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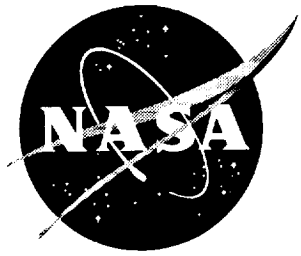

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M. Susan Williams, Lewis R. Owens, Jr., and Julio Chu
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December 1999

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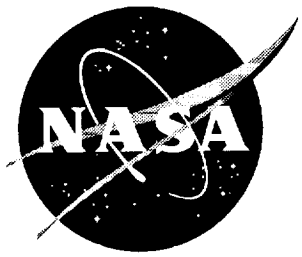

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Summary

A representative supersonic transport design from the National Aeronautics and Space Administration (NASA) Advanced Supersonic Technology (AST) and Supersonic Cruise Research (SCR) programs was tested in the National Transonic Facility (NTF) in its original configuration with small-radius leading-edge flaps and also with modified large-radius inboard leading-edge flaps. Aerodynamic data were obtained over a range of Reynolds numbers at a Mach number of 0.3 and angles of attack up to 16°.

Results showed that increasing the radius of the inboard leading-edge flap delayed nose-up pitching moment to a higher lift coefficient. Deflecting the large-radius leading-edge flap produced an overall decrease in lift coefficient and delayed nose-up pitching moment to even higher angles of attack as compared with the undeflected large-radius leading-edge flap. Minimum drag coefficient decreased with increasing Reynolds number. At angles of attack corresponding to the maximum untrimmed lift-to-drag ratio, lift and drag coefficients decreased while lift-to-drag ratio increased with increasing Reynolds number. At an angle of attack of 13.5°, the pitching-moment coefficient was nearly constant with increasing Reynolds number for both the small-radius leading-edge flap and the deflected large-radius leading-edge flap. However, the pitching-moment coefficient increased with increasing Reynolds number for the undeflected large-radius leading-edge flap above a chord Reynolds number of about 35×10^6. Good agreement with vortex-lattice-method calculations was obtained for lift coefficients between -0.02 and 0.2. At higher angles of attack, the lift data approached the potential-plus-vortex boundary. The agreement with drag coefficient and pitching-moment coefficient was limited.

Introduction

There is renewed interest in the research of commercial supersonic transport aircraft. The success of a high-speed civil transport (HSCT) necessitates that it be economically viable and environmentally acceptable. It is difficult to meet these requirements from an aerodynamic point of view, since a configuration optimized for supersonic cruise has poor aerodynamic performance in the low-speed takeoff and landing flight segments. Efficient supersonic flight requires a highly swept, sharp-leading-edge, low-aspect-ratio wing, which readily forms a leading-edge, upper surface vortex at low-speed, high-lift conditions typical of takeoff and landing. Early studies have documented the benefits of utilizing the lift increment associated with separation-induced vortex flow on slender wing configurations (refs. 1 and 2). However, the studies also showed typically larger drag increments associated with the formation of vortical flow and, hence, a decrease of the configuration lift-to-drag ratio (L/D). This decrease in L/D must necessarily be offset by augmented engine thrust, which gives rise to increased jet noise levels. A major objective of the HSCT program is to design an aircraft that will meet stringent environmental noise requirements and that also will have efficient supersonic cruise performance over existing commercial supersonic transports.

To address the low-speed, high-lift flight segment, the Boeing Company has proposed the use of an increased-radius leading edge inboard of the leading-edge sweep break of a modified arrow wing planform, with the intent that the increased-radius leading edge will delay leading-edge flow separation and the associated increase in drag to angles of attack higher than required for takeoff and landing. A recent study suggested that leading-edge bluntness combined with an arrow wing planform could provide satisfactory synergistic performance (ref. 3). As reported in reference 4, increasing either the leading-edge radius or the Reynolds number results in an increase in the angle of attack at which the experimental lift coefficient (C_L) departs from the potential flow C_L estimate. The objective of this test is to show that an increased-radius leading edge maintains this advantage at the high Reynolds numbers typical of takeoff, landing, and subsonic cruise conditions of an HSCT configuration. In addition to this specific objective, the test provides data that can be used to enhance the understanding of leading-edge flows of swept wings. Therefore, a cooperative agreement was reached between the Boeing Company and NASA Langley Research Center to test a Boeing-designed and -built large-radius leading-edge flap on an existing supersonic transport model at the National Transonic Facility (NTF) over a range of Reynolds numbers.

The model used in this experiment represents a supersonic transport design from the NASA Advanced Supersonic Technology (AST) and Supersonic Cruise Research (SCR) programs. The model is designated AST-210, and the original configuration utilizes small-radius leading-edge flaps (refs. 5, 6, and 7). This model was readily available for testing the increased-radius inboard leading-edge flaps. This model was tested in the current study with both the original small-radius leading-edge flaps and the large-radius inboard leading-edge flaps. The resulting aerodynamic coefficients over a range of Reynolds numbers at a Mach number of 0.3 and angles of attack up to 16° are the focus of this report.

Symbols

The longitudinal aerodynamic coefficients were reduced in the stability axes with all moments referenced to 50 percent of the mean aerodynamic chord, which corresponds to a distance of 51.528 in. aft from the forebody apex.

b	wingspan, 38.048 in.
C_A	axial-force coefficient, $\frac{\text{Axial force}}{q_\infty S_{\text{ref}}}$
C_D	drag coefficient, $\frac{\text{Drag}}{q_\infty S_{\text{ref}}}$
$C_{D,FS}$	estimated minimum induced drag coefficient (see eq. (A2) in appendix A)
$C_{D,\text{min}}$	minimum drag coefficient
$C_{D,p}$	minimum parasite drag coefficient, $C_D - \frac{C_L^2}{\pi \text{AR}}$
$C_{D,V}$	vortex-lattice-method planar-wing drag coefficient
C_f	average skin friction coefficient calculated from turbulent flat plate power law
C_L	lift coefficient, $\frac{\text{Lift}}{q_\infty S_{\text{ref}}}$
C_l	rolling-moment coefficient, $\frac{\text{Rolling moment}}{q_\infty S_{\text{ref}} b}$
C_m	pitching-moment coefficient, $\frac{\text{Pitching moment}}{q_\infty S_{\text{ref}} \bar{c}}$
C_N	normal-force coefficient, $\frac{\text{Normal force}}{q_\infty S_{\text{ref}}}$
C_n	yawing-moment coefficient, $\frac{\text{Yawing moment}}{q_\infty S_{\text{ref}} b}$
C_Y	side-force coefficient, $\frac{\text{Side force}}{q_\infty S_{\text{ref}}}$
c	wing chord, in.
$\bar{c}$	wing mean aerodynamic chord, 31.416 in.
L/D	untrimmed lift-to-drag force ratio
$(L/D)_{\text{max}}$	maximum untrimmed lift-to-drag force ratio
M_∞	free-stream Mach number
P_T	total pressure, psia
q_∞	free-stream dynamic pressure, psf
$R_{\bar{c}}$	Reynolds number based on $\bar{c}$
R_{LE}	Reynolds number based on r and velocity component measured normal to wing leading edge
r	average leading-edge radius over wingspan measured normal to wing leading edge, in.
S	effective leading-edge-suction parameter (see eq. (A1) in appendix A), percent
S_{ref}	wing reference area, 5.72 ft^2
T_T	total temperature, °F
X, Y, Z	body coordinate system (see fig. 4)
α	angle of attack, deg
β	angle of sideslip, deg
δ	flap deflection angle normal to hinge line and with respect to wing chord plane, positive for leading-edge deflection down, deg
Λ	wing leading-edge sweep angle, deg

Abbreviations:

AR	aspect ratio
AST	Advanced Supersonic Technology
HSCT	high-speed civil transport
NTF	National Transonic Facility
SCR	Supersonic Cruise Research
VLM	vortex-lattice method
VLM-SA	vortex-lattice method coupled with suction analogy

Subscripts:

FS	full attached-flow leading-edge suction
LE	leading-edge flap

Model

The AST-210 model was one of the first models designed to be tested in the NTF, and the model construction was completed in 1980. The model is a 2.5-percent scale version of a proposed Mach 2.7 supersonic transport configuration. Figures 1, 2, and 3 are photographs of the model mounted in the test section of the NTF. For this investigation, the model was tested without the vertical tails shown in figure 3. Figures 4, 5, and 6 are sketches showing the model dimensions and model axis system. The fuselage is cambered with a drooped nose, and the wings are complex in shape with camber, twist, and

thickness changes for supersonic drag minimization. The inboard wing is highly swept at $\Lambda = 73.02°$ to minimize supersonic wave drag, and the outboard wing is at a lesser sweep angle of $\Lambda = 60°$ to improve low-speed performance. A general sketch of wing leading-edge flap geometry is shown in figure 7. Three sets of inboard wing leading-edge flaps were used in this experiment: (1) a small-radius flap with 0° leading-edge deflection shown head-on in figure 3 to highlight the substantial chamber and twist, (2) a large-radius flap with 0° leading-edge deflection, and (3) a large-radius flap with 30° leading-edge deflection. Both undeflected configurations share the same outboard flaps. All outboard flaps have the same small leading-edge radius. These three configurations are designated in this paper as (1) the small-radius-flap configuration, $\delta_{LE} = 0°$; (2) the large-radius-flap configuration, $\delta_{LE} = 0°$; and (3) the large-radius-flap configuration, $\delta_{LE} = 30°$.

Facility

The NTF is a fan-driven, closed-circuit, cryogenic, transonic, pressure wind tunnel. The test section is 8.2 ft by 8.2 ft by 25 ft long and has a slotted floor and ceiling. The NTF operating capability has a nominal Mach number range of 0.2 to 1.2, pressure range of 15 psia to 120 psia, and temperature range of −260°F to 150°F. A maximum Reynolds number of 146×10^6 per foot is achieved at a Mach number of 1.0. Independent control of pressure, temperature, and fan speed allow Mach number, Reynolds number, and dynamic pressure to be varied independently within the facility limits. More details of tunnel geometry and operation may be found in reference 8.

Instrumentation

Aerodynamic force and moment data were obtained with an unheated, temperature-compensated, six-component strain-gage balance. An insulated and heated onboard accelerometer was used to measure the pitch angle of the body X-axis. An onboard electronically scanned pressure (ESP) module was used to measure leading-edge and wing surface pressures. A 48-port ESP module with 30-psid range was selected for measuring the pressures. Surface pressures were measured for the large-radius-flap configurations only and are not presented in this report. Model chamber pressures were measured with Barocel pressure transducers located external to the tunnel.

Data Reduction

Measurement Accuracy and Data Repeatability

The quoted specifications for the instrumentation and Beattie-Bridgeman gas model (ref. 9) provided a means to approximate the accuracies of the test parameters and the aerodynamic coefficients. The method used to calculate the accuracies of the coefficients was the technique of Kline and McClintock as reported by Holman (ref. 10).

The accuracies of the test parameters are as follows:

M_∞	0.002
P_T	0.003 to 0.010 psia
T_T	0.1°F
$R_{\bar{c}}$	0.03 to 0.76 × 10^6
q_∞	1.6 to 10.1 psf
α	0.1°
β	0.1°

(The range in the parameters is due to autoranging of the instrumentation.)

The balance measurement accuracy from the laboratory calibrations is typically quoted for the worst outlying point as ±0.50 percent of the full-scale loading on all components applied simultaneously. Recent improvements in determining force balance calibration accuracy has shown that the measurement accuracy is more nearly ±0.25 percent of full scale (ref. 11). The balance load capacities, accuracies, and approximate maximum loads during this test were as follows:

Balance component	Full-load capacity	Multiple-load accuracy	Maximum test load
Normal, lb	2000	±5.0	2128
Axial, lb	175	±0.44	234
Pitch, in-lb	6000	±15.0	4690
Side, lb	700	±1.75	15
Yaw, in-lb	3000	±7.5	100
Roll, in-lb	3000	±7.5	174

The corresponding coefficients for the maximum balance loads derived from the multiple-load

accuracy above for three average dynamic pressure levels and two angles of attack are

$\alpha = 2.5°$

q_∞, psf	C_N	C_A	C_m	C_L	C_D
300	±0.003	±0.0003	±0.0033	±0.0033	±0.0004
530	±.002	±.0001	±.0019	±.0023	±.0002
800	±.001	±.0001	±.0013	±.0013	±.0001

$\alpha = 13.5°$

q_∞, psf	C_N	C_A	C_m	C_L	C_D
300	±0.003	±0.0003	±0.0033	±0.0034	±0.0012
530	±.002	±.0001	±.0019	±.0024	±.0007
800	±.001	±.0001	±.0013	±.0014	±.0005

Repeat runs were performed during the test for all three model configurations. They were made at a chord Reynolds number of 80×10^6 for the small-radius-flap configuration, $\delta_{LE} = 0°$, and at 20×10^6 and 80×10^6 for both large-radius-flap configurations. The data were obtained for $q_\infty \approx 530$ psf and are shown in plots of C_A, α, and C_m versus C_N in figures 8 through 12. The data show the repeatability to be within the expected balance accuracy for $q_\infty \approx 530$ psf except for the large-radius-flap configuration, $\delta_{LE} = 0°$, at $R_{\bar{c}} = 80 \times 10^6$. Since the instrumentation and test techniques were the same for all the configurations, the scatter in the aerodynamic coefficients for the large-radius-flap configuration, $\delta_{LE} = 0°$, at the higher Reynolds number appears to reflect the sensitivity of the aerodynamics at high Reynolds numbers.

Data Corrections

The complete data reduction methods are documented in reference 12. Corrections have been applied to model angle of attack, drag coefficient, and cavity pressure.

The model angle of attack has been corrected for tunnel flow angularity (upflow) by measuring model normal-force data for both upright and inverted runs. The angle of attack was corrected for 0.16° upflow.

The model drag coefficient was corrected for buoyancy effects. The drag coefficient correction is based on empty-tunnel calibrations and is a function of both Mach number and Reynolds number.

Cavity pressures were measured and applied to a base area to correct the measured drag. The correction adjusted the cavity pressure to free-stream static pressure.

The NTF achieves high Reynolds numbers by utilizing cryogenic temperatures and elevated pressures. Model deformation due to tunnel pressure (aeroelastic effects) can misrepresent true Reynolds number effects. However, no attempt to correct the data for these effects has been made in this report.

Test Program

All data presented herein are for a Mach number of 0.3. A tunnel performance map showing the available Reynolds number and total pressure (P_T) range for this Mach number is shown in figure 13. The tunnel envelope boundaries are defined by a map of the operating temperature and pressure range and the drive power limits. Also shown in the figure are the test conditions, which are concentrated along either lines of constant Reynolds number or constant dynamic pressure. For a Mach number of 0.3, the facility can represent approximately 60 percent of the required full-scale high-lift-condition chord Reynolds number. The maximum chord Reynolds number achieved was 115×10^6.

Data Presentation

The force and moment data presented in the following sections were obtained without pressure instrumentation wiring and tubing spanning the balance and without fixing the boundary-layer transition location. Since aeroelastic effects were not taken into account in data reduction, presentation and discussion of data are divided into three nominal dynamic pressure groupings:

Low dynamic pressure:	$q_\infty < 500$ psf
Constant dynamic pressure:	$q_\infty \approx 530$ psf
High dynamic pressure:	$q_\infty > 600$ psf

First, the basic longitudinal aerodynamic characteristics are discussed. Following this discussion is an analysis of results, which examines the effects of (1) changing the leading-edge radius, (2) changing the leading-edge deflection, and (3) changing the Reynolds number on the longitudinal aerodynamic characteristics and performance. The final section provides some correlation of the performance of the present configurations with that of previous configurations and with vortex-lattice-method (VLM) estimates. The following list shows the layout of each section and the associated figures:

Basic longitudinal aerodynamic characteristics:

Small-radius-flap configuration, $\delta_{LE} = 0°$:
- $q_\infty < 500$ psf . . . . . figure 14(a)
- $q_\infty \approx 530$ psf . . . . . figure 14(b)
- $q_\infty > 600$ psf . . . . . figure 14(c)

Large-radius-flap configuration, $\delta_{LE} = 0°$:
- $q_\infty < 500$ psf . . . . . figure 15(a)
- $q_\infty \approx 530$ psf . . . . . figure 15(b)
- $q_\infty > 600$ psf . . . . . figure 15(c)

Large-radius-flap configuration, $\delta_{LE} = 30°$:
- $q_\infty < 500$ psf . . . . . figure 16(a)
- $q_\infty \approx 530$ psf . . . . . figure 16(b)
- $q_\infty > 600$ psf . . . . . figure 16(c)

Effect of leading-edge radius . . . . . figure 17

Effect of leading-edge deflection . . . . . figure 18

Effect of Reynolds number on longitudinal aerodynamic characteristics and suction parameter:
- $C_{D,\text{min}}$ . . . . . figure 19
- Low-angle-of-attack characteristics . . . . . figure 20
- High-angle-of-attack characteristics . . . . . figure 21

Correlation of suction parameter data to data in reference 15 . . . . . figure 22

Comparison of VLM estimates with experimental data at $R_{\bar{c}} = 80 \times 10^6$ . . . . figures 23 and 24

A tabulation of the force and moment coefficients with pertinent test conditions is presented in appendix B.

Discussion of Results

Basic Longitudinal Aerodynamic Characteristics

Small-radius-flap configuration, $\delta_{LE} = 0°$. The longitudinal aerodynamic characteristics of the small-radius-flap configuration, $\delta_{LE} = 0°$, are presented in figure 14 for the three dynamic pressure groupings. Data for a range of chord Reynolds numbers from 5.7×10^6 to 57.5×10^6 at dynamic pressures less than 500 psf are presented in figure 14(a). A lift-curve slope increase near $\alpha = 6°$ is seen in the C_L versus α plot. The increase in lift is characteristic of highly swept wings with sharp leading edges, where the flow at the leading edge separates to form an upper surface vortex. The vortex produces an increased positive pitching moment. The highest Reynolds number curve shows less lift for a given angle of attack, indicating less separation.

The drag polar plot at $R_{\bar{c}} = 57.5 \times 10^6$ shows a lower drag level than the lower Reynolds number runs for $C_L \leq 0.25$. As expected, this reduction in drag is consistent with a reduction in turbulent-boundary-layer skin friction with increasing Reynolds number. The reduced drag in turn yields higher overall L/D levels. The maximum L/D occurs at $C_L \approx 0.12$ ($\alpha \approx 5.5°$). The drag polar inflection ($0.05 \leq C_L \leq 0.15$) for the low Reynolds number runs ($R_{\bar{c}} < 17.1 \times 10^6$) indicates possible flow transition from laminar to turbulent. Note that Reynolds number effects discussed here have not been separated from aeroelastic effects. However, aeroelastic effects should be small at these dynamic pressures.

Data taken over a range of chord Reynolds numbers from 20.5×10^6 to 80.5×10^6 and a range of dynamic pressures from 523 to 529 psf, which for this test program is considered to be constant dynamic pressure, are presented in figure 14(b). The lift-curve slope and pitching-moment coefficient increase near $\alpha = 6°$, which is similar to the low dynamic pressure data (fig. 14(a)). No effect of Reynolds number on C_L is seen until higher angles of attack, where the higher Reynolds numbers produce slightly less lift. At lower lift coefficients, there is no effect of Reynolds number on C_m, but above $C_L \approx 0.15$ the change in C_m with Reynolds number is seen to be nonmonotonic, with intermediate chord Reynolds numbers of 28.7×10^6 and 34.5×10^6 showing less positive pitching-moment coefficient. The change in drag coefficient with Reynolds number is orderly at lower lift coefficients and becomes less sensitive to Reynolds number at higher lift coefficients, which indicates a change in polar shape with increasing Reynolds number. The highest L/D occurs at the highest Reynolds number.

The highest Reynolds number data taken for this configuration is shown in figure 14(c). The dynamic pressure for these runs varied and was greater than 600 psf. The lift coefficient as a function of angle of attack has a trend similar to the previous data sets, figures 14(a) and 14(b). Differences in the pitching-moment coefficient curves are seen at lift coefficient values greater than $\approx$0.15, which may be effects of both Reynolds number and increasing dynamic pressure. At lower lift coefficients the highest Reynolds number shows lower drag coefficients, and the maximum L/D occurs at the highest Reynolds number.

Large-radius-flap configuration, $\delta_{LE} = 0°$. The large-radius-flap configuration, $\delta_{LE} = 0°$, data at lower dynamic pressure conditions is presented in figure 15(a). The lowest lift-curve slope was

demonstrated at the highest chord Reynolds number of 57.5×10^6. The effect of Reynolds number on the pitching-moment coefficient is nonmonotonic. At $C_L \leq 0.25$, the lowest drag coefficient is exhibited for the highest Reynolds number, which produces the highest L/D. The maximum L/D occurs at $C_L \approx 0.14$, which corresponds to $\alpha \approx 6°$. The inflection in the drag curve at lower lift coefficients and lower Reynolds numbers is similar to that shown for the small-radius-flap configuration, $\delta_{LE} = 0°$.

The Reynolds number variations at constant dynamic pressure and high dynamic pressure for the large-radius-flap configuration, $\delta_{LE} = 0°$, are shown in figures 15(b) and 15(c), respectively. The trends shown are similar to those observed for the low dynamic pressure data. There is a slight decrease in the lift-curve slope with increasing Reynolds number. Pitching-moment coefficient varies nonmonotonically with Reynolds number at higher values of C_L. The highest Reynolds number data show the lowest drag coefficients at lower lift coefficients, and the highest L/D occurs at the highest Reynolds number.

Large-radius-flap configuration, $\delta_{LE} = 30°$. The large-radius-flap configuration, $\delta_{LE} = 30°$, data is presented in figure 16(a) for low dynamic pressure conditions. The lift curves are linear for $\alpha < 6°$; however, for higher angles of attack the slope has decreased. The lowest lift occurred at the highest Reynolds number. No significant increase in pitching-moment coefficient is seen for lift coefficients less than 0.4. Above $C_L \approx 0.4$, the data trend suggests pitch-up. The drag polars show lower drag coefficients with increasing Reynolds number up to $C_L \approx 0.37$ with the run at $R_{\bar{c}} = 46.7 \times 10^6$ showing the most drag reduction. The L/D curves show that the maximum L/D occurs at a $C_L \approx 0.18$, which corresponds to $\alpha \approx 7.5°$. Similar to the results seen in previous data sets, the highest L/D occurs at the highest Reynolds number.

The data for the constant dynamic pressure condition are shown in figure 16(b). The chord Reynolds numbers ranged from 20.7×10^6 to 80.3×10^6. The lift-curve slope shows a small but systematic decrease with increasing Reynolds number. The pitching-moment coefficient data show variation with Reynolds number at $C_L > 0.2$. The drag polars show the same type of systematic decrease in drag at lower lift coefficients and a reversal in trend at higher lift coefficients. The Reynolds number effects on L/D are similar to those seen at lower dynamic pressure conditions.

Data for the highest Reynolds numbers and dynamic pressure levels are shown in figure 16(c). There is no evidence of a variation due to Reynolds number or dynamic pressure in this two-run set. The high loads encountered during testing limited the angle-of-attack range.

Effect of Leading-Edge Variations

Effect of leading-edge radius. A comparison of the small-radius-flap configuration, $\delta_{LE} = 0°$, and the large-radius-flap configuration, $\delta_{LE} = 0°$, is presented in figure 17 for $R_{\bar{c}} = 80 \times 10^6$. In the plot of C_L versus α, the lift-curve slope increase at $\alpha = 6.0°$ indicates the formation of vortical flow, which is more pronounced for the small-radius leading edge. A comparison of the pitching-moment coefficients for the two configurations is illustrated in the C_m versus C_L curves. By increasing the radius of the inboard leading-edge flap, pitch-up is delayed until $C_L \approx 0.33$ ($\alpha \approx 10.5°$). This suggests that the leading-edge flow separation for the large-radius-flap configuration, $\delta_{LE} = 0°$, progressed inboard more gradually along the wing leading edge for $6° < \alpha < 10.5°$ as compared with the small-radius-flap configuration, $\delta_{LE} = 0°$. The small-radius leading edge generally has higher C_D values for a given C_L (fig. 17(b)), primarily because the inboard leading edge produces less leading-edge suction than the large-radius leading edge. The large-radius leading edge produces higher L/D values for $C_L > 0.1$ because of the lower drag values.

Effect of leading-edge deflection. The effect of leading-edge flap deflection on the longitudinal aerodynamic characteristics is shown in figure 18. The data were obtained at $R_{\bar{c}} = 80 \times 10^6$. As shown in the figure, deflecting the leading-edge flap produces an overall decrease in the lift coefficient and delays pitch-up to higher angles of attack. Deflecting the leading-edge flap was effective in decreasing the drag coefficient for $C_L > 0.13$ because leading-edge flow remained attached over the forward-facing flap surface, producing leading-edge suction to higher angles of attack. The angle of attack at which $(L/D)_{max}$ occurred increased slightly from 6° ($C_L \approx 0.14$) to 7° ($C_L \approx 0.16$) because of flap deflection. The maximum L/D occurs at $C_L \approx 0.16$, which is lower than needed for takeoff and landing operation for this class of transport (ref. 13). Although not part of the present investigation, it is expected that C_L for $(L/D)_{max}$ would improve to a more typical value when the trailing-edge flaps are also deflected.

Reynolds Number Effects on Longitudinal Aerodynamic Characteristics and Suction Parameter

Data presented thus far have shown the variation of the longitudinal aerodynamic coefficients with either angle of attack or lift coefficient. Although these plots provide data at various Reynolds numbers, the effects of Reynolds number are difficult to discern. An alternate presentation of the data is provided to show at given angles of attack the effect of changing Reynolds number over the entire test range.

The Reynolds number effects on the minimum drag coefficient for each flap configuration are discussed first. The approximate angles of attack where the minimum drag occurred for each configuration were 2.2°, 2.2°, and 4.5°, which correspond to the small-radius-flap configuration, $\delta_{LE} = 0°$; the large-radius-flap configuration, $\delta_{LE} = 0°$; and the large-radius-flap configuration, $\delta_{LE} = 30°$, respectively.

Next, data plots at two other angles of attack are presented to show the longitudinal aerodynamic characteristics produced by the model flow field as a function of Reynolds number. The first angle of attack corresponds to the attitude where $(L/D)_{max}$ was measured and is referred to as the low-angle-of-attack condition. These angles of attack were 5.5°, 6°, and 7.5°, which correspond to the small-radius-flap configuration, $\delta_{LE} = 0°$; the large-radius-flap configuration, $\delta_{LE} = 0°$; and the large-radius-flap configuration, $\delta_{LE} = 30°$, respectively. The second angle of attack of 13.5° was selected to observe the effect of Reynolds number on the three configurations with vortex separations present and is referred to as the high-angle-of-attack condition.

Reynolds number effect on $C_{D,min}$. The variation of $C_{D,min}$ with Reynolds number for each configuration is shown in figure 19, where $C_{D,min}$ is determined from total drag data. The trend for each configuration is similar over the range of Reynolds numbers tested. A turbulent-boundary-layer, flat plate, average skin friction coefficient curve was calculated for each configuration and offset to align with the experimental data. The amount of offset to the average skin friction equation is noted for each curve (ref. 14). The adjusted curves compare well with the experimental data for Reynolds numbers greater than 20×10^6 and suggest that the model boundary layer can be characterized as turbulent. Below Reynolds numbers of 20×10^6, the experimental data indicate that the model flow field may be represented by a transitional boundary layer when compared with the flat plate skin friction. The $C_{D,min}$ trends for both large-radius-flap configurations are similar even though the flap was unported from the side of the fuselage when the flap was deflected.

Reynolds number effects at low angles of attack. Figure 20 presents longitudinal aerodynamic coefficients, $(L/D)_{max}$, and suction parameter (method of calculation shown in appendix A) as a function of Reynolds number for different leading-edge flap configurations at the low-angle-of-attack condition, which varied from 5.5° to 7° depending upon the configuration. The dynamic pressure level at which the data were obtained is denoted by the use of different symbols. This was done to qualitatively distinguish the complex mix of Reynolds number and aeroelastic effects. The large-radius-flap configuration, $\delta_{LE} = 0°$, data contained the most overlapping of dynamic pressure levels. Note again that only the Reynolds number data obtained at constant dynamic pressure, ≈530 psf, are considered "pure" scale effects.

At the low-angle-of-attack condition, C_L and C_D, where C_D is total drag, generally decrease with increasing Reynolds number for all configurations (figs. 20(a) and 20(b)); C_m (fig. 20(c)) remains nearly constant, which is an indication that the aerodynamic center or center of pressure is not a function of Reynolds number; and $(L/D)_{max}$ (fig. 20(d)) increases with increasing Reynolds number, apparently being dominated by the decrease in C_D. Flight Reynolds numbers for low-speed, high-lift conditions are approximately 200×10^6 for this type of aircraft, and extrapolation indicates only a small increase in $(L/D)_{max}$ can be expected. As shown in figure 20(e), suction values increase up to Reynolds numbers of about 20×10^6 and then level off at approximately 80 percent for both undeflected flap configurations and approximately 90 percent to 95 percent for the deflected flap configuration. Both the decrease in drag and the increase in suction with increasing Reynolds number are expected changes based on classical boundary-layer state changes. Neither leading-edge radius nor leading-edge deflection appear to have a significant influence on the Reynolds number effects at the low-angle-of-attack condition.

Reynolds number effects at high angles of attack. Figure 21 presents the longitudinal aerodynamic coefficients, L/D, and suction parameter as a function of Reynolds number for the different leading-edge flap configurations at the high-angle-of-attack condition ($\alpha = 13.5°$). Again, the dynamic pressure level at which the data were obtained is denoted by the use of different symbols.

As shown in figure 21(a), C_L decreases with increasing Reynolds number for all three configurations just as was observed at the low-angle-of-attack condition; C_D also decreases with increasing Reynolds number (fig. 21(b)) except for the large-radius-flap configuration, $\delta_{LE} = 0°$. For the large-radius-flap configuration, $\delta_{LE} = 0°$, C_D decreases up to Reynolds numbers of $\approx 30 \times 10^6$ and then remains nearly constant up to the maximum Reynolds number test condition. Pitching-moment coefficient (fig. 21(c)) shows slight variations with Reynolds number for the small-radius-flap configuration, $\delta_{LE} = 0°$, and the large-radius-flap configuration, $\delta_{LE} = 30°$. In contrast, the large-radius-flap configuration, $\delta_{LE} = 0°$, shows decreasing C_m up to a Reynolds number of $\approx 30 \times 10^6$ and increasing C_m above 30×10^6 that approaches the low Reynolds number levels. Reynolds number versus L/D is plotted in figure 21(d). The small-radius-flap configuration, $\delta_{LE} = 0°$, shows no variation in L/D with increasing Reynolds number, while the large-radius-flap configurations show slight increases in L/D with increasing Reynolds number, with the deflected flap showing the largest increase. Leading-edge suction parameter versus Reynolds number is presented in figure 21(e). The suction levels for the small-radius-flap configuration, $\delta_{LE} = 0°$, are essentially 0 percent over the Reynolds number range, since the leading-edge flow at this angle of attack is separated. The large-radius-flap configuration, $\delta_{LE} = 0°$, shows an increase in leading-edge suction up to Reynolds number of $\approx 20 \times 10^6$. From Reynolds numbers of 20×10^6 to 35×10^6, the suction level remains slightly less than 20 percent, and then at Reynolds numbers greater than 35×10^6 there is a sharp decrease in leading-edge suction, which corresponds to the increase in C_m shown in figure 21(c). The large-radius-flap configuration, $\delta_{LE} = 30°$, shows an increase in leading-edge suction up to Reynolds numbers of $\approx 20 \times 10^6$ and remains constant above that Reynolds number at a level of $\approx$75 percent.

Correlation of suction parameter with previous data. Figure 22 presents effective leading-edge suction at $(L/D)_{max}$ versus the Reynolds number referenced to the average leading-edge radius (R_{LE}) for the small-radius-flap configuration, $\delta_{LE} = 0°$, and the large-radius-flap configuration, $\delta_{LE} = 0°$. Also included in this figure is the data from reference 15, which is used in many aero-analysis codes to determine the effect of R_{LE} on the leading-edge suction. Note that the data from reference 15 are for a series of swept wing planforms, whereas the experimental data from this investigation are for a modified arrow wing planform. For $R_{LE} \geq 17\,000$, the suction parameter from this investigation is $\approx$80 percent, which is lower than the suction values from reference 15. It appears that the suction parameter is not just a function of leading-edge radius but of planform shape as well.

Comparison of VLM Estimates With Experimental Data, $R_{\bar{c}} = 80 \times 10^6$

Numerical approximation of the longitudinal aerodynamic characteristics for two model configurations were calculated with the vortex-lattice method coupled with suction analogy (VLM-SA) (refs. 16, 17, and 18). The predicted aerodynamic results were computed for the small-radius-flap configuration, $\delta_{LE} = 0°$, and the large-radius-flap configuration, $\delta_{LE} = 0°$, and are presented in figures 23 and 24, respectively. The configuration geometry is modeled within the VLM-SA code as slopes of the mean camber surface. The computed potential and the potential-plus-vortex solutions along with experimental data obtained at $R_{\bar{c}} \approx 80 \times 10^6$ are shown in the figures.

In general, good agreement with the potential (attached) flow solution was obtained for lift coefficients ranging from -0.02 to 0.2 ($1° \leq \alpha \leq 8$). In particular, experimental data for the large-radius-flap configuration, $\delta_{LE} = 0°$, agree with the potential solution to higher angles of attack as compared with the small-radius-flap configuration, $\delta_{LE} = 0°$. At higher angles of attack, the data for both configurations indicate development of vortex flow, and the data approach the potential-plus-vortex boundary. The agreement with drag coefficient is limited to a narrow band of $0 \leq C_L \leq 0.08$ ($2° \leq \alpha \leq 5°$). The agreement of theory with experiment is very poor for the pitching-moment coefficient throughout the lift coefficient range. At low C_L, the predicted theoretical pitching-moment slopes were greater than those for the experimental data of both configurations. The general lack of agreement is attributed to inadequate modeling of the complex model geometry and the flow physics.

Conclusions

1. Increasing the radius of the inboard leading-edge flap delayed pitch-up to a higher lift coefficient (C_L), which suggests that the leading-edge flow separation for the large-radius-flap configuration, $\delta_{LE} = 0°$, (where δ_{LE} is the leading-edge flap deflection angle) progressed inboard more gradually along the wing leading edge as compared with the small-radius-flap configuration, $\delta_{LE} = 0°$. The small-radius-flap configuration, $\delta_{LE} = 0°$, generally had higher drag coefficient (C_D) values for a given C_L

because the flow around the small-radius flap separated sooner than flow around the large-radius flap.

2. Deflecting the large-radius flap caused an overall decrease in lift coefficient and delayed pitch-up to higher angles of attack as compared with the undeflected large-radius flap. High suction produced by the forward-facing deflected flap was effective in decreasing the drag coefficient for $C_L > 0.13$.

3. The minimum drag coefficient ($C_{D,\min}$) decreased with increasing chord Reynolds number ($R_{\bar{c}}$) for all configurations tested. Comparison of experimental $C_{D,\min}$ data with a turbulent-boundary-layer, flat plate, average skin friction coefficient curve suggested that the model boundary layer was turbulent for $R_{\bar{c}} > 20 \times 10^6$ and transitional for $R_{\bar{c}} < 20 \times 10^6$.

4. At low angles of attack corresponding to maximum untrimmed lift-to-drag ratio ($(L/D)_{\max}$) for each configuration, C_L and C_D decreased while $(L/D)_{\max}$ increased with increasing chord Reynolds number. Effective leading-edge suction parameter increased up to $R_{\bar{c}} \approx 20 \times 10^6$ and leveled off at ≈80 percent for the undeflected flap configurations and ≈90 to 95 percent for the deflected flap configuration.

5. At an angle of attack (α) of 13.5°, the effective leading-edge suction was 0 percent for the small-radius-flap configuration, $\delta_{LE} = 0°$, and pitching-moment coefficient (C_m) was essentially constant with Reynolds number. The effective leading-edge suction for the large-radius flap configuration, $\delta_{LE} = 0°$, increased from 10 to 20 percent up to $R_{\bar{c}} \approx 35 \times 10^6$, and above 35×10^6 there was a loss in leading-edge suction and an increase in C_m with increasing Reynolds number. The C_m for the large-radius-flap configuration, $\delta_{LE} = 30°$, remained nearly constant over the Reynolds number range, and the effective leading-edge suction initially increased up to $R_{\bar{c}} \approx 20 \times 10^6$ and remained constant above that Reynolds number at a level of ≈75 percent.

6. Effective leading-edge suction values for both undeflected flap configurations are ≈80 percent for $R_{LE} \geq 17\,000$ and were lower than suction values from an earlier study. It appears that suction parameter is not just a function of leading-edge radius but also of planform shape as well.

7. The longitudinal characteristics of the undeflected flap configurations were calculated with the vortex-lattice method coupled with suction analogy. Good agreement with the linear solutions was obtained for $-0.02 \leq C_L \leq 0.2$ ($1° \leq \alpha \leq 8°$). At higher angles of attack, the lift data approached the potential-plus-vortex boundary. The agreement with drag coefficient was limited to $0 \leq C_L \leq 0.08$ ($2° \leq \alpha \leq 5°$). The agreement of theory with experiment was poor for the pitching-moment coefficient.

8. The data repeatability was within the expected balance accuracy except for the large-radius-flap configuration, $\delta_{LE} = 0°$, at $R_{\bar{c}} = 80 \times 10^6$. Since the instrumentation and test techniques were the same for all the configurations, the scatter in the aerodynamic coefficients for this configuration at this particular test condition appears to reflect the sensitivity of the aerodynamics at high Reynolds numbers.

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Hampton, VA 23681-0001
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Appendix A

Calculation of Effective Suction

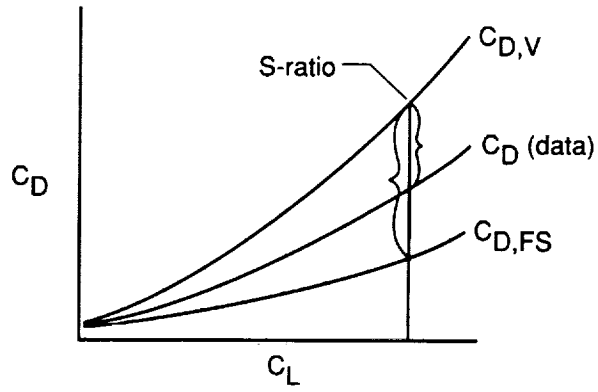
Leading-edge suction can be quantified by the extent to which the flap recovers the "effect" of leading-edge suction that is lost because of flow separation. The effective leading-edge-suction parameter is calculated as follows:

$$S = \frac{C_D - C_{D,V}}{C_{D,FS} - C_{D,V}} \times 100\% \qquad \text{(A1)}$$

where $C_{D,V}$ represents the planar wing drag, assuming full leading-edge flow separation and vortex-flow reattachment on the configuration with the flap undeflected ($\delta_{LE} = 0°$). The value $C_{D,V}$ is computed by using the vortex-lattice method with suction analogy (refs. 16, 17, and 18). The appropriate experimental $C_{D,\min}$ increment from table A1 has also been added to $C_{D,V}$. The term $C_{D,FS}$ represents the estimated minimum induced drag for a cambered wing (with attached flow and 100 percent leading-edge suction) and is calculated by

$$C_{D,FS} = C_{D,\min} + \frac{C_L^2}{\pi \mathrm{AR}} \qquad \text{(A2)}$$

where values for $C_{D,\min}$ are given in table A1 and the baseline reference aspect ratio (AR = 1.758) was used. The ratio described by equation (A1) is illustrated in the following sketch. The smaller brace reflects the increment represented in the numerator of equation (A1), and the larger brace reflects the increment represented in the denominator of equation (A1).



The parameter S is useful for evaluating slender-wing configurations, which have a natural tendency to develop vortex flow, because it indicates the effectiveness of the flap system in reducing drag relative to a drag that occurs naturally. Both drag boundaries shown in the sketch are theoretically achievable on a planar wing configuration. The upper bound assumes full leading-edge separation with subsequent vortex-flow reattachment. The lower bound assumes an attached-flow elliptic load distribution with full leading-edge suction. Note that the upper and lower boundaries of the large-radius-flap configuration, $\delta_{LE} = 0°$, were used to determine the suction values for the large-radius-flap configuration, $\delta_{LE} = 30°$.

Table A1. Values for Parameters Used in Equation (A2)

Configuration	$R_{\bar{c}}$	$C_{D,\min}$
Small-radius-flap configuration, $\delta_{LE} = 0°$	5.8×10^6	0.00640
	8.1	.00671
	11.5	.00698
	17.3	.00693
	20.7	.00687
	23.0	.00661
	28.8	.00658
	34.6	.00640
	47.2	.00628
	57.6	.00591
	59.9	.00605
	80.7	.00573–.00595
	92.2	.00579
	103.7	.00562
	115.2	.00555
Large-radius-flap configuration, $\delta_{LE} = 0°$	5.8×10^6	0.00687
	8.1	.00688, .00702
	11.5	.00693
	17.3	.00711
	20.7	.00690
	23.0	.00684
	28.8	.00666
	34.6	.00654
	47.2	.00621, .00638
	57.6	.00550
	59.9	.00611, .00628
	80.7	.00584
	115.2	.00538
Large-radius-flap configuration, $\delta_{LE} = 30°$	5.8×10^6	0.01090
	8.1	.01080
	11.5	.01060
	20.7	.01035–.01050
	34.6	.00964
	46.1	.00890
	59.9	.00920
	80.7	.00875, .00885
	103.7	.00860
	115.2	.00850

Appendix B

Tabulated Force and Moment Coefficients

Table B1. Index to Tabulated Data

Run	Configuration	$R_{\bar{c}}$	q_∞, psf
78	Large-radius flap, $\delta_{LE} = 30°$	5.8×10^6	145
79		8.0	204
80		11.4	290
82		20.7	532
84		20.7	530
86		20.6	529
88		20.6	526
90		20.6	526
92		46.7	295
93		80.3	529
95		80.5	532
96		102.6	672
97		115.0	754
98		80.5	526
100		59.2	528
101		34.4	527
102	↓	20.8	531
107	Large-radius flap, $\delta_{LE} = 0°$	5.7×10^6	145
108		8.0	204
109		11.4	290
111		17.1	436
112		20.7	527
114		20.7	526
116		20.8	528
118		20.7	528
120		20.6	528
121		20.7	528
125		57.5	373
126		80.6	524
128		80.1	525
129		114.2	749
130		80.3	527
132		80.1	527
134		79.9	526
135		79.9	526
137		59.3	526
138		46.8	525
141		59.3	785
143		34.3	526
145		47.0	791
147		28.5	525
149	↓	22.9	527
153	Small-radius flap, $\delta_{LE} = 0°$	5.7×10^6	145
155		8.1	205
156		11.5	292
159		17.1	438
161		20.5	523
164		22.9	528
166		28.7	529
168		34.5	529
170		47.0	526
171		59.6	529
172	↓	80.5	527

Table B1. Concluded

Run	Configuration	$R_{\bar{c}}$	q_∞, psf
174	Small-radius flap, $\delta_{LE} = 0°$	57.5×10^6	376
175	↓	80.1	528
176		80.2	530
177		79.9	526
178		91.3	601
179		102.9	675
180		114.2	750
182		80.0	525
183		80.3	526

Run No. 78 Begins With Point No.1794

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1794	.298	91.9	17.2	.307	5.8	145	-.0910	.0205	-.0024	.0209	-.0909	.0000	-.0001	.0002
1795	.298	91.7	17.2	1.250	5.8	145	-.0546	.0168	.0000	.0179	-.0542	.0001	-.0003	.0002
1796	.298	91.9	17.2	2.220	5.8	145	-.0160	.0138	.0014	.0143	-.0154	.0002	-.0004	.0003
1797	.298	92.1	17.2	3.201	5.8	145	.0233	.0119	.0017	.0105	.0239	.0002	-.0006	.0003
1798	.298	92.2	17.2	4.220	5.8	145	.0651	.0110	.0013	.0062	.0657	.0004	-.0006	.0003
1799	.298	92.5	17.2	5.160	5.8	145	.1012	.0110	.0011	.0018	.1017	.0004	-.0006	.0003
1800	.298	92.7	17.2	6.084	5.8	145	.1359	.0120	.0014	-.0025	.1364	.0005	-.0007	.0003
1801	.298	93.0	17.2	7.036	5.8	145	.1681	.0135	.0017	-.0072	.1685	.0006	-.0008	.0002
1802	.298	93.4	17.2	8.451	5.8	145	.2147	.0172	.0028	-.0146	.2149	.0006	-.0008	.0003
1803	.298	93.5	17.2	10.341	5.8	145	.2771	.0239	.0039	-.0263	.2769	.0008	-.0007	.0002
1804	.298	93.8	17.3	10.819	5.8	146	.2920	.0262	.0040	-.0292	.2917	.0010	-.0008	.0002
1805	.298	93.6	17.2	11.280	5.8	145	.3072	.0285	.0041	-.0322	.3068	.0008	-.0008	.0002
1806	.299	93.2	17.2	11.753	5.8	145	.3239	.0313	.0040	-.0354	.3234	.0010	-.0008	.0002
1807	.298	92.6	17.2	12.270	5.8	145	.3439	.0349	.0036	-.0391	.3434	.0010	-.0008	.0003
1808	.298	92.2	17.2	12.800	5.8	145	.3640	.0391	.0031	-.0426	.3636	.0008	-.0007	.0003
1809	.298	92.2	17.2	13.576	5.8	145	.3932	.0461	.0031	-.0475	.3931	.0006	-.0005	.0004
1810	.298	92.4	17.2	14.096	5.8	145	.4111	.0513	.0035	-.0505	.4112	.0013	-.0006	.0004
1811	.298	92.6	17.2	14.624	5.8	145	.4303	.0568	.0041	-.0538	.4307	.0017	-.0007	.0006
1812	.298	93.0	17.2	6.144	5.8	145	.1369	.0119	.0015	-.0028	.1373	.0005	-.0007	.0003

Run No. 79 Begins With Point No.1813

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1813	.299	102.1	24.0	.266	8.0	205	-.0900	.0202	-.0026	.0205	-.0899	-.0001	-.0001	.0002
1814	.300	102.0	24.1	1.228	8.0	205	-.0544	.0164	-.0001	.0175	-.0541	.0001	-.0004	.0003
1815	.299	101.2	24.1	2.215	8.0	204	-.0160	.0137	.0012	.0143	-.0154	.0006	-.0005	.0003
1816	.299	100.6	24.0	3.218	8.0	204	.0243	.0118	.0017	.0103	.0249	.0007	-.0006	.0004
1817	.299	100.2	24.1	4.258	8.0	204	.0659	.0108	.0014	.0058	.0665	.0007	-.0007	.0003
1818	.299	100.2	24.0	5.200	8.0	204	.1025	.0110	.0014	.0016	.1030	.0008	-.0007	.0004
1819	.300	100.3	24.1	6.145	8.0	205	.1370	.0119	.0017	-.0029	.1375	.0006	-.0008	.0003
1820	.299	100.7	24.1	7.113	8.0	205	.1701	.0135	.0019	-.0077	.1705	.0007	-.0008	.0003
1821	.300	101.1	24.1	8.566	8.0	205	.2174	.0171	.0030	-.0156	.2175	.0008	-.0008	.0002
1822	.299	101.5	24.1	10.488	8.0	205	.2810	.0241	.0040	-.0275	.2807	.0009	-.0007	.0002
1823	.299	101.8	24.1	10.974	8.0	204	.2979	.0263	.0041	-.0309	.2974	.0011	-.0008	.0002
1824	.299	101.8	24.1	11.443	8.0	204	.3138	.0289	.0040	-.0340	.3132	.0011	-.0008	.0002
1825	.300	101.2	24.1	11.924	8.0	205	.3295	.0316	.0037	-.0373	.3289	.0010	-.0009	.0002
1826	.299	100.8	24.0	12.446	8.0	204	.3502	.0353	.0034	-.0411	.3496	.0007	-.0008	.0002
1827	.299	100.2	24.0	12.986	8.0	204	.3695	.0395	.0029	-.0446	.3689	.0006	-.0007	.0003
1828	.299	100.3	24.0	13.776	8.0	204	.3985	.0466	.0029	-.0497	.3981	.0005	-.0005	.0004
1829	.299	100.6	24.0	14.304	8.0	204	.4165	.0517	.0033	-.0529	.4164	.0007	-.0004	.0005
1830	.299	101.0	24.1	14.845	8.0	205	.4344	.0573	.0041	-.0559	.4345	.0013	-.0006	.0005
1831	.299	101.6	24.1	6.217	8.0	205	.1385	.0119	.0016	-.0033	.1390	.0007	-.0008	.0003

Run No. 80 Begins With Point No.1832

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1832	.298	101.2	34.4	.186	11.4	290	-.0941	.0203	-.0026	.0206	-.0941	-.0001	-.0001	.0001
1833	.297	100.8	34.4	1.157	11.4	289	-.0572	.0164	.0000	.0175	-.0569	.0002	-.0003	.0003
1834	.298	100.7	34.4	2.190	11.4	290	-.0169	.0135	.0015	.0140	-.0164	.0005	-.0005	.0003
1835	.298	100.2	34.4	3.228	11.4	290	.0245	.0115	.0018	.0101	.0251	.0007	-.0006	.0003
1836	.297	99.6	34.4	4.303	11.4	289	.0671	.0106	.0015	.0055	.0677	.0008	-.0007	.0003
1837	.298	99.4	34.4	5.289	11.4	290	.1046	.0108	.0014	.0011	.1051	.0008	-.0008	.0003
1838	.298	98.9	34.4	6.245	11.4	289	.1394	.0119	.0018	-.0034	.1399	.0008	-.0008	.0003
1839	.298	99.0	34.4	7.232	11.4	290	.1727	.0135	.0022	-.0084	.1730	.0007	-.0008	.0003
1840	.298	99.9	34.4	8.716	11.4	290	.2211	.0173	.0032	-.0165	.2211	.0010	-.0007	.0002
1841	.298	101.1	34.4	10.703	11.4	291	.2871	.0246	.0041	-.0292	.2867	.0012	-.0007	.0002
1842	.297	101.9	34.4	11.203	11.4	289	.3049	.0271	.0041	-.0327	.3043	.0011	-.0008	.0002
1843	.298	101.6	34.4	11.683	11.4	291	.3202	.0296	.0040	-.0359	.3195	.0012	-.0009	.0002
1844	.298	100.8	34.4	12.175	11.4	290	.3376	.0326	.0039	-.0394	.3368	.0012	-.0010	.0002
1845	.298	100.1	34.4	12.716	11.4	291	.3563	.0363	.0035	-.0431	.3555	.0010	-.0009	.0002
1846	.298	99.5	34.4	13.268	11.4	290	.3773	.0408	.0030	-.0469	.3765	.0010	-.0008	.0002
1847	.298	99.1	34.4	14.088	11.5	291	.4059	.0484	.0032	-.0519	.4055	.0010	-.0008	.0002
1848	.298	98.8	34.4	14.637	11.5	290	.4262	.0541	.0037	-.0554	.4260	.0013	-.0008	.0002
1849	.298	98.9	34.4	15.197	11.4	290	.4457	.0600	.0045	-.0590	.4458	.0024	-.0010	.0004
1850	.298	100.2	34.4	6.329	11.4	291	.1417	.0119	.0020	-.0039	.1422	.0007	-.0008	.0003

Run No. 82 Begins With Point No.1870

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1870	.299	101.8	62.4	-.008	20.7	530	-.1032	.0210	-.0026	.0209	-.1032	-.0001	-.0001	.0001
1871	.299	101.5	62.4	1.010	20.7	531	-.0631	.0166	-.0002	.0177	-.0628	.0001	-.0002	.0001
1872	.299	101.5	62.4	2.111	20.7	532	-.0199	.0133	.0018	.0140	-.0194	.0003	-.0005	.0001
1873	.300	101.6	62.4	3.188	20.7	534	.0233	.0113	.0023	.0099	.0239	.0004	-.0006	.0001
1874	.299	101.9	62.4	4.324	20.7	531	.0687	.0104	.0020	.0051	.0693	.0007	-.0006	.0002
1875	.299	102.1	62.4	5.328	20.6	531	.1073	.0107	.0020	.0006	.1078	.0008	-.0007	.0002
1876	.300	102.2	62.4	6.335	20.7	532	.1433	.0117	.0024	-.0043	.1437	.0007	-.0007	.0002
1877	.299	101.7	62.4	7.327	20.7	531	.1771	.0135	.0029	-.0092	.1774	.0009	-.0007	.0002
1878	.299	101.5	62.4	8.873	20.7	532	.2280	.0177	.0040	-.0178	.2280	.0009	-.0007	.0002
1879	.300	101.7	62.4	10.915	20.7	535	.2964	.0254	.0052	-.0313	.2959	.0010	-.0007	.0001
1880	.299	102.0	62.4	11.428	20.7	532	.3141	.0278	.0054	-.0350	.3133	.0009	-.0007	.0001
1881	.300	102.2	62.4	11.919	20.7	532	.3309	.0305	.0055	-.0386	.3300	.0008	-.0007	.0001
1882	.299	101.7	62.4	12.415	20.6	530	.3493	.0337	.0058	-.0422	.3484	.0005	-.0006	.0002
1883	.299	101.5	62.4	13.016	20.7	531	.3701	.0385	.0057	-.0459	.3692	-.0006	-.0002	.0004
1884	.299	101.5	62.4	13.609	20.6	530	.3934	.0440	.0055	-.0499	.3927	-.0012	.0001	.0006
1885	.299	101.7	62.4	14.517	20.7	531	.4256	.0528	.0058	-.0557	.4253	-.0012	.0004	.0007
1886	.299	102.0	62.4	15.135	20.7	531	.4484	.0594	.0065	-.0598	.4484	-.0003	.0002	.0009
1887	.300	102.1	62.4	15.735	20.7	532	.4682	.0660	.0074	-.0635	.4685	.0008	-.0002	.0010
1888	.300	101.7	62.4	6.392	20.7	532	.1443	.0118	.0025	-.0044	.1447	.0006	-.0007	.0002

Run No. 84 Begins With Point No.1908

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1908	.299	101.9	62.4	-.021	20.7	530	-.1034	.0210	-.0026	.0208	-.1034	-.0002	-.0001	.0001
1909	.299	101.8	62.4	1.018	20.7	531	-.0624	.0166	-.0001	.0176	-.0621	-.0001	-.0002	.0001
1910	.299	101.8	62.4	2.119	20.7	531	-.0191	.0133	.0018	.0139	-.0186	.0002	-.0005	.0001
1911	.299	101.9	62.4	3.197	20.6	530	.0239	.0113	.0023	.0099	.0245	.0003	-.0006	.0001
1912	.299	102.0	62.4	4.331	20.7	530	.0692	.0104	.0020	.0051	.0698	.0005	-.0006	.0002
1913	.299	102.1	62.4	5.334	20.6	530	.1072	.0107	.0020	.0006	.1077	.0006	-.0007	.0002
1914	.299	101.9	62.4	6.340	20.7	530	.1436	.0117	.0024	-.0042	.1440	.0006	-.0007	.0002
1915	.299	102.0	62.4	7.329	20.6	530	.1772	.0135	.0029	-.0093	.1774	.0008	-.0007	.0001
1916	.299	101.8	62.4	8.869	20.7	531	.2282	.0177	.0040	-.0178	.2282	.0010	-.0007	.0001
1917	.299	101.6	62.4	10.909	20.7	531	.2964	.0254	.0052	-.0312	.2958	.0009	-.0007	.0001
1918	.299	101.9	62.4	11.418	20.6	529	.3141	.0279	.0055	-.0349	.3134	.0008	-.0006	.0001
1919	.299	101.8	62.4	11.918	20.7	531	.3308	.0307	.0058	-.0383	.3300	.0004	-.0005	.0002
1920	.299	101.8	62.4	12.415	20.7	531	.3478	.0338	.0060	-.0418	.3469	.0000	-.0003	.0003
1921	.299	101.7	62.4	13.014	20.7	531	.3702	.0385	.0058	-.0459	.3693	-.0007	-.0002	.0004
1922	.299	101.5	62.4	13.603	20.7	531	.3911	.0436	.0055	-.0496	.3904	-.0011	.0000	.0006
1923	.299	102.0	62.4	14.513	20.7	531	.4248	.0525	.0057	-.0557	.4244	-.0010	.0002	.0007
1924	.299	101.9	62.4	15.129	20.7	530	.4470	.0591	.0064	-.0596	.4469	-.0006	.0003	.0008
1925	.299	102.1	62.4	15.739	20.7	531	.4686	.0662	.0075	-.0635	.4690	.0009	-.0002	.0010
1926	.299	101.9	62.4	6.389	20.6	529	.1447	.0118	.0025	-.0044	.1451	.0006	-.0007	.0002

Run No. 86 Begins With Point No.1946

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1946	.298	101.5	62.4	-.010	20.6	528	-.1027	.0209	-.0025	.0208	-.1027	-.0002	-.0001	.0001
1947	.298	101.7	62.4	1.017	20.6	529	-.0622	.0166	-.0001	.0176	-.0619	-.0001	-.0002	.0001
1948	.298	102.0	62.4	2.120	20.6	527	-.0192	.0133	.0019	.0139	-.0187	.0002	-.0005	.0001
1949	.298	102.4	62.4	3.195	20.6	529	.0241	.0113	.0023	.0099	.0247	.0004	-.0006	.0001
1950	.299	102.3	62.4	4.332	20.6	529	.0691	.0104	.0020	.0051	.0697	.0005	-.0006	.0002
1951	.298	102.3	62.4	5.336	20.6	529	.1074	.0107	.0021	.0006	.1079	.0007	-.0007	.0002
1952	.299	102.5	62.4	6.340	20.6	530	.1432	.0117	.0024	-.0043	.1436	.0006	-.0007	.0002
1953	.298	102.0	62.4	7.327	20.6	528	.1771	.0135	.0029	-.0093	.1774	.0008	-.0007	.0001
1954	.298	101.7	62.4	8.868	20.6	529	.2283	.0177	.0040	-.0178	.2283	.0009	-.0007	.0001
1955	.298	102.0	62.4	10.903	20.6	529	.2961	.0254	.0052	-.0312	.2955	.0010	-.0007	.0001
1956	.299	102.0	62.4	11.415	20.6	530	.3136	.0279	.0055	-.0348	.3129	.0008	-.0006	.0001
1957	.298	101.9	62.4	11.910	20.6	528	.3302	.0306	.0058	-.0382	.3294	.0004	-.0005	.0002
1958	.299	102.1	62.4	12.410	20.6	529	.3473	.0338	.0060	-.0417	.3464	.0000	-.0004	.0002
1959	.298	102.1	62.4	13.006	20.6	528	.3695	.0384	.0058	-.0458	.3686	-.0006	-.0003	.0004
1960	.298	102.3	62.4	13.600	20.6	529	.3924	.0438	.0055	-.0498	.3917	-.0013	.0001	.0006
1961	.298	102.4	62.4	14.496	20.6	529	.4243	.0525	.0058	-.0555	.4239	-.0013	.0003	.0007
1962	.298	102.4	62.4	15.102	20.6	528	.4459	.0588	.0064	-.0595	.4458	-.0009	.0003	.0008
1963	.299	101.9	62.4	15.716	20.6	530	.4671	.0658	.0073	-.0632	.4675	.0013	-.0003	.0010
1964	.298	102.2	62.4	6.391	20.6	528	.1446	.0118	.0025	-.0044	.1450	.0006	-.0007	.0002

Run No. 88 Begins With Point No.1984

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
1984	.298	101.8	62.4	-.021	20.6	526	-.1036	.0210	-.0027	.0209	-.1036	-.0001	-.0001	.0001
1985	.297	101.9	62.4	1.005	20.6	525	-.0633	.0167	-.0003	.0177	-.0630	.0000	-.0002	.0001
1986	.298	101.6	62.4	2.105	20.6	526	-.0202	.0134	.0018	.0141	-.0197	.0002	-.0005	.0001
1987	.298	101.8	62.4	3.182	20.6	526	.0229	.0114	.0022	.0101	.0234	.0003	-.0006	.0001
1988	.298	101.8	62.4	4.312	20.6	526	.0679	.0105	.0020	.0053	.0685	.0006	-.0006	.0002
1989	.298	101.9	62.4	5.316	20.6	527	.1059	.0107	.0019	.0008	.1064	.0007	-.0007	.0002
1990	.297	101.7	62.4	6.321	20.6	526	.1424	.0118	.0024	-.0040	.1429	.0007	-.0007	.0002
1991	.297	101.7	62.4	7.311	20.6	526	.1762	.0135	.0029	-.0091	.1765	.0009	-.0007	.0002
1992	.298	101.6	62.4	8.855	20.6	527	.2266	.0176	.0039	-.0175	.2266	.0009	-.0007	.0001
1993	.298	101.7	62.4	10.886	20.6	526	.2948	.0253	.0051	-.0309	.2943	.0009	-.0007	.0001
1994	.298	101.9	62.4	11.401	20.6	526	.3124	.0278	.0054	-.0346	.3117	.0009	-.0007	.0001
1995	.298	102.0	62.4	11.897	20.6	526	.3289	.0306	.0057	-.0379	.3281	.0004	-.0004	.0002
1996	.298	101.7	62.4	12.389	20.6	526	.3462	.0337	.0059	-.0414	.3453	.0000	-.0003	.0002
1997	.298	101.9	62.4	12.988	20.6	526	.3677	.0382	.0057	-.0455	.3669	-.0007	-.0002	.0004
1998	.297	101.7	62.4	13.578	20.6	525	.3900	.0435	.0054	-.0493	.3893	-.0015	.0001	.0005
1999	.298	101.6	62.4	14.480	20.6	526	.4226	.0522	.0057	-.0552	.4222	-.0013	.0003	.0007
2000	.298	102.2	62.4	15.087	20.6	526	.4444	.0586	.0063	-.0592	.4444	-.0007	.0004	.0008
2001	.298	102.1	62.4	15.694	20.6	526	.4659	.0656	.0073	-.0630	.4662	.0018	-.0005	.0011
2002	.297	101.7	62.4	6.381	20.6	526	.1434	.0118	.0025	-.0043	.1438	.0006	-.0007	.0002

