	-.095	.565	-.092	.388	-.125
.375	-.187	.376	-.215	.715	-.008	.383	-.135	.703	.088	.432	-.150
.400	-.219	.400	-.245	.788	.216	.411	-.166	.789	.200	.474	-.158
.429	-.262	.425	-.147	.860	.368	.439	-.180	.861	.266	.494	-.153
.450	-.237	.450	-.215	.924	.336	.479	-.118	.933	.306	.559	-.093
.475	-.245	.475	-.271	.965	.342	.518	-.083	.975	.217	.637	.001
.500	-.207	.500	-.284			.546	-.065			.679	.086
.525	-.215	.525	-.250			.570	-.034			.752	.163
.550	-.223	.550	-.095			.640	.072			.845	.212
.575	-.226	.576	-.147			.702	.126			.935	.279
.600	-.192	.600	-.181			.800	.209				
.625	-.107	.628	-.095			.857	.222				
.650	-.134	.650	-.006			.919	.279				
.675	-.113	.675	.019			.959	.290				
.700	-.080	.700	.043								
.750	-.043	.750	.123								
.800	.073	.800	.186								
.850	.135	.849	.230								
.900	.170	.900	.272								
.950	.178	.949	.242								
CN =	.3425		.3159		.4106		.3733		.3525		.2706
CM =	.0221		-.0543		-.1039		-.1157		-.1246		-.0943

TABLE 4. - Continued.

M = .953 Q = 9.48 ALPHA = 3.72 CNWP = .3172 DA =2.2 RN =5.00

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.010	0.000	.115	.026	-.682	0.000	.490	.024	-.500	0.000	.521
.020	-.172	.022	-.601	.076	-.783	.017	-.559	.064	-.645	.018	-.582
.040	-.200	.041	-.810	.138	-.804	.032	-.659	.136	-.610	.038	-.439
.060	-.210	.074	-.836	.211	-.744	.051	-.638	.208	-.602	.058	-.636
.100	-.248	.109	-.827	.300	-.369	.070	-.663	.298	-.239	.139	-.514
.200	-.397	.201	-.551	.400	-.296	.148	-.707	.398	-.269	.195	-.254
.300	-.456	.301	-.241	.499	-.267	.219	-.686	.499	-.300	.297	-.253
.400	-.444	.401	-.302	.573	-.321	.268	-.566	.564	-.217	.386	-.256
.500	-.337	.501	-.270	.686	-.377	.314	-.296	.676	-.317	.452	-.261
.525	-.284	.526	-.229	.787	-.566	.383	-.255	.786	-.488	.504	-.290
.550	-.232	.551	-.215	.859	-.351	.440	-.286	.858	-.386	.556	-.300
.575	-.223	.576	-.196	.924	-.137	.498	-.286	.907	-.099	.647	-.339
.600	-.167	.600	-.240	.965	-.092	.538	-.286	.957	-.119	.696	-.343
.625	0.000	.629	-.247	1.000	-.076	.570	-.300	1.000	-.161	.746	-.374
.650	-.059	.650	-.270			.615	-.284			.797	-.080
.669	-.047	.675	-.258			.548	-.315			.852	-.167
.688	-.036	.699	-.253			.667	-.348			.895	-.202
.719	-.046	.726	-.302			.701	-.433			.946	-.085
.750	-.051	.750	-.316			.777	0.000			1.000	.016
.775	-.069	.775	-.327			.816	-.585				
.800	-.081	.800	-.362			.856	-.361				
.825	-.096	.824	-.399			.896	-.361				
.850	-.118	.849	-.417			.935	-.155				
.875	-.157	.874	-.443			.972	-.119				
.900	-.188	.899	-.390			1.000	-.087				
.925	-.218	.924	-.238								
.950	-.296	.950	-.136								
.975	-.235	.974	-.064								
1.000	-.055	1.000	-.044								

LOWER SURFACE

.020	.058	.022	.242	.028	.192	.017	.141	.025	.008	.020	.073
.040	.051	.041	.176	.077	-.058	.045	-.059	.066	-.038	.040	-.009
.060	.047	.074	.062	.139	-.096	.055	-.095	.139	-.089	.060	-.064
.100	.029	.101	-.007	.210	-.114	.070	-.092	.211	-.035	.140	-.194
.200	-.059	.207	-.185	.301	-.130	.152	-.202	.302	-.065	.196	-.158
.300	-.144	.301	-.124	.400	-.121	.220	-.118	.400	-.064	.253	-.150
.325	-.246	.326	-.125	.500	-.082	.269	-.103	.503	-.063	.306	-.123
.344	-.212	.350	-.158	.574	-.017	.315	-.074	.565	-.052	.388	-.115
.375	-.148	.376	-.184	.715	.017	.383	-.112	.703	.119	.432	-.138
.400	-.178	.400	-.177	.788	.246	.411	-.132	.789	.221	.474	-.120
.429	-.203	.425	-.132	.860	.393	.439	-.129	.861	.283	.494	-.104
.450	-.178	.450	-.219	.924	.358	.479	-.092	.933	.318	.559	-.047
.475	-.199	.475	-.257	.965	.359	.518	-.059	.975	.234	.637	.036
.500	-.160	.500	-.261			.546	-.038			.679	.108
.525	-.162	.525	-.185			.570	-.007			.752	.186
.550	-.192	.550	-.082			.640	.099			.845	.221
.575	-.183	.576	-.132			.702	.152			.935	.280
.600	-.170	.600	-.170			.800	.236				
.625	-.149	.628	-.094			.857	.247				
.650	-.121	.650	-.003			.919	.311				
.675	-.103	.675	.024			.959	.320				
.700	-.064	.700	.046								
.750	-.033	.750	.123								
.800	.084	.800	.191								
.850	.149	.849	.235								
.900	.185	.900	.275								
.950	.189	.949	.241								

CN =	.3694		.3691		.4613		.4445		.4013		.2916
CM =	.0339		-.0705		-.1116		-.1203		-.1129		-.0823

TABLE 4. - Continued.

M = .945 Q = 9.18 ALPHA = 4.74 CNWP = .3909 DA =1.4 RN =4.81

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.036	0.000	.084	.026	-.788	0.000	.458	.024	-.613	0.000	.452
.020	-.226	.022	-.674	.076	-.900	.017	-.659	.064	-.753	.018	-.756
.040	-.250	.041	-.860	.138	-.886	.032	-.791	.136	-.738	.038	-.600
.060	-.271	.074	-.958	.211	-.854	.051	-.749	.208	-.757	.058	-.754
.100	-.296	.109	-.948	.300	-.530	.070	-.758	.298	-.734	.139	-.721
.200	-.441	.201	-.515	.400	-.422	.148	-.797	.398	-.674	.195	-.743
.300	-.477	.301	-.272	.499	-.346	.219	-.782	.499	-.313	.237	-.719
.400	-.478	.401	-.347	.573	-.379	.268	-.756	.564	-.270	.386	-.188
.500	-.343	.501	-.319	.686	-.425	.314	-.732	.676	-.340	.452	-.115
.525	-.260	.526	-.272	.787	-.534	.383	-.574	.786	-.340	.504	-.117
.550	-.192	.551	-.261	.859	-.284	.440	-.379	.858	-.366	.556	-.117
.575	-.140	.576	-.240	.924	-.105	.498	-.346	.907	0.000	.647	-.186
.600	-.109	.600	-.274	.965	-.037	.538	-.331	.957	-.162	.696	-.203
.625	0.000	.629	-.279	1.000	-.051	.570	-.335	1.000	-.048	.746	-.292
.650	-.096	.650	-.314			.615	-.324			.797	-.337
.669	-.079	.675	-.294			.648	-.357			.852	-.410
.688	-.074	.699	-.283			.667	-.390			.896	-.235
.719	-.093	.726	-.332			.701	-.477			.946	-.105
.750	-.104	.750	-.341			.777	0.000			1.000	.002
.775	-.123	.775	-.350			.816	-.433				
.800	-.139	.800	-.385			.856	-.288				
.825	-.151	.824	-.427			.896	-.288				
.850	-.167	.849	-.438			.935	-.116				
.875	-.207	.874	-.462			.972	-.069				
.900	-.244	.899	-.408			1.000	-.052				
.925	-.268	.924	-.239								
.950	-.355	.950	-.135								
.975	-.318	.974	-.058								
1.000	-.099	1.000	-.040								

LOWER SURFACE

.020	.052	.022	.298	.028	.228	.017	.182	.025	.032	.020	.102
.040	.046	.041	.230	.077	-.003	.045	-.015	.066	-.004	.040	.036
.060	.036	.074	.117	.139	-.052	.055	-.047	.139	-.059	.060	-.026
.100	.008	.101	.047	.210	-.086	.070	-.045	.211	-.085	.140	-.103
.200	-.012	.207	-.134	.301	-.100	.152	-.138	.302	-.056	.196	-.113
.300	-.118	.301	-.087	.400	-.105	.220	-.094	.400	-.056	.253	-.097
.325	-.255	.326	-.089	.500	-.077	.269	-.084	.503	-.050	.306	-.093
.344	-.192	.350	-.119	.574	-.020	.315	-.064	.565	-.043	.388	-.087
.375	-.152	.376	-.142	.715	.002	.383	-.098	.703	.127	.432	-.121
.400	-.167	.400	-.137	.788	.222	.411	-.118	.789	.235	.474	-.117
.429	-.190	.425	-.116	.860	.382	.439	-.113	.861	.306	.494	-.107
.450	-.170	.450	-.186	.924	.356	.479	-.086	.933	.343	.559	-.064
.475	-.200	.475	-.223	.965	.359	.518	-.058	.975	.259	.637	.031
.500	-.139	.500	-.174			.546	-.042			.679	.108
.525	-.165	.525	-.143			.570	-.012			.752	.185
.550	-.164	.550	-.070			.640	.084			.845	.224
.575	-.174	.576	-.113			.702	.135			.935	.288
.600	-.140	.600	-.141			.800	.233				
.625	-.120	.628	-.070			.857	.249				
.650	-.090	.650	.020			.919	.309				
.675	-.076	.675	.044			.959	.317				
.700	-.038	.700	.062								
.750	-.006	.750	.138								
.800	.120	.800	.205								
.850	.180	.849	.249								
.900	.223	.900	.287								
.950	.220	.949	.248								

CN =	.4521	.4425	.5509	.5355	.5446	.4079
CM =	.0134	-.0766	-.1071	-.1154	-.1114	-.0764

TABLE 4. - Continued.

M = .957 Q = 9.66 ALPHA = 7.23 CNWP = .5911 DA =0.2 RN =4.86

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.078	0.000	-.035	.026	-.982	0.000	.383	.024	-.829	0.000	.400
.020	-.345	.022	-.890	.076	-1.063	.017	-.871	.064	-.925	.018	-.849
.040	-.364	.041	-1.033	.138	-1.077	.032	-.955	.136	-.902	.038	-.837
.060	-.421	.074	-1.121	.211	-1.040	.051	-.947	.208	-.902	.058	-.890
.100	-.398	.109	-1.141	.300	-1.017	.070	-.945	.298	-.906	.139	-.843
.200	-.518	.201	-1.137	.400	-.998	.148	-.955	.398	-.872	.195	-.872
.300	-.566	.301	-.868	.499	-.686	.219	-.957	.499	-.851	.297	-.862
.400	-.544	.401	-.837	.573	-.634	.268	-.949	.564	-.843	.386	-.849
.500	-.428	.501	-.687	.686	-.555	.314	-.936	.676	-.415	.452	-.833
.525	-.377	.526	-.626	.787	-.443	.383	-.907	.786	-.357	.504	-.822
.550	-.341	.551	-.544	.859	-.396	.440	-.899	.858	-.279	.556	-.816
.575	-.341	.576	-.423	.924	-.327	.498	-.892	.907	0.000	.647	-.550
.600	-.346	.600	-.348	.965	-.223	.538	-.881	.957	-.277	.696	-.373
.625	0.000	.629	-.258	1.000	-.253	.570	-.881	1.000	-.407	.746	-.329
.650	-.256	.650	-.258			.615	-.735			.797	-.295
.669	-.229	.675	-.238			.648	-.609			.852	-.208
.688	-.209	.699	-.242			.667	-.649			.896	-.161
.719	-.195	.726	-.299			.701	-.566			.946	-.096
.750	-.186	.750	-.284			.777	0.000			1.000	-.083
.775	-.192	.775	-.304			.816	-.463				
.800	-.204	.800	-.364			.856	-.491				
.825	-.218	.824	-.406			.896	-.491				
.850	-.229	.849	-.427			.935	-.406				
.875	-.266	.874	-.448			.972	-.385				
.900	-.297	.899	-.455			1.000	-.345				
.925	-.313	.924	-.386								
.950	-.396	.950	-.305								
.975	-.399	.974	-.156								
1.000	-.167	1.000	-.066								
					LOWER SURFACE						
.020	.086	.022	.404	.028	.394	.017	.340	.025	.160	.020	.193
.040	.105	.041	.354	.077	.160	.045	.137	.066	.075	.040	.104
.060	.104	.074	.241	.139	.080	.055	.100	.139	-.021	.060	.031
.100	.077	.101	.172	.210	.023	.070	.088	.211	-.074	.140	-.107
.200	.053	.207	-.008	.301	-.018	.152	-.028	.302	-.090	.196	-.151
.300	-.043	.301	.005	.400	-.047	.220	-.047	.400	-.087	.253	-.119
.325	-.147	.326	-.002	.500	-.055	.269	-.098	.503	-.103	.306	-.124
.344	-.066	.350	-.031	.574	-.011	.315	-.040	.565	-.166	.388	-.106
.375	-.070	.376	-.054	.715	-.053	.383	-.094	.703	.051	.432	-.177
.400	-.083	.400	-.060	.788	.189	.411	-.127	.789	.180	.474	-.195
.429	-.121	.425	-.041	.860	.359	.439	-.161	.861	.248	.494	-.197
.450	-.083	.450	-.109	.924	.328	.479	-.151	.933	.274	.559	-.216
.475	-.120	.475	-.138	.965	.315	.518	-.121	.975	.142	.637	-.144
.500	-.064	.500	-.103			.546	-.117			.679	-.015
.525	-.083	.525	-.088			.570	-.087			.752	.084
.550	-.084	.550	-.023			.640	-.001			.845	.146
.575	.103	.576	-.067			.702	.020			.935	.229
.600	-.066	.600	-.100			.800	.127				
.625	-.050	.628	-.038			.857	.168				
.650	-.024	.650	.049			.919	.234				
.675	-.021	.675	.067			.959	.242				
.700	*****	.700	.081								
.750	.041	.750	.154								
.800	.168	.800	.219								
.850	.225	.849	.262								
.900	.257	.900	.295								
.950	.243	.949	.249								
CN =	.7376		.7529		.8235		.7626		.6918		.5827
CM =	.0441		-.0938		-.1367		-.1476		-.1212		-.0912

TABLE 4. - Continued.

M = .949 Q =10.19 ALPHA = 9.38 CNWP = .6875 DA =1.7 RN =5.06

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.131	0.000	-.229	.026	-1.128	0.000	.208	.024	-1.086	0.000	.172
.020	-.421	.022	-1.110	.076	-1.210	.017	-1.055	.064	-1.160	.018	-1.082
.040	-.423	.041	-1.233	.138	-1.210	.032	-1.152	.136	-1.127	.038	-1.114
.060	-.479	.074	-1.293	.211	-1.173	.051	-1.153	.208	-1.108	.058	-1.170
.100	-.426	.109	-1.311	.300	-.881	.070	-1.142	.298	-1.112	.139	-1.114
.200	-.518	.201	-1.064	.400	-.839	.148	-1.124	.398	-1.076	.195	-1.116
.300	-.549	.301	-1.046	.499	-.767	.219	-1.097	.499	-1.051	.297	-.624
.400	-.527	.401	-1.032	.573	-.700	.268	-1.095	.564	-.882	.386	-.532
.500	-.405	.501	-.968	.686	-.609	.314	-1.084	.676	-.612	.452	-.500
.525	-.367	.526	-.953	.787	-.554	.383	-1.031	.786	-.532	.504	-.421
.550	-.334	.551	-.926	.859	-.507	.440	-.795	.858	-.548	.556	-.408
.575	-.337	.576	-.829	.924	-.486	.498	-.727	.907	-.514	.647	-.385
.600	-.334	.600	-.787	.965	-.465	.538	-.691	.957	-.507	.696	-.391
.625	0.000	.629	-.600	1.000	-.438	.570	-.665	1.000	-.618	.746	-.379
.650	-.259	.650	-.449			.615	-.602			.797	-.406
.669	-.240	.675	-.296			.648	-.559			.852	-.373
.688	-.222	.699	-.256			.667	-.530			.896	-.374
.719	-.205	.726	-.318			.701	-.467			.946	-.359
.750	-.205	.750	-.318			.777	-.394			1.000	-.338
.775	-.216	.775	-.350			.816	-.392				
.800	-.233	.800	-.416			.856	-.378				
.825	-.252	.824	-.455			.896	-.378				
.850	-.272	.849	-.487			.935	-.377				
.875	-.318	.874	-.511			.972	-.339				
.900	-.353	.899	-.536			1.000	-.333				
.925	-.375	.924	-.454								
.950	-.458	.950	-.293								
.975	-.524	.974	-.172								
1.000	-.220	1.000	-.108								
					LOWER SURFACE						
.020	.083	.022	.408	.028	.479	.017	-.447	.025	.292	.020	.324
.040	.121	.041	.399	.077	.262	.045	.264	.066	.179	.040	.232
.060	.127	.074	.308	.139	.173	.055	.223	.139	.073	.060	.152
.100	.115	.101	.248	.210	.105	.070	.195	.211	.014	.140	-.004
.200	.102	.207	.087	.301	.056	.152	.062	.302	-.012	.196	-.031
.300	.017	.301	.078	.400	.021	.220	.043	.400	-.034	.253	-.062
.325	-.047	.326	.068	.500	.005	.269	.024	.503	-.066	.306	-.077
.344	-.007	.350	.040	.574	.016	.315	.017	.565	-.086	.388	-.123
.375	-.008	.376	.022	.715	-.028	.383	-.037	.703	.054	.432	-.197
.400	-.013	.400	.008	.788	.185	.411	-.059	.789	.154	.474	-.187
.429	-.050	.425	.022	.860	.349	.439	-.063	.861	.206	.494	-.184
.450	-.019	.450	-.040	.924	.300	.479	-.066	.933	.215	.559	-.204
.475	-.054	.475	-.060	.965	.282	.518	-.056	.975	.075	.637	-.155
.500	-.010	.500	-.044			.546	-.051			.679	-.082
.525	-.017	.525	-.041			.570	-.033			.752	-.009
.550	-.032	.550	.011			.640	.059			.845	.035
.575	-.022	.576	-.024			.702	.079			.935	.114
.600	-.022	.600	-.060			.800	.153				
.625	-.007	.628	-.014			.857	.189				
.650	-.016	.650	.064			.919	.251				
.675	.013	.675	.079			.959	.243				
.700	.052	.700	.084								
.750	.064	.750	.149								
.800	.186	.800	.209								
.850	.237	.849	.248								
.900	.265	.900	.279								
.950	.241	.949	.224								
CN =	.8270		.9330		.9270		.8310		.9210		.5650
CM =	.0460		-.1230		-.1540		-.1260		-.1610		-.0607

TABLE 4. - Continued.

M = .969 Q = 9.96 ALPHA = 2.45 CNWP = .2001 DA = .9 RN =4.97

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.005	0.000	.192	.026	-.428	0.000	.527	.024	-.118	0.000	.548
.020	-.146	.022	-.417	.076	-.679	.017	-.295	.064	-.221	.018	-.007
.040	-.182	.041	-.539	.138	-.681	.032	-.452	.136	-.267	.038	-.083
.060	-.215	.074	-.653	.211	-.612	.051	-.481	.208	-.279	.058	-.208
.100	-.225	.109	-.637	.300	-.422	.070	-.501	.298	-.231	.139	-.196
.200	-.371	.201	-.445	.400	-.260	.148	-.582	.398	-.190	.195	-.247
.300	-.413	.301	-.390	.499	-.200	.219	-.491	.499	-.180	.297	-.235
.400	-.422	.401	-.392	.573	-.262	.268	-.168	.564	-.229	.386	-.245
.500	-.357	.501	-.263	.686	-.322	.314	-.142	.676	-.355	.452	-.259
.525	-.314	.526	-.220	.787	-.443	.383	-.162	.786	-.504	.504	-.300
.550	-.261	.551	-.204	.859	-.177	.440	-.172	.858	-.548	.556	-.310
.575	-.269	.576	-.182	.924	-.060	.498	-.182	.907	0.000	.647	-.367
.600	-.285	.600	-.210	.965	.016	.538	-.202	.957	-.213	.696	-.409
.625	0.000	.629	-.208	1.000	-.043	.570	-.202	1.000	-.215	.746	-.472
.650	-.198	.650	-.235			.615	-.192			.797	-.451
.669	-.171	.675	-.221			.648	-.232			.852	-.066
.688	-.142	.699	-.219			.667	-.252			.896	-.024
.719	-.120	.726	-.253			.701	-.312			.946	-.002
.750	-.101	.750	-.267			.777	0.000			1.000	.015
.775	-.106	.775	-.278			.816	-.394				
.800	-.112	.800	-.307			.856	-.524				
.825	-.120	.824	-.346			.896	-.524				
.850	-.131	.849	-.361			.935	-.191				
.875	-.166	.874	-.375			.972	-.141				
.900	-.199	.899	-.297			1.000	-.116				
.925	-.222	.924	-.148								
.950	-.296	.950	-.059								
.975	-.240	.974	.004								
1.000	-.063	1.000	.027								
					LOWER SURFACE						
.020	.022	.022	.083	.028	-.010	.017	-.112	.025	-.235	.020	-.359
.040	-.004	.041	.014	.077	-.294	.045	-.261	.066	-.279	.040	-.367
.060	-.019	.074	-.068	.139	-.292	.055	-.119	.139	-.281	.060	-.394
.100	-.047	.101	-.145	.210	-.362	.070	-.147	.211	-.194	.140	-.362
.200	-.056	.207	-.328	.301	-.221	.152	-.307	.302	-.178	.196	-.376
.300	-.141	.301	-.321	.400	-.083	.220	-.223	.400	-.115	.253	-.346
.325	-.269	.326	-.296	.500	-.179	.269	-.241	.503	-.108	.306	-.283
.344	-.343	.350	-.306	.574	-.049	.315	-.304	.565	-.147	.388	-.169
.375	-.242	.376	-.333	.715	.007	.383	-.122	.703	.086	.432	-.204
.400	-.247	.400	-.398	.788	.239	.411	-.150	.789	.191	.474	-.173
.429	-.283	.425	-.362	.860	.376	.439	-.170	.861	.274	.494	-.159
.450	-.280	.450	-.415	.924	.345	.479	-.158	.933	.324	.559	-.097
.475	-.335	.475	-.379	.965	.352	.518	-.113	.975	.223	.637	.015
.500	-.262	.500	-.422			.546	-.085			.679	.094
.525	-.305	.525	-.472			.570	-.044			.752	.173
.550	-.296	.550	-.412			.640	.068			.845	.219
.575	-.331	.576	-.242			.702	.116			.935	.277
.600	-.300	.600	-.203			.800	.192				
.625	-.292	.628	-.118			.857	.208				
.650	-.271	.650	-.039			.919	.280				
.675	-.273	.675	.003			.959	.288				
.700	-.202	.700	.040								
.750	-.164	.750	.109								
.800	.013	.800	.191								
.850	.107	.849	.231								
.900	.169	.900	.272								
.950	.192	.949	.255								
CN =	.2607		.2205		.3216		.2641		.2352		.1499
CM =	.0102		-.0624		-.0962		.1068		-.1264		-.0970

TABLE 4. - Continued.

M = .970 Q = 9.34 ALPHA = 3.19 CNWP = .3134 DA =5.1 RN =4.71

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.008	0.000	.153	.026	-.612	0.000	.541	.024	-.485	0.000	.519
.020	-.150	.022	-.519	.076	-.712	.017	-.438	.064	-.614	.018	-.471
.040	-.191	.041	-.720	.138	-.745	.032	-.535	.136	-.610	.038	-.363
.060	-.227	.074	-.720	.211	-.712	.051	-.555	.208	-.623	.058	-.597
.100	-.217	.109	-.783	.300	-.633	.070	-.577	.298	-.568	.139	-.218
.200	-.372	.201	-.527	.400	-.305	.148	-.621	.398	-.190	.195	-.318
.300	-.414	.301	-.444	.499	-.183	.219	-.608	.499	-.249	.297	-.275
.400	-.421	.401	-.431	.573	-.206	.268	-.598	.564	-.264	.386	-.294
.500	-.344	.501	-.285	.686	-.282	.314	-.476	.676	-.398	.452	-.290
.525	-.307	.526	-.231	.787	-.643	.383	-.187	.786	-.326	.504	-.333
.550	-.261	.551	-.209	.859	-.372	.440	-.196	.858	-.354	.556	-.330
.575	-.271	.576	-.183	.924	-.168	.498	-.198	.907	0.000	.647	-.358
.600	-.275	.600	-.209	.965	-.106	.538	-.208	.957	-.283	.696	-.404
.625	0.000	.629	-.214	1.000	-.088	.570	-.217	1.000	-.248	.746	-.464
.650	-.170	.650	-.235			.615	-.204			.797	-.328
.669	-.127	.675	-.214			.648	-.250			.852	-.064
.688	-.095	.699	-.203			.667	-.290			.896	-.063
.719	-.074	.726	-.235			.701	-.387			.946	-.030
.750	-.060	.750	-.247			.777	0.000			1.000	.009
.775	-.067	.775	-.268			.816	-.701				
.800	-.068	.800	-.306			.856	-.410				
.825	-.082	.824	-.352			.896	-.410				
.850	-.092	.849	-.367			.935	-.281				
.875	-.128	.874	-.388			.972	-.250				
.900	-.150	.899	-.348			1.000	-.210				
.925	-.181	.924	-.225								
.950	-.242	.950	-.131								
.975	-.175	.974	-.056								
1.000	-.022	1.000	-.030								
					LOWER SURFACE						
.020	.059	.022	.195	.028	.181	.017	.116	.025	-.050	.020	-.004
.040	.040	.041	.123	.077	-.086	.045	-.084	.066	-.074	.040	-.069
.060	.028	.074	-.012	.139	-.145	.055	-.117	.139	-.113	.060	-.111
.100	.002	.101	-.079	.210	-.075	.070	-.105	.211	-.137	.140	-.215
.200	-.010	.207	-.214	.301	-.152	.152	-.204	.302	-.069	.196	-.210
.300	-.109	.301	-.199	.400	-.127	.220	-.120	.400	-.059	.253	-.249
.325	-.231	.326	-.182	.500	-.094	.269	-.113	.503	-.074	.306	-.129
.344	-.284	.350	-.170	.574	.013	.315	-.062	.565	-.058	.388	-.147
.375	-.197	.376	-.222	.715	.074	.383	-.101	.703	.105	.432	-.189
.400	-.191	.400	-.247	.788	.340	.411	-.127	.789	.181	.474	-.149
.429	-.214	.425	-.142	.860	.431	.439	-.127	.861	.245	.494	-.119
.450	-.241	.450	-.201	.924	.387	.479	-.080	.933	.296	.559	-.055
.475	-.278	.475	-.260	.965	.377	.518	-.044	.975	.210	.637	.035
.500	-.203	.500	-.276			.546	-.023			.679	.104
.525	-.233	.525	-.268			.570	.010			.752	.179
.550	-.232	.550	-.086			.640	.124			.845	.223
.575	-.218	.576	-.136			.702	.186			.935	.292
.600	-.224	.600	-.177			.800	.245				
.625	-.179	.628	-.079			.857	.255				
.650	-.152	.650	.005			.919	.311				
.675	-.133	.675	.033			.959	.314				
.700	-.089	.700	.055								
.750	-.047	.750	.129								
.800	.080	.800	.195								
.850	.146	.849	.239								
.900	.187	.900	.277								
.950	.202	.949	.249								
CN =	.3402		.3502		.4924		.4274		.4024		.2960
CM =	.0296		-.0724		-.1242		-.1314		-.1042		-.0863

TABLE 4. - Continued.

M = .975 Q = 9.95 ALPHA = 4.01 CNWP = .3533 QA =1.7 RN =4.96

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.016	0.000	.115	.026	-.612	0.000	.505	.024	-.500	0.000	.458
.020	-.186	.022	-.569	.076	-.730	.017	-.487	.064	-.644	.018	-.641
.040	-.222	.041	-.769	.138	-.769	.032	-.541	.136	-.629	.038	-.470
.060	-.265	.074	-.845	.211	-.738	.051	-.571	.208	-.673	.058	-.667
.100	-.258	.109	-.820	.300	-.698	.070	-.599	.298	-.671	.139	-.593
.200	-.383	.201	-.617	.400	-.627	.148	-.651	.398	-.624	.135	-.622
.300	-.440	.301	-.494	.499	-.331	.219	-.651	.499	-.603	.237	-.597
.400	-.440	.401	-.459	.573	-.264	.268	-.637	.564	-.575	.386	-.[illegible]
.500	-.372	.501	-.391	.686	-.346	.314	-.619	.676	-.380	.452	-.544
.525	-.335	.525	-.320	.787	-.490	.383	-.545	.786	-.331	.504	-.563
.550	-.287	.551	-.291	.859	-.507	.440	-.593	.858	-.172	.556	-.273
.575	-.298	.576	-.261	.924	-.153	.498	-.503	.907	0.000	.647	-.026
.600	-.318	.600	-.281	.959	-.078	.538	-.297	.957	-.093	.696	-.036
.625	0.000	.629	-.271	1.000	-.098	.570	-.256	1.000	-.132	.746	-.084
.650	-.244	.650	-.291			.615	-.228			.797	-.127
.669	-.214	.675	-.269			.643	-.256			.852	-.233
.688	-.175	.699	-.271			.667	-.285			.896	-.342
.719	-.176	.726	-.300			.701	-.362			.946	-.081
.750	-.146	.750	-.314			.777	0.000			1.000	.033
.775	-.145	.775	-.323			.816	-.581				
.800	-.150	.800	-.353			.856	-.419				
.825	-.155	.824	-.389			.896	-.419				
.850	-.169	.849	-.399			.935	-.203				
.875	-.205	.874	-.425			.972	-.163				
.900	-.236	.899	-.415			1.000	-.147				
.925	-.253	.924	-.302								
.950	-.328	.950	-.176								
.975	-.303	.974	-.092								
1.000	-.119	1.000	-.070								
					LOWER SURFACE						
.020	.050	.022	.197	.028	.191	.017	.121	.025	-.068	.020	-.012
.040	.036	.041	.127	.077	-.080	.045	-.095	.066	-.063	.040	-.061
.060	.020	.074	.009	.139	-.145	.055	-.157	.139	-.154	.060	-.118
.100	-.006	.101	-.078	.210	-.188	.070	-.089	.211	-.142	.140	-.184
.200	-.020	.207	-.232	.301	-.090	.152	-.193	.302	-.145	.196	-.187
.300	-.108	.301	-.250	.400	-.151	.220	-.184	.400	-.063	.253	-.214
.325	-.250	.326	-.193	.500	-.159	.269	-.188	.503	-.089	.306	-.119
.344	-.274	.350	-.200	.574	-.019	.315	-.057	.565	-.104	.388	-.106
.375	-.188	.376	-.192	.715	-.012	.383	-.111	.703	.105	.432	-.147
.400	-.181	.400	-.263	.788	.224	.411	-.144	.789	.206	.474	-.145
.429	-.238	.425	-.244	.860	.373	.439	-.180	.861	.276	.494	-.141
.450	-.247	.450	-.232	.924	.339	.479	-.202	.933	.325	.559	-.133
.475	-.287	.475	-.173	.965	.342	.518	-.091	.975	.244	.637	.001
.500	-.211	.500	-.216			.546	-.054			.679	.102
.525	-.251	.525	-.263			.570	-.020			.752	.184
.550	-.253	.550	-.124			.640	.084			.845	.235
.575	-.238	.576	-.138			.702	.133			.935	.301
.600	-.254	.600	-.221			.800	.213				
.625	-.241	.628	-.121			.857	.234				
.650	-.207	.650	-.017			.919	.289				
.675	-.182	.675	.013			.959	.300				
.700	-.114	.700	.035								
.750	-.074	.750	.112								
.800	.070	.800	.173								
.850	.136	.849	.217								
.900	.184	.900	.257								
.950	.190	.949	.220								

CN =	.4100	.3980	.5070	.4720	.4920	.3740
CM =	.0160	-.0760	-.1140	-.1260	-.1110	-.7320

TABLE 4. - Continued.

M = .973 Q =10.23 ALPHA = 5.90 CNWP = .5121 DA =1.1 RN =4.88

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.021	0.000	.036	.026	-.829	0.000	.444	.024	-.683	0.000	.421
.020	-.226	.022	-.736	.076	-.921	.017	-.709	.064	-.805	.018	-.784
.040	-.257	.041	-.932	.138	-.911	.032	-.811	.136	-.788	.038	-.722
.060	-.305	.074	-1.017	.211	-.893	.051	-.805	.208	-.795	.058	-.780
.100	-.291	.109	-1.032	.300	-.878	.070	-.805	.298	-.829	.139	-.772
.200	-.423	.201	-1.004	.400	-.843	.148	-.825	.398	-.772	.195	-.801
.300	-.465	.301	-.688	.499	-.804	.219	-.831	.499	-.752	.297	-.791
.400	-.447	.401	-.561	.573	-.532	.268	-.823	.564	-.748	.386	-.768
.500	-.376	.501	-.482	.686	-.498	.314	-.793	.676	-.726	.452	-.738
.525	-.341	.526	-.418	.787	-.505	.383	-.755	.786	-.332	.504	-.728
.550	-.304	.551	-.378	.859	-.426	.440	-.757	.858	-.267	.556	-.704
.575	-.307	.576	-.340	.924	-.223	.498	-.747	.907	0.000	.647	-.631
.600	-.323	.600	-.358	.965	-.189	.538	-.746	.957	-.258	.696	-.304
.625	0.000	.629	-.340	1.000	-.164	.570	-.747	1.000	-.449	.746	-.257
.650	-.251	.650	-.358			.615	-.726			.797	-.201
.669	-.222	.675	-.340			.648	-.734			.852	-.173
.688	-.197	.699	-.330			.667	-.746			.896	-.155
.719	-.180	.726	-.353			.701	-.767			.946	-.135
.750	-.157	.750	-.374			.777	0.000			1.000	-.126
.775	-.156	.775	-.377			.816	-.507				
.800	-.158	.800	-.406			.856	-.496				
.825	-.170	.824	-.444			.896	-.496				
.850	-.182	.849	-.451			.935	-.456				
.875	-.219	.874	-.481			.972	-.447				
.900	-.243	.899	-.471			1.000	-.386				
.925	-.264	.924	-.371								
.950	-.338	.950	-.250								
.975	-.386	.974	-.149								
1.000	-.142	1.000	-.117								
					LOWER SURFACE						
.020	.095	.022	.313	.028	.329	.017	.288	.025	.077	.020	.142
.040	.095	.041	.259	.077	.066	.045	.064	.066	.045	.040	.086
.060	.086	.074	.150	.139	.003	.055	.023	.139	-.032	.060	.026
.100	.058	.101	.084	.210	-.041	.070	.012	.211	-.093	.140	-.143
.200	.042	.207	-.095	.301	-.069	.152	-.113	.302	-.120	.196	-.148
.300	-.053	.301	-.057	.400	-.074	.220	-.073	.400	-.043	.253	-.177
.325	-.201	.326	-.060	.500	-.099	.269	-.063	.503	-.085	.306	-.087
.344	-.177	.350	-.092	.574	-.007	.315	-.044	.565	-.133	.388	-.118
.375	-.091	.376	-.117	.715	-.029	.383	-.092	.703	.076	.432	-.202
.400	-.127	.400	-.110	.788	.213	.411	-.126	.789	.188	.474	-.218
.429	-.177	.425	-.086	.860	.382	.439	-.163	.861	.252	.494	-.233
.450	-.184	.450	-.163	.924	.360	.479	-.171	.933	.276	.559	-.192
.475	-.195	.475	-.215	.965	.345	.518	-.066	.975	.149	.637	-.118
.500	-.135	.500	-.202			.546	-.055			.679	-.021
.525	-.140	.525	-.125			.570	-.030			.752	.065
.550	-.159	.550	-.051			.640	.066			.845	.110
.575	-.140	.576	-.110			.702	.094			.935	.187
.600	-.155	.600	-.160			.800	.190				
.625	-.129	.628	-.075			.857	.219				
.650	-.096	.650	.014			.919	.279				
.675	-.042	.675	.038			.959	.279				
.700	-.039	.700	.052								
.750	-.010	.750	.127								
.800	.126	.800	.195								
.850	.189	.849	.235								
.900	.227	.900	.275								
.950	.224	.949	.227								
CN =	.5610		.6110		.7240		.7314		.6494		.5165
CM =	.0260		-.0870		-.1370		-.1780		-.1306		-.0816

TABLE 4. - Continued.

M = .973 Q =10.02 ALPHA = 7.49 CNWP = .6066 DA = .9 RN =5.19

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.089	0.000	-.038	.026	-.954	0.000	.348	.024	-.780	0.000	.364
.020	-.345	.022	-.864	.076	-1.034	.017	-.877	.064	-.894	.018	-.851
.040	-.357	.041	-1.005	.138	-1.042	.032	-.966	.136	-.874	.038	-.851
.060	-.409	.074	-1.090	.211	-1.014	.051	-.954	.208	-.884	.058	-.904
.100	-.391	.109	-1.107	.300	-.992	.070	-.964	.298	-.888	.139	-.862
.200	-.499	.201	-1.104	.400	-.974	.148	-.960	.398	-.858	.195	-.882
.300	-.540	.301	-.851	.499	-.952	.219	-.964	.499	-.835	.297	-.872
.400	-.513	.401	-.831	.573	-.688	.268	-.964	.564	-.831	.386	-.856
.500	-.422	.501	-.695	.686	-.587	.314	-.954	.676	-.702	.452	-.845
.525	-.381	.526	-.642	.787	-.483	.383	-.926	.786	-.402	.504	-.841
.550	-.346	.551	-.597	.859	-.437	.440	-.922	.858	-.382	.556	-.833
.575	-.351	.576	-.512	.924	-.352	.498	-.914	.907	0.000	.647	-.422
.600	-.365	.600	-.475	.965	-.214	.538	-.899	.957	-.398	.696	-.371
.625	0.000	.529	-.375	1.000	-.267	.570	-.897	1.000	-.592	.746	-.368
.650	-.288	.650	-.359			.615	-.854			.797	-.317
.669	-.264	.675	-.304			.648	-.776			.852	-.314
.688	-.239	.699	-.290			.667	-.744			.896	-.306
.719	-.217	.726	-.340			.701	-.627			.946	-.301
.750	-.204	.750	-.346			.777	0.000			1.000	-.306
.775	-.209	.775	-.352			.816	-.537				
.800	-.215	.800	-.397			.856	-.526				
.825	-.223	.824	-.435			.896	-.526				
.850	-.239	.849	-.448			.935	-.467				
.875	-.273	.874	-.468			.972	-.481				
.900	-.306	.899	-.475			1.000	-.409				
.925	-.322	.924	-.402								
.950	-.400	.950	-.299								
.975	-.437	.974	-.166								
1.000	-.190	1.000	-.088								

LOWER SURFACE

.020	.076	.022	.378	.028	.370	.017	.346	.025	.174	.020	.208
.040	.097	.041	.329	.077	.147	.045	.163	.066	.077	.040	.132
.060	.098	.074	.236	.139	.073	.055	.133	.139	-.016	.060	.064
.100	.073	.101	.174	.210	.020	.070	.104	.211	-.069	.140	-.098
.200	.053	.207	.001	.301	-.020	.152	-.030	.302	-.099	.196	-.112
.300	-.048	.301	.016	.400	-.047	.220	-.024	.400	-.063	.253	-.105
.325	-.189	.326	.012	.500	-.048	.269	-.030	.503	-.085	.306	-.102
.344	-.069	.350	-.020	.574	-.004	.315	-.024	.565	-.157	.388	-.128
.375	-.091	.376	-.039	.715	-.039	.383	-.080	.703	.043	.432	-.192
.400	-.103	.400	-.045	.788	.189	.411	-.107	.789	.160	.474	-.192
.429	-.131	.425	-.029	.860	.358	.439	-.145	.861	.231	.494	-.197
.450	-.105	.450	-.094	.924	.318	.479	-.093	.933	.253	.559	-.219
.475	-.146	.475	-.127	.965	.310	.518	-.086	.975	.118	.637	-.284
.500	-.088	.500	-.090			.546	-.078			.679	-.148
.525	-.103	.525	-.081			.570	-.050			.752	-.022
.550	-.104	.550	-.019			.640	.046			.845	.036
.575	-.119	.576	-.066			.702	.073			.935	.116
.600	-.077	.600	-.098			.800	.158				
.625	-.060	.628	-.037			.857	.190				
.650	-.029	.650	.052			.919	.243				
.675	-.027	.675	.068			.959	.232				
.700	.016	.700	.077								
.750	.034	.750	.149								
.800	.160	.800	.212								
.850	.218	.849	.254								
.900	.253	.900	.291								
.950	.238	.949	.239								

CN =	.7240		.7680		.8383		.8251		.7268		.5685
CM =	.0370		-.1000		-.1480		-.1693		-.1432		-.7989

TABLE 4. - Continued.

M = .965 Q = 9.91 ALPHA = 7.63 CNWP = .6147 DA =1.5 RN =5.16

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.087	0.000	-.057	.026	-.985	0.000	.336	.024	-.837	0.000	.340
.020	-.347	.022	-.899	.076	-1.067	.017	-.916	.064	-.927	.018	-.877
.040	-.363	.041	-1.038	.138	-1.074	.032	-1.003	.136	-.903	.038	-.887
.060	-.418	.074	-1.117	.211	-1.041	.051	-.991	.208	-.907	.058	-.931
.100	-.399	.109	-1.141	.300	-1.003	.070	-.991	.298	-.921	.139	-.889
.200	-.498	.201	-1.133	.400	-.999	.148	-.991	.398	-.877	.195	-.899
.300	-.548	.301	-.871	.499	-.742	.219	-.983	.499	-.851	.297	-.889
.400	-.513	.401	-.867	.573	-.677	.268	-.981	.564	-.861	.385	-.864
.500	-.426	.501	-.742	.686	-.589	.314	-.969	.676	-.630	.452	-.856
.525	-.385	.526	-.696	.787	-.481	.383	-.940	.786	-.428	.504	-.845
.550	-.352	.551	-.646	.859	-.431	.440	-.936	.858	-.381	.556	-.526
.575	-.351	.576	-.543	.924	-.356	.498	-.926	.907	0.000	.647	-.394
.600	-.363	.600	-.491	.965	-.208	.538	-.910	.957	-.428	.696	-.381
.625	0.000	.629	-.378	1.000	-.274	.570	-.918	1.000	-.583	.746	-.365
.650	-.283	.650	-.339			.615	-.766			.797	-.297
.669	-.255	.675	-.289			.648	-.679			.852	-.284
.688	-.231	.699	-.278			.667	-.660			.896	-.295
.719	-.217	.726	-.333			.701	-.613			.946	-.000
.750	-.201	.750	-.330			.777	0.000			1.000	-.283
.775	-.206	.775	-.342			.816	-.587				
.800	-.209	.800	-.389			.856	-.529				
.825	-.221	.824	-.430			.896	-.529				
.850	-.231	.849	-.432			.935	-.458				
.875	-.266	.874	-.456			.972	-.507				
.900	-.293	.899	-.458			1.000	-.377				
.925	-.322	.924	-.376								
.950	-.402	.950	-.284								
.975	-.428	.974	-.158								
1.000	-.179	1.000	-.074								

LOWER SURFACE

.020	.081	.022	.388	.028	.388	.017	.374	.025	.212	.020	.234
.040	.102	.041	.344	.077	.164	.045	.175	.066	.098	.040	.143
.060	.100	.074	.258	.139	.090	.055	.138	.139	.005	.060	.070
.100	.082	.101	.193	.210	.036	.070	.114	.211	-.051	.140	-.075
.200	.057	.207	.021	.301	-.002	.152	-.018	.302	-.051	.196	-.110
.300	-.041	.301	.030	.400	-.023	.220	-.013	.400	-.054	.253	-.101
.325	-.142	.326	.024	.500	-.029	.269	-.022	.503	-.081	.306	-.106
.344	-.060	.350	-.044	.574	.011	.315	-.019	.565	-.153	.388	-.120
.375	-.078	.376	-.026	.715	-.019	.383	-.072	.703	.048	.432	-.166
.400	-.087	.400	-.036	.788	.204	.411	-.105	.789	.164	.474	-.194
.429	-.122	.425	-.020	.860	.367	.439	-.140	.861	.224	.494	-.196
.450	-.089	.450	-.088	.924	.321	.479	-.103	.933	.253	.559	-.219
.475	-.133	.475	-.116	.965	.309	.518	-.089	.975	.126	.637	-.276
.500	-.076	.500	-.086			.546	-.083			.679	-.136
.525	-.088	.525	-.073			.570	-.055			.752	-.005
.550	-.090	.550	-.009			.640	.036			.845	.050
.575	-.113	.576	-.054			.702	.062			.935	.130
.600	-.067	.600	-.087			.800	.157				
.625	-.052	.628	-.025			.857	.189				
.650	-.018	.650	.058			.919	.246				
.675	-.015	.675	.076			.959	.238				
.700	.028	.700	.087								
.750	.046	.750	.158								
.800	.171	.800	.218								
.850	.233	.849	.262								
.900	.261	.900	.298								
.950	.245	.949	.245								

CN =	.7306		.7979		.8296		.8396		.7439		.5523
CM =	.0452		-.1051		-.1494		-.1699		-.1508		-.0714

TABLE 4. - Continued.

M = .980 Q = 9.55 ALPHA = 3.35 CNWP = .2744 DA = .5 RN =4.55

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.026	0.000	.161	.026	-.584	0.000	.533	.024	-.400	0.000	.506
.020	-.129	.022	-.503	.076	-.694	.017	-.336	.064	-.525	.018	-.400
.040	-.169	.041	-.694	.138	-.721	.032	-.454	.136	-.569	.038	-.365
.060	-.212	.074	-.680	.211	-.678	.051	-.501	.208	-.595	.058	-.584
.100	-.212	.109	-.765	.300	-.657	.070	-.528	.298	-.605	.139	-.467
.200	-.353	.201	-.550	.400	-.402	.148	-.608	.398	-.525	.195	-.518
.300	-.396	.301	-.463	.499	-.289	.219	-.595	.499	-.216	.297	-.552
.400	-.389	.401	-.446	.573	-.239	.268	-.588	.564	-.226	.386	-.311
.500	-.333	.501	-.354	.686	-.347	.314	-.575	.676	-.360	.452	-.231
.525	-.298	.526	-.305	.787	-.424	.383	-.544	.786	-.510	.504	-.251
.550	-.251	.551	-.280	.859	-.534	.440	-.542	.858	-.255	.556	-.271
.575	-.254	.576	-.248	.924	-.183	.498	-.283	.907	0.000	.647	-.338
.600	-.273	.600	-.263	.965	-.134	.538	-.237	.957	-.087	.696	-.377
.625	0.000	.629	-.263	1.000	-.109	.570	-.228	1.000	-.072	.746	-.394
.650	-.201	.650	-.284			.615	-.213			.797	-.097
.669	-.171	.675	-.263			.648	-.241			.852	-.216
.688	-.149	.699	-.265			.667	-.277			.896	-.279
.719	-.129	.726	-.295			.701	-.360			.946	.032
.750	-.108	.750	-.312			.777	0.000			1.000	.074
.775	-.104	.775	-.323			.816	-.522				
.800	-.107	.800	-.352			.856	-.583				
.825	-.123	.824	-.389			.896	-.583				
.850	-.135	.849	-.403			.935	-.170				
.875	-.167	.874	-.431			.972	-.137				
.900	-.197	.899	-.438			1.000	-.120				
.925	-.218	.924	-.351								
.950	-.295	.950	-.237								
.975	-.298	.974	-.125								
1.000	-.098	1.000	-.092								
					LOWER SURFACE						
.020	.070	.022	.153	.028	.113	.017	-.064	.025	-.151	.020	-.121
.040	.053	.041	.089	.077	-.188	.045	-.303	.066	-.190	.040	-.148
.060	.035	.074	-.022	.139	-.221	.055	-.355	.139	-.226	.060	-.213
.100	.010	.101	-.099	.210	-.280	.070	-.343	.211	-.167	.140	-.312
.200	-.001	.207	-.279	.301	-.339	.152	-.238	.302	-.173	.196	-.242
.300	-.091	.301	-.282	.400	-.096	.220	-.201	.400	-.179	.253	-.286
.325	-.213	.326	-.256	.500	-.124	.269	-.194	.503	-.098	.306	-.261
.344	-.275	.350	-.271	.574	-.099	.315	-.184	.565	-.139	.388	-.130
.375	-.199	.376	-.291	.715	-.069	.383	-.239	.703	.099	.432	-.199
.400	-.187	.400	-.338	.788	.170	.411	-.205	.789	.223	.474	-.200
.429	-.210	.425	-.304	.860	.336	.439	-.204	.861	.303	.494	-.193
.450	-.219	.450	-.314	.924	.319	.479	-.240	.933	.346	.559	-.101
.475	-.279	.475	-.348	.965	.321	.518	-.238	.975	.243	.637	.036
.500	-.203	.500	-.399			.546	-.237			.679	.117
.525	-.236	.525	-.444			.570	-.142			.752	.198
.550	-.241	.550	-.324			.640	.041			.845	.240
.575	-.258	.576	-.223			.702	.077			.935	.295
.600	-.277	.600	-.279			.800	.161				
.625	-.271	.628	-.189			.857	.201				
.650	-.247	.650	-.086			.919	.262				
.675	-.237	.675	-.035			.959	.281				
.700	-.178	.700	.002								
.750	-.153	.750	.082								
.800	.010	.800	.144								
.850	.091	.849	.192								
.900	.146	.900	.241								
.950	.159	.949	.214								
CN =	.3074		.3206		.3906		.3616		.3775		.3021
CM =	.0333		-.0788		-.1002		-.1177		-.1090		-.0859

TABLE 4. - Continued.

M = .978 Q = 9.45 ALPHA = 3.41 CNWP = .2935 DA = .4 RN =4.53

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.022	0.000	.161	.026	-.547	0.000	.532	.024	-.419	0.000	.499
.020	-.138	.022	-.506	.076	-.695	.017	-.413	.064	-.562	.018	-.488
.040	-.175	.041	-.700	.138	-.718	.032	-.512	.136	-.593	.038	-.407
.060	-.218	.074	-.691	.211	-.676	.051	-.534	.208	-.608	.058	-.620
.100	-.214	.109	-.768	.300	-.662	.070	-.571	.298	-.616	.139	-.524
.200	-.355	.201	-.554	.400	-.396	.148	-.631	.398	-.543	.195	-.562
.300	-.396	.301	-.470	.499	-.265	.219	-.625	.499	-.227	.297	-.568
.400	-.390	.401	-.451	.573	-.241	.268	-.612	.564	-.235	.386	-.370
.500	-.334	.501	-.373	.686	-.331	.314	-.592	.676	-.366	.452	-.218
.525	-.293	.526	-.306	.787	-.427	.383	-.560	.786	-.503	.504	-.257
.550	-.248	.551	-.281	.859	-.515	.440	-.469	.858	-.179	.556	-.105
.575	-.253	.576	-.249	.924	-.159	.498	-.248	.907	0.000	.647	-.058
.600	-.269	.600	-.274	.965	-.110	.538	-.217	.957	-.047	.696	-.105
.625	0.000	.629	-.270	1.000	-.085	.570	-.216	1.000	-.013	.746	-.182
.650	-.192	.650	-.295			.615	-.204			.797	-.221
.669	-.168	.675	-.270			.648	-.239			.852	-.331
.688	-.148	.699	-.270			.667	-.281			.896	-.377
.719	-.130	.726	-.295			.701	-.362			.946	-.022
.750	-.110	.750	-.311			.777	0.000			1.000	.037
.775	-.105	.775	-.324			.816	-.540				
.800	-.115	.800	-.352			.856	-.453				
.825	-.124	.824	-.391			.896	-.453				
.850	-.139	.849	-.403			.935	-.133				
.875	-.170	.874	-.433			.972	-.096				
.900	-.202	.899	-.427			1.000	-.080				
.925	-.223	.924	-.318								
.950	-.297	.950	-.191								
.975	-.280	.974	-.098								
1.000	-.088	1.000	-.071								

LOWER SURFACE

.020	.070	.022	.154	.028	.108	.017	.058	.025	-.135	.020	-.042
.040	.054	.041	.090	.077	-.180	.045	-.156	.066	-.186	.040	-.081
.060	.034	.074	-.017	.139	-.212	.055	-.207	.139	-.228	.060	-.160
.100	.009	.101	-.090	.210	-.273	.070	-.150	.211	-.112	.140	-.259
.200	-.003	.207	-.251	.301	-.107	.152	-.354	.302	-.125	.196	-.203
.300	-.091	.301	-.283	.400	-.119	.220	-.183	.400	-.105	.253	-.206
.325	-.221	.326	-.253	.500	-.200	.269	-.186	.503	-.061	.306	-.097
.344	-.264	.350	-.256	.574	-.098	.315	-.171	.565	-.128	.388	-.111
.375	-.195	.376	-.270	.715	-.044	.383	-.095	.703	.126	.432	-.168
.400	-.190	.400	-.334	.788	.189	.411	-.122	.789	.250	.474	-.113
.429	-.209	.425	-.240	.860	.358	.439	-.168	.861	.330	.494	-.084
.450	-.222	.450	-.320	.924	.343	.479	-.206	.933	.368	.559	-.015
.475	-.276	.475	-.352	.965	.344	.518	-.197	.975	.276	.637	.086
.500	-.206	.500	-.394			.546	-.134			.679	.156
.525	-.238	.525	-.388			.570	-.056			.752	.226
.550	-.248	.550	-.182			.640	.067			.845	.269
.575	-.257	.576	-.159			.702	.114			.935	.337
.600	-.273	.600	-.229			.800	.207				
.625	-.269	.628	-.119			.857	.220				
.650	-.242	.650	-.025			.919	.282				
.675	-.231	.675	.013			.959	.301				
.700	-.161	.700	.042								
.750	-.127	.750	.112								
.800	.029	.800	.171								
.850	.108	.849	.211								
.900	.165	.900	.253								
.950	.177	.949	.225								

CN =	.3214	.3455	.4053	.3924	.4124	.3377
CM =	.0264	-.0783	-.1014	-.1162	-.1108	-.8398

TABLE 4. - Continued.

M = .983 Q = 9.80 ALPHA = 3.63 CNWP = .3242 DA =-.3 RN =4.85

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.011	0.000	.139	.026	-.582	0.000	.530	.024	-.417	0.000	.518
.020	-.160	.022	-.542	.076	-.700	.017	-.448	.064	-.561	.018	-.471
.040	-.193	.041	-.754	.138	-.745	.032	-.544	.136	-.596	.038	-.384
.060	-.240	.074	-.818	.211	-.725	.051	-.550	.208	-.588	.058	-.602
.100	-.236	.109	-.816	.300	-.691	.070	-.578	.298	-.637	.139	-.526
.200	-.372	.201	-.681	.400	-.675	.148	-.635	.398	-.574	.195	-.580
.300	-.419	.301	-.510	.499	-.380	.219	-.633	.499	-.580	.297	-.576
.400	-.415	.401	-.478	.573	-.289	.268	-.629	.564	-.574	.386	-.542
.500	-.348	.501	-.428	.686	-.362	.314	-.604	.676	-.578	.452	-.528
.525	-.316	.526	-.360	.787	-.390	.383	-.577	.786	-.477	.504	-.546
.550	-.269	.551	-.327	.859	-.511	.440	-.586	.858	-.298	.556	-.556
.575	-.276	.576	-.287	.924	-.234	.498	-.586	.907	0.000	.647	-.536
.600	-.291	.600	-.309	.965	-.150	.538	-.573	.957	-.144	.696	-.546
.625	0.000	.629	-.297	1.000	-.124	.570	-.422	1.000	-.104	.746	-.289
.650	-.223	.650	-.308			.615	-.285			.797	-.063
.669	-.199	.675	-.299			.648	-.282			.852	-.026
.688	-.172	.699	-.287			.667	-.303			.896	-.026
.719	-.159	.726	-.317			.701	-.362			.946	.017
.750	-.129	.750	-.327			.777	0.000			1.000	.067
.775	-.128	.775	-.341			.816	-.494				
.800	-.127	.800	-.386			.856	-.563				
.825	-.136	.824	-.410			.896	-.563				
.850	-.146	.849	-.414			.935	-.193				
.875	-.179	.874	-.442			.972	-.160				
.900	-.205	.899	-.451			1.000	-.147				
.925	-.214	.924	-.378								
.950	-.261	.950	-.230								
.975	-.322	.974	-.128								
1.000	-.125	1.000	-.102								
					LOWER SURFACE						
.020	.081	.022	.191	.028	.141	.017	.085	.025	-.139	.020	-.085
.040	.065	.041	.113	.077	-.152	.045	-.136	.066	-.204	.040	-.139
.060	.051	.074	.012	.139	-.197	.055	-.182	.139	-.230	.060	-.214
.100	.020	.101	-.072	.210	-.260	.070	-.145	.211	-.282	.140	-.320
.200	.012	.207	-.215	.301	-.323	.152	-.327	.302	-.149	.196	-.280
.300	-.082	.301	-.262	.400	-.067	.220	-.245	.400	-.217	.253	-.280
.325	-.206	.326	-.226	.500	-.194	.269	-.215	.503	-.101	.306	-.270
.344	-.265	.350	-.235	.574	-.134	.315	-.161	.565	-.152	.388	-.139
.375	-.176	.376	-.253	.715	-.114	.383	-.224	.703	.058	.432	-.215
.400	-.168	.400	-.327	.788	.136	.411	-.150	.789	.197	.474	-.218
.429	-.190	.425	-.257	.860	.332	.439	-.163	.861	.275	.494	-.215
.450	-.218	.450	-.314	.924	.320	.479	-.181	.933	.317	.559	-.133
.475	-.265	.475	-.341	.965	.323	.518	-.206	.975	.206	.637	-.014
.500	-.192	.500	-.390			.546	-.202			.679	.068
.525	-.231	.525	-.417			.570	-.142			.752	.152
.550	-.238	.550	-.203			.640	.029			.845	.196
.575	-.243	.576	-.172			.702	.061			.935	.273
.600	-.267	.600	-.243			.800	.159				
.625	-.260	.628	-.133			.857	.174				
.650	-.235	.650	-.034			.919	.241				
.675	-.233	.675	.008			.959	.258				
.700	-.165	.700	.036								
.750	-.142	.750	.108								
.800	.037	.800	.166								
.850	.123	.849	.207								
.900	.177	.900	.247								
.950	.188	.949	.210								
CN =	.3647		.3966		.4473		.4214		.4424		.3545
CM =	.0295		-.0818		-.1027		-.1223		-.1315		-.0832

TABLE 4. - Continued.

M = .979 Q = 9.89 ALPHA = 4.48 CNWP = .4110 DA = .5 RN =4.72

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.001	0.000	.087	.026	-.693	0.000	.489	.024	-.552	0.000	.460
.020	-.182	.022	-.625	.076	-.816	.017	-.559	.064	-.704	.018	-.634
.040	-.215	.041	-.814	.138	-.810	.032	-.684	.136	-.671	.038	-.518
.060	-.262	.074	-.902	.211	-.795	.051	-.660	.208	-.726	.058	-.690
.100	-.252	.109	-.892	.300	-.775	.070	-.680	.298	-.698	.139	-.676
.200	-.392	.201	-.773	.400	-.713	.148	-.738	.398	-.653	.195	-.690
.300	-.432	.301	-.534	.499	-.451	.219	-.723	.499	-.645	.297	-.696
.400	-.424	.401	-.493	.573	-.347	.268	-.717	.564	-.649	.386	-.655
.500	-.357	.501	-.442	.686	-.403	.314	-.705	.676	-.651	.452	-.610
.525	-.317	.526	-.375	.787	-.450	.383	-.654	.786	-.340	.504	-.628
.550	-.282	.551	-.345	.859	-.535	.440	-.660	.858	-.272	.556	-.636
.575	-.288	.576	-.304	.924	-.208	.498	-.668	.907	0.000	.647	-.598
.600	-.304	.600	-.327	.965	-.156	.538	-.656	.957	-.185	.696	-.204
.625	0.000	.629	-.315	1.000	-.136	.570	-.660	1.000	-.299	.746	-.136
.650	-.239	.650	-.329			.615	-.624			.797	-.060
.669	-.214	.675	-.311			.648	-.489			.852	-.012
.688	-.192	.699	-.305			.667	-.462			.896	.005
.719	-.178	.726	-.331			.701	-.459			.946	.021
.750	-.150	.750	-.342			.777	0.000			1.000	.043
.775	-.137	.775	-.350			.816	-.522				
.800	-.150	.800	-.380			.856	-.439				
.825	-.153	.824	-.417			.896	-.439				
.850	-.166	.849	-.427			.935	-.215				
.875	-.197	.874	-.453			.972	-.195				
.900	-.229	.899	-.446			1.000	-.178				
.925	-.243	.924	-.344								
.950	-.322	.950	-.213								
.975	-.352	.974	-.129								
1.000	-.132	1.000	-.107								
					LOWER SURFACE						
.020	.081	.022	.222	.028	.234	.017	.168	.025	-.035	.020	.027
.040	.071	.041	.158	.077	-.023	.045	-.034	.066	-.059	.040	-.001
.060	.058	.074	.034	.139	-.094	.055	-.068	.139	-.023	.060	-.075
.100	.033	.101	-.037	.210	-.059	.070	-.064	.211	-.125	.140	-.175
.200	.018	.207	-.196	.301	-.137	.152	-.184	.302	-.154	.196	-.174
.300	-.073	.301	-.125	.400	-.119	.220	-.160	.400	-.039	.253	-.160
.325	-.210	.326	-.121	.500	-.169	.269	-.175	.503	-.069	.306	-.091
.344	-.231	.350	-.154	.574	-.018	.315	-.073	.565	-.142	.388	-.121
.375	-.165	.376	-.200	.715	-.068	.383	-.094	.703	.100	.432	-.181
.400	-.141	.400	-.217	.788	.175	.411	-.140	.789	.219	.474	-.199
.429	-.202	.425	-.098	.860	.356	.439	-.183	.861	.288	.494	-.183
.450	-.217	.450	-.169	.924	.344	.479	-.212	.933	.320	.559	-.127
.475	-.251	.475	-.229	.965	.337	.518	-.195	.975	.196	.637	-.024
.500	-.175	.500	-.260			.546	-.083			.679	.056
.525	-.207	.525	-.273			.570	-.040			.752	.139
.550	-.208	.550	-.082			.640	.059			.845	.182
.575	-.219	.576	-.125			.702	.089			.935	.260
.600	-.241	.600	-.202			.800	.185				
.625	-.213	.628	-.093			.857	.206				
.650	-.176	.650	-.002			.919	.265				
.675	-.136	.675	.025			.959	.276				
.700	-.074	.700	.039								
.750	-.047	.750	.111								
.800	.090	.800	.180								
.850	.157	.849	.221								
.900	.204	.900	.261								
.950	.206	.949	.217								
CN =	.4430		.4813		.5794		.5632		.5668		.4449
CM =	.0156		-.0882		-.1170		-.1387		-.1294		-.0725

TABLE 4. - Continued.

M = .983 Q = 9.98 ALPHA = 4.69 CNWP = .4074 DA = .5 RN =4.75

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.002	0.000	.091	.026	-.662	0.000	.484	.024	-.522	0.000	.455
.020	-.184	.022	-.624	.076	-.790	.017	-.554	.064	-.680	.018	-.623
.040	-.213	.041	-.813	.138	-.800	.032	-.682	.136	-.663	.038	-.498
.060	-.262	.074	-.904	.211	-.784	.051	-.652	.208	-.712	.058	-.666
.100	-.256	.109	-.910	.300	-.770	.070	-.668	.298	-.696	.139	-.651
.200	-.390	.201	-.829	.400	-.723	.148	-.721	.398	-.651	.195	-.688
.300	-.430	.301	-.540	.499	-.524	.219	-.729	.499	-.643	.297	-.692
.400	-.415	.401	-.500	.573	-.378	.268	-.711	.564	-.643	.386	-.639
.500	-.352	.501	-.449	.686	-.415	.314	-.697	.676	-.651	.452	-.629
.525	-.315	.526	-.377	.787	-.451	.383	-.662	.786	-.404	.504	-.631
.550	-.278	.551	-.346	.859	-.536	.440	-.664	.858	-.296	.556	-.635
.575	-.284	.576	-.310	.924	-.221	.498	-.660	.907	0.000	.647	-.623
.600	-.310	.600	-.328	.965	-.170	.538	-.650	.957	-.238	.696	-.265
.625	0.000	.629	-.322	1.000	-.146	.570	-.654	1.000	-.375	.746	-.174
.650	-.240	.650	-.342			.615	-.628			.797	-.066
.669	-.217	.675	-.322			.648	-.581			.852	-.035
.688	-.195	.699	-.310			.667	-.479			.896	-.008
.719	-.177	.726	-.342			.701	-.475			.946	.013
.750	-.152	.750	-.347			.777	0.000			1.000	.030
.775	-.142	.775	-.353			.816	-.514				
.800	-.145	.800	-.373			.856	-.478				
.825	-.149	.824	-.412			.896	-.478				
.850	-.164	.849	-.423			.935	-.223				
.875	-.198	.874	-.449			.972	-.199				
.900	-.227	.899	-.448			1.000	-.179				
.925	-.239	.924	-.352								
.950	-.318	.950	-.218								
[illegible]	-.366	.974	-.132								
[illegible]	-.142	1.000	-.109								
					LOWER SURFACE						
.020	.083	.022	.220	.028	.213	.017	.174	.025	-.043	.020	.006
.040	.075	.041	.160	.077	-.041	.045	-.015	.066	-.089	.040	-.017
.060	.062	.074	.045	.139	-.098	.055	-.065	.139	-.180	.060	-.041
.100	.037	.101	-.038	.210	-.098	.070	-.071	.211	-.059	.140	-.177
.200	.022	.207	-.200	.301	-.165	.152	-.083	.302	-.116	.196	-.200
.300	-.067	.301	-.155	.400	-.132	.220	-.162	.400	-.188	.253	-.253
.325	-.204	.326	-.085	.500	-.163	.269	-.178	.503	-.065	.306	-.121
.344	-.224	.350	-.135	.574	-.033	.315	-.163	.565	-.137	.388	-.117
.375	-.155	.376	-.193	.715	-.092	.383	-.094	.703	.073	.432	-.194
.400	-.134	.400	-.257	.788	.166	.411	-.129	.789	.189	.474	-.200
.429	-.196	.425	-.117	.860	.352	.439	-.171	.861	.260	.494	-.203
.450	-.209	.450	-.171	.924	.336	.479	-.212	.933	.289	.559	-.145
.475	-.250	.475	-.208	.965	.328	.518	-.212	.975	.164	.637	-.057
.500	-.174	.500	-.246			.546	-.150			.679	.033
.525	-.208	.525	-.263			.570	-.051			.752	.118
.550	-.212	.550	-.094			.640	.055			.845	.171
.575	-.214	.576	-.128			.702	.087			.935	.260
.600	-.239	.600	-.217			.800	.177				
.625	-.222	.628	-.099			.857	.197				
.650	-.197	.650	-.003			.919	.259				
.675	-.175	.675	.023			.959	.270				
.700	-.100	.700	.039								
.750	-.071	.750	.110								
.800	.086	.800	.176								
.850	.157	.849	.218								
.900	.206	.900	.258								
.950	.207	.949	.215								
CN =	.4395		.4874		.5684		.5628		.5459		.4380
CM =	.0279		-.0861		-.1189		-.1414		-.1305		-.0736

TABLE 4. - Continued.

M = .982 Q =10.00 ALPHA = 5.27 CNWP = .4456 DA = .6 RN =4.75

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.002	0.000	.069	.026	-.718	0.000	.476	.024	-.560	0.000	.447
.020	-.192	.022	-.661	.076	-.832	.017	-.590	.064	-.719	.018	-.669
.040	-.225	.041	-.850	.138	-.826	.032	-.720	.136	-.709	.038	-.534
.060	-.273	.074	-.933	.211	-.818	.051	-.698	.208	-.737	.058	-.693
.100	-.262	.109	-.942	.300	-.799	.070	-.710	.298	-.727	.139	-.679
.200	-.400	.201	-.893	.400	-.749	.148	-.755	.398	-.685	.195	-.709
.300	-.441	.301	-.568	.499	-.681	.219	-.751	.499	-.675	.297	-.709
.400	-.427	.401	-.515	.573	-.435	.268	-.734	.564	-.677	.386	-.679
.500	-.359	.501	-.470	.686	-.435	.314	-.718	.676	-.679	.452	-.640
.525	-.326	.526	-.411	.787	-.481	.383	-.681	.786	-.432	.504	-.648
.550	-.291	.551	-.371	.859	-.538	.440	-.684	.858	-.353	.556	-.654
.575	-.291	.576	-.334	.924	-.231	.498	-.690	.907	0.000	.647	-.656
.600	-.314	.600	-.354	.965	-.191	.538	-.682	.957	-.328	.696	-.654
.625	0.000	.629	-.342	1.000	-.169	.570	-.684	1.000	-.517	.746	-.654
.650	-.215	.650	-.358			.615	-.651			.797	-.260
.669	-.233	.675	-.332			.648	-.671			.852	-.202
.688	-.212	.699	-.328			.667	-.684			.896	-.184
.719	-.194	.726	-.352			.701	-.708			.946	-.160
.750	-.171	.750	-.361			.777	0.000			1.000	-.156
.775	-.158	.775	-.365			.816	-.543				
.800	-.162	.800	-.395			.856	-.463				
.825	-.162	.824	-.430			.896	-.463				
.850	-.174	.849	-.442			.935	-.341				
.875	-.211	.874	-.466			.972	-.296				
.900	-.240	.899	-.463			1.000	-.289				
.925	-.257	.924	-.375								
.950	-.329	.950	-.243								
.975	-.368	.974	-.149								
1.000	-.143	1.000	-.128								
					LOWER SURFACE						
.020	.089	.022	.238	.028	.262	.017	.205	.025	-.019	.020	.033
.040	.084	.041	.179	.077	-.003	.045	-.007	.066	-.059	.040	-.015
.060	.073	.074	.060	.139	-.076	.055	-.048	.139	-.126	.060	-.075
.100	.046	.101	-.007	.210	-.074	.070	-.048	.211	-.106	.140	-.171
.200	.031	.207	-.154	.301	-.123	.152	-.169	.302	-.146	.196	-.190
.300	-.058	.301	-.124	.400	-.109	.220	-.151	.400	-.185	.253	-.256
.325	-.197	.326	-.108	.500	-.156	.269	-.167	.503	-.063	.306	-.222
.344	-.211	.350	-.147	.574	-.013	.315	-.148	.565	-.138	.388	-.153
.375	-.144	.376	-.195	.715	-.077	.383	-.080	.703	.067	.432	-.204
.400	-.122	.400	-.214	.788	.183	.411	-.125	.789	.175	.474	-.245
.429	-.191	.425	-.089	.860	.363	.439	-.167	.861	.241	.494	-.257
.450	-.203	.450	-.154	.924	.343	.479	-.208	.933	.271	.559	-.213
.475	-.234	.475	-.215	.965	.331	.518	-.213	.975	.141	.637	-.148
.500	-.162	.500	-.248			.546	-.169			.679	-.048
.525	-.189	.525	-.265			.570	-.054			.752	.034
.550	-.193	.550	-.085			.640	.053			.845	.078
.575	-.202	.576	-.122			.702	.081			.935	.167
.600	-.231	.600	-.199			.800	.162				
.625	-.204	.628	-.091			.857	.185				
.650	-.161	.650	-.001			.919	.248				
.675	-.122	.675	.022			.959	.254				
.700	-.070	.700	.038								
.750	-.044	.750	.111								
.800	.094	.800	.177								
.850	.166	.849	.221								
.900	.209	.900	.260								
.950	.207	.949	.215								
CN =	.4874		.5311		.6256		.6227		.5777		.4776
CM =	.0226		-.0906		-.1288		-.1595		-.1379		-.0972

TABLE 4. - Continued.