Run No. 90 Begins With Point No.2012

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2012	.298	101.5	62.4	-.060	20.6	527	-.1044	.0211	-.0027	.0209	-.1044	-.0001	-.0001	.0001
2013	.298	101.5	62.4	1.013	20.6	526	-.0627	.0166	-.0002	.0177	-.0624	.0001	-.0002	.0001
2014	.298	101.2	62.4	2.119	20.6	526	-.0194	.0133	.0018	.0140	-.0189	.0004	-.0005	.0001
2015	.298	101.4	62.4	3.193	20.6	526	.0238	.0114	.0023	.0100	.0244	.0005	-.0006	.0001
2016	.298	101.5	62.4	4.325	20.6	526	.0685	.0105	.0020	.0052	.0691	.0007	-.0006	.0002
2017	.297	101.7	62.4	5.325	20.6	524	.1067	.0107	.0020	.0007	.1072	.0008	-.0007	.0002
2018	.297	101.3	62.4	6.331	20.6	525	.1429	.0118	.0024	-.0041	.1433	.0008	-.0007	.0002
2019	.298	101.2	62.4	7.320	20.6	528	.1758	.0135	.0029	-.0091	.1761	.0010	-.0007	.0002
2020	.298	101.6	62.4	8.859	20.6	526	.2276	.0177	.0040	-.0176	.2276	.0010	-.0007	.0001
2021	.297	101.7	62.4	10.891	20.6	526	.2957	.0253	.0052	-.0311	.2951	.0010	-.0007	.0001
2022	.297	101.4	62.4	11.402	20.6	525	.3127	.0278	.0054	-.0346	.3120	.0008	-.0006	.0001
2023	.297	101.1	62.4	11.897	20.6	524	.3309	.0308	.0057	-.0382	.3301	.0005	-.0005	.0002
2024	.298	101.4	62.4	12.399	20.6	526	.3468	.0337	.0060	-.0416	.3460	.0002	-.0004	.0003
2025	.298	101.5	62.4	12.995	20.6	526	.3686	.0383	.0057	-.0456	.3678	-.0007	-.0002	.0004
2026	.298	101.5	62.4	13.590	20.6	526	.3907	.0436	.0054	-.0495	.3900	-.0010	.0000	.0006
2027	.298	101.4	62.4	14.483	20.6	526	.4223	.0521	.0057	-.0552	.4219	-.0013	.0003	.0006
2028	.297	101.1	62.4	15.101	20.6	525	.4449	.0588	.0063	-.0592	.4448	-.0010	.0004	.0008
2029	.298	101.4	62.4	15.724	20.6	527	.4669	.0659	.0073	-.0632	.4672	.0010	-.0003	.0010
2030	.298	101.7	62.4	6.382	20.6	526	.1438	.0118	.0025	-.0043	.1442	.0006	-.0007	.0001

Run No. 92 Begins With Point No.2055

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2055	.299	-255.0	34.9	.078	46.5	296	-.0959	.0187	-.0017	.0188	-.0958	-.0009	-.0007	-.0002
2056	.299	-255.3	34.9	1.009	46.6	295	-.0593	.0149	.0003	.0159	-.0590	-.0007	-.0009	-.0002
2057	.299	-255.4	34.9	2.037	46.6	295	-.0196	.0119	.0019	.0125	-.0191	-.0003	-.0011	-.0001
2058	.299	-255.7	34.9	3.061	46.7	296	.0199	.0099	.0022	.0087	.0204	-.0002	-.0014	-.0002
2059	.299	-255.8	34.9	4.151	46.6	295	.0606	.0089	.0018	.0045	.0611	.0001	-.0014	-.0001
2060	.299	-255.6	34.9	5.139	46.6	295	.0983	.0090	.0017	.0001	.0987	.0003	-.0014	-.0001
2061	.299	-255.7	34.9	6.112	46.7	296	.1314	.0098	.0019	-.0043	.1317	.0004	-.0014	-.0001
2062	.299	-255.9	34.9	7.099	46.7	295	.1648	.0114	.0022	-.0091	.1649	.0004	-.0014	-.0001
2063	.299	-256.0	34.9	8.577	46.8	295	.2102	.0150	.0028	-.0166	.2101	.0009	-.0015	-.0002
2064	.299	-256.0	34.9	10.590	46.8	295	.2753	.0219	.0037	-.0291	.2747	.0007	-.0013	-.0002
2065	.299	-256.3	34.9	11.088	46.8	295	.2922	.0242	.0041	-.0325	.2914	.0008	-.0013	-.0002
2066	.299	-256.0	34.9	11.570	46.8	295	.3076	.0265	.0041	-.0358	.3067	.0006	-.0013	-.0002
2067	.299	-256.2	34.9	12.071	46.8	295	.3245	.0292	.0041	-.0393	.3234	.0000	-.0012	-.0002
2068	.299	-256.3	34.9	12.607	46.8	295	.3425	.0327	.0039	-.0429	.3414	.0001	-.0013	-.0002
2069	.299	-256.4	34.9	13.159	46.9	295	.3628	.0370	.0032	-.0466	.3617	-.0001	-.0012	-.0001
2070	.298	-256.3	34.9	13.968	46.8	294	.3909	.0445	.0031	-.0512	.3901	-.0011	-.0008	-.0001
2071	.299	-256.3	34.9	14.515	46.9	295	.4093	.0499	.0036	-.0543	.4087	-.0006	-.0007	.0001
2072	.299	-256.3	34.9	15.122	46.9	295	.4303	.0565	.0047	-.0578	.4301	-.0001	-.0008	.0000
2073	.301	-256.1	34.9	6.197	47.0	298	.1340	.0098	.0018	-.0048	.1343	.0003	-.0013	-.0001

Run No. 93 Begins With Point No.2074

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2074	.298	-249.9	63.1	-.132	80.3	528	-.1083	.0197	-.0028	.0194	-.1083	-.0007	-.0003	.0000
2075	.298	-250.1	63.1	.815	80.4	529	-.0700	.0156	-.0005	.0165	-.0698	-.0005	-.0002	.0000
2076	.298	-250.2	63.1	1.901	80.5	528	-.0305	.0122	.0013	.0131	-.0301	-.0003	-.0004	.0001
2077	.298	-250.2	63.1	2.985	80.5	528	.0091	.0100	.0019	.0095	.0096	-.0003	-.0005	.0000
2078	.298	-250.0	63.1	4.113	80.3	528	.0559	.0089	.0019	.0048	.0563	.0001	-.0007	.0001
2079	.298	-250.1	63.1	5.127	80.4	528	.0937	.0089	.0020	.0005	.0941	-.0001	-.0004	.0001
2080	.298	-250.0	63.1	6.147	80.4	529	.1281	.0098	.0022	-.0040	.1284	.0004	-.0009	.0001
2081	.298	-250.0	63.1	7.149	80.3	529	.1626	.0114	.0026	-.0089	.1628	.0001	-.0006	.0000
2082	.298	-249.9	63.1	8.660	80.3	528	.2104	.0152	.0033	-.0167	.2103	.0003	-.0007	.0000
2083	.298	-250.0	63.1	10.662	80.3	528	.2743	.0222	.0043	-.0290	.2736	.0007	-.0008	.0000
2084	.298	-249.7	63.1	11.170	80.3	530	.2901	.0243	.0047	-.0324	.2893	.0003	-.0006	.0000
2085	.298	-250.0	63.1	11.664	80.3	528	.3060	.0267	.0049	-.0357	.3050	.0003	-.0007	.0000
2086	.298	-249.9	63.1	12.170	80.3	528	.3251	.0295	.0052	-.0398	.3240	.0002	-.0005	.0001
2087	.298	-249.8	63.1	12.734	80.2	529	.3424	.0329	.0049	-.0434	.3412	-.0003	-.0007	.0000
2088	.298	-249.9	63.1	13.309	80.2	528	.3640	.0372	.0044	-.0477	.3628	-.0005	-.0005	.0000
2089	.298	-249.8	63.1	14.183	80.3	529	.3944	.0447	.0038	-.0533	.3934	-.0016	-.0001	.0001
2090	.298	-249.9	63.1	14.781	80.3	528	.4145	.0508	.0044	-.0567	.4137	-.0002	-.0002	.0003
2091	.298	-249.9	63.1	16.057	80.3	528	.4571	.0652	.0067	-.0638	.4573	-.0004	-.0001	.0002
2092	.298	-250.1	63.1	6.222	80.4	528	.1320	.0098	.0023	-.0046	.1323	.0004	-.0008	.0001

Run No. 95 Begins With Point No.2112

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2112	.299	-249.6	63.1	-.234	80.4	531	-.1091	.0200	-.0030	.0195	-.1091	-.0007	-.0001	.0000
2113	.299	-249.8	63.1	.802	80.5	532	-.0705	.0156	-.0008	.0165	-.0702	-.0005	-.0001	.0001
2114	.299	-249.8	63.1	1.900	80.5	532	-.0297	.0122	.0013	.0131	-.0293	-.0004	-.0002	.0000
2115	.299	-249.7	63.1	2.979	80.5	533	.0120	.0099	.0020	.0092	.0125	-.0004	-.0001	.0001
2116	.299	-249.8	63.1	4.109	80.5	532	.0551	.0088	.0019	.0048	.0556	-.0003	-.0003	.0001
2117	.299	-249.6	63.1	5.112	80.4	532	.0931	.0089	.0017	.0005	.0936	.0000	-.0004	.0001
2118	.298	-249.7	63.1	6.151	80.3	530	.1296	.0098	.0023	-.0042	.1298	-.0002	-.0004	.0002
2119	.298	-249.7	63.1	7.146	80.4	531	.1642	.0114	.0026	-.0092	.1643	.0001	-.0005	.0001
2120	.299	-249.5	63.1	8.647	80.4	532	.2098	.0151	.0034	-.0167	.2097	.0003	-.0005	.0001
2121	.298	-249.7	63.1	10.648	80.4	531	.2728	.0220	.0043	-.0288	.2722	.0002	-.0005	.0001
2122	.299	-249.7	63.1	11.165	80.5	533	.2897	.0242	.0047	-.0324	.2889	.0003	-.0004	.0001
2123	.299	-249.9	63.1	11.667	80.5	531	.3061	.0266	.0049	-.0359	.3051	-.0001	-.0002	.0003
2124	.299	-250.0	63.1	12.156	80.6	531	.3233	.0292	.0052	-.0396	.3222	-.0001	-.0003	.0002
2125	.299	-250.1	63.1	12.737	80.7	532	.3411	.0327	.0048	-.0433	.3399	-.0005	-.0003	.0001
2126	.299	-250.1	63.1	13.314	80.7	532	.3625	.0369	.0041	-.0476	.3612	-.0007	-.0002	.0001
2127	.299	-250.2	63.1	14.183	80.8	532	.3932	.0445	.0038	-.0532	.3921	-.0011	.0001	.0002
2128	.299	-250.4	63.1	14.781	80.8	531	.4132	.0506	.0042	-.0565	.4125	-.0008	.0000	.0003
2129	.298	-250.4	63.1	16.060	80.8	531	.4558	.0651	.0067	-.0636	.4560	.0016	-.0004	.0005
2130	.299	-250.5	63.1	6.236	81.0	533	.1329	.0097	.0023	-.0048	.1332	-.0001	-.0004	.0002

Run No. 96 Begins With Point No.2135

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2135	.298	-251.2	79.9	-.268	102.7	672	-.1099	.0199	-.0032	.0193	-.1100	-.0006	-.0001	.0001
2136	.299	-251.4	79.9	.686	103.0	673	-.0729	.0157	-.0011	.0165	-.0728	-.0004	-.0002	.0001
2137	.299	-251.3	79.9	1.779	102.9	672	-.0316	.0121	.0009	.0130	-.0312	-.0001	-.0003	.0001
2138	.299	-251.1	79.9	2.841	102.7	673	.0088	.0099	.0019	.0094	.0093	-.0001	-.0003	.0001
2139	.299	-251.0	79.9	4.038	102.7	673	.0547	.0086	.0018	.0047	.0552	.0001	-.0004	.0002
2140	.298	-251.2	79.9	5.021	102.7	672	.0910	.0087	.0019	.0006	.0914	.0002	-.0004	.0002
2141	.299	-250.9	79.9	6.023	102.6	673	.1260	.0094	.0024	-.0039	.1263	.0001	-.0004	.0002
2142	.299	-250.7	79.9	7.000	102.4	672	.1581	.0109	.0026	-.0085	.1582	.0002	-.0004	.0002
2143	.299	-251.2	79.9	8.450	102.8	673	.2041	.0143	.0034	-.0159	.2040	.0003	-.0004	.0002
2144	.299	-250.8	79.9	10.373	102.5	673	.2652	.0206	.0045	-.0275	.2646	.0006	-.0004	.0002
2145	.299	-250.8	79.9	10.837	102.5	673	.2798	.0225	.0048	-.0306	.2791	.0005	-.0003	.0002
2146	.299	-250.7	79.9	11.328	102.5	673	.2961	.0247	.0051	-.0340	.2952	.0005	-.0004	.0002
2147	.299	-250.7	79.9	11.792	102.4	672	.3114	.0270	.0054	-.0373	.3103	.0004	-.0003	.0003
2148	.299	-250.6	79.9	12.399	102.4	673	.3307	.0303	.0055	-.0415	.3295	.0003	-.0003	.0003
2149	.298	-250.7	79.9	13.013	102.3	671	.3527	.0343	.0052	-.0460	.3514	.0004	-.0004	.0003
2150	.299	-250.6	79.9	13.910	102.4	673	.3834	.0413	.0045	-.0521	.3821	.0008	-.0003	.0004
2151	.299	-250.6	79.9	14.538	102.3	673	.4048	.0472	.0044	-.0560	.4037	.0020	-.0006	.0006

Run No. 97 Begins With Point No.2152

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2152	.298	-250.9	89.9	-.479	115.1	754	-.1175	.0208	-.0038	.0198	-.1177	-.0004	-.0001	.0001
2153	.299	-250.8	89.9	.626	115.1	756	-.0758	.0159	-.0013	.0166	-.0756	-.0004	-.0002	.0001
2154	.298	-250.6	89.9	1.760	114.9	755	-.0321	.0121	.0008	.0130	-.0318	-.0002	-.0002	.0001
2155	.298	-251.0	89.9	2.856	115.2	754	.0092	.0098	.0020	.0093	.0097	.0000	-.0003	.0001
2156	.298	-250.7	89.9	4.086	115.0	754	.0560	.0086	.0019	.0045	.0565	.0002	-.0004	.0002
2157	.298	-250.8	89.9	5.147	115.0	753	.0955	.0087	.0021	.0000	.0959	.0002	-.0004	.0002
2158	.298	-250.9	89.9	6.137	115.1	754	.1296	.0095	.0025	-.0045	.1299	.0003	-.0004	.0002
2159	.298	-250.9	89.9	7.146	115.1	754	.1627	.0111	.0029	-.0093	.1628	.0003	-.0005	.0002
2160	.298	-250.8	89.9	8.622	114.9	752	.2090	.0147	.0037	-.0169	.2089	.0004	-.0005	.0002
2161	.298	-250.6	89.9	10.584	114.9	754	.2710	.0213	.0049	-.0289	.2703	.0005	-.0003	.0002
2162	.298	-250.7	89.9	11.075	115.0	755	.2872	.0234	.0053	-.0323	.2863	.0006	-.0004	.0003
2163	.298	-250.9	89.9	11.570	115.0	753	.3026	.0257	.0056	-.0356	.3016	.0006	-.0004	.0002
2164	.298	-250.3	89.9	12.073	114.7	755	.3187	.0282	.0058	-.0392	.3176	.0004	-.0003	.0002
2165	.298	-250.6	89.9	12.690	114.8	753	.3398	.0318	.0058	-.0436	.3384	.0007	-.0004	.0003
2166	.299	-250.6	89.9	13.329	115.0	757	.3615	.0362	.0054	-.0481	.3601	.0009	-.0004	.0003
2167	.298	-250.5	89.9	14.241	114.8	754	.3934	.0439	.0048	-.0543	.3921	.0013	-.0004	.0004
2168	.299	-250.9	89.9	6.141	115.3	756	.1289	.0095	.0025	-.0044	.1292	.0002	-.0005	.0002

Run No. 98 Begins With Point No.2169

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2169	.297	-250.7	63.1	-.212	80.6	527	-.1129	.0202	-.0034	.0197	-.1130	-.0004	-.0001	.0002
2170	.297	-250.7	63.1	.778	80.6	526	-.0756	.0159	-.0013	.0168	-.0753	-.0004	-.0001	.0002
2171	.298	-250.8	63.1	1.869	80.7	528	-.0329	.0123	.0008	.0133	-.0325	-.0002	-.0002	.0002
2172	.297	-250.5	63.1	2.950	80.4	525	.0079	.0101	.0018	.0096	.0084	.0000	-.0003	.0002
2173	.297	-250.7	63.1	4.076	80.5	525	.0510	.0089	.0016	.0052	.0515	-.0001	-.0002	.0003
2174	.297	-250.8	63.1	5.080	80.6	525	.0882	.0090	.0015	.0011	.0887	.0001	-.0003	.0003
2175	.297	-250.8	63.1	6.101	80.6	526	.1248	.0097	.0019	-.0036	.1251	.0001	-.0003	.0003
2176	.297	-250.7	63.0	7.111	80.6	527	.1578	.0113	.0021	-.0084	.1580	.0000	-.0003	.0002
2177	.297	-250.8	63.1	8.621	80.5	525	.2066	.0151	.0029	-.0161	.2065	.0003	-.0004	.0002
2178	.297	-250.9	63.1	10.616	80.6	526	.2707	.0219	.0041	-.0284	.2701	.0004	-.0003	.0003
2179	.297	-250.8	63.1	11.128	80.5	525	.2868	.0242	.0043	-.0317	.2861	.0007	-.0004	.0003
2180	.297	-250.6	63.1	11.628	80.4	526	.3038	.0265	.0046	-.0353	.3029	.0006	-.0003	.0003
2181	.297	-250.6	63.1	12.113	80.4	526	.3186	.0290	.0046	-.0385	.3176	.0005	-.0003	.0003
2182	.297	-250.6	63.1	12.698	80.5	526	.3390	.0326	.0045	-.0427	.3379	.0006	-.0004	.0004
2183	.297	-250.7	63.1	13.270	80.6	527	.3593	.0366	.0040	-.0469	.3581	.0005	-.0003	.0004
2184	.297	-250.6	63.1	14.130	80.4	525	.3893	.0440	.0034	-.0524	.3883	.0013	-.0003	.0005
2185	.297	-250.5	63.1	14.728	80.4	525	.4100	.0499	.0037	-.0561	.4092	.0015	-.0004	.0006
2186	.297	-250.6	63.1	16.021	80.5	526	.4527	.0644	.0061	-.0631	.4529	.0050	-.0012	.0010
2187	.297	-250.8	63.1	6.173	80.6	526	.1255	.0098	.0018	-.0038	.1258	.0002	-.0003	.0003

Run No. 100 Begins With Point No.2199

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2199	.298	-202.6	62.5	-.238	59.4	528	-.1087	.0205	-.0029	.0200	-.1088	-.0006	-.0002	.0000
2200	.298	-202.5	62.5	.829	59.3	528	-.0675	.0159	-.0006	.0168	-.0673	-.0003	-.0003	.0000
2201	.299	-202.3	62.5	1.911	59.4	530	-.0266	.0125	.0013	.0133	-.0262	-.0002	-.0004	.0000
2202	.299	-202.1	62.5	2.992	59.3	530	.0154	.0103	.0020	.0095	.0159	.0001	-.0006	.0001
2203	.299	-202.0	62.5	4.122	59.3	530	.0592	.0093	.0017	.0049	.0597	.0003	-.0006	.0001
2204	.298	-202.1	62.5	5.126	59.2	528	.0968	.0094	.0018	.0006	.0972	.0005	-.0007	.0001
2205	.298	-202.1	62.5	6.157	59.1	527	.1328	.0103	.0021	-.0041	.1331	.0004	-.0007	.0001
2206	.299	-202.0	62.5	7.152	59.3	530	.1652	.0119	.0025	-.0088	.1654	.0006	-.0008	.0000
2207	.299	-202.1	62.5	8.666	59.3	531	.2141	.0157	.0033	-.0168	.2140	.0008	-.0008	.0000
2208	.298	-202.1	62.5	10.677	59.1	527	.2786	.0228	.0044	-.0293	.2780	.0007	-.0007	.0000
2209	.298	-202.1	62.5	11.188	59.1	527	.2956	.0250	.0047	-.0329	.2948	.0006	-.0007	.0000
2210	.298	-202.0	62.5	11.678	59.2	528	.3112	.0273	.0049	-.0363	.3103	.0004	-.0007	.0000
2211	.299	-202.1	62.5	12.175	59.3	529	.3280	.0301	.0050	-.0398	.3269	.0001	-.0006	.0000
2212	.299	-202.1	62.5	12.760	59.3	530	.3479	.0338	.0048	-.0439	.3468	-.0003	-.0006	.0000
2213	.298	-202.2	62.5	13.327	59.2	528	.3687	.0381	.0041	-.0479	.3675	-.0007	-.0004	.0000
2214	.298	-202.1	62.5	14.204	59.1	527	.3996	.0462	.0039	-.0533	.3987	-.0013	-.0001	.0002
2215	.298	-202.1	62.5	14.814	59.1	526	.4219	.0527	.0046	-.0570	.4214	-.0010	-.0001	.0002
2216	.298	-202.1	62.5	16.113	59.2	528	.4641	.0673	.0071	-.0642	.4645	.0007	-.0005	.0003
2217	.300	-202.1	62.5	6.285	59.6	535	.1365	.0103	.0021	-.0048	.1368	.0003	-.0008	.0001

Run No. 101 Begins With Point No.2218

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2218	.298	-79.9	62.4	-.132	34.4	528	-.1064	.0205	-.0026	.0202	-.1065	-.0001	-.0001	.0000
2219	.298	-79.8	62.4	.935	34.4	528	-.0650	.0160	-.0003	.0170	-.0647	.0000	-.0002	.0000
2220	.297	-80.0	62.4	2.032	34.3	525	-.0233	.0127	.0017	.0134	-.0229	.0003	-.0004	.0000
2221	.298	-80.2	62.4	3.105	34.4	526	.0191	.0106	.0022	.0095	.0196	.0004	-.0006	.0001
2222	.297	-79.9	62.4	4.240	34.3	525	.0638	.0097	.0018	.0049	.0643	.0006	-.0006	.0001
2223	.298	-79.8	62.4	5.247	34.4	527	.1013	.0098	.0018	.0005	.1017	.0008	-.0006	.0001
2224	.298	-79.8	62.4	6.252	34.4	529	.1366	.0108	.0022	-.0042	.1370	.0008	-.0006	.0001
2225	.298	-79.9	62.4	7.244	34.4	528	.1702	.0125	.0026	-.0091	.1704	.0009	-.0007	.0001
2226	.297	-80.1	62.4	8.772	34.3	525	.2203	.0165	.0035	-.0173	.2202	.0009	-.0007	.0001
2227	.297	-79.8	62.4	10.796	34.3	524	.2858	.0238	.0047	-.0302	.2852	.0009	-.0006	.0001
2228	.298	-79.8	62.4	11.315	34.4	528	.3024	.0262	.0051	-.0337	.3016	.0008	-.0005	.0001
2229	.298	-79.8	62.4	11.814	34.4	529	.3196	.0288	.0052	-.0373	.3187	.0006	-.0005	.0001
2230	.298	-80.1	62.4	12.303	34.5	529	.3355	.0316	.0053	-.0407	.3346	.0005	-.0006	.0001
2231	.298	-80.0	62.4	12.886	34.4	527	.3561	.0356	.0052	-.0448	.3551	.0001	-.0005	.0001
2232	.298	-79.8	62.4	13.462	34.3	526	.3777	.0403	.0046	-.0488	.3767	-.0007	-.0001	.0002
2233	.297	-79.5	62.4	14.350	34.3	525	.4101	.0488	.0045	-.0544	.4094	-.0024	.0005	.0004
2234	.298	-79.9	62.4	14.958	34.4	527	.4302	.0549	.0050	-.0581	.4298	-.0021	.0007	.0006
2235	.298	-80.0	62.4	16.275	34.4	528	.4755	.0707	.0081	-.0654	.4763	.0022	-.0009	.0005
2236	.299	-79.7	62.4	6.387	34.5	532	.1415	.0110	.0023	-.0049	.1419	.0007	-.0006	.0001

Run No. 102 Begins With Point No.2239

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2239	.299	100.1	62.5	-.060	20.8	533	-.1043	.0211	-.0025	.0209	-.1043	.0000	-.0002	.0000
2240	.299	99.7	62.5	.754	20.8	532	-.0643	.0172	-.0001	.0180	-.0641	.0001	-.0003	.0000
2241	.299	99.6	62.5	.988	20.8	533	-.0631	.0166	-.0001	.0176	-.0628	.0000	-.0003	.0000
2242	.299	99.3	62.5	2.099	20.8	531	-.0193	.0133	.0019	.0139	-.0188	.0004	-.0006	.0000
2243	.298	100.0	62.4	3.175	20.7	529	.0235	.0113	.0024	.0099	.0241	.0004	-.0006	.0001
2244	.299	101.1	62.5	4.322	20.7	532	.0696	.0104	.0021	.0050	.0701	.0006	-.0007	.0001
2245	.299	100.9	62.5	5.327	20.7	532	.1081	.0106	.0021	.0005	.1086	.0007	-.0008	.0001
2246	.299	100.8	62.5	6.330	20.7	531	.1445	.0117	.0025	-.0044	.1449	.0008	-.0008	.0001
2247	.299	100.5	62.4	7.316	20.7	530	.1786	.0135	.0030	-.0094	.1788	.0009	-.0008	.0001
2248	.299	100.6	62.5	8.865	20.7	531	.2299	.0177	.0041	-.0180	.2299	.0010	-.0008	.0001
2249	.299	100.6	62.5	10.894	20.7	531	.2983	.0254	.0053	-.0315	.2977	.0011	-.0009	.0000

Run No. 107 Begins With Point No.2328

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2328	.298	101.3	17.2	-2.586	5.7	145	-.1668	.0224	.0012	.0148	-.1676	.0006	.0000	.0000
2329	.298	101.7	17.2	-1.358	5.7	145	-.1162	.0156	.0032	.0128	-.1165	.0006	.0000	.0000
2330	.299	102.0	17.2	-.635	5.7	145	-.0867	.0126	.0037	.0115	-.0868	.0007	-.0001	.0000
2331	.298	102.0	17.2	-.145	5.7	145	-.0665	.0109	.0038	.0107	-.0666	.0006	-.0003	.0000
2332	.299	101.3	17.2	.346	5.7	145	-.0472	.0094	.0040	.0096	-.0472	.0007	-.0004	.0000
2333	.298	100.2	17.2	.836	5.7	145	-.0286	.0083	.0044	.0086	-.0285	.0007	-.0006	.0001
2334	.298	98.6	17.2	1.312	5.7	145	-.0104	.0075	.0047	.0077	-.0102	.0010	-.0005	.0000
2335	.298	97.9	17.2	1.555	5.7	145	-.0013	.0072	.0050	.0072	-.0012	.0010	-.0005	.0000
2336	.298	98.1	17.2	2.033	5.7	144	.0149	.0070	.0053	.0064	.0151	.0009	-.0004	.0001
2337	.298	98.7	17.2	2.275	5.7	145	.0224	.0069	.0054	.0059	.0226	.0009	-.0004	.0001
2338	.299	99.3	17.2	3.247	5.7	145	.0543	.0072	.0061	.0040	.0547	.0008	-.0005	.0001
2339	.298	100.0	17.2	4.264	5.7	145	.0892	.0087	.0063	.0020	.0896	.0009	-.0004	.0002
2340	.299	100.7	17.2	4.777	5.7	145	.1064	.0099	.0062	.0009	.1069	.0009	-.0004	.0002
2341	.298	101.0	17.2	5.201	5.7	145	.1214	.0109	.0060	-.0002	.1219	.0011	-.0007	.0002
2342	.298	100.4	17.2	6.120	5.7	145	.1541	.0136	.0056	-.0030	.1547	.0011	-.0008	.0002
2343	.298	100.1	17.2	6.574	5.7	145	.1706	.0151	.0052	-.0046	.1712	.0012	-.0006	.0002
2344	.298	100.4	17.2	7.069	5.7	145	.1886	.0170	.0048	-.0064	.1893	.0014	-.0006	.0002
2345	.299	100.7	17.2	7.552	5.7	145	.2076	.0193	.0042	-.0082	.2084	.0014	-.0006	.0002
2346	.298	101.0	17.2	8.012	5.7	145	.2246	.0214	.0035	-.0102	.2254	.0014	-.0009	.0002
2347	.299	100.2	17.2	8.485	5.7	145	.2431	.0239	.0030	-.0123	.2440	.0014	-.0008	.0002
2348	.298	99.8	17.2	8.954	5.7	145	.2624	.0268	.0023	-.0144	.2633	.0011	-.0008	.0003
2349	.298	99.6	17.2	9.428	5.7	145	.2813	.0303	.0019	-.0163	.2825	.0012	-.0005	.0003
2350	.298	99.8	17.2	9.901	5.7	145	.3033	.0348	.0019	-.0179	.3047	.0012	-.0005	.0003
2351	.298	100.5	17.2	10.389	5.7	145	.3264	.0407	.0021	-.0189	.3284	.0006	-.0002	.0005
2352	.298	101.0	17.2	10.884	5.7	145	.3497	.0469	.0038	-.0201	.3523	.0010	-.0004	.0003
2353	.298	101.2	17.2	11.362	5.7	145	.3672	.0535	.0080	-.0200	.3706	.0013	-.0016	.0003
2354	.298	100.3	17.2	12.398	5.7	144	.4147	.0688	.0147	-.0220	.4198	.0011	-.0011	.0004
2355	.298	100.0	17.2	12.944	5.7	145	.4377	.0770	.0177	-.0231	.4438	.0011	-.0009	.0003
2356	.298	100.3	17.2	14.132	5.7	145	.4897	.0974	.0257	-.0251	.4986	.0005	-.0006	.0003
2357	.298	101.0	17.2	6.173	5.7	145	.1556	.0137	.0056	-.0032	.1561	.0012	-.0006	.0002

Run No. 108 Begins With Point No.2358

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2358	.298	101.3	24.2	-2.673	8.0	204	-.1696	.0224	.0016	.0144	-.1705	.0004	-.0001	-.0001
2359	.297	100.8	24.2	-1.408	8.0	202	-.1172	.0155	.0036	.0125	-.1175	.0004	-.0003	.0000
2360	.298	100.3	24.1	-.674	8.0	203	-.0874	.0125	.0037	.0114	-.0875	.0006	-.0002	.0000
2361	.298	100.4	24.1	-.195	8.0	203	-.0687	.0109	.0040	.0106	-.0688	.0006	-.0002	.0000
2362	.298	101.0	24.2	.310	8.0	204	-.0486	.0093	.0043	.0095	-.0485	.0005	-.0003	.0000
2363	.298	100.9	24.2	.820	8.0	203	-.0282	.0084	.0045	.0087	-.0281	.0008	-.0005	.0000
2364	.298	100.6	24.1	1.307	8.0	203	-.0106	.0076	.0048	.0077	-.0104	.0007	-.0005	.0000
2365	.298	100.6	24.1	1.556	8.0	204	-.0021	.0072	.0050	.0072	-.0019	.0005	-.0004	.0001
2366	.298	100.9	24.1	2.043	8.0	203	.0148	.0071	.0052	.0065	.0150	.0007	-.0004	.0001
2367	.298	101.2	24.2	2.292	8.0	204	.0225	.0070	.0053	.0061	.0227	.0005	-.0005	.0001
2368	.298	100.8	24.1	3.282	8.0	204	.0548	.0074	.0062	.0042	.0552	.0008	-.0006	.0001
2369	.298	100.6	24.1	4.314	8.0	204	.0894	.0087	.0064	.0019	.0898	.0008	-.0006	.0001
2370	.298	100.9	24.1	4.836	8.0	203	.1077	.0100	.0063	.0008	.1082	.0009	-.0006	.0002
2371	.298	101.2	24.2	5.266	8.0	204	.1225	.0109	.0061	-.0004	.1230	.0010	-.0007	.0002
2372	.298	100.9	24.2	6.204	8.0	204	.1561	.0136	.0055	-.0034	.1566	.0012	-.0009	.0001
2373	.298	100.4	24.1	6.670	8.0	204	.1729	.0152	.0052	-.0051	.1735	.0012	-.0008	.0001
2374	.298	99.8	24.1	7.158	8.0	203	.1906	.0170	.0048	-.0070	.1912	.0013	-.0007	.0002
2375	.298	100.3	24.1	7.654	8.0	203	.2096	.0191	.0043	-.0090	.2103	.0013	-.0007	.0002
2376	.298	101.0	24.2	8.126	8.0	204	.2276	.0213	.0038	-.0112	.2283	.0013	-.0007	.0002
2377	.298	101.3	24.2	8.605	8.0	204	.2453	.0239	.0033	-.0132	.2461	.0016	-.0008	.0002
2378	.298	100.7	24.1	9.085	8.0	203	.2639	.0267	.0028	-.0154	.2648	.0013	-.0007	.0002
2379	.298	100.2	24.1	9.565	8.0	203	.2847	.0304	.0018	-.0174	.2858	.0011	-.0007	.0003
2380	.298	100.9	24.2	10.045	8.0	204	.3061	.0347	.0015	-.0192	.3075	.0010	-.0006	.0004
2381	.298	101.2	24.2	10.547	8.0	204	.3322	.0411	.0011	-.0205	.3341	.0004	-.0008	.0006
2382	.298	101.1	24.1	11.052	8.0	203	.3526	.0476	.0037	-.0209	.3552	.0002	-.0002	.0005
2383	.298	100.8	24.1	11.549	8.0	203	.3742	.0543	.0070	-.0218	.3775	.0000	-.0006	.0004
2384	.298	100.8	24.1	12.624	8.0	204	.4194	.0697	.0138	-.0237	.4245	.0006	-.0013	.0003
2385	.298	101.0	24.2	13.194	8.0	204	.4440	.0787	.0175	-.0248	.4502	.0005	-.0011	.0003
2386	.298	101.1	24.1	14.445	8.0	204	.5018	.1017	.0265	-.0268	.5112	.0008	-.0009	.0004
2387	.298	100.5	24.1	6.261	8.0	203	.1571	.0137	.0056	-.0036	.1577	.0011	-.0007	.0002

Run No. 109 Begins With Point No.2388

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2388	.297	102.3	34.5	-2.764	11.4	290	-.1717	.0222	.0020	.0138	-.1726	.0003	-.0003	-.0001
2389	.297	101.8	34.5	-1.460	11.4	290	-.1176	.0149	.0043	.0118	-.1180	.0005	-.0003	.0000
2390	.297	101.4	34.5	-.702	11.4	289	-.0865	.0116	.0048	.0105	-.0866	.0007	-.0003	.0000
2391	.298	102.1	34.5	-.215	11.4	291	-.0670	.0101	.0045	.0098	-.0670	.0003	-.0005	-.0001
2392	.297	101.9	34.5	.299	11.4	289	-.0471	.0088	.0046	.0089	-.0470	.0009	-.0005	.0000
2393	.297	101.3	34.5	.799	11.4	290	-.0287	.0078	.0047	.0082	-.0286	.0008	-.0006	.0000
2394	.297	100.7	34.5	1.293	11.4	290	-.0111	.0073	.0049	.0075	-.0109	.0005	-.0006	.0000
2395	.297	100.6	34.5	1.543	11.4	289	-.0027	.0072	.0050	.0072	-.0025	.0005	-.0005	.0001
2396	.297	101.3	34.5	2.043	11.4	290	.0140	.0070	.0053	.0065	.0142	.0006	-.0005	.0001
2397	.298	102.3	34.5	2.298	11.4	292	.0221	.0069	.0054	.0060	.0224	.0006	-.0005	.0001
2398	.298	102.7	34.5	3.315	11.4	291	.0548	.0073	.0062	.0041	.0551	.0006	-.0006	.0001
2399	.297	102.3	34.5	4.383	11.4	290	.0911	.0091	.0065	.0021	.0915	.0008	-.0007	.0001
2400	.297	101.7	34.5	4.933	11.4	290	.1100	.0102	.0064	.0006	.1104	.0009	-.0007	.0001
2401	.297	102.3	34.5	5.376	11.4	290	.1256	.0111	.0063	-.0008	.1261	.0010	-.0007	.0001
2402	.298	102.8	34.5	6.331	11.4	291	.1591	.0136	.0057	-.0040	.1596	.0012	-.0008	.0001
2403	.298	102.3	34.5	6.826	11.4	290	.1769	.0152	.0053	-.0060	.1774	.0012	-.0008	.0002
2404	.297	101.9	34.5	7.310	11.4	290	.1942	.0170	.0050	-.0079	.1948	.0013	-.0009	.0002
2405	.297	101.1	34.5	7.807	11.4	290	.2125	.0190	.0045	-.0101	.2131	.0013	-.0009	.0002
2406	.297	100.7	34.5	8.293	11.4	289	.2307	.0214	.0042	-.0122	.2313	.0013	-.0008	.0002
2407	.297	100.8	34.5	8.779	11.4	290	.2491	.0239	.0038	-.0144	.2498	.0014	-.0006	.0002
2408	.298	101.8	34.5	9.268	11.4	291	.2676	.0269	.0032	-.0166	.2684	.0015	-.0005	.0001
2409	.298	102.0	34.5	9.773	11.4	291	.2888	.0307	.0022	-.0188	.2899	.0015	-.0007	.0002
2410	.297	101.3	34.5	10.274	11.4	290	.3116	.0354	.0017	-.0208	.3129	.0008	-.0009	.0004
2411	.297	101.0	34.5	10.797	11.4	290	.3382	.0422	.0016	-.0220	.3401	.0003	-.0009	.0005
2412	.298	100.3	34.5	11.339	11.4	290	.3605	.0494	.0045	-.0225	.3632	-.0002	-.0004	.0005
2413	.297	100.8	34.5	11.864	11.4	289	.3838	.0566	.0078	-.0235	.3873	-.0004	-.0004	.0004
2414	.298	101.7	34.5	13.006	11.4	291	.4303	.0732	.0148	-.0256	.4357	.0002	-.0008	.0003
2415	.297	98.4	34.5	13.612	11.5	290	.4571	.0834	.0188	-.0266	.4639	-.0001	-.0007	.0003
2416	.297	99.7	34.5	14.943	11.4	290	.5212	.1091	.0286	-.0291	.5317	.0005	-.0010	.0006
2417	.297	100.3	34.5	6.397	11.4	290	.1599	.0138	.0058	-.0042	.1604	.0009	-.0006	.0002

Run No. 111 Begins With Point No.2448

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2448	.298	100.5	51.8	-2.826	17.2	437	-.1749	.0221	.0017	.0134	-.1758	.0003	.0001	.0000
2449	.298	100.3	51.8	-1.549	17.2	437	-.1224	.0150	.0037	.0117	-.1228	.0004	.0000	.0000
2450	.298	99.8	51.8	-.731	17.2	437	-.0888	.0116	.0043	.0104	-.0889	.0005	-.0001	.0000
2451	.297	99.7	51.8	-.219	17.2	436	-.0683	.0099	.0045	.0096	-.0684	.0005	-.0001	.0000
2452	.297	101.1	51.8	.788	17.1	435	-.0294	.0077	.0049	.0080	-.0293	.0004	-.0002	.0000
2453	.297	103.9	51.8	1.273	17.0	436	-.0127	.0073	.0050	.0075	-.0125	.0003	-.0003	.0001
2454	.297	101.7	51.8	1.522	17.1	434	-.0043	.0072	.0051	.0072	-.0041	.0005	-.0003	.0001
2455	.298	101.0	51.8	2.029	17.1	437	.0121	.0071	.0054	.0066	.0123	.0004	-.0003	.0001
2456	.298	100.2	51.8	2.294	17.1	436	.0210	.0072	.0056	.0063	.0213	.0005	-.0003	.0001
2457	.297	99.9	51.8	3.311	17.2	436	.0541	.0077	.0064	.0045	.0545	.0004	-.0003	.0001
2458	.298	99.7	51.8	4.397	17.2	437	.0907	.0090	.0068	.0020	.0911	.0006	-.0003	.0001
2459	.297	99.6	51.8	4.905	17.2	435	.1083	.0099	.0068	.0005	.1087	.0006	-.0004	.0002
2460	.297	99.5	51.8	5.356	17.2	436	.1239	.0108	.0067	-.0009	.1244	.0007	-.0004	.0002
2461	.298	99.5	51.8	6.312	17.2	437	.1576	.0132	.0064	-.0042	.1581	.0008	-.0005	.0002
2462	.298	99.7	51.8	6.804	17.2	437	.1754	.0148	.0061	-.0062	.1759	.0008	-.0004	.0002
2463	.297	99.5	51.8	7.267	17.2	436	.1920	.0164	.0058	-.0081	.1925	.0008	-.0004	.0002
2464	.298	99.7	51.8	7.778	17.2	436	.2108	.0185	.0055	-.0103	.2114	.0008	-.0004	.0002
2465	.298	99.7	51.8	8.275	17.2	436	.2294	.0207	.0051	-.0126	.2300	.0009	-.0005	.0002
2466	.297	99.5	51.8	8.758	17.2	435	.2479	.0233	.0047	-.0148	.2485	.0011	-.0003	.0001
2467	.297	99.6	51.8	9.262	17.2	435	.2673	.0264	.0041	-.0171	.2680	.0012	-.0003	.0001
2468	.298	99.8	51.8	9.754	17.2	436	.2878	.0299	.0034	-.0194	.2887	.0012	-.0004	.0001
2469	.298	99.9	51.8	10.259	17.2	437	.3077	.0338	.0029	-.0216	.3088	.0011	-.0004	.0001
2470	.297	99.5	51.8	10.772	17.2	435	.3341	.0400	.0028	-.0232	.3357	.0010	-.0004	.0002
2471	.297	100.0	51.8	11.309	17.1	435	.3588	.0471	.0039	-.0243	.3610	.0002	-.0003	.0003
2472	.298	99.9	51.8	11.848	17.2	437	.3815	.0544	.0068	-.0252	.3845	-.0005	-.0001	.0004
2473	.298	100.2	51.8	13.052	17.2	437	.4327	.0722	.0138	-.0275	.4378	-.0002	-.0004	.0003
2474	.297	100.4	51.8	13.722	17.1	435	.4631	.0837	.0188	-.0286	.4697	-.0002	-.0005	.0002
2475	.297	100.3	51.8	14.303	17.1	435	.4912	.0951	.0235	-.0293	.4994	-.0004	-.0006	.0003
2476	.298	100.2	51.8	6.358	17.2	437	.1586	.0133	.0064	-.0044	.1591	.0007	-.0005	.0001

Run No. 112 Begins With Point No.2479

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2479	.298	98.9	62.4	-2.981	20.7	527	-.1811	.0228	.0010	.0132	-.1820	.0002	.0000	.0000
2480	.298	99.1	62.4	-1.647	20.7	526	-.1267	.0152	.0033	.0115	-.1271	.0002	.0000	.0000
2481	.297	99.2	62.4	-.797	20.7	526	-.0920	.0117	.0039	.0103	-.0922	.0003	.0000	.0000
2482	.298	99.5	62.4	-.263	20.7	528	-.0702	.0098	.0042	.0094	-.0702	.0004	-.0001	.0000
2483	.297	99.3	62.4	.779	20.7	525	-.0312	.0075	.0048	.0079	-.0311	.0003	-.0002	.0000
2484	.298	99.3	62.4	1.278	20.7	529	-.0135	.0071	.0050	.0073	-.0134	.0003	-.0003	.0001
2485	.298	99.3	62.4	1.535	20.7	527	-.0050	.0070	.0051	.0070	-.0048	.0003	-.0003	.0001
2486	.298	99.4	62.4	2.055	20.7	528	.0123	.0069	.0054	.0064	.0125	.0003	-.0003	.0001
2487	.298	99.7	62.4	2.324	20.7	526	.0207	.0069	.0056	.0060	.0209	.0003	-.0003	.0001
2488	.298	99.6	62.4	3.375	20.7	526	.0552	.0075	.0065	.0042	.0556	.0004	-.0004	.0001
2489	.298	99.7	62.4	4.492	20.7	528	.0925	.0089	.0069	.0015	.0929	.0004	-.0004	.0001
2490	.298	100.0	62.4	5.016	20.7	526	.1106	.0098	.0069	.0000	.1110	.0005	-.0004	.0001
2491	.298	99.7	62.4	5.478	20.7	526	.1268	.0107	.0068	-.0015	.1272	.0005	-.0004	.0002
2492	.298	99.7	62.4	6.461	20.7	526	.1614	.0133	.0066	-.0050	.1618	.0006	-.0005	.0002
2493	.298	99.7	62.4	6.968	20.7	526	.1794	.0149	.0063	-.0071	.1798	.0006	-.0005	.0002
2494	.298	99.5	62.4	7.451	20.7	527	.1965	.0166	.0060	-.0091	.1969	.0006	-.0004	.0002
2495	.298	100.0	62.4	7.982	20.7	527	.2157	.0188	.0058	-.0114	.2162	.0007	-.0005	.0002
2496	.298	99.8	62.4	8.493	20.7	527	.2349	.0212	.0055	-.0138	.2354	.0007	-.0004	.0002
2497	.298	99.0	62.4	8.991	20.7	528	.2534	.0240	.0049	-.0160	.2540	.0009	-.0004	.0002
2498	.298	98.7	62.4	9.501	20.7	527	.2739	.0273	.0044	-.0184	.2746	.0010	-.0005	.0001
2499	.298	98.5	62.4	9.998	20.8	528	.2937	.0309	.0039	-.0206	.2946	.0011	-.0005	.0001
2500	.298	98.5	62.4	10.527	20.8	527	.3166	.0358	.0040	-.0227	.3178	.0013	-.0006	.0000
2501	.298	98.5	62.4	11.058	20.7	527	.3432	.0424	.0035	-.0243	.3450	.0005	-.0005	.0002
2502	.298	98.5	62.4	11.617	20.8	528	.3664	.0495	.0058	-.0253	.3688	-.0004	-.0003	.0004
2503	.298	98.7	62.4	12.194	20.7	526	.3920	.0576	.0085	-.0265	.3953	-.0009	-.0001	.0004
2504	.298	99.1	62.4	13.505	20.7	527	.4480	.0778	.0165	-.0290	.4537	-.0006	-.0003	.0003
2505	.298	99.1	62.4	14.266	20.7	526	.4853	.0926	.0230	-.0299	.4931	-.0006	-.0006	.0003
2506	.298	99.1	62.4	14.881	20.7	526	.5133	.1045	.0275	-.0309	.5229	-.0002	-.0007	.0005
2507	.298	98.8	62.4	6.519	20.7	526	.1625	.0134	.0067	-.0052	.1630	.0005	-.0005	.0001

Run No. 114 Begins With Point No.2538

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2538	.298	101.9	62.4	-2.965	20.6	526	-.1811	.0227	.0010	.0132	-.1820	.0001	.0000	.0000
2539	.298	101.8	62.4	-1.647	20.6	526	-.1267	.0152	.0033	.0115	-.1270	.0002	-.0001	.0000
2540	.298	101.9	62.4	-.792	20.6	527	-.0917	.0116	.0039	.0103	-.0918	.0003	-.0001	.0000
2541	.298	101.8	62.4	-.264	20.6	526	-.0704	.0098	.0043	.0095	-.0704	.0004	-.0001	.0000
2542	.298	102.0	62.4	.780	20.6	527	-.0308	.0075	.0048	.0079	-.0307	.0002	-.0003	.0000
2543	.298	101.8	62.4	1.279	20.6	527	-.0135	.0071	.0050	.0073	-.0134	.0002	-.0003	.0000
2544	.298	102.0	62.4	1.533	20.6	527	-.0050	.0070	.0051	.0070	-.0048	.0003	-.0003	.0001
2545	.298	102.1	62.4	2.055	20.6	527	.0125	.0069	.0054	.0064	.0127	.0003	-.0004	.0001
2546	.298	102.1	62.4	2.325	20.6	526	.0211	.0069	.0056	.0060	.0214	.0002	-.0004	.0001
2547	.298	103.9	62.4	3.374	20.5	526	.0555	.0076	.0065	.0042	.0558	.0004	-.0004	.0001
2548	.298	103.7	62.4	4.494	20.5	527	.0929	.0089	.0069	.0015	.0933	.0005	-.0005	.0001
2549	.298	101.8	62.4	5.016	20.6	528	.1103	.0097	.0068	-.0001	.1107	.0005	-.0005	.0001
2550	.298	99.7	62.4	5.479	20.7	526	.1267	.0107	.0067	-.0015	.1271	.0005	-.0005	.0002
2551	.298	98.4	62.4	6.460	20.8	527	.1612	.0133	.0065	-.0050	.1616	.0007	-.0006	.0002
2552	.298	98.0	62.4	6.966	20.8	526	.1794	.0149	.0063	-.0071	.1798	.0007	-.0006	.0002
2553	.298	97.7	62.4	7.446	20.8	526	.1966	.0166	.0060	-.0091	.1970	.0007	-.0006	.0002
2554	.298	97.6	62.4	7.975	20.8	527	.2155	.0188	.0057	-.0114	.2160	.0008	-.0006	.0002
2555	.297	97.7	62.4	8.487	20.8	525	.2348	.0212	.0054	-.0137	.2354	.0009	-.0006	.0002
2556	.298	98.1	62.4	8.987	20.7	526	.2543	.0240	.0048	-.0161	.2549	.0011	-.0006	.0002
2557	.298	98.5	62.4	9.495	20.7	526	.2740	.0273	.0043	-.0183	.2748	.0012	-.0007	.0001
2558	.298	98.6	62.4	9.991	20.7	526	.2939	.0309	.0038	-.0206	.2948	.0013	-.0007	.0001
2559	.297	98.7	62.4	10.520	20.7	525	.3166	.0357	.0039	-.0227	.3178	.0013	-.0007	.0000
2560	.298	98.2	62.4	11.049	20.7	526	.3432	.0423	.0034	-.0243	.3450	.0007	-.0007	.0002
2561	.298	97.8	62.4	11.623	20.8	526	.3679	.0497	.0057	-.0255	.3704	-.0003	-.0004	.0004
2562	.298	97.7	62.4	12.187	20.8	526	.3922	.0576	.0084	-.0266	.3955	-.0009	-.0003	.0004
2563	.298	97.7	62.4	13.502	20.8	526	.4490	.0779	.0165	-.0292	.4548	-.0006	-.0003	.0003
2564	.298	98.3	62.4	14.265	20.7	526	.4848	.0924	.0228	-.0299	.4926	-.0003	-.0007	.0003
2565	.298	98.1	62.4	14.890	20.7	526	.5145	.1048	.0274	-.0310	.5242	.0001	-.0008	.0005
2566	.297	98.4	62.4	6.527	20.7	525	.1629	.0134	.0066	-.0053	.1633	.0006	-.0007	.0001

Run No. 116 Begins With Point No.2593

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2593	.298	99.9	62.4	-2.967	20.7	528	-.1811	.0227	.0010	.0132	-.1820	.0001	-.0001	.0000
2594	.298	100.2	62.4	-1.651	20.7	527	-.1271	.0153	.0032	.0116	-.1275	.0003	-.0002	.0000
2595	.298	99.9	62.4	-.800	20.7	528	-.0922	.0117	.0038	.0103	-.0924	.0003	-.0002	.0000
2596	.298	99.9	62.4	-.271	20.7	529	-.0712	.0099	.0042	.0095	-.0712	.0004	-.0002	.0000
2597	.298	99.5	62.4	.774	20.7	527	-.0315	.0076	.0047	.0079	-.0314	.0003	-.0003	.0000
2598	.298	99.3	62.5	1.272	20.7	527	-.0139	.0071	.0049	.0073	-.0138	.0003	-.0004	.0000
2599	.298	99.1	62.5	1.529	20.7	528	-.0053	.0070	.0051	.0071	-.0051	.0003	-.0004	.0000
2600	.298	98.9	62.4	2.048	20.7	527	.0120	.0070	.0054	.0065	.0122	.0003	-.0004	.0001
2601	.298	98.7	62.4	2.318	20.7	526	.0207	.0070	.0056	.0061	.0210	.0003	-.0004	.0001
2602	.298	98.4	62.5	3.370	20.8	527	.0553	.0076	.0064	.0043	.0557	.0005	-.0005	.0001
2603	.298	98.7	62.4	4.491	20.7	527	.0929	.0089	.0069	.0015	.0933	.0005	-.0005	.0001
2604	.298	97.9	62.5	5.015	20.8	529	.1105	.0098	.0069	.0000	.1109	.0005	-.0005	.0001
2605	.298	97.9	62.4	5.478	20.8	527	.1272	.0107	.0068	-.0015	.1277	.0006	-.0006	.0002
2606	.298	97.8	62.4	6.462	20.8	527	.1615	.0133	.0065	-.0050	.1620	.0006	-.0006	.0002
2607	.298	98.4	62.4	6.967	20.8	527	.1795	.0149	.0062	-.0070	.1800	.0007	-.0006	.0002
2608	.298	98.6	62.4	7.454	20.8	527	.1972	.0167	.0060	-.0091	.1977	.0007	-.0006	.0002
2609	.298	98.6	62.4	7.983	20.8	527	.2165	.0189	.0058	-.0114	.2170	.0009	-.0006	.0002
2610	.298	98.9	62.4	8.498	20.7	527	.2353	.0213	.0055	-.0138	.2359	.0010	-.0006	.0002
2611	.298	98.7	62.4	8.998	20.8	527	.2550	.0241	.0048	-.0161	.2557	.0010	-.0006	.0002
2612	.298	98.6	62.4	9.509	20.8	527	.2751	.0274	.0043	-.0185	.2758	.0012	-.0007	.0001
2613	.298	98.7	62.4	10.007	20.7	527	.2954	.0311	.0039	-.0208	.2963	.0012	-.0007	.0001
2614	.298	98.4	62.5	10.537	20.8	529	.3171	.0359	.0039	-.0227	.3184	.0014	-.0008	.0001
2615	.298	98.6	62.4	11.071	20.8	528	.3449	.0427	.0036	-.0244	.3467	.0006	-.0006	.0003
2616	.298	98.6	62.4	11.631	20.8	527	.3687	.0499	.0057	-.0255	.3712	-.0004	-.0004	.0004
2617	.298	98.6	62.4	12.201	20.8	527	.3935	.0579	.0085	-.0267	.3968	-.0009	-.0003	.0004
2618	.298	98.8	62.4	13.521	20.8	528	.4503	.0783	.0166	-.0292	.4561	-.0006	-.0004	.0003
2619	.298	98.6	62.4	14.293	20.8	528	.4866	.0930	.0230	-.0300	.4945	-.0005	-.0007	.0003
2620	.299	98.6	62.5	14.909	20.8	530	.5148	.1050	.0275	-.0310	.5245	.0000	-.0008	.0005
2621	.298	97.9	62.4	6.569	20.8	527	.1646	.0135	.0065	-.0054	.1651	.0006	-.0007	.0001

Run No. 118 Begins With Point No.2652

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2652	.299	100.6	62.4	-2.978	20.7	531	-.1810	.0228	.0008	.0133	-.1819	.0002	-.0001	.0000
2653	.298	100.0	62.3	-1.651	20.7	527	-.1278	.0154	.0031	.0116	-.1282	.0003	-.0002	.0000
2654	.298	100.0	62.4	-.798	20.7	527	-.0923	.0118	.0038	.0104	-.0925	.0004	-.0002	.0000
2655	.298	99.9	62.4	-.270	20.7	528	-.0710	.0099	.0041	.0095	-.0710	.0003	-.0003	.0000
2656	.298	99.7	62.4	.775	20.7	527	-.0312	.0076	.0047	.0080	-.0310	.0003	-.0004	.0000
2657	.298	99.6	62.4	1.275	20.7	528	-.0138	.0071	.0049	.0074	-.0137	.0002	-.0004	.0000
2658	.298	99.2	62.4	1.532	20.7	528	-.0051	.0070	.0051	.0071	-.0049	.0002	-.0004	.0001
2659	.298	99.0	62.4	2.054	20.7	528	.0121	.0070	.0054	.0065	.0124	.0003	-.0005	.0001
2660	.298	99.6	62.4	2.327	20.7	528	.0213	.0070	.0056	.0061	.0215	.0003	-.0005	.0001
2661	.299	99.4	62.4	3.376	20.8	531	.0556	.0076	.0064	.0043	.0560	.0005	-.0005	.0001
2662	.299	99.3	62.4	4.494	20.7	529	.0930	.0090	.0068	.0016	.0934	.0006	-.0006	.0001
2663	.298	99.2	62.4	5.017	20.7	526	.1113	.0099	.0069	.0000	.1118	.0006	-.0006	.0001
2664	.298	99.1	62.3	5.481	20.7	526	.1274	.0108	.0068	-.0015	.1279	.0006	-.0006	.0002
2665	.298	99.2	62.4	6.465	20.7	526	.1622	.0134	.0065	-.0050	.1626	.0007	-.0007	.0002
2666	.298	98.7	62.4	6.973	20.8	528	.1801	.0150	.0062	-.0070	.1805	.0008	-.0007	.0002
2667	.298	98.8	62.4	7.457	20.7	528	.1971	.0167	.0059	-.0090	.1976	.0008	-.0006	.0002
2668	.298	99.1	62.4	7.986	20.7	529	.2158	.0189	.0057	-.0114	.2163	.0008	-.0007	.0002
2669	.298	99.1	62.4	8.497	20.7	529	.2348	.0213	.0054	-.0137	.2354	.0010	-.0006	.0002
2670	.299	99.0	62.4	9.001	20.8	529	.2548	.0242	.0048	-.0161	.2554	.0011	-.0006	.0002
2671	.298	98.8	62.4	9.510	20.7	528	.2748	.0275	.0043	-.0184	.2755	.0012	-.0007	.0001
2672	.298	99.2	62.4	10.006	20.7	527	.2953	.0311	.0038	-.0207	.2962	.0013	-.0008	.0001
2673	.298	99.1	62.4	10.548	20.7	528	.3179	.0361	.0039	-.0228	.3191	.0014	-.0008	.0000
2674	.299	99.2	62.4	11.070	20.7	529	.3444	.0427	.0035	-.0243	.3462	.0007	-.0007	.0002
2675	.298	99.4	62.4	11.636	20.7	527	.3686	.0500	.0057	-.0255	.3711	-.0004	-.0004	.0004
2676	.298	99.5	62.4	12.208	20.7	527	.3940	.0580	.0085	-.0267	.3974	-.0007	-.0004	.0004
2677	.299	99.6	62.4	13.534	20.7	529	.4508	.0785	.0167	-.0292	.4566	-.0006	-.0004	.0003
2678	.298	99.4	62.4	14.300	20.7	528	.4874	.0933	.0229	-.0301	.4953	-.0004	-.0007	.0003
2679	.298	99.3	62.4	14.909	20.7	527	.5155	.1052	.0274	-.0311	.5252	.0000	-.0009	.0005
2680	.298	98.8	62.4	6.578	20.7	527	.1650	.0136	.0065	-.0054	.1655	.0007	-.0007	.0001

Run No. 120 Begins With Point No.2690

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2690	.298	101.5	62.4	-2.943	20.6	527	-.1810	.0227	.0010	.0133	-.1819	.0003	.0000	.0000
2691	.299	101.0	62.4	-1.634	20.7	530	-.1266	.0152	.0033	.0115	-.1270	.0003	-.0001	.0000
2692	.298	101.3	62.4	-.785	20.6	528	-.0919	.0116	.0039	.0103	-.0921	.0004	-.0001	.0000
2693	.298	100.6	62.4	-.256	20.7	528	-.0708	.0098	.0042	.0095	-.0709	.0004	-.0001	.0000
2694	.298	100.7	62.4	.787	20.7	528	-.0311	.0076	.0047	.0079	-.0310	.0003	-.0002	.0000
2695	.299	100.6	62.4	1.285	20.7	530	-.0138	.0071	.0050	.0073	-.0137	.0003	-.0003	.0001
2696	.298	100.5	62.4	1.543	20.7	528	-.0052	.0070	.0051	.0071	-.0050	.0003	-.0003	.0001
2697	.298	100.4	62.4	2.066	20.7	527	.0123	.0069	.0054	.0064	.0126	.0004	-.0003	.0001
2698	.298	100.4	62.4	2.337	20.7	528	.0212	.0070	.0056	.0061	.0215	.0004	-.0004	.0001
2699	.299	100.5	62.4	3.382	20.7	529	.0553	.0076	.0064	.0043	.0557	.0005	-.0004	.0001
2700	.298	100.5	62.4	4.500	20.6	527	.0932	.0090	.0069	.0016	.0936	.0006	-.0004	.0001
2701	.299	100.6	62.4	5.023	20.7	529	.1109	.0098	.0069	.0000	.1113	.0006	-.0004	.0002
2702	.298	100.7	62.4	5.490	20.7	528	.1274	.0108	.0068	-.0015	.1278	.0006	-.0004	.0002
2703	.298	100.8	62.4	6.474	20.6	527	.1621	.0134	.0066	-.0051	.1626	.0007	-.0006	.0002
2704	.298	101.0	62.4	6.980	20.6	526	.1805	.0150	.0063	-.0071	.1810	.0007	-.0005	.0002
2705	.299	101.0	62.4	7.463	20.7	530	.1968	.0167	.0061	-.0091	.1973	.0007	-.0005	.0002
2706	.298	100.9	62.4	7.995	20.6	528	.2166	.0189	.0058	-.0114	.2171	.0008	-.0005	.0002
2707	.298	101.0	62.4	8.508	20.6	528	.2355	.0214	.0055	-.0138	.2361	.0009	-.0005	.0002
2708	.298	100.8	62.4	9.008	20.7	528	.2550	.0242	.0049	-.0161	.2556	.0009	-.0004	.0002
2709	.299	101.2	62.4	9.521	20.7	529	.2755	.0275	.0043	-.0185	.2763	.0012	-.0006	.0001
2710	.298	100.8	62.3	10.011	20.6	526	.2959	.0312	.0039	-.0208	.2968	.0013	-.0006	.0001
2711	.298	101.1	62.4	10.545	20.6	528	.3177	.0360	.0040	-.0228	.3189	.0014	-.0006	.0000
2712	.298	101.3	62.4	11.072	20.6	527	.3449	.0427	.0035	-.0244	.3467	.0007	-.0006	.0002
2713	.298	101.2	62.4	11.640	20.6	527	.3695	.0502	.0059	-.0255	.3720	-.0003	-.0004	.0004
2714	.298	101.5	62.4	12.208	20.6	526	.3941	.0581	.0087	-.0266	.3974	-.0009	-.0002	.0004
2715	.299	101.4	62.4	13.537	20.7	530	.4505	.0786	.0170	-.0291	.4564	-.0003	-.0005	.0003
2716	.298	101.8	62.4	14.298	20.6	527	.4878	.0934	.0232	-.0300	.4957	-.0003	-.0007	.0004
2717	.298	101.7	62.3	14.914	20.6	526	.5173	.1057	.0278	-.0311	.5270	.0001	-.0008	.0006
2718	.298	101.2	62.4	6.575	20.6	527	.1651	.0136	.0066	-.0054	.1656	.0005	-.0006	.0002

Run No. 121 Begins With Point No.2719

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2719	.298	100.0	62.4	-2.956	20.7	528	-.1810	.0227	.0010	.0133	-.1820	.0002	.0000	.0000
2720	.299	99.9	62.4	-1.639	20.7	529	-.1266	.0152	.0033	.0115	-.1270	.0003	-.0001	.0000
2721	.299	99.8	62.4	-.792	20.7	529	-.0920	.0116	.0039	.0103	-.0921	.0003	-.0001	.0000
2722	.298	99.8	62.4	-.262	20.7	528	-.0708	.0099	.0042	.0095	-.0708	.0004	-.0001	.0000
2723	.299	99.7	62.4	.780	20.7	529	-.0311	.0076	.0048	.0079	-.0310	.0003	-.0002	.0000
2724	.298	99.5	62.4	1.280	20.7	529	-.0137	.0071	.0050	.0073	-.0135	.0003	-.0003	.0000
2725	.299	99.4	62.4	1.538	20.7	529	-.0053	.0070	.0051	.0071	-.0051	.0003	-.0003	.0001
2726	.298	99.4	62.4	2.059	20.7	527	.0122	.0070	.0054	.0064	.0125	.0004	-.0003	.0001
2727	.298	99.5	62.4	2.331	20.7	528	.0213	.0070	.0056	.0061	.0215	.0004	-.0003	.0001
2728	.298	99.4	62.3	3.376	20.7	526	.0555	.0076	.0065	.0043	.0558	.0004	-.0004	.0001
2729	.298	99.8	62.4	4.497	20.7	528	.0928	.0089	.0069	.0016	.0932	.0005	-.0004	.0001
2730	.299	99.4	62.4	5.023	20.7	529	.1108	.0098	.0069	.0000	.1112	.0005	-.0004	.0001
2731	.298	99.5	62.3	5.485	20.7	526	.1274	.0108	.0068	-.0015	.1278	.0006	-.0004	.0002
2732	.299	99.5	62.4	6.469	20.7	529	.1613	.0133	.0065	-.0050	.1618	.0006	-.0005	.0002
2733	.298	99.7	62.4	6.977	20.7	528	.1797	.0149	.0063	-.0070	.1801	.0007	-.0005	.0002
2734	.298	99.7	62.4	7.462	20.7	528	.1976	.0168	.0061	-.0091	.1981	.0007	-.0005	.0002
2735	.299	99.8	62.4	7.992	20.7	530	.2159	.0189	.0058	-.0114	.2164	.0008	-.0005	.0002
2736	.298	100.0	62.4	8.503	20.7	528	.2349	.0213	.0055	-.0137	.2355	.0009	-.0005	.0002
2737	.299	100.1	62.4	9.004	20.7	529	.2547	.0241	.0049	-.0161	.2554	.0010	-.0004	.0002
2738	.298	100.0	62.4	9.513	20.7	528	.2749	.0275	.0044	-.0184	.2757	.0011	-.0005	.0001
2739	.298	99.9	62.4	10.009	20.7	527	.2950	.0311	.0040	-.0207	.2959	.0011	-.0006	.0001
2740	.299	100.1	62.4	10.538	20.7	529	.3166	.0359	.0040	-.0227	.3178	.0013	-.0006	.0001
2741	.298	99.9	62.4	11.066	20.7	526	.3453	.0427	.0036	-.0244	.3471	.0007	-.0006	.0002
2742	.298	100.3	62.4	11.637	20.7	527	.3690	.0501	.0059	-.0255	.3715	-.0004	-.0003	.0004
2743	.299	100.5	62.4	12.200	20.7	530	.3918	.0577	.0086	-.0265	.3951	-.0007	-.0002	.0004
2744	.299	100.5	62.4	13.527	20.7	529	.4500	.0784	.0169	-.0291	.4558	-.0004	-.0004	.0003
2745	.298	100.7	62.4	14.290	20.7	529	.4864	.0931	.0231	-.0299	.4943	-.0004	-.0006	.0003
2746	.299	100.5	62.4	14.905	20.7	529	.5147	.1050	.0276	-.0310	.5244	.0001	-.0009	.0006
2747	.298	99.8	62.4	6.572	20.7	528	.1645	.0136	.0066	-.0054	.1650	.0005	-.0005	.0002

Run No. 125 Begins With Point No.2833

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2833	.298	-251.4	44.7	-2.930	57.6	375	-.1777	.0213	.0012	.0121	-.1785	-.0005	.0002	.0000
2834	.298	-251.5	44.7	-1.623	57.7	375	-.1250	.0139	.0034	.0103	-.1253	-.0003	.0002	.0000
2835	.297	-251.5	44.7	-.844	57.4	372	-.0950	.0107	.0039	.0092	-.0952	-.0004	.0001	.0000
2836	.297	-251.0	44.7	-.338	57.4	374	-.0741	.0089	.0041	.0084	-.0742	-.0003	.0001	.0000
2837	.298	-251.3	44.7	.188	57.5	374	-.0541	.0074	.0043	.0075	-.0541	-.0003	.0000	.0000
2838	.297	-251.6	44.7	.702	57.6	374	-.0357	.0064	.0046	.0068	-.0356	-.0004	-.0001	.0001
2839	.297	-251.3	44.7	1.215	57.5	374	-.0179	.0058	.0049	.0061	-.0177	-.0004	.0000	.0001
2840	.297	-251.3	44.7	1.466	57.5	374	-.0095	.0056	.0049	.0058	-.0094	-.0003	-.0001	.0001
2841	.298	-251.5	44.7	1.985	57.6	375	.0074	.0055	.0052	.0052	.0076	-.0004	-.0002	.0001
2842	.298	-251.4	44.7	2.243	57.6	374	.0150	.0055	.0052	.0049	.0152	-.0004	-.0001	.0001
2843	.297	-251.5	44.7	3.278	57.5	373	.0481	.0060	.0059	.0032	.0484	-.0003	-.0001	.0001
2844	.298	-251.4	44.7	4.359	57.6	374	.0828	.0071	.0063	.0007	.0831	-.0003	-.0002	.0002
2845	.298	-251.4	44.7	4.911	57.6	374	.1015	.0080	.0062	-.0008	.1018	-.0002	-.0002	.0002
2846	.297	-251.4	44.7	5.362	57.5	373	.1176	.0089	.0062	-.0022	.1179	-.0001	-.0002	.0002
2847	.298	-251.3	44.7	6.346	57.5	374	.1501	.0112	.0056	-.0055	.1504	-.0003	-.0001	.0002
2848	.297	-251.4	44.7	6.854	57.5	373	.1679	.0127	.0052	-.0075	.1682	-.0002	-.0002	.0002
2849	.297	-251.3	44.7	7.396	57.5	374	.1874	.0147	.0049	-.0096	.1877	-.0003	-.0001	.0002
2850	.297	-251.5	44.7	7.910	57.5	373	.2057	.0168	.0044	-.0117	.2061	-.0002	-.0001	.0002
2851	.297	-251.3	44.7	8.409	57.4	373	.2242	.0191	.0037	-.0139	.2246	.0000	-.0002	.0002
2852	.297	-251.3	44.7	8.926	57.5	374	.2442	.0220	.0030	-.0162	.2447	-.0001	-.0001	.0002
2853	.297	-251.3	44.7	9.428	57.5	374	.2634	.0255	.0027	-.0181	.2640	-.0003	-.0001	.0003
2854	.298	-251.3	44.7	9.948	57.5	374	.2840	.0298	.0028	-.0198	.2849	-.0002	-.0002	.0003
2855	.298	-251.2	44.7	10.460	57.5	374	.3063	.0345	.0022	-.0218	.3075	-.0005	-.0003	.0003
2856	.297	-251.2	44.7	10.981	57.5	374	.3286	.0399	.0020	-.0235	.3301	-.0006	-.0004	.0004
2857	.297	-251.1	44.7	11.525	57.3	372	.3520	.0468	.0040	-.0246	.3543	-.0007	-.0004	.0004
2858	.297	-251.2	44.7	12.065	57.4	373	.3751	.0539	.0063	-.0257	.3780	-.0002	-.0004	.0003
2859	.296	-251.0	44.7	13.247	57.2	371	.4245	.0718	.0144	-.0275	.4297	-.0001	-.0004	.0003
2860	.297	-251.1	44.7	13.874	57.3	372	.4506	.0818	.0182	-.0287	.4571	.0002	-.0005	.0004
2861	.297	-251.3	44.7	15.240	57.4	372	.5127	.1073	.0269	-.0313	.5228	.0012	-.0009	.0010
2862	.297	-251.7	44.7	6.434	57.6	373	.1511	.0114	.0056	-.0057	.1514	.0002	-.0006	.0002

Run No. 126 Begins With Point No.2863

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2863	.297	-251.3	62.6	-3.088	80.4	523	-.1848	.0222	.0003	.0121	-.1857	-.0004	.0001	.0000
2864	.298	-251.7	62.6	-1.737	80.6	524	-.1308	.0144	.0028	.0103	-.1312	-.0003	.0002	.0000
2865	.298	-251.4	62.6	-.894	80.5	524	-.0965	.0107	.0035	.0091	-.0966	-.0002	.0000	.0000
2866	.298	-251.6	62.6	-.361	80.7	525	-.0750	.0088	.0038	.0083	-.0751	-.0002	.0000	.0000
2867	.298	-251.5	62.6	.675	80.5	524	-.0369	.0064	.0045	.0068	-.0369	-.0002	.0000	.0000
2868	.298	-251.7	62.6	1.181	80.7	525	-.0190	.0057	.0047	.0060	-.0189	-.0002	.0000	.0000
2869	.298	-251.6	62.6	1.434	80.6	524	-.0109	.0055	.0049	.0058	-.0107	-.0003	-.0001	.0000
2870	.298	-251.6	62.6	1.958	80.6	524	.0068	.0055	.0052	.0052	.0070	-.0002	-.0001	.0001
2871	.298	-251.6	62.6	2.225	80.7	525	.0157	.0055	.0054	.0048	.0159	-.0001	-.0002	.0001
2872	.298	-251.6	62.6	3.265	80.7	525	.0482	.0060	.0060	.0031	.0485	-.0001	-.0002	.0001
2873	.298	-251.6	62.6	4.380	80.6	524	.0854	.0072	.0067	.0006	.0857	.0000	-.0003	.0002
2874	.298	-251.7	62.6	4.899	80.6	524	.1020	.0080	.0065	-.0008	.1023	.0000	-.0003	.0001
2875	.298	-251.6	62.6	5.373	80.6	524	.1187	.0089	.0065	-.0023	.1190	-.0001	-.0002	.0002
2876	.297	-251.5	62.6	6.391	80.5	523	.1542	.0114	.0060	-.0059	.1545	-.0001	-.0003	.0002
2877	.298	-251.7	62.6	6.896	80.6	524	.1710	.0129	.0058	-.0078	.1713	-.0001	-.0003	.0002
2878	.298	-251.6	62.6	7.371	80.6	525	.1873	.0146	.0055	-.0096	.1876	.0000	-.0003	.0002
2879	.298	-251.6	62.6	7.892	80.6	525	.2067	.0167	.0052	-.0119	.2071	.0001	-.0003	.0002
2880	.298	-251.6	62.6	8.395	80.6	524	.2249	.0191	.0045	-.0140	.2252	.0002	-.0002	.0002
2881	.298	-251.5	62.6	8.881	80.6	525	.2432	.0217	.0039	-.0162	.2436	.0002	-.0002	.0002
2882	.298	-251.6	62.6	9.387	80.6	524	.2637	.0250	.0037	-.0184	.2642	.0001	-.0002	.0003
2883	.298	-251.4	62.6	9.888	80.5	524	.2819	.0289	.0039	-.0200	.2826	-.0002	-.0002	.0004
2884	.298	-251.6	62.6	10.415	80.6	525	.3057	.0338	.0035	-.0220	.3068	-.0002	-.0004	.0003
2885	.298	-251.6	62.6	10.913	80.6	525	.3277	.0389	.0029	-.0239	.3291	-.0004	-.0004	.0004
2886	.298	-251.5	62.6	11.456	80.6	525	.3503	.0453	.0040	-.0253	.3523	-.0007	-.0003	.0005
2887	.298	-251.5	62.6	12.021	80.6	525	.3748	.0529	.0069	-.0263	.3776	-.0002	-.0004	.0003
2888	.297	-251.6	62.6	13.322	80.5	523	.4304	.0733	.0164	-.0279	.4357	.0001	-.0004	.0003
2889	.297	-251.4	62.6	14.045	80.4	523	.4635	.0856	.0211	-.0295	.4704	.0004	-.0005	.0004
2890	.297	-251.5	62.6	14.625	80.5	523	.4873	.0957	.0245	-.0305	.4957	.0010	-.0008	.0007
2891	.297	-251.9	62.6	6.475	80.7	523	.1541	.0115	.0060	-.0060	.1544	.0001	-.0005	.0002

Run No. 128 Begins With Point No.2903

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2903	.298	-250.3	62.9	-2.995	80.2	526	-.1789	.0215	.0005	.0121	-.1798	-.0004	.0001	.0000
2904	.297	-250.3	62.9	-1.720	80.1	525	-.1282	.0143	.0028	.0104	-.1286	-.0002	.0002	.0000
2905	.297	-250.2	62.9	-.877	80.1	525	-.0942	.0107	.0034	.0092	-.0944	-.0002	.0000	.0000
2906	.297	-250.3	62.9	-.350	80.1	525	-.0739	.0089	.0038	.0084	-.0740	-.0003	.0000	.0000
2907	.297	-250.3	62.9	.689	80.1	525	-.0347	.0065	.0044	.0069	-.0346	-.0002	-.0001	.0000
2908	.298	-250.3	62.9	1.196	80.2	526	-.0168	.0059	.0047	.0061	-.0167	-.0002	-.0001	.0001
2909	.297	-250.1	62.9	1.452	80.0	526	-.0082	.0057	.0049	.0058	-.0081	-.0002	-.0002	.0001
2910	.298	-250.1	62.9	1.976	80.1	526	.0082	.0056	.0052	.0052	.0084	-.0003	-.0002	.0001
2911	.297	-250.3	62.9	2.245	80.2	526	.0168	.0056	.0053	.0049	.0170	-.0002	-.0002	.0001
2912	.297	-250.2	62.9	3.273	79.9	524	.0497	.0061	.0059	.0032	.0500	-.0001	-.0002	.0001
2913	.298	-250.1	62.9	4.388	80.1	527	.0856	.0073	.0065	.0006	.0859	-.0002	-.0002	.0001
2914	.298	-250.1	62.9	4.909	80.0	526	.1034	.0081	.0065	-.0008	.1037	-.0001	-.0002	.0002
2915	.297	-250.2	62.9	5.374	80.0	524	.1183	.0089	.0063	-.0022	.1186	-.0001	-.0002	.0002
2916	.297	-250.2	62.9	6.393	80.0	525	.1541	.0115	.0059	-.0057	.1544	.0000	-.0002	.0002
2917	.298	-250.0	62.9	6.893	80.1	526	.1708	.0130	.0057	-.0076	.1711	.0000	-.0002	.0002
2918	.297	-250.2	62.9	7.370	80.1	526	.1882	.0148	.0054	-.0096	.1885	.0000	-.0002	.0002
2919	.297	-250.3	62.9	7.890	80.0	524	.2066	.0169	.0050	-.0117	.2070	.0001	-.0003	.0002
2920	.297	-250.2	62.9	8.397	80.1	525	.2255	.0192	.0044	-.0139	.2259	.0001	-.0002	.0002
2921	.298	-250.1	62.9	8.886	80.1	527	.2429	.0218	.0038	-.0160	.2434	.0000	-.0003	.0002
2922	.297	-250.3	62.9	9.399	80.1	525	.2640	.0254	.0040	-.0181	.2646	-.0001	-.0001	.0003
2923	.297	-250.3	62.9	9.898	80.1	525	.2830	.0294	.0040	-.0197	.2839	-.0003	-.0003	.0004
2924	.298	-250.2	62.9	10.433	80.1	526	.3074	.0344	.0034	-.0219	.3086	-.0005	-.0004	.0003
2925	.297	-250.1	62.9	10.943	80.0	525	.3294	.0397	.0033	-.0236	.3310	-.0007	-.0003	.0004
2926	.297	-250.2	62.9	11.495	80.1	526	.3521	.0464	.0053	-.0247	.3543	-.0008	-.0003	.0004
2927	.298	-249.9	62.9	12.058	79.9	526	.3757	.0539	.0076	-.0258	.3787	-.0003	-.0003	.0003
2928	.297	-250.2	62.9	13.371	80.0	524	.4323	.0746	.0174	-.0275	.4379	-.0003	-.0003	.0002
2929	.297	-250.0	62.9	14.075	80.0	526	.4616	.0860	.0216	-.0289	.4687	.0001	-.0004	.0003
2930	.297	-250.0	62.9	14.665	80.0	525	.4889	.0969	.0253	-.0301	.4975	.0004	-.0005	.0005
2931	.297	-250.0	62.9	6.461	80.0	526	.1559	.0116	.0060	-.0061	.1562	.0000	-.0003	.0002

Run No. 129 Begins With Point No.2932

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2932	.297	-250.3	90.0	-3.133	114.1	747	-.1822	.0219	-.0007	.0118	-.1831	-.0003	.0001	-.0001
2933	.297	-250.1	90.0	-1.776	114.1	749	-.1276	.0141	.0021	.0101	-.1280	-.0001	.0000	.0000
2934	.297	-250.2	90.0	-.965	114.2	749	-.0952	.0106	.0029	.0089	-.0953	-.0001	.0000	.0000
2935	.296	-250.2	90.0	-.236	114.0	746	-.0674	.0082	.0035	.0079	-.0675	.0000	-.0001	.0000
2936	.297	-250.2	90.0	.136	114.0	747	-.0537	.0073	.0038	.0074	-.0537	.0000	.0000	.0000
2937	.297	-250.3	90.0	1.178	114.3	749	-.0165	.0056	.0046	.0059	-.0164	-.0001	-.0002	.0000
2938	.297	-250.3	90.0	1.445	114.3	749	-.0073	.0054	.0048	.0055	-.0071	.0000	-.0002	.0001
2939	.297	-250.4	90.0	1.963	114.3	748	.0095	.0054	.0051	.0050	.0097	-.0001	-.0002	.0001
2940	.297	-250.3	90.0	2.238	114.3	749	.0174	.0054	.0054	.0046	.0176	-.0001	-.0002	.0001
2941	.297	-250.2	90.0	3.274	114.1	748	.0496	.0058	.0061	.0030	.0498	.0000	-.0003	.0001
2942	.297	-250.1	90.0	4.498	114.2	750	.0895	.0072	.0068	.0001	.0898	.0000	-.0003	.0001
2943	.297	-250.1	90.0	5.010	114.0	748	.1064	.0080	.0068	-.0014	.1067	.0000	-.0003	.0001
2944	.297	-250.3	90.0	5.498	114.3	749	.1221	.0089	.0067	-.0028	.1223	.0000	-.0003	.0001
2945	.297	-250.1	90.0	6.460	114.3	750	.1543	.0113	.0065	-.0062	.1546	.0001	-.0003	.0002
2946	.297	-250.2	90.0	6.954	114.2	749	.1706	.0128	.0064	-.0080	.1709	.0001	-.0003	.0002
2947	.297	-250.3	90.0	7.452	114.1	747	.1878	.0146	.0062	-.0099	.1881	.0002	-.0003	.0002
2948	.297	-250.2	90.0	7.922	114.3	749	.2043	.0165	.0059	-.0119	.2046	.0003	-.0003	.0002
2949	.297	-250.1	90.0	8.419	114.0	748	.2223	.0187	.0055	-.0141	.2227	.0002	-.0003	.0002
2950	.297	-250.2	90.0	8.921	114.2	749	.2403	.0213	.0051	-.0163	.2407	.0002	-.0003	.0002
2951	.297	-250.2	90.0	9.410	114.1	748	.2591	.0244	.0050	-.0184	.2596	.0003	-.0003	.0003
2952	.297	-250.1	90.0	9.941	114.2	750	.2804	.0287	.0055	-.0202	.2811	-.0002	-.0003	.0004
2953	.297	-250.1	90.0	10.447	114.1	749	.3016	.0333	.0050	-.0220	.3026	-.0002	-.0004	.0003
2954	.297	-250.1	90.0	10.981	114.3	750	.3242	.0385	.0047	-.0240	.3256	-.0005	-.0002	.0004
2955	.297	-250.2	90.0	11.530	114.4	750	.3473	.0449	.0060	-.0255	.3492	-.0010	.0000	.0005
2956	.297	-250.0	90.0	12.155	113.9	747	.3749	.0536	.0091	-.0266	.3778	.0000	-.0004	.0003
2957	.297	-250.0	90.0	13.702	114.1	750	.4413	.0783	.0207	-.0285	.4473	.0003	-.0005	.0004
2958	.297	-250.4	90.0	6.470	114.5	751	.1547	.0114	.0065	-.0062	.1550	.0002	-.0004	.0002

Run No. 130 Begins With Point No.2959

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
2959	.298	-250.4	62.9	-3.112	80.4	527	-.1867	.0225	-.0004	.0123	-.1876	-.0004	.0001	.0000
2960	.298	-250.2	62.9	-1.753	80.2	527	-.1318	.0146	.0025	.0105	-.1322	-.0002	.0000	.0000
2961	.298	-250.2	62.9	-.921	80.3	527	-.1000	.0111	.0030	.0094	-.1002	-.0002	.0000	.0000
2962	.298	-250.1	62.9	-.390	80.2	528	-.0780	.0092	.0034	.0086	-.0780	-.0002	-.0001	.0000
2963	.298	-250.2	62.9	.652	80.2	526	-.0399	.0066	.0040	.0070	-.0398	-.0002	-.0001	.0001
2964	.298	-250.4	62.9	1.157	80.3	526	-.0213	.0059	.0045	.0063	-.0212	-.0002	-.0002	.0001
2965	.298	-250.3	62.9	1.416	80.4	528	-.0126	.0057	.0046	.0059	-.0125	-.0002	-.0002	.0001
2966	.298	-250.1	62.9	1.934	80.3	528	.0037	.0055	.0049	.0054	.0039	-.0002	-.0002	.0001
2967	.298	-250.2	62.9	2.203	80.2	527	.0125	.0056	.0050	.0050	.0127	-.0002	-.0001	.0001
2968	.298	-250.6	62.9	3.240	80.4	526	.0441	.0060	.0056	.0035	.0444	-.0002	-.0002	.0001
2969	.297	-250.2	62.9	4.357	80.1	526	.0819	.0073	.0063	.0010	.0822	.0000	-.0003	.0002
2970	.298	-250.3	62.9	4.876	80.3	527	.0983	.0080	.0063	-.0004	.0986	.0000	-.0003	.0002
2971	.298	-250.1	62.9	5.345	80.2	527	.1141	.0089	.0062	-.0018	.1145	.0000	-.0002	.0002
2972	.298	-250.2	62.9	6.367	80.3	528	.1487	.0113	.0058	-.0053	.1491	-.0001	-.0003	.0002
2973	.298	-250.3	62.9	6.861	80.3	527	.1652	.0129	.0055	-.0070	.1656	.0001	-.0003	.0002
2974	.298	-250.3	62.9	7.345	80.2	526	.1833	.0146	.0053	-.0090	.1837	.0001	-.0003	.0002
2975	.298	-250.2	62.9	7.865	80.3	527	.2010	.0167	.0049	-.0110	.2014	.0001	-.0002	.0002
2976	.298	-250.3	62.9	8.367	80.3	527	.2198	.0189	.0044	-.0133	.2202	.0002	-.0003	.0002
2977	.298	-250.2	62.9	8.850	80.3	527	.2379	.0215	.0038	-.0154	.2384	.0003	-.0003	.0003
2978	.298	-250.2	62.9	9.358	80.2	526	.2567	.0247	.0033	-.0175	.2573	.0001	-.0003	.0003
2979	.298	-250.3	62.9	9.876	80.3	527	.2774	.0288	.0039	-.0192	.2782	-.0002	-.0003	.0004
2980	.298	-250.0	62.9	10.395	80.1	526	.2993	.0334	.0033	-.0212	.3004	-.0003	-.0004	.0004
2981	.298	-250.2	62.9	10.903	80.3	528	.3206	.0384	.0028	-.0230	.3221	-.0004	-.0004	.0004
2982	.298	-250.3	62.9	11.458	80.3	527	.3449	.0450	.0039	-.0245	.3469	-.0008	-.0003	.0005
2983	.298	-250.2	62.9	12.017	80.2	526	.3686	.0524	.0066	-.0256	.3715	-.0004	-.0004	.0003
2986	.298	-250.5	62.9	13.317	80.5	528	.4269	.0731	.0164	-.0272	.4323	-.0002	-.0004	.0003
2987	.298	-250.2	62.9	14.039	80.3	528	.4569	.0847	.0206	-.0287	.4638	.0003	-.0005	.0004
2988	.298	-249.9	62.9	14.618	80.2	528	.4819	.0949	.0241	-.0298	.4903	.0005	-.0006	.0005
2989	.298	-250.2	62.9	6.469	80.3	528	.1523	.0116	.0058	-.0057	.1526	.0001	-.0004	.0002

Run No. 132 Begins With Point No.3025

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3025	.298	-249.6	63.1	-3.047	80.1	528	-.1814	.0224	.0003	.0126	-.1823	-.0003	.0002	.0000
3026	.298	-249.8	63.1	-1.755	80.2	528	-.1302	.0150	.0027	.0109	-.1306	-.0001	.0002	.0000
3027	.297	-249.5	63.1	-.911	79.9	527	-.0960	.0113	.0034	.0097	-.0961	.0000	.0000	.0000
3028	.297	-249.6	63.1	-.384	80.0	527	-.0757	.0095	.0037	.0090	-.0758	.0000	.0001	.0000
3029	.298	-249.6	63.1	.670	80.1	528	-.0356	.0070	.0045	.0073	-.0355	.0000	.0000	.0001
3030	.297	-249.8	63.1	1.197	80.1	527	-.0175	.0063	.0048	.0066	-.0174	.0000	-.0001	.0001
3031	.297	-250.0	63.1	1.461	80.2	527	-.0088	.0061	.0050	.0062	-.0087	-.0001	-.0001	.0001
3032	.298	-250.1	63.1	1.988	80.4	528	.0090	.0060	.0053	.0056	.0092	-.0001	-.0002	.0001
3033	.297	-250.1	63.1	2.252	80.3	527	.0173	.0060	.0054	.0053	.0175	.0000	-.0002	.0001
3034	.297	-249.7	63.1	3.296	80.1	527	.0510	.0065	.0062	.0035	.0513	.0001	-.0003	.0001
3035	.298	-250.0	63.1	4.412	80.3	529	.0866	.0076	.0066	.0009	.0870	-.0001	-.0002	.0001
3036	.297	-249.7	63.1	4.927	80.1	527	.1045	.0085	.0066	-.0006	.1048	.0001	-.0003	.0002
3037	.295	-249.9	63.1	5.389	79.6	519	.1201	.0094	.0065	-.0020	.1204	.0001	-.0003	.0002
3038	.298	-250.1	63.1	6.413	80.5	530	.1548	.0119	.0061	-.0056	.1552	.0001	-.0003	.0002
3039	.297	-249.8	63.1	6.907	80.1	526	.1722	.0135	.0059	-.0074	.1725	.0002	-.0004	.0002
3040	.297	-249.7	63.1	7.385	80.0	526	.1887	.0152	.0056	-.0093	.1891	.0003	-.0003	.0002
3041	.298	-249.5	63.1	7.912	80.1	528	.2078	.0173	.0052	-.0115	.2082	.0001	-.0002	.0002
3042	.298	-249.7	63.1	8.415	80.1	528	.2270	.0198	.0046	-.0137	.2274	.0003	-.0003	.0002
3043	.297	-249.8	63.1	8.895	80.1	527	.2448	.0224	.0041	-.0158	.2454	.0002	-.0003	.0002
3044	.297	-249.8	63.1	9.416	80.0	526	.2643	.0261	.0045	-.0175	.2650	-.0002	-.0002	.0003
3045	.298	-249.7	63.1	9.919	80.2	529	.2848	.0303	.0043	-.0193	.2857	-.0001	-.0004	.0003
3046	.297	-249.7	63.1	10.434	80.1	527	.3078	.0351	.0038	-.0213	.3091	-.0004	-.0003	.0003
3047	.297	-249.9	63.1	10.970	80.2	527	.3318	.0410	.0046	-.0229	.3335	-.0009	-.0003	.0004
3048	.297	-249.8	63.1	11.532	80.1	527	.3553	.0481	.0067	-.0240	.3577	-.0006	-.0004	.0003
3049	.297	-249.8	63.1	12.116	80.0	526	.3803	.0564	.0104	-.0248	.3836	-.0005	-.0002	.0002
3050	.298	-249.8	63.1	13.417	80.2	528	.4358	.0765	.0191	-.0268	.4416	-.0003	-.0003	.0002
3051	.298	-249.5	63.1	14.118	80.0	528	.4654	.0880	.0233	-.0282	.4728	-.0001	-.0005	.0003
3052	.297	-249.8	63.1	14.701	80.0	525	.4937	.0992	.0272	-.0294	.5027	-.0002	-.0004	.0004
3053	.298	-249.7	63.1	6.461	80.1	528	.1552	.0119	.0061	-.0057	.1556	.0000	-.0002	.0002

Run No. 134 Begins With Point No.3084

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3084	.297	-249.8	63.0	-3.103	80.0	526	-.1835	.0225	.0002	.0125	-.1845	-.0006	.0000	.0000
3085	.298	-249.5	63.0	-1.766	80.0	528	-.1284	.0147	.0028	.0107	-.1288	-.0002	.0000	.0000
3086	.298	-249.7	63.0	-.921	80.0	527	-.0951	.0111	.0035	.0095	-.0953	-.0002	-.0001	.0000
3087	.297	-249.7	63.0	-.394	79.9	526	-.0761	.0094	.0037	.0088	-.0761	-.0002	-.0001	.0000
3088	.297	-249.7	63.0	.668	79.9	526	-.0354	.0068	.0044	.0071	-.0353	-.0002	-.0002	.0000
3089	.297	-249.7	63.0	1.190	79.9	526	-.0162	.0061	.0048	.0064	-.0161	-.0001	-.0002	.0000
3090	.297	-249.7	63.0	1.449	79.8	524	-.0083	.0059	.0050	.0061	-.0082	-.0003	-.0002	.0001
3091	.297	-249.9	63.0	1.968	79.9	524	.0084	.0058	.0053	.0055	.0086	-.0003	-.0003	.0001
3092	.297	-249.6	63.0	2.236	79.8	525	.0169	.0059	.0054	.0051	.0171	-.0003	-.0003	.0001
3093	.297	-249.8	63.0	3.278	80.0	526	.0498	.0063	.0061	.0034	.0500	-.0002	-.0003	.0001
3094	.297	-249.9	63.0	4.394	80.1	526	.0863	.0075	.0066	.0009	.0866	-.0001	-.0004	.0001
3095	.297	-249.7	63.0	4.912	79.9	526	.1032	.0083	.0066	-.0006	.1035	-.0002	-.0004	.0001
3096	.298	-249.7	63.0	5.398	80.0	527	.1202	.0093	.0064	-.0021	.1206	.0000	-.0004	.0001
3097	.297	-249.6	63.0	6.402	79.9	526	.1535	.0117	.0061	-.0055	.1538	-.0001	-.0004	.0002
3098	.297	-249.7	63.0	6.899	79.9	526	.1713	.0133	.0058	-.0074	.1716	.0000	-.0005	.0001
3099	.297	-249.5	63.0	7.376	79.7	525	.1878	.0150	.0055	-.0093	.1882	-.0001	-.0005	.0001
3100	.298	-249.5	63.0	7.905	79.9	527	.2074	.0172	.0051	-.0115	.2078	.0001	-.0005	.0002
3101	.297	-249.6	63.0	8.404	79.9	526	.2255	.0196	.0045	-.0136	.2260	.0001	-.0005	.0002
3102	.297	-249.8	63.0	8.895	79.8	524	.2447	.0223	.0039	-.0158	.2452	.0001	-.0005	.0002
3103	.297	-249.8	63.0	9.408	80.0	526	.2637	.0258	.0043	-.0177	.2644	-.0003	-.0004	.0003
3104	.297	-249.9	63.0	9.915	80.0	526	.2843	.0300	.0042	-.0194	.2852	-.0004	-.0005	.0003
3105	.297	-249.5	63.0	10.424	79.8	526	.3069	.0348	.0036	-.0214	.3081	-.0005	-.0006	.0003
3106	.297	-249.8	63.0	10.952	80.0	526	.3292	.0403	.0039	-.0230	.3308	-.0010	-.0004	.0004
3107	.297	-249.8	63.0	11.512	80.0	526	.3529	.0474	.0063	-.0241	.3552	-.0008	-.0005	.0003
3108	.298	-249.8	63.0	12.095	80.0	527	.3783	.0555	.0094	-.0250	.3815	-.0005	-.0004	.0002
3109	.297	-249.5	63.0	13.373	79.7	524	.4328	.0754	.0184	-.0268	.4385	-.0003	-.0005	.0002
3110	.297	-249.5	63.0	14.083	79.8	525	.4641	.0873	.0227	-.0283	.4714	.0001	-.0007	.0004
3111	.297	-249.6	63.0	14.668	79.9	526	.4903	.0979	.0263	-.0295	.4991	.0001	-.0007	.0005
3112	.299	-249.6	63.0	6.450	80.2	530	.1549	.0118	.0061	-.0057	.1552	-.0001	-.0005	.0002

Run No. 135 Begins With Point No.3113

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3113	.297	-249.8	63.0	-3.031	80.0	526	-.1800	.0219	.0005	.0123	-.1809	-.0005	.0000	.0000
3114	.298	-249.5	63.0	-1.735	79.9	527	-.1279	.0145	.0029	.0106	-.1283	-.0003	.0000	.0000
3115	.297	-249.8	63.0	-.900	80.0	526	-.0952	.0110	.0035	.0094	-.0954	-.0003	-.0001	.0000
3116	.297	-249.8	63.0	-.362	79.9	525	-.0731	.0091	.0038	.0086	-.0731	-.0002	-.0002	.0000
3117	.298	-249.6	63.0	.683	79.9	527	-.0346	.0067	.0044	.0070	-.0346	-.0002	-.0002	.0000
3118	.297	-249.8	63.0	1.184	79.8	524	-.0173	.0060	.0048	.0063	-.0172	-.0004	-.0003	.0000
3119	.297	-249.8	63.0	1.446	79.8	524	-.0080	.0059	.0049	.0060	-.0079	-.0003	-.0003	.0001
3120	.297	-249.8	63.0	1.968	79.9	525	.0083	.0058	.0052	.0054	.0085	-.0003	-.0003	.0001
3121	.297	-249.6	63.0	2.237	79.9	526	.0173	.0058	.0054	.0051	.0175	-.0002	-.0003	.0001
3122	.297	-249.7	63.0	3.272	79.9	526	.0500	.0063	.0060	.0034	.0502	-.0001	-.0004	.0001
3123	.297	-249.6	63.0	4.391	79.9	526	.0862	.0075	.0065	.0008	.0865	-.0001	-.0004	.0001
3124	.297	-249.7	63.0	4.912	79.8	525	.1042	.0083	.0065	-.0007	.1045	.0000	-.0005	.0001
3125	.297	-249.7	63.0	5.395	80.0	526	.1201	.0092	.0064	-.0022	.1204	.0000	-.0004	.0001
3126	.297	-249.6	63.0	6.402	79.8	525	.1552	.0117	.0060	-.0057	.1555	.0001	-.0005	.0002
3127	.298	-249.7	63.0	6.904	80.1	528	.1712	.0133	.0057	-.0074	.1715	.0000	-.0006	.0001
3128	.297	-249.7	63.0	7.387	79.9	526	.1895	.0151	.0055	-.0095	.1899	.0000	-.0005	.0001
3129	.297	-249.8	63.0	7.909	80.0	526	.2076	.0172	.0051	-.0116	.2080	.0001	-.0005	.0002
3130	.297	-249.8	63.0	8.410	79.9	524	.2269	.0196	.0045	-.0138	.2273	.0001	-.0005	.0002
3131	.298	-249.6	63.0	8.901	80.0	528	.2445	.0223	.0039	-.0159	.2450	.0001	-.0005	.0002
3132	.297	-249.8	63.0	9.406	80.0	526	.2634	.0257	.0042	-.0177	.2641	-.0003	-.0003	.0003
3133	.297	-249.7	63.0	9.914	79.9	526	.2845	.0300	.0042	-.0195	.2854	-.0003	-.0005	.0003
3134	.297	-249.5	63.0	10.429	79.8	526	.3073	.0348	.0036	-.0214	.3085	-.0005	-.0005	.0003
3135	.297	-249.6	63.0	10.954	79.8	524	.3313	.0406	.0041	-.0232	.3330	-.0010	-.0004	.0004
3136	.297	-249.5	63.0	11.517	79.8	526	.3542	.0476	.0062	-.0242	.3566	-.0006	-.0005	.0003
3137	.297	-249.4	63.0	12.087	79.8	526	.3774	.0553	.0093	-.0250	.3806	-.0003	-.0005	.0003
3138	.297	-249.5	63.0	13.375	79.7	525	.4325	.0754	.0183	-.0268	.4382	-.0004	-.0005	.0002
3139	.297	-249.5	63.0	14.083	79.8	526	.4647	.0875	.0229	-.0283	.4720	.0001	-.0006	.0004
3140	.297	-249.5	63.0	14.671	79.8	526	.4907	.0981	.0264	-.0294	.4996	.0000	-.0006	.0004
3141	.299	-249.4	63.0	6.493	80.2	531	.1561	.0119	.0060	-.0059	.1565	.0000	-.0005	.0001

Run No. 137 Begins With Point No.3170

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3170	.298	-203.3	62.5	-3.037	59.5	526	-.1803	.0223	.0005	.0126	-.1812	.0001	.0000	-.0001
3171	.298	-203.2	62.5	-1.749	59.5	527	-.1279	.0149	.0030	.0109	-.1282	.0001	.0000	.0000
3172	.298	-203.3	62.5	-.903	59.5	526	-.0944	.0113	.0035	.0097	-.0946	.0001	-.0001	.0000
3173	.298	-203.2	62.5	-.378	59.5	527	-.0752	.0095	.0038	.0090	-.0753	.0002	-.0002	.0000
3174	.298	-203.4	62.5	.673	59.5	526	-.0353	.0070	.0045	.0074	-.0352	.0002	-.0003	.0000
3175	.298	-202.9	62.5	1.205	59.3	526	-.0158	.0063	.0049	.0066	-.0156	.0002	-.0004	.0000
3176	.298	-202.9	62.5	1.459	59.5	528	-.0084	.0062	.0049	.0064	-.0082	.0002	-.0004	.0000
3177	.298	-203.1	62.5	1.981	59.4	526	.0081	.0061	.0052	.0058	.0083	.0002	-.0005	.0000
3178	.298	-202.8	62.5	2.252	59.3	526	.0180	.0061	.0055	.0054	.0182	.0003	-.0005	.0000
3179	.298	-202.8	62.5	3.296	59.4	527	.0507	.0066	.0062	.0036	.0510	.0004	-.0005	.0001
3180	.297	-202.9	62.5	4.410	59.3	524	.0871	.0078	.0066	.0010	.0875	.0004	-.0006	.0001
3181	.298	-202.6	62.5	4.936	59.3	527	.1055	.0087	.0066	-.0005	.1058	.0005	-.0006	.0001
3182	.298	-202.9	62.5	5.412	59.4	527	.1203	.0096	.0064	-.0019	.1207	.0005	-.0006	.0001
3183	.297	-202.8	62.5	6.416	59.3	525	.1558	.0120	.0062	-.0055	.1561	.0004	-.0007	.0001
3184	.297	-202.7	62.5	6.916	59.2	525	.1729	.0137	.0058	-.0073	.1733	.0006	-.0008	.0001
3185	.298	-202.9	62.5	7.393	59.4	527	.1899	.0154	.0056	-.0092	.1903	.0007	-.0007	.0001
3186	.298	-202.8	62.5	7.922	59.3	526	.2093	.0175	.0052	-.0115	.2097	.0006	-.0007	.0002
3187	.298	-202.5	62.5	8.423	59.2	526	.2278	.0200	.0045	-.0137	.2282	.0007	-.0007	.0001
3188	.298	-202.8	62.5	8.909	59.4	527	.2462	.0226	.0040	-.0158	.2468	.0006	-.0007	.0002
3189	.298	-202.8	62.5	9.430	59.3	526	.2665	.0264	.0043	-.0177	.2672	.0003	-.0007	.0003
3190	.298	-202.8	62.5	9.932	59.4	527	.2873	.0305	.0043	-.0195	.2882	.0001	-.0007	.0003
3191	.297	-202.7	62.5	10.445	59.2	525	.3102	.0354	.0037	-.0215	.3114	.0000	-.0009	.0003
3192	.298	-202.7	62.5	10.979	59.3	526	.3320	.0411	.0044	-.0229	.3337	-.0004	-.0009	.0003
3193	.297	-202.6	62.5	11.539	59.2	525	.3568	.0483	.0064	-.0241	.3593	-.0002	-.0009	.0002
3194	.298	-202.9	62.5	12.107	59.3	526	.3809	.0560	.0093	-.0252	.3842	.0001	-.0007	.0002
3195	.297	-202.5	62.5	13.411	59.1	524	.4382	.0766	.0186	-.0272	.4440	.0001	-.0006	.0001
3196	.298	-202.6	62.5	14.134	59.3	526	.4685	.0885	.0228	-.0287	.4759	.0003	-.0007	.0002
3197	.298	-202.7	62.5	14.717	59.3	527	.4957	.0995	.0265	-.0298	.5047	.0007	-.0009	.0003
3198	.297	-202.9	62.5	6.440	59.3	524	.1558	.0121	.0062	-.0055	.1562	.0005	-.0007	.0001

Run No. 138 Begins With Point No.3199

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3199	.298	-157.0	62.5	-3.024	47.0	526	-.1798	.0224	.0007	.0128	-.1808	.0001	.0000	-.0001
3200	.298	-157.3	62.5	-1.729	47.1	527	-.1274	.0150	.0031	.0111	-.1278	.0002	.0000	-.0001
3201	.297	-156.7	62.5	-.886	46.8	523	-.0932	.0114	.0037	.0099	-.0933	.0002	-.0002	.0000
3202	.298	-156.0	62.4	-.354	46.7	526	-.0713	.0096	.0040	.0091	-.0714	.0004	-.0002	.0000
3203	.298	-156.6	62.5	.689	46.9	526	-.0328	.0072	.0046	.0075	-.0327	.0004	-.0003	.0000
3204	.297	-156.8	62.5	1.219	46.9	525	-.0146	.0066	.0049	.0068	-.0144	.0004	-.0004	.0000
3205	.297	-157.0	62.5	1.479	46.9	525	-.0059	.0064	.0050	.0065	-.0057	.0003	-.0004	.0000
3206	.298	-156.9	62.5	2.003	47.0	526	.0112	.0064	.0053	.0059	.0115	.0004	-.0004	.0000
3207	.297	-156.4	62.5	2.268	46.8	525	.0196	.0064	.0055	.0056	.0198	.0005	-.0005	.0000
3208	.297	-156.8	62.5	3.386	46.9	525	.0552	.0069	.0063	.0036	.0556	.0005	-.0005	.0001
3209	.297	-156.8	62.5	4.418	46.9	525	.0892	.0081	.0067	.0012	.0895	.0006	-.0006	.0001
3210	.298	-156.5	62.5	4.951	46.9	526	.1078	.0090	.0066	-.0004	.1081	.0007	-.0005	.0001
3211	.297	-156.1	62.5	5.423	46.7	524	.1240	.0099	.0065	-.0019	.1244	.0007	-.0006	.0001
3212	.297	-156.4	62.5	6.426	46.8	524	.1582	.0124	.0062	-.0054	.1586	.0007	-.0007	.0001
3213	.297	-156.4	62.5	6.931	46.8	524	.1760	.0140	.0059	-.0074	.1764	.0008	-.0007	.0001
3214	.297	-156.2	62.5	7.416	46.8	525	.1935	.0158	.0056	-.0094	.1939	.0008	-.0007	.0001
3215	.298	-156.4	62.5	7.939	46.8	526	.2120	.0179	.0052	-.0116	.2124	.0008	-.0007	.0001
3216	.297	-155.8	62.5	8.440	46.6	524	.2310	.0204	.0046	-.0138	.2314	.0009	-.0007	.0002
3217	.297	-156.1	62.5	8.932	46.7	525	.2503	.0232	.0040	-.0160	.2508	.0007	-.0007	.0002
3218	.298	-156.2	62.5	9.450	46.8	526	.2702	.0270	.0043	-.0178	.2710	.0004	-.0006	.0003
3219	.298	-156.0	62.5	9.956	46.8	526	.2913	.0312	.0042	-.0197	.2923	.0004	-.0008	.0002
3220	.297	-155.9	62.5	10.467	46.7	525	.3139	.0361	.0038	-.0216	.3152	.0002	-.0009	.0003
3221	.298	-155.7	62.5	11.009	46.7	526	.3373	.0422	.0048	-.0230	.3391	.0000	-.0010	.0003
3222	.297	-155.8	62.5	11.562	46.6	523	.3613	.0492	.0068	-.0243	.3639	.0001	-.0008	.0003
3223	.297	-156.4	62.5	12.129	46.8	525	.3844	.0566	.0093	-.0255	.3876	.0004	-.0007	.0002
3224	.297	-156.2	62.5	13.423	46.8	525	.4393	.0764	.0178	-.0277	.4450	.0003	-.0007	.0001
3225	.297	-156.1	62.5	14.138	46.7	524	.4717	.0887	.0222	-.0292	.4791	.0006	-.0007	.0002
3226	.297	-155.8	62.5	14.727	46.7	525	.4984	.0997	.0260	-.0303	.5074	.0009	-.0008	.0003
3227	.296	-155.5	62.5	6.504	46.5	522	.1604	.0126	.0062	-.0057	.1608	.0008	-.0007	.0001

Run No. 141 Begins With Point No.3284

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3284	.298	-119.3	93.3	-3.212	59.5	787	-.1848	.0232	-.0008	.0127	-.1858	-.0001	.0000	-.0001
3285	.297	-119.4	93.3	-1.804	59.3	783	-.1287	.0151	.0022	.0110	-.1291	.0000	.0000	-.0001
3286	.297	-119.2	93.3	-.975	59.4	786	-.0952	.0115	.0030	.0098	-.0954	.0001	-.0001	.0000
3287	.297	-119.2	93.3	-.229	59.3	784	-.0663	.0091	.0036	.0087	-.0664	.0001	-.0002	.0000
3288	.297	-119.2	93.3	.150	59.2	782	-.0520	.0081	.0039	.0082	-.0520	.0001	-.0002	.0000
3289	.297	-119.2	93.3	1.211	59.3	785	-.0142	.0065	.0047	.0067	-.0141	.0001	-.0003	.0000
3290	.297	-119.3	93.3	1.480	59.3	784	-.0055	.0063	.0049	.0064	-.0054	.0000	-.0004	.0000
3291	.298	-119.1	93.3	2.014	59.4	788	.0118	.0063	.0053	.0058	.0120	.0001	-.0004	.0000
3292	.297	-119.2	93.3	2.291	59.3	783	.0208	.0063	.0055	.0054	.0210	.0001	-.0004	.0001
3293	.297	-119.1	93.3	3.350	59.3	783	.0543	.0069	.0064	.0036	.0546	.0002	-.0004	.0001
3294	.297	-119.2	93.3	4.560	59.3	784	.0936	.0082	.0070	.0007	.0940	.0002	-.0005	.0001
3295	.297	-119.1	93.3	5.074	59.3	785	.1113	.0091	.0071	-.0008	.1116	.0003	-.0005	.0001
3296	.297	-119.1	93.3	5.584	59.3	784	.1287	.0101	.0071	-.0025	.1290	.0004	-.0005	.0001
3297	.297	-119.0	93.3	6.576	59.2	783	.1623	.0127	.0070	-.0060	.1627	.0004	-.0006	.0002
3298	.297	-119.1	93.3	7.095	59.3	785	.1800	.0144	.0069	-.0080	.1804	.0006	-.0006	.0002
3299	.297	-119.2	93.3	7.602	59.3	784	.1975	.0163	.0067	-.0101	.1979	.0006	-.0006	.0002
3300	.297	-119.0	93.3	8.083	59.2	783	.2151	.0183	.0065	-.0122	.2155	.0006	-.0006	.0002
3301	.297	-119.1	93.3	8.594	59.3	783	.2344	.0208	.0060	-.0145	.2349	.0006	-.0006	.0002
3302	.298	-119.0	93.3	9.137	59.4	788	.2547	.0243	.0063	-.0165	.2553	.0003	-.0005	.0003
3303	.297	-119.1	93.3	9.664	59.2	783	.2766	.0285	.0064	-.0184	.2775	.0002	-.0006	.0003
3304	.297	-119.0	93.3	10.228	59.3	784	.3007	.0334	.0062	-.0206	.3018	-.0001	-.0006	.0003
3305	.297	-119.0	93.3	10.797	59.3	785	.3246	.0394	.0072	-.0221	.3262	-.0005	-.0007	.0004
3306	.297	-119.1	93.3	11.431	59.4	787	.3521	.0473	.0096	-.0235	.3545	-.0002	-.0006	.0003
3307	.296	-119.0	93.3	12.091	59.2	782	.3810	.0570	.0142	-.0242	.3845	-.0001	-.0005	.0002
3308	.298	-118.8	93.3	12.789	59.4	789	.4100	.0672	.0185	-.0253	.4147	-.0001	-.0005	.0001
3309	.297	-119.0	93.3	14.295	59.2	782	.4494	.0855	.0261	-.0282	.4566	.0003	-.0006	.0003
3310	.297	-119.2	93.3	6.581	59.4	787	.1621	.0127	.0070	-.0060	.1624	.0005	-.0006	.0002

Run No. 143 Begins With Point No.3341

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3341	.297	-80.0	62.3	-2.978	34.3	525	-.1782	.0223	.0009	.0129	-.1791	-.0002	.0000	-.0001
3342	.297	-79.6	62.3	-1.697	34.2	524	-.1258	.0150	.0033	.0112	-.1262	.0000	.0000	-.0001
3343	.298	-79.8	62.4	-.856	34.3	526	-.0920	.0115	.0038	.0100	-.0921	.0000	-.0001	-.0001
3344	.297	-80.2	62.4	-.327	34.3	524	-.0707	.0097	.0041	.0092	-.0708	.0000	-.0002	.0000
3345	.298	-79.8	62.4	.718	34.3	526	-.0308	.0073	.0046	.0076	-.0307	.0000	-.0003	.0000
3346	.298	-79.6	62.4	1.225	34.3	526	-.0135	.0067	.0049	.0069	-.0134	.0000	-.0003	.0000
3347	.298	-79.9	62.4	1.502	34.3	526	-.0044	.0066	.0050	.0067	-.0043	.0000	-.0004	.0000
3348	.298	-80.0	62.4	2.007	34.4	526	.0125	.0065	.0053	.0060	.0127	.0001	-.0004	.0000
3349	.298	-79.8	62.3	2.295	34.3	526	.0221	.0066	.0056	.0056	.0223	.0001	-.0004	.0000
3350	.298	-79.4	62.4	3.344	34.3	528	.0560	.0072	.0063	.0038	.0563	.0002	-.0005	.0001
3351	.297	-79.6	62.4	4.465	34.3	525	.0930	.0084	.0067	.0011	.0934	.0003	-.0005	.0001
3352	.298	-79.8	62.3	4.991	34.3	526	.1113	.0094	.0067	-.0004	.1117	.0004	-.0005	.0001
3353	.298	-79.7	62.4	5.459	34.4	528	.1267	.0103	.0065	-.0019	.1271	.0004	-.0005	.0001
3354	.297	-79.8	62.3	6.447	34.3	524	.1617	.0128	.0063	-.0055	.1621	.0005	-.0007	.0001
3355	.298	-79.7	62.4	6.951	34.3	526	.1791	.0144	.0060	-.0074	.1795	.0005	-.0006	.0001
3356	.298	-79.8	62.4	7.434	34.3	526	.1964	.0162	.0057	-.0094	.1968	.0006	-.0006	.0002
3357	.298	-79.7	62.4	7.964	34.3	526	.2157	.0184	.0054	-.0117	.2162	.0006	-.0007	.0002
3358	.298	-79.7	62.4	8.479	34.3	527	.2350	.0209	.0048	-.0140	.2355	.0007	-.0006	.0002
3359	.297	-79.7	62.3	8.970	34.3	525	.2545	.0238	.0042	-.0163	.2551	.0007	-.0007	.0002
3360	.297	-79.7	62.3	9.487	34.3	524	.2751	.0275	.0041	-.0183	.2759	.0004	-.0006	.0003
3361	.297	-79.9	62.4	9.997	34.3	524	.2964	.0318	.0042	-.0202	.2974	.0003	-.0009	.0003
3362	.297	-79.7	62.3	10.512	34.3	524	.3192	.0367	.0037	-.0222	.3205	.0002	-.0009	.0002
3363	.297	-79.8	62.3	11.037	34.3	524	.3421	.0423	.0039	-.0241	.3439	.0001	-.0009	.0003
3364	.297	-79.8	62.3	11.598	34.3	524	.3656	.0493	.0059	-.0253	.3681	-.0005	-.0005	.0004
3365	.298	-79.8	62.4	12.154	34.3	526	.3889	.0566	.0080	-.0266	.3921	-.0006	-.0005	.0004
3366	.298	-80.0	62.3	13.444	34.3	526	.4440	.0758	.0150	-.0296	.4495	-.0003	-.0005	.0003
3367	.297	-79.8	62.3	14.161	34.3	524	.4775	.0888	.0202	-.0308	.4847	-.0007	-.0005	.0002
3368	.298	-79.8	62.3	14.780	34.3	525	.5048	.1007	.0249	-.0315	.5138	-.0001	-.0007	.0004
3369	.297	-79.6	62.3	6.552	34.3	524	.1644	.0131	.0063	-.0058	.1648	.0005	-.0007	.0001

Run No. 145 Begins With Point No.3401

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3401	.298	-54.2	93.3	-3.245	47.0	792	-.1893	.0235	-.0007	.0127	-.1903	.0001	.0001	.0000
3402	.299	-54.0	93.3	-1.828	47.0	793	-.1314	.0151	.0023	.0109	-.1319	.0003	.0001	.0000
3403	.298	-54.0	93.3	-.988	47.0	791	-.0980	.0115	.0032	.0098	-.0982	.0003	-.0001	.0000
3404	.299	-54.0	93.3	-.237	47.0	793	-.0681	.0090	.0037	.0086	-.0682	.0004	-.0002	.0000
3405	.298	-54.1	93.3	.144	47.0	791	-.0538	.0080	.0040	.0081	-.0537	.0003	-.0002	.0000
3406	.298	-54.1	93.3	1.210	47.0	791	-.0158	.0064	.0047	.0067	-.0156	.0003	-.0003	.0000
3407	.298	-53.9	93.3	1.477	47.0	791	-.0070	.0063	.0049	.0064	-.0069	.0004	-.0003	.0000
3408	.298	-54.0	93.3	2.014	47.0	791	.0104	.0062	.0053	.0058	.0106	.0004	-.0004	.0000
3409	.298	-53.7	93.3	2.295	47.0	792	.0195	.0062	.0055	.0054	.0198	.0004	-.0004	.0001
3410	.298	-54.0	93.3	3.365	47.0	792	.0537	.0068	.0064	.0036	.0540	.0005	-.0004	.0001
3411	.298	-53.9	93.3	4.577	46.9	791	.0937	.0082	.0071	.0007	.0941	.0006	-.0005	.0001
3412	.299	-54.0	93.3	5.092	47.0	793	.1110	.0091	.0071	-.0009	.1113	.0007	-.0005	.0001
3413	.298	-54.0	93.3	5.594	47.0	791	.1285	.0101	.0071	-.0025	.1288	.0007	-.0005	.0001
3414	.298	-53.8	93.3	6.584	47.0	792	.1614	.0126	.0071	-.0061	.1618	.0008	-.0006	.0002
3415	.298	-54.0	93.3	7.100	47.0	791	.1798	.0143	.0069	-.0081	.1802	.0008	-.0006	.0002
3416	.299	-53.9	93.3	7.615	47.0	793	.1977	.0161	.0067	-.0103	.1981	.0009	-.0006	.0002
3417	.298	-54.0	93.3	8.092	46.9	788	.2152	.0181	.0066	-.0124	.2156	.0009	-.0006	.0002
3418	.298	-54.2	93.3	8.611	47.0	791	.2341	.0205	.0062	-.0148	.2345	.0009	-.0006	.0002
3419	.298	-54.2	93.3	9.125	47.0	790	.2537	.0234	.0058	-.0172	.2542	.0010	-.0006	.0002
3420	.298	-54.2	93.3	9.642	47.0	792	.2736	.0270	.0058	-.0192	.2743	.0008	-.0006	.0003
3421	.298	-54.2	93.3	10.205	46.9	789	.2967	.0318	.0060	-.0214	.2977	.0006	-.0007	.0003
3422	.298	-53.8	93.3	10.754	47.0	791	.3210	.0370	.0055	-.0236	.3222	.0006	-.0008	.0003
3423	.298	-54.1	93.3	11.342	47.0	791	.3456	.0435	.0064	-.0254	.3474	.0005	-.0009	.0003
3424	.298	-54.2	93.3	11.953	47.0	790	.3724	.0516	.0088	-.0267	.3750	.0003	-.0007	.0004
3425	.298	-54.2	93.3	12.578	47.0	791	.3988	.0601	.0116	-.0282	.4023	.0007	-.0006	.0003
3426	.298	-54.0	93.3	14.096	46.9	790	.4647	.0843	.0208	-.0315	.4712	.0011	-.0008	.0003
3427	.298	-54.2	93.3	6.671	46.9	789	.1648	.0129	.0071	-.0064	.1652	.0007	-.0006	.0001