M = .976 Q = 9.60 ALPHA = 5.49 CNWP = .5009 DA =1.1 RN =4.73

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.059	0.000	-.005	.026	-.856	0.000	.408	.024	-.719	0.000	.388
.020	-.263	.022	-.770	.076	-.944	.017	-.733	.064	-.847	.018	-.800
.040	-.285	.041	-.952	.138	-.931	.032	-.834	.136	-.837	.038	-.748
.060	-.330	.074	-1.041	.211	-.916	.051	-.825	.208	-.832	.058	-.811
.100	-.328	.109	-1.058	.300	-.901	.070	-.829	.298	-.857	.139	-.800
.200	-.451	.201	-1.020	.400	-.862	.148	-.850	.398	-.804	.195	-.837
.300	-.490	.301	-.692	.499	-.789	.219	-.850	.499	-.788	.297	-.826
.400	-.483	.401	-.579	.573	-.543	.268	-.850	.564	-.781	.386	-.796
.500	-.410	.501	-.505	.686	-.516	.314	-.821	.676	-.777	.452	-.754
.525	-.377	.526	-.444	.787	-.545	.383	-.785	.786	-.387	.504	-.763
.550	-.331	.551	-.405	.859	-.477	.440	-.780	.858	-.315	.556	-.752
.575	-.338	.576	-.370	.924	-.261	.498	-.778	.907	-.348	.647	-.703
.600	-.356	.600	-.382	.965	-.222	.538	-.772	.957	-.318	.696	-.493
.625	.022	.629	-.370	1.000	-.199	.570	-.774	1.000	-.464	.746	-.310
.650	-.278	.650	-.384			.615	-.745			.797	-.256
.669	-.255	.675	-.366			.648	-.757			.852	-.220
.688	-.228	.699	-.353			.667	-.766			.896	-.189
.719	-.211	.726	-.384			.701	-.789			.946	-.158
.750	-.189	.750	-.390			.777	-.585			1.000	-.135
.775	-.187	.775	-.398			.816	-.502				
.800	-.193	.800	-.426			.856	-.520				
.825	-.202	.824	-.464			.896	-.520				
.850	-.214	.849	-.475			.935	-.466				
.875	-.254	.874	-.498			.972	-.423				
.900	-.281	.899	-.483			1.000	-.390				
.925	-.300	.924	-.379								
.950	-.375	.950	-.262								
.975	-.409	.974	-.169								
1.000	-.173	1.000	-.143								
					LOWER SURFACE						
.020	.051	.022	.272	.028	.285	.017	.244	.025	.043	.020	.096
.040	.054	.041	.215	.077	.025	.045	.024	.066	-.017	.040	.023
.060	.045	.074	.112	.139	-.036	.055	-.014	.139	-.091	.060	-.034
.100	.015	.101	.049	.210	-.077	.070	-.025	.211	-.149	.140	-.197
.200	.002	.207	-.129	.301	-.103	.152	-.154	.302	-.174	.196	-.188
.300	-.100	.301	-.090	.400	-.115	.220	-.110	.400	-.106	.253	-.230
.325	-.239	.326	-.095	.500	-.131	.269	-.103	.503	-.145	.306	-.146
.344	-.245	.350	-.126	.574	-.042	.315	-.080	.565	-.198	.388	-.179
.375	-.135	.376	-.147	.715	-.062	.383	-.122	.703	.017	.432	-.252
.400	-.171	.400	-.144	.788	.183	.411	-.160	.789	.127	.474	-.271
.429	-.217	.425	-.117	.860	.346	.439	-.196	.861	.191	.494	-.285
.450	-.212	.450	-.194	.924	.313	.479	-.200	.933	.213	.559	-.243
.475	-.222	.475	-.240	.965	.306	.518	-.099	.975	.093	.637	-.165
.500	-.159	.500	-.233			.546	-.089			.679	-.067
.525	-.174	.525	-.157			.570	-.063			.752	.014
.550	-.201	.550	-.078			.640	.038			.845	.056
.575	-.171	.576	-.139			.702	.069			.935	.142
.600	-.177	.600	-.188			.800	.160				
.625	-.155	.628	-.106			.857	.182				
.650	-.127	.650	-.017			.919	.245				
.675	-.108	.675	.007			.959	.246				
.700	-.067	.700	.021								
.750	-.041	.750	.096								
.800	.093	.800	.160								
.850	.157	.849	.202								
.900	.196	.900	.241								
.950	.194	.949	.195								
CN =	.5450		.5960		.7090		.7140		.6400		.5120
CM =	.0230		-.0830		-.1360		-.1720		-.1322		-.0820

TABLE 4. - Continued.

M = .978 Q =10.48 ALPHA = 5.82 CNWP = .5137 DA = .9 RN =4.98

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.027	0.000	.032	.026	-.840	0.000	.441	.024	-.682	0.000	.420
.020	-.234	.022	-.749	.076	-.926	.017	-.701	.064	-.801	.018	-.771
.040	-.265	.041	-.929	.138	-.920	.032	-.807	.136	-.790	.038	-.705
.060	-.312	.074	-1.019	.211	-.893	.051	-.798	.208	-.792	.058	-.765
.100	-.299	.109	-1.032	.300	-.876	.070	-.801	.298	-.817	.139	-.761
.200	-.426	.201	-.982	.400	-.835	.148	-.825	.398	-.761	.195	-.799
.300	-.469	.301	-.664	.499	-.815	.219	-.833	.499	-.742	.297	-.788
.400	-.449	.401	-.550	.573	-.528	.268	-.825	.564	-.738	.386	-.771
.500	-.377	.501	-.484	.686	-.505	.314	-.805	.676	-.744	.452	-.742
.525	-.344	.526	-.427	.787	-.515	.383	-.763	.786	-.378	.504	-.735
.550	-.311	.551	-.388	.859	-.409	.440	-.763	.858	-.305	.556	-.733
.575	-.314	.576	-.352	.924	-.242	.498	-.751	.907	0.000	.647	-.705
.600	-.327	.600	-.369	.965	-.212	.538	-.749	.957	-.325	.696	-.364
.625	0.000	.629	-.352	1.000	-.182	.570	-.751	1.000	-.521	.746	-.278
.650	-.260	.650	-.369			.615	-.718			.797	-.237
.669	-.238	.675	-.346			.648	-.732			.852	-.214
.688	-.212	.699	-.334			.667	-.743			.896	-.198
.719	-.193	.726	-.362			.701	-.763			.946	-.179
.750	-.163	.750	-.378			.777	0.000			1.000	-.174
.775	-.162	.775	-.381			.816	-.550				
.800	-.163	.800	-.410			.856	-.515				
.825	-.175	.824	-.449			.896	-.515				
.850	-.188	.849	-.457			.935	-.491				
.875	-.226	.874	-.485			.972	-.524				
.900	-.256	.899	-.480			1.000	-.436				
.925	-.274	.924	-.392								
.950	-.347	.950	-.260								
.975	-.397	.974	-.153								
1.000	-.157	1.000	-.125								
					LOWER SURFACE						
.020	.096	.022	.315	.028	.339	.017	.278	.025	.084	.020	.127
.040	.097	.041	.261	.077	.076	.045	.063	.066	.042	.040	.075
.060	.090	.074	.145	.139	.008	.055	.024	.139	-.034	.060	.016
.100	.057	.101	.082	.210	-.038	.070	.009	.211	-.106	.140	-.151
.200	.043	.207	-.096	.301	-.081	.152	-.128	.302	-.127	.196	-.171
.300	-.047	.301	-.054	.400	-.082	.220	-.094	.400	-.018	.253	-.213
.325	-.198	.326	-.059	.500	-.119	.269	-.085	.503	-.086	.306	-.126
.344	-.180	.350	-.093	.574	-.008	.315	-.047	.565	-.139	.388	-.123
.375	-.109	.376	-.113	.715	-.040	.383	-.095	.703	.071	.432	-.208
.400	-.126	.400	-.108	.788	.209	.411	-.127	.789	.179	.474	-.237
.429	-.178	.425	-.084	.860	.377	.439	-.164	.861	.245	.494	-.242
.450	-.188	.450	-.163	.924	.356	.479	-.197	.933	.267	.559	-.207
.475	-.201	.475	-.210	.965	.338	.518	-.122	.975	.136	.637	-.155
.500	-.138	.500	-.202			.546	-.058			.679	-.048
.525	-.142	.525	-.127			.570	-.032			.752	.037
.550	-.162	.550	-.051			.640	.062			.845	.079
.575	-.136	.576	-.110			.702	.089			.935	.165
.600	-.151	.600	-.166			.800	.174				
.625	-.127	.628	-.079			.857	.202				
.650	-.094	.650	.011			.919	.267				
.675	-.084	.675	.036			.959	.263				
.700	-.041	.700	.048								
.750	-.017	.750	.124								
.800	.122	.800	.192								
.850	.185	.849	.232								
.900	.228	.900	.271								
.950	.224	.949	.224								
CN =	.5669		.6144		.7227		.7278		.6576		.5192
CM =	.0219		-.0943		-.1368		-.1796		-.1374		-.0853

TABLE 4. - Continued.

M = .975 Q =10.15 ALPHA = 6.75 CNWP = .5510 DA =1.5 RN =5.24

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.061	0.000	.021	.026	-.881	0.000	.405	.024	-.677	0.000	.422
.020	-.289	.022	-.767	.076	-.973	.017	-.777	.064	-.792	.018	-.770
.040	-.307	.041	-.950	.138	-.965	.032	-.865	.136	-.784	.038	-.728
.060	-.364	.074	-1.030	.211	-.948	.051	-.856	.208	-.828	.058	-.775
.100	-.344	.109	-1.052	.300	-.936	.070	-.857	.298	-.826	.139	-.770
.200	-.468	.201	-1.028	.400	-.906	.148	-.875	.398	-.780	.195	-.802
.300	-.512	.301	-.758	.499	-.908	.219	-.889	.499	-.762	.297	-.798
.400	-.492	.401	-.670	.573	-.694	.268	-.883	.564	-.762	.386	-.782
.500	-.422	.501	-.507	.686	-.628	.314	-.869	.676	-.766	.452	-.759
.525	-.386	.526	-.449	.787	-.463	.383	-.829	.786	-.429	.504	-.747
.550	-.344	.551	-.403	.859	-.345	.440	-.830	.858	-.351	.556	-.736
.575	-.349	.576	-.365	.924	-.270	.498	-.821	.907	0.000	.647	-.709
.600	-.364	.600	-.379	.965	-.189	.538	-.813	.957	-.414	.696	-.519
.625	0.000	.629	-.351	1.000	-.209	.570	-.811	1.000	-.508	.746	-.333
.650	-.293	.650	-.367			.615	-.789			.797	-.293
.669	-.270	.675	-.349			.648	-.801			.852	-.263
.688	-.241	.699	-.333			.667	-.811			.896	-.252
.719	-.218	.726	-.367			.701	-.830			.946	-.230
.750	-.194	.750	-.362			.777	0.000			1.000	-.235
.775	-.187	.775	-.365			.816	-.526				
.800	-.196	.800	-.397			.856	-.504				
.825	-.208	.824	-.435			.896	-.504				
.850	-.222	.849	-.444			.935	-.522				
.875	-.257	.874	-.470			.972	-.530				
.900	-.286	.899	-.471			1.000	-.505				
.925	-.303	.924	-.400								
.950	-.383	.950	-.273								
.975	-.419	.974	-.158								
1.000	-.177	1.000	-.115								
					LOWER SURFACE						
.020	.076	.022	.332	.028	.309	.017	.276	.025	.081	.020	.133
.040	.088	.041	.272	.077	.077	.045	.080	.066	.026	.040	.071
.060	.075	.074	.184	.139	.012	.055	.041	.139	-.050	.060	.016
.100	.051	.101	.116	.210	-.035	.070	.033	.211	-.116	.140	-.137
.200	.034	.207	-.064	.301	-.054	.152	-.096	.302	-.127	.196	-.171
.300	-.070	.301	-.034	.400	-.073	.220	-.071	.400	-.067	.253	-.177
.325	-.216	.326	-.038	.500	-.069	.269	-.063	.503	-.097	.306	-.137
.344	-.151	.350	-.070	.574	-.011	.315	-.045	.565	-.154	.388	-.124
.375	-.111	.376	-.092	.715	-.030	.383	-.091	.703	.052	.432	-.179
.400	-.140	.400	-.095	.788	.216	.411	-.127	.789	.159	.474	-.168
.429	-.175	.425	-.070	.860	.372	.439	-.163	.861	.229	.494	-.194
.450	-.149	.450	-.141	.924	.339	.479	-.187	.933	.259	.559	-.217
.475	-.184	.475	-.192	.965	.329	.518	-.082	.975	.141	.637	-.275
.500	-.137	.500	-.163			.546	-.066			.679	-.141
.525	-.152	.525	-.112			.570	-.040			.752	-.009
.550	-.153	.550	-.039			.640	.054			.845	.048
.575	-.162	.576	-.095			.702	.090			.935	.134
.600	-.126	.600	-.139			.800	.164				
.625	-.104	.628	-.060			.857	.192				
.650	-.070	.650	.032			.919	.254				
.675	-.061	.675	.052			.959	.247				
.700	-.009	.700	.068								
.750	.014	.750	.139								
.800	.140	.800	.208								
.850	.201	.849	.249								
.900	.239	.900	.286								
.950	.232	.949	.237								
CN =	.6406		.6621		.7794		.7815		.6719		.5234
CM =	.0231		-.0959		-.0146		-.1851		-.1477		-.0869

TABLE 4. - Continued.

M = .990 Q = 9.82 ALPHA = 3.33 CNWP = .2493 DA = .4 RN =4.63

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.030	0.000	.174	.026	-.494	0.000	.539	.024	-.328	0.000	.496
.020	-.118	.022	-.477	.076	-.662	.017	-.317	.064	-.458	.018	-.319
.040	-.149	.041	-.657	.138	-.682	.032	-.442	.136	-.521	.038	-.328
.060	-.199	.074	-.680	.211	-.645	.051	-.491	.208	-.552	.058	-.556
.100	-.201	.109	-.738	.300	-.641	.070	-.522	.298	-.571	.139	-.420
.200	-.342	.201	-.527	.400	-.390	.148	-.591	.398	-.511	.195	-.505
.300	-.385	.301	-.453	.499	-.305	.219	-.583	.499	-.273	.297	-.521
.400	-.376	.401	-.434	.573	-.231	.268	-.572	.564	-.227	.386	-.478
.500	-.320	.501	-.376	.686	-.349	.314	-.558	.676	-.348	.452	-.334
.525	-.288	.526	-.306	.787	-.407	.383	-.529	.786	-.488	.504	-.252
.550	-.241	.551	-.277	.859	-.522	.440	-.535	.858	-.590	.556	-.260
.575	-.249	.576	-.246	.924	-.222	.498	-.303	.907	0.000	.647	-.325
.600	-.262	.600	-.266	.965	-.161	.538	-.241	.957	-.199	.696	-.375
.625	0.000	.629	-.256	1.000	-.144	.570	-.220	1.000	-.203	.746	-.439
.650	-.194	.650	-.277			.615	-.209			.797	-.478
.669	-.169	.675	-.264			.648	-.241			.852	-.471
.688	-.141	.699	-.256			.667	-.271			.896	-.149
.719	-.131	.726	-.287			.701	-.351			.946	-.094
.750	-.101	.750	-.301			.777	0.000			1.000	-.073
.775	-.102	.775	-.312			.816	-.502				
.800	-.099	.800	-.338			.856	-.599				
.825	-.111	.824	-.377			.896	-.599				
.850	-.123	.849	-.390			.935	-.244				
.875	-.160	.874	-.419			.972	-.221				
.900	-.185	.899	-.438			1.000	-.191				
.925	-.209	.924	-.405								
.950	-.279	.950	-.260								
.975	-.299	.974	-.133								
1.000	-.112	1.000	-.104								
					LOWER SURFACE						
.020	.080	.022	.148	.028	.109	.017	-.067	.025	-.184	.020	-.235
.040	.059	.041	.084	.077	-.200	.045	-.315	.066	-.249	.040	-.299
.060	.043	.074	-.011	.139	-.210	.055	-.383	.139	-.250	.060	-.380
.100	.012	.101	-.082	.210	-.286	.070	-.385	.211	-.293	.140	-.261
.200	.004	.207	-.274	.301	-.327	.152	-.437	.302	-.318	.196	-.363
.300	-.074	.301	-.272	.400	-.383	.220	-.416	.400	-.200	.253	-.432
.325	-.193	.326	-.247	.500	-.077	.269	-.178	.503	-.139	.306	-.262
.344	-.264	.350	-.261	.574	-.091	.315	-.153	.565	-.147	.388	-.213
.375	-.182	.376	-.294	.715	-.078	.383	-.197	.703	.058	.432	-.229
.400	-.175	.400	-.349	.788	.165	.411	-.171	.789	.176	.474	-.234
.429	-.209	.425	-.312	.860	.315	.439	-.180	.861	.251	.494	-.255
.450	-.209	.450	-.357	.924	.292	.479	-.222	.933	.290	.559	-.187
.475	-.260	.475	-.329	.965	.303	.518	-.227	.975	.186	.637	-.070
.500	-.195	.500	-.384			.546	-.237			.679	.009
.525	-.229	.525	-.437			.570	-.195			.752	.092
.550	-.236	.550	-.400			.640	.043			.845	.142
.575	-.251	.576	-.305			.702	.073			.935	.218
.600	-.273	.600	-.318			.800	.146				
.625	-.260	.628	-.205			.857	.156				
.650	-.246	.650	-.107			.919	.221				
.675	-.244	.675	-.054			.959	.243				
.700	-.178	.700	-.008								
.750	-.172	.750	.072								
.800	.004	.800	.135								
.850	.008	.849	.182								
.900	.146	.900	.234								
.950	.157	.949	.212								
CN =	.2969		.3039		.3401		.3242		.3337		.2655
CM =	.0387		-.0697		-.0939		-.1184		-.1184		-.0930

TABLE 4. - Continued.

M = .993 Q = 9.76 ALPHA = 4.23 CNWP = .4026 DA =1.4 RN =4.74

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.020	0.000	.099	.026	-.619	0.000	.466	.024	-.457	0.000	.452
.020	-.204	.022	-.665	.076	-.730	.017	-.577	.064	-.601	.018	-.638
.040	-.228	.041	-.846	.138	-.821	.032	-.694	.136	-.696	.038	-.507
.060	-.277	.074	-.934	.211	-.811	.051	-.667	.208	-.735	.058	-.668
.100	-.269	.109	-.946	.300	-.790	.070	-.678	.298	-.716	.139	-.660
.200	-.397	.201	-.898	.400	-.750	.148	-.730	.398	-.681	.195	-.687
.300	-.434	.301	-.575	.499	-.748	.219	-.719	.499	-.666	.297	-.681
.400	-.431	.401	-.524	.573	-.456	.268	-.704	.564	-.666	.386	-.633
.500	-.364	.501	-.482	.686	-.442	.314	-.688	.676	-.683	.452	-.601
.525	-.333	.526	-.424	.787	-.486	.383	-.650	.786	-.459	.504	-.619
.550	-.290	.551	-.384	.859	-.565	.440	-.648	.858	-.387	.556	-.621
.575	-.299	.576	-.349	.924	-.260	.498	-.642	.907	-.308	.647	-.607
.600	-.316	.600	-.363	.965	-.214	.538	-.638	.957	-.340	.696	-.623
.625	0.000	.629	-.343	1.000	-.192	.570	-.636	1.000	-.534	.746	-.633
.650	-.249	.650	-.361			.615	-.590			.797	-.395
.669	-.226	.675	-.343			.648	-.475			.852	-.203
.688	-.200	.699	-.332			.667	-.412			.896	-.167
.719	-.189	.726	-.352			.701	-.424			.946	-.149
.750	-.163	.750	-.342			.777	-.557			1.000	-.137
.775	-.153	.775	-.351			.816	-.548				
.800	-.155	.800	-.380			.856	-.633				
.825	-.161	.824	-.416			.896	-.633				
.850	-.174	.849	-.428			.935	-.279				
.875	-.208	.874	-.458			.972	-.268				
.900	-.231	.899	-.466			1.000	-.238				
.925	-.252	.924	-.400								
.950	-.322	.950	-.257								
.975	-.340	.974	-.158								
1.000	-.149	1.000	-.133								
					LOWER SURFACE						
.020	.070	.022	.180	.028	.136	.017	.165	.025	-.129	.020	-.011
.040	.066	.041	.111	.077	-.146	.045	-.078	.066	-.184	.040	-.091
.060	.054	.074	.046	.139	-.197	.055	-.126	.139	-.251	.060	-.162
.100	.027	.101	-.030	.210	-.085	.070	-.115	.211	-.088	.140	-.304
.200	.017	.207	-.196	.301	-.171	.152	-.307	.302	-.158	.196	-.218
.300	-.087	.301	-.185	.400	-.134	.220	-.217	.400	-.230	.253	-.295
.325	-.216	.326	-.126	.500	-.177	.269	-.141	.503	-.109	.306	-.276
.344	-.251	.350	-.132	.574	-.076	.315	-.150	.565	-.176	.388	-.206
.375	-.157	.376	-.193	.715	-.093	.383	-.114	.703	.017	.432	-.238
.400	-.143	.400	-.258	.788	.163	.411	-.131	.789	.128	.474	-.283
.429	-.202	.425	-.225	.860	.341	.439	-.157	.861	.197	.494	-.293
.450	-.210	.450	-.292	.924	.310	.479	-.202	.933	.227	.559	-.238
.475	-.243	.475	-.302	.965	.309	.518	-.224	.975	.106	.637	-.155
.500	-.179	.500	-.269			.546	-.224			.679	-.061
.525	-.239	.525	-.272			.570	-.146			.752	.023
.550	-.258	.550	-.137			.640	.028			.845	.067
.575	-.249	.575	-.158			.702	.059			.935	.160
.600	-.264	.600	-.233			.800	.139				
.625	-.258	.628	-.126			.857	.151				
.650	-.236	.650	-.037			.919	.221				
.675	-.176	.675	0.000			.959	.234				
.700	-.107	.700	.021								
.750	-.088	.750	.089								
.800	.070	.800	.147								
.850	.140	.849	.191								
.900	.185	.900	.228								
.950	.188	.949	.193								
CN =	.4302		.4927		.5785		.5400		.5227		.4206
CM =	.0290		-.0925		-.1301		-.1445		-.1360		-.0935

TABLE 4. - Continued.

M = .995 Q =10.36 ALPHA = 6.43 CNWP = .5193 DA = .8 RN =4.94

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.034	0.000	.006	.026	-.818	0.000	.427	.024	-.668	0.000	.427
.020	-.243	.022	-.761	.076	-.909	.017	-.713	.064	-.783	.018	-.754
.040	-.268	.041	-.920	.138	-.899	.032	-.804	.136	-.777	.038	-.682
.060	-.323	.074	-1.008	.211	-.880	.051	-.795	.208	-.793	.058	-.742
.100	-.303	.109	-1.028	.300	-.869	.070	-.795	.298	-.812	.139	-.746
.200	-.426	.201	-1.010	.400	-.832	.148	-.816	.398	-.764	.195	-.783
.300	-.467	.301	-.734	.499	-.842	.219	-.824	.499	-.741	.297	-.775
.400	-.450	.401	-.649	.573	-.763	.268	-.824	.564	-.746	.386	-.758
.500	-.386	.501	-.516	.686	-.592	.314	-.804	.676	-.754	.452	-.735
.525	-.354	.526	-.466	.787	-.538	.383	-.767	.786	-.512	.504	-.724
.550	-.320	.551	-.430	.859	-.379	.440	-.767	.858	-.458	.556	-.722
.575	-.325	.576	-.386	.924	-.297	.498	-.757	.907	-.431	.647	-.701
.600	-.343	.600	-.402	.965	-.277	.538	-.753	.957	-.430	.696	-.711
.625	0.000	.629	-.381	1.000	-.253	.570	-.757	1.000	-.583	.746	-.728
.650	-.284	.650	-.402			.615	-.728			.797	-.517
.669	-.272	.675	-.371			.648	-.738			.852	-.344
.688	-.247	.699	-.361			.667	-.749			.896	-.329
.719	-.226	.726	-.384			.701	-.767			.946	-.307
.750	-.204	.750	-.386			.777	-.521			1.000	-.307
.775	-.194	.775	-.867			.816	-.435				
.800	-.194	.800	-.414			.856	-.441				
.825	-.195	.824	-.449			.896	-.441				
.850	-.206	.849	-.456			.935	-.471				
.875	-.244	.874	-.481			.972	-.490				
.900	-.269	.899	-.488			1.000	-.489				
.925	-.283	.924	-.430								
.950	-.355	.950	-.303								
.975	-.413	.974	-.184								
1.000	-.177	1.000	-.146								
					LOWER SURFACE						
.020	.093	.022	.298	.028	.325	.017	.285	.025	.057	.020	.104
.040	.100	.041	.245	.077	.072	.045	.067	.066	-.012	.040	.042
.060	.095	.074	.147	.139	.011	.055	.028	.139	-.042	.060	-.004
.100	.068	.101	.078	.210	-.039	.070	.015	.211	-.115	.140	-.169
.200	.050	.207	-.091	.301	-.078	.152	-.131	.302	-.145	.196	-.189
.300	-.053	.301	-.057	.400	-.075	.220	-.107	.400	-.202	.253	-.250
.325	-.189	.326	-.057	.500	-.122	.269	-.125	.503	-.093	.306	-.217
.344	-.175	.350	-.087	.574	-.002	.315	-.019	.565	-.163	.388	-.177
.375	-.090	.376	-.123	.715	-.090	.383	-.087	.703	.025	.432	-.246
.400	-.123	.400	-.111	.788	.193	.411	-.119	.789	.128	.474	-.255
.429	-.172	.425	-.075	.860	.372	.439	-.158	.861	.192	.494	-.276
.450	-.167	.450	-.160	.924	.330	.479	-.196	.933	.219	.559	-.256
.475	-.190	.475	-.199	.965	.325	.518	-.203	.975	.095	.637	-.215
.500	-.139	.500	-.217			.546	-.207			.679	-.103
.525	-.143	.525	-.189			.570	-.088			.752	-.022
.550	-.185	.550	-.036			.640	.057			.845	.011
.575	-.174	.576	-.093			.702	.072			.935	.091
.600	-.164	.600	-.164			.800	.130				
.625	-.134	.628	-.081			.857	.155				
.650	-.109	.650	.012			.919	.220				
.675	-.089	.675	.037			.959	.213				
.700	-.045	.700	.048								
.750	-.017	.750	.121								
.800	.120	.800	.187								
.850	.183	.849	.228								
.900	.223	.900	.265								
.950	.215	.949	.215								
CN =	.5750		.6390		.7581		.6869		.6431		.5297
CM =	.0220		-.0970		-.1526		-.1585		-.1488		-.1075

TABLE 4. - Concluded.

M =1.002 Q =11.26 ALPHA = 8.63 CNWP = .6420 DA = .6 RN =5.39

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
UPPER SURFACE											
0.000	-.083	0.000	-.107	.026	-.955	0.000	.332	.024	-.862	0.000	.350
.020	-.341	.022	-.935	.076	-1.033	.017	-.855	.064	-.934	.018	-.849
.040	-.351	.041	-1.060	.138	-1.047	.032	-.939	.136	-.921	.038	-.848
.060	-.395	.074	-1.126	.211	-1.006	.051	-.925	.208	-.918	.058	-.905
.100	-.379	.109	-1.146	.300	-.993	.070	-.934	.298	-.935	.139	-.866
.200	-.482	.201	-1.150	.400	-.965	.148	-.932	.398	-.889	.195	-.877
.300	-.516	.301	-.904	.499	-.977	.219	-.923	.499	-.882	.297	-.868
.400	-.501	.401	-.903	.573	-.698	.268	-.925	.564	-.873	.386	-.858
.500	-.425	.501	-.814	.686	-.599	.314	-.918	.676	-.866	.452	-.851
.525	-.392	.526	-.789	.787	-.532	.383	-.899	.786	-.577	.504	-.853
.550	-.362	.551	-.768	.859	-.489	.440	-.899	.858	-.529	.556	-.840
.575	-.362	.576	-.704	.924	-.461	.498	-.890	.907	-.581	.647	-.794
.600	-.392	.600	-.673	.965	-.446	.538	-.876	.957	-.581	.696	-.826
.625	0.000	.629	-.592	1.000	-.418	.570	-.881	1.000	-.581	.746	-.747
.650	-.326	.650	-.553			.615	-.855			.797	-.482
.669	-.308	.675	-.462			.648	-.843			.852	-.449
.688	-.283	.699	-.388			.667	-.811			.896	-.434
.719	-.267	.726	-.368			.701	-.749			.946	-.424
.750	-.237	.750	-.332			.777	-.602			1.000	-.433
.775	-.226	.775	-.341			.816	-.583				
.800	-.225	.800	-.391			.856	-.581				
.825	-.229	.824	-.434			.896	-.581				
.850	-.240	.849	-.453			.935	-.581				
.875	-.275	.874	-.468			.972	-.576				
.900	-.303	.899	-.489			1.000	-.530				
.925	-.323	.924	-.520								
.950	-.402	.950	-.399								
.975	-.459	.974	-.249								
1.000	-.219	1.000	-.142								
LOWER SURFACE											
.020	.094	.022	.381	.028	.428	.017	.378	.025	.193	.020	.207
.040	.117	.041	.346	.077	.197	.045	.180	.066	.095	.040	.127
.060	.121	.074	.248	.139	.118	.055	.141	.139	-.006	.060	.061
.100	.101	.101	.184	.210	.058	.070	.118	.211	-.063	.140	-.129
.200	.076	.207	.022	.301	.012	.152	-.016	.302	-.122	.196	-.149
.300	-.021	.301	.032	.400	-.022	.220	-.016	.400	-.173	.253	-.205
.325	-.152	.326	.024	.500	-.036	.269	-.022	.503	-.072	.306	-.177
.344	-.057	.350	-.004	.574	.005	.315	-.014	.565	-.162	.388	-.146
.375	-.057	.376	-.025	.716	-.089	.383	-.067	.703	0.000	.432	-.216
.400	-.082	.400	-.034	.788	.153	.411	-.103	.789	.109	.474	-.262
.429	-.112	.425	-.015	.860	.342	.439	-.140	.861	.175	.494	-.281
.450	-.083	.450	-.086	.924	.299	.479	-.179	.933	.195	.559	-.270
.475	-.108	.475	-.118	.965	.290	.518	-.176	.975	.060	.637	-.253
.500	-.059	.500	-.086			.546	-.146			.679	-.138
.525	-.068	.525	-.072			.570	-.035			.752	-.051
.550	-.088	.550	-.005			.640	.047			.845	-.037
.575	-.075	.576	-.060			.702	.058			.935	.047
.600	-.070	.600	-.097			.800	.116				
.625	-.052	.628	-.038			.857	.151				
.650	-.024	.650	.047			.919	.215				
.675	-.023	.675	.065			.959	.208				
.700	.021	.700	.071								
.750	.036	.750	.138								
.800	.171	.800	.201								
.850	.230	.849	.242								
.900	.262	.900	.276								
.950	.244	.949	.218								
CN =	.7550		.8460		.8721		.8303		.7835		.6325
CM =	.0320		-.1190		-.1575		-.1795		-.1671		-.1178

TABLE 5. - SURFACE PRESSURE COEFFICIENTS, SECTION NORMAL-FORCE AND PITCHING-MOMENT COEFFICIENTS, AND TOTAL WING-PANEL NORMAL-FORCE COEFFICIENTS WITH FUSELAGE ADDITIONS ON

[Q, kN/m^2; ALPHA, deg; DA, deg; RN/m, X 10^6; CP = 0.000 indicates pressure not available]

M = .505 Q = 9.89 ALPHA = 2.25 CNWP = .2074 DA =0.0 RN =7.04

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.001	0.000	.136	.026	-.607	0.000	.442	.024	-.251	0.000	.528
.020	-.157	.022	-.671	.076	-.518	.017	-.465	.064	-.251	.018	-.167
.040	-.209	.041	-.615	.138	-.386	.032	-.477	.136	-.242	.038	-.218
.060	-.234	.074	-.564	.211	-.323	.051	-.436	.208	-.230	.058	-.250
.100	-.268	.109	-.518	.300	-.296	.070	-.404	.298	-.202	.139	-.213
.200	-.340	.201	-.371	.400	-.286	.148	-.312	.398	-.199	.195	-.199
.300	-.295	.301	-.346	.499	-.245	.219	-.288	.499	-.203	.297	-.166
.400	-.259	.401	-.275	.573	-.253	.268	-.266	.564	-.220	.386	-.167
.500	-.186	.501	-.234	.686	-.286	.314	-.255	.676	-.287	.452	-.156
.525	-.156	.526	-.210	.787	-.281	.383	-.245	.786	-.301	.504	-.180
.550	-.159	.551	-.210	.859	-.277	.440	-.245	.858	-.336	.556	-.188
.575	-.161	.576	-.210	.924	-.243	.498	-.243	.907	0.000	.647	-.203
.600	-.150	.600	-.257	.965	-.163	.538	-.241	.957	-.206	.696	-.218
.625	0.000	.629	-.213	1.000	-.167	.570	-.245	1.000	-.160	.746	-.240
.650	-.122	.650	-.226			.615	-.245			.797	-.262
.669	-.106	.675	-.212			.648	-.265			.852	-.275
.688	-.098	.699	-.221			.667	-.275			.896	-.282
.719	-.104	.726	-.236			.701	-.296			.946	-.233
.750	-.098	.750	-.234			.777	0.000			1.000	-.109
.775	-.104	.775	-.226			.816	-.306				
.800	-.099	.800	-.231			.856	-.305				
.825	-.103	.824	-.244			.896	-.305				
.850	-.106	.849	-.224			.935	-.235				
.875	-.122	.874	-.214			.972	-.094				
.900	-.128	.899	-.198			1.000	-.114				
.925	-.117	.924	-.180								
.950	-.121	.950	-.160								
.975	-.079	.974	-.108								
1.000	-.027	1.000	-.069								
					LOWER SURFACE						
.020	.055	.022	.178	.028	.107	.017	.027	.025	-.205	.020	-.210
.040	.036	.041	.075	.077	-.079	.045	-.110	.066	-.173	.040	-.218
.060	.016	.074	-.008	.139	-.105	.055	-.134	.139	-.183	.060	-.243
.100	-.008	.101	-.051	.210	-.122	.070	-.125	.211	-.165	.140	-.218
.200	-.020	.207	-.176	.301	-.119	.152	-.184	.302	-.139	.196	-.188
.300	-.060	.301	-.128	.400	-.118	.220	-.136	.400	-.125	.253	-.161
.325	-.121	.326	-.121	.500	-.099	.269	-.129	.503	-.105	.306	-.136
.344	-.105	.350	-.139	.574	-.079	.315	-.122	.565	-.090	.388	-.120
.375	-.130	.376	-.143	.715	-.036	.383	-.129	.703	.053	.432	-.121
.400	-.125	.400	-.148	.788	.156	.411	-.133	.789	.178	.474	-.108
.429	-.172	.425	-.131	.860	.284	.439	-.128	.861	.244	.494	-.105
.450	-.149	.450	-.165	.924	.283	.479	-.119	.933	.276	.559	-.082
.475	-.189	.475	-.176	.965	.274	.518	-.100	.975	.183	.637	-.018
.500	-.148	.500	-.154			.546	-.090			.679	.048
.525	-.153	.525	-.152			.570	-.072			.752	.132
.550	-.142	.550	-.108			.640	-.008			.845	.180
.575	-.156	.576	-.114			.702	.043			.935	.243
.600	-.141	.600	-.136			.800	.153				
.625	-.114	.628	-.095			.857	.183				
.650	-.080	.650	-.014			.919	.222				
.675	-.078	.675	.003			.959	.215				
.700	-.032	.700	.014								
.750	.006	.750	.080								
.800	.117	.800	.140								
.850	.172	.849	.181								
.900	.206	.900	.211								
.950	.190	.949	.168								
CN =	.2990		.2700		.2937		.2497		.2107		.1587
CM =	.0190		-.0550		-.0827		-.0832		-.0970		-.0822

TABLE 5. - Continued.

M = .507 Q = 9.95 ALPHA = 3.39 CNWP = .2619 DA = .6 RN =7.06

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.003	0.000	0.000	.026	-.824	0.000	.344	.024	-.439	0.000	.472
.020	-.174	.022	-.759	.076	-.636	.017	-.678	.064	-.368	.018	-.346
.040	-.219	.041	-.759	.138	-.462	.032	-.628	.136	-.323	.038	-.350
.060	-.244	.074	-.633	.211	-.376	.051	-.550	.208	-.293	.058	-.354
.100	-.277	.109	-.610	.300	-.336	.070	-.504	.298	-.253	.139	-.271
.200	-.343	.201	-.409	.400	-.306	.148	-.376	.398	-.237	.195	-.244
.300	-.293	.301	-.373	.499	-.266	.219	-.336	.499	-.233	.297	-.198
.400	-.258	.401	-.294	.573	-.266	.268	-.306	.564	-.246	.386	-.190
.500	-.184	.501	-.241	.686	-.296	.314	-.284	.676	-.313	.452	-.180
.525	-.164	.526	-.217	.787	-.292	.383	-.268	.786	-.313	.504	-.194
.550	-.162	.551	-.216	.859	-.278	.440	-.266	.858	-.314	.556	-.201
.575	-.167	.576	-.217	.924	-.236	.498	-.254	.907	0.000	.647	-.215
.600	-.157	.600	-.259	.965	-.144	.538	-.258	.957	-.196	.696	-.225
.625	0.000	.629	-.227	1.000	-.146	.570	-.258	1.000	-.174	.746	-.252
.650	-.123	.650	-.229			.615	-.258			.797	-.262
.669	-.110	.675	-.218			.648	-.284			.852	-.276
.688	-.097	.699	-.224			.667	-.304			.896	-.281
.719	-.107	.726	-.232			.701	-.320			.946	-.231
.750	-.096	.750	-.231			.777	0.000			1.000	-.103
.775	-.107	.775	-.223			.816	-.322				
.800	-.101	.800	-.226			.856	-.314				
.825	-.105	.824	-.235			.896	-.314				
.850	-.109	.849	-.216			.935	-.236				
.875	-.129	.874	-.203			.972	-.089				
.900	-.129	.899	-.184			1.000	-.108				
.925	-.119	.924	-.165								
.950	-.117	.950	-.145								
.975	-.079	.974	-.091								
1.000	-.027	1.000	-.051								
					LOWER SURFACE						
.020	.071	.022	.252	.028	.224	.017	.174	.025	-.019	.020	-.039
.040	.057	.041	.163	.077	.015	.045	-0.000	.066	-.059	.040	-.093
.060	.044	.074	.068	.139	-.032	.055	-.030	.139	-.108	.060	-.134
.100	.017	.101	.022	.210	-.062	.070	-.037	.211	-.107	.140	-.155
.200	.006	.207	-.114	.301	-.072	.152	-.119	.302	-.091	.196	-.138
.300	-.030	.301	-.080	.400	-.077	.220	-.085	.400	-.089	.253	-.120
.325	-.089	.326	-.070	.500	-.064	.269	-.084	.503	-.074	.306	-.097
.344	-.077	.350	-.094	.574	-.055	.315	-.077	.565	-.063	.388	-.092
.375	-.098	.376	-.098	.715	-.010	.383	-.084	.703	.068	.432	-.096
.400	-.091	.400	-.105	.788	.178	.411	-.093	.789	.183	.474	-.090
.429	-.141	.425	-.089	.860	.304	.439	-.088	.861	.244	.494	-.082
.450	-.120	.450	-.124	.924	.288	.479	-.082	.933	.261	.559	-.067
.475	-.162	.475	-.136	.965	.282	.518	-.064	.975	.184	.637	-.007
.500	-.117	.500	-.117			.546	-.052			.679	.058
.525	-.126	.525	-.117			.570	-.036			.752	.135
.550	-.118	.550	-.075			.640	.024			.845	.182
.575	-.127	.576	-.082			.702	.071			.935	.245
.600	-.111	.600	-.103			.800	.171				
.625	-.083	.628	-.066			.857	.204				
.650	-.052	.650	.014			.919	.247				
.675	-.052	.675	.025			.959	.236				
.700	-.005	.700	.037								
.750	*****	.750	.100								
.800	.139	.800	.158								
.850	.139	.849	.205								
.900	.224	.900	.232								
.950	.210	.949	.185								
CN =	.3572		.3381		.3674		.3259		.2866		.2175
CM =	.0240		-.0519		-.0840		-.0883		-.0957		-.0804

TABLE 5. - Continued.

M = .506 Q = 9.83 ALPHA = 4.30 CNWP = .3130 DA = .6 RN =7.00

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.014	0.000	-.144	.026	-1.032	0.000	.201	.024	-.616	0.000	.391
.020	-.206	.022	-.957	.076	-.751	.017	-.916	.064	-.482	.018	-.519
.040	-.248	.041	-.918	.138	-.528	.032	-.801	.136	-.397	.038	-.479
.060	-.275	.074	-.774	.211	-.429	.051	-.680	.208	-.348	.058	-.462
.100	-.298	.109	-.700	.300	-.370	.070	-.609	.298	-.294	.139	-.327
.200	-.367	.201	-.467	.400	-.329	.148	-.437	.398	-.271	.195	-.291
.300	-.314	.301	-.412	.499	-.284	.219	-.384	.499	-.256	.297	-.229
.400	-.273	.401	-.326	.573	-.286	.268	-.346	.564	-.271	.386	-.212
.500	-.199	.501	-.265	.686	-.305	.314	-.317	.676	-.332	.452	-.196
.525	-.178	.526	-.236	.787	-.304	.383	-.304	.786	-.322	.504	-.210
.550	-.177	.551	-.236	.859	-.286	.440	-.296	.858	-.334	.556	-.215
.575	-.179	.576	-.236	.924	-.233	.498	-.286	.907	0.000	.647	-.230
.600	-.172	.600	-.276	.965	-.144	.538	-.281	.957	-.189	.696	-.236
.625	0.000	.629	-.241	1.000	-.141	.570	-.286	1.000	-.167	.746	-.261
.650	-.136	.650	-.246			.615	-.281			.797	-.267
.669	-.125	.675	-.232			.648	-.304			.852	-.281
.688	-.115	.699	-.236			.667	-.319			.896	-.285
.719	-.120	.726	-.239			.701	-.335			.946	-.229
.750	-.114	.750	-.245			.777	0.000			1.000	-.099
.775	-.120	.775	-.234			.816	-.335				
.800	-.114	.800	-.237			.856	-.326				
.825	-.116	.824	-.245			.896	-.326				
.850	-.120	.849	-.225			.935	-.239				
.875	-.131	.874	-.211			.972	-.088				
.900	-.137	.899	-.190			1.000	-.177				
.925	-.122	.924	-.170								
.950	-.124	.950	-.146								
.975	-.082	.974	-.091								
1.000	-.031	1.000	-.054								
					LOWER SURFACE						
.020	.086	.022	.301	.028	.302	.017	.282	.025	.113	.020	.093
.040	.078	.041	.219	.077	.086	.045	.087	.066	.029	.040	.015
.060	.067	.074	.120	.139	.023	.055	.053	.139	-.042	.060	-.042
.100	.042	.101	.070	.210	-.016	.070	.037	.211	-.054	.140	-.096
.200	.029	.207	-.072	.301	-.033	.152	-.071	.302	-.051	.196	-.092
.300	-.008	.301	-.048	.400	-.047	.220	-.042	.400	-.055	.253	-.085
.325	-.066	.326	-.044	.500	-.041	.269	-.047	.503	-.047	.306	-.065
.344	-.053	.350	-.066	.574	-.036	.315	-.042	.565	-.039	.388	-.070
.375	-.075	.376	-.072	.715	.002	.383	-.057	.703	.084	.432	-.077
.400	-.071	.400	-.080	.788	.190	.411	-.065	.789	.192	.474	-.070
.429	-.118	.425	-.066	.860	.315	.439	-.064	.861	.253	.494	-.066
.450	-.096	.450	-.102	.924	.298	.479	-.059	.933	.266	.559	-.051
.475	-.140	.475	-.113	.965	.291	.518	-.046	.975	.188	.637	.002
.500	-.092	.500	-.094			.546	-.036			.679	.063
.525	-.102	.525	-.096			.570	-.019			.752	.136
.550	-.097	.550	-.059			.640	.041			.845	.176
.575	-.107	.576	-.065			.702	.081			.935	.237
.600	-.094	.600	-.087			.800	.179				
.625	-.065	.628	-.051			.857	.212				
.650	-.035	.650	.023			.919	.257				
.675	-.039	.675	.036			.959	.241				
.700	.011	.700	.045								
.750	.037	.750	.107								
.800	.149	.800	.166								
.850	.203	.849	.204								
.900	.232	.900	.233								
.950	.212	.949	.185								
CN =	.4173		.4053		.4377		.3914		.3577		.2709
CM =	.0320		-.0512		-.0872		-.0900		-.0980		-.0783

TABLE 5. - Continued.

M = .504 Q = 9.79 ALPHA = 5.26 CNWP = .3839 DA =0.0 RN =6.99

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.032	0.000	-.374	.026	-1.351	0.000	-.071	.024	-.903	0.000	.211
.020	-.265	.022	-1.254	.076	-.926	.017	-1.333	.064	-.650	.018	-.900
.040	-.304	.041	-1.153	.138	-.622	.032	-1.100	.136	-.484	.038	-.714
.060	-.327	.074	-.940	.211	-.500	.051	-.907	.208	-.412	.058	-.639
.100	-.351	.109	-.816	.300	-.418	.070	-.794	.298	-.334	.139	-.420
.200	-.409	.201	-.540	.400	-.377	.148	-.550	.398	-.297	.195	-.357
.300	-.358	.301	-.468	.499	-.314	.219	-.459	.499	-.281	.297	-.271
.400	-.310	.401	-.360	.573	-.306	.268	-.416	.564	-.283	.386	-.242
.500	-.229	.501	-.293	.686	-.316	.314	-.374	.676	-.337	.452	-.221
.525	-.204	.526	-.262	.787	-.303	.383	-.347	.786	-.328	.504	-.230
.550	-.206	.551	-.260	.859	-.286	.440	-.334	.858	-.350	.556	-.228
.575	-.206	.576	-.256	.924	-.231	.498	-.316	.907	0.000	.647	-.246
.600	-.194	.600	-.297	.965	-.143	.538	-.316	.957	-.193	.696	-.251
.625	0.000	.629	-.266	1.000	-.129	.570	-.316	1.000	-.136	.746	-.273
.650	-.157	.650	-.266			.615	-.306			.797	-.290
.669	-.145	.675	-.248			.648	-.328			.852	-.300
.688	-.137	.699	-.247			.667	-.343			.896	-.300
.719	-.137	.726	-.256			.701	-.349			.946	-.235
.750	-.127	.750	-.262			.777	0.000			1.000	-.099
.775	-.131	.775	-.252			.816	-.347				
.800	-.127	.800	-.253			.856	-.331				
.825	-.128	.824	-.256			.896	-.331				
.850	-.133	.849	-.234			.935	-.235				
.875	-.142	.874	-.218			.972	-.091				
.900	-.147	.899	-.196			1.000	-.110				
.925	-.131	.924	-.173								
.950	-.135	.950	-.144								
.975	-.084	.974	-.087								
1.000	-.032	1.000	-.056								
					LOWER SURFACE						
.020	.113	.022	.346	.028	.393	.017	.403	.025	.276	.020	.272
.040	.117	.041	.287	.077	.172	.045	.213	.066	.130	.040	.159
.060	.106	.074	.198	.139	.089	.055	.174	.139	.030	.060	.085
.100	.082	.101	.144	.210	.044	.070	.146	.211	.010	.140	-.017
.200	.064	.207	-.007	.301	.015	.152	.006	.302	-.003	.196	-.032
.300	.024	.301	.004	.400	-.005	.220	.014	.400	-.014	.253	-.041
.325	-.026	.326	.005	.500	-.004	.269	.003	.503	-.013	.306	-.033
.344	-.011	.350	-.019	.574	-.005	.315	0.000	.565	-.010	.388	-.044
.375	-.037	.376	-.026	.715	.016	.383	-.020	.703	.102	.432	-.057
.400	-.034	.400	-.034	.788	.205	.411	-.031	.789	.212	.474	-.054
.429	-.082	.425	-.024	.860	.328	.439	-.033	.861	.272	.494	-.050
.450	-.059	.450	-.060	.924	.314	.479	-.026	.933	.286	.559	-.040
.475	-.105	.475	-.076	.965	.302	.518	-.017	.975	.197	.637	.010
.500	-.059	.500	-.059			.546	-.011			.679	.066
.525	-.073	.525	-.062			.570	.004			.752	.138
.550	-.069	.550	-.031			.640	.059			.845	.172
.575	-.078	.576	-.041			.702	.095			.935	.232
.600	-.065	.600	-.064			.800	.184				
.625	-.039	.628	-.028			.857	.217				
.650	-.009	.650	.046			.919	.253				
.675	-.006	.675	.056			.959	.237				
.700	.041	.700	.062								
.750	.066	.750	.122								
.800	.179	.800	.180								
.850	.230	.849	.218								
.900	.255	.900	.244								
.950	.236	.949	.195								
CN =	.5268		.4930		.5166		.4859		.4420		.3493
CM =	.0550		-.0530		-.0863		-.0887		-.0995		-.0751

TABLE 5. - Continued.

M = .502 Q = 9.68 ALPHA = 5.40 CNWP = .3879 DA =0.0 RN =6.94

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.046	0.000	-.369	.026	-1.346	0.000	-.107	.024	-.895	0.000	.180
.020	-.278	.022	-1.297	.076	-.930	.017	-1.396	.064	-.649	.018	-.945
.040	-.320	.041	-1.184	.138	-.650	.032	-1.125	.136	-.505	.038	-.739
.060	-.343	.074	-.962	.211	-.519	.051	-.930	.208	-.434	.058	-.665
.100	-.363	.109	-.840	.300	-.436	.070	-.816	.298	-.352	.139	-.438
.200	-.420	.201	-.559	.400	-.390	.148	-.569	.398	-.310	.195	-.374
.300	-.364	.301	-.482	.499	-.331	.219	-.477	.499	-.300	.297	-.285
.400	-.314	.401	-.377	.573	-.320	.268	-.427	.564	-.302	.386	-.255
.500	-.230	.501	-.303	.686	-.333	.314	-.395	.676	-.351	.452	-.231
.525	-.207	.526	-.272	.787	-.315	.383	-.362	.786	-.345	.504	-.244
.550	-.208	.551	-.272	.859	-.298	.440	-.343	.858	-.362	.556	-.242
.575	-.208	.576	-.263	.924	-.242	.498	-.331	.907	0.000	.647	-.250
.600	-.196	.600	-.313	.965	-.151	.538	-.320	.957	-.203	.696	-.256
.625	0.000	.629	-.272	1.000	-.136	.570	-.316	1.000	-.148	.746	-.278
.650	-.161	.650	-.274			.615	-.313			.797	-.293
.669	-.148	.675	-.262			.648	-.333			.852	-.300
.688	-.137	.699	-.262			.667	-.343			.896	-.304
.719	-.138	.726	-.272			.701	-.353			.946	-.240
.750	-.130	.750	-.265			.777	0.000			1.000	-.103
.775	-.132	.775	-.255			.816	-.353				
.800	-.133	.800	-.255			.856	-.333				
.825	-.131	.824	-.260			.896	-.333				
.850	-.133	.849	-.239			.935	-.240				
.875	-.148	.874	-.221			.972	-.094				
.900	-.148	.899	-.199			1.000	-.114				
.925	-.134	.924	-.179								
.950	-.136	.950	-.150								
.975	-.087	.974	-.092								
1.000	-.036	1.000	-.055								
					LOWER SURFACE						
.020	.101	.022	.343	.028	.386	.017	.403	.025	.262	.020	.268
.040	.107	.041	.279	.077	.166	.045	.213	.066	.123	.040	.155
.060	.098	.074	.191	.139	.082	.055	.173	.139	.023	.060	.085
.100	.076	.101	.136	.210	.037	.070	.142	.211	.003	.140	-.022
.200	.053	.207	-.013	.301	.007	.152	.004	.302	-.008	.196	-.035
.300	.014	.301	-.003	.400	-.013	.220	.014	.400	-.025	.253	-.042
.325	-.036	.326	-.002	.500	-.014	.269	.001	.503	-.026	.306	-.036
.344	-.020	.350	-.028	.574	-.016	.315	-.002	.565	-.022	.388	-.047
.375	-.047	.376	-.033	.715	.004	.383	-.023	.703	.092	.432	-.060
.400	-.042	.400	-.041	.788	.211	.411	-.033	.789	.203	.474	-.056
.429	-.093	.425	-.031	.860	.317	.439	-.035	.861	.264	.494	-.053
.450	-.071	.450	-.069	.924	.304	.479	-.032	.933	.275	.559	-.044
.475	-.117	.475	-.084	.965	.294	.518	-.022	.975	.187	.637	.007
.500	-.069	.500	-.066			.546	-.016			.679	.064
.525	-.079	.525	-.069			.570	-.001			.752	.134
.550	-.071	.550	-.034			.640	.052			.845	.172
.575	-.085	.576	-.043			.702	.091			.935	.233
.600	-.072	.600	-.065			.800	.181				
.625	-.045	.628	-.031			.857	.214				
.650	-.013	.650	.042			.919	.249				
.675	-.017	.675	.052			.959	.235				
.700	.028	.700	.058								
.750	.055	.750	.118								
.800	.167	.800	.177								
.850	.220	.849	.215								
.900	.244	.900	.243								
.950	.223	.949	.192								
CN =	.5193		.4940		.5227		.4939		.4470		.3583
CM =	.0590		-.0517		-.0877		-.0883		-.1008		-.0756

TABLE 5. - Continued.

M = .508 Q = 9.95 ALPHA = 6.40 CNWP = .4421 DA =0.0 RN =7.06

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.068	0.000	-.619	.026	-1.643	0.000	-.363	.024	-1.159	0.000	-.027
.020	-.327	.022	-1.591	.076	-1.077	.017	-1.708	.064	-.798	.018	-1.279
.040	-.362	.041	-1.405	.138	-.736	.032	-1.358	.136	-.599	.038	-.924
.060	-.381	.074	-1.111	.211	-.581	.051	-1.099	.208	-.493	.058	-.806
.100	-.401	.109	-.962	.300	-.483	.070	-.954	.298	-.399	.139	-.514
.200	-.453	.201	-.623	.400	-.421	.148	-.647	.398	-.351	.195	-.433
.300	-.387	.301	-.524	.499	-.358	.219	-.538	.499	-.327	.297	-.316
.400	-.327	.401	-.410	.573	-.344	.268	-.479	.564	-.321	.386	-.276
.500	-.253	.501	-.187	.686	-.348	.314	-.436	.676	-.370	.452	-.254
.525	-.230	.526	-.299	.787	-.325	.383	-.399	.786	-.357	.504	-.263
.550	-.228	.551	-.295	.859	-.304	.440	-.379	.858	-.370	.556	-.260
.575	-.230	.576	-.289	.924	-.239	.498	-.358	.907	0.000	.647	-.265
.600	-.213	.600	-.329	.965	-.148	.538	-.346	.957	-.204	.696	-.272
.625	0.000	.629	-.289	1.000	-.129	.570	-.338	1.000	-.139	.746	-.289
.650	-.176	.650	-.289			.615	-.332			.797	-.304
.669	-.163	.675	-.279			.648	-.352			.852	-.314
.688	-.154	.699	-.269			.667	-.365			.896	-.312
.719	-.154	.726	-.279			.701	-.369			.946	-.241
.750	-.142	.750	-.275			.777	0.000			1.000	-.102
.775	-.145	.775	-.263			.816	-.358				
.800	-.140	.800	-.261			.856	-.340				
.825	-.144	.824	-.263			.896	-.340				
.850	-.141	.849	-.239			.935	-.237				
.875	-.157	.874	-.223			.972	-.092				
.900	-.158	.899	-.195			1.000	-.113				
.925	-.141	.924	-.172								
.950	-.139	.950	-.142								
.975	-.090	.974	-.086								
1.000	-.038	1.000	-.055								
					LOWER SURFACE						
.020	.112	.022	.359	.028	.443	.017	.461	.025	.360	.020	.366
.040	.126	.041	.330	.077	.233	.045	.283	.066	.207	.040	.239
.060	.122	.074	.236	.139	.139	.055	.242	.139	.088	.060	.155
.100	.098	.101	.185	.210	.077	.070	.208	.211	.047	.140	.027
.200	.077	.207	.030	.301	.041	.152	.055	.302	.024	.196	.004
.300	.038	.301	.033	.400	.013	.220	.055	.400	.002	.253	-.006
.325	-.009	.326	.030	.500	.007	.269	.037	.503	-.002	.306	-.008
.344	.002	.350	.007	.574	.002	.315	.032	.565	-.002	.388	-.028
.375	-.020	.376	-.004	.715	.016	.383	.007	.703	.103	.432	-.040
.400	-.021	.400	-.011	.788	.224	.411	-.006	.789	.208	.474	-.040
.429	-.068	.425	-.002	.860	.328	.439	-.008	.861	.272	.494	-.039
.450	-.049	.450	-.040	.924	.309	.479	-.005	.933	.281	.559	-.032
.475	-.094	.475	-.054	.965	.299	.518	.002	.975	.190	.637	.013
.500	-.047	.500	-.041			.546	.006			.679	.069
.525	-.050	.525	-.044			.570	.018			.752	.134
.550	-.049	.550	-.011			.640	.071			.845	.169
.575	-.063	.576	-.020			.702	.103			.935	.237
.600	-.047	.600	-.047			.800	.189				
.625	-.019	.628	-.012			.857	.221				
.650	.009	.650	.059			.919	.255				
.675	0.000	.675	.068			.959	.240				
.700	.048	.700	.072								
.750	.071	.750	.130								
.800	.185	.800	.187								
.850	.233	.849	.224								
.900	.256	.900	.249								
.950	.234	.949	.198								
CN =	.5921		.5590		.5934		.5648		.5203		.4187
CM =	.0730		-.0500		-.0883		-.0890		-.1014		-.0741

TABLE 5. - Continued.

M = .796 Q = 9.87 ALPHA = 2.23 CNWP = .2160 DA =1.0 RN =4.88

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.011	0.000	.194	.026	-.590	0.000	.506	.024	-.220	0.000	.561
.020	-.136	.022	-.489	.076	-.513	.017	-.372	.064	-.232	.018	-.102
.040	-.188	.041	-.568	.138	-.395	.032	-.451	.136	-.250	.038	-.187
.060	-.216	.074	-.520	.211	-.334	.051	-.415	.208	-.246	.058	-.265
.100	-.263	.109	-.548	.300	-.303	.070	-.397	.298	-.215	.139	-.239
.200	-.363	.201	-.355	.400	-.292	.148	-.334	.398	-.218	.195	-.228
.300	-.309	.301	-.363	.499	-.252	.219	-.311	.499	-.224	.297	-.192
.400	-.279	.401	-.274	.573	-.264	.268	-.294	.564	-.243	.386	-.187
.500	-.191	.501	-.224	.686	-.313	.314	-.274	.676	-.373	.452	-.183
.525	-.163	.526	-.196	.787	-.336	.383	-.274	.786	-.328	.504	-.206
.550	-.169	.551	-.198	.859	-.317	.440	-.274	.858	-.377	.556	-.208
.575	-.179	.576	-.202	.924	-.241	.498	-.272	.907	0.000	.647	-.226
.600	-.165	.600	-.264	.965	-.117	.538	-.272	.957	.198	.696	-.240
.625	0.000	.629	-.234	1.000	-.134	.570	-.274	1.000	-.138	.746	-.269
.650	-.120	.650	-.245			.615	-.294			.797	-.280
.669	-.107	.675	-.234			.648	-.334			.852	-.303
.688	-.098	.699	-.241			.667	-.364			.896	-.283
.719	-.099	.726	-.264			.701	-.395			.946	-.196
.750	-.096	.750	-.253			.777	0.000			1.000	-.058
.775	-.102	.775	-.247			.816	-.405				
.800	-.104	.800	-.251			.856	-.358				
.825	-.108	.824	-.262			.896	-.358				
.850	-.117	.849	-.240			.935	-.231				
.875	-.141	.874	-.226			.972	.083				
.900	-.150	.899	-.204			1.000	-.101				
.925	-.140	.924	-.178								
.950	-.144	.950	-.148								
.975	-.084	.974	-.084								
1.000	-.015	1.000	-.041								

LOWER SURFACE

.020	.048	.022	.169	.028	.090	.017	-.026	.025	-.239	.020	-.269
.040	.024	.041	.074	.077	-.116	.045	-.146	.066	-.209	.040	-.256
.060	.009	.074	-.025	.139	-.137	.055	-.171	.139	-.215	.060	-.297
.100	-.016	.101	-.084	.210	-.150	.070	-.155	.211	-.193	.140	-.264
.200	-.024	.207	-.229	.301	-.148	.152	-.209	.302	-.156	.196	-.224
.300	-.066	.301	-.160	.400	-.141	.220	-.162	.400	-.141	.253	-.186
.325	-.153	.326	-.152	.500	-.111	.269	-.151	.503	-.113	.306	-.146
.344	-.129	.350	-.171	.574	-.074	.315	-.134	.565	-.094	.388	-.131
.375	-.141	.376	-.175	.715	-.024	.383	-.146	.703	.077	.432	-.134
.400	-.147	.400	-.178	.788	.188	.411	-.153	.789	.200	.474	-.116
.429	-.191	.425	-.157	.860	.338	.439	-.149	.861	.264	.494	-.109
.450	-.167	.450	-.196	.924	.320	.479	-.128	.933	.298	.559	-.079
.475	-.211	.475	-.207	.965	.319	.518	-.106	.975	.218	.637	.005
.500	-.160	.500	-.178			.546	-.090			.679	.074
.525	-.180	.525	-.168			.570	-.064			.752	.161
.550	-.169	.550	-.111			.640	.024			.845	.203
.575	-.177	.576	-.127			.702	.084			.935	.263
.600	-.168	.600	-.149			.800	.183				
.625	-.142	.628	-.095			.857	.205				
.650	-.108	.650	-.011			.919	.256				
.675	-.094	.675	.013			.959	.259				
.700	-.051	.700	.027								
.750	-.004	.750	.102								
.800	.114	.800	.162								
.850	.180	.849	.201								
.900	.218	.900	.238								
.950	.214	.949	.200								

CN =	.3000	.2650	.3110	.2880	.2230	.1770
CM =	.0170	-.0630	-.0940	-.1090	-.1100	-.0960

TABLE 5. - Continued.

M = .785 Q = 9.13 ALPHA = 2.29 CNWP = .2389 DA =1.4 RN =4.56

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
UPPER SURFACE											
0.000	.001	0.000	.138	.026	-.742	0.000	.433	.024	-.337	0.000	.518
.020	-.184	.022	-.584	.076	-.564	.017	-.521	.064	-.327	.018	-.236
.040	-.199	.041	-.656	.138	-.460	.032	-.548	.136	-.327	.038	-.287
.060	-.225	.074	-.588	.211	-.388	.051	-.510	.208	-.310	.058	-.346
.100	-.268	.109	-.587	.300	-.351	.070	-.469	.298	-.268	.139	-.287
.200	-.362	.201	-.402	.400	-.332	.148	-.383	.398	-.267	.195	-.262
.300	-.312	.301	-.409	.499	-.297	.219	-.346	.499	-.268	.297	-.210
.400	-.284	.401	-.314	.573	-.299	.268	-.330	.564	-.290	.386	-.208
.500	-.192	.501	-.263	.686	-.353	.314	-.297	.676	-.408	.452	-.198
.525	-.171	.526	-.235	.787	-.352	.383	-.295	.786	-.358	.504	-.220
.550	-.173	.551	-.219	.859	-.327	.440	-.297	.858	-.384	.556	-.220
.575	-.184	.576	-.221	.924	-.245	.498	-.290	.907	0.000	.647	-.241
.600	-.171	.600	-.279	.965	-.126	.538	-.295	.957	-.219	.696	-.248
.625	0.000	.629	-.254	1.000	-.138	.570	-.295	1.000	-.130	.746	-.278
.650	-.133	.650	-.254			.615	-.306			.797	-.300
.669	-.121	.675	-.241			.648	-.348			.852	-.319
.688	-.111	.699	-.254			.667	-.373			.896	-.307
.719	-.116	.726	-.272			.701	-.402			.946	-.220
.750	-.110	.750	-.271			.777	0.000			1.000	-.079
.775	-.113	.775	-.262			.816	-.408				
.800	-.118	.800	-.271			.856	-.377				
.825	-.121	.824	-.279			.896	-.377				
.850	-.129	.849	-.256			.935	-.240				
.875	-.155	.874	-.242			.972	-.101				
.900	-.162	.899	-.216			1.000	-.115				
.925	-.154	.924	-.193								
.950	-.155	.950	-.161								
.975	-.097	.974	-.097								
1.000	-.023	1.000	-.057								
LOWER SURFACE											
.020	.046	.022	.171	.028	.111	.017	.041	.025	-.159	.020	-.161
.040	.025	.041	.083	.077	-.102	.045	-.124	.066	-.167	.040	-.206
.060	.010	.074	-.015	.139	-.128	.055	-.144	.139	-.191	.060	-.263
.100	-.012	.101	-.072	.210	-.147	.070	-.137	.211	-.181	.140	-.244
.200	-.034	.207	-.224	.301	-.147	.152	-.210	.302	-.148	.196	-.209
.300	-.079	.301	-.150	.400	-.143	.220	-.159	.400	-.139	.253	-.180
.325	-.162	.326	-.144	.500	-.117	.269	-.152	.503	-.113	.306	-.146
.344	-.132	.350	-.164	.574	-.084	.315	-.137	.565	-.098	.388	-.134
.375	-.147	.376	-.168	.715	-.039	.383	-.148	.703	.057	.432	-.136
.400	-.151	.400	-.174	.788	.173	.411	-.146	.789	.178	.474	-.126
.429	-.196	.425	-.155	.860	.315	.439	-.148	.861	.237	.494	-.112
.450	-.169	.450	-.196	.924	.306	.479	-.129	.933	.278	.559	-.086
.475	-.216	.475	-.207	.965	.301	.518	-.107	.975	.194	.637	-.008
.500	-.164	.500	-.179			.546	-.091			.679	.060
.525	-.185	.525	-.169			.570	-.064			.752	.143
.550	-.174	.550	-.119			.640	.023			.845	.188
.575	-.182	.576	-.131			.702	.083			.935	.251
.600	-.175	.600	-.156			.800	.172				
.625	-.154	.628	-.101			.857	.187				
.650	-.116	.650	-.017			.919	.229				
.675	-.104	.675	.003			.959	.232				
.700	-.062	.700	.019								
.750	-.016	.750	.089								
.800	.106	.800	.148								
.850	.164	.849	.190								
.900	.200	.900	.232								
.950	.196	.949	.186								
CN =	.3110		.2920		.3460		.3150		.2750		.2040
CM =	.0192		-.0600		-.0940		-.1060		-.1100		-.0940

TABLE 5. - Continued.

M = .783 Q =13.94 ALPHA = 3.39 CNWP = .2964 DA = .6 RN =6.98

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.014	0.000	.071	.026	-1.097	0.000	.397	.024	-.420	0.000	.512
.020	-.154	.022	-.726	.076	-.927	.017	-.738	.064	-.387	.018	-.341
.040	-.205	.041	-.789	.138	-.492	.032	-.842	.136	-.359	.038	-.365
.060	-.229	.074	-.693	.211	-.405	.051	-.571	.208	-.328	.058	-.402
.100	-.270	.109	-.716	.300	-.356	.070	-.520	.298	-.276	.139	-.322
.200	-.371	.201	-.423	.400	-.328	.148	-.421	.398	-.260	.195	-.285
.300	-.310	.301	-.422	.499	-.278	.219	-.369	.499	-.261	.297	-.226
.400	-.279	.401	-.314	.573	-.279	.268	-.341	.564	-.274	.386	-.211
.500	-.196	.501	-.257	.686	-.328	.314	-.308	.676	-.387	.452	-.199
.525	-.170	.526	-.221	.787	-.328	.383	-.298	.786	-.350	.504	-.220
.550	-.175	.551	-.221	.859	-.308	.440	-.292	.858	-.376	.556	-.223
.575	-.182	.576	-.221	.924	-.227	.498	-.285	.907	0.000	.647	-.245
.600	-.173	.600	-.279	.965	-.111	.538	-.276	.957	-.194	.696	-.254
.625	0.000	.629	-.250	1.000	-.120	.570	-.285	1.000	-.119	.746	-.276
.650	-.134	.650	-.257			.615	-.291			.797	-.294
.669	-.120	.675	-.243			.648	-.335			.852	-.311
.688	-.110	.699	-.244			.667	-.356			.896	-.297
.719	-.111	.726	-.261			.701	-.378			.946	-.207
.750	-.106	.750	-.249			.777	0.000			1.000	-.064
.775	-.111	.775	-.240			.816	-.385				
.800	-.112	.800	-.247			.856	-.356				
.825	-.116	.824	-.252			.896	-.356				
.850	-.124	.849	-.229			.935	-.225				
.875	-.144	.874	-.213			.972	-.072				
.900	-.152	.899	-.189			1.000	-.089				
.925	-.141	.924	-.163								
.950	-.144	.950	-.130								
.975	-.086	.974	-.065								
1.000	-.012	1.000	-.027								
					LOWER SURFACE						
.020	.080	.022	.256	.028	.229	.017	.173	.025	-.027	.020	-.038
.040	.064	.041	.172	.077	.011	.045	-.006	.066	-.069	.040	-.114
.060	.051	.074	.085	.139	-.037	.055	-.039	.139	-.122	.060	-.161
.100	.028	.101	.030	.210	-.068	.070	-.042	.211	-.127	.140	-.189
.200	.013	.207	-.123	.301	-.080	.152	-.131	.302	-.105	.196	-.167
.300	-.025	.301	-.077	.400	-.084	.220	-.097	.400	-.099	.253	-.143
.325	-.097	.326	-.071	.500	-.065	.269	-.093	.503	-.077	.306	-.110
.344	-.073	.350	-.097	.574	-.041	.315	-.082	.565	-.065	.388	-.106
.375	-.096	.376	-.102	.715	-.006	.383	-.099	.703	.087	.432	-.114
.400	-.098	.400	-.109	.788	.205	.411	-.106	.789	.211	.474	-.102
.429	-.147	.425	-.090	.860	.352	.439	-.102	.861	.276	.494	-.095
.450	-.125	.450	-.133	.924	.331	.479	-.088	.933	.297	.559	-.073
.475	-.164	.475	-.145	.965	.327	.518	-.067	.975	.217	.637	-.001
.500	-.119	.500	-.119			.546	-.053			.679	.071
.525	-.131	.525	-.113			.570	-.032			.752	.153
.550	-.128	.550	-.062			.640	.053			.845	.201
.575	-.133	.576	-.075			.702	.107			.935	.262
.600	-.114	.600	-.100			.800	.200				
.625	-.087	.628	-.052			.857	.217				
.650	-.054	.650	.030			.919	.260				
.675	-.051	.675	.049			.959	.260				
.700	0.000	.700	.060								
.750	.039	.750	.131								
.800	.164	.800	.195								
.850	.229	.849	.235								
.900	.266	.900	.270								
.950	.257	.949	.226								
CN =	.4030		.3720		.4350		.3720		.3230		.2440
CM =	.0120		-.0610		-.0860		-.1036		-.1088		-.0912

TABLE 5. - Continued.

M = .796 Q = 9.54 ALPHA = 4.14 CNWP = .3492 DA =1.1 RN =4.73

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.002	0.000	.006	.026	-1.311	0.000	.320	.024	-.636	0.000	.451
.020	-.188	.022	-.880	.076	-1.290	.017	-1.162	.064	-.445	.018	-.707
.040	-.239	.041	-.970	.138	-.523	.032	-1.265	.136	-.441	.038	-.545
.060	-.263	.074	-.768	.211	-.443	.051	-.902	.208	-.398	.058	-.654
.100	-.302	.109	-.701	.300	-.399	.070	-.679	.298	-.328	.139	-.398
.200	-.403	.201	-.471	.400	-.368	.148	-.481	.398	-.301	.195	-.345
.300	-.341	.301	-.473	.499	-.315	.219	-.428	.499	-.294	.297	-.255
.400	-.309	.401	-.348	.573	-.309	.268	-.395	.564	-.303	.386	-.227
.500	-.219	.501	-.276	.686	-.355	.314	-.353	.676	-.424	.452	-.215
.525	-.196	.526	-.240	.787	-.344	.383	-.343	.786	-.350	.504	-.227
.550	-.199	.551	-.244	.859	-.311	.440	-.328	.858	-.369	.556	-.225
.575	-.211	.576	-.248	.924	-.218	.498	-.311	.907	0.000	.647	-.242
.600	-.199	.600	-.306	.965	-.099	.538	-.315	.957	.188	.696	-.253
.625	0.000	.629	-.264	1.000	-.109	.570	-.313	1.000	-.117	.746	-.276
.650	-.159	.650	-.274			.615	-.326			.797	-.299
.669	-.144	.675	-.250			.648	-.366			.852	-.316
.688	-.134	.699	-.261			.667	-.395			.896	-.298
.719	-.136	.726	-.278			.701	-.420			.946	-.195
.750	-.131	.750	-.275			.777	0.000			1.000	-.052
.775	-.132	.775	-.265			.816	-.410				
.800	-.131	.800	-.267			.856	-.367				
.825	-.137	.824	-.271			.896	-.367				
.850	-.143	.849	-.246			.935	-.220				
.875	-.163	.874	-.227			.972	.090				
.900	-.169	.899	-.201			1.000	-.102				
.925	-.159	.924	-.168								
.950	-.159	.950	-.137								
.975	-.097	.974	-.073								
1.000	-.019	1.000	-.037								
					LOWER SURFACE						
.020	.088	.022	.298	.028	.279	.017	.277	.025	.109	.020	.136
.040	.080	.041	.216	.077	.057	.045	.073	.066	.024	.040	.020
.060	.068	.074	.121	.139	-.003	.055	.038	.139	-.052	.060	-.045
.100	.042	.101	.062	.210	-.037	.070	.027	.211	-.070	.140	-.116
.200	.026	.207	-.099	.301	-.055	.152	-.083	.302	-.059	.196	-.110
.300	-.012	.301	-.065	.400	-.064	.220	-.057	.400	-.064	.253	-.101
.325	-.098	.326	-.059	.500	-.047	.269	-.059	.503	-.052	.306	-.081
.344	-.071	.350	-.083	.574	-.027	.315	-.053	.565	-.042	.388	-.082
.375	-.086	.376	-.094	.715	.005	.383	-.074	.703	.101	.432	-.090
.400	-.090	.400	-.100	.788	.212	.411	-.082	.789	.214	.474	-.080
.429	-.140	.425	-.086	.860	.355	.439	-.077	.861	.276	.494	-.070
.450	-.110	.450	-.126	.924	.334	.479	-.070	.933	.299	.559	-.051
.475	-.155	.475	-.140	.965	.330	.518	-.053	.975	.213	.637	.016
.500	-.107	.500	-.114			.546	-.041			.679	.079
.525	-.125	.525	-.109			.570	-.022			.752	.158
.550	-.117	.550	-.057			.640	.059			.845	.202
.575	-.122	.576	-.075			.702	.109			.935	.260
.600	-.118	.600	-.099			.800	.205				
.625	-.092	.628	-.053			.857	.237				
.650	-.057	.650	.028			.919	.285				
.675	-.054	.675	.048			.959	.281				
.700	-.005	.700	.058								
.750	.033	.750	.127								
.800	.161	.800	.186								
.850	.224	.849	.225								
.900	.260	.900	.260								
.950	.251	.949	.214								
CN =	.4440		.4150		.5140		.4580		.3960		.3220
CM =	.0264		-.0604		-.0850		-.1050		-.1080		-.0830

TABLE 5. - Continued.