Run No. 147 Begins With Point No.3454

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3454	.297	-23.5	62.4	-2.991	28.5	525	-.1816	.0226	.0008	.0131	-.1826	.0003	.0000	.0000
3455	.297	-23.9	62.4	-1.708	28.5	525	-.1295	.0153	.0031	.0114	-.1299	.0004	-.0001	.0000
3456	.297	-24.5	62.4	-.856	28.6	525	-.0950	.0117	.0037	.0102	-.0951	.0004	-.0002	.0000
3457	.297	-23.8	62.4	-.322	28.5	525	-.0734	.0098	.0040	.0093	-.0734	.0006	-.0002	.0000
3458	.297	-23.8	62.4	.721	28.5	524	-.0339	.0074	.0046	.0078	-.0338	.0004	-.0003	.0000
3459	.297	-24.0	62.4	1.225	28.6	525	-.0162	.0068	.0048	.0071	-.0161	.0005	-.0004	.0000
3460	.297	-24.1	62.4	1.484	28.5	524	-.0076	.0067	.0050	.0069	-.0074	.0005	-.0004	.0000
3461	.297	-23.9	62.4	2.008	28.6	525	.0099	.0067	.0052	.0062	.0101	.0005	-.0004	.0000
3462	.297	-23.8	62.4	2.277	28.5	524	.0188	.0067	.0054	.0059	.0191	.0005	-.0005	.0000
3463	.297	-23.8	62.4	3.325	28.6	525	.0525	.0072	.0062	.0041	.0528	.0007	-.0005	.0001
3464	.297	-24.0	62.4	4.439	28.5	524	.0896	.0085	.0067	.0015	.0900	.0008	-.0006	.0001
3465	.297	-23.8	62.4	4.965	28.6	525	.1077	.0094	.0067	-.0001	.1081	.0008	-.0006	.0001
3466	.297	-23.9	62.4	5.430	28.5	525	.1239	.0103	.0066	-.0015	.1243	.0008	-.0006	.0001
3467	.297	-23.7	62.4	6.416	28.5	525	.1582	.0128	.0063	-.0050	.1586	.0009	-.0007	.0002
3468	.297	-24.0	62.4	6.930	28.6	525	.1766	.0144	.0060	-.0071	.1771	.0010	-.0007	.0002
3469	.297	-23.8	62.4	7.415	28.6	525	.1940	.0162	.0058	-.0091	.1944	.0010	-.0007	.0002
3470	.297	-23.7	62.4	7.938	28.5	524	.2124	.0183	.0055	-.0113	.2129	.0010	-.0007	.0002
3471	.297	-23.8	62.4	8.452	28.5	525	.2319	.0207	.0050	-.0136	.2324	.0011	-.0007	.0002
3472	.297	-24.0	62.4	8.953	28.5	524	.2512	.0235	.0045	-.0160	.2518	.0012	-.0007	.0002
3473	.297	-23.9	62.4	9.461	28.5	524	.2714	.0268	.0039	-.0182	.2721	.0014	-.0008	.0001
3474	.298	-23.7	62.4	9.967	28.6	526	.2908	.0306	.0039	-.0203	.2917	.0015	-.0009	.0001
3475	.297	-23.8	62.4	10.488	28.5	524	.3141	.0355	.0038	-.0223	.3153	.0015	-.0008	.0000
3476	.297	-23.9	62.4	11.016	28.6	525	.3375	.0412	.0034	-.0242	.3392	.0012	-.0008	.0002
3477	.297	-24.1	62.4	11.567	28.5	524	.3621	.0480	.0045	-.0257	.3643	.0005	-.0007	.0003
3478	.297	-23.9	62.4	12.129	28.5	525	.3864	.0557	.0072	-.0268	.3895	-.0003	-.0004	.0004
3479	.297	-23.9	62.4	13.426	28.5	525	.4417	.0751	.0144	-.0296	.4470	-.0003	-.0004	.0003
3480	.297	-23.7	62.4	14.158	28.5	524	.4757	.0883	.0197	-.0308	.4828	-.0003	-.0005	.0002
3481	.297	-23.7	62.4	14.783	28.5	525	.5037	.1005	.0247	-.0315	.5127	.0000	-.0006	.0003
3482	.297	-24.5	62.4	6.479	28.6	525	.1598	.0129	.0063	-.0052	.1602	.0009	-.0008	.0001

Run No. 149 Begins With Point No.3514

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3514	.298	56.2	62.4	-3.023	23.0	527	-.1819	.0229	.0008	.0132	-.1828	.0002	.0000	.0000
3515	.298	57.2	62.4	-1.660	22.9	528	-.1257	.0151	.0032	.0114	-.1261	.0003	-.0001	.0000
3516	.297	57.8	62.4	-.811	22.8	526	-.0915	.0116	.0038	.0102	-.0916	.0004	-.0001	.0000
3517	.298	58.4	62.4	-.276	22.9	529	-.0695	.0097	.0041	.0093	-.0695	.0004	-.0002	.0000
3518	.298	58.1	62.4	.754	22.8	527	-.0311	.0075	.0047	.0078	-.0310	.0003	-.0003	.0000
3519	.298	57.5	62.4	1.261	22.9	526	-.0134	.0070	.0049	.0072	-.0133	.0002	-.0004	.0000
3520	.298	56.3	62.4	1.517	22.9	527	-.0050	.0069	.0050	.0069	-.0048	.0003	-.0004	.0000
3521	.298	56.7	62.4	2.045	22.9	527	.0126	.0068	.0053	.0063	.0129	.0003	-.0004	.0001
3522	.298	57.6	62.4	2.315	22.9	526	.0219	.0069	.0055	.0059	.0222	.0004	-.0004	.0001
3523	.298	58.6	62.4	3.364	22.8	526	.0562	.0075	.0064	.0041	.0565	.0004	-.0005	.0001
3524	.298	58.9	62.4	4.480	22.8	529	.0935	.0088	.0068	.0015	.0939	.0006	-.0005	.0001
3525	.298	58.6	62.4	5.004	22.8	526	.1117	.0098	.0068	-.0001	.1121	.0006	-.0005	.0001
3526	.298	57.9	62.4	5.466	22.9	529	.1270	.0107	.0067	-.0016	.1274	.0006	-.0006	.0001
3527	.298	57.4	62.4	6.454	22.9	528	.1620	.0132	.0065	-.0051	.1624	.0007	-.0007	.0002
3528	.297	57.2	62.4	6.956	22.9	525	.1800	.0149	.0062	-.0071	.1804	.0007	-.0006	.0002
3529	.298	57.8	62.4	7.451	22.9	527	.1978	.0167	.0059	-.0092	.1983	.0007	-.0006	.0002
3530	.298	58.6	62.4	7.978	22.8	526	.2172	.0189	.0057	-.0115	.2177	.0008	-.0006	.0002
3531	.299	59.1	62.4	8.495	22.8	530	.2353	.0213	.0053	-.0138	.2359	.0009	-.0006	.0002
3532	.298	58.5	62.4	8.990	22.8	527	.2556	.0242	.0047	-.0161	.2562	.0011	-.0006	.0002
3533	.298	57.8	62.4	9.509	22.9	528	.2750	.0275	.0042	-.0184	.2758	.0011	-.0007	.0001
3534	.298	57.6	62.4	10.006	22.9	527	.2945	.0311	.0039	-.0206	.2955	.0012	-.0008	.0001
3535	.297	57.9	62.4	10.532	22.8	526	.3185	.0362	.0038	-.0227	.3197	.0014	-.0007	.0000
3536	.298	58.4	62.4	11.071	22.8	528	.3447	.0426	.0034	-.0244	.3464	.0008	-.0007	.0002
3537	.298	59.4	62.4	11.646	22.8	529	.3689	.0500	.0057	-.0256	.3714	-.0003	-.0004	.0004
3538	.298	58.8	62.4	12.214	22.8	526	.3947	.0580	.0082	-.0269	.3980	-.0008	-.0003	.0004
3539	.299	58.3	62.4	13.529	22.9	530	.4488	.0778	.0160	-.0294	.4546	-.0007	-.0003	.0003
3540	.298	58.2	62.4	14.296	22.9	529	.4859	.0927	.0225	-.0302	.4937	-.0006	-.0005	.0002
3541	.298	58.8	62.4	14.922	22.8	527	.5173	.1055	.0274	-.0313	.5270	-.0004	-.0006	.0004
3542	.299	58.4	62.4	6.509	22.9	530	.1628	.0134	.0065	-.0052	.1632	.0007	-.0007	.0001

Run No. 153 Begins With Point No.3625

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3625	.298	101.6	17.2	-2.591	5.7	145	-.1705	.0226	-.0003	.0148	-.1714	.0001	.0000	.0000
3626	.298	101.9	17.2	-1.346	5.7	145	-.1174	.0153	.0022	.0125	-.1178	.0003	.0000	.0001
3627	.298	101.6	17.2	-.613	5.7	145	-.0875	.0123	.0030	.0113	-.0876	.0002	.0000	.0001
3628	.298	100.5	17.2	-.136	5.7	145	-.0676	.0107	.0033	.0104	-.0676	.0003	.0001	.0001
3629	.298	99.7	17.2	.355	5.7	145	-.0490	.0092	.0036	.0094	-.0489	.0002	.0000	.0001
3630	.299	99.7	17.2	.836	5.7	146	-.0306	.0082	.0039	.0085	-.0305	.0002	-.0002	.0001
3631	.298	100.0	17.2	1.315	5.7	145	-.0124	.0072	.0042	.0074	-.0122	.0004	-.0003	.0001
3632	.298	100.1	17.2	1.554	5.7	145	-.0042	.0068	.0044	.0069	-.0040	.0002	-.0003	.0001
3633	.298	100.6	17.2	2.035	5.7	145	.0132	.0065	.0049	.0059	.0134	.0003	-.0004	.0001
3634	.298	100.7	17.2	2.280	5.7	145	.0218	.0064	.0051	.0055	.0221	.0004	-.0003	.0001
3635	.298	101.0	17.2	3.249	5.7	145	.0536	.0067	.0058	.0035	.0538	.0004	-.0004	.0002
3636	.298	101.3	17.2	4.263	5.7	145	.0876	.0085	.0060	.0019	.0880	.0005	-.0005	.0002
3637	.298	101.5	17.2	4.776	5.7	145	.1047	.0098	.0060	.0009	.1052	.0004	-.0005	.0002
3638	.298	101.6	17.3	5.206	5.7	145	.1214	.0107	.0061	-.0004	.1219	.0007	-.0004	.0002
3639	.298	100.8	17.2	6.131	5.7	146	.1549	.0141	.0064	-.0026	.1556	.0005	-.0001	.0003
3640	.299	99.4	17.2	6.604	5.7	145	.1731	.0162	.0067	-.0038	.1738	.0004	-.0001	.0003
3641	.298	99.1	17.2	7.091	5.7	145	.1938	.0189	.0069	-.0052	.1947	.0005	-.0002	.0003
3642	.298	99.1	17.2	7.575	5.7	145	.2162	.0222	.0071	-.0065	.2173	.0005	-.0003	.0003
3643	.298	99.8	17.2	8.045	5.7	145	.2362	.0256	.0077	-.0078	.2375	.0002	-.0003	.0003
3644	.298	99.9	17.2	8.531	5.7	145	.2574	.0296	.0087	-.0090	.2590	.0004	-.0004	.0003
3645	.298	100.2	17.2	9.008	5.7	145	.2779	.0339	.0102	-.0101	.2798	.0007	-.0005	.0003
3646	.298	100.7	17.2	9.492	5.7	145	.2972	.0384	.0120	-.0112	.2994	.0006	-.0006	.0003
3647	.298	101.1	17.2	9.972	5.7	145	.3179	.0433	.0139	-.0124	.3205	.0006	-.0005	.0003
3648	.298	101.3	17.2	10.463	5.7	145	.3374	.0486	.0161	-.0136	.3406	.0004	-.0005	.0003
3649	.298	101.8	17.2	10.957	5.7	145	.3585	.0545	.0184	-.0147	.3623	.0004	-.0005	.0003
3650	.298	101.8	17.3	11.434	5.7	145	.3804	.0605	.0211	-.0162	.3849	.0005	-.0003	.0003
3651	.299	100.6	17.2	12.466	5.7	146	.4221	.0748	.0263	-.0181	.4283	.0004	-.0001	.0003
3652	.299	99.5	17.2	13.003	5.7	145	.4455	.0832	.0291	-.0193	.4528	.0005	-.0001	.0003
3653	.298	99.3	17.2	14.182	5.7	145	.4971	.1028	.0356	-.0222	.5072	.0009	-.0004	.0004
3654	.298	99.3	17.2	6.180	5.7	145	.1567	.0142	.0063	-.0028	.1573	.0008	-.0004	.0003

Run No. 155 Begins With Point No.3685

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3685	.300	100.6	24.0	-2.682	8.0	205	-.1723	.0229	-.0001	.0147	-.1732	.0002	-.0001	.0000
3686	.299	101.3	24.0	-1.415	8.0	204	-.1192	.0157	.0021	.0127	-.1195	.0003	-.0001	.0000
3687	.300	102.2	24.1	-.676	8.0	205	-.0889	.0125	.0028	.0114	-.0890	.0003	-.0002	.0001
3688	.300	102.2	24.1	-.196	8.0	206	-.0696	.0108	.0031	.0105	-.0696	.0003	-.0004	.0000
3689	.299	100.8	24.1	.314	8.0	205	-.0494	.0094	.0034	.0096	-.0494	.0003	-.0005	.0000
3690	.300	99.0	24.1	.822	8.1	205	-.0300	.0083	.0039	.0086	-.0299	.0004	-.0005	.0000
3691	.299	98.5	24.1	1.310	8.1	205	-.0122	.0076	.0042	.0078	-.0121	.0004	-.0005	.0001
3692	.300	98.8	24.1	1.554	8.1	206	-.0033	.0073	.0044	.0073	-.0031	.0004	-.0004	.0001
3693	.300	99.6	24.1	2.041	8.1	205	.0138	.0068	.0049	.0063	.0140	.0005	-.0004	.0001
3694	.300	100.6	24.1	2.293	8.0	205	.0224	.0067	.0051	.0058	.0227	.0004	-.0004	.0001
3695	.300	100.3	24.2	3.283	8.1	206	.0544	.0071	.0059	.0039	.0547	.0005	-.0003	.0002
3696	.300	98.2	24.1	4.313	8.1	206	.0884	.0089	.0061	.0021	.0888	.0006	-.0003	.0002
3697	.300	98.7	24.1	4.832	8.1	205	.1064	.0100	.0061	.0009	.1069	.0005	-.0004	.0002
3698	.300	99.8	24.1	5.267	8.1	205	.1221	.0110	.0060	-.0003	.1226	.0006	-.0005	.0002
3699	.299	99.2	24.1	6.210	8.1	205	.1569	.0143	.0065	-.0028	.1575	.0005	-.0003	.0002
3700	.300	98.8	24.1	6.693	8.1	205	.1755	.0165	.0067	-.0041	.1762	.0005	-.0004	.0002
3701	.300	99.8	24.1	7.189	8.1	206	.1964	.0193	.0071	-.0055	.1973	.0007	-.0004	.0002
3702	.300	99.4	24.1	7.692	8.1	206	.2192	.0228	.0077	-.0068	.2203	.0007	-.0001	.0002
3703	.300	98.5	24.1	8.180	8.1	205	.2403	.0265	.0085	-.0081	.2417	.0006	-.0002	.0003
3704	.300	100.0	24.1	8.677	8.1	206	.2617	.0305	.0096	-.0094	.2633	.0005	-.0004	.0003
3705	.300	100.9	24.1	9.174	8.0	206	.2831	.0350	.0112	-.0107	.2851	.0006	-.0006	.0003
3706	.300	99.2	24.1	9.671	8.1	206	.3025	.0397	.0131	-.0117	.3049	.0005	-.0003	.0003
3707	.300	98.4	24.1	10.160	8.1	205	.3220	.0446	.0150	-.0129	.3248	.0004	-.0004	.0003
3708	.299	99.5	24.1	10.668	8.1	205	.3448	.0507	.0173	-.0141	.3482	.0006	-.0005	.0003
3709	.300	100.7	24.1	11.180	8.0	206	.3655	.0567	.0198	-.0153	.3695	.0004	-.0005	.0003
3710	.299	100.3	24.2	11.674	8.1	206	.3864	.0631	.0222	-.0164	.3912	.0005	-.0003	.0003
3711	.300	99.1	24.1	12.745	8.1	206	.4308	.0781	.0276	-.0189	.4374	.0006	-.0003	.0003
3712	.300	99.8	24.1	13.313	8.1	205	.4570	.0873	.0309	-.0203	.4648	.0006	-.0004	.0003
3713	.300	100.9	24.1	14.546	8.0	206	.5111	.1087	.0380	-.0232	.5221	.0009	-.0007	.0005
3714	.299	100.0	24.1	6.276	8.1	205	.1579	.0145	.0065	-.0029	.1586	.0005	-.0003	.0002

Run No. 156 Begins With Point No.3715

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3715	.299	98.6	34.5	-2.806	11.5	292	-.1756	.0231	-.0004	.0145	-.1765	.0004	.0001	.0000
3716	.299	98.5	34.5	-1.493	11.5	292	-.1209	.0156	.0020	.0124	-.1213	.0004	.0001	.0001
3717	.299	98.1	34.5	-.733	11.5	292	-.0908	.0125	.0026	.0113	-.0910	.0003	.0000	.0001
3718	.299	97.9	34.5	-.239	11.5	292	-.0710	.0109	.0029	.0105	-.0710	.0003	.0000	.0001
3719	.299	97.8	34.5	.278	11.5	292	-.0506	.0095	.0034	.0096	-.0506	.0004	-.0001	.0001
3720	.299	97.5	34.5	.779	11.5	292	-.0321	.0084	.0038	.0088	-.0320	.0003	-.0001	.0001
3721	.299	97.5	34.5	1.281	11.5	292	-.0135	.0076	.0042	.0079	-.0134	.0002	-.0002	.0001
3722	.299	97.4	34.5	1.534	11.5	292	-.0046	.0074	.0044	.0075	-.0044	.0002	-.0002	.0001
3723	.299	97.1	34.5	2.038	11.6	292	.0132	.0071	.0048	.0065	.0134	.0004	-.0002	.0001
3724	.299	97.0	34.5	2.291	11.6	292	.0212	.0070	.0050	.0061	.0215	.0003	-.0002	.0001
3725	.298	96.8	34.5	3.317	11.5	292	.0548	.0074	.0059	.0041	.0552	.0004	-.0003	.0001
3726	.299	96.7	34.5	4.390	11.6	292	.0904	.0091	.0062	.0021	.0909	.0004	-.0003	.0002
3727	.299	96.6	34.5	4.930	11.6	292	.1088	.0101	.0062	.0007	.1093	.0005	-.0002	.0002
3728	.299	97.4	34.4	5.370	11.5	292	.1247	.0112	.0061	-.0006	.1252	.0006	-.0004	.0002
3729	.298	99.6	34.5	6.340	11.5	291	.1600	.0146	.0066	-.0033	.1607	.0006	-.0005	.0002
3730	.299	101.0	34.5	6.846	11.5	293	.1800	.0169	.0070	-.0047	.1807	.0005	-.0005	.0002
3731	.299	100.1	34.5	7.356	11.5	292	.2012	.0199	.0075	-.0061	.2021	.0007	-.0001	.0001
3732	.299	99.4	34.5	7.879	11.5	292	.2241	.0235	.0082	-.0075	.2252	.0006	-.0001	.0002
3733	.299	98.8	34.5	8.388	11.5	292	.2459	.0275	.0093	-.0088	.2473	.0004	-.0001	.0003
3734	.299	98.3	34.5	8.905	11.5	292	.2680	.0319	.0106	-.0101	.2697	.0005	-.0003	.0002
3735	.299	97.9	34.5	9.423	11.5	293	.2896	.0367	.0125	-.0113	.2917	.0005	-.0004	.0002
3736	.298	98.3	34.4	9.949	11.5	291	.3119	.0419	.0145	-.0127	.3144	.0006	-.0005	.0003
3737	.298	100.0	34.5	10.474	11.5	292	.3338	.0476	.0167	-.0139	.3369	.0007	-.0006	.0003
3738	.299	101.1	34.5	11.013	11.4	292	.3554	.0537	.0192	-.0152	.3591	.0006	-.0005	.0003
3739	.299	100.5	34.5	11.548	11.5	292	.3781	.0605	.0218	-.0165	.3825	.0007	-.0004	.0003
3740	.299	99.7	34.5	12.062	11.5	292	.3993	.0673	.0244	-.0177	.4045	.0006	-.0003	.0004
3741	.298	99.3	34.5	13.201	11.5	291	.4501	.0847	.0308	-.0204	.4575	.0007	-.0004	.0004
3742	.299	100.8	34.5	13.803	11.4	292	.4754	.0944	.0341	-.0218	.4842	.0007	-.0005	.0004
3743	.299	102.1	34.5	15.106	11.4	293	.5334	.1183	.0420	-.0249	.5458	.0014	-.0008	.0008
3744	.299	101.0	34.5	6.420	11.5	292	.1616	.0148	.0067	-.0034	.1623	.0006	-.0003	.0002

Run No. 159 Begins With Point No.3805

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3805	.298	101.0	51.8	-2.896	17.2	439	-.1799	.0234	-.0009	.0142	-.1808	.0004	-.0001	.0000
3806	.298	98.9	51.8	-1.570	17.2	438	-.1245	.0157	.0016	.0123	-.1249	.0004	-.0001	.0001
3807	.298	101.0	51.8	-.747	17.1	438	-.0909	.0122	.0026	.0110	-.0910	.0005	-.0002	.0001
3808	.298	101.5	51.8	-.235	17.1	437	-.0710	.0105	.0030	.0102	-.0711	.0004	-.0002	.0001
3809	.298	99.2	51.8	.774	17.2	437	-.0328	.0083	.0038	.0086	-.0327	.0004	-.0003	.0000
3810	.298	100.4	51.8	1.267	17.2	439	-.0141	.0075	.0042	.0078	-.0139	.0003	-.0003	.0001
3811	.298	99.8	51.8	1.520	17.2	438	-.0052	.0073	.0045	.0074	-.0050	.0004	-.0003	.0001
3812	.298	100.2	51.8	2.034	17.2	438	.0127	.0070	.0050	.0064	.0129	.0003	-.0004	.0001
3813	.298	100.0	51.8	2.296	17.2	437	.0211	.0070	.0052	.0060	.0214	.0004	-.0004	.0001
3814	.298	100.7	51.8	3.313	17.2	438	.0546	.0074	.0060	.0042	.0550	.0005	-.0005	.0001
3815	.298	100.8	51.8	4.400	17.2	438	.0905	.0089	.0064	.0019	.0910	.0005	-.0005	.0001
3816	.298	99.3	51.8	4.905	17.2	438	.1078	.0098	.0064	.0005	.1082	.0007	-.0004	.0001
3817	.298	99.8	51.8	5.358	17.2	437	.1241	.0108	.0063	-.0009	.1245	.0007	-.0005	.0001
3818	.298	102.3	51.8	6.325	17.1	438	.1589	.0140	.0066	-.0037	.1595	.0005	-.0004	.0001
3819	.298	102.7	51.8	6.834	17.1	437	.1783	.0162	.0071	-.0052	.1790	.0003	-.0004	.0002
3820	.298	100.6	51.8	7.326	17.2	437	.1984	.0191	.0080	-.0065	.1992	.0005	-.0003	.0001
3821	.298	99.4	51.8	7.873	17.2	437	.2222	.0227	.0088	-.0080	.2232	.0005	-.0003	.0001
3822	.298	99.0	51.8	8.416	17.2	438	.2455	.0269	.0097	-.0094	.2468	.0003	-.0002	.0002
3823	.298	98.2	51.8	8.953	17.3	439	.2693	.0317	.0113	-.0107	.2710	.0007	-.0005	.0002
3824	.298	98.2	51.8	9.495	17.3	438	.2924	.0367	.0133	-.0121	.2944	.0006	-.0006	.0002
3825	.298	100.8	51.8	10.024	17.2	438	.3148	.0421	.0153	-.0134	.3173	.0007	-.0006	.0002
3826	.298	103.7	51.8	10.560	17.0	438	.3367	.0478	.0175	-.0148	.3398	.0006	-.0006	.0002
3827	.298	105.5	51.8	11.085	17.0	437	.3594	.0540	.0197	-.0162	.3631	.0007	-.0006	.0003
3828	.298	106.7	51.8	11.645	16.9	438	.3825	.0611	.0228	-.0174	.3870	.0004	-.0005	.0002
3829	.298	104.2	51.8	12.182	17.0	438	.4051	.0685	.0258	-.0186	.4104	.0002	-.0004	.0002
3830	.298	102.2	51.8	13.400	17.1	437	.4584	.0871	.0327	-.0216	.4660	.0000	-.0003	.0001
3831	.298	101.7	51.8	14.057	17.1	438	.4873	.0982	.0365	-.0231	.4965	.0003	-.0004	.0002
3832	.298	101.1	51.8	14.619	17.1	438	.5118	.1083	.0398	-.0245	.5225	.0006	-.0006	.0004
3833	.298	100.4	51.8	6.377	17.1	436	.1602	.0141	.0067	-.0038	.1608	.0003	-.0004	.0001

Run No. 161 Begins With Point No.3859

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3859	.297	101.6	62.4	-3.034	20.5	523	-.1858	.0242	-.0018	.0142	-.1868	.0004	-.0002	.0000
3860	.297	102.1	62.4	-1.691	20.5	524	-.1295	.0162	.0011	.0123	-.1299	.0005	-.0002	.0000
3861	.297	102.0	62.4	-.837	20.5	523	-.0950	.0125	.0022	.0110	-.0951	.0005	-.0002	.0001
3862	.296	101.5	62.4	-.307	20.5	522	-.0741	.0107	.0026	.0102	-.0742	.0005	-.0002	.0001
3863	.296	102.0	62.4	.746	20.5	522	-.0334	.0082	.0036	.0086	-.0333	.0005	-.0004	.0000
3864	.297	102.2	62.4	1.254	20.5	524	-.0150	.0075	.0041	.0077	-.0148	.0004	-.0004	.0001
3865	.297	101.9	62.4	1.514	20.5	523	-.0062	.0072	.0044	.0073	-.0060	.0003	-.0005	.0000
3866	.297	101.7	62.4	2.044	20.5	523	.0124	.0069	.0050	.0064	.0126	.0003	-.0005	.0001
3867	.297	101.9	62.4	2.316	20.5	524	.0214	.0069	.0052	.0060	.0216	.0004	-.0005	.0001
3868	.296	102.2	62.4	3.364	20.5	522	.0553	.0075	.0060	.0041	.0556	.0005	-.0006	.0001
3869	.296	101.9	62.4	4.482	20.5	521	.0927	.0090	.0065	.0017	.0932	.0006	-.0006	.0001
3870	.296	101.7	62.4	5.004	20.5	522	.1108	.0099	.0065	.0002	.1112	.0007	-.0006	.0001
3871	.296	101.8	62.4	5.466	20.5	522	.1269	.0109	.0064	-.0013	.1273	.0008	-.0006	.0001
3872	.297	102.1	62.4	6.463	20.5	523	.1627	.0142	.0067	-.0043	.1633	.0007	-.0006	.0001
3873	.297	102.4	62.4	7.001	20.5	524	.1836	.0169	.0076	-.0057	.1843	.0007	-.0006	.0002
3874	.297	102.0	62.4	7.524	20.5	524	.2047	.0199	.0084	-.0071	.2056	.0008	-.0006	.0002
3875	.297	101.7	62.4	8.099	20.5	524	.2299	.0240	.0096	-.0087	.2310	.0007	-.0006	.0002
3876	.296	101.9	62.4	8.659	20.5	522	.2548	.0286	.0108	-.0101	.2562	.0006	-.0005	.0003
3877	.296	102.1	62.4	9.215	20.5	522	.2794	.0337	.0123	-.0116	.2812	.0007	-.0007	.0002
3878	.297	102.2	62.4	9.776	20.5	524	.3017	.0389	.0143	-.0129	.3039	.0008	-.0008	.0002
3879	.297	101.6	62.4	10.314	20.5	524	.3235	.0443	.0161	-.0144	.3262	.0007	-.0007	.0002
3880	.296	101.7	62.4	10.884	20.5	522	.3486	.0506	.0181	-.0161	.3518	.0006	-.0006	.0002
3881	.297	102.0	62.4	11.462	20.5	523	.3729	.0578	.0211	-.0175	.3770	.0006	-.0006	.0002
3882	.297	102.2	62.4	12.054	20.5	523	.3976	.0659	.0249	-.0187	.4026	.0001	-.0004	.0002
3883	.297	101.8	62.4	12.636	20.5	523	.4229	.0743	.0284	-.0200	.4289	.0000	-.0005	.0001
3884	.297	101.9	62.4	13.959	20.5	524	.4802	.0956	.0361	-.0232	.4890	-.0003	-.0003	-.0001
3885	.297	102.0	62.4	14.663	20.5	523	.5130	.1085	.0405	-.0249	.5237	-.0001	-.0003	-.0001
3886	.297	102.4	62.4	15.253	20.5	523	.5380	.1195	.0441	-.0263	.5505	.0002	-.0004	.0000
3887	.296	101.9	62.4	6.581	20.5	522	.1661	.0145	.0068	-.0047	.1667	.0006	-.0006	.0001

Run No. 164 Begins With Point No.3950

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
3950	.299	57.6	62.4	-2.952	22.9	530	-.1848	.0235	-.0013	.0139	-.1857	.0003	-.0003	.0000
3951	.299	57.2	62.4	-1.646	22.9	530	-.1299	.0158	.0014	.0120	-.1303	.0004	-.0003	.0000
3952	.298	56.7	62.4	-.787	22.9	528	-.0956	.0121	.0024	.0107	-.0958	.0004	-.0003	.0000
3953	.298	56.7	62.4	-.251	22.9	528	-.0740	.0103	.0028	.0099	-.0740	.0005	-.0003	.0000
3954	.298	56.4	62.4	.797	23.0	529	-.0340	.0079	.0038	.0083	-.0339	.0004	-.0005	.0000
3955	.298	56.5	62.4	1.310	23.0	529	-.0151	.0072	.0044	.0075	-.0149	.0003	-.0005	.0000
3956	.298	57.1	62.4	1.574	22.9	526	-.0055	.0070	.0046	.0071	-.0053	.0004	-.0006	.0000
3957	.298	57.3	62.4	2.104	22.9	528	.0124	.0066	.0052	.0061	.0126	.0003	-.0006	.0000
3958	.298	57.5	62.4	2.374	22.9	528	.0209	.0067	.0054	.0057	.0212	.0003	-.0006	.0000
3959	.298	57.5	62.4	3.427	22.9	528	.0555	.0072	.0061	.0038	.0558	.0005	-.0006	.0001
3960	.298	57.5	62.4	4.541	22.9	527	.0928	.0087	.0066	.0013	.0932	.0006	-.0007	.0001
3961	.298	57.8	62.4	5.067	22.8	526	.1112	.0097	.0066	-.0002	.1117	.0007	-.0007	.0001
3962	.298	57.7	62.4	5.527	22.9	527	.1272	.0107	.0065	-.0017	.1277	.0008	-.0007	.0001
3963	.298	57.9	62.4	6.515	22.9	528	.1626	.0138	.0066	-.0048	.1631	.0009	-.0008	.0001
3964	.298	57.9	62.4	7.044	22.9	528	.1828	.0163	.0070	-.0063	.1835	.0006	-.0007	.0001
3965	.298	58.0	62.4	7.569	22.8	527	.2046	.0193	.0077	-.0079	.2053	.0005	-.0007	.0001
3966	.298	57.9	62.4	8.153	22.9	528	.2299	.0237	.0094	-.0092	.2309	.0008	-.0007	.0001
3967	.298	57.7	62.4	8.716	22.9	528	.2546	.0283	.0105	-.0107	.2560	.0006	-.0007	.0002
3968	.298	57.9	62.4	9.269	22.9	529	.2789	.0334	.0121	-.0120	.2806	.0007	-.0008	.0002
3969	.298	57.9	62.4	9.819	22.9	529	.3019	.0387	.0141	-.0134	.3041	.0007	-.0008	.0002
3970	.298	57.6	62.4	10.367	22.9	529	.3240	.0441	.0157	-.0150	.3266	.0006	-.0008	.0002
3971	.298	57.5	62.4	10.939	22.9	529	.3483	.0504	.0179	-.0167	.3515	.0004	-.0007	.0002
3972	.298	58.0	62.4	11.504	22.9	528	.3723	.0575	.0209	-.0180	.3763	.0005	-.0007	.0002
3973	.298	57.7	62.4	12.101	22.9	529	.3972	.0656	.0247	-.0192	.4021	.0000	-.0006	.0002
3974	.298	57.6	62.4	12.702	22.9	528	.4235	.0744	.0283	-.0206	.4294	-.0003	-.0005	.0000
3975	.298	57.9	62.4	14.024	22.9	529	.4821	.0961	.0363	-.0237	.4910	-.0003	-.0004	-.0001
3976	.298	58.0	62.4	14.731	22.9	528	.5137	.1089	.0407	-.0254	.5245	-.0001	-.0004	-.0001
3977	.298	57.7	62.4	15.323	22.9	529	.5392	.1201	.0444	-.0268	.5517	.0001	-.0005	.0000
3978	.298	57.7	62.4	6.635	22.8	526	.1662	.0143	.0068	-.0051	.1668	.0006	-.0007	.0001

Run No. 166 Begins With Point No.4011

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4011	.298	-23.9	62.4	-2.976	28.7	529	-.1864	.0236	-.0016	.0138	-.1874	.0003	-.0002	.0000
4012	.299	-24.1	62.4	-1.674	28.7	530	-.1319	.0158	.0012	.0119	-.1323	.0004	-.0002	.0000
4013	.299	-24.3	62.4	-.814	28.7	529	-.0979	.0121	.0022	.0107	-.0980	.0004	-.0003	.0000
4014	.298	-24.4	62.4	-.281	28.7	529	-.0764	.0103	.0026	.0099	-.0765	.0004	-.0002	.0000
4015	.299	-24.0	62.4	.772	28.7	530	-.0361	.0078	.0036	.0083	-.0360	.0004	-.0004	.0000
4016	.298	-24.4	62.4	1.285	28.7	529	-.0172	.0072	.0042	.0075	-.0170	.0003	-.0005	.0000
4017	.299	-24.3	62.4	1.548	28.7	530	-.0079	.0069	.0045	.0070	-.0077	.0004	-.0005	.0000
4018	.299	-23.8	62.4	2.085	28.7	529	.0103	.0066	.0051	.0061	.0105	.0003	-.0006	.0000
4019	.299	-23.8	62.4	2.351	28.7	530	.0187	.0066	.0052	.0058	.0190	.0003	-.0006	.0000
4020	.299	-24.1	62.4	3.394	28.7	530	.0531	.0072	.0059	.0039	.0534	.0005	-.0006	.0001
4021	.298	-23.8	62.4	4.504	28.7	529	.0895	.0085	.0064	.0014	.0899	.0006	-.0007	.0001
4022	.298	-23.9	62.4	5.032	28.7	529	.1076	.0094	.0064	-.0001	.1080	.0006	-.0007	.0001
4023	.298	-24.2	62.4	5.493	28.7	529	.1240	.0104	.0063	-.0016	.1244	.0007	-.0007	.0001
4024	.298	-23.9	62.4	6.481	28.7	529	.1594	.0134	.0063	-.0047	.1599	.0008	-.0007	.0001
4025	.298	-23.9	62.4	7.001	28.7	529	.1789	.0157	.0065	-.0063	.1795	.0008	-.0007	.0001
4026	.298	-24.0	62.4	7.525	28.7	529	.2001	.0186	.0071	-.0078	.2008	.0005	-.0007	.0001
4027	.298	-24.1	62.4	8.085	28.7	528	.2239	.0224	.0079	-.0094	.2248	.0004	-.0006	.0002
4028	.299	-24.1	62.4	8.642	28.7	530	.2479	.0267	.0087	-.0109	.2491	.0003	-.0006	.0002
4029	.299	-24.0	62.4	9.183	28.7	530	.2717	.0315	.0100	-.0123	.2732	.0005	-.0008	.0002
4030	.298	-24.1	62.4	9.735	28.7	528	.2956	.0369	.0119	-.0137	.2976	.0006	-.0008	.0002
4031	.298	-24.1	62.4	10.295	28.7	529	.3184	.0425	.0140	-.0151	.3209	.0007	-.0008	.0002
4032	.298	-24.1	62.4	10.876	28.7	529	.3427	.0490	.0167	-.0166	.3458	.0007	-.0007	.0002
4033	.298	-24.0	62.4	11.439	28.7	529	.3671	.0560	.0197	-.0180	.3709	.0005	-.0007	.0002
4034	.298	-24.3	62.4	12.013	28.7	529	.3903	.0634	.0226	-.0193	.3950	.0004	-.0006	.0002
4035	.299	-24.1	62.4	12.621	28.7	530	.4158	.0722	.0266	-.0205	.4215	.0000	-.0005	.0001
4036	.298	-23.9	62.4	13.928	28.7	529	.4730	.0931	.0344	-.0236	.4815	-.0001	-.0004	.0000
4037	.299	-24.1	62.4	14.639	28.7	530	.5041	.1056	.0387	-.0253	.5145	-.0002	-.0004	-.0001
4038	.299	-24.2	62.4	15.223	28.7	530	.5291	.1165	.0422	-.0266	.5411	-.0001	-.0004	-.0001
4039	.299	-24.5	62.4	6.614	28.7	530	.1627	.0138	.0063	-.0051	.1632	.0007	-.0007	.0001

Run No. 168 Begins With Point No.4071

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4071	.299	-80.1	62.4	-2.963	34.5	530	-.1838	.0232	-.0013	.0136	-.1848	.0003	-.0003	.0000
4072	.298	-80.2	62.4	-1.680	34.5	528	-.1307	.0156	.0014	.0117	-.1311	.0003	-.0002	.0000
4073	.299	-80.3	62.4	-.821	34.5	530	-.0958	.0119	.0025	.0104	-.0959	.0004	-.0003	.0000
4074	.299	-80.0	62.4	-.292	34.5	529	-.0753	.0101	.0029	.0096	-.0753	.0003	-.0003	.0000
4075	.299	-80.2	62.4	.759	34.5	530	-.0353	.0076	.0037	.0080	-.0352	.0003	-.0004	.0000
4076	.299	-80.2	62.4	1.269	34.5	529	-.0167	.0069	.0043	.0072	-.0165	.0003	-.0005	.0000
4077	.299	-80.3	62.4	1.531	34.5	530	-.0076	.0067	.0045	.0068	-.0074	.0002	-.0005	.0000
4078	.298	-80.1	62.4	2.063	34.5	528	.0101	.0064	.0051	.0060	.0103	.0002	-.0005	.0000
4079	.298	-80.3	62.4	2.330	34.5	528	.0189	.0064	.0053	.0056	.0192	.0002	-.0005	.0001
4080	.299	-80.4	62.4	3.376	34.5	530	.0530	.0070	.0060	.0038	.0533	.0003	-.0005	.0001
4081	.299	-80.3	62.4	4.486	34.6	531	.0891	.0082	.0064	.0012	.0895	.0004	-.0006	.0001
4082	.298	-80.2	62.4	5.016	34.5	529	.1077	.0091	.0064	-.0004	.1081	.0006	-.0006	.0001
4083	.298	-80.3	62.4	5.475	34.5	528	.1237	.0101	.0062	-.0018	.1241	.0006	-.0006	.0001
4084	.298	-80.3	62.4	6.469	34.5	528	.1587	.0131	.0063	-.0049	.1592	.0007	-.0007	.0001
4085	.298	-80.3	62.4	6.990	34.5	528	.1785	.0154	.0065	-.0065	.1791	.0007	-.0007	.0002
4086	.298	-80.2	62.4	7.510	34.4	528	.2003	.0184	.0070	-.0080	.2010	.0005	-.0006	.0002
4087	.298	-80.2	62.4	8.069	34.4	528	.2237	.0221	.0078	-.0096	.2246	.0003	-.0006	.0002
4088	.299	-80.2	62.4	8.620	34.5	529	.2471	.0263	.0086	-.0111	.2482	.0003	-.0005	.0002
4089	.298	-80.4	62.4	9.160	34.5	529	.2706	.0310	.0099	-.0126	.2720	.0005	-.0007	.0002
4090	.299	-80.5	62.4	9.710	34.5	529	.2930	.0361	.0117	-.0139	.2949	.0005	-.0007	.0002
4091	.299	-80.3	62.4	10.281	34.5	530	.3170	.0420	.0140	-.0153	.3194	.0007	-.0007	.0002
4092	.299	-80.4	62.4	10.850	34.5	529	.3404	.0484	.0166	-.0166	.3434	.0006	-.0006	.0002
4093	.298	-80.3	62.4	11.403	34.5	528	.3636	.0551	.0192	-.0180	.3673	.0005	-.0006	.0002
4094	.299	-80.2	62.4	11.997	34.5	529	.3881	.0628	.0223	-.0193	.3926	.0004	-.0006	.0002
4095	.299	-80.3	62.4	12.578	34.5	529	.4135	.0711	.0258	-.0207	.4191	.0003	-.0004	.0002
4096	.298	-80.2	62.4	13.885	34.5	529	.4701	.0918	.0336	-.0237	.4784	.0001	-.0004	.0001
4097	.298	-80.1	62.4	14.605	34.4	528	.5027	.1047	.0381	-.0255	.5128	-.0001	-.0003	.0000
4098	.298	-80.4	62.4	15.184	34.5	529	.5269	.1153	.0415	-.0268	.5387	.0001	-.0004	.0001
4099	.298	-80.3	62.4	6.599	34.4	526	.1627	.0135	.0063	-.0054	.1632	.0006	-.0006	.0001

Run No. 170 Begins With Point No.4132

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4132	.298	-157.4	62.4	-2.965	47.1	527	-.1828	.0230	-.0013	.0135	-.1837	-.0001	-.0002	-.0001
4133	.298	-157.2	62.5	-1.694	47.0	526	-.1311	.0155	.0015	.0116	-.1315	.0000	-.0002	.0000
4134	.298	-157.3	62.4	-.838	47.1	526	-.0959	.0118	.0026	.0104	-.0960	.0000	-.0002	.0000
4135	.298	-157.4	62.4	-.313	47.0	526	-.0763	.0101	.0030	.0096	-.0763	.0000	-.0003	.0000
4136	.298	-157.2	62.5	.741	47.1	527	-.0356	.0076	.0039	.0079	-.0355	.0000	-.0003	.0000
4137	.298	-157.2	62.4	1.248	47.0	525	-.0175	.0068	.0044	.0072	-.0174	.0000	-.0004	.0000
4138	.297	-157.4	62.4	1.511	47.0	525	-.0083	.0066	.0046	.0068	-.0081	.0000	-.0004	.0000
4139	.298	-157.3	62.5	2.037	47.1	527	.0096	.0063	.0052	.0059	.0098	.0000	-.0004	.0000
4140	.298	-157.3	62.4	2.310	47.0	526	.0182	.0063	.0053	.0055	.0185	-.0001	-.0004	.0000
4141	.298	-157.3	62.5	3.352	47.0	526	.0520	.0068	.0061	.0037	.0523	.0000	-.0005	.0001
4142	.298	-157.4	62.4	4.460	47.0	526	.0885	.0080	.0065	.0011	.0889	.0001	-.0005	.0001
4143	.298	-157.3	62.4	4.989	47.1	526	.1069	.0089	.0065	-.0005	.1072	.0002	-.0005	.0001
4144	.298	-157.2	62.5	5.446	47.0	526	.1221	.0099	.0063	-.0018	.1225	.0003	-.0005	.0001
4145	.298	-157.2	62.5	6.455	47.1	527	.1584	.0131	.0067	-.0048	.1588	.0002	-.0004	.0001
4146	.298	-157.0	62.5	6.978	47.0	527	.1787	.0155	.0072	-.0064	.1792	.0001	-.0005	.0001
4147	.298	-157.3	62.5	7.507	47.1	526	.2008	.0187	.0080	-.0078	.2015	.0001	-.0005	.0001
4148	.298	-157.3	62.5	8.066	47.0	526	.2240	.0224	.0089	-.0093	.2249	.0000	-.0004	.0002
4149	.298	-157.5	62.4	8.618	47.0	526	.2479	.0267	.0098	-.0108	.2491	.0000	-.0004	.0002
4150	.298	-157.4	62.5	9.155	47.1	526	.2706	.0313	.0111	-.0122	.2722	-.0002	-.0005	.0001
4151	.297	-157.3	62.4	9.703	47.0	525	.2935	.0365	.0132	-.0136	.2954	-.0002	-.0004	.0001
4152	.298	-157.3	62.4	10.264	47.0	526	.3163	.0422	.0155	-.0149	.3187	-.0003	-.0004	.0001
4153	.298	-157.4	62.5	10.834	47.0	526	.3385	.0483	.0180	-.0162	.3415	-.0003	-.0003	.0001
4154	.298	-157.3	62.5	11.391	47.1	526	.3619	.0551	.0207	-.0176	.3656	-.0003	-.0004	.0001
4155	.298	-157.2	62.5	11.965	47.0	527	.3854	.0624	.0234	-.0189	.3899	-.0004	-.0003	.0000
4156	.298	-157.2	62.5	12.534	47.0	526	.4103	.0704	.0265	-.0204	.4158	-.0005	-.0002	.0000
4157	.298	-157.2	62.4	13.822	47.0	525	.4662	.0906	.0337	-.0235	.4743	-.0005	-.0001	-.0001
4158	.298	-157.4	62.5	14.530	47.0	526	.4963	.1027	.0377	-.0252	.5062	-.0003	-.0002	.0000
4159	.298	-157.3	62.5	15.119	47.1	527	.5228	.1138	.0413	-.0266	.5344	-.0001	-.0003	.0001
4160	.298	-157.4	62.5	6.607	47.0	526	.1626	.0135	.0067	-.0054	.1631	.0000	-.0004	.0001

Run No. 171 Begins With Point No.4162

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4162	.298	-203.3	62.5	-3.144	59.6	528	-.1859	.0237	-.0018	.0134	-.1869	-.0001	-.0001	-.0001
4163	.299	-203.2	62.5	-1.777	59.6	529	-.1293	.0154	.0014	.0113	-.1297	.0000	-.0001	.0000
4164	.298	-203.3	62.5	-.915	59.6	528	-.0964	.0117	.0024	.0101	-.0966	.0000	-.0001	.0000
4165	.299	-203.2	62.5	-.381	59.6	529	-.0748	.0099	.0029	.0093	-.0748	.0000	-.0001	.0000
4166	.299	-203.2	62.5	.680	59.7	530	-.0349	.0073	.0038	.0077	-.0349	.0000	-.0002	.0000
4167	.299	-203.0	62.5	1.188	59.5	529	-.0167	.0067	.0042	.0069	-.0165	.0000	-.0003	.0000
4168	.299	-203.1	62.5	1.454	59.6	529	-.0072	.0064	.0045	.0065	-.0070	.0000	-.0003	.0000
4169	.299	-203.1	62.5	1.984	59.6	530	.0105	.0061	.0050	.0057	.0107	.0000	-.0003	.0000
4170	.299	-203.2	62.5	2.259	59.6	529	.0200	.0061	.0053	.0052	.0202	-.0001	-.0003	.0000
4171	.299	-203.2	62.5	3.310	59.6	529	.0528	.0066	.0059	.0035	.0531	.0001	-.0003	.0001
4172	.299	-203.0	62.5	4.428	59.5	529	.0897	.0079	.0064	.0009	.0900	.0001	-.0003	.0001
4173	.299	-203.1	62.5	4.958	59.6	530	.1076	.0087	.0063	-.0007	.1079	.0002	-.0004	.0001
4174	.299	-203.0	62.5	5.439	59.6	530	.1234	.0097	.0063	-.0021	.1238	.0002	-.0004	.0001
4175	.298	-203.0	62.5	6.463	59.5	528	.1607	.0131	.0067	-.0051	.1611	.0001	-.0003	.0001
4176	.298	-203.1	62.5	6.994	59.5	527	.1814	.0157	.0075	-.0066	.1820	.0000	-.0004	.0001
4177	.299	-203.0	62.5	7.524	59.6	530	.2029	.0188	.0081	-.0080	.2036	.0001	-.0004	.0001
4178	.298	-203.1	62.5	8.072	59.5	528	.2257	.0226	.0090	-.0094	.2267	.0000	-.0002	.0001
4179	.299	-203.1	62.5	8.649	59.7	530	.2497	.0270	.0100	-.0110	.2509	-.0002	-.0002	.0002
4180	.298	-203.1	62.5	9.171	59.5	528	.2723	.0316	.0115	-.0123	.2738	-.0001	-.0003	.0001
4181	.299	-203.2	62.5	9.721	59.7	530	.2948	.0367	.0135	-.0136	.2967	-.0002	-.0003	.0001
4182	.299	-203.1	62.5	10.273	59.7	530	.3153	.0421	.0157	-.0149	.3177	-.0003	-.0002	.0001
4183	.298	-203.0	62.5	10.838	59.5	528	.3403	.0486	.0182	-.0163	.3434	-.0002	-.0002	.0001
4184	.299	-203.0	62.5	11.394	59.5	529	.3626	.0551	.0208	-.0176	.3663	-.0003	-.0002	.0001
4185	.299	-203.1	62.5	11.969	59.5	529	.3878	.0628	.0237	-.0191	.3923	-.0004	-.0002	.0000
4186	.299	-203.0	62.5	12.529	59.6	530	.4093	.0702	.0263	-.0203	.4147	-.0003	-.0002	.0000
4187	.298	-202.9	62.5	13.813	59.5	528	.4658	.0904	.0335	-.0235	.4739	-.0002	-.0002	.0000
4188	.299	-203.0	62.5	14.505	59.5	529	.4951	.1022	.0375	-.0251	.5049	-.0002	-.0001	.0001
4189	.299	-203.1	62.5	15.097	59.6	530	.5210	.1132	.0410	-.0265	.5325	.0000	-.0003	.0002
4190	.299	-203.0	62.5	6.601	59.5	529	.1648	.0136	.0068	-.0055	.1653	.0001	-.0003	.0001

Run No. 172 Begins With Point No.4192

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4192	.298	-251.6	62.9	-3.007	81.1	528	-.1803	.0226	-.0014	.0130	-.1813	.0000	.0001	.0000
4193	.299	-251.6	62.9	-1.738	81.2	529	-.1307	.0152	.0013	.0112	-.1311	.0001	.0001	.0000
4194	.298	-251.5	62.9	-.885	81.1	528	-.0957	.0115	.0024	.0100	-.0959	.0001	.0000	.0000
4195	.298	-251.4	62.9	-.353	80.8	526	-.0751	.0097	.0029	.0092	-.0751	.0001	.0001	.0000
4196	.298	-251.3	62.9	.696	80.9	527	-.0349	.0072	.0038	.0076	-.0348	.0001	-.0002	.0000
4197	.298	-251.1	62.9	1.204	80.7	527	-.0169	.0065	.0042	.0068	-.0168	.0002	-.0002	.0000
4198	.298	-251.0	62.9	1.463	80.7	527	-.0085	.0063	.0045	.0064	-.0084	.0000	-.0001	.0000
4199	.298	-251.1	62.9	1.999	80.7	527	.0103	.0060	.0051	.0056	.0105	.0001	-.0002	.0000
4200	.298	-250.8	62.9	2.268	80.6	527	.0186	.0060	.0053	.0052	.0188	.0001	-.0002	.0001
4201	.298	-250.9	62.9	3.313	80.6	527	.0528	.0064	.0061	.0033	.0531	.0002	-.0003	.0001
4202	.298	-250.7	62.9	4.416	80.5	527	.0873	.0077	.0063	.0009	.0876	.0002	-.0003	.0001
4203	.298	-250.7	62.9	4.941	80.5	527	.1040	.0084	.0063	-.0006	.1043	.0001	-.0002	.0001
4204	.297	-250.6	62.9	5.420	80.1	523	.1207	.0095	.0062	-.0020	.1210	.0002	-.0002	.0001
4205	.296	-250.5	62.9	6.448	80.0	522	.1581	.0129	.0068	-.0050	.1585	.0001	-.0003	.0001
4206	.297	-250.7	62.9	6.965	80.2	523	.1772	.0153	.0074	-.0064	.1778	.0001	-.0002	.0001
4207	.296	-250.5	62.9	7.494	80.0	522	.2003	.0185	.0082	-.0079	.2010	.0002	-.0002	.0001
4208	.297	-250.5	62.9	8.045	80.1	523	.2219	.0220	.0090	-.0093	.2228	.0001	-.0002	.0001
4210	.298	-250.3	62.8	8.604	80.3	528	.2458	.0263	.0101	-.0108	.2470	.0000	-.0002	.0001
4211	.298	-250.7	62.9	9.120	80.6	528	.2671	.0307	.0112	-.0120	.2686	.0000	-.0002	.0001
4212	.298	-250.4	62.9	9.669	80.3	526	.2915	.0361	.0134	-.0134	.2934	.0002	-.0002	.0001
4213	.298	-250.4	62.9	10.225	80.4	528	.3121	.0414	.0153	-.0147	.3145	.0000	-.0002	.0001
4214	.298	-250.5	62.9	10.781	80.5	528	.3347	.0475	.0178	-.0160	.3377	.0000	-.0002	.0001
4215	.298	-250.4	62.9	11.338	80.4	527	.3581	.0541	.0203	-.0174	.3617	-.0001	-.0001	.0000
4216	.298	-250.2	62.9	11.902	80.2	526	.3813	.0613	.0230	-.0187	.3857	-.0001	-.0001	.0000
4217	.298	-250.4	62.9	12.484	80.4	527	.4053	.0692	.0260	-.0201	.4106	.0000	-.0001	.0001
4218	.298	-250.2	62.9	13.750	80.2	527	.4580	.0883	.0327	-.0231	.4659	.0001	-.0003	.0001
4219	.298	-250.3	62.9	14.451	80.2	526	.4902	.1007	.0369	-.0248	.4998	.0001	-.0001	.0001
4220	.298	-250.5	62.9	15.027	80.3	526	.5156	.1113	.0404	-.0262	.5268	.0005	-.0003	.0004
4221	.298	-250.3	62.9	6.569	80.2	526	.1617	.0133	.0069	-.0053	.1621	.0001	-.0002	.0001

Run No. 174 Begins With Point No.4257

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4257	.298	-249.7	45.0	-2.892	57.3	378	-.1732	.0217	-.0004	.0129	-.1740	-.0003	-.0001	.0000
4258	.298	-249.7	44.9	-1.589	57.2	376	-.1206	.0143	.0021	.0109	-.1209	-.0002	.0000	.0000
4259	.298	-250.0	45.0	-.820	57.3	377	-.0906	.0112	.0029	.0098	-.0908	-.0002	-.0001	.0000
4260	.298	-250.0	44.9	-.314	57.4	377	-.0721	.0096	.0031	.0091	-.0722	-.0002	-.0001	.0000
4261	.298	-250.1	45.0	.215	57.4	377	-.0522	.0081	.0035	.0082	-.0522	-.0002	-.0002	.0000
4262	.298	-250.2	45.0	.728	57.4	377	-.0331	.0071	.0039	.0075	-.0331	-.0002	-.0003	.0001
4263	.298	-250.3	45.0	1.243	57.5	377	-.0137	.0064	.0044	.0066	-.0135	-.0002	-.0003	.0000
4264	.297	-250.4	45.0	1.493	57.4	376	-.0069	.0062	.0045	.0064	-.0067	-.0002	-.0003	.0001
4265	.298	-250.4	45.0	2.010	57.5	377	.0105	.0059	.0050	.0055	.0107	-.0001	-.0003	.0001
4266	.297	-250.4	45.0	2.272	57.5	376	.0192	.0059	.0052	.0051	.0194	-.0002	-.0003	.0001
4267	.297	-250.4	45.0	3.311	57.4	375	.0517	.0064	.0059	.0033	.0520	-.0002	-.0004	.0001
4268	.298	-250.5	45.0	4.392	57.6	377	.0858	.0076	.0061	.0009	.0861	-.0002	-.0003	.0001
4269	.298	-250.6	45.0	4.941	57.7	378	.1042	.0084	.0061	-.0007	.1045	-.0001	-.0005	.0001
4270	.298	-250.7	45.0	5.394	57.7	377	.1207	.0094	.0059	-.0021	.1210	-.0001	-.0003	.0001
4271	.297	-250.7	45.0	6.393	57.5	375	.1552	.0125	.0062	-.0049	.1556	-.0001	-.0004	.0001
4272	.298	-250.6	45.0	6.947	57.6	377	.1757	.0151	.0067	-.0063	.1762	-.0002	-.0005	.0001
4273	.297	-250.7	45.0	7.488	57.5	375	.1986	.0183	.0073	-.0078	.1992	-.0001	-.0003	.0001
4274	.298	-250.5	45.0	8.028	57.6	377	.2191	.0217	.0079	-.0091	.2200	-.0002	-.0004	.0001
4275	.298	-250.6	45.0	8.558	57.6	377	.2433	.0260	.0088	-.0106	.2445	-.0003	-.0003	.0001
4276	.297	-250.8	45.0	9.093	57.6	375	.2654	.0305	.0102	-.0119	.2668	-.0003	-.0003	.0001
4277	.298	-250.7	45.0	9.630	57.7	377	.2856	.0352	.0120	-.0131	.2874	-.0004	-.0003	.0001
4278	.297	-250.6	45.0	10.168	57.5	375	.3077	.0406	.0141	-.0144	.3100	-.0005	-.0003	.0001
4279	.297	-250.8	44.9	10.701	57.5	375	.3299	.0465	.0165	-.0156	.3328	-.0005	-.0002	.0001
4280	.297	-250.6	45.0	11.260	57.5	375	.3520	.0528	.0188	-.0170	.3556	-.0005	-.0003	.0001
4281	.297	-250.7	45.0	11.817	57.5	375	.3742	.0597	.0214	-.0182	.3785	-.0006	-.0002	.0000
4282	.298	-250.5	45.0	12.366	57.6	377	.3973	.0671	.0243	-.0196	.4024	-.0006	-.0002	.0000
4283	.297	-250.2	44.9	13.527	57.4	376	.4458	.0844	.0302	-.0222	.4532	-.0006	-.0002	.0001
4284	.297	-250.3	45.0	14.144	57.3	374	.4718	.0945	.0335	-.0237	.4806	-.0004	-.0003	.0001
4285	.297	-250.4	45.0	15.492	57.4	375	.5308	.1194	.0414	-.0268	.5434	.0001	-.0006	.0005
4286	.297	-250.0	44.9	6.498	57.3	376	.1595	.0129	.0062	-.0053	.1600	-.0002	-.0004	.0001

Run No. 175 Begins With Point No.4287

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4287	.298	-250.0	62.9	-3.104	80.1	527	-.1857	.0231	-.0020	.0130	-.1866	-.0002	-.0001	-.0001
4288	.298	-249.9	62.9	-1.739	80.1	527	-.1301	.0150	.0013	.0110	-.1305	-.0002	-.0001	.0000
4289	.298	-250.1	62.9	-.891	80.4	529	-.0973	.0113	.0022	.0098	-.0974	-.0001	-.0001	.0000
4290	.298	-249.8	62.9	-.358	80.0	527	-.0759	.0095	.0027	.0090	-.0759	-.0001	-.0001	.0000
4291	.298	-249.8	62.9	.694	80.0	527	-.0354	.0070	.0037	.0074	-.0353	-.0001	-.0003	.0000
4292	.298	-249.9	62.9	1.200	80.2	528	-.0191	.0063	.0041	.0067	-.0189	.0000	-.0003	.0000
4293	.298	-250.0	62.9	1.464	80.2	528	-.0095	.0061	.0044	.0063	-.0094	-.0002	-.0003	.0000
4294	.298	-249.8	62.9	1.994	80.1	528	.0088	.0057	.0049	.0054	.0090	-.0001	-.0004	.0000
4295	.298	-250.0	62.9	2.264	80.1	526	.0177	.0057	.0052	.0050	.0179	.0000	-.0004	.0000
4296	.298	-249.9	62.9	3.299	80.1	527	.0498	.0062	.0058	.0033	.0501	-.0001	-.0004	.0000
4297	.298	-249.8	62.9	4.411	80.1	528	.0846	.0075	.0063	.0009	.0849	.0000	-.0005	.0000
4298	.298	-249.6	62.9	4.939	79.9	527	.1041	.0083	.0063	-.0007	.1044	.0000	-.0004	.0000
4299	.298	-249.9	62.9	5.414	80.1	527	.1198	.0093	.0062	-.0021	.1201	.0001	-.0005	.0000
4300	.298	-249.9	62.9	6.436	80.0	526	.1553	.0125	.0066	-.0050	.1557	.0000	-.0004	.0001
4301	.298	-249.9	62.9	6.966	80.0	526	.1751	.0150	.0073	-.0065	.1757	-.0001	-.0006	.0001
4302	.298	-249.7	62.9	7.479	79.9	527	.1960	.0179	.0080	-.0078	.1966	.0002	-.0007	.0001
4303	.298	-249.7	62.9	8.030	80.0	528	.2186	.0215	.0086	-.0093	.2195	-.0002	-.0005	.0001
4304	.297	-249.7	62.9	8.585	79.9	526	.2436	.0259	.0099	-.0108	.2448	.0000	-.0005	.0001
4305	.298	-249.8	62.9	9.106	80.0	527	.2635	.0301	.0109	-.0121	.2649	-.0002	-.0005	.0001
4306	.298	-249.5	62.9	9.661	79.8	526	.2871	.0353	.0129	-.0134	.2890	-.0002	-.0006	.0001
4307	.298	-249.7	62.9	10.209	80.0	527	.3095	.0408	.0151	-.0148	.3118	-.0003	-.0005	.0001
4308	.298	-249.5	62.9	10.768	79.9	528	.3309	.0466	.0172	-.0160	.3337	-.0004	-.0005	.0000
4309	.297	-249.7	62.9	11.322	79.8	525	.3550	.0533	.0197	-.0174	.3585	-.0005	-.0004	.0000
4310	.299	-249.8	62.9	11.925	80.3	531	.3803	.0610	.0227	-.0189	.3847	-.0005	-.0004	-.0001
4311	.299	-249.8	62.9	12.497	80.4	532	.4036	.0688	.0254	-.0202	.4090	-.0005	-.0003	-.0001
4312	.299	-249.7	62.9	13.764	80.3	532	.4575	.0882	.0325	-.0233	.4653	-.0007	-.0003	-.0002
4313	.299	-249.7	62.9	14.460	80.3	532	.4883	.1002	.0363	-.0249	.4979	-.0005	-.0003	-.0002
4314	.299	-249.7	62.9	15.038	80.2	530	.5134	.1108	.0399	-.0263	.5246	-.0004	-.0003	-.0001
4315	.299	-249.7	62.9	6.537	80.3	532	.1596	.0130	.0068	-.0053	.1600	.0001	-.0006	.0001