M = .788 Q = 9.39 ALPHA = 4.57 CNWP = .3714 DA =1.5 RN =4.68

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.002	0.000	-.003	.026	-1.388	0.000	.275	.024	-.852	0.000	.413
.020	-.197	.022	-.928	.076	-1.371	.017	-1.267	.064	-.520	.018	-.834
.040	-.246	.041	-1.009	.138	-.557	.032	-1.346	.136	-.474	.038	-.573
.060	-.268	.074	-.806	.211	-.443	.051	-1.210	.208	-.424	.058	-.694
.100	-.308	.109	-.717	.300	-.401	.070	-.623	.298	-.346	.139	-.435
.200	-.407	.201	-.485	.400	-.367	.148	-.496	.398	-.319	.195	-.369
.300	-.346	.301	-.476	.499	-.313	.219	-.447	.499	-.303	.297	-.279
.400	-.314	.401	-.348	.573	-.315	.268	-.411	.564	-.316	.386	-.243
.500	-.227	.501	-.278	.686	-.349	.314	-.369	.676	-.421	.452	-.224
.525	-.204	.526	-.243	.787	-.349	.383	-.345	.786	-.345	.504	-.237
.550	-.209	.551	-.243	.859	-.308	.440	-.337	.858	-.367	.556	-.239
.575	-.214	.576	-.243	.924	-.208	.498	-.326	.907	0.000	.647	-.252
.600	-.206	.600	-.295	.965	-.090	.538	-.318	.957	-.200	.696	-.260
.625	0.000	.629	-.265	1.000	-.099	.570	-.324	1.000	-.087	.746	-.285
.650	-.165	.650	-.274			.615	-.337			.797	-.297
.669	-.149	.675	-.256			.648	-.377			.852	-.317
.688	-.138	.699	-.263			.667	-.401			.896	-.291
.719	-.140	.726	-.274			.701	-.427			.946	-.191
.750	-.133	.750	-.267			.777	0.000			1.000	-.054
.775	-.133	.775	-.253			.816	-.411				
.800	-.138	.800	-.256			.856	-.357				
.825	-.140	.824	-.260			.896	-.357				
.850	-.146	.849	-.234			.935	-.200				
.875	-.161	.874	-.213			.972	-.085				
.900	-.165	.899	-.184			1.000	-.093				
.925	-.156	.924	-.154								
.950	-.151	.950	-.121								
.975	-.096	.974	-.059								
1.000	-.027	1.000	-.029								

LOWER SURFACE

.020	.092	.022	.318	.028	.306	.017	.307	.025	.163	.020	.180
.040	.081	.041	.244	.077	.080	.045	.114	.066	.062	.040	.081
.060	.075	.074	.146	.139	.018	.055	.079	.139	-.026	.060	.008
.100	.049	.101	.084	.210	-.018	.070	.058	.211	-.040	.140	-.079
.200	.033	.207	-.075	.301	-.041	.152	-.057	.302	-.039	.196	-.079
.300	-.013	.301	-.042	.400	-.050	.220	-.036	.400	-.047	.253	-.074
.325	-.089	.326	-.039	.500	-.037	.269	-.038	.503	-.038	.306	-.055
.344	-.071	.350	-.064	.574	-.019	.315	-.032	.565	-.029	.388	-.062
.375	-.073	.376	-.070	.715	.017	.383	-.057	.703	.113	.432	-.079
.400	-.082	.400	-.082	.788	.223	.411	-.063	.789	.220	.474	-.076
.429	-.128	.425	-.062	.860	.363	.439	-.060	.861	.280	.494	-.070
.450	-.099	.450	-.104	.924	.338	.479	-.050	.933	.306	.559	-.052
.475	-.144	.475	-.119	.965	.332	.518	-.032	.975	.219	.637	.013
.500	-.089	.500	-.093			.546	-.020			.679	.079
.525	-.109	.525	-.088			.570	-.000			.752	.155
.550	-.105	.550	-.037			.640	.084			.845	.195
.575	-.111	.576	-.052			.702	.132			.935	.260
.600	-.098	.600	-.081			.800	.212				
.625	-.069	.628	-.033			.857	.225				
.650	-.032	.650	.046			.919	.267				
.675	-.036	.675	.061			.959	.264				
.700	.015	.700	.073								
.750	.050	.750	.138								
.800	.176	.800	.199								
.850	.237	.849	.238								
.900	.270	.900	.270								
.950	.261	.949	.226								

CN =	.4720	.4380	.5370	.4890	.4370	.3550
CM =	.0270	-.0610	-.0840	-.1040	-.1090	-.0820

TABLE 5. - Continued.

M = .782 Q = 9.12 ALPHA = 5.19 CNWP = .4315 DA =1.4 RN =4.57

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.030	0.000	-.157	.026	-1.586	0.000	.149	.024	-1.341	0.000	.259
.020	-.254	.022	-1.101	.076	-1.529	.017	-1.509	.064	-.776	.018	-1.400
.040	-.296	.041	-1.344	.138	-.982	.032	-1.599	.136	-.634	.038	-1.183
.060	-.324	.074	-1.222	.211	-.636	.051	-1.531	.208	-.507	.058	-.628
.100	-.361	.109	-.880	.300	-.455	.070	-1.476	.298	-.418	.139	-.555
.200	-.453	.201	-.579	.400	-.414	.148	-.575	.398	-.385	.195	-.462
.300	-.391	.301	-.549	.499	-.368	.219	-.506	.499	-.362	.297	-.340
.400	-.356	.401	-.402	.573	-.363	.268	-.473	.564	-.364	.386	-.292
.500	-.258	.501	-.332	.686	-.394	.314	-.440	.676	-.464	.452	-.269
.525	-.243	.526	-.299	.787	-.374	.383	-.418	.786	-.373	.504	-.283
.550	-.246	.551	-.292	.859	-.331	.440	-.396	.858	-.384	.556	-.279
.575	-.256	.576	-.292	.924	-.236	.498	-.385	.907	0.000	.647	-.294
.600	-.246	.600	-.344	.965	-.112	.538	-.374	.957	-.223	.696	-.295
.625	0.000	.629	-.310	1.000	-.129	.570	-.374	1.000	-.112	.746	-.317
.650	-.207	.650	-.310			.615	-.379			.797	-.331
.669	-.189	.675	-.299			.648	-.418			.852	-.347
.688	-.178	.699	-.299			.667	-.438			.896	-.327
.719	-.175	.726	-.307			.701	-.459			.946	-.219
.750	-.170	.750	-.309			.777	0.000			1.000	-.091
.775	-.173	.775	-.295			.816	-.425				
.800	-.173	.800	-.296			.856	-.372				
.825	-.172	.824	-.296			.896	-.372				
.850	-.174	.849	-.270			.935	-.217				
.875	-.195	.874	-.246			.972	-.130				
.900	-.198	.899	-.216			1.000	-.119				
.925	-.185	.924	-.187								
.950	-.186	.950	-.151								
.975	-.121	.974	-.093								
1.000	-.041	1.000	-.069								
					LOWER SURFACE						
.020	.089	.022	.333	.028	.341	.017	.345	.025	.243	.020	.252
.040	.086	.041	.265	.077	.116	.045	.165	.066	.111	.040	.144
.060	.077	.074	.163	.139	.042	.055	.126	.139	.015	.060	.074
.100	.051	.101	.098	.210	-.003	.070	.102	.211	-.017	.140	-.048
.200	.032	.207	-.063	.301	-.033	.152	-.029	.302	-.027	.196	-.059
.300	-.015	.301	-.045	.400	-.049	.220	-.018	.400	-.042	.253	-.065
.325	-.088	.326	-.041	.500	-.040	.269	-.025	.503	-.040	.306	-.056
.344	-.055	.350	-.066	.574	-.028	.315	-.025	.565	-.038	.388	-.072
.375	-.074	.376	-.074	.715	-.001	.383	-.047	.703	.091	.432	-.085
.400	-.077	.400	-.084	.788	.212	.411	-.056	.789	.197	.474	-.081
.429	-.129	.425	-.069	.860	.350	.439	-.058	.861	.257	.494	-.073
.450	-.099	.450	-.112	.924	.321	.479	-.050	.933	.277	.559	-.065
.475	-.145	.475	-.124	.965	.316	.518	-.035	.975	.187	.637	-.003
.500	-.094	.500	-.103			.546	-.025			.679	.060
.525	-.112	.525	-.101			.570	-.006			.752	.123
.550	-.100	.550	-.056			.640	.074			.845	.157
.575	-.109	.576	-.072			.702	.120			.935	.220
.600	-.107	.600	-.095			.800	.192				
.625	-.085	.628	-.049			.857	.209				
.650	-.049	.650	.029			.919	.248				
.675	-.047	.675	.044			.959	.241				
.700	-.002	.700	.051								
.750	.030	.750	.117								
.800	.157	.800	.174								
.850	.220	.849	.215								
.900	.254	.900	.247								
.950	.236	.949	.194								
CN =	.5340		.5130		.6290		.5810		.5240		.3620
CM =	.0450		-.0558		-.8180		-.9810		-.1020		-.0840

TABLE 5. - Continued.

M = .784 Q = 9.06 ALPHA = 5.58 CNWP = .4389 DA =1.6 RN =4.53

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.029	0.000	-.176	.026	-1.577	0.000	.137	.024	-1.356	0.000	.260
.020	-.248	.022	-1.124	.076	-1.238	.017	-1.495	.064	-1.114	.018	-1.394
.040	-.292	.041	-1.362	.138	-.985	.032	-1.594	.136	-.595	.038	-1.205
.060	-.315	.074	-1.280	.211	-.722	.051	-1.530	.208	-.488	.058	-.653
.100	-.351	.109	-.954	.300	-.463	.070	-1.462	.298	-.404	.139	-.536
.200	-.441	.201	-.590	.400	-.399	.148	-.568	.398	-.362	.195	-.435
.300	-.376	.301	-.532	.499	-.348	.219	-.487	.499	-.343	.297	-.313
.400	-.346	.401	-.393	.573	-.344	.268	-.454	.564	-.340	.386	-.274
.500	-.259	.501	-.312	.686	-.377	.314	-.419	.676	-.433	.452	-.251
.525	-.233	.526	-.279	.787	-.359	.383	-.394	.786	-.351	.504	-.260
.550	-.237	.551	-.279	.859	-.308	.440	-.377	.858	-.362	.556	-.260
.575	-.242	.576	-.279	.924	-.215	.498	-.366	.907	0.000	.647	-.274
.600	-.233	.600	-.323	.965	-.096	.538	-.355	.957	-.214	.695	-.277
.625	0.000	.629	-.298	1.000	-.199	.570	-.355	1.000	-.104	.746	-.295
.650	-.189	.650	-.297			.615	-.366			.797	-.322
.669	-.186	.675	-.279			.648	-.399			.852	-.337
.688	-.175	.699	-.279			.667	-.421			.895	-.313
.719	-.170	.726	-.290			.701	-.443			.946	-.210
.750	-.164	.750	-.284			.777	0.000			1.000	-.076
.775	-.164	.775	-.272			.816	-.410				
.800	-.165	.800	-.270			.856	-.351				
.825	-.166	.824	-.268			.896	-.351				
.850	-.170	.849	-.239			.935	-.199				
.875	-.186	.874	-.220			.972	-.117				
.900	-.192	.899	-.189			1.000	-.106				
.925	-.179	.924	-.161								
.950	-.177	.950	-.121								
.975	-.116	.974	-.065								
1.000	-.040	1.000	-.042								

LOWER SURFACE

.020	.096	.022	.346	.028	.358	.017	.367	.025	.279	.020	.290
.040	.095	.041	.288	.077	.140	.045	.178	.066	.138	.040	.166
.060	.087	.074	.193	.139	.064	.055	.136	.139	.033	.060	.085
.100	.064	.101	.132	.210	.018	.070	.112	.211	.006	.140	-.029
.200	.048	.207	-.026	.301	-.012	.152	-.016	.302	-.008	.196	-.043
.300	-.003	.301	-.014	.400	-.028	.220	-.005	.400	-.021	.253	-.052
.325	-.073	.326	-.014	.500	-.024	.269	-.014	.503	-.024	.306	-.046
.344	-.048	.350	-.034	.574	-.012	.315	-.011	.565	-.016	.388	-.059
.375	-.058	.376	-.046	.715	.017	.383	-.034	.703	.109	.432	-.073
.400	-.063	.400	-.057	.788	.221	.411	-.044	.789	.211	.474	-.071
.429	-.110	.425	-.042	.860	.358	.439	-.043	.861	.266	.494	-.066
.450	-.079	.450	-.085	.924	.331	.479	-.036	.933	.290	.559	-.057
.475	-.128	.475	-.097	.965	.324	.518	-.021	.975	.200	.637	-.002
.500	-.077	.500	-.077			.546	-.008			.679	.065
.525	-.093	.525	-.073			.570	.011			.752	.133
.550	-.086	.550	-.026			.640	.090			.845	.175
.575	-.090	.576	-.043			.702	.135			.935	.238
.600	-.078	.600	-.069			.800	.207				
.625	-.050	.628	-.026			.857	.222				
.650	-.022	.650	.049			.919	.260				
.675	-.023	.675	.064			.959	.253				
.700	.026	.700	.074								
.750	.055	.750	.137								
.800	.178	.800	.196								
.850	.241	.849	.237								
.900	.270	.900	.266								
.950	.257	.949	.217								

CN =	.5610	.5370	.6200	.5790	.5520	.3590
CM =	.0435	-.0517	-.0830	-.0970	-.0960	-.0830

TABLE 5. - Continued.

M = .807 Q = 9.81 ALPHA = 5.80 CNWP = .4724 DA =1.3 RN =4.81

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.024	0.000	-.182	.026	-1.509	0.000	.163	.024	-1.329	0.000	.242
.020	-.255	.022	-1.165	.076	-1.552	.017	-1.433	.064	-1.367	.018	-1.371
.040	-.298	.041	-1.353	.138	-1.056	.032	-1.532	.136	-.520	.038	-1.307
.060	-.325	.074	-1.329	.211	-.962	.051	-1.494	.208	-.480	.058	-1.258
.100	-.358	.109	-1.182	.300	-.617	.070	-1.441	.298	-.409	.139	-.482
.200	-.465	.201	-.693	.400	-.396	.148	-.855	.398	-.377	.195	-.442
.300	-.389	.301	-.607	.499	-.327	.219	-.548	.499	-.360	.297	-.325
.400	-.354	.401	-.405	.573	-.327	.268	-.455	.564	-.357	.386	-.282
.500	-.272	.501	-.322	.686	-.362	.314	-.415	.676	-.462	.452	-.260
.525	-.248	.526	-.287	.787	-.348	.383	-.394	.786	-.364	.504	-.272
.550	-.255	.551	-.285	.859	-.309	.440	-.382	.858	-.366	.556	-.270
.575	-.265	.576	-.285	.924	-.220	.498	-.364	.907	0.000	.647	-.278
.600	-.258	.600	-.336	.965	-.085	.538	-.355	.957	-.195	.696	-.283
.625	0.000	.629	-.305	1.000	-.122	.570	-.355	1.000	-.135	.746	-.307
.650	-.214	.650	-.305			.615	-.360			.797	-.325
.669	-.199	.675	-.288			.648	-.396			.852	-.340
.688	-.188	.699	-.292			.667	-.417			.896	-.311
.719	-.187	.726	-.305			.701	-.431			.946	-.198
.750	-.175	.750	-.309			.777	0.000			1.000	-.072
.775	-.178	.775	-.295			.816	-.408				
.800	-.176	.800	-.290			.856	-.361				
.825	-.179	.824	-.288			.896	-.361				
.850	-.180	.849	-.260			.935	-.228				
.875	-.195	.874	-.237			.972	-.111				
.900	-.204	.899	-.205			1.000	-.116				
.925	-.190	.924	-.172								
.950	-.181	.950	-.135								
.975	-.116	.974	-.080								
1.000	-.036	1.000	-.057								

LOWER SURFACE

.020	.107	.022	.359	.028	.372	.017	.383	.025	.277	.020	.296
.040	.107	.041	.300	.077	.153	.045	.190	.066	.146	.040	.173
.060	.098	.074	.192	.139	.079	.055	.152	.139	.044	.060	.100
.100	.075	.101	.130	.210	.028	.070	.127	.211	.007	.140	-.021
.200	.054	.207	-.035	.301	-.001	.152	-.008	.302	-.007	.196	-.039
.300	.008	.301	-.021	.400	-.020	.220	.004	.400	-.019	.253	-.046
.325	-.061	.326	-.020	.500	-.014	.269	-.005	.503	-.024	.306	-.041
.344	-.034	.350	-.047	.574	-.004	.315	-.003	.565	-.020	.388	-.056
.375	-.052	.376	-.054	.715	.017	.383	-.031	.703	.106	.432	-.070
.400	-.056	.400	-.067	.788	.227	.411	-.040	.789	.213	.474	-.066
.429	-.104	.425	-.052	.860	.365	.439	-.043	.861	.271	.494	-.060
.450	-.077	.450	-.095	.924	.339	.479	-.037	.933	.290	.559	-.047
.475	-.121	.475	-.110	.965	.332	.518	-.025	.975	.202	.637	.010
.500	-.070	.500	-.088			.546	-.016			.679	.071
.525	-.087	.525	-.083			.570	.004			.752	.138
.550	-.081	.550	-.039			.640	.078			.845	.174
.575	-.087	.576	-.056			.702	.122			.935	.236
.600	-.095	.600	-.082			.800	.211				
.625	-.067	.628	-.039			.857	.242				
.650	-.034	.650	.038			.919	.292				
.675	-.037	.675	.054			.959	.286				
.700	.012	.700	.062								
.750	.044	.750	.126								
.800	.172	.800	.185								
.850	.232	.849	.225								
.900	.266	.900	.254								
.950	.249	.949	.206								

CN =	.5760	.5690	.6870	.6120	.5760	.4490
CM =	.0446	-.0506	-.0780	-.0970	-.0950	-.0720

TABLE 5. - Continued.

M = .787 Q = 9.39 ALPHA = 6.52 CNWP = .5125 DA =1.7 RN =4.68

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.051	0.000	-.286	.026	-1.679	0.000	.045	.024	-1.529	0.000	.106
.020	-.304	.022	-1.364	.076	-1.193	.017	-1.630	.064	-1.561	.018	-1.572
.040	-.343	.041	-1.541	.138	-1.090	.032	-1.739	.136	-.722	.038	-1.554
.060	-.361	.074	-1.592	.211	-.981	.051	-1.722	.208	-.518	.058	-1.582
.100	-.395	.109	-1.191	.300	-.761	.070	-1.518	.298	-.436	.139	-.519
.200	-.489	.201	-.751	.400	-.568	.148	-.960	.398	-.402	.195	-.451
.300	-.413	.301	-.647	.499	-.443	.219	-.713	.499	-.379	.297	-.348
.400	-.380	.401	-.440	.573	-.409	.268	-.609	.564	-.379	.386	-.302
.500	-.295	.501	-.350	.686	-.394	.314	-.511	.676	-.462	.452	-.282
.525	-.272	.526	-.318	.787	-.343	.383	-.452	.786	-.369	.504	-.294
.550	-.277	.551	-.318	.859	-.295	.440	-.428	.858	-.354	.556	-.286
.575	-.290	.576	-.316	.924	-.213	.498	-.413	.907	0.000	.647	-.297
.600	-.278	.600	-.372	.965	-.098	.538	-.390	.957	-.210	.696	-.305
.625	0.000	.629	-.331	1.000	-.154	.570	-.388	1.000	-.159	.746	-.317
.650	-.237	.650	-.329			.615	-.392			.797	-.341
.669	-.220	.675	-.309			.648	-.405			.852	-.351
.688	-.209	.699	-.308			.667	-.414			.896	-.325
.719	-.209	.726	-.318			.701	-.419			.946	-.221
.750	-.196	.750	-.315			.777	0.000			1.000	-.098
.775	-.198	.775	-.300			.816	-.376				
.800	-.198	.800	-.296			.856	-.317				
.825	-.197	.824	-.290			.896	-.317				
.850	-.200	.849	-.257			.935	-.207				
.875	-.218	.874	-.233			.972	-.159				
.900	-.218	.899	-.199			1.000	-.141				
.925	-.201	.924	-.168								
.950	-.200	.950	-.128								
.975	-.131	.974	-.078								
1.000	-.049	1.000	-.069								
					LOWER SURFACE						
.020	.103	.022	.366	.028	.392	.017	.403	.025	.328	.020	.343
.040	.112	.041	.317	.077	.186	.045	.233	.066	.187	.040	.223
.060	.106	.074	.217	.139	.098	.055	.192	.139	.066	.060	.145
.100	.082	.101	.157	.210	.043	.070	.165	.211	.025	.140	.007
.200	.064	.207	0.000	.301	.008	.152	.024	.302	.009	.196	-.018
.300	.010	.301	.007	.400	-.013	.220	.023	.400	-.015	.253	-.033
.325	-.060	.326	.005	.500	-.011	.269	.012	.503	-.021	.306	-.035
.344	-.028	.350	-.022	.574	-.004	.315	.009	.565	-.020	.388	-.055
.375	-.048	.376	-.032	.715	.015	.383	-.020	.703	.104	.432	-.071
.400	-.049	.400	-.046	.788	.230	.411	-.029	.789	.204	.474	-.070
.429	-.100	.425	-.032	.860	.361	.439	-.030	.861	.256	.494	-.063
.450	-.071	.450	-.077	.924	.324	.479	-.026	.933	.276	.559	-.054
.475	-.123	.475	-.093	.965	.316	.518	-.013	.975	.187	.637	-.001
.500	-.071	.500	-.074			.546	-.005			.679	.060
.525	-.082	.525	-.074			.570	.012			.752	.125
.550	-.074	.550	-.032			.640	.091			.845	.153
.575	-.085	.576	-.046			.702	.130			.935	.217
.600	-.080	.600	-.077			.800	.195				
.625	-.039	.628	-.029			.857	.212				
.650	-.023	.650	.046			.919	.253				
.675	-.029	.675	.061			.959	.243				
.700	.020	.700	.067								
.750	.049	.750	.128								
.800	.179	.800	.187								
.850	.237	.849	.225								
.900	.268	.900	.256								
.950	.253	.949	.203								
CN =	.6430		.6290		.7200		.6690		.6270		.5020
CM =	.0250		-.0510		-.0890		-.0880		-.0890		-.0650

TABLE 5. - Continued.

M = .791 Q = 9.64 ALPHA = 6.76 CNWP = .5167 DA =1.4 RN =4.76

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.045	0.000	-.290	.026	-1.659	0.000	.072	.024	-1.507	0.000	.147
.020	-.303	.022	-1.398	.076	-1.180	.017	-1.582	.064	-1.561	.018	-1.528
.040	-.342	.041	-1.556	.138	-1.050	.032	-1.694	.136	-.781	.038	-1.510
.060	-.368	.074	-1.627	.211	-.944	.051	-1.676	.208	-.491	.058	-1.539
.100	-.398	.109	-1.278	.300	-.777	.070	-1.632	.298	-.420	.139	-.469
.200	-.497	.201	-.751	.400	-.608	.148	-1.021	.398	-.387	.195	-.426
.300	-.419	.301	-.643	.499	-.468	.219	-.740	.499	-.362	.297	-.340
.400	-.385	.401	-.425	.573	-.414	.268	-.550	.564	-.362	.386	-.290
.500	-.300	.501	-.338	.686	-.383	.314	-.445	.676	-.437	.452	-.267
.525	-.280	.526	-.301	.787	-.329	.383	-.404	.786	-.352	.504	-.277
.550	-.285	.551	-.301	.859	-.286	.440	-.383	.858	-.353	.556	-.277
.575	-.297	.576	-.301	.924	-.207	.498	-.362	.907	0.000	.647	-.285
.600	-.288	.600	-.359	.965	-.093	.538	-.356	.957	-.193	.696	-.285
.625	0.000	.629	-.322	1.000	-.142	.570	-.339	1.000	-.159	.746	-.309
.650	-.242	.650	-.322			.615	-.341			.797	-.330
.669	-.226	.675	-.301			.648	-.368			.852	-.338
.688	-.213	.699	-.301			.667	-.379			.896	-.313
.719	-.212	.726	-.311			.701	-.389			.946	-.212
.750	-.199	.750	-.300			.777	0.000			1.000	-.090
.775	-.198	.775	-.283			.816	-.339				
.800	-.196	.800	-.279			.856	-.324				
.825	-.195	.824	-.273			.896	-.324				
.850	-.196	.849	-.241			.935	-.208				
.875	-.210	.874	-.212			.972	-.126				
.900	-.217	.899	-.180			1.000	-.123				
.925	-.198	.924	-.145								
.950	-.195	.950	-.109								
.975	-.126	.974	-.063								
1.000	-.047	1.000	-.052								
					LOWER SURFACE						
.020	.111	.022	.376	.028	.412	.017	.423	.025	.343	.020	.356
.040	.121	.041	.336	.077	.199	.045	.248	.066	.196	.040	.231
.060	.113	.074	.236	.139	.115	.055	.209	.139	.082	.060	.160
.100	.088	.101	.176	.210	.062	.070	.180	.211	.037	.140	.018
.200	.069	.207	.010	.301	.024	.152	.038	.302	.020	.196	-.008
.300	.023	.301	.019	.400	.002	.220	.040	.400	-.005	.253	-.024
.325	-.048	.326	.017	.500	.001	.269	.027	.503	-.007	.306	-.020
.344	-.021	.350	-.009	.574	.005	.315	.024	.565	-.007	.388	-.041
.375	-.037	.376	-.022	.715	.024	.383	-.008	.703	.110	.432	-.060
.400	-.037	.400	-.029	.788	.234	.411	-.018	.789	.216	.474	-.058
.429	-.086	.425	-.018	.860	.369	.439	-.022	.861	.271	.494	-.052
.450	-.060	.450	-.062	.924	.339	.479	-.019	.933	.290	.559	-.043
.475	-.114	.475	-.078	.965	.328	.518	-.009	.975	.200	.637	.009
.500	-.055	.500	-.056			.546	-.003			.679	.068
.525	-.068	.525	-.057			.570	.014			.752	.130
.550	-.064	.550	-.013			.640	.081			.845	.163
.575	-.070	.576	-.028			.702	.121			.935	.225
.600	-.066	.600	-.055			.800	.203				
.625	-.039	.628	-.014			.857	.237				
.650	-.007	.650	.061			.919	.288				
.675	-.014	.675	.073			.959	.279				
.700	.036	.700	.080								
.750	.064	.750	.141								
.800	.191	.800	.199								
.850	.252	.849	.236								
.900	.281	.900	.266								
.950	.264	.949	.212								
CN =	.6600		.6380		.7290		.6620		.6260		.4950
CM =	.0490		-.0440		-.0910		-.0830		-.0870		-.0650

TABLE 5. - Continued.

M = .810 Q = 9.87 ALPHA = 7.74 CNWP = .5873 DA =1.4 RN =4.83

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.064	0.000	-.366	.026	-1.643	0.000	.024	.024	-1.520	0.000	.065
.020	-.350	.022	-1.504	.076	-1.210	.017	-1.564	.064	-1.592	.018	-1.541
.040	-.382	.041	-1.641	.138	-1.041	.032	-1.670	.136	-1.042	.038	-1.545
.060	-.406	.074	-1.714	.211	-.996	.051	-1.670	.208	-.772	.058	-1.595
.100	-.434	.109	-1.318	.300	-.901	.070	-1.635	.298	-.489	.139	-1.425
.200	-.547	.201	-1.215	.400	-.817	.148	-1.108	.398	-.414	.195	-.664
.300	-.447	.301	-.864	.499	-.699	.219	-.762	.499	-.376	.297	-.275
.400	-.423	.401	-.550	.573	-.648	.268	-.558	.564	-.378	.386	-.271
.500	-.334	.501	-.350	.686	-.548	.314	-.418	.676	-.392	.452	-.259
.525	-.310	.526	-.311	.787	-.400	.383	-.412	.786	-.311	.504	-.276
.550	-.315	.551	-.311	.859	-.344	.440	-.381	.858	-.269	.556	-.274
.575	-.336	.576	-.307	.924	-.249	.498	-.343	.907	0.000	.647	-.286
.600	-.329	.600	-.358	.965	-.101	.538	-.332	.957	-.157	.696	-.289
.625	0.000	.629	-.316	1.000	-.211	.570	-.326	1.000	-.187	.746	-.312
.650	-.288	.650	-.319			.615	-.308			.797	-.331
.669	-.272	.675	-.299			.648	-.342			.852	-.335
.688	-.259	.699	-.299			.667	-.343			.896	-.314
.719	-.254	.726	-.309			.701	-.341			.946	-.227
.750	-.235	.750	-.300			.777	0.000			1.000	-.109
.775	-.231	.775	-.285			.816	-.308				
.800	-.229	.800	-.285			.856	-.265				
.825	-.222	.824	-.281			.896	-.265				
.850	-.223	.849	-.250			.935	-.247				
.875	-.232	.874	-.227			.972	-.231				
.900	-.234	.899	-.197			1.000	-.224				
.925	-.216	.924	-.196								
.950	-.208	.950	-.141								
.975	-.133	.974	-.087								
1.000	-.047	1.000	-.062								

LOWER SURFACE

.020	.128	.022	.395	.028	.448	.017	.454	.025	.365	.020	.393
.040	.145	.041	.364	.077	.246	.045	.284	.066	.226	.040	.275
.060	.145	.074	.278	.139	.157	.055	.247	.139	.102	.060	.192
.100	.120	.101	.220	.210	.098	.070	.216	.211	.053	.140	.043
.200	.100	.207	.054	.301	.055	.152	.067	.302	.031	.196	.014
.300	.047	.301	.051	.400	.025	.220	.058	.400	-.001	.253	-.010
.325	-.015	.326	.048	.500	.018	.269	.038	.503	-.007	.306	-.015
.344	.012	.350	.023	.574	.017	.315	.032	.565	-.008	.388	-.040
.375	-.003	.376	.010	.715	.023	.383	-.004	.703	.105	.432	-.062
.400	-.008	.400	-.001	.788	.236	.411	-.018	.789	.209	.474	-.059
.429	-.059	.425	.009	.860	.370	.439	-.023	.861	.267	.494	-.056
.450	-.030	.450	-.036	.924	.327	.479	-.024	.933	.283	.559	-.050
.475	-.083	.475	-.053	.965	.315	.518	-.017	.975	.182	.637	.006
.500	-.031	.500	-.037			.546	-.012			.679	.063
.525	-.040	.525	-.038			.570	0.000			.752	.128
.550	-.038	.550	.008			.640	.065			.845	.160
.575	-.043	.576	-.010			.702	.103			.935	.222
.600	-.043	.600	-.040			.800	.181				
.625	-.016	.628	0.000			.857	.220				
.650	-.014	.650	.075			.919	.273				
.675	.006	.675	.086			.959	.252				
.700	.056	.700	.093								
.750	.082	.750	.152								
.800	.207	.800	.210								
.850	.266	.849	.246								
.900	.294	.900	.274								
.950	.273	.949	.221								

CN =	.7570		.7560		.8570		.6590		.6720		.5530
CM =	.0630		-.0490		-.1210		-.0720		-.0730		-.0560

TABLE 5. - Continued.

M = .880 Q = 9.19 ALPHA = 2.41 CNWP = .2627 DA =1.3 PN =5.09

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.009	0.000	.178	.026	-.735	0.000	.471	.024	-.305	0.000	.529
.020	-.131	.022	-.526	.076	-.893	.017	-.532	.064	-.361	.018	-.217
.040	-.179	.041	-.681	.138	-.548	.032	-.655	.136	-.373	.038	-.276
.060	-.205	.074	-.674	.211	-.298	.051	-.633	.208	-.334	.058	-.416
.100	-.256	.109	-.613	.300	-.349	.070	-.547	.298	-.325	.139	-.305
.200	-.395	.201	-.461	.400	-.328	.148	-.331	.398	-.278	.195	-.373
.300	-.305	.301	-.400	.499	-.336	.219	-.384	.499	-.305	.297	-.250
.400	-.301	.401	-.385	.573	-.259	.268	-.317	.564	-.314	.386	-.227
.500	-.190	.501	-.228	.686	-.338	.314	-.296	.676	-.485	.452	-.213
.525	-.163	.526	-.201	.787	-.384	.383	-.317	.786	-.373	.504	-.244
.550	-.174	.551	-.201	.859	-.324	.440	-.302	.858	-.356	.556	-.247
.575	-.192	.576	-.207	.924	-.214	.498	-.254	.907	0.000	.647	-.296
.600	-.179	.600	-.277	.965	-.093	.538	-.263	.957	-.213	.696	-.276
.625	0.000	.629	-.268	1.000	-.127	.570	-.265	1.000	-.098	.746	-.287
.650	-.145	.650	-.273			.615	-.282			.797	-.306
.659	-.128	.675	-.256			.648	-.340			.852	-.338
.688	-.118	.699	-.266			.667	-.395			.896	-.293
.719	-.125	.726	-.298			.701	-.512			.946	-.175
.750	-.118	.750	-.288			.777	0.000			1.000	-.052
.775	-.125	.775	-.277			.816	-.462				
.800	-.126	.800	-.284			.856	-.382				
.825	-.137	.824	-.289			.896	-.382				
.850	-.149	.849	-.263			.935	-.199				
.875	-.177	.874	-.235			.972	-.105				
.900	-.189	.899	-.204			1.000	-.103				
.925	-.181	.924	-.174								
.950	-.186	.950	-.135								
.975	-.110	.974	-.067								
1.000	-.019	1.000	-.031								
					LOWER SURFACE						
.020	.043	.022	.191	.028	.114	.017	.041	.025	-.152	.020	-.170
.040	.018	.041	.102	.077	-.100	.045	-.131	.066	-.159	.040	-.250
.060	.006	.074	.009	.139	-.129	.055	-.163	.139	-.186	.060	-.260
.100	-.018	.101	-.053	.210	-.148	.070	-.146	.211	-.186	.140	-.263
.200	-.028	.207	-.219	.301	-.148	.152	-.206	.302	-.145	.196	-.227
.300	-.075	.301	-.143	.400	-.141	.220	-.168	.400	-.139	.253	-.189
.325	-.173	.326	-.139	.500	-.107	.269	-.155	.503	-.111	.306	-.145
.344	-.137	.350	-.162	.574	-.064	.315	-.135	.565	-.096	.388	-.140
.375	-.142	.376	-.169	.715	-.025	.383	-.156	.703	.080	.432	-.148
.400	-.161	.400	-.171	.788	.194	.411	-.160	.789	.203	.474	-.131
.429	-.202	.425	-.150	.860	.342	.439	-.155	.861	.266	.494	-.116
.450	-.178	.450	-.198	.924	.314	.479	-.133	.933	.305	.559	-.095
.475	-.208	.475	-.206	.965	.314	.518	-.103	.975	.219	.637	-.003
.500	-.165	.500	-.175			.546	-.087			.679	.072
.525	-.185	.525	-.162			.570	-.056			.752	.156
.550	-.185	.550	-.096			.640	.048			.845	.205
.575	-.185	.576	-.117			.702	.108			.935	.268
.600	-.168	.600	-.141			.800	.187				
.625	-.140	.628	-.081			.857	.195				
.650	-.108	.650	.003			.919	.243				
.675	-.096	.675	.024			.959	.248				
.700	-.049	.700	.042								
.750	.004	.750	.112								
.800	.127	.800	.176								
.850	.197	.849	.216								
.900	.240	.900	.257								
.950	.243	.949	.219								
CN =	.3320		.3240		.3700		.3380		.3070		.2420
CM =	-.0043		-.0660		-.0910		-.1160		-.1180		-.0960

TABLE 5. - Continued..

M = .891 Q = 9.82 ALPHA = 2.62 CNWP = .2645 DA =1.4 RN =4.50

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.009	0.000	.174	.026	-.771	0.000	.476	.024	-.320	0.000	.527
.020	-.131	.022	-.542	.076	-.899	.017	-.523	.064	-.399	.018	-.197
.040	-.179	.041	-.688	.138	-.755	.032	-.646	.136	-.367	.038	-.254
.060	-.202	.074	-.705	.211	-.321	.051	-.595	.208	-.341	.058	-.394
.100	-.256	.109	-.546	.300	-.331	.070	-.593	.298	-.324	.139	-.296
.200	-.424	.201	-.444	.400	-.321	.148	-.285	.398	-.288	.195	-.371
.300	-.298	.301	-.371	.499	-.361	.219	-.384	.499	-.298	.297	-.286
.400	-.406	.401	-.405	.573	-.252	.268	-.372	.564	-.296	.386	-.215
.500	-.186	.501	-.231	.686	-.341	.314	-.301	.676	-.480	.452	-.203
.525	-.167	.526	-.194	.787	-.432	.383	-.319	.786	-.431	.504	-.246
.550	-.176	.551	-.198	.859	-.342	.440	-.310	.858	-.334	.556	-.239
.575	-.199	.576	-.204	.924	-.223	.498	-.310	.907	0.000	.647	-.316
.600	-.187	.600	-.276	.965	-.094	.538	-.279	.957	-.214	.696	-.265
.625	0.000	.629	-.271	1.000	-.136	.570	-.240	1.000	-.095	.746	-.278
.650	-.156	.650	-.287			.615	-.260			.797	-.302
.669	-.140	.675	-.254			.648	-.329			.852	-.363
.688	-.131	.699	-.263			.667	-.382			.896	-.287
.719	-.139	.726	-.312			.701	-.494			.946	-.175
.750	-.133	.750	-.321			.777	0.000			1.000	-.046
.775	-.136	.775	-.307			.816	-.542				
.800	-.140	.800	-.308			.856	-.439				
.825	-.144	.824	-.317			.896	-.439				
.850	-.155	.849	-.283			.935	-.208				
.875	-.185	.874	-.258			.972	-.119				
.900	-.201	.899	-.225			1.000	-.116				
.925	-.196	.924	-.190								
.950	-.193	.950	-.151								
.975	-.115	.974	-.082								
1.000	-.020	1.000	-.046								

LOWER SURFACE

.020	.039	.022	.189	.028	.114	.017	.026	.025	-.162	.020	-.197
.040	.017	.041	.105	.077	-.105	.045	-.145	.066	-.167	.040	-.234
.060	.002	.074	-.010	.139	-.134	.055	-.175	.139	-.202	.060	-.280
.100	-.024	.101	-.073	.210	-.152	.070	-.157	.211	-.196	.140	-.297
.200	-.032	.207	-.233	.301	-.153	.152	-.214	.302	-.154	.196	-.264
.300	-.076	.301	-.167	.400	-.149	.220	-.178	.400	-.145	.253	-.207
.325	-.182	.326	-.162	.500	-.115	.269	-.162	.503	-.120	.306	-.164
.344	-.144	.350	-.184	.574	-.071	.315	-.140	.565	-.112	.388	-.274
.375	-.156	.376	-.192	.715	-.032	.383	-.154	.703	.071	.432	-.149
.400	-.162	.400	-.189	.788	.186	.411	-.172	.789	.187	.474	-.153
.429	-.201	.425	-.169	.860	.339	.439	-.166	.861	.252	.494	-.135
.450	-.183	.450	-.220	.924	.311	.479	-.146	.933	.294	.559	-.118
.475	-.224	.475	-.233	.965	.310	.518	-.117	.975	.210	.637	-.082
.500	-.174	.500	-.196			.546	-.100			.679	-.001
.525	-.196	.525	-.178			.570	-.072			.752	.077
.550	-.194	.550	-.112			.640	.031			.845	.156
.575	-.198	.576	-.138			.702	.087			.935	.203
.600	-.187	.600	-.160			.800	.181				
.625	-.163	.628	-.098			.857	.199				
.650	-.126	.650	-.013			.919	.258				
.675	-.109	.675	.013			.959	.264				
.700	-.062	.700	.028								
.750	-.010	.750	.101								
.800	.119	.800	.163								
.850	.180	.849	.204								
.900	.224	.900	.243								
.950	.219	.949	.204								

CN =	.3680		.3150		.3830		.3376		.3048		.2350
CM =	.0014		-.0670		-.0916		-.1203		-.1168		-.0987

TABLE 5. - Continued.

M = .898 Q = 9.59 ALPHA = 3.29 CNWP = .3307 DA =1.6 RN =5.23

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.004	0.000	.131	.026	-.876	0.000	.403	.024	-.590	0.000	.493
.020	-.158	.022	-.616	.076	-.939	.017	-.790	.064	-.653	.018	-.491
.040	-.205	.041	-.718	.138	-.956	.032	-.924	.136	-.428	.038	-.408
.060	-.224	.074	-.825	.211	-.552	.051	-.855	.208	-.444	.058	-.570
.100	-.276	.109	-.754	.300	-.386	.070	-.845	.298	-.348	.139	-.389
.200	-.453	.201	-.493	.400	-.301	.148	-.398	.398	-.330	.195	-.416
.300	-.264	.301	-.493	.499	-.303	.219	-.316	.499	-.311	.297	-.378
.400	-.464	.401	-.433	.573	-.285	.268	-.319	.564	-.343	.386	-.329
.500	-.186	.501	-.347	.686	-.346	.314	-.316	.676	-.479	.452	-.193
.525	-.169	.526	-.295	.787	-.442	.383	-.357	.786	-.537	.504	-.219
.550	-.189	.551	-.263	.859	-.381	.440	-.367	.858	-.315	.556	-.221
.575	-.231	.576	-.240	.924	-.223	.498	-.367	.907	0.000	.647	-.301
.600	-.225	.600	-.293	.965	-.092	.538	-.352	.957	-.202	.696	-.319
.625	0.000	.629	-.285	1.000	-.134	.570	-.375	1.000	-.113	.746	-.373
.650	-.172	.650	-.316			.615	-.365			.797	-.259
.669	-.161	.675	-.296			.648	-.409			.852	-.364
.688	-.151	.699	-.305			.667	-.440			.896	-.284
.719	-.159	.726	-.335			.701	-.537			.946	-.172
.750	-.158	.750	-.309			.777	0.000			1.000	-.050
.775	-.165	.775	-.294			.816	-.461				
.800	-.168	.800	-.282			.856	-.439				
.825	-.170	.824	-.282			.896	-.439				
.850	-.179	.849	-.261			.935	-.197				
.875	-.207	.874	-.233			.972	-.125				
.900	-.222	.899	-.203			1.000	-.116				
.925	-.213	.924	-.167								
.950	-.208	.950	-.128								
.975	-.127	.974	-.065								
1.000	-.030	1.000	-.033								
					LOWER SURFACE						
.020	.053	.022	.235	.028	.172	.017	.149	.025	-.031	.020	-.005
.040	.036	.041	.154	.077	-.049	.045	-.035	.066	-.075	.040	-.082
.060	.023	.074	.060	.139	-.087	.055	-.069	.139	-.137	.060	-.145
.100	-.004	.101	-.005	.210	-.115	.070	-.069	.211	-.145	.140	-.211
.200	-.015	.207	-.176	.301	-.121	.152	-.150	.302	-.117	.196	-.187
.300	-.066	.301	-.115	.400	-.121	.220	-.123	.400	-.117	.253	-.164
.325	-.166	.326	-.112	.500	-.093	.269	-.112	.503	-.100	.306	-.136
.344	-.122	.350	-.136	.574	-.053	.315	-.098	.565	-.090	.388	-.131
.375	-.131	.376	-.147	.715	-.020	.383	-.123	.703	.083	.432	-.145
.400	-.145	.400	-.148	.788	.199	.411	-.134	.789	.195	.474	-.132
.429	-.188	.425	-.127	.860	.352	.439	-.129	.861	.256	.494	-.117
.450	-.169	.450	-.177	.924	.320	.479	-.109	.933	.298	.559	-.093
.475	-.196	.475	-.191	.965	.316	.518	-.083	.975	.212	.637	-.007
.500	-.150	.500	-.158			.546	-.068			.679	.067
.525	-.170	.525	-.143			.570	-.040			.752	.147
.550	-.172	.550	-.075			.640	.063			.845	.190
.575	-.167	.576	-.101			.702	.118			.935	.250
.600	-.157	.600	-.125			.800	.190				
.625	-.129	.628	-.068			.857	.199				
.650	-.095	.650	.013			.919	.242				
.675	-.084	.675	.037			.959	.248				
.700	-.034	.700	.050								
.750	.011	.750	.124								
.800	.142	.800	.181								
.850	.211	.849	.220								
.900	.254	.900	.259								
.950	.252	.949	.219								
CN =	.4190		.4000		.4530		.4280		.4060		.3150
CM =	-.0010		-.0690		-.0930		-.1210		-.1180		-.0910

TABLE 5. - Continued.

M = .891 Q = 9.46 ALPHA = 3.50 CNWP = .3612 DA =1.3 RN =4.34

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.001	0.000	.089	.026	-.982	0.000	.360	.024	-.706	0.000	.467
.020	-.171	.022	-.671	.076	-1.070	.017	-.881	.064	-.823	.018	-.709
.040	-.217	.041	-.783	.138	-1.039	.032	-1.013	.136	-.465	.038	-.442
.060	-.240	.074	-.882	.211	-.852	.051	-.963	.208	-.493	.058	-.657
.100	-.289	.109	-.805	.300	-.463	.070	-.955	.298	-.367	.139	-.466
.200	-.465	.201	-.557	.400	-.324	.148	-.728	.398	-.369	.195	-.499
.300	-.306	.301	-.493	.499	-.316	.219	-.344	.499	-.350	.297	-.400
.400	-.475	.401	-.489	.573	-.271	.268	-.324	.564	-.376	.386	-.207
.500	-.203	.501	-.364	.686	-.357	.314	-.314	.676	-.491	.452	-.201
.525	-.188	.526	-.312	.787	-.428	.383	-.355	.786	-.394	.504	-.243
.550	-.205	.551	-.272	.859	-.372	.440	-.374	.858	-.314	.556	-.245
.575	-.246	.576	-.253	.924	-.233	.498	-.387	.907	0.000	.647	-.319
.600	-.240	.600	-.308	.965	-.101	.538	-.365	.957	-.210	.696	-.299
.625	0.000	.629	-.303	1.000	-.135	.570	-.387	1.000	-.110	.746	-.293
.650	-.192	.650	-.324			.615	-.365			.797	-.322
.669	-.178	.675	-.304			.648	-.378			.852	-.372
.688	-.168	.699	-.303			.667	-.406			.896	-.296
.719	-.177	.726	-.315			.701	-.494			.946	-.174
.750	-.175	.750	-.324			.777	0.000			1.000	-.053
.775	-.183	.775	-.309			.816	-.513				
.800	-.185	.800	-.301			.856	-.455				
.825	-.199	.824	-.308			.896	-.455				
.850	-.195	.849	-.280			.935	-.209				
.875	-.221	.874	-.249			.972	-.128				
.900	-.235	.899	-.217			1.000	-.121				
.925	-.226	.924	-.184								
.950	-.216	.950	-.146								
.975	-.132	.974	-.082								
1.000	-.037	1.000	-.053								

LOWER SURFACE

.020	.062	.022	.263	.028	.202	.017	.202	.025	.053	.020	.049
.040	.046	.041	.180	.077	-.012	.045	-.002	.066	-.021	.040	-.029
.060	.034	.074	.079	.139	-.060	.055	-.036	.139	-.098	.060	-.096
.100	.006	.101	0.000	.210	-.092	.070	-.039	.211	-.115	.140	-.176
.200	-.009	.207	-.171	.301	-.104	.152	-.136	.302	-.098	.196	-.166
.300	-.059	.301	-.119	.400	-.109	.220	-.111	.400	-.096	.253	-.155
.325	-.148	.326	-.114	.500	-.085	.269	-.107	.503	-.091	.306	-.133
.344	-.109	.350	-.138	.574	-.051	.315	-.095	.565	-.083	.388	-.128
.375	-.122	.376	-.148	.715	-.022	.383	-.120	.703	.077	.432	-.136
.400	-.131	.400	-.149	.788	.196	.411	-.127	.789	.190	.474	-.120
.429	-.176	.425	-.132	.860	.346	.439	-.123	.861	.251	.494	-.109
.450	-.153	.450	-.177	.924	.318	.479	-.106	.933	.281	.559	-.082
.475	-.190	.475	-.196	.965	.310	.518	-.082	.975	.200	.637	-.005
.500	-.140	.500	-.162			.546	-.065			.679	.068
.525	-.163	.525	-.150			.570	-.041			.752	.138
.550	-.160	.550	-.089			.640	.058			.845	.181
.575	-.166	.576	-.117			.702	.108			.935	.240
.600	-.162	.600	-.139			.800	.187				
.625	-.135	.628	-.082			.857	.196				
.650	-.101	.650	.002			.919	.240				
.675	-.089	.675	.025			.959	.243				
.700	-.044	.700	.036								
.750	.003	.750	.106								
.800	.132	.800	.166								
.850	.203	.849	.207								
.900	.245	.900	.244								
.950	.242	.949	.204								

CN =	.4500	.4210	.5242	.4774	.4398	.3376
CM =	.0096	-.0644	-.8769	-.1148	-.1073	-.8413

TABLE 5. - Continued.

M = .891 Q = 9.43 ALPHA = 4.03 CNWP = .3752 DA =1.4 RN =4.33

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.006	0.000	.093	.026	-.985	0.000	.366	.024	-.711	0.000	.439
.020	-.173	.022	-.667	.076	-1.066	.017	-.908	.064	-.833	.018	-.806
.040	-.218	.041	-.782	.138	-1.036	.032	-1.034	.136	-.423	.038	-.612
.060	-.240	.074	-.881	.211	-.927	.051	-.992	.208	-.485	.058	-.735
.100	-.293	.109	-.786	.300	-.460	.070	-.975	.298	-.336	.139	-.486
.200	-.466	.201	-.555	.400	-.307	.148	-.972	.398	-.371	.195	-.513
.300	-.280	.301	-.489	.499	-.338	.219	-.414	.499	-.345	.297	-.398
.400	-.466	.401	-.487	.573	-.254	.268	-.298	.564	-.374	.386	-.205
.500	-.206	.501	-.380	.686	-.327	.314	-.273	.676	-.493	.452	-.197
.525	-.187	.526	-.319	.787	-.425	.383	-.319	.786	-.382	.504	-.234
.550	-.206	.551	-.288	.859	-.348	.440	-.348	.858	-.308	.556	-.246
.575	-.243	.576	-.268	.924	-.219	.498	-.359	.907	0.000	.647	-.314
.600	-.244	.600	-.312	.965	-.092	.538	-.354	.957	-.191	.696	-.296
.625	0.000	.629	-.300	1.000	-.127	.570	-.350	1.000	-.115	.746	-.293
.650	-.191	.650	-.319			.615	-.319			.797	-.314
.669	-.177	.675	-.299			.648	-.361			.852	-.361
.688	-.167	.699	-.305			.667	-.399			.896	-.291
.719	-.173	.726	-.317			.701	-.499			.946	-.167
.750	-.172	.750	-.312			.777	0.000			1.000	-.046
.775	-.176	.775	-.290			.816	-.530				
.800	-.180	.800	-.293			.856	-.457				
.825	-.183	.824	-.301			.896	-.457				
.850	-.189	.849	-.269			.935	-.218				
.875	-.213	.874	-.239			.972	-.127				
.900	-.226	.899	-.206			1.000	-.122				
.925	-.211	.924	-.169								
.950	-.203	.950	-.131								
.975	-.123	.974	-.071								
1.000	-.027	1.000	-.043								
					LOWER SURFACE						
.020	.074	.022	.272	.028	.219	.017	.213	.025	.057	.020	.088
.040	.059	.041	.189	.077	.001	.045	.026	.066	-.010	.040	.004
.060	.048	.074	.092	.139	-.047	.055	-.009	.139	-.094	.060	-.063
.100	.019	.101	.030	.210	-.078	.070	-.015	.211	-.102	.140	-.154
.200	.007	.207	-.142	.301	-.091	.152	-.118	.302	-.085	.196	-.147
.300	-.045	.301	-.095	.400	-.095	.220	-.093	.400	-.086	.253	-.138
.325	-.124	.326	-.092	.500	-.075	.269	-.089	.503	-.080	.306	-.116
.344	-.100	.350	-.114	.574	-.040	.315	-.080	.565	-.070	.388	-.117
.375	-.115	.376	-.126	.715	-.012	.383	-.105	.703	.087	.432	-.126
.400	-.121	.400	-.126	.788	.203	.411	-.116	.789	.199	.474	-.113
.429	-.166	.425	-.109	.860	.354	.439	-.112	.861	.253	.494	-.097
.450	-.142	.450	-.157	.924	.325	.479	-.098	.933	.289	.559	-.075
.475	-.188	.475	-.172	.965	.322	.518	-.077	.975	.207	.637	0.000
.500	-.134	.500	-.145			.546	-.064			.679	.071
.525	-.154	.525	-.130			.570	-.039			.752	.144
.550	-.154	.550	-.072			.640	.054			.845	.187
.575	-.156	.576	-.097			.702	.103			.935	.245
.600	-.150	.600	-.122			.800	.195				
.625	-.122	.628	-.069			.857	.218				
.650	-.088	.650	.014			.919	.275				
.675	-.077	.675	.034			.959	.275				
.700	-.031	.700	.050								
.750	.016	.750	.118								
.800	.145	.800	.176								
.850	.214	.849	.217								
.900	.258	.900	.252								
.950	.252	.949	.211								
CN =	.4930		.4410		.5333		.5079		.4427		.3532
CM =	.0285		-.0660		-.0806		-.1135		-.1071		-.0821

TABLE 5. - Continued.

M = .886 Q = 9.34 ALPHA = 4.26 CNWP = .3995 DA =1.4 RN =5.15

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.001	0.000	.045	.026	-1.041	0.000	.336	.024	-.818	0.000	.416
.020	-.184	.022	-.733	.076	-1.116	.017	-.981	.064	-.929	.018	-.917
.040	-.230	.041	-.748	.138	-1.063	.032	-1.076	.136	-.405	.038	-.732
.060	-.247	.074	-.899	.211	-1.009	.051	-1.052	.208	-.436	.058	-.865
.100	-.299	.109	-.844	.300	-.473	.070	-1.031	.298	-.373	.139	-.491
.200	-.462	.201	-.575	.400	-.296	.148	-1.009	.398	-.395	.195	-.567
.300	-.312	.301	-.510	.499	-.305	.219	-.507	.499	-.379	.297	-.412
.400	-.478	.401	-.489	.573	-.266	.268	-.370	.564	-.390	.386	-.202
.500	-.208	.501	-.378	.686	-.318	.314	-.296	.676	-.516	.452	-.206
.525	-.194	.526	-.318	.787	-.424	.383	-.318	.786	-.337	.504	-.246
.550	-.208	.551	-.288	.859	-.338	.440	-.336	.858	-.310	.556	-.255
.575	-.245	.576	-.264	.924	-.211	.498	-.359	.907	0.000	.647	-.326
.600	-.244	.600	-.318	.965	-.086	.538	-.349	.957	-.209	.696	-.326
.625	0.000	.629	-.307	1.000	-.121	.570	-.340	1.000	-.103	.746	-.268
.650	-.203	.650	-.326			.615	-.318			.797	-.313
.669	-.198	.675	-.307			.648	-.362			.852	-.368
.688	-.186	.699	-.298			.667	-.404			.896	-.294
.719	-.192	.726	-.307			.701	-.507			.946	-.170
.750	-.187	.750	-.302			.777	0.000			1.000	-.053
.775	-.194	.775	-.278			.816	-.509				
.800	-.197	.800	-.280			.856	-.433				
.825	-.196	.824	-.280			.896	-.433				
.850	-.203	.849	-.249			.935	-.201				
.875	-.225	.874	-.220			.972	-.116				
.900	-.232	.899	-.187			1.000	-.106				
.925	-.220	.924	-.153								
.950	-.207	.950	-.114								
.975	-.129	.974	-.057								
1.000	-.035	1.000	-.034								
					LOWER SURFACE						
.020	.076	.022	.294	.028	.250	.017	.243	.025	.112	.020	.135
.040	.062	.041	.213	.077	.028	.045	.055	.066	.032	.040	.042
.060	.053	.074	.122	.139	-.026	.055	.020	.139	-.053	.060	-.027
.100	.025	.101	.056	.210	-.062	.070	.011	.211	-.076	.140	-.124
.200	.012	.207	-.111	.301	-.078	.152	-.094	.302	-.065	.196	-.121
.300	-.039	.301	-.072	.400	-.084	.220	-.071	.400	-.073	.253	-.117
.325	-.131	.326	-.068	.500	-.061	.269	-.068	.503	-.065	.306	-.100
.344	-.094	.350	-.091	.574	-.031	.315	-.062	.565	-.057	.388	-.107
.375	-.103	.376	-.102	.715	-.004	.383	-.089	.703	.093	.432	-.120
.400	-.113	.400	-.110	.788	.214	.411	-.094	.789	.203	.474	-.109
.429	-.162	.425	-.088	.860	.363	.439	-.092	.861	.265	.494	-.099
.450	-.138	.450	-.138	.924	.333	.479	-.079	.933	.300	.559	-.081
.475	-.169	.475	-.151	.965	.327	.518	-.053	.975	.210	.637	-.007
.500	-.123	.500	-.122			.546	-.039			.679	.068
.525	-.139	.525	-.111			.570	-.013			.752	.140
.550	-.141	.550	-.053			.640	.082			.845	.187
.575	-.134	.576	-.075			.702	.133			.935	.249
.600	-.126	.600	-.103			.800	.205				
.625	-.097	.628	-.051			.857	.214				
.650	-.062	.650	.030			.919	.259				
.675	-.057	.675	.051			.959	.260				
.700	-.010	.700	.063								
.750	.028	.750	.132								
.800	.163	.800	.193								
.850	.229	.849	.231								
.900	.268	.900	.267								
.950	.268	.949	.224								
CN =	.5040		.4580		.5620		.5400		.4732		.3901
CM =	.0043		-.0680		-.0850		-.0113		-.1070		-.0791

TABLE 5. - Continued.

M = .893 Q = 9.47 ALPHA = 4.72 CNWP = .4788 DA =2.2 RN =5.18

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.015	0.000	-.018	.026	-1.085	0.000	.295	.024	-.944	0.000	.351
.020	-.233	.022	-.869	.076	-1.156	.017	-1.065	.064	-1.032	.018	-1.059
.040	-.269	.041	-1.076	.138	-1.114	.032	-1.156	.136	-.968	.038	-1.030
.060	-.288	.074	-1.173	.211	-1.072	.051	-1.131	.208	-.970	.058	-1.086
.100	-.343	.109	-.891	.300	-.973	.070	-1.129	.298	-.403	.139	-1.007
.200	-.507	.201	-.590	.400	-.533	.148	-1.112	.398	-.306	.195	-.988
.300	-.333	.301	-.611	.499	-.393	.219	-1.091	.499	-.329	.297	-.368
.400	-.488	.401	-.594	.573	-.257	.268	-1.072	.564	-.335	.386	-.141
.500	-.243	.501	-.485	.686	-.316	.314	-1.040	.676	-.509	.452	-.121
.525	-.219	.526	-.438	.787	-.323	.383	-.588	.786	-.441	.504	-.169
.550	-.229	.551	-.411	.859	-.304	.440	-.515	.858	-.340	.556	-.206
.575	-.264	.576	-.387	.924	-.207	.498	-.410	.907	0.000	.647	-.291
.600	-.270	.600	-.442	.965	-.080	.538	-.336	.957	-.208	.696	-.321
.625	0.000	.629	-.423	1.000	-.117	.570	-.297	1.000	-.134	.746	-.345
.650	-.243	.650	-.451			.615	-.280			.797	-.298
.669	-.243	.675	-.428			.648	-.316			.852	-.381
.688	-.203	.699	-.418			.667	-.344			.896	-.304
.719	-.209	.726	-.458			.701	-.386			.946	-.188
.750	-.211	.750	-.362			.777	0.000			1.000	-.073
.775	-.224	.775	-.314			.816	-.439				
.800	-.235	.800	-.277			.856	-.436				
.825	-.239	.824	-.264			.896	-.436				
.850	-.247	.849	-.235			.935	-.213				
.875	-.276	.874	-.204			.972	-.106				
.900	-.284	.899	-.176			1.000	-.106				
.925	-.263	.924	-.141								
.950	-.241	.950	-.106								
.975	-.147	.974	-.057								
1.000	-.049	1.000	-.041								
					LOWER SURFACE						
.020	.088	.022	.316	.028	.274	.017	.285	.025	.160	.020	.223
.040	.085	.041	.244	.077	.058	.045	.114	.066	.059	.040	.127
.060	.076	.074	.165	.139	-.003	.055	.077	.139	-.031	.060	.059
.100	.045	.101	.102	.210	-.040	.070	.062	.211	-.053	.140	-.064
.200	.025	.207	-.066	.301	-.061	.152	-.055	.302	-.050	.196	-.078
.300	-.032	.301	-.035	.400	-.069	.220	-.037	.400	-.061	.253	-.083
.325	-.116	.326	-.037	.500	-.052	.269	-.040	.503	-.057	.306	-.075
.344	-.076	.350	-.059	.574	-.025	.315	-.035	.565	-.047	.388	-.097
.375	-.089	.376	-.072	.715	.003	.383	-.063	.703	.102	.432	-.117
.400	-.100	.400	-.079	.788	.218	.411	-.069	.789	.207	.474	-.114
.429	-.149	.425	-.060	.860	.365	.439	-.067	.861	.266	.494	-.403
.450	-.123	.450	-.110	.924	.334	.479	-.055	.933	.296	.559	-.086
.475	-.155	.475	-.127	.965	.332	.518	-.035	.975	.208	.637	-.015
.500	-.111	.500	-.098			.546	-.027			.679	-.056
.525	.128	.525	-.089			.570	-.002			.752	.133
.550	-.128	.550	-.035			.640	.100			.845	.172
.575	-.128	.576	-.058			.702	.148			.935	.231
.600	-.116	.600	-.086			.800	.211				
.625	-.086	.628	-.038			.857	.218				
.650	-.054	.650	.045			.919	.263				
.675	-.051	.675	.062			.959	.266				
.700	.003	.700	.071								
.750	.038	.750	.135								
.800	.174	.800	.197								
.850	.242	.849	.235								
.900	.280	.900	.269								
.950	.270	.949	.223								
CN =	.5740		.5670		.6380		.6860		.5730		.4680
CM =	.0097		-.0780		-.0830		-.1060		-.1020		-.0650

TABLE 5. - Continued.

M = .893 Q = 9.45 ALPHA = 4.78 CNWP = .4297 DA =1.3 RN =4.33

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.001	0.000	.001	.026	-1.085	0.000	.327	.024	-.936	0.000	.391
.020	-.196	.022	-.839	.076	-1.157	.017	-1.009	.064	-1.030	.018	-.993
.040	-.235	.041	-1.030	.138	-1.104	.032	-1.102	.136	-.958	.038	-.912
.060	-.259	.074	-1.083	.211	-1.060	.051	-1.076	.208	-.567	.058	-.952
.100	-.318	.109	-.748	.300	-.787	.070	-1.061	.298	-.304	.139	-.879
.200	-.475	.201	-.600	.400	-.461	.148	-1.051	.398	-.342	.195	-.412
.300	-.275	.301	-.598	.499	-.293	.219	-1.040	.499	-.358	.297	-.403
.400	-.470	.401	-.568	.573	-.251	.268	-.634	.564	-.377	.386	-.219
.500	-.214	.501	0.000	.686	-.312	.314	-.525	.676	-.516	.452	-.181
.525	-.194	.526	-.417	.787	-.386	.383	-.406	.786	-.453	.504	-.227
.550	-.208	.551	-.369	.859	-.312	.440	-.257	.858	-.293	.556	-.233
.575	-.247	.576	-.338	.924	-.212	.498	-.221	.907	0.000	.647	-.311
.600	-.250	.600	-.385	.965	-.085	.538	-.240	.957	-.188	.696	-.314
.625	0.000	.629	-.373	1.000	-.120	.570	-.259	1.000	-.119	.746	-.285
.650	-.222	.650	-.385			.615	-.283			.797	-.323
.669	-.217	.675	-.357			.648	-.347			.852	-.378
.688	-.200	.699	-.341			.667	-.398			.896	-.295
.719	-.210	.726	-.384			.701	-.504			.946	-.179
.750	-.213	.750	-.344			.777	0.000			1.000	-.062
.775	-.220	.775	-.303			.816	-.512				
.800	-.231	.800	-.289			.856	-.445				
.825	-.232	.824	-.278			.896	-.445				
.850	-.241	.849	-.253			.935	-.235				
.875	-.268	.874	-.220			.972	-.109				
.900	-.275	.899	-.189			1.000	-.116				
.925	-.247	.924	-.155								
.950	-.229	.950	-.121								
.975	-.133	.974	-.071								
1.000	-.035	1.000	-.053								
					LOWER SURFACE						
.020	.089	.022	.316	.028	.276	.017	.265	.025	.160	.020	.186
.040	.078	.041	.242	.077	.056	.045	.083	.066	.061	.040	.085
.060	.068	.074	.130	.139	-.003	.055	.046	.139	-.027	.060	.019
.100	.038	.101	.067	.210	-.042	.070	.033	.211	-.053	.140	-.096
.200	.022	.207	-.106	.301	-.061	.152	-.081	.302	-.049	.196	-.103
.300	-.030	.301	-.071	.400	-.071	.220	-.060	.400	-.059	.253	-.103
.325	-.119	.326	-.067	.500	-.056	.269	-.061	.503	-.059	.306	-.088
.344	-.078	.350	-.091	.574	-.026	.315	-.053	.565	-.051	.388	-.101
.375	-.091	.376	-.102	.715	0.000	.383	-.081	.703	.097	.432	-.111
.400	-.103	.400	-.107	.788	.217	.411	-.088	.789	.203	.474	-.101
.429	-.143	.425	-.091	.860	.373	.439	-.084	.861	.262	.494	-.090
.450	-.124	.450	-.137	.924	.335	.479	-.074	.933	.292	.559	-.062
.475	-.164	.475	-.152	.965	.331	.518	-.055	.975	.208	.637	.005
.500	-.114	.500	-.128			.546	-.041			.679	.075
.525	-.130	.525	-.117			.570	-.018			.752	.141
.550	-.130	.550	-.063			.640	.072			.845	.179
.575	-.136	.576	-.085			.702	.117			.935	.237
.600	-.132	.600	-.114			.800	.207				
.625	-.106	.628	-.060			.857	.233				
.650	-.072	.650	.024			.919	.291				
.675	-.069	.675	.043			.959	.291				
.700	-.018	.700	.052								
.750	.024	.750	.120								
.800	.153	.800	.181								
.850	.221	.849	.221								
.900	.262	.900	.256								
.950	.254	.949	.208								
CN =	.5500		.4940		.6177		.5902		.5321		.3886
CM =	.0030		-.0670		-.0846		-.1093		-.1031		-.0753

TABLE 5. - Continued.

M = .890 Q = 9.38 ALPHA = 5.44 CNWP = .5001 DA =1.4 RN =5.15

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.015	0.000	-.061	.026	-1.146	0.000	.270	.024	-1.035	0.000	.325
.020	-.230	.022	-.948	.076	-1.215	.017	-1.103	.064	-1.114	.018	-1.094
.040	-.265	.041	-1.138	.138	-1.181	.032	-1.192	.136	-1.048	.038	-1.072
.060	-.285	.074	-1.230	.211	-1.131	.051	-1.163	.208	-1.037	.058	-1.118
.100	-.341	.109	-.991	.300	-1.075	.070	-1.152	.298	-.598	.139	-1.032
.200	-.504	.201	-.647	.400	-.619	.148	-1.131	.398	-.417	.195	-1.088
.300	-.295	.301	-.621	.499	-.420	.219	-1.110	.499	-.293	.297	-.312
.400	-.497	.401	-.613	.573	-.272	.268	-1.088	.564	-.313	.386	-.135
.500	-.235	.501	-.492	.686	-.302	.314	-.742	.676	-.481	.452	-.135
.525	-.213	.526	-.442	.787	-.312	.383	-.589	.786	-.332	.504	-.189
.550	-.226	.551	-.417	.859	-.302	.440	-.505	.858	-.339	.556	-.224
.575	-.260	.576	-.387	.924	-.201	.498	-.369	.907	0.000	.647	-.303
.600	-.262	.600	-.442	.965	-.076	.538	-.293	.957	-.199	.696	-.327
.625	0.000	.629	-.421	1.000	-.115	.570	-.265	1.000	-.133	.746	-.323
.650	-.243	.650	-.442			.515	-.272			.797	-.341
.669	-.235	.675	-.410			.648	-.324			.852	-.381
.688	-.230	.699	-.400			.667	-.358			.896	-.328
.719	-.239	.726	-.421			.701	-.399			.946	-.226
.750	-.242	.750	-.399			.777	0.000			1.000	-.079
.775	-.251	.775	-.342			.816	-.439				
.800	-.269	.800	-.285			.856	-.371				
.825	-.274	.824	-.263			.896	-.371				
.850	-.286	.849	-.229			.935	-.212				
.875	-.311	.874	-.200			.972	-.101				
.900	-.318	.899	-.169			1.000	-.100				
.925	-.287	.924	-.138								
.950	-.253	.950	-.105								
.975	-.152	.974	-.058								
1.000	-.055	1.000	-.041								

LOWER SURFACE

.020	.095	.022	.337	.028	.312	.017	.312	.025	.207	.020	.248
.040	.092	.041	.270	.077	.093	.045	.125	.066	.095	.040	.138
.060	.080	.074	.183	.139	.027	.055	.088	.139	0.000	.060	.067
.100	.052	.101	.119	.210	-.015	.070	.069	.211	-.031	.140	-.054
.200	.034	.207	-.053	.301	-.040	.152	-.049	.302	-.031	.196	-.071
.300	-.021	.301	-.025	.400	-.050	.220	-.033	.400	-.039	.253	-.078
.325	-.101	.326	-.028	.500	-.041	.269	-.038	.503	-.039	.306	-.072
.344	-.065	.350	-.051	.574	-.016	.315	-.031	.565	-.039	.348	-.088
.375	-.078	.376	-.061	.715	.005	.383	-.060	.703	.110	.432	-.112
.400	-.085	.400	-.071	.788	.219	.411	-.068	.789	.209	.474	-.107
.429	-.131	.425	-.055	.860	.367	.439	-.067	.861	.268	.494	-.095
.450	-.111	.450	-.102	.924	.339	.479	-.054	.933	.296	.559	-.081
.475	-.141	.475	-.116	.965	.333	.518	-.033	.975	.212	.637	-.011
.500	-.095	.500	-.092			.546	-.017			.679	.061
.525	-.113	.525	-.085			.570	.005			.752	.131
.550	-.113	.550	-.031			.640	.098			.845	.167
.575	-.113	.576	-.054			.702	.143			.935	.235
.600	-.099	.600	-.082			.800	.216				
.625	-.047	.628	-.031			.857	.221				
.650	-.040	.650	.048			.919	.266				
.675	-.038	.675	.066			.959	.266				
.700	.014	.700	.076								
.750	.049	.750	.141								
.800	.182	.800	.202								
.850	.247	.849	.240								
.900	.284	.900	.271								
.950	.273	.949	.227								

CN =	.6070	.6050	.6870	.6740	.6190	.4800
CM =	-.0010	-.0750	-.0820	-.1000	-.0930	-.0670

TABLE 5. - Continued.

M = .896 Q = 9.64 ALPHA = 5.47 CNWP = .5167 DA =1.3 RN =4.41

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.004	0.000	-.039	.026	-1.125	0.000	.310	.024	-1.006	0.000	.348
.020	-.224	.022	-.923	.076	-1.200	.017	-1.064	.064	-1.091	.018	-1.075
.040	-.257	.041	-1.113	.138	-1.169	.032	-1.155	.136	-1.034	.038	-1.047
.060	-.284	.074	-1.204	.211	-1.116	.051	-1.129	.208	-1.026	.058	-1.102
.100	-.339	.109	-1.188	.300	-1.068	.070	-1.127	.298	-.995	.139	-1.023
.200	-.499	.201	-.612	.400	-.664	.148	-1.108	.398	-.485	.195	-1.006
.300	-.410	.301	-.614	.499	-.488	.219	-1.104	.499	-.311	.297	-.965
.400	-.447	.401	-.591	.573	-.486	.268	-1.087	.564	-.283	.386	-.207
.500	-.232	.501	-.502	.686	-.259	.314	-1.058	.676	-.441	.452	-.069
.525	-.208	.526	-.466	.787	-.297	.383	-.995	.786	-.332	.504	-.082
.550	-.217	.551	-.427	.859	-.277	.440	-.587	.858	-.331	.556	-.121
.575	-.254	.576	-.402	.924	-.196	.498	-.503	.907	0.000	.647	-.257
.600	-.261	.600	-.458	.965	-.065	.538	-.323	.957	-.187	.696	-.269
.625	0.000	.629	-.427	1.000	-.105	.570	-.268	1.000	-.124	.746	-.298
.650	-.234	.650	-.467			.615	-.241			.797	-.333
.669	-.227	.675	-.438			.648	-.282			.852	-.386
.688	-.220	.699	-.432			.667	-.323			.896	-.320
.719	-.223	.726	-.477			.701	-.381			.945	-.206
.750	-.229	.750	-.472			.777	0.000			1.000	-.060
.775	-.244	.775	-.468			.816	-.447				
.800	-.259	.800	-.447			.856	-.407				
.825	-.268	.824	-.356			.896	-.407				
.850	-.283	.849	-.261			.935	-.232				
.875	-.323	.874	-.213			.972	-.093				
.900	-.344	.899	-.174			1.000	-.105				
.925	-.339	.924	-.140								
.950	-.297	.950	-.105								
.975	-.163	.974	-.063								
1.000	-.053	1.000	-.047								

LOWER SURFACE

.020	.104	.022	.341	.028	.317	.017	.307	.025	.204	.020	.245
.040	.100	.041	.274	.077	.091	.045	.121	.066	.099	.040	.148
.060	.088	.074	.170	.139	.026	.055	.082	.139	.003	.060	.073
.100	.060	.101	.103	.210	-.017	.070	.067	.211	-.025	.140	-.055
.200	.040	.207	-.072	.301	-.042	.152	-.052	.302	-.027	.196	-.067
.300	-.016	.301	-.040	.400	-.058	.220	-.035	.400	-.036	.253	-.078
.325	-.101	.326	-.042	.500	-.044	.269	-.039	.503	-.037	.306	-.070
.344	-.062	.350	-.069	.574	-.017	.315	-.033	.565	-.036	.388	-.088
.375	-.077	.376	-.081	.715	.033	.383	-.061	.703	.109	.432	-.104
.400	-.086	.400	-.084	.788	.224	.411	-.071	.789	.220	.474	-.095
.429	-.132	.425	-.067	.860	.378	.439	-.071	.861	.279	.494	-.084
.450	-.108	.450	-.121	.924	.349	.479	-.061	.933	.306	.559	.058
.475	-.150	.475	-.138	.965	.345	.518	-.041	.975	.223	.637	.011
.500	-.096	.500	-.110			.546	-.027			.679	.077
.525	-.112	.525	-.101			.570	-.006			.752	.143
.550	-.115	.550	-.046			.640	.083			.845	.177
.575	-.122	.576	-.068			.702	.126			.935	.242
.600	-.116	.600	-.096			.800	.219				
.625	-.089	.628	-.046			.857	.246				
.650	-.057	.650	.036			.919	.304				
.675	-.054	.675	.052			.959	.305				
.700	-.004	.700	.064								
.750	*****	.750	.129								
.800	.174	.800	.189								
.850	.241	.849	.226								
.900	.278	.900	.264								
.950	.264	.949	.218								

CN =	.6310		.6060		.7135		.7289		.6456		.5187
CM =	.0320		-.0800		-.0924		-.1124		-.0939		-.0664

TABLE 5. - Continued.

M = .883 Q = 9.15 ALPHA = 6.28 CNWP = .5941 DA =1.4 RN =5.11

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.031	0.000	-.150	.026	-1.258	0.000	.199	.024	-1.171	0.000	.225
.020	-.280	.022	-1.106	.076	-1.332	.017	-1.218	.064	-1.256	.018	-1.217
.040	-.314	.041	-1.273	.138	-1.323	.032	-1.317	.136	-1.188	.038	-1.226
.060	-.320	.074	-1.370	.211	-1.258	.051	-1.312	.208	-1.175	.058	-1.280
.100	-.378	.109	-1.322	.300	-1.214	.070	-1.280	.298	-1.148	.139	-1.200
.200	-.531	.201	-.999	.400	-.845	.148	-1.258	.398	-.674	.195	-1.186
.300	-.321	.301	-.734	.499	-.671	.219	-1.234	.499	-.600	.297	-.904
.400	-.516	.401	-.634	.573	-.515	.268	-1.214	.564	-.494	.386	-.400
.500	-.269	.501	-.548	.686	-.308	.314	-1.182	.676	-.327	.452	-.127
.525	-.244	.526	-.496	.787	-.258	.383	-.728	.786	-.239	.504	-.093
.550	-.254	.551	-.477	.859	-.219	.440	-.684	.858	-.216	.556	-.129
.575	-.283	.576	-.442	.924	-.154	.498	-.664	.907	0.000	.647	-.203
.600	-.294	.600	-.516	.965	-.041	.538	-.623	.957	-.141	.696	-.237
.625	0.000	.629	-.477	1.000	-.102	.570	-.579	1.000	-.150	.746	-.281
.650	-.266	.650	-.509			.615	-.504			.797	-.309
.669	-.266	.675	-.444			.648	-.454			.852	-.340
.688	-.257	.699	-.477			.567	-.436			.896	-.320
.719	-.266	.726	-.498			.701	-.379			.946	-.232
.750	-.269	.750	-.469			.777	0.000			1.000	-.096
.775	-.278	.775	-.403			.816	-.308				
.800	-.303	.800	-.311			.856	-.272				
.825	-.311	.824	-.274			.896	-.272				
.850	-.324	.849	-.231			.935	-.167				
.875	-.355	.874	-.202			.972	-.127				
.900	-.361	.899	-.173			1.000	-.105				
.925	-.324	.924	-.147								
.950	-.276	.950	-.117								
.975	-.171	.974	-.066								
1.000	-.068	1.000	-.044								
					LOWER SURFACE						
.020	.114	.022	.367	.028	.372	.017	.370	.025	.278	.020	.319
.040	.116	.041	.314	.077	.156	.045	.187	.066	.151	.040	.198
.060	.108	.074	.232	.139	.078	.055	.150	.139	.057	.060	.125
.100	.084	.101	.170	.210	.027	.070	.128	.211	.008	.140	-.013
.200	.060	.207	.001	.301	-.006	.152	-.004	.302	-.003	.196	-.038
.300	.003	.301	.013	.400	-.025	.220	.006	.400	-.024	.253	-.053
.325	-.073	.326	.011	.500	-.020	.269	-.005	.503	-.033	.306	-.051
.344	-.038	.350	-.016	.574	-.003	.315	-.001	.565	-.033	.388	-.079
.375	-.049	.376	-.028	.715	.010	.383	-.032	.703	.102	.432	-.102
.400	-.058	.400	-.038	.788	.277	.411	-.041	.789	.206	.474	-.103
.429	-.105	.425	-.023	.860	.378	.439	-.039	.861	.263	.494	-.099
.450	-.079	.450	-.071	.924	.346	.479	-.031	.933	.287	.559	-.088
.475	-.117	.475	-.088	.965	.343	.518	-.015	.975	.193	.637	-.017
.500	-.067	.500	-.066			.546	-.004			.679	.045
.525	-.081	.525	-.061			.570	.020			.752	.120
.550	-.082	.550	-.011			.640	.110			.845	.155
.575	-.081	.576	-.032			.702	.152			.935	.222
.600	-.076	.600	-.061			.800	.214				
.625	-.047	.628	-.017			.857	.224				
.650	-.013	.650	.061			.919	.265				
.675	-.016	.675	.076			.959	.264				
.700	.035	.700	.084								
.750	.066	.750	.146								
.800	.199	.800	.210								
.850	.261	.849	.246								
.900	.297	.900	.279								
.950	.280	.949	.233								
CN =	.6980		.7270		.8221		.8016		.7405		.5745
CM =	.0075		-.0770		-.8931		-.1041		-.8245		-.5339

TABLE 5. - Continued.

M = .946 Q = 9.57 ALPHA = 1.86 CNWP = .2212 DA =1.4 RN =4.23

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.014	0.000	.225	.026	-.437	0.000	.489	.024	-.157	0.000	.525
.020	-.103	.022	-.411	.076	-.707	.017	-.384	.064	-.271	.018	-.100
.040	-.141	.041	-.540	.138	-.489	.032	-.540	.136	-.323	.038	-.163
.060	-.181	.074	-.404	.211	-.416	.051	-.565	.208	-.311	.058	-.305
.100	-.210	.109	-.448	.300	-.384	.070	-.582	.298	-.280	.139	-.218
.200	-.388	.201	-.379	.400	-.281	.148	-.193	.398	-.256	.195	-.305
.300	-.415	.301	-.377	.499	-.289	.219	-.271	.499	-.224	.297	-.287
.400	-.435	.401	-.367	.573	-.357	.268	-.292	.564	-.266	.386	-.297
.500	-.304	.501	-.292	.686	-.380	.314	-.292	.676	-.406	.452	-.305
.525	-.180	.526	-.247	.787	-.512	.383	-.332	.786	-.560	.504	-.353
.550	-.103	.551	-.215	.859	-.316	.440	-.349	.858	-.557	.556	-.353
.575	-.094	.576	-.199	.924	-.230	.498	-.357	.907	0.000	.647	-.413
.600	-.085	.600	-.251	.965	-.081	.538	-.353	.957	-.240	.696	-.451
.625	0.000	.629	-.253	1.000	-.155	.570	-.359	1.000	-.342	.746	-.523
.650	-.068	.650	-.287			.615	-.332			.797	-.435
.669	-.061	.675	-.274			.648	-.374			.852	-.106
.688	-.059	.699	-.278			.667	-.405			.896	-.128
.719	-.072	.726	-.321			.701	-.489			.946	-.079
.750	-.084	.750	-.340			.777	0.000			1.000	-.003
.775	-.097	.775	-.344			.816	-.624				
.800	-.110	.800	-.382			.856	-.469				
.825	-.122	.824	-.423			.896	-.469				
.850	-.146	.849	-.437			.935	-.230				
.875	-.190	.874	-.468			.972	-.171				
.900	-.220	.899	-.437			1.000	-.159				
.925	-.249	.924	-.276								
.950	-.325	.950	-.171								
.975	-.250	.974	-.093								
1.000	-.064	1.000	-.072								

LOWER SURFACE

.020	.029	.022	.144	.028	.021	.017	-.084	.025	-.329	.020	-.321
.040	-.001	.041	.052	.077	-.222	.045	-.226	.066	-.366	.040	-.388
.060	-.013	.074	-.029	.139	-.251	.055	-.286	.139	-.253	.060	-.374
.100	-.044	.101	-.107	.210	-.205	.070	-.187	.211	-.265	.140	-.434
.200	-.055	.207	-.283	.301	-.220	.152	-.381	.302	-.257	.196	-.381
.300	-.102	.301	-.204	.400	-.191	.220	-.276	.400	-.167	.253	-.377
.325	-.253	.326	-.178	.500	-.187	.269	-.230	.503	-.151	.306	-.300
.344	-.225	.350	-.216	.574	-.069	.315	-.134	.565	-.188	.388	-.226
.375	-.197	.376	-.256	.715	-.052	.383	-.187	.703	.043	.432	-.247
.400	-.216	.400	-.265	.788	.181	.411	-.210	.789	.156	.474	-.157
.429	-.261	.425	-.173	.860	.330	.439	-.250	.861	.228	.494	-.129
.450	-.239	.450	-.253	.924	.293	.479	-.263	.933	.275	.559	-.089
.475	-.269	.475	-.299	.965	.298	.518	-.192	.975	.194	.637	.004
.500	-.209	.500	-.281			.546	-.138			.679	.082
.525	-.234	.525	-.231			.570	-.090			.752	.155
.550	-.246	.550	-.123			.640	.028			.845	.195
.575	-.269	.576	-.170			.702	.081			.935	.248
.600	-.252	.600	-.201			.800	.162				
.625	-.216	.628	-.118			.857	.174				
.650	-.173	.650	-.031			.919	.233				
.675	-.152	.675	-.002			.959	.248				
.700	-.104	.700	.019								
.750	-.045	.750	.089								
.800	.092	.800	.151								
.850	.166	.849	.193								
.900	.212	.900	.236								
.950	.215	.949	.202								

CN =	.2852		.2752		.3370		.2850		.2270		.1910
CM =	.0153		-.0835		-.1080		-.1300		-.1250		-.1030

TABLE 5. - Continued.

M = .943 Q = 9.82 ALPHA = 2.14 CNWP = .2511 DA =1.2 RN =4.35

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.014	0.000	.198	.026	-.503	0.000	.468	.024	-.311	0.000	.539
.020	-.121	.022	-.485	.076	-.758	.017	-.481	.064	-.340	.018	-.165
.040	-.158	.041	-.598	.138	-.708	.032	-.598	.136	-.321	.038	-.214
.060	-.194	.074	-.558	.211	-.465	.051	-.637	.208	-.357	.058	-.366
.100	-.227	.109	-.420	.300	-.465	.070	-.657	.298	-.305	.139	-.234
.200	-.404	.201	-.400	.400	-.332	.148	-.711	.398	-.294	.195	-.311
.300	-.426	.301	-.404	.499	-.310	.219	-.272	.499	-.248	.297	-.303
.400	-.443	.401	-.402	.573	-.326	.268	-.262	.564	-.248	.386	-.306
.500	-.171	.501	-.084	.686	-.414	.314	-.270	.676	-.416	.452	-.314
.525	-.089	.526	-.297	.787	-.524	.383	-.290	.786	-.560	.504	-.357
.550	-.088	.551	-.262	.859	-.260	.440	-.318	.858	-.525	.556	-.359
.575	-.113	.576	-.234	.924	-.187	.498	-.332	.907	0.000	.647	-.390
.600	-.120	.600	-.287	.965	-.069	.538	-.332	.957	-.221	.696	-.429
.625	0.000	.629	-.272	1.000	-.138	.570	-.346	1.000	-.206	.746	-.479
.650	-.112	.650	-.303			.615	-.312			.797	-.144
.669	-.106	.675	-.278			.648	-.303			.852	-.167
.688	-.100	.699	-.292			.667	-.337			.896	-.217
.719	-.110	.726	-.333			.701	-.444			.946	-.128
.750	-.117	.750	-.364			.777	0.000			1.000	-.023
.775	-.130	.775	-.375			.816	-.529				
.800	-.145	.800	-.408			.856	-.560				
.825	-.149	.824	-.447			.896	-.560				
.850	-.172	.849	-.460			.935	-.235				
.875	-.216	.874	-.487			.972	-.158				
.900	-.244	.899	-.407			1.000	-.150				
.925	-.272	.924	-.246								
.950	-.343	.950	-.157								
.975	-.246	.974	-.089								
1.000	-.065	1.000	-.069								
					LOWER SURFACE						
.020	.034	.022	.183	.028	.053	.017	-.027	.025	-.191	.020	-.236
.040	.012	.041	.093	.077	-.176	.045	-.182	.066	-.252	.040	-.324
.060	-.003	.074	-.013	.139	-.179	.055	-.233	.139	-.282	.060	-.343
.100	-.033	.101	-.084	.210	-.187	.070	-.192	.211	-.233	.140	-.416
.200	-.044	.207	-.279	.301	-.212	.152	-.331	.302	-.230	.196	-.261
.300	-.098	.301	-.190	.400	-.183	.220	-.192	.400	-.138	.253	-.318
.325	-.214	.326	-.186	.500	-.158	.269	-.203	.503	-.161	.306	-.208
.344	-.180	.350	-.217	.574	-.073	.315	-.137	.565	-.187	.388	-.192
.375	-.186	.376	-.245	.715	-.048	.383	-.185	.703	.053	.432	-.204
.400	-.203	.400	-.218	.788	.184	.411	-.212	.789	.168	.474	-.169
.429	-.244	.425	-.190	.860	.339	.439	-.243	.861	.239	.494	-.146
.450	-.215	.450	-.262	.924	.303	.479	-.179	.933	.283	.559	-.096
.475	-.249	.475	-.300	.965	.306	.518	-.127	.975	.198	.637	0.000
.500	-.199	.500	-.259			.546	-.108			.679	.078
.525	-.220	.525	-.204			.570	-.076			.752	.157
.550	-.222	.550	-.131			.640	.036			.845	.200
.575	-.222	.576	-.170			.702	.089			.935	.266
.600	-.224	.600	-.197			.800	.164				
.625	-.200	.628	-.124			.857	.168				
.650	-.162	.650	-.035			.919	.214				
.675	-.143	.675	-.007			.959	.228				
.700	-.095	.700	.012								
.750	-.036	.750	.085								
.800	.089	.800	.144								
.850	.152	.849	.187								
.900	.200	.900	.231								
.950	.202	.949	.195								
CN =	.3238		.2897		.3790		.3480		.2710		.2250
CM =	.0005		-.0810		-.1030		-.1190		-.1220		-.1030

TABLE 5. - Continued.

M = .946 Q = 9.30 ALPHA = 3.11 CNWP = .3122 DA =1.5 RN =4.11

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.013	0.000	.132	.026	-.712	0.000	.446	.024	-.528	0.000	.507
.020	-.127	.022	-.585	.076	-.820	.017	-.604	.064	-.674	.018	-.507
.040	-.173	.041	-.780	.138	-.820	.032	-.684	.136	-.647	.038	-.353
.060	-.205	.074	-.791	.211	-.532	.051	-.692	.208	-.288	.058	-.503
.100	-.235	.109	-.799	.300	-.500	.070	-.710	.298	-.302	.139	-.369
.200	-.406	.201	-.359	.400	-.405	.148	-.757	.398	-.304	.195	-.429
.300	-.428	.301	-.400	.499	-.345	.219	-.735	.499	-.193	.297	-.329
.400	-.445	.401	-.415	.573	-.388	.268	-.485	.564	-.257	.386	-.332
.500	-.252	.501	-.350	.686	-.435	.314	-.329	.676	-.417	.452	-.332
.525	-.123	.526	-.307	.787	-.566	.383	-.307	.786	-.563	.504	-.377
.550	-.095	.551	-.286	.859	-.346	.440	-.339	.858	-.623	.556	-.371
.575	-.110	.576	-.266	.924	-.152	.498	-.339	.907	0.000	.647	******
.600	-.114	.600	-.313	.965	-.080	.538	-.339	.957	-.250	.696	-.438
.625	0.000	.629	-.304	1.000	-.102	.570	-.349	1.000	-.321	.746	-.501
.650	-.110	.650	-.329			.615	-.329			.797	-.124
.669	-.101	.675	-.307			.648	-.371			.852	-.181
.688	-.098	.699	-.307			.667	-.403			.896	-.232
.719	-.114	.726	-.350			.701	-.487			.946	-.133
.750	-.116	.750	-.360			.777	0.000			1.000	-.019
.775	-.133	.775	-.371			.816	-.457				
.800	-.145	.800	-.400			.856	-.388				
.825	-.155	.824	-.442			.896	-.388				
.850	-.174	.849	-.455			.935	-.218				
.875	-.215	.874	-.477			.972	-.140				
.900	-.247	.899	-.400			1.000	-.122				
.925	-.273	.924	-.250								
.950	-.343	.950	-.160								
.975	-.250	.974	-.098								
1.000	-.073	1.000	-.082								
					LOWER SURFACE						
.020	.055	.022	.226	.028	.120	.017	.057	.025	-.093	.020	-.031
.040	.036	.041	.141	.077	-.099	.045	-.133	.066	-.124	.040	-.114
.060	.023	.074	.042	.139	-.132	.055	-.169	.139	-.156	.060	-.176
.100	-.006	.101	-.025	.210	-.149	.070	-.142	.211	-.168	.140	-.291
.200	-.019	.207	-.221	.301	-.151	.152	-.267	.302	-.120	.196	-.278
.300	-.076	.301	-.148	.400	-.161	.220	-.181	.400	-.118	.253	-.296
.325	-.214	.326	-.144	.500	-.138	.269	-.189	.503	-.120	.306	-.180
.344	-.143	.350	-.175	.574	-.063	.315	-.131	.565	-.108	.388	-.174
.375	-.161	.376	-.191	.715	-.040	.383	-.170	.703	.068	.432	-.172
.400	-.182	.400	-.183	.788	.187	.411	-.197	.789	.180	.474	-.169
.429	-.209	.425	-.164	.860	.344	.439	-.211	.861	.244	.494	-.152
.450	-.204	.450	-.226	.924	.313	.479	-.152	.933	.282	.559	-.096
.475	-.232	.475	-.263	.965	.315	.518	-.119	.975	.192	.637	-.004
.500	-.177	.500	-.216			.546	-.099			.679	.072
.525	-.196	.525	-.183			.570	-.067			.752	.148
.550	-.198	.550	-.112			.640	.041			.845	.192
.575	-.196	.576	-.152			.702	.094			.935	.255
.600	-.193	.600	-.180			.800	.177				
.625	-.169	.628	-.109			.857	.192				
.650	-.133	.650	-.021			.919	.252				
.675	-.117	.675	.006			.959	.270				
.700	-.066	.700	.020								
.750	-.013	.750	.092								
.800	.109	.800	.154								
.850	.179	.849	.196								
.900	.216	.900	.231								
.950	.218	.949	.195								
CN =	.3822		.3767		.4572		.4107		.3726		.2972
CM =	.0080		-.0995		.1088		.1124		.1216		-.0949

TABLE 5. - Continued.

M = .943 Q = 9.76 ALPHA = 3.86 CNWP = .4147 DA =1.4 RN =4.32

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.013	0.000	.066	.026	-.819	0.000	.402	.024	-.626	0.000	.456
.020	-.163	.022	-.709	.076	-.928	.017	-.728	.064	-.786	.018	-.782
.040	-.196	.041	-.906	.138	-.923	.032	-.862	.136	-.730	.038	-.611
.060	-.233	.074	-.994	.211	-.872	.051	-.825	.208	-.780	.058	-.773
.100	-.257	.109	-.936	.300	-.555	.070	-.833	.298	-.751	.139	-.774
.200	-.426	.201	-.412	.400	-.485	.148	-.851	.398	-.673	.195	-.774
.300	-.445	.301	-.397	.499	-.393	.219	-.841	.499	-.322	.297	-.741
.400	-.455	.401	-.443	.573	-.403	.268	-.817	.564	-.320	.386	-.265
.500	-.221	.501	-.177	.686	-.466	.314	-.780	.676	-.446	.452	-.243
.525	-.125	.526	-.350	.787	-.690	.383	-.454	.786	-.301	.504	-.220
.550	-.113	.551	-.332	.859	-.386	.440	-.382	.858	-.267	.556	-.233
.575	-.130	.576	-.308	.924	-.167	.498	-.362	.907	0.000	.647	-.307
.600	-.134	.600	-.363	.965	-.106	.538	-.360	.957	-.202	.696	-.351
.625	0.000	.629	-.337	1.000	-.123	.570	-.362	1.000	-.110	.746	-.438
.650	-.128	.650	-.373			.615	-.341			.797	-.253
.669	-.120	.675	-.349			.648	-.376			.852	-.349
.688	-.116	.699	-.342			.667	-.411			.896	-.364
.719	-.130	.726	-.379			.701	-.495			.946	-.137
.750	-.135	.750	-.385			.777	0.000			1.000	-.025
.775	-.153	.775	-.394			.816	-.485				
.800	-.170	.800	-.431			.856	-.383				
.825	-.180	.824	-.466			.896	-.383				
.850	-.196	.849	-.478			.935	-.173				
.875	-.241	.874	-.507			.972	-.133				
.900	-.271	.899	-.455			1.000	-.107				
.925	-.294	.924	-.298								
.950	-.384	.950	-.186								
.975	-.335	.974	-.114								
1.000	-.120	1.000	-.098								
					LOWER SURFACE						
.020	.080	.022	.273	.028	.198	.017	.145	.025	.020	.020	.097
.040	.065	.041	.194	.077	-.020	.045	-.049	.066	-.036	.040	.010
.060	.052	.074	.095	.139	-.070	.055	-.085	.139	-.116	.060	-.067
.100	.022	.101	.030	.210	-.104	.070	-.081	.211	-.132	.140	-.205
.200	.005	.207	-.154	.301	-.122	.152	-.172	.302	-.101	.196	-.180
.300	-.057	.301	-.100	.400	-.131	.220	-.140	.400	-.097	.253	-.176
.325	-.192	.326	-.099	.500	-.105	.269	-.129	.503	-.096	.306	-.154
.344	-.118	.350	-.128	.574	-.053	.315	-.106	.565	-.085	.388	-.134
.375	-.134	.376	-.142	.715	-.030	.383	-.147	.703	.082	.432	-.160
.400	-.154	.400	-.142	.788	.200	.411	-.162	.789	.193	.474	-.146
.429	-.191	.425	-.122	.860	.353	.439	-.156	.861	.256	.494	-.121
.450	-.172	.450	-.181	.924	.321	.479	-.129	.933	.292	.559	-.070
.475	-.207	.475	-.215	.965	.318	.518	-.095	.975	.214	.637	.014
.500	-.153	.500	-.172			.546	-.076			.679	.086
.525	-.172	.525	-.154			.570	-.045			.752	.154
.550	-.178	.550	-.085			.640	.063			.845	.191
.575	-.171	.576	-.121			.702	.112			.935	.250
.600	-.169	.600	-.150			.800	.189				
.625	-.143	.628	-.084			.857	.195				
.650	-.104	.650	-.001			.919	.244				
.675	-.095	.675	.022			.959	.256				
.700	-.043	.700	.036								
.750	.004	.750	.107								
.800	.136	.800	.166								
.850	.209	.849	.205								
.900	.254	.900	.244								
.950	.246	.949	.201								
CN =	.4490		.4470		.5800		.5260		.5150		.4280
CM =	.0054		-.0830		-.1190		-.1130		-.1020		-.0860

TABLE 5. - Continued.

M = .950 Q = 9.54 ALPHA = 4.00 CNWP = .3880 DA =1.9 RN =4.21

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.012	0.000	.071	.026	-.808	0.000	.419	.024	-.622	0.000	.441
.020	-.158	.022	-.698	.076	-.915	.017	-.685	.064	-.785	.018	-.748
.040	-.182	.041	-.893	.138	-.913	.032	-.814	.136	-.744	.038	-.600
.060	-.239	.074	-.981	.211	-.869	.051	-.781	.208	-.780	.058	-.767
.100	-.268	.109	-.926	.300	-.521	.070	-.791	.298	-.754	.139	-.761
.200	-.423	.201	-.467	.400	-.458	.148	-.827	.398	-.557	.195	-.748
.300	-.458	.301	-.339	.499	-.374	.219	-.812	.499	-.333	.297	-.740
.400	-.465	.401	-.398	.573	-.405	.268	-.793	.564	-.635	.386	-.379
.500	-.335	.501	-.365	.686	-.458	.314	-.760	.676	-.474	.452	-.183
.525	-.265	.526	-.318	.787	-.593	.383	-.500	.786	-.356	.504	-.116
.550	-.194	.551	-.304	.859	-.455	.440	-.395	.858	-.238	.556	-.088
.575	-.159	.576	-.285	.924	-.189	.498	-.382	.907	0.000	.647	-.149
.600	-.129	.600	-.338	.965	-.115	.538	-.366	.957	-.177	.696	-.205
.625	0.000	.629	-.323	1.000	-.139	.570	-.374	1.000	-.025	.746	-.287
.650	-.101	.650	-.354			.615	-.353			.797	-.273
.669	-.097	.675	-.333			.648	-.387			.852	-.348
.688	-.090	.699	-.333			.667	-.416			.896	-.482
.719	-.110	.726	-.375			.701	-.500			.946	-.119
.750	-.120	.750	-.378			.777	0.000			1.000	-.021
.775	-.137	.775	-.386			.816	-.740				
.800	-.151	.800	-.420			.856	-.459				
.825	-.166	.824	-.460			.896	-.459				
.850	-.182	.849	-.472			.935	-.252				
.875	-.227	.874	-.501			.972	-.209				
.900	-.259	.899	-.476			1.000	-.182				
.925	-.284	.924	-.327								
.950	-.370	.950	-.208								
.975	-.331	.974	-.129								
1.000	-.117	1.000	-.112								
					LOWER SURFACE						
.020	.076	.022	.260	.028	.204	.017	.126	.025	-.021	.020	.045
.040	.058	.041	.179	.077	-.028	.045	-.052	.066	-.060	.040	-.014
.060	.048	.074	.081	.139	-.074	.055	-.089	.139	-.130	.060	-.074
.100	.015	.101	.012	.210	-.107	.070	-.083	.211	-.145	.140	-.218
.200	0.000	.207	-.168	.301	-.124	.152	-.212	.302	-.110	.196	-.130
.300	-.064	.301	-.109	.400	-.137	.220	-.148	.400	-.109	.253	-.182
.325	-.204	.326	-.108	.500	-.113	.269	-.136	.503	-.107	.306	-.157
.344	-.132	.350	-.135	.574	-.058	.315	-.113	.565	-.100	.388	-.145
.375	-.140	.376	-.150	.715	-.039	.383	-.154	.703	.073	.432	-.177
.400	-.164	.400	-.150	.788	.185	.411	-.178	.789	.180	.474	-.161
.429	-.189	.425	-.127	.860	.344	.439	-.189	.861	.248	.494	-.150
.450	-.186	.450	-.188	.924	.310	.479	-.141	.933	.285	.559	-.085
.475	-.215	.475	-.217	.965	.310	.518	-.108	.975	.206	.637	.007
.500	-.160	.500	-.170			.546	-.089			.679	.082
.525	-.180	.525	-.150			.570	-.062			.752	.150
.550	-.189	.550	-.082			.640	.045			.845	.188
.575	-.182	.576	-.120			.702	.095			.935	.248
.600	-.174	.600	-.150			.800	.186				
.625	-.150	.628	-.090			.857	.201				
.650	-.113	.650	-.003			.919	.264				
.675	-.101	.675	.021			.959	.272				
.700	-.049	.700	.032								
.750	-.002	.750	.103								
.800	.133	.800	.163								
.850	.204	.849	.205								
.900	.249	.900	.239								
.950	.243	.949	.194								
CN =	.4599		.4440		.5570		.5399		.4950		.3912
CM =	.0110		-.0842		-.1138		-.1305		-.1009		-.0701

TABLE 5. - Continued.

M = .953 Q = 9.52 ALPHA = 4.69 CNWP = .4371 DA =1.4 RN =4.19

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.017	0.000	.050	.026	-.866	0.000	.415	.024	-.632	0.000	.454
.020	-.171	.022	-.731	.076	-.964	.017	-.731	.064	-.789	.018	-.777
.040	-.206	.041	-.935	.138	-.944	.032	-.862	.136	-.769	.038	-.648
.060	-.230	.074	-1.029	.211	-.923	.051	-.837	.208	-.782	.058	-.759
.100	-.282	.109	-1.021	.300	-.881	.070	-.839	.298	-.772	.139	-.778
.200	-.431	.201	-.701	.400	-.471	.148	-.862	.398	-.720	.195	-.789
.300	-.466	.301	-.451	.499	-.379	.219	-.860	.499	-.691	.297	-.756
.400	-.465	.401	-.353	.573	-.392	.268	-.839	.564	-.579	.386	-.715
.500	-.359	.501	-.338	.686	-.450	.314	-.814	.676	-.444	.452	-.662
.525	-.303	.526	-.304	.787	-.569	.383	-.759	.786	-.308	.504	-.660
.550	-.256	.551	-.294	.859	-.609	.440	-.735	.858	-.185	.556	-.514
.575	-.240	.576	-.277	.924	-.211	.498	-.469	.907	0.000	.647	-.077
.600	-.196	.600	-.338	.965	-.131	.538	-.400	.957	-.128	.696	-.018
.625	0.000	.629	-.317	1.000	-.150	.570	-.377	1.000	-.162	.746	-.032
.650	-.108	.650	-.353			.615	-.356			.797	-.104
.669	-.100	.675	-.338			.648	-.389			.852	-.208
.688	-.093	.699	-.338			.667	-.421			.896	-.242
.719	-.108	.726	-.373			.701	-.486			.946	-.158
.750	-.118	.750	-.382			.777	0.000			1.000	-.011
.775	-.131	.775	-.390			.816	-.714				
.800	-.150	.800	-.424			.856	-.523				
.825	-.160	.824	-.462			.896	-.523				
.850	-.180	.849	-.477			.935	-.284				
.875	-.229	.874	-.511			.972	-.245				
.900	-.260	.899	-.493			1.000	-.228				
.925	-.285	.924	-.354								
.950	-.371	.950	-.223								
.975	-.347	.974	-.141								
1.000	-.129	1.000	-.123								
					LOWER SURFACE						
.020	.096	.022	.285	.028	.248	.017	.187	.025	.040	.020	.113
.040	.083	.041	.215	.077	.024	.045	-.003	.066	-.027	.040	.018
.060	.074	.074	.118	.139	-.032	.055	-.039	.139	-.109	.060	-.048
.100	.043	.101	.053	.210	-.073	.070	-.042	.211	-.124	.140	-.198
.200	.019	.207	-.128	.301	-.097	.152	-.151	.302	-.100	.196	-.163
.300	-.043	.301	-.079	.400	-.111	.220	-.120	.400	-.101	.253	-.163
.325	-.174	.326	-.080	.500	-.099	.269	-.117	.503	-.108	.306	-.142
.344	-.105	.350	-.106	.574	-.048	.315	-.093	.565	-.108	.388	-.145
.375	-.119	.376	-.121	.715	-.044	.383	-.140	.703	.072	.432	-.187
.400	-.144	.400	-.123	.788	.185	.411	-.166	.789	.188	.474	-.166
.429	-.178	.425	-.100	.860	.348	.439	-.184	.861	.252	.494	-.158
.450	-.166	.450	-.163	.924	.320	.479	-.133	.933	.289	.559	-.105
.475	-.194	.475	-.191	.965	.314	.518	-.103	.975	.194	.637	-.005
.500	-.142	.500	-.148			.546	-.088			.679	.071
.525	-.163	.525	-.133			.570	-.057			.752	.146
.550	-.172	.550	-.065			.640	.046			.845	.189
.575	-.163	.576	-.102			.702	.093			.935	.252
.600	-.158	.600	-.136			.800	.180				
.625	-.133	.628	-.073			.857	.202				
.650	-.098	.650	.011			.919	.263				
.675	-.084	.675	.031			.959	.269				
.700	-.034	.700	.043								
.750	.014	.750	.109								
.800	.151	.800	.171								
.850	.223	.849	.208								
.900	.267	.900	.242								
.950	.257	.949	.195								
CN =	.5067		.5058		.6200		.6157		.5552		.4528
CM =	.0110		-.0811		-.1167		-.1380		-.1052		-.0684

TABLE 5. - Continued.

M = .944 Q = 9.32 ALPHA = 5.34 CNWP = .4717 DA =1.9 RN =4.13

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.015	0.000	-.007	.026	-.964	0.000	.367	.024	-.784	0.000	.430
.020	-.168	.022	-.827	.076	-1.050	.017	-.813	.064	-.897	.018	-.838
.040	-.208	.041	-1.012	.138	-1.022	.032	-.920	.136	-.867	.038	-.744
.060	-.293	.074	-1.108	.211	-.986	.051	-.890	.208	-.867	.058	-.808
.100	-.305	.109	-1.108	.300	-.955	.070	-.886	.298	-.874	.139	-.809
.200	-.462	.201	-.713	.400	-.593	.148	-.893	.398	-.798	.195	-.817
.300	-.496	.301	-.357	.499	-.470	.219	-.880	.499	-.769	.297	-.785
.400	-.487	.401	-.432	.573	-.442	.268	-.847	.564	-.756	.386	-.742
.500	-.357	.501	-.395	.686	-.496	.314	-.826	.676	-.594	.452	-.794
.525	-.292	.526	-.345	.787	-.451	.383	-.862	.786	-.235	.504	-.786
.550	-.235	.551	-.338	.859	-.502	.440	-.847	.858	-.310	.556	-.534
.575	-.213	.576	-.316	.924	-.193	.498	-.837	.907	0.000	.647	-.207
.600	-.179	.600	-.376	.965	-.083	.538	-.724	.957	-.099	.696	-.100
.625	0.000	.629	-.346	1.000	-.118	.570	-.561	1.000	-.051	.746	-.036
.650	-.135	.650	-.385			.615	-.493			.797	-.069
.669	-.134	.675	-.357			.648	-.496			.852	-.157
.688	-.132	.699	-.349			.667	-.506			.896	-.206
.719	-.143	.726	-.414			.701	-.553			.946	-.162
.750	-.154	.750	-.416			.777	0.000			1.000	-.038
.775	-.173	.775	-.424			.816	-.528				
.800	-.194	.800	-.463			.856	-.364				
.825	-.206	.824	-.500			.896	-.364				
.850	-.226	.849	-.512			.935	-.248				
.875	-.269	.874	-.540			.972	-.221				
.900	-.299	.899	-.527			1.000	-.207				
.925	-.323	.924	-.372								
.950	-.412	.950	-.240								
.975	-.400	.974	-.152								
1.000	-.162	1.000	-.129								
					LOWER SURFACE						
.020	.096	.022	.314	.028	.274	.017	.199	.025	.108	.020	.142
.040	.083	.041	.250	.077	.058	.045	.049	.066	.021	.040	.025
.060	.071	.074	.137	.139	-.006	.055	.012	.139	-.074	.060	-.002
.100	.042	.101	.069	.210	-.052	.070	.006	.211	-.103	.140	-.130
.200	.018	.207	-.112	.301	-.086	.152	-.108	.302	-.089	.196	-.126
.300	-.038	.301	-.074	.400	-.107	.220	-.093	.400	-.096	.253	-.131
.325	-.154	.326	-.076	.500	-.099	.269	-.090	.503	-.099	.306	-.138
.344	-.098	.350	-.105	.574	-.057	.315	-.079	.565	-.094	.388	-.142
.375	-.108	.376	-.121	.715	-.071	.383	-.120	.703	.077	.432	-.196
.400	-.123	.400	-.125	.788	.130	.411	-.135	.789	.202	.474	-.170
.429	-.166	.425	-.106	.860	.310	.439	-.131	.861	.286	.494	-.165
.450	-.138	.450	-.168	.924	.305	.479	-.112	.933	.322	.559	-.117
.475	-.169	.475	-.164	.965	.309	.518	-.086	.975	.239	.637	-.030
.500	-.119	.500	-.132			.546	-.068			.679	.046
.525	-.139	.525	-.117			.570	-.040			.752	.121
.550	-.143	.550	-.056			.640	.066			.845	.164
.575	-.139	.576	-.090			.702	.115			.935	.234
.600	-.132	.600	-.125			.800	.176				
.625	-.106	.628	-.125			.857	.181				
.650	-.073	.650	.018			.919	.227				
.675	-.070	.675	.035			.959	.231				
.700	-.019	.700	.045								
.750	.019	.750	.111								
.800	.158	.800	.170								
.850	.226	.849	.211								
.900	.264	.900	.246								
.950	.254	.949	.192								
CN =	.5733		.5405		.6510		.6830		.6550		.4890
CM =	.0105		-.0889		-.1030		-.1390		-.1200		-.0670

TABLE 5. - Continued.

M = .950 Q = 9.32 ALPHA = 5.55 CNWP = .4980 DA =1.9 RN =4.11

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.009	0.000	-.003	.026	-.954	0.000	.371	.024	-.765	0.000	.397
.020	-.202	.022	-.825	.076	-1.037	.017	-.832	.064	-.888	.018	-.857
.040	-.229	.041	-1.005	.138	-1.016	.032	-.931	.136	-.859	.038	-.798
.060	-.260	.074	-1.095	.211	-.983	.051	-.918	.208	-.861	.058	-.849
.100	-.304	.109	-1.108	.300	-.959	.070	-.916	.298	-.867	.139	-.843
.200	-.453	.201	-.797	.400	-.608	.148	-.931	.398	-.799	.195	-.867
.300	-.489	.301	-.531	.499	-.482	.219	-.931	.499	-.767	.297	-.850
.400	-.481	.401	-.372	.573	-.446	.268	-.920	.564	-.765	.386	-.827
.500	-.366	.501	-.376	.686	-.493	.314	-.899	.676	-.716	.452	-.775
.525	-.309	.526	-.331	.787	-.613	.383	-.845	.786	-.298	.504	-.773
.550	-.263	.551	-.320	.859	-.474	.440	-.832	.858	-.246	.556	-.760
.575	-.252	.576	-.312	.924	-.223	.498	-.826	.907	0.000	.647	-.251
.600	-.215	.600	-.374	.965	-.142	.538	-.779	.957	-.154	.696	-.161
.625	0.000	.629	-.344	1.000	-.171	.570	-.617	1.000	-.268	.746	-.093
.650	-.143	.650	-.387			.615	-.504			.797	-.060
.669	-.127	.675	-.367			.648	-.493			.852	-.093
.688	-.120	.699	-.366			.667	-.515			.896	-.126
.719	-.128	.726	-.408			.701	-.546			.946	-.110
.750	-.143	.750	-.405			.777	0.000			1.000	-.019
.775	-.157	.775	-.416			.816	-.625				
.800	-.176	.800	-.453			.856	-.441				
.825	-.192	.824	-.494			.896	-.441				
.850	-.213	.849	-.501			.935	-.296				
.875	-.252	.874	-.532			.972	-.266				
.900	-.287	.899	-.526			1.000	-.246				
.925	-.310	.924	-.393								
.950	-.396	.950	-.259								
.975	-.397	.974	-.164								
1.000	-.161	1.000	-.138								
					LOWER SURFACE						
.020	.103	.022	.317	.028	.287	.017	.231	.025	.099	.020	.149
.040	.095	.041	.252	.077	.067	.045	.048	.066	.025	.040	.064
.060	.085	.074	.151	.139	.002	.055	.010	.139	-.072	.060	-.004
.100	.055	.101	.086	.210	-.042	.070	.002	.211	-.098	.140	-.144
.200	.029	.207	-.090	.301	-.074	.152	-.108	.302	-.085	.196	-.136
.300	-.031	.301	-.053	.400	-.095	.220	-.092	.400	-.087	.253	-.142
.325	-.142	.326	-.053	.500	-.085	.269	-.092	.503	-.098	.306	-.145
.344	-.086	.350	-.081	.574	-.041	.315	-.078	.565	-.094	.388	-.138
.375	-.099	.376	-.096	.715	-.034	.383	-.123	.703	.069	.432	-.205
.400	-.119	.400	-.100	.788	.192	.411	-.142	.789	.175	.474	-.196
.429	-.157	.425	-.082	.860	.351	.439	-.140	.861	.235	.494	-.181
.450	-.141	.450	-.138	.924	.317	.479	-.123	.933	.268	.559	-.142
.475	-.175	.475	-.161	.965	.309	.518	-.094	.975	.173	.637	-.050
.500	-.119	.500	-.130			.546	-.081			.679	.030
.525	-.137	.525	-.115			.570	-.053			.752	.102
.550	-.148	.550	-.052			.640	.049			.845	.149
.575	-.143	.576	-.087			.702	.093			.935	.224
.600	-.132	.600	-.123			.800	.175				
.625	-.108	.628	-.063			.857	.201				
.650	-.074	.650	.018			.919	.290				
.675	-.069	.675	.037			.959	.261				
.700	-.019	.700	.045								
.750	.023	.750	.113								
.800	.161	.800	.171								
.850	.230	.849	.209								
.900	.267	.900	.244								
.950	.255	.949	.192								
CN =	.5599		.5757		.6940		.7133		.6615		.5126
CM =	.0193		-.0964		-.1220		-.1480		-.1210		-.0652

TABLE 5. - Continued.

M = .959 Q = 9.82 ALPHA = 6.46 CNWP = .5703 DA =1.5 RN =4.30

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.007	0.000	-.042	.026	-1.008	0.000	.315	.024	-.815	0.000	.389
.020	-.229	.022	-.894	.076	-1.087	.017	-.924	.064	-.919	.018	-.879
.040	-.277	.041	-1.059	.138	-1.081	.032	-1.010	.136	-.897	.038	-.840
.060	-.321	.074	-1.148	.211	-1.040	.051	-.987	.208	-.909	.058	-.890
.100	-.305	.109	-1.159	.300	-1.028	.070	-.995	.298	-.901	.139	-.873
.200	-.472	.201	-1.138	.400	-.989	.148	-.985	.398	-.855	.195	-.875
.300	-.515	.301	-.861	.499	-.716	.219	-.977	.499	-.831	.297	-.873
.400	-.507	.401	-.702	.573	-.649	.268	-.970	.564	-.840	.386	-.847
.500	-.407	.501	-.435	.686	-.625	.314	-.949	.676	-.472	.452	-.822
.525	-.365	.526	-.362	.787	-.576	.383	-.915	.786	-.374	.504	-.823
.550	-.327	.551	-.331	.859	-.442	.440	-.909	.858	-.362	.556	-.804
.575	-.341	.576	-.291	.924	-.323	.498	-.899	.907	0.000	.647	-.399
.600	-.353	.600	-.357	.965	-.223	.538	-.884	.957	-.381	.696	-.347
.625	0.000	.629	-.311	1.000	-.263	.570	-.889	1.000	-.534	.746	-.340
.650	-.266	.650	-.352			.615	-.858			.797	-.355
.669	-.241	.675	-.327			.648	-.868			.852	-.337
.688	-.221	.699	-.326			.667	-.889			.896	-.327
.719	-.210	.726	-.375			.701	-.660			.946	-.316
.750	-.196	.750	-.383			.777	0.000			1.000	-.314
.775	-.200	.775	-.385			.816	-.473				
.800	-.211	.800	-.429			.856	-.489				
.825	-.224	.824	-.469			.896	-.489				
.850	-.239	.849	-.482			.935	-.460				
.875	-.274	.874	-.513			.972	-.483				
.900	-.303	.899	-.498			1.000	-.447				
.925	-.319	.924	-.403								
.950	-.405	.950	-.312								
.975	-.416	.974	-.193								
1.000	-.174	1.000	-.137								

LOWER SURFACE

.020	.125	.022	.346	.028	.328	.017	.276	.025	.134	.020	.162
.040	.118	.041	.288	.077	.111	.045	.088	.066	.031	.040	.059
.060	.108	.074	.194	.139	.038	.055	.049	.139	-.073	.060	-.006
.100	.080	.101	.130	.210	-.013	.070	.037	.211	-.124	.140	-.184
.200	.055	.207	-.047	.301	-.052	.152	-.085	.302	-.163	.196	-.200
.300	-.010	.301	-.021	.400	-.078	.220	-.077	.400	-.103	.253	-.212
.325	-.116	.326	-.022	.500	-.069	.269	-.080	.503	-.144	.306	-.147
.344	-.061	.350	-.054	.574	-.028	.315	-.070	.565	-.204	.388	-.180
.375	-.076	.376	-.070	.715	-.058	.383	-.123	.703	.003	.432	-.264
.400	-.104	.400	-.076	.788	.173	.411	-.154	.789	.115	.474	-.298
.429	-.147	.425	-.061	.860	.338	.439	-.187	.861	.179	.494	-.309
.450	-.124	.450	-.118	.924	.297	.479	-.131	.933	.208	.559	-.280
.475	-.162	.475	-.143	.965	.287	.518	-.118	.975	.080	.637	-.224
.500	-.104	.500	-.110			.546	-.106			.679	-.110
.525	-.125	.525	-.099			.570	-.078			.752	-.036
.550	-.134	.550	-.036			.640	.026			.845	.012
.575	-.127	.576	-.072			.702	.050			.935	.091
.600	-.118	.600	-.107			.800	.086				
.625	-.096	.628	-.048			.857	.101				
.650	-.058	.650	.036			.919	.153				
.675	-.055	.675	.055			.959	.154				
.700	.001	.700	.062								
.750	.040	.750	.128								
.800	.187	.800	.187								
.850	.254	.849	.224								
.900	.284	.900	.258								
.950	.267	.949	.202								

CN =	.6908	.7042	.8240	.7720	.6600	.5180
CM =	.0048	-.0922	-.1440	-.1510	-.1200	-.0760

TABLE 5. - Continued.

M = .951 Q = 9.91 ALPHA = 7.16 CNWP = .6013 DA = .8 RN =4.37

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	-.011	0.000	-.068	.026	-1.039	0.000	.303	.024	-.865	0.000	.346
.020	-.266	.022	-.952	.076	-1.120	.017	-.960	.064	-.959	.018	-.940
.040	-.317	.041	-1.103	.138	-1.116	.032	-1.049	.136	-.932	.038	-.926
.060	-.368	.074	-1.195	.211	-1.077	.051	-1.035	.208	-.936	.058	-.972
.100	-.335	.109	-1.218	.300	-1.057	.070	-1.033	.298	-.930	.139	-.929
.200	-.504	.201	-1.211	.400	-.749	.148	-1.028	.398	-.902	.195	-.949
.300	-.536	.301	-.928	.499	-.719	.219	-1.030	.499	-.888	.297	-.913
.400	-.519	.401	-.859	.573	-.709	.268	-1.016	.564	-.888	.386	-.889
.500	-.400	.501	-.470	.686	-.645	.314	-1.002	.676	-.424	.452	-.875
.525	-.356	.526	-.358	.787	-.510	.383	-.976	.786	-.363	.504	-.863
.550	-.320	.551	-.294	.859	-.435	.440	-.956	.858	-.337	.556	-.841
.575	-.323	.576	-.259	.924	-.346	.498	-.944	.907	0.000	.647	-.399
.600	-.308	.600	-.360	.965	-.246	.538	-.919	.957	-.302	.696	-.318
.625	0.000	.629	-.314	1.000	-.282	.570	-.915	1.000	-.253	.746	-.244
.650	-.212	.650	-.383			.615	-.886			.797	-.173
.669	-.190	.675	-.324			.648	-.884			.852	-.141
.688	-.176	.699	-.336			.667	-.842			.896	-.139
.719	-.179	.726	-.398			.701	-.681			.946	-.111
.750	-.182	.750	-.402			.777	0.000			1.000	-.081
.775	-.193	.775	-.416			.816	-.497				
.800	-.211	.800	-.468			.856	-.469				
.825	-.224	.824	-.505			.896	-.469				
.850	-.245	.849	-.523			.935	-.404				
.875	-.289	.874	-.545			.972	-.390				
.900	-.319	.899	-.562			1.000	-.360				
.925	-.340	.924	-.494								
.950	-.427	.950	-.343								
.975	-.439	.974	-.206								
1.000	-.189	1.000	-.143								
					LOWER SURFACE						
.020	.133	.022	.374	.028	.357	.017	.319	.025	.169	.020	.227
.040	.133	.041	.312	.077	.149	.045	.125	.066	.063	.040	.102
.060	.126	.074	.223	.139	.066	.055	.081	.139	-.050	.060	.021
.100	.098	.101	.164	.210	.007	.070	.058	.211	-.084	.140	-.157
.200	.071	.207	-.014	.301	-.028	.152	-.079	.302	-.085	.196	-.158
.300	.010	.301	.001	.400	-.059	.220	-.066	.400	-.096	.253	-.161
.325	-.080	.326	.001	.500	-.060	.269	-.071	.503	-.113	.306	-.155
.344	-.040	.350	-.029	.574	-.026	.315	-.065	.565	-.143	.388	-.164
.375	-.045	.376	-.047	.715	-.047	.383	-.118	.703	.030	.432	-.240
.400	-.063	.400	-.053	.788	.172	.411	-.147	.789	.135	.474	-.244
.429	-.110	.425	-.043	.860	.330	.439	-.155	.861	.193	.494	-.251
.450	-.086	.450	-.097	.924	.295	.479	-.137	.933	.217	.559	-.217
.475	-.126	.475	-.123	.965	.283	.518	-.117	.975	.092	.637	-.120
.500	-.077	.500	-.094			.546	-.106			.679	-.035
.525	-.090	.525	-.091			.570	-.081			.752	.044
.550	-.099	.550	-.031			.640	.016			.845	.099
.575	-.102	.576	-.066			.702	.046			.935	.184
.600	-.097	.600	-.101			.800	.147				
.625	-.064	.628	-.048			.857	.178				
.650	-.035	.650	.037			.919	.237				
.675	-.043	.675	.053			.959	.228				
.700	.018	.700	.058								
.750	.051	.750	.123								
.800	.190	.800	.180								
.850	.256	.849	.218								
.900	.286	.900	.247								
.950	.261	.949	.193								
CN =	.7329		.7653		.8190		.8250		.7077		.5599
CM =	.0166		-.0824		-.1385		-.1613		-.1226		-.0683

TABLE 5. - Continued.

M = .957 Q =10.28 ALPHA = 7.84 CNWP = .6673 DA = .9 RN =4.68

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	-.001	0.000	-.101	.026	-1.081	0.000	.294	.024	-.903	0.000	.366
.020	-.280	.022	-1.022	.076	-1.169	.017	-.983	.064	-.996	.018	-.927
.040	-.326	.041	-1.151	.138	-1.159	.032	-1.079	.136	-.969	.038	-.924
.060	-.389	.074	-1.225	.211	-1.126	.051	-1.069	.208	-.970	.058	-.974
.100	-.371	.109	-1.245	.300	-1.099	.070	-1.061	.298	-.974	.139	-.946
.200	-.517	.201	-1.235	.400	-1.008	.148	-1.061	.398	-.925	.195	-.950
.300	-.551	.301	-.948	.499	-.760	.219	-1.053	.499	-.914	.297	-.944
.400	-.530	.401	-.948	.573	-.721	.268	-1.051	.564	-.910	.386	-.916
.500	-.426	.501	-.802	.686	-.637	.314	-1.041	.676	-.882	.452	-.908
.525	-.389	.526	-.753	.787	-.535	.383	-1.022	.786	-.489	.504	-.906
.550	-.355	.551	-.695	.859	-.483	.440	-1.012	.858	-.483	.556	-.895
.575	-.362	.576	-.588	.924	-.416	.498	******	.907	0.000	.647	-.455
.600	-.374	.600	-.549	.965	-.265	.538	-.991	.957	-.508	.696	-.424
.625	0.000	.629	-.384	1.000	-.338	.570	-.993	1.000	-.530	.746	-.404
.650	-.294	.650	-.361			.615	-.862			.797	-.411
.669	-.272	.675	-.304			.648	-.770			.852	-.399
.688	-.249	.699	-.293			.667	-.747			.896	-.386
.719	-.237	.726	-.362			.701	-.702			.946	-.376
.750	-.225	.750	-.361			.777	0.000			1.000	-.388
.775	-.230	.775	-.374			.816	-.641				
.800	-.236	.800	-.424			.856	-.624				
.825	-.249	.824	-.477			.896	-.624				
.850	-.267	.849	-.493			.935	-.557				
.875	-.308	.874	-.516			.972	-.627				
.900	-.334	.899	-.536			1.000	-.516				
.925	-.357	.924	-.474								
.950	-.441	.950	-.353								
.975	-.482	.974	-.225								
1.000	-.204	1.000	-.134								

LOWER SURFACE

.020	.161	.022	.409	.028	.420	.017	.352	.025	.206	.020	.227
.040	.166	.041	.360	.077	.198	.045	.176	.066	.082	.040	.113
.060	.161	.074	.260	.139	.113	.055	.138	.139	-.037	.060	.044
.100	.129	.101	.199	.210	.051	.070	.115	.211	-.086	.140	-.154
.200	.098	.207	.024	.301	.004	.152	-.037	.302	-.115	.196	-.186
.300	.036	.301	.036	.400	-.032	.220	-.033	.400	-.103	.253	-.193
.325	-.052	.326	.031	.500	-.045	.269	-.045	.503	-.122	.306	-.136
.344	-.014	.350	.001	.574	-.019	.315	-.041	.565	-.205	.388	-.171
.375	-.023	.376	-.015	.715	-.069	.383	-.102	.703	-.006	.432	-.265
.400	-.041	.400	-.022	.788	-.159	.411	-.137	.789	.120	.474	-.296
.429	-.085	.425	-.006	.860	.332	.439	-.177	.861	.187	.494	-.309
.450	-.059	.450	-.067	.924	.294	.479	-.175	.933	.202	.559	-.291
.475	-.107	.475	-.088	.965	.279	.518	-.122	.975	.060	.637	-.260
.500	-.050	.500	-.064			.546	-.122			.679	-.135
.525	-.065	.525	-.054			.570	-.091			.752	-.057
.550	-.073	.550	.003			.640	.008			.845	-.020
.575	-.071	.576	-.035			.702	.029			.935	.068
.600	-.069	.600	-.071			.800	.106				
.625	-.042	.628	-.022			.857	.150				
.650	-.010	.650	.062			.919	.210				
.675	-.018	.675	.074			.959	.205				
.700	.038	.700	.081								
.750	.070	.750	.143								
.800	.209	.800	.202								
.850	.275	.849	.241								
.900	.307	.900	.275								
.950	.282	.949	.217								

CN =	.9230		.8650		.9014		.8868		.7893		.5858
CM =	.0167		-.1083		-.1475		-.1803		-.1562		.8403

TABLE 5. - Continued.

M = .969 Q = 9.68 ALPHA = 2.22 CNWP = .2468 DA =1.2 RN =4.22

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.031	0.000	.166	.026	-.465	0.000	.467	.024	-.342	0.000	.544
.020	-.100	.022	-.476	.076	-.727	.017	-.444	.064	-.406	.018	-.135
.040	-.134	.041	-.604	.138	-.733	.032	-.559	.136	-.235	.038	-.180
.060	-.167	.074	-.726	.211	-.654	.051	-.596	.208	-.325	.058	-.343
.100	-.210	.109	-.674	.300	-.471	.070	-.618	.298	-.293	.139	-.287
.200	-.363	.201	-.511	.400	-.292	.148	-.683	.398	-.307	.195	-.340
.300	-.406	.301	-.424	.499	-.269	.219	-.637	.499	-.307	.297	-.280
.400	-.426	.401	-.437	.573	-.280	.268	-.467	.564	-.304	.386	-.267
.500	-.348	.501	-.302	.686	-.369	.314	-.242	.676	-.351	.452	-.263
.525	-.312	.526	-.258	.787	-.490	.383	-.228	.786	-.511	.504	-.310
.550	-.264	.551	-.233	.859	-.560	.440	-.259	.858	-.607	.556	-.329
.575	-.281	.576	-.217	.924	-.183	.498	-.271	.907	0.000	.647	-.377
.600	-.301	.600	-.260	.965	-.082	.538	-.282	.957	.293	.696	-.414
.625	0.000	.629	-.252	1.000	-.127	.570	-.292	1.000	-.280	.746	-.486
.650	-.219	.650	-.271			.615	-.271			.797	-.573
.669	-.188	.675	-.257			.648	-.313			.852	-.231
.688	-.166	.699	-.262			.667	-.346			.896	-.130
.719	-.151	.726	-.300			.701	-.436			.946	-.144
.750	-.126	.750	-.302			.777	0.000			1.000	-.110
.775	-.128	.775	-.311			.816	-.662				
.800	-.136	.800	-.343			.856	-.653				
.825	-.136	.824	-.384			.896	-.653				
.850	-.148	.849	-.399			.935	-.242				
.875	-.184	.874	-.425			.972	-.192				
.900	-.215	.899	-.403			1.000	-.176				
.925	-.237	.924	-.276								
.950	-.303	.950	-.227								
.975	-.229	.974	-.122								
1.000	-.056	1.000	-.098								
					LOWER SURFACE						
.020	.045	.022	.089	.028	.045	.017	-.086	.025	-.189	.020	-.265
.040	.018	.041	.014	.077	-.199	.045	-.319	.066	-.263	.040	-.343
.060	.007	.074	-.069	.139	-.218	.055	-.393	.139	-.285	.060	-.363
.100	-.026	.101	-.157	.210	-.259	.070	-.192	.211	-.177	.140	-.416
.200	-.039	.207	-.336	.301	-.172	.152	-.448	.302	-.231	.196	-.442
.300	-.081	.301	-.343	.400	-.211	.220	-.286	.400	-.217	.253	-.403
.325	-.229	.326	-.314	.500	-.194	.269	-.232	.503	-.145	.306	-.372
.344	-.257	.350	-.304	.574	-.082	.315	-.227	.565	-.194	.388	-.277
.375	-.185	.376	-.303	.715	-.059	.383	-.161	.703	.028	.432	-.305
.400	-.206	.400	-.281	.788	-.179	.411	-.186	.789	.140	.474	-.309
.429	-.258	.425	-.171	.860	.332	.439	-.217	.861	.210	.494	-.319
.450	-.287	.450	-.178	.924	.297	.479	-.245	.933	.257	.559	-.193
.475	-.347	.475	-.198	.965	.302	.518	-.233	.975	.169	.637	-.058
.500	-.260	.500	-.168			.546	-.166			.679	.025
.525	-.295	.525	-.163			.570	-.094			.752	.094
.550	-.296	.550	-.090			.640	.003			.845	.131
.575	-.315	.576	-.136			.702	.076			.935	.195
.600	-.302	.600	-.171			.800	.129				
.625	-.291	.628	-.096			.857	.159				
.650	-.253	.650	-.018			.919	.202				
.675	-.208	.675	.011			.959	.219				
.700	-.128	.700	.028								
.750	-.040	.750	.095								
.800	.084	.800	.149								
.850	.156	.849	.188								
.900	.206	.900	.228								
.950	.215	.949	.196								
CN =	.3349		.3065		.3703		.3290		.2667		.1485
CM =	-.0043		-.0476		-.1033		-.1229		-.1196		-.0892

TABLE 5. - Continued.

M = .973 Q = 9.62 ALPHA = 2.52 CNWP = .2499 DA =1.3 RN =4.18

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.032	0.000	.174	.026	-.465	0.000	.479	.024	-.373	0.000	.544
.020	-.099	.022	-.476	.076	-.726	.017	-.402	.064	-.504	.018	-.137
.040	-.138	.041	-.605	.138	-.726	.032	-.532	.136	-.506	.038	-.183
.060	-.167	.074	-.721	.211	-.653	.051	-.572	.208	-.187	.058	-.337
.100	-.195	.109	-.712	.300	-.467	.070	-.591	.298	-.233	.139	-.293
.200	-.359	.201	-.507	.400	-.389	.148	-.674	.398	-.280	.195	-.355
.300	-.404	.301	-.433	.499	-.260	.219	-.634	.499	-.300	.297	-.307
.400	-.416	.401	-.447	.573	-.306	.268	-.601	.564	-.305	.386	-.312
.500	-.343	.501	-.328	.686	-.371	.314	-.276	.676	-.422	.452	-.313
.525	-.308	.526	-.281	.787	-.489	.383	-.233	.786	-.560	.504	-.352
.550	-.263	.551	-.259	.859	-.583	.440	-.266	.858	-.485	.556	-.382
.575	-.280	.576	-.230	.924	-.198	.498	-.275	.907	0.000	.647	-.410
.600	-.296	.600	-.270	.965	-.111	.538	-.285	.957	-.222	.696	-.372
.625	0.000	.629	-.261	1.000	-.140	.570	-.291	1.000	-.231	.746	-.448
.650	-.211	.650	-.283			.615	-.270			.797	-.543
.669	-.189	.675	-.268			.648	-.312			.852	-.235
.688	-.162	.699	-.261			.667	-.342			.896	-.075
.719	-.148	.726	-.289			.701	-.427			.946	-.028
.750	-.125	.750	-.317			.777	0.000			1.000	-.005
.775	-.125	.775	-.327			.816	-.653				
.800	-.135	.800	-.360			.856	-.702				
.825	-.142	.824	-.397			.896	-.702				
.850	-.158	.849	-.411			.935	-.280				
.875	-.195	.874	-.442			.972	-.260				
.900	-.225	.899	-.440			1.000	-.235				
.925	-.250	.924	-.334								
.950	-.324	.950	-.201								
.975	-.273	.974	-.111								
1.000	-.078	1.000	-.085								
					LOWER SURFACE						
.020	.052	.022	.096	.028	.017	.017	-.097	.025	-.205	.020	-.224
.040	.029	.041	.019	.077	-.239	.045	-.208	.066	-.293	.040	-.282
.060	.017	.074	-.066	.139	-.200	.055	-.236	.139	-.324	.060	-.303
.100	-.008	.101	-.152	.210	-.207	.070	-.224	.211	-.349	.140	-.384
.200	-.023	.207	-.338	.301	-.258	.152	-.410	.302	-.200	.196	-.393
.300	-.071	.301	-.338	.400	-.168	.220	-.316	.400	-.096	.253	-.387
.325	-.214	.326	-.318	.500	-.222	.269	-.221	.503	-.131	.306	-.368
.344	-.245	.350	-.320	.574	-.155	.315	-.230	.565	-.201	.388	-.226
.375	-.178	.376	-.330	.715	-.070	.383	-.157	.703	.025	.432	-.259
.400	-.193	.400	-.365	.788	.166	.411	-.174	.789	.145	.474	-.273
.429	-.270	.425	-.257	.860	.321	.439	-.215	.861	.215	.494	-.242
.450	-.286	.450	-.233	.924	.283	.479	-.239	.933	.260	.559	-.131
.475	-.358	.475	-.198	.965	.288	.518	-.209	.975	.169	.637	-.008
.500	-.253	.500	-.192			.546	-.155			.679	.070
.525	-.293	.525	-.183			.570	-.107			.752	.142
.550	-.292	.550	-.103			.640	.021			.845	.188
.575	-.319	.576	-.156			.702	.070			.935	.246
.600	-.306	.600	-.209			.800	.145				
.625	-.305	.628	-.130			.857	.160				
.650	-.277	.650	-.040			.919	.220				
.675	-.249	.675	-.007			.959	.239				
.700	-.162	.700	.011								
.750	-.078	.750	.084								
.800	.067	.800	.139								
.850	.147	.849	.174								
.900	.198	.900	.220								
.950	.212	.949	.188								
CN =	.3191		.3035		.3757		.3488		.2559		.1995
CM =	-.0011		-.0790		-.1021		-.1286		-.1166		-.0962

TABLE 5. - Continued.

M = .967 Q = 9.75 ALPHA = 3.46 CNWP = .3732 DA =2.0 RN =5.08

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.004	0.000	.081	.026	-.738	0.000	.419	.024	-.532	0.000	.454
.020	-.158	.022	-.622	.076	-.848	.017	-.632	.064	-.679	.018	-.606
.040	-.193	.041	-.829	.138	-.869	.032	-.746	.136	-.654	.038	-.488
.060	-.218	.074	-.852	.211	-.828	.051	-.714	.208	-.696	.058	-.685
.100	-.262	.109	-.852	.300	-.746	.070	-.726	.298	-.683	.139	-.620
.200	-.414	.201	-.603	.400	-.440	.148	-.766	.398	-.341	.195	-.660
.300	-.448	.301	-.472	.499	-.298	.219	-.756	.499	-.281	.297	-.611
.400	-.459	.401	-.492	.573	-.278	.268	-.738	.564	-.291	.386	-.283
.500	-.378	.501	-.335	.686	-.287	.314	-.716	.676	-.425	.452	-.285
.525	-.338	.526	-.289	.787	-.553	.383	-.502	.786	-.578	.504	-.325
.550	-.293	.551	-.268	.859	-.628	.440	-.342	.858	-.462	.556	-.355
.575	-.310	.576	-.247	.924	-.234	.498	-.318	.907	0.000	.647	-.389
.600	-.321	.600	-.287	.965	-.141	.538	-.312	.957	-.265	.696	-.431
.625	0.000	.629	-.279	1.000	-.166	.570	-.318	1.000	-.255	.746	-.495
.650	-.222	.650	-.308			.615	-.308			.797	-.161
.669	-.185	.675	-.281			.648	-.348			.852	-.096
.688	-.158	.699	-.283			.667	-.379			.896	-.133
.719	-.142	.726	-.318			.701	-.471			.946	-.093
.750	-.127	.750	-.310			.777	0.000			1.000	-.020
.775	-.137	.775	-.323			.816	-.716				
.800	-.145	.800	-.354			.856	-.713				
.825	-.154	.824	-.391			.896	-.713				
.850	-.166	.849	-.406			.935	-.352				
.875	-.201	.874	-.429			.972	-.347				
.900	-.234	.899	-.403			1.000	-.306				
.925	-.256	.924	-.285								
.950	-.324	.950	-.185								
.975	-.264	.974	-.107								
1.000	-.092	1.000	-.084								
					LOWER SURFACE						
.020	.053	.022	.193	.028	.152	.017	.096	.025	-.070	.020	-.044
.040	.036	.041	.126	.077	-.071	.045	-.079	.066	-.125	.040	-.125
.060	.026	.074	.036	.139	-.110	.055	-.116	.139	-.210	.060	-.185
.100	-.001	.101	-.034	.210	-.131	.070	-.084	.211	-.188	.140	-.301
.200	-.021	.207	-.200	.301	-.165	.152	0.000	.302	-.231	.196	-.244
.300	-.079	.301	-.126	.400	-.157	.220	-.180	.400	-.102	.253	-.252
.325	-.236	.326	-.128	.500	-.149	.269	-.155	.503	-.154	.306	-.177
.344	-.151	.350	-.156	.574	-.058	.315	-.109	.565	-.214	.388	-.181
.375	-.153	.376	-.180	.715	-.051	.383	-.161	.703	.035	.432	-.234
.400	-.200	.400	-.163	.788	.183	.411	-.186	.789	.143	.474	-.232
.429	-.253	.425	-.130	.860	.335	.439	-.224	.861	.209	.494	-.229
.450	-.258	.450	-.203	.924	.291	.479	-.232	.933	.257	.559	-.236
.475	-.266	.475	-.239	.965	.291	.518	-.121	.975	.165	.637	-.096
.500	-.202	.500	-.205			.546	-.097			.679	.013
.525	-.223	.525	-.152			.570	-.064			.752	.109
.550	-.246	.550	-.078			.640	.041			.845	.169
.575	-.229	.576	-.123			.702	.086			.935	.245
.600	-.187	.600	-.153			.800	.142				
.625	-.180	.628	-.085			.857	.140				
.650	-.137	.650	-.001			.919	.191				
.675	-.114	.675	.021			.959	.200				
.700	-.064	.700	.038								
.750	-.008	.750	.104								
.800	.120	.800	.170								
.850	.190	.849	.202								
.900	.236	.900	.239								
.950	.234	.949	.200								
CN =	.4530		.4252		.5213		.5140		.4137		.3182
CM =	.0008		-.0787		-.1100		-.1370		-.1098		-.0683

TABLE 5. - Continued.

M = .967 Q = 9.66 ALPHA = 3.93 CNWP = .3896 DA =1.8 RN =4.22

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.034	0.000	.082	.026	-.782	0.000	.444	.024	-.561	0.000	.469
.020	-.135	.022	-.663	.076	-.898	.017	-.625	.064	-.722	.018	-.611
.040	-.170	.041	-.857	.138	-.895	.032	-.740	.136	-.696	.038	-.498
.060	-.209	.074	-.940	.211	-.869	.051	-.718	.208	-.719	.058	-.693
.100	-.241	.109	-.895	.300	-.831	.070	-.731	.298	-.709	.139	-.650
.200	-.395	.201	-.627	.400	-.555	.148	-.773	.398	-.657	.195	-.677
.300	-.436	.301	-.485	.499	-.322	.219	-.769	.499	-.549	.297	-.651
.400	-.437	.401	-.477	.573	-.298	.268	-.751	.564	-.320	.386	-.565
.500	-.361	.501	-.329	.686	-.380	.314	-.723	.676	-.410	.452	-.294
.525	-.328	.526	-.284	.787	-.528	.383	-.679	.786	-.559	.504	-.295
.550	-.285	.551	-.260	.859	-.617	.440	-.401	.858	-.463	.556	-.299
.575	-.295	.576	-.237	.924	-.219	.498	-.328	.907	0.000	.647	-.352
.600	-.310	.600	-.278	.965	-.125	.538	-.313	.957	-.243	.696	-.396
.625	0.000	.629	-.268	1.000	-.153	.570	-.307	1.000	-.239	.746	-.466
.650	-.213	.650	-.296			.615	-.298			.797	-.127
.669	-.177	.675	-.278			.648	-.339			.852	-.090
.688	-.150	.699	-.278			.667	-.368			.896	-.114
.719	-.135	.726	-.309			.701	-.452			.946	-.062
.750	-.118	.750	-.331			.777	0.000			1.000	.024
.775	-.125	.775	-.342			.816	-.696				
.800	-.138	.800	-.372			.856	-.707				
.825	-.150	.824	-.409			.896	-.707				
.850	-.165	.849	-.420			.935	-.347				
.875	-.202	.874	-.439			.972	-.347				
.900	-.232	.899	-.409			1.000	-.302				
.925	-.253	.924	-.291								
.950	-.336	.950	-.190								
.975	-.293	.974	-.110								
1.000	-.095	1.000	-.092								
					LOWER SURFACE						
.020	.085	.022	.246	.028	.209	.017	.122	.025	-.026	.020	-.022
.040	.067	.041	.173	.077	-.017	.045	-.053	.066	-.094	.040	-.085
.060	.055	.074	.056	.139	-.066	.055	-.089	.139	-.134	.060	-.155
.100	.023	.101	-.014	.210	-.095	.070	-.080	.211	-.182	.140	-.282
.200	.005	.207	-.191	.301	-.115	.152	-.232	.302	-.205	.196	-.235
.300	-.052	.301	-.115	.400	-.127	.220	-.168	.400	-.085	.253	-.222
.325	-.198	.326	-.112	.500	-.135	.269	-.143	.503	-.141	.306	-.170
.344	-.172	.350	-.141	.574	-.040	.315	-.095	.565	-.200	.388	-.183
.375	-.136	.376	-.160	.715	-.046	.383	-.144	.703	.042	.432	-.256
.400	-.171	.400	-.150	.788	.196	.411	-.170	.789	.158	.474	-.247
.429	-.213	.425	-.119	.860	.355	.439	-.206	.861	.224	.494	-.225
.450	-.225	.450	-.190	.924	.313	.479	-.221	.933	.264	.559	-.168
.475	-.228	.475	-.229	.965	.313	.518	-.111	.975	.173	.637	-.055
.500	-.175	.500	-.182			.546	-.090			.679	.037
.525	-.188	.525	-.141			.570	-.062			.752	.112
.550	-.218	.550	-.070			.640	.042			.845	.159
.575	-.197	.576	-.111			.702	.083			.935	.241
.600	-.185	.600	-.144			.800	.156				
.625	-.161	.628	-.078			.857	.174				
.650	-.120	.650	.009			.919	.237				
.675	-.104	.675	.030			.959	.243				
.700	-.050	.700	.045								
.750	.001	.750	.114								
.800	.141	.800	.171								
.850	.212	.849	.213								
.900	.257	.900	.249								
.950	.257	.949	.207								
CN =	.4699		.4457		.5761		.5331		.4928		.3560
CM =	-.0046		-.0791		-.1126		-.1396		-.1171		-.0671

TABLE 5. - Continued.