Run No. 176 Begins With Point No.4316

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4316	.296	-250.3	62.9	-2.994	79.9	521	-.1820	.0225	-.0017	.0129	-.1829	-.0003	.0000	.0000
4317	.296	-250.3	62.9	-1.727	79.8	521	-.1292	.0150	.0013	.0110	-.1296	-.0001	-.0002	.0000
4318	.295	-250.1	62.9	-.877	79.5	518	-.0957	.0113	.0023	.0098	-.0959	-.0001	-.0001	.0000
4319	.296	-250.3	62.9	-.348	79.8	520	-.0762	.0096	.0027	.0090	-.0763	-.0001	-.0001	.0000
4320	.297	-250.3	62.9	.691	80.0	523	-.0368	.0071	.0036	.0075	-.0368	-.0001	-.0002	.0000
4321	.299	-250.2	62.9	1.202	80.6	532	-.0181	.0064	.0042	.0067	-.0180	-.0001	-.0003	.0000
4322	.299	-250.0	62.9	1.463	80.5	533	-.0090	.0061	.0044	.0063	-.0089	-.0001	-.0004	.0000
4323	.299	-250.0	62.9	1.992	80.4	532	.0084	.0058	.0049	.0055	.0086	-.0002	-.0004	.0000
4324	.299	-249.8	62.9	2.260	80.4	532	.0175	.0057	.0052	.0050	.0177	-.0002	-.0004	.0000
4325	.299	-249.8	62.9	3.302	80.3	532	.0510	.0063	.0060	.0033	.0513	-.0001	-.0005	.0000
4326	.299	-250.0	62.9	4.414	80.4	532	.0856	.0075	.0063	.0008	.0860	.0000	-.0005	.0000
4327	.299	-249.7	62.9	4.940	80.3	532	.1041	.0084	.0063	-.0007	.1045	.0001	-.0005	.0001
4328	.299	-249.8	62.9	5.422	80.4	532	.1205	.0094	.0063	-.0021	.1208	.0002	-.0006	.0000
4329	.299	-249.7	62.9	6.446	80.3	532	.1571	.0127	.0068	-.0051	.1576	-.0001	-.0006	.0001
4330	.299	-249.6	62.9	6.969	80.2	531	.1756	.0150	.0072	-.0064	.1761	.0000	-.0006	.0001
4331	.299	-249.8	62.9	7.486	80.4	532	.1971	.0180	.0080	-.0079	.1977	.0001	-.0006	.0001
4332	.299	-249.7	62.9	8.049	80.3	532	.2199	.0217	.0087	-.0093	.2207	-.0002	-.0005	.0000
4333	.299	-249.7	62.9	8.591	80.3	532	.2431	.0259	.0099	-.0108	.2442	-.0002	-.0006	.0001
4334	.299	-249.6	62.9	9.121	80.1	530	.2656	.0304	.0111	-.0121	.2671	.0000	-.0007	.0001
4335	.299	-249.8	62.9	9.678	80.4	532	.2868	.0354	.0128	-.0134	.2886	-.0002	-.0005	.0001
4336	.299	-249.5	62.9	10.234	80.3	532	.3110	.0412	.0152	-.0148	.3134	-.0003	-.0005	.0001
4337	.299	-249.7	62.9	10.789	80.3	532	.3332	.0471	.0174	-.0162	.3362	-.0003	-.0005	.0000
4338	.299	-249.7	62.9	11.345	80.2	531	.3566	.0537	.0201	-.0175	.3602	-.0004	-.0005	.0000
4339	.299	-249.6	62.9	11.930	80.2	532	.3795	.0610	.0227	-.0189	.3839	-.0005	-.0005	.0000
4340	.299	-249.5	62.9	12.489	80.1	531	.4035	.0687	.0257	-.0202	.4088	-.0005	-.0004	-.0001
4341	.299	-249.6	62.9	13.760	80.2	532	.4579	.0883	.0325	-.0232	.4657	-.0007	-.0003	-.0002
4342	.299	-249.7	62.9	14.453	80.2	531	.4877	.1001	.0363	-.0249	.4972	-.0007	-.0004	-.0002
4343	.299	-249.7	62.9	15.044	80.3	531	.5132	.1107	.0396	-.0263	.5243	-.0004	-.0004	.0000
4345	.299	-249.8	62.9	6.524	80.4	532	.1593	.0130	.0069	-.0053	.1598	.0000	-.0007	.0001

Run No. 177 Begins With Point No.4348

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4348	.296	-250.0	63.3	-3.022	80.2	526	-.1825	.0228	-.0015	.0131	-.1835	-.0002	-.0002	-.0001
4349	.297	-249.9	63.3	-1.747	80.3	527	-.1301	.0152	.0014	.0112	-.1305	-.0002	-.0001	.0000
4350	.297	-249.7	63.3	-.889	80.1	526	-.0964	.0115	.0024	.0100	-.0965	.0000	-.0002	.0000
4351	.297	-249.7	63.3	-.365	80.1	526	-.0766	.0098	.0028	.0092	-.0767	-.0001	-.0002	.0000
4352	.296	-249.9	63.3	.681	80.2	526	-.0367	.0072	.0038	.0076	-.0366	-.0001	-.0004	.0000
4353	.296	-249.6	63.3	1.191	80.0	526	-.0185	.0065	.0042	.0068	-.0183	.0000	-.0004	.0000
4354	.296	-250.0	63.3	1.456	80.2	526	-.0100	.0062	.0045	.0064	-.0098	-.0001	-.0005	.0000
4355	.297	-249.5	63.3	1.981	80.0	526	.0070	.0060	.0049	.0057	.0072	-.0002	-.0004	.0000
4356	.297	-249.5	63.3	2.254	80.1	526	.0165	.0059	.0052	.0052	.0167	-.0001	-.0005	.0000
4357	.296	-249.6	63.3	3.293	79.9	525	.0501	.0064	.0059	.0034	.0504	-.0001	-.0004	.0000
4358	.297	-249.4	63.3	4.408	80.0	527	.0864	.0076	.0064	.0009	.0867	.0000	-.0005	.0001
4359	.297	-249.5	63.3	4.931	80.1	527	.1041	.0084	.0064	-.0006	.1044	.0000	-.0005	.0000
4360	.296	-249.5	63.3	5.399	79.9	526	.1194	.0094	.0062	-.0020	.1197	.0002	-.0007	.0000
4361	.297	-249.3	63.3	6.429	80.0	527	.1558	.0127	.0067	-.0049	.1562	.0000	-.0006	.0001
4362	.296	-249.2	63.3	6.965	79.8	526	.1767	.0152	.0075	-.0064	.1773	.0000	-.0006	.0001
4363	.296	-249.1	63.3	7.480	79.8	526	.1958	.0180	.0080	-.0077	.1965	.0000	-.0007	.0000
4364	.297	-249.2	63.3	8.043	79.9	526	.2197	.0218	.0089	-.0092	.2206	.0000	-.0007	.0001
4365	.297	-249.3	63.3	8.596	79.9	527	.2428	.0260	.0100	-.0107	.2439	.0001	-.0007	.0001
4366	.297	-249.3	63.3	9.116	80.0	527	.2641	.0303	.0110	-.0120	.2656	-.0001	-.0008	.0001
4367	.296	-249.3	63.3	9.665	79.8	526	.2867	.0354	.0131	-.0133	.2885	-.0001	-.0007	.0001
4368	.296	-249.2	63.3	10.209	79.8	525	.3104	.0410	.0152	-.0147	.3127	-.0002	-.0006	.0001
4369	.296	-249.2	63.3	10.763	79.8	526	.3308	.0467	.0172	-.0159	.3337	-.0003	-.0006	.0000
4370	.296	-249.1	63.3	11.317	79.8	526	.3541	.0533	.0198	-.0173	.3577	-.0004	-.0006	.0000
4371	.297	-249.0	63.3	11.885	79.7	526	.3774	.0604	.0226	-.0186	.3817	-.0006	-.0005	-.0001
4372	.296	-249.3	63.3	12.450	79.8	525	.4012	.0681	.0253	-.0200	.4065	-.0007	-.0004	-.0001
4373	.297	-249.0	63.3	13.717	79.7	527	.4559	.0876	.0325	-.0231	.4637	-.0007	-.0003	-.0002
4374	.296	-249.0	63.3	14.408	79.7	525	.4836	.0989	.0360	-.0246	.4929	-.0007	-.0004	-.0002
4375	.297	-249.2	63.3	15.004	79.9	526	.5114	.1100	.0397	-.0261	.5224	-.0005	-.0004	-.0002
4376	.297	-249.3	63.3	6.519	79.9	526	.1594	.0130	.0070	-.0053	.1598	.0001	-.0007	.0001

Run No. 178 Begins With Point No.4377

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4377	.297	-249.7	72.2	-2.993	91.4	601	-.1808	.0224	-.0019	.0128	-.1817	-.0002	-.0001	-.0001
4378	.297	-249.7	72.2	-1.622	91.6	604	-.1247	.0144	.0012	.0108	-.1250	-.0001	-.0002	.0000
4379	.298	-249.7	72.2	-.857	91.6	604	-.0935	.0111	.0023	.0097	-.0936	.0000	-.0002	.0000
4380	.297	-249.5	72.2	-.171	91.6	604	-.0682	.0090	.0029	.0087	-.0683	.0000	-.0002	.0000
4381	.297	-249.8	72.2	.177	91.6	603	-.0544	.0080	.0032	.0081	-.0544	-.0001	-.0003	.0000
4382	.297	-249.8	72.2	1.172	91.5	600	-.0195	.0064	.0041	.0067	-.0194	-.0001	-.0004	.0000
4383	.296	-249.4	72.2	1.434	91.1	599	-.0088	.0061	.0045	.0063	-.0087	-.0001	-.0004	.0000
4384	.296	-249.6	72.2	1.929	91.2	600	.0060	.0058	.0048	.0056	.0062	-.0002	-.0004	.0000
4385	.297	-249.7	72.2	2.195	91.4	601	.0149	.0058	.0051	.0051	.0151	-.0001	-.0005	.0000
4386	.297	-249.5	72.2	3.190	91.3	601	.0465	.0062	.0058	.0035	.0468	.0000	-.0005	.0000
4387	.297	-249.4	72.2	4.306	91.2	601	.0826	.0073	.0063	.0011	.0829	.0000	-.0005	.0000
4388	.297	-249.3	72.2	4.787	91.2	602	.0987	.0081	.0064	-.0003	.0990	.0001	-.0006	.0000
4389	.297	-249.5	72.2	5.300	91.5	603	.1156	.0090	.0063	-.0018	.1159	.0000	-.0005	.0000
4390	.296	-249.3	72.2	6.234	91.1	600	.1478	.0118	.0067	-.0044	.1482	.0000	-.0005	.0001
4391	.296	-249.3	72.2	6.730	91.1	600	.1661	.0139	.0072	-.0057	.1665	.0001	-.0007	.0000
4392	.297	-249.2	72.2	7.254	91.3	603	.1866	.0165	.0080	-.0072	.1872	.0000	-.0006	.0000
4393	.297	-249.3	72.2	7.726	91.2	601	.2060	.0194	.0086	-.0085	.2068	.0001	-.0007	.0000
4394	.297	-249.3	72.2	8.257	91.1	601	.2278	.0232	.0095	-.0098	.2287	.0001	-.0007	.0001
4395	.297	-249.4	72.2	8.788	91.3	601	.2499	.0273	.0107	-.0112	.2511	-.0002	-.0006	.0001
4396	.297	-249.3	72.2	9.306	91.2	601	.2722	.0319	.0120	-.0126	.2738	.0000	-.0007	.0001
4397	.297	-249.3	72.2	9.847	91.2	601	.2932	.0369	.0139	-.0138	.2952	-.0001	-.0006	.0001
4398	.297	-249.3	72.2	10.371	91.2	602	.3133	.0421	.0157	-.0150	.3157	-.0001	-.0006	.0000
4399	.296	-249.4	72.2	10.897	91.1	599	.3362	.0481	.0183	-.0164	.3392	-.0003	-.0006	.0000
4400	.296	-249.7	72.2	11.446	91.2	599	.3604	.0549	.0209	-.0178	.3641	-.0003	-.0005	.0000
4401	.297	-249.7	72.2	11.996	91.5	601	.3821	.0618	.0237	-.0191	.3866	-.0005	-.0004	-.0001
4402	.296	-249.4	72.2	13.267	90.9	597	.4355	.0800	.0303	-.0221	.4422	-.0009	-.0003	-.0002
4403	.297	-249.7	72.2	14.719	91.4	601	.4970	.1042	.0384	-.0256	.5072	-.0005	-.0003	-.0002
4405	.297	-249.6	72.2	6.337	91.5	604	.1508	.0120	.0067	-.0047	.1512	.0000	-.0006	.0000

Run No. 179 Begins With Point No.4406

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4406	.297	-250.2	81.0	-3.002	102.9	675	-.1755	.0217	-.0016	.0125	-.1764	-.0002	-.0001	.0000
4407	.297	-250.4	81.0	-1.679	103.1	675	-.1224	.0142	.0012	.0106	-.1227	.0000	-.0001	.0000
4408	.297	-250.2	81.0	-.899	102.9	675	-.0923	.0110	.0022	.0095	-.0924	.0000	-.0001	.0000
4409	.297	-250.2	81.0	-.190	102.9	675	-.0650	.0087	.0028	.0085	-.0650	.0000	-.0002	.0000
4410	.297	-250.3	81.0	.165	103.1	676	-.0516	.0078	.0032	.0079	-.0516	.0000	-.0002	.0000
4411	.297	-250.1	81.0	1.184	102.7	673	-.0157	.0062	.0042	.0065	-.0156	-.0001	-.0003	.0000
4412	.297	-250.2	81.0	1.446	102.9	674	-.0064	.0060	.0044	.0061	-.0063	.0000	-.0003	.0000
4413	.297	-250.3	81.0	1.962	103.0	675	.0108	.0057	.0050	.0052	.0109	.0000	-.0003	.0000
4414	.297	-250.2	81.0	2.232	103.0	676	.0184	.0056	.0052	.0049	.0186	-.0001	-.0003	.0001
4415	.297	-250.0	81.0	3.249	102.8	675	.0508	.0061	.0059	.0032	.0511	.0000	-.0003	.0001
4416	.297	-250.1	81.0	4.396	102.9	676	.0876	.0073	.0065	.0005	.0879	.0000	-.0004	.0001
4417	.297	-250.2	81.0	4.926	102.9	675	.1047	.0082	.0065	-.0009	.1050	.0000	-.0003	.0001
4418	.297	-250.2	81.0	5.414	102.9	675	.1218	.0092	.0065	-.0024	.1221	.0001	-.0004	.0001
4419	.297	-250.1	81.0	6.384	102.8	674	.1552	.0123	.0072	-.0051	.1556	.0000	-.0004	.0001
4420	.297	-250.1	81.0	6.902	102.9	676	.1740	.0146	.0079	-.0065	.1745	-.0001	-.0004	.0001
4421	.297	-250.0	81.0	7.434	102.9	676	.1956	.0176	.0086	-.0079	.1962	.0001	-.0004	.0001
4422	.297	-250.1	81.0	7.939	102.9	675	.2174	.0209	.0095	-.0093	.2182	.0000	-.0003	.0001
4423	.297	-250.2	81.0	8.484	103.0	676	.2397	.0250	.0107	-.0107	.2407	-.0001	-.0004	.0002
4424	.297	-250.1	81.0	9.036	102.9	676	.2629	.0295	.0119	-.0122	.2643	-.0001	-.0004	.0001
4425	.296	-250.0	81.0	9.573	102.6	672	.2859	.0346	.0137	-.0135	.2876	.0000	-.0003	.0001
4426	.297	-250.3	81.0	10.139	103.0	675	.3067	.0399	.0157	-.0148	.3089	-.0001	-.0003	.0001
4427	.297	-250.1	81.0	10.699	102.9	675	.3293	.0458	.0181	-.0162	.3320	-.0001	-.0003	.0001
4428	.297	-250.2	81.0	11.270	102.9	674	.3529	.0525	.0209	-.0176	.3563	-.0002	-.0003	.0001
4429	.297	-250.2	81.0	11.843	102.8	674	.3762	.0596	.0235	-.0189	.3804	-.0002	-.0002	.0001
4430	.297	-250.1	81.0	12.438	102.8	674	.4018	.0678	.0267	-.0204	.4070	-.0003	-.0002	.0000
4431	.297	-250.1	81.0	13.761	102.7	673	.4562	.0876	.0336	-.0235	.4639	-.0001	-.0003	.0001
4432	.300	-250.0	81.0	6.416	103.6	686	.1571	.0125	.0072	-.0052	.1575	.0001	-.0004	.0001

Run No. 180 Begins With Point No.4433

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4433	.296	-250.1	90.0	-3.140	113.7	743	-.1799	.0224	-.0022	.0125	-.1808	-.0001	-.0001	.0000
4434	.296	-250.0	90.0	-1.774	113.8	745	-.1259	.0146	.0009	.0106	-.1263	.0000	.0000	.0000
4435	.296	-250.0	90.0	-.964	113.9	747	-.0943	.0111	.0020	.0095	-.0945	.0000	.0000	.0000
4436	.296	-250.1	90.0	-.235	113.9	745	-.0664	.0088	.0026	.0084	-.0664	.0001	-.0002	.0000
4437	.296	-250.2	90.0	.126	113.9	745	-.0534	.0078	.0031	.0079	-.0534	.0000	-.0001	.0000
4438	.296	-249.9	90.0	1.184	113.8	746	-.0152	.0061	.0042	.0063	-.0151	-.0001	-.0003	.0000
4439	.296	-250.1	90.0	1.457	113.9	744	-.0059	.0058	.0044	.0059	-.0058	-.0001	-.0003	.0000
4440	.296	-250.0	90.0	1.983	113.7	744	.0117	.0056	.0050	.0051	.0119	.0000	-.0003	.0000
4441	.296	-250.0	90.0	2.256	113.8	745	.0203	.0056	.0053	.0047	.0205	-.0001	-.0003	.0001
4442	.296	-250.1	90.0	3.300	113.7	744	.0525	.0061	.0060	.0030	.0527	.0001	-.0003	.0001
4443	.296	-249.9	90.0	4.518	113.7	744	.0915	.0074	.0066	.0001	.0917	.0000	-.0004	.0001
4444	.296	-250.0	90.0	5.016	113.7	744	.1079	.0082	.0067	-.0013	.1082	.0000	-.0004	.0001
4445	.296	-249.9	90.0	5.515	113.7	744	.1243	.0093	.0067	-.0027	.1246	.0001	-.0004	.0001
4446	.296	-250.0	90.0	6.515	113.7	744	.1600	.0127	.0076	-.0055	.1604	.0000	-.0003	.0002
4448	.299	-250.1	90.0	7.080	114.8	758	.1804	.0154	.0084	-.0070	.1809	.0001	-.0004	.0001
4449	.299	-250.0	90.0	7.627	114.8	758	.2025	.0186	.0092	-.0085	.2032	.0000	-.0004	.0001
4450	.298	-250.0	90.0	8.138	114.7	757	.2234	.0221	.0102	-.0098	.2243	.0000	-.0004	.0001
4451	.298	-250.0	90.0	8.728	114.6	756	.2492	.0267	.0115	-.0115	.2504	.0000	-.0003	.0002
4452	.298	-250.0	90.0	9.311	114.6	756	.2731	.0317	.0131	-.0129	.2747	.0000	-.0004	.0001
4453	.299	-250.1	90.0	9.885	114.9	758	.2959	.0371	.0151	-.0143	.2979	.0000	-.0004	.0001
4454	.299	-250.1	90.0	10.500	114.8	758	.3205	.0434	.0176	-.0158	.3230	.0000	-.0003	.0001
4455	.299	-249.9	90.0	11.098	114.7	758	.3451	.0501	.0203	-.0173	.3483	-.0001	-.0003	.0001
4456	.299	-249.9	90.0	11.712	114.7	758	.3701	.0576	.0233	-.0188	.3741	-.0001	-.0003	.0001
4457	.298	-250.0	90.0	12.312	114.6	756	.3945	.0655	.0264	-.0202	.3993	-.0002	-.0002	.0000
4459	.298	-249.9	90.0	6.625	114.5	755	.1630	.0131	.0078	-.0058	.1634	.0000	-.0003	.0001

Run No. 182 Begins With Point No.4491

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4491	.296	-250.1	63.0	-3.005	79.9	522	-.1788	.0225	-.0015	.0130	-.1797	.0001	-.0001	.0000
4492	.297	-250.0	63.0	-1.741	79.9	524	-.1277	.0151	.0013	.0111	-.1281	.0001	-.0001	.0000
4493	.297	-250.0	63.0	-.896	80.0	524	-.0949	.0115	.0024	.0099	-.0951	.0001	-.0001	.0000
4494	.296	-250.0	63.0	-.370	79.8	522	-.0745	.0097	.0028	.0092	-.0746	.0002	-.0001	.0000
4495	.296	-250.0	63.0	.685	79.8	522	-.0348	.0072	.0037	.0075	-.0347	.0002	-.0002	.0000
4496	.296	-249.9	63.0	1.211	79.6	521	-.0164	.0065	.0042	.0068	-.0163	.0001	-.0003	.0001
4497	.296	-249.7	63.0	1.475	79.6	522	-.0074	.0062	.0044	.0064	-.0072	.0002	-.0003	.0001
4499	.297	-249.7	63.0	2.002	79.8	525	.0104	.0060	.0050	.0055	.0106	.0001	-.0004	.0001
4500	.297	-249.8	63.0	2.267	79.9	525	.0186	.0059	.0052	.0051	.0188	.0001	-.0004	.0001
4501	.297	-249.8	63.0	3.306	79.9	525	.0515	.0065	.0059	.0034	.0518	.0002	-.0004	.0001
4502	.297	-249.7	63.0	4.417	79.9	526	.0873	.0077	.0063	.0009	.0876	.0003	-.0004	.0001
4503	.297	-249.7	63.0	4.945	79.8	525	.1048	.0085	.0062	-.0006	.1052	.0003	-.0004	.0001
4504	.297	-249.7	63.0	5.424	79.9	526	.1212	.0095	.0061	-.0021	.1216	.0004	-.0004	.0001
4505	.297	-250.0	63.0	6.446	80.0	525	.1569	.0128	.0066	-.0050	.1573	.0002	-.0004	.0001
4506	.298	-250.5	63.0	6.964	80.5	527	.1759	.0152	.0072	-.0063	.1764	.0002	-.0004	.0001
4507	.298	-250.5	63.0	7.498	80.5	527	.1983	.0182	.0079	-.0078	.1990	.0003	-.0005	.0001
4508	.297	-250.2	63.0	8.055	80.2	526	.2217	.0220	.0089	-.0093	.2226	.0002	-.0005	.0002
4509	.298	-250.0	63.0	8.595	80.2	527	.2443	.0262	.0098	-.0107	.2454	.0002	-.0003	.0002
4510	.298	-250.1	63.0	9.126	80.3	528	.2655	.0305	.0110	-.0120	.2670	.0001	-.0005	.0001
4511	.297	-249.9	63.0	9.674	80.0	526	.2898	.0358	.0131	-.0134	.2917	.0001	-.0004	.0002
4512	.298	-250.0	63.0	10.216	80.3	528	.3106	.0411	.0150	-.0147	.3130	.0001	-.0003	.0002
4513	.297	-250.0	63.0	10.767	80.1	526	.3336	.0472	.0174	-.0160	.3366	.0001	-.0003	.0002
4514	.298	-250.0	63.0	11.337	80.2	528	.3568	.0538	.0200	-.0174	.3604	.0001	-.0003	.0001
4515	.297	-250.0	63.0	11.894	80.1	526	.3801	.0609	.0226	-.0188	.3845	.0000	-.0003	.0001
4516	.298	-250.0	63.0	12.459	80.2	528	.4032	.0686	.0256	-.0201	.4085	.0000	-.0002	.0001
4517	.297	-249.7	63.0	13.715	80.0	526	.4563	.0877	.0321	-.0231	.4641	.0001	-.0002	.0002
4518	.298	-249.9	63.0	14.405	80.1	527	.4867	.0995	.0361	-.0247	.4962	.0004	-.0003	.0003

Run No. 183 Begins With Point No.4519

point	M_∞	T_T, °F	P_T, psi	α, deg	$R_c \times 10^{-6}$	q_∞, psf	C_L	C_D	C_m	C_A	C_N	C_Y	C_l	C_n
4519	.298	-250.5	63.0	-3.012	80.4	526	-.1811	.0226	-.0016	.0130	-.1820	.0000	-.0002	.0000
4520	.298	-250.4	63.0	-1.757	80.6	529	-.1304	.0152	.0012	.0111	-.1308	.0001	-.0001	.0001
4521	.298	-250.5	63.0	-.904	80.6	529	-.0962	.0115	.0023	.0099	-.0964	.0001	-.0002	.0001
4522	.298	-250.6	63.0	-.368	80.6	529	-.0755	.0096	.0028	.0091	-.0756	.0002	-.0001	.0001
4523	.299	-250.8	63.0	.688	80.8	530	-.0350	.0071	.0037	.0075	-.0349	.0001	-.0003	.0001
4524	.298	-250.5	63.0	1.205	80.6	529	-.0178	.0064	.0041	.0067	-.0176	.0001	-.0003	.0001
4525	.298	-250.8	63.0	1.472	80.8	529	-.0082	.0062	.0044	.0063	-.0081	.0002	-.0004	.0001
4526	.298	-250.7	63.0	1.997	80.6	528	.0094	.0059	.0049	.0055	.0096	.0001	-.0003	.0001
4527	.298	-250.6	63.0	2.264	80.7	529	.0178	.0059	.0051	.0051	.0180	.0001	-.0003	.0001
4528	.298	-250.5	63.0	3.310	80.5	527	.0511	.0064	.0058	.0034	.0514	.0002	-.0004	.0001
4529	.298	-250.5	63.0	4.418	80.5	527	.0868	.0076	.0062	.0008	.0871	.0002	-.0003	.0001
4530	.298	-250.5	63.0	4.944	80.5	527	.1045	.0084	.0062	-.0006	.1048	.0002	-.0004	.0001
4531	.298	-250.3	63.0	5.428	80.5	529	.1214	.0094	.0061	-.0022	.1218	.0003	-.0004	.0001
4532	.298	-250.7	63.0	6.434	80.6	528	.1552	.0126	.0064	-.0049	.1557	.0001	-.0002	.0002
4533	.297	-250.7	63.0	6.965	80.4	525	.1754	.0151	.0071	-.0063	.1760	.0002	-.0002	.0002
4534	.297	-250.4	63.0	7.485	80.3	526	.1964	.0180	.0078	-.0077	.1971	.0002	-.0002	.0002
4535	.298	-250.3	63.0	8.038	80.3	526	.2191	.0217	.0085	-.0092	.2200	.0002	-.0002	.0002
4536	.298	-250.0	63.0	8.602	80.2	528	.2456	.0262	.0098	-.0108	.2468	.0002	-.0005	.0001
4537	.296	-250.0	63.0	9.111	79.8	523	.2660	.0305	.0109	-.0121	.2675	.0001	-.0007	.0001
4538	.297	-249.9	63.0	9.654	79.9	524	.2884	.0355	.0129	-.0134	.2903	.0002	-.0007	.0001
4540	.297	-250.3	63.0	10.192	80.1	524	.3094	.0408	.0148	-.0146	.3117	.0000	-.0006	.0001
4541	.296	-250.1	63.0	10.743	79.7	521	.3331	.0469	.0174	-.0160	.3360	.0000	-.0006	.0001
4542	.296	-249.8	63.0	11.305	79.8	523	.3553	.0534	.0197	-.0174	.3588	-.0001	-.0006	.0001
4543	.297	-249.5	63.0	11.883	79.7	524	.3798	.0608	.0227	-.0188	.3842	-.0002	-.0005	.0000
4544	.297	-249.8	63.0	12.441	79.8	524	.4033	.0684	.0256	-.0201	.4085	-.0004	-.0004	-.0001
4545	.296	-249.8	63.0	13.688	79.7	522	.4553	.0872	.0321	-.0230	.4630	-.0003	-.0004	-.0001
4546	.296	-249.9	63.0	14.386	79.8	523	.4858	.0991	.0362	-.0247	.4952	-.0003	-.0004	-.0001
4547	.296	-249.8	63.0	14.978	79.8	523	.5112	.1098	.0396	-.0261	.5221	-.0003	-.0004	-.0002
4548	.297	-249.9	63.0	6.484	79.9	524	.1588	.0129	.0067	-.0052	.1593	.0003	-.0007	.0001

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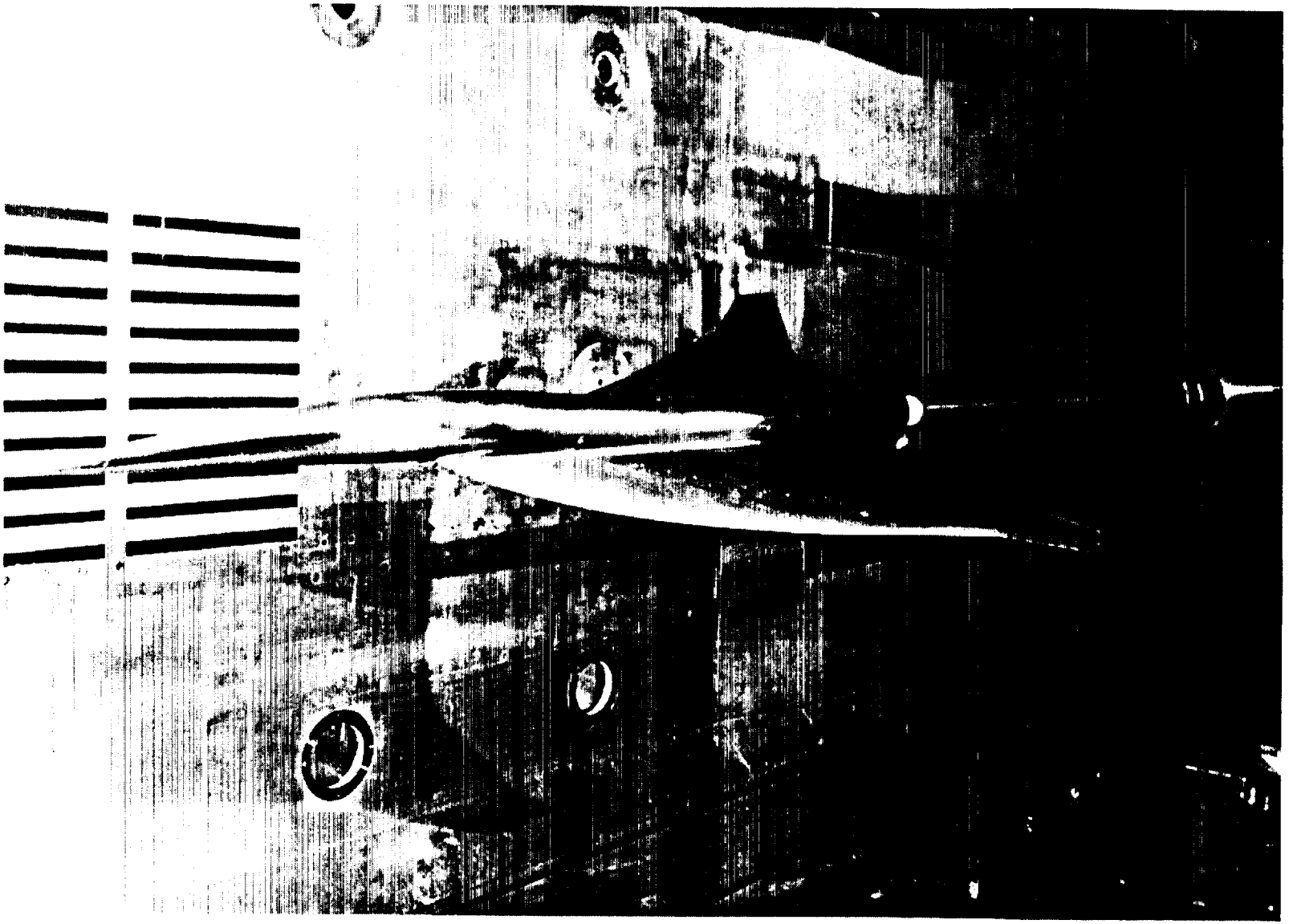
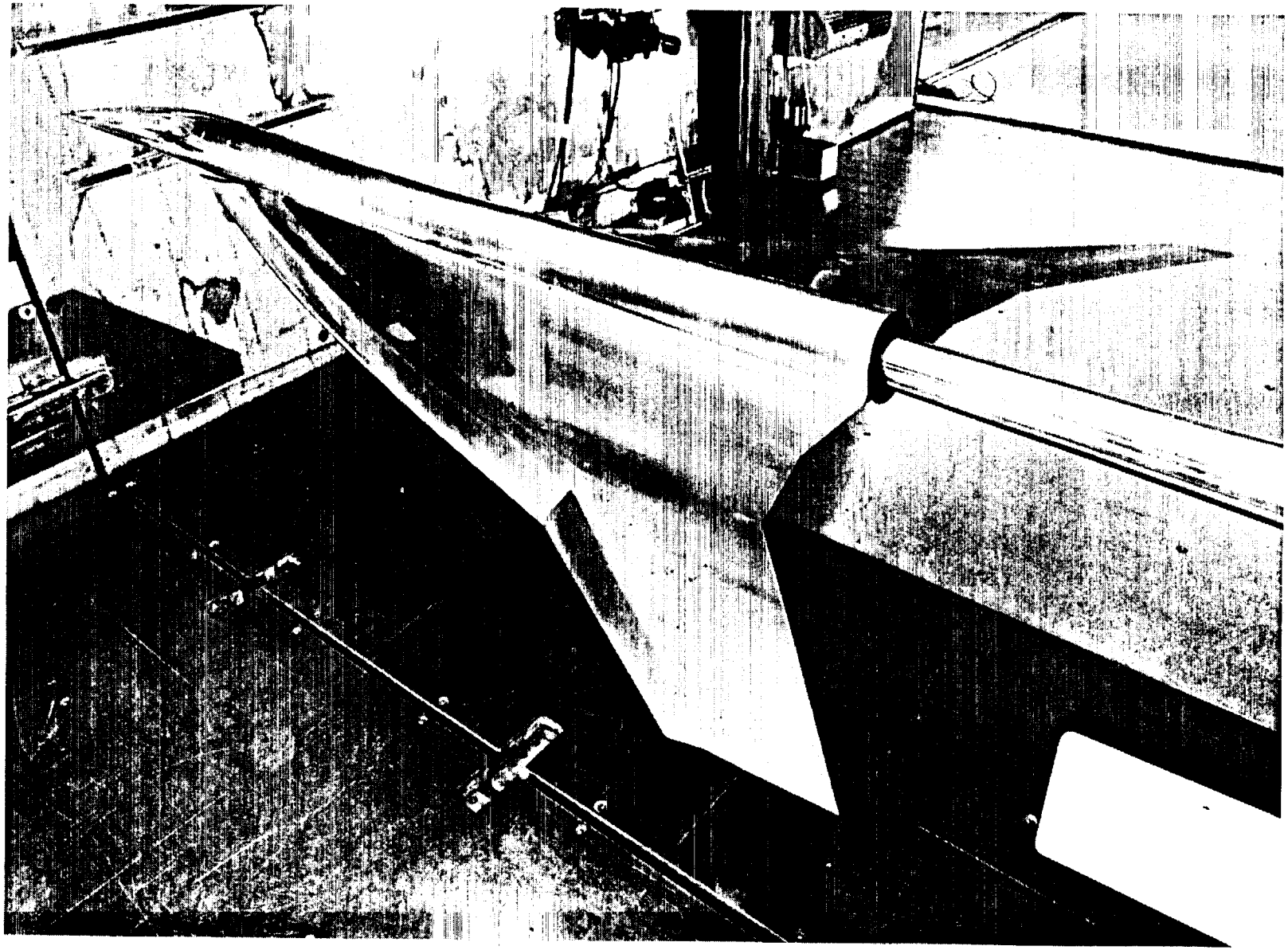


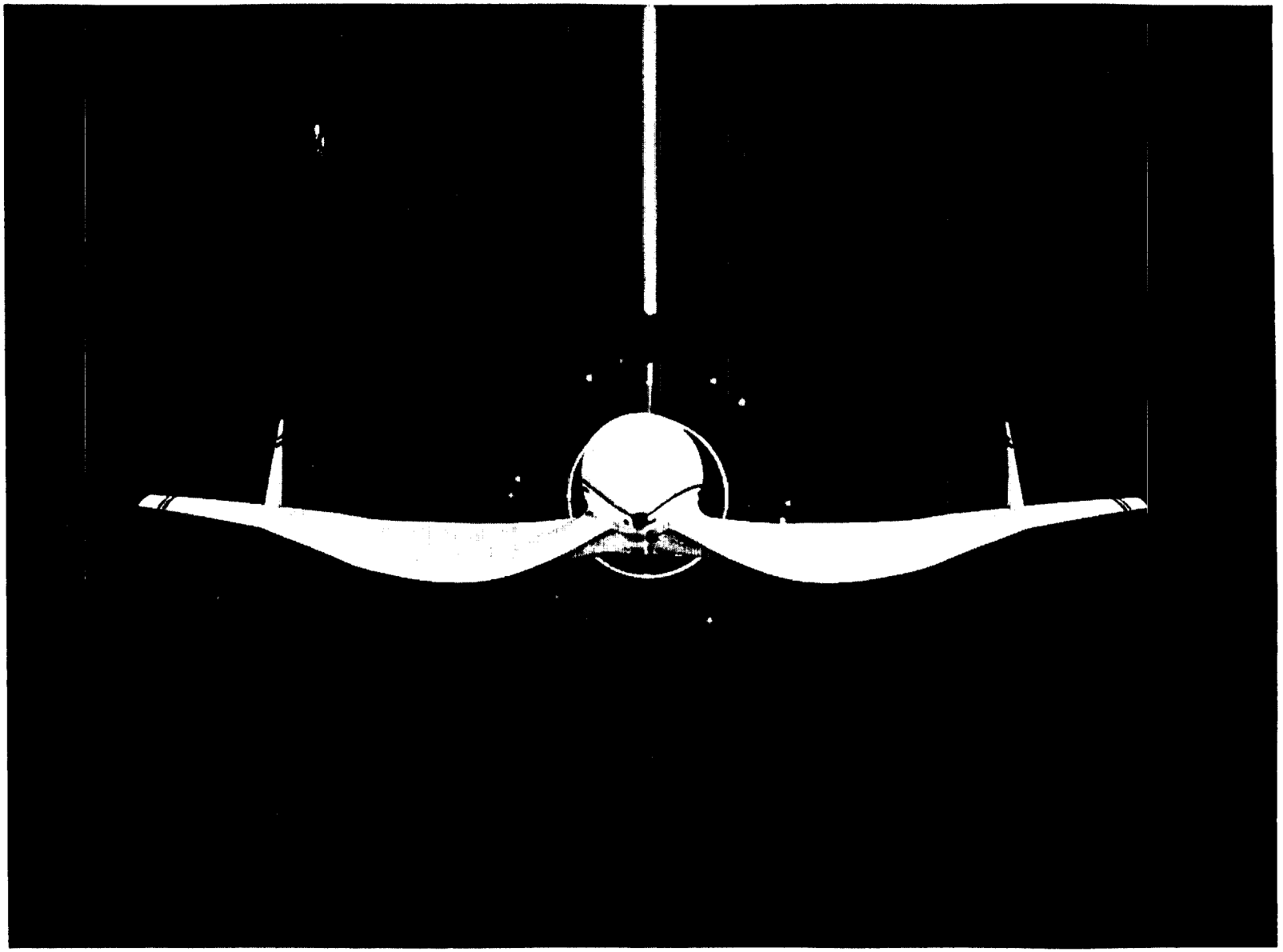
L-90-11030

Figure 1. Photograph of AST-210 model with small-radius-flap configuration mounted in NTF test section. $\delta_{LE} = 0°$.



L-91-16393

Figure 2. Photograph of AST-210 model with large-radius-flap configuration. $\delta_{LE} = 30°$.



L-90-12562

Figure 3. Head-on view of AST-210 model with small-radius-flap configuration. $\delta_{LE} = 0°$.

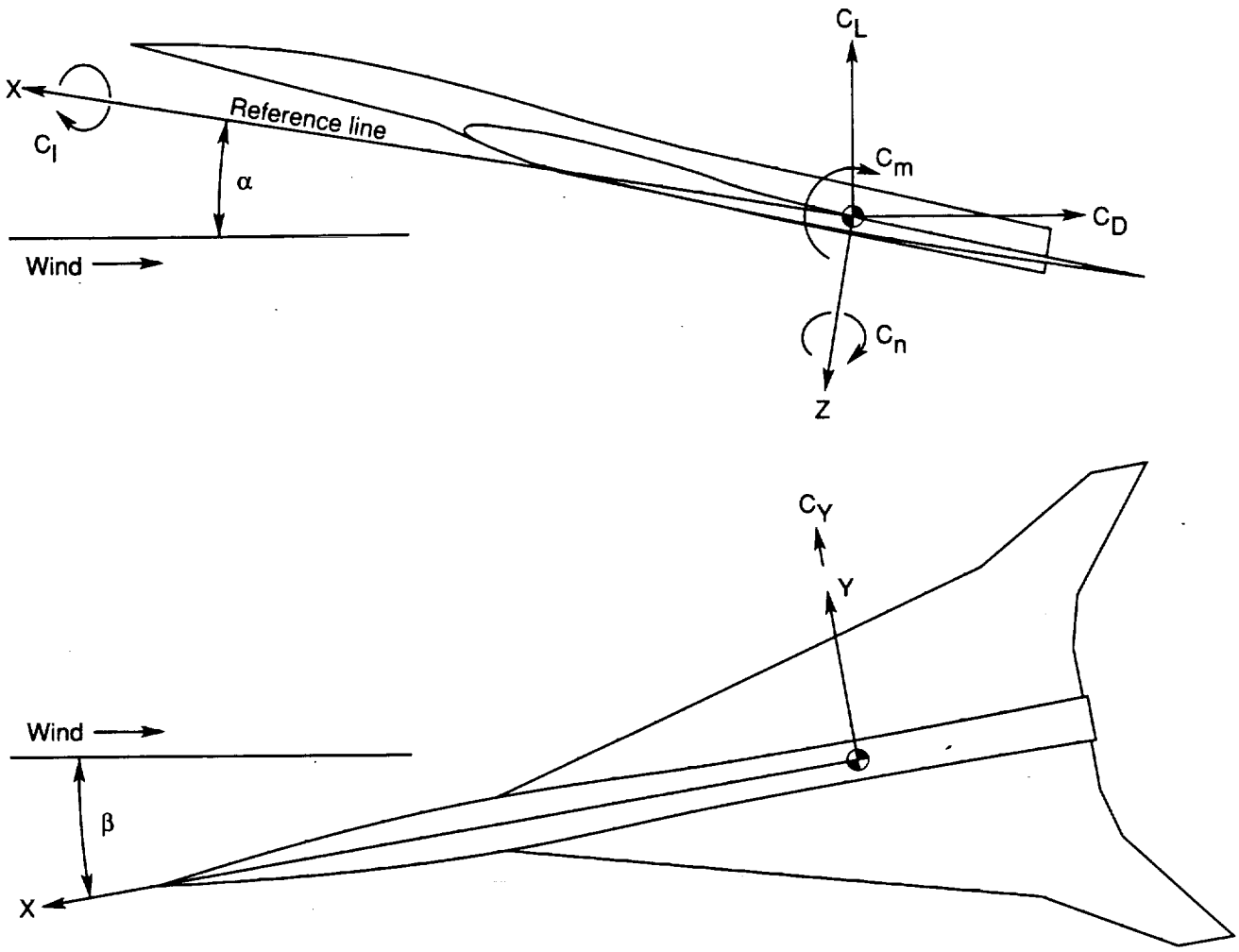


Figure 4. System of axes.

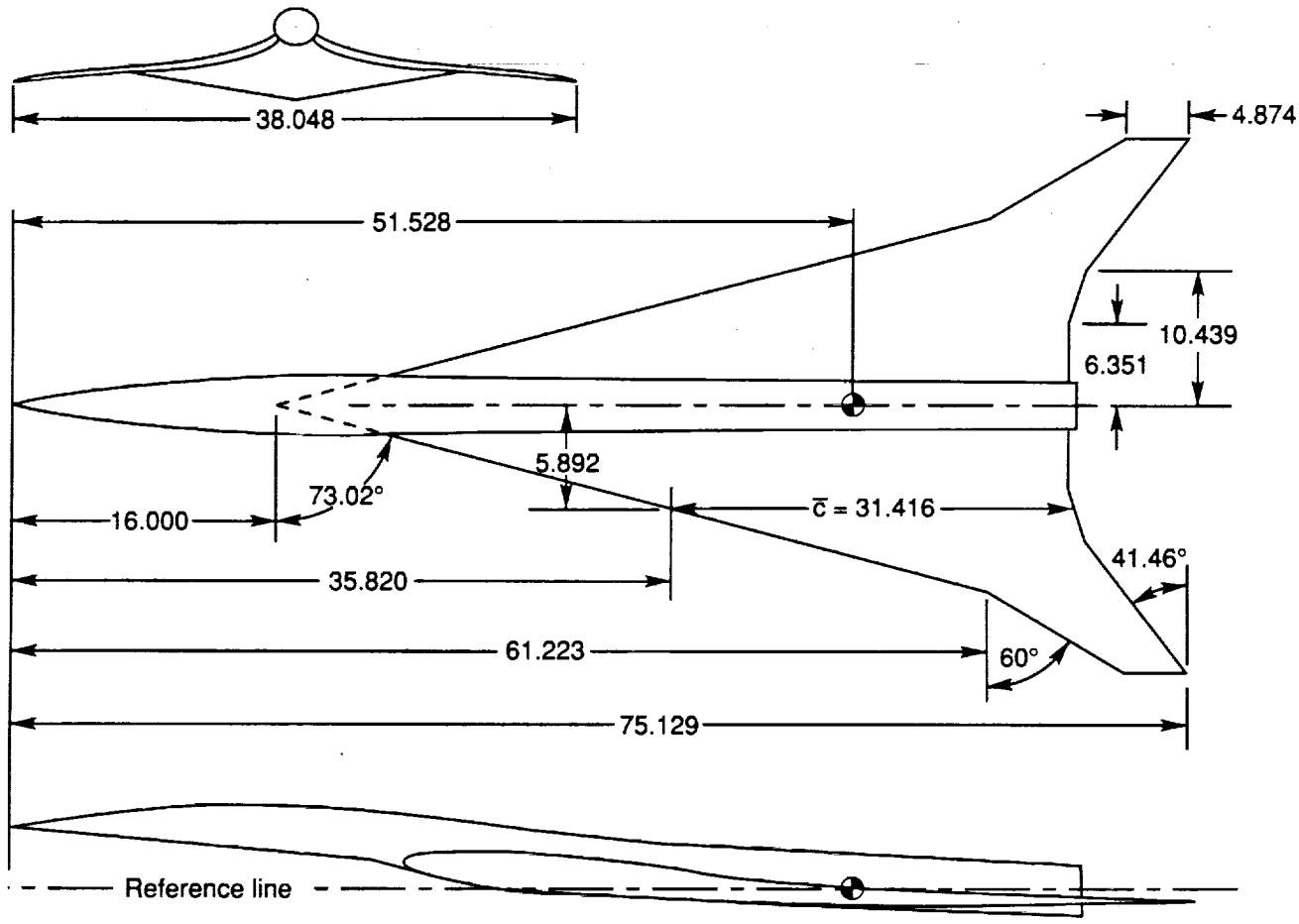


Figure 5. Three-view sketch of model. Dimensions are given in inches.

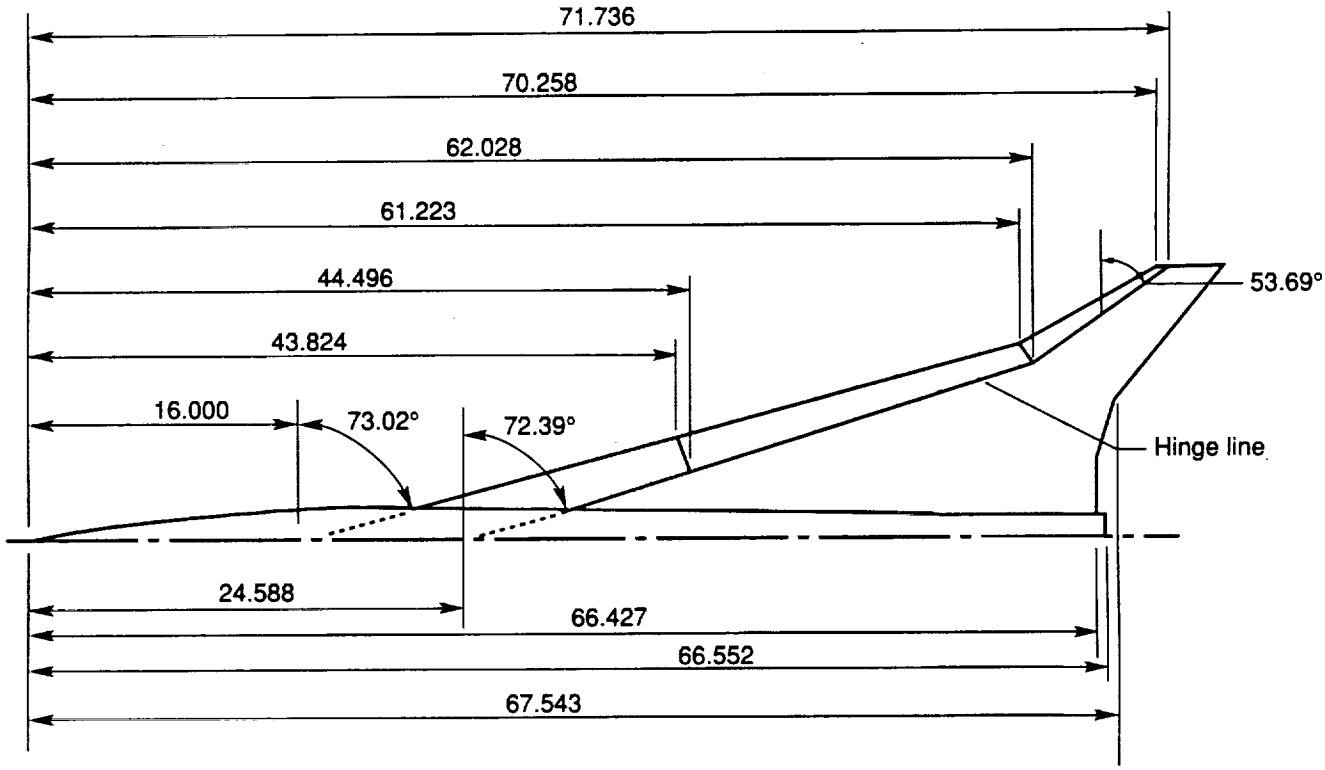


Figure 6. Details of leading-edge flap system. Dimensions are given in inches.

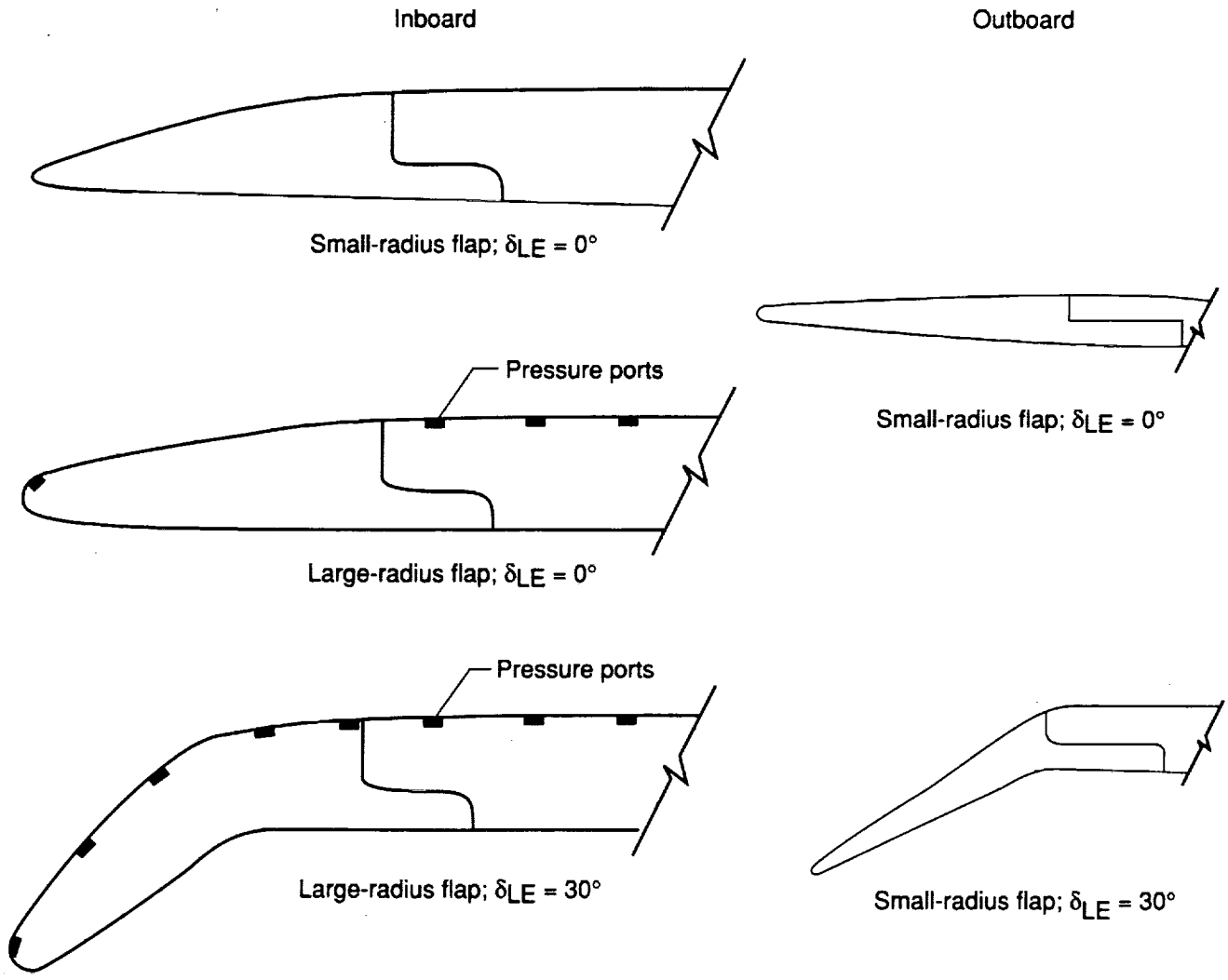
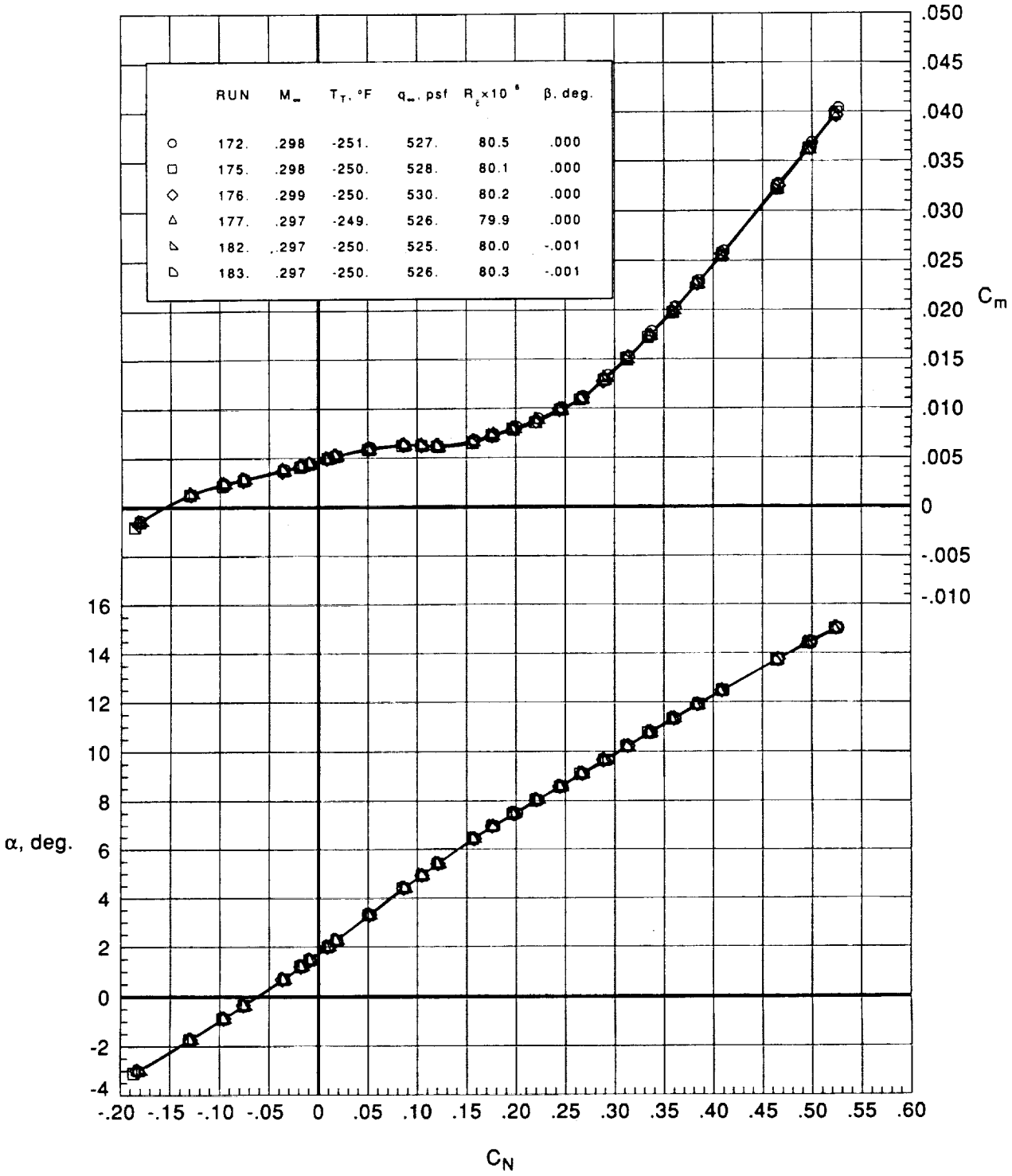
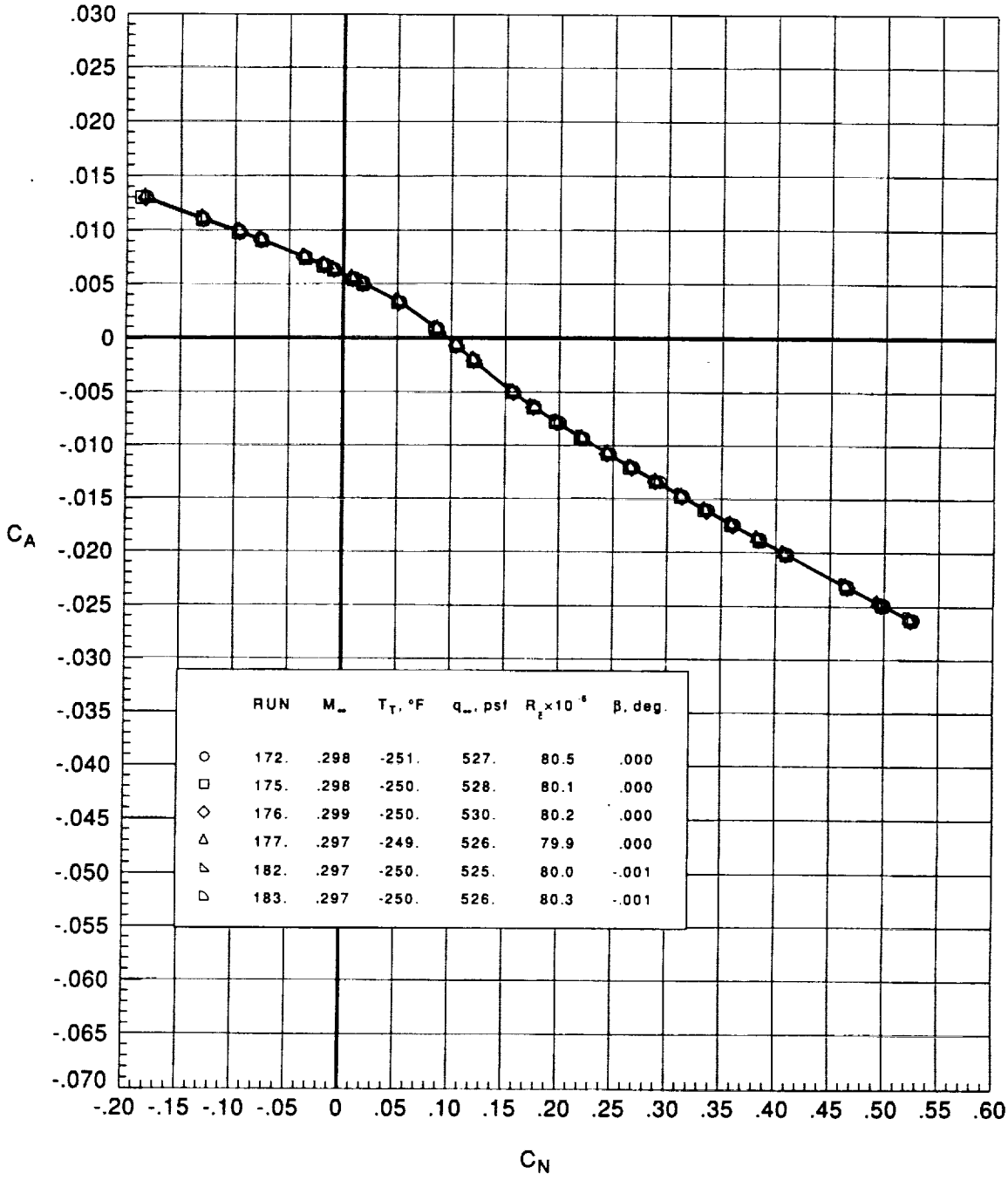


Figure 7. General sketch of leading-edge flap geometry.



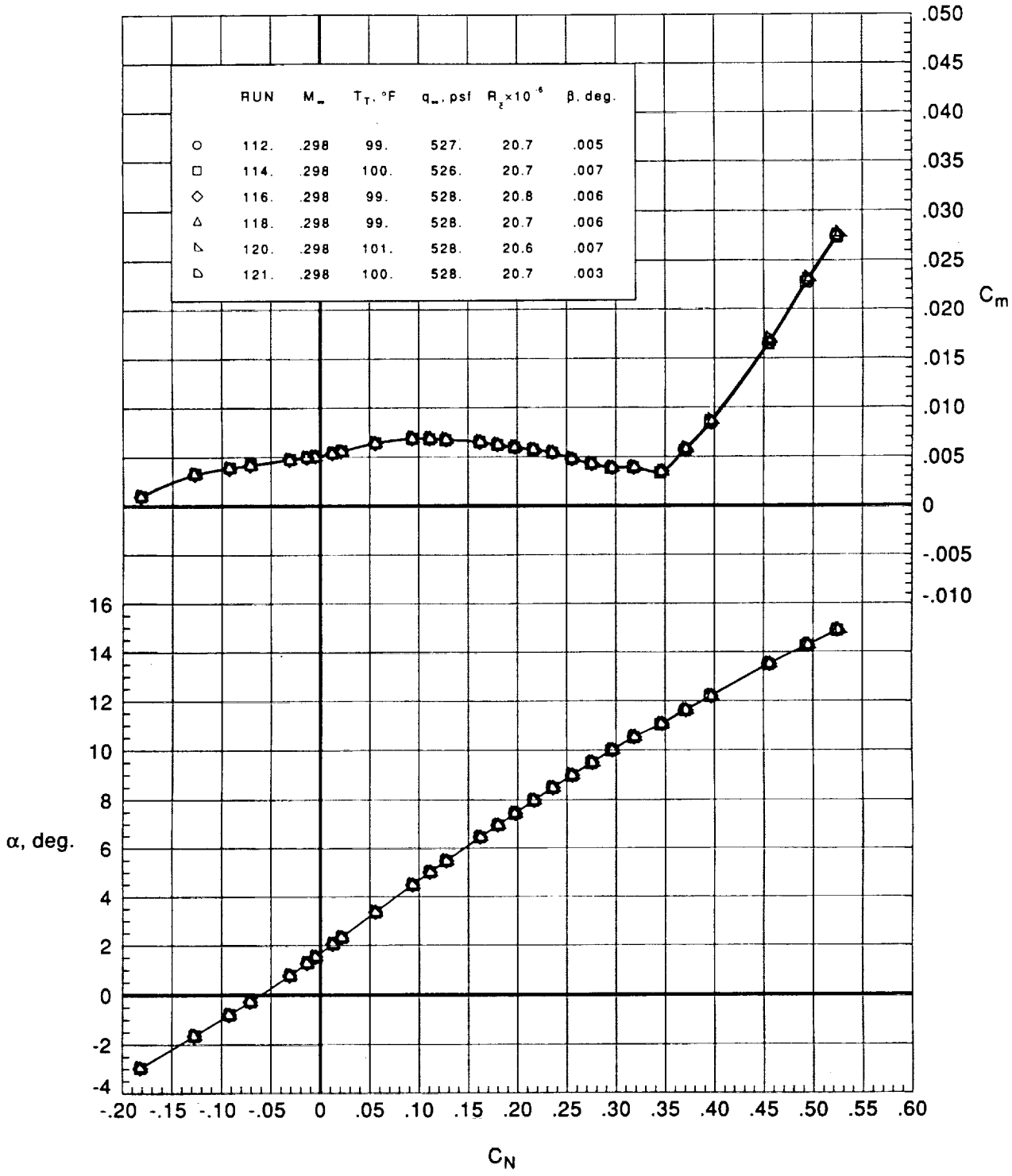
(a) C_m and α versus C_N.

Figure 8. Data repeatability of small-radius-flap configuration. $\delta_{LE} = 0°$; $R_{\bar{c}} \approx 80 \times 10^6$.



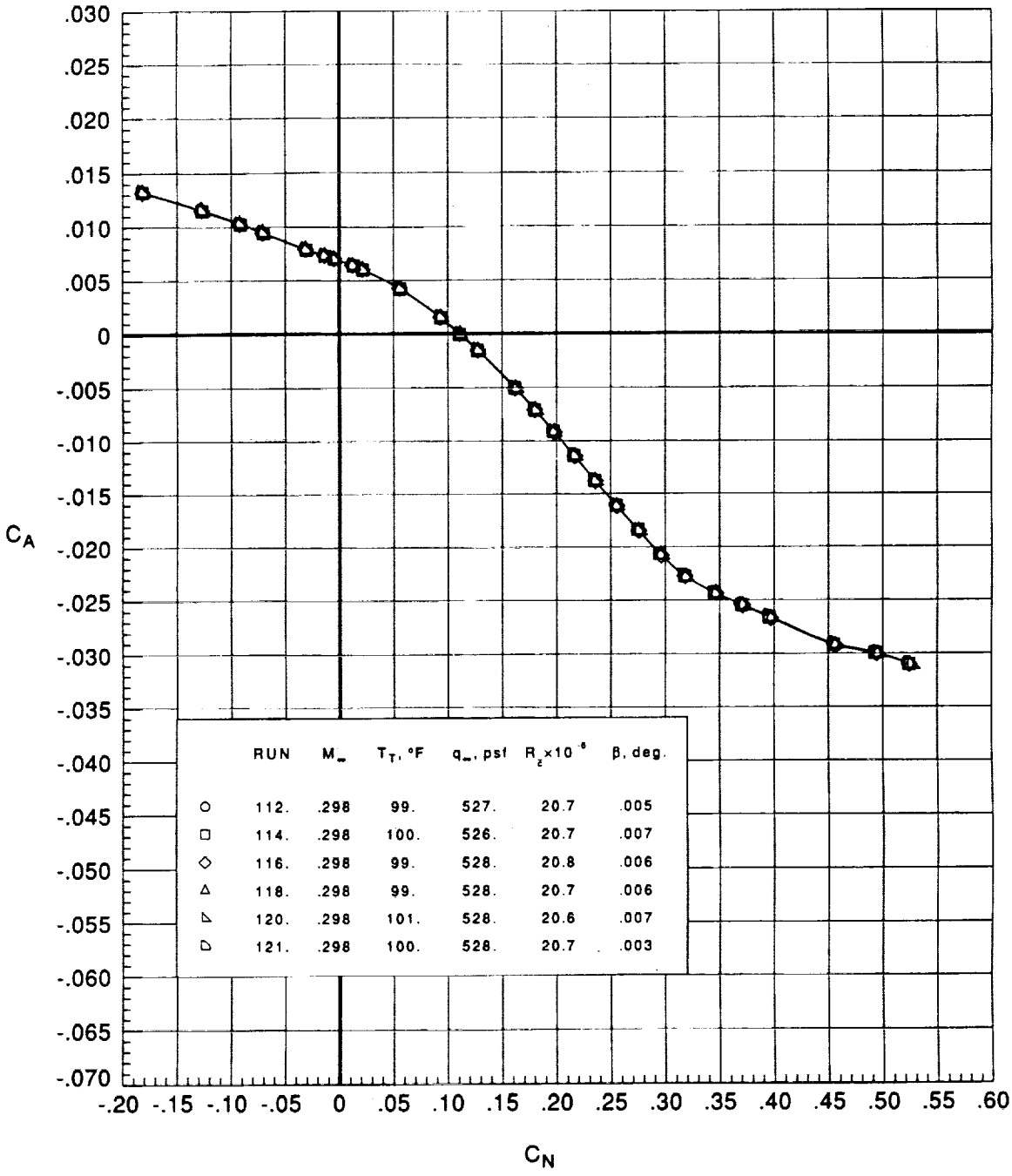
(b) C_A versus C_N.

Figure 8. Concluded.



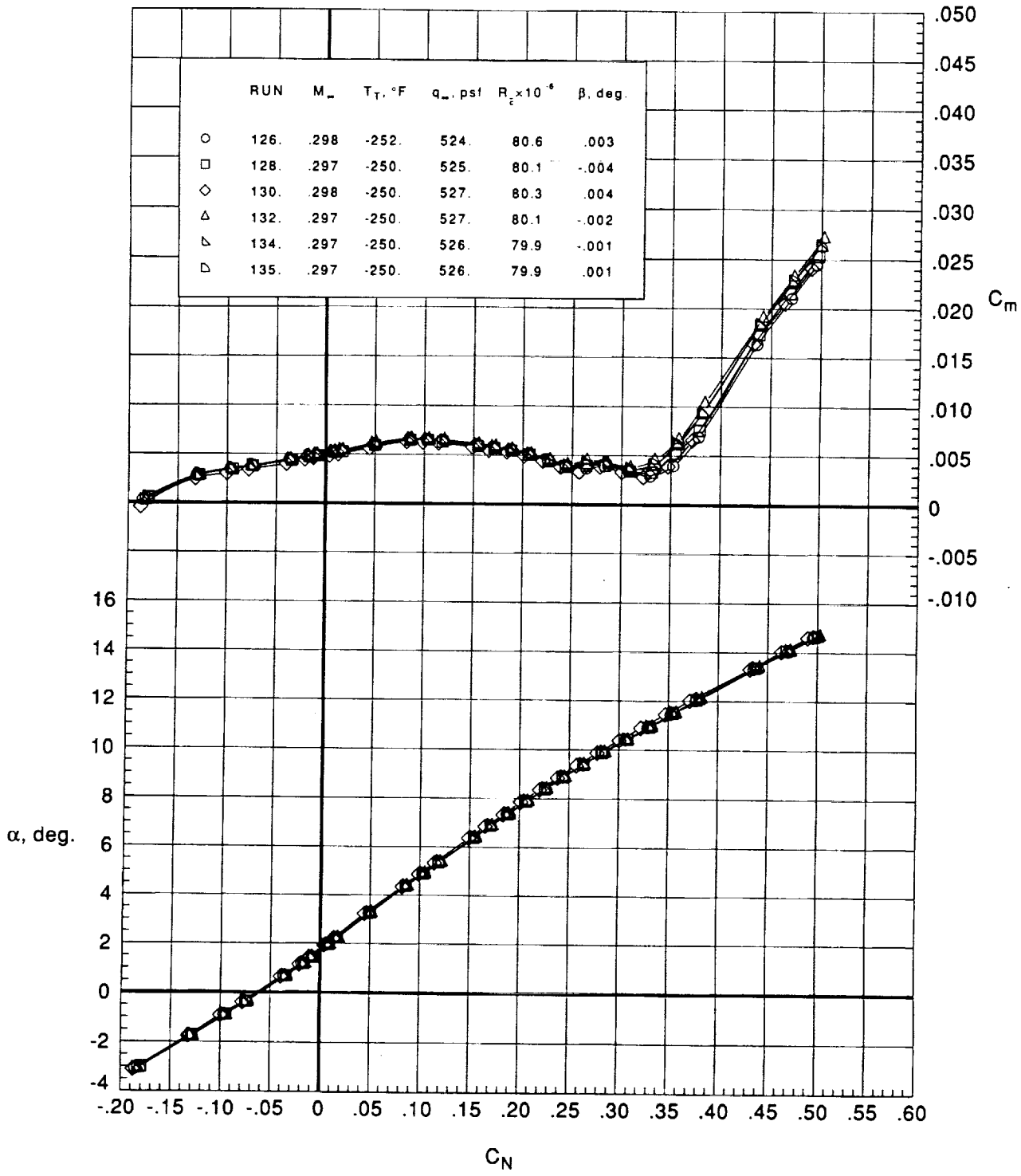
(a) C_m and α versus C_N.

Figure 9. Data repeatability of large-radius-flap configuration. $\delta_{LE} = 0°$; $R_{\bar{c}} \approx 20 \times 10^6$.



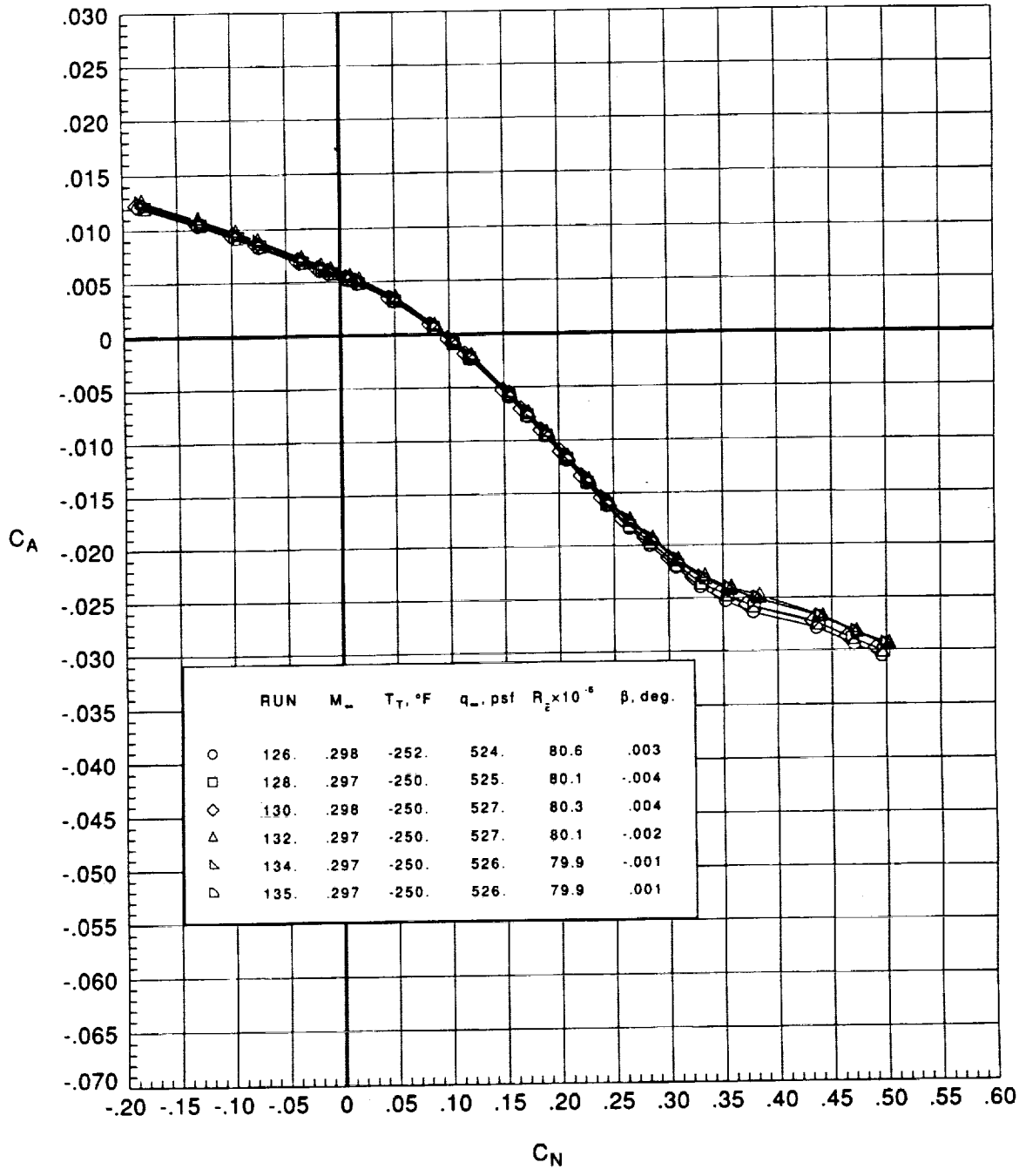
(b) C_A versus C_N.

Figure 9. Concluded.



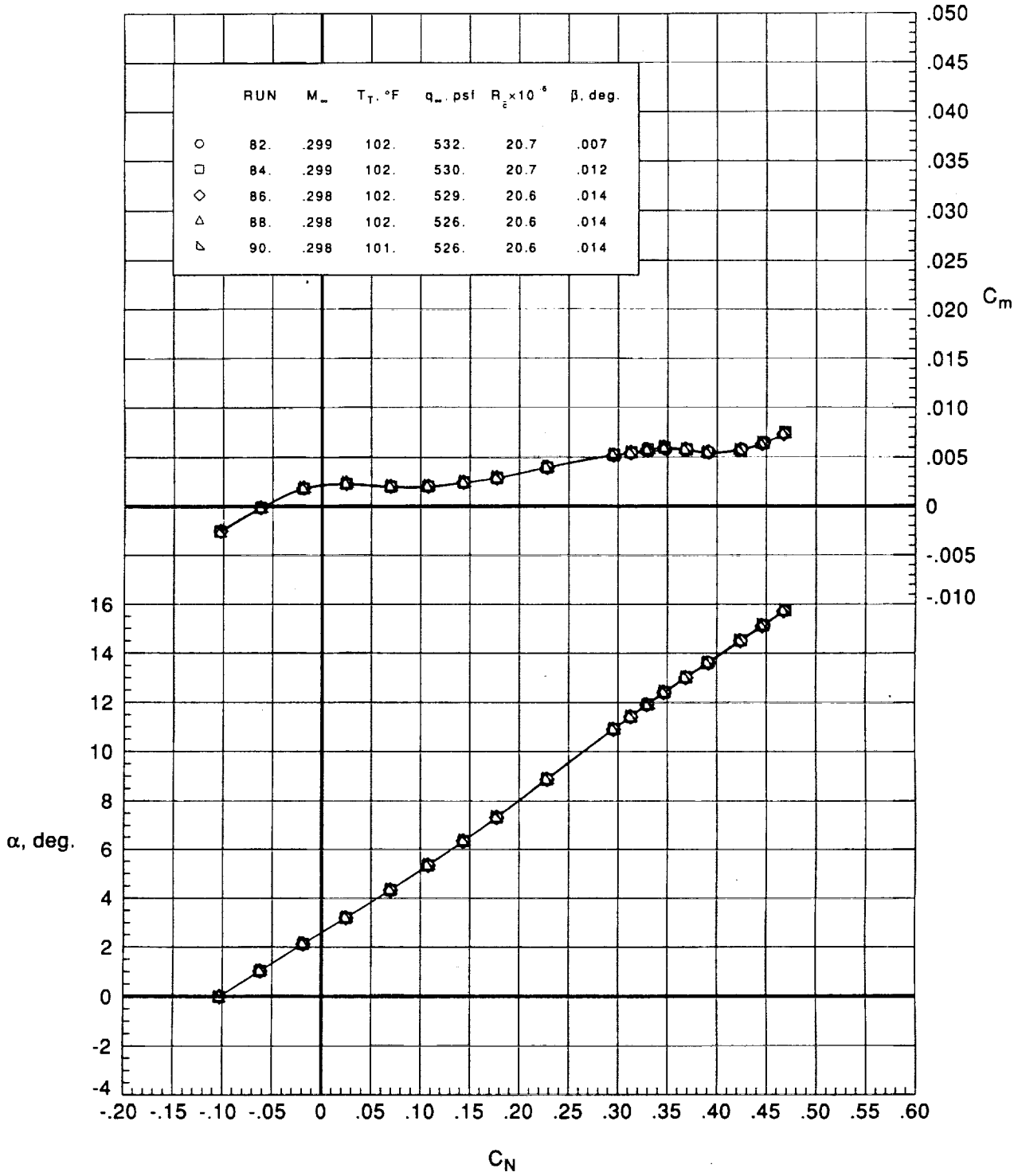
(a) C_m and α versus C_N.

Figure 10. Data repeatability of large-radius-flap configuration. $\delta_{LE} = 0°$; $R_{\bar{c}} \approx 80 \times 10^6$.



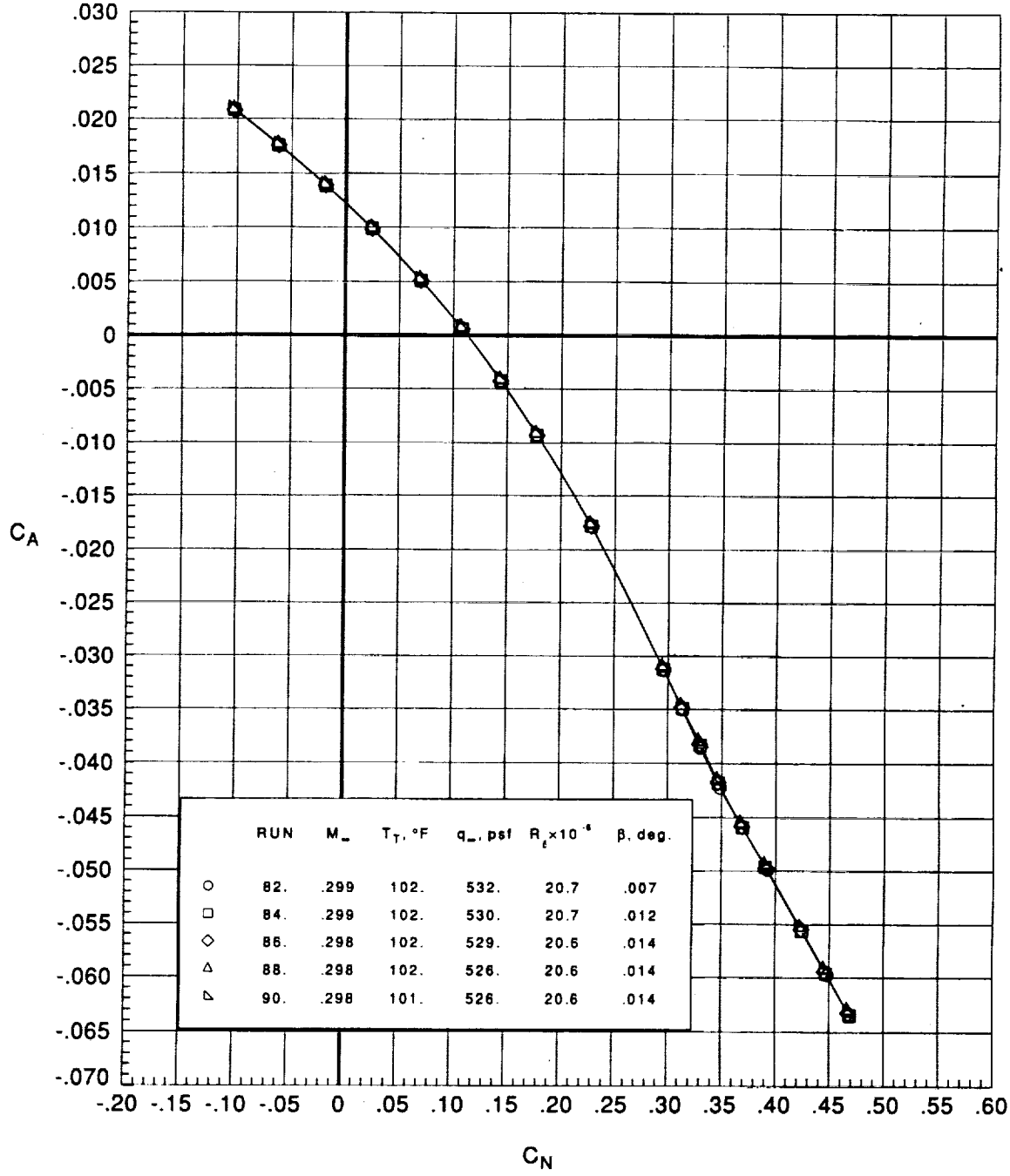
(b) C_A versus C_N.

Figure 10. Concluded.



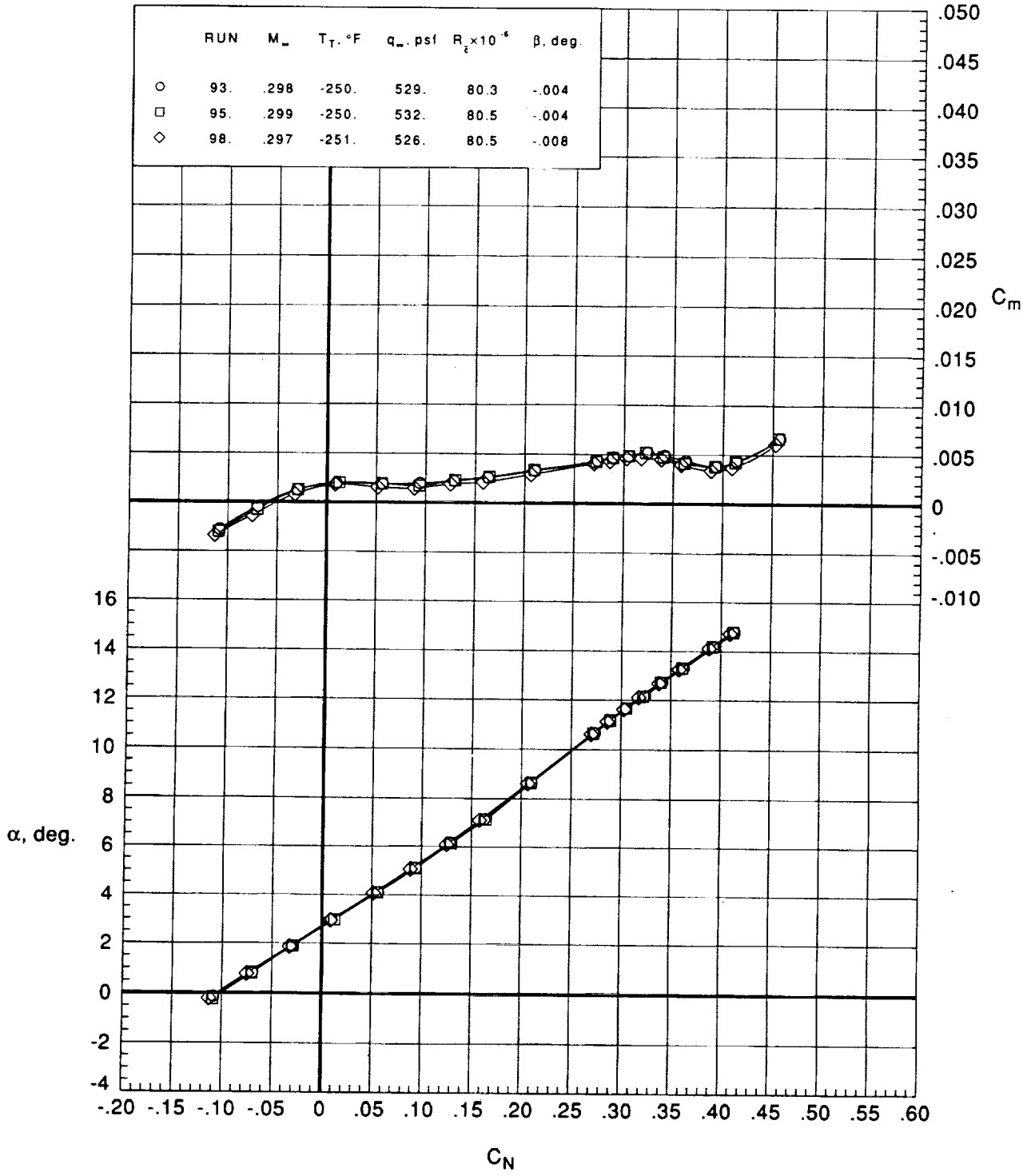
(a) C_m and α versus C_N.

Figure 11. Data repeatability of large-radius-flap configuration. $\delta_{LE} = 30°$; $R_{\bar{c}} \approx 20 \times 10^6$.



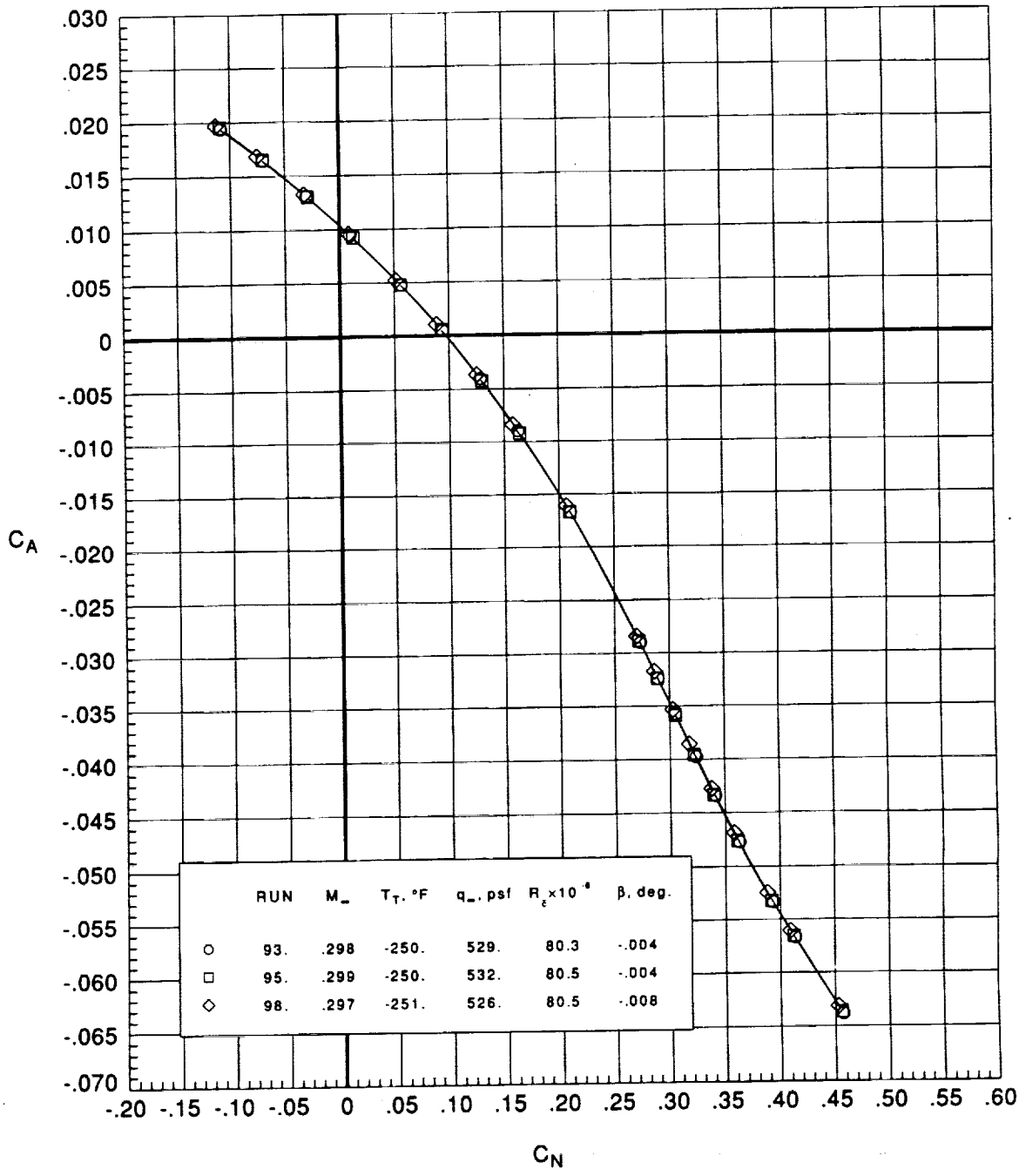
(b) C_A versus C_N.

Figure 11. Concluded.



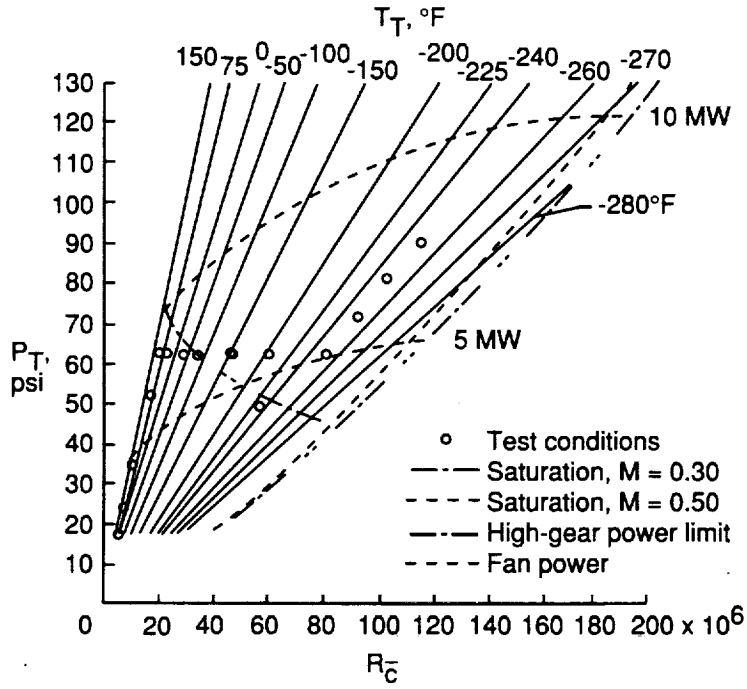
(a) C_m and α versus C_N.

Figure 12. Data repeatability of large-radius-flap configuration. $\delta_{LE} = 30°$; $R_{\bar{c}} \approx 80 \times 10^6$.



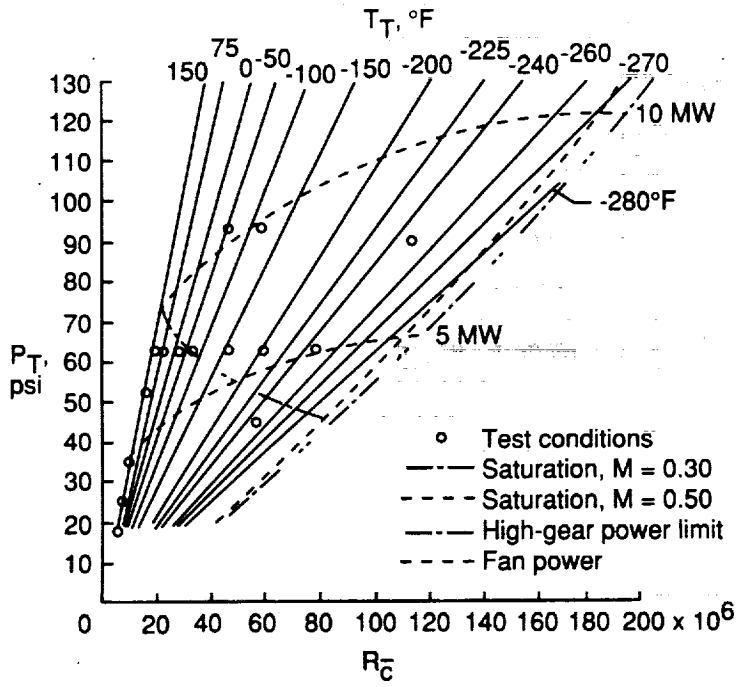
(b) C_A versus C_N.

Figure 12. Concluded.



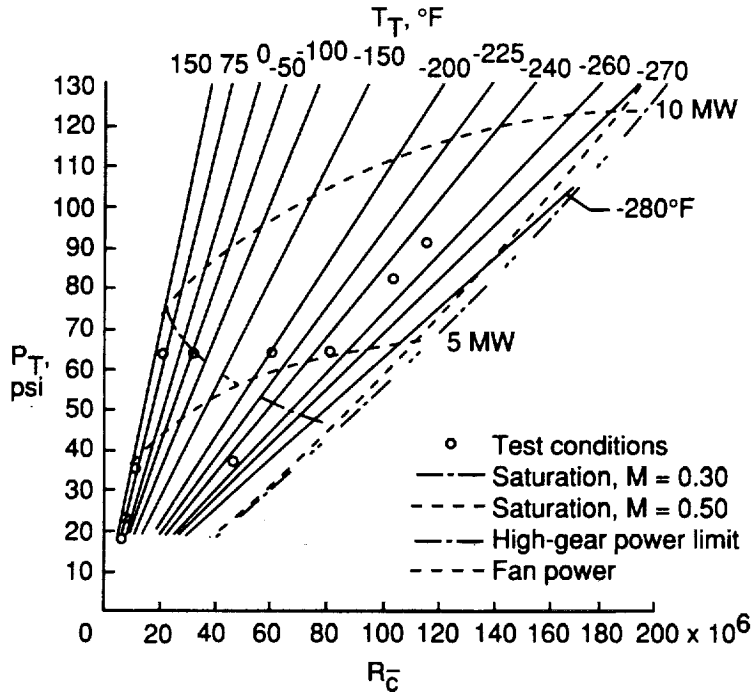
(a) Small-radius-flap configuration. $\delta_{LE} = 0°$.

Figure 13. NTF operating envelope for $M_\infty = 0.3$ with test conditions indicated for each configuration.



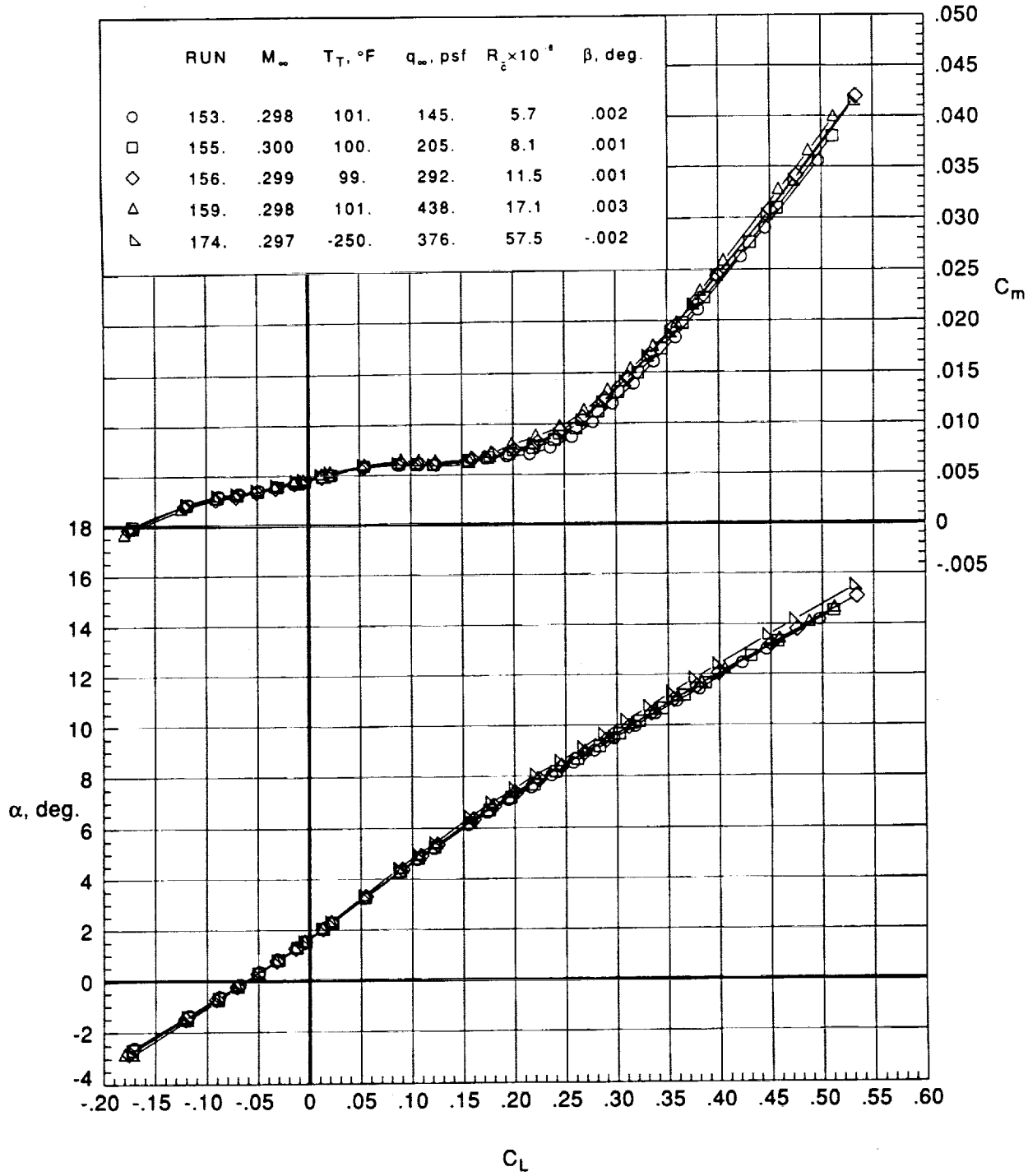
(b) Large-radius-flap configuration. $\delta_{LE} = 0°$.

Figure 13. Continued.



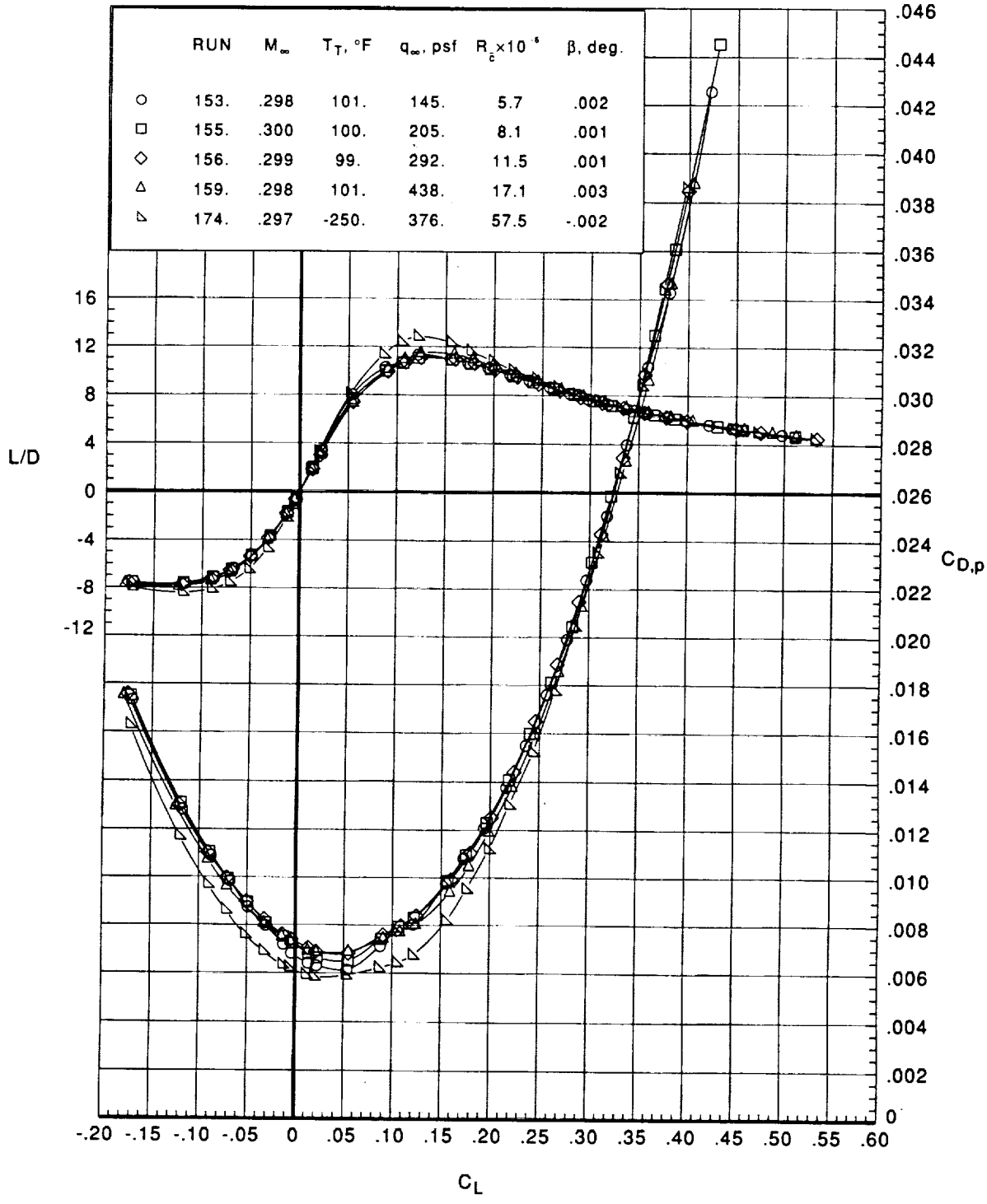
(c) Large-radius-flap configuration. $\delta_{LE} = 30°$.

Figure 13. Concluded.



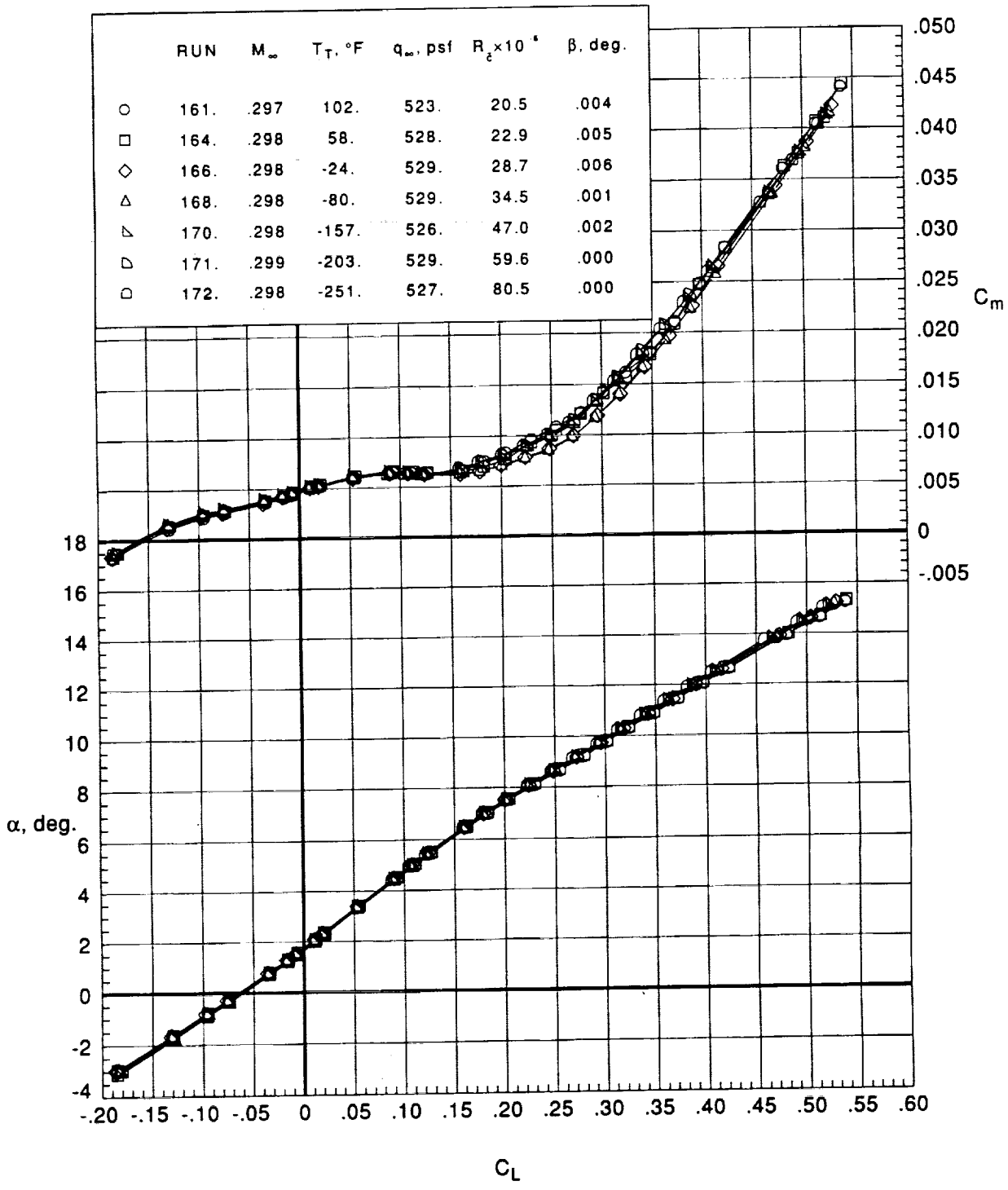
(a) $q_\infty < 500$ psf.

Figure 14. Effect of Reynolds number on longitudinal aerodynamic characteristics of small-radius-flap configuration. $\delta_{LE} = 0°$.



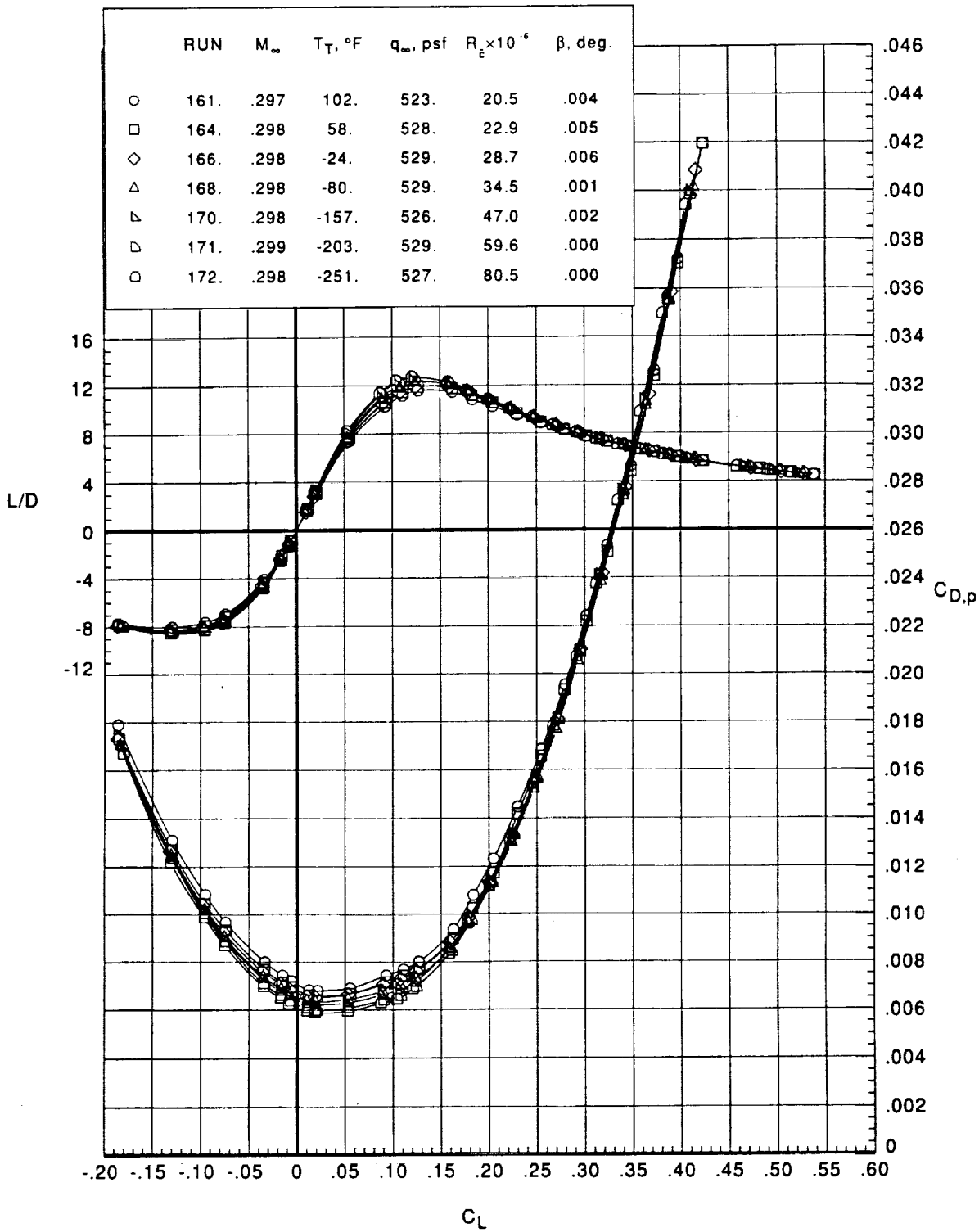
(a) Concluded.

Figure 14. Continued.



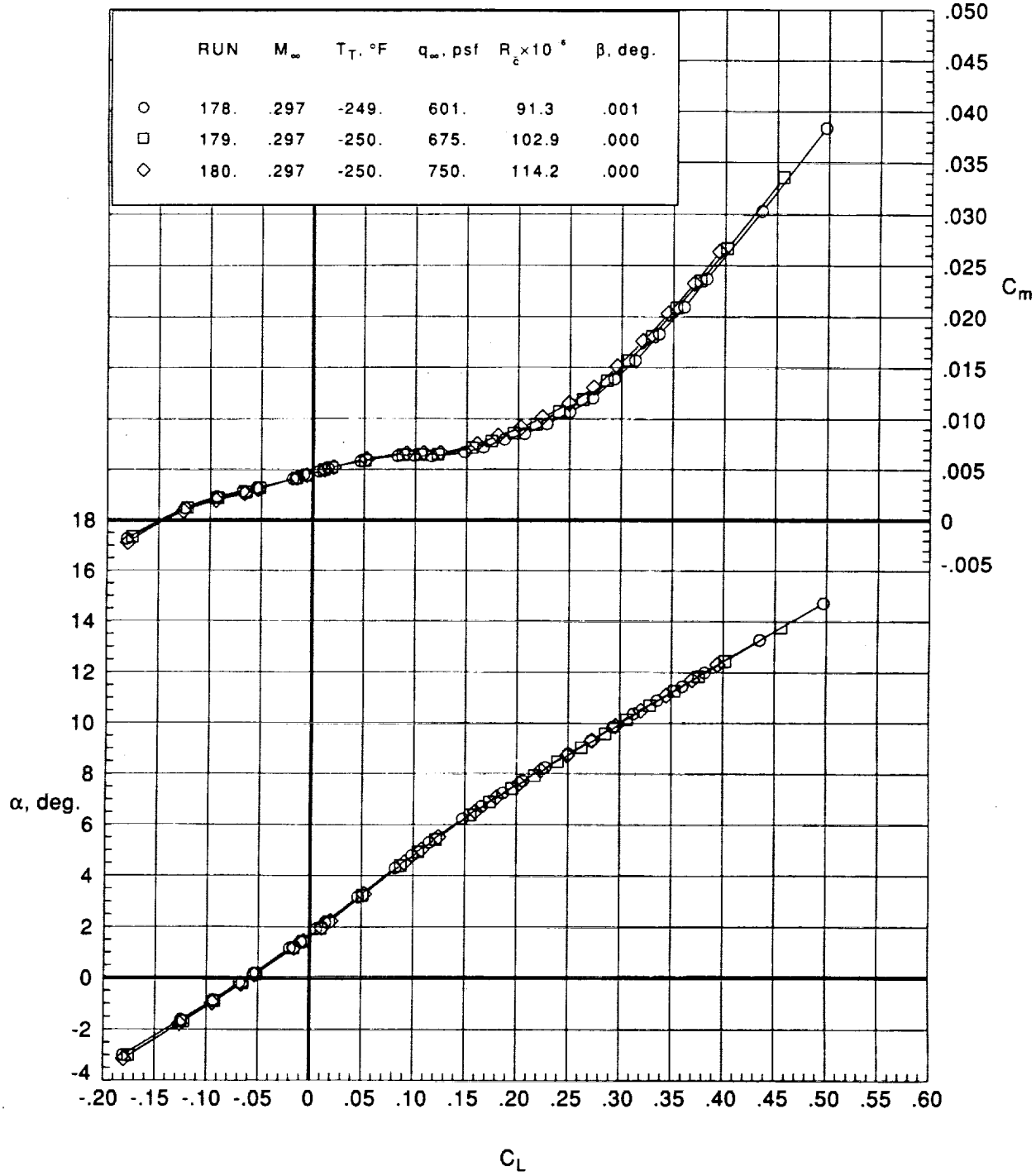
(b) $q_\infty \approx 530$ psf.

Figure 14. Continued.



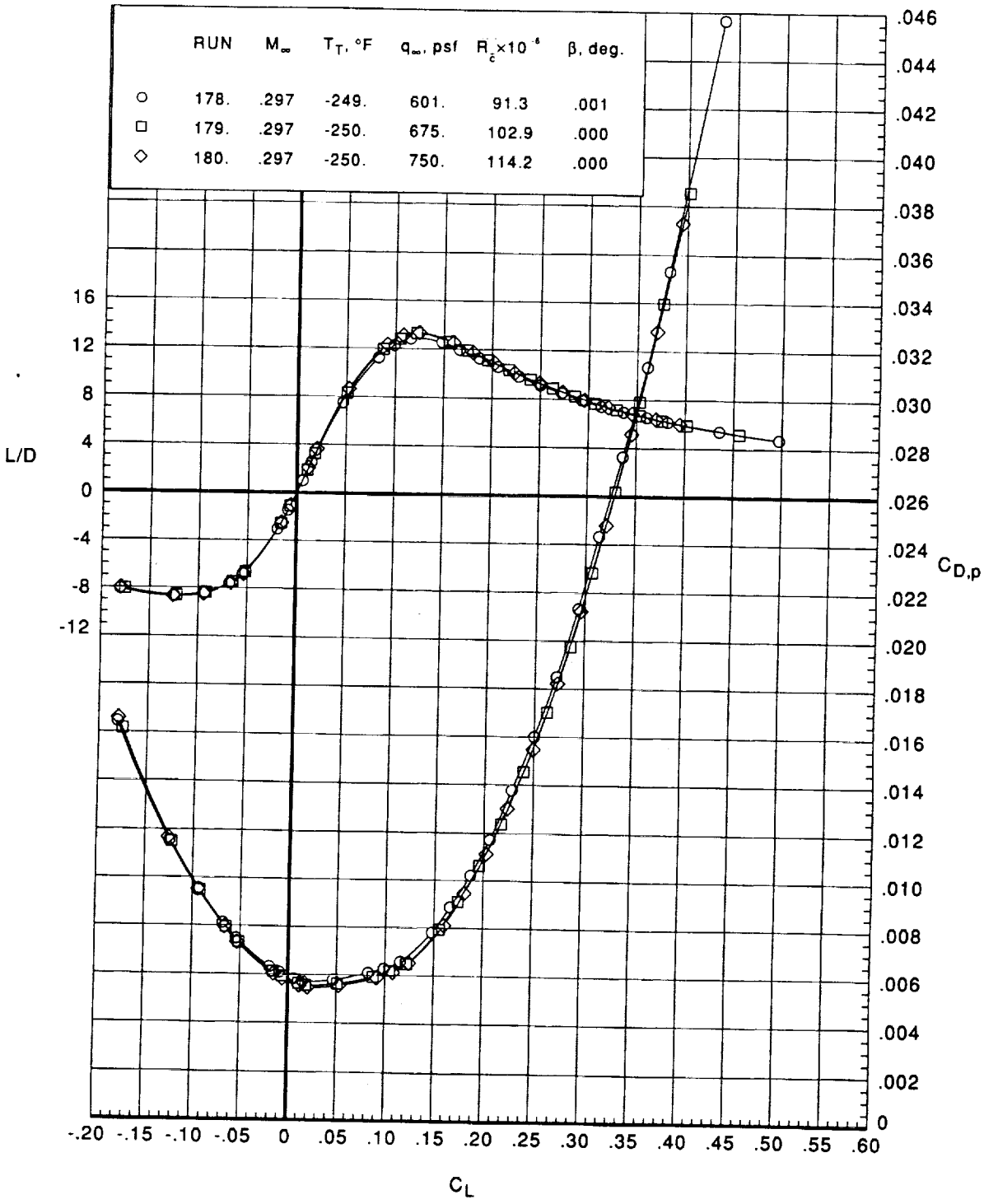
(b) Concluded.

Figure 14. Continued.



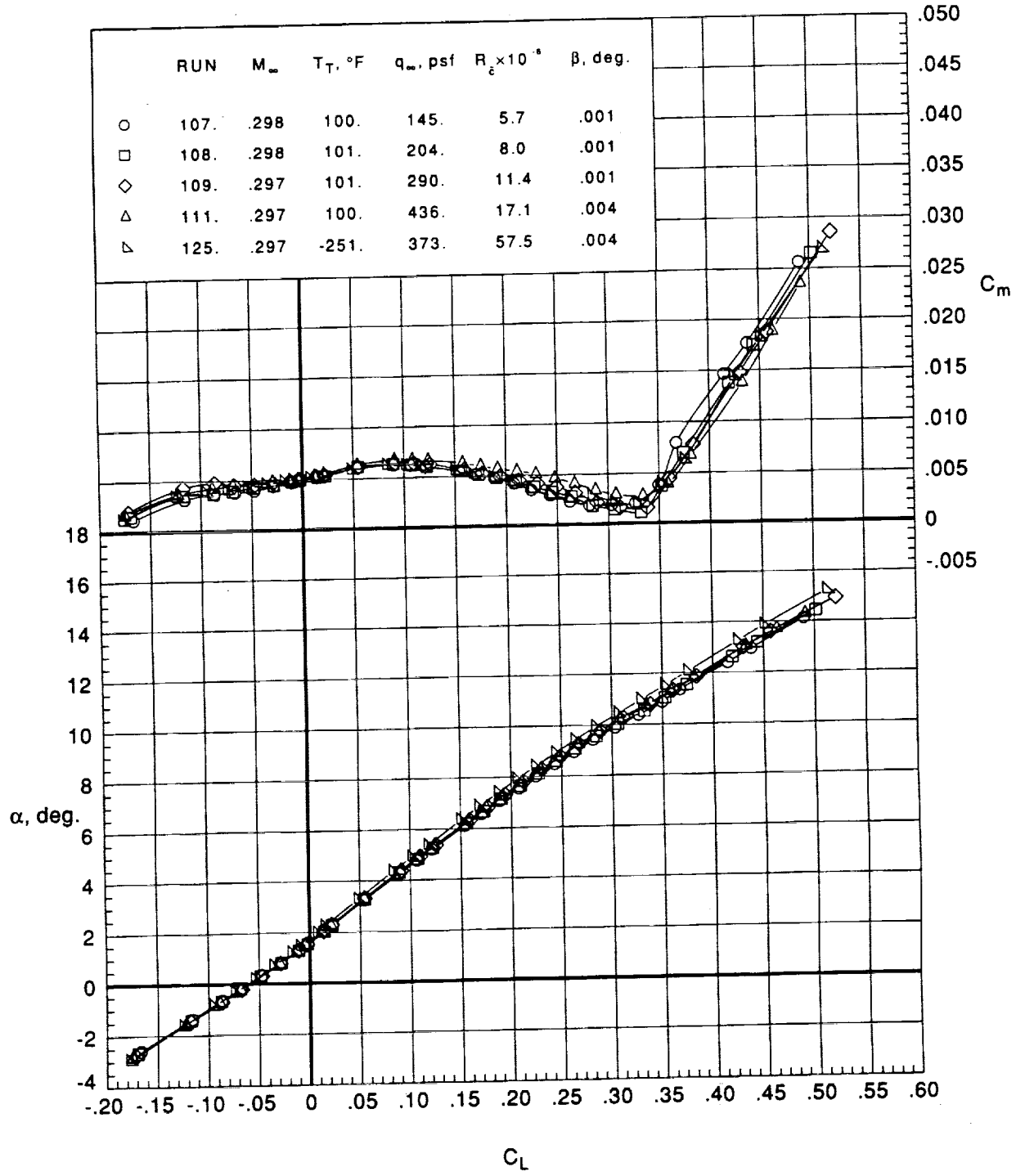
(c) $q_\infty > 600$ psf.