M = .969 Q = 9.32 ALPHA = 4.09 CNWP = .3965 DA =1.8 RN =4.55

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
UPPER SURFACE											
0.000	.029	0.000	.088	.026	-.774	0.000	.410	.024	-.571	0.000	.438
.020	-.140	.022	-.649	.076	-.892	.017	-.673	.064	-.732	.018	-.658
.040	-.182	.041	-.842	.138	-.890	.032	-.796	.136	-.709	.038	-.536
.060	-.217	.074	-.924	.211	-.860	.051	-.763	.208	-.736	.058	-.718
.100	-.245	.109	-.876	.300	-.828	.070	-.772	.298	-.720	.139	-.700
.200	-.397	.201	-.619	.400	-.561	.148	-.796	.398	-.666	.195	-.709
.300	-.435	.301	-.488	.499	-.358	.219	-.794	.499	-.545	.297	-.694
.400	-.444	.401	-.497	.573	-.336	.268	-.779	.564	-.335	.386	-.634
.500	-.369	.501	-.359	.686	-.397	.314	-.748	.676	-.424	.452	-.607
.525	-.334	.526	-.301	.787	-.530	.383	-.707	.786	-.572	.504	-.372
.550	-.288	.551	-.283	.859	-.608	.440	-.506	.858	-.461	.556	-.313
.575	-.297	.576	-.262	.924	-.210	.498	-.363	.907	0.000	.647	-.357
.600	-.314	.600	-.304	.965	-.131	.538	-.325	.957	-.258	.696	-.399
.625	0.000	.629	-.285	1.000	-.161	.570	-.323	1.000	-.278	.746	-.455
.650	-.217	.650	-.308			.615	-.316			.797	-.128
.669	-.186	.675	-.293			.648	-.347			.852	-.091
.688	-.161	.699	-.295			.667	-.380			.896	-.115
.719	-.142	.726	-.327			.701	-.455			.946	-.065
.750	-.121	.750	-.323			.777	0.000			1.000	.005
.775	-.132	.775	-.334			.816	-.694				
.800	-.140	.800	-.366			.856	-.737				
.825	-.153	.824	-.404			.896	-.737				
.850	-.166	.849	-.416			.935	-.328				
.875	-.207	.874	-.437			.972	-.318				
.900	-.237	.899	-.400			1.000	-.283				
.925	-.258	.924	-.285								
.950	-.334	.950	-.179								
.975	-.294	.974	-.106								
1.000	-.101	1.000	-.088								
LOWER SURFACE											
.020	.082	.022	.229	.028	.175	.017	.130	.025	-.049	.020	-.026
.040	.062	.041	.152	.077	-.033	.045	-.049	.066	-.102	.040	-.091
.060	.052	.074	.072	.139	-.079	.055	-.088	.139	-.172	.060	-.157
.100	.023	.101	.003	.210	-.109	.070	-.078	.211	-.181	.140	-.287
.200	.005	.207	-.173	.301	-.132	.152	-.235	.302	-.219	.196	-.245
.300	-.054	.301	-.102	.400	-.129	.220	-.160	.400	-.085	.253	-.225
.325	-.199	.326	-.098	.500	-.116	.269	-.143	.503	-.151	.306	-.161
.344	-.160	.350	-.130	.574	-.043	.315	-.095	.565	-.210	.388	-.177
.375	-.134	.376	-.149	.715	-.043	.383	-.146	.703	.036	.432	-.233
.400	-.167	.400	-.138	.788	.190	.411	-.172	.789	.149	.474	-.221
.429	-.224	.425	-.111	.860	.347	.439	-.209	.861	.222	.494	-.223
.450	-.242	.450	-.177	.924	.308	.479	-.220	.933	.261	.559	-.235
.475	-.242	.475	-.218	.965	.304	.518	-.111	.975	.167	.637	-.142
.500	-.178	.500	-.174			.546	-.077			.679	-.010
.525	-.197	.525	-.133			.570	-.054			.752	.092
.550	-.225	.550	-.062			.640	.052			.845	.155
.575	-.202	.576	-.104			.702	.093			.935	.240
.600	-.166	.600	-.139			.800	.149				
.625	-.161	.628	-.072			.857	.152				
.650	-.115	.650	.013			.919	-.200				
.675	-.096	.675	.035			.959	.204				
.700	-.045	.700	.050								
.750	.009	.750	.116								
.800	.144	.800	.175								
.850	.219	.849	.216								
.900	.265	.900	.253								
.950	.260	.949	.210								
CN =	.4722		.4598		.5760		.5510		.4980		.3690
CM =	-.0002		-.0793		-.1140		-.1380		-.1180		-.0648

TABLE 5. - Continued.

M = .971 Q = 9.37 ALPHA = 5.37 CNWP = .5102 DA =1.4 RN =4.08

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.027	0.000	.024	.026	-.890	0.000	.375	.024	-.672	0.000	.434
.020	-.182	.022	-.757	.076	-.983	.017	-.792	.064	-.811	.018	-.767
.040	-.224	.041	-.947	.138	-.972	.032	-.888	.136	-.791	.038	-.669
.060	-.270	.074	-1.038	.211	-.950	.051	-.882	.208	-.787	.058	-.751
.100	-.277	.109	-1.051	.300	-.931	.070	-.886	.298	-.813	.139	-.776
.200	-.436	.201	-.987	.400	-.879	.148	-.899	.398	-.752	.195	-.794
.300	-.473	.301	-.641	.499	-.622	.219	-.899	.499	-.736	.297	-.776
.400	-.472	.401	-.539	.573	-.517	.268	-.888	.564	-.730	.386	-.756
.500	-.385	.501	-.466	.686	-.463	.314	-.867	.676	-.730	.452	-.717
.525	-.349	.526	-.396	.787	-.528	.383	-.828	.786	-.447	.504	-.719
.550	-.311	.551	-.362	.859	-.531	.440	-.820	.858	-.430	.556	-.710
.575	-.322	.576	-.326	.924	-.226	.498	-.813	.907	0.000	.647	-.696
.600	-.342	.600	-.368	.965	-.143	.538	-.803	.957	-.379	.696	-.695
.625	0.000	.629	-.338	1.000	-.175	.570	-.803	1.000	-.495	.746	-.726
.650	-.261	.650	-.360			.615	-.771			.797	-.448
.669	-.232	.675	-.343			.648	-.786			.852	-.308
.688	-.202	.699	-.336			.667	-.793			.896	-.273
.719	-.190	.726	-.368			.701	-.813			.946	-.255
.750	-.167	.750	-.373			.777	0.000			1.000	-.240
.775	-.167	.775	-.387			.816	-.514				
.800	-.176	.800	-.417			.856	-.403				
.825	-.189	.824	-.454			.896	-.403				
.850	-.205	.849	-.461			.935	-.353				
.875	-.239	.874	-.489			.972	-.312				
.900	-.270	.899	-.476			1.000	-.301				
.925	-.293	.924	-.367								
.950	-.371	.950	-.250								
.975	-.382	.974	-.161								
1.000	-.148	1.000	-.138								
					LOWER SURFACE						
.020	.117	.022	.300	.028	.270	.017	.219	.025	.071	.020	.088
.040	.108	.041	.236	.077	.055	.045	.035	.066	-.002	.040	.002
.060	.096	.074	.138	.139	-.006	.055	0.000	.139	-.091	.060	-.049
.100	.065	.101	.069	.210	-.049	.070	-.006	.211	-.145	.140	-.212
.200	.040	.207	-.109	.301	-.081	.152	-.156	.302	-.173	.196	-.223
.300	-.023	.301	-.062	.400	-.099	.220	-.105	.400	-.089	.253	-.262
.325	-.171	.326	-.063	.500	-.091	.269	-.109	.503	-.136	.306	-.183
.344	-.080	.350	-.088	.574	-.036	.315	-.078	.565	-.193	.388	-.169
.375	-.102	.376	-.108	.715	-.052	.383	-.123	.703	.020	.432	-.256
.400	-.136	.400	-.107	.788	.189	.411	-.159	.789	.126	.474	-.288
.429	-.171	.425	-.085	.860	.355	.439	-.193	.861	.186	.494	-.302
.450	-.170	.450	-.150	.924	.319	.479	-.215	.933	.216	.559	-.261
.475	-.187	.475	-.181	.965	.312	.518	-.098	.975	.092	.637	-.212
.500	-.135	.500	-.135			.546	-.077			.679	-.100
.525	-.154	.525	-.119			.570	-.052			.752	-.022
.550	-.172	.550	-.050			.640	.050			.845	.022
.575	-.153	.576	-.094			.702	.085			.935	.107
.600	-.149	.600	-.131			.800	.140				
.625	-.127	.628	-.065			.857	.146				
.650	-.091	.650	.017			.919	.193				
.675	-.081	.675	.037			.959	.203				
.700	-.026	.700	.050								
.750	.018	.750	.115								
.800	.163	.800	.174								
.850	.235	.849	.213								
.900	.276	.900	.249								
.950	.266	.949	.196								
CN =	.5960		.5990		.7164		.7273		.6260		.5186
CM =	.0048		-.0893		-.1297		-.1622		-.1360		-.1031

TABLE 5. - Continued.

M = .964 Q = 9.75 ALPHA = 5.38 CNWP = .5063 DA =1.5 RN =4.26

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.809 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.017	0.000	.022	.026	-.909	0.000	.380	.024	-.680	0.000	.416
.020	-.190	.022	-.770	.076	-1.000	.017	-.815	.064	-.824	.018	-.796
.040	-.234	.041	-.969	.138	-.988	.032	-.907	.136	-.799	.038	-.714
.060	-.280	.074	-1.064	.211	-.967	.051	-.907	.208	-.805	.058	-.784
.100	-.283	.109	-1.074	.300	-.945	.070	-.907	.298	-.828	.139	-.807
.200	-.443	.201	-.951	.400	-.899	.148	-.917	.398	-.767	.195	-.822
.300	-.479	.301	-.635	.499	-.559	.219	-.927	.499	-.748	.297	-.808
.400	-.471	.401	-.539	.573	-.484	.268	-.917	.564	-.748	.386	-.786
.500	-.384	.501	-.443	.686	-.457	.314	-.886	.676	-.748	.452	-.747
.525	-.345	.526	-.378	.787	-.506	.383	-.843	.786	-.439	.504	-.746
.550	-.306	.551	-.346	.859	-.562	.440	-.823	.858	-.406	.556	-.733
.575	-.317	.576	-.315	.924	-.258	.498	-.825	.907	0.000	.647	-.714
.600	-.324	.600	-.366	.965	-.145	.538	-.806	.957	-.347	.696	-.489
.625	0.000	.629	-.335	1.000	-.185	.570	-.804	1.000	-.494	.746	-.251
.650	-.233	.650	-.354			.615	-.571			.797	-.217
.669	-.197	.675	-.335			.648	-.511			.852	-.177
.688	.174	.699	-.335			.667	-.507			.896	-.154
.719	-.162	.726	-.366			.701	-.525			.946	-.128
.750	-.149	.750	-.364			.777	0.000			1.000	-.107
.775	-.153	.775	-.369			.816	-.682				
.800	-.163	.800	-.401			.856	-.680				
.825	-.178	.824	-.438			.896	-.680				
.850	-.195	.849	-.449			.935	-.352				
.875	-.234	.874	-.471			.972	-.352				
.900	-.265	.899	-.447			1.000	-.308				
.925	-.286	.924	-.331								
.950	-.364	.950	-.227								
.975	-.350	.974	-.142								
1.000	-.138	1.000	-.120								
					LOWER SURFACE						
.020	.114	.022	.297	.028	.278	.017	.229	.025	.049	.020	.093
.040	.102	.041	.233	.077	.053	.045	.043	.066	-.013	.040	.011
.060	.089	.074	.142	.139	-.007	.055	.005	.139	-.102	.060	-.044
.100	.060	.101	.079	.210	-.048	.070	-.003	.211	-.151	.140	-.217
.200	.036	.207	-.100	.301	-.078	.152	-.127	.302	-.176	.196	-.224
.300	-.030	.301	-.057	.400	-.099	.220	-.108	.400	-.104	.253	-.234
.325	-.172	.326	-.057	.500	-.091	.269	-.106	.503	-.143	.306	-.193
.344	-.088	.350	-.083	.574	-.039	.315	-.085	.565	-.200	.388	-.175
.375	-.106	.376	-.097	.715	-.052	.383	-.133	.703	.018	.432	-.262
.400	-.136	.400	-.102	.788	.188	.411	-.162	.789	.128	.474	-.272
.429	-.168	.425	-.080	.860	.355	.439	-.197	.861	.191	.494	-.277
.450	-.166	.450	-.144	.924	.318	.479	-.184	.933	.215	.559	-.226
.475	-.195	.475	-.174	.965	.313	.518	-.106	.975	.095	.637	-.156
.500	-.137	.500	-.132			.546	-.100			.679	-.053
.525	-.157	.525	-.116			.570	-.071			.752	.026
.550	-.171	.550	-.050			.640	.031			.845	.073
.575	-.164	.576	-.092			.702	.067			.935	.154
.600	-.149	.600	-.126			.800	.142				
.625	-.125	.628	-.065			.857	.169				
.650	-.089	.650	.019			.919	.233				
.675	-.080	.675	.039			.959	.234				
.700	-.026	.700	.049								
.750	.020	.750	.115								
.800	.163	.800	.172								
.850	.234	.849	.211								
.900	.278	.900	.248								
.950	.268	.949	.199								
CN =	.5820		.5890		.7197		.7250		.6239		.4942
CM =	.0129		-.0855		-.1279		-.1611		-.1340		-.0801

TABLE 5. - Continued.

M = .967 Q =10.04 ALPHA = 6.25 CNWP = .5759 DA =2.0 RN =4.38

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.014	0.000	-.048	.026	-.990	0.000	.321	.024	-.809	0.000	.398
.020	-.213	.022	-.895	.076	-1.076	.017	-.894	.064	-.911	.018	-.847
.040	-.257	.041	-1.048	.138	-1.076	.032	-.976	.136	-.888	.038	-.799
.060	-.306	.074	-1.137	.211	-1.034	.051	-.958	.208	-.898	.058	-.854
.100	-.306	.109	-1.153	.300	-1.022	.070	-.968	.298	-.889	.139	-.845
.200	-.452	.201	-1.132	.400	-.986	.148	-.966	.398	-.853	.195	-.855
.300	-.504	.301	-.811	.499	-.740	.219	-.956	.499	-.822	.297	-.841
.400	-.489	.401	-.650	.573	-.640	.268	-.956	.564	-.806	.386	-.827
.500	-.404	.501	-.480	.686	-.600	.314	-.936	.676	-.808	.452	-.805
.525	-.365	.526	-.405	.787	-.552	.383	-.907	.786	-.453	.504	-.797
.550	-.330	.551	-.369	.859	-.388	.440	-.898	.858	-.398	.556	-.785
.575	-.338	.576	-.339	.924	-.301	.498	-.886	.907	0.000	.647	-.770
.600	-.356	.600	-.394	.965	-.207	.538	-.876	.957	-.479	.696	-.756
.625	0.000	.629	-.350	1.000	-.241	.570	-.878	1.000	-.549	.746	-.424
.650	-.275	.650	-.383			.615	-.848			.797	-.390
.669	-.248	.675	-.361			.648	-.858			.852	-.358
.688	-.224	.699	-.353			.667	-.868			.896	-.336
.719	-.210	.726	-.389			.701	-.830			.946	-.327
.750	-.192	.750	-.393			.777	0.000			1.000	-.327
.775	-.192	.775	-.397			.816	-.480				
.800	-.203	.800	-.433			.856	-.481				
.825	-.216	.824	-.468			.896	-.481				
.850	-.233	.849	-.481			.935	-.470				
.875	-.267	.874	-.509			.972	-.485				
.900	-.299	.899	-.505			1.000	-.460				
.925	-.319	.924	-.406								
.950	-.402	.950	-.297								
.975	-.428	.974	-.182								
1.000	-.181	1.000	-.142								
					LOWER SURFACE						
.020	.128	.022	.344	.028	.331	.017	.270	.025	.141	.020	.150
.040	.123	.041	.286	.077	.116	.045	.094	.066	.037	.040	.054
.060	.113	.074	.187	.139	.045	.055	.055	.139	-.066	.060	-.011
.100	.083	.101	.124	.210	-.007	.070	.042	.211	-.121	.140	-.195
.200	.059	.207	-.050	.301	-.048	.152	-.081	.302	-.165	.196	-.209
.300	-.008	.301	-.021	.400	-.075	.220	-.073	.400	-.095	.253	-.241
.325	-.133	.326	-.024	.500	-.072	.269	-.075	.503	-.142	.306	-.177
.344	-.061	.350	-.052	.574	-.032	.315	-.064	.565	-.204	.388	-.178
.375	-.079	.376	-.068	.715	-.040	.383	-.117	.703	0.000	.432	-.270
.400	-.100	.400	-.071	.788	.205	.411	-.149	.789	.099	.474	-.298
.429	-.139	.425	-.052	.860	.359	.439	-.181	.861	.163	.494	-.318
.450	-.120	.450	-.115	.924	.312	.479	-.166	.933	.190	.559	-.289
.475	-.157	.475	-.142	.965	.300	.518	-.096	.975	.065	.637	-.256
.500	-.100	.500	-.106			.546	-.090			.679	-.135
.525	-.118	.525	-.094			.570	-.061			.752	-.058
.550	-.130	.550	-.029			.640	.044			.845	-.023
.575	-.124	.576	-.068			.702	.073			.935	.068
.600	-.115	.600	-.104			.800	.104				
.625	-.089	.628	-.050			.857	.114				
.650	-.056	.650	.037			.919	.166				
.675	-.052	.675	.053			.959	.166				
.700	.003	.700	.063								
.750	.040	.750	.126								
.800	.183	.800	.186								
.850	.254	.849	.225								
.900	.291	.900	.258								
.950	.273	.949	.203								
CN =	.6791		.7015		.8207		.7999		.6986		.5402
CM =	.0089		-.0943		-.1424		-.1682		-.1411		-.0936

TABLE 5. - Continued.

M = .969 Q =10.15 ALPHA = 6.40 CNWP = .5698 DA =1.7 RN =4.42

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
UPPER SURFACE											
0.000	.016	0.000	-.061	.026	-1.006	0.000	.324	.024	-.832	0.000	.404
.020	-.214	.022	-.903	.076	-1.083	.017	-.887	.064	-.924	.018	-.834
.040	-.258	.041	-1.052	.138	-1.083	.032	-.972	.136	-.894	.038	-.783
.060	-.314	.074	-1.137	.211	-1.039	.051	-.954	.208	-.901	.058	-.838
.100	-.306	.109	-1.151	.300	-1.020	.070	-.964	.298	-.887	.139	-.834
.200	-.456	.201	-1.129	.400	-.984	.148	-.964	.398	-.853	.195	-.844
.300	-.505	.301	-.828	.499	-.690	.219	-.953	.499	-.824	.297	-.835
.400	-.488	.401	-.688	.573	-.661	.268	-.953	.564	-.806	.386	-.819
.500	-.403	.501	-.495	.686	-.617	.314	-.932	.676	-.802	.452	-.798
.525	-.365	.526	-.416	.787	-.525	.383	-.899	.786	-.441	.504	-.792
.550	-.329	.551	-.381	.859	-.381	.440	-.891	.858	-.413	.556	-.781
.575	-.337	.576	-.341	.924	-.298	.498	-.885	.907	0.000	.647	-.771
.600	-.351	.600	-.397	.965	-.206	.538	-.877	.957	-.429	.696	-.630
.625	0.000	.629	-.347	1.000	-.238	.570	-.877	1.000	-.595	.746	-.387
.650	-.269	.650	-.379			.615	-.847			.797	-.374
.669	-.245	.675	-.360			.648	-.859			.852	-.351
.688	-.223	.699	-.357			.667	-.794			.896	-.340
.719	-.211	.726	-.390			.701	-.530			.946	-.326
.750	-.196	.750	-.382			.777	0.000			1.000	-.335
.775	-.199	.775	-.391			.816	-.457				
.800	-.210	.800	-.430			.856	-.466				
.825	-.224	.824	-.469			.896	-.466				
.850	-.243	.849	-.487			.935	-.460				
.875	-.281	.874	-.508			.972	-.481				
.900	-.304	.899	-.508			1.000	-.453				
.925	-.328	.924	-.413								
.950	-.404	.950	-.312								
.975	-.424	.974	-.188								
1.000	-.180	1.000	-.136								
LOWER SURFACE											
.020	.132	.022	.348	.028	.350	.017	.272	.025	.153	.020	.146
.040	.126	.041	.299	.077	.131	.045	.092	.066	.045	.040	.046
.060	.118	.074	.191	.139	.056	.055	.054	.139	-.064	.060	-.014
.100	.084	.101	.124	.210	.001	.070	.042	.211	-.112	.140	-.199
.200	.060	.207	-.050	.301	-.040	.152	-.082	.302	-.160	.196	-.215
.300	-.007	.301	-.021	.400	-.069	.220	-.073	.400	-.103	.253	-.278
.325	-.127	.326	-.022	.500	-.065	.269	-.076	.503	-.141	.306	-.169
.344	-.058	.350	-.051	.574	-.026	.315	-.063	.565	-.204	.388	-.171
.375	-.075	.376	-.068	.715	-.051	.383	-.115	.703	-.005	.432	-.265
.400	-.091	.400	-.072	.788	.189	.411	-.147	.789	.103	.474	-.295
.429	-.133	.425	-.055	.860	.353	.439	-.182	.861	.164	.494	-.311
.450	-.107	.450	-.114	.924	.306	.479	-.170	.933	.190	.559	-.278
.475	-.146	.475	-.140	.965	.296	.518	-.106	.975	.070	.637	-.250
.500	-.087	.500	-.107			.546	-.100			.679	-.129
.525	-.105	.525	-.093			.570	-.071			.752	-.052
.550	-.112	.550	-.030			.640	.030			.845	-.014
.575	-.108	.576	-.065			.702	.053			.935	.071
.600	-.108	.600	-.103			.800	.083				
.625	-.078	.628	-.046			.857	.097				
.650	-.045	.650	.038			.919	.148				
.675	-.048	.675	.054			.959	.144				
.700	.007	.700	.063								
.750	.042	.750	.127								
.800	.184	.800	.186								
.850	.252	.849	.225								
.900	.286	.900	.258								
.950	.273	.949	.205								
CN =	.6914		.7015		.8211		.7490		.6974		.5321
CM =	.0118		-.0940		-.1398		-.1490		-.1355		-.0931

TABLE 5. - Continued.

M = .965 Q =10.71 ALPHA = 7.86 CNWP = .6615 DA = .9 RN =4.68

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.004	0.000	-.095	.026	-1.064	0.000	.311	.024	-.881	0.000	-.385
.020	-.270	.022	-.987	.076	-1.148	.017	-.957	.064	-.975	.018	-.896
.040	-.313	.041	-1.123	.138	-1.129	.032	-1.051	.136	-.935	.038	-.883
.060	-.378	.074	-1.203	.211	-1.094	.051	-1.036	.208	-.935	.058	-.935
.100	-.368	.109	-1.224	.300	-1.073	.070	-1.036	.298	-.954	.139	-.913
.200	-.499	.201	-1.214	.400	-1.045	.148	-1.036	.398	-.901	.195	-.912
.300	-.541	.301	-.932	.499	-.767	.219	-1.030	.499	-.887	.297	-.906
.400	-.518	.401	-.931	.573	-.720	.268	-1.029	.564	-.883	.386	-.888
.500	-.424	.501	-.793	.686	-.633	.314	-1.018	.676	-.874	.452	-.879
.525	-.383	.526	-.742	.787	-.527	.383	-1.000	.786	-.549	.504	-.877
.550	-.352	.551	-.695	.859	-.480	.440	-.990	.858	-.488	.556	-.868
.575	-.359	.576	-.592	.924	-.408	.498	-.981	.907	0.000	.647	-.846
.600	-.372	.600	-.564	.965	-.261	.538	-.966	.957	-.582	.696	-.612
.625	0.000	.629	-.424	1.000	-.332	.570	-.972	1.000	-.674	.746	-.446
.650	-.295	.650	-.385			.615	-.929			.797	-.428
.669	-.271	.675	-.315			.648	-.852			.852	-.412
.688	-.248	.699	-.303			.667	-.765			.896	-.399
.719	-.239	.726	-.350			.701	-.718			.946	-.384
.750	-.225	.750	-.357			.777	0.000			1.000	-.388
.775	-.228	.775	-.373			.816	-.628				
.800	-.236	.800	-.424			.856	-.614				
.825	-.246	.824	-.469			.896	-.614				
.850	-.262	.849	-.488			.935	-.547				
.875	-.302	.874	-.508			.972	-.617				
.900	-.332	.899	-.528			1.000	-.512				
.925	-.351	.924	-.492								
.950	-.433	.950	-.369								
.975	-.475	.974	-.224								
1.000	-.208	1.000	-.126								
					LOWER SURFACE						
.020	.166	.022	.407	.028	.412	.017	.354	.025	.197	.020	.221
.040	.172	.041	.356	.077	.192	.045	.173	.066	.077	.040	.109
.060	.165	.074	.260	.139	.111	.055	.134	.139	-.040	.060	.039
.100	.133	.101	.198	.210	.052	.070	.112	.211	-.086	.140	-.156
.200	.103	.207	.026	.301	.007	.152	-.038	.302	-.132	.196	-.185
.300	.037	.301	.038	.400	-.029	.220	-.035	.400	-.091	.253	-.242
.325	-.052	.326	.032	.500	-.040	.269	-.046	.503	-.126	.306	-.149
.344	-.010	.350	.005	.574	-.011	.315	-.040	.565	-.192	.388	-.168
.375	-.023	.376	-.013	.715	-.068	.383	-.101	.703	-.013	.432	-.263
.400	-.040	.400	-.020	.788	.169	.411	-.132	.789	.107	.474	-.294
.429	-.087	.425	-.006	.860	.344	.439	-.174	.861	.172	.494	-.315
.450	-.061	.450	-.066	.924	.297	.479	-.186	.933	.194	.559	-.286
.475	-.108	.475	-.087	.965	.284	.518	-.109	.975	.061	.637	-.263
.500	-.050	.500	-.061			.546	-.111			.679	-.138
.525	-.066	.525	-.054			.570	-.086			.752	-.059
.550	-.075	.550	.003			.640	.014			.845	-.029
.575	-.071	.576	-.033			.702	.036			.935	.054
.600	-.071	.600	-.073			.800	.105				
.625	-.044	.628	-.020			.857	.149				
.650	-.011	.650	.061			.919	.212				
.675	-.015	.675	.077			.959	.204				
.700	.040	.700	.081								
.750	.074	.750	.145								
.800	.215	.800	.202								
.850	.278	.849	.239								
.900	.313	.900	.274								
.950	.291	.949	.216								
CN =	.8159		.8584		.8995		.8780		.7833		.6072
CM =	.0290		-.1135		-.1496		-.1818		-.1616		-.1016

TABLE 5. - Continued.

M = .975 Q = 9.52 ALPHA = 2.37 CNWP = .2520 DA =1.3 RN =4.13

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.032	0.000	.164	.026	-.454	0.000	.460	.024	-.368	0.000	.542
.020	-.101	.022	-.478	.076	-.724	.017	-.429	.064	-.500	.018	-.149
.040	-.136	.041	-.600	.138	-.726	.032	-.546	.136	-.541	.038	-.189
.060	-.167	.074	-.719	.211	-.651	.051	-.588	.208	-.158	.058	-.353
.100	-.196	.109	-.716	.300	-.467	.070	-.609	.298	-.226	.139	-.295
.200	-.359	.201	-.506	.400	-.404	.148	-.682	.398	-.260	.195	-.359
.300	-.397	.301	-.424	.499	-.279	.219	-.640	.499	-.285	.297	-.313
.400	-.415	.401	-.443	.573	-.293	.268	-.577	.564	-.298	.386	-.313
.500	-.341	.501	-.325	.686	-.368	.314	-.270	.676	-.419	.452	-.312
.525	-.307	.526	-.274	.787	-.488	.383	-.239	.786	-.559	.504	-.355
.550	-.262	.551	-.254	.859	-.585	.440	-.270	.858	-.462	.556	-.378
.575	-.278	.576	-.233	.924	-.202	.498	-.283	.907	0.000	.647	-.410
.600	-.298	.600	-.272	.965	-.112	.538	-.295	.957	-.223	.696	-.366
.625	0.000	.629	-.257	1.000	-.147	.570	-.300	1.000	-.235	.746	-.446
.650	-.216	.650	-.285			.615	-.274			.797	-.537
.669	-.186	.675	-.265			.648	-.316			.852	-.305
.688	-.162	.699	-.265			.667	-.352			.896	-.100
.719	-.145	.726	-.295			.701	-.442			.946	-.028
.750	-.125	.750	-.305			.777	0.000			1.000	-.007
.775	-.128	.775	-.318			.816	-.661				
.800	-.135	.800	-.351			.856	-.711				
.825	-.141	.824	-.386			.896	-.711				
.850	-.158	.849	-.401			.935	-.281				
.875	-.197	.874	-.433			.972	-.255				
.900	-.223	.899	-.427			1.000	-.234				
.925	-.244	.924	-.320								
.950	-.321	.950	-.192								
.975	-.270	.974	-.107								
1.000	-.081	1.000	-.081								
					LOWER SURFACE						
.020	.051	.022	.103	.028	.019	.017	-.099	.025	-.184	.020	-.225
.040	.026	.041	.028	.077	-.237	.045	-.309	.066	-.278	.040	-.314
.060	.015	.074	-.060	.139	-.194	.055	-.355	.139	-.318	.060	-.332
.100	-.011	.101	-.147	.210	-.205	.070	-.148	.211	-.341	.140	-.379
.200	-.026	.207	-.325	.301	-.259	.152	-.396	.302	-.223	.196	-.386
.300	-.068	.301	-.334	.400	-.212	.220	-.267	.400	-.193	.253	-.381
.325	-.214	.326	-.311	.500	-.193	.269	-.248	.503	-.125	.306	-.360
.344	-.242	.350	-.309	.574	-.092	.315	-.248	.565	-.200	.388	-.223
.375	-.171	.376	-.325	.715	-.077	.383	-.161	.703	.017	.432	-.264
.400	-.186	.400	-.363	.788	.159	.411	-.191	.789	.140	.474	-.272
.429	-.261	.425	-.264	.860	.319	.439	-.222	.861	.210	.494	-.236
.450	-.274	.450	-.255	.924	.283	.479	-.247	.933	.259	.559	-.133
.475	-.336	.475	-.219	.965	.290	.518	-.208	.975	.168	.637	-.013
.500	-.247	.500	-.166			.546	-.128			.679	.063
.525	-.278	.525	-.170			.570	-.089			.752	.141
.550	-.282	.550	-.095			.640	.034			.845	.187
.575	-.302	.576	-.144			.702	.081			.935	.250
.600	-.298	.600	-.200			.800	.147				
.625	-.287	.628	-.121			.857	.147				
.650	-.264	.650	-.038			.919	.190				
.675	-.240	.675	-.007			.959	.205				
.700	-.158	.700	.013								
.750	-.072	.750	.084								
.800	.072	.800	.142								
.850	.154	.849	.182								
.900	.204	.900	.221								
.950	.214	.949	.193								
CN =	.3326		.3062		.3802		.3546		.2349		.2086
CM =	.0003		-.0776		-.1049		-.1281		-.1114		-.1016

TABLE 5. - Continued.

M = .983 Q = 9.56 ALPHA = 3.87 CNWP = .3814 DA =1.5 RN =4.76

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.035	0.000	.111	.026	-.672	0.000	.451	.024	-.488	0.000	.483
.020	-.060	.022	-.597	.076	-.805	.017	-.581	.064	-.650	.018	-.527
.040	-.168	.041	-.797	.138	-.826	.032	-.691	.136	-.640	.038	-.450
.060	-.215	.074	-.860	.211	-.794	.051	-.672	.208	-.670	.058	-.639
.100	-.235	.109	-.826	.300	-.742	.070	-.691	.298	-.669	.139	-.584
.200	-.382	.201	-.578	.400	-.509	.148	-.733	.398	-.620	.195	-.631
.300	-.409	.301	-.462	.499	-.402	.219	-.733	.499	-.594	.297	-.597
.400	-.415	.401	-.470	.573	-.338	.268	-.722	.564	-.584	.386	-.576
.500	-.338	.501	-.405	.686	-.384	.314	-.691	.676	-.386	.452	-.551
.525	-.302	.526	-.339	.787	-.505	.383	-.660	.786	-.513	.504	-.569
.550	-.260	.551	-.307	.859	-.589	.440	-.658	.858	-.546	.556	-.586
.575	-.269	.576	-.280	.924	-.221	.498	-.643	.907	0.000	.647	-.480
.600	-.292	.600	-.318	.965	-.146	.538	-.406	.957	-.311	.696	-.386
.625	0.000	.629	-.294	1.000	-.168	.570	-.344	1.000	-.331	.746	-.420
.650	-.223	.650	-.318			.615	-.307			.797	-.473
.669	-.198	.675	-.295			.648	-.319			.852	-.548
.688	-.172	.699	-.297			.667	-.358			.896	-.230
.719	-.163	.726	-.328			.701	-.419			.946	-.154
.750	-.142	.750	-.318			.777	0.000			1.000	-.130
.775	-.137	.775	-.326			.816	-.639				
.800	-.144	.800	-.356			.856	-.709				
.825	-.155	.824	-.394			.896	-.709				
.850	-.170	.849	-.404			.935	-.344				
.875	-.202	.874	-.435			.972	-.343				
.900	-.230	.899	-.437			1.000	-.301				
.925	-.251	.924	-.347								
.950	-.329	.950	-.211								
.975	-.331	.974	-.123								
1.000	-.116	1.000	-.101								
					LOWER SURFACE						
.020	.089	.022	.204	.028	.170	.017	.093	.025	-.076	.020	-.063
.040	.071	.041	.122	.077	-.050	.045	-.081	.066	-.157	.040	-.126
.060	.063	.074	.035	.139	-.107	.055	-.145	.139	-.224	.060	-.190
.100	.036	.101	-.049	.210	-.116	.070	-.102	.211	-.106	.140	-.314
.200	.019	.207	-.209	.301	-.162	.152	-.176	.302	-.165	.196	-.214
.300	-.030	.301	-.115	.400	-.134	.220	-.189	.400	-.234	.253	-.293
.325	-.179	.326	-.115	.500	-.157	.269	-.205	.503	-.122	.306	-.272
.344	-.168	.350	-.127	.574	-.047	.315	-.204	.565	-.171	.388	-.171
.375	-.108	.376	-.160	.715	-.081	.383	-.121	.703	.033	.432	-.232
.400	-.152	.400	-.182	.788	.176	.411	-.140	.789	.147	.474	-.227
.429	-.211	.425	-.097	.860	.344	.439	-.154	.861	.221	.494	-.229
.450	-.240	.450	-.169	.924	.308	.479	-.193	.933	.265	.559	-.227
.475	-.264	.475	-.211	.965	.308	.518	-.198	.975	.162	.637	-.245
.500	-.192	.500	-.211			.546	-.153			.679	-.107
.525	-.212	.525	-.173			.570	-.089			.752	.019
.550	-.224	.550	-.053			.640	.056			.845	.077
.575	-.238	.576	-.100			.702	.095			.935	.169
.600	-.243	.600	-.142			.800	.143				
.625	-.205	.628	-.066			.857	.148				
.650	-.169	.650	.015			.919	.200				
.675	-.124	.675	.040			.959	.215				
.700	-.052	.700	.053								
.750	.007	.750	.120								
.800	.144	.800	.177								
.850	.219	.849	.216								
.900	.268	.900	.254								
.950	.270	.949	.210								
CN =	.4650		.4461		.5262		.5339		.4927		.3827
CM =	-.0027		-.0839		-.1128		-.1407		-.1326		-.0949

TABLE 5. - Continued.

M = .982 Q = 9.50 ALPHA = 4.02 CNWP = .3687 DA =1.5 RN =4.11

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.034	0.000	.106	.026	-.701	0.000	.460	.024	-.494	0.000	.479
.020	-.126	.022	-.598	.076	-.813	.017	-.572	.064	-.651	.018	-.519
.040	-.171	.041	-.800	.138	-.839	.032	-.680	.136	-.629	.038	-.443
.060	-.215	.074	-.855	.211	-.796	.051	-.661	.208	-.666	.058	-.635
.100	-.238	.109	-.821	.300	-.745	.070	-.690	.298	-.656	.139	-.573
.200	-.385	.201	-.574	.400	-.502	.148	-.734	.398	-.611	.195	-.625
.300	-.411	.301	-.463	.499	-.371	.219	-.724	.499	-.592	.297	-.598
.400	-.413	.401	-.465	.573	-.326	.268	-.724	.564	-.488	.386	-.579
.500	-.337	.501	-.393	.686	-.426	.314	-.703	.676	-.384	.452	-.553
.525	-.306	.526	-.330	.787	-.505	.383	-.667	.786	-.519	.504	-.568
.550	-.262	.551	-.305	.859	-.592	.440	-.669	.858	-.581	.556	-.586
.575	-.275	.576	-.282	.924	-.223	.498	-.648	.907	0.000	.647	-.429
.600	-.299	.600	-.317	.965	-.150	.538	-.407	.957	-.326	.696	-.381
.625	0.000	.629	-.291	1.000	-.171	.570	-.346	1.000	-.338	.746	-.424
.650	-.219	.650	-.316			.615	-.305			.797	-.490
.669	-.194	.675	-.303			.648	-.326			.852	-.579
.698	-.175	.699	-.305			.667	-.357			.896	-.246
.719	-.162	.726	-.326			.701	-.420			.946	-.167
.750	-.139	.750	-.350			.777	0.000			1.000	-.145
.775	-.138	.775	-.354			.816	-.646				
.800	-.144	.800	-.388			.856	-.694				
.825	-.153	.824	-.422			.896	-.694				
.850	-.167	.849	-.435			.935	-.341				
.875	-.204	.874	-.464			.972	-.351				
.900	-.232	.899	-.466			1.000	-.305				
.925	-.255	.924	-.373								
.950	-.332	.950	-.240								
.975	-.329	.974	-.144								
1.000	-.116	1.000	-.123								
					LOWER SURFACE						
.020	.087	.022	.196	.028	.166	.017	.081	.025	-.077	.020	-.069
.040	.072	.041	.123	.077	-.054	.045	-.088	.066	-.166	.040	-.123
.060	.059	.074	.005	.139	-.097	.055	-.137	.139	-.236	.060	-.195
.100	.032	.101	-.077	.210	-.116	.070	-.109	.211	-.226	.140	-.320
.200	.016	.207	-.240	.301	-.154	.152	-.187	.302	-.174	.196	-.228
.300	-.034	.301	-.159	.400	-.130	.220	-.197	.400	-.232	.253	-.301
.325	-.181	.326	-.139	.500	-.177	.269	-.208	.503	-.127	.306	-.280
.344	-.171	.350	-.137	.574	-.074	.315	-.207	.565	-.180	.388	-.197
.375	-.113	.376	-.193	.715	-.084	.383	-.127	.703	.023	.432	-.262
.400	-.158	.400	-.204	.788	.169	.411	-.151	.789	.133	.474	-.291
.429	-.219	.425	-.119	.860	.340	.439	-.155	.861	.200	.494	-.301
.450	-.237	.450	-.191	.924	.302	.479	-.201	.933	.240	.559	-.243
.475	-.286	.475	-.239	.965	.301	.518	-.209	.975	.140	.637	-.154
.500	-.196	.500	-.239			.546	-.175			.679	-.055
.525	-.227	.525	-.187			.570	-.109			.752	.017
.550	-.241	.550	-.080			.640	.360			.845	.064
.575	-.247	.576	-.129			.702	.074			.935	.145
.600	-.272	.600	-.170			.800	.138				
.625	-.236	.628	-.092			.857	.160				
.650	-.191	.650	-.009			.919	.223				
.675	-.139	.675	.014			.959	.238				
.700	-.076	.700	.030								
.750	-.017	.750	.098								
.800	.119	.800	.154								
.850	.196	.849	.196								
.900	.243	.900	.230								
.950	.245	.949	.185								
CN =	.4372		.4174		.5276		.5286		.4594		.3743
CM =	.0059		-.0854		-.1104		-.1409		-.1273		-.0944

TABLE 5. - Continued.

M = .976 Q = 9.36 ALPHA = 4.92 CNWP = .4537 DA =1.4 RN =4.06

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.040	0.000	.063	.026	-.813	0.000	.423	.024	-.584	0.000	.451
.020	-.143	.022	-.692	.076	-.917	.017	-.681	.064	-.746	.018	-.685
.040	-.184	.041	-.878	.138	-.907	.032	-.811	.136	-.734	.038	-.555
.060	-.234	.074	-.974	.211	-.896	.051	-.779	.208	-.755	.058	-.709
.100	-.249	.109	-.974	.300	-.864	.070	-.796	.298	-.746	.139	-.719
.200	-.410	.201	-.792	.400	-.808	.148	-.832	.398	-.703	.195	-.725
.300	-.452	.301	-.549	.499	-.514	.219	-.832	.499	-.694	.297	-.717
.400	-.445	.401	-.515	.573	-.417	.268	-.811	.564	-.687	.386	-.677
.500	-.376	.501	-.457	.686	-.460	.314	-.789	.676	-.698	.452	-.641
.525	-.345	.526	-.386	.787	-.512	.383	-.752	.786	-.471	.504	-.639
.550	-.304	.551	-.354	.859	-.587	.440	-.750	.858	-.384	.556	-.659
.575	-.315	.576	-.320	.924	-.231	.498	-.756	.907	0.000	.647	-.656
.600	-.336	.600	-.354	.965	-.148	.538	-.743	.957	-.325	.696	-.657
.625	0.000	.629	-.330	1.000	-.178	.570	-.748	1.000	-.500	.746	-.682
.650	-.256	.650	-.350			.615	-.694			.797	-.421
.669	-.225	.675	-.328			.648	-.630			.852	-.268
.688	-.200	.699	-.328			.667	-.566			.896	-.231
.719	-.181	.726	-.354			.701	-.530			.946	-.208
.750	-.156	.750	-.361			.777	0.000			1.000	-.190
.775	-.157	.775	-.366			.816	-.641				
.800	-.163	.800	-.396			.856	-.639				
.825	-.176	.824	-.433			.896	-.639				
.850	-.190	.849	-.443			.935	-.323				
.875	-.228	.874	-.468			.972	-.316				
.900	-.259	.899	-.456			1.000	-.280				
.925	-.280	.924	-.349								
.950	-.358	.950	-.230								
.975	-.349	.974	-.146								
1.000	-.140	1.000	-.130								
					LOWER SURFACE						
.020	.113	.022	.261	.028	.231	.017	.169	.025	-.022	.020	.040
.040	.098	.041	.186	.077	.007	.045	-.016	.066	-.088	.040	-.038
.060	.085	.074	.094	.139	-.046	.055	-.053	.139	-.114	.060	-.097
.100	.055	.101	.028	.210	-.080	.070	-.052	.211	-.171	.140	-.225
.200	.029	.207	-.152	.301	-.106	.152	-.214	.302	-.195	.196	-.240
.300	-.033	.301	-.089	.400	-.110	.220	-.172	.400	-.178	.253	-.306
.325	-.183	.326	-.091	.500	-.115	.269	-.179	.503	-.108	.306	-.259
.344	-.118	.350	-.118	.574	-.037	.315	-.072	.565	-.185	.388	-.184
.375	-.115	.376	-.134	.715	-.082	.383	-.137	.703	.012	.432	-.258
.400	-.155	.400	-.125	.788	.167	.411	-.167	.789	.126	.474	-.287
.429	-.207	.425	-.103	.860	.340	.439	-.201	.861	.193	.494	-.300
.450	-.222	.450	-.172	.924	.305	.479	-.235	.933	.220	.559	-.251
.475	-.243	.475	-.213	.965	.305	.518	-.218	.975	.101	.637	-.185
.500	-.169	.500	-.168			.546	-.113			.679	-.083
.525	-.188	.525	-.130			.570	-.069			.752	-.010
.550	-.216	.550	-.059			.640	.033			.845	.037
.575	-.197	.576	-.106			.702	.066			.935	.119
.600	-.165	.600	-.142			.800	.136				
.625	-.157	.628	-.074			.857	.159				
.650	-.111	.650	.011			.919	.223				
.675	-.096	.675	.028			.959	.229				
.700	-.046	.700	.046								
.750	.006	.750	.108								
.800	.148	.800	.170								
.850	.222	.849	.205								
.900	.266	.900	.239								
.950	.258	.949	.194								
CN =	.5336		.5280		.6469		.6411		.5592		.4592
CM =	.0043		-.0849		-.1228		-.1564		-.1308		-.0952

TABLE 5. - Continued.

M = .979 Q = 9.47 ALPHA = 5.57 CNWP = .5086 DA =1.2 RN =4.10

UPPER SURFACE

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
0.000	.035	0.000	.029	.026	-.876	0.000	.398	.024	-.650	0.000	.426
.020	-.169	.022	-.746	.076	-.968	.017	-.745	.064	-.795	.018	-.747
.040	-.208	.041	-.940	.138	-.958	.032	-.859	.136	-.782	.038	-.647
.060	-.248	.074	-1.025	.211	-.937	.051	-.842	.208	-.788	.058	-.740
.100	-.246	.109	-1.035	.300	-.926	.070	-.850	.298	-.813	.139	-.766
.200	-.417	.201	-1.004	.400	-.874	.148	-.874	.398	-.750	.195	-.782
.300	-.464	.301	-.655	.499	-.800	.219	-.882	.499	-.738	.297	-.770
.400	-.459	.401	-.556	.573	-.554	.268	-.874	.564	-.741	.386	-.750
.500	-.387	.501	-.497	.686	-.527	.314	-.853	.676	-.763	.452	-.715
.525	-.352	.526	-.433	.787	-.529	.383	-.810	.786	-.466	.504	-.710
.550	-.313	.551	-.395	.859	-.533	.440	-.795	.858	-.465	.556	-.699
.575	-.323	.576	-.357	.924	-.248	.498	-.795	.907	0.000	.647	-.693
.600	-.343	.600	-.392	.965	-.173	.538	-.783	.957	-.404	.696	-.694
.625	0.000	.629	-.359	1.000	-.202	.570	-.787	1.000	-.546	.746	-.721
.650	-.268	.650	-.378			.615	-.748			.797	-.693
.669	-.243	.675	-.359			.648	-.757			.852	-.360
.688	-.220	.699	-.351			.667	-.769			.896	-.318
.719	-.200	.726	-.380			.701	-.794			.946	-.296
.750	-.180	.750	-.388			.777	0.000			1.000	-.282
.775	-.172	.775	-.390			.816	-.649				
.800	-.182	.800	-.419			.856	-.593				
.825	-.191	.824	-.454			.896	-.593				
.850	-.209	.849	-.465			.935	-.441				
.875	-.246	.874	-.488			.972	-.388				
.900	-.275	.899	-.478			1.000	-.367				
.925	-.293	.924	-.377								
.950	-.371	.950	-.260								
.975	-.385	.974	-.169								
1.000	-.165	1.000	-.146								

LOWER SURFACE

.020	.124	.022	.291	.028	.272	.017	.209	.025	.039	.020	.069
.040	.113	.041	.228	.077	.053	.045	.031	.066	-.017	.040	-.010
.060	.101	.074	.125	.139	-.010	.055	-.016	.139	-.089	.060	-.067
.100	.069	.101	.061	.210	-.050	.070	-.024	.211	-.155	.140	-.209
.200	.042	.207	-.119	.301	-.082	.152	-.194	.302	-.180	.196	-.225
.300	-.018	.301	-.070	.400	-.104	.220	-.153	.400	-.134	.253	-.290
.325	-.169	.326	-.068	.500	-.130	.269	-.117	.503	-.120	.306	-.261
.344	-.071	.350	-.094	.574	-.037	.315	-.083	.565	-.188	.388	-.194
.375	-.095	.376	-.112	.715	-.079	.383	-.133	.703	-.003	.432	-.244
.400	-.135	.400	-.108	.788	.170	.411	-.161	.789	.113	.474	-.289
.429	-.176	.425	-.089	.860	.341	.439	-.197	.861	.175	.494	-.305
.450	-.182	.450	-.154	.924	.305	.479	-.231	.933	.203	.559	-.268
.475	-.191	.475	-.192	.965	.300	.518	-.214	.975	.081	.637	-.218
.500	-.145	.500	-.142			.546	-.112			.679	-.108
.525	-.158	.525	-.123			.570	-.067			.752	-.034
.550	-.187	.550	-.056			.640	.031			.845	.003
.575	-.163	.576	-.100			.702	.058			.935	.085
.600	-.158	.600	-.138			.800	.124				
.625	-.137	.628	-.071			.857	.154				
.650	-.097	.650	.011			.919	.216				
.675	-.089	.675	.034			.959	.222				
.700	-.032	.700	.044								
.750	.014	.750	.109								
.800	.158	.800	.168								
.850	.229	.849	.207								
.900	.270	.900	.238								
.950	.261	.949	.188								

CN =	.5885		.6040		.7238		.7218		.6152		.5087
CM =	.0094		-.0880		-.1339		-.1763		-.1375		-.1086

TABLE 5. - Continued.

M = .977 Q = 9.58 ALPHA = 6.48 CNWP = .5728 DA =1.6 RN =4.16

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.030	0.000	-.022	.026	-.951	0.000	.350	.024	-.761	0.000	.418
.020	-.197	.022	-.853	.076	-1.033	.017	-.850	.064	-.872	.018	-.802
.040	-.246	.041	-1.004	.138	-1.033	.032	-.940	.136	-.847	.038	-.747
.060	-.299	.074	-1.089	.211	-.991	.051	-.929	.208	-.863	.058	-.803
.100	-.297	.109	-1.111	.300	-.978	.070	-.925	.298	-.858	.139	-.809
.200	-.450	.201	-1.089	.400	-.947	.148	-.940	.398	-.820	.195	-.828
.300	-.494	.301	-.801	.499	-.938	.219	-.929	.499	-.798	.297	-.822
.400	-.489	.401	-.695	.573	-.680	.268	-.929	.564	-.796	.386	-.809
.500	-.408	.501	-.519	.686	-.628	.314	-.909	.676	-.800	.452	-.783
.525	-.371	.526	-.461	.787	-.535	.383	-.877	.786	-.473	.504	-.785
.550	-.332	.551	-.421	.859	-.396	.440	-.877	.858	-.447	.556	-.779
.575	-.339	.576	-.377	.924	-.323	.498	-.875	.907	0.000	.647	-.761
.600	-.360	.600	-.414	.965	-.234	.538	-.861	.957	-.474	.696	-.758
.625	0.000	.629	-.369	1.000	-.255	.570	-.861	1.000	-.593	.746	-.761
.650	-.286	.650	-.396			.615	-.835			.797	-.496
.669	-.260	.675	-.369			.648	-.846			.852	-.411
.688	-.237	.699	-.364			.667	-.856			.896	-.379
.719	-.220	.726	-.400			.701	-.843			.946	-.365
.750	-.199	.750	-.397			.777	0.000			1.000	-.361
.775	-.200	.775	-.400			.816	-.472				
.800	-.210	.800	-.434			.856	-.479				
.825	-.221	.824	-.472			.896	-.479				
.850	-.233	.849	-.483			.935	-.472				
.875	-.270	.874	-.511			.972	-.510				
.900	-.299	.899	-.513			1.000	-.476				
.925	-.317	.924	-.431								
.950	-.396	.950	-.310								
.975	-.425	.974	-.192								
1.000	-.180	1.000	-.152								
					LOWER SURFACE						
.020	.145	.022	.346	.028	.327	.017	.270	.025	.125	.020	.145
.040	.140	.041	.282	.077	.116	.045	.088	.066	.034	.040	.048
.060	.130	.074	.182	.139	.044	.055	.053	.139	-.069	.060	-.008
.100	.096	.101	.115	.210	-.010	.070	.041	.211	-.126	.140	-.189
.200	.067	.207	-.061	.301	-.048	.152	-.088	.302	-.162	.196	-.201
.300	0.000	.301	-.028	.400	-.076	.220	-.074	.400	-.211	.253	-.267
.325	0.000	.326	-.028	.500	-.073	.269	-.076	.503	-.114	.306	-.228
.344	-.058	.350	-.058	.574	-.025	.315	-.059	.565	-.180	.388	-.194
.375	-.070	.376	-.073	.715	-.054	.383	-.111	.703	-.001	.432	-.250
.400	-.098	.400	-.077	.788	.192	.411	-.145	.789	.105	.474	-.285
.429	-.136	.425	-.053	.860	.354	.439	-.178	.861	.166	.494	-.311
.450	-.123	.450	-.121	.924	.310	.479	-.208	.933	.197	.559	-.283
.475	-.146	.475	-.151	.965	.300	.518	-.144	.975	.078	.637	-.242
.500	-.094	.500	-.109			.546	-.079			.679	-.126
.525	-.115	.525	-.095			.570	-.057			.752	-.046
.550	-.131	.550	-.028			.640	.038			.845	-.017
.575	-.119	.576	-.070			.702	.067			.935	.061
.600	-.115	.600	-.106			.800	.098				
.625	-.093	.628	-.047			.857	.105				
.650	-.058	.650	.036			.919	.157				
.675	-.055	.675	.055			.959	.156				
.700	0.000	.700	.062								
.750	.039	.750	.129								
.800	.182	.800	.187								
.850	.251	.849	.223								
.900	.291	.900	.258								
.950	.276	.949	.204								
CN =	.6902		.6992		.8156		.7794		.6732		.5644
CM =	.0151		-.0971		-.1473		-.1674		-.1430		-.1133

TABLE 5. - Continued.

M = .983 Q = 9.97 ALPHA = 6.65 CNWP = .5798 DA =1.9 RN =4.31

STA X/C	.133 CP	STA X/C	.306 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.020	0.000	-.011	.026	-.929	0.000	.348	.024	-.739	0.000	.417
.020	-.219	.022	-.841	.076	-1.016	.017	-.858	.064	-.847	.018	-.798
.040	-.260	.041	-.996	.138	-1.020	.032	-.943	.136	-.834	.038	-.754
.060	-.311	.074	-1.083	.211	-.979	.051	-.927	.208	-.845	.058	-.813
.100	-.305	.109	-1.104	.300	-.973	.070	-.937	.298	-.846	.139	-.814
.200	-.424	.201	-1.083	.400	-.945	.148	-.945	.398	-.811	.195	-.826
.300	-.478	.301	-.801	.499	-.945	.219	-.937	.499	-.791	.297	-.815
.400	-.471	.401	-.717	.573	-.709	.268	-.937	.564	-.787	.386	-.809
.500	-.398	.501	-.538	.686	-.640	.314	-.917	.676	-.795	.452	-.789
.525	-.363	.526	-.478	.787	-.507	.383	-.888	.786	-.487	.504	-.789
.550	-.326	.551	-.432	.859	-.419	.440	-.878	.858	-.447	.556	-.778
.575	-.336	.576	-.390	.924	-.331	.498	-.878	.907	0.000	.647	-.764
.600	-.356	.600	-.420	.965	-.250	.538	-.860	.957	-.462	.696	-.755
.625	0.000	.629	-.377	1.000	-.276	.570	-.858	1.000	-.603	.746	-.772
.650	-.282	.650	-.400			.615	-.828			.797	-.533
.669	-.259	.675	-.375			.648	-.838			.852	-.418
.688	-.233	.699	-.370			.667	-.848			.896	-.396
.719	-.220	.726	-.398			.701	-.863			.946	-.373
.750	-.203	.750	-.394			.777	0.000			1.000	-.365
.775	-.196	.775	-.394			.816	-.467				
.800	-.207	.800	-.428			.856	-.490				
.825	-.217	.824	-.462			.896	-.490				
.850	-.229	.849	-.479			.935	-.483				
.875	-.268	.874	-.504			.972	-.516				
.900	-.296	.899	-.509			1.000	-.476				
.925	-.312	.924	-.432								
.950	-.391	.950	-.309								
.975	-.423	.974	-.193								
1.000	-.179	1.000	-.152								
					LOWER SURFACE						
.020	.150	.022	.358	.028	.339	.017	.287	.025	.134	.020	.160
.040	.148	.041	.295	.077	.127	.045	.108	.066	.040	.040	.069
.060	.141	.074	.205	.139	.055	.055	.072	.139	-.056	.060	.007
.100	.111	.101	.138	.210	.003	.070	.055	.211	-.115	.140	-.176
.200	.087	.207	-.035	.301	-.035	.152	-.080	.302	-.150	.196	-.193
.300	.021	.301	-.007	.400	-.065	.220	-.068	.400	-.210	.253	-.256
.325	-.098	.326	-.007	.500	-.061	.269	-.072	.503	-.107	.306	-.222
.344	-.038	.350	-.036	.574	-.015	.315	-.055	.565	-.174	.388	-.193
.375	-.049	.376	-.054	.715	-.051	.383	-.105	.703	.001	.432	-.259
.400	-.077	.400	-.058	.788	-.204	.411	-.141	.789	.106	.474	-.276
.429	-.118	.425	-.040	.860	.361	.439	-.175	.861	.165	.494	-.300
.450	-.104	.450	-.104	.924	.316	.479	-.206	.933	.195	.559	-.281
.475	-.133	.475	-.134	.965	.301	.518	-.161	.975	.079	.637	-.243
.500	-.082	.500	-.095			.546	-.075			.679	-.123
.525	-.098	.525	-.083			.570	-.050			.752	-.047
.550	-.116	.550	-.019			.640	.046			.845	-.021
.575	-.106	.576	-.061			.702	.068			.935	.060
.600	-.104	.600	-.100			.800	.097				
.625	-.082	.628	-.043			.857	.102				
.650	-.046	.650	.046			.919	.155				
.675	-.046	.675	.058			.959	.154				
.700	.015	.700	.065								
.750	.051	.750	.131								
.800	.195	.800	.188								
.850	.264	.849	.225								
.900	.300	.900	.259								
.950	.287	.949	.202								
CN =	.6990		.7142		.8245		.7908		.6696		.5667
CM =	.0172		-.0986		-.1512		-.1689		-.1428		-.1133

TABLE 5. - Continued.

M = .987 Q = 9.63 ALPHA = 3.72 CNWB = .3687 DA =1.4 RN =4.80

STA X/C	.133 CP	STA X/C	.305 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.022	0.000	.185	.025	-.669	0.000	.449	.024	-.475	0.000	.479
.020	-.132	.022	-.553	.075	-.776	.017	-.556	.064	-.628	.018	-.509
.040	-.173	.041	-.791	.138	-.815	.032	-.657	.136	-.622	.038	-.438
.060	-.218	.074	-.862	.211	-.784	.051	-.651	.208	-.648	.058	-.629
.100	-.239	.159	-.825	.300	-.733	.070	-.671	.298	-.656	.139	-.565
.200	-.392	.201	-.603	.400	-.497	.148	-.717	.398	-.605	.195	-.618
.300	-.419	.301	-.477	.499	-.386	.219	-.715	.499	-.586	.297	-.585
.400	-.418	.401	-.457	.573	-.323	.268	-.711	.564	-.484	.386	-.568
.500	-.345	.501	-.399	.685	-.383	.314	-.686	.675	-.381	.452	-.539
.525	-.311	.525	-.335	.737	-.459	.333	-.653	.786	-.511	.504	-.560
.550	-.269	.551	-.304	.859	-.586	.440	-.653	.853	-.569	.556	-.575
.575	-.283	.575	-.279	.924	-.223	.498	-.651	.907	0.000	.647	-.407
.600	-.306	.600	-.312	.965	-.141	.538	-.414	.957	-.317	.696	-.366
.625	0.000	.629	-.292	1.000	-.167	.570	-.342	1.000	-.331	.746	-.415
.650	-.233	.650	-.312			.615	-.302			.797	-.465
.669	-.206	.675	-.298			.648	-.323			.852	-.516
.688	-.185	.699	-.294			.667	-.350			.896	-.218
.719	-.174	.725	-.323			.701	-.414			.946	-.159
.750	-.147	.750	-.322			.777	0.000			1.000	-.134
.775	-.143	.775	-.328			.816	-.630				
.800	-.151	.800	-.378			.856	-.682				
.825	-.157	.824	-.392			.896	-.682				
.850	-.170	.849	-.465			.935	-.324				
.875	-.206	.874	-.451			.972	-.325				
.900	-.232	.899	-.434			1.000	-.281				
.925	-.252	.924	-.342								
.950	-.332	.950	-.214								
.975	-.331	.974	-.119								
1.000	-.124	1.000	-.103								
					LOWER SURFACE						
.020	.075	.022	.192	.023	.150	.017	.078	.025	-.085	.020	-.075
.040	.060	.041	.115	.077	-.072	.045	-.088	.066	-.163	.040	-.131
.060	.050	.074	.030	.139	-.135	.065	-.160	.139	-.236	.060	-.201
.100	.024	.101	-.059	.210	-.104	.070	-.088	.211	-.170	.140	-.321
.200	.011	.207	-.225	.301	-.166	.152	-.258	.302	-.175	.196	-.208
.300	-.038	.301	-.225	.400	-.165	.220	-.179	.400	-.231	.253	-.287
.325	-.180	.325	-.159	.500	-.149	.269	-.196	.503	-.127	.306	-.272
.344	-.184	.350	-.115	.574	-.054	.315	-.203	.565	-.174	.388	-.175
.375	-.113	.375	-.123	.715	-.084	.383	-.135	.703	.028	.432	-.230
.400	-.154	.400	-.155	.788	.173	.411	-.151	.789	.143	.474	-.218
.429	-.218	.425	-.110	.850	.342	.439	-.137	.861	.218	.494	-.224
.450	-.243	.450	-.174	.924	.306	.479	-.193	.933	.264	.559	-.226
.475	-.278	.475	-.221	.965	.306	.518	-.182	.975	.160	.637	-.250
.500	-.197	.500	-.222			.546	-.137			.679	-.104
.525	-.229	.525	-.187			.570	-.075			.752	.020
.550	-.240	.550	-.054			.640	.052			.845	.085
.575	-.239	.575	-.104			.702	.091			.935	.172
.600	-.248	.600	-.150			.800	.139				
.625	-.232	.625	-.055			.857	.145				
.650	-.196	.650	.015			.919	.192				
.675	-.171	.675	.040			.959	.209				
.700	-.079	.700	.053								
.750	-.008	.750	.118								
.800	.136	.800	.175								
.850	.212	.849	.213								
.900	.263	.900	.249								
.950	.264	.949	.212								
CN =	.4498		.4365		.5099		.5150		.4617		.3643
CM =	-.0009		-.0833		-.1113		-.1333		-.1291		-.0914

TABLE 5. - Continued.

M = .987 Q = 9.71 ALPHA = 3.89 CNWP = .3815 DA =1.4 RN =4.82

STA X/C	.133 CP	STA X/C	.386 CP	STA X/C	.480 CP	STA X/C	.633 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.022	0.000	.163	.026	-.674	0.000	.449	.024	-.478	0.000	.477
.020	-.133	.022	-.593	.076	-.792	.017	-.571	.064	-.635	.018	-.517
.040	-.173	.041	-.793	.138	-.825	.032	-.632	.136	-.623	.038	-.444
.060	-.223	.074	-.868	.211	-.795	.051	-.672	.208	-.657	.058	-.630
.100	-.241	.109	-.847	.300	-.743	.070	-.682	.298	-.660	.139	-.571
.200	-.391	.201	-.627	.400	-.573	.148	-.718	.398	-.612	.195	-.627
.300	-.422	.301	-.489	.499	-.416	.219	-.724	.499	-.595	.297	-.596
.400	-.422	.401	-.468	.573	-.333	.268	-.713	.564	-.595	.386	-.576
.500	-.347	.501	-.410	.636	-.381	.314	-.691	.675	-.402	.452	-.553
.525	-.315	.525	-.345	.737	-.502	.383	-.650	.786	-.511	.504	-.563
.550	-.272	.551	-.314	.859	-.590	.440	-.652	.858	-.519	.556	-.582
.575	-.284	.575	-.253	.924	-.223	.498	-.672	.907	0.000	.647	-.578
.600	-.304	.600	-.321	.965	-.230	.538	-.569	.957	-.310	.696	-.578
.625	0.000	.623	-.233	1.000	-.172	.570	-.339	1.000	-.334	.746	-.559
.650	-.233	.650	-.314			.615	-.319			.797	-.472
.669	-.215	.675	-.303			.648	-.335			.852	-.437
.688	-.190	.699	-.300			.667	-.364			.896	-.258
.719	-.180	.725	-.325			.701	-.424			.946	-.157
.750	-.153	.750	-.323			.777	0.000			1.000	-.136
.775	-.146	.775	-.329			.816	-.631				
.800	-.152	.800	-.339			.856	-.677				
.825	-.166	.824	-.394			.896	-.677				
.850	-.175	.849	-.407			.935	-.325				
.875	-.209	.874	-.435			.972	-.325				
.900	-.236	.899	-.433			1.000	-.231				
.925	-.253	.924	-.349								
.950	-.332	.950	-.215								
.975	-.331	.974	-.123								
1.000	-.125	1.000	-.135								
					LOWER SURFACE						
.020	.079	.022	.159	.028	.160	.017	.084	.025	-.080	.020	-.071
.040	.062	.041	.115	.077	-.066	.045	-.083	.065	-.159	.040	-.132
.060	.035	.074	.029	.139	-.130	.055	-.146	.139	-.235	.060	-.195
.100	.028	.101	-.053	.210	-.106	.070	-.099	.211	-.149	.140	-.316
.200	.016	.207	-.217	.301	-.165	.152	-.237	.302	-.177	.196	-.205
.300	-.036	.301	-.198	.400	-.161	.220	-.175	.400	-.233	.253	-.286
.325	-.181	.325	-.163	.500	-.147	.269	-.201	.503	-.125	.306	-.266
.344	-.181	.350	-.096	.574	-.052	.315	-.203	.565	-.172	.388	-.170
.375	-.107	.375	-.143	.715	-.086	.383	-.130	.703	.032	.432	-.228
.400	-.153	.400	-.174	.738	.173	.411	-.150	.789	.143	.474	-.220
.429	-.218	.425	-.188	.860	.343	.439	-.177	.861	.217	.494	-.227
.450	-.243	.450	-.160	.924	.304	.479	-.136	.933	.266	.559	-.228
.475	-.273	.475	-.214	.965	.304	.518	-.130	.975	.160	.637	-.243
.500	-.193	.500	-.214			.546	-.143			.679	-.107
.525	-.225	.525	-.165			.570	-.081			.752	.012
.550	-.236	.550	-.096			.640	.048			.845	.079
.575	-.237	.575	-.103			.702	.092			.935	.162
.600	-.246	.600	-.147			.800	.136				
.625	-.217	.624	-.088			.857	.141				
.650	-.194	.650	.015			.919	.140				
.675	-.169	.675	.039			.959	.204				
.700	-.079	.700	.053								
.750	-.005	.750	.115								
.800	.139	.800	.175								
.850	.213	.849	.213								
.900	.265	.900	.250								
.950	.267	.949	.210								

CN =	.4716	.4500	.5301	.5275	.4806	.3961
CM =	-.0008	-.0335	-.1152	-.1402	-.1329	-.0998

TABLE 5. - Concluded.

M = .985 Q = 9.89 ALPHA = 6.37 CNWP = .5633 DA =1.5 RN =4.27

STA X/C	.133 CP	STA X/C	.305 CP	STA X/C	.480 CP	STA X/C	.653 CP	STA X/C	.808 CP	STA X/C	.933 CP
					UPPER SURFACE						
0.000	.016	0.000	-.067	.026	-.895	0.000	.353	.024	-.727	0.010	.423
.020	-.212	.022	-.830	.076	-1.008	.017	-.835	.064	-.837	.018	-.779
.040	-.251	.041	-.952	.138	-1.006	.032	-.919	.136	-.824	.038	-.717
.060	-.307	.074	-1.072	.211	-.972	.051	-.916	.208	-.841	.058	-.778
.100	-.326	.101	-1.042	.300	-.966	.070	-.914	.293	-.842	.139	-.790
.200	-.439	.201	-1.069	.400	-.933	.148	-.916	.398	-.798	.195	-.809
.300	-.468	.301	-.780	.499	-.936	.213	-.916	.499	-.783	.297	-.792
.400	-.401	.401	-.677	.573	-.695	.268	-.916	.564	-.777	.386	-.790
.500	-.374	.501	-.523	.636	-.522	.314	-.896	.676	-.785	.452	-.767
.525	-.344	.525	-.494	.737	-.539	.383	-.860	.786	-.496	.504	-.763
.550	-.310	.551	-.424	.859	-.387	.440	-.858	.858	-.487	.556	-.753
.575	-.322	.575	-.377	.924	-.310	.498	-.856	.907	0.000	.647	-.739
.600	-.346	.601	-.417	.965	-.227	.538	-.841	.957	-.479	.696	-.738
.625	0.000	.623	-.378	1.000	-.256	.573	-.841	1.000	-.589	.746	-.758
.650	-.275	.650	-.343			.615	-.815			.797	-.563
.669	-.254	.675	-.374			.648	-.825			.852	-.430
.688	-.232	.699	-.365			.667	-.843			.896	-.398
.719	-.226	.725	-.394			.701	-.853			.946	-.383
.750	-.196	.750	-.337			.777	0.000			1.000	-.371
.775	-.197	.775	-.400			.816	-.471				
.800	-.207	.801	-.424			.856	-.485				
.825	-.214	.824	-.457			.896	-.485				
.850	-.232	.849	-.477			.935	-.514				
.875	-.269	.874	-.537			.972	-.543				
.900	-.297	.899	-.513			1.000	-.483				
.925	-.310	.924	-.444								
.950	-.358	.951	-.323								
.975	-.417	.974	-.206								
1.000	-.182	1.000	-.155								
					LOWER SURFACE						
.020	.137	.022	.349	.028	.331	.017	.278	.025	.119	.020	.146
.040	.135	.041	.288	.077	.115	.045	.035	.066	.029	.040	.054
.060	.128	.074	.181	.133	.045	.055	.056	.133	-.063	.060	.001
.100	.100	.101	.125	.210	-.006	.070	.043	.211	-.123	.140	-.164
.200	.075	.207	-.052	.301	-.043	.152	-.030	.302	-.154	.196	-.192
.300	.012	.301	-.018	.400	-.072	.220	-.072	.400	-.216	.253	-.258
.325	-.119	.325	-.018	.500	-.072	.269	-.072	.503	-.108	.306	-.214
.344	-.046	.351	-.048	.574	-.020	.315	-.054	.565	-.176	.388	-.188
.375	-.057	.375	-.047	.715	-.061	.383	-.133	.703	.003	.432	-.253
.400	-.038	.400	-.063	.788	.191	.411	-.136	.789	.106	.474	-.274
.429	-.128	.425	-.048	.850	.360	.439	-.171	.861	.172	.494	-.294
.450	-.119	.451	-.112	.924	.315	.479	-.199	.933	.202	.559	-.277
.475	-.140	.475	-.141	.965	.306	.516	-.153	.975	.086	.637	-.238
.500	-.090	.500	-.103			.546	-.069			.679	-.121
.525	-.109	.525	-.065			.570	-.046			.752	-.048
.550	-.127	.550	-.022			.640	.050			.845	-.020
.575	-.116	.575	-.064			.702	.075			.975	.059
.600	-.114	.600	-.093			.800	.100				
.625	-.091	.625	-.040			.857	.106				
.650	-.055	.650	.043			.919	.158				
.675	-.005	.675	.061			.959	.158				
.700	.007	.700	.068								
.750	.045	.750	.132								
.800	.136	.800	.132								
.850	.250	.849	.227								
.900	.298	.900	.262								
.950	.283	.949	.204								
CN =	.6890		.7150		.8115		.7786		.6647		.5578
CM =	.0094		-.0394		-.1483		-.1711		-.1463		-.1144

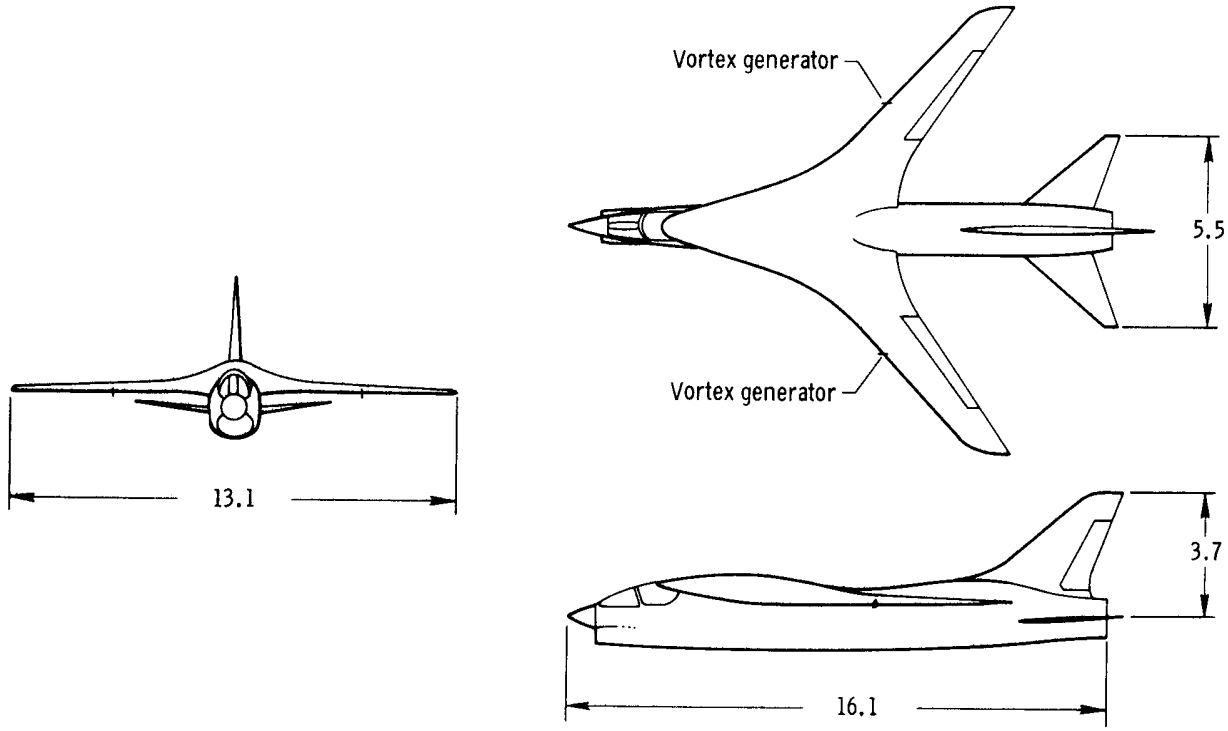
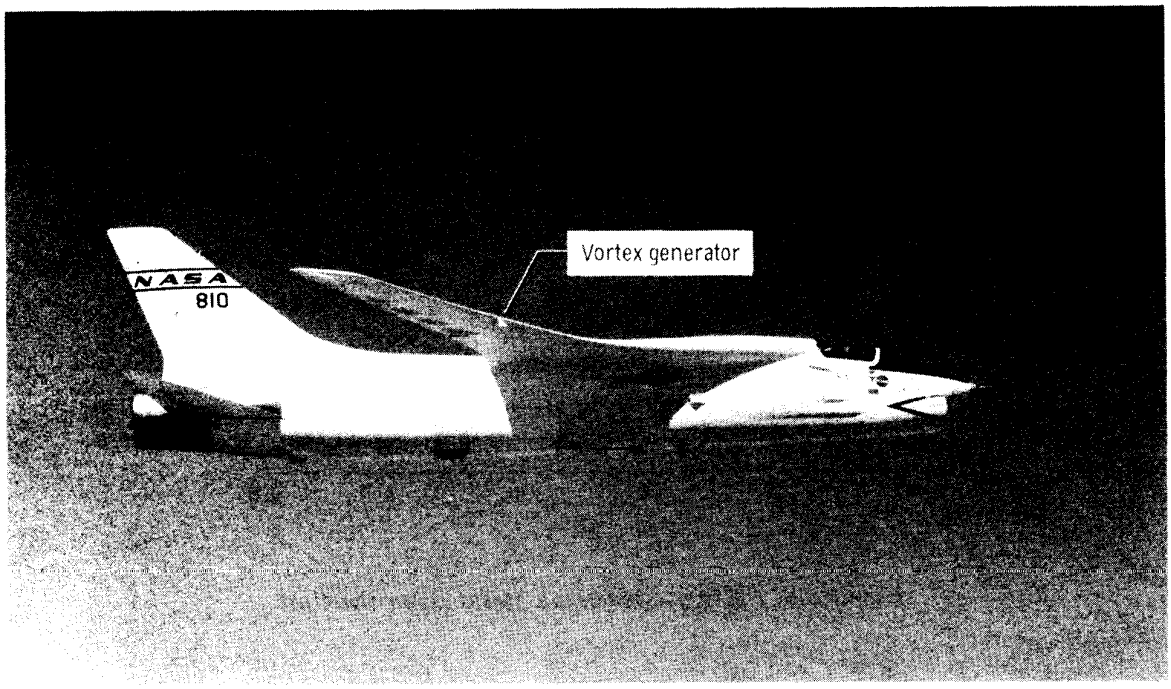


Figure 1. Three-view drawing of F-8 supercritical wing airplane and location of vortex generators. Dimensions in meters.



E-22933

Figure 2. F-8 supercritical wing airplane in flight.

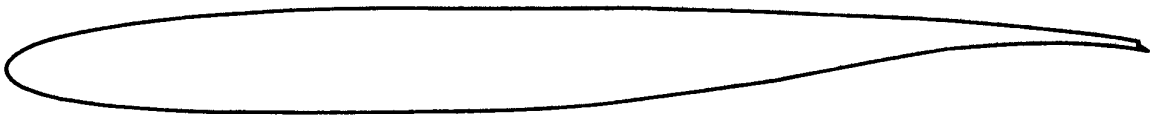


Figure 3. Wing section streamwise profile near midsemispan.

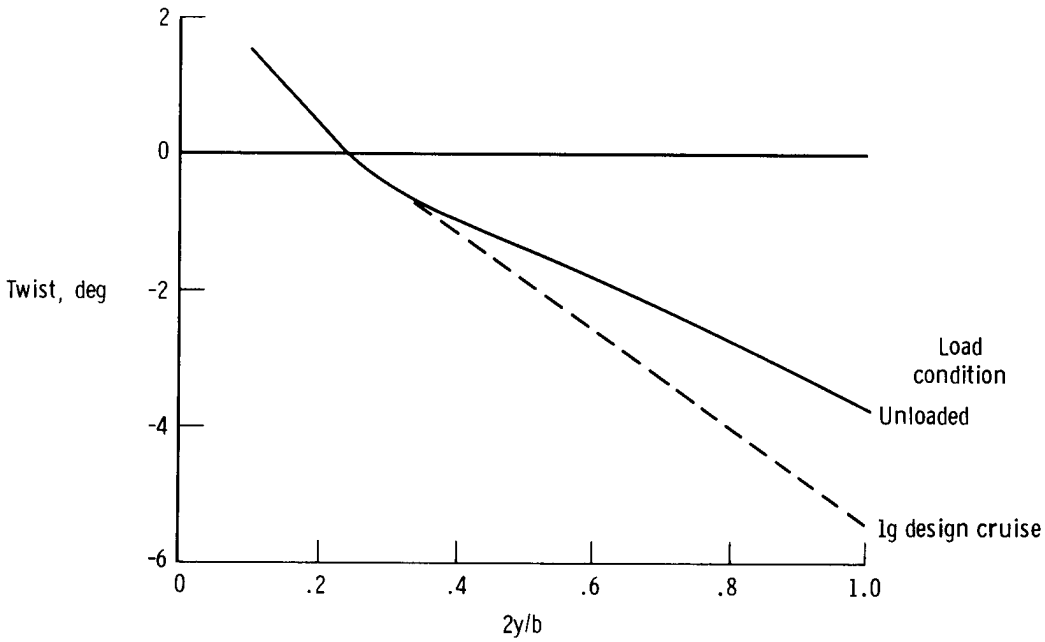


Figure 4. Wing spanwise twist distribution.

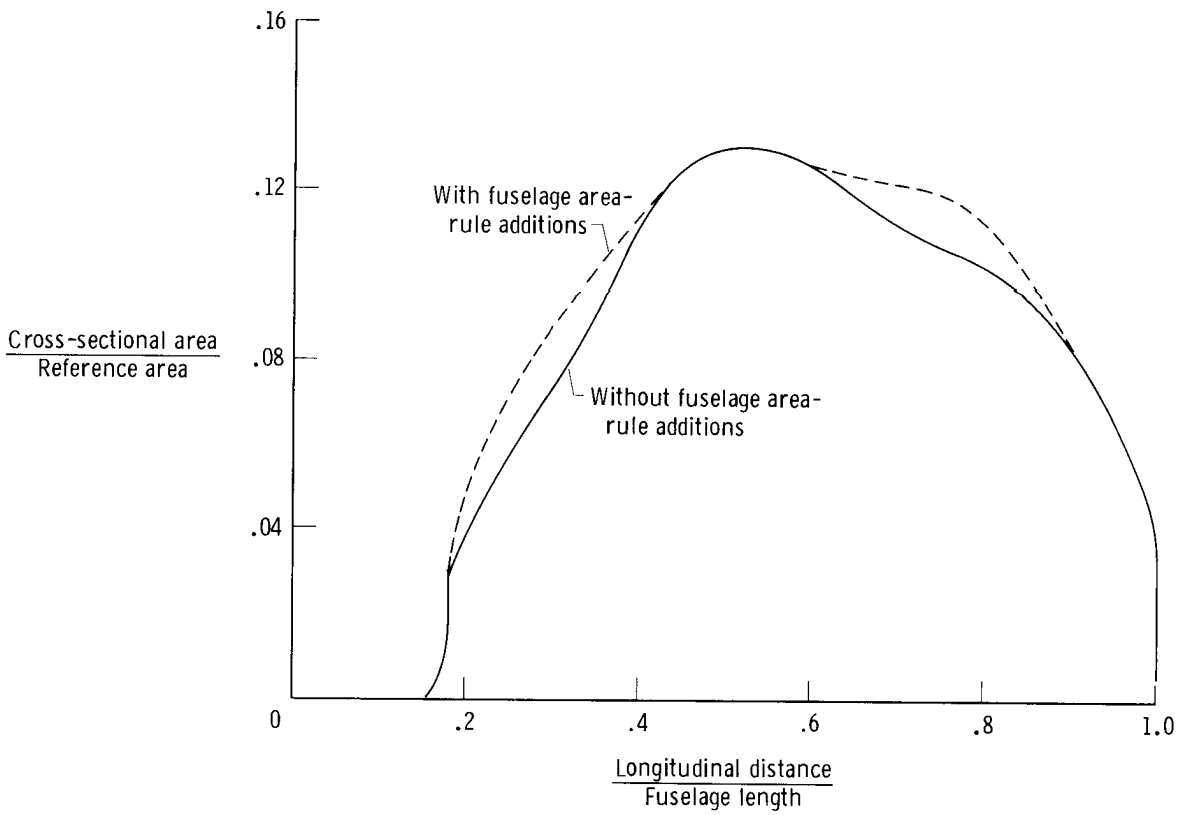
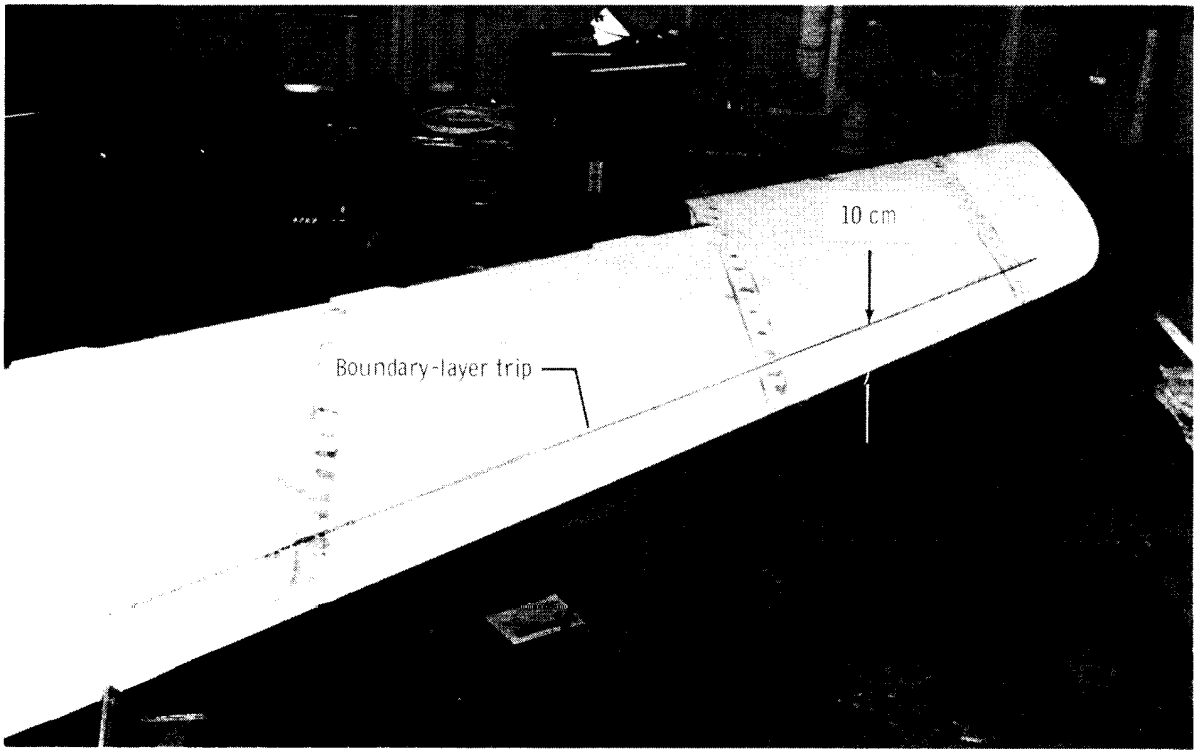
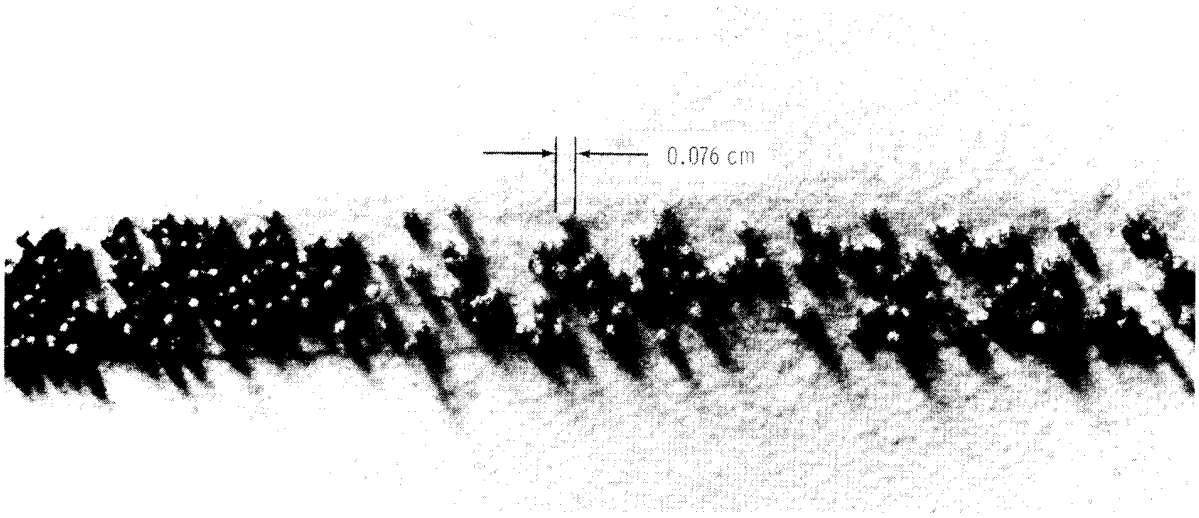


Figure 5. Cross-sectional area distribution with and without fuselage area-rule additions.



(a) Location.

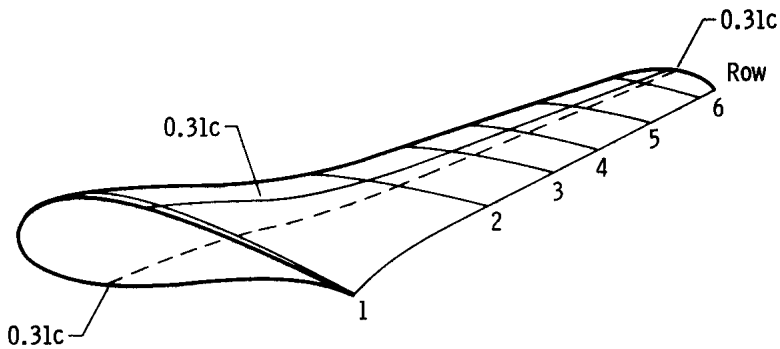
E-26073



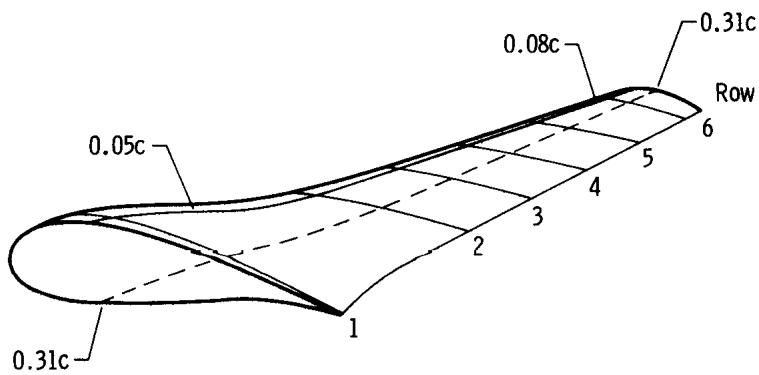
(b) Details.

E-26075

Figure 6. Boundary-layer trip on upper surface of right wing.



(a) $M \geqslant 0.95$.



(b) $M \leqslant 0.90$.

Figure 7. Boundary-layer trip locations for model.

Row	2y/b
1	0.133
2	0.306
3	0.480
4	0.653
5	0.808
6	0.933

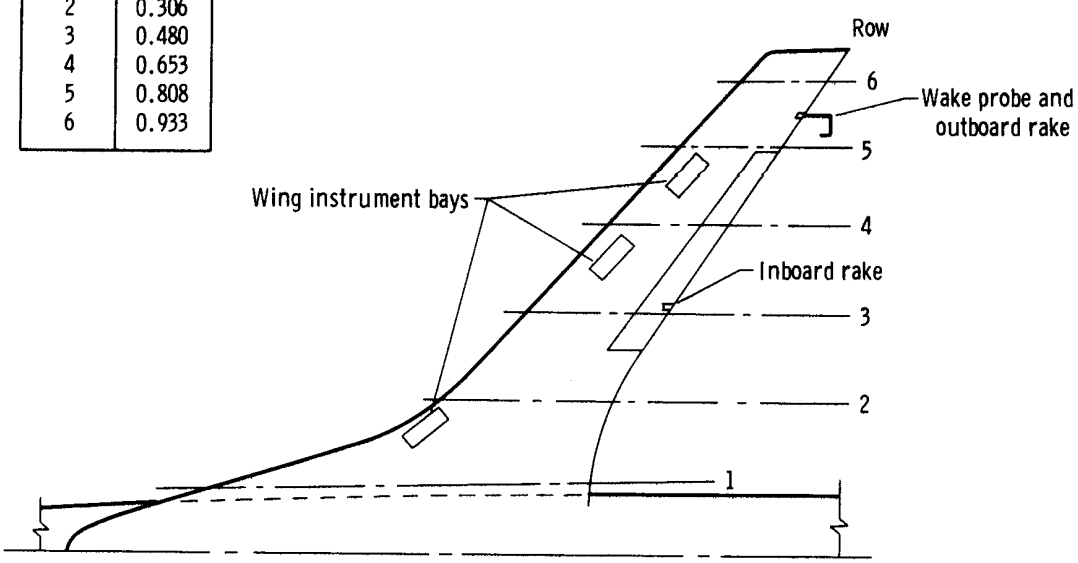
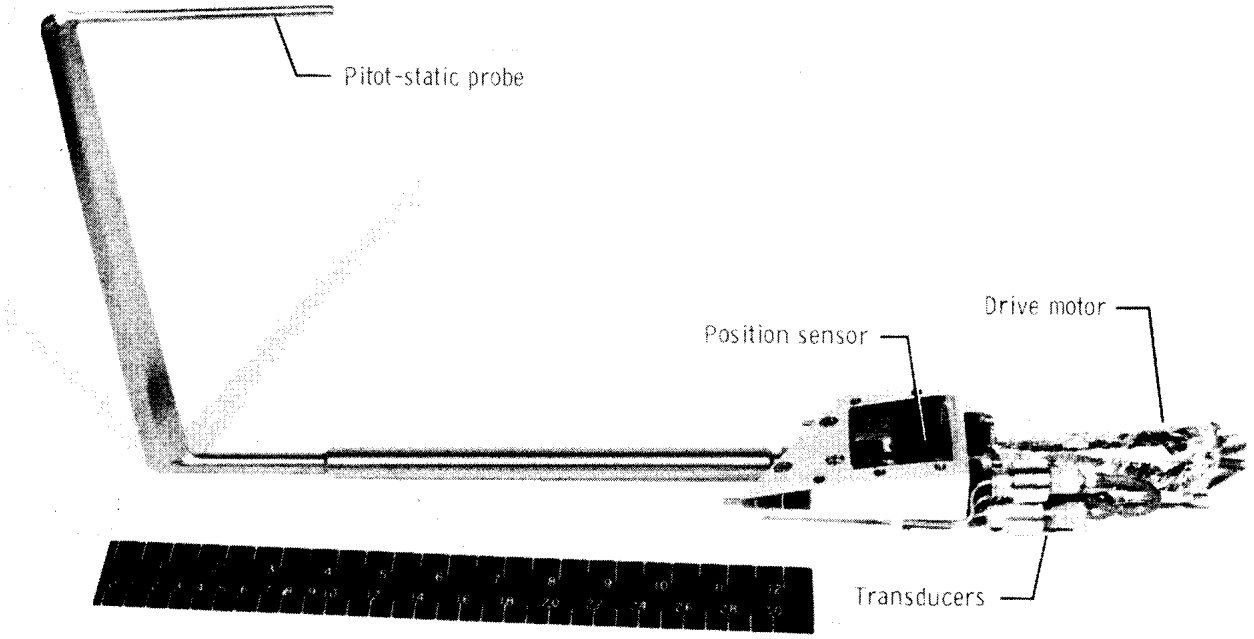
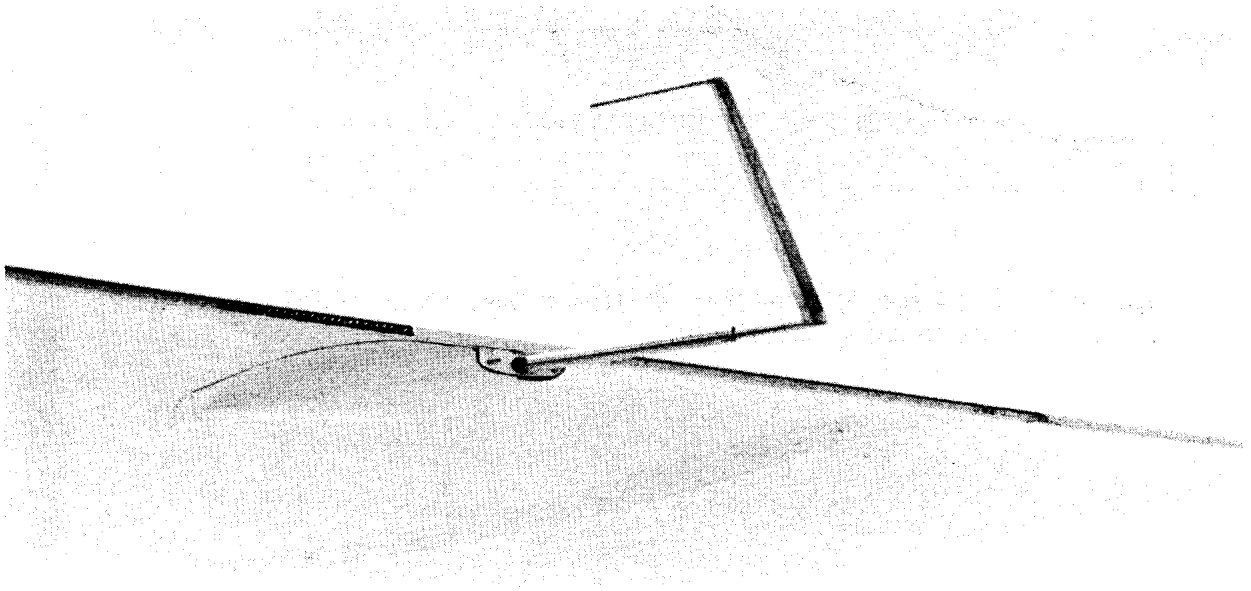


Figure 8. Location of pressure orifice rows, instrument bays, wake probe, and boundary-layer rake.

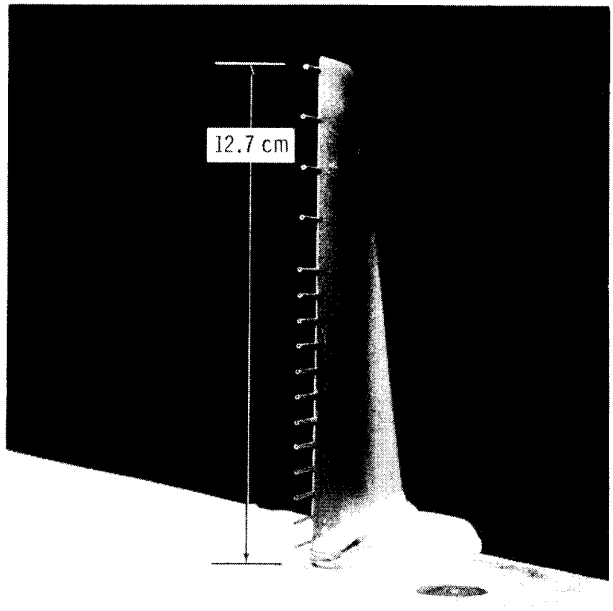


E-24465



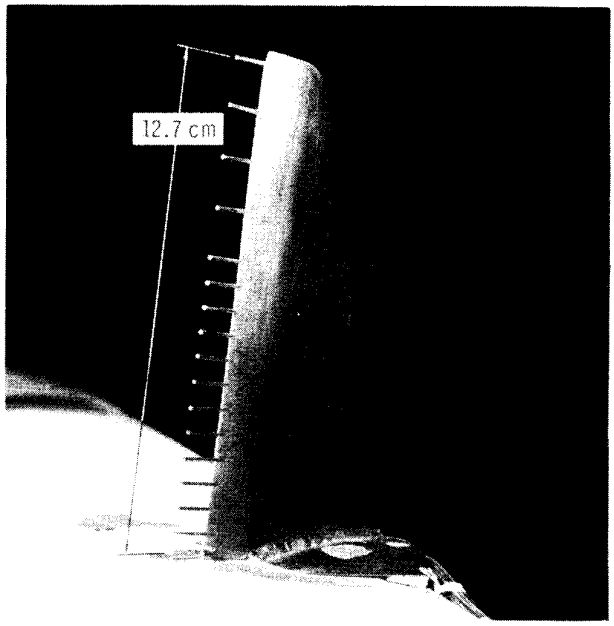
E-24997

Figure 9. Pitot-static rotating wake probe.



E-25673

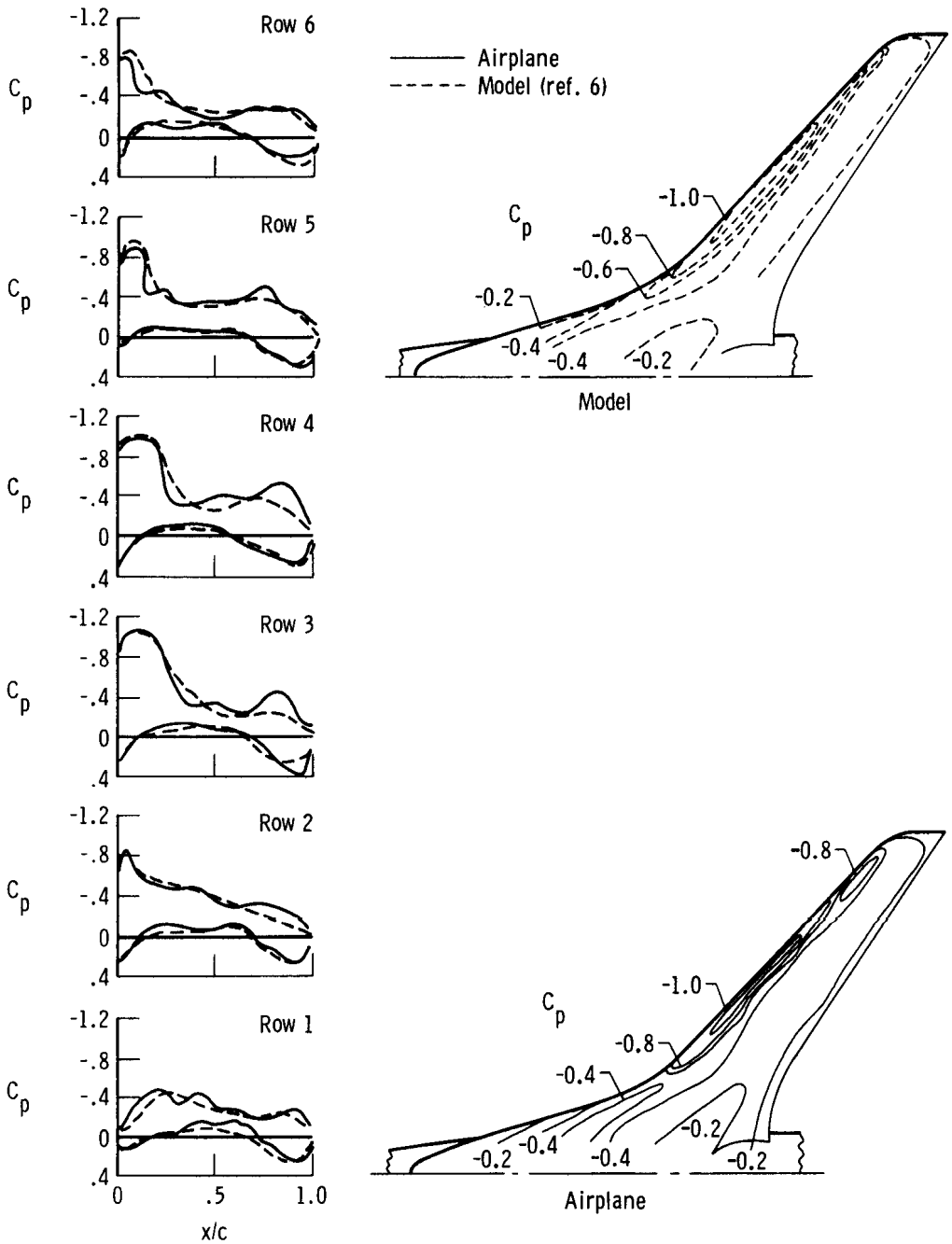
(a) Inboard rake.



E-25676

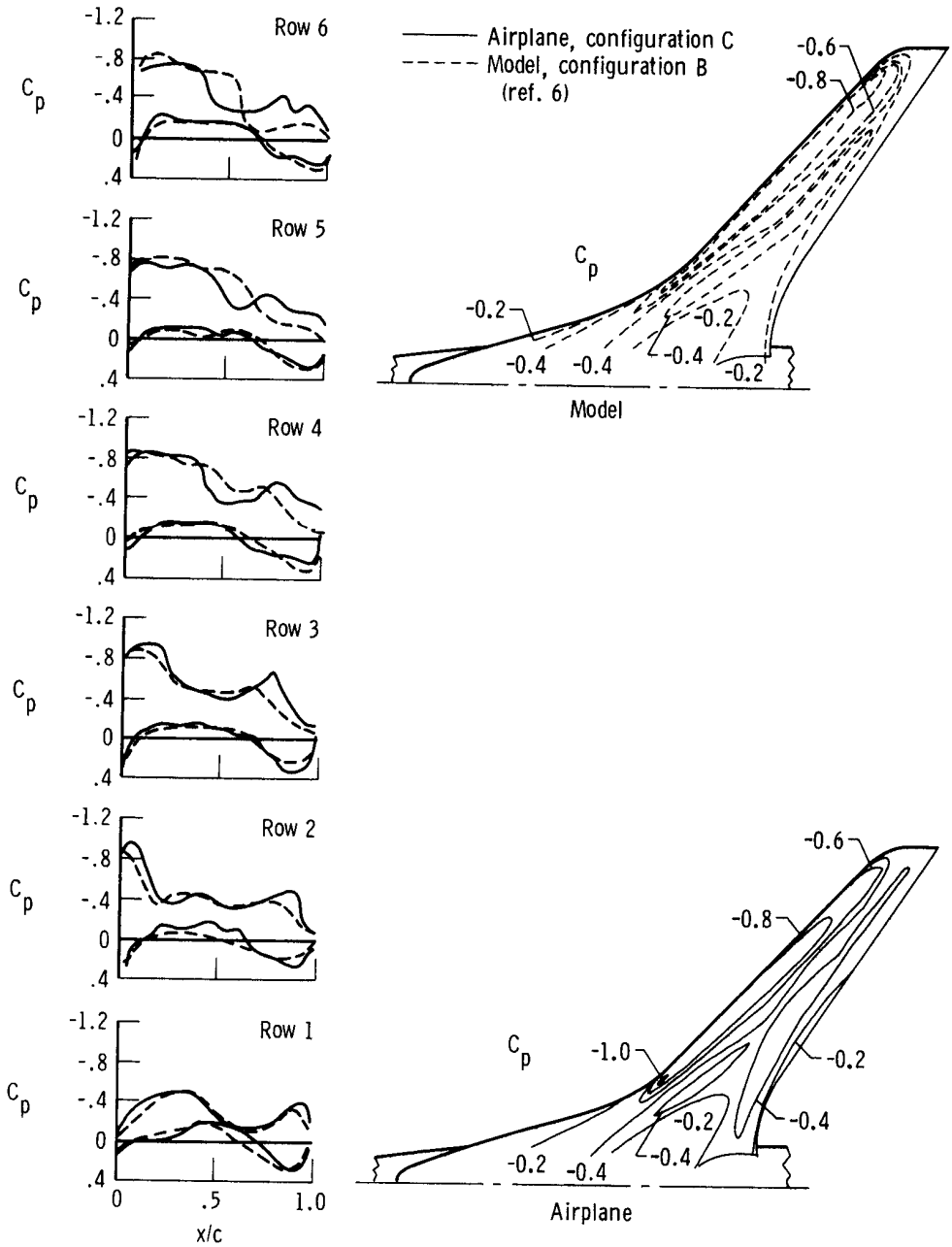
(b) Outboard rake.

Figure 10. Boundary-layer rakes.



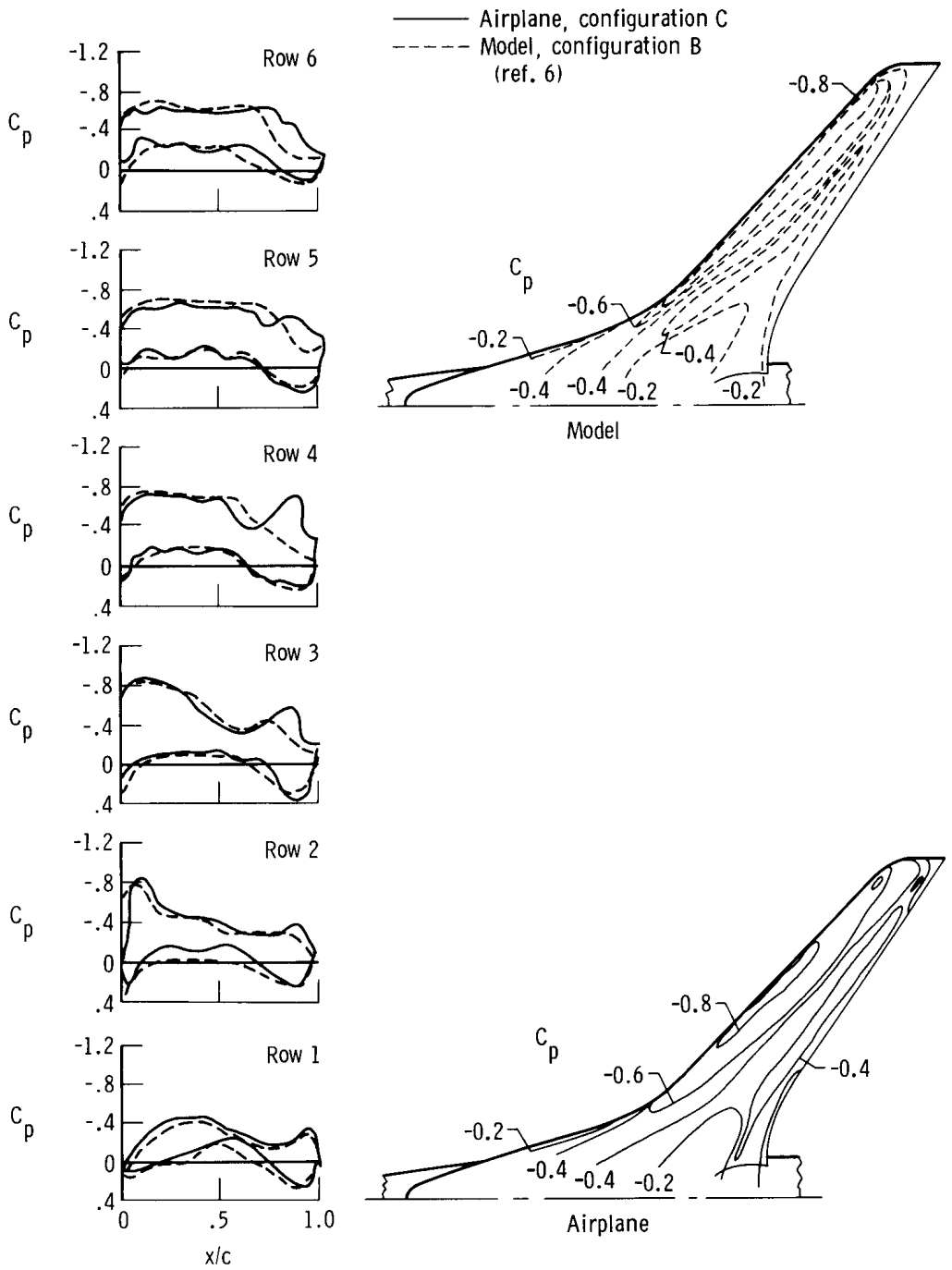
(a) M = 0.90, α = 4.03°, configuration A.

Figure 11. Chordwise pressure distributions and isobars on upper wing surfaces near design cruise condition.



(b) $M = 0.95$, $\alpha = 3.86°$.

Figure 11. Continued.



(c) $M = 0.99$, $\alpha = 3.89°$.

Figure 11. Concluded.

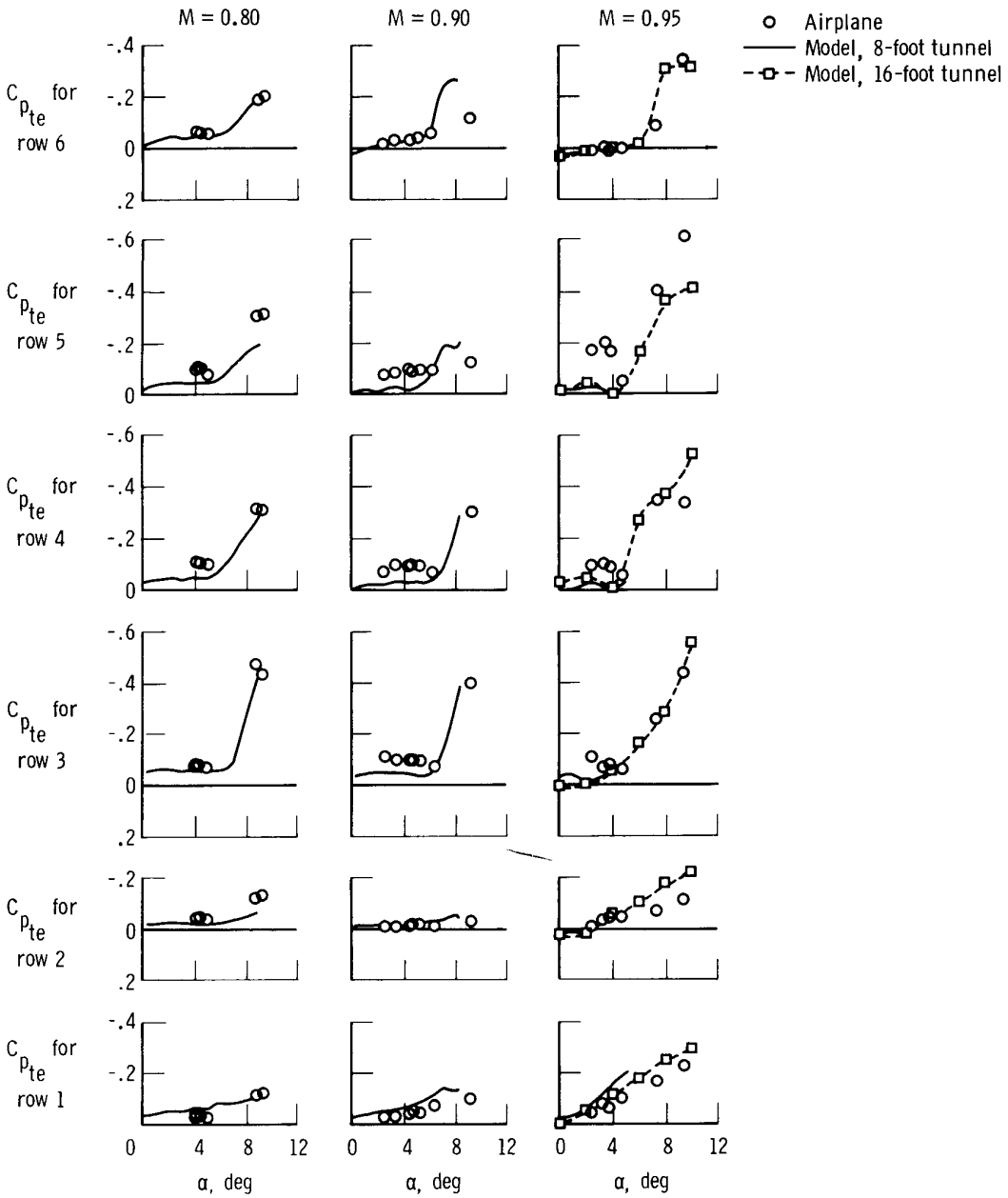


Figure 12. Trailing-edge pressure recovery characteristics for configuration A.

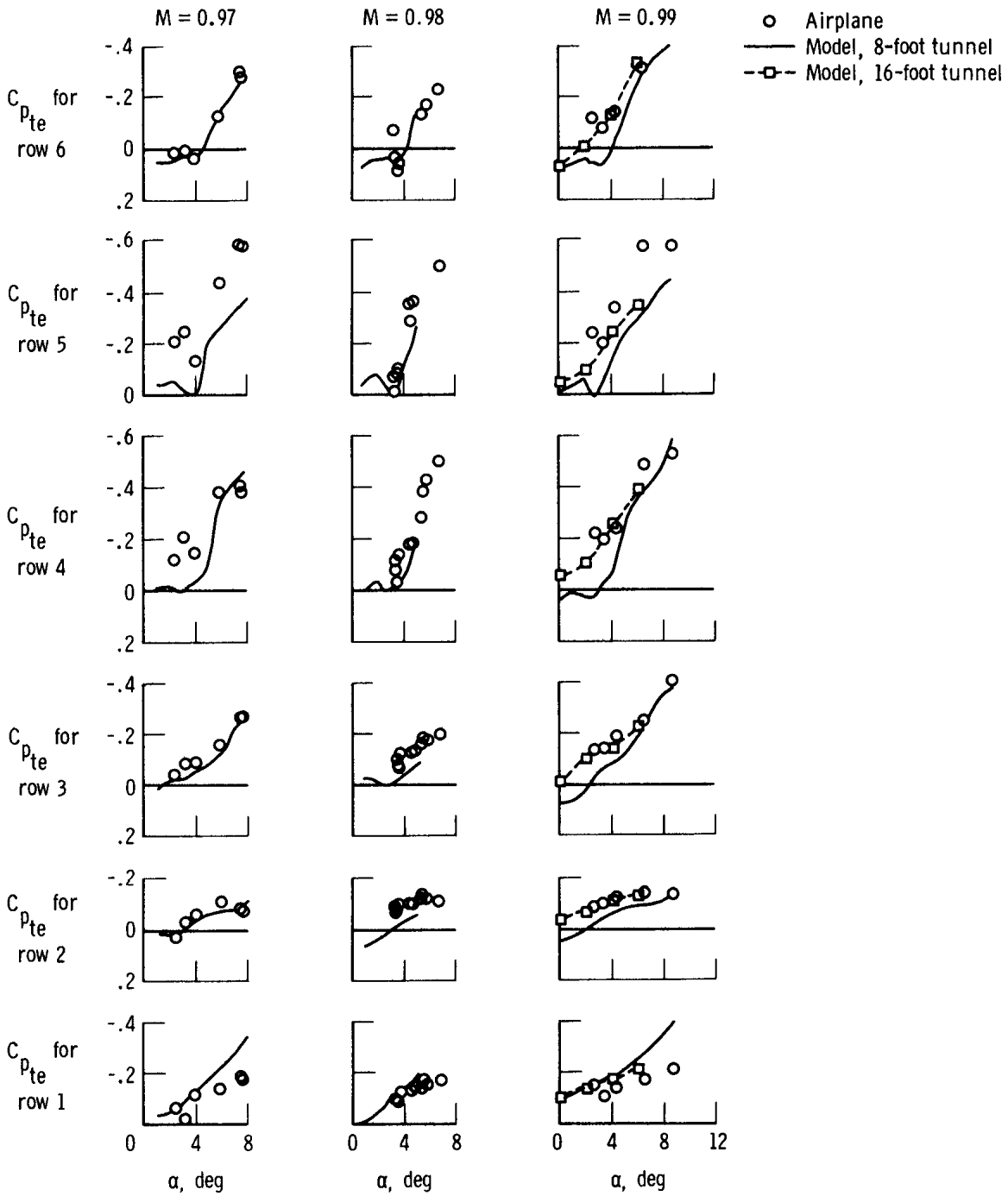


Figure 12. Concluded.

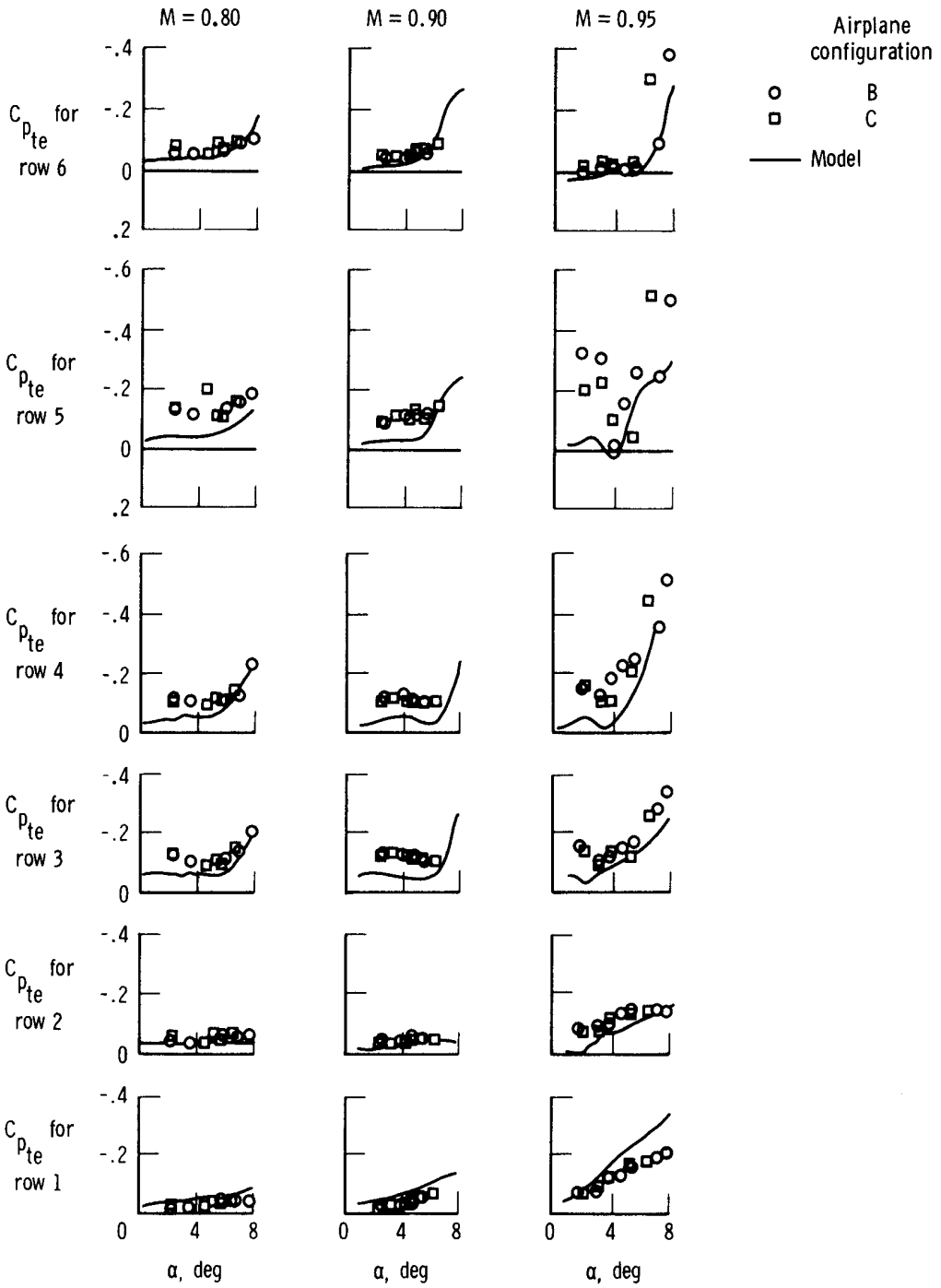


Figure 13. Trailing-edge pressure recovery characteristics for airplane configurations B and C and for model in 8-foot tunnel.

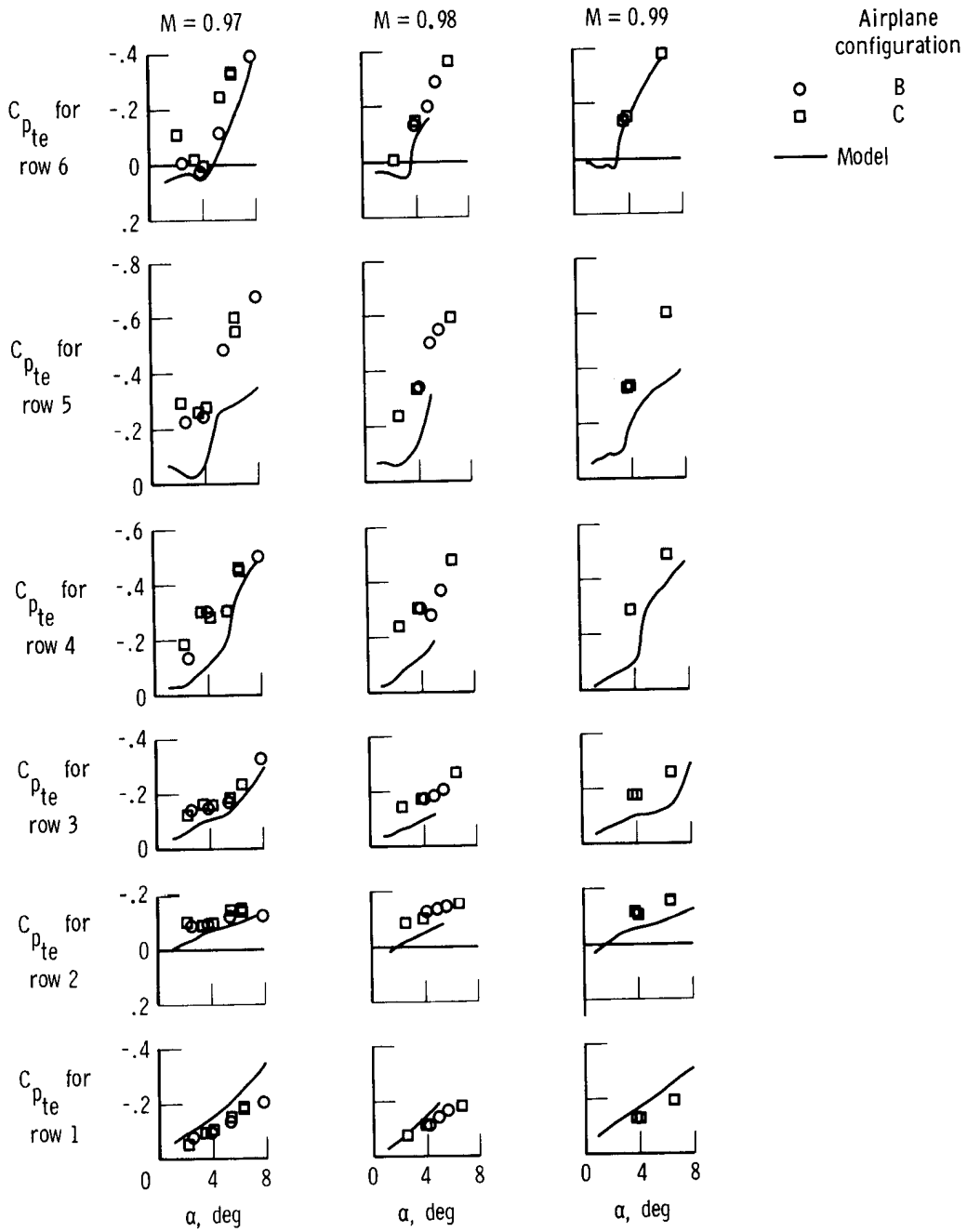
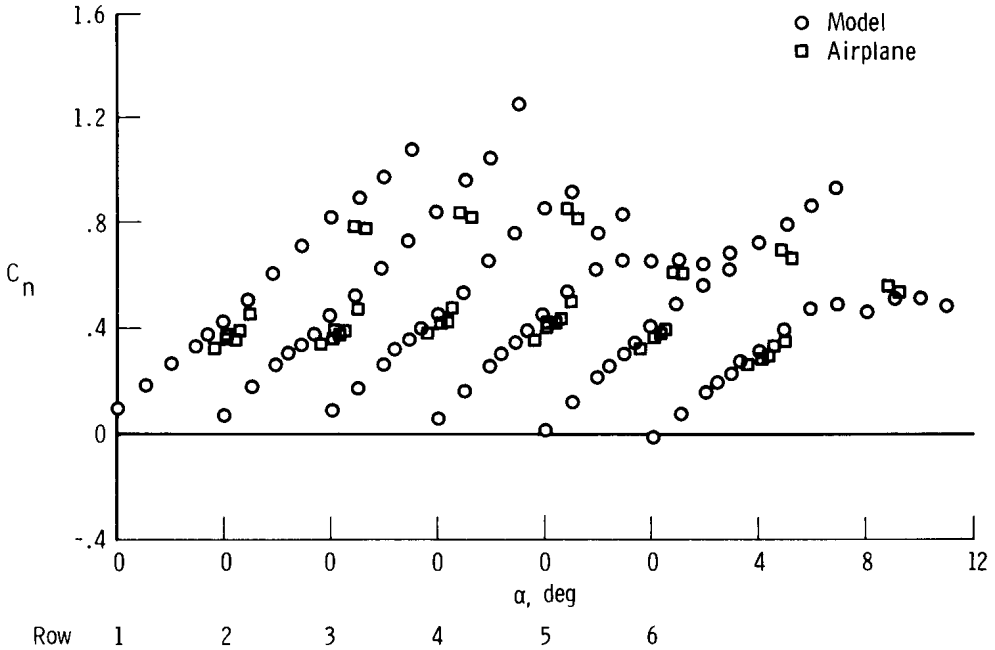
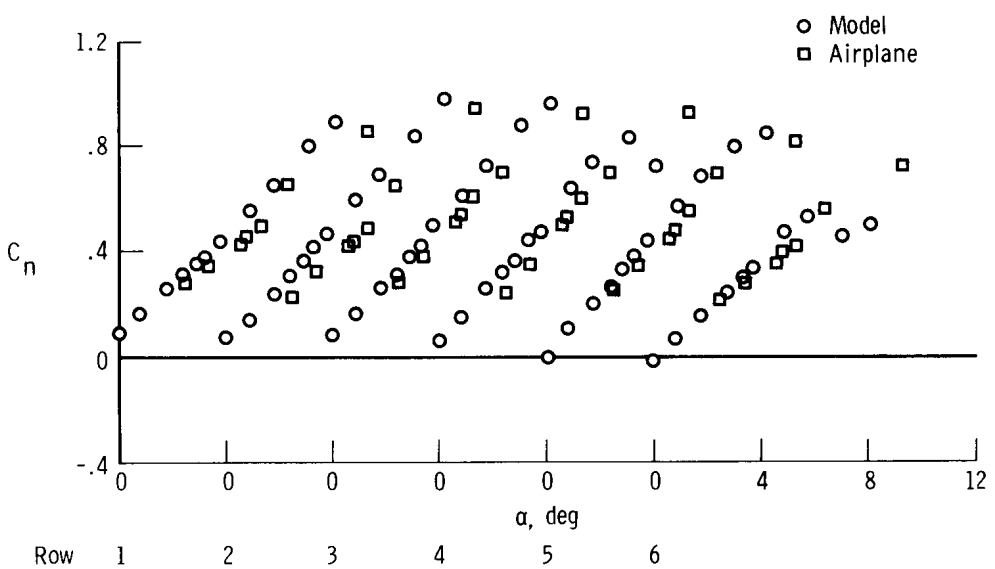


Figure 13. Concluded.

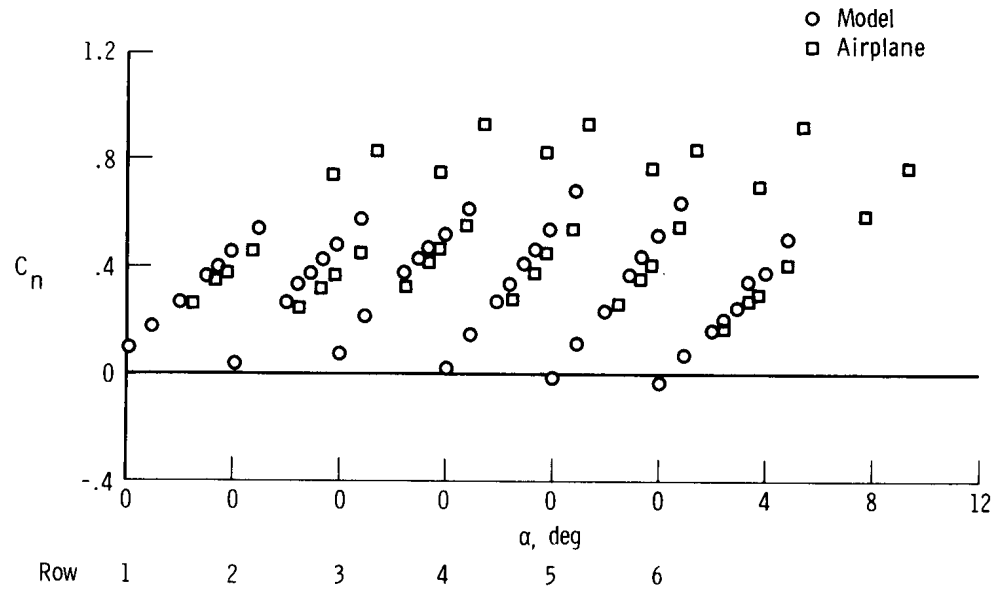


(a) M = 0.80.

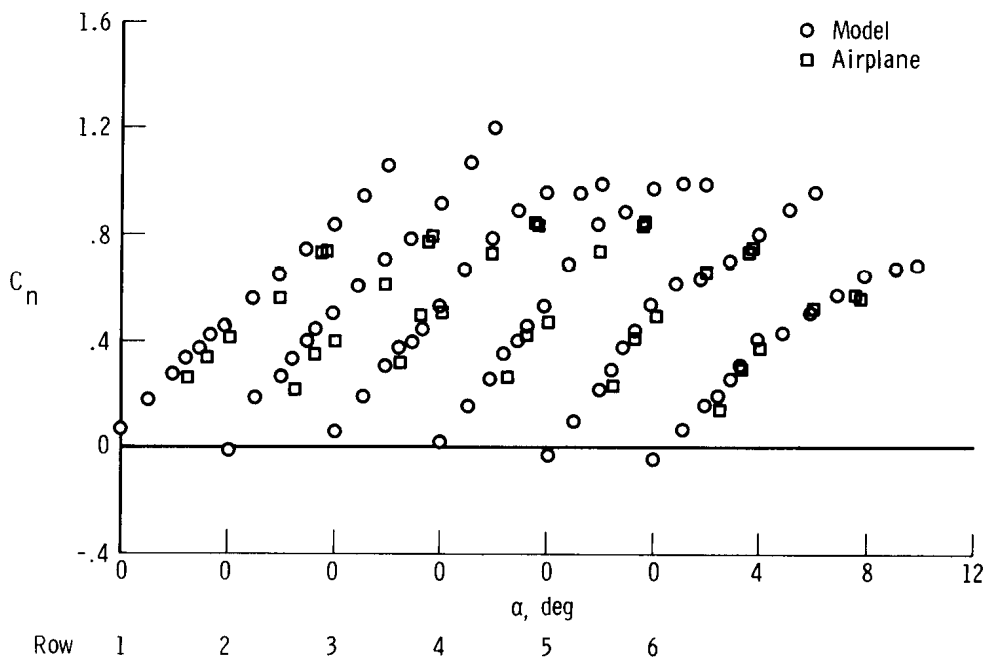


(b) M = 0.90.

Figure 14. Variation of section normal-force coefficient with angle of attack for configuration A. Model data are for 8-foot tunnel.

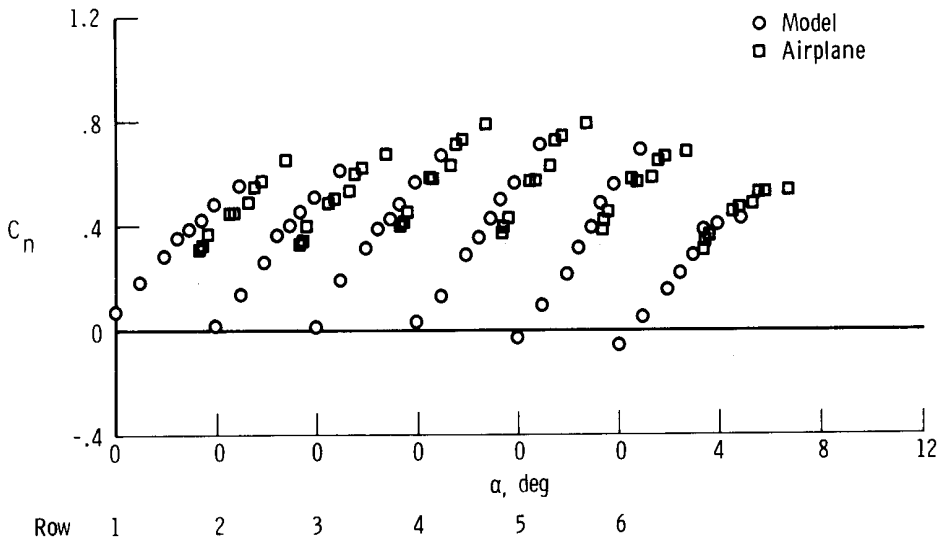


(c) M = 0.95.

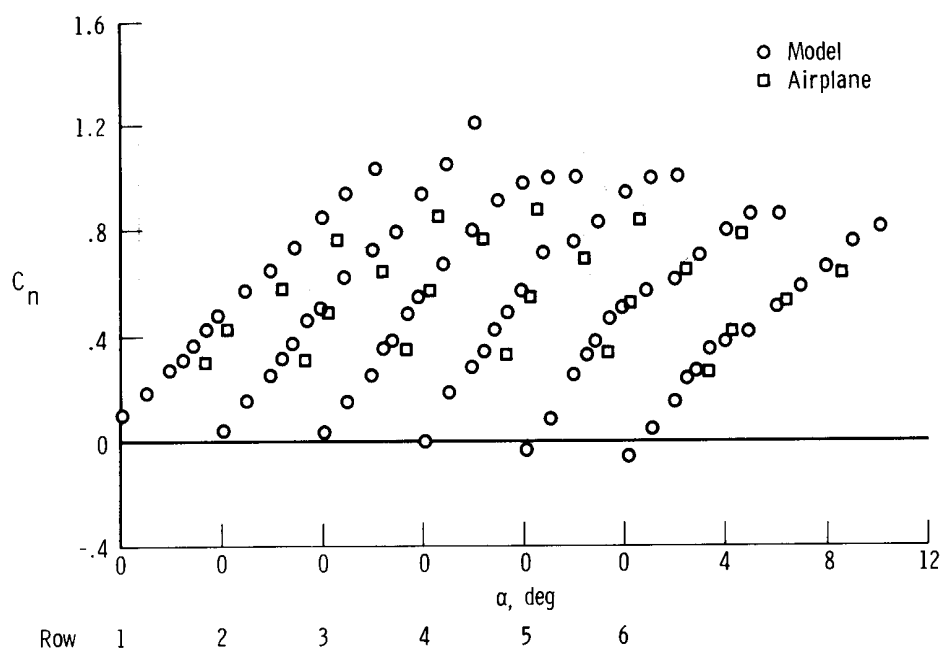


(d) M = 0.97.

Figure 14. Continued.

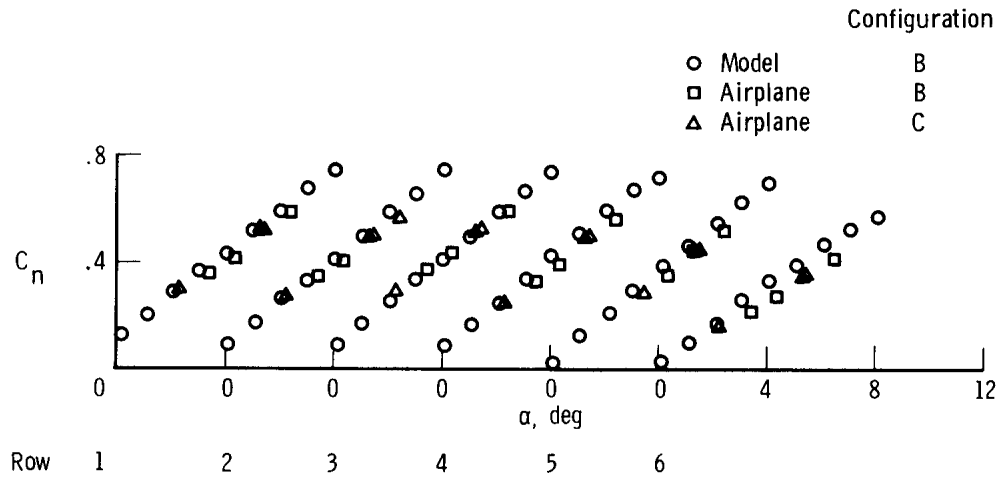


(e) M = 0.98.

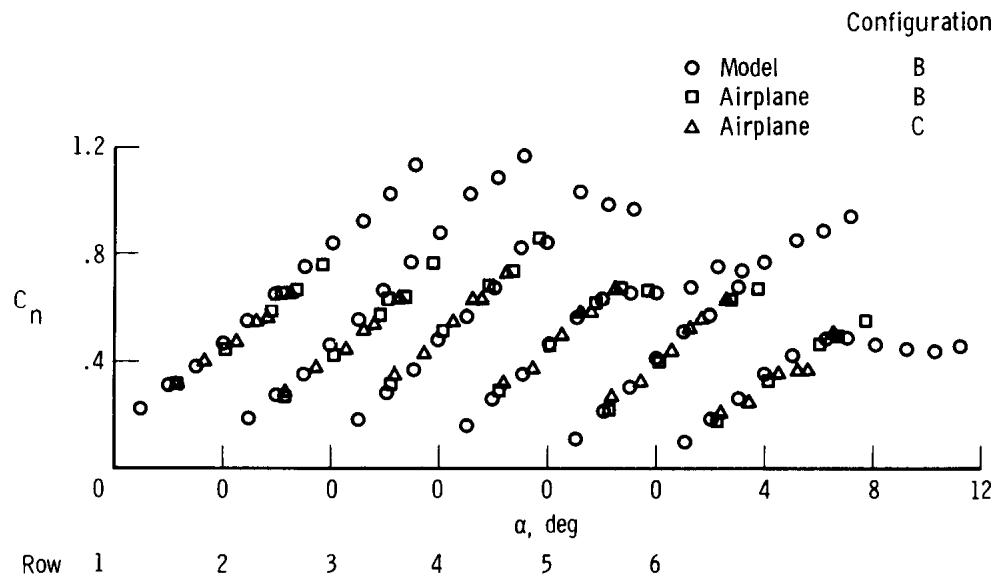


(f) M = 0.99.

Figure 14. Concluded.

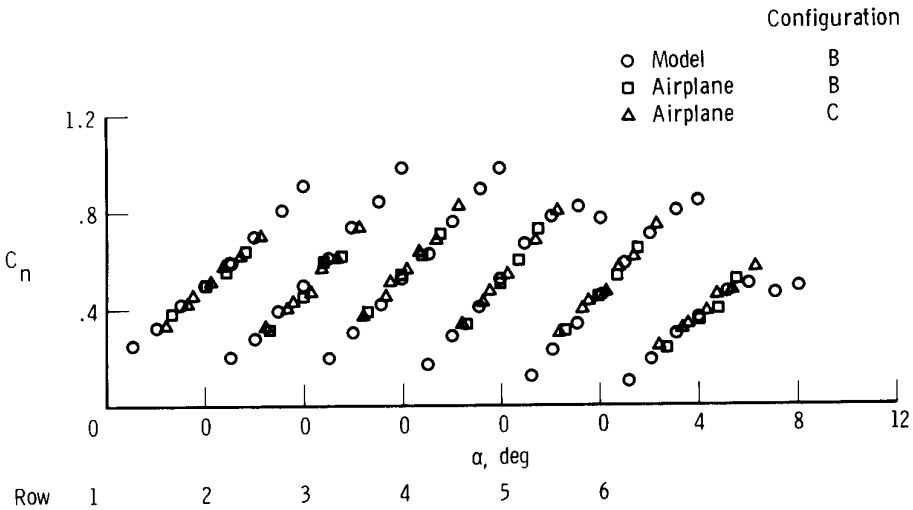


(a) M = 0.50.

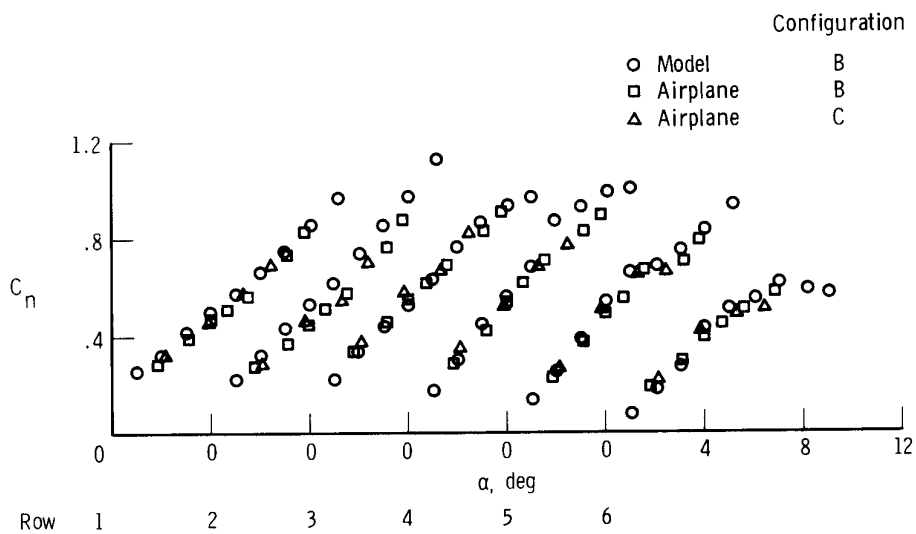


(b) M = 0.80.