Figure 14. Continued.



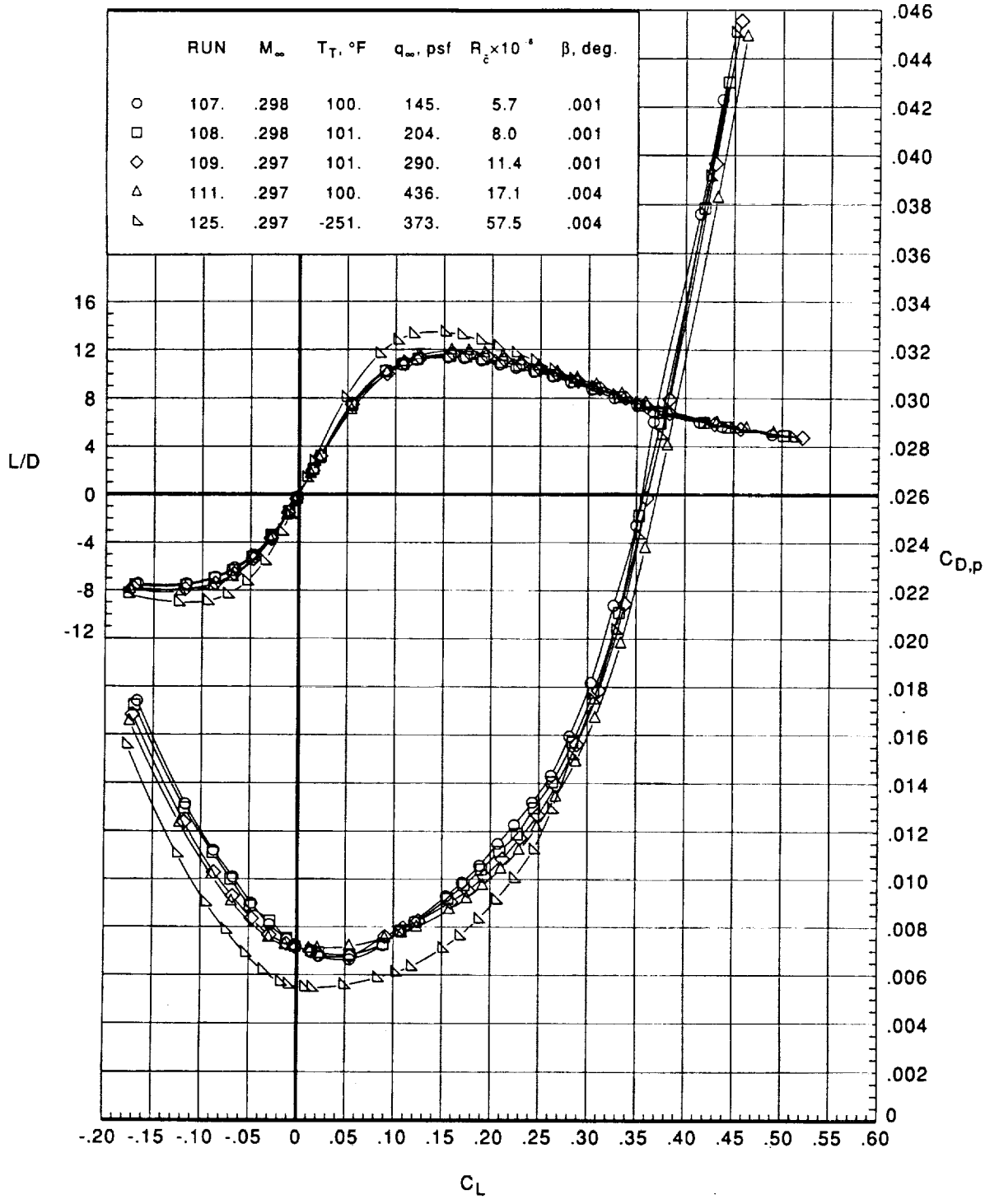
(c) Concluded.

Figure 14. Concluded.



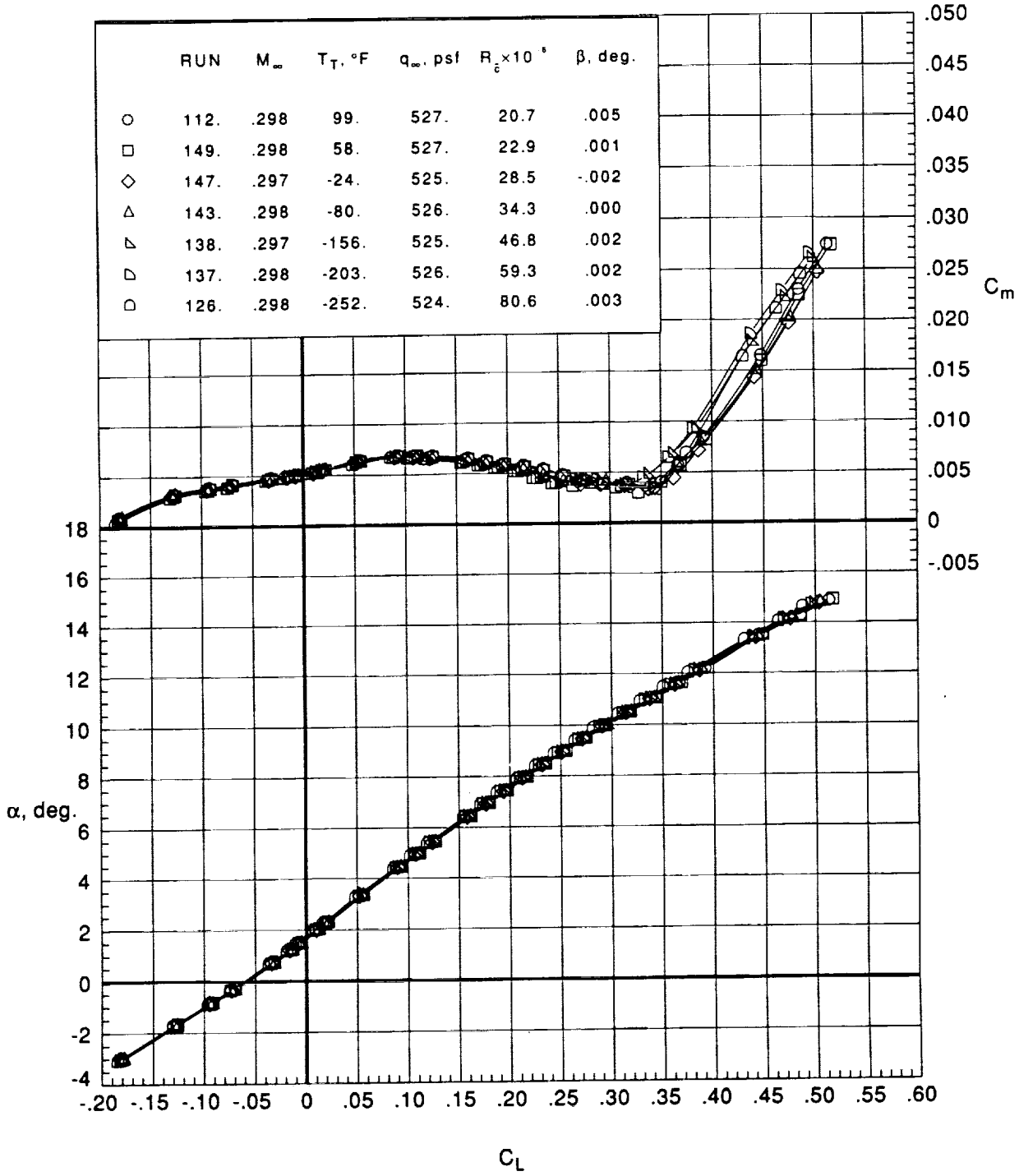
(a) $q_\infty < 500$ psf.

Figure 15. Effect of Reynolds number on longitudinal aerodynamic characteristics of large-radius-flap configuration. $\delta_{LE} = 0°$.



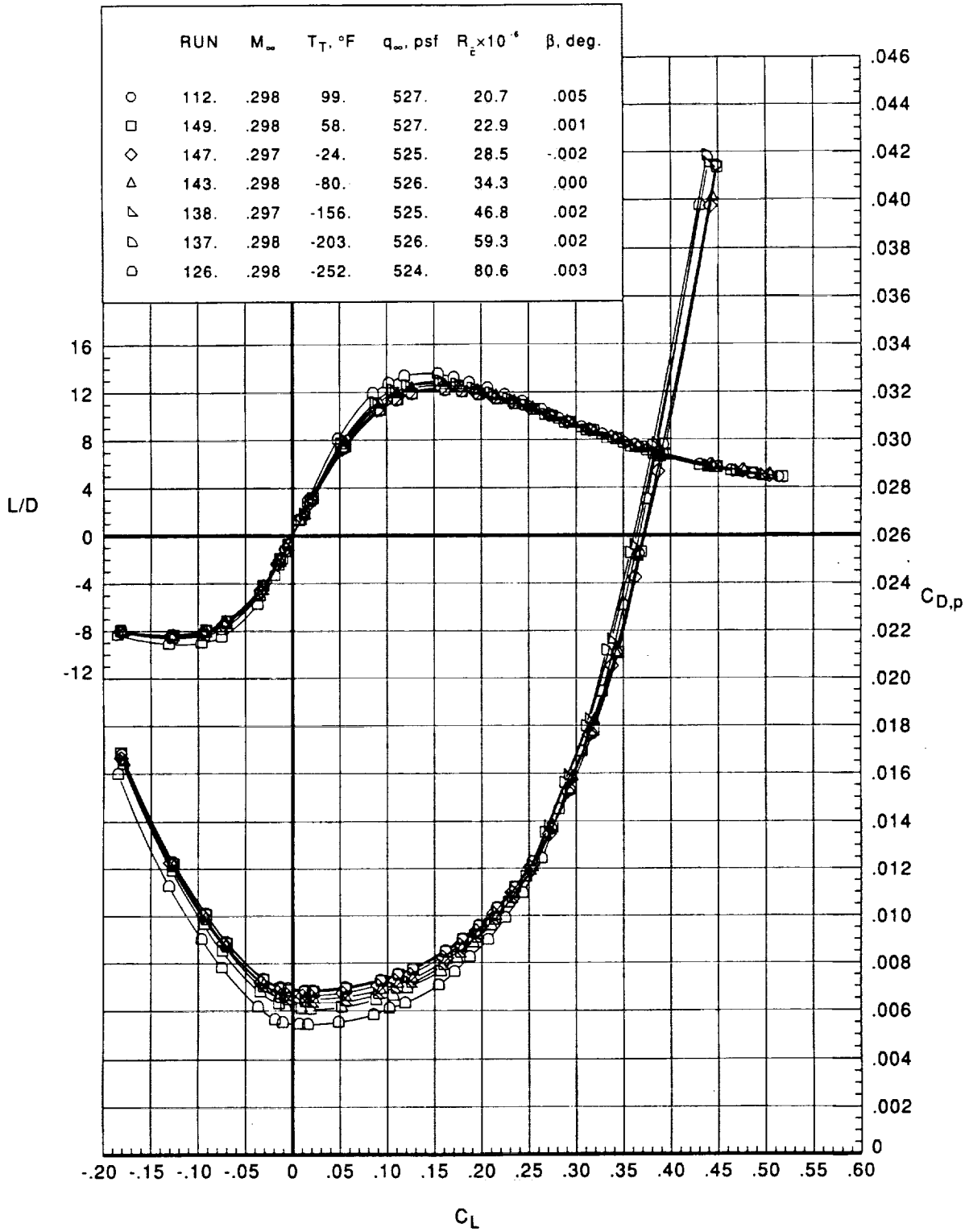
(a) Concluded.

Figure 15. Continued.



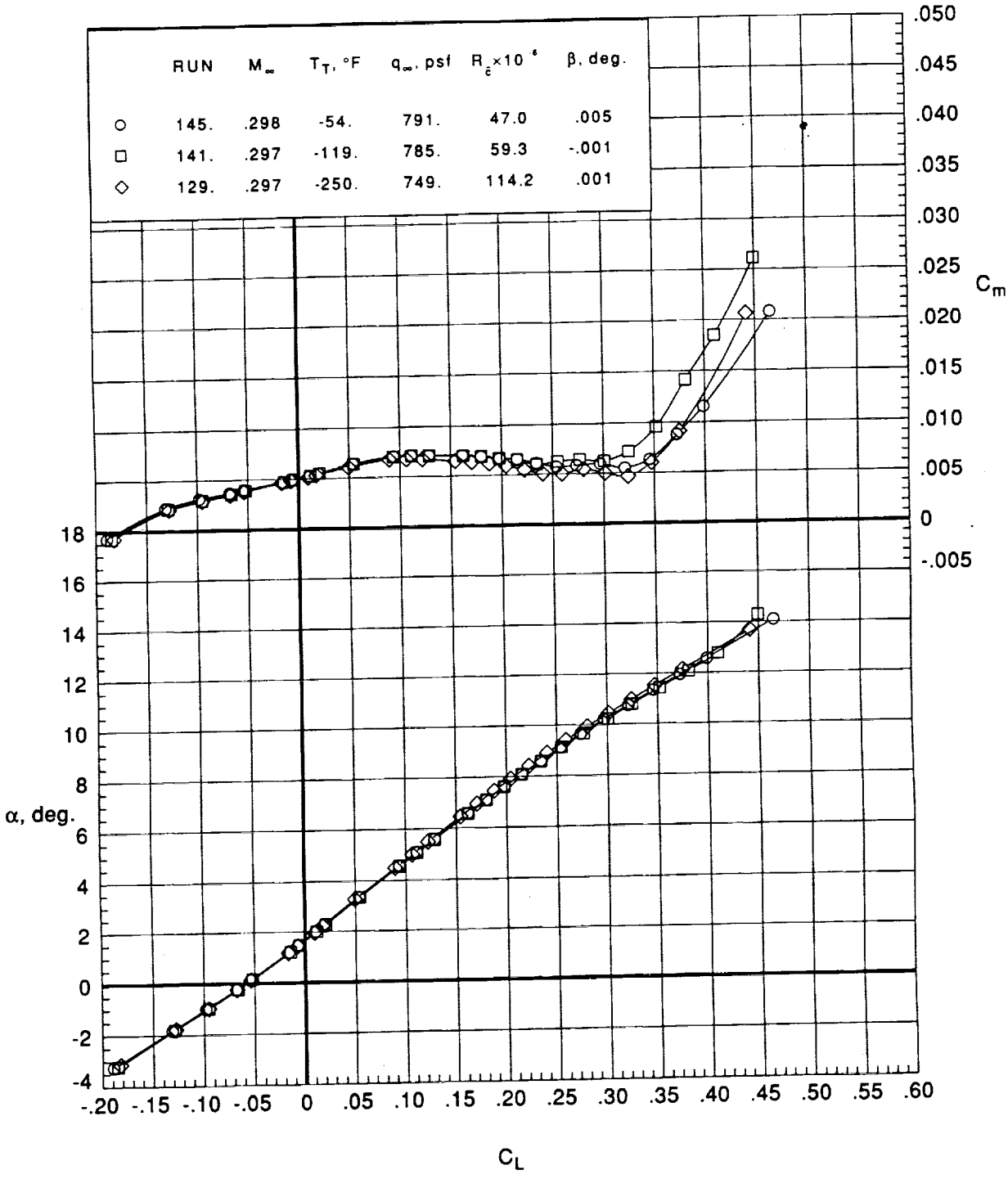
(b) $q_\infty \approx 530$ psf.

Figure 15. Continued.



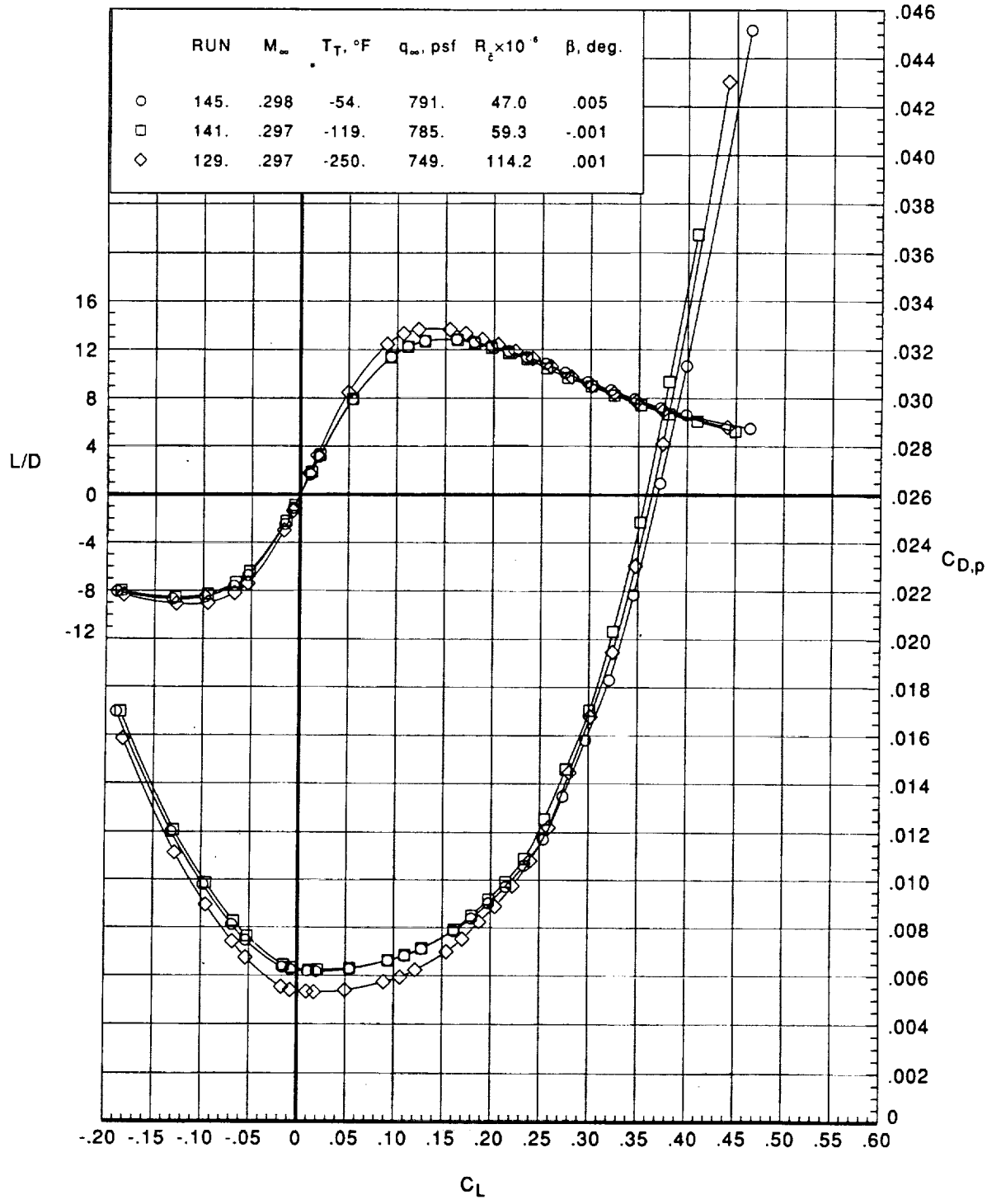
(b) Concluded.

Figure 15. Continued.



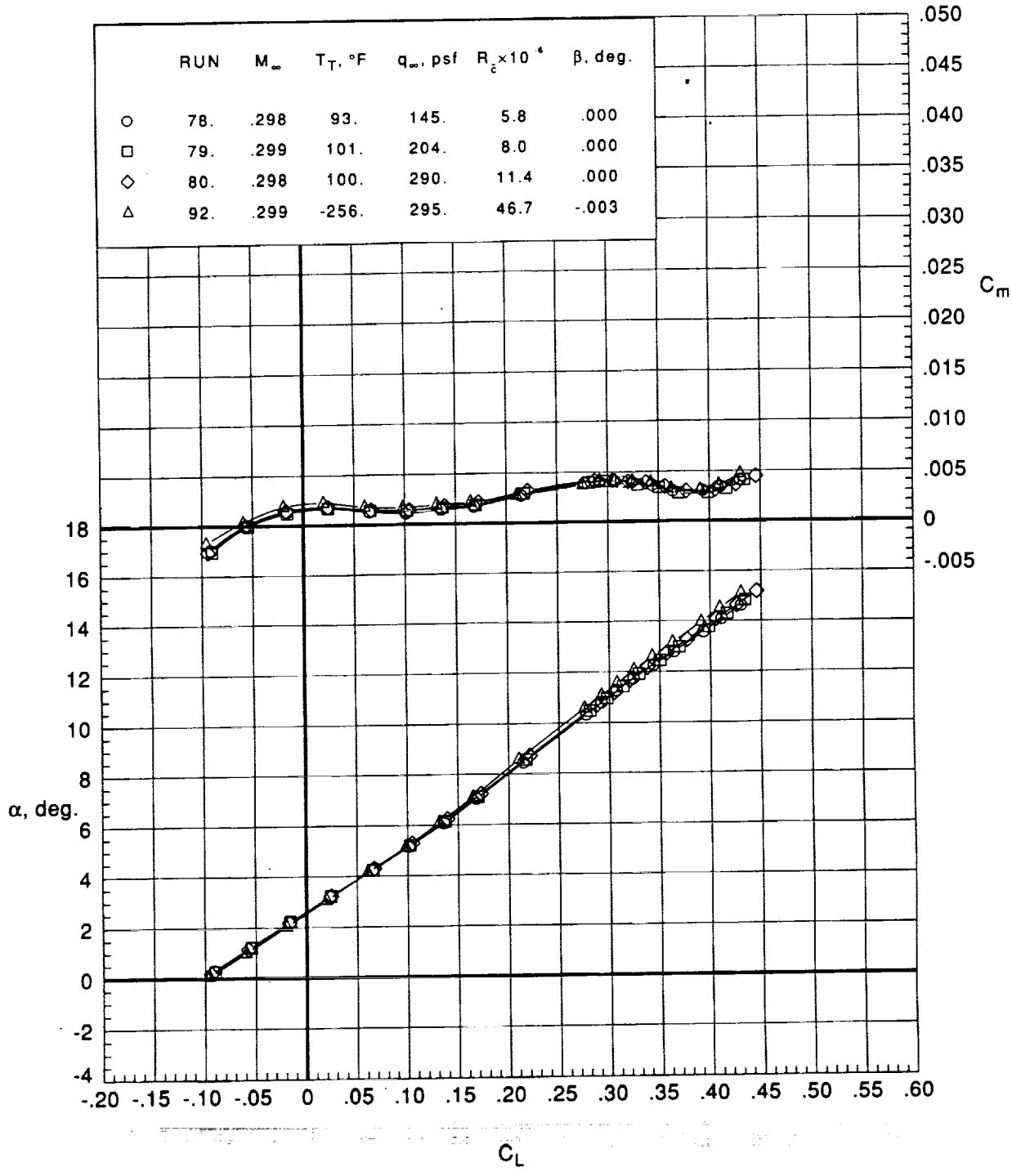
(c) $q_\infty > 600$ psf.

Figure 15. Continued.



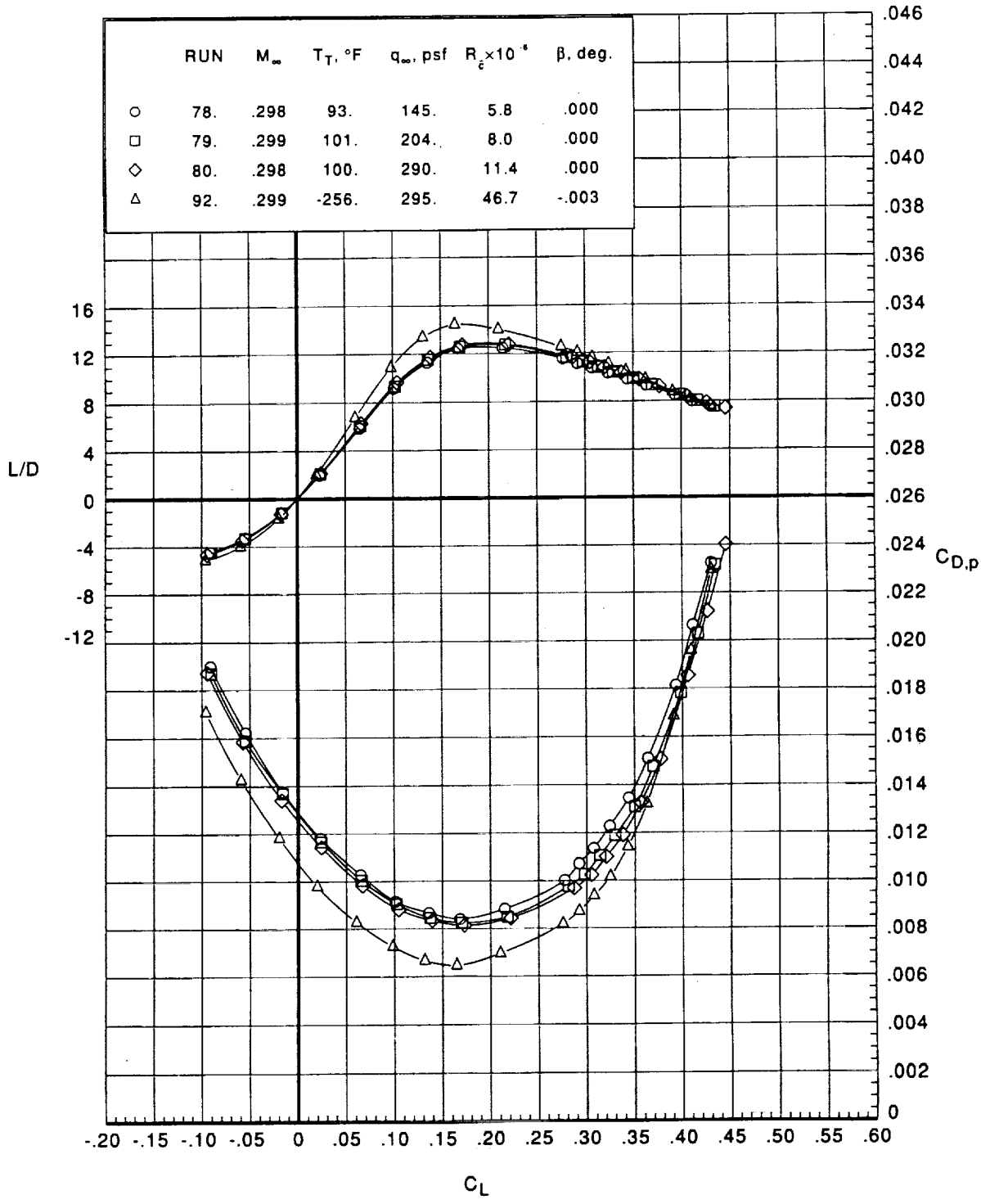
(c) Concluded.

Figure 15. Concluded.



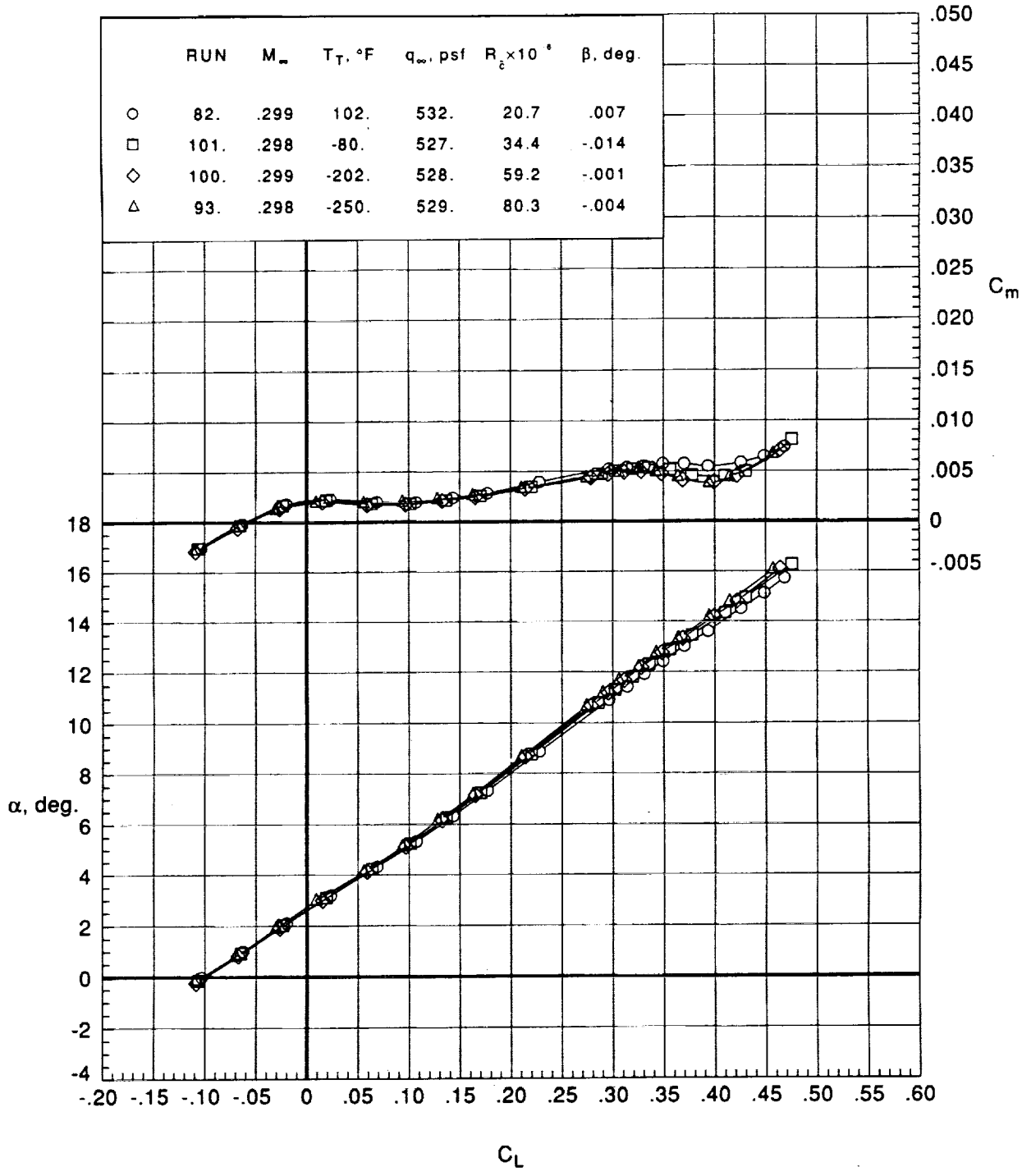
(a) $q_\infty < 500$ psf.

Figure 16. Effect of Reynolds number on longitudinal aerodynamic characteristics of large-radius-flap configuration. $\delta_{LE} = 30°$.



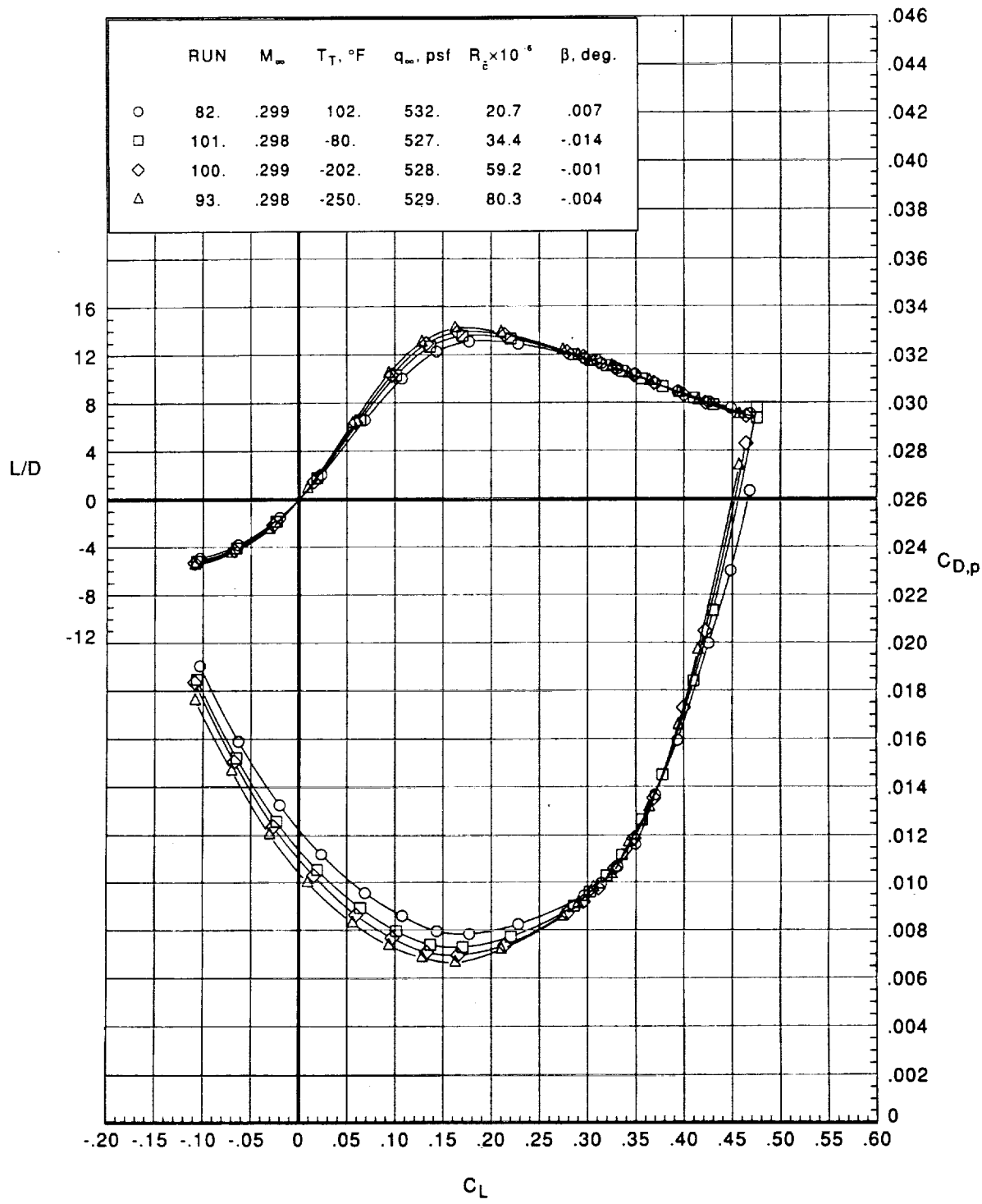
(a) Concluded.

Figure 16. Continued.



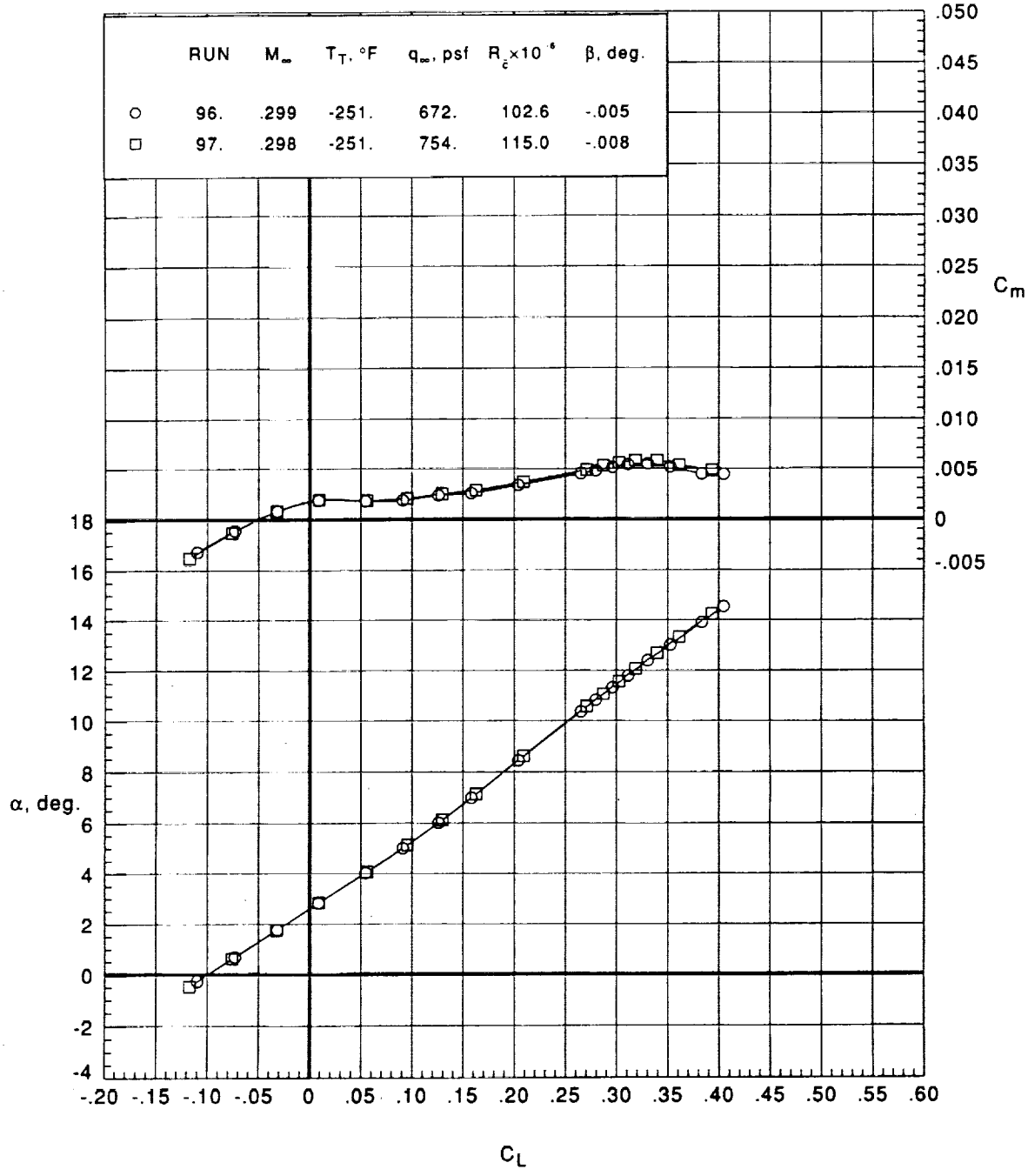
(b) $q_\infty \approx 530$ psf.

Figure 16. Continued.



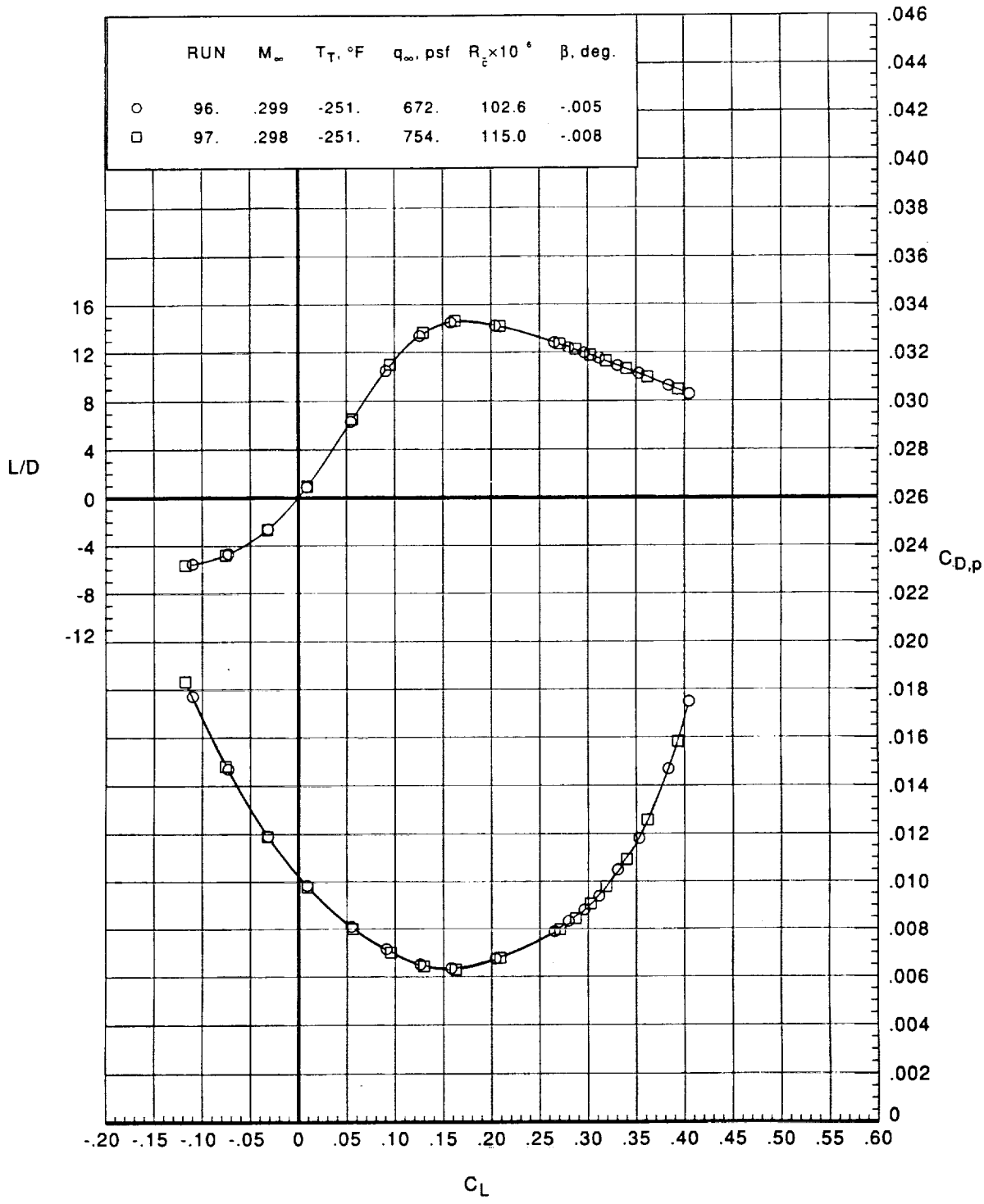
(b) Concluded.

Figure 16. Continued.



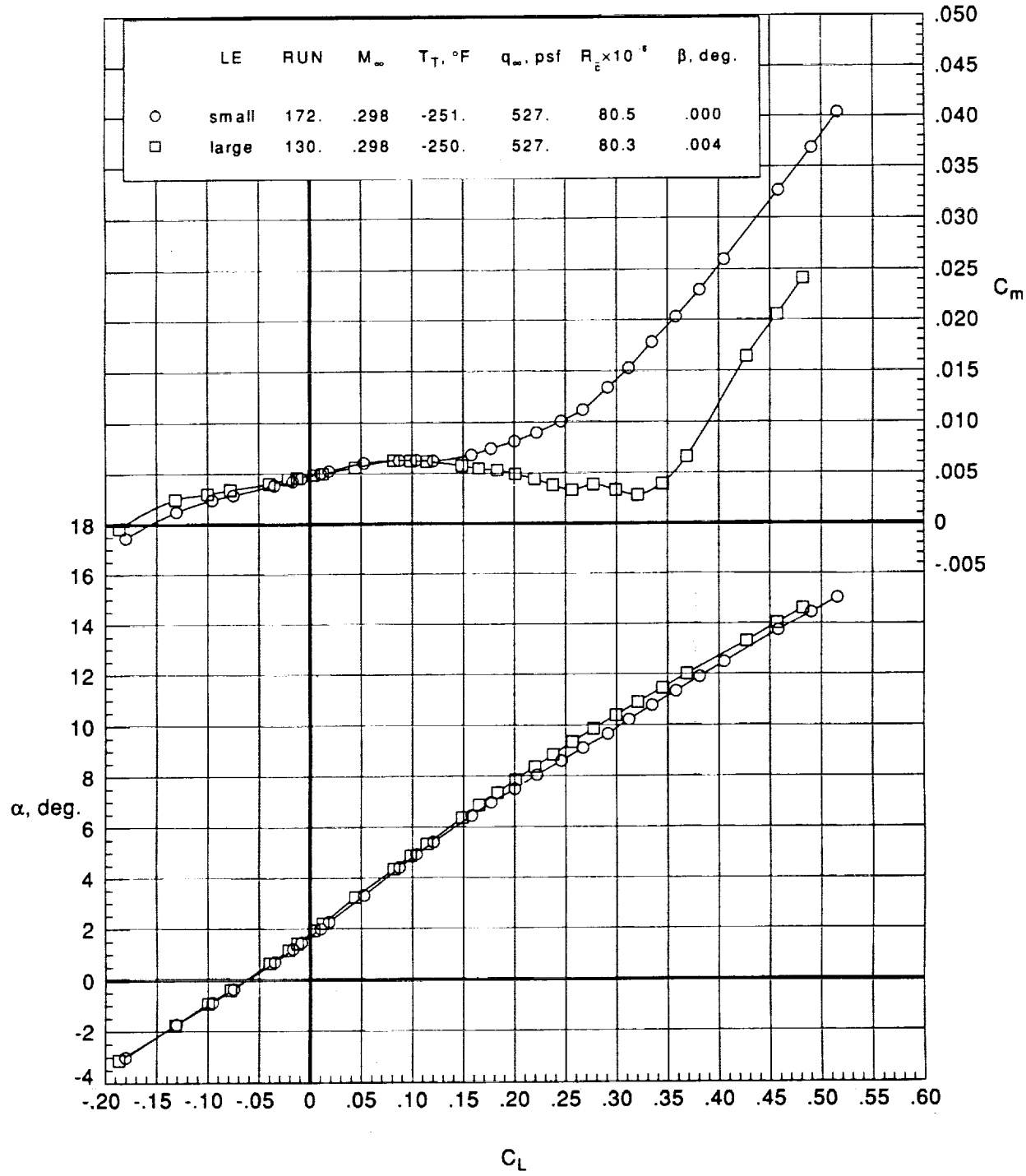
(c) $q_\infty > 600$ psf.

Figure 16. Continued.



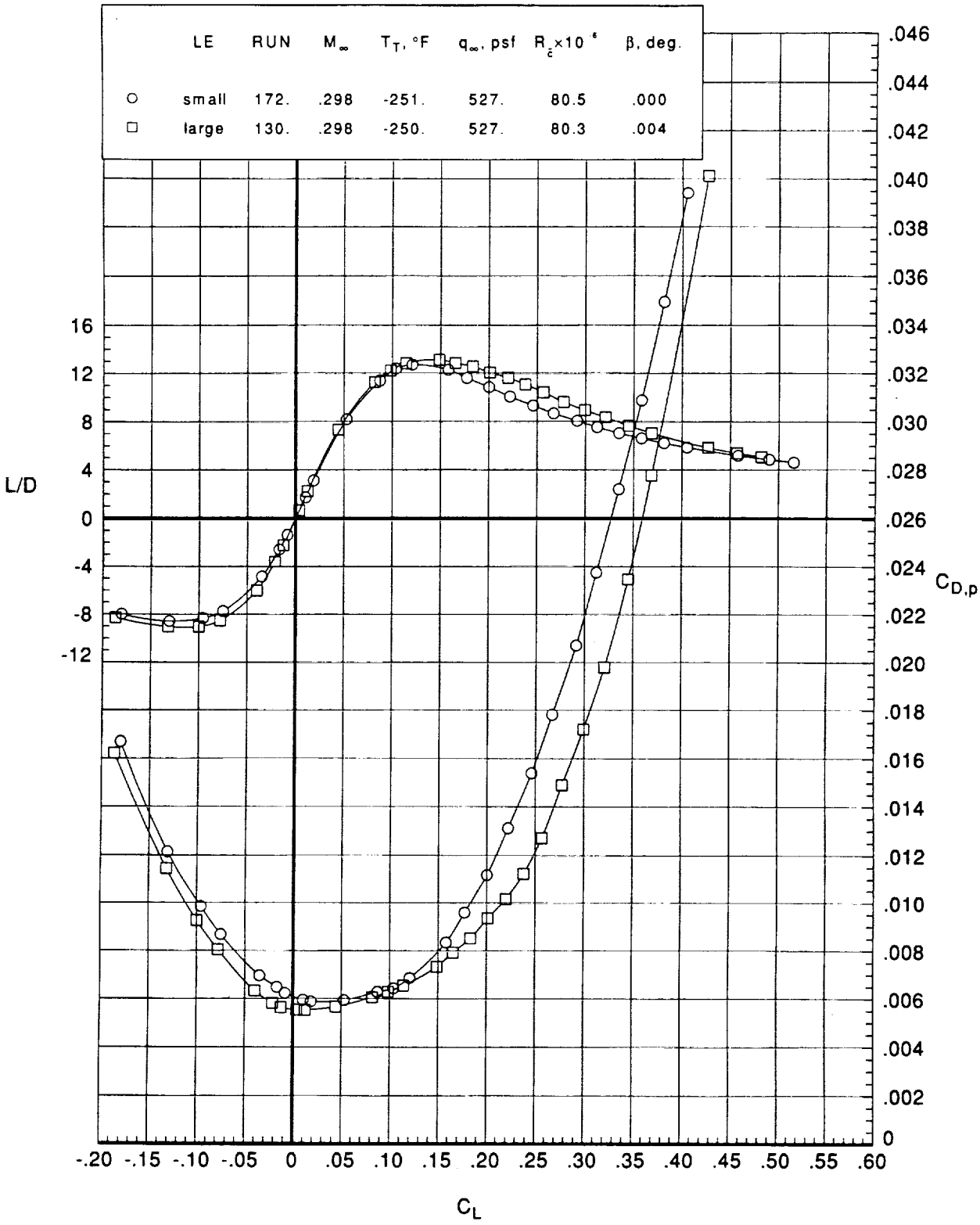
(c) Concluded.

Figure 16. Concluded.



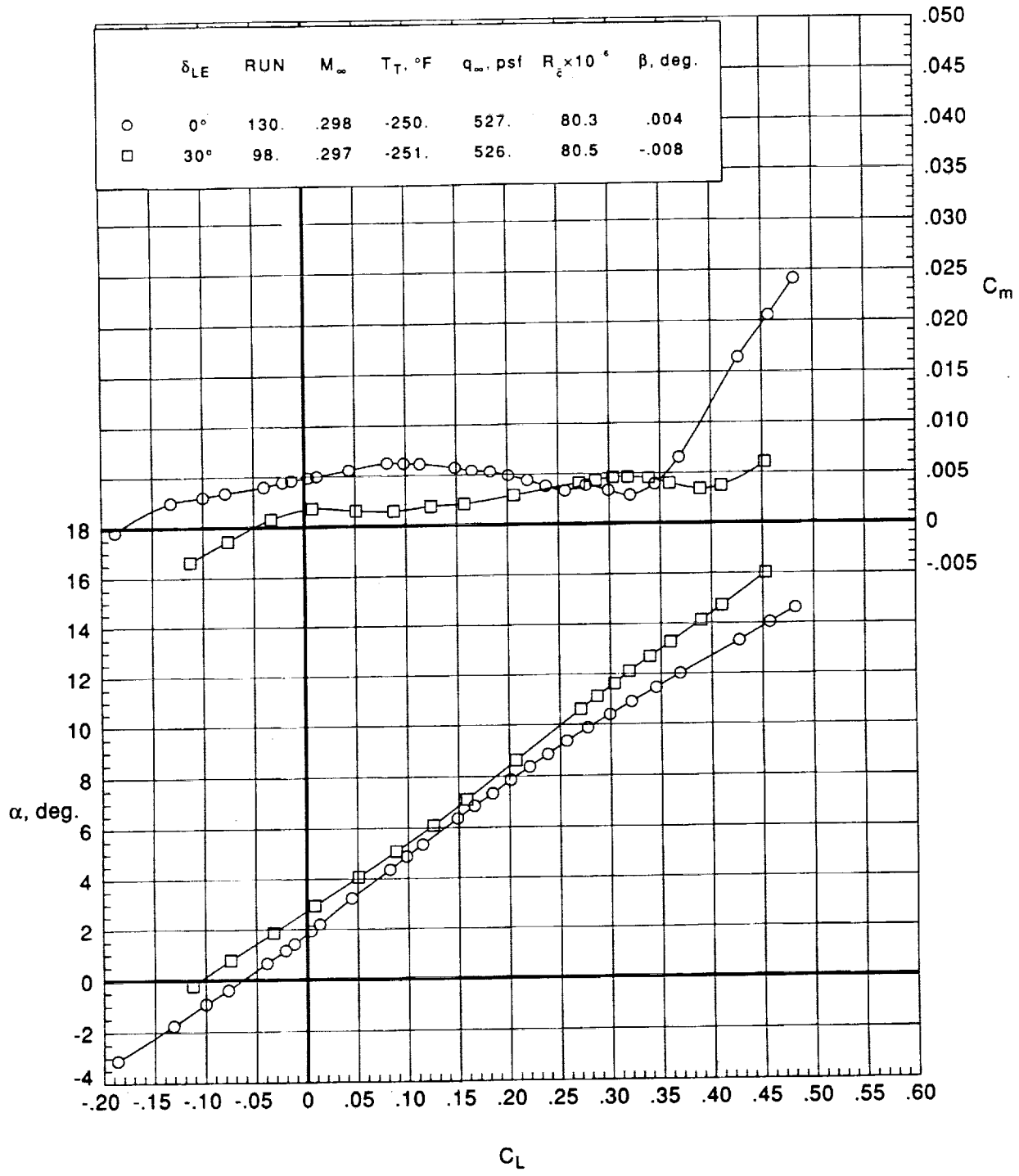
(a) C_m and α versus C_L.

Figure 17. Effect of leading-edge radius on longitudinal aerodynamic characteristics of AST-210 configuration. $\delta_{LE} = 0°$.



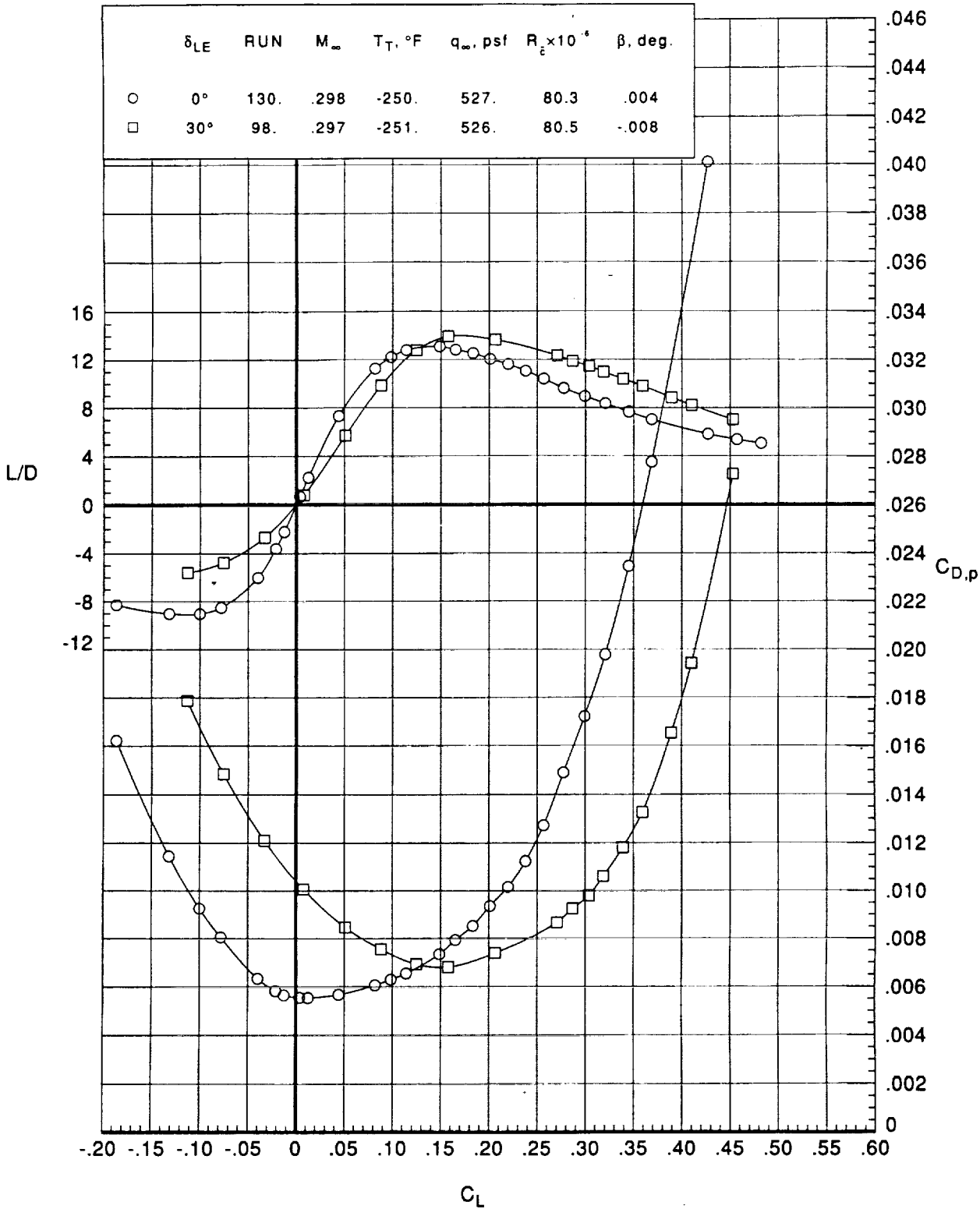
(b) $C_{D,p}$ and L/D versus C_L.

Figure 17. Concluded.



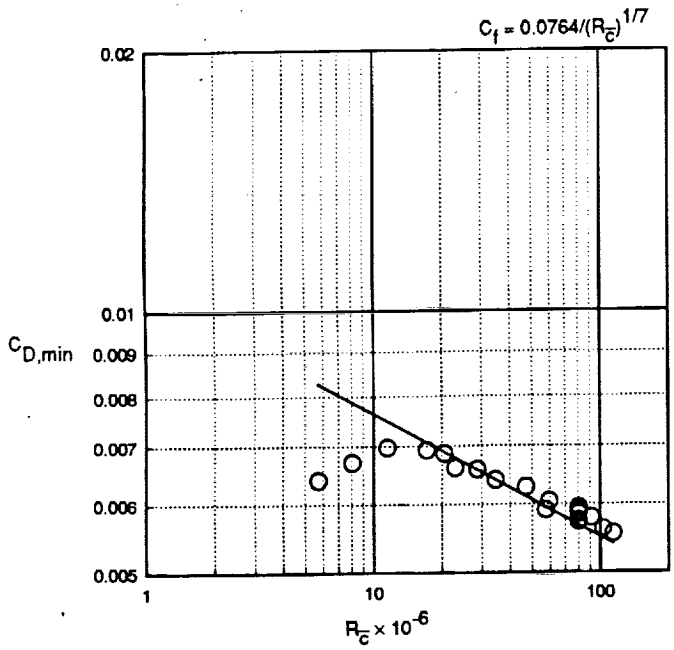
(a) C_m and α versus C_L.

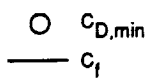
Figure 18. Effect of leading-edge deflection on longitudinal aerodynamic characteristics of large-radius-flap configuration.



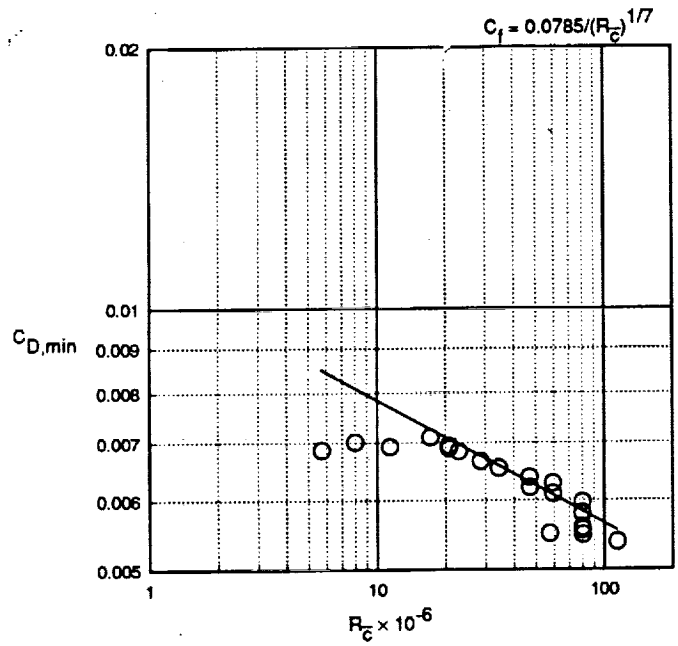
(b) $C_{D,p}$ and L/D versus C_L.