Figure 15. Variation of section normal-force coefficient with angle of attack for configurations B and C. Model data are for 8-foot tunnel.

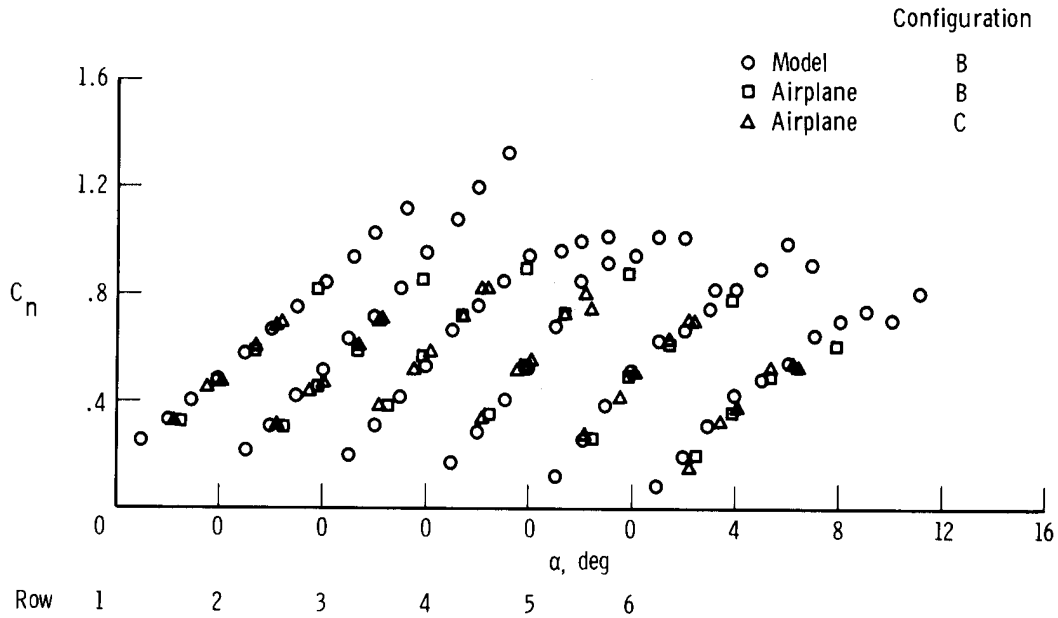


(c) M = 0.90.

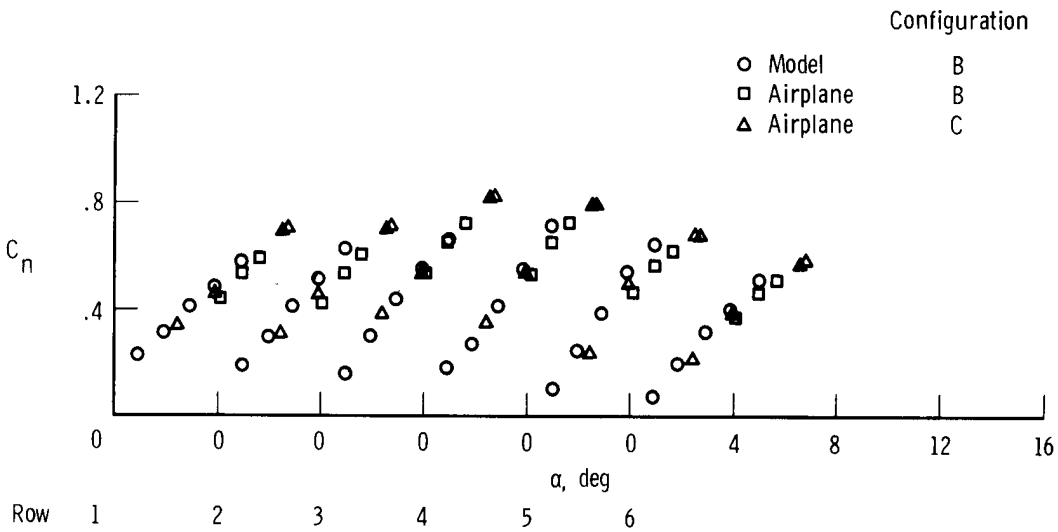


(d) M = 0.95.

Figure 15. Continued.

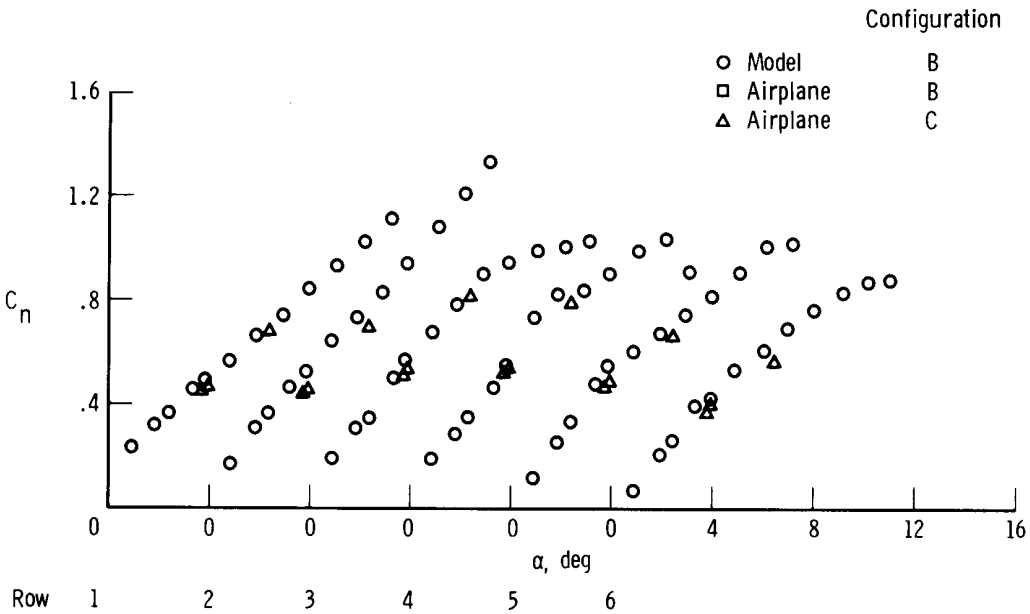


(e) M = 0.97.



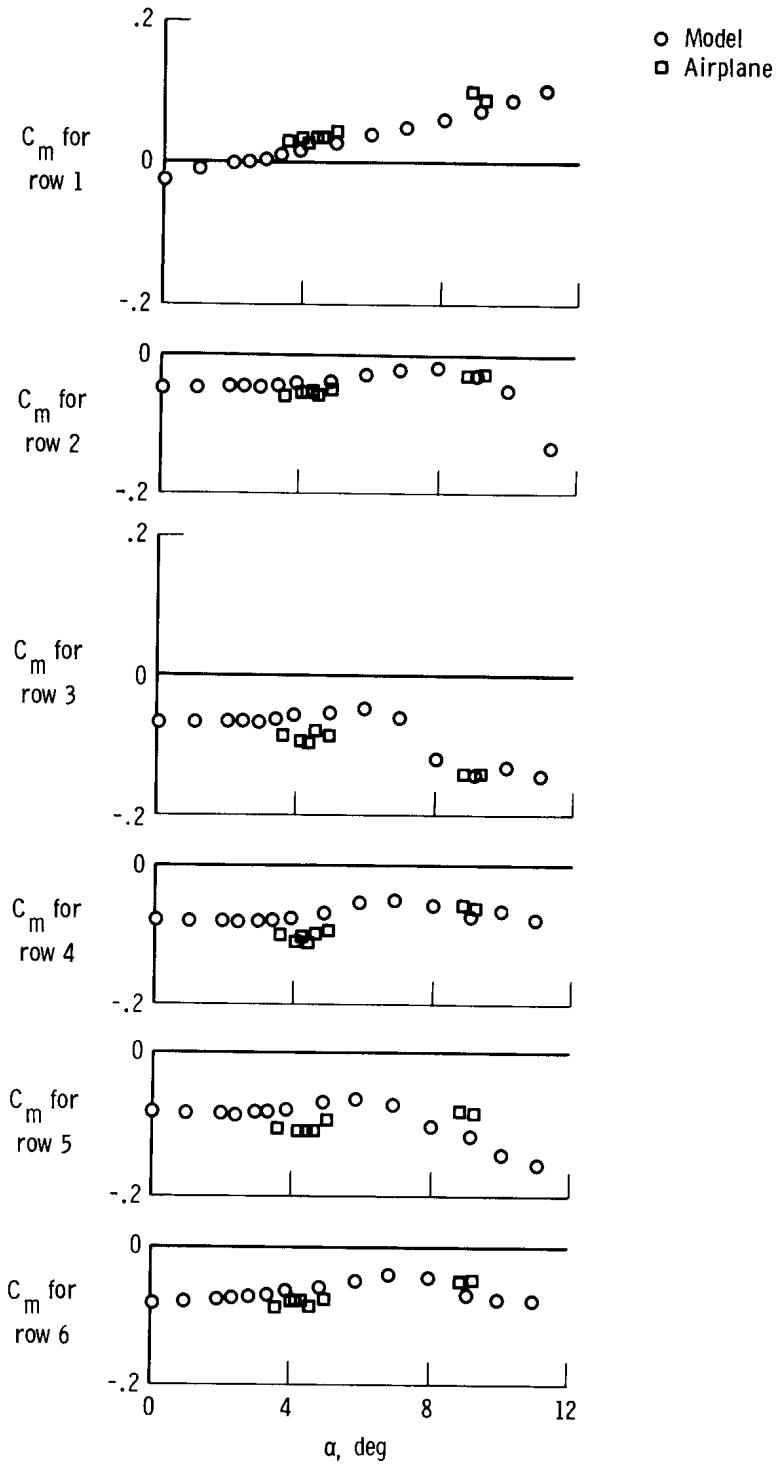
(f) M = 0.98.

Figure 15. Continued.



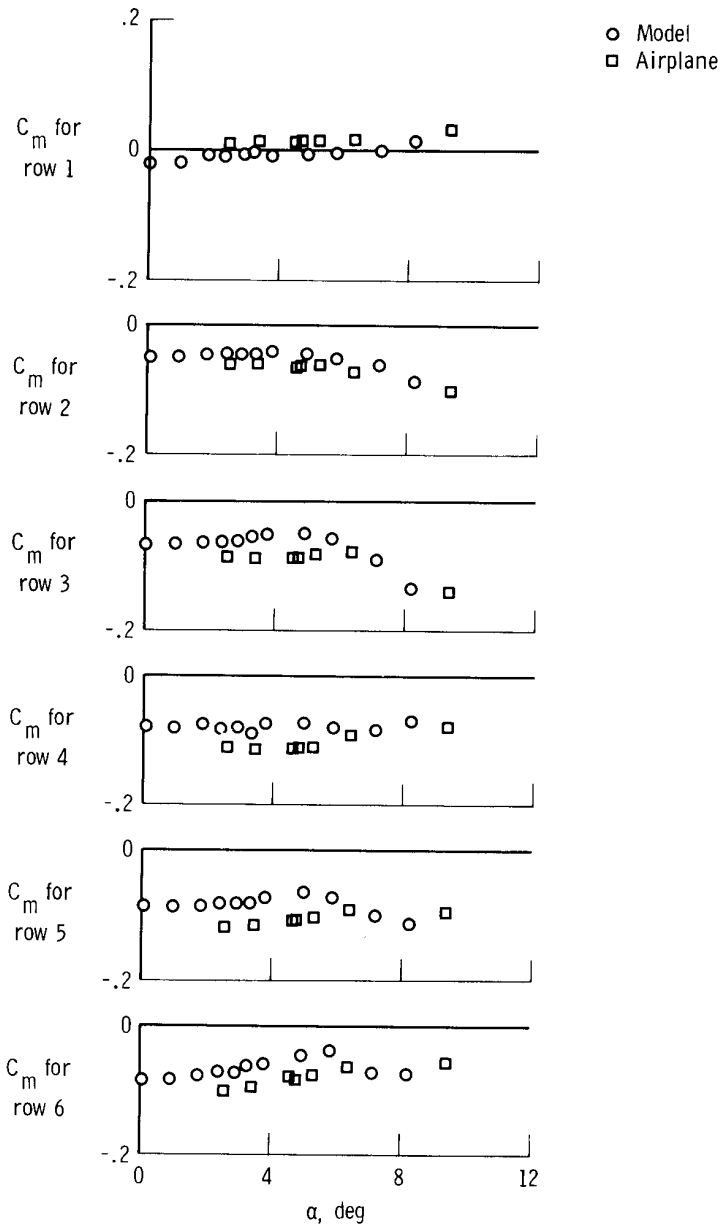
(g) M = 0.99.

Figure 15. Concluded.



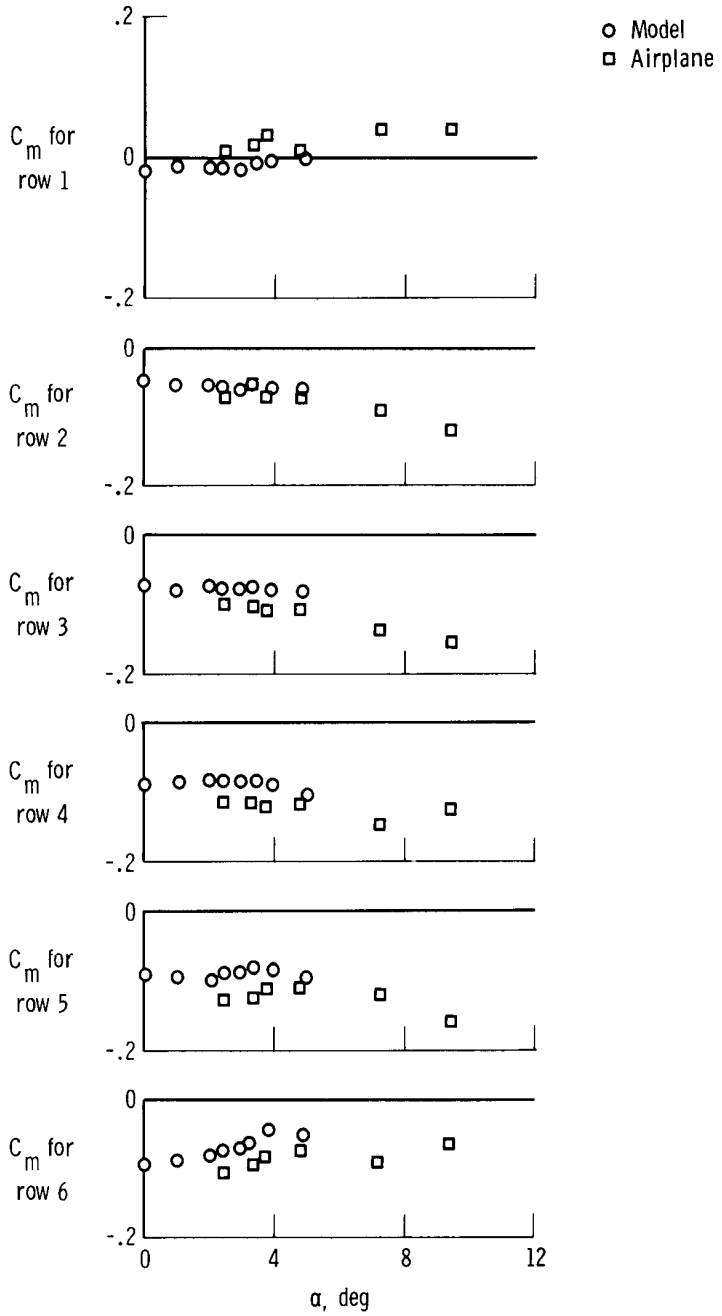
(a) M = 0.80.

Figure 16. Variation of section pitching-moment coefficient with angle of attack for configuration A. Model data are for 8-foot tunnel.



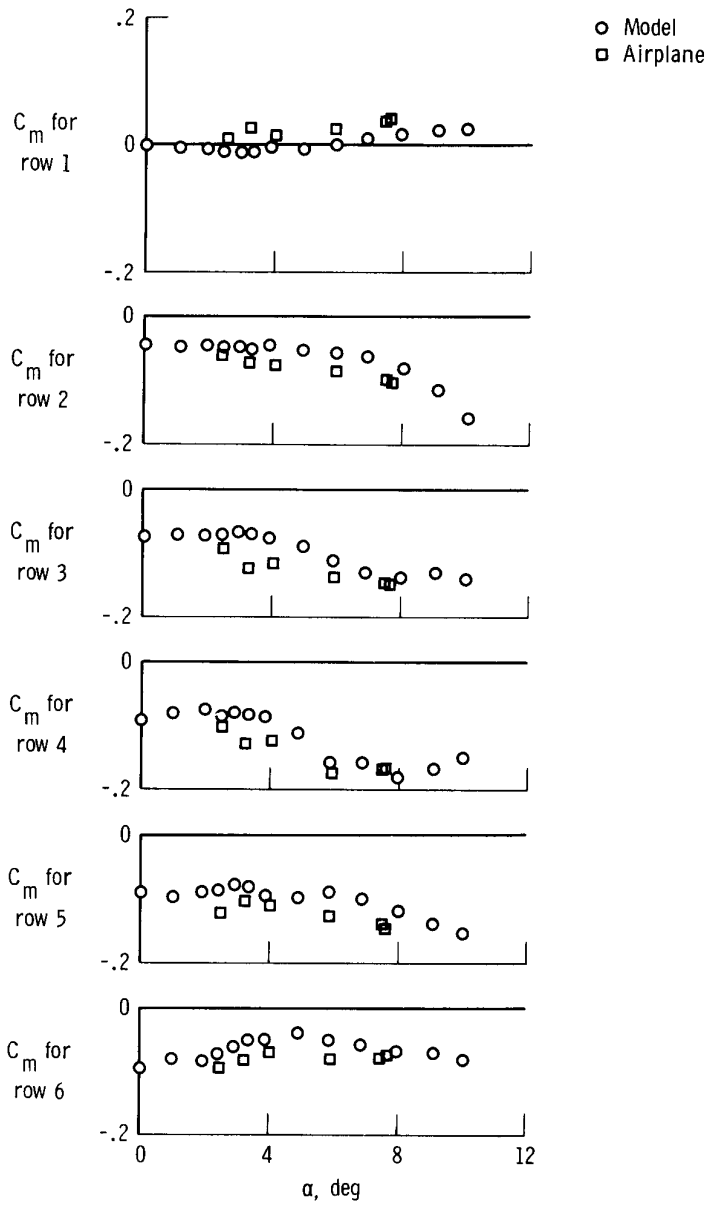
(b) M = 0.90.

Figure 16. Continued.



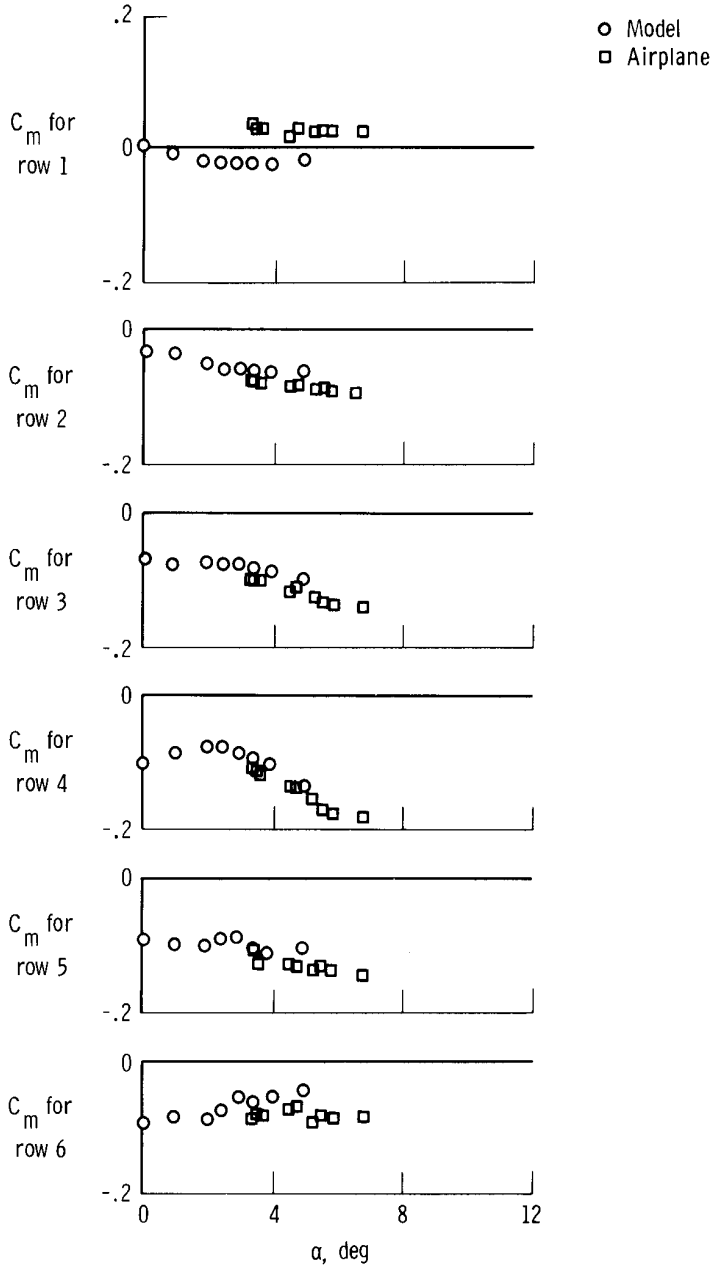
(c) M = 0.95.

Figure 16. Continued.



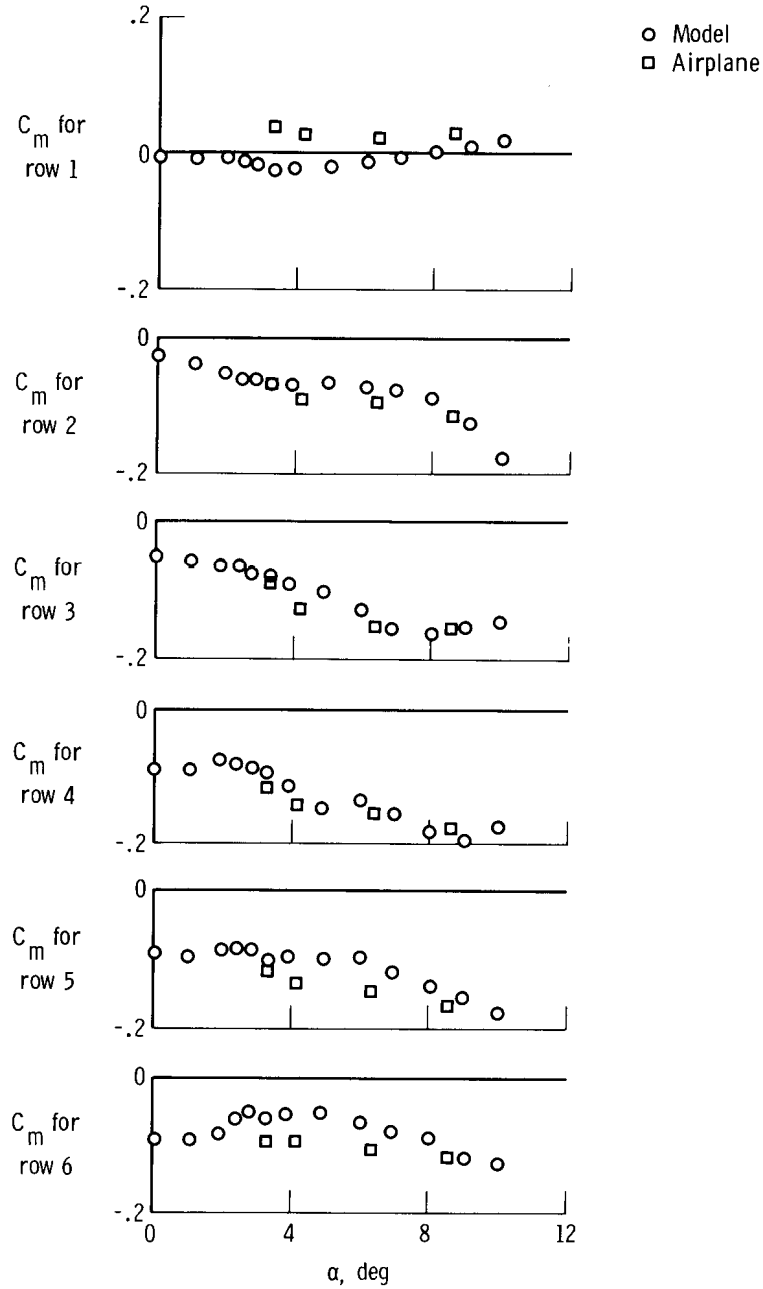
(d) M = 0.97.

Figure 16. Continued.



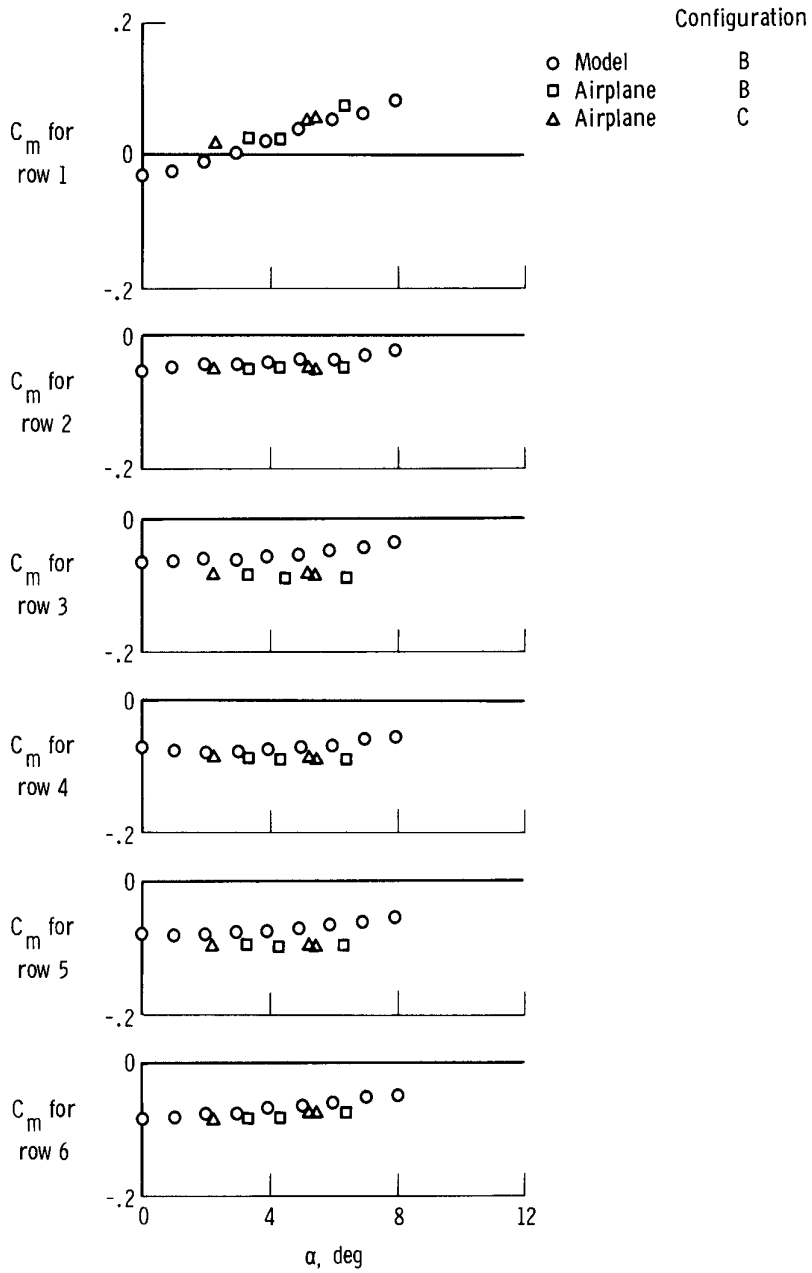
(e) M = 0.98.

Figure 16. Continued.



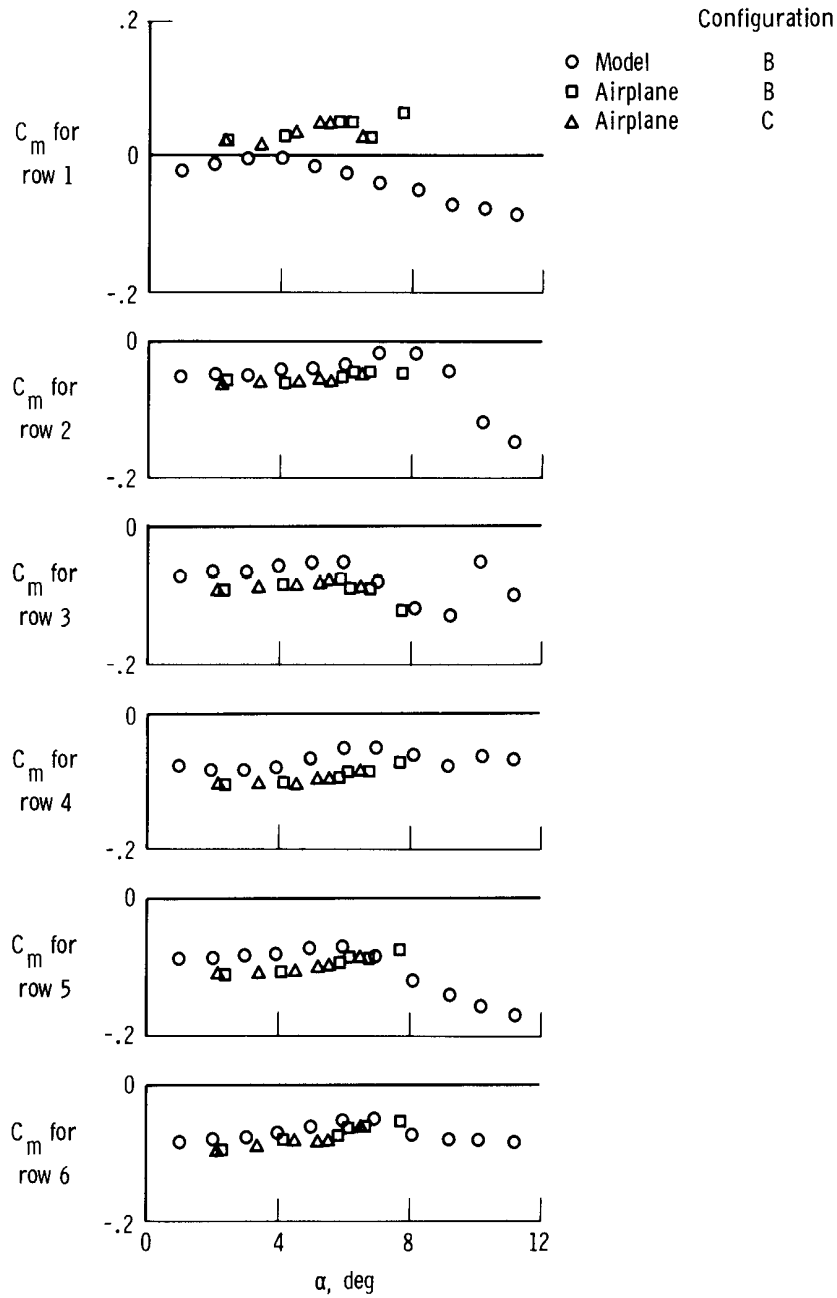
(f) M = 0.99.

Figure 16. Concluded.



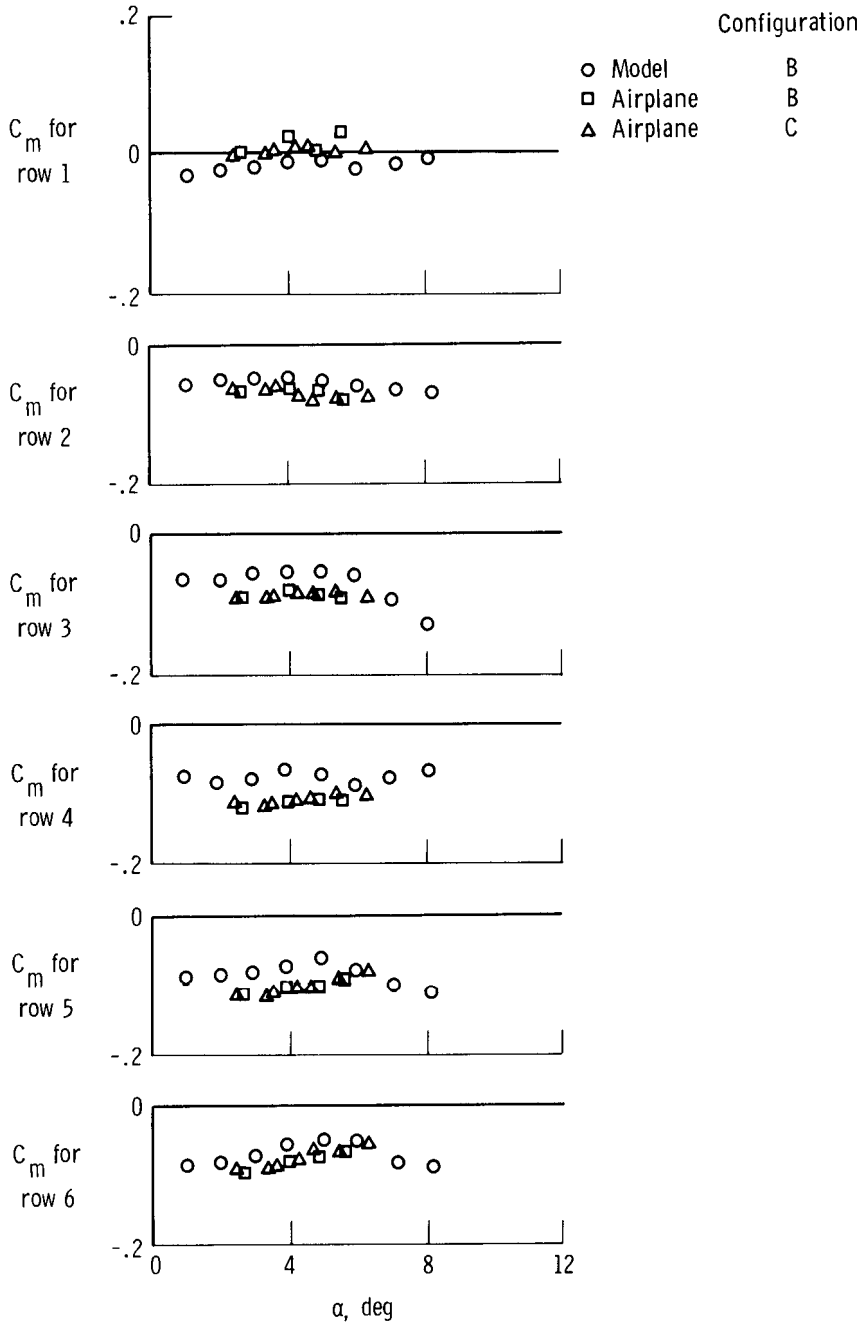
(a) M = 0.50.

Figure 17. Variation of section pitching-moment coefficient with angle of attack for configurations B and C. Model data are for 8-foot tunnel.



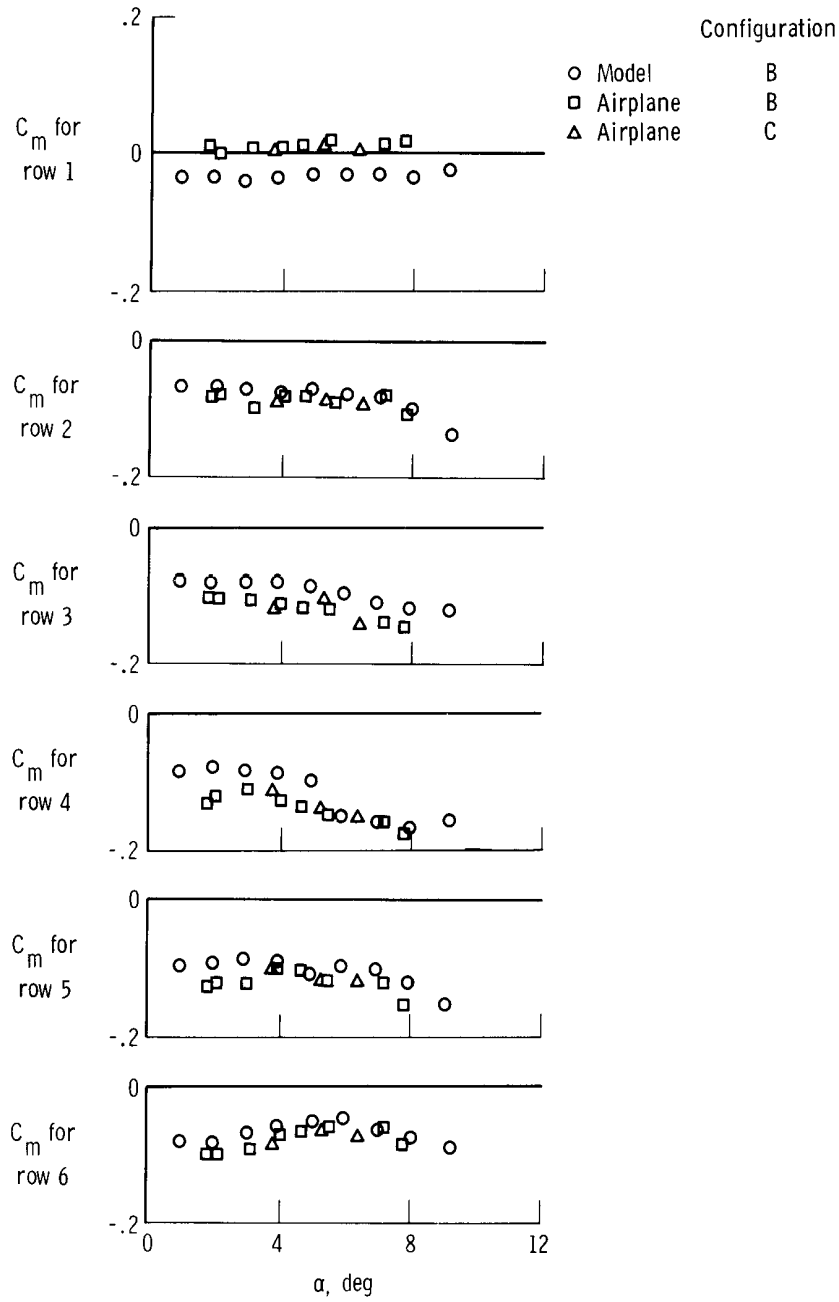
(b) M = 0.80.

Figure 17. Continued.



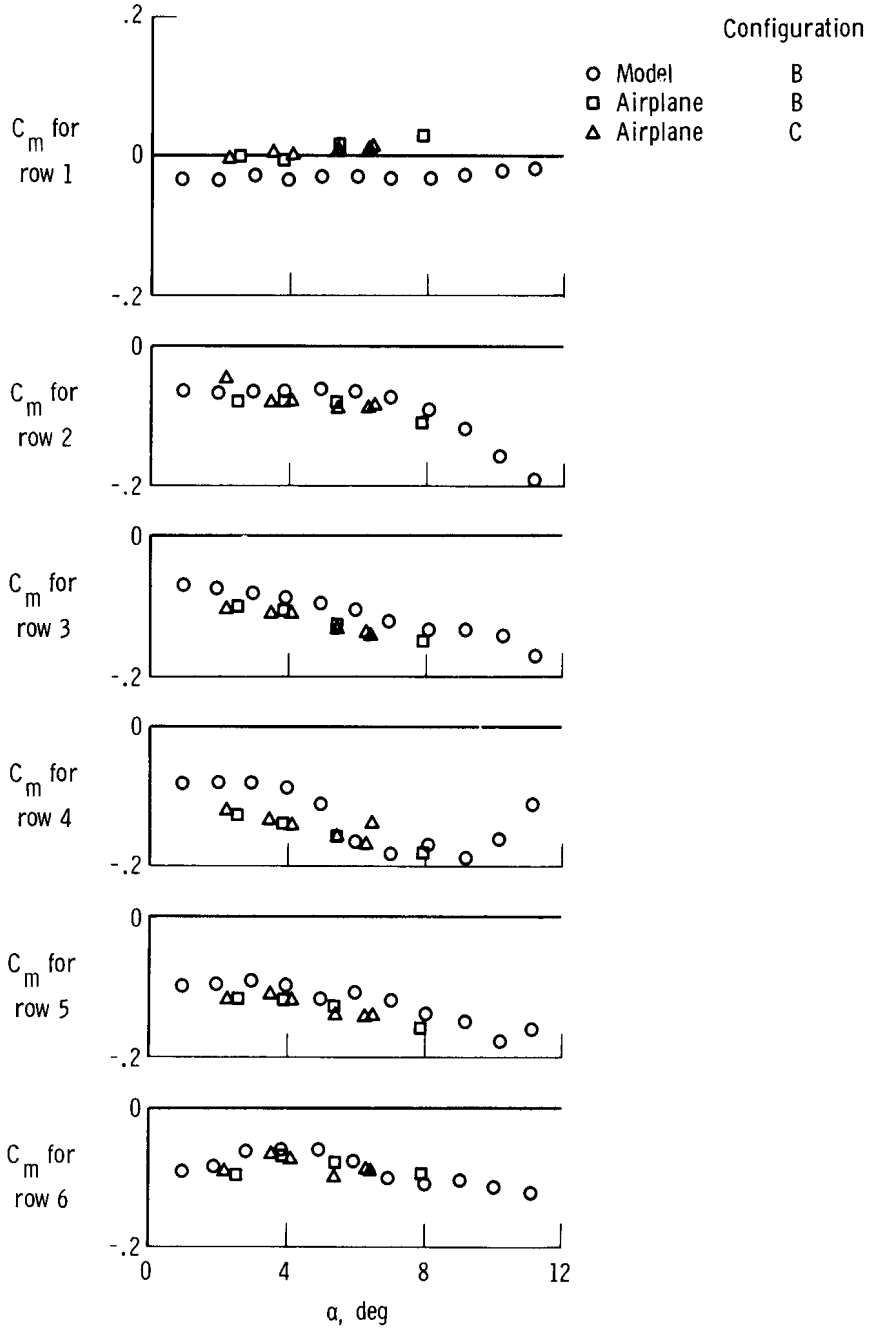
(c) M = 0.90.

Figure 17. Continued.



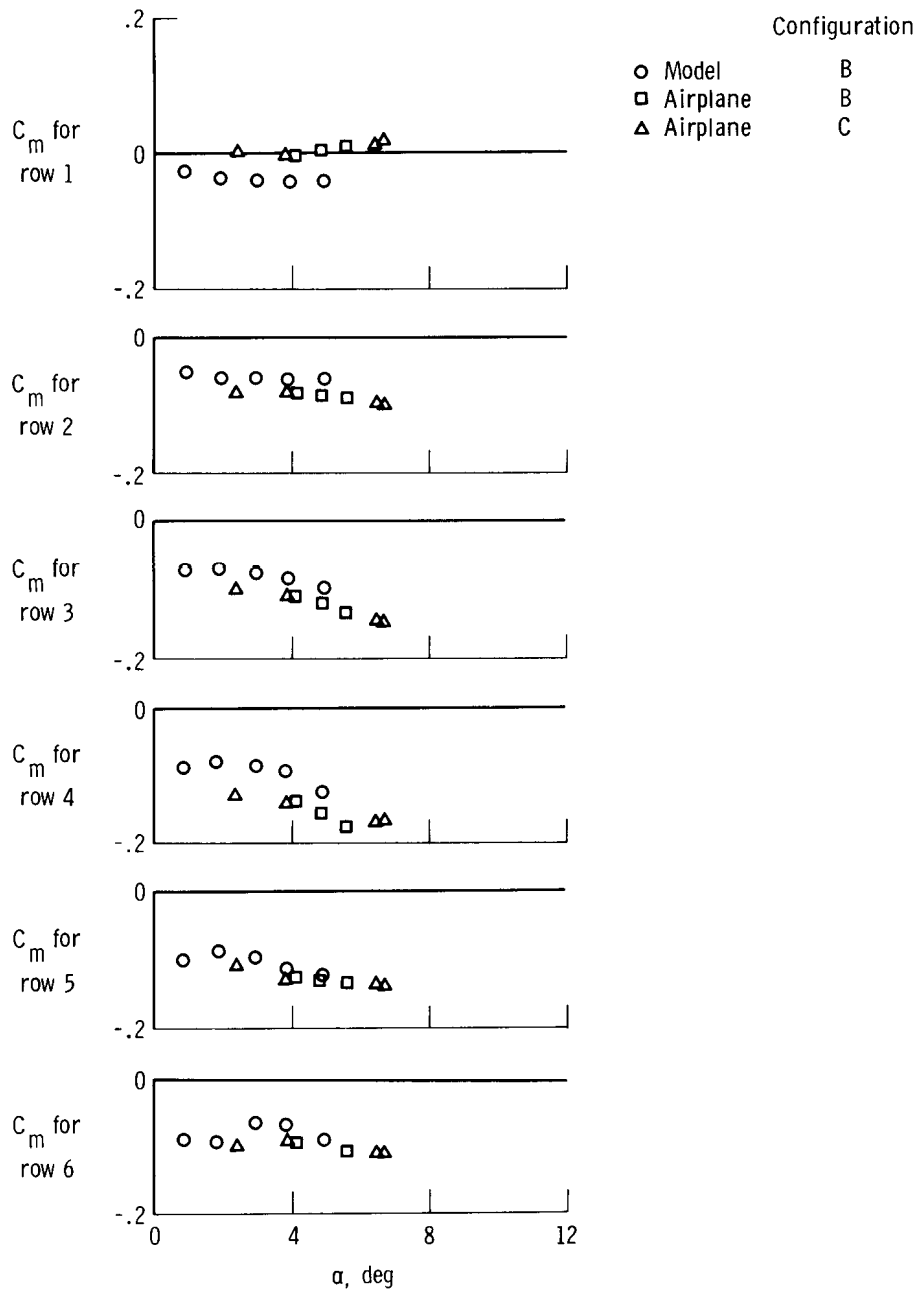
(d) M = 0.95.

Figure 17. Continued.



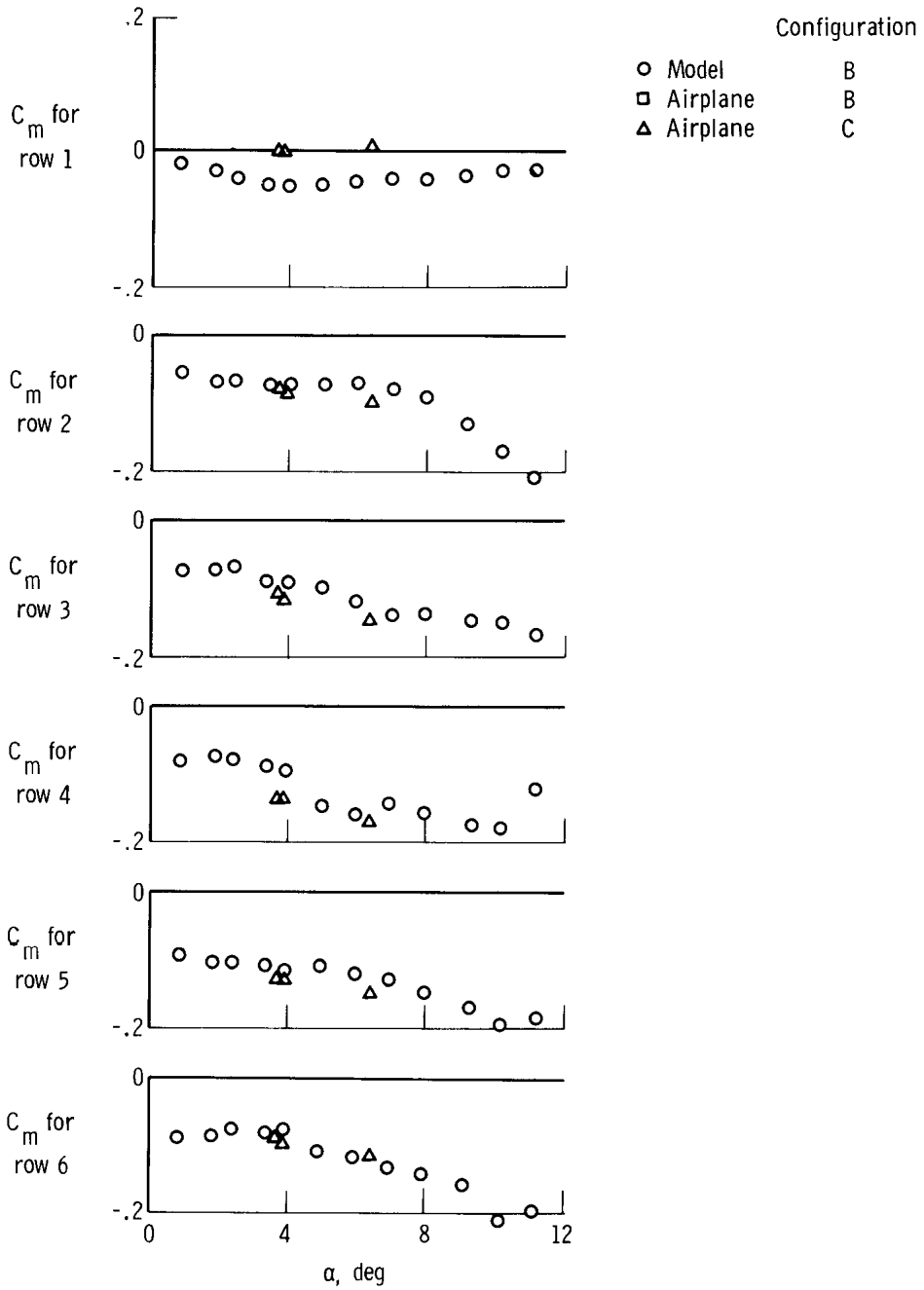
(e) M = 0.97.

Figure 17. Continued.



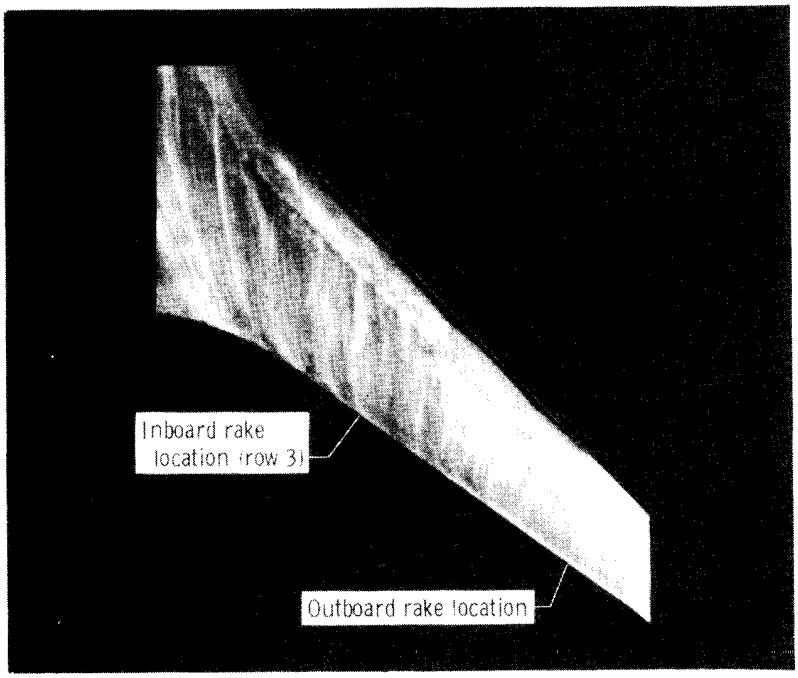
(f) M = 0.98.

Figure 17. Continued.

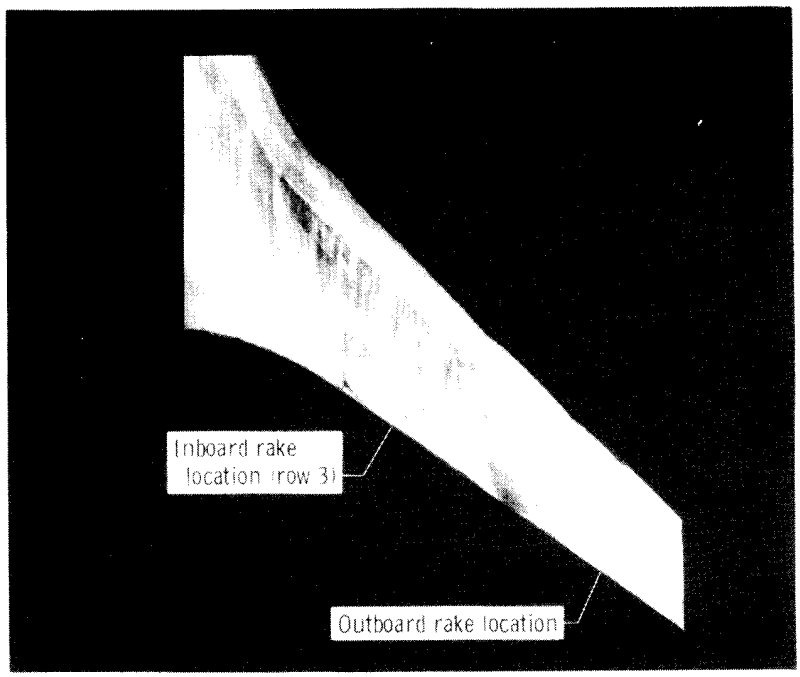


(g) M = 0.99.

Figure 17. Concluded.

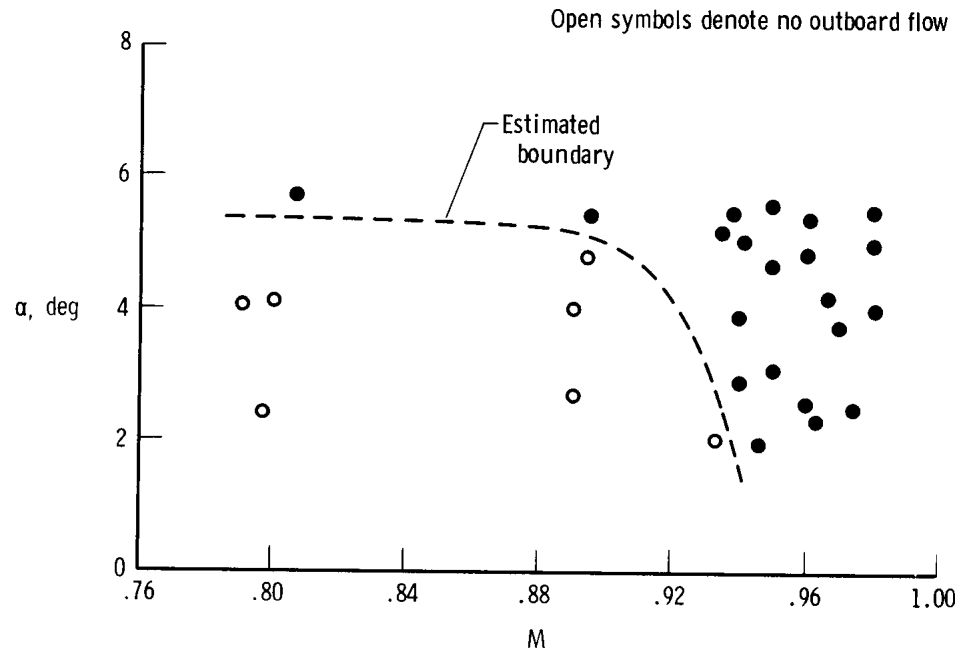


(a) $M = 0.90$, $\alpha = 3.5°$.

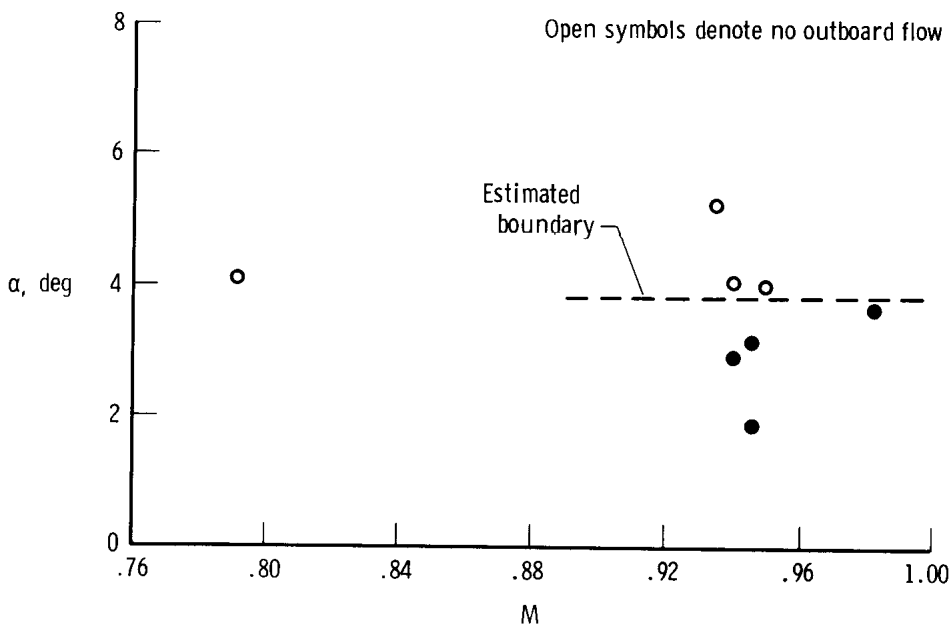


(b) $M = 0.97$, $\alpha = 4.0°$.

Figure 18. Oil flow on upper surface of model wing.



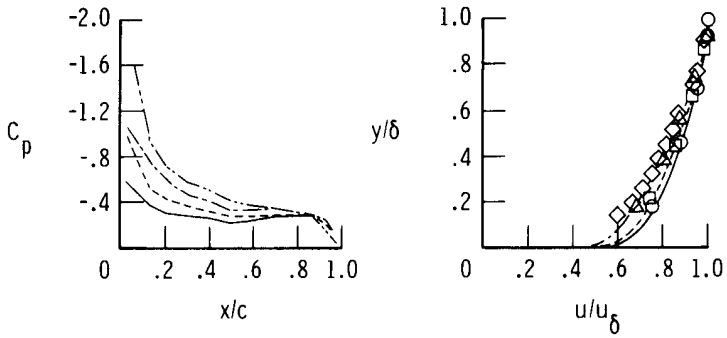
(a) Inboard rake, 2y/b = 0.49, x/c = 0.95.



(b) Outboard rake, 2y/b = 0.87, x/c = 0.93.

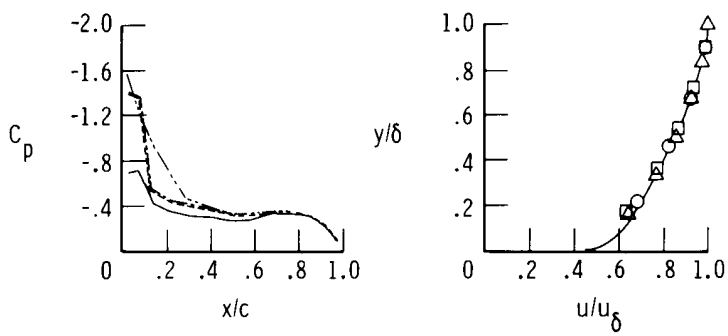
Figure 19. Conditions for outboard flow in boundary layer at rake locations.

	α, deg	δ_a, deg	δ, cm	δ*, cm	θ, cm
○	2.4	0.6	2.7	0.38	0.27
□	4.3	0.7	2.8	0.45	0.31
△	6.4	0.7	3.2	0.61	0.38
◇	9.3	1.6	10.0	1.90	1.20



(a) M = 0.51, configuration B.

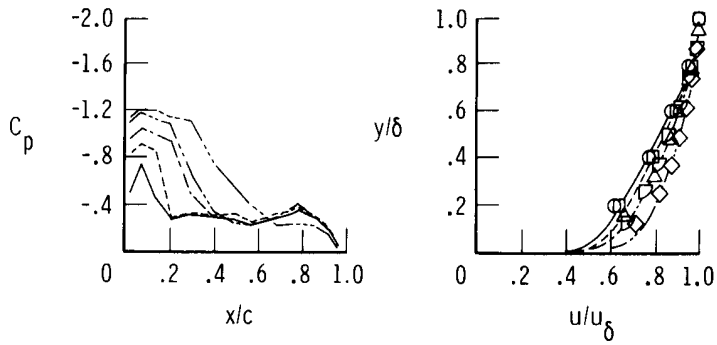
	α, deg	δ_a, deg	δ, cm	δ*, cm	θ, cm
○	2.5	1.1	2.8	0.56	0.34
□	4.3	1.3	3.5	0.70	0.42
△	4.6	1.3	3.8	0.76	0.46
----	5.6	1.3	>12.7	----	----



(b) M = 0.80, configuration C.

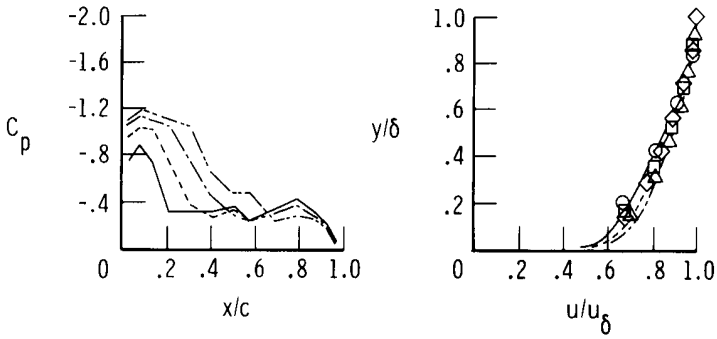
Figure 20. Effect of angle of attack on chordwise pressure distribution and trailing-edge boundary-layer characteristics at inboard rake location. $u_\infty/\nu_\infty = 4 \times 10^6$ *per meter.*

	α, deg	δ_a, deg	δ, cm	δ*, cm	θ, cm
○	2.5	1.0	3.1	0.68	0.37
□	3.6	1.4	3.1	0.65	0.37
△	4.7	1.6	3.8	0.68	0.41
◇	5.5	1.7	5.1	0.71	0.46
▽	6.4	0.6	5.1	0.92	0.56



(c) M = 0.89, configuration A.

	α, deg	δ_a, deg	δ, cm	δ*, cm	θ, cm
○	2.6	1.1	3.0	0.63	0.33
□	4.0	1.1	3.6	0.65	0.36
△	4.8	1.1	4.1	0.66	0.41
◇	5.5	1.0	4.4	0.79	0.44

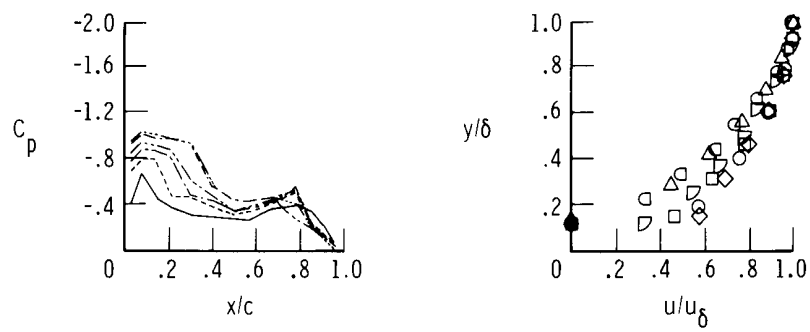


(d) M = 0.89, configuration B.

Figure 20. Continued.

	α, deg	δ_a, deg	δ, cm
○	2.2	1.4	3.1
□	3.5	1.1	4.1
△	4.3	1.6	4.3
◇	4.7	1.1	4.1
▽	5.5	1.1	5.1
◻	5.6	1.1	5.6

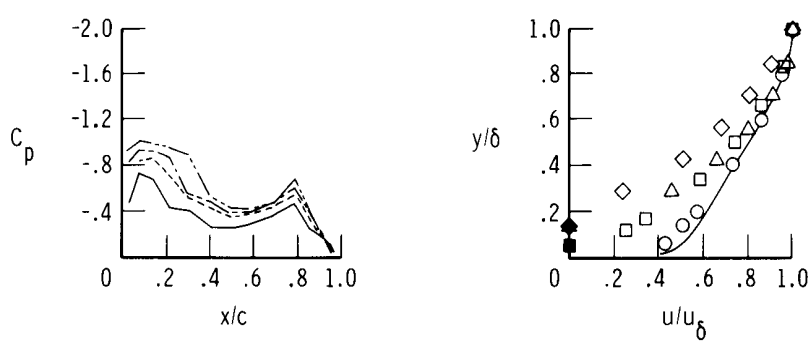
Solid symbols denote $u \leqq 0$.



(e) M = 0.93, configuration A.

	α, deg	δ_a, deg	δ, cm	δ*, cm	θ, cm
○	2.3	0.6	3.1	0.81	0.40
□	3.2	1.0	3.8	----	----
△	3.9	1.1	4.4	----	----
◇	4.7	1.3	4.4	----	----

Solid symbols denote $u \leqq 0$.

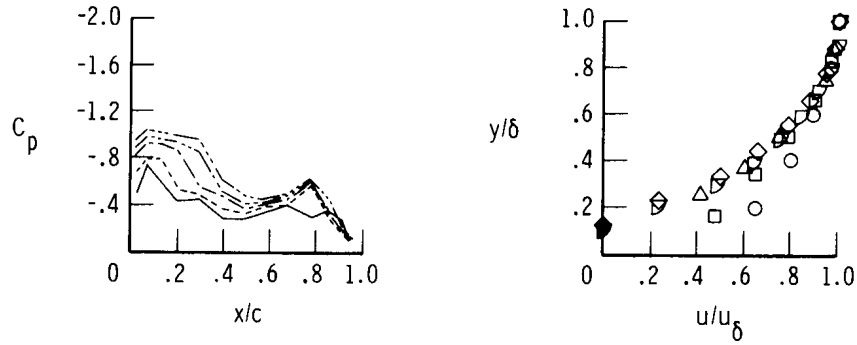


(f) M = 0.94, configuration C.

Figure 20. Continued.

	α, deg	δ_a, deg	δ, cm
○	2.1	1.1	3.1
□	2.9	1.3	3.8
△	4.0	1.6	5.0
◇	5.0	1.4	5.7
▽	5.4	1.7	6.3

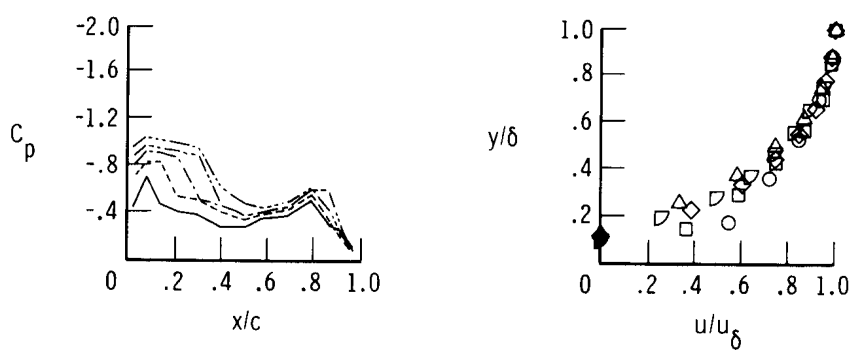
Solid symbols denote u ≦ 0.



(g) M = 0.94, configuration B.

	α, deg	δ_a, deg	δ, cm
○	1.9	1.1	3.5
□	3.0	1.3	4.4
△	4.0	1.4	5.0
◇	4.7	1.5	5.7
▽	5.6	1.6	6.7

Solid symbols denote u ≦ 0.

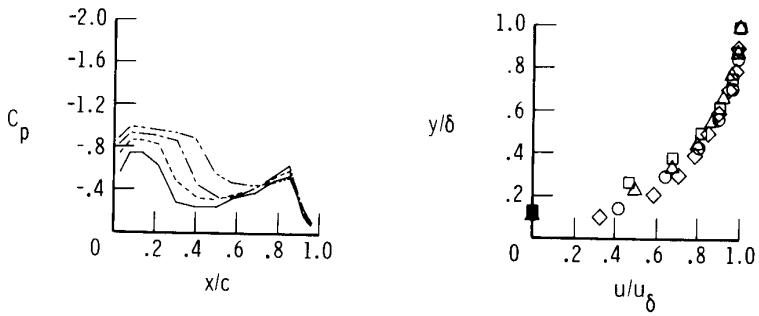


(h) M = 0.95, configuration B.

Figure 20. Continued.

	α, deg	δ_a, deg	δ, cm
○	2.6	1.2	4.4
□	3.8	1.3	5.1
△	4.8	1.6	5.7
◇	5.4	1.0	6.4

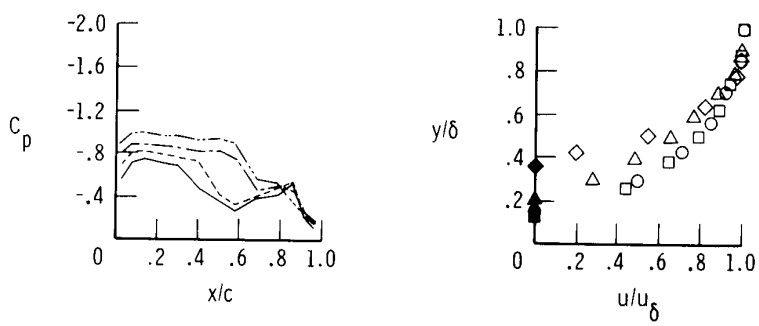
Solid symbols denote $u \leqq 0$.



(i) M = 0.96, configuration B.

	α, deg	δ_a, deg	δ, cm
○	3.7	0.6	4.4
□	4.7	1.0	5.0
△	5.5	1.2	6.3
◇	5.9	1.1	8.9

Solid symbols denote $u \leqq 0$.

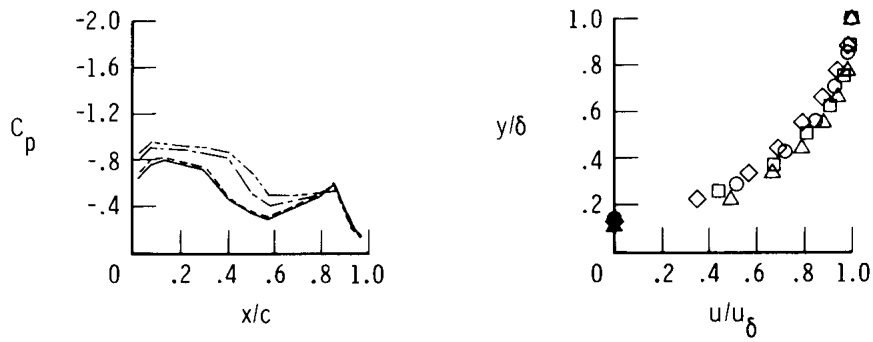


(j) M = 0.98, configuration A.

Figure 20. Continued.

	α, deg	δ_a, deg	δ, cm
○	3.7	1.6	4.4
□	4.0	1.4	5.0
△	4.9	1.1	5.7
◇	5.6	0.9	5.7

Solid symbols denote u ≦ 0.



(k) M = 0.98, configuration B.

Figure 20. Concluded.

	α, deg	δ_a, deg	δ, cm
○	4.7	1.1	4.1
□	4.7	1.5	4.8

Flagged symbols denote lower surface.
Solid symbols denote u ≦ 0.

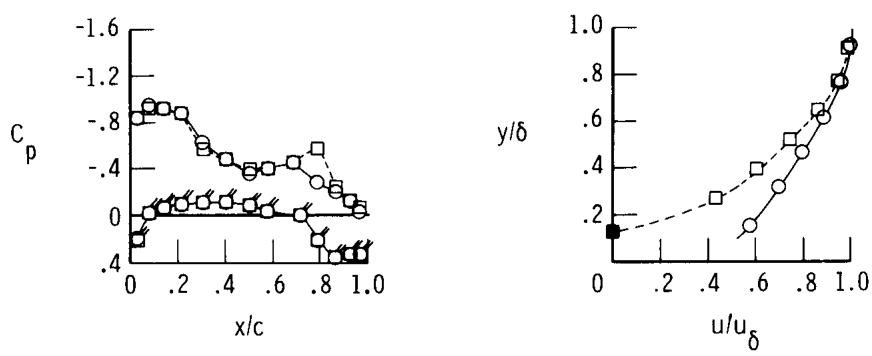
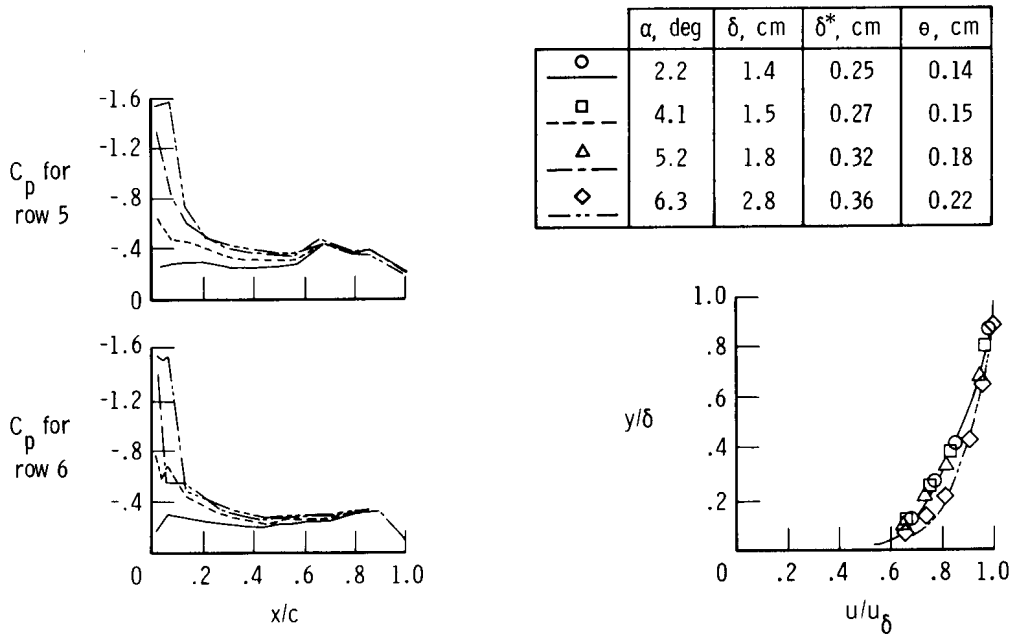
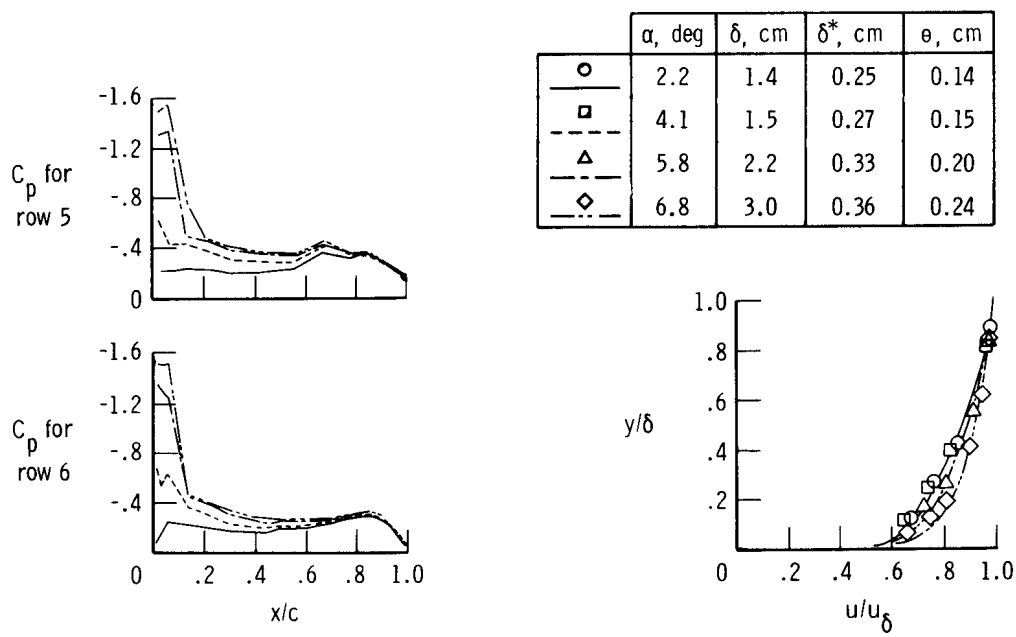


Figure 21. Effect of aileron deflection on chordwise pressure distribution and trailing-edge boundary-layer velocity distribution at inboard rake location. Configuration A; Mach 0.93; $u_\infty/\nu_\infty = 4 \times 10^6$ per meter.

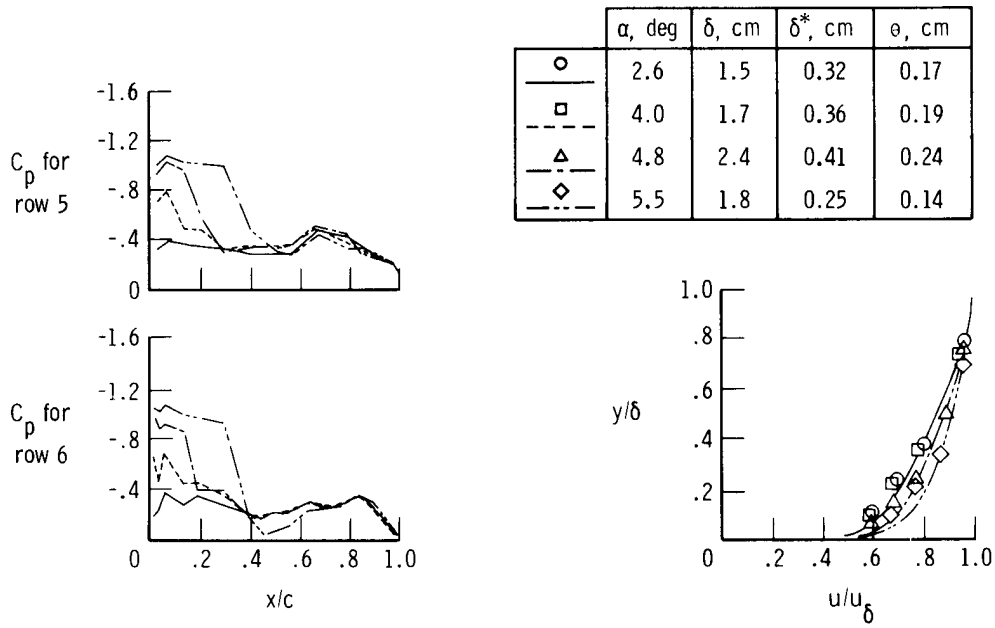


(a) M = 0.80, configuration C.

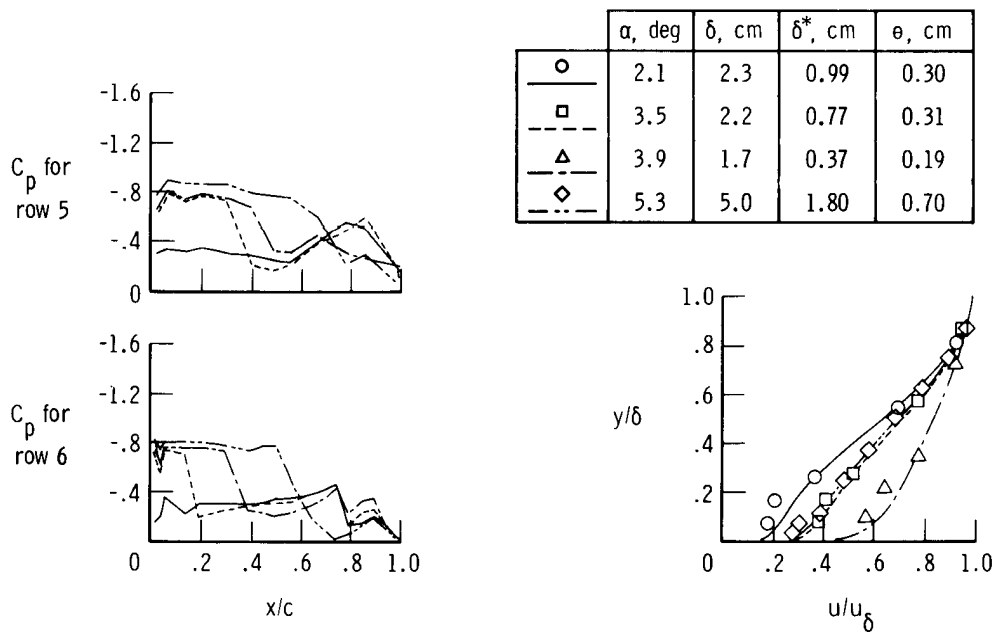


(b) M = 0.80, configuration B.

Figure 22. Effect of angle of attack on chordwise pressure distribution at two outboard orifice rows and trailing-edge boundary-layer characteristics at outboard rake location. $u_\infty/\nu_\infty = 4 \times 10^6$ *per meter.*

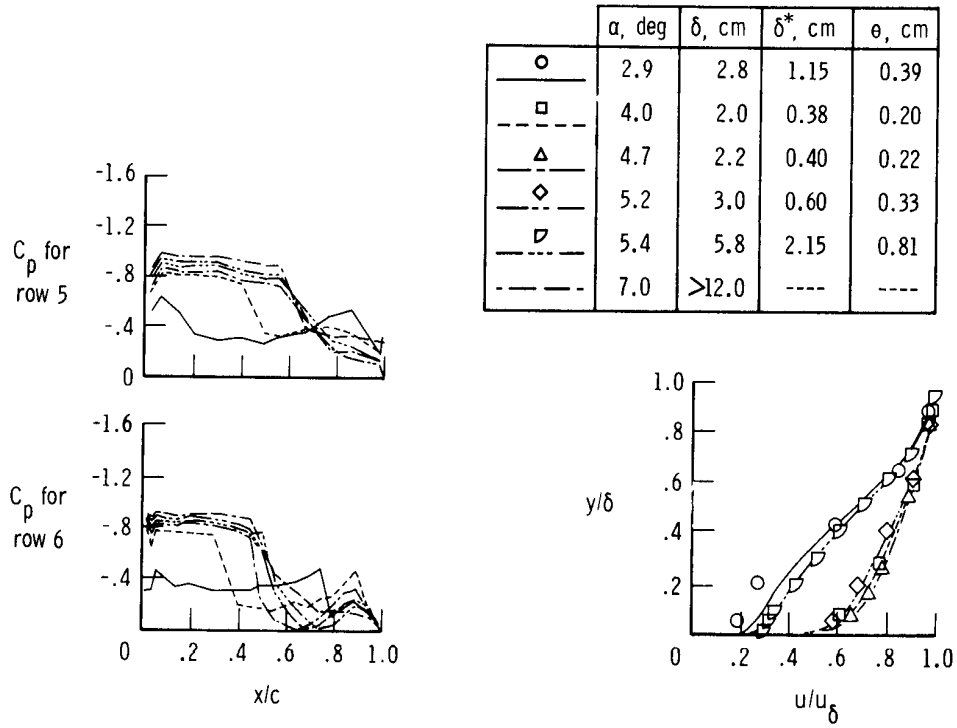


(c) M = 0.89, configuration B.

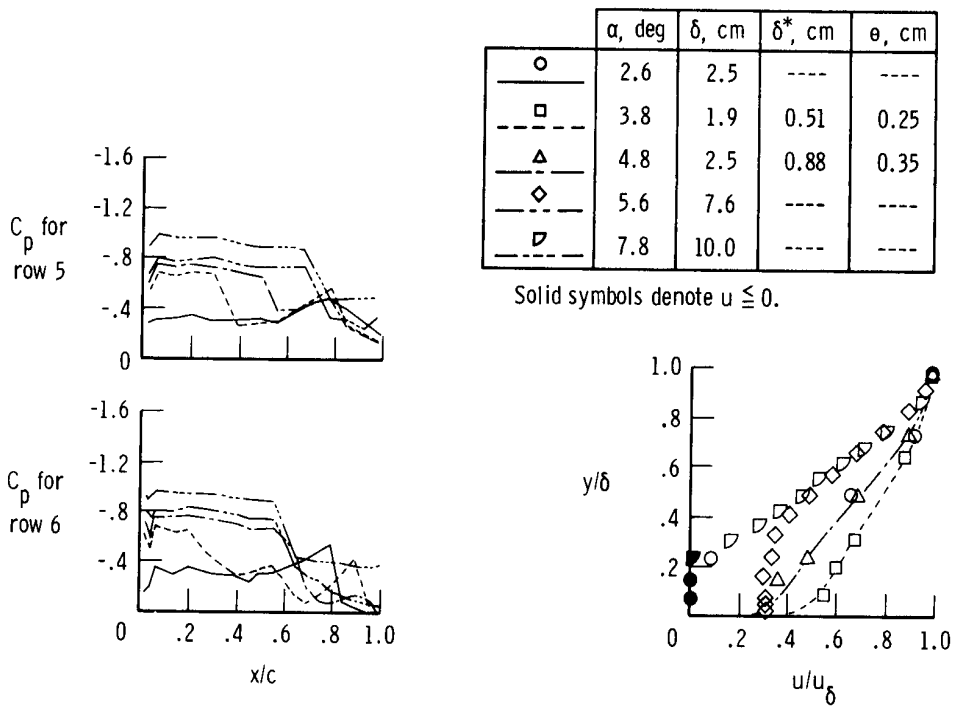


(d) M = 0.94, configuration C.

Figure 22. Continued.

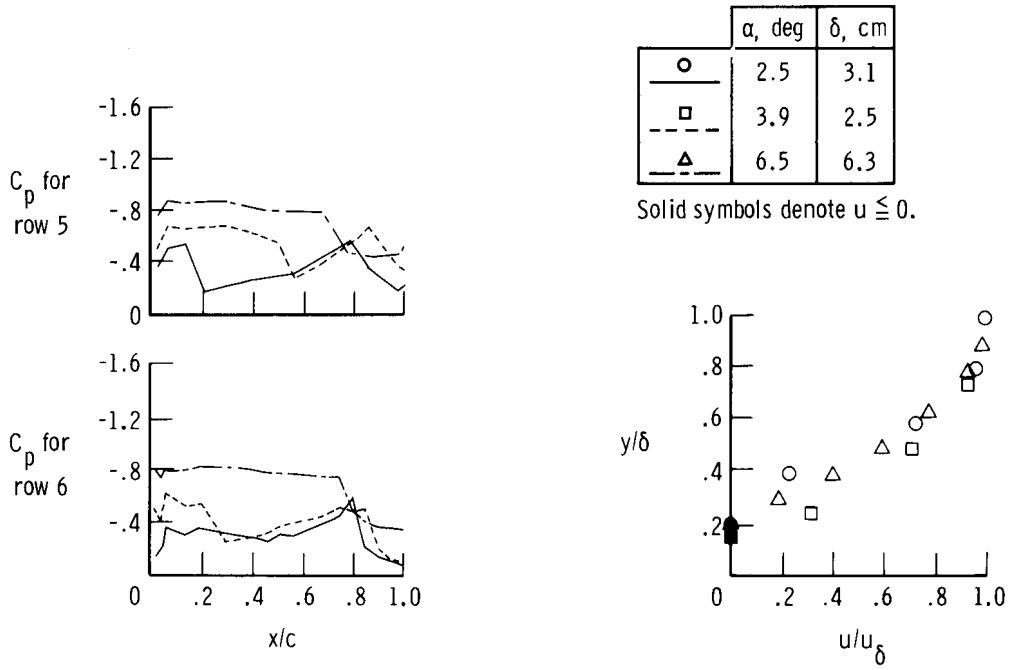


(e) M = 0.94, configuration B.

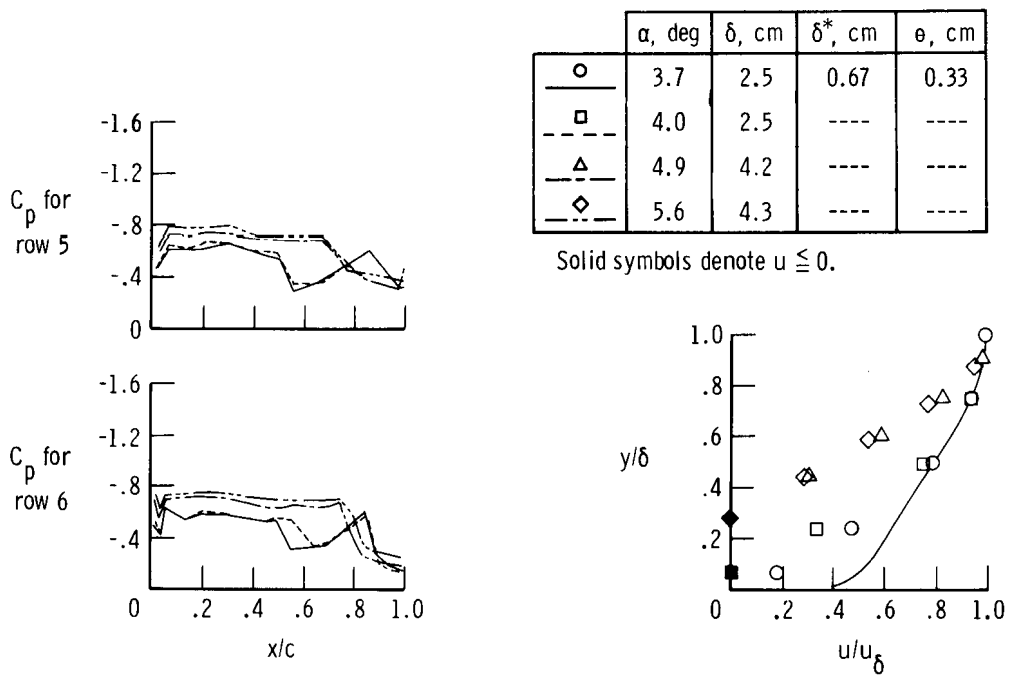


(f) M = 0.96, configuration B.

Figure 22. Continued.

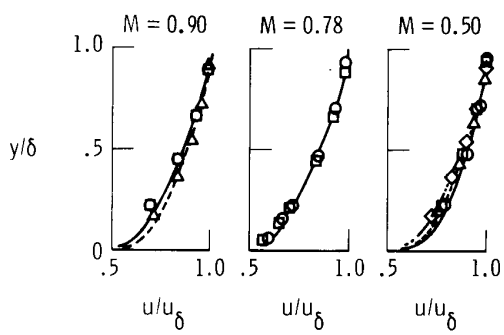


(g) M = 0.98, configuration C.



(h) M = 0.98, configuration B.

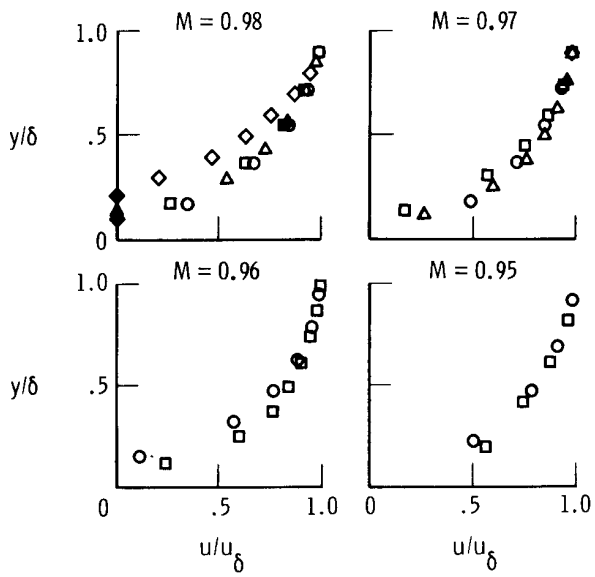
Figure 22. Concluded.



	α, deg	δ_a, deg	δ, cm	δ^*, cm	θ, cm
M = 0.90					
○	1.5	0.7	2.8	0.56	0.31
□	2.5	0.7	2.8	0.56	0.31
△	3.4	0.8	3.4	0.61	0.34
M = 0.78					
○	2.5	0.5	2.7	0.54	0.32
□	3.4	0.6	2.8	0.56	0.34
M = 0.50					
○	1.5	0.3	2.6	0.34	0.23
□	2.9	0.3	2.6	0.36	0.26
△	4.9	0.6	2.9	0.41	0.29
◇	7.0	0.3	3.5	0.56	0.38

(a) Inboard rake location.

Figure 23. Trailing-edge boundary-layer characteristics at inboard and outboard rake locations for $u_\infty/\nu_\infty = 7 \times 10^6$ per meter. Configuration C.

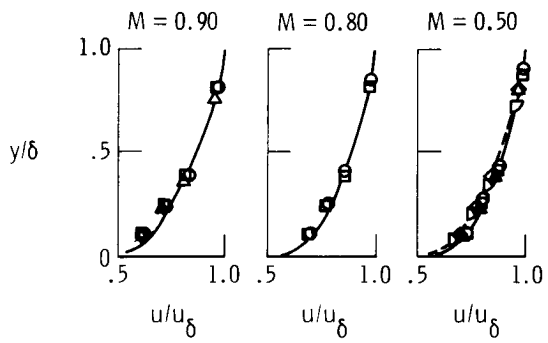


	α, deg	δ_a, deg	δ, cm
M = 0.98			
○	1.3	0.6	3.5
□	2.7	0.7	3.5
△	4.9	0.6	4.4
◇	6.3	0.8	6.4
M = 0.97			
○	2.2	1.1	3.5
□	3.4	1.6	4.2
△	5.5	1.1	5.0
M = 0.96			
○	2.8	2.0	4.1
□	4.7	1.6	5.2
M = 0.95			
○	1.5	0.8	2.8
□	2.2	0.9	3.1

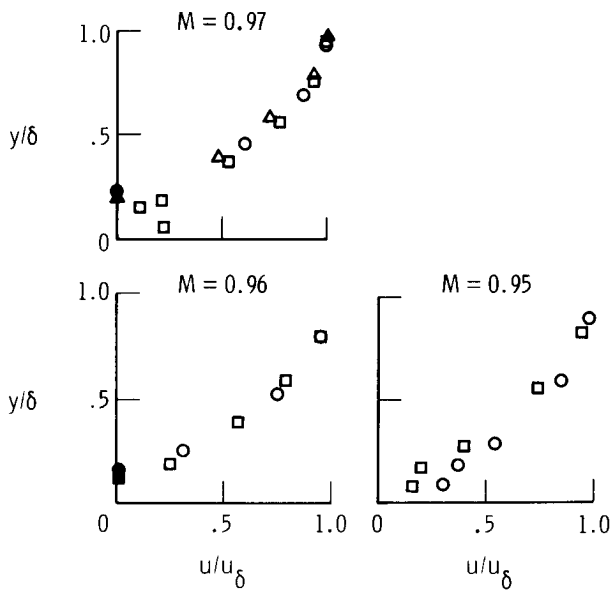
Solid symbols denote $u \leqq 0$.

(a) Concluded.

Figure 23. Continued.



	α, deg	δ, cm	δ*, cm	θ, cm
M = 0.90				
○	1.5	1.5	0.30	0.17
□	2.5	1.5	0.30	0.17
△	3.4	1.7	0.34	0.19
M = 0.80				
○	2.4	1.5	0.26	0.15
□	3.4	1.5	0.26	0.15
M = 0.50				
○	1.5	1.4	0.20	0.13
□	2.9	1.4	0.20	0.13
△	4.9	1.5	0.21	0.14
◇	5.9	1.5	0.24	0.17
▽	7.0	1.7	0.27	0.19

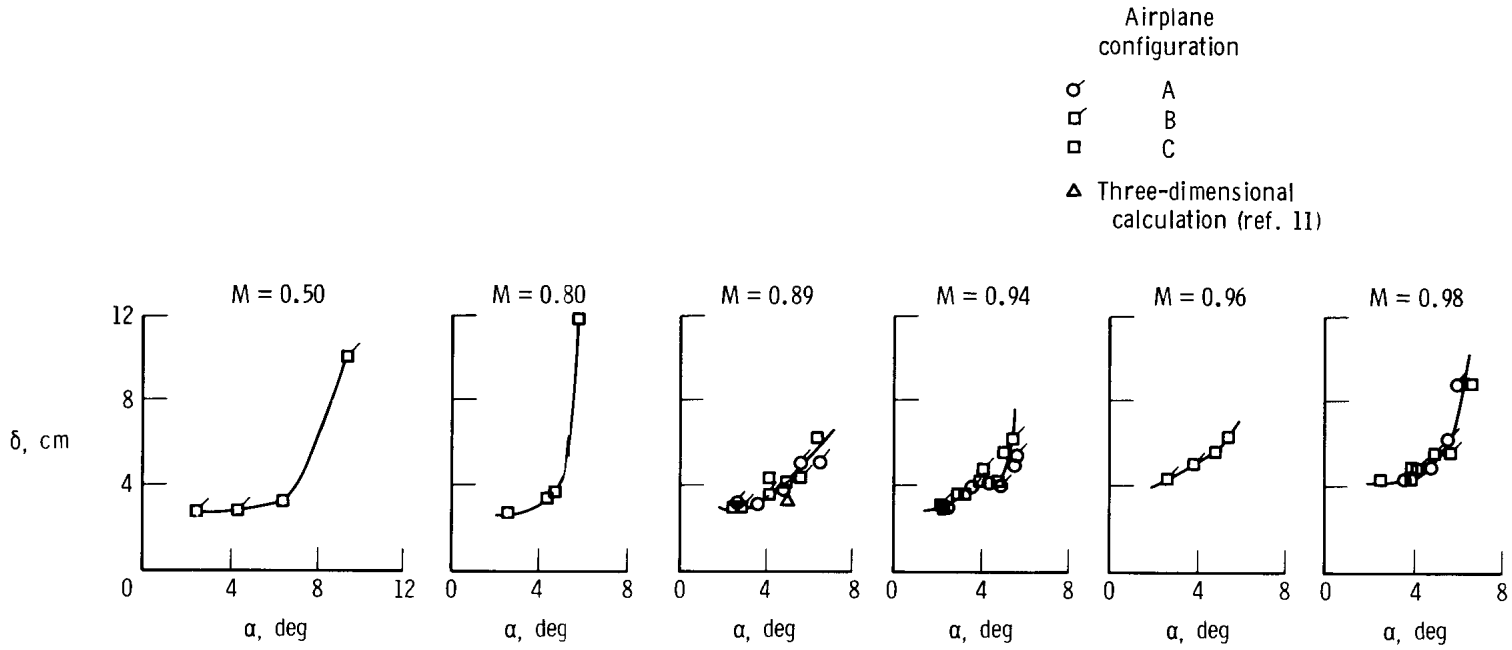


	α, deg	δ, cm
M = 0.97		
○	2.2	2.7
□	3.4	3.3
△	4.8	3.2
M = 0.96		
○	2.8	2.3
□	4.7	3.1
M = 0.95		
○	1.5	2.1
□	2.2	2.3

Solid symbols denote $u \leqq 0$.

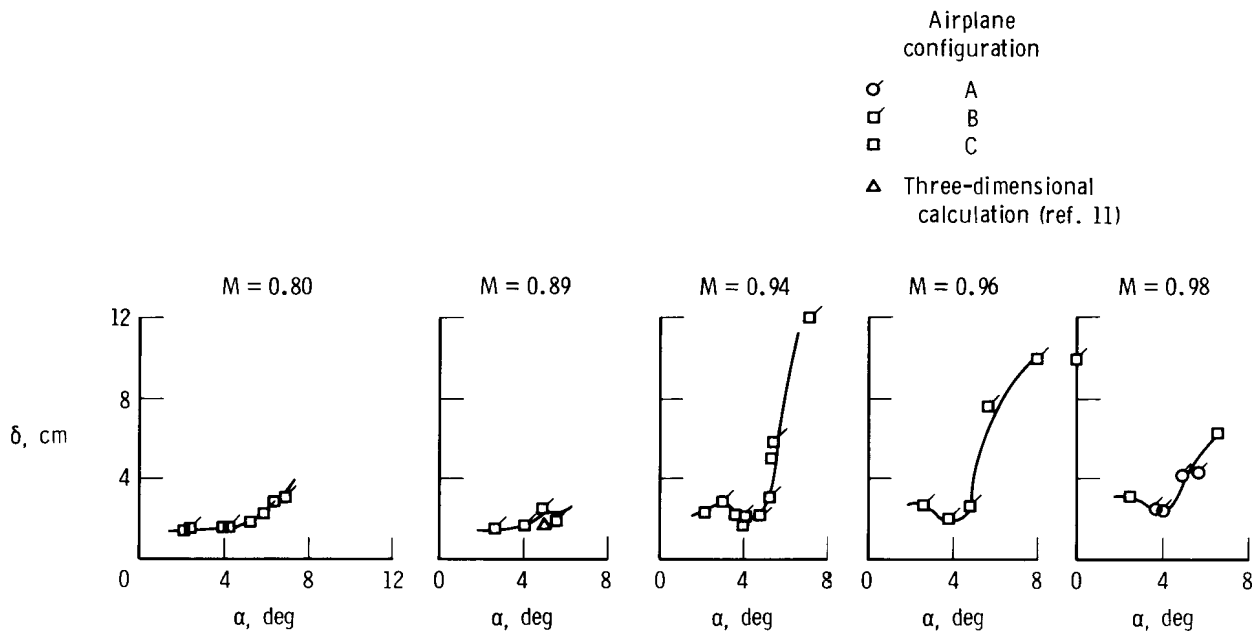
(b) Outboard rake location.

Figure 23. Concluded.



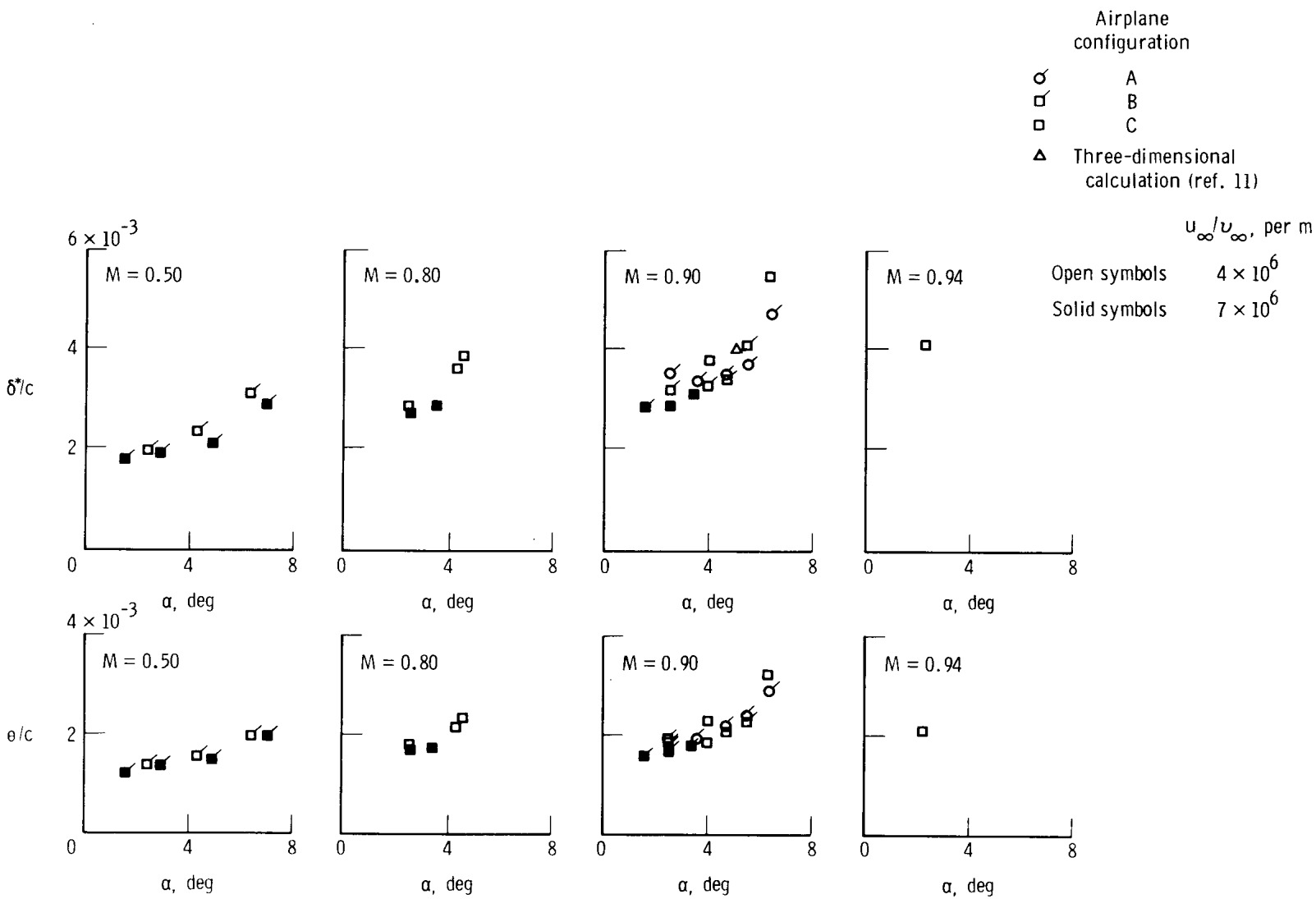
(a) Inboard rake location.

Figure 24. Boundary-layer velocity thicknesses at inboard and outboard rake locations. $u_\infty/\nu_\infty = 4 \times 10^6$ *per meter.*



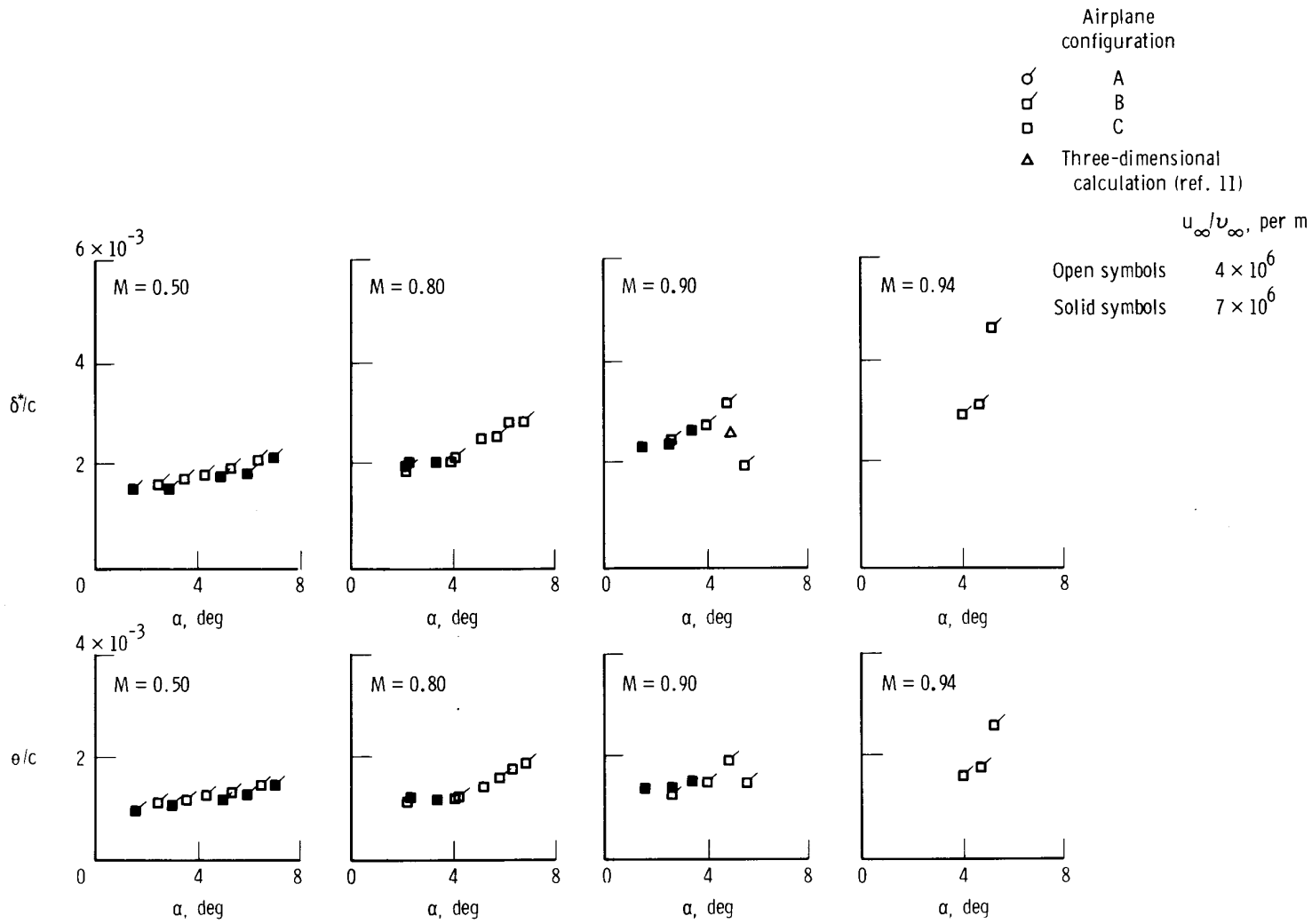
(b) Outboard rake location.

Figure 24. Concluded.



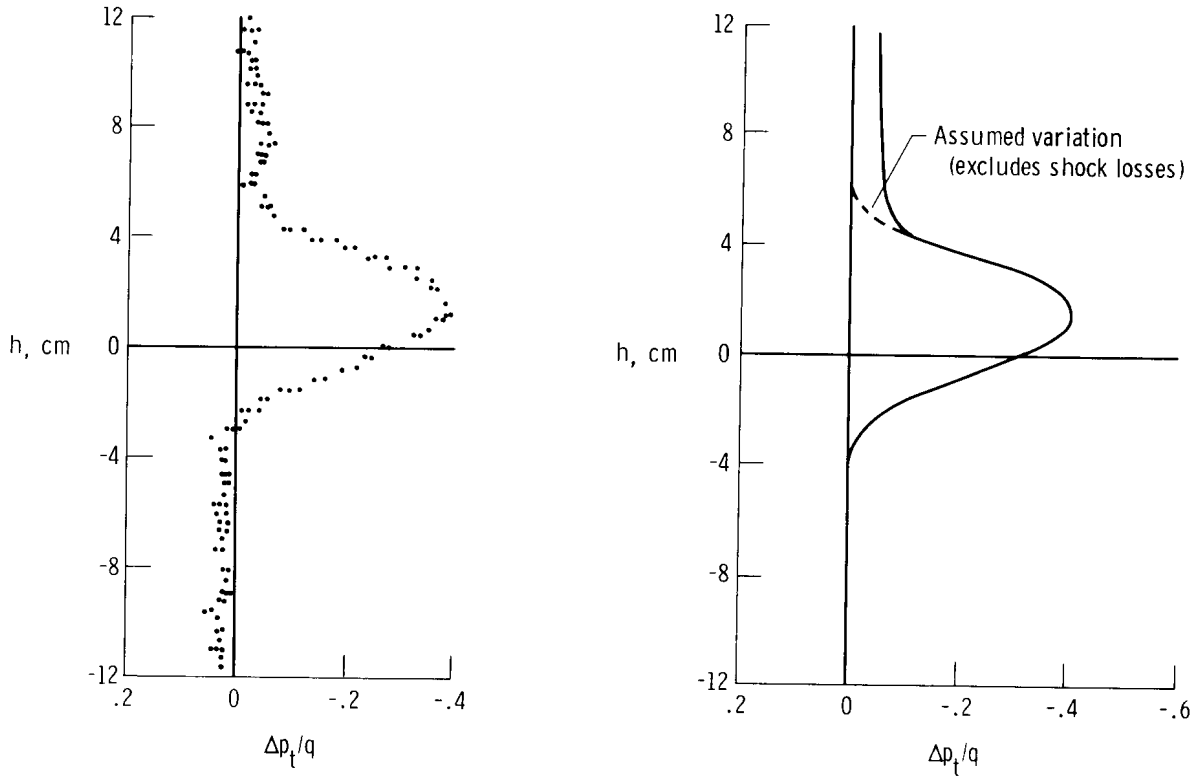
(a) Inboard rake location.

Figure 25. Boundary-layer integral thicknesses at rake locations.



(b) Outboard rake location.

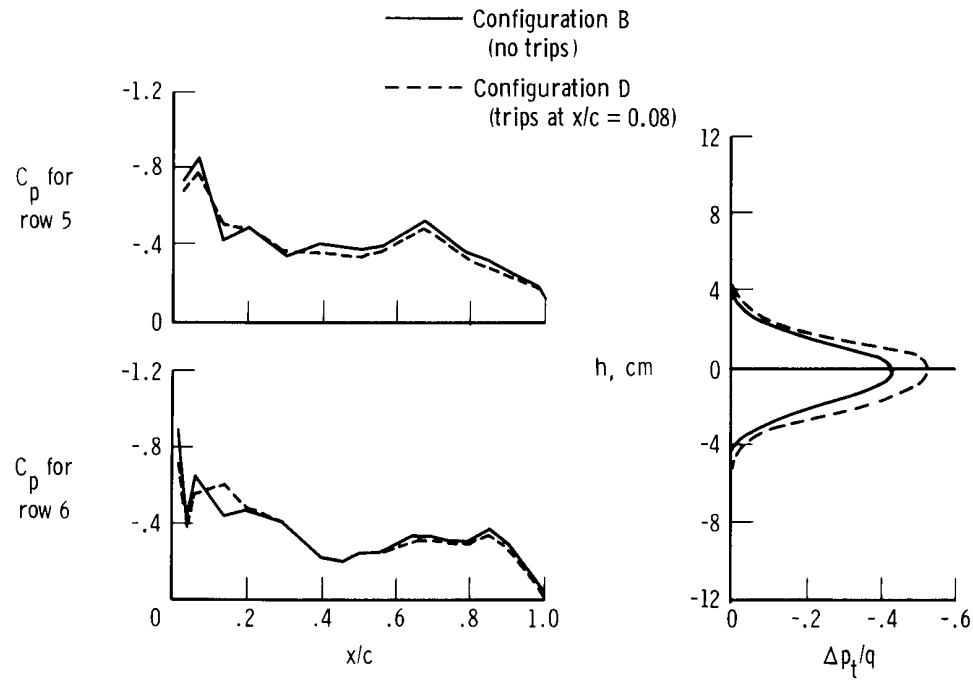
Figure 25. Concluded.



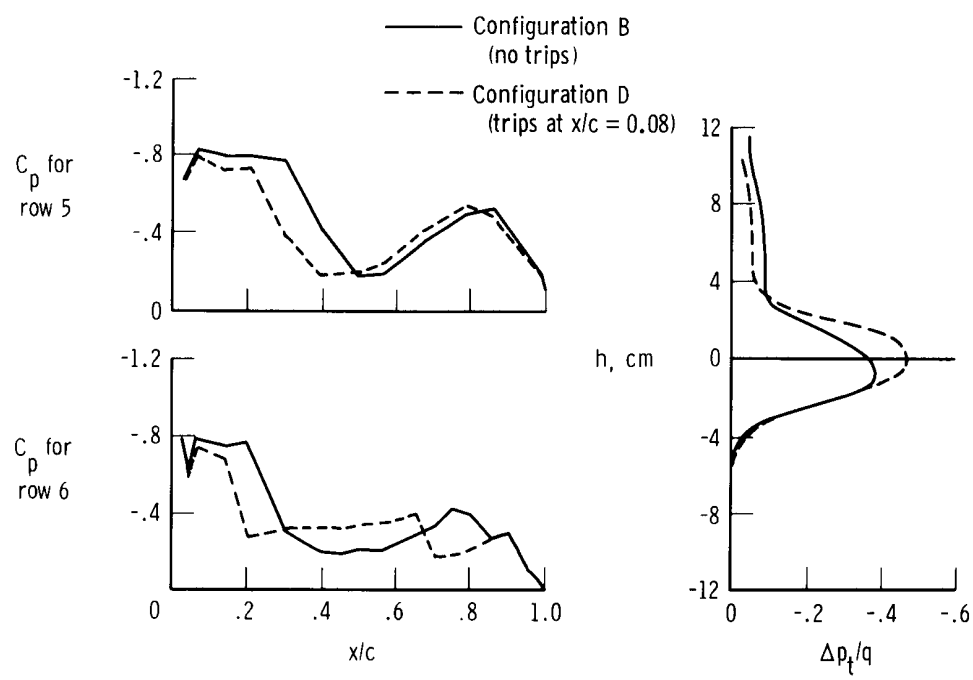
(a) Measured.

(b) Faired and zero-adjusted.

Figure 26. Measured and adjusted variation of normalized total pressure losses in wake.

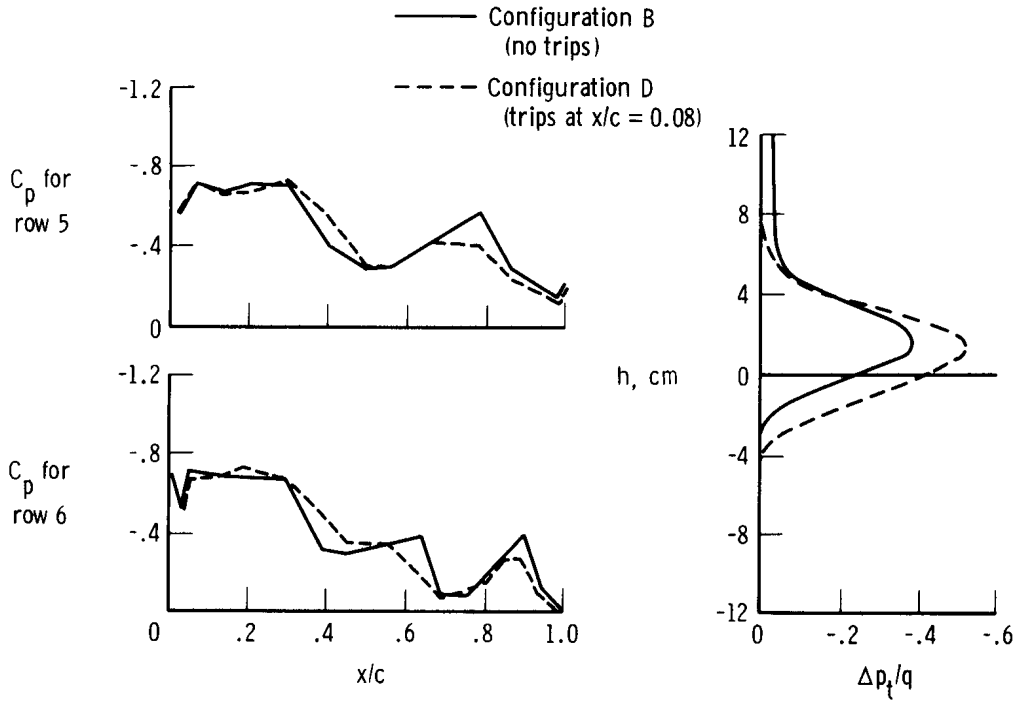


(a) M = 0.89, α = 3.7°.

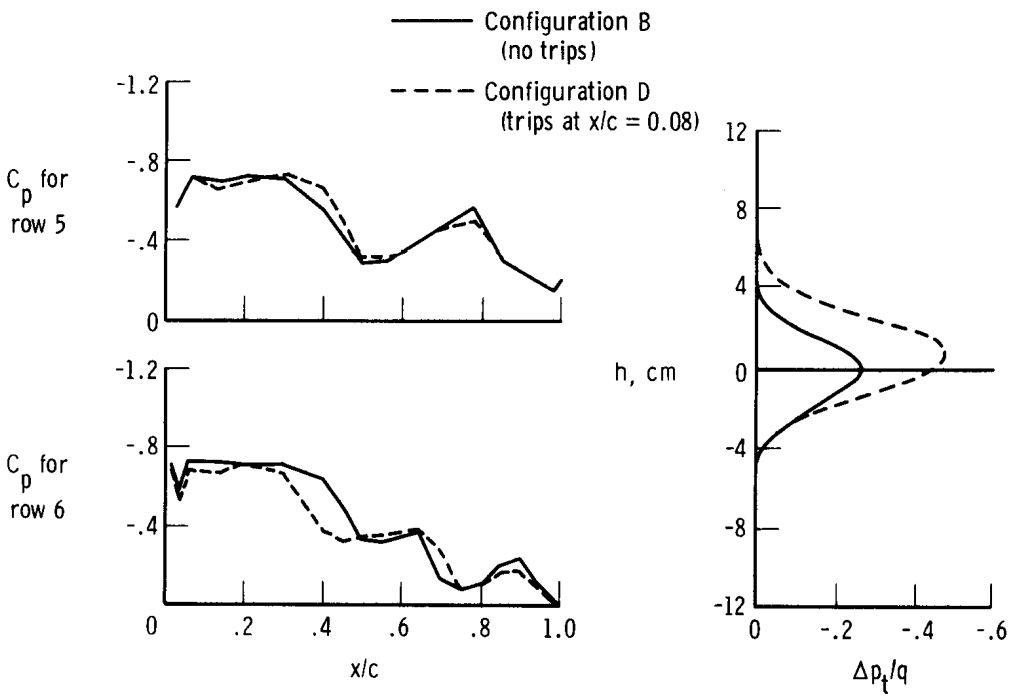


(b) M = 0.93, α = 3.7°.

Figure 27. Effects of boundary-layer trips on upper surface chordwise pressure distributions at two outboard orifice rows, and adjusted normalized total pressure variations in wake.

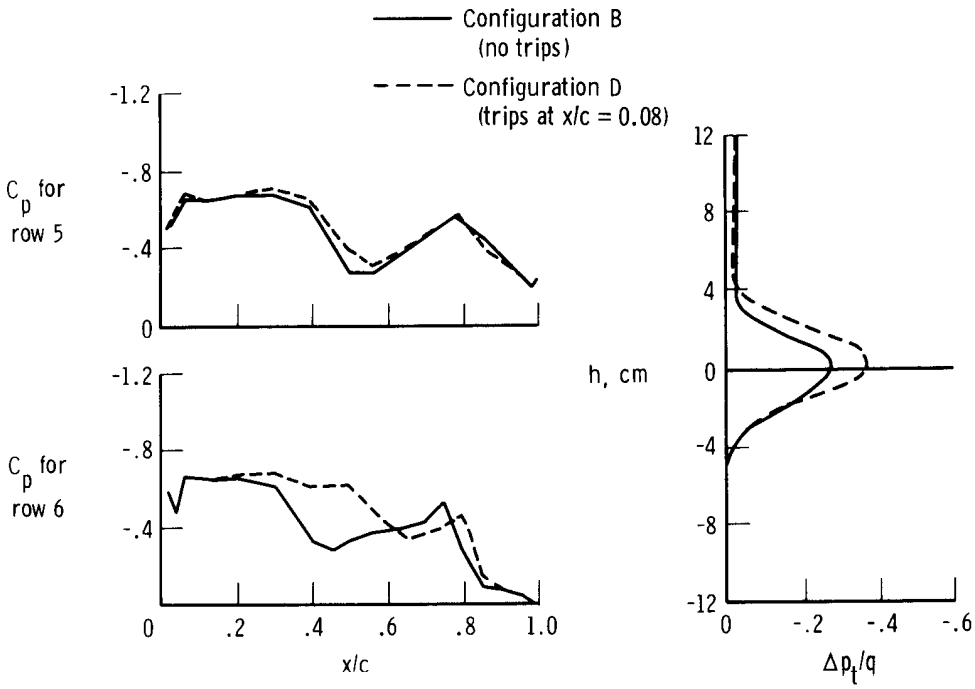


(c) M = 0.96, α = 4.0°.

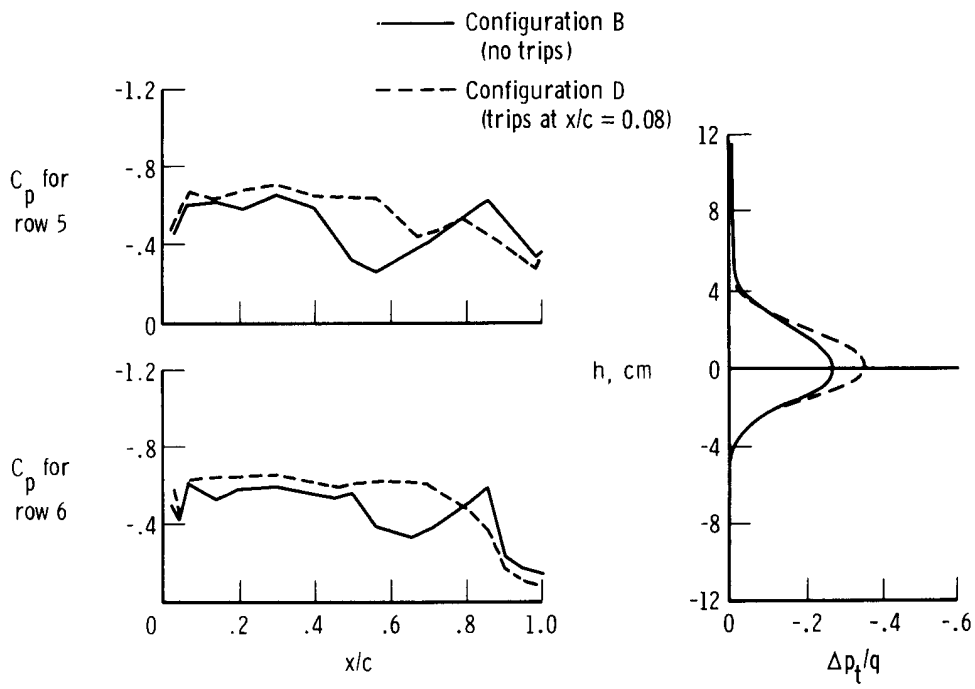


(d) M = 0.96, α = 4.1°.

Figure 27. Continued.



(e) $M = 0.97$, $\alpha = 3.8°$.



(f) $M = 0.98$, $\alpha = 3.7°$.

Figure 27. Concluded.

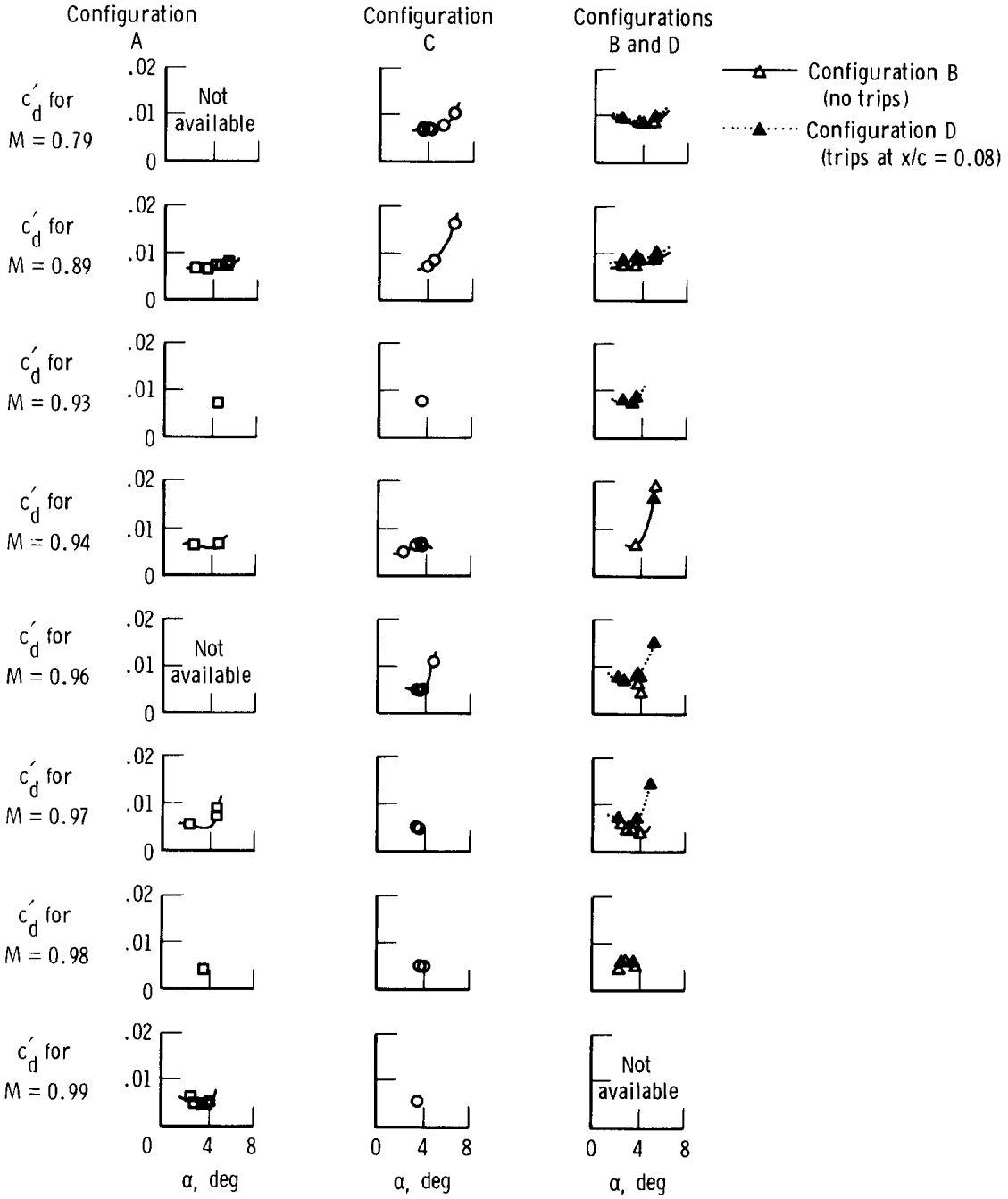


Figure 28. Effect of angle of attack on wing section drag coefficients.

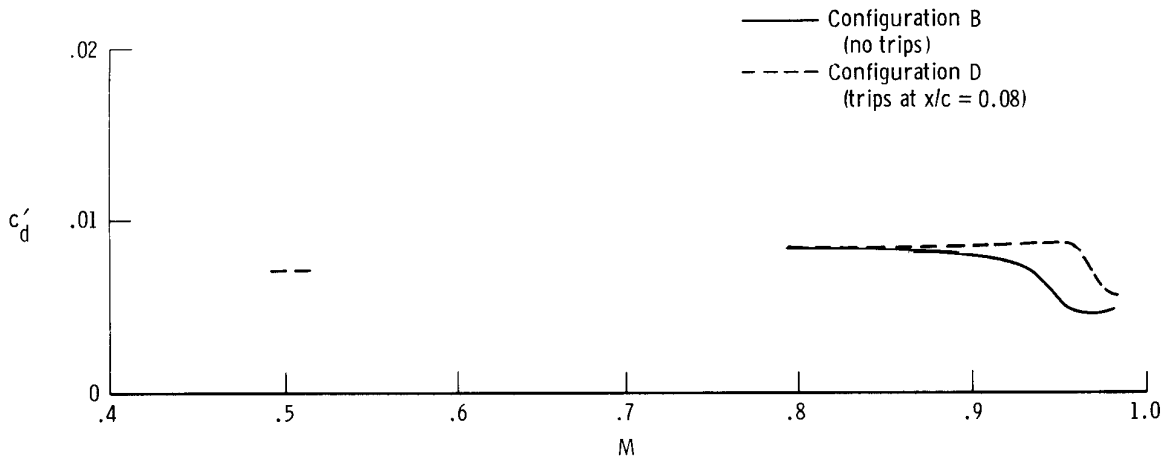
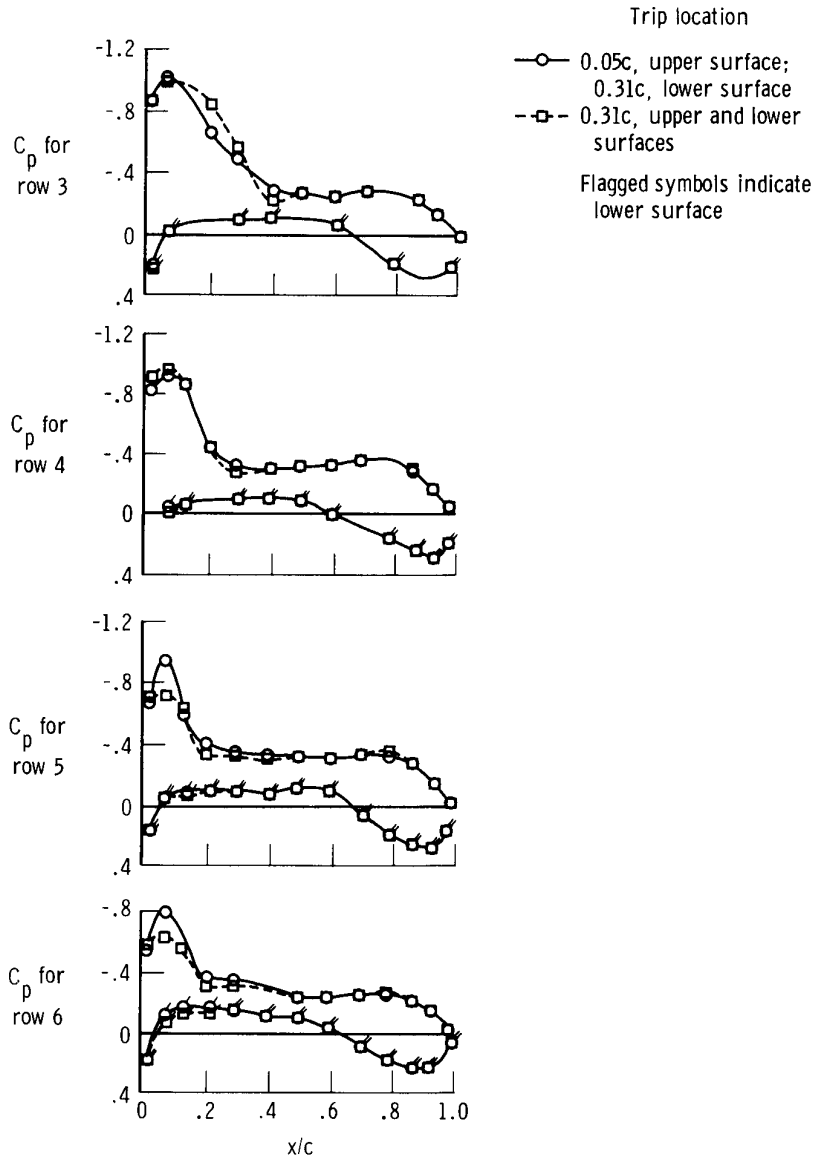
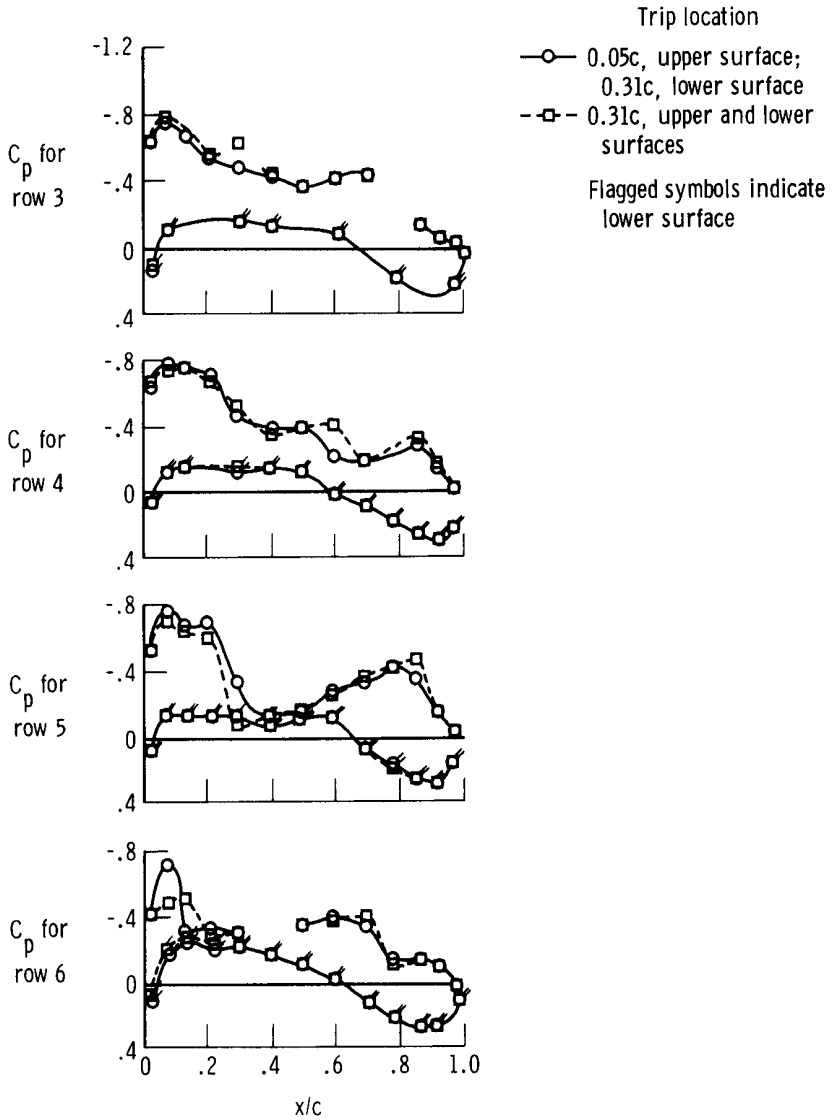


Figure 29. Effect of Mach number on wing section drag coefficients at angles of attack near 4°.



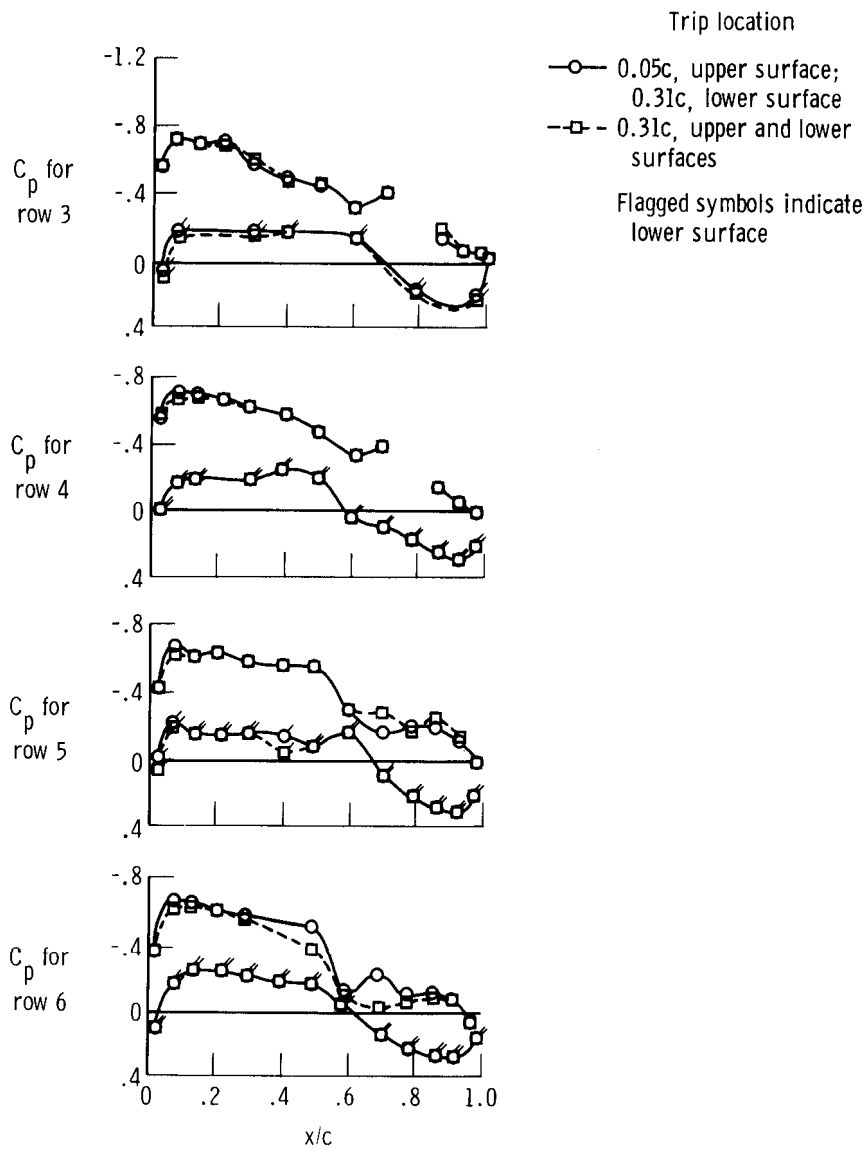
(a) $M = 0.90$, $\alpha = 3.4°$.

Figure 30. Effect of upper surface boundary-layer trip position on model wing pressure distributions.



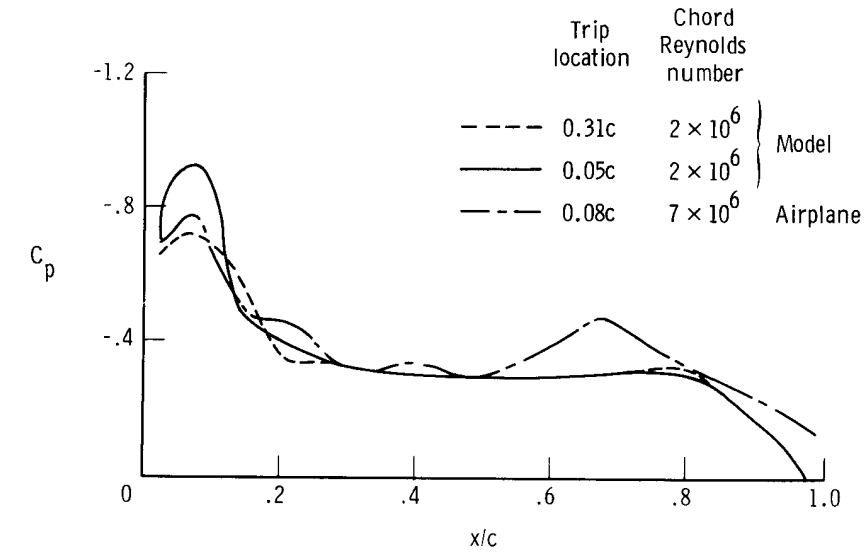
(b) $M = 0.95$, $\alpha = 2.8°$.

Figure 30. Continued.

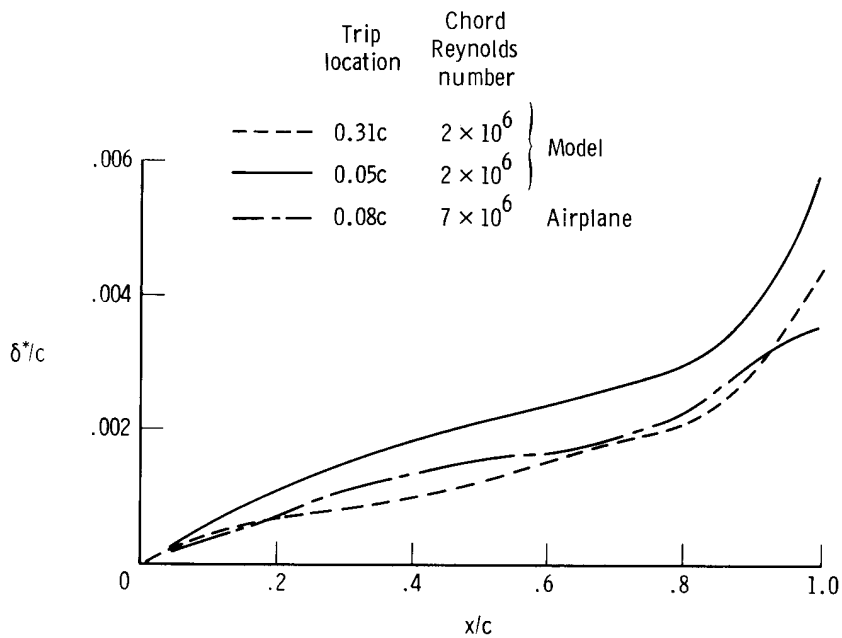


(c) $M = 0.99$, $\alpha = 2.9°$.

Figure 30. Concluded.



(a) Measured pressure coefficient distributions.



(b) Displacement thickness-to-chord ratios calculated by the method described in reference 17.

Figure 31. Comparison of measured pressure coefficient distributions and calculated displacement thicknesses on model and airplane at row 5. Mach 0.90; $\alpha = 3.4°$.

		Measured δ/δ^*	Matching calculation		
			δ, cm	c_f	δ/δ^*
A	○	6	1.12	0.00260	7.0
B	□	5	1.27	0.00180	4.4
C	△	2.6	1.90	0.00030	2.4
D	◇	1.9	3.25	0.00001	2.2
E	▽	2.9	2.54	0.00044	2.7
F	◁	4.3	3.22	0.00110	3.8

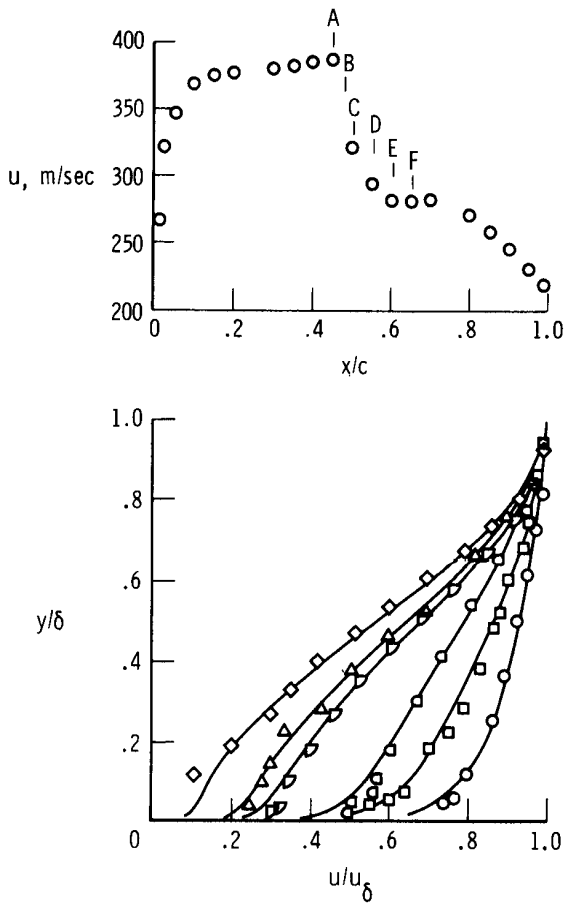


Figure 32. Matching turbulent boundary-layer profiles in shock interaction region of 17-percent-thick unswept supercritical airfoil.

NASA-Langley, 1977 H-850