Figure 18. Concluded.

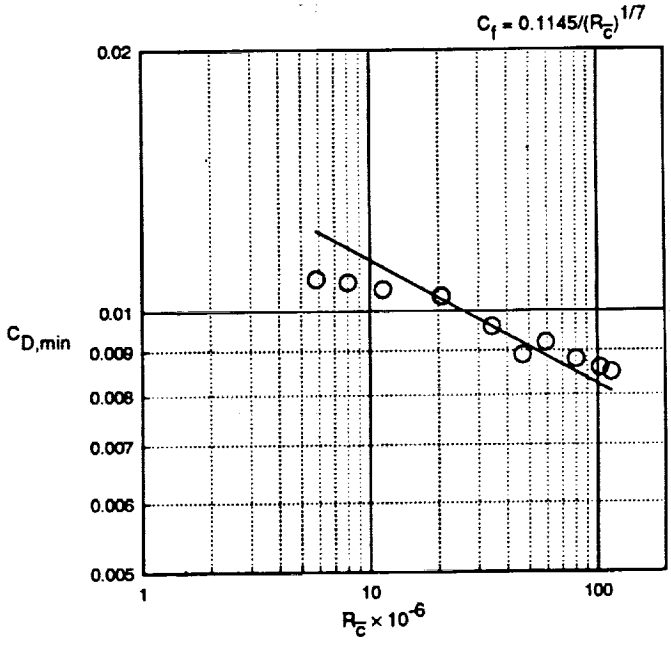




(a) Small-radius-flap configuration. $\delta_{LE} = 0°$.

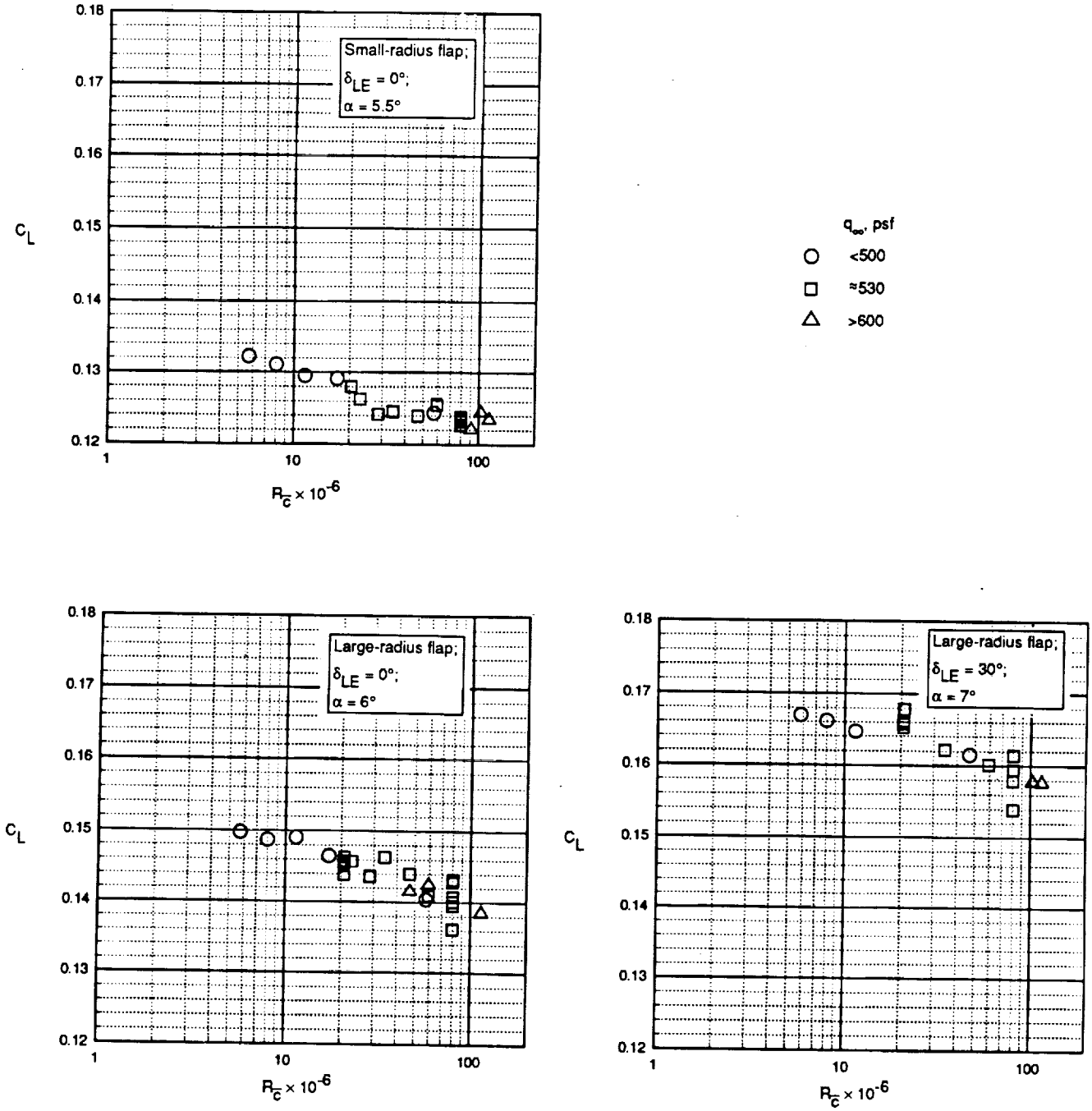


(b) Large-radius-flap configuration. $\delta_{LE} = 0°$.



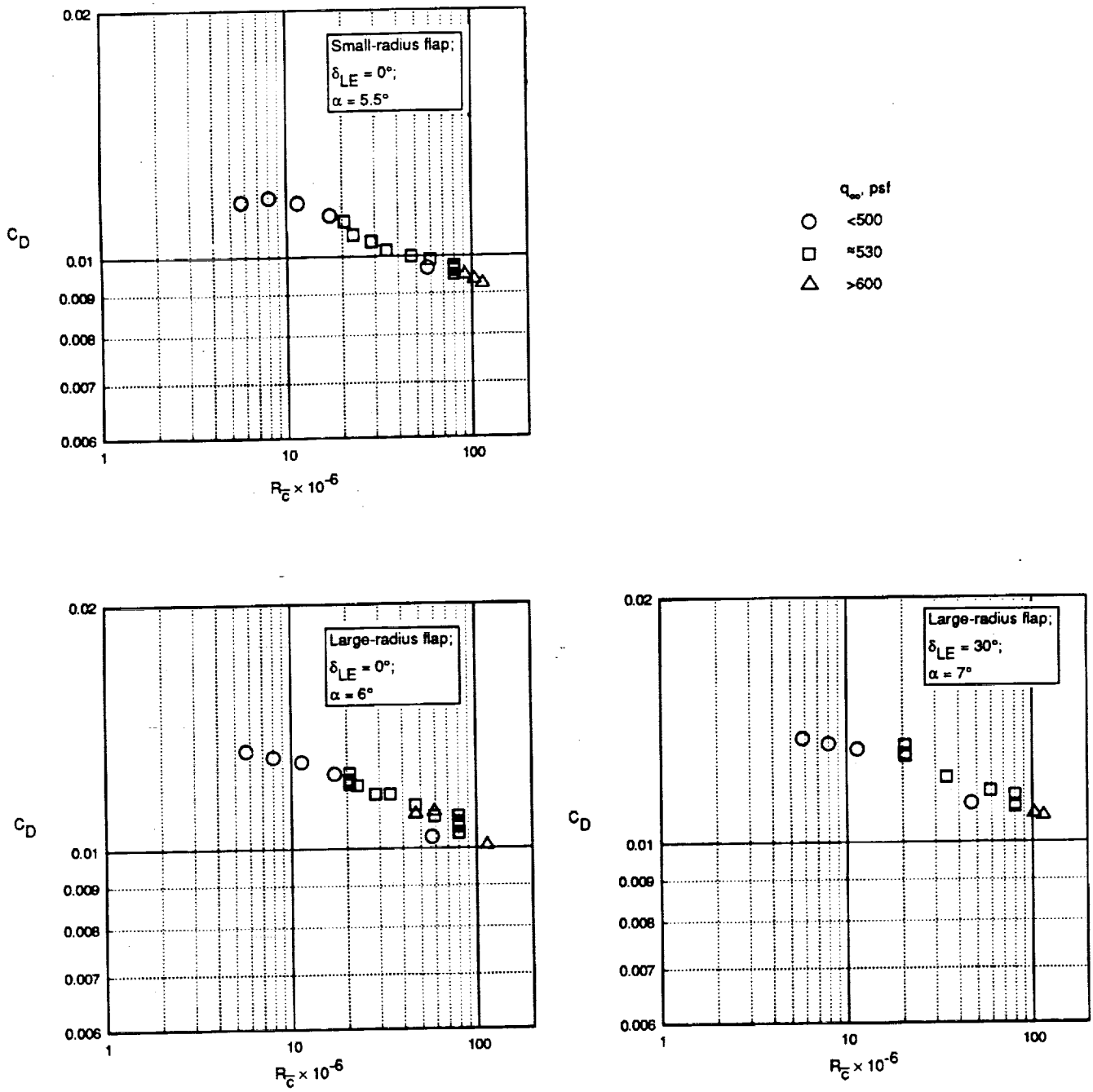
(c) Large-radius-flap configuration. $\delta_{LE} = 30°$.

Figure 19. Variation of minimum drag coefficient with Reynolds number.



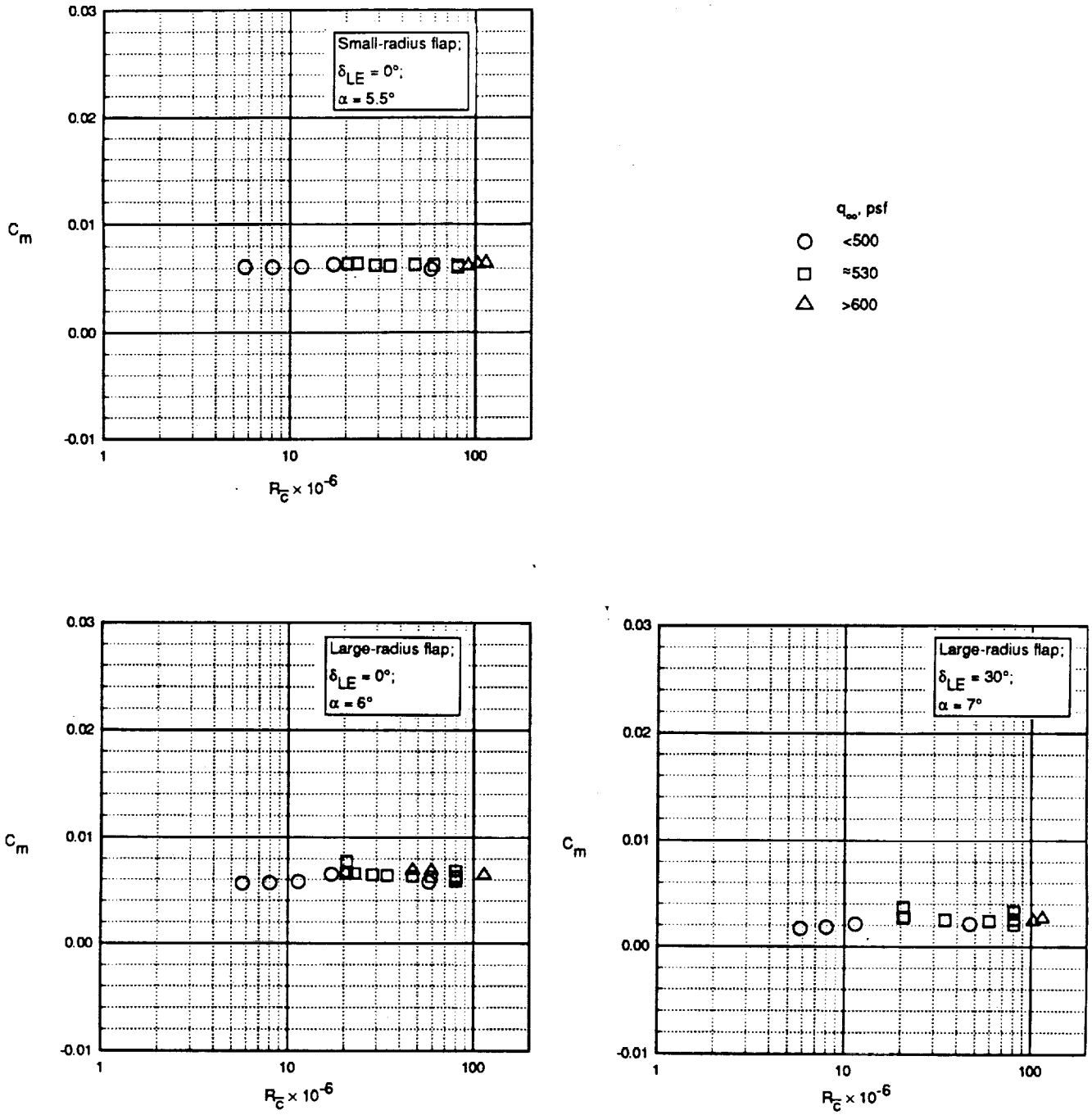
(a) C_L versus $R_{\bar{c}}$.

Figure 20. Effect of Reynolds number on longitudinal aerodynamic coefficients and performance for three test configurations at low angles of attack. $M_\infty = 0.3$.



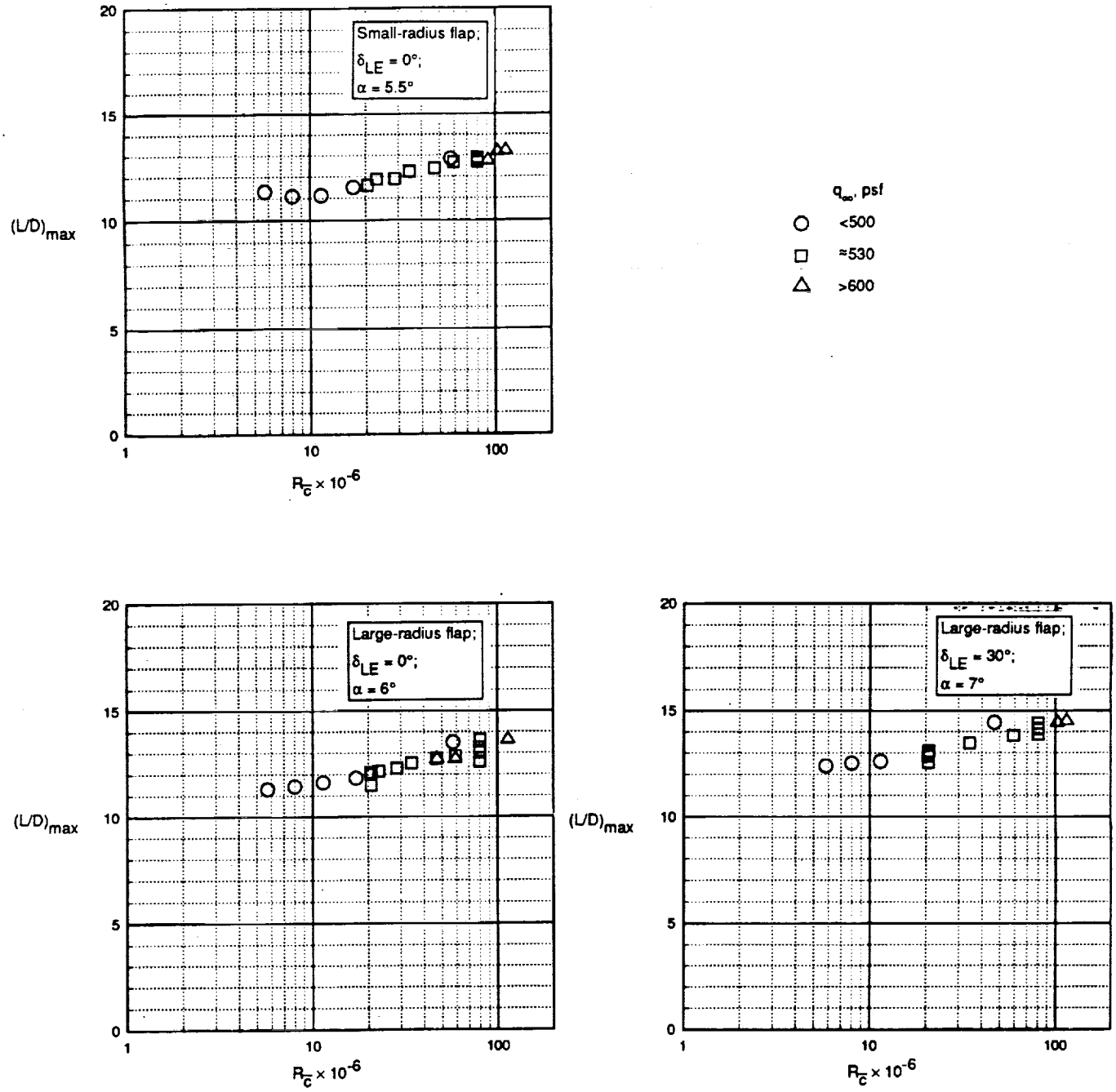
(b) C_D versus $R_{\bar{c}}$.

Figure 20. Continued.



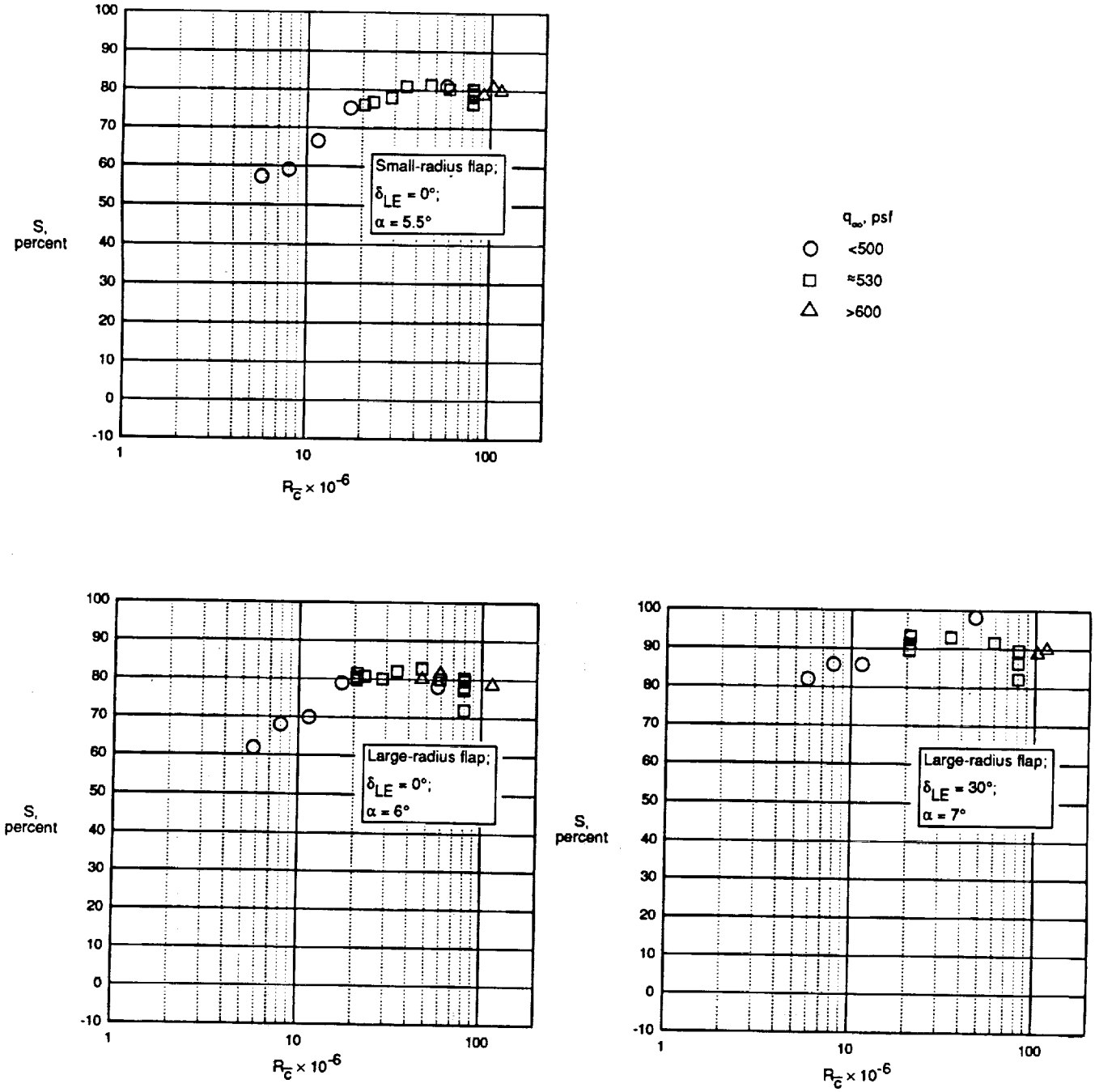
(c) C_m versus $R_{\bar{c}}$.

Figure 20. Continued.



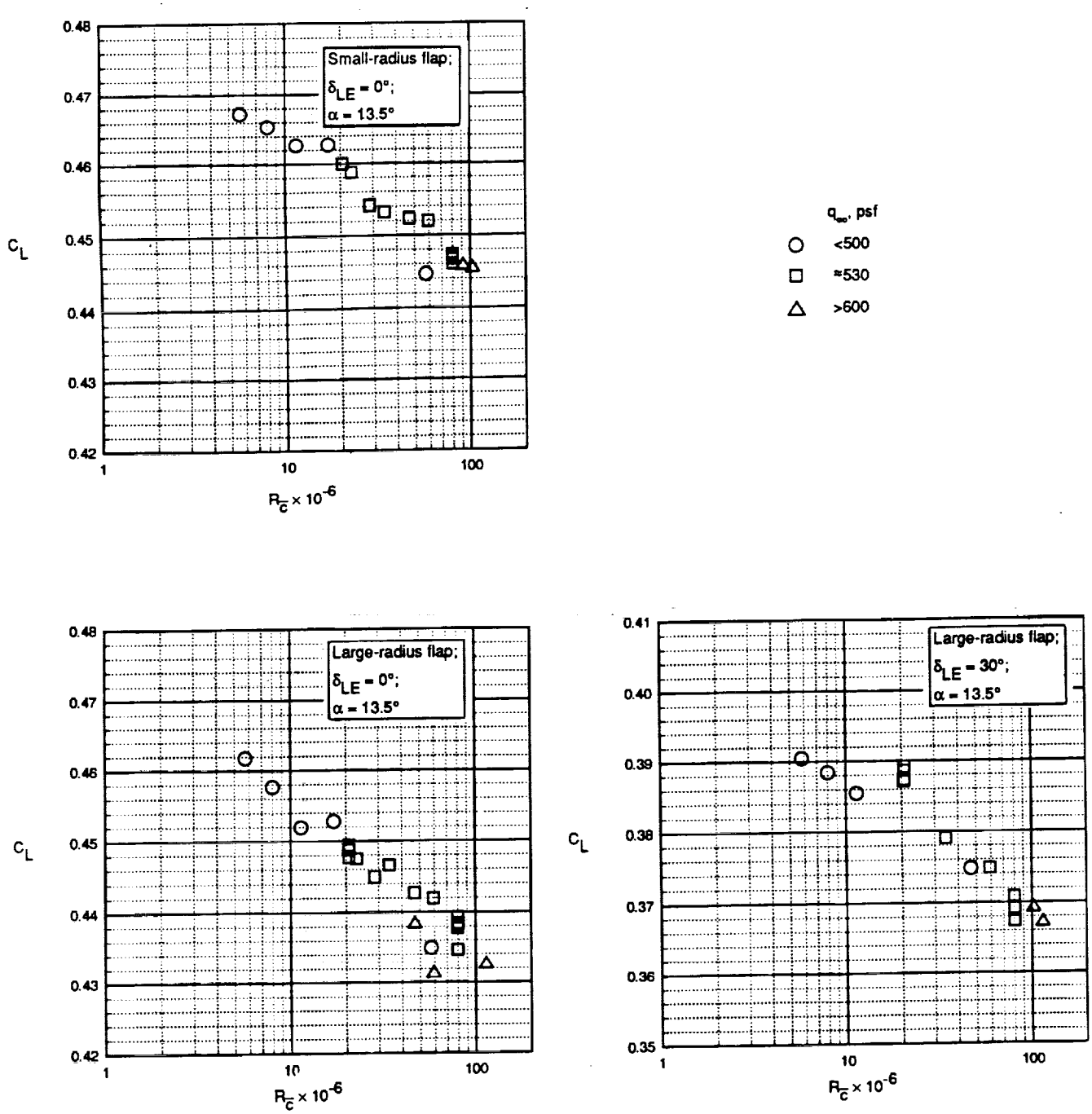
(d) $(L/D)_{\max}$ versus $R_{\bar{c}}$.

Figure 20. Continued.



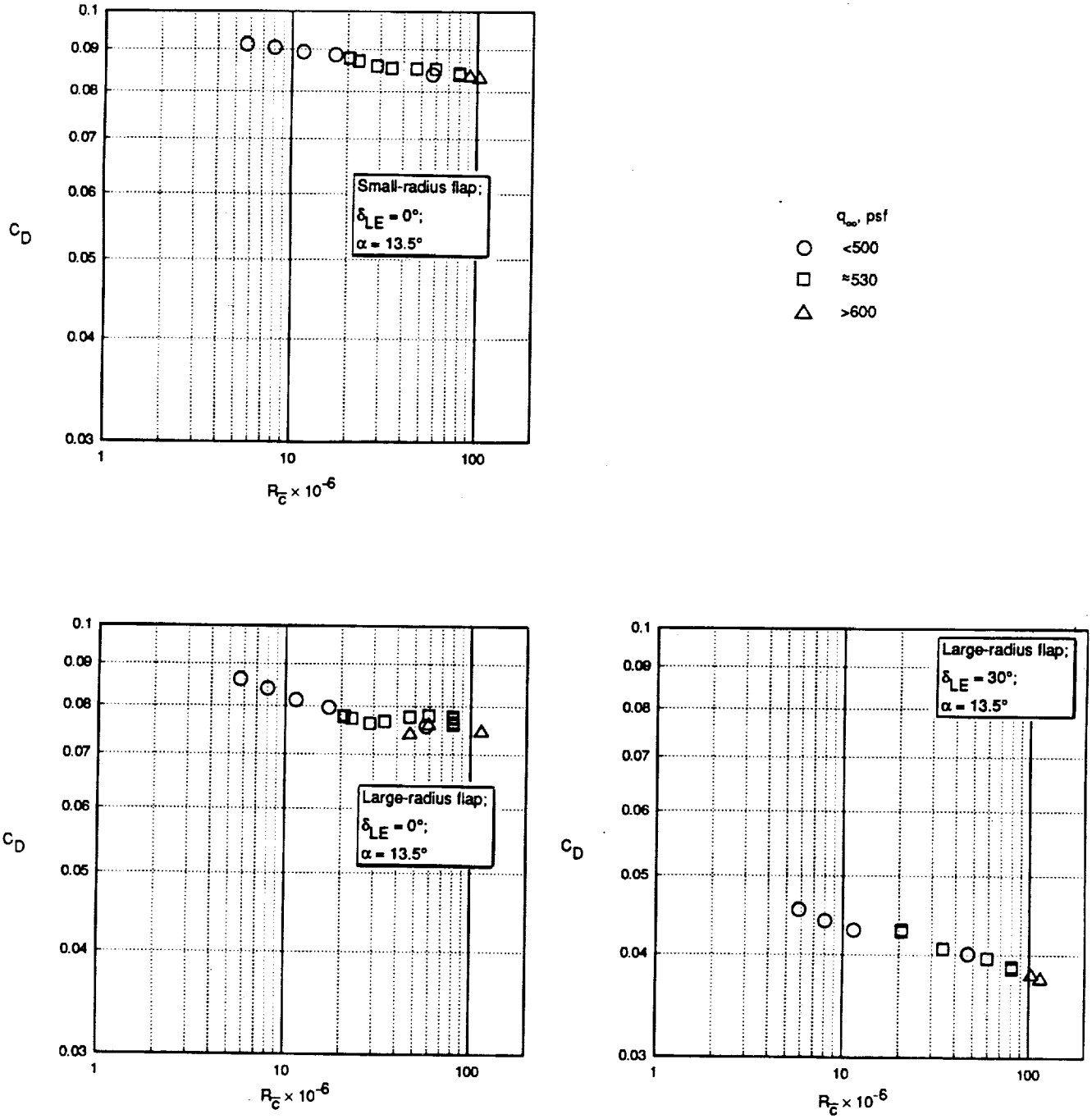
(e) S versus $R_{\bar{c}}$.

Figure 20. Concluded.



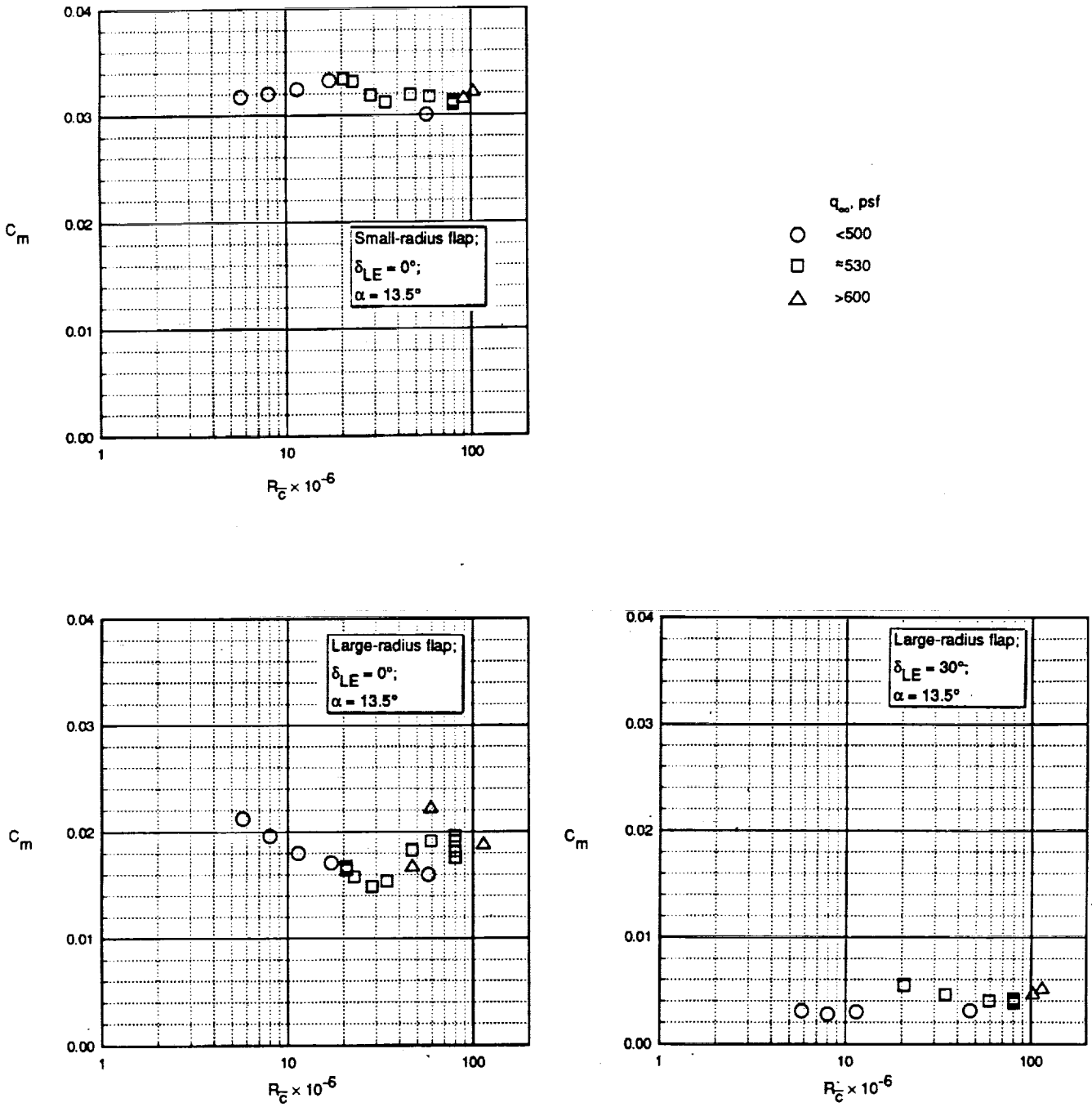
(a) C_L versus $R_{\bar{c}}$.

Figure 21. Effect of Reynolds number on longitudinal aerodynamic coefficients and performance for three test configurations at high angles of attack. $M_\infty = 0.3$.



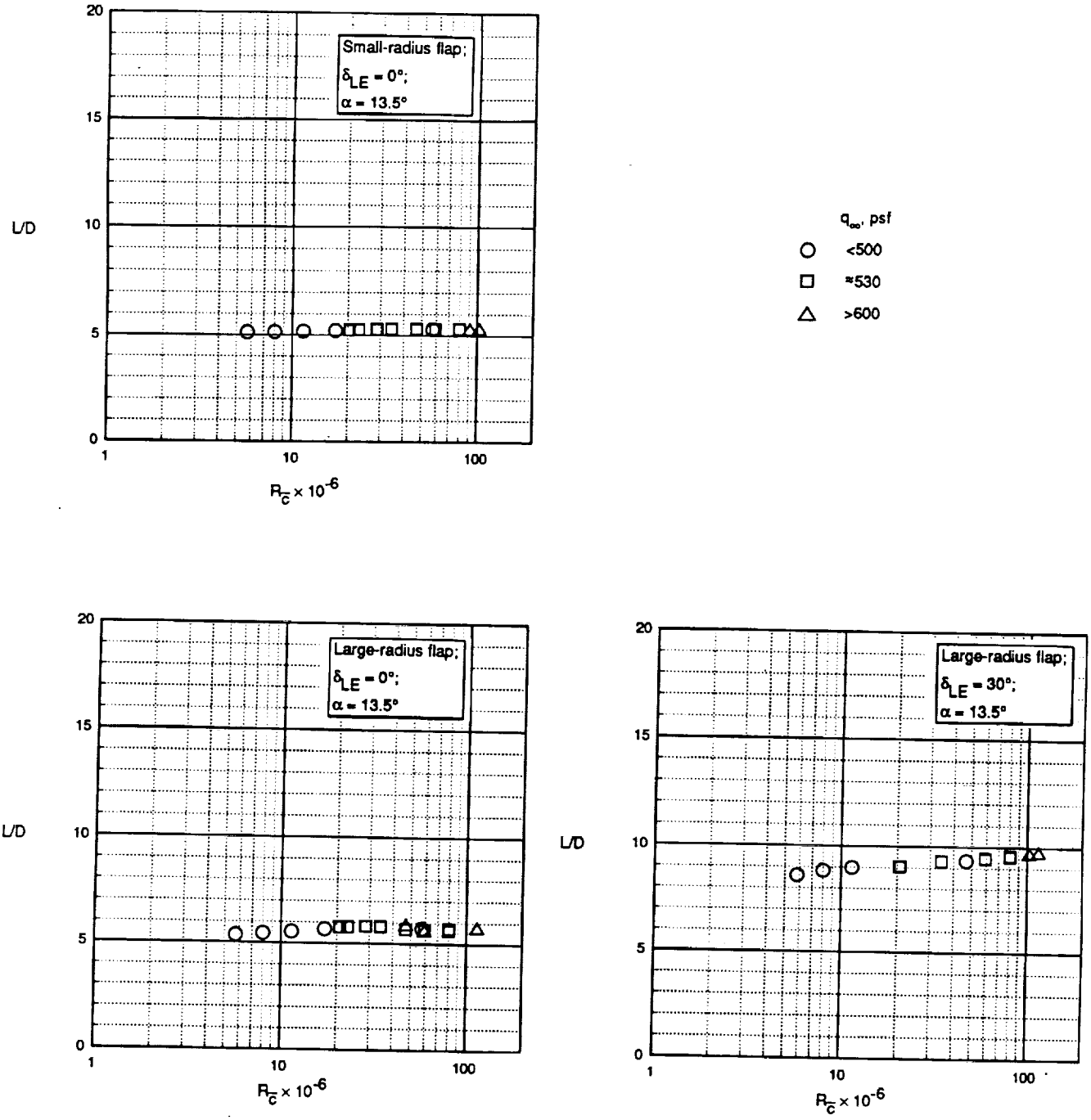
(b) C_D versus $R_{\bar{c}}$.

Figure 21. Continued.



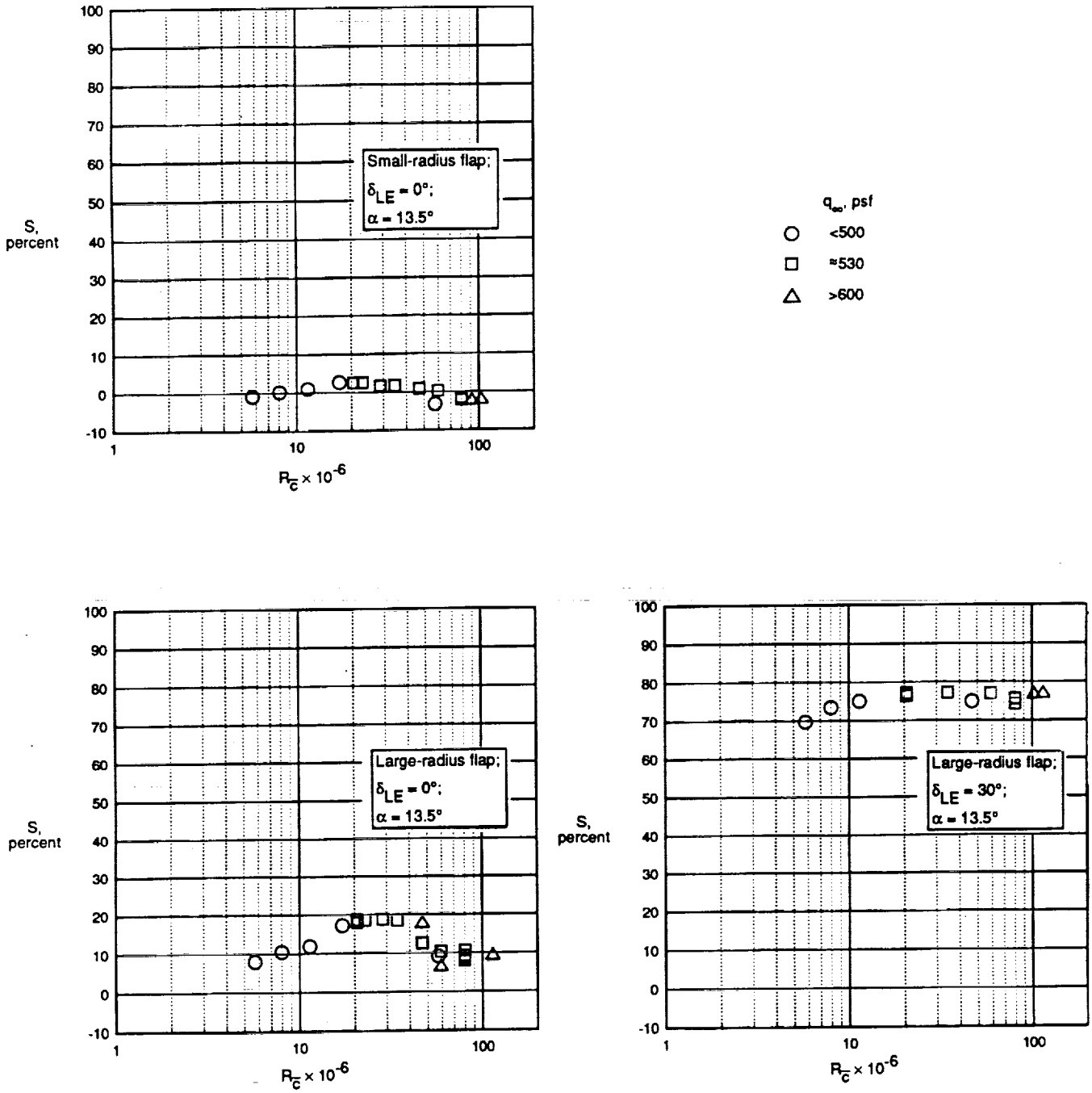
(c) C_m versus $R_{\bar{c}}$.

Figure 21. Continued.



(d) L/D versus $R_{\bar{c}}$.

Figure 21. Continued.



(e) S versus $R_{\bar{c}}$.

Figure 21. Concluded.

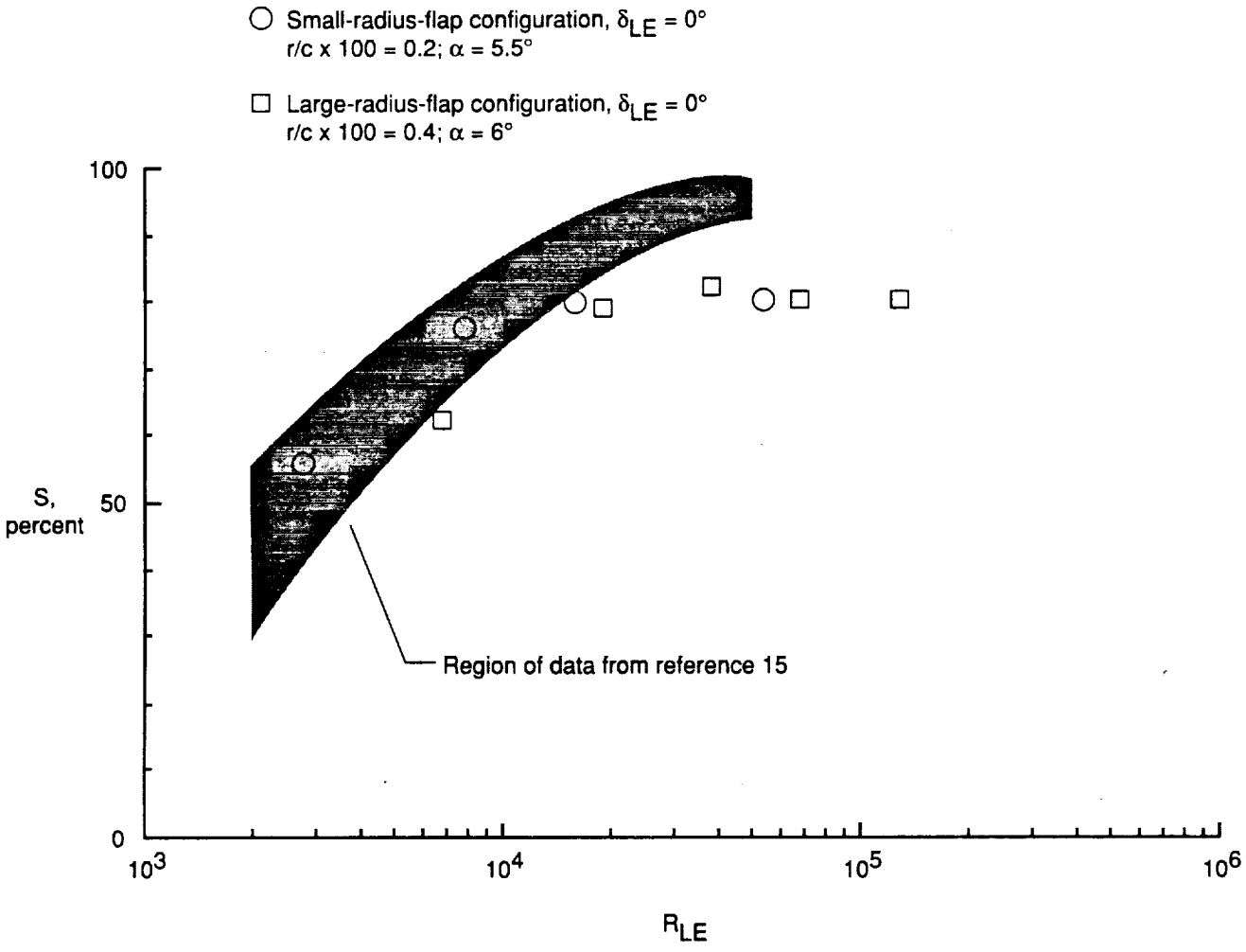
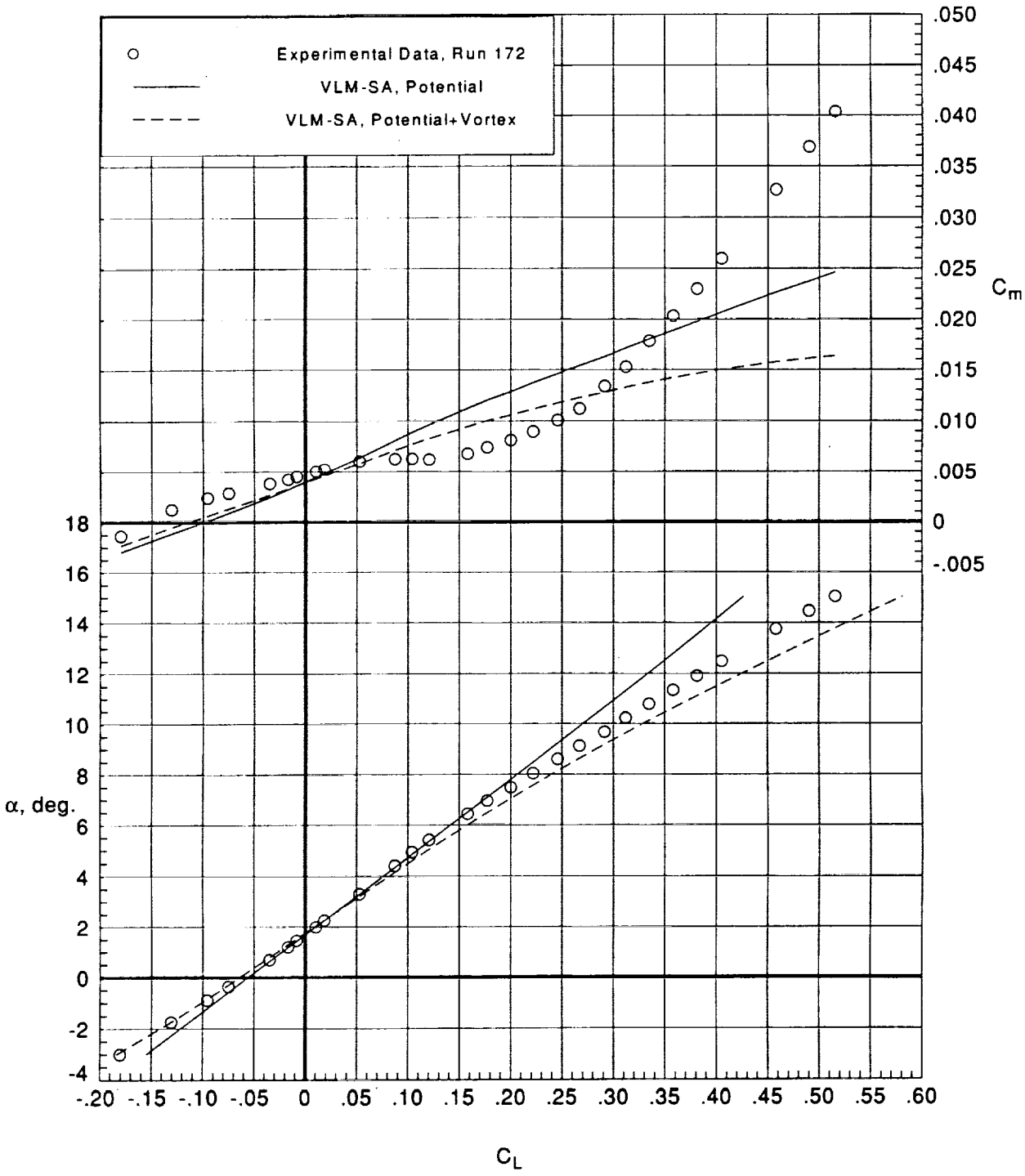
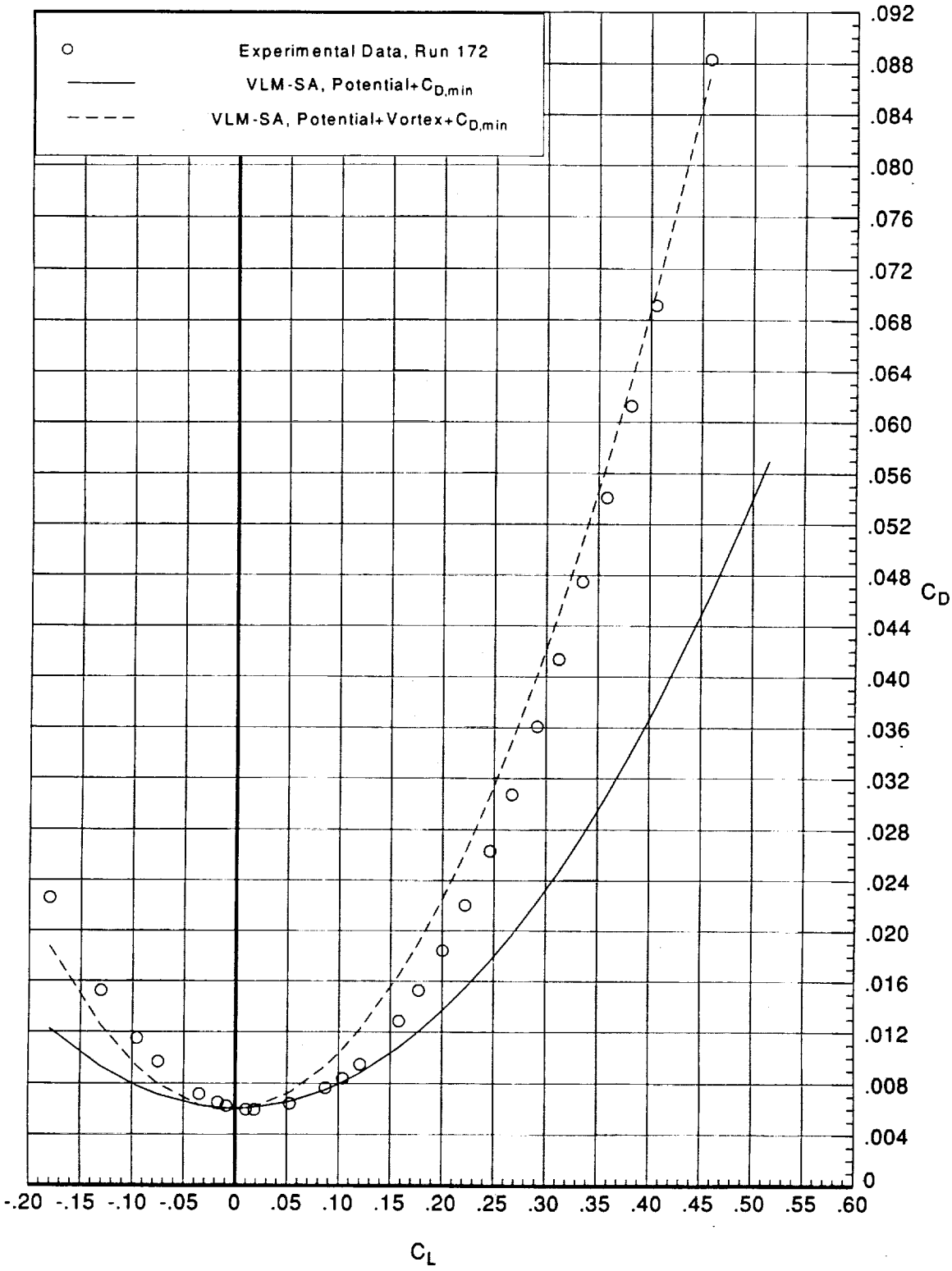


Figure 22. Suction parameter comparison of AST-210 at $(L/D)_{max}$ to data of reference 15.



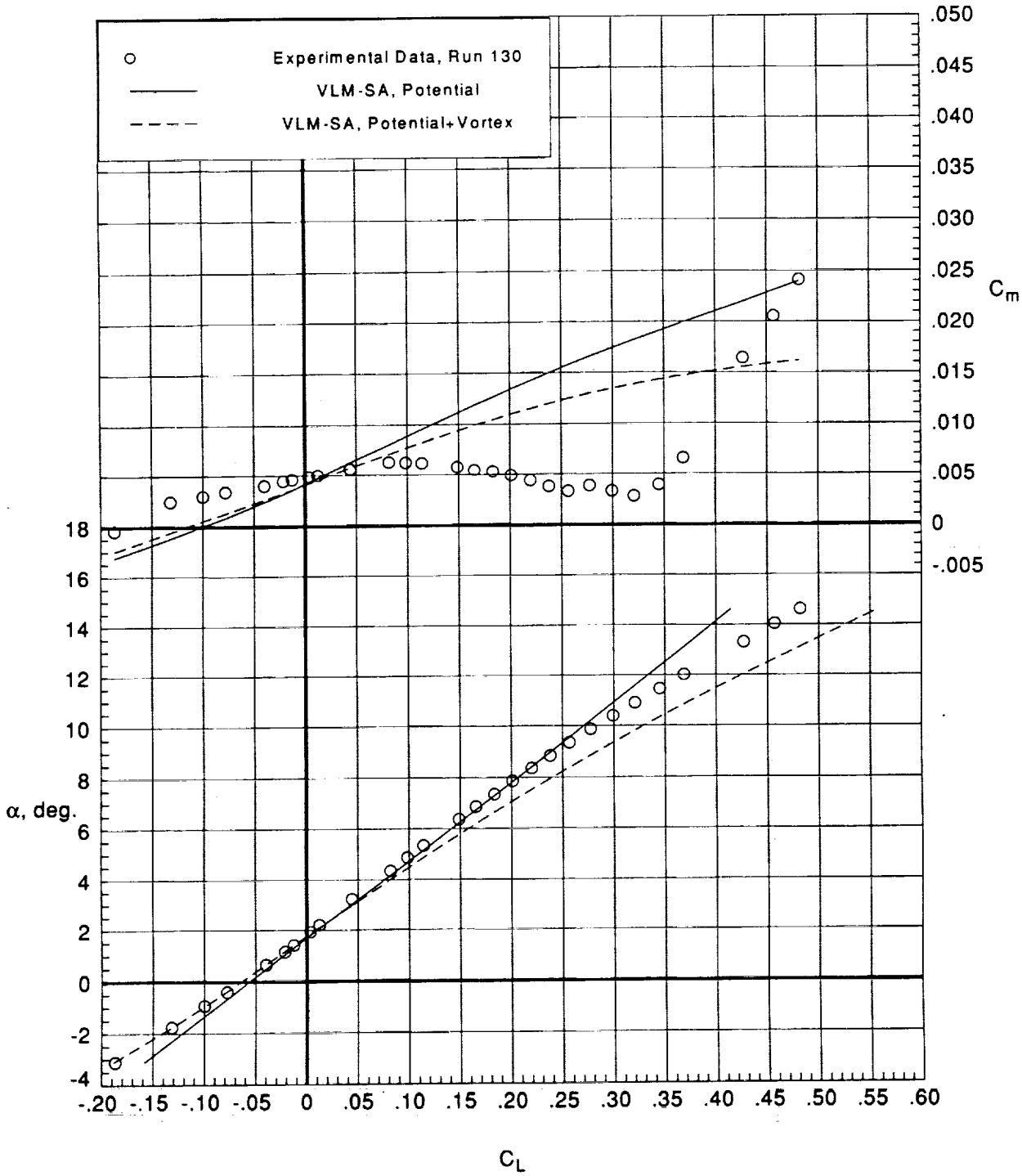
(a) C_m and α versus C_L.

Figure 23. Comparison of VLM estimates with experimental data for small-radius-flap configuration. $\delta_{LE} = 0°$; $R_{\bar{c}} \approx 80 \times 10^6$; $M_\infty = 0.3$; $q_\infty = 537$ psf.



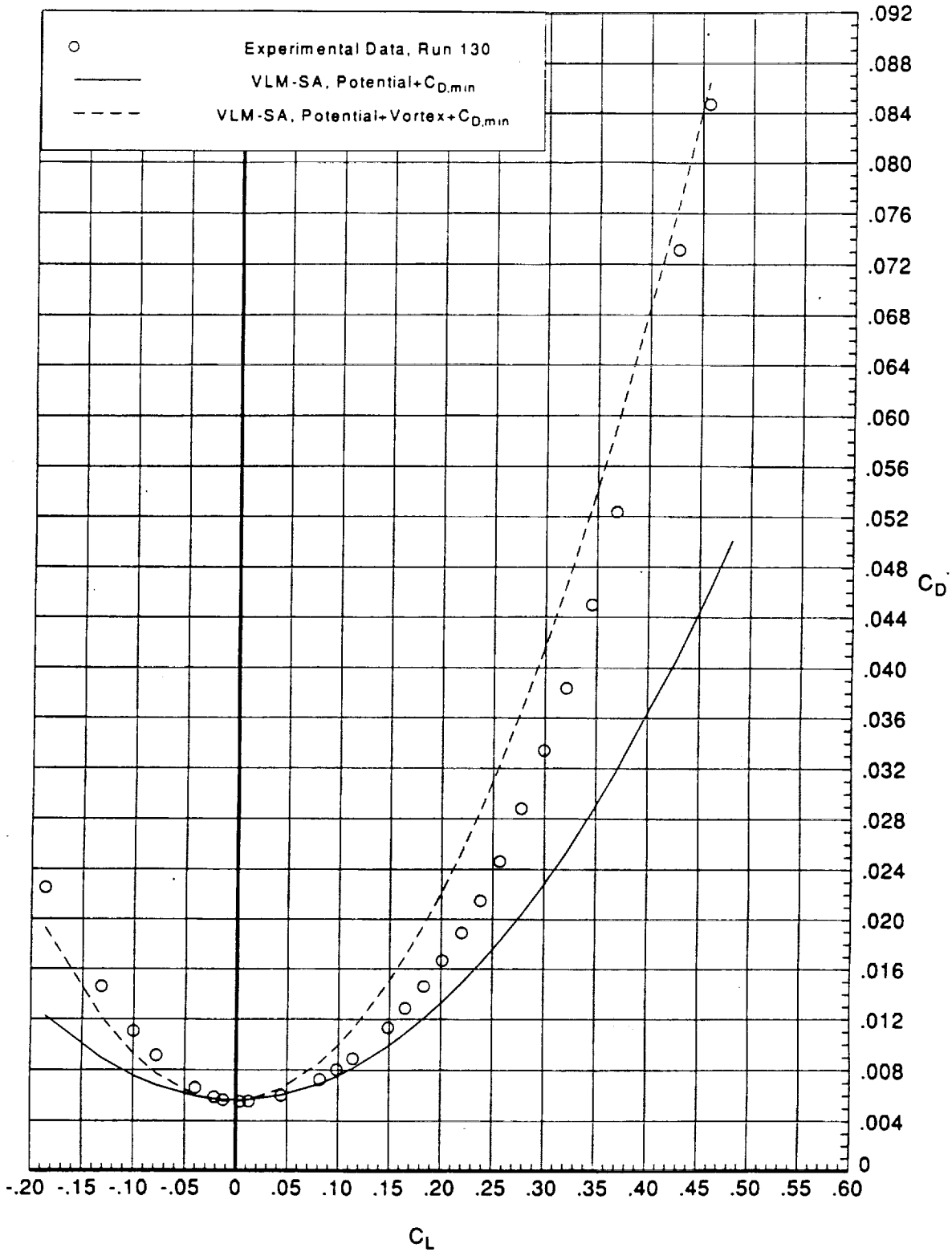
(b) C_D versus C_L.

Figure 23. Concluded.



(a) C_m and α versus C_L.

Figure 24. Comparison of VLM estimates with experimental data for large-radius-flap configuration. $\delta_{LE} = 0°$; $R_{\bar{c}} \approx 80 \times 10^6$; $M_\infty = 0.3$; $q_\infty = 537$ psf.



(b) C_D versus C_L.

Figure 24. Concluded.

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13. ABSTRACT *(Maximum 200 words)*

A representative supersonic transport design was tested in the National Transonic Facility (NTF) in its original configuration with small-radius leading-edge flaps and also with modified large-radius inboard leading-edge flaps. Aerodynamic data were obtained over a range of Reynolds numbers at a Mach number of 0.3 and angles of attack up to 16°. Increasing the radius of the inboard leading-edge flap delayed nose-up pitching moment to a higher lift coefficient. Deflecting the large-radius leading-edge flap produced an overall decrease in lift coefficient and delayed nose-up pitching moment to even higher angles of attack as compared with the undeflected large-radius leading-edge flap. At angles of attack corresponding to the maximum untrimmed lift-to-drag ratio, lift and drag coefficients decreased while lift-to-drag ratio increased with increasing Reynolds number. At an angle of attack of 13.5°, the pitching-moment coefficient was nearly constant with increasing Reynolds number for both the small-radius leading-edge flap and the deflected large-radius leading-edge flap. However, the pitching-moment coefficient increased with increasing Reynolds number for the undeflected large-radius leading-edge flap above a chord Reynolds number of about 35×10^6.

